



**IL VOSTRO PARTNER PER GLI UTENSILI DI PRECISIONE**

**L'ampia gamma di prodotti di nostra produzione è commercializzata con il marchio Head Master.**

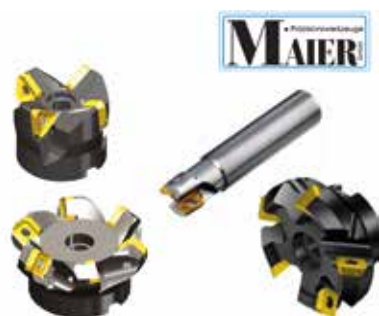
**Oltre alla fresatura, gli utensili di tornitura, gli utensili per scanalatura e gli utensili in metallo duro**

**integrale includono soluzioni speciali per il prodotto.**

**Gli utensili sono realizzati esclusivamente in un'area di produzione, al più alto livello tecnologico dello stabilimento di produzione.**

**Maier GmbH produce e fornisce utensili di altissima qualità.**

**Qualità Made in Germany**





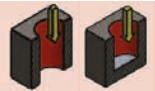
BOHRWERKZEUGE DRILLING

Catalogo Foratura inserti



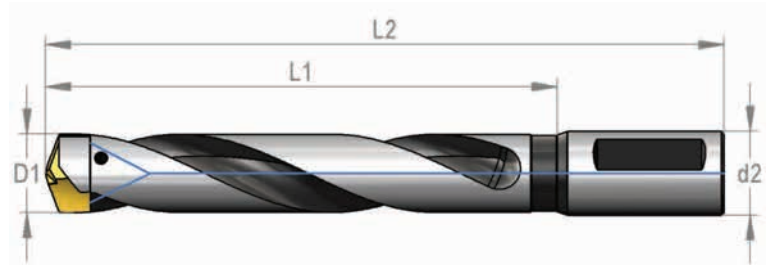


## Series 6010 - HD-Drill - 3xD



Vollbohrer (IK), zylindrischer Schaft 3D / 5D / 7D mit austauschbaren HM-Wechselschneiden.  
Ein Träger für jeweils 10 HM-Wechselschneiden (z.B. 10,00 - 10,90).

Drill (with inner coolant bores), cylindrical shank 3D / 5D / 7D with changeable Solid carbide insert.  
One holder for 10 changeable solid carbide inserts (for example 10,00 - 10,90)



| Bestell-Nr.:<br>Order Code:<br>HD3 = 3xD | Bearbeitungsdurch-<br>messer<br>Work ng diameter | Abmessungen<br>Dimension (mm) |     |    |      | Ersatzteile / Spare parts                                                                             |                                                                                                      |
|------------------------------------------|--------------------------------------------------|-------------------------------|-----|----|------|-------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
|                                          |                                                  |                               |     |    |      | Schraube<br>Screw  | Schlüssel<br>Key  |
|                                          | D1                                               | L1                            | L2  | d2 | f    |                                                                                                       |                                                                                                      |
| 6010 HD3 D10                             | 10.00 - 10.90                                    | 45                            | 90  | 12 | 0,1  | M-M 2,5                                                                                               | M-BT5                                                                                                |
| 6010 HD3 D11                             | 11.00 - 11.90                                    | 45                            | 90  | 12 | 0,11 |                                                                                                       |                                                                                                      |
| 6010 HD3 D12                             | 12.00 - 12.90                                    | 57                            | 105 | 16 | 0,12 |                                                                                                       |                                                                                                      |
| 6010 HD3 D13                             | 13.00 - 13.90                                    | 57                            | 105 | 16 | 0,13 |                                                                                                       |                                                                                                      |
| 6010 HD3 D14                             | 14.00 - 14.90                                    | 65                            | 115 | 16 | 0,14 | M-M3                                                                                                  | M-BT6                                                                                                |
| 6010 HD3 D15                             | 15.00 - 15.90                                    | 65                            | 115 | 16 | 0,15 |                                                                                                       |                                                                                                      |
| 6010 HD3 D16                             | 16.00 - 16.90                                    | 80                            | 130 | 20 | 0,16 |                                                                                                       |                                                                                                      |
| 6010 HD3 D17                             | 17.00 - 17.90                                    | 80                            | 130 | 20 | 0,17 |                                                                                                       |                                                                                                      |
| 6010 HD3 D18                             | 18.00 - 18.90                                    | 90                            | 140 | 20 | 0,18 |                                                                                                       |                                                                                                      |
| 6010 HD3 D19                             | 19.00 - 19.90                                    | 90                            | 140 | 20 | 0,19 |                                                                                                       |                                                                                                      |
| 6010 HD3 D20                             | 20.00 - 20.90                                    | 95                            | 150 | 25 | 0,2  | M-M4                                                                                                  | M-BT8                                                                                                |
| 6010 HD3 D21                             | 21.00 - 21.90                                    | 95                            | 150 | 25 | 0,21 |                                                                                                       |                                                                                                      |
| 6010 HD3 D22                             | 22.00 - 22.90                                    | 105                           | 160 | 25 | 0,22 |                                                                                                       |                                                                                                      |
| 6010 HD3 D23                             | 23.00 - 23.90                                    | 105                           | 160 | 25 | 0,23 |                                                                                                       |                                                                                                      |
| 6010 HD3 D24                             | 24.00 - 24.90                                    | 110                           | 170 | 25 | 0,24 |                                                                                                       |                                                                                                      |
| 6010 HD3 D25                             | 25.00 - 25.90                                    | 110                           | 170 | 32 | 0,25 |                                                                                                       |                                                                                                      |
| 6010 HD3 D26                             | 26.00 - 26.90                                    | 110                           | 170 | 32 | 0,26 | M-M5                                                                                                  | M-BT10                                                                                               |
| 6010 HD3 D27                             | 27.00 - 27.90                                    | 110                           | 170 | 32 | 0,27 |                                                                                                       |                                                                                                      |
| 6010 HD3 D28                             | 28.00 - 28.90                                    | 130                           | 190 | 32 | 0,28 |                                                                                                       |                                                                                                      |
| 6010 HD3 D29                             | 29.00 - 29.90                                    | 130                           | 190 | 32 | 0,29 |                                                                                                       |                                                                                                      |
| 6010 HD3 D30                             | 30.00 - 30.90                                    | 140                           | 200 | 32 | 0,3  |                                                                                                       |                                                                                                      |
| 6010 HD3 D31                             | 31.00 - 31.90                                    | 140                           | 200 | 32 | 0,31 |                                                                                                       |                                                                                                      |
| 6010 HD3 D32                             | 32.00 - 32.90                                    | 150                           | 210 | 32 | 0,32 |                                                                                                       |                                                                                                      |
| 6010 HD3 D33                             | 33.00 - 33.90                                    | 150                           | 210 | 32 | 0,33 |                                                                                                       |                                                                                                      |

Bestellbeispiel / Order example: 6010 HD3 D10

E



# Series 6015, 6020 - HD-Drill - 5xD / 7xD

| Bestell-Nr.:<br>Order Code:<br>HD5 = 5xD | Bearbeitungsdurchmesser<br>Working diameter | Abmessungen<br>Dimension (mm) |     |    |      | Ersatzteile / Spare parts                                                           |                                                                                     |
|------------------------------------------|---------------------------------------------|-------------------------------|-----|----|------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                                          |                                             |                               |     |    |      | Schraube<br>Screw                                                                   | Schlüssel<br>Key                                                                    |
|                                          | D1                                          | L1                            | L2  | d2 | f    |  |  |
| 6015 HD5 D10                             | 10.00 - 10.90                               | 65                            | 110 | 12 | 0,1  | M-M 2,5                                                                             | M-BT5                                                                               |
| 6015 HD5 D11                             | 11.00 - 11.90                               | 65                            | 110 | 12 | 0,11 |                                                                                     |                                                                                     |
| 6015 HD5 D12                             | 12.00 - 12.90                               | 87                            | 135 | 16 | 0,12 |                                                                                     |                                                                                     |
| 6015 HD5 D13                             | 13.00 - 13.90                               | 87                            | 135 | 16 | 0,13 |                                                                                     |                                                                                     |
| 6015 HD5 D14                             | 14.00 - 14.90                               | 95                            | 145 | 16 | 0,14 | M-M3                                                                                | M-BT6                                                                               |
| 6015 HD5 D15                             | 15.00 - 15.90                               | 95                            | 145 | 16 | 0,15 |                                                                                     |                                                                                     |
| 6015 HD5 D16                             | 16.00 - 16.90                               | 100                           | 150 | 20 | 0,16 |                                                                                     |                                                                                     |
| 6015 HD5 D17                             | 17.00 - 17.90                               | 100                           | 150 | 20 | 0,17 |                                                                                     |                                                                                     |
| 6015 HD5 D18                             | 18.00 - 18.90                               | 120                           | 170 | 20 | 0,18 |                                                                                     |                                                                                     |
| 6015 HD5 D19                             | 19.00 - 19.90                               | 120                           | 170 | 20 | 0,19 | M-M4                                                                                | M-BT8                                                                               |
| 6015 HD5 D20                             | 20.00 - 20.90                               | 135                           | 190 | 25 | 0,2  |                                                                                     |                                                                                     |
| 6015 HD5 D21                             | 21.00 - 21.90                               | 135                           | 190 | 25 | 0,21 |                                                                                     |                                                                                     |
| 6015 HD5 D22                             | 22.00 - 22.90                               | 145                           | 200 | 25 | 0,22 |                                                                                     |                                                                                     |
| 6015 HD5 D23                             | 23.00 - 23.90                               | 145                           | 200 | 25 | 0,23 |                                                                                     |                                                                                     |
| 6015 HD5 D24                             | 24.00 - 24.90                               | 160                           | 220 | 25 | 0,24 |                                                                                     |                                                                                     |
| 6015 HD5 D25                             | 25.00 - 25.90                               | 160                           | 220 | 32 | 0,25 |                                                                                     |                                                                                     |
| 6015 HD5 D26                             | 26.00 - 26.90                               | 180                           | 240 | 32 | 0,26 | M-M5                                                                                | M-BT10                                                                              |
| 6015 HD5 D27                             | 27.00 - 27.90                               | 180                           | 240 | 32 | 0,27 |                                                                                     |                                                                                     |
| 6015 HD5 D28                             | 28.00 - 28.90                               | 190                           | 250 | 32 | 0,28 |                                                                                     |                                                                                     |
| 6015 HD5 D29                             | 29.00 - 29.90                               | 190                           | 250 | 32 | 0,29 |                                                                                     |                                                                                     |
| 6015 HD5 D30                             | 30.00 - 30.90                               | 200                           | 260 | 32 | 0,3  |                                                                                     |                                                                                     |
| 6015 HD5 D31                             | 31.00 - 31.90                               | 200                           | 260 | 32 | 0,31 |                                                                                     |                                                                                     |
| 6015 HD5 D32                             | 32.00 - 32.90                               | 210                           | 270 | 32 | 0,32 |                                                                                     |                                                                                     |
| 6015 HD5 D33                             | 33.00 - 33.90                               | 210                           | 270 | 32 | 0,33 |                                                                                     |                                                                                     |

Bestellbeispiel / Order example: 6015 HD5 D10

| Bestell-Nr.:<br>Order Code:<br>HD7 = 7xD | Bearbeitungsdurchmesser<br>Working diameter | Abmessungen<br>Dimension (mm) |     |    |      | Ersatzteile / Spare parts                                                             |                                                                                       |
|------------------------------------------|---------------------------------------------|-------------------------------|-----|----|------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                                          |                                             |                               |     |    |      | Schraube<br>Screw                                                                     | Schlüssel<br>Key                                                                      |
|                                          | D1                                          | L1                            | L2  | d2 | f    |  |  |
| 6020 HD7 D10                             | 10.00 - 10.90                               | 90                            | 135 | 12 | 0,1  | M-M 2,5                                                                               | M-BT5                                                                                 |
| 6020 HD7 D11                             | 11.00 - 11.90                               | 90                            | 135 | 12 | 0,11 |                                                                                       |                                                                                       |
| 6020 HD7 D12                             | 12.00 - 12.90                               | 115                           | 165 | 16 | 0,12 |                                                                                       |                                                                                       |
| 6020 HD7 D13                             | 13.00 - 13.90                               | 115                           | 165 | 16 | 0,13 |                                                                                       |                                                                                       |
| 6020 HD7 D14                             | 14.00 - 14.90                               | 125                           | 175 | 16 | 0,14 | M-M3                                                                                  | M-BT6                                                                                 |
| 6020 HD7 D15                             | 15.00 - 15.90                               | 125                           | 175 | 16 | 0,15 |                                                                                       |                                                                                       |
| 6020 HD7 D16                             | 16.00 - 16.90                               | 140                           | 190 | 20 | 0,16 |                                                                                       |                                                                                       |
| 6020 HD7 D17                             | 17.00 - 17.90                               | 140                           | 190 | 20 | 0,17 |                                                                                       |                                                                                       |
| 6020 HD7 D18                             | 18.00 - 18.90                               | 160                           | 210 | 20 | 0,18 |                                                                                       |                                                                                       |
| 6020 HD7 D19                             | 19.00 - 19.90                               | 160                           | 210 | 20 | 0,19 | M-M4                                                                                  | M-BT8                                                                                 |
| 6020 HD7 D20                             | 20.00 - 20.90                               | 175                           | 230 | 25 | 0,2  |                                                                                       |                                                                                       |
| 6020 HD7 D21                             | 21.00 - 21.90                               | 175                           | 230 | 25 | 0,21 |                                                                                       |                                                                                       |
| 6020 HD7 D22                             | 22.00 - 22.90                               | 185                           | 240 | 25 | 0,22 |                                                                                       |                                                                                       |
| 6020 HD7 D23                             | 23.00 - 23.90                               | 185                           | 240 | 25 | 0,23 |                                                                                       |                                                                                       |
| 6020 HD7 D24                             | 24.00 - 24.90                               | 210                           | 270 | 25 | 0,24 |                                                                                       |                                                                                       |
| 6020 HD7 D25                             | 25.00 - 25.90                               | 210                           | 270 | 32 | 0,25 |                                                                                       |                                                                                       |
| 6020 HD7 D26                             | 26.00 - 26.90                               | 230                           | 290 | 32 | 0,26 | M-M5                                                                                  | M-BT10                                                                                |
| 6020 HD7 D27                             | 27.00 - 27.90                               | 230                           | 290 | 32 | 0,27 |                                                                                       |                                                                                       |
| 6020 HD7 D28                             | 28.00 - 28.90                               | 240                           | 300 | 32 | 0,28 |                                                                                       |                                                                                       |
| 6020 HD7 D29                             | 29.00 - 29.90                               | 240                           | 300 | 32 | 0,29 |                                                                                       |                                                                                       |
| 6020 HD7 D30                             | 30.00 - 30.90                               | 260                           | 320 | 32 | 0,3  |                                                                                       |                                                                                       |
| 6020 HD7 D31                             | 31.00 - 31.90                               | 260                           | 320 | 32 | 0,31 |                                                                                       |                                                                                       |
| 6020 HD7 D32                             | 32.00 - 32.90                               | 280                           | 340 | 32 | 0,32 |                                                                                       |                                                                                       |
| 6020 HD7 D33                             | 33.00 - 33.90                               | 280                           | 340 | 32 | 0,33 |                                                                                       |                                                                                       |

Bestellbeispiel / Order example: 6020 HD7 D10

E

## Series 6010 - HD-Drill

| Vc<br>(m/min) |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | Öl                            | Emulsion | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|-------------------------------|----------|-----|---------|-----------|
|               | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK |                               |          |     |         |           |
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |                               |          |     |         |           |
| TIALN         | 120               | 120 | 100         |                  | 80               | 80               | 70                | 60                |                   |                   |                   |                   |                   | 60              | 50              | 70    |       |                       |                               |          |     |         |           |
| PTT20         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                               |          |     |         |           |
| PTT35         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                               |          |     |         |           |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                               |          |     |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                               |          |     |         |           |
| KTE20         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                               |          |     |         |           |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                               |          |     |         |           |
| fz            | 0,1-0,2           |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet □ bedingt geeignet |          |     |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

## HD-Drill - Einsätze HD-Drill - Inserts



M-MI.. TIALN

**Mindestabnahme: 2Stk. je Durchmesser**  
Minimum purchase: 2pcs per diameter



| Durchmesser-<br>bereich d1<br>Working<br>diameter d1 | Bestell-Nummern für HM-Wechselschneiden für die Arbeitsdurchmesser (mm)<br>Ordernumber for HM-Inserts with Workingdiameter (mm) |            |            |            |            |            |            |            |            |            |
|------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| 10,00 - 10,90                                        | M-MI 10,00                                                                                                                      | M-MI 10,10 | M-MI 10,20 | M-MI 10,30 | M-MI 10,40 | M-MI 10,50 | M-MI 10,60 | M-MI 10,70 | M-MI 10,80 | M-MI 10,90 |
| 11,00 - 11,90                                        | M-MI 11,00                                                                                                                      | M-MI 11,10 | M-MI 11,20 | M-MI 11,30 | M-MI 11,40 | M-MI 11,50 | M-MI 11,60 | M-MI 11,70 | M-MI 11,80 | M-MI 11,90 |
| 12,00 - 12,90                                        | M-MI 12,00                                                                                                                      | M-MI 12,10 | M-MI 12,20 | M-MI 12,30 | M-MI 12,40 | M-MI 12,50 | M-MI 12,60 | M-MI 12,70 | M-MI 12,80 | M-MI 12,90 |
| 13,00 - 13,90                                        | M-MI 13,00                                                                                                                      | M-MI 13,10 | M-MI 13,20 | M-MI 13,30 | M-MI 13,40 | M-MI 13,50 | M-MI 13,60 | M-MI 13,70 | M-MI 13,80 | M-MI 13,90 |
| 14,00 - 14,90                                        | M-MI 14,00                                                                                                                      | M-MI 14,10 | M-MI 14,20 | M-MI 14,30 | M-MI 14,40 | M-MI 14,50 | M-MI 14,60 | M-MI 14,70 | M-MI 14,80 | M-MI 14,90 |
| 15,00 - 15,90                                        | M-MI 15,00                                                                                                                      | M-MI 15,10 | M-MI 15,20 | M-MI 15,30 | M-MI 15,40 | M-MI 15,50 | M-MI 15,60 | M-MI 15,70 | M-MI 15,80 | M-MI 15,90 |
| 16,00 - 16,90                                        | M-MI 16,00                                                                                                                      | M-MI 16,10 | M-MI 16,20 | M-MI 16,30 | M-MI 16,40 | M-MI 16,50 | M-MI 16,60 | M-MI 16,70 | M-MI 16,80 | M-MI 16,90 |
| 17,00 - 17,90                                        | M-MI 17,00                                                                                                                      | M-MI 17,10 | M-MI 17,20 | M-MI 17,30 | M-MI 17,40 | M-MI 17,50 | M-MI 17,60 | M-MI 17,70 | M-MI 17,80 | M-MI 17,90 |
| 18,00 - 18,90                                        | M-MI 18,00                                                                                                                      | M-MI 18,10 | M-MI 18,20 | M-MI 18,30 | M-MI 18,40 | M-MI 18,50 | M-MI 18,60 | M-MI 18,70 | M-MI 18,80 | M-MI 18,90 |
| 19,00 - 19,90                                        | M-MI 19,00                                                                                                                      | M-MI 19,10 | M-MI 19,20 | M-MI 19,30 | M-MI 19,40 | M-MI 19,50 | M-MI 19,60 | M-MI 19,70 | M-MI 19,80 | M-MI 19,90 |
| 20,00 - 20,90                                        | M-MI 20,00                                                                                                                      | M-MI 20,10 | M-MI 20,20 | M-MI 20,30 | M-MI 20,40 | M-MI 20,50 | M-MI 20,60 | M-MI 20,70 | M-MI 20,80 | M-MI 20,90 |
| 21,00 - 21,90                                        | M-MI 21,00                                                                                                                      | M-MI 21,10 | M-MI 21,20 | M-MI 21,30 | M-MI 21,40 | M-MI 21,50 | M-MI 21,60 | M-MI 21,70 | M-MI 21,80 | M-MI 21,90 |
| 22,00 - 22,90                                        | M-MI 22,00                                                                                                                      | M-MI 22,10 | M-MI 22,20 | M-MI 22,30 | M-MI 22,40 | M-MI 22,50 | M-MI 22,60 | M-MI 22,70 | M-MI 22,80 | M-MI 22,90 |
| 23,00 - 23,90                                        | M-MI 23,00                                                                                                                      | M-MI 23,10 | M-MI 23,20 | M-MI 23,30 | M-MI 23,40 | M-MI 23,50 | M-MI 23,60 | M-MI 23,70 | M-MI 23,80 | M-MI 23,90 |
| 24,00 - 24,90                                        | M-MI 24,00                                                                                                                      | M-MI 24,10 | M-MI 24,20 | M-MI 24,30 | M-MI 24,40 | M-MI 24,50 | M-MI 24,60 | M-MI 24,70 | M-MI 24,80 | M-MI 24,90 |
| 25,00 - 25,90                                        | M-MI 25,00                                                                                                                      | M-MI 25,10 | M-MI 25,20 | M-MI 25,30 | M-MI 25,40 | M-MI 25,50 | M-MI 25,60 | M-MI 25,70 | M-MI 25,80 | M-MI 25,90 |
| 26,00 - 26,90                                        | M-MI 26,00                                                                                                                      | M-MI 26,10 | M-MI 26,20 | M-MI 26,30 | M-MI 26,40 | M-MI 26,50 | M-MI 26,60 | M-MI 26,70 | M-MI 26,80 | M-MI 26,90 |
| 27,00 - 27,90                                        | M-MI 27,00                                                                                                                      | M-MI 27,10 | M-MI 27,20 | M-MI 27,30 | M-MI 27,40 | M-MI 27,50 | M-MI 27,60 | M-MI 27,70 | M-MI 27,80 | M-MI 27,90 |
| 28,00 - 28,90                                        | M-MI 28,00                                                                                                                      | M-MI 28,10 | M-MI 28,20 | M-MI 28,30 | M-MI 28,40 | M-MI 28,50 | M-MI 28,60 | M-MI 28,70 | M-MI 28,80 | M-MI 28,90 |
| 29,00 - 29,90                                        | M-MI 29,00                                                                                                                      | M-MI 29,10 | M-MI 29,20 | M-MI 29,30 | M-MI 29,40 | M-MI 29,50 | M-MI 29,60 | M-MI 29,70 | M-MI 29,80 | M-MI 29,90 |
| 30,00 - 30,90                                        | M-MI 30,00                                                                                                                      | M-MI 30,10 | M-MI 30,20 | M-MI 30,30 | M-MI 30,40 | M-MI 30,50 | M-MI 30,60 | M-MI 30,70 | M-MI 30,80 | M-MI 30,90 |
| 31,00 - 31,90                                        | M-MI 31,00                                                                                                                      | M-MI 31,10 | M-MI 31,20 | M-MI 31,30 | M-MI 31,40 | M-MI 31,50 | M-MI 31,60 | M-MI 31,70 | M-MI 31,80 | M-MI 31,90 |
| 32,00 - 32,90                                        | M-MI 32,00                                                                                                                      | M-MI 32,10 | M-MI 32,20 | M-MI 32,30 | M-MI 32,40 | M-MI 32,50 | M-MI 32,60 | M-MI 32,70 | M-MI 32,80 | M-MI 32,90 |
| 33,00 - 33,90                                        | M-MI 33,00                                                                                                                      | M-MI 33,10 | M-MI 33,20 | M-MI 33,30 | M-MI 33,40 | M-MI 33,50 | M-MI 33,60 | M-MI 33,70 | M-MI 33,80 | M-MI 33,90 |

Bestellbeispiel / Orderexample: M-MI 10,00 TIALN



M-SI.. TIALN

**Mindestabnahme: 2Stk. je Durchmesser**  
Minimum purchase: 2pcs per diameter



180°

| Durchmesser-<br>bereich d1<br>Working<br>diameter d1 | Bestell-Nummern für HM-Wechselschneiden für die Arbeitsdurchmesser (mm)<br>Ordernumber for HM-Inserts with Workingdiameter (mm) |
|------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| 10,00                                                | M-SI 10,00                                                                                                                      |
| 11,00                                                | M-SI 11,00                                                                                                                      |
| 13,00                                                | M-SI 13,00                                                                                                                      |
| 15,00                                                | M-SI 15,00                                                                                                                      |
| 18,00                                                | M-SI 18,00                                                                                                                      |
| 20,00                                                | M-SI 20,00                                                                                                                      |
| 22,00                                                | M-SI 22,00                                                                                                                      |
| 24,00                                                | M-SI 24,00                                                                                                                      |
| 26,00                                                | M-SI 26,00                                                                                                                      |
| 30,00                                                | M-SI 30,00                                                                                                                      |
| 33,00                                                | M-SI 33,00                                                                                                                      |

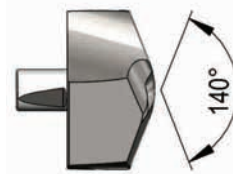
Bestellbeispiel / Orderexample: M-SI 10,00 TIALN

## HD-Drill - Einsätze HD-Drill - Inserts



M-QS.. TIALN  
mit Zentrierspitze  
with centercorner

**Mindestabnahme: 2Stk. je Durchmesser**  
Minimum purchase: 2pcs per diameter



| Durchmesser-<br>bereich d1<br>Working<br>diameter d1 | Bestell-Nummern für HM-Wechselschneiden für die Arbeitsdurchmesser (mm)<br>Ordernumber for HM-Inserts with Workingdiameter (mm) |            |            |            |            |            |            |            |            |            |
|------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| 10,00 - 10,90                                        | M-QS 10,00                                                                                                                      | M-QS 10,10 | M-QS 10,20 | M-QS 10,30 | M-QS 10,40 | M-QS 10,50 | M-QS 10,60 | M-QS 10,70 | M-QS 10,80 | M-QS 10,90 |
| 11,00 - 11,90                                        | M-QS 11,00                                                                                                                      | M-QS 11,10 | M-QS 11,20 | M-QS 11,30 | M-QS 11,40 | M-QS 11,50 | M-QS 11,60 | M-QS 11,70 | M-QS 11,80 | M-QS 11,90 |
| 12,00 - 12,90                                        | M-QS 12,00                                                                                                                      | M-QS 12,10 | M-QS 12,20 | M-QS 12,30 | M-QS 12,40 | M-QS 12,50 | M-QS 12,60 | M-QS 12,70 | M-QS 12,80 | M-QS 12,90 |
| 13,00 - 13,90                                        | M-QS 13,00                                                                                                                      | M-QS 13,10 | M-QS 13,20 | M-QS 13,30 | M-QS 13,40 | M-QS 13,50 | M-QS 13,60 | M-QS 13,70 | M-QS 13,80 | M-QS 13,90 |
| 14,00 - 14,90                                        | M-QS 14,00                                                                                                                      | M-QS 14,10 | M-QS 14,20 | M-QS 14,30 | M-QS 14,40 | M-QS 14,50 | M-QS 14,60 | M-QS 14,70 | M-QS 14,80 | M-QS 14,90 |
| 15,00 - 15,90                                        | M-QS 15,00                                                                                                                      | M-QS 15,10 | M-QS 15,20 | M-QS 15,30 | M-QS 15,40 | M-QS 15,50 | M-QS 15,60 | M-QS 15,70 | M-QS 15,80 | M-QS 15,90 |
| 16,00 - 16,90                                        | M-QS 16,00                                                                                                                      | M-QS 16,10 | M-QS 16,20 | M-QS 16,30 | M-QS 16,40 | M-QS 16,50 | M-QS 16,60 | M-QS 16,70 | M-QS 16,80 | M-QS 16,90 |
| 17,00 - 17,90                                        | M-QS 17,00                                                                                                                      | M-QS 17,10 | M-QS 17,20 | M-QS 17,30 | M-QS 17,40 | M-QS 17,50 | M-QS 17,60 | M-QS 17,70 | M-QS 17,80 | M-QS 17,90 |
| 18,00 - 18,90                                        | M-QS 18,00                                                                                                                      | M-QS 18,10 | M-QS 18,20 | M-QS 18,30 | M-QS 18,40 | M-QS 18,50 | M-QS 18,60 | M-QS 18,70 | M-QS 18,80 | M-QS 18,90 |
| 19,00 - 19,90                                        | M-QS 19,00                                                                                                                      | M-QS 19,10 | M-QS 19,20 | M-QS 19,30 | M-QS 19,40 | M-QS 19,50 | M-QS 19,60 | M-QS 19,70 | M-QS 19,80 | M-QS 19,90 |
| 20,00 - 20,90                                        | M-QS 20,00                                                                                                                      | M-QS 20,10 | M-QS 20,20 | M-QS 20,30 | M-QS 20,40 | M-QS 20,50 | M-QS 20,60 | M-QS 20,70 | M-QS 20,80 | M-QS 20,90 |
| 21,00 - 21,90                                        | M-QS 21,00                                                                                                                      | M-QS 21,10 | M-QS 21,20 | M-QS 21,30 | M-QS 21,40 | M-QS 21,50 | M-QS 21,60 | M-QS 21,70 | M-QS 21,80 | M-QS 21,90 |
| 22,00 - 22,90                                        | M-QS 22,00                                                                                                                      | M-QS 22,10 | M-QS 22,20 | M-QS 22,30 | M-QS 22,40 | M-QS 22,50 | M-QS 22,60 | M-QS 22,70 | M-QS 22,80 | M-QS 22,90 |
| 23,00 - 23,90                                        | M-QS 23,00                                                                                                                      | M-QS 23,10 | M-QS 23,20 | M-QS 23,30 | M-QS 23,40 | M-QS 23,50 | M-QS 23,60 | M-QS 23,70 | M-QS 23,80 | M-QS 23,90 |
| 24,00 - 24,90                                        | M-QS 24,00                                                                                                                      | M-QS 24,10 | M-QS 24,20 | M-QS 24,30 | M-QS 24,40 | M-QS 24,50 | M-QS 24,60 | M-QS 24,70 | M-QS 24,80 | M-QS 24,90 |
| 25,00 - 25,90                                        | M-QS 25,00                                                                                                                      | M-QS 25,10 | M-QS 25,20 | M-QS 25,30 | M-QS 25,40 | M-QS 25,50 | M-QS 25,60 | M-QS 25,70 | M-QS 25,80 | M-QS 25,90 |
| 26,00 - 26,90                                        | M-QS 26,00                                                                                                                      | M-QS 26,10 | M-QS 26,20 | M-QS 26,30 | M-QS 26,40 | M-QS 26,50 | M-QS 26,60 | M-QS 26,70 | M-QS 26,80 | M-QS 26,90 |
| 27,00 - 27,90                                        | M-QS 27,00                                                                                                                      | M-QS 27,10 | M-QS 27,20 | M-QS 27,30 | M-QS 27,40 | M-QS 27,50 | M-QS 27,60 | M-QS 27,70 | M-QS 27,80 | M-QS 27,90 |
| 28,00 - 28,90                                        | M-QS 28,00                                                                                                                      | M-QS 28,10 | M-QS 28,20 | M-QS 28,30 | M-QS 28,40 | M-QS 28,50 | M-QS 28,60 | M-QS 28,70 | M-QS 28,80 | M-QS 28,90 |
| 29,00 - 29,90                                        | M-QS 29,00                                                                                                                      | M-QS 29,10 | M-QS 29,20 | M-QS 29,30 | M-QS 29,40 | M-QS 29,50 | M-QS 29,60 | M-QS 29,70 | M-QS 29,80 | M-QS 29,90 |
| 30,00 - 30,90                                        | M-QS 30,00                                                                                                                      | M-QS 30,10 | M-QS 30,20 | M-QS 30,30 | M-QS 30,40 | M-QS 30,50 | M-QS 30,60 | M-QS 30,70 | M-QS 30,80 | M-QS 30,90 |
| 31,00 - 31,90                                        | M-QS 31,00                                                                                                                      | M-QS 31,10 | M-QS 31,20 | M-QS 31,30 | M-QS 31,40 | M-QS 31,50 | M-QS 31,60 | M-QS 31,70 | M-QS 31,80 | M-QS 31,90 |
| 32,00 - 32,90                                        | M-QS 32,00                                                                                                                      | M-QS 32,10 | M-QS 32,20 | M-QS 32,30 | M-QS 32,40 | M-QS 32,50 | M-QS 32,60 | M-QS 32,70 | M-QS 32,80 | M-QS 32,90 |
| 33,00 - 33,90                                        | M-QS 33,00                                                                                                                      | M-QS 33,10 | M-QS 33,20 | M-QS 33,30 | M-QS 33,40 | M-QS 33,50 | M-QS 33,60 | M-QS 33,70 | M-QS 33,80 | M-QS 33,90 |

Bestellbeispiel / Orderexample: M-QS 10,00 TIALN



M-SI/QS.. TIALN  
mit Zentrierspitze  
with centercorner

**Mindestabnahme: 2Stk. je Durchmesser**  
Minimum purchase: 2pcs per diameter



180°

| Durchmesser-<br>bereich d1<br>Working<br>diameter d1 | Bestell-Nummern für HM-Wechselschneiden für die Arbeitsdurchmesser (mm)<br>Ordernumber for HM-Inserts with Workingdiameter (mm) |
|------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| 10,00                                                | M-SI/QS 10,00                                                                                                                   |
| 11,00                                                | M-SI/QS 11,00                                                                                                                   |
| 13,00                                                | M-SI/QS 13,00                                                                                                                   |
| 15,00                                                | M-SI/QS 15,00                                                                                                                   |
| 18,00                                                | M-SI/QS 18,00                                                                                                                   |
| 20,00                                                | M-SI/QS 20,00                                                                                                                   |
| 22,00                                                | M-SI/QS 22,00                                                                                                                   |
| 24,00                                                | M-SI/QS 24,00                                                                                                                   |
| 26,00                                                | M-SI/QS 26,00                                                                                                                   |
| 30,00                                                | M-SI/QS 30,00                                                                                                                   |
| 33,00                                                | M-SI/QS 33,00                                                                                                                   |

Bestellbeispiel / Orderexample: M-SI/QS 10,00 TIALN



## HD-Drill - Einsätze HD-Drill - Inserts



M-MA.. ALU-TIALN

**Mindestabnahme: 2Stk. je Durchmesser**  
Minimum purchase: 2pcs per diameter



| Durchmesser-<br>bereich d1<br>Working<br>diameter d1 | Bestell-Nummern für HM-Wechselschneiden für die Arbeitsdurchmesser (mm)<br>Ordernumber for HM-Inserts with Workingdiameter (mm) |            |            |            |            |            |            |            |            |            |
|------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| 10,00 - 10,90                                        | M-MA 10,00                                                                                                                      | M-MA 10,10 | M-MA 10,20 | M-MA 10,30 | M-MA 10,40 | M-MA 10,50 | M-MA 10,60 | M-MA 10,70 | M-MA 10,80 | M-MA 10,90 |
| 11,00 - 11,90                                        | M-MA 11,00                                                                                                                      | M-MA 11,10 | M-MA 11,20 | M-MA 11,30 | M-MA 11,40 | M-MA 11,50 | M-MA 11,60 | M-MA 11,70 | M-MA 11,80 | M-MA 11,90 |
| 12,00 - 12,90                                        | M-MA 12,00                                                                                                                      | M-MA 12,10 | M-MA 12,20 | M-MA 12,30 | M-MA 12,40 | M-MA 12,50 | M-MA 12,60 | M-MA 12,70 | M-MA 12,80 | M-MA 12,90 |
| 13,00 - 13,90                                        | M-MA 13,00                                                                                                                      | M-MA 13,10 | M-MA 13,20 | M-MA 13,30 | M-MA 13,40 | M-MA 13,50 | M-MA 13,60 | M-MA 13,70 | M-MA 13,80 | M-MA 13,90 |
| 14,00 - 14,90                                        | M-MA 14,00                                                                                                                      | M-MA 14,10 | M-MA 14,20 | M-MA 14,30 | M-MA 14,40 | M-MA 14,50 | M-MA 14,60 | M-MA 14,70 | M-MA 14,80 | M-MA 14,90 |
| 15,00 - 15,90                                        | M-MA 15,00                                                                                                                      | M-MA 15,10 | M-MA 15,20 | M-MA 15,30 | M-MA 15,40 | M-MA 15,50 | M-MA 15,60 | M-MA 15,70 | M-MA 15,80 | M-MA 15,90 |
| 16,00 - 16,90                                        | M-MA 16,00                                                                                                                      | M-MA 16,10 | M-MA 16,20 | M-MA 16,30 | M-MA 16,40 | M-MA 16,50 | M-MA 16,60 | M-MA 16,70 | M-MA 16,80 | M-MA 16,90 |
| 17,00 - 17,90                                        | M-MA 17,00                                                                                                                      | M-MA 17,10 | M-MA 17,20 | M-MA 17,30 | M-MA 17,40 | M-MA 17,50 | M-MA 17,60 | M-MA 17,70 | M-MA 17,80 | M-MA 17,90 |
| 18,00 - 18,90                                        | M-MA 18,00                                                                                                                      | M-MA 18,10 | M-MA 18,20 | M-MA 18,30 | M-MA 18,40 | M-MA 18,50 | M-MA 18,60 | M-MA 18,70 | M-MA 18,80 | M-MA 18,90 |
| 19,00 - 19,90                                        | M-MA 19,00                                                                                                                      | M-MA 19,10 | M-MA 19,20 | M-MA 19,30 | M-MA 19,40 | M-MA 19,50 | M-MA 19,60 | M-MA 19,70 | M-MA 19,80 | M-MA 19,90 |
| 20,00 - 20,90                                        | M-MA 20,00                                                                                                                      | M-MA 20,10 | M-MA 20,20 | M-MA 20,30 | M-MA 20,40 | M-MA 20,50 | M-MA 20,60 | M-MA 20,70 | M-MA 20,80 | M-MA 20,90 |
| 21,00 - 21,90                                        | M-MA 21,00                                                                                                                      | M-MA 21,10 | M-MA 21,20 | M-MA 21,30 | M-MA 21,40 | M-MA 21,50 | M-MA 21,60 | M-MA 21,70 | M-MA 21,80 | M-MA 21,90 |
| 22,00 - 22,90                                        | M-MA 22,00                                                                                                                      | M-MA 22,10 | M-MA 22,20 | M-MA 22,30 | M-MA 22,40 | M-MA 22,50 | M-MA 22,60 | M-MA 22,70 | M-MA 22,80 | M-MA 22,90 |
| 23,00 - 23,90                                        | M-MA 23,00                                                                                                                      | M-MA 23,10 | M-MA 23,20 | M-MA 23,30 | M-MA 23,40 | M-MA 23,50 | M-MA 23,60 | M-MA 23,70 | M-MA 23,80 | M-MA 23,90 |
| 24,00 - 24,90                                        | M-MA 24,00                                                                                                                      | M-MA 24,10 | M-MA 24,20 | M-MA 24,30 | M-MA 24,40 | M-MA 24,50 | M-MA 24,60 | M-MA 24,70 | M-MA 24,80 | M-MA 24,90 |
| 25,00 - 25,90                                        | M-MA 25,00                                                                                                                      | M-MA 25,10 | M-MA 25,20 | M-MA 25,30 | M-MA 25,40 | M-MA 25,50 | M-MA 25,60 | M-MA 25,70 | M-MA 25,80 | M-MA 25,90 |
| 26,00 - 26,90                                        | M-MA 26,00                                                                                                                      | M-MA 26,10 | M-MA 26,20 | M-MA 26,30 | M-MA 26,40 | M-MA 26,50 | M-MA 26,60 | M-MA 26,70 | M-MA 26,80 | M-MA 26,90 |
| 27,00 - 27,90                                        | M-MA 27,00                                                                                                                      | M-MA 27,10 | M-MA 27,20 | M-MA 27,30 | M-MA 27,40 | M-MA 27,50 | M-MA 27,60 | M-MA 27,70 | M-MA 27,80 | M-MA 27,90 |
| 28,00 - 28,90                                        | M-MA 28,00                                                                                                                      | M-MA 28,10 | M-MA 28,20 | M-MA 28,30 | M-MA 28,40 | M-MA 28,50 | M-MA 28,60 | M-MA 28,70 | M-MA 28,80 | M-MA 28,90 |
| 29,00 - 29,90                                        | M-MA 29,00                                                                                                                      | M-MA 29,10 | M-MA 29,20 | M-MA 29,30 | M-MA 29,40 | M-MA 29,50 | M-MA 29,60 | M-MA 29,70 | M-MA 29,80 | M-MA 29,90 |
| 30,00 - 30,90                                        | M-MA 30,00                                                                                                                      | M-MA 30,10 | M-MA 30,20 | M-MA 30,30 | M-MA 30,40 | M-MA 30,50 | M-MA 30,60 | M-MA 30,70 | M-MA 30,80 | M-MA 30,90 |
| 31,00 - 31,90                                        | M-MA 31,00                                                                                                                      | M-MA 31,10 | M-MA 31,20 | M-MA 31,30 | M-MA 31,40 | M-MA 31,50 | M-MA 31,60 | M-MA 31,70 | M-MA 31,80 | M-MA 31,90 |
| 32,00 - 32,90                                        | M-MA 32,00                                                                                                                      | M-MA 32,10 | M-MA 32,20 | M-MA 32,30 | M-MA 32,40 | M-MA 32,50 | M-MA 32,60 | M-MA 32,70 | M-MA 32,80 | M-MA 32,90 |
| 33,00 - 33,90                                        | M-MA 33,00                                                                                                                      | M-MA 33,10 | M-MA 33,20 | M-MA 33,30 | M-MA 33,40 | M-MA 33,50 | M-MA 33,60 | M-MA 33,70 | M-MA 33,80 | M-MA 33,90 |

Bestellbeispiel / Orderexample: M-MA 10,00 TIALN



M-SA/QS.. TIALN  
mit Zentrierspitze  
with centercorner

**Mindestabnahme: 2Stk. je Durchmesser**  
Minimum purchase: 2pcs per diameter



180°

| Durchmesser-<br>bereich d1<br>Working<br>diameter d1 | Bestell-Nummern für HM-Wechselschneiden für die Arbeitsdurchmesser (mm)<br>Ordernumber for HM-Inserts with Workingdiameter (mm) |
|------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| 10,00                                                | M-SA/QS 10,00                                                                                                                   |
| 11,00                                                | M-SA/QS 11,00                                                                                                                   |
| 13,00                                                | M-SA/QS 13,00                                                                                                                   |
| 15,00                                                | M-SA/QS 15,00                                                                                                                   |
| 18,00                                                | M-SA/QS 18,00                                                                                                                   |
| 20,00                                                | M-SA/QS 20,00                                                                                                                   |
| 22,00                                                | M-SA/QS 22,00                                                                                                                   |
| 24,00                                                | M-SA/QS 24,00                                                                                                                   |
| 26,00                                                | M-SA/QS 26,00                                                                                                                   |
| 30,00                                                | M-SA/QS 30,00                                                                                                                   |
| 33,00                                                | M-SA/QS 33,00                                                                                                                   |

Bestellbeispiel / Orderexample: M-SA/QS 10,00 TIALN

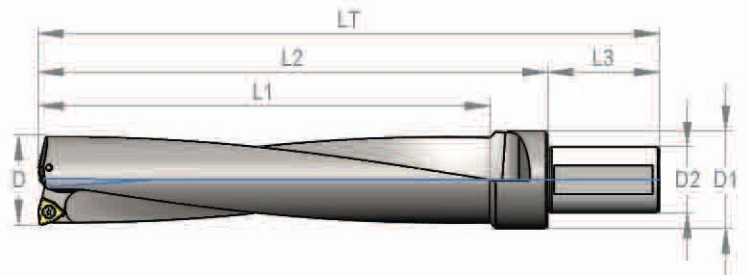
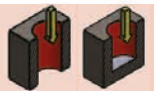
E

## HM-Qualitäten HM-Grades

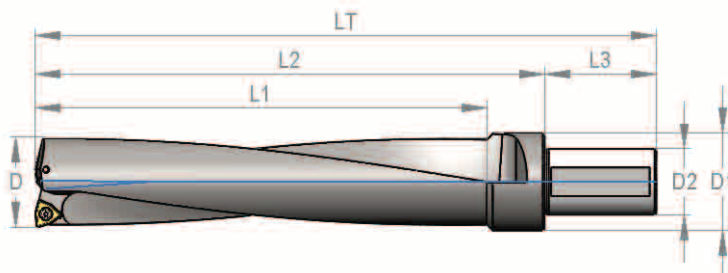
| Schritzhgeschwindigkeit - Verschleisssteiligkeit / cutting speed - wear resistance |    |    |    |    |    |    |    |    |    |    |             |    |    |    |             |    |    |    |    |             |    |    |    |    |                |    |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------------------------------------------------------------|----|----|----|----|----|----|----|----|----|----|-------------|----|----|----|-------------|----|----|----|----|-------------|----|----|----|----|----------------|----|----|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Vorschub - Zähligkeit / advance-thrughness                                         |    |    |    |    |    |    |    |    |    |    |             |    |    |    |             |    |    |    |    |             |    |    |    |    |                |    |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| P                                                                                  |    |    |    |    |    |    |    |    |    |    | M           |    |    |    | K           |    |    |    |    | N           |    |    |    |    | S              |    |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 10                                                                                 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 10          | 15 | 20 | 25 | 05          | 10 | 15 | 20 | 25 | 05          | 10 | 15 | 20 | 25 | 10             | 20 | 30 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| M-MI..TIALN                                                                        |    |    |    |    |    |    |    |    |    |    | M-MI..TIALN |    |    |    |             |    |    |    |    | M-MI..TIALN |    |    |    |    | M-QS..TIALN    |    |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                    |    |    |    |    |    |    |    |    |    |    |             |    |    |    |             |    |    |    |    |             |    |    |    |    |                |    |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                    |    |    |    |    |    |    |    |    |    |    |             |    |    |    |             |    |    |    |    |             |    |    |    |    |                |    |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                    |    |    |    |    |    |    |    |    |    |    |             |    |    |    |             |    |    |    |    |             |    |    |    |    |                |    |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                    |    |    |    |    |    |    |    |    |    |    |             |    |    |    |             |    |    |    |    |             |    |    |    |    |                |    |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| M-QS..TIALN                                                                        |    |    |    |    |    |    |    |    |    |    |             |    |    |    | M-MI..TIALN |    |    |    |    |             |    |    |    |    | M-QS..TIALN    |    |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                    |    |    |    |    |    |    |    |    |    |    |             |    |    |    |             |    |    |    |    |             |    |    |    |    |                |    |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                    |    |    |    |    |    |    |    |    |    |    |             |    |    |    |             |    |    |    |    |             |    |    |    |    |                |    |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                    |    |    |    |    |    |    |    |    |    |    |             |    |    |    |             |    |    |    |    |             |    |    |    |    |                |    |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                    |    |    |    |    |    |    |    |    |    |    |             |    |    |    |             |    |    |    |    |             |    |    |    |    |                |    |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| M-SI..TIALN                                                                        |    |    |    |    |    |    |    |    |    |    |             |    |    |    |             |    |    |    |    |             |    |    |    |    |                |    |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| M-SI/OS..TIALN                                                                     |    |    |    |    |    |    |    |    |    |    |             |    |    |    |             |    |    |    |    |             |    |    |    |    |                |    |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                    |    |    |    |    |    |    |    |    |    |    |             |    |    |    | M-SI..TIALN |    |    |    |    |             |    |    |    |    | M-SI/OS..TIALN |    |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                    |    |    |    |    |    |    |    |    |    |    |             |    |    |    |             |    |    |    |    |             |    |    |    |    |                |    |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                    |    |    |    |    |    |    |    |    |    |    |             |    |    |    |             |    |    |    |    |             |    |    |    |    |                |    |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                    |    |    |    |    |    |    |    |    |    |    |             |    |    |    |             |    |    |    |    |             |    |    |    |    |                |    |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                    |    |    |    |    |    |    |    |    |    |    |             |    |    |    |             |    |    |    |    |             |    |    |    |    |                |    |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                    |    |    |    |    |    |    |    |    |    |    |             |    |    |    |             |    |    |    |    |             |    |    |    |    |                |    |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                    |    |    |    |    |    |    |    |    |    |    |             |    |    |    |             |    |    |    |    |             |    |    |    |    |                |    |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|                                     |   |       |                                                          |
|-------------------------------------|---|-------|----------------------------------------------------------|
| Stahl<br>Steel                      | P | 10    | M-MI..TIALN, M-QS..TIALN,<br>M-SI..TIALN, M-SI/OS..TIALN |
|                                     |   | 20    |                                                          |
|                                     |   | 30    |                                                          |
|                                     |   | 35    |                                                          |
| Rostfreier Stahl<br>Stainless steel | M | 10    | M-MI..TIALN, M-QS..TIALN,<br>M-SI..TIALN, M-SI/OS..TIALN |
|                                     |   | 15    |                                                          |
|                                     |   | 20    | M-MI..TIALN, M-QS..TIALN,<br>M-SI..TIALN, M-SI/OS..TIALN |
|                                     |   | 25    |                                                          |
| Guss<br>Cast iron                   | K | 10-15 |                                                          |
|                                     |   | 20-25 | M-MI..TIALN, M-QS..TIALN,<br>M-SI..TIALN, M-SI/OS..TIALN |
| Leichtmetall<br>Light alloys        | N | 10-15 | M-MI..TIALN, M-MA..TIALN, M-SA/OS..TIALN                 |
|                                     |   | 20-25 | M-MI..TIALN, M-MA..TIALN, M-SA/OS..TIALN                 |
|                                     |   | 10-15 |                                                          |
|                                     |   | 20-25 |                                                          |
| Exotische Materialien<br>Exotics    | S | 10    | M-QS..TIALN,<br>M-SI/OS..TIALN                           |
|                                     |   | 20    |                                                          |
|                                     |   | 30    |                                                          |
|                                     |   |       |                                                          |

|         |                                  |
|---------|----------------------------------|
| M-MI    | TIALN-beschichtet / TIALN-coated |
| M-QS    | TIALN-beschichtet / TIALN-coated |
| M-MA    | TIALN-beschichtet / TIALN-coated |
| M-SI    | TIALN-beschichtet / TIALN-coated |
| M-SI/OS | TIALN-beschichtet / TIALN-coated |
| M-MI    | gefast / faced                   |
| M-QS    | gefast / faced                   |
| M-MA    | ungefast / unfaced               |
| M-SI    | gefast / faced                   |
| M-SI/OS | gefast / faced                   |



| Bestell-Nr.:<br>Order | Abmessungen / Dimension (mm) |    |    |       |      |       |    |      | Wendeplatte<br>Insert  | Schraube<br>Screw  | Schlüssel<br>Key  |
|-----------------------|------------------------------|----|----|-------|------|-------|----|------|-----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
|                       | D                            | D1 | D2 | LT    | L1   | L2    | L3 | f    |                                                                                                           |                                                                                                       |                                                                                                      |
| 6025 TD 160-30R       | 16                           | 32 | 25 | 134   | 49   | 80    | 54 | 0,08 | WC.T<br>030208..                                                                                          | M-VT25-2<br>1,2 Nm                                                                                    | M-BT08                                                                                               |
| 6025 TD 165-30R       | 16,5                         | 32 | 25 | 135,5 | 50,5 | 81,5  | 54 | 0,08 |                                                                                                           |                                                                                                       |                                                                                                      |
| 6025 TD 170-30R       | 17                           | 32 | 25 | 137   | 52   | 83    | 54 | 0,08 |                                                                                                           |                                                                                                       |                                                                                                      |
| 6025 TD 175-30R       | 17,5                         | 32 | 25 | 138,5 | 54,5 | 84,5  | 54 | 0,08 |                                                                                                           |                                                                                                       |                                                                                                      |
| 6025 TD 180-30R       | 18                           | 32 | 25 | 140   | 56   | 86    | 54 | 0,08 |                                                                                                           |                                                                                                       |                                                                                                      |
| 6025 TD 185-30R       | 18,5                         | 32 | 25 | 141,5 | 57,5 | 87,5  | 54 | 0,08 |                                                                                                           |                                                                                                       |                                                                                                      |
| 6025 TD 190-30R       | 19                           | 32 | 25 | 143   | 59   | 89    | 54 | 0,08 |                                                                                                           |                                                                                                       |                                                                                                      |
| 6025 TD 195-30R       | 19,5                         | 32 | 25 | 144,5 | 60,5 | 90,5  | 54 | 0,08 |                                                                                                           |                                                                                                       |                                                                                                      |
| 6025 TD 200-30R       | 20                           | 32 | 25 | 146   | 62   | 92    | 54 | 0,08 |                                                                                                           |                                                                                                       |                                                                                                      |
| 6025 TD 205-30R       | 20,5                         | 32 | 25 | 147,5 | 63,5 | 93,5  | 54 | 0,08 |                                                                                                           |                                                                                                       |                                                                                                      |
| 6025 TD 210-30R       | 21                           | 32 | 25 | 149   | 65   | 95    | 54 | 0,1  | WC.T<br>040208..                                                                                          | M-VT25<br>1,2 Nm                                                                                      | M-BT08                                                                                               |
| 6025 TD 215-30R       | 21,5                         | 32 | 25 | 150,5 | 66,5 | 96,5  | 54 | 0,1  |                                                                                                           |                                                                                                       |                                                                                                      |
| 6025 TD 220-30R       | 22                           | 32 | 25 | 152   | 68   | 98    | 54 | 0,1  |                                                                                                           |                                                                                                       |                                                                                                      |
| 6025 TD 225-30R       | 22,5                         | 32 | 25 | 153,5 | 69,5 | 99,5  | 54 | 0,1  |                                                                                                           |                                                                                                       |                                                                                                      |
| 6025 TD 230-30R       | 23                           | 32 | 25 | 155   | 71   | 101   | 54 | 0,1  |                                                                                                           |                                                                                                       |                                                                                                      |
| 6025 TD 235-30R       | 23,5                         | 32 | 25 | 156,5 | 72,5 | 102,5 | 54 | 0,1  |                                                                                                           |                                                                                                       |                                                                                                      |
| 6025 TD 240-30R       | 24                           | 32 | 25 | 158   | 74   | 104   | 54 | 0,1  |                                                                                                           |                                                                                                       |                                                                                                      |
| 6025 TD 245-30R       | 24,5                         | 32 | 25 | 159,5 | 75,5 | 105,5 | 54 | 0,1  |                                                                                                           |                                                                                                       |                                                                                                      |
| 6025 TD 250-30R       | 25                           | 32 | 25 | 161   | 77   | 107   | 54 | 0,1  |                                                                                                           |                                                                                                       |                                                                                                      |
| 6025 TD 255-30R       | 25,5                         | 32 | 25 | 162,5 | 78,5 | 108,5 | 54 | 0,1  |                                                                                                           |                                                                                                       |                                                                                                      |
| 6025 TD 260-30R       | 26                           | 32 | 25 | 164   | 80   | 110   | 54 | 0,14 | WC.T<br>050308..                                                                                          | M-VT30<br>1,2 Nm                                                                                      | M-BT08                                                                                               |
| 6025 TD 265-30R       | 26,5                         | 32 | 25 | 165,5 | 81,5 | 111,5 | 54 | 0,14 |                                                                                                           |                                                                                                       |                                                                                                      |
| 6025 TD 270-30R       | 27                           | 32 | 25 | 167   | 83   | 113   | 54 | 0,14 |                                                                                                           |                                                                                                       |                                                                                                      |
| 6025 TD 280-30R       | 28                           | 32 | 25 | 170   | 86   | 116   | 54 | 0,14 |                                                                                                           |                                                                                                       |                                                                                                      |
| 6025 TD 290-30R       | 29                           | 32 | 25 | 173   | 89   | 119   | 54 | 0,14 |                                                                                                           |                                                                                                       |                                                                                                      |
| 6025 TD 300-30R       | 30                           | 49 | 32 | 180   | 92   | 122   | 58 | 0,14 |                                                                                                           |                                                                                                       |                                                                                                      |
| 6025 TD 310-30R       | 31                           | 49 | 32 | 183   | 95   | 125   | 58 | 0,14 |                                                                                                           |                                                                                                       |                                                                                                      |
| 6025 TD 320-30R       | 32                           | 49 | 32 | 186   | 98   | 128   | 58 | 0,14 |                                                                                                           |                                                                                                       |                                                                                                      |
| 6025 TD 330-30R       | 33                           | 49 | 32 | 189   | 101  | 131   | 58 | 0,14 |                                                                                                           |                                                                                                       |                                                                                                      |
| 6025 TD 340-30R       | 34                           | 49 | 32 | 192   | 104  | 134   | 58 | 0,14 | WC.T<br>06T308..                                                                                          | M-VT35<br>3,0 Nm                                                                                      | M-BT15                                                                                               |
| 6025 TD 350-30R       | 35                           | 49 | 32 | 195   | 107  | 137   | 58 | 0,14 |                                                                                                           |                                                                                                       |                                                                                                      |
| 6025 TD 360-30R       | 36                           | 49 | 32 | 198   | 110  | 140   | 58 | 0,14 |                                                                                                           |                                                                                                       |                                                                                                      |
| 6025 TD 370-30R       | 37                           | 49 | 32 | 201   | 113  | 143   | 58 | 0,14 |                                                                                                           |                                                                                                       |                                                                                                      |
| 6025 TD 380-30R       | 38                           | 49 | 32 | 204   | 116  | 146   | 58 | 0,14 |                                                                                                           |                                                                                                       |                                                                                                      |
| 6025 TD 390-30R       | 39                           | 49 | 32 | 207   | 119  | 149   | 58 | 0,14 |                                                                                                           |                                                                                                       |                                                                                                      |
| 6025 TD 400-30R       | 40                           | 49 | 32 | 210   | 122  | 152   | 58 | 0,14 |                                                                                                           |                                                                                                       |                                                                                                      |
| 6025 TD 410-30R       | 41                           | 49 | 32 | 213   | 125  | 155   | 58 | 0,14 |                                                                                                           |                                                                                                       |                                                                                                      |
| 6025 TD 420-30R       | 42                           | 49 | 32 | 216   | 128  | 158   | 58 | 0,18 | WC.T<br>080408..                                                                                          | M-VT41<br>3,0 Nm                                                                                      | M-BT15                                                                                               |
| 6025 TD 430-30R       | 43                           | 49 | 32 | 219   | 131  | 161   | 58 | 0,18 |                                                                                                           |                                                                                                       |                                                                                                      |
| 6025 TD 440-30R       | 44                           | 49 | 32 | 222   | 134  | 164   | 58 | 0,18 |                                                                                                           |                                                                                                       |                                                                                                      |
| 6025 TD 450-30R       | 45                           | 59 | 40 | 240   | 137  | 172   | 58 | 0,18 |                                                                                                           |                                                                                                       |                                                                                                      |
| 6025 TD 460-30R       | 46                           | 59 | 40 | 243   | 140  | 175   | 58 | 0,18 |                                                                                                           |                                                                                                       |                                                                                                      |
| 6025 TD 470-30R       | 47                           | 59 | 40 | 246   | 143  | 178   | 58 | 0,18 |                                                                                                           |                                                                                                       |                                                                                                      |
| 6025 TD 480-30R       | 48                           | 59 | 40 | 249   | 146  | 181   | 58 | 0,18 |                                                                                                           |                                                                                                       |                                                                                                      |
| 6025 TD 490-30R       | 49                           | 59 | 40 | 252   | 149  | 184   | 58 | 0,18 |                                                                                                           |                                                                                                       |                                                                                                      |
| 6025 TD 500-30R       | 50                           | 59 | 40 | 255   | 152  | 187   | 58 | 0,18 |                                                                                                           |                                                                                                       |                                                                                                      |
| 6025 TD 510-30R       | 51                           | 59 | 40 | 258   | 155  | 190   | 58 | 0,18 |                                                                                                           |                                                                                                       |                                                                                                      |
| 6025 TD 520-30R       | 52                           | 59 | 40 | 261   | 158  | 193   | 58 | 0,18 |                                                                                                           |                                                                                                       |                                                                                                      |
| 6025 TD 530-30R       | 53                           | 59 | 40 | 264   | 161  | 196   | 58 | 0,18 |                                                                                                           |                                                                                                       |                                                                                                      |
| 6025 TD 540-30R       | 54                           | 59 | 40 | 267   | 164  | 199   | 58 | 0,18 |                                                                                                           |                                                                                                       |                                                                                                      |
| 6025 TD 550-30R       | 55                           | 59 | 40 | 270   | 167  | 202   | 58 | 0,18 |                                                                                                           |                                                                                                       |                                                                                                      |
| 6025 TD 560-30R       | 56                           | 59 | 40 | 273   | 170  | 205   | 58 | 0,18 |                                                                                                           |                                                                                                       |                                                                                                      |
| 6025 TD 570-30R       | 57                           | 59 | 40 | 276   | 173  | 208   | 58 | 0,18 |                                                                                                           |                                                                                                       |                                                                                                      |



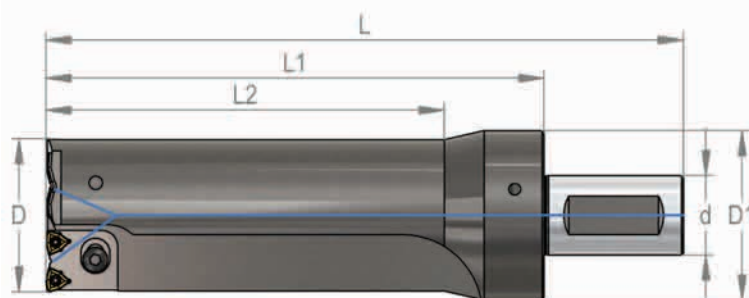
| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |       |       |       |    |      | Wendeplat-<br>te<br>Inst.<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|----|----|-------|-------|-------|----|------|------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
|                             | D                            | D1 | D2 | LT    | L1    | L2    | L3 | f    |                                                                                                                  |                                                                                                          |                                                                                                         |
| 6025 TD 160-50R             | 16                           | 32 | 25 | 164   | 80    | 110   | 54 | 0,08 | WC.T<br>030208..                                                                                                 | M-VT25-2<br>1,2 Nm                                                                                       | M-BT08                                                                                                  |
| 6025 TD 170-50R             | 17                           | 32 | 25 | 170   | 85    | 116   | 54 | 0,08 |                                                                                                                  |                                                                                                          |                                                                                                         |
| 6025 TD 175-50R             | 17,5                         | 32 | 25 | 172   | 87,5  | 118   | 54 | 0,08 |                                                                                                                  |                                                                                                          |                                                                                                         |
| 6025 TD 180-50R             | 18                           | 32 | 25 | 174   | 90    | 120   | 54 | 0,08 |                                                                                                                  |                                                                                                          |                                                                                                         |
| 6025 TD 190-50R             | 19                           | 32 | 25 | 179   | 95    | 125   | 54 | 0,08 |                                                                                                                  |                                                                                                          |                                                                                                         |
| 6025 TD 200-50R             | 20                           | 32 | 25 | 184   | 100   | 130   | 54 | 0,08 |                                                                                                                  |                                                                                                          |                                                                                                         |
| 6025 TD 210-50R             | 21                           | 32 | 25 | 189   | 105   | 135   | 54 | 0,1  | WC.T<br>040208..                                                                                                 | M-VT25<br>1,2 Nm                                                                                         | M-BT08                                                                                                  |
| 6025 TD 215-50R             | 21,5                         | 32 | 25 | 122   | 107,5 | 137,5 | 54 | 0,1  |                                                                                                                  |                                                                                                          |                                                                                                         |
| 6025 TD 220-50R             | 22                           | 32 | 25 | 194   | 110   | 140   | 54 | 0,1  |                                                                                                                  |                                                                                                          |                                                                                                         |
| 6025 TD 225-50R             | 22,5                         | 32 | 25 | 196,5 | 112,5 | 142,5 | 54 | 0,1  |                                                                                                                  |                                                                                                          |                                                                                                         |
| 6025 TD 230-50R             | 23                           | 32 | 25 | 199   | 115   | 145   | 54 | 0,1  |                                                                                                                  |                                                                                                          |                                                                                                         |
| 6025 TD 240-50R             | 24                           | 32 | 25 | 204   | 120   | 150   | 54 | 0,1  |                                                                                                                  |                                                                                                          |                                                                                                         |
| 6025 TD 250-50R             | 25                           | 32 | 25 | 209   | 125   | 155   | 54 | 0,1  | WC.T<br>050308..                                                                                                 | M-VT30<br>1,2 Nm                                                                                         | M-BT08                                                                                                  |
| 6025 TD 260-50R             | 26                           | 32 | 25 | 214   | 130   | 160   | 54 | 0,14 |                                                                                                                  |                                                                                                          |                                                                                                         |
| 6025 TD 270-50R             | 27                           | 32 | 25 | 219   | 135   | 165   | 54 | 0,14 |                                                                                                                  |                                                                                                          |                                                                                                         |
| 6025 TD 280-50R             | 28                           | 32 | 25 | 224   | 140   | 170   | 54 | 0,14 |                                                                                                                  |                                                                                                          |                                                                                                         |
| 6025 TD 290-50R             | 29                           | 32 | 25 | 229   | 145   | 175   | 54 | 0,14 |                                                                                                                  |                                                                                                          |                                                                                                         |
| 6025 TD 300-50R             | 30                           | 49 | 32 | 238   | 150   | 180   | 58 | 0,14 | WC.T<br>06T308..                                                                                                 | M-VT35<br>3,0 Nm                                                                                         | M-BT15                                                                                                  |
| 6025 TD 310-50R             | 31                           | 49 | 32 | 243   | 155   | 185   | 58 | 0,14 |                                                                                                                  |                                                                                                          |                                                                                                         |
| 6025 TD 320-50R             | 32                           | 49 | 32 | 248   | 160   | 190   | 58 | 0,14 |                                                                                                                  |                                                                                                          |                                                                                                         |
| 6025 TD 330-50R             | 33                           | 49 | 32 | 253   | 165   | 195   | 58 | 0,14 |                                                                                                                  |                                                                                                          |                                                                                                         |
| 6025 TD 340-50R             | 34                           | 49 | 32 | 258   | 170   | 200   | 58 | 0,14 |                                                                                                                  |                                                                                                          |                                                                                                         |
| 6025 TD 350-50R             | 35                           | 49 | 32 | 263   | 175   | 205   | 58 | 0,14 |                                                                                                                  |                                                                                                          |                                                                                                         |
| 6025 TD 360-50R             | 36                           | 49 | 32 | 268   | 180   | 210   | 58 | 0,14 |                                                                                                                  |                                                                                                          |                                                                                                         |
| 6025 TD 370-50R             | 37                           | 49 | 32 | 273   | 185   | 215   | 58 | 0,14 |                                                                                                                  |                                                                                                          |                                                                                                         |
| 6025 TD 380-50R             | 38                           | 49 | 32 | 278   | 190   | 220   | 58 | 0,14 |                                                                                                                  |                                                                                                          |                                                                                                         |
| 6025 TD 390-50R             | 39                           | 49 | 32 | 283   | 195   | 225   | 58 | 0,14 |                                                                                                                  |                                                                                                          |                                                                                                         |
| 6025 TD 400-50R             | 40                           | 49 | 32 | 288   | 200   | 230   | 58 | 0,14 |                                                                                                                  |                                                                                                          |                                                                                                         |
| 6025 TD 410-50R             | 41                           | 49 | 32 | 293   | 205   | 235   | 58 | 0,14 |                                                                                                                  |                                                                                                          |                                                                                                         |

E



## Lieferumfang ohne Innen- und Außenkassette

Scope of delivery without inner and outer cassette



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |                |     |     |     |                                                     |      | Kassetten<br>Cassettes |                 | Wendeplatte<br>Insert<br> |
|-----------------------------|------------------------------|----|----|----------------|-----|-----|-----|-----------------------------------------------------|------|------------------------|-----------------|--------------------------------------------------------------------------------------------------------------|
|                             | D                            | d  | D1 | Dmin -<br>Dmax | L   | L1  | L2  | Wendeplat-<br>tenanzahl<br>Complete<br>insert units | f    | Außen<br>outside       | Innen<br>inside |                                                                                                              |
| 6025 TD 700-25R             | 70                           | 40 | 80 | 69-72          | 278 | 210 | 140 | 4                                                   | 0,15 | M-BA70                 | M-BI70          | WC.T 06T308..                                                                                                |
| 6025 TD 800-25R             | 80                           | 40 | 80 | 78-81          | 318 | 250 | 200 | 4                                                   | 0,15 | M-BA80                 | M-BI80          |                                                                                                              |

Bestellbeispiel / Order example: 6025 TD 700-25R

| Ersatzteile<br>Spare parts | Kassette Außen<br>Cassette outside                                                | Kassette Innen<br>Cassette inside                                                 | Spannschraube für<br>Wendeplatte<br>Insert clamping<br>screw                      | Klemmschraube<br>für Kassette<br>Clamping screw<br>for cassette                    | Justierschraube f.<br>Feineinstellung<br>Adjustingscrew for<br>fine setting         | Torxdreher<br>Key                                                                   |
|----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                            |  |  |  |  |  |  |
|                            | <b>TD 700-25R</b><br>M-BA70                                                       | M-BI70                                                                            | M-VT35                                                                            | M-BL4                                                                              | M-M4                                                                                | M-BT15<br>M-BT08                                                                    |
| <b>TD 800-25R</b>          | M-BA80                                                                            | M-BI80                                                                            |                                                                                   |                                                                                    |                                                                                     |                                                                                     |

Körper und Einbauteile sind im Lieferumfang enthalten.

Durch die radiale einstellbare Außenkassette lässt sich der Bohrdurchmesser +3mm vergrößern.

Weitere Größen auf Anfrage.

Body and chassis parts are include.

By the radially adjustable outside cassette can be the correct bore diameter +3mm.

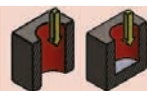
Further sizes on request.

M-BT08 = 1,2 Nm  
M-BT15 = 3,0 Nm

|                                                                                                                                                                                                          | Form Figure                                                                         | Abmessungen Dimensions |       |      |      |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|-------|------|------|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                                                                                                                          |                                                                                     | l                      | d     | s    | d1   | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>WCMT .. ALU                                                                                                        |  | 3,46                   | 5,56  | 2,38 | 2,50 | 0,8 | WCGT 030208 ALU            | M-VT25   | M-BT08    |                                         | ■   |                                     |       |       |       |       | □     |
|                                                                                                                                                                                                          |                                                                                     | 3,99                   | 6,35  | 2,38 | 2,80 | 0,8 | WCGT 040208 ALU            | M-VT25   | M-BT08    |                                         | ■   |                                     |       |       |       |       | □     |
|                                                                                                                                                                                                          |                                                                                     | 5,07                   | 7,94  | 3,18 | 3,40 | 0,8 | WCGT 050308 ALU            | M-VT30   | M-BT08    |                                         | ■   |                                     |       |       |       |       | □     |
|                                                                                                                                                                                                          |                                                                                     | 6,14                   | 9,52  | 3,97 | 3,80 | 0,8 | WCGT 06T308 ALU            | M-VT35   | M-BT15    |                                         | ■   |                                     |       |       |       |       | □     |
|                                                                                                                                                                                                          |                                                                                     | 8,14                   | 12,70 | 4,76 | 5,40 | 0,8 | WCGT 080408 ALU            | M-VT41   | M-BT15    |                                         | ■   |                                     |       |       |       |       | □     |
| <br>WCMT .. WG<br><br><br>WCMT .. WM |  | 3,46                   | 5,56  | 2,38 | 2,50 | 0,8 | WCMT 030208 WG             | M-VT25   | M-BT 08   |                                         |     |                                     | ■     |       |       |       |       |
|                                                                                                                                                                                                          |                                                                                     | 3,46                   | 5,56  | 2,38 | 2,50 | 0,8 | WCMT 030208 WM             | M-VT25   | M-BT 08   |                                         |     |                                     |       | ■     |       |       |       |
|                                                                                                                                                                                                          |                                                                                     | 3,99                   | 6,35  | 2,38 | 2,80 | 0,8 | WCMT 040208 WG             | M-VT25   | M-BT 08   |                                         |     |                                     | ■     |       |       |       |       |
|                                                                                                                                                                                                          |                                                                                     | 3,99                   | 6,35  | 2,38 | 2,80 | 0,4 | WCMT 040204 WM             | M-VT25   | M-BT 08   |                                         |     |                                     |       | ■     |       |       |       |
|                                                                                                                                                                                                          |                                                                                     | 3,99                   | 6,35  | 2,38 | 2,80 | 0,8 | WCMT 040208 WM             | M-VT25   | M-BT 08   |                                         |     |                                     |       | ■     |       |       |       |
|                                                                                                                                                                                                          |                                                                                     | 5,07                   | 7,94  | 3,18 | 3,40 | 0,8 | WCMT 050308 WG             | M-VT30   | M-BT 08   |                                         |     |                                     | ■     |       |       |       |       |
|                                                                                                                                                                                                          |                                                                                     | 6,14                   | 9,52  | 3,97 | 3,80 | 0,8 | WCMT 06T308 WG             | M-VT35   | M-BT 15   |                                         |     |                                     | ■     |       |       |       |       |
|                                                                                                                                                                                                          |                                                                                     | 6,14                   | 9,52  | 3,97 | 3,80 | 0,4 | WCMT 06T304 WM             | M-VT35   | M-BT 15   |                                         |     |                                     |       | ■     |       |       |       |
|                                                                                                                                                                                                          |                                                                                     | 6,14                   | 9,52  | 3,97 | 3,80 | 0,8 | WCMT 06T308 WM             | M-VT35   | M-BT 15   |                                         |     |                                     |       | ■     |       |       |       |
|                                                                                                                                                                                                          |                                                                                     | 8,14                   | 12,70 | 4,76 | 5,40 | 0,8 | WCMT 080408 WG             | M-VT41   | M-BT 15   |                                         |     |                                     | ■     |       |       |       |       |
|                                                                                                                                                                                                          |                                                                                     | 8,14                   | 12,70 | 4,76 | 5,40 | 1,2 | WCMT 080412 WG             | M-VT41   | M-BT 15   |                                         |     |                                     | ■     |       |       |       |       |
|                                                                                                                                                                                                          |                                                                                     | 8,14                   | 12,70 | 4,76 | 5,40 | 0,4 | WCMT 080404 WM             | M-VT41   | M-BT 15   |                                         |     |                                     |       | ■     |       |       |       |
|                                                                                                                                                                                                          |                                                                                     | 8,14                   | 12,70 | 4,76 | 5,40 | 0,8 | WCMT 080408 WM             | M-VT41   | M-BT 15   |                                         |     |                                     |       | ■     |       |       |       |
|                                                                                                                                                                                                          |                                                                                     | 8,14                   | 12,70 | 4,76 | 5,40 | 1,2 | WCMT 080412 WM             | M-VT41   | M-BT 15   |                                         |     |                                     |       | ■     |       |       |       |



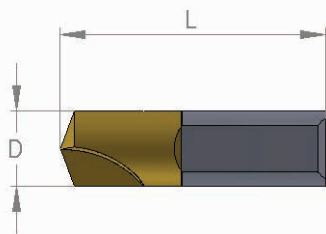
## Series 6025



| Vc<br>(m/min) |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | Öl         | Emulsion           | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|------------|--------------------|-----|---------|-----------|
|               | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK |            |                    |     |         |           |
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |            |                    |     |         |           |
| PTT20         |                   |     |             |                  | 200              | 200              | 125               | 125               |                   |                   |                   |                   |                   | 165             | 160             | 180   |       |                       |            | ■                  |     |         |           |
| PTT35         |                   |     |             |                  | 200              | 200              | 125               | 125               |                   |                   |                   |                   |                   | 165             | 160             | 180   |       |                       |            | ■                  |     |         |           |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| KTE20         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| CT28          |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| fz            | Tabelle           |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet | □ bedingt geeignet |     |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

## Zentrierbohrer für Bohrtyp 6026-TD Center drill for drill type 6026-TD

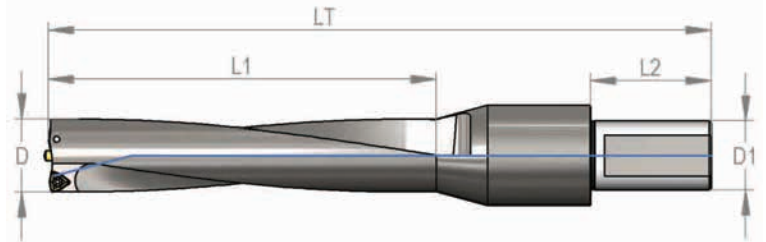
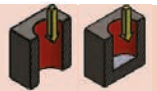


| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |                         |
|-----------------------------|------------------------------|----|----|-------------------------|
|                             | Von Ø bis Ø<br>From Ø to Ø   | D  | L  | Beschichtung<br>Coating |
| Z6-30                       | Ø25 - Ø30                    | 6  | 30 | TIN                     |
| Z8-35                       | Ø31 - Ø40                    | 8  | 35 | TIN                     |
| Z10-35                      | Ø41 - Ø50                    | 10 | 35 | TIN                     |
| Z12-38                      | Ø51 - Ø75                    | 12 | 38 | TIN                     |
| Z16-45                      | Ø75 - Ø80                    | 16 | 45 | TIN                     |

Bestellbeispiel / Order example: Z6-30

HSS-Zentrierbohrer mit TiN-Beschichtung

HSS-Center drill with TiN-Coating

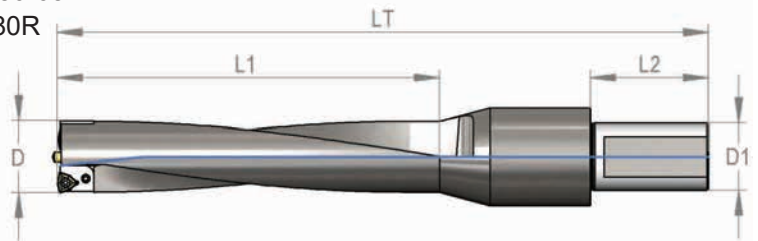


| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |     |    |       |     |    |     |     |    | Vorschub | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|-----|-----|----|-------|-----|----|-----|-----|----|----------|-----------------------|-------------------|------------------|
|                             | D                            | D1 | 5xD |     |    | 6,5xD |     |    | 8xD |     |    | f        |                       |                   |                  |
| 6026 TD 250-..R             | 25                           | 32 | 240 | 150 | 60 | 275   | 185 | 60 | 310 | 220 | 60 | 0,08     | WC.T 0302..           | M-VT25-2          | M-BT08           |
| 6026 TD 260-..R             | 26                           | 32 | 240 | 150 | 60 | 275   | 185 | 60 | 310 | 220 | 60 | 0,1      | WC.T 0402..           | M-VT25<br>1,2 Nm  | M-BT08           |
| 6026 TD 270-..R             | 27                           | 32 | 240 | 150 | 60 | 275   | 185 | 60 | 310 | 220 | 60 | 0,1      |                       |                   |                  |
| 6026 TD 280-..R             | 28                           | 32 | 240 | 150 | 60 | 275   | 185 | 60 | 310 | 220 | 60 | 0,1      |                       |                   |                  |
| 6026 TD 290-..R             | 29                           | 32 | 240 | 150 | 60 | 275   | 185 | 60 | 310 | 220 | 60 | 0,1      |                       |                   |                  |
| 6026 TD 300-..R             | 30                           | 32 | 240 | 150 | 60 | 275   | 185 | 60 | 310 | 220 | 60 | 0,1      |                       |                   |                  |
| 6026 TD 310-..R             | 31                           | 32 | 265 | 175 | 60 | 308   | 218 | 60 | 350 | 260 | 60 | 0,14     | WC.T 0503..           | M-VT30<br>1,2 Nm  | M-BT08           |
| 6026 TD 320-..R             | 32                           | 32 | 265 | 175 | 60 | 308   | 218 | 60 | 350 | 260 | 60 | 0,14     |                       |                   |                  |
| 6026 TD 330-..R             | 33                           | 32 | 265 | 175 | 60 | 308   | 218 | 60 | 350 | 260 | 60 | 0,14     |                       |                   |                  |
| 6026 TD 340-..R             | 34                           | 32 | 265 | 175 | 60 | 308   | 218 | 60 | 350 | 260 | 60 | 0,14     |                       |                   |                  |
| 6026 TD 350-..R             | 35                           | 32 | 265 | 175 | 60 | 308   | 218 | 60 | 350 | 260 | 60 | 0,14     |                       |                   |                  |
| 6026 TD 360-..R             | 36                           | 32 | 290 | 200 | 60 | 340   | 250 | 60 | 390 | 300 | 60 | 0,14     |                       |                   |                  |
| 6026 TD 370-..R             | 37                           | 32 | 290 | 200 | 60 | 340   | 250 | 60 | 390 | 300 | 60 | 0,14     |                       |                   |                  |
| 6026 TD 380-..R             | 38                           | 32 | 290 | 200 | 60 | 340   | 250 | 60 | 390 | 300 | 60 | 0,14     |                       |                   |                  |
| 6026 TD 390-..R             | 39                           | 32 | 290 | 200 | 60 | 340   | 250 | 60 | 390 | 300 | 60 | 0,14     |                       |                   |                  |
| 6026 TD 400-..R             | 40                           | 32 | 290 | 200 | 60 | 340   | 250 | 60 | 390 | 300 | 60 | 0,14     |                       |                   |                  |

Bestellbeispiel 5xD / Ordere# mple 5xD : 6026 TD 250-50R

Bestellbeispiel 6,5xD / Ordere# mple 6,5xD : 6026 TD 250-65R

Bestellbeispiel 8xD / Ordere# mple 8xD : 6026 TD 250-80R



## Lieferumfang ohne Innen- und Außenkassette

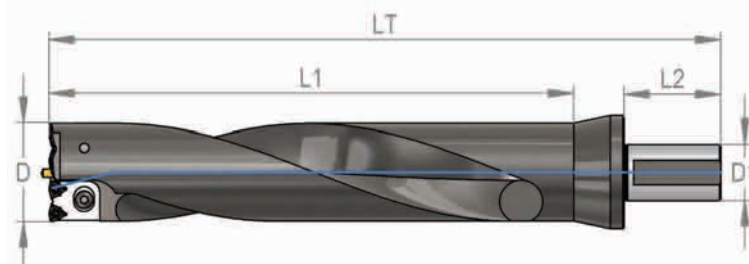
Scope of delivery without inner and outer cassette

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |     |    |       |     |    |     |     |    | Vorschub | Kassette<br>innen<br>Cassette<br>inside | Kassette<br>außen<br>Cassette<br>outside | Wendeplatte<br>Insert |
|-----------------------------|------------------------------|----|-----|-----|----|-------|-----|----|-----|-----|----|----------|-----------------------------------------|------------------------------------------|-----------------------|
|                             | D                            | D1 | 5xD |     |    | 6,5xD |     |    | 8xD |     |    | f        |                                         |                                          |                       |
| 6026 TD 410-..R             | 41                           | 40 | 330 | 225 | 70 | 388   | 283 | 70 | 445 | 340 | 70 | 0,14     | M-BI4145                                | M-BA41                                   | WC.T 06T3..           |
| 6026 TD 420-..R             | 42                           | 40 | 330 | 225 | 70 | 388   | 283 | 70 | 445 | 340 | 70 | 0,14     | M-BI4145                                | M-BA42                                   |                       |
| 6026 TD 430-..R             | 43                           | 40 | 330 | 225 | 70 | 388   | 283 | 70 | 445 | 340 | 70 | 0,14     | M-BI4145                                | M-BA43                                   |                       |
| 6026 TD 440-..R             | 44                           | 40 | 330 | 225 | 70 | 388   | 283 | 70 | 445 | 340 | 70 | 0,14     | M-BI4145                                | M-BA44                                   |                       |
| 6026 TD 450-..R             | 45                           | 40 | 330 | 225 | 70 | 388   | 283 | 70 | 445 | 340 | 70 | 0,14     | M-BI4145                                | M-BA45                                   |                       |
| 6026 TD 460-..R             | 46                           | 40 | 355 | 250 | 70 | 420   | 315 | 70 | 485 | 380 | 70 | 0,14     | M-BI4650                                | M-BA46                                   |                       |
| 6026 TD 470-..R             | 47                           | 40 | 355 | 250 | 70 | 420   | 315 | 70 | 485 | 380 | 70 | 0,14     | M-BI4650                                | M-BA47                                   |                       |
| 6026 TD 480-..R             | 48                           | 40 | 355 | 250 | 70 | 420   | 315 | 70 | 485 | 380 | 70 | 0,14     | M-BI4650                                | M-BA48                                   |                       |
| 6026 TD 490-..R             | 49                           | 40 | 355 | 250 | 70 | 420   | 315 | 70 | 485 | 380 | 70 | 0,14     | M-BI4650                                | M-BA49                                   |                       |
| 6026 TD 500-..R             | 50                           | 40 | 355 | 250 | 70 | 420   | 315 | 70 | 485 | 380 | 70 | 0,14     | M-BI4650                                | M-BA50                                   |                       |
| 6026 TD 510-..R             | 51                           | 40 | 355 | 250 | 70 | 420   | 315 | 70 | 485 | 380 | 70 | 0,18     | M-BI5155                                | M-BA51                                   | WC.T 0804..           |
| 6026 TD 520-..R             | 52                           | 40 | 380 | 275 | 70 | 453   | 348 | 70 | 525 | 420 | 70 | 0,18     | M-BI5155                                | M-BA52                                   |                       |
| 6026 TD 530-..R             | 53                           | 40 | 380 | 275 | 70 | 453   | 348 | 70 | 525 | 420 | 70 | 0,18     | M-BI5155                                | M-BA53                                   |                       |
| 6026 TD 540-..R             | 54                           | 40 | 380 | 275 | 70 | 453   | 348 | 70 | 525 | 420 | 70 | 0,18     | M-BI5155                                | M-BA54                                   |                       |
| 6026 TD 550-..R             | 55                           | 40 | 380 | 275 | 70 | 453   | 348 | 70 | 525 | 420 | 70 | 0,18     | M-BI5155                                | M-BA55                                   |                       |
| 6026 TD 560-..R             | 56                           | 40 | 405 | 300 | 70 | 485   | 380 | 70 | 565 | 460 | 70 | 0,18     | M-BI5659                                | M-BA56                                   |                       |
| 6026 TD 570-..R             | 57                           | 40 | 405 | 300 | 70 | 485   | 380 | 70 | 565 | 460 | 70 | 0,18     | M-BI5659                                | M-BA57                                   |                       |
| 6026 TD 580-..R             | 58                           | 40 | 405 | 300 | 70 | 485   | 380 | 70 | 565 | 460 | 70 | 0,18     | M-BI5659                                | M-BA58                                   |                       |
| 6026 TD 590-..R             | 59                           | 40 | 405 | 300 | 70 | 485   | 380 | 70 | 565 | 460 | 70 | 0,18     | M-BI5659                                | M-BA59                                   |                       |

Bestellbeispiel 5xD / Ordere# mple 5xD : 6026 TD 410-50R

Bestellbeispiel 6,5xD / Ordere# mple 6,5xD : 6026 TD 410-65R

Bestellbeispiel 8xD / Ordere# mple 8xD : 6026 TD 410-80R



## Lieferumfang ohne Innen- und Außenkassette

Scope of delivery without inner and outer cassette

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |     |    |       |     |    |     |     |    | Vorschub | Kassette<br>innen<br>Cassette<br>inside | Kassette<br>außen<br>Cassette<br>outside | Wendeplatte<br>Insert<br> |
|-----------------------------|------------------------------|----|-----|-----|----|-------|-----|----|-----|-----|----|----------|-----------------------------------------|------------------------------------------|--------------------------------------------------------------------------------------------------------------|
|                             | D                            | D1 | 5xD |     |    | 6,5xD |     |    | 8xD |     |    | f        |                                         |                                          |                                                                                                              |
| 6026 TD 600-..R             | 60-65                        | 40 | 430 | 325 | 70 | 528   | 423 | 70 | 625 | 520 | 70 | 0,14     | M-BI6065                                | M-BA6065                                 | WC.T 0503..                                                                                                  |
| 6026 TD 650-..R             | 65-70                        | 40 | 455 | 350 | 70 | 560   | 455 | 70 | 665 | 560 | 70 | 0,14     | M-BI6570                                | M-BA6570                                 |                                                                                                              |
| 6026 TD 700-..R             | 70-75                        | 40 | 480 | 375 | 70 | 593   | 488 | 70 | 705 | 600 | 70 | 0,14     | M-BI7075                                | M-BA7075                                 |                                                                                                              |
| 6026 TD 750-..R             | 75-80                        | 40 | 505 | 400 | 70 | 625   | 520 | 70 | 745 | 640 | 70 | 0,14     | M-BI7580                                | M-BA7580                                 | WC.T 06T3..                                                                                                  |

Bestellbeispiel 5xD / Orderbeispiel 5xD : 6026 TD 600-50R

Wendeplatte auf Seite / Insert page : E-26

Bestellbeispiel 6,5xD / Orderbeispiel 6,5xD : 6026 TD 600-65R

Bestellbeispiel 8xD / Orderbeispiel 8xD : 6026 TD 600-80R

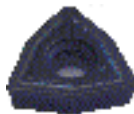
| Bestell-Nr.:<br>Order Code: | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> | Zentrierbohrer<br>Center drill |                               |                       | Kassetten<br>Cassettes |                  |                              |
|-----------------------------|-------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|--------------------------------|-------------------------------|-----------------------|------------------------|------------------|------------------------------|
|                             |                                                                                                             |                                                                                                         |                                                                                                        | Zentrierbohrer<br>Center drill | Fixierschraube<br>Fixing bolt | Anschlag<br>Stop bolt | Innen<br>inside        | Außen<br>outside | Klemmschraube<br>Clamp screw |
| 6026 TD 250-..R             | WC.T 0302..                                                                                                 | M-VT25                                                                                                  | M-BT08                                                                                                 | Z6-30                          | M-M5                          | M-MS5                 |                        |                  |                              |
| 6026 TD 260 - 280-..R       | WC.T 0402..                                                                                                 | M-VT25                                                                                                  | M-BT08                                                                                                 | Z6-30                          | M-M5                          | M-MS5                 |                        |                  |                              |
| 6026 TD 290 - 300-..R       | WC.T 0402..                                                                                                 | M-VT25                                                                                                  | M-BT08                                                                                                 | Z6-30                          | M-M5L                         | M-MS5                 |                        |                  |                              |
| 6026 TD 310 - 350-..R       | WC.T 0503..                                                                                                 | M-VT30                                                                                                  | M-BT08                                                                                                 | Z8-35                          | M-M6                          | M-MS6                 |                        |                  |                              |
| 6026 TD 360 - 400-..R       | WC.T 0503..                                                                                                 | M-VT30                                                                                                  | M-BT08                                                                                                 | Z8-35                          | M-M6L                         | M-MS6                 |                        |                  |                              |
| 6026 TD 410-..R             | WC.T 06T3..                                                                                                 | M-VT35                                                                                                  | M-BT08                                                                                                 | Z10-35                         | M-M8                          | M-MS8                 | M-BI4145               | M-BA41           | M-BS5-10                     |
| 6026 TD 420-..R             | WC.T 06T3..                                                                                                 | M-VT35                                                                                                  | M-BT08                                                                                                 | Z10-35                         | M-M8                          | M-MS8                 | M-BI4145               | M-BA42           | M-BS5-10                     |
| 6026 TD 430-..R             | WC.T 06T3..                                                                                                 | M-VT35                                                                                                  | M-BT08                                                                                                 | Z10-35                         | M-M8                          | M-MS8                 | M-BI4145               | M-BA43           | M-BS5-10                     |
| 6026 TD 440-..R             | WC.T 06T3..                                                                                                 | M-VT35                                                                                                  | M-BT08                                                                                                 | Z10-35                         | M-M8                          | M-MS8                 | M-BI4145               | M-BA44           | M-BS5-10                     |
| 6026 TD 450-..R             | WC.T 06T3..                                                                                                 | M-VT35                                                                                                  | M-BT08                                                                                                 | Z10-35                         | M-M8                          | M-MS8                 | M-BI4145               | M-BA45           | M-BS5-10                     |
| 6026 TD 460-..R             | WC.T 06T3..                                                                                                 | M-VT35                                                                                                  | M-BT08                                                                                                 | Z10-35                         | M-M8L                         | M-MS8                 | M-BI4650               | M-BA46           | M-BS5-12                     |
| 6026 TD 470-..R             | WC.T 06T3..                                                                                                 | M-VT35                                                                                                  | M-BT08                                                                                                 | Z10-35                         | M-M8L                         | M-MS8                 | M-BI4650               | M-BA47           | M-BS5-12                     |
| 6026 TD 480-..R             | WC.T 06T3..                                                                                                 | M-VT35                                                                                                  | M-BT08                                                                                                 | Z10-35                         | M-M8L                         | M-MS8                 | M-BI4650               | M-BA48           | M-BS5-12                     |
| 6026 TD 490-..R             | WC.T 06T3..                                                                                                 | M-VT35                                                                                                  | M-BT08                                                                                                 | Z10-35                         | M-M8L                         | M-MS8                 | M-BI4650               | M-BA49           | M-BS5-12                     |
| 6026 TD 500-..R             | WC.T 06T3..                                                                                                 | M-VT35                                                                                                  | M-BT08                                                                                                 | Z10-35                         | M-M8L                         | M-MS8                 | M-BI4650               | M-BA50           | M-BS5-12                     |
| 6026 TD 510-..R             | WC.T 0804..                                                                                                 | M-VT41                                                                                                  | M-BT08                                                                                                 | Z12-38                         | M-M8L                         | M-MS8                 | M-BI5155               | M-BA51           | M-BS6-12                     |
| 6026 TD 520-..R             | WC.T 0804..                                                                                                 | M-VT41                                                                                                  | M-BT08                                                                                                 | Z12-38                         | M-M8L                         | M-MS8                 | M-BI5155               | M-BA52           | M-BS6-12                     |
| 6026 TD 530-..R             | WC.T 0804..                                                                                                 | M-VT41                                                                                                  | M-BT08                                                                                                 | Z12-38                         | M-M8L                         | M-MS8                 | M-BI5155               | M-BA53           | M-BS6-12                     |
| 6026 TD 540-..R             | WC.T 0804..                                                                                                 | M-VT41                                                                                                  | M-BT08                                                                                                 | Z12-38                         | M-M8L                         | M-MS8                 | M-BI5155               | M-BA54           | M-BS6-12                     |
| 6026 TD 550-..R             | WC.T 0804..                                                                                                 | M-VT41                                                                                                  | M-BT08                                                                                                 | Z12-38                         | M-M8L                         | M-MS8                 | M-BI5155               | M-BA55           | M-BS6-12                     |
| 6026 TD 560-..R             | WC.T 0804..                                                                                                 | M-VT41                                                                                                  | M-BT08                                                                                                 | Z12-38                         | M-M8L                         | M-MS8                 | M-BI5659               | M-BA56           | M-BS6-14                     |
| 6026 TD 570-..R             | WC.T 0804..                                                                                                 | M-VT41                                                                                                  | M-BT15                                                                                                 | Z12-38                         | M-M8L                         | M-MS8                 | M-BI5659               | M-BA57           | M-BS6-14                     |
| 6026 TD 580-..R             | WC.T 0804..                                                                                                 | M-VT41                                                                                                  | M-BT15                                                                                                 | Z12-38                         | M-M8L                         | M-MS8                 | M-BI5659               | M-BA58           | M-BS6-14                     |
| 6026 TD 590-..R             | WC.T 0804..                                                                                                 | M-VT41                                                                                                  | M-BT15                                                                                                 | Z12-38                         | M-M8L                         | M-MS8                 | M-BI5659               | M-BA59           | M-BS6-14                     |
| 6026 TD 600-..R             | WC.T 0503..                                                                                                 | M-VT30                                                                                                  | M-BT08                                                                                                 | Z12-38                         | M-M8L                         | M-MS8L                | M-BI6065               | M-BA6065         | M-BS5-10                     |
| 6026 TD 650-..R             | WC.T 0503..                                                                                                 | M-VT30                                                                                                  | M-BT08                                                                                                 | Z12-38                         | M-M8L                         | M-MS8L                | M-BI6570               | M-BA6570         | M-BS5-10                     |
| 6026 TD 700-..R             | WC.T 0503..                                                                                                 | M-VT30                                                                                                  | M-BT08                                                                                                 | Z12-38                         | M-M8L                         | M-MS8L                | M-BI7075               | M-BA7075         | M-BS5-10                     |
| 6026 TD 750-..R             | WC.T 06T3..                                                                                                 | M-VT35                                                                                                  | M-BT15                                                                                                 | Z16-45                         | M-M10L                        | M-MS10L               | M-BI7580               | M-BA7580         | M-BS6-12                     |

M-BT08 = 1,2 Nm

M-BT15 = 3,0 Nm

# Series 6026 - TD-Drill 5xD / 6,5xD / 8xD



|                                                                                                                                                                                                      | Form Figure                                                                       | Abmessungen Dimensions |       |      |      |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------|-------|------|------|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                                                                                                                      |                                                                                   | l                      | d     | s    | d1   | r   |                            |          |           | CT28                                    | K10 |                                     | PTT20 | PTV28 | PTT35 | PAP28 | MTM10 |
| <br>WCMT .. ALU                                                                                                      |  |                        |       |      |      |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                                                                                                                                      |                                                                                   | 3,46                   | 5,56  | 2,38 | 2,50 | 0,8 | WCGT 030208 ALU            | M-VT25   | M-BT08    |                                         | ■   |                                     |       |       |       |       | □     |
|                                                                                                                                                                                                      |                                                                                   | 3,99                   | 6,35  | 2,38 | 2,80 | 0,8 | WCGT 040208 ALU            | M-VT25   | M-BT08    |                                         | ■   |                                     |       |       |       |       | □     |
|                                                                                                                                                                                                      |                                                                                   | 5,07                   | 7,94  | 3,18 | 3,40 | 0,8 | WCGT 050308 ALU            | M-VT30   | M-BT08    |                                         | ■   |                                     |       |       |       |       | □     |
|                                                                                                                                                                                                      |                                                                                   | 6,14                   | 9,52  | 3,97 | 3,80 | 0,8 | WCGT 06T308 ALU            | M-VT35   | M-BT15    |                                         | ■   |                                     |       |       |       |       | □     |
|                                                                                                                                                                                                      |                                                                                   | 8,14                   | 12,70 | 4,76 | 5,40 | 0,8 | WCGT 080408 ALU            | M-VT41   | M-BT15    |                                         | ■   |                                     |       |       |       |       | □     |
|                                                                                                                                                                                                      |                                                                                   |                        |       |      |      |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |
| <br>WCMT .. WG<br><br><br>WCMT .. WM |  | 3,46                   | 5,56  | 2,38 | 2,50 | 0,8 | WCMT 030208 WG             | M-VT25   | M-BT 08   |                                         |     |                                     |       | ■     |       |       |       |
|                                                                                                                                                                                                      |                                                                                   | 3,46                   | 5,56  | 2,38 | 2,50 | 0,8 | WCMT 030208 WM             | M-VT25   | M-BT 08   |                                         |     |                                     |       |       | ■     |       |       |
|                                                                                                                                                                                                      |                                                                                   | 3,99                   | 6,35  | 2,38 | 2,80 | 0,8 | WCMT 040208 WG             | M-VT25   | M-BT 08   |                                         |     |                                     |       | ■     |       |       |       |
|                                                                                                                                                                                                      |                                                                                   | 3,99                   | 6,35  | 2,38 | 2,80 | 0,4 | WCMT 040204 WM             | M-VT25   | M-BT 08   |                                         |     |                                     |       |       | ■     |       |       |
|                                                                                                                                                                                                      |                                                                                   | 3,99                   | 6,35  | 2,38 | 2,80 | 0,8 | WCMT 040208 WM             | M-VT25   | M-BT 08   |                                         |     |                                     |       |       | ■     |       |       |
|                                                                                                                                                                                                      |                                                                                   | 5,07                   | 7,94  | 3,18 | 3,40 | 0,8 | WCMT 050308 WG             | M-VT30   | M-BT 08   |                                         |     |                                     |       | ■     |       |       |       |
|                                                                                                                                                                                                      |                                                                                   | 6,14                   | 9,52  | 3,97 | 3,80 | 0,8 | WCMT 06T308 WG             | M-VT35   | M-BT 15   |                                         |     |                                     |       | ■     |       |       |       |
|                                                                                                                                                                                                      |                                                                                   | 6,14                   | 9,52  | 3,97 | 3,80 | 0,4 | WCMT 06T304 WM             | M-VT35   | M-BT 15   |                                         |     |                                     |       |       | ■     |       |       |
|                                                                                                                                                                                                      |                                                                                   | 6,14                   | 9,52  | 3,97 | 3,80 | 0,8 | WCMT 06T308 WM             | M-VT35   | M-BT 15   |                                         |     |                                     |       |       | ■     |       |       |
|                                                                                                                                                                                                      |                                                                                   | 8,14                   | 12,70 | 4,76 | 5,40 | 0,8 | WCMT 080408 WG             | M-VT41   | M-BT 15   |                                         |     |                                     |       | ■     |       |       |       |
|                                                                                                                                                                                                      |                                                                                   | 8,14                   | 12,70 | 4,76 | 5,40 | 1,2 | WCMT 080412 WG             | M-VT41   | M-BT 15   |                                         |     |                                     |       | ■     |       |       |       |
|                                                                                                                                                                                                      |                                                                                   | 8,14                   | 12,70 | 4,76 | 5,40 | 0,4 | WCMT 080404 WM             | M-VT41   | M-BT 15   |                                         |     |                                     |       |       | ■     |       |       |
|                                                                                                                                                                                                      |                                                                                   | 8,14                   | 12,70 | 4,76 | 5,40 | 0,8 | WCMT 080408 WM             | M-VT41   | M-BT 15   |                                         |     |                                     |       |       | ■     |       |       |
|                                                                                                                                                                                                      |                                                                                   | 8,14                   | 12,70 | 4,76 | 5,40 | 1,2 | WCMT 080412 WM             | M-VT41   | M-BT 15   |                                         |     |                                     |       |       | ■     |       |       |
|                                                                                                                                                                                                      |                                                                                   |                        |       |      |      |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |

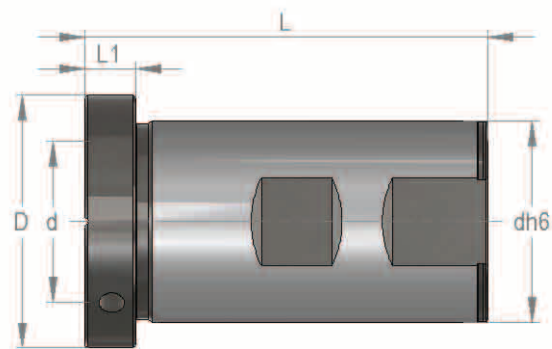
| Vc<br>(m/min) | Alu        |     |      | Stahl   |         |         |          |          |          |          |          |          |          |         | INOX    |     | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion           | MMS | Trocken | Druckluft |
|---------------|------------|-----|------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|---------|---------|-----|-------|-------|-----------------------|------------|--------------------|-----|---------|-----------|
|               | Kunststoff | Alu | Guss | < 500 N | < 750 N | < 900 N | < 1100 N | < 1400 N | < 55 HRC | < 60 HRC | < 65 HRC | < 67 HRC | < 70 HRC | < 900 N | > 900 N |     |       |       |                       |            |                    |     |         |           |
| ISO-Code      | N          | N   | N    | P       | P       | P       | P        | P        | H        | H        | H        | H        | H        | M       | M       | K   | S     | N     |                       |            |                    |     |         |           |
| PTT20         |            |     |      |         | 200     | 200     | 125      | 125      |          |          |          |          |          | 165     | 160     | 180 |       |       |                       | ■          |                    |     |         |           |
| PTT35         |            |     |      |         | 200     | 200     | 125      | 125      |          |          |          |          |          | 165     | 160     | 180 |       |       |                       | ■          |                    |     |         |           |
| PAP28         |            |     |      |         |         |         |          |          |          |          |          |          |          |         |         |     |       |       |                       |            |                    |     |         |           |
| MTM10         |            |     |      |         |         |         |          |          |          |          |          |          |          |         |         |     |       |       |                       |            |                    |     |         |           |
| KTE20         |            |     |      |         |         |         |          |          |          |          |          |          |          |         |         |     |       |       |                       |            |                    |     |         |           |
| CT28          |            |     |      |         |         |         |          |          |          |          |          |          |          |         |         |     |       |       |                       |            |                    |     |         |           |
| fz            | Tabelle    |     |      |         |         |         |          |          |          |          |          |          |          |         |         |     |       |       |                       | ■ geeignet | □ bedingt geeignet |     |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

**Serie EX-TD - Exzenterhülsen**  
**Series EX-TD - Eccentric clamping tool**

**Exzenterhülsen**  
Einstellbar: ± 0,5mm im Durchmesser

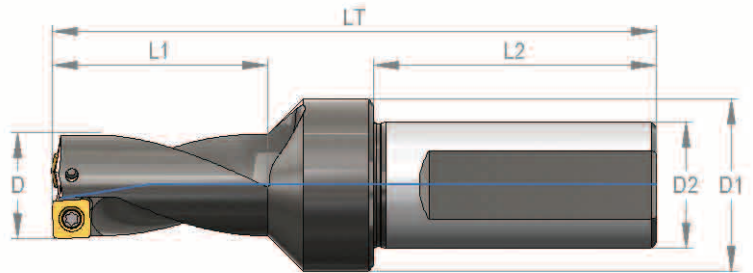
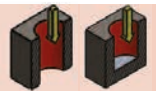
**Eccentric clamping tool:**  
adjustable: ± 0,5mm in the diameter



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |    |
|-----------------------------|------------------------------|----|-----|----|----|
|                             | D                            | d  | dh6 | L  | L1 |
| EX-TD D32/d25               | 40                           | 25 | 32  | 70 | 10 |
| EX-TD D40/d32               | 50                           | 32 | 40  | 80 | 10 |
| EX-TD D50/d40               | 80                           | 40 | 50  | 90 | 10 |

Bestellbeispiel / Order example: EX-TD D32/d25

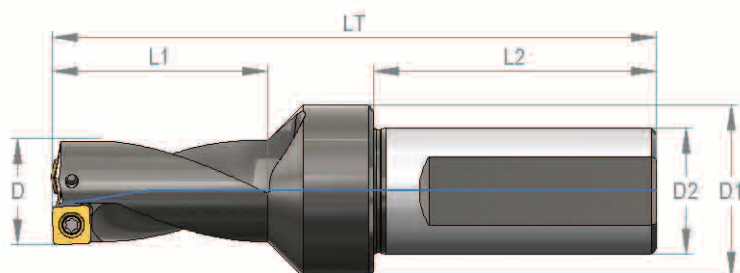




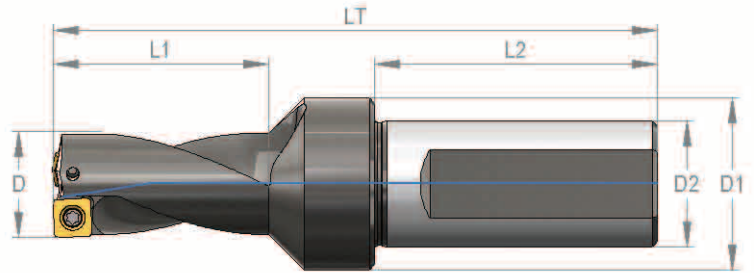
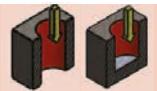
| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |     |    |    |      | Vorschub                             | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|----|----|-----|----|----|------|--------------------------------------|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
|                             | D                            | D1 | D2 | LT  | L1 | L2 | f    |                                      |                                                                                                              |                                                                                                          |                                                                                                         |
| 6028 TD 120-20 R            | 12                           | 25 | 20 | 91  | 27 | 50 | 0,1  | SP . T 040204 ..<br>XO . T 040204 .. | M-VT20-4<br>0,6 Nm                                                                                           | M-BT06                                                                                                   |                                                                                                         |
| 6028 TD 125-20 R            | 12,5                         | 25 | 20 | 91  | 27 | 50 | 0,1  |                                      |                                                                                                              |                                                                                                          |                                                                                                         |
| 6028 TD 130-20 R            | 13                           | 25 | 20 | 93  | 29 | 50 | 0,1  |                                      |                                                                                                              |                                                                                                          |                                                                                                         |
| 6028 TD 135-20 R            | 13,5                         | 25 | 20 | 93  | 29 | 50 | 0,1  |                                      |                                                                                                              |                                                                                                          |                                                                                                         |
| 6028 TD 140-20 R            | 14                           | 25 | 20 | 96  | 31 | 50 | 0,12 | SP . T 050204 ..<br>XO . T 050204 .. | M-VT20-4<br>0,6 Nm                                                                                           | M-BT06                                                                                                   |                                                                                                         |
| 6028 TD 145-20 R            | 14,5                         | 25 | 20 | 96  | 31 | 50 | 0,12 |                                      |                                                                                                              |                                                                                                          |                                                                                                         |
| 6028 TD 150-20 R            | 15                           | 25 | 20 | 99  | 33 | 50 | 0,12 |                                      |                                                                                                              |                                                                                                          |                                                                                                         |
| 6028 TD 155-20 R            | 15,5                         | 25 | 20 | 99  | 33 | 50 | 0,12 |                                      |                                                                                                              |                                                                                                          |                                                                                                         |
| 6028 TD 160-20 R            | 16                           | 25 | 20 | 101 | 35 | 50 | 0,12 | SP . T 060205 ..<br>XO . T 060204 .. | M-VT22-6<br>0,9 Nm                                                                                           | M-BT07                                                                                                   |                                                                                                         |
| 6028 TD 165-20 R            | 16,5                         | 34 | 25 | 107 | 35 | 56 | 0,12 |                                      |                                                                                                              |                                                                                                          |                                                                                                         |
| 6028 TD 170-20 R            | 17                           | 34 | 25 | 109 | 37 | 56 | 0,12 |                                      |                                                                                                              |                                                                                                          |                                                                                                         |
| 6028 TD 175-20 R            | 17,5                         | 34 | 25 | 109 | 37 | 56 | 0,12 |                                      |                                                                                                              |                                                                                                          |                                                                                                         |
| 6028 TD 180-20 R            | 18                           | 34 | 25 | 112 | 39 | 56 | 0,12 | SP . T 07T208 ..<br>XO . T 07T205 .. | M-VT25-6<br>0,9 Nm                                                                                           | M-BT07                                                                                                   |                                                                                                         |
| 6028 TD 185-20 R            | 18,5                         | 34 | 25 | 112 | 39 | 56 | 0,12 |                                      |                                                                                                              |                                                                                                          |                                                                                                         |
| 6028 TD 190-20 R            | 19                           | 34 | 25 | 114 | 41 | 56 | 0,12 |                                      |                                                                                                              |                                                                                                          |                                                                                                         |
| 6028 TD 195-20 R            | 19,5                         | 34 | 25 | 114 | 41 | 56 | 0,12 |                                      |                                                                                                              |                                                                                                          |                                                                                                         |
| 6028 TD 200-20 R            | 20                           | 34 | 25 | 118 | 43 | 56 | 0,14 | SP . T 090308 ..<br>XO . T 090305 .. | M-VT30-7<br>1,4 Nm                                                                                           | M-BT09                                                                                                   |                                                                                                         |
| 6028 TD 205-20 R            | 20,5                         | 34 | 25 | 118 | 43 | 56 | 0,14 |                                      |                                                                                                              |                                                                                                          |                                                                                                         |
| 6028 TD 210-20 R            | 21                           | 34 | 25 | 120 | 45 | 56 | 0,14 |                                      |                                                                                                              |                                                                                                          |                                                                                                         |
| 6028 TD 215-20 R            | 21,5                         | 34 | 25 | 120 | 45 | 56 | 0,14 |                                      |                                                                                                              |                                                                                                          |                                                                                                         |
| 6028 TD 220-20 R            | 22                           | 34 | 25 | 122 | 47 | 56 | 0,14 | SP . T 11T308 ..<br>XO . T 11T306 .. | M-VT35-8<br>3,0 Nm                                                                                           | M-BT15                                                                                                   |                                                                                                         |
| 6028 TD 225-20 R            | 22,5                         | 34 | 25 | 122 | 47 | 56 | 0,14 |                                      |                                                                                                              |                                                                                                          |                                                                                                         |
| 6028 TD 230-20 R            | 23                           | 34 | 25 | 126 | 49 | 56 | 0,14 |                                      |                                                                                                              |                                                                                                          |                                                                                                         |
| 6028 TD 235-20 R            | 23,5                         | 34 | 25 | 126 | 49 | 56 | 0,14 |                                      |                                                                                                              |                                                                                                          |                                                                                                         |
| 6028 TD 240-20 R            | 24                           | 44 | 32 | 133 | 51 | 60 | 0,15 | SP . T 090308 ..<br>XO . T 090305 .. | M-VT30-7<br>1,4 Nm                                                                                           | M-BT09                                                                                                   |                                                                                                         |
| 6028 TD 245-20 R            | 24,5                         | 44 | 32 | 133 | 51 | 60 | 0,15 |                                      |                                                                                                              |                                                                                                          |                                                                                                         |
| 6028 TD 250-20 R            | 25                           | 44 | 32 | 135 | 53 | 60 | 0,15 |                                      |                                                                                                              |                                                                                                          |                                                                                                         |
| 6028 TD 255-20 R            | 25,5                         | 44 | 32 | 135 | 53 | 60 | 0,15 |                                      |                                                                                                              |                                                                                                          |                                                                                                         |
| 6028 TD 260-20 R            | 26                           | 44 | 32 | 137 | 55 | 60 | 0,15 | SP . T 090308 ..<br>XO . T 090305 .. | M-VT30-7<br>1,4 Nm                                                                                           | M-BT09                                                                                                   |                                                                                                         |
| 6028 TD 265-20 R            | 26,5                         | 44 | 32 | 137 | 55 | 60 | 0,15 |                                      |                                                                                                              |                                                                                                          |                                                                                                         |
| 6028 TD 270-20 R            | 27                           | 44 | 32 | 140 | 57 | 60 | 0,15 |                                      |                                                                                                              |                                                                                                          |                                                                                                         |
| 6028 TD 275-20 R            | 27,5                         | 44 | 32 | 140 | 57 | 60 | 0,15 |                                      |                                                                                                              |                                                                                                          |                                                                                                         |
| 6028 TD 280-20 R            | 28                           | 44 | 32 | 143 | 59 | 60 | 0,15 | SP . T 090308 ..<br>XO . T 090305 .. | M-VT30-7<br>1,4 Nm                                                                                           | M-BT09                                                                                                   |                                                                                                         |
| 6028 TD 285-20 R            | 28,5                         | 44 | 32 | 143 | 59 | 60 | 0,15 |                                      |                                                                                                              |                                                                                                          |                                                                                                         |
| 6028 TD 290-20 R            | 29                           | 44 | 32 | 145 | 61 | 60 | 0,15 |                                      |                                                                                                              |                                                                                                          |                                                                                                         |
| 6028 TD 295-20 R            | 29,5                         | 44 | 32 | 145 | 61 | 60 | 0,15 |                                      |                                                                                                              |                                                                                                          |                                                                                                         |
| 6028 TD 300-20 R            | 30                           | 44 | 32 | 150 | 63 | 60 | 0,16 | SP . T 11T308 ..<br>XO . T 11T306 .. | M-VT35-8<br>3,0 Nm                                                                                           | M-BT15                                                                                                   |                                                                                                         |
| 6028 TD 305-20 R            | 30,5                         | 44 | 32 | 150 | 63 | 60 | 0,16 |                                      |                                                                                                              |                                                                                                          |                                                                                                         |
| 6028 TD 310-20 R            | 31                           | 44 | 32 | 152 | 65 | 60 | 0,16 |                                      |                                                                                                              |                                                                                                          |                                                                                                         |
| 6028 TD 315-20 R            | 31,5                         | 44 | 32 | 152 | 65 | 60 | 0,16 |                                      |                                                                                                              |                                                                                                          |                                                                                                         |
| 6028 TD 320-20 R            | 32                           | 44 | 32 | 154 | 67 | 60 | 0,16 | SP . T 11T308 ..<br>XO . T 11T306 .. | M-VT35-8<br>3,0 Nm                                                                                           | M-BT15                                                                                                   |                                                                                                         |
| 6028 TD 325-20 R            | 32,5                         | 44 | 32 | 154 | 67 | 60 | 0,16 |                                      |                                                                                                              |                                                                                                          |                                                                                                         |
| 6028 TD 330-20 R            | 33                           | 44 | 32 | 157 | 69 | 60 | 0,16 |                                      |                                                                                                              |                                                                                                          |                                                                                                         |
| 6028 TD 335-20 R            | 33,5                         | 44 | 32 | 157 | 69 | 60 | 0,16 |                                      |                                                                                                              |                                                                                                          |                                                                                                         |
| 6028 TD 340-20 R            | 34                           | 44 | 32 | 159 | 71 | 60 | 0,16 | SP . T 11T308 ..<br>XO . T 11T306 .. | M-VT35-8<br>3,0 Nm                                                                                           | M-BT15                                                                                                   |                                                                                                         |
| 6028 TD 345-20 R            | 34,5                         | 44 | 32 | 159 | 71 | 60 | 0,16 |                                      |                                                                                                              |                                                                                                          |                                                                                                         |
| 6028 TD 350-20 R            | 35                           | 44 | 32 | 161 | 73 | 60 | 0,16 |                                      |                                                                                                              |                                                                                                          |                                                                                                         |
| 6028 TD 355-20 R            | 35,5                         | 44 | 32 | 161 | 73 | 60 | 0,16 |                                      |                                                                                                              |                                                                                                          |                                                                                                         |

Bestellbeispiel / Order example: 6028-TD 120-20R

E

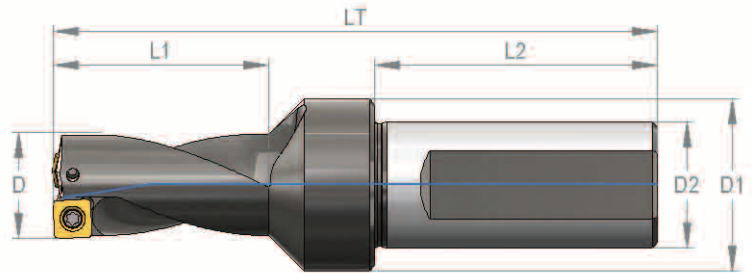
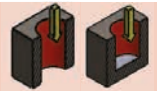


| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |     |     |    | Vorschub | Wendepatte<br>Insert                                                                | Schraube<br>Screw                                                                   | Schlüssel<br>Key                                                                    |
|-----------------------------|------------------------------|----|----|-----|-----|----|----------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                             | D                            | D1 | D2 | LT  | L1  | L2 | f        |  |  |  |
| 6028 TD 360-20 R            | 36                           | 48 | 40 | 176 | 76  | 70 | 0,16     | SP . T 130410 ..<br>XO . T 130406 ..                                                | M-VT40-10<br>3,0 Nm                                                                 | M-BT15                                                                              |
| 6028 TD 365-20 R            | 36,5                         | 48 | 40 | 176 | 76  | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 370-20 R            | 37                           | 48 | 40 | 178 | 78  | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 375-20 R            | 37,5                         | 48 | 40 | 178 | 78  | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 380-20 R            | 38                           | 48 | 40 | 181 | 80  | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 385-20 R            | 38,5                         | 48 | 40 | 181 | 80  | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 390-20 R            | 39                           | 48 | 40 | 183 | 82  | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 395-20 R            | 39,5                         | 48 | 40 | 183 | 82  | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 400-20 R            | 40                           | 48 | 40 | 186 | 84  | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 405-20 R            | 40,5                         | 48 | 40 | 186 | 84  | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 410-20 R            | 41                           | 48 | 40 | 188 | 86  | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 415-20 R            | 41,5                         | 48 | 40 | 188 | 86  | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 420-20 R            | 42                           | 48 | 40 | 191 | 88  | 70 | 0,16     | SP . T 15M510 ..<br>XO . T 15M508 ..                                                | M-VT45-11<br>5,0 Nm                                                                 | M-BT20                                                                              |
| 6028 TD 425-20 R            | 42,5                         | 48 | 40 | 191 | 88  | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 430-20 R            | 43                           | 58 | 40 | 196 | 91  | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 435-20 R            | 43,5                         | 58 | 40 | 196 | 91  | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 440-20 R            | 44                           | 58 | 40 | 198 | 93  | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 445-20 R            | 44,5                         | 58 | 40 | 198 | 93  | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 450-20 R            | 45                           | 58 | 40 | 201 | 95  | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 455-20 R            | 45,5                         | 58 | 40 | 201 | 95  | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 460-20 R            | 46                           | 58 | 40 | 203 | 97  | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 465-20 R            | 46,5                         | 58 | 40 | 203 | 97  | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 470-20 R            | 47                           | 58 | 40 | 206 | 99  | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 475-20 R            | 47,5                         | 58 | 40 | 206 | 99  | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 480-20 R            | 48                           | 58 | 40 | 208 | 101 | 70 | 0,16     | SP . T 180510 ..<br>XO . T 180508 ..                                                | M-VT50-11<br>5,0 Nm                                                                 | M-BT20                                                                              |
| 6028 TD 485-20 R            | 48,5                         | 58 | 40 | 208 | 101 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 490-20 R            | 49                           | 58 | 40 | 210 | 103 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 495-20 R            | 49,5                         | 58 | 40 | 210 | 103 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 500-20 R            | 50                           | 58 | 40 | 212 | 105 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 505-20 R            | 50,5                         | 58 | 40 | 212 | 105 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 510-20 R            | 51                           | 68 | 40 | 218 | 108 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 515-20 R            | 51,5                         | 68 | 40 | 218 | 108 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 520-20 R            | 52                           | 68 | 40 | 220 | 110 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 525-20 R            | 52,5                         | 68 | 40 | 220 | 110 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 530-20 R            | 53                           | 68 | 40 | 222 | 112 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 535-20 R            | 53,5                         | 68 | 40 | 222 | 112 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 540-20 R            | 54                           | 68 | 40 | 224 | 114 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 545-20 R            | 54,5                         | 68 | 40 | 224 | 114 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 550-20 R            | 55                           | 68 | 40 | 226 | 116 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 555-20 R            | 55,6                         | 68 | 40 | 226 | 116 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 560-20 R            | 56                           | 68 | 40 | 230 | 118 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 565-20 R            | 56,5                         | 68 | 40 | 230 | 118 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 570-20 R            | 57                           | 68 | 40 | 233 | 121 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 575-20 R            | 57,5                         | 68 | 40 | 233 | 121 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 580-20 R            | 58                           | 68 | 40 | 236 | 124 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 585-20 R            | 58,5                         | 68 | 40 | 236 | 124 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 590-20 R            | 59                           | 68 | 40 | 239 | 127 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 595-20 R            | 59,5                         | 68 | 40 | 239 | 127 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 600-20 R            | 60                           | 68 | 40 | 242 | 130 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 605-20 R            | 60,5                         | 68 | 40 | 242 | 130 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |     |     |    | Vorschub | Wendeplatte<br>Insert                                                               | Schraube<br>Screw                                                                   | Schlüssel<br>Key                                                                    |
|-----------------------------|------------------------------|----|----|-----|-----|----|----------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                             | D                            | D1 | D2 | LT  | L1  | L2 | f        |  |  |  |
| 6028 TD 120-30 R            | 12                           | 25 | 20 | 103 | 39  | 50 | 0,1      | SP . T 040204 ..<br>XO . T 040204 ..                                                | M-VT20-4<br>0,6 Nm                                                                  | M-BT06                                                                              |
| 6028 TD 125-30 R            | 12,5                         | 25 | 20 | 103 | 39  | 50 | 0,1      |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 130-30 R            | 13                           | 25 | 20 | 106 | 42  | 50 | 0,1      |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 135-30 R            | 13,5                         | 25 | 20 | 106 | 42  | 50 | 0,1      | SP . T 050204 ..<br>XO . T 050204 ..                                                | M-VT20-4<br>0,6 Nm                                                                  | M-BT06                                                                              |
| 6028 TD 140-30 R            | 14                           | 25 | 20 | 110 | 45  | 50 | 0,12     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 145-30 R            | 14,5                         | 25 | 20 | 110 | 45  | 50 | 0,12     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 150-30 R            | 15                           | 25 | 20 | 114 | 48  | 50 | 0,12     | SP . T 060205 ..<br>XO . T 060204 ..                                                | M-VT20-4<br>0,6 Nm                                                                  | M-BT06                                                                              |
| 6028 TD 155-30 R            | 15,5                         | 25 | 20 | 114 | 48  | 50 | 0,12     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 160-30 R            | 16                           | 25 | 20 | 117 | 51  | 50 | 0,12     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 165-30 R            | 16,5                         | 34 | 25 | 123 | 51  | 56 | 0,12     | SP . T 060205 ..<br>XO . T 060204 ..                                                | M-VT22-6<br>0,9 Nm                                                                  | M-BT07                                                                              |
| 6028 TD 170-30 R            | 17                           | 34 | 25 | 126 | 54  | 56 | 0,12     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 175-30 R            | 17,5                         | 34 | 25 | 126 | 54  | 56 | 0,12     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 180-30 R            | 18                           | 34 | 25 | 130 | 57  | 56 | 0,12     | SP . T 07T208 ..<br>XO . T 07T205 ..                                                | M-VT25-6<br>0,9 Nm                                                                  | M-BT07                                                                              |
| 6028 TD 185-30 R            | 18,5                         | 34 | 25 | 130 | 57  | 56 | 0,12     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 190-30 R            | 19                           | 34 | 25 | 133 | 60  | 56 | 0,12     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 195-30 R            | 19,5                         | 34 | 25 | 133 | 60  | 56 | 0,12     | SP . T 07T208 ..<br>XO . T 07T205 ..                                                | M-VT25-6<br>0,9 Nm                                                                  | M-BT07                                                                              |
| 6028 TD 200-30 R            | 20                           | 34 | 25 | 138 | 63  | 56 | 0,14     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 205-30 R            | 20,5                         | 34 | 25 | 138 | 63  | 56 | 0,14     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 210-30 R            | 21                           | 34 | 25 | 141 | 66  | 56 | 0,14     | SP . T 090308 ..<br>XO . T 090305 ..                                                | M-VT30-7<br>1,4 Nm                                                                  | M-BT09                                                                              |
| 6028 TD 215-30 R            | 21,5                         | 34 | 25 | 141 | 66  | 56 | 0,14     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 220-30 R            | 22                           | 34 | 25 | 144 | 69  | 56 | 0,14     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 225-30 R            | 22,5                         | 34 | 25 | 144 | 69  | 56 | 0,14     | SP . T 090308 ..<br>XO . T 090305 ..                                                | M-VT30-7<br>1,4 Nm                                                                  | M-BT09                                                                              |
| 6028 TD 230-30 R            | 23                           | 34 | 25 | 149 | 72  | 56 | 0,14     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 235-30 R            | 23,5                         | 34 | 25 | 149 | 72  | 56 | 0,14     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 240-30 R            | 24                           | 44 | 32 | 157 | 75  | 60 | 0,15     | SP . T 11T308 ..<br>XO . T 11T306 ..                                                | M-VT35-8<br>3,0 Nm                                                                  | M-BT15                                                                              |
| 6028 TD 245-30 R            | 24,5                         | 44 | 32 | 157 | 75  | 60 | 0,15     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 250-30 R            | 25                           | 44 | 32 | 160 | 78  | 60 | 0,15     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 255-30 R            | 25,5                         | 44 | 32 | 160 | 78  | 60 | 0,15     | SP . T 11T308 ..<br>XO . T 11T306 ..                                                | M-VT35-8<br>3,0 Nm                                                                  | M-BT15                                                                              |
| 6028 TD 260-30 R            | 26                           | 44 | 32 | 163 | 81  | 60 | 0,15     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 265-30 R            | 26,5                         | 44 | 32 | 163 | 81  | 60 | 0,15     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 270-30 R            | 27                           | 44 | 32 | 167 | 84  | 60 | 0,15     | SP . T 11T308 ..<br>XO . T 11T306 ..                                                | M-VT35-8<br>3,0 Nm                                                                  | M-BT15                                                                              |
| 6028 TD 275-30 R            | 27,5                         | 44 | 32 | 167 | 84  | 60 | 0,15     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 280-30 R            | 28                           | 44 | 32 | 171 | 87  | 60 | 0,15     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 285-30 R            | 28,5                         | 44 | 32 | 171 | 87  | 60 | 0,15     | SP . T 11T308 ..<br>XO . T 11T306 ..                                                | M-VT35-8<br>3,0 Nm                                                                  | M-BT15                                                                              |
| 6028 TD 290-30 R            | 29                           | 44 | 32 | 174 | 90  | 60 | 0,15     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 295-30 R            | 29,5                         | 44 | 32 | 174 | 90  | 60 | 0,15     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 300-30 R            | 30                           | 44 | 32 | 180 | 93  | 60 | 0,16     | SP . T 11T308 ..<br>XO . T 11T306 ..                                                | M-VT35-8<br>3,0 Nm                                                                  | M-BT15                                                                              |
| 6028 TD 305-30 R            | 30,5                         | 44 | 32 | 180 | 93  | 60 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 310-30 R            | 31                           | 44 | 32 | 183 | 96  | 60 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 315-30 R            | 31,5                         | 44 | 32 | 183 | 96  | 60 | 0,16     | SP . T 11T308 ..<br>XO . T 11T306 ..                                                | M-VT35-8<br>3,0 Nm                                                                  | M-BT15                                                                              |
| 6028 TD 320-30 R            | 32                           | 44 | 32 | 186 | 99  | 60 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 325-30 R            | 32,5                         | 44 | 32 | 186 | 99  | 60 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 330-30 R            | 33                           | 44 | 32 | 190 | 102 | 60 | 0,16     | SP . T 11T308 ..<br>XO . T 11T306 ..                                                | M-VT35-8<br>3,0 Nm                                                                  | M-BT15                                                                              |
| 6028 TD 335-30 R            | 33,5                         | 44 | 32 | 190 | 102 | 60 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 340-30 R            | 34                           | 44 | 32 | 193 | 105 | 60 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 345-30 R            | 34,5                         | 44 | 32 | 193 | 105 | 60 | 0,16     | SP . T 11T308 ..<br>XO . T 11T306 ..                                                | M-VT35-8<br>3,0 Nm                                                                  | M-BT15                                                                              |
| 6028 TD 350-30 R            | 35                           | 44 | 32 | 196 | 108 | 60 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 355-30 R            | 35,5                         | 44 | 32 | 196 | 108 | 60 | 0,16     |                                                                                     |                                                                                     |                                                                                     |

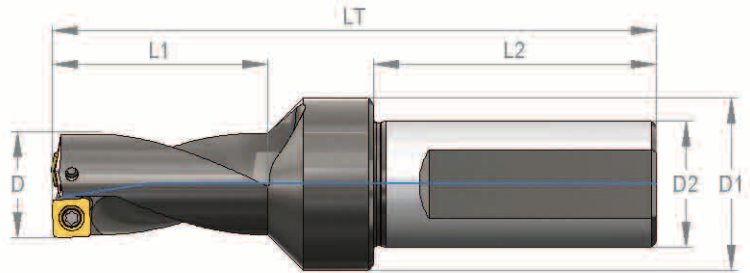
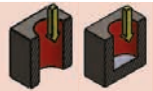
Bestellbeispiel / Order example: 6028-TD 120-30R



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |     |     |    | Vorschub | Wendeplatte<br>Insert                                                               | Schraube<br>Screw                                                                   | Schlüssel<br>Key                                                                    |
|-----------------------------|------------------------------|----|----|-----|-----|----|----------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                             | D                            | D1 | D2 | LT  | L1  | L2 | f        |  |  |  |
| 6028 TD 360-30 R            | 36                           | 48 | 40 | 212 | 112 | 70 | 0,16     | SP . T 130410 ..<br>XO . T 130406 ..                                                | M-VT40-10<br>3,0 Nm                                                                 | M-BT15                                                                              |
| 6028 TD 365-30 R            | 36,5                         | 48 | 40 | 212 | 112 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 370-30 R            | 37                           | 48 | 40 | 215 | 115 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 375-30 R            | 37,5                         | 48 | 40 | 215 | 115 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 380-30 R            | 38                           | 48 | 40 | 219 | 118 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 385-30 R            | 38,5                         | 48 | 40 | 219 | 118 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 390-30 R            | 39                           | 48 | 40 | 222 | 121 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 395-30 R            | 39,5                         | 48 | 40 | 222 | 121 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 400-30 R            | 40                           | 48 | 40 | 226 | 124 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 405-30 R            | 40,5                         | 48 | 40 | 226 | 124 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 410-30 R            | 41                           | 48 | 40 | 229 | 127 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 415-30 R            | 41,5                         | 48 | 40 | 229 | 127 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 420-30 R            | 42                           | 48 | 40 | 233 | 130 | 70 | 0,16     | SP . T 15M510 ..<br>XO . T 15M508 ..                                                | M-VT45-11<br>3,0 Nm                                                                 | M-BT20                                                                              |
| 6028 TD 425-30 R            | 42,5                         | 48 | 40 | 233 | 130 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 430-30 R            | 43                           | 58 | 40 | 239 | 134 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 435-30 R            | 43,5                         | 58 | 40 | 239 | 134 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 440-30 R            | 44                           | 58 | 40 | 242 | 137 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 445-30 R            | 44,5                         | 58 | 40 | 242 | 137 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 450-30 R            | 45                           | 58 | 40 | 246 | 140 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 455-30 R            | 45,5                         | 58 | 40 | 246 | 140 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 460-30 R            | 46                           | 58 | 40 | 249 | 143 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 465-30 R            | 46,5                         | 58 | 40 | 249 | 143 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 470-30 R            | 47                           | 58 | 40 | 253 | 146 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 475-30 R            | 47,5                         | 58 | 40 | 253 | 146 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 480-30 R            | 48                           | 58 | 40 | 256 | 149 | 70 | 0,16     | SP . T 180510 ..<br>XO . T 180508 ..                                                | M-VT50-11<br>5,0 Nm                                                                 | M-BT20                                                                              |
| 6028 TD 485-30 R            | 48,5                         | 58 | 40 | 256 | 149 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 490-30 R            | 49                           | 58 | 40 | 259 | 152 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 495-30 R            | 49,5                         | 58 | 40 | 259 | 152 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 500-30 R            | 50                           | 58 | 40 | 262 | 155 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 505-30 R            | 50,5                         | 58 | 40 | 262 | 155 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 510-30 R            | 51                           | 68 | 40 | 269 | 159 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 515-30 R            | 51,5                         | 68 | 40 | 269 | 159 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 520-30 R            | 52                           | 68 | 40 | 272 | 162 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 525-30 R            | 52,5                         | 68 | 40 | 272 | 162 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 530-30 R            | 53                           | 68 | 40 | 275 | 165 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 535-30 R            | 53,5                         | 68 | 40 | 275 | 165 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 540-30 R            | 54                           | 68 | 40 | 278 | 168 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 545-30 R            | 54,5                         | 68 | 40 | 278 | 168 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 550-30 R            | 55                           | 68 | 40 | 281 | 171 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 555-30 R            | 55,6                         | 68 | 40 | 281 | 171 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 560-30 R            | 56                           | 68 | 40 | 286 | 174 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 565-30 R            | 56,5                         | 68 | 40 | 286 | 174 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 570-30 R            | 57                           | 68 | 40 | 290 | 178 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 575-30 R            | 57,5                         | 68 | 40 | 290 | 178 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 580-30 R            | 58                           | 68 | 40 | 294 | 182 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 585-30 R            | 58,5                         | 68 | 40 | 294 | 182 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 590-30 R            | 59                           | 68 | 40 | 298 | 186 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 595-30 R            | 59,5                         | 68 | 40 | 298 | 186 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 600-30 R            | 60                           | 68 | 40 | 302 | 190 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 605-30 R            | 60,5                         | 68 | 40 | 302 | 190 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |

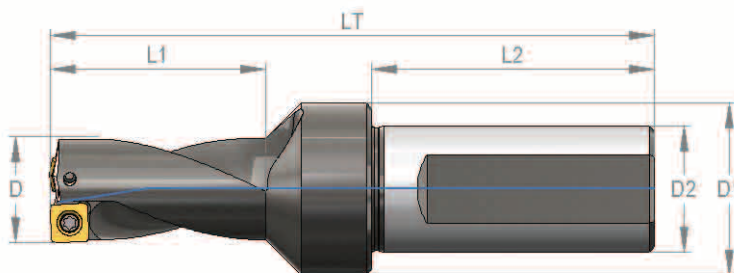
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| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |     |     |    | Vorschub | Wendeplatte<br>Insert                | Schraube<br>Screw  | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|----|-----|-----|----|----------|--------------------------------------|--------------------|------------------|
|                             | D                            | D1 | D2 | LT  | L1  | L2 | f        |                                      |                    |                  |
| 6028 TD 120-40 R            | 12                           | 25 | 20 | 115 | 51  | 50 | 0,1      | SP . T 040204 ..<br>XO . T 040204 .. | M-VT20-4<br>0,6 Nm | M-BT06           |
| 6028 TD 125-40 R            | 12,5                         | 25 | 20 | 115 | 51  | 50 | 0,1      |                                      |                    |                  |
| 6028 TD 130-40 R            | 13                           | 25 | 20 | 119 | 55  | 50 | 0,1      |                                      |                    |                  |
| 6028 TD 135-40 R            | 13,5                         | 25 | 20 | 119 | 55  | 50 | 0,1      |                                      |                    |                  |
| 6028 TD 140-40 R            | 14                           | 25 | 20 | 124 | 59  | 50 | 0,12     | SP . T 050204 ..<br>XO . T 050204 .. | M-VT20-4<br>0,6 Nm | M-BT06           |
| 6028 TD 145-40 R            | 14,5                         | 25 | 20 | 124 | 59  | 50 | 0,12     |                                      |                    |                  |
| 6028 TD 150-40 R            | 15                           | 25 | 20 | 129 | 63  | 50 | 0,12     |                                      |                    |                  |
| 6028 TD 155-40 R            | 15,5                         | 25 | 20 | 129 | 63  | 50 | 0,12     |                                      |                    |                  |
| 6028 TD 160-40 R            | 16                           | 25 | 20 | 133 | 64  | 50 | 0,12     | SP . T 060205 ..<br>XO . T 060204 .. | M-VT22-6<br>0,9 Nm | M-BT07           |
| 6028 TD 165-40 R            | 16,5                         | 34 | 25 | 139 | 64  | 56 | 0,12     |                                      |                    |                  |
| 6028 TD 170-40 R            | 17                           | 34 | 25 | 143 | 71  | 56 | 0,12     |                                      |                    |                  |
| 6028 TD 175-40 R            | 17,5                         | 34 | 25 | 143 | 71  | 56 | 0,12     |                                      |                    |                  |
| 6028 TD 180-40 R            | 18                           | 34 | 25 | 148 | 75  | 56 | 0,12     |                                      |                    |                  |
| 6028 TD 185-40 R            | 18,5                         | 34 | 25 | 148 | 75  | 56 | 0,12     |                                      |                    |                  |
| 6028 TD 190-40 R            | 19                           | 34 | 25 | 152 | 79  | 56 | 0,12     | SP . T 07T208 ..<br>XO . T 07T205 .. | M-VT25-6<br>0,9 Nm | M-BT07           |
| 6028 TD 195-40 R            | 19,5                         | 34 | 25 | 152 | 79  | 56 | 0,12     |                                      |                    |                  |
| 6028 TD 200-40 R            | 20                           | 34 | 25 | 158 | 83  | 56 | 0,14     |                                      |                    |                  |
| 6028 TD 205-40 R            | 20,5                         | 34 | 25 | 158 | 83  | 56 | 0,14     |                                      |                    |                  |
| 6028 TD 210-40 R            | 21                           | 34 | 25 | 162 | 87  | 56 | 0,14     |                                      |                    |                  |
| 6028 TD 215-40 R            | 21,5                         | 34 | 25 | 162 | 87  | 56 | 0,14     |                                      |                    |                  |
| 6028 TD 220-40 R            | 22                           | 34 | 25 | 166 | 91  | 56 | 0,14     | SP . T 090308 ..<br>XO . T 090305 .. | M-VT30-7<br>1,4 Nm | M-BT09           |
| 6028 TD 225-40 R            | 22,5                         | 34 | 25 | 166 | 91  | 56 | 0,14     |                                      |                    |                  |
| 6028 TD 230-40 R            | 23                           | 34 | 25 | 172 | 95  | 56 | 0,14     |                                      |                    |                  |
| 6028 TD 235-40 R            | 23,5                         | 34 | 25 | 172 | 95  | 56 | 0,14     |                                      |                    |                  |
| 6028 TD 240-40 R            | 24                           | 44 | 32 | 181 | 99  | 60 | 0,15     |                                      |                    |                  |
| 6028 TD 245-40 R            | 24,5                         | 44 | 32 | 181 | 99  | 60 | 0,15     |                                      |                    |                  |
| 6028 TD 250-40 R            | 25                           | 44 | 32 | 185 | 103 | 60 | 0,15     | SP . T 11T308 ..<br>XO . T 11T306 .. | M-VT35-8<br>3,0 Nm | M-BT15           |
| 6028 TD 255-40 R            | 25,5                         | 44 | 32 | 185 | 103 | 60 | 0,15     |                                      |                    |                  |
| 6028 TD 260-40 R            | 26                           | 44 | 32 | 189 | 107 | 60 | 0,15     |                                      |                    |                  |
| 6028 TD 265-40 R            | 26,5                         | 44 | 32 | 189 | 107 | 60 | 0,15     |                                      |                    |                  |
| 6028 TD 270-40 R            | 27                           | 44 | 32 | 194 | 111 | 60 | 0,15     |                                      |                    |                  |
| 6028 TD 275-40 R            | 27,5                         | 44 | 32 | 194 | 111 | 60 | 0,15     |                                      |                    |                  |
| 6028 TD 280-40 R            | 28                           | 44 | 32 | 199 | 115 | 60 | 0,15     | SP . T 11T308 ..<br>XO . T 11T306 .. | M-VT35-8<br>3,0 Nm | M-BT15           |
| 6028 TD 285-40 R            | 28,5                         | 44 | 32 | 199 | 115 | 60 | 0,15     |                                      |                    |                  |
| 6028 TD 290-40 R            | 29                           | 44 | 32 | 203 | 119 | 60 | 0,15     |                                      |                    |                  |
| 6028 TD 295-40 R            | 29,5                         | 44 | 32 | 203 | 119 | 60 | 0,15     |                                      |                    |                  |
| 6028 TD 300-40 R            | 30                           | 44 | 32 | 210 | 123 | 60 | 0,16     |                                      |                    |                  |
| 6028 TD 305-40 R            | 30,5                         | 44 | 32 | 210 | 123 | 60 | 0,16     |                                      |                    |                  |
| 6028 TD 310-40 R            | 31                           | 44 | 32 | 214 | 127 | 60 | 0,16     | SP . T 11T308 ..<br>XO . T 11T306 .. | M-VT35-8<br>3,0 Nm | M-BT15           |
| 6028 TD 315-40 R            | 31,5                         | 44 | 32 | 214 | 127 | 60 | 0,16     |                                      |                    |                  |
| 6028 TD 320-40 R            | 32                           | 44 | 32 | 218 | 131 | 60 | 0,16     |                                      |                    |                  |
| 6028 TD 325-40 R            | 32,5                         | 44 | 32 | 218 | 131 | 60 | 0,16     |                                      |                    |                  |
| 6028 TD 330-40 R            | 33                           | 44 | 32 | 223 | 135 | 60 | 0,16     |                                      |                    |                  |
| 6028 TD 335-40 R            | 33,5                         | 44 | 32 | 223 | 135 | 60 | 0,16     |                                      |                    |                  |
| 6028 TD 340-40 R            | 34                           | 44 | 32 | 227 | 139 | 60 | 0,16     | SP . T 11T308 ..<br>XO . T 11T306 .. | M-VT35-8<br>3,0 Nm | M-BT15           |
| 6028 TD 345-40 R            | 34,5                         | 44 | 32 | 227 | 139 | 60 | 0,16     |                                      |                    |                  |
| 6028 TD 350-40 R            | 35                           | 44 | 32 | 231 | 143 | 60 | 0,16     |                                      |                    |                  |
| 6028 TD 355-40 R            | 35,5                         | 44 | 32 | 231 | 143 | 60 | 0,16     |                                      |                    |                  |

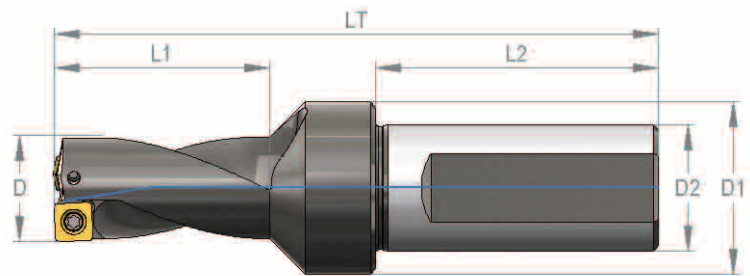
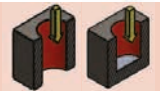
Bestellbeispiel / Order example: 6028-TD 120-40R



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |     |     |    | Vorschub | Wendeplatte<br>Insert                                                               | Schraube<br>Screw                                                                   | Schlüssel<br>Key                                                                    |
|-----------------------------|------------------------------|----|----|-----|-----|----|----------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                             | D                            | D1 | D2 | LT  | L1  | L2 | f        |  |  |  |
| 6028 TD 360-40 R            | 36                           | 48 | 40 | 248 | 148 | 70 | 0,16     | SP . T 130410 ..<br>XO . T 130406 ..                                                | M-VT40-10<br>3,0 Nm                                                                 | M-BT15                                                                              |
| 6028 TD 365-40 R            | 36,5                         | 48 | 40 | 248 | 148 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 370-40 R            | 37                           | 48 | 40 | 252 | 152 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 375-40 R            | 37,5                         | 48 | 40 | 252 | 152 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 380-40 R            | 38                           | 48 | 40 | 257 | 156 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 385-40 R            | 38,5                         | 48 | 40 | 257 | 156 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 390-40 R            | 39                           | 48 | 40 | 261 | 160 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 395-40 R            | 39,5                         | 48 | 40 | 261 | 160 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 400-40 R            | 40                           | 48 | 40 | 266 | 164 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 405-40 R            | 40,5                         | 48 | 40 | 266 | 164 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 410-40 R            | 41                           | 48 | 40 | 270 | 168 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 415-40 R            | 41,5                         | 48 | 40 | 270 | 168 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 420-40 R            | 42                           | 48 | 40 | 275 | 172 | 70 | 0,16     | SP . T 15M510 ..<br>XO . T 15M508 ..                                                | M-VT45-11<br>5,0 Nm                                                                 | M-BT20                                                                              |
| 6028 TD 425-40 R            | 42,5                         | 48 | 40 | 275 | 172 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 430-40 R            | 43                           | 58 | 40 | 282 | 177 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 435-40 R            | 43,5                         | 58 | 40 | 282 | 177 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 440-40 R            | 44                           | 58 | 40 | 286 | 181 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 445-40 R            | 44,5                         | 58 | 40 | 286 | 181 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 450-40 R            | 45                           | 58 | 40 | 291 | 185 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 455-40 R            | 45,5                         | 58 | 40 | 291 | 185 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 460-40 R            | 46                           | 58 | 40 | 295 | 189 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 465-40 R            | 46,5                         | 58 | 40 | 295 | 189 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 470-40 R            | 47                           | 58 | 40 | 300 | 193 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 475-40 R            | 47,5                         | 58 | 40 | 300 | 193 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 480-40 R            | 48                           | 58 | 40 | 304 | 197 | 70 | 0,16     | SP . T 180510 ..<br>XO . T 180508 ..                                                | M-VT50-11<br>5,0 Nm                                                                 | M-BT20                                                                              |
| 6028 TD 485-40 R            | 48,5                         | 58 | 40 | 304 | 197 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 490-40 R            | 49                           | 58 | 40 | 308 | 201 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 495-40 R            | 49,5                         | 58 | 40 | 308 | 201 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 500-40 R            | 50                           | 58 | 40 | 312 | 205 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 505-40 R            | 50,5                         | 58 | 40 | 312 | 205 | 70 | 0,16     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 510-40 R            | 51                           | 68 | 40 | 320 | 210 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 515-40 R            | 51,5                         | 68 | 40 | 320 | 210 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 520-40 R            | 52                           | 68 | 40 | 324 | 214 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 525-40 R            | 52,5                         | 68 | 40 | 324 | 214 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 530-40 R            | 53                           | 68 | 40 | 328 | 218 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 535-40 R            | 53,5                         | 68 | 40 | 328 | 218 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 540-40 R            | 54                           | 68 | 40 | 332 | 222 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 545-40 R            | 54,5                         | 68 | 40 | 332 | 222 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 550-40 R            | 55                           | 68 | 40 | 336 | 226 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 555-40 R            | 55,5                         | 68 | 40 | 336 | 226 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 560-40 R            | 56                           | 68 | 40 | 342 | 230 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 565-40 R            | 56,5                         | 68 | 40 | 342 | 230 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 570-40 R            | 57                           | 68 | 40 | 347 | 235 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 575-40 R            | 57,5                         | 68 | 40 | 347 | 235 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 580-40 R            | 58                           | 68 | 40 | 352 | 240 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 585-40 R            | 58,5                         | 68 | 40 | 352 | 240 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 590-40 R            | 59                           | 68 | 40 | 357 | 245 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 595-40 R            | 59,5                         | 68 | 40 | 357 | 245 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 600-40 R            | 60                           | 68 | 40 | 362 | 250 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |
| 6028 TD 605-40 R            | 60,5                         | 68 | 40 | 362 | 250 | 70 | 0,18     |                                                                                     |                                                                                     |                                                                                     |

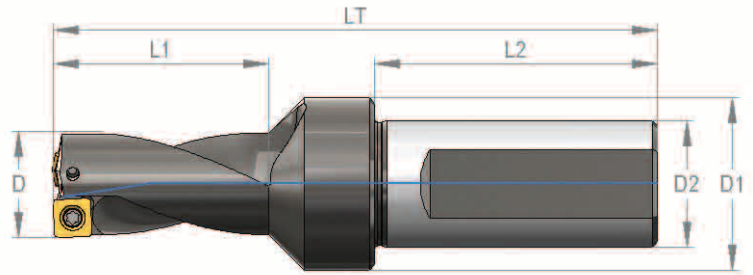
Bestellbeispiel / Order example: 6028-TD 360-40R





| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |     |     |    | Vorschub | Wendeplatte<br>Insert                | Schraube<br>Screw  | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|----|-----|-----|----|----------|--------------------------------------|--------------------|------------------|
|                             | D                            | D1 | D2 | LT  | L1  | L2 | f        |                                      |                    |                  |
| 6028 TD 120-50 R            | 12                           | 25 | 20 | 127 | 63  | 50 | 0,1      | SP . T 040204 ..<br>XO . T 040204 .. | M-VT20-4<br>0,6 Nm | M-BT06           |
| 6028 TD 125-50 R            | 12,5                         | 25 | 20 | 127 | 63  | 50 | 0,1      |                                      |                    |                  |
| 6028 TD 130-50 R            | 13                           | 25 | 20 | 132 | 68  | 50 | 0,1      |                                      |                    |                  |
| 6028 TD 135-50 R            | 13,5                         | 25 | 20 | 132 | 68  | 50 | 0,1      |                                      |                    |                  |
| 6028 TD 140-50 R            | 14                           | 25 | 20 | 138 | 73  | 50 | 0,12     | SP . T 050204 ..<br>XO . T 050204 .. | M-VT20-4<br>0,6 Nm | M-BT06           |
| 6028 TD 145-50 R            | 14,5                         | 25 | 20 | 138 | 73  | 50 | 0,12     |                                      |                    |                  |
| 6028 TD 150-50 R            | 15                           | 25 | 20 | 144 | 78  | 50 | 0,12     |                                      |                    |                  |
| 6028 TD 155-50 R            | 15,5                         | 25 | 20 | 144 | 78  | 50 | 0,12     |                                      |                    |                  |
| 6028 TD 160-50 R            | 16                           | 25 | 20 | 149 | 83  | 50 | 0,12     | SP . T 060205 ..<br>XO . T 060204 .. | M-VT22-6<br>0,9 Nm | M-BT07           |
| 6028 TD 165-50 R            | 16,5                         | 34 | 25 | 155 | 83  | 56 | 0,12     |                                      |                    |                  |
| 6028 TD 170-50 R            | 17                           | 34 | 25 | 160 | 88  | 56 | 0,12     |                                      |                    |                  |
| 6028 TD 175-50 R            | 17,5                         | 34 | 25 | 160 | 88  | 56 | 0,12     |                                      |                    |                  |
| 6028 TD 180-50 R            | 18                           | 34 | 25 | 166 | 93  | 56 | 0,12     | SP . T 07T208 ..<br>XO . T 07T205 .. | M-VT25-6<br>0,9 Nm | M-BT07           |
| 6028 TD 185-50 R            | 18,5                         | 34 | 25 | 166 | 93  | 56 | 0,12     |                                      |                    |                  |
| 6028 TD 190-50 R            | 19                           | 34 | 25 | 171 | 98  | 56 | 0,12     |                                      |                    |                  |
| 6028 TD 195-50 R            | 19,5                         | 34 | 25 | 171 | 98  | 56 | 0,12     |                                      |                    |                  |
| 6028 TD 200-50 R            | 20                           | 34 | 25 | 178 | 103 | 56 | 0,14     | SP . T 090308 ..<br>XO . T 090305 .. | M-VT30-7<br>1,4 Nm | M-BT09           |
| 6028 TD 205-50 R            | 20,5                         | 34 | 25 | 178 | 103 | 56 | 0,14     |                                      |                    |                  |
| 6028 TD 210-50 R            | 21                           | 34 | 25 | 183 | 108 | 56 | 0,14     |                                      |                    |                  |
| 6028 TD 215-50 R            | 21,5                         | 34 | 25 | 183 | 108 | 56 | 0,14     |                                      |                    |                  |
| 6028 TD 220-50 R            | 22                           | 34 | 25 | 188 | 113 | 56 | 0,14     | SP . T 11T308 ..<br>XO . T 11T306 .. | M-VT35-8<br>3,0 Nm | M-BT15           |
| 6028 TD 225-50 R            | 22,5                         | 34 | 25 | 188 | 113 | 56 | 0,14     |                                      |                    |                  |
| 6028 TD 230-50 R            | 23                           | 34 | 25 | 195 | 118 | 56 | 0,14     |                                      |                    |                  |
| 6028 TD 235-50 R            | 23,5                         | 34 | 25 | 195 | 118 | 56 | 0,14     |                                      |                    |                  |
| 6028 TD 240-50 R            | 24                           | 44 | 32 | 205 | 123 | 60 | 0,15     | SP . T 11T308 ..<br>XO . T 11T306 .. | M-VT35-8<br>3,0 Nm | M-BT15           |
| 6028 TD 245-50 R            | 24,5                         | 44 | 32 | 205 | 123 | 60 | 0,15     |                                      |                    |                  |
| 6028 TD 250-50 R            | 25                           | 44 | 32 | 210 | 128 | 60 | 0,15     |                                      |                    |                  |
| 6028 TD 255-50 R            | 25,5                         | 44 | 32 | 210 | 128 | 60 | 0,15     |                                      |                    |                  |
| 6028 TD 260-50 R            | 26                           | 44 | 32 | 215 | 133 | 60 | 0,15     | SP . T 11T308 ..<br>XO . T 11T306 .. | M-VT35-8<br>3,0 Nm | M-BT15           |
| 6028 TD 265-50 R            | 26,5                         | 44 | 32 | 215 | 133 | 60 | 0,15     |                                      |                    |                  |
| 6028 TD 270-50 R            | 27                           | 44 | 32 | 221 | 138 | 60 | 0,15     |                                      |                    |                  |
| 6028 TD 275-50 R            | 27,5                         | 44 | 32 | 221 | 138 | 60 | 0,15     |                                      |                    |                  |
| 6028 TD 280-50 R            | 28                           | 44 | 32 | 227 | 143 | 60 | 0,15     | SP . T 11T308 ..<br>XO . T 11T306 .. | M-VT35-8<br>3,0 Nm | M-BT15           |
| 6028 TD 285-50 R            | 28,5                         | 44 | 32 | 227 | 143 | 60 | 0,15     |                                      |                    |                  |
| 6028 TD 290-50 R            | 29                           | 44 | 32 | 232 | 148 | 60 | 0,15     |                                      |                    |                  |
| 6028 TD 295-50 R            | 29,5                         | 44 | 32 | 232 | 148 | 60 | 0,15     |                                      |                    |                  |
| 6028 TD 300-50 R            | 30                           | 44 | 32 | 240 | 153 | 60 | 0,16     | SP . T 11T308 ..<br>XO . T 11T306 .. | M-VT35-8<br>3,0 Nm | M-BT15           |
| 6028 TD 305-50 R            | 30,5                         | 44 | 32 | 240 | 153 | 60 | 0,16     |                                      |                    |                  |
| 6028 TD 310-50 R            | 31                           | 44 | 32 | 245 | 158 | 60 | 0,16     |                                      |                    |                  |
| 6028 TD 315-50 R            | 31,5                         | 44 | 32 | 245 | 158 | 60 | 0,16     |                                      |                    |                  |
| 6028 TD 320-50 R            | 32                           | 44 | 32 | 250 | 163 | 60 | 0,16     | SP . T 11T308 ..<br>XO . T 11T306 .. | M-VT35-8<br>3,0 Nm | M-BT15           |
| 6028 TD 325-50 R            | 32,5                         | 44 | 32 | 250 | 163 | 60 | 0,16     |                                      |                    |                  |
| 6028 TD 330-50 R            | 33                           | 44 | 32 | 256 | 168 | 60 | 0,16     |                                      |                    |                  |
| 6028 TD 335-50 R            | 33,5                         | 44 | 32 | 256 | 168 | 60 | 0,16     |                                      |                    |                  |
| 6028 TD 340-50 R            | 34                           | 44 | 32 | 261 | 173 | 60 | 0,16     | SP . T 11T308 ..<br>XO . T 11T306 .. | M-VT35-8<br>3,0 Nm | M-BT15           |
| 6028 TD 345-50 R            | 34,5                         | 44 | 32 | 261 | 173 | 60 | 0,16     |                                      |                    |                  |
| 6028 TD 350-40 R            | 35                           | 44 | 32 | 266 | 178 | 60 | 0,16     |                                      |                    |                  |
| 6028 TD 355-50 R            | 35,5                         | 44 | 32 | 266 | 178 | 60 | 0,16     |                                      |                    |                  |

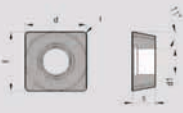
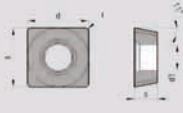
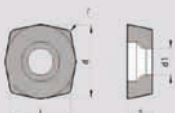
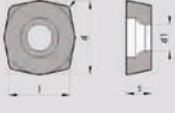
Bestellbeispiel / Order example: 6028-TD 120-50R



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |     |     |    | Vorschub | Wendeplatte<br>Insert                | Schraube<br>Screw   | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|----|-----|-----|----|----------|--------------------------------------|---------------------|------------------|
|                             | D                            | D1 | D2 | LT  | L1  | L2 | f        |                                      |                     |                  |
| 6028 TD 360-50 R            | 36                           | 48 | 40 | 284 | 184 | 70 | 0,16     | SP . T 130410 ..<br>XO . T 130406 .. | M-VT40-10<br>3,0 Nm | M-BT15           |
| 6028 TD 365-50 R            | 36,5                         | 48 | 40 | 284 | 184 | 70 | 0,16     |                                      |                     |                  |
| 6028 TD 370-50 R            | 37                           | 48 | 40 | 289 | 189 | 70 | 0,16     |                                      |                     |                  |
| 6028 TD 375-50 R            | 37,5                         | 48 | 40 | 289 | 189 | 70 | 0,16     |                                      |                     |                  |
| 6028 TD 380-50 R            | 38                           | 48 | 40 | 295 | 194 | 70 | 0,16     |                                      |                     |                  |
| 6028 TD 385-50 R            | 38,5                         | 48 | 40 | 295 | 194 | 70 | 0,16     |                                      |                     |                  |
| 6028 TD 390-50 R            | 39                           | 48 | 40 | 300 | 199 | 70 | 0,16     |                                      |                     |                  |
| 6028 TD 395-50 R            | 39,5                         | 48 | 40 | 300 | 199 | 70 | 0,16     |                                      |                     |                  |
| 6028 TD 400-50 R            | 40                           | 48 | 40 | 306 | 204 | 70 | 0,16     |                                      |                     |                  |
| 6028 TD 405-50 R            | 40,5                         | 48 | 40 | 306 | 204 | 70 | 0,16     |                                      |                     |                  |
| 6028 TD 410-50 R            | 41                           | 48 | 40 | 311 | 209 | 70 | 0,16     | SP . T 15M510 ..<br>XO . T 15M508 .. | M-VT45-11<br>5,0 Nm | M-BT20           |
| 6028 TD 415-50 R            | 41,5                         | 48 | 40 | 311 | 209 | 70 | 0,16     |                                      |                     |                  |
| 6028 TD 420-50 R            | 42                           | 48 | 40 | 317 | 214 | 70 | 0,16     |                                      |                     |                  |
| 6028 TD 425-50 R            | 42,5                         | 48 | 40 | 317 | 214 | 70 | 0,16     |                                      |                     |                  |
| 6028 TD 430-50 R            | 43                           | 58 | 40 | 325 | 220 | 70 | 0,16     |                                      |                     |                  |
| 6028 TD 435-50 R            | 43,5                         | 58 | 40 | 326 | 221 | 70 | 0,16     |                                      |                     |                  |
| 6028 TD 440-50 R            | 44                           | 58 | 40 | 330 | 225 | 70 | 0,16     |                                      |                     |                  |
| 6028 TD 445-50 R            | 44,5                         | 58 | 40 | 330 | 225 | 70 | 0,16     |                                      |                     |                  |
| 6028 TD 450-50 R            | 45                           | 58 | 40 | 336 | 230 | 70 | 0,16     |                                      |                     |                  |
| 6028 TD 455-50 R            | 45,5                         | 58 | 40 | 336 | 230 | 70 | 0,16     |                                      |                     |                  |
| 6028 TD 460-50 R            | 46                           | 58 | 40 | 341 | 235 | 70 | 0,16     | SP . T 180510 ..<br>XO . T 180508 .. | M-VT50-11<br>5,0 Nm | M-BT20           |
| 6028 TD 465-50 R            | 46,5                         | 58 | 40 | 341 | 235 | 70 | 0,16     |                                      |                     |                  |
| 6028 TD 470-50 R            | 47                           | 58 | 40 | 347 | 240 | 70 | 0,16     |                                      |                     |                  |
| 6028 TD 475-50 R            | 47,5                         | 58 | 40 | 347 | 240 | 70 | 0,16     |                                      |                     |                  |
| 6028 TD 480-50 R            | 48                           | 58 | 40 | 352 | 245 | 70 | 0,16     |                                      |                     |                  |
| 6028 TD 485-50 R            | 48,5                         | 58 | 40 | 352 | 245 | 70 | 0,16     |                                      |                     |                  |
| 6028 TD 490-50 R            | 49                           | 58 | 40 | 357 | 250 | 70 | 0,16     |                                      |                     |                  |
| 6028 TD 495-50 R            | 49,5                         | 58 | 40 | 357 | 250 | 70 | 0,16     |                                      |                     |                  |
| 6028 TD 500-50 R            | 50                           | 58 | 40 | 362 | 255 | 70 | 0,16     |                                      |                     |                  |
| 6028 TD 505-50 R            | 50,5                         | 58 | 40 | 362 | 255 | 70 | 0,16     |                                      |                     |                  |
| 6028 TD 510-50 R            | 51                           | 68 | 40 | 371 | 261 | 70 | 0,18     | SP . T 180510 ..<br>XO . T 180508 .. | M-VT50-11<br>5,0 Nm | M-BT20           |
| 6028 TD 515-50 R            | 51,5                         | 68 | 40 | 371 | 261 | 70 | 0,18     |                                      |                     |                  |
| 6028 TD 520-50 R            | 52                           | 68 | 40 | 376 | 266 | 70 | 0,18     |                                      |                     |                  |
| 6028 TD 525-50 R            | 52,5                         | 68 | 40 | 376 | 266 | 70 | 0,18     |                                      |                     |                  |
| 6028 TD 530-50 R            | 53                           | 68 | 40 | 381 | 271 | 70 | 0,18     |                                      |                     |                  |
| 6028 TD 535-50 R            | 53,5                         | 68 | 40 | 381 | 271 | 70 | 0,18     |                                      |                     |                  |
| 6028 TD 540-50 R            | 54                           | 68 | 40 | 386 | 276 | 70 | 0,18     |                                      |                     |                  |
| 6028 TD 545-50 R            | 54,5                         | 68 | 40 | 386 | 276 | 70 | 0,18     |                                      |                     |                  |
| 6028 TD 550-50 R            | 55                           | 68 | 40 | 391 | 281 | 70 | 0,18     |                                      |                     |                  |
| 6028 TD 555-50 R            | 55,6                         | 68 | 40 | 391 | 281 | 70 | 0,18     |                                      |                     |                  |
| 6028 TD 560-50 R            | 56                           | 68 | 40 | 398 | 286 | 70 | 0,18     | SP . T 180510 ..<br>XO . T 180508 .. | M-VT50-11<br>5,0 Nm | M-BT20           |
| 6028 TD 565-50 R            | 56,5                         | 68 | 40 | 398 | 286 | 70 | 0,18     |                                      |                     |                  |
| 6028 TD 570-50 R            | 57                           | 68 | 40 | 404 | 292 | 70 | 0,18     |                                      |                     |                  |
| 6028 TD 575-50 R            | 57,5                         | 68 | 40 | 404 | 292 | 70 | 0,18     |                                      |                     |                  |
| 6028 TD 580-50 R            | 58                           | 68 | 40 | 410 | 298 | 70 | 0,18     |                                      |                     |                  |
| 6028 TD 585-50 R            | 58,5                         | 68 | 40 | 410 | 298 | 70 | 0,18     |                                      |                     |                  |
| 6028 TD 590-50 R            | 59                           | 68 | 40 | 416 | 304 | 70 | 0,18     |                                      |                     |                  |
| 6028 TD 595-50 R            | 59,5                         | 68 | 40 | 416 | 304 | 70 | 0,18     |                                      |                     |                  |
| 6028 TD 600-50 R            | 60                           | 68 | 40 | 422 | 310 | 70 | 0,18     |                                      |                     |                  |
| 6028 TD 605-50 R            | 60,5                         | 68 | 40 | 422 | 310 | 70 | 0,18     |                                      |                     |                  |

Bestellbeispiel / Order example: 6028-TD 360-50R

# Series 6028

|                                                                                                   | Form Figure                                                                         | Abmessungen Dimensions |   |     |     |     | Bezeichnung Designation | Schraube  | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|---------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|---|-----|-----|-----|-------------------------|-----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                   |                                                                                     | l                      | d | s   | d1  | r   |                         |           |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>SPET... ALU   |    | 4,7                    |   | 2,4 | 2,3 | 0,4 | SPET 040204 ALU         | M-VT20-4  | M-BT06    | ■                                       |     |                                     |       |       |       |       | □     |
|                                                                                                   |                                                                                     | 5,1                    |   | 2,4 | 2,3 | 0,4 | SPET 050204 ALU         | M-VT20-4  | M-BT06    | ■                                       |     |                                     |       |       |       |       | □     |
|                                                                                                   |                                                                                     | 6,2                    |   | 2,5 | 2,5 | 0,5 | SPET 060205 ALU         | M-VT22-6  | M-BT07    | ■                                       |     |                                     |       |       |       |       | □     |
|                                                                                                   |                                                                                     | 7,5                    |   | 2,8 | 2,8 | 0,8 | SPET 07T208 ALU         | M-VT25-6  | M-BT07    | ■                                       |     |                                     |       |       |       |       | □     |
|                                                                                                   |                                                                                     | 9,2                    |   | 3,3 | 3,4 | 0,8 | SPET 090308 ALU         | M-VT30-7  | M-BT09    | ■                                       |     |                                     |       |       |       |       | □     |
|                                                                                                   |                                                                                     | 11,0                   |   | 4,0 | 4,0 | 0,8 | SPET 11T308 ALU         | M-VT 30-7 | M-BT09    | ■                                       |     |                                     |       |       |       |       | □     |
|                                                                                                   |                                                                                     | 13,0                   |   | 4,5 | 4,5 | 1,0 | SPET 130410 ALU         | M-VT40-10 | M-BT15    | ■                                       |     |                                     |       |       |       |       | □     |
|                                                                                                   |                                                                                     | 15,2                   |   | 5,0 | 5,5 | 1,0 | SPET 15M510 ALU         | M-VT45-11 | M-BT20    | ■                                       |     |                                     |       |       |       |       | □     |
|                                                                                                   |                                                                                     | 18,2                   |   | 5,5 | 6,0 | 1,0 | SPET 180510 ALU         | M-VT50-11 | M-BT20    | ■                                       |     |                                     |       |       |       |       | □     |
| <br>SPMT... MD    |    | 4,7                    |   | 2,4 | 2,3 | 0,4 | SPMT 040204 MD          | M-VT20-4  | M-BT06    |                                         |     |                                     |       | ■     |       |       |       |
|                                                                                                   |                                                                                     | 5,1                    |   | 2,4 | 2,3 | 0,4 | SPMT 050204 MD          | M-VT20-4  | M-BT06    |                                         |     |                                     |       | ■     |       |       |       |
|                                                                                                   |                                                                                     | 6,2                    |   | 2,5 | 2,5 | 0,5 | 205 MD                  | M-VT22-6  | M-BT07    |                                         |     |                                     |       | ■     |       |       |       |
|                                                                                                   |                                                                                     | 7,5                    |   | 2,8 | 2,8 | 0,8 | SPMT 07T208 MD          | M-VT25-6  | M-BT07    |                                         |     |                                     |       | ■     |       |       |       |
|                                                                                                   |                                                                                     | 9,2                    |   | 3,3 | 3,4 | 0,8 | SPMT 090308 MD          | M-VT30-7  | M-BT09    |                                         |     |                                     |       | ■     |       |       |       |
|                                                                                                   |                                                                                     | 11,0                   |   | 4,0 | 4,0 | 0,8 | SPMT 11T308 MD          | M-VT 30-7 | M-BT09    |                                         |     |                                     |       | ■     |       |       |       |
|                                                                                                   |                                                                                     | 13,0                   |   | 4,5 | 4,5 | 1,0 | SPMT 130410 MD          | M-VT40-10 | M-BT15    |                                         |     |                                     |       | ■     |       |       |       |
|                                                                                                   |                                                                                     | 15,2                   |   | 5,0 | 5,5 | 1,0 | SPMT 15M510 MD          | M-VT45-11 | M-BT20    |                                         |     |                                     |       | ■     |       |       |       |
|                                                                                                   |                                                                                     | 18,2                   |   | 5,5 | 6,0 | 1,0 | SPMT 180510 MD          | M-VT50-11 | M-BT20    |                                         |     |                                     |       | ■     |       |       |       |
| <br>XOET... ALU |  | 4,3                    |   | 2,4 | 2,3 | 0,4 | XOET 040204 ALU         | M-VT20-4  | M-BT06    | ■                                       |     |                                     |       |       |       |       | □     |
|                                                                                                   |                                                                                     | 4,8                    |   | 2,4 | 2,3 | 0,4 | XOET 050204 ALU         | M-VT20-4  | M-BT06    | ■                                       |     |                                     |       |       |       |       | □     |
|                                                                                                   |                                                                                     | 5,8                    |   | 2,5 | 2,5 | 0,4 | XOET 060204 ALU         | M-VT22-6  | M-BT07    | ■                                       |     |                                     |       |       |       |       | □     |
|                                                                                                   |                                                                                     | 6,9                    |   | 2,8 | 2,8 | 0,5 | XOET 07T205 ALU         | M-VT25-6  | M-BT07    | ■                                       |     |                                     |       |       |       |       | □     |
|                                                                                                   |                                                                                     | 8,4                    |   | 3,3 | 3,4 | 0,5 | XOET 090305 ALU         | M-VT30-7  | M-BT09    | ■                                       |     |                                     |       |       |       |       | □     |
|                                                                                                   |                                                                                     | 10,0                   |   | 4,0 | 4,0 | 0,6 | XOET 11T306 ALU         | M-VT 30-7 | M-BT09    | ■                                       |     |                                     |       |       |       |       | □     |
|                                                                                                   |                                                                                     | 11,9                   |   | 4,5 | 4,5 | 0,6 | XOET 130406 ALU         | M-VT40-10 | M-BT15    | ■                                       |     |                                     |       |       |       |       | □     |
|                                                                                                   |                                                                                     | 13,9                   |   | 5,0 | 5,5 | 0,8 | XOET 15M508 ALU         | M-VT45-11 | M-BT20    | ■                                       |     |                                     |       |       |       |       | □     |
|                                                                                                   |                                                                                     | 16,5                   |   | 5,5 | 6,0 | 0,8 | XOET 180508 ALU         | M-VT50-11 | M-BT20    | ■                                       |     |                                     |       |       |       |       | □     |
| <br>XOMT... MD  |  | 4,3                    |   | 2,4 | 2,3 | 0,4 | XOMT 040204 MD          | M-VT20-4  | M-BT06    |                                         |     |                                     |       | ■     |       |       |       |
|                                                                                                   |                                                                                     | 4,8                    |   | 2,4 | 2,3 | 0,4 | XOMT 050204 MD          | M-VT20-4  | M-BT06    |                                         |     |                                     |       | ■     |       |       |       |
|                                                                                                   |                                                                                     | 5,8                    |   | 2,5 | 2,5 | 0,4 | XOMT 060204 MD          | M-VT22-6  | M-BT07    |                                         |     |                                     |       | ■     |       |       |       |
|                                                                                                   |                                                                                     | 6,9                    |   | 2,8 | 2,8 | 0,5 | XOMT 07T205 MD          | M-VT25-6  | M-BT07    |                                         |     |                                     |       | ■     |       |       |       |
|                                                                                                   |                                                                                     | 8,4                    |   | 3,3 | 3,4 | 0,5 | XOMT 090305 MD          | M-VT30-7  | M-BT09    |                                         |     |                                     |       | ■     |       |       |       |
|                                                                                                   |                                                                                     | 10,0                   |   | 4,0 | 4,0 | 0,6 | XOMT 11T306 MD          | M-VT 30-7 | M-BT09    |                                         |     |                                     |       | ■     |       |       |       |
|                                                                                                   |                                                                                     | 11,9                   |   | 4,5 | 4,5 | 0,6 | XOMT 130406 MD          | M-VT40-10 | M-BT15    |                                         |     |                                     |       | ■     |       |       |       |
|                                                                                                   |                                                                                     | 13,9                   |   | 5,0 | 5,5 | 0,8 | XOMT 15M508 MD          | M-VT45-11 | M-BT20    |                                         |     |                                     |       | ■     |       |       |       |
|                                                                                                   |                                                                                     | 16,5                   |   | 5,5 | 6,0 | 0,8 | XOMT 180508 MD          | M-VT50-11 | M-BT20    |                                         |     |                                     |       | ■     |       |       |       |

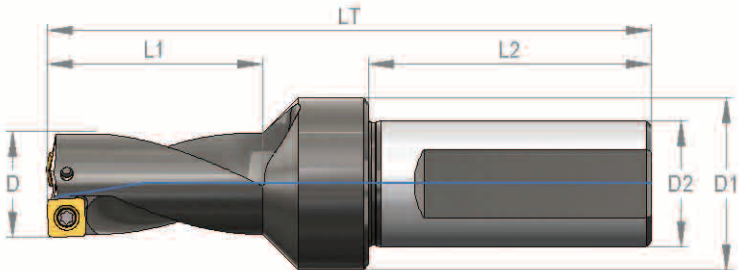
E

Series 6028

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl                                           | Emulsion                                  | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|----------------------------------------------|-------------------------------------------|-----|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |                                              |                                           |     |         |           |
| PTT20         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                              |                                           |     |         |           |
| PTT35         |                   |     |             |                  | 300              | 200              | 160               | 130               |                   |                   |                   |                   |                   | 160             | 160             | 150   |       |                       |                                              |                                           |     |         |           |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                              |                                           |     |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                              |                                           |     |         |           |
| KTE20         | 600               | 300 | 250         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                              |                                           |     |         |           |
| CT28          | 600               | 300 | 250         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                              |                                           |     |         |           |
| fz            | Tabelle           |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | <input checked="" type="checkbox"/> geeignet | <input type="checkbox"/> bedingt geeignet |     |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

Toleranzen - SD-Drill  
Tolerance - SD-Drill



|           | Ø12 ~ Ø29                      | Ø30 ~ Ø45                     | Ø46 ~ Ø60                      |
|-----------|--------------------------------|-------------------------------|--------------------------------|
| 2xD ~ 3xD | Bohrtoleranz 0 ~ -0,15         | Bohrtoleranz 0 ~ -0,15        | Bohrtoleranz 0 ~ -0,15         |
|           | Bohrungstoleranz +0,2 ~ -0,1   | Bohrungstoleranz +0,25 ~ -0,1 | Bohrungstoleranz +0,25 ~ -0,1  |
| 4xD ~ 5xD | Bohrtoleranz 0 ~ -0,15         | Bohrtoleranz 0 ~ -0,15        | Bohrtoleranz 0 ~ -0,15         |
|           | Bohrungstoleranz +0,25 ~ -0,05 | Bohrungstoleranz +0,3 ~ -0,05 | Bohrungstoleranz +0,33 ~ -0,05 |





# KATALOG 01/2024

Catalogo 01/2024





| Type<br>Type                    | Forma<br>Shape                                                                      | codice<br>Designation | immagine<br>Figure                                                                  | Rivestimento<br>Coated | n°tagli<br>No. of flute | Ø<br>Size |     | Material<br>Work piece |                                     |                       |                                        |                                                   |                                  | Pag.<br>Page |                                    |
|---------------------------------|-------------------------------------------------------------------------------------|-----------------------|-------------------------------------------------------------------------------------|------------------------|-------------------------|-----------|-----|------------------------|-------------------------------------|-----------------------|----------------------------------------|---------------------------------------------------|----------------------------------|--------------|------------------------------------|
|                                 |                                                                                     |                       |                                                                                     |                        |                         |           |     | P                      | M                                   | K                     | N                                      | S                                                 | H                                |              |                                    |
|                                 |                                                                                     |                       |                                                                                     |                        |                         | Min       | Max | Steel<br>Stahl         | Stainless steel<br>Rostfreier Stahl | Cast Iron<br>Gussisen | Non-ferrous metal<br>Nichteisenmetalle | Heat resistant alloy<br>Hitzebeständige Legierung | Titanium Alloy<br>Titanlegierung |              | Hardened steel<br>Gehärteter Stahl |
| aluminium<br>milling cutter     |    | 1500.035....          |    | ALCN<br>.035           | 2                       | 8,0       | 25  |                        |                                     |                       |                                        |                                                   |                                  |              | 4                                  |
|                                 |    | 1501.035....          |    | ALCN<br>.035           | 3                       | 8,0       | 25  |                        |                                     |                       |                                        |                                                   |                                  |              | 4                                  |
|                                 |    | 1502.035....          |    | ALCN<br>.035           | 3                       | 8,0       | 25  |                        |                                     |                       |                                        |                                                   |                                  |              | 5                                  |
|                                 |    | 1503.035....          |    | ALCN<br>.035           | 4                       | 8,0       | 25  |                        |                                     |                       |                                        |                                                   |                                  |              | 5                                  |
|                                 |    | 1504.035....          |    | ALCN<br>.035           | 3                       | 8,0       | 25  |                        |                                     |                       |                                        |                                                   |                                  |              | 6                                  |
|                                 |    | 1505.035....          |    | ALCN<br>.035           | 3                       | 8,0       | 25  |                        |                                     |                       |                                        |                                                   |                                  |              | 6                                  |
|                                 |    | 1506.035....          |    | ALCN<br>.035           | 4                       | 8,0       | 25  |                        |                                     |                       |                                        |                                                   |                                  |              | 7                                  |
|                                 |    | 1507.035....          |    | ALCN<br>.035           | 2                       | 8,0       | 25  |                        |                                     |                       |                                        |                                                   |                                  |              | 7                                  |
| helix milling<br>cutter         |    | 1508.025....          |    | ALTIN<br>.025          | 3                       | 8,0       | 10  |                        |                                     |                       |                                        |                                                   |                                  |              | 8                                  |
| solid carbide<br>milling cutter |    | 1509.025....          |    | ALTIN<br>.025          | 3                       | 8,0       | 25  |                        |                                     |                       |                                        |                                                   |                                  |              | 8                                  |
|                                 |   | 1510.025....          |   | ALTIN<br>.025          | 3                       | 8,0       | 25  |                        |                                     |                       |                                        |                                                   |                                  |              | 9                                  |
|                                 |  | 1511.025....          |  | ALTIN<br>.025          | 4                       | 8,0       | 25  |                        |                                     |                       |                                        |                                                   |                                  |              | 9                                  |
| milling cutter<br>Q35°/38°      |  | 1512.025....          |  | ALTIN<br>.025          | 4                       | 8,0       | 25  |                        |                                     |                       |                                        |                                                   |                                  |              | 10                                 |
|                                 |  | 1513.025....          |  | ALTIN<br>.025          | 4                       | 8,0       | 25  |                        |                                     |                       |                                        |                                                   |                                  |              | 10                                 |
|                                 |  | 1514.025....          |  | ALTIN<br>.025          | 4                       | 8,0       | 25  |                        |                                     |                       |                                        |                                                   |                                  |              | 11                                 |
| milling cutter<br>Q42°/45°      |  | 1515.025....          |  | ALTIN<br>.025          | 4                       | 8,0       | 25  |                        |                                     |                       |                                        |                                                   |                                  |              | 12                                 |
|                                 |  | 1516.025....          |  | ALTIN<br>.025          | 4                       | 8,0       | 25  |                        |                                     |                       |                                        |                                                   |                                  |              | 12                                 |
|                                 |  | 1517.025....          |  | ALTIN<br>.025          | 4                       | 8,0       | 25  |                        |                                     |                       |                                        |                                                   |                                  |              | 13                                 |
| millling cutter                 |  | 1518.025....          |  | ALTIN<br>.025          | 6                       | 8,0       | 25  |                        |                                     |                       |                                        |                                                   |                                  |              | 14                                 |
| Roughing<br>milling cutter      |  | 1519.025....          |  | ALTIN<br>.025          | 4                       | 8,0       | 25  |                        |                                     |                       |                                        |                                                   |                                  |              | 14                                 |
|                                 |  | 1520.025....          |  | ALTIN<br>.025          | 4                       | 8,0       | 25  |                        |                                     |                       |                                        |                                                   |                                  |              | 15                                 |
|                                 |  | 1521.025....          |  | ALTIN<br>.025          | 4                       | 8,0       | 25  |                        |                                     |                       |                                        |                                                   |                                  |              | 15                                 |
| Torus<br>milling cutter         |  | 1522.025....          |  | ALTIN<br>.025          | 4                       | 8,0       | 25  |                        |                                     |                       |                                        |                                                   |                                  |              | 16                                 |

| Type<br>Typ e                    | Forma<br>Shape                                                                    | codice<br>Designation | immagine<br>Figure                                                                | Rivestimento<br>Coated | n°tagli<br>No. of flute | Ø<br>Size |     | Material<br>Work piece |                                      |                         |                                       |                                                  |                         | Pag<br>Page |
|----------------------------------|-----------------------------------------------------------------------------------|-----------------------|-----------------------------------------------------------------------------------|------------------------|-------------------------|-----------|-----|------------------------|--------------------------------------|-------------------------|---------------------------------------|--------------------------------------------------|-------------------------|-------------|
|                                  |                                                                                   |                       |                                                                                   |                        |                         | Min       | Max | P                      | M                                    | K                       | N                                     | S                                                | H                       |             |
|                                  |                                                                                   |                       |                                                                                   |                        |                         |           |     | Steel<br>Stahl         | Stainless steel<br>Rostfrei-er Stahl | Cast Iron<br>Guss-eisen | Non-ferrous metal<br>Nichteisenmetall | Heat resistant alloy<br>Hitzebeständige-er Titan | Titanium Alloy<br>Titan |             |
| radius milling cutter            |  | 1523.025....          |  | ALTIN<br>.025          | 2                       | 8,0       | 25  | ■                      | ■                                    | ■                       | ■                                     | ■                                                | ■                       | 16          |
|                                  |  | 1524.025....          |  | ALTIN<br>.025          | 3                       | 8,0       | 25  | ■                      | ■                                    | ■                       | ■                                     | ■                                                | ■                       | 17          |
|                                  |  | 1525.025....          |  | ALTIN<br>.025          | 4                       | 8,0       | 25  | ■                      | ■                                    | ■                       | ■                                     | ■                                                | ■                       | 17          |
| Ball milling cutter              |  | 1526.025....          |  | ALTIN<br>.025          | 2                       | 8,0       | 25  | ■                      | ■                                    | ■                       | ■                                     | ■                                                | ■                       | 18          |
| Ball milling cutter              |  | 1527.025....          |  | ALTIN<br>.025          | 4                       | 8,0       | 25  | ■                      | ■                                    | ■                       | ■                                     | ■                                                | ■                       | 18          |
| quarter circle milling cutter    |  | 1528.025....          |  | ALTIN<br>.025          | 4                       | 8,0       | 25  | ■                      | ■                                    | ■                       | ■                                     | ■                                                | ■                       | 19          |
| Face- & centering milling cutter |  | 1529.025....          |  | ALTIN<br>.025          | 2                       | 12        | 20  | ■                      | ■                                    | ■                       | ■                                     | ■                                                | ■                       | 20          |
| forward- & backward milling      |  | 1530.025....          |  | ALTIN<br>.025          | 4                       | 12        | 20  | ■                      | ■                                    | ■                       | ■                                     | ■                                                | ■                       | 19          |
| Prolunghe                        |                                                                                   |                       |  |                        |                         |           |     | ■                      | ■                                    | ■                       | ■                                     | ■                                                | ■                       | 21          |
|                                  |                                                                                   |                       |                                                                                   |                        |                         |           |     | ■                      | ■                                    | ■                       | ■                                     | ■                                                | ■                       |             |
|                                  |                                                                                   |                       |                                                                                   |                        |                         |           |     | ■                      | ■                                    | ■                       | ■                                     | ■                                                | ■                       |             |
|                                  |                                                                                   |                       |                                                                                   |                        |                         |           |     | ■                      | ■                                    | ■                       | ■                                     | ■                                                | ■                       |             |
|                                  |                                                                                   |                       |                                                                                   |                        |                         |           |     | ■                      | ■                                    | ■                       | ■                                     | ■                                                | ■                       |             |

## Serie 1500 VHM-ALU

VHM

Werks-norm

geläpft

HSC

HPC

ALCN .035

ALU-NE

| Ø d1 | Ø d2 | M   | l1 | ap | Z | EURO  | fz    | fz    |
|------|------|-----|----|----|---|-------|-------|-------|
|      |      |     |    |    |   |       | Alu   | Alu   |
| 8,0  | 7,8  | M5  | 15 | 9  | 2 | rich. | 0,030 | 0,040 |
| 10,0 | 9,8  | M6  | 17 | 10 | 2 | rich. | 0,040 | 0,050 |
| 12,0 | 11,8 | M6  | 18 | 11 | 2 | rich. | 0,050 | 0,080 |
| 13,0 | 12,8 | M8  | 18 | 12 | 2 | rich. | 0,050 | 0,080 |
| 16,0 | 15,8 | M10 | 21 | 15 | 2 | rich. | 0,060 | 0,080 |
| 20,0 | 19,8 | M10 | 25 | 19 | 2 | rich. | 0,090 | 0,120 |
| 25,0 | 24,8 | M12 | 35 | 24 | 2 | rich. | 0,120 | 0,140 |

Orderexample: 1500.035.16,0

| Eignung / Vc (m/min) | Alu Kunststoff | Alu | Alu Guss | Stahl < 500 N | Stahl < 750 N | Stahl < 900 N | Stahl < 1100 N | Stahl < 1400 N | Stahl < 55 HRC | Stahl < 60 HRC | Stahl < 65 HRC | Stahl < 67 HRC | Stahl < 70 HRC | INOX < 900 N | INOX > 900 N | GG(G) | TITAN | Graphit GFK CFK | Öl       | Emulsion | MMS | Trocken | Druckluft |
|----------------------|----------------|-----|----------|---------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------------|--------------|-------|-------|-----------------|----------|----------|-----|---------|-----------|
| ISO-Code             | N              | N   | N        | P             | P             | P             | P              | P              | H              | H              | H              | H              | H              | M            | M            | K     | S     | N               | ■ idoneo | ■        | ■   | ■       | ■         |
| .010                 | 170            | 125 | 100      |               |               |               |                |                |                |                |                |                |                |              |              |       |       |                 |          |          |     |         |           |
| .035                 | 450            | 450 | 400      |               |               |               |                |                |                |                |                |                |                |              |              |       |       |                 |          |          |     |         |           |

## Serie 1501 VHM-ALU Z3

VHM

Werks-norm

geläpft

HSC

HPC

ALCN .035

ALU-NE

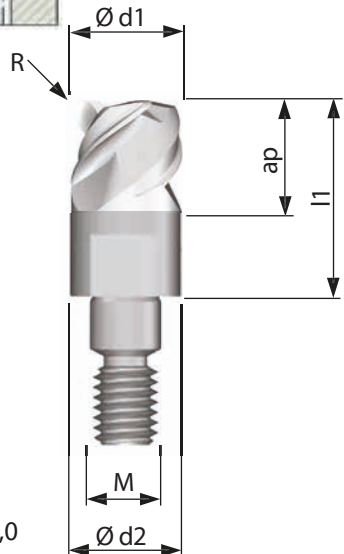
| Ø d1 | Ø d2 | M   | l1 | ap | C   | Z | EURO  | fz    | fz    |
|------|------|-----|----|----|-----|---|-------|-------|-------|
|      |      |     |    |    |     |   |       | Alu   | Alu   |
| 8,0  | 7,8  | M5  | 15 | 9  | 0,2 | 3 | rich. | 0,030 | 0,040 |
| 10,0 | 9,8  | M6  | 17 | 10 | 0,2 | 3 | rich. | 0,040 | 0,050 |
| 12,0 | 11,8 | M6  | 18 | 11 | 0,2 | 3 | rich. | 0,050 | 0,060 |
| 13,0 | 12,8 | M8  | 18 | 12 | 0,2 | 3 | rich. | 0,050 | 0,060 |
| 16,0 | 15,8 | M10 | 21 | 15 | 0,2 | 3 | rich. | 0,060 | 0,080 |
| 20,0 | 19,8 | M10 | 25 | 19 | 0,2 | 3 | rich. | 0,090 | 0,120 |
| 25,0 | 24,8 | M12 | 35 | 24 | 0,3 | 3 | rich. | 0,120 | 0,140 |

Bestellbeispiel / Orderexample: 1501.035.16,0

| Eignung / Vc (m/min) | Alu Kunststoff | Alu | Alu Guss | Stahl < 500 N | Stahl < 750 N | Stahl < 900 N | Stahl < 1100 N | Stahl < 1400 N | Stahl < 55 HRC | Stahl < 60 HRC | Stahl < 65 HRC | Stahl < 67 HRC | Stahl < 70 HRC | INOX < 900 N | INOX > 900 N | GG(G) | TITAN | Graphit GFK CFK | Öl       | Emulsion | MMS | Trocken | Druckluft |
|----------------------|----------------|-----|----------|---------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------------|--------------|-------|-------|-----------------|----------|----------|-----|---------|-----------|
| ISO-Code             | N              | N   | N        | P             | P             | P             | P              | P              | H              | H              | H              | H              | H              | M            | M            | K     | S     | N               | ■ idoneo | ■        | ■   | ■       | ■         |
| .010                 | 170            | 125 | 100      |               |               |               |                |                |                |                |                |                |                |              |              |       |       |                 |          |          |     |         |           |
| .035                 | 450            | 450 | 400      |               |               |               |                |                |                |                |                |                |                |              |              |       |       |                 |          |          |     |         |           |

A seconda delle condizioni di applicazione, i dati di taglio possono essere corretti verso l'alto o verso il basso. Per i valori indicati non si assume alcuna responsabilità.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

## Serie 1502 VHM-ALU Radisu Z3

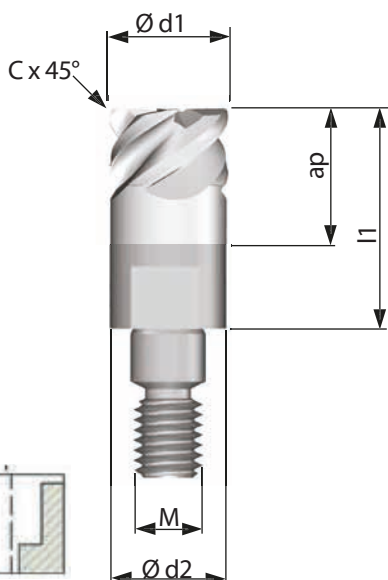
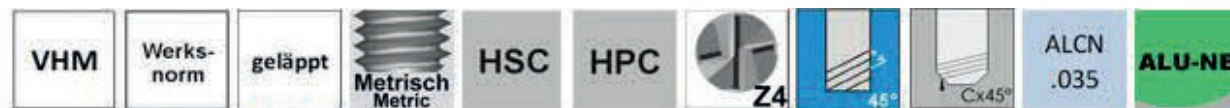


| Ø d1 | Ø d2 | M   | l1 | ap | R   | Z | EURO  | fz    | fz    |
|------|------|-----|----|----|-----|---|-------|-------|-------|
| 8,0  | 7,8  | M5  | 15 | 9  | 0,5 | 3 | rich. | 0,030 | 0,040 |
| 8,0  | 7,8  | M5  | 15 | 9  | 1,0 | 3 | rich. | 0,030 | 0,040 |
| 10,0 | 9,8  | M6  | 17 | 10 | 0,5 | 3 | rich. | 0,040 | 0,050 |
| 10,0 | 9,8  | M6  | 17 | 10 | 1,0 | 3 | rich. | 0,040 | 0,050 |
| 12,0 | 11,8 | M6  | 18 | 11 | 0,5 | 3 | rich. | 0,050 | 0,070 |
| 12,0 | 11,8 | M6  | 18 | 11 | 1,0 | 3 | rich. | 0,050 | 0,070 |
| 13,0 | 12,8 | M8  | 18 | 12 | 0,5 | 3 | rich. | 0,050 | 0,070 |
| 13,0 | 12,8 | M8  | 18 | 12 | 1,0 | 3 | rich. | 0,050 | 0,070 |
| 16,0 | 15,8 | M10 | 21 | 15 | 2,0 | 3 | rich. | 0,060 | 0,080 |
| 16,0 | 15,8 | M10 | 21 | 15 | 4,0 | 3 | rich. | 0,060 | 0,080 |
| 20,0 | 19,8 | M10 | 25 | 19 | 4,0 | 3 | rich. | 0,090 | 0,120 |
| 20,0 | 19,8 | M10 | 25 | 19 | 5,0 | 3 | rich. | 0,090 | 0,120 |
| 25,0 | 24,8 | M12 | 35 | 24 | 5,0 | 3 | rich. | 0,120 | 0,140 |
| 25,0 | 24,8 | M12 | 35 | 24 | 6,0 | 3 | rich. | 0,120 | 0,140 |

Orderexample: 1502.035.16,0

| Eignung /<br>Vc (m/min) |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | Öl                                                                                                                                                                                                                                | Emulsion                                                                            | MMS                                                                                 | Trocken                                                                             | Druckluft                                                                           |                                                                                     |
|-------------------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                         | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK |                                                                                                                                                |  |  |  |  |                                                                                     |
| ISO-Code                | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     | <div><div> geeignet</div><div> bedingt geeignet</div></div> |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| .010                    | 170               | 125 | 100         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                                                                                                                                                                   |  |                                                                                     |                                                                                     |  |  |
| .035                    | 450               | 450 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                                                                                                                                                                   |  |                                                                                     |                                                                                     |  |  |

## Serie 1503 VHM-ALU roughing/finishing, z4



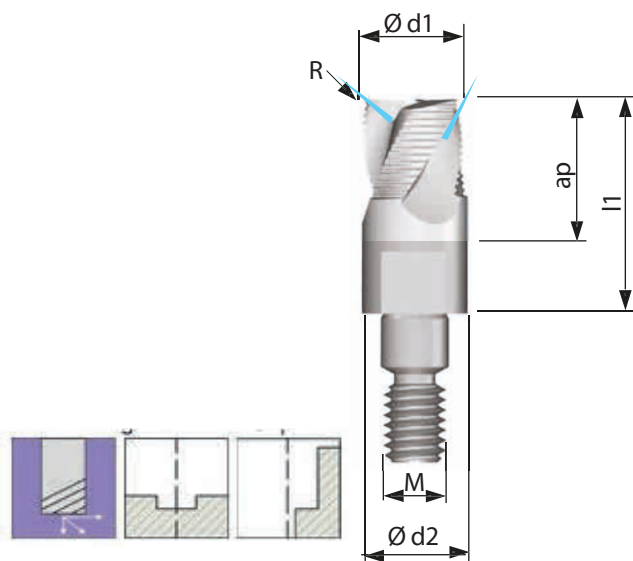
| Ø d1 | Ø d2 | M   | l1 | ap | C   | Z | EURO     | fz    | fz    |
|------|------|-----|----|----|-----|---|----------|-------|-------|
| 8,0  | 7,8  | M5  | 15 | 9  | 0,2 | 4 | 74,30 €  | 0,030 | 0,040 |
| 10,0 | 9,8  | M6  | 17 | 10 | 0,2 | 4 | 81,06 €  | 0,040 | 0,050 |
| 12,0 | 11,8 | M6  | 18 | 11 | 0,2 | 4 | 109,76 € | 0,050 | 0,070 |
| 13,0 | 12,8 | M8  | 18 | 12 | 0,2 | 4 | 123,28 € | 0,050 | 0,070 |
| 16,0 | 15,8 | M10 | 21 | 15 | 0,2 | 4 | 160,41 € | 0,060 | 0,080 |
| 20,0 | 19,8 | M10 | 25 | 19 | 0,2 | 4 | 194,18 € | 0,090 | 0,120 |
| 25,0 | 24,8 | M12 | 35 | 24 | 0,3 | 4 | 227,95 € | 0,120 | 0,140 |

Orderexample: 1503.035.16,0

| Eignung /<br>Vc (m/min) |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | Öl                                                                                    | Emulsion                                                                              | MMS                                                                                   | Trocken                                                                               | Druckluft                                                                             |  |
|-------------------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--|
|                         | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK |  |  |  |  |  |  |
| ISO-Code                | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     | ■ geeignet    □ bedingt geeignet                                                      |                                                                                       |                                                                                       |                                                                                       |                                                                                       |  |
| .010                    | 170               | 125 | 100         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                       | ■                                                                                     |                                                                                       | □                                                                                     | □                                                                                     |  |
| .035                    | 450               | 450 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                       | ■                                                                                     |                                                                                       | □                                                                                     |                                                                                       |  |

A seconda delle condizioni di applicazione, i dati di taglio possono essere corretti verso l'alto o verso il basso. Per i valori indicati non si assume alcuna responsabilità.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

## Serie 1504 VHM-ALU HR,internal coolant z3

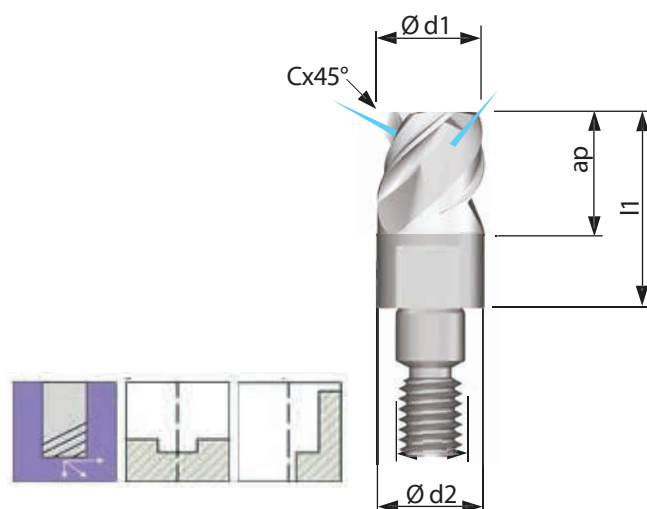


| Ø d1 | Ø d2 | M   | l1 | ap | R   | Z | EURO     | fz<br>Alu | fz<br>Alu |
|------|------|-----|----|----|-----|---|----------|-----------|-----------|
| 8,0  | 7,8  | M5  | 20 | 9  | 0,4 | 3 | 108,07 € | 0,030     | 0,040     |
| 10,0 | 9,8  | M6  | 22 | 10 | 0,4 | 3 | 114,82 € | 0,040     | 0,050     |
| 12,0 | 11,8 | M6  | 23 | 11 | 0,4 | 3 | 143,52 € | 0,050     | 0,070     |
| 13,0 | 12,8 | M8  | 23 | 12 | 0,4 | 3 | 165,47 € | 0,050     | 0,070     |
| 16,0 | 15,8 | M10 | 26 | 15 | 0,4 | 3 | 211,07 € | 0,060     | 0,080     |
| 20,0 | 19,8 | M10 | 30 | 19 | 0,4 | 3 | 261,74 € | 0,090     | 0,120     |
| 25,0 | 24,8 | M12 | 40 | 24 | 0,5 | 3 | 430,58 € | 0,120     | 0,140     |

Orderexample: 1504.035.16,0

| Eignung /<br>Vc (m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion           | MMS | Trocken | Druckluft |
|-------------------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|------------|--------------------|-----|---------|-----------|
| ISO-Code                | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     | ■ geeignet | □ bedingt geeignet |     |         |           |
| .010                    | 170               | 125 | 100         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     | □       | □         |
| .035                    | 450               | 450 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     | □       | □         |

## Serie 1505 VHM-ALU,internal coolant z3



| Ø d1 | Ø d2 | M   | l1 | ap | C   | Z | EURO     | fz<br>Alu | fz<br>Alu |
|------|------|-----|----|----|-----|---|----------|-----------|-----------|
| 8,0  | 7,8  | M5  | 15 | 9  | 0,2 | 3 | 108,07 € | 0,030     | 0,040     |
| 10,0 | 9,8  | M6  | 17 | 10 | 0,2 | 3 | 114,82 € | 0,040     | 0,050     |
| 12,0 | 11,8 | M6  | 18 | 11 | 0,2 | 3 | 143,52 € | 0,050     | 0,070     |
| 13,0 | 12,8 | M8  | 18 | 12 | 0,2 | 3 | 165,47 € | 0,050     | 0,070     |
| 16,0 | 15,8 | M10 | 21 | 15 | 0,2 | 3 | 211,07 € | 0,060     | 0,080     |
| 20,0 | 19,8 | M10 | 25 | 19 | 0,2 | 3 | 261,74 € | 0,090     | 0,120     |
| 25,0 | 24,8 | M12 | 35 | 24 | 0,3 | 3 | 430,58 € | 0,120     | 0,140     |

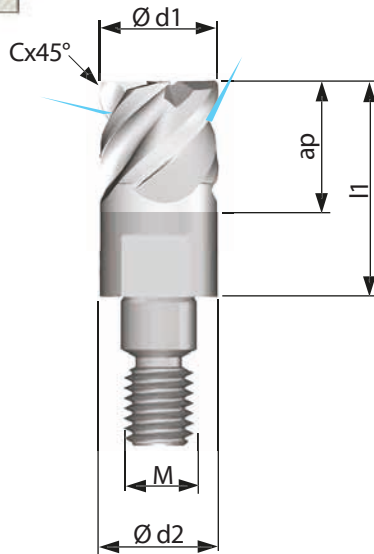
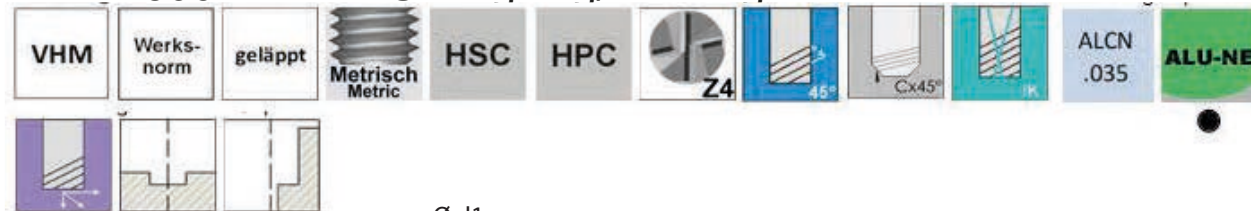
Orderexample: 1505.035.16,0

| Eignung /<br>Vc (m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion           | MMS | Trocken | Druckluft |
|-------------------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|------------|--------------------|-----|---------|-----------|
| ISO-Code                | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     | ■ geeignet | □ bedingt geeignet |     |         |           |
| .010                    | 170               | 125 | 100         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     | □       | □         |
| .035                    | 450               | 450 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     | □       | □         |

A seconda delle condizioni di applicazione, i dati di taglio possono essere corretti verso l'alto o verso il basso. Per i valori indicati non si assume alcuna responsabilità..  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.



## Serie 1506 VHM-ALU roughing/finishing internal coolant z4

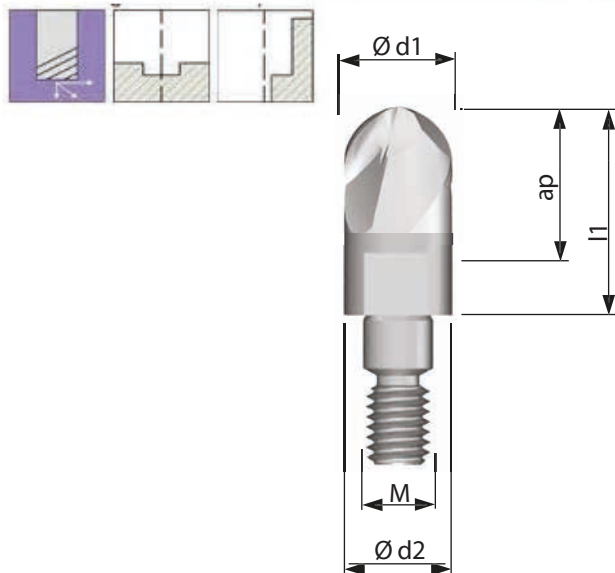


| Ø d1 | Ø d2 | M   | l1 | ap | C   | Z | EURO     | fz<br>Alu | fz<br>Alu |
|------|------|-----|----|----|-----|---|----------|-----------|-----------|
| 8,0  | 7,8  | M5  | 15 | 9  | 0,2 | 4 | 108,07 € | 0,030     | 0,040     |
| 10,0 | 9,8  | M6  | 17 | 10 | 0,2 | 4 | 114,82 € | 0,040     | 0,050     |
| 12,0 | 11,8 | M6  | 18 | 11 | 0,2 | 4 | 143,52 € | 0,050     | 0,070     |
| 13,0 | 12,8 | M8  | 18 | 12 | 0,2 | 4 | 165,47 € | 0,050     | 0,070     |
| 16,0 | 15,8 | M10 | 21 | 15 | 0,2 | 4 | 211,07 € | 0,060     | 0,080     |
| 20,0 | 19,8 | M10 | 25 | 19 | 0,2 | 4 | 261,74 € | 0,090     | 0,120     |
| 25,0 | 24,8 | M12 | 35 | 24 | 0,3 | 4 | 430,58 € | 0,120     | 0,140     |

Orderexample: 1506.035.16,0

| Eignung / Vc (m/min) | Alu Kunststoff | Alu | Alu Guss | Stahl < 500 N | Stahl < 750 N | Stahl < 900 N | Stahl < 1100 N | Stahl < 1400 N | Stahl < 55 HRC | Stahl < 60 HRC | Stahl < 65 HRC | Stahl < 67 HRC | Stahl < 70 HRC | INOX < 900 N | INOX > 900 N | GG(G) | TITAN | Graphit GFK CFK | Öl         | Emulsion           | MMS | Trocken | Druckluft |
|----------------------|----------------|-----|----------|---------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------------|--------------|-------|-------|-----------------|------------|--------------------|-----|---------|-----------|
| ISO-Code             | N              | N   | N        | P             | P             | P             | P              | P              | H              | H              | H              | H              | H              | M            | M            | K     | S     | N               | ■ geeignet | □ bedingt geeignet |     |         |           |
| .010                 | 170            | 125 | 100      |               |               |               |                |                |                |                |                |                |                |              |              |       |       |                 |            | ■                  |     | □       | □         |
| .035                 | 450            | 450 | 400      |               |               |               |                |                |                |                |                |                |                |              |              |       |       |                 |            | ■                  |     | □       | □         |

## Serie 1507 VHM-ALU radius z2



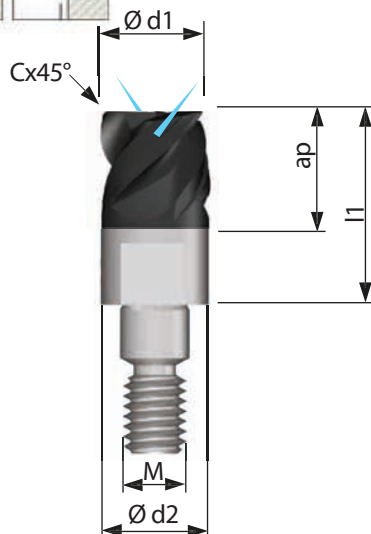
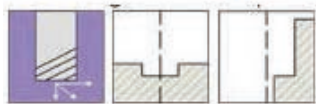
| Ø d1 | Ø d2 | M   | l1 | ap  | Z | EURO     | fz<br>Alu | fz<br>Alu |
|------|------|-----|----|-----|---|----------|-----------|-----------|
| 8,0  | 7,8  | M5  | 15 | 6   | 2 | 74,30 €  | 0,030     | 0,040     |
| 10,0 | 9,8  | M6  | 17 | 7,5 | 2 | 81,06 €  | 0,040     | 0,050     |
| 12,0 | 11,8 | M6  | 18 | 9   | 2 | 109,76 € | 0,050     | 0,070     |
| 13,0 | 12,8 | M8  | 18 | 10  | 2 | 123,28 € | 0,050     | 0,070     |
| 16,0 | 15,8 | M10 | 21 | 12  | 2 | 160,41 € | 0,060     | 0,080     |
| 20,0 | 19,8 | M10 | 25 | 15  | 2 | 194,18 € | 0,090     | 0,120     |
| 25,0 | 24,8 | M12 | 35 | 16  | 2 | 227,95 € | 0,120     | 0,140     |

Orderexample: 1507.035.16,0

| Eignung / Vc (m/min) | Alu Kunststoff | Alu | Alu Guss | Stahl < 500 N | Stahl < 750 N | Stahl < 900 N | Stahl < 1100 N | Stahl < 1400 N | Stahl < 55 HRC | Stahl < 60 HRC | Stahl < 65 HRC | Stahl < 67 HRC | Stahl < 70 HRC | INOX < 900 N | INOX > 900 N | GG(G) | TITAN | Graphit GFK CFK | Öl         | Emulsion           | MMS | Trocken | Druckluft |
|----------------------|----------------|-----|----------|---------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------------|--------------|-------|-------|-----------------|------------|--------------------|-----|---------|-----------|
| ISO-Code             | N              | N   | N        | P             | P             | P             | P              | P              | H              | H              | H              | H              | H              | M            | M            | K     | S     | N               | ■ geeignet | □ bedingt geeignet |     |         |           |
| .010                 | 170            | 125 | 100      |               |               |               |                |                |                |                |                |                |                |              |              |       |       |                 |            | ■                  |     | □       | □         |
| .035                 | 450            | 450 | 400      |               |               |               |                |                |                |                |                |                |                |              |              |       |       |                 |            | ■                  |     | □       | □         |

A seconda delle condizioni di applicazione, i dati di taglio possono essere corretti verso l'alto o verso il basso. Per i valori indicati non si assume alcuna responsabilità.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

## Serie 1508 VHM/Coating internal coolant z3



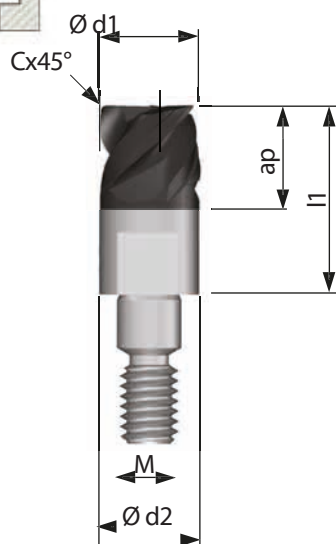
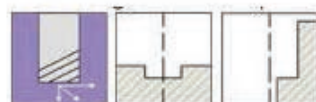
| Ø d1 | Ø d2 | M  | l  | ap | Dmin | Dmax | C    | z | EURO     | fz    |
|------|------|----|----|----|------|------|------|---|----------|-------|
| 8,0  | 7,8  | M5 | 15 | 9  | 10   | 16   | 0,25 | 3 | 143,52 € | 0,040 |
| 10,0 | 9,8  | M6 | 17 | 10 | 12   | 18   | 0,25 | 3 | 160,41 € | 0,060 |

Orderexample: 1508.025.10,0



| Eignung /<br>Vc (m/min) |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | Öl                                                                                  | Emulsion                                                                            | MMS                                                                                 | Trocken                                                                             | Druckluft                                                                           |                    |  |  |
|-------------------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------|--|--|
|                         | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK |  |  |  |  |  |                    |  |  |
| ISO-Code                | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     | ■ geeignet                                                                          |                                                                                     |                                                                                     |                                                                                     |                                                                                     | □ bedingt geeignet |  |  |
| Vc                      | 170               | 125 | 100         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                    |  |  |

## Serie 1509 VHM/Coating INOX z3



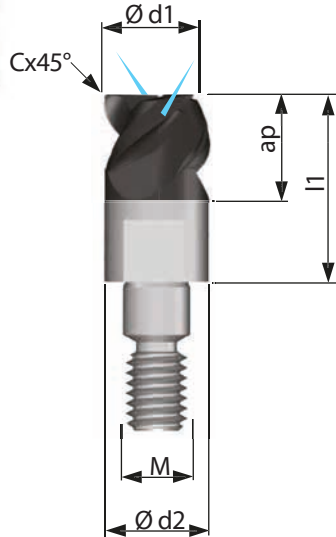
| Ø d1 | Ø d2 | M   | l  | ap | C    | Z | EURO     | fz    | fz    |
|------|------|-----|----|----|------|---|----------|-------|-------|
| 8,0  | 7,8  | M5  | 15 | 9  | 0,10 | 3 | 74,30 €  | 0,050 | 0,080 |
| 10,0 | 9,8  | M6  | 17 | 10 | 0,10 | 3 | 81,06 €  | 0,060 | 0,090 |
| 12,0 | 11,8 | M6  | 18 | 11 | 0,15 | 3 | 109,76 € | 0,070 | 0,100 |
| 13,0 | 12,8 | M8  | 18 | 12 | 0,15 | 3 | 123,28 € | 0,070 | 0,100 |
| 16,0 | 15,8 | M10 | 21 | 15 | 0,20 | 3 | 160,41 € | 0,080 | 0,120 |
| 20,0 | 19,8 | M10 | 25 | 19 | 0,20 | 3 | 194,18 € | 0,100 | 0,150 |
| 25,0 | 24,8 | M12 | 35 | 24 | 0,20 | 3 | 227,95 € | 0,120 | 0,150 |

Orderexample: 1509.025.16,0

| Eignung /<br>Vc (m/min) |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | Öl                                                                                    | Emulsion                                                                              | MMS                                                                                   | Trocken                                                                               | Druckluft                                                                             |   |
|-------------------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---|
|                         | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK |  |  |  |  |  |   |
| ISO-Code                | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     | ■ geeignet    □ bedingt geeignet                                                      |                                                                                       |                                                                                       |                                                                                       |                                                                                       |   |
| Vc                      |                   | 280 | 200         | 130              | 110              | 100              | 70                | 60                |                   |                   |                   |                   |                   | 70              | 60              | 90    |       |                       |                                                                                       | ■                                                                                     | □                                                                                     | ■                                                                                     | ■                                                                                     | ■ |

A seconda delle condizioni di applicazione, i dati di taglio possono essere corretti verso l'alto o verso il basso. Per i valori indicati non si assume alcuna responsabilità.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

## Serie 1510 VHM/Coating INOX internal coolant z3

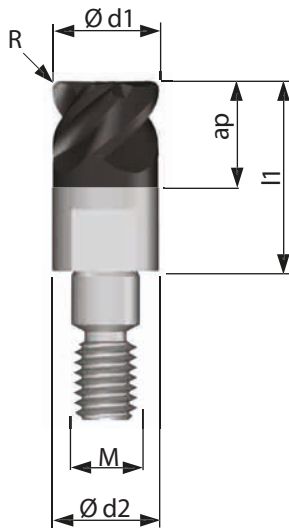
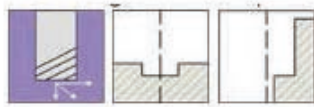


| Ø d1 | Ø d2 | M   | l1 | ap | C    | Z | EURO     | fz    | fz    |
|------|------|-----|----|----|------|---|----------|-------|-------|
| 8,0  | 7,8  | M5  | 15 | 9  | 0,10 | 3 | 108,07 € | 0,050 | 0,080 |
| 10,0 | 9,8  | M6  | 17 | 10 | 0,10 | 3 | 114,82 € | 0,060 | 0,090 |
| 12,0 | 11,8 | M6  | 18 | 11 | 0,15 | 3 | 143,52 € | 0,070 | 0,100 |
| 13,0 | 12,8 | M8  | 18 | 12 | 0,15 | 3 | 165,47 € | 0,070 | 0,100 |
| 16,0 | 15,8 | M10 | 21 | 15 | 0,20 | 3 | 211,07 € | 0,080 | 0,120 |
| 20,0 | 19,8 | M10 | 25 | 19 | 0,20 | 3 | 261,74 € | 0,100 | 0,150 |
| 25,0 | 24,8 | M12 | 35 | 24 | 0,20 | 3 | 430,58 € | 0,120 | 0,150 |

Orderexample: 1510.025.16,0

| Eignung / Vc (m/min) | Alu Kunststoff | Alu | Alu Guss | Stahl < 500 N | Stahl < 750 N | Stahl < 900 N | Stahl < 1100 N | Stahl < 1400 N | Stahl < 55 HRC | Stahl < 60 HRC | Stahl < 65 HRC | Stahl < 67 HRC | Stahl < 70 HRC | INOX < 900 N | INOX > 900 N | GG(G) | TITAN | Graphit GFK CFK | Öl         | Emulsion | MMS | Trocken | Druckluft |
|----------------------|----------------|-----|----------|---------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------------|--------------|-------|-------|-----------------|------------|----------|-----|---------|-----------|
| ISO-Code             | N              | N   | N        | P             | P             | P             | P              | P              | H              | H              | H              | H              | H              | M            | M            | K     | S     | N               | ■ geeignet | ■        | ■   | ■       | ■         |
| Vc                   |                | 280 | 200      | 130           | 110           | 100           | 70             | 60             |                |                |                |                |                | 70           | 60           | 90    |       |                 |            |          |     |         |           |

## Serie 1511 VHM/Coating corner radius z4



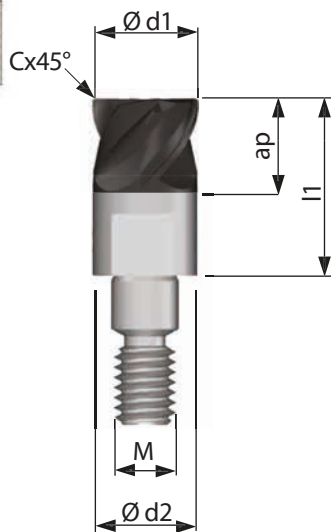
| Ø d1 | R   | Ø d2 | M   | l1 | ap | Z | EURO     | fz    | fz    |
|------|-----|------|-----|----|----|---|----------|-------|-------|
| 8,0  | 0,0 | 7,8  | M5  | 15 | 9  | 4 | 74,30 €  | 0,050 | 0,080 |
| 8,0  | 0,5 | 7,8  | M5  | 15 | 9  | 4 | 74,30 €  | 0,050 | 0,080 |
| 10,0 | 0,0 | 9,8  | M6  | 17 | 10 | 4 | 81,06 €  | 0,060 | 0,090 |
| 10,0 | 0,5 | 9,8  | M6  | 17 | 10 | 4 | 81,06 €  | 0,060 | 0,090 |
| 12,0 | 0,0 | 11,8 | M6  | 18 | 11 | 4 | 109,76 € | 0,070 | 0,100 |
| 12,0 | 0,5 | 11,8 | M6  | 18 | 11 | 4 | 109,76 € | 0,070 | 0,100 |
| 12,0 | 1,0 | 11,8 | M6  | 18 | 11 | 4 | 109,76 € | 0,070 | 0,100 |
| 13,0 | 0,0 | 12,8 | M8  | 18 | 12 | 4 | 123,28 € | 0,070 | 0,100 |
| 13,0 | 0,5 | 12,8 | M8  | 18 | 12 | 4 | 123,28 € | 0,070 | 0,100 |
| 13,0 | 1,0 | 12,8 | M8  | 18 | 12 | 4 | 123,28 € | 0,070 | 0,100 |
| 16,0 | 0,0 | 15,8 | M10 | 21 | 15 | 4 | 160,41 € | 0,080 | 0,120 |
| 16,0 | 0,5 | 15,8 | M10 | 21 | 15 | 4 | 160,41 € | 0,080 | 0,120 |
| 16,0 | 1,0 | 15,8 | M10 | 21 | 15 | 4 | 160,41 € | 0,080 | 0,120 |
| 20,0 | 0,0 | 19,8 | M10 | 25 | 19 | 4 | 194,18 € | 0,100 | 0,150 |
| 20,0 | 0,5 | 19,8 | M10 | 25 | 19 | 4 | 194,18 € | 0,100 | 0,150 |
| 20,0 | 1,0 | 19,8 | M10 | 25 | 19 | 4 | 194,18 € | 0,100 | 0,150 |
| 25,0 | 0,0 | 24,8 | M12 | 35 | 24 | 4 | 227,95 € | 0,120 | 0,150 |
| 25,0 | 0,5 | 24,8 | M12 | 35 | 24 | 4 | 227,95 € | 0,120 | 0,150 |
|      | 1,0 | 24,8 | M12 | 35 | 24 | 4 | 227,95 € | 0,120 | 0,150 |

Orderexample: 1511.025.16,0-R1,0 25,0

| Eignung / Vc (m/min) | Alu Kunststoff | Alu | Alu Guss | Stahl < 500 N | Stahl < 750 N | Stahl < 900 N | Stahl < 1100 N | Stahl < 1400 N | Stahl < 55 HRC | Stahl < 60 HRC | Stahl < 65 HRC | Stahl < 67 HRC | Stahl < 70 HRC | INOX < 900 N | INOX > 900 N | GG(G) | TITAN | Graphit GFK CFK | Öl         | Emulsion | MMS | Trocken | Druckluft |
|----------------------|----------------|-----|----------|---------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------------|--------------|-------|-------|-----------------|------------|----------|-----|---------|-----------|
| ISO-Code             | N              | N   | N        | P             | P             | P             | P              | P              | H              | H              | H              | H              | H              | M            | M            | K     | S     | N               | ■ geeignet | ■        | ■   | ■       | ■         |
| Vc                   |                | 280 | 200      | 130           | 110           | 100           | 70             | 60             |                |                |                |                |                | 70           | 60           | 90    |       |                 |            |          |     |         |           |

A seconda delle condizioni di applicazione, i dati di taglio possono essere corretti verso l'alto o verso il basso. Per i valori indicati non si assume alcuna responsabilità.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

## Serie 1512 VHM/Coating 35/38 z4

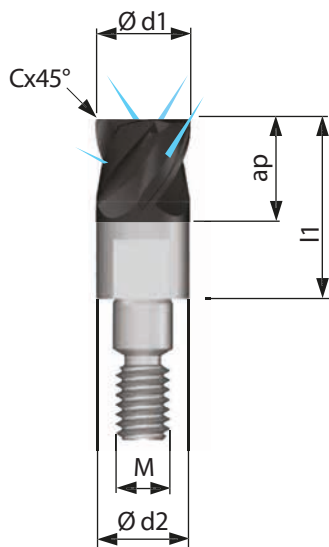
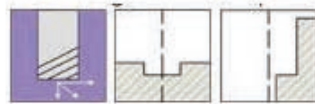


| Ø d1 | Ø d2 | M   | l1 | ap | C    | Z | EURO     | fz    | fz    |
|------|------|-----|----|----|------|---|----------|-------|-------|
| 8,0  | 7,8  | M5  | 15 | 9  | 0,20 | 4 | 74,30 €  | 0,050 | 0,060 |
| 10,0 | 9,8  | M6  | 17 | 10 | 0,30 | 4 | 81,06 €  | 0,060 | 0,080 |
| 12,0 | 11,8 | M6  | 18 | 11 | 0,30 | 4 | 109,76 € | 0,070 | 0,090 |
| 13,0 | 12,8 | M8  | 18 | 12 | 0,30 | 4 | 123,28 € | 0,070 | 0,090 |
| 16,0 | 15,8 | M10 | 21 | 15 | 0,40 | 4 | 160,41 € | 0,080 | 0,100 |
| 20,0 | 19,8 | M10 | 25 | 19 | 0,50 | 4 | 194,18 € | 0,100 | 0,130 |
| 25,0 | 24,8 | M12 | 35 | 24 | 0,50 | 4 | 227,95 € | 0,100 | 0,130 |

Orderexample: 1512.025.16,0

| Eignung / Vc (m/min) | Alu Kunststoff | Alu | Alu Guss | Stahl < 500 N | Stahl < 750 N | Stahl < 900 N | Stahl < 1100 N | Stahl < 1400 N | Stahl < 55 HRC | Stahl < 60 HRC | Stahl < 65 HRC | Stahl < 67 HRC | Stahl < 70 HRC | INOX < 900 N | INOX > 900 N | GG(G) | TITAN | Graphit GFK CFK | Öl         | Emulsion | MMS | Trocken | Druckluft |
|----------------------|----------------|-----|----------|---------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------------|--------------|-------|-------|-----------------|------------|----------|-----|---------|-----------|
| ISO-Code             | N              | N   | N        | P             | P             | P             | P              | P              | H              | H              | H              | H              | H              | M            | M            | K     | S     | N               | ■ geeignet | ■        | ■   | ■       | ■         |
| Vc                   |                |     |          | 260           | 240           | 190           | 180            | 150            |                |                |                |                |                | 80           | 70           | 240   |       |                 |            |          |     |         |           |

## Serie 1513 VHM/Coating 35/38 internal cooling z4



| Ø d1 | Ø d2 | M   | l1 | ap | C    | Z | EURO     | fz    | fz    |
|------|------|-----|----|----|------|---|----------|-------|-------|
| 8,0  | 7,8  | M5  | 15 | 9  | 0,20 | 4 | 108,07 € | 0,050 | 0,060 |
| 10,0 | 9,8  | M6  | 17 | 10 | 0,30 | 4 | 114,82 € | 0,060 | 0,080 |
| 12,0 | 11,8 | M6  | 18 | 11 | 0,30 | 4 | 143,52 € | 0,070 | 0,090 |
| 13,0 | 12,8 | M8  | 18 | 12 | 0,30 | 4 | 165,47 € | 0,070 | 0,090 |
| 16,0 | 15,8 | M10 | 21 | 15 | 0,40 | 4 | 211,07 € | 0,080 | 0,100 |
| 20,0 | 19,8 | M10 | 25 | 19 | 0,50 | 4 | 261,74 € | 0,100 | 0,130 |
| 25,0 | 24,8 | M12 | 35 | 24 | 0,50 | 4 | 430,58 € | 0,100 | 0,130 |

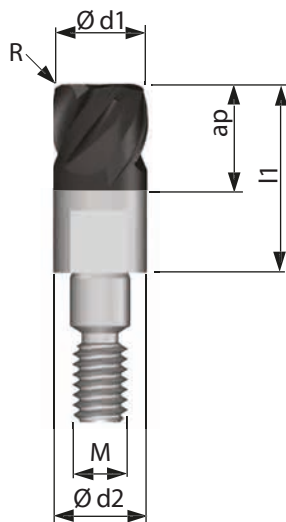
Orderexample: 1513.025.16,0

| Eignung / Vc (m/min) | Alu Kunststoff | Alu | Alu Guss | Stahl < 500 N | Stahl < 750 N | Stahl < 900 N | Stahl < 1100 N | Stahl < 1400 N | Stahl < 55 HRC | Stahl < 60 HRC | Stahl < 65 HRC | Stahl < 67 HRC | Stahl < 70 HRC | INOX < 900 N | INOX > 900 N | GG(G) | TITAN | Graphit GFK CFK | Öl         | Emulsion | MMS | Trocken | Druckluft |
|----------------------|----------------|-----|----------|---------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------------|--------------|-------|-------|-----------------|------------|----------|-----|---------|-----------|
| ISO-Code             | N              | N   | N        | P             | P             | P             | P              | P              | H              | H              | H              | H              | H              | M            | M            | K     | S     | N               | ■ geeignet | ■        | ■   | ■       | ■         |
| Vc                   |                |     |          | 260           | 240           | 190           | 180            | 150            |                |                |                |                |                | 80           | 70           | 240   |       |                 |            |          |     |         |           |

A seconda delle condizioni di applicazione, i dati di taglio possono essere corretti verso l'alto o verso il basso. Per i valori indicati non si assume alcuna responsabilità..  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.



# Serie 1514 VHM/Coating 35/38 corner radius z4



| Ø d1 | R    | Ø d2 | M   | l1 | ap | Z | EURO     | fz    | fz    |
|------|------|------|-----|----|----|---|----------|-------|-------|
| 8,0  | 0,50 | 7,8  | M5  | 15 | 9  | 4 | 74,30 €  | 0,050 | 0,060 |
| 8,0  | 1,00 | 7,8  | M5  | 15 | 9  | 4 | 74,30 €  | 0,050 | 0,060 |
| 8,0  | 1,50 | 7,8  | M5  | 15 | 9  | 4 | 74,30 €  | 0,050 | 0,060 |
| 8,0  | 2,00 | 7,8  | M5  | 15 | 9  | 4 | 74,30 €  | 0,050 | 0,060 |
| 10,0 | 0,50 | 9,8  | M6  | 17 | 10 | 4 | 81,06 €  | 0,060 | 0,080 |
| 10,0 | 1,00 | 9,8  | M6  | 17 | 10 | 4 | 81,06 €  | 0,060 | 0,080 |
| 10,0 | 1,50 | 9,8  | M6  | 17 | 10 | 4 | 81,06 €  | 0,060 | 0,080 |
| 10,0 | 2,00 | 9,8  | M6  | 17 | 10 | 4 | 81,06 €  | 0,060 | 0,080 |
| 12,0 | 0,50 | 11,8 | M6  | 18 | 11 | 4 | 109,76 € | 0,070 | 0,090 |
| 12,0 | 1,00 | 11,8 | M6  | 18 | 11 | 4 | 109,76 € | 0,070 | 0,090 |
| 12,0 | 1,50 | 11,8 | M6  | 18 | 11 | 4 | 109,76 € | 0,070 | 0,090 |
| 12,0 | 2,00 | 11,8 | M6  | 18 | 11 | 4 | 109,76 € | 0,070 | 0,090 |
| 13,0 | 0,50 | 12,8 | M8  | 18 | 12 | 4 | 123,28 € | 0,070 | 0,090 |
| 13,0 | 1,00 | 12,8 | M8  | 18 | 12 | 4 | 123,28 € | 0,070 | 0,090 |
| 13,0 | 1,50 | 12,8 | M8  | 18 | 12 | 4 | 123,28 € | 0,070 | 0,090 |
| 13,0 | 2,00 | 12,8 | M8  | 18 | 12 | 4 | 123,28 € | 0,070 | 0,090 |
| 16,0 | 1,00 | 15,8 | M10 | 21 | 15 | 4 | 160,41 € | 0,080 | 0,100 |
| 16,0 | 1,50 | 15,8 | M10 | 21 | 15 | 4 | 160,41 € | 0,080 | 0,100 |
| 16,0 | 2,00 | 15,8 | M10 | 21 | 15 | 4 | 160,41 € | 0,080 | 0,100 |
| 16,0 | 2,50 | 15,8 | M10 | 21 | 15 | 4 | 160,41 € | 0,080 | 0,100 |
| 20,0 | 1,00 | 19,8 | M10 | 25 | 19 | 4 | 194,18 € | 0,100 | 0,130 |
| 20,0 | 1,50 | 19,8 | M10 | 25 | 19 | 4 | 194,18 € | 0,100 | 0,130 |
| 20,0 | 2,00 | 19,8 | M10 | 25 | 19 | 4 | 194,18 € | 0,100 | 0,130 |
| 20,0 | 2,50 | 19,8 | M10 | 25 | 19 | 4 | 194,18 € | 0,100 | 0,130 |
| 20,0 | 3,00 | 19,8 | M10 | 25 | 19 | 4 | 194,18 € | 0,100 | 0,130 |
| 20,0 | 4,00 | 19,8 | M10 | 25 | 19 | 4 | 194,18 € | 0,100 | 0,130 |
| 20,0 | 5,00 | 19,8 | M10 | 25 | 19 | 4 | 194,18 € | 0,100 | 0,130 |
| 25,0 | 1,00 | 24,8 | M12 | 35 | 24 | 4 | 227,95 € | 0,100 | 0,130 |
| 25,0 | 1,50 | 24,8 | M12 | 35 | 24 | 4 | 227,95 € | 0,100 | 0,130 |
| 25,0 | 2,00 | 24,8 | M12 | 35 | 24 | 4 | 227,95 € | 0,100 | 0,130 |
| 25,0 | 2,50 | 24,8 | M12 | 35 | 24 | 4 | 227,95 € | 0,100 | 0,130 |
| 25,0 | 3,00 | 24,8 | M12 | 35 | 24 | 4 | 227,95 € | 0,100 | 0,130 |
| 25,0 | 4,00 | 24,8 | M12 | 35 | 24 | 4 | 227,95 € | 0,100 | 0,130 |
| 25,0 | 5,00 | 24,8 | M12 | 35 | 24 | 4 | 227,95 € | 0,100 | 0,130 |

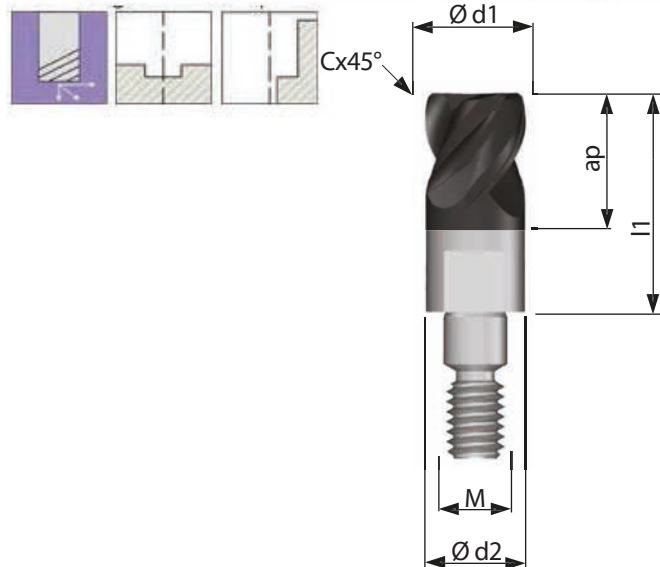
Orderexample: 1514.025.16,0-R1,0

| Eignung /<br>Vc (m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion | MMS | Trocken | Druckluft |
|-------------------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|------------|----------|-----|---------|-----------|
|                         | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     | ■ geeignet | ■        | ■   | ■       | ■         |
| ISO-Code                | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     | ■ geeignet | ■        | ■   | ■       | ■         |
| Vc                      |                   |     |             | 260              | 240              | 190              | 180               | 150               |                   |                   |                   |                   |                   | 80              | 70              | 240   |       |                       |            |          |     |         |           |

A seconda delle condizioni di applicazione, i dati di taglio possono essere corretti verso l'alto o verso il basso. Per i valori indicati non si assume alcuna responsabilità.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.



## Serie 1515 VHM/Coating 42/45 z4

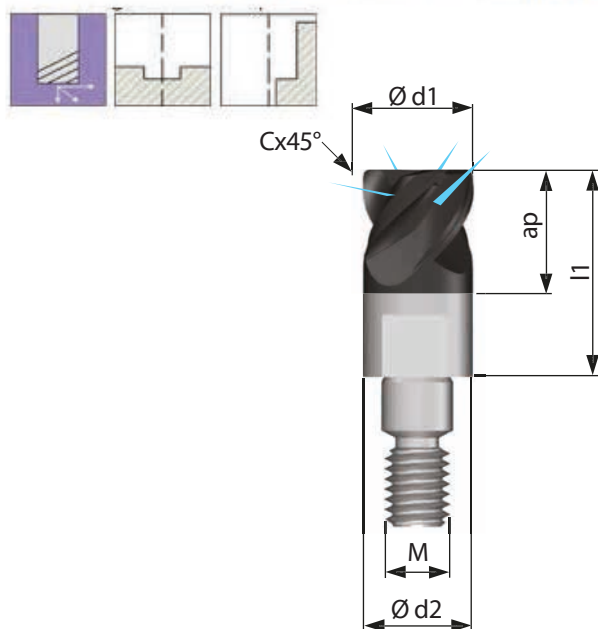


| Ø d1 | Ø d2 | M   | l1 | ap | C    | Z | EURO     | fz    | fz    |
|------|------|-----|----|----|------|---|----------|-------|-------|
| 8,0  | 7,8  | M5  | 15 | 9  | 0,20 | 4 | 74,30 €  | 0,050 | 0,060 |
| 10,0 | 9,8  | M6  | 17 | 10 | 0,30 | 4 | 81,06 €  | 0,060 | 0,080 |
| 12,0 | 11,8 | M6  | 18 | 11 | 0,30 | 4 | 109,76 € | 0,070 | 0,090 |
| 13,0 | 12,8 | M8  | 18 | 12 | 0,30 | 4 | 123,28 € | 0,070 | 0,090 |
| 16,0 | 15,8 | M10 | 21 | 15 | 0,40 | 4 | 160,41 € | 0,080 | 0,100 |
| 20,0 | 19,8 | M10 | 25 | 19 | 0,50 | 4 | 194,18 € | 0,100 | 0,130 |
| 25,0 | 24,8 | M12 | 35 | 24 | 0,50 | 4 | 227,95 € | 0,100 | 0,130 |

Orderexample: 1515.025.16,0

| Eignung / Vc (m/min) | Alu Kunststoff | Alu | Alu Guss | Stahl < 500 N | Stahl < 750 N | Stahl < 900 N | Stahl < 1100 N | Stahl < 1400 N | Stahl < 55 HRC | Stahl < 60 HRC | Stahl < 65 HRC | Stahl < 67 HRC | Stahl < 70 HRC | INOX < 900 N | INOX > 900 N | GG(G) | TITAN | Graphit GFK CFK | Öl         | Emulsion | MMS                | Trocken | Druckluft |
|----------------------|----------------|-----|----------|---------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------------|--------------|-------|-------|-----------------|------------|----------|--------------------|---------|-----------|
| ISO-Code             | N              | N   | N        | P             | P             | P             | P              | P              | H              | H              | H              | H              | H              | M            | M            | K     | S     | N               | ■ geeignet | ■        | ■ bedingt geeignet | ■       | ■         |
| Vc                   |                |     |          | 260           | 240           | 190           | 180            | 150            |                |                |                |                |                | 80           | 70           | 240   |       |                 |            |          |                    |         |           |

## Serie 1516 VHM/Coating 42/45Inter.cooling z4



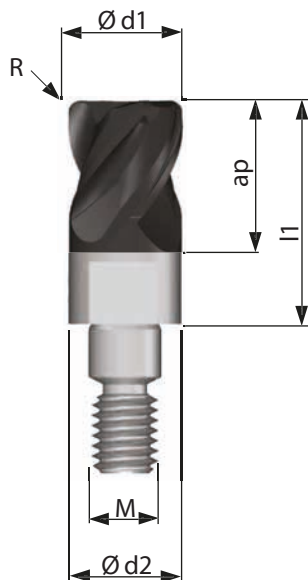
| Ø d1 | Ø d2 | M   | l1 | ap | C    | Z | EURO     | fz    | fz    |
|------|------|-----|----|----|------|---|----------|-------|-------|
| 8,0  | 7,8  | M5  | 15 | 9  | 0,20 | 4 | 108,07 € | 0,050 | 0,060 |
| 10,0 | 9,8  | M6  | 17 | 10 | 0,30 | 4 | 114,82 € | 0,060 | 0,080 |
| 12,0 | 11,8 | M6  | 18 | 11 | 0,30 | 4 | 143,52 € | 0,070 | 0,090 |
| 13,0 | 12,8 | M8  | 18 | 12 | 0,30 | 4 | 165,47 € | 0,070 | 0,090 |
| 16,0 | 15,8 | M10 | 21 | 15 | 0,40 | 4 | 211,07 € | 0,080 | 0,100 |
| 20,0 | 19,8 | M10 | 25 | 19 | 0,50 | 4 | 261,74 € | 0,100 | 0,130 |
| 25,0 | 24,8 | M12 | 35 | 24 | 0,50 | 4 | 430,58 € | 0,100 | 0,130 |

Orderexample: 1516.025.16,0

| Eignung / Vc (m/min) | Alu Kunststoff | Alu | Alu Guss | Stahl < 500 N | Stahl < 750 N | Stahl < 900 N | Stahl < 1100 N | Stahl < 1400 N | Stahl < 55 HRC | Stahl < 60 HRC | Stahl < 65 HRC | Stahl < 67 HRC | Stahl < 70 HRC | INOX < 900 N | INOX > 900 N | GG(G) | TITAN | Graphit GFK CFK | Öl         | Emulsion | MMS                | Trocken | Druckluft |
|----------------------|----------------|-----|----------|---------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------------|--------------|-------|-------|-----------------|------------|----------|--------------------|---------|-----------|
| ISO-Code             | N              | N   | N        | P             | P             | P             | P              | P              | H              | H              | H              | H              | H              | M            | M            | K     | S     | N               | ■ geeignet | ■        | ■ bedingt geeignet | ■       | ■         |
| Vc                   |                |     |          | 260           | 240           | 190           | 180            | 150            |                |                |                |                |                | 80           | 70           | 240   |       |                 |            |          |                    |         |           |

A seconda delle condizioni di applicazione, i dati di taglio possono essere corretti verso l'alto o verso il basso. Per i valori indicati non si assume alcuna responsabilità.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

# Serie 1517 VHM/Coating 42/45 corner radius z4



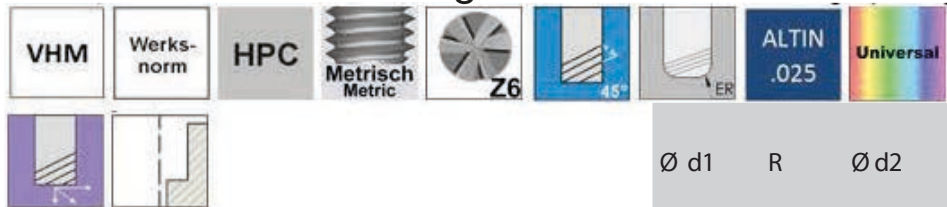
| Ø d1 | R    | Ø d1 | M   | l1 | ap | Z | EURO     | fz    | fz    |
|------|------|------|-----|----|----|---|----------|-------|-------|
| 8,0  | 0,50 | 7,8  | M5  | 15 | 9  | 4 | 74,30 €  | 0,050 | 0,060 |
| 8,0  | 1,00 | 7,8  | M5  | 15 | 9  | 4 | 74,30 €  | 0,050 | 0,060 |
| 8,0  | 1,50 | 7,8  | M5  | 15 | 9  | 4 | 74,30 €  | 0,050 | 0,060 |
| 8,0  | 2,00 | 7,8  | M5  | 15 | 9  | 4 | 74,30 €  | 0,050 | 0,060 |
| 10,0 | 0,50 | 9,8  | M6  | 17 | 10 | 4 | 81,06 €  | 0,060 | 0,080 |
| 10,0 | 1,00 | 9,8  | M6  | 17 | 10 | 4 | 81,06 €  | 0,060 | 0,080 |
| 10,0 | 1,50 | 9,8  | M6  | 17 | 10 | 4 | 81,06 €  | 0,060 | 0,080 |
| 10,0 | 2,00 | 9,8  | M6  | 17 | 10 | 4 | 81,06 €  | 0,060 | 0,080 |
| 12,0 | 0,50 | 11,8 | M6  | 18 | 11 | 4 | 109,76 € | 0,070 | 0,090 |
| 12,0 | 1,00 | 11,8 | M6  | 18 | 11 | 4 | 109,76 € | 0,070 | 0,090 |
| 12,0 | 1,50 | 11,8 | M6  | 18 | 11 | 4 | 109,76 € | 0,070 | 0,090 |
| 12,0 | 2,00 | 11,8 | M6  | 18 | 11 | 4 | 109,76 € | 0,070 | 0,090 |
| 13,0 | 0,50 | 12,8 | M8  | 18 | 12 | 4 | 123,28 € | 0,070 | 0,090 |
| 13,0 | 1,00 | 12,8 | M8  | 18 | 12 | 4 | 123,28 € | 0,070 | 0,090 |
| 13,0 | 1,50 | 12,8 | M8  | 18 | 12 | 4 | 123,28 € | 0,070 | 0,090 |
| 13,0 | 2,00 | 12,8 | M8  | 18 | 12 | 4 | 123,28 € | 0,070 | 0,090 |
| 16,0 | 1,00 | 15,8 | M10 | 21 | 15 | 4 | 160,41 € | 0,080 | 0,100 |
| 16,0 | 1,50 | 15,8 | M10 | 21 | 15 | 4 | 160,41 € | 0,080 | 0,100 |
| 16,0 | 2,00 | 15,8 | M10 | 21 | 15 | 4 | 160,41 € | 0,080 | 0,100 |
| 16,0 | 2,50 | 15,8 | M10 | 21 | 15 | 4 | 160,41 € | 0,080 | 0,100 |
| 20,0 | 1,00 | 19,8 | M10 | 25 | 19 | 4 | 194,18 € | 0,100 | 0,130 |
| 20,0 | 1,50 | 19,8 | M10 | 25 | 19 | 4 | 194,18 € | 0,100 | 0,130 |
| 20,0 | 2,00 | 19,8 | M10 | 25 | 19 | 4 | 194,18 € | 0,100 | 0,130 |
| 20,0 | 2,50 | 19,8 | M10 | 25 | 19 | 4 | 194,18 € | 0,100 | 0,130 |
| 20,0 | 3,00 | 19,8 | M10 | 25 | 19 | 4 | 194,18 € | 0,100 | 0,130 |
| 20,0 | 4,00 | 19,8 | M10 | 25 | 19 | 4 | 194,18 € | 0,100 | 0,130 |
| 20,0 | 5,00 | 19,8 | M10 | 25 | 19 | 4 | 194,18 € | 0,100 | 0,130 |
| 25,0 | 1,00 | 24,8 | M12 | 35 | 24 | 4 | 227,95 € | 0,100 | 0,130 |
| 25,0 | 1,50 | 24,8 | M12 | 35 | 24 | 4 | 227,95 € | 0,100 | 0,130 |
| 25,0 | 2,00 | 24,8 | M12 | 35 | 24 | 4 | 227,95 € | 0,100 | 0,130 |
| 25,0 | 2,50 | 24,8 | M12 | 35 | 24 | 4 | 227,95 € | 0,100 | 0,130 |
| 25,0 | 3,00 | 24,8 | M12 | 35 | 24 | 4 | 227,95 € | 0,100 | 0,130 |
| 25,0 | 4,00 | 24,8 | M12 | 35 | 24 | 4 | 227,95 € | 0,100 | 0,130 |
| 25,0 | 5,00 | 24,8 | M12 | 35 | 24 | 4 | 227,95 € | 0,100 | 0,130 |

Orderexample: 1517.025.16,0-R1,0

| Eignung / Vc (m/min) | Alu Kunststoff | Alu | Alu Guss | Stahl < 500 N | Stahl < 750 N | Stahl < 900 N | Stahl < 1100 N | Stahl < 1400 N | Stahl < 55 HRC | Stahl < 60 HRC | Stahl < 65 HRC | Stahl < 67 HRC | Stahl < 70 HRC | INOX < 900 N | INOX > 900 N | GG(G) | TITAN | Graphit GFK CFK | Öl         | Emulsion           | MMS | Trocken | Druckluft |
|----------------------|----------------|-----|----------|---------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------------|--------------|-------|-------|-----------------|------------|--------------------|-----|---------|-----------|
| ISO-Code             | N              | N   | N        | P             | P             | P             | P              | P              | H              | H              | H              | H              | H              | M            | M            | K     | S     | N               | ■ geeignet | □ bedingt geeignet | ■   | ■       | ■         |
| Vc                   |                |     |          | 260           | 240           | 190           | 180            | 150            |                |                |                |                |                | 80           | 70           | 240   |       |                 |            |                    |     |         |           |

A seconda delle condizioni di applicazione, i dati di taglio possono essere corretti verso l'alto o verso il basso. Per i valori indicati non si assume alcuna responsabilità..  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

## Serie 1518 VHM/Coating corner radius z6



| Ø d1 | R   | Ø d2 | M   | l1 | ap | Z | EURO     | fz<br>ae=0,1xD |
|------|-----|------|-----|----|----|---|----------|----------------|
| 8,0  | 0,0 | 7,8  | M5  | 15 | 9  | 6 | 74,30 €  | 0,060          |
| 8,0  | 0,5 | 7,8  | M5  | 15 | 9  | 6 | 74,30 €  | 0,060          |
| 10,0 | 0,0 | 9,8  | M6  | 17 | 10 | 6 | 81,06 €  | 0,080          |
| 10,0 | 0,5 | 9,8  | M6  | 17 | 10 | 6 | 81,06 €  | 0,080          |
| 10,0 | 1,0 | 9,8  | M6  | 17 | 10 | 6 | 81,06 €  | 0,080          |
| 10,0 | 1,5 | 9,8  | M6  | 17 | 10 | 6 | 81,06 €  | 0,080          |
| 12,0 | 0,0 | 11,8 | M6  | 18 | 11 | 6 | 109,76 € | 0,100          |
| 12,0 | 0,5 | 11,8 | M6  | 18 | 11 | 6 | 109,76 € | 0,100          |
| 12,0 | 1,0 | 11,8 | M6  | 18 | 11 | 6 | 109,76 € | 0,100          |
| 12,0 | 1,5 | 11,8 | M6  | 18 | 11 | 6 | 109,76 € | 0,100          |
| 13,0 | 0,0 | 12,8 | M8  | 18 | 12 | 6 | 123,28 € | 0,100          |
| 13,0 | 0,5 | 12,8 | M8  | 18 | 12 | 6 | 123,28 € | 0,100          |
| 13,0 | 1,0 | 12,8 | M8  | 18 | 12 | 6 | 123,28 € | 0,100          |
| 13,0 | 1,5 | 12,8 | M8  | 18 | 12 | 6 | 123,28 € | 0,100          |
| 16,0 | 0,0 | 15,8 | M10 | 21 | 15 | 6 | 160,41 € | 0,120          |
| 16,0 | 1,0 | 15,8 | M10 | 21 | 15 | 6 | 160,41 € | 0,120          |
| 20,0 | 0,0 | 19,8 | M10 | 25 | 19 | 6 | 194,18 € | 0,130          |
| 20,0 | 1,0 | 19,8 | M10 | 25 | 19 | 6 | 194,18 € | 0,130          |
| 25,0 | 0,0 | 24,8 | M12 | 35 | 24 | 6 | 227,95 € | 0,130          |
| 25,0 | 1,0 | 24,8 | M12 | 35 | 24 | 6 | 227,95 € | 0,130          |

Orderexample: 1518.025.16,0-R1,0

| Eignung /<br>Vc (m/min) |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | Öl                                                                                    | Emulsion                                                                              | MMS                                                                                   | Trocken                                                                               | Druckluft                                                                             |   |
|-------------------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---|
|                         | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK |  |  |  |  |  |   |
| ISO-Code                | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     | ■ geeignet    □ bedingt geeignet                                                      |                                                                                       |                                                                                       |                                                                                       |                                                                                       |   |
| Vc                      |                   |     |             | 450              | 425              | 360              | 350               | 250               |                   |                   |                   |                   |                   | 130             | 120             | 300   |       |                       |                                                                                       | ■                                                                                     | □                                                                                     | ■                                                                                     | ■                                                                                     | ■ |

## Serie 1519 VHM/Coating HR z4



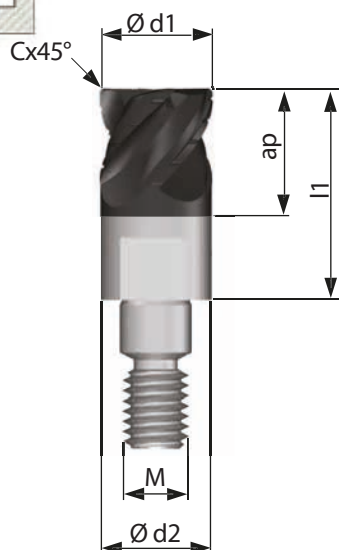
| Ø d1 | Ø d2 | M   | l1 | ap | C   | Z | EURO     | fz    | fz    |
|------|------|-----|----|----|-----|---|----------|-------|-------|
| 8,0  | 7,8  | M5  | 15 | 9  | 0,3 | 4 | 91,18 €  | 0,040 | 0,050 |
| 10,0 | 9,8  | M6  | 17 | 10 | 0,3 | 4 | 97,93 €  | 0,050 | 0,060 |
| 12,0 | 11,8 | M6  | 18 | 11 | 0,3 | 4 | 126,65 € | 0,060 | 0,080 |
| 13,0 | 12,8 | M8  | 18 | 12 | 0,3 | 4 | 140,17 € | 0,060 | 0,080 |
| 16,0 | 15,8 | M10 | 21 | 15 | 0,3 | 4 | 177,29 € | 0,080 | 0,100 |
| 20,0 | 19,8 | M10 | 25 | 19 | 0,3 | 4 | 211,07 € | 0,100 | 0,120 |
| 25,0 | 24,8 | M12 | 35 | 24 | 0,3 | 4 | 244,85 € | 0,120 | 0,140 |

Orderexample: 1519.025.16,0

| Eignung /<br>Vc (m/min) |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       | Graphit<br>GFK<br>CFK | Öl                                                                                    | Emulsion                                                                              | MMS                                                                                   | Trocken                                                                               | Druckluft                                                                             |
|-------------------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                         | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN |                       |  |  |  |  |  |
| ISO-Code                | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     | ■ geeignet    □ bedingt geeignet                                                      |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| Vc                      |                   |     |             | 140              | 120              | 100              | 70                | 60                | 35                |                   |                   |                   |                   | 60              | 50              | 90    |       |                       |                                                                                       | ■                                                                                     | □                                                                                     | □                                                                                     | ■                                                                                     |

A seconda delle condizioni di applicazione, i dati di taglio possono essere corretti verso l'alto o verso il basso. Per i valori indicati non si assume alcuna responsabilità.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

## Serie 1520 VHM/Coating 35/38 roughing z4

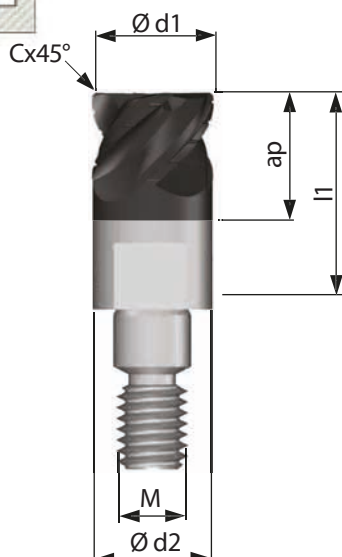


| Ø d1 | Ø d2 | M   | l1 | ap | C    | Z | EURO     | fz    | fz    |
|------|------|-----|----|----|------|---|----------|-------|-------|
| 8,0  | 7,8  | M5  | 15 | 9  | 0,20 | 4 | 91,18 €  | 0,040 | 0,050 |
| 10,0 | 9,8  | M6  | 17 | 10 | 0,30 | 4 | 97,93 €  | 0,050 | 0,060 |
| 12,0 | 11,8 | M6  | 18 | 11 | 0,30 | 4 | 126,65 € | 0,060 | 0,080 |
| 13,0 | 12,8 | M8  | 18 | 12 | 0,30 | 4 | 140,17 € | 0,060 | 0,080 |
| 16,0 | 15,8 | M10 | 21 | 15 | 0,40 | 4 | 177,29 € | 0,080 | 0,100 |
| 20,0 | 19,8 | M10 | 25 | 19 | 0,50 | 4 | 211,07 € | 0,100 | 0,120 |
| 25,0 | 24,8 | M12 | 35 | 24 | 0,50 | 4 | 244,85 € | 0,120 | 0,140 |

Orderexample: 1520.025.16,0

| Eignung / Vc (m/min) | Alu Kunststoff | Alu | Alu Guss | Stahl < 500 N | Stahl < 750 N | Stahl < 900 N | Stahl < 1100 N | Stahl < 1400 N | Stahl < 55 HRC | Stahl < 60 HRC | Stahl < 65 HRC | Stahl < 67 HRC | Stahl < 70 HRC | INOX < 900 N | INOX > 900 N | GG(G) | TITAN | Graphit GFK CFK | Öl         | Emulsion | MMS | Trocken | Druckluft |
|----------------------|----------------|-----|----------|---------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------------|--------------|-------|-------|-----------------|------------|----------|-----|---------|-----------|
| ISO-Code             | N              | N   | N        | P             | P             | P             | P              | P              | H              | H              | H              | H              | H              | M            | M            | K     | S     | N               | ■ geeignet | ■        | ■   | ■       | ■         |
| Vc                   |                |     |          | 140           | 120           | 100           | 70             | 60             | 35             |                |                |                |                | 60           | 50           | 90    |       |                 |            |          |     |         |           |

## Serie 1521 VHM/Coating 42/45 roughing z4



| Ø d1 | Ø d2 | M   | l1 | ap | C    | Z | EURO     | fz    | fz    |
|------|------|-----|----|----|------|---|----------|-------|-------|
| 8,0  | 7,8  | M5  | 15 | 9  | 0,20 | 4 | 91,18 €  | 0,040 | 0,050 |
| 10,0 | 9,8  | M6  | 17 | 10 | 0,30 | 4 | 97,93 €  | 0,050 | 0,060 |
| 12,0 | 11,8 | M6  | 18 | 11 | 0,30 | 4 | 126,65 € | 0,060 | 0,080 |
| 13,0 | 12,8 | M8  | 18 | 12 | 0,30 | 4 | 140,17 € | 0,060 | 0,080 |
| 16,0 | 15,8 | M10 | 21 | 15 | 0,40 | 4 | 177,29 € | 0,080 | 0,100 |
| 20,0 | 19,8 | M10 | 25 | 19 | 0,50 | 4 | 211,07 € | 0,100 | 0,120 |
| 25,0 | 24,8 | M12 | 35 | 24 | 0,50 | 4 | 244,85 € | 0,120 | 0,140 |

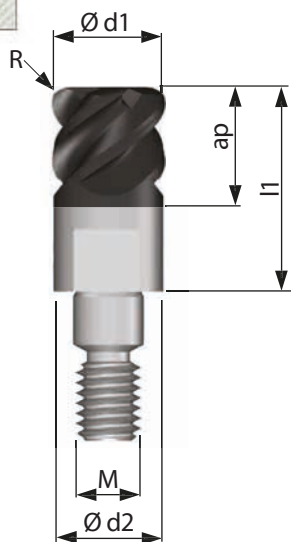
Orderexample: 1521.025.16,0

| Eignung / Vc (m/min) | Alu Kunststoff | Alu | Alu Guss | Stahl < 500 N | Stahl < 750 N | Stahl < 900 N | Stahl < 1100 N | Stahl < 1400 N | Stahl < 55 HRC | Stahl < 60 HRC | Stahl < 65 HRC | Stahl < 67 HRC | Stahl < 70 HRC | INOX < 900 N | INOX > 900 N | GG(G) | TITAN | Graphit GFK CFK | Öl         | Emulsion | MMS | Trocken | Druckluft |
|----------------------|----------------|-----|----------|---------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------------|--------------|-------|-------|-----------------|------------|----------|-----|---------|-----------|
| ISO-Code             | N              | N   | N        | P             | P             | P             | P              | P              | H              | H              | H              | H              | H              | M            | M            | K     | S     | N               | ■ geeignet | ■        | ■   | ■       | ■         |
| Vc                   |                |     |          | 140           | 120           | 100           | 70             | 60             | 35             |                |                |                |                | 60           | 50           | 90    |       |                 |            |          |     |         |           |

A seconda delle condizioni di applicazione, i dati di taglio possono essere corretti verso l'alto o verso il basso. Per i valori indicati non si assume alcuna responsabilità.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.



## Serie 1522 VHM/Coating 50° corner radius z4

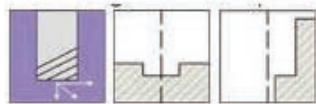


| Ø d1 | R   | Ø d2 | M   | l1 | ap | SR | Z | EURO     | fz    | fz    |
|------|-----|------|-----|----|----|----|---|----------|-------|-------|
| 8,0  | 1,0 | 7,8  | M5  | 15 | 9  | 12 | 4 | 74,30 €  | 0,050 | 0,060 |
| 10,0 | 1,5 | 9,8  | M6  | 17 | 10 | 15 | 4 | 81,06 €  | 0,060 | 0,080 |
| 12,0 | 1,5 | 11,8 | M6  | 18 | 11 | 18 | 4 | 109,76 € | 0,070 | 0,090 |
| 13,0 | 1,5 | 12,8 | M6  | 18 | 12 | 18 | 4 | 123,28 € | 0,070 | 0,090 |
| 16,0 | 2,0 | 15,8 | M10 | 21 | 15 | 24 | 4 | 160,41 € | 0,080 | 0,100 |
| 20,0 | 2,0 | 19,8 | M10 | 25 | 19 | 30 | 4 | 194,18 € | 0,100 | 0,130 |
| 25,0 | 2,0 | 24,8 | M12 | 35 | 24 | 36 | 4 | 227,95 € | 0,100 | 0,130 |

Orderexample: 1522.025.16,0

| Eignung /<br>Vc (m/min) |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | Öl                                                                                  | Emulsion                                                                            | MMS                                                                                 | Trocken                                                                             | Druckluft                                                                           |                    |  |  |
|-------------------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------|--|--|
|                         | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK |  |  |  |  |  |                    |  |  |
| ISO-Code                | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     | ■ geeignet                                                                          |                                                                                     |                                                                                     |                                                                                     |                                                                                     | □ bedingt geeignet |  |  |
| Vc                      |                   |     |             | 260              | 240              | 190              | 180               | 150               |                   |                   |                   |                   |                   | 80              | 70              | 240   |       |                       |                                                                                     | ■                                                                                   | ■                                                                                   | □                                                                                   | ■                                                                                   | ■                  |  |  |

## Serie 1523 VHM/Coating radius z2



| Ø d1 | Ø d2 | M   | l1 | ap | Z | EURO     | fz    | fz    |
|------|------|-----|----|----|---|----------|-------|-------|
| 8,0  | 7,8  | M5  | 15 | 9  | 2 | 74,30 €  | 0,042 | 0,055 |
| 10,0 | 9,8  | M6  | 17 | 10 | 2 | 81,06 €  | 0,060 | 0,080 |
| 12,0 | 11,8 | M6  | 18 | 11 | 2 | 109,76 € | 0,080 | 0,090 |
| 13,0 | 12,8 | M8  | 18 | 12 | 2 | 123,28 € | 0,080 | 0,090 |
| 16,0 | 15,8 | M10 | 21 | 15 | 2 | 160,41 € | 0,100 | 0,110 |
| 20,0 | 19,8 | M10 | 25 | 19 | 2 | 194,18 € | 0,120 | 0,130 |
| 25,0 | 24,8 | M12 | 35 | 24 | 2 | 227,95 € | 0,120 | 0,140 |

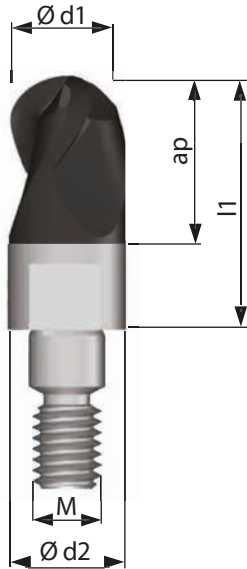
Orderexample: 1523.025.16,0

| Eignung /<br>Vc (m/min) |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | Öl                                                                                    | Emulsion                                                                              | MMS                                                                                   | Trocken                                                                               | Druckluft                                                                             |  |
|-------------------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--|
|                         | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK |  |  |  |  |  |  |
| ISO-Code                | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     | ■ geeignet    □ bedingt geeignet                                                      |                                                                                       |                                                                                       |                                                                                       |                                                                                       |  |
| Vc                      |                   |     |             | 160              | 140              | 130              | 80                | 70                | 50                |                   |                   |                   |                   | 80              | 70              | 120   |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |  |

A seconda delle condizioni di applicazione, i dati di taglio possono essere corretti verso l'alto o verso il basso. Per i valori indicati non si assume alcuna responsabilità.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.



## Serie 1524 VHM/Coating radius z3

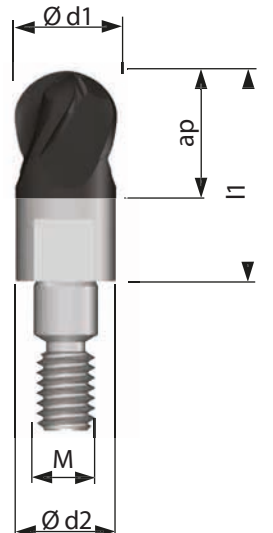
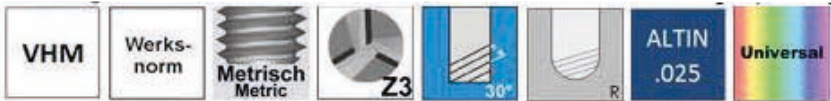


| Ø d1 | Ø d2 | M   | l1 | ap | Z | EURO     | fz    | fz    |
|------|------|-----|----|----|---|----------|-------|-------|
| 8,0  | 7,8  | M5  | 15 | 9  | 3 | 74,30 €  | 0,042 | 0,055 |
| 10,0 | 9,8  | M6  | 17 | 10 | 3 | 81,06 €  | 0,060 | 0,080 |
| 12,0 | 11,8 | M6  | 18 | 11 | 3 | 109,76 € | 0,080 | 0,090 |
| 13,0 | 12,8 | M8  | 18 | 12 | 3 | 123,28 € | 0,080 | 0,090 |
| 16,0 | 15,8 | M10 | 21 | 15 | 3 | 160,41 € | 0,100 | 0,110 |
| 20,0 | 19,8 | M10 | 25 | 19 | 3 | 194,18 € | 0,120 | 0,130 |
| 25,0 | 24,8 | M12 | 35 | 24 | 3 | 227,95 € | 0,120 | 0,140 |

Orderexample: 1524.025.16,0

| Eignung /<br>Vc (m/min) |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       | Graphit<br>GFK<br>CFK | Öl                                                                                           | Emulsion                                                                            | MMS                                                                                 | Trocken                                                                             | Druckluft                                                                           |                                                                                                      |  |  |
|-------------------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|--|--|
|                         | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN |                       |           |  |  |  |  |                                                                                                      |  |  |
| ISO-Code                | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |  geeignet |                                                                                     |                                                                                     |                                                                                     |                                                                                     |  bedingt geeignet |  |  |
| Vc                      |                   |     |             | 160              | 140              | 130              | 80                | 70                | 50                |                   |                   |                   |                   | 80              | 70              | 120   |       |                       |                                                                                              |  |  |  |  |                   |  |  |

## Serie 1525 VHM/Coating radius z4



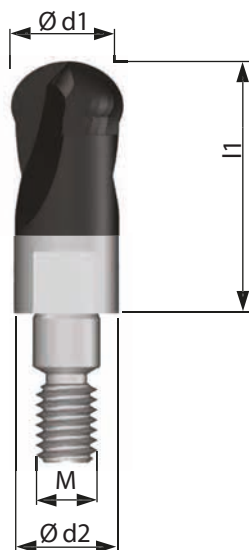
| Ø d1 | Ø d2 | M   | l1 | ap | Z | EURO     | fz    | fz    |
|------|------|-----|----|----|---|----------|-------|-------|
| 8,0  | 7,8  | M5  | 15 | 9  | 4 | 74,30 €  | 0,042 | 0,055 |
| 10,0 | 9,8  | M6  | 17 | 10 | 4 | 81,06 €  | 0,060 | 0,080 |
| 12,0 | 11,8 | M6  | 18 | 11 | 4 | 109,76 € | 0,080 | 0,090 |
| 13,0 | 12,8 | M8  | 18 | 12 | 4 | 123,28 € | 0,080 | 0,090 |
| 16,0 | 15,8 | M10 | 21 | 15 | 4 | 160,41 € | 0,100 | 0,110 |
| 20,0 | 19,8 | M10 | 25 | 19 | 4 | 194,18 € | 0,120 | 0,130 |
| 25,0 | 24,8 | M12 | 35 | 24 | 4 | 227,95 € | 0,120 | 0,140 |

Orderexample: 1525.025.16,0

| Eignung /<br>Vc (m/min) |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | Öl                                                                                    | Emulsion                                                                              | MMS                                                                                   | Trocken                                                                               | Druckluft                                                                             |
|-------------------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                         | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK |  |  |  |  |  |
| ISO-Code                | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |  |  |  |  |  |
| Vc                      |                   |     |             | 160              | 140              | 130              | 80                | 70                | 50                |                   |                   |                   |                   | 80              | 70              | 120   |       |                       |  |  |  |  |  |

A seconda delle condizioni di applicazione, i dati di taglio possono essere corretti verso l'alto o verso il basso. Per i valori indicati non si assume alcuna responsabilità.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

## Serie 1526 VHM/Coating ball z2

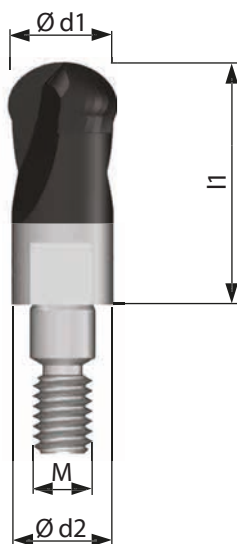


| Ø d1 | Ø d2 | M   | l  | Z | EURO     | fz    | fz    |
|------|------|-----|----|---|----------|-------|-------|
| 8,0  | 8    | M5  | 15 | 2 | 74,30 €  | 0,042 | 0,055 |
| 10,0 | 8    | M5  | 17 | 2 | 81,06 €  | 0,060 | 0,080 |
| 12,0 | 10   | M6  | 18 | 2 | 109,76 € | 0,080 | 0,090 |
| 16,0 | 13   | M8  | 21 | 2 | 160,41 € | 0,100 | 0,110 |
| 20,0 | 16   | M10 | 25 | 2 | 194,18 € | 0,120 | 0,130 |
| 25,0 | 21   | M12 | 35 | 2 | 227,95 € | 0,120 | 0,140 |

Orderexample: 1526.025.16,0

| Eignung / Vc (m/min) | Alu Kunststoff | Alu | Alu Guss | Stahl < 500 N | Stahl < 750 N | Stahl < 900 N | Stahl < 1100 N | Stahl < 1400 N | Stahl < 55 HRC | Stahl < 60 HRC | Stahl < 65 HRC | Stahl < 67 HRC | Stahl < 70 HRC | INOX < 900 N | INOX > 900 N | GG(G) | TITAN | Graphit GFK CFK | Öl         | Emulsion | MMS | Trocken | Druckluft |
|----------------------|----------------|-----|----------|---------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------------|--------------|-------|-------|-----------------|------------|----------|-----|---------|-----------|
| ISO-Code             | N              | N   | N        | P             | P             | P             | P              | P              | H              | H              | H              | H              | H              | M            | M            | K     | S     | N               | ■ geeignet | ■        | ■   | ■       | ■         |
| Vc                   |                |     |          | 160           | 140           | 130           | 80             | 70             | 50             |                |                |                |                | 80           | 70           | 120   |       |                 |            |          |     |         |           |

## Serie 1527 VHM/Coating ball z4



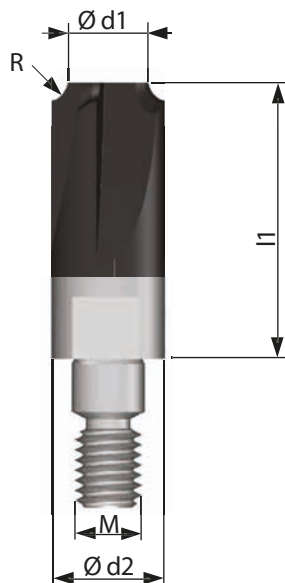
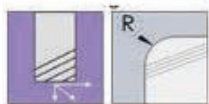
| Ø d1 | Ø d2 | M   | l  | Z | EURO     | fz    | fz    |
|------|------|-----|----|---|----------|-------|-------|
| 8,0  | 8    | M5  | 15 | 4 | 74,30 €  | 0,042 | 0,055 |
| 10,0 | 8    | M5  | 17 | 4 | 81,06 €  | 0,060 | 0,080 |
| 12,0 | 10   | M6  | 18 | 4 | 109,76 € | 0,080 | 0,090 |
| 16,0 | 13   | M8  | 21 | 4 | 160,41 € | 0,100 | 0,110 |
| 20,0 | 16   | M10 | 25 | 4 | 194,18 € | 0,120 | 0,130 |
| 25,0 | 21   | M12 | 35 | 4 | 227,95 € | 0,120 | 0,140 |

Orderexample: 1527.025.16,0

| Eignung / Vc (m/min) | Alu Kunststoff | Alu | Alu Guss | Stahl < 500 N | Stahl < 750 N | Stahl < 900 N | Stahl < 1100 N | Stahl < 1400 N | Stahl < 55 HRC | Stahl < 60 HRC | Stahl < 65 HRC | Stahl < 67 HRC | Stahl < 70 HRC | INOX < 900 N | INOX > 900 N | GG(G) | TITAN | Graphit GFK CFK | Öl         | Emulsion | MMS | Trocken | Druckluft |
|----------------------|----------------|-----|----------|---------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------------|--------------|-------|-------|-----------------|------------|----------|-----|---------|-----------|
| ISO-Code             | N              | N   | N        | P             | P             | P             | P              | P              | H              | H              | H              | H              | H              | M            | M            | K     | S     | N               | ■ geeignet | ■        | ■   | ■       | ■         |
| Vc                   |                |     |          | 160           | 140           | 130           | 80             | 70             | 50             |                |                |                |                | 80           | 70           | 120   |       |                 |            |          |     |         |           |

A seconda delle condizioni di applicazione, i dati di taglio possono essere corretti verso l'alto o verso il basso. Per i valori indicati non si assume alcuna responsabilità.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

## Serie 1528 VHM/Coating quater circle z4

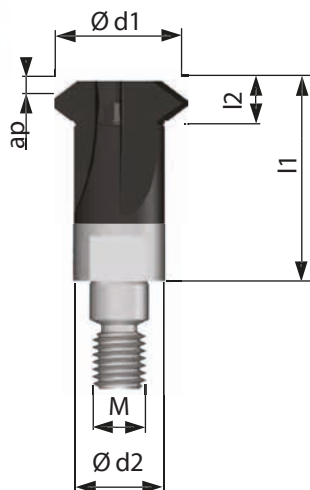


| Ø d2 | R   | Ø d1 | M   | l1 | Z | EURO     | fz    |
|------|-----|------|-----|----|---|----------|-------|
| 8    | 0,5 | 7    | M5  | 15 | 4 | 72,13 €  | 0,004 |
| 8    | 1,0 | 6    | M5  | 15 | 4 | 72,13 €  | 0,008 |
| 10   | 1,5 | 7    | M6  | 17 | 4 | 78,69 €  | 0,008 |
| 10   | 2,0 | 6    | M6  | 17 | 4 | 78,69 €  | 0,016 |
| 13   | 2,5 | 8    | M8  | 18 | 4 | 106,56 € | 0,016 |
| 13   | 3,0 | 7    | M8  | 18 | 4 | 106,56 € | 0,016 |
| 16   | 3,5 | 9    | M10 | 21 | 4 | 155,74 € | 0,016 |
| 16   | 4,0 | 8    | M10 | 21 | 4 | 155,74 € | 0,032 |
| 16   | 4,5 | 7    | M10 | 21 | 4 | 155,74 € | 0,032 |
| 20   | 5,0 | 10   | M10 | 25 | 4 | 188,53 € | 0,032 |
| 20   | 6,0 | 8    | M10 | 25 | 4 | 188,53 € | 0,055 |
| 25   | 7,0 | 11   | M12 | 35 | 4 | 221,32 € | 0,060 |
| 25   | 8,0 | 9    | M12 | 35 | 4 | 221,32 € | 0,060 |

Orderexample: 1528.025.16,0-R3,5

| Eignung / Vc (m/min) | Alu Kunststoff | Alu | Alu Guss | Stahl < 500 N | Stahl < 750 N | Stahl < 900 N | Stahl < 1100 N | Stahl < 1400 N | Stahl < 55 HRC | Stahl < 60 HRC | Stahl < 65 HRC | Stahl < 67 HRC | Stahl < 70 HRC | INOX < 900 N | INOX > 900 N | GG(G) | TITAN | Graphit GFK CFK | Öl         | Emulsion | MMS | Trocken | Druckluft |
|----------------------|----------------|-----|----------|---------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------------|--------------|-------|-------|-----------------|------------|----------|-----|---------|-----------|
| ISO-Code             | N              | N   | N        | P             | P             | P             | P              | P              | H              | H              | H              | H              | H              | M            | M            | K     | S     | N               | ■ geeignet | ■        | ■   | ■       | ■         |
| Vc                   |                | 400 | 400      | 180           | 160           | 150           | 90             |                |                |                |                |                |                | 90           | 70           | 120   |       |                 |            |          |     |         |           |

## Serie 1530 VHM/Coating forward-/ and backchamfer z4



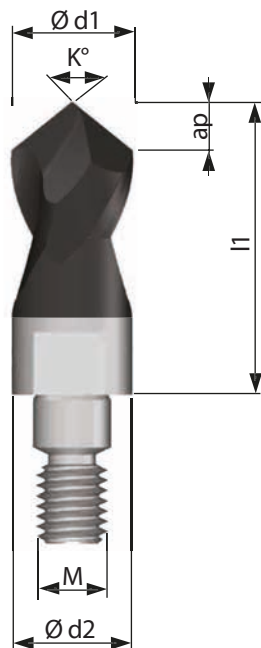
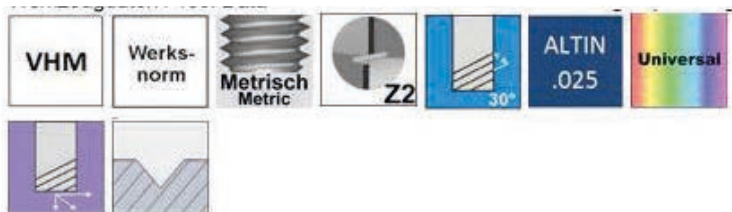
| Ø d1 | Ø d2 | M   | l1 | l2  | ap  | Z | EURO     | fz    |
|------|------|-----|----|-----|-----|---|----------|-------|
| 12   | 8    | M5  | 18 | 3,8 | 1,9 | 4 | 269,31 € | 0,015 |
| 16   | 13   | M8  | 20 | 2,8 | 1,4 | 4 | 278,60 € | 0,016 |
| 20   | 16   | M10 | 20 | 3,8 | 1,9 | 4 | 295,51 € | 0,016 |

Orderexample: 1530.025.16,0

| Eignung / Vc (m/min) | Alu Kunststoff | Alu | Alu Guss | Stahl < 500 N | Stahl < 750 N | Stahl < 900 N | Stahl < 1100 N | Stahl < 1400 N | Stahl < 55 HRC | Stahl < 60 HRC | Stahl < 65 HRC | Stahl < 67 HRC | Stahl < 70 HRC | INOX < 900 N | INOX > 900 N | GG(G) | TITAN | Graphit GFK CFK | Öl         | Emulsion | MMS | Trocken | Druckluft |
|----------------------|----------------|-----|----------|---------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------------|--------------|-------|-------|-----------------|------------|----------|-----|---------|-----------|
| ISO-Code             | N              | N   | N        | P             | P             | P             | P              | P              | H              | H              | H              | H              | H              | M            | M            | K     | S     | N               | ■ geeignet | ■        | ■   | ■       | ■         |
| Vc                   |                | 115 | 70       | 65            | 65            | 40            | 40             |                |                |                |                |                |                | 35           |              | 40    |       |                 |            |          |     |         |           |

A seconda delle condizioni di applicazione, i dati di taglio possono essere corretti verso l'alto o verso il basso. Per i valori indicati non si assume alcuna responsabilità.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

# Serie 1529 VHM/Coating face- & centering z2



60°

Ø d1 Ø d2 M l1 ap Z EURO



|    |    |     |    |    |   |          |             |
|----|----|-----|----|----|---|----------|-------------|
| 12 | 12 | M6  | 17 | 10 | 2 | 92,87 €  | 0,015-0,030 |
| 16 | 16 | M10 | 21 | 13 | 2 | 131,70 € | 0,015-0,030 |
| 20 | 18 | M10 | 25 | 17 | 2 | 160,41 € | 0,015-0,030 |

Orderexample: 1529-60°.025.16,0

90°

Ø d1 Ø d2 M l1 ap Z EURO



|    |    |     |    |    |   |          |             |
|----|----|-----|----|----|---|----------|-------------|
| 12 | 12 | M6  | 17 | 6  | 2 | 92,87 €  | 0,015-0,030 |
| 16 | 16 | M10 | 21 | 8  | 2 | 131,70 € | 0,015-0,030 |
| 20 | 18 | M10 | 25 | 10 | 2 | 160,41 € | 0,015-0,030 |

Orderexample: 1529-90°.025.16,0

120°

Ø d1 Ø d2 M l1 ap Z EURO



|    |    |     |    |     |   |          |             |
|----|----|-----|----|-----|---|----------|-------------|
| 12 | 12 | M6  | 17 | 3,4 | 2 | 92,87 €  | 0,015-0,030 |
| 16 | 16 | M10 | 21 | 4,5 | 2 | 131,70 € | 0,015-0,030 |
| 20 | 18 | M10 | 25 | 5,6 | 2 | 160,41 € | 0,015-0,030 |

Orderexample: 1529-120°.025.16,0

142°

Ø d1 Ø d2 M l1 ap Z EURO



|    |    |     |    |     |   |          |             |
|----|----|-----|----|-----|---|----------|-------------|
| 12 | 12 | M6  | 17 | 2   | 2 | 92,87 €  | 0,015-0,030 |
| 16 | 16 | M10 | 21 | 2,7 | 2 | 131,70 € | 0,015-0,030 |
| 20 | 18 | M10 | 25 | 3,4 | 2 | 160,41 € | 0,015-0,030 |

Orderexample: 1529-142°.025.16,0

| Eignung / Vc (m/min) | Alu Kunststoff | Alu | Alu Guss | Stahl < 500 N | Stahl < 750 N | Stahl < 900 N | Stahl < 1100 N | Stahl < 1400 N | Stahl < 55 HRC | Stahl < 60 HRC | Stahl < 65 HRC | Stahl < 67 HRC | Stahl < 70 HRC | INOX < 900 N | INOX > 900 N | GG(G) | TITAN | Graphit GFK CFK | Öl         | Emulsion           | MMS | Trocken | Druckluft |
|----------------------|----------------|-----|----------|---------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------------|--------------|-------|-------|-----------------|------------|--------------------|-----|---------|-----------|
| ISO-Code             | N              | N   | N        | P             | P             | P             | P              | P              | H              | H              | H              | H              | H              | M            | M            | K     | S     | N               | ■ geeignet | □ bedingt geeignet |     |         |           |
| Vc                   | 220            | 220 | 200      | 90            | 80            | 65            | 55             |                |                |                |                |                |                | 35           | 30           | 100   |       |                 |            | ■                  |     | □       |           |

A seconda delle condizioni di applicazione, i dati di taglio possono essere corretti verso l'alto o verso il basso. Per i valori indicati non si assume alcuna responsabilità.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

## Serie 5110 - Steel adaptors

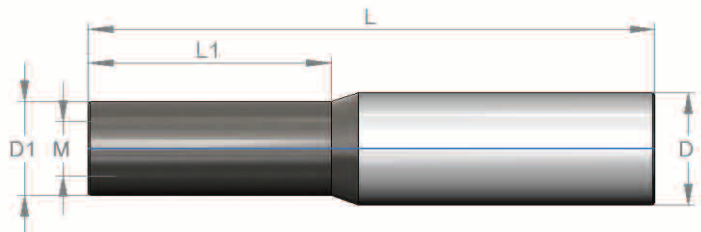
**Execution:** prolunghe coniche in acciaio per  
fresche di tipo filettato con refrigerante  
interno  
conical steel extensions for  
threaded  
taps and cutters with inner coolant



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |     |     |     |    |          |
|-----------------------------|------------------------------|-----|-----|-----|----|----------|
|                             | D                            | M   | L   | L1  | D1 | EURO     |
| 5110 10 040M6               | 10                           | M6  | 115 | 40  | 9  | 191,02 € |
| 5110 10 060M6               | 10                           | M6  | 135 | 60  | 9  | 191,02 € |
| 5110 12 060M6               | 12                           | M6  | 115 | 60  | 10 | 191,02 € |
| 5110 12 080M6               | 12                           | M6  | 135 | 80  | 10 | 191,02 € |
| 5110 12 100M6               | 12                           | M6  | 155 | 100 | 10 | 191,02 € |
| 5110 16 080M8               | 16                           | M8  | 135 | 80  | 13 | 213,21 € |
| 5110 16 100M8               | 16                           | M8  | 155 | 100 | 13 | 213,21 € |
| 5110 16 120M8               | 16                           | M8  | 175 | 120 | 13 | 213,21 € |
| 5110 20 100-16M10           | 20                           | M10 | 160 | 100 | 16 | 230,28 € |
| 5110 20 140-16M10           | 20                           | M10 | 200 | 140 | 16 | 230,28 € |
| 5110 20 100M10              | 20                           | M10 | 160 | 100 | 18 | 230,28 € |
| 5110 20 140M10              | 20                           | M10 | 200 | 140 | 18 | 230,28 € |
| 5110 25 100M12              | 25                           | M12 | 165 | 100 | 21 | 247,34 € |
| 5110 25 150M12              | 25                           | M12 | 215 | 150 | 21 | 247,34 € |
| 5110 32 100M16              | 32                           | M16 | 170 | 100 | 29 | 264,39 € |
| 5110 32 150M16              | 32                           | M16 | 220 | 150 | 29 | 264,39 € |

## Serie 5115 - Steel adaptors

**Execution:** prolunghe cilindriche in acciaio per  
fresa di tipo filettato con refrigerante  
interno  
cylindrical steel extensions for  
threaded taps and cutters with inner coolant

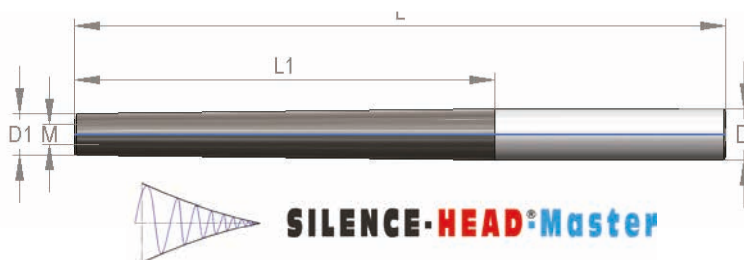


| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |     |     |    |    |          |
|-----------------------------|------------------------------|-----|-----|----|----|----------|
|                             | D                            | M   | L   | L1 | D1 | EURO     |
| 5115 16 025SM5              | 16                           | M5  | 75  | 20 | 8  | 191,02 € |
| 5115 16 050LM5              | 16                           | M5  | 100 | 45 | 8  | 191,02 € |
| 5115 16 025SM6              | 16                           | M6  | 80  | 25 | 10 | 191,02 € |
| 5115 16 070LM6              | 16                           | M6  | 125 | 70 | 10 | 191,02 € |
| 5115 16 025SM8              | 16                           | M8  | 80  | 25 | 13 | 191,02 € |
| 5115 16 070LM8              | 16                           | M8  | 125 | 70 | 13 | 191,02 € |
| 5115 20 045S-16M10          | 20                           | M10 | 100 | 45 | 16 | 213,21 € |
| 5115 20 075L-16M10          | 20                           | M10 | 130 | 75 | 16 | 213,21 € |
| 5115 20 045SM10             | 20                           | M10 | 100 | 45 | 18 | 213,21 € |
| 5115 20 075LM10             | 20                           | M10 | 130 | 75 | 18 | 213,21 € |
| 5115 25 045SM12             | 25                           | M12 | 105 | 45 | 21 | 247,34 € |
| 5115 25 075LM12             | 25                           | M12 | 135 | 75 | 21 | 247,34 € |



## Serie 5108 - Vibro -

- Esecuzione: Prolunghe con nucleo integrale in metallo duro e refrigerante interno  
 - Prevenzione delle vibrazioni attraverso una varietà di generatori HM (nucleo)  
 con proprietà di oscillazione smorzata ed elevata capacità torsionale  
 Precisione ed elevata accuratezza di rotazione, lavorazione a grandi profondità con pareti cilindriche  
 - Operazioni di sgrossatura e finitura con elevate forze di bloccaggio,  
 Le massime esigenze in termini di qualità della superficie



anti vibration

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |     |     |     |    |          |
|-----------------------------|------------------------------|-----|-----|-----|----|----------|
|                             | D                            | M   | L   | L1  | D1 | EURO     |
| 5108 10 040M6               | 10                           | M6  | 115 | 40  | 9  | 382,05 € |
| 5108 10 060M6               | 10                           | M6  | 135 | 60  | 9  | 382,05 € |
| 5108 12 060M6               | 12                           | M6  | 115 | 60  | 10 | 382,05 € |
| 5108 12 080M6               | 12                           | M6  | 135 | 80  | 10 | 382,05 € |
| 5108 12 100M6               | 12                           | M6  | 155 | 100 | 10 | 382,05 € |
| 5108 16 080M8               | 16                           | M8  | 135 | 80  | 13 | 424,69 € |
| 5108 16 100M8               | 16                           | M8  | 155 | 100 | 13 | 424,69 € |
| 5108 16 120M8               | 16                           | M8  | 175 | 120 | 13 | 424,69 € |
| 5108 20 100-16M10           | 20                           | M10 | 160 | 100 | 16 | 458,80 € |
| 5108 20 140-16M10           | 20                           | M10 | 200 | 140 | 16 | 458,80 € |
| 5108 20 100M10              | 20                           | M10 | 160 | 100 | 18 | 458,80 € |
| 5108 20 140M10              | 20                           | M10 | 200 | 140 | 18 | 458,80 € |
| 5108 25 100M12              | 25                           | M12 | 165 | 100 | 21 | 492,92 € |
| 5108 25 150M12              | 25                           | M12 | 215 | 150 | 21 | 492,92 € |
| 5108 32 100M16              | 32                           | M16 | 170 | 100 | 29 | 520,22 € |
| 5108 32 150M16              | 32                           | M16 | 220 | 150 | 29 | 635,95 € |

Bestellbeispiel / Orderexample: 5108 10 040M6

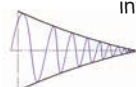
VHM - Kern



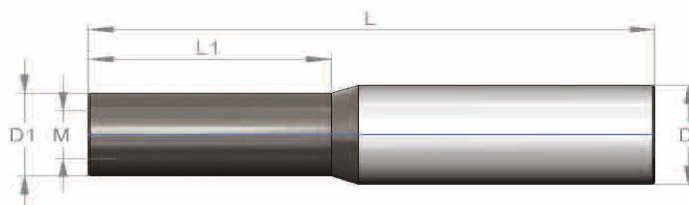
## Serie 5112 - Vibro -

Execution:

Prolunghe antivibranti cilindriche con nucleo integrale in metallo duro per frese di tipo filettato con raffreddamento interno



**SILENCE-HEAD Master**  
anti vibration



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |     |     |    |    |          |
|-----------------------------|------------------------------|-----|-----|----|----|----------|
|                             | D                            | M   | L   | L1 | D1 | EURO     |
| 5112 16 025SM5              | 16                           | M5  | 75  | 20 | 8  | 424,69 € |
| 5112 16 050LM5              | 16                           | M5  | 100 | 45 | 8  | 424,69 € |
| 5112 16 025SM6              | 16                           | M6  | 80  | 25 | 10 | 424,69 € |
| 5112 16 070LM6              | 16                           | M6  | 125 | 70 | 10 | 424,69 € |
| 5112 16 025SM8              | 16                           | M8  | 80  | 25 | 13 | 424,69 € |
| 5112 16 070LM8              | 16                           | M8  | 125 | 70 | 13 | 424,69 € |
| 5112 20 045S-16M10          | 20                           | M10 | 100 | 45 | 16 | 458,80 € |
| 5112 20 075L-16M10          | 20                           | M10 | 130 | 75 | 16 | 458,80 € |
| 5112 20 045SM10             | 20                           | M10 | 100 | 45 | 18 | 458,80 € |
| 5112 20 075LM10             | 20                           | M10 | 130 | 75 | 18 | 458,80 € |
| 5112 25 045SM12             | 25                           | M12 | 105 | 45 | 21 | 520,22 € |
| 5112 25 075LM12             | 25                           | M12 | 135 | 75 | 21 | 520,22 € |

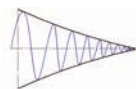
## Serie E - 5108 - adaptors damped oscilation

Esecuzione:

Prolunghe integrali in metallo duro con raffreddamento interno

Vantaggi:

- elevata rigidità e stabilità
- molta forza
- bassa dilatazione termica
- elevata stabilità dimensionale
- alta frequenza naturale
- buona attenuazione
- comportamento di fallimento di buon carattere
- aumento dell'efficienza
- Prevenzione delle vibrazioni attraverso una varietà di nucleo composito in fibra di carbonio con elevate proprietà di oscillazione smorzate ed elevata capacità di torsione



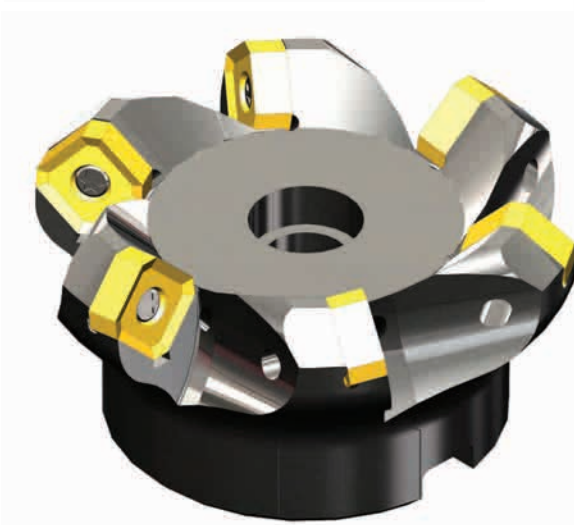
**SILENCE-HEAD-Master**

anti vibration

Abmessungen / Dimension (mm)

| Bestell-Nr.:<br>Order Code: | D  | M   | L   | L1  | D1  | EURO       |
|-----------------------------|----|-----|-----|-----|-----|------------|
| E - 5108 10 020M6           | 10 | M6  | 60  | 20  | 9,5 | 558,49 €   |
| E - 5108 10 040M6           | 10 | M6  | 80  | 40  | 9,5 | 558,49 €   |
| E - 5108 10 060M6           | 10 | M6  | 100 | 60  | 9,5 | 558,49 €   |
| E - 5108 10 080M6           | 10 | M6  | 120 | 80  | 9,5 | 558,49 €   |
| E - 5108 16 040M8           | 16 | M8  | 95  | 40  | 13  | 558,49 €   |
| E - 5108 16 060M8           | 16 | M8  | 115 | 60  | 13  | 651,54 €   |
| E - 5108 16 080M8           | 16 | M8  | 135 | 80  | 13  | 698,09 €   |
| E - 5108 16 100M8           | 16 | M8  | 155 | 100 | 13  | 754,47 €   |
| E - 5108 16 120M8           | 16 | M8  | 175 | 120 | 13  | 789,59 €   |
| E - 5108 20 040M10          | 20 | M10 | 100 | 40  | 18  | 649,10 €   |
| E - 5108 20 060M10          | 20 | M10 | 120 | 60  | 18  | 730,22 €   |
| E - 5108 20 080M10          | 20 | M10 | 140 | 80  | 18  | 835,50 €   |
| E - 5108 20 100M10          | 20 | M10 | 160 | 100 | 18  | 940,75 €   |
| E - 5108 20 120M10          | 20 | M10 | 180 | 120 | 18  | 962,69 €   |
| E - 5108 20 140M10          | 20 | M10 | 200 | 140 | 18  | -          |
| E - 5108 25 080M12          | 25 | M12 | 145 | 80  | 21  | 1.046,02 € |
| E - 5108 25 100M12          | 25 | M12 | 165 | 100 | 21  | 1.149,07 € |
| E - 5108 25 120M12          | 25 | M12 | 185 | 120 | 21  | 1.256,53 € |
| E - 5108 25 140M12          | 25 | M12 | 205 | 140 | 21  | 1.407,83 € |
| E - 5108 25 150M12          | 25 | M12 | 215 | 150 | 21  | -          |
| E - 5108 25 160M12          | 25 | M12 | 225 | 160 | 21  | 1.488,98 € |
| E - 5108 32 100M16          | 32 | M16 | 170 | 100 | 29  | 1.694,00 € |
| E - 5108 32 150M16          | 32 | M16 | 220 | 150 | 29  | 1.962,63 € |
| E - 5108 32 200M16          | 32 | M16 | 270 | 200 | 29  | 2.265,62 € |
| E - 5108 32 250M16          | 32 | M16 | 320 | 250 | 29  | 4.695,99 € |
| E - 5108 32 300M16          | 32 | M16 | 370 | 300 | 29  | 5.744,29 € |

Bestellbeispiel / Orderexample: 5108 10 040M6

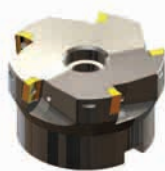
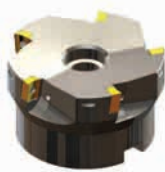


# MILLING TOOLS

Catalogo Frese ad Inserti





| Typ<br>T <sub>p</sub> e                             | Serie<br>Series | Darstellung<br>Figure                                                               | WSP<br>Insert | Größe<br>Size | Seite<br>Page |
|-----------------------------------------------------|-----------------|-------------------------------------------------------------------------------------|---------------|---------------|---------------|
| ALU - Eckfräser 90°<br>Aluminium Milling cutter 90° | 2110<br>W-W     |    | XPHX 11T3..   | Ø16 - Ø32     | 244           |
|                                                     | 2112<br>M-W     |    | XPHX 11T3..   | Ø40 - Ø100    | 245           |
|                                                     | 2114<br>E-W     |    | XPHX 11T3..   | Ø16 - Ø40     | 246           |
|                                                     | 2116<br>W-WVXL  |   | XPHX 11T3..   | Ø16 - Ø40     | 247           |
|                                                     | 2130<br>W-W     |  | XPHX 1705..   | Ø25 - Ø32     | 248           |
|                                                     | 2132<br>M-W     |  | XPHX 1705..   | Ø40 - Ø125    | 249           |
|                                                     | 2134<br>E-W     |  | XPHX 1705..   | Ø25 - Ø40     | 250           |
|                                                     | 2136<br>W-WVXL  |  | XPHX 1705..   | Ø25 - Ø40     | 251           |

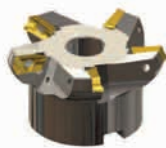
| Typ<br>T <sub>p</sub> e                             | Serie<br>Series | Darstellung<br>Figure                                                                 | WSP<br>Insert | Größe<br>Size | Seite<br>Page |
|-----------------------------------------------------|-----------------|---------------------------------------------------------------------------------------|---------------|---------------|---------------|
| ALU - Eckfräser 90°<br>Aluminium Milling cutter 90° | 2140<br>W-W     |    | VDKT 11T2..   | Ø12 - Ø40     | 252           |
|                                                     | 2141<br>E-W     |    | VDKT 11T2..   | Ø12 - Ø40     | 253           |
|                                                     | 2142<br>W-W     |    | VCKT 220530.. | Ø32 - Ø40     | 254           |
|                                                     | 2143<br>M-W     |   | VCKT 220530.. | Ø40 - Ø100    | 255           |
|                                                     | 2144<br>W-W     |   | XEKT 19M5..   | Ø20 - Ø42     | 256           |
|                                                     | 2145<br>E-W     |   | XEKT 19M5..   | Ø25 - Ø40     | 257           |
|                                                     | 2146<br>M-W     |  | XEKT 19M5..   | Ø40 - Ø125    | 258           |
|                                                     | 2147<br>W-W     |   | XEKT 2506..   | Ø25 - Ø40     | 259           |

B

| Typ<br>Type                                            | Serie<br>Series | Darstellung<br>Figure                                                               | WSP<br>Insert | Größe<br>Size | Seite<br>Page |
|--------------------------------------------------------|-----------------|-------------------------------------------------------------------------------------|---------------|---------------|---------------|
| ALU - Eckfräser 90°<br>Aluminium Milling<br>cutter 90° | 2148<br>M-W     |    | XEKT 2506..   | Ø50- Ø125     | 260           |
|                                                        | 1010<br>W-W     |    | TPKT 0803..   | Ø20 - Ø32     | 261           |
| Eckfräsen 90°<br>Milling cutter 90°                    | 1012<br>M-W     |    | TPKT 0803..   | Ø32 - Ø80     | 262           |
|                                                        | 1014<br>E-W     |  | TPKT 0803..   | Ø20 - Ø42     | 263           |
|                                                        | 1016<br>W-WXL   |  | TPKT 0803..   | Ø20 - Ø42     | 264           |
|                                                        | 1018<br>W-W     |  | WNEX 040304.. | Ø20 - Ø32     | 265           |
|                                                        | 1018<br>M-W     |  | WNEX 040304.. | Ø25 - Ø40     | 266           |
|                                                        | 1020<br>M-W     |  | WNEX 080608.. | Ø50 - Ø160    | 267           |

| Typ<br>Type                               | Serie<br>Series | Darstellung<br>Figure                                                                 | WSP<br>Insert | Größe<br>Size | Seite<br>Page |
|-------------------------------------------|-----------------|---------------------------------------------------------------------------------------|---------------|---------------|---------------|
| Eckfräsen 90°<br>Milling cutter 90°       | 1030/06<br>W-W  |    | APKT 0602..   | Ø10 - Ø32     | 268           |
|                                           | 1035/06<br>M-W  |    | APKT 0602..   | Ø32 - Ø50     | 269           |
|                                           | 1040/06<br>E-W  |    | APKT 0602..   | Ø10 - Ø32     | 270           |
|                                           | 1030<br>W-W     |   | APKT 1003..   | Ø9,7 - Ø40    | 271 -<br>272  |
|                                           | 1035<br>M-W     |  | APKT 1003..   | Ø32 - Ø100    | 273           |
|                                           | 1040<br>E-W     |  | APKT 1003..   | Ø9,7 - Ø32    | 274           |
|                                           | 1045<br>W-WXL   |  | APKT 1003..   | Ø9,7 - Ø32    | 275           |
| Planfräsen 75°<br>Face Milling cutter 75° | 1080<br>W-W     |  | APKT 1003..   | Ø25 - Ø40     | 276           |



| Typ<br>Type                               | Serie<br>Series | Darstellung<br>Figure                                                               | WSP<br>Insert | Größe<br>Size | Seite<br>Page |
|-------------------------------------------|-----------------|-------------------------------------------------------------------------------------|---------------|---------------|---------------|
| Planfräsen 75°<br>Face Milling cutter 75° | 1085<br>M-W     |    | APKT 1003..   | Ø50 - Ø80     | 277           |
|                                           |                 |                                                                                     |               |               | 278           |
| Eckfräsen 90°<br>Milling cutter 90°       | 1055<br>W-W     |    | APKT 1604..   | Ø22 - Ø40     | 279           |
|                                           | 1060<br>M-W     |  | APKT 1604..   | Ø40 - Ø160    | 280           |
| Planfräsen 75°<br>Face Milling cutter 75° | 1090<br>M-W     |  | APKT 1604..   | Ø50 - Ø125    | 281           |
| Eckfräsen 90°<br>Milling cutter 90°       | 1061<br>W-W     |  | ADKT 1505..   | Ø25 - Ø40     | 282           |
|                                           | 1062<br>M-W     |  | ADKT 1505..   | Ø40 - Ø125    | 283           |
| Planfräsen 75°<br>Face Milling cutter 75° | 1091<br>M-W     |  | ADKT 1505..   | Ø50 - Ø125    | 284           |

| Typ<br>Type                               | Serie<br>Series | Darstellung<br>Figure                                                                 | WSP<br>Insert | Größe<br>Size | Seite<br>Page |
|-------------------------------------------|-----------------|---------------------------------------------------------------------------------------|---------------|---------------|---------------|
| Eckfräsen 90°<br>Milling cutter 90°       | 2010<br>W-W     |    | XPKT 11T3..   | Ø16 - Ø32     | 285           |
|                                           | 2012<br>M-W     |    | XPKT 11T3..   | Ø32 - Ø80     | 286           |
|                                           | 2014<br>E-W     |    | XPKT 11T3..   | Ø16 - Ø32     | 287           |
|                                           | 2016<br>W-WXL   |   | XPKT 11T3..   | Ø16 - Ø32     | 288           |
| Planfräsen 75°<br>Face Milling cutter 75° | 2024<br>W-W     |  | XPKT 11T3..   | Ø25 - Ø40     | 289           |
|                                           | 2026<br>M-W     |  | XPKT 11T3..   | Ø50 - Ø80     | 290           |
| Eckfräsen 90°<br>Milling cutter 90°       | 2030<br>W-W     |  | XPKT 1705..   | Ø22 - Ø32     | 291           |
|                                           | 2032<br>M-W     |  | XPKT 1705..   | Ø40 - Ø160    | 292           |

B

| Typ<br>Type                               | Serie<br>Series | Darstellung<br>Figure                                                               | WSP<br>Insert | Größe<br>Size | Seite<br>Page |
|-------------------------------------------|-----------------|-------------------------------------------------------------------------------------|---------------|---------------|---------------|
| Eckfräsen 90°<br>Milling cutter 90°       | 2032<br>M       |    | XPKT 1705..   | Ø200 - Ø350   | 293           |
| Planfräsen 75°<br>Face Milling cutter 75° | 2044<br>M-W     |    | XPKT 1705..   | Ø50 - Ø125    | 294           |
| Eckfräsen 90°<br>Milling cutter 90°       | 2045<br>W-W     |    | SDKT 09T308.. | Ø25 - Ø32     | 295           |
|                                           | 2046<br>M-W     |   | SDKT 09T308.. | Ø32 - Ø80     | 296           |
|                                           | 1063 N<br>M-W   |  | SDKT 1205..   | Ø50 - Ø125    | 297           |
|                                           | 1063<br>M-W     |  | SDMT 1205..   | Ø50 - Ø125    | 298           |
|                                           | 2074<br>M-W     |  | LNMX 131308.. | Ø50 - Ø315    | 299           |
|                                           | 2027<br>W-W     |  | LNMX 1006..   | Ø14 - Ø40     | 300           |

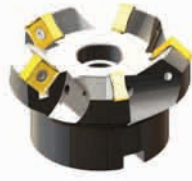
| Typ<br>Type                                     | Serie<br>Series | Darstellung<br>Figure                                                                 | WSP<br>Insert | Größe<br>Size | Seite<br>Page |
|-------------------------------------------------|-----------------|---------------------------------------------------------------------------------------|---------------|---------------|---------------|
| Eckfräsen 90°<br>Milling cutter 90°             | 2029<br>M-W     |    | LNMX 1006..   | Ø40 - Ø80     | 301           |
|                                                 | 2047<br>W-W     |     | LNMX 1510..   | Ø32 - Ø40     | 302           |
|                                                 | 2048<br>W-W     |    | LNMX 1510..   | Ø50 - Ø160    | 303           |
| Schaft-Schrupfräser 90°<br>Helical end mill 90° | 1095<br>W-W     |   | APKT 1003..   | Ø20 - Ø40     | 304           |
|                                                 | 1095<br>M-W     |  | APKT 1003..   | Ø40           | 304           |
|                                                 | 1100<br>W-W     |   | APKT 1003     | Ø32 - Ø40     | 305           |
|                                                 | 1100<br>W-W     |   | APKT 1604..   | Ø40 - Ø80     | 306           |
|                                                 | 1105<br>W-W     |  | APKT 1604..   | Ø25 - Ø40     | 307           |

| Typ<br>Type                                     | Serie<br>Series | Darstellung<br>Figure                                                               | WSP<br>Insert | Größe<br>Size | Seite<br>Page |
|-------------------------------------------------|-----------------|-------------------------------------------------------------------------------------|---------------|---------------|---------------|
| Schaft-Schrupfräser 90°<br>Helical end mill 90° | 1110<br>M-W     |    | APKT 1604..   | Ø50 - Ø100    | 308           |
|                                                 | 1111<br>W-W     |    | ADKT 1505..   | Ø25 - Ø40     | 309           |
|                                                 | 1112<br>M-W     |    | ADKT 1505..   | Ø50 - Ø100    | 310           |
|                                                 | 2020<br>W-W     |   | XPKT 11T3..   | Ø20 - Ø40     | 311           |
|                                                 | 2020<br>M-W     |  | XPKT 11T3..   | Ø40           | 311           |
|                                                 | 2022<br>W-W     |  | XPKT 11T3..   | Ø32 - Ø40     | 312           |
|                                                 | 2038<br>W-W     |  | XPKT 1705..   | Ø40 - Ø80     | 313           |
|                                                 | 2040<br>W-W     |  | XPKT 1705..   | Ø25 - Ø40     | 314           |

| Typ<br>Type                                     | Serie<br>Series | Darstellung<br>Figure                                                                 | WSP<br>Insert | Größe<br>Size | Seite<br>Page |
|-------------------------------------------------|-----------------|---------------------------------------------------------------------------------------|---------------|---------------|---------------|
| Schaft-Schrupfräser 90°<br>Helical end mill 90° | 2042<br>M-W     |    | XPKT 1705..   | Ø50 - Ø100    | 315           |
|                                                 | 2078<br>M-W     |    | LNMX 1313..   | Ø63 - Ø125    | 316           |
|                                                 | 2079<br>M-W     |    | LNMX 1313..   | Ø63 - Ø125    | 317           |
| Winkelfräser<br>Angel milling                   | 3048<br>M-W     |   | APKT 1003..   | Ø17 - Ø19     | 318           |
|                                                 | 3050<br>M-W     |  | APKT 1604..   | Ø35           | 319           |
|                                                 | 2028<br>M-W     |  | XPKT 11T3..   | Ø17 - Ø19     | 320           |
|                                                 | 2028<br>W-W     |  | XPKT 11T3..   | Ø17 - Ø19     | 321           |
|                                                 | 2034<br>M-W     |  | XPKT 1705..   | Ø35           | 322           |

B

| Typ<br>Type                               | Serie<br>Series | Darstellung<br>Figure                                                               | WSP<br>Insert                | Größe<br>Size | Seite<br>Page |
|-------------------------------------------|-----------------|-------------------------------------------------------------------------------------|------------------------------|---------------|---------------|
| Winkelfräser<br>Angel milling             | 2036<br>M-W     |    | LCEX 310404..                | Ø30           | 323           |
| Planfräsen 45°<br>Face milling cutter 45° | 1071<br>W-W     |    | SDHT 09T3 AE<br>SDHW 09T3 AE | Ø16 - Ø25     | 324           |
|                                           | 1072<br>M-W     |    | SDHT 09T3 AE<br>SDHW 09T3 AE | Ø32 - Ø100    | 325           |
|                                           | 1070<br>M-W     |   | SEHT 1204..<br>SE.W 1204..   | Ø40 - Ø200    | 326           |
|                                           | 1075<br>M-W     |  | SEHT 1204..<br>SE.W 1204..   | Ø50 - Ø200    | 327           |
|                                           | 1065<br>M       |  | SEKN 1203..<br>SEKR 1203..   | Ø50 - Ø160    | 328           |
|                                           | 1064<br>M-W     |  | OFMT 05T305..                | Ø32 - Ø125    | 329           |
| Planfräsen 45°<br>Face milling cutter 45° | 2050<br>M-W     |  | SNKU 1205..<br>SNKU 1405     | Ø40 - Ø200    | 330           |

| Typ<br>Type                               | Serie<br>Series | Darstellung<br>Figure                                                                 | WSP<br>Insert            | Größe<br>Size | Seite<br>Page |
|-------------------------------------------|-----------------|---------------------------------------------------------------------------------------|--------------------------|---------------|---------------|
| Planfräsen 45°<br>Face milling cutter 45° | 2050<br>M       |     | SNKU 1405..              | Ø200 - Ø315   | 331           |
|                                           | 2052<br>M-W     |     | SNMX 1205..<br>..AN-WM.. | Ø50 - Ø250    | 332           |
| Planfräsen 88°<br>Face milling cutter 88° | 2054<br>M-W     |    | SNMX 1205..<br>..QN-WM.. | Ø50 - Ø200    | 333           |
| Planfräsen 45°<br>Face milling cutter 45° | 2060<br>W-W     |    | HPKT 0704..              | Ø40           | 334           |
|                                           | 2060<br>M-W     |  | HPKT 0704..              | Ø40 - Ø160    | 335           |
|                                           | 2060<br>M       |   | HPKT 0704..              | Ø200 - Ø315   | 336           |
| Planfräsen<br>Face milling cutter         | 2066<br>W-W     |   | RNKG 1204..              | Ø32           | 337           |
|                                           | 2068<br>M-W     |  | RNKG 1204..              | Ø40 - Ø100    | 338           |

| Typ<br>Type                                  | Serie<br>Series | Darstellung<br>Figure                                                               | WSP<br>Insert | Größe<br>Size | Seite<br>Page                |
|----------------------------------------------|-----------------|-------------------------------------------------------------------------------------|---------------|---------------|------------------------------|
| Scheibenfräser<br>Grooving and cut-off mills | 1115<br>M-W     |    | SNHX..        | Ø63 - Ø250    | 340 -<br>341<br>346 -<br>347 |
|                                              | 1116<br>E-W     |    | SNHX..        | Ø50 - Ø80     | 342<br>346 -<br>347          |
| Trennfräser<br>Grooving and cut-off mills    | 1119            |    | SNHX..        | Ø63 - Ø160    | 343<br>346 -<br>347          |
|                                              | 1119<br>M-W     |   | SNHX..        | Ø63 - Ø160    | 343<br>346 -<br>347          |
| Scheibenfräser<br>Grooving and cut-off mills | 1120            |  | SNHX..        | Ø63 - Ø250    | 344 -<br>345<br>346 -<br>347 |
| Schlitzscheibenfräser<br>Slot disc cutter    | 1122<br>M       |  | X10M..        | Ø63 - Ø160    | 348<br>351                   |
|                                              | 1122<br>W       |  | X10M          | Ø63 - Ø100    | 349<br>351                   |
|                                              | 1122            |  | X10M          | Ø63 - Ø160    | 350<br>351                   |

| Typ<br>Type                                  | Serie<br>Series                        | Darstellung<br>Figure                                                                 | WSP<br>Insert                                    | Größe<br>Size | Seite<br>Page |
|----------------------------------------------|----------------------------------------|---------------------------------------------------------------------------------------|--------------------------------------------------|---------------|---------------|
| Scheibenfräser<br>Grooving and cut-off mills | 1124                                   |    | XCMT 0702<br>XCGT 0702<br>XCMT 10T3<br>XCMT 10T3 | Ø100 - Ø200   | 352 -<br>353  |
|                                              | 1125                                   |    | TCXT 16T3..                                      | Ø125 - Ø250   | 354 -<br>355  |
|                                              | 2076                                   |    | LNMX 1313...R<br>LNMX 1313...L                   | Ø125 - Ø315   | 356 -<br>357  |
|                                              | 1126                                   |   | RCGT 0602..<br>RCMT 0602..                       | Ø63 - Ø200    | 358 -<br>359  |
|                                              | 1127                                   |  | RCGT 0803..<br>RCMT 0803..                       | Ø63 - Ø200    | 358 -<br>359  |
|                                              | 1128                                   |  | RCGT 1003..<br>RCMT 1003..                       | Ø80 - Ø200    | 358 -<br>359  |
|                                              | 1129                                   |  | RCGT 1204..<br>RCMT 1204..                       | Ø80 - Ø200    | 359           |
|                                              | T-Nutenfräser<br>T-Slot milling cutter |   | SPLT 0603..<br>SDHT 09T3 AE..<br>SPLT 1204..     | Ø21 - Ø50     | 360           |

B



B

| Typ<br>Type                                                           | Serie<br>Series | Darstellung<br>Figure                                                               | WSP<br>Insert                             | Größe<br>Size | Seite<br>Page |
|-----------------------------------------------------------------------|-----------------|-------------------------------------------------------------------------------------|-------------------------------------------|---------------|---------------|
| Zirkularfräser Innen/außen<br>Circulargroove milling inside / outside | 1132<br>W-W     |    | MN12..                                    | Ø34 - Ø44     | 362           |
|                                                                       | 1132<br>E-W     |    | MN12..                                    | Ø34 - Ø44     | 363           |
|                                                                       | 1132<br>M-W     |    | MN12..                                    | Ø49 - Ø80     | 364           |
|                                                                       | 1132<br>S-W     |  | MN12..                                    | Ø63 - Ø100    | 365           |
| Kopierfräser<br>Copy milling cutter                                   | 5010<br>M-W     |  | TOKX 160440..                             | Ø52 - Ø80     | 366           |
| High-Speed Fräser<br>High Speed cutter                                | 5012<br>W-W     |  | SDLX 0703..<br>SDLX 10T3..<br>SDLX 1304.. | Ø16 - Ø35     | 367           |
|                                                                       | 5013<br>E-W     |  | SDLX 0703..<br>SDLX 10T3..<br>SDLX 1304.. | Ø16 - Ø35     | 368           |
|                                                                       | 5014<br>M-W     |  | SDLX 10T3..<br>SDLX 1304..                | Ø32 - Ø100    | 369           |

| Typ<br>Type                                             | Serie<br>Series | Darstellung<br>Figure                                                                | WSP<br>Insert                                                                          | Größe<br>Size | Seite<br>Page       |
|---------------------------------------------------------|-----------------|--------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|---------------|---------------------|
| Kopier - Schlichtfräser<br>Copy - Finishcutter          | 5026<br>W-W     |    | M-RD..<br>M-RE..                                                                       | Ø8 - Ø32      | 373<br>376 -<br>377 |
| Vibro<br>Kopier - Schlichtfräser<br>Copy - Finishcutter | 5027<br>W-W     |    | M-RD..<br>M-RE..                                                                       | Ø8 - Ø32      | 374<br>376 -<br>377 |
| Kopier - Schlichtfräser<br>Copy - Finishcutter          | 5028<br>E-W     |    | M-RD..<br>M-RE..                                                                       | Ø8 - Ø32      | 375<br>376 -<br>377 |
| Kopierfräser<br>Copy milling cutter                     | 5030<br>E-W     |  | RDHX 0501..<br>RDHX 07T1..<br>RDHX 0702..<br>RDHX 1003..<br>RDHX 12T3..<br>RDHX 1604.. | Ø10 - Ø42     | 378 -<br>379        |
|                                                         | 5035<br>M-W     |  | RDHX 1003..<br>RDHX 12T3..<br>RDHX 1604..                                              | Ø35 - Ø160    | 380 -<br>381        |
|                                                         | 5040<br>W-W     |  | RDHX 0501..<br>RDHX 07T1..<br>RDHX 0702..<br>RDHX 1003..<br>RDHX 12T3..                | Ø10 - Ø25     | 382 -<br>383        |
| Kopierfräser<br>Copy milling cutter                     | 5042<br>W-W     |  | RDHX 10T3..SM<br>RPHX 10T3..SM                                                         | Ø20 - Ø32     | 384                 |
|                                                         | 5044<br>M-W     |  | RDHX 10T3..SM<br>RPHX 10T3..SM                                                         | Ø40 - Ø50     | 385                 |

| Typ<br>Type                          | Serie<br>Series | Darstellung<br>Figure                                                               | WSP<br>Insert                  | Größe<br>Size | Seite<br>Page |
|--------------------------------------|-----------------|-------------------------------------------------------------------------------------|--------------------------------|---------------|---------------|
| Kopierfräser<br>Copy milling cutter  | 5046<br>W-W     |    | RDHX 1204..SM<br>RPHX 1204..SM | Ø25 - Ø32     | 386           |
|                                      | 5048<br>M-W     |    | RDHX 1204..SM<br>RPHX 1204..SM | Ø40 - Ø100    | 387           |
|                                      | 5050<br>M-W     |    | RDHX 1605..SM<br>RPHX 1605..SM | Ø50 - Ø125    | 388           |
| Stahlverlängerung<br>Steel adaptors  | 5110            |  |                                | Ø10 - Ø25     | 389           |
|                                      | 5115            |  |                                | Ø16 - Ø25     | 390           |
|                                      | 5117            |  |                                | Ø9,8 - Ø29    | 391           |
|                                      | 5120            |  |                                | Ø10 - Ø29     | 392           |
| Vibro Verlängerung<br>Vibro adaptors | 5108            |  |                                | Ø10 - Ø32     | 393           |

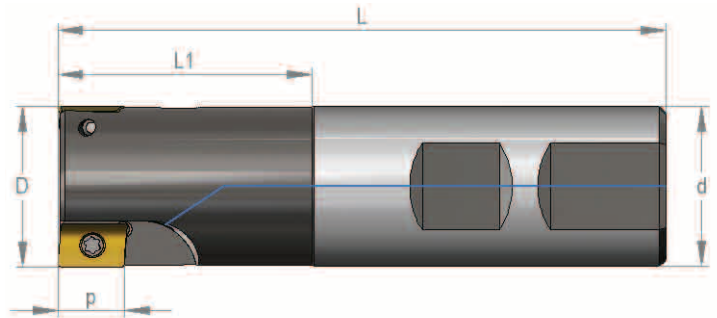
| Typ<br>Type                          | Serie<br>Series | Darstellung<br>Figure                                                                 | WSP<br>Insert | Größe<br>Size | Seite<br>Page |
|--------------------------------------|-----------------|---------------------------------------------------------------------------------------|---------------|---------------|---------------|
| Vibro Verlängerung<br>Vibro adaptors | 5112            |     |               | Ø16 - Ø25     | 394           |
|                                      | 5116            |     |               | Ø9,8 - Ø29    | 395           |
|                                      | 5118            |     |               | Ø10 - Ø29     | 396           |
|                                      | E- 5108         |    |               | Ø16 - Ø32     | 397           |
| Spannwerkzeuge<br>Clamp tools        | 5125            |  |               |               | 398           |
|                                      |                 |                                                                                       |               |               |               |
|                                      |                 |                                                                                       |               |               |               |
|                                      |                 |                                                                                       |               |               |               |

## Serie 2110 - ALU-Eckfräser 90° Series 2110 - Aluminium Milling cutter 90°



**Ausführung:** Schaftfräser zylindrisch 90°, mit Innenbohrung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eckfräsen, Helixfräsen und universelle Einsatzmöglichkeiten

**Execution:** Endmill cutter cylindrical 90° with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- and shoulder milling, Helical milling and universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |    |   | Wendeplatte<br>Insert   | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|-----|----|----|---|-------------------------|-------------------|------------------|
|                             | D                            | d  | L   | L1 | p  | Z |                         |                   |                  |
| 2110 W-W D16                | 16                           | 16 | 80  | 40 | 10 | 2 | XPHX<br>11T3.. FR ALU.. | M-VT25<br>1,2 Nm  | M-BT08           |
| 2110 W-WL D16               | 16                           | 16 | 150 | 40 | 10 | 2 |                         |                   |                  |
| 2110 W-W D18                | 18                           | 20 | 80  | 40 | 10 | 2 |                         |                   |                  |
| 2110 W-WL D18               | 18                           | 20 | 150 | 40 | 10 | 2 |                         |                   |                  |
| 2110 W-W D19                | 19                           | 20 | 85  | 40 | 10 | 2 |                         |                   |                  |
| 2110 W-WL D19               | 19                           | 20 | 150 | 40 | 10 | 2 |                         |                   |                  |
| 2110 W-W D20                | 20                           | 20 | 90  | 40 | 10 | 2 |                         |                   |                  |
| 2110 W-WL D20               | 20                           | 20 | 150 | 40 | 10 | 2 |                         |                   |                  |
| 2110 W-W D22                | 22                           | 25 | 95  | 40 | 10 | 2 |                         |                   |                  |
| 2110 W-WL D22               | 22                           | 25 | 150 | 40 | 10 | 2 |                         |                   |                  |
| 2110 W-W D25                | 25                           | 25 | 95  | 40 | 10 | 2 |                         |                   |                  |
| 2110 W-WL D25               | 25                           | 25 | 150 | 40 | 10 | 2 |                         |                   |                  |
| 2110 W-W D25-3              | 25                           | 25 | 95  | 40 | 10 | 3 |                         |                   |                  |
| 2110 W-WL D25-3             | 25                           | 25 | 150 | 40 | 10 | 3 |                         |                   |                  |
| 2110 W-W D32                | 32                           | 25 | 95  | 40 | 10 | 3 |                         |                   |                  |
| 2110 W-WL D32               | 32                           | 25 | 150 | 40 | 10 | 3 |                         |                   |                  |
| 2110 W-W D32                | 32                           | 32 | 95  | 40 | 10 | 3 |                         |                   |                  |
| 2110 W-WL D32               | 32                           | 32 | 150 | 40 | 10 | 3 |                         |                   |                  |

Bestellbeispiel / Order example: 2110 W-W D16

W-W = Kühlmittelbohrung / W-W = coolant bores

| Form Figure | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|-------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|             | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|             | 10,50                  | 6,70 | 3,50 |    | 0,5 | XPHX 11T304 FR ALU         | M-VT 25  | M-BT 08   | ■                                       |     |                                     |       |       |       |       | ■     |
|             | 10,50                  | 6,70 | 3,50 |    | 0,8 | XPHX 11T308 FR ALU         | M-VT 25  | M-BT 08   | □                                       |     |                                     |       |       |       |       | ■     |
|             | 10,50                  | 6,70 | 3,50 |    | 1,2 | XPHX 11T312 FR ALU         | M-VT 25  | M-BT 08   | □                                       |     |                                     |       |       |       |       | ■     |
|             | 10,50                  | 6,70 | 3,50 |    | 1,6 | XPHX 11T316 FR ALU         | M-VT 25  | M-BT 08   | □                                       |     |                                     |       |       |       |       | ■     |
|             | 10,50                  | 6,70 | 3,50 |    | 2,0 | XPHX 11T316 FR ALU         | M-VT 25  | M-BT 08   | □                                       |     |                                     |       |       |       |       | ■     |

| Vc<br>(m/min) |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |  |  |  |  |  |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|               | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| PTV28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| PTT35         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| KTE20         | 400               | 400 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       | 100                   |                                                                                       | ■                                                                                     |                                                                                       | □                                                                                     |                                                                                       |
| K10           | 300               | 300 | 300         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       | 100                   |                                                                                       | ■                                                                                     |                                                                                       | □                                                                                     |                                                                                       |
| fz            | 0,15              |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet □ bedingt geeignet                                                         |                                                                                       |                                                                                       |                                                                                       |                                                                                       |

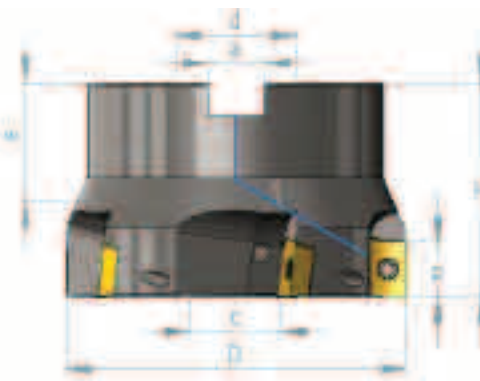
Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

## Serie 2112 - ALU-Eckfräser 90° Series 2112 - Aluminium Milling cutter 90°



**Ausführung:** Aufsteckfräser zylindrisch 90°, mit Innenkühlung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eckfräsen, Helixfräsen und universelle Einsatzmöglichkeiten

**Execution:** Endmill cutter cylindrical 90°, with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- and shoulder milling, Helical milling and universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |    |      |    |    |   | Wendeplatte<br>Insert                                                               | Schraube<br>Screw                                                                   | Schlüssel<br>Key                                                                    |
|-----------------------------|------------------------------|----|----|----|------|----|----|---|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                             | D                            | d  | c  | e  | a    | H  | p  | Z |  |  |  |
| 2112 M-W D40                | 40                           | 16 | -  | 21 | 8,4  | 40 | 10 | 4 | XPHX<br>11T3.. FR ALU..                                                             | M-VT25<br>1,2 Nm                                                                    | M-BT08                                                                              |
| 2112 M-W D50                | 50                           | 22 | 17 | 21 | 10,4 | 40 | 10 | 4 |                                                                                     |                                                                                     |                                                                                     |
| 2112 M-W D63                | 63                           | 22 | 17 | 21 | 10,4 | 40 | 10 | 5 |                                                                                     |                                                                                     |                                                                                     |
| 2112 M-W D80                | 80                           | 27 | 20 | 22 | 12,4 | 50 | 10 | 5 |                                                                                     |                                                                                     |                                                                                     |
| 2112 M-W D100               | 100                          | 32 | 20 | 22 | 12,4 | 50 | 10 | 5 |                                                                                     |                                                                                     |                                                                                     |

Bestellbeispiel / Order example: 2112 M-W D40

M-W = Kühlmittelbohrung / M-W = coolant bores

|                                                                                               | Form Figure                                                                         | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|-----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                               |                                                                                     | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>XPHX... |  | 10,50                  | 6,70 | 3,50 |    | 0,5 | XPHX 11T304 FR ALU         | M-VT 25  | M-BT 08   | ■                                       |     |                                     |       |       |       |       | ■     |
|                                                                                               |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 0,8 | XPHX 11T308 FR ALU         | M-VT 25  | M-BT 08   | □                                       |     |                                     |       |       |       |       | ■     |
|                                                                                               |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 1,2 | XPHX 11T312 FR ALU         | M-VT 25  | M-BT 08   | □                                       |     |                                     |       |       |       |       | ■     |
|                                                                                               |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 1,6 | XPHX 11T316 FR ALU         | M-VT 25  | M-BT 08   | □                                       |     |                                     |       |       |       |       | ■     |
|                                                                                               |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 2,0 | XPHX 11T316 FR ALU         | M-VT 25  | M-BT 08   | □                                       |     |                                     |       |       |       |       | ■     |
|                                                                                               |                                                                                     |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion           | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|------------|--------------------|-----|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |            |                    |     |         |           |
| PTV28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| PTT35         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| KTE20         | 400               | 400 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       | 100                   |            | ■                  |     | □       |           |
| K10           | 300               | 300 | 300         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       | 100                   |            | ■                  |     | □       |           |
| fz            | 0,15              |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet | □ bedingt geeignet |     |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

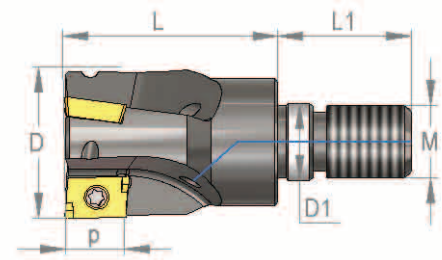
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## Serie 2114 - ALU-Eckfräser 90° Series 2114 - Aluminium Milling cutter 90°



**Ausführung:** Einschraubfräser zylindrisch 90°, mit Innenbohrung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eckfräsen, Helixfräsen und universelle Einsatzmöglichkeiten

**Execution:** Endmill cutter cylindrical 90° with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- and shoulder milling, Helical milling and universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |      |     |      |   | Wendeplatte<br>Insert                                                               | Schraube<br>Screw                                                                   | Schlüssel<br>Key                                                                    |
|-----------------------------|------------------------------|----|----|------|-----|------|---|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                             | D                            | p  | L  | L1   | M   | D1   | Z |  |  |  |
| 2114 E-W D16                | 16                           | 10 | 25 | 17,5 | M8  | 8,5  | 2 | XPHX<br>11T3.. FR ALU..                                                             | M-VT25<br>1,2 Nm                                                                    | M-BT08                                                                              |
| 2114 E-W D18                | 18                           | 10 | 25 | 17,5 | M8  | 8,5  | 2 |                                                                                     |                                                                                     |                                                                                     |
| 2114 E-W D20                | 20                           | 10 | 30 | 20   | M10 | 10,5 | 2 |                                                                                     |                                                                                     |                                                                                     |
| 2114 E-W D20-3              | 20                           | 10 | 30 | 20   | M10 | 10,5 | 3 |                                                                                     |                                                                                     |                                                                                     |
| 2114 E-W D25                | 25                           | 10 | 35 | 22   | M12 | 12,5 | 4 |                                                                                     |                                                                                     |                                                                                     |
| 2114 E-W D25-3              | 25                           | 10 | 35 | 22   | M12 | 12,5 | 3 |                                                                                     |                                                                                     |                                                                                     |
| 2114 E-W D32                | 32                           | 10 | 43 | 24   | M16 | 17   | 3 |                                                                                     |                                                                                     |                                                                                     |
| 2114 E-W D32-5              | 32                           | 10 | 43 | 24   | M16 | 17   | 5 |                                                                                     |                                                                                     |                                                                                     |
| 2114 E-W D40                | 40                           | 10 | 43 | 24   | M16 | 17   | 3 |                                                                                     |                                                                                     |                                                                                     |

Bestellbeispiel / Order example: 2114 E-W D16

E-W = Kühlmittelbohrung / E-W = coolant bores

Verlängerungen siehe Seite 392 - 400

Erweiterungen können Sie auf Seite 392 - 400

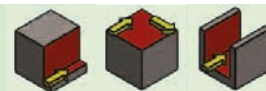
|                                                                                    | Form Figure                                                                         | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                    |                                                                                     | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|  |  | 10,50                  | 6,70 | 3,50 |    | 0,5 | XPHX 11T304 FR ALU         | M-VT 25  | M-BT 08   | ■                                       |     |                                     |       |       |       |       | ■     |
|                                                                                    |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 0,8 | XPHX 11T308 FR ALU         | M-VT 25  | M-BT 08   | □                                       |     |                                     |       |       |       |       | ■     |
|                                                                                    |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 1,2 | XPHX 11T312 FR ALU         | M-VT 25  | M-BT 08   | □                                       |     |                                     |       |       |       |       | ■     |
|                                                                                    |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 1,6 | XPHX 11T316 FR ALU         | M-VT 25  | M-BT 08   | □                                       |     |                                     |       |       |       |       | ■     |
|                                                                                    |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 2,0 | XPHX 11T316 FR ALU         | M-VT 25  | M-BT 08   | □                                       |     |                                     |       |       |       |       | ■     |
|                                                                                    |                                                                                     |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |  |  |  |  |  |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|               | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| PTV28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| PTT35         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| KTE20         | 400               | 400 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       | 100                   |                                                                                       | ■                                                                                     |                                                                                       | □                                                                                     |                                                                                       |
| K10           | 300               | 300 | 300         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       | 100                   |                                                                                       | ■                                                                                     |                                                                                       | □                                                                                     |                                                                                       |
| fz            | 0,15              |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet □ bedingt geeignet                                                         |                                                                                       |                                                                                       |                                                                                       |                                                                                       |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

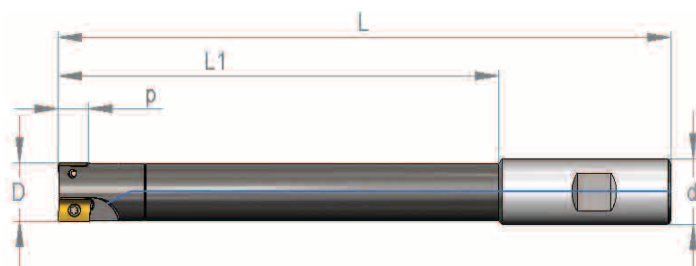


## Serie 2116 - ALU-Eckfräser 90° Series 2116 - Aluminium Milling cutter 90°



**Ausführung:** extra lange Schaftfräser zylindrisch 90°, mit Innenbohrung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eckfräsen, Helixfräsen und universelle Einsatzmöglichkeiten

**Execution:** extra long Enmill cutter cylindrical 90° with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- and shoulder milling, Helical milling and universal application



schwingungsgedämpfte Ausführung  
anti Vibration damped execution

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |     |    |   | Wendeplatte<br>Insert   | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|-----|-----|----|---|-------------------------|-------------------|------------------|
|                             | D                            | d  | L   | L1  | p  | Z |                         |                   |                  |
| 2116 W-WVXL D16             | 16                           | 16 | 200 | 145 | 10 | 2 | XPHX<br>11T3.. FR ALU.. | M-VT25<br>1,2 Nm  | M-BT08           |
| 2116 W-WVXL D18             | 18                           | 16 | 200 | 145 | 10 | 2 |                         |                   |                  |
| 2116 W-WVXL D20             | 20                           | 20 | 230 | 170 | 10 | 2 |                         |                   |                  |
| 2116 W-WVXL D20-3           | 20                           | 20 | 230 | 170 | 10 | 3 |                         |                   |                  |
| 2116 W-WVXL D25             | 25                           | 25 | 250 | 185 | 10 | 3 |                         |                   |                  |
| 2116 W-WVXL D25-3           | 25                           | 25 | 250 | 185 | 10 | 4 |                         |                   |                  |
| 2116 W-WVXL D32             | 32                           | 32 | 263 | 193 | 10 | 3 |                         |                   |                  |
| 2116 W-WVXL D32-5           | 32                           | 32 | 263 | 193 | 10 | 5 |                         |                   |                  |
| 2116 W-WVXL D40             | 40                           | 32 | 263 | 193 | 10 | 3 |                         |                   |                  |

Bestellbeispiel / Order example: 2116 W-WVXL D16

W-W = Kühlmittelbohrung / W-W = coolant bores

|  | Form Figure | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|--|-------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|  |             | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|  |             | 10,50                  | 6,70 | 3,50 |    | 0,5 | XPHX 11T304 FR ALU         | M-VT 25  | M-BT 08   | ■                                       |     |                                     |       |       |       |       | ■     |
|  |             | 10,50                  | 6,70 | 3,50 |    | 0,8 | XPHX 11T308 FR ALU         | M-VT 25  | M-BT 08   | □                                       |     |                                     |       |       |       |       | ■     |
|  |             | 10,50                  | 6,70 | 3,50 |    | 1,2 | XPHX 11T312 FR ALU         | M-VT 25  | M-BT 08   | □                                       |     |                                     |       |       |       |       | ■     |
|  |             | 10,50                  | 6,70 | 3,50 |    | 1,6 | XPHX 11T316 FR ALU         | M-VT 25  | M-BT 08   | □                                       |     |                                     |       |       |       |       | ■     |
|  |             | 10,50                  | 6,70 | 3,50 |    | 2,0 | XPHX 11T316 FR ALU         | M-VT 25  | M-BT 08   | □                                       |     |                                     |       |       |       |       | ■     |
|  |             |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | Öl                                 | Emulsion | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|------------------------------------|----------|-----|---------|-----------|
|               | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK |                                    |          |     |         |           |
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |                                    |          |     |         |           |
| PTV28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                    |          |     |         |           |
| PTT35         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                    |          |     |         |           |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                    |          |     |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                    |          |     |         |           |
| KTE20         | 400               | 400 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       | 100                   |                                    | ■        |     | □       |           |
| K10           | 300               | 300 | 300         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       | 100                   |                                    | ■        |     | □       |           |
| fz            | 0,15              |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet      □ bedingt geeignet |          |     |         |           |

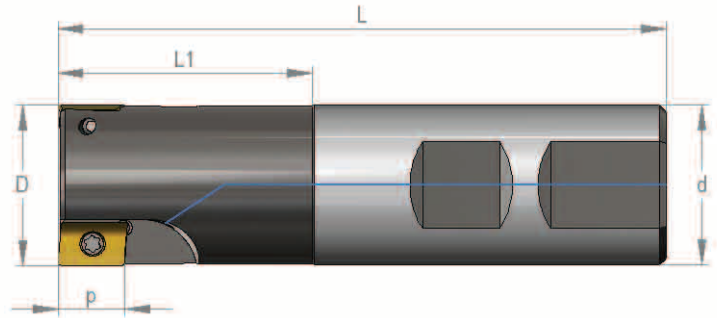
Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

## Serie 2130 - ALU-Eckfräser 90° Series 2130 - Aluminium Milling cutter 90°



**Ausführung:** Schaftfräser zylindrisch 90°, mit Innenbohrung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eckfräsen, Helixfräsen und universelle Einsatzmöglichkeiten

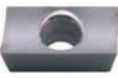
**Execution:** Endmill cutter cylindrical 90° with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- and shoulder milling, Helical milling and universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |    |   | Wendepatte<br>Insert                                                                | Schraube<br>Screw                                                                   | Schlüssel<br>Key                                                                    |
|-----------------------------|------------------------------|----|-----|----|----|---|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                             | D                            | d  | L   | L1 | p  | Z |  |  |  |
| 2130 W-W D25                | 25                           | 25 | 100 | 50 | 16 | 2 | XPHX<br>1705.. FR ALU..                                                             | M-VT40-6<br>3,0 Nm                                                                  | M-BT15                                                                              |
| 2130 W-WL D25               | 25                           | 25 | 200 | 70 | 16 | 2 |                                                                                     |                                                                                     |                                                                                     |
| 2130 W-W D32                | 32                           | 32 | 110 | 50 | 16 | 2 |                                                                                     |                                                                                     |                                                                                     |
| 2130 W-WL D32               | 32                           | 32 | 200 | 70 | 16 | 2 |                                                                                     |                                                                                     |                                                                                     |
| 2130 W-W D32/32             | 32                           | 32 | 110 | 50 | 16 | 3 |                                                                                     |                                                                                     |                                                                                     |
| 2130 W-WL D32/32            | 32                           | 32 | 200 | 70 | 16 | 3 |                                                                                     |                                                                                     |                                                                                     |

Bestellbeispiel / Order example: 2130 W-W D25

W-W = Kühlmittelbohrung / W-W = coolant bores

|                                                                                    | Form Figure                                                                         | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                    |                                                                                     | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|  |  | 16,00                  | 9,45 | 5,26 |    | 0,8 | XPHX 1705 FR ALU           | M-VT40-6 | M-BT 15   |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                    |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 1,2 | XPHX 170512 FR ALU         | M-VT40-6 | M-BT 15   |                                         | □   |                                     |       |       |       |       | ■     |
|                                                                                    |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 1,6 | XPHX 170516 FR ALU         | M-VT40-6 | M-BT 15   |                                         | □   |                                     |       |       |       |       | ■     |
|                                                                                    |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 2,4 | XPHX 170524 FR ALU         | M-VT40-6 | M-BT 15   |                                         | □   |                                     |       |       |       |       | ■     |
|                                                                                    |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 3,0 | XPHX 170530 FR ALU         | M-VT40-6 | M-BT 15   |                                         | □   |                                     |       |       |       |       | ■     |
|                                                                                    |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 4,0 | XPHX 170540 FR ALU         | M-VT40-6 | M-BT 15   |                                         | □   |                                     |       |       |       |       | ■     |
|                                                                                    |                                                                                     |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu        |     |      | Stahl   |         |         |          |          |          |          |          |          |          | INOX    |         | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl                            | Emulsion | MMS | Trocken | Druckluft |
|---------------|------------|-----|------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|---------|---------|-------|-------|-----------------------|-------------------------------|----------|-----|---------|-----------|
|               | Kunststoff |     | Guss | < 500 N | < 750 N | < 900 N | < 1100 N | < 1400 N | < 55 HRC | < 60 HRC | < 65 HRC | < 67 HRC | < 70 HRC | < 900 N | > 900 N |       |       |                       |                               |          |     |         |           |
| ISO-Code      | N          | N   | N    | P       | P       | P       | P        | P        | H        | H        | H        | H        | H        | M       | M       | K     | S     | N                     |                               |          |     |         |           |
| PTV28         |            |     |      |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       |                               |          |     |         |           |
| PTT35         |            |     |      |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       |                               |          |     |         |           |
| PAP28         |            |     |      |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       |                               |          |     |         |           |
| MTM10         |            |     |      |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       |                               |          |     |         |           |
| KTE20         | 400        | 400 | 400  |         |         |         |          |          |          |          |          |          |          |         |         |       |       | 100                   |                               | ■        |     | □       |           |
| K10           | 300        | 300 | 300  |         |         |         |          |          |          |          |          |          |          |         |         |       |       | 100                   |                               | ■        |     | □       |           |
| fz            | 0,25       |     |      |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       | ■ geeignet □ bedingt geeignet |          |     |         |           |

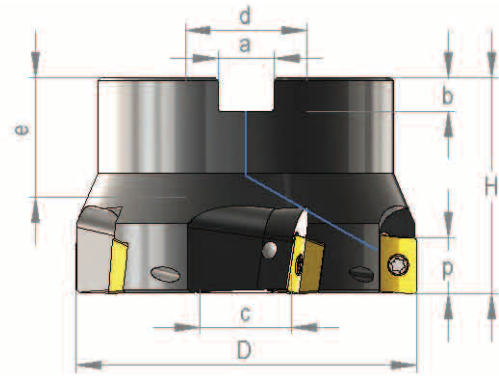
Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

# Serie 2132 - ALU-Eckfräser 90° Series 2132 - Aluminium Milling cutter 90°



**Ausführung:** Aufsteckfräser zylindrisch 90°, mit Innenbohrung  
**Lieferumfang:** ohne Wendschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eckfräsen, Helixfräsen und universelle Einsatzmöglichkeiten

**Execution:** Endmill cutter cylindrical 90°, with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- and shoulder milling, Helical milling and universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |    |      |    |    |   | Wendeplatte<br>Insert   | Schraube<br>Screw  | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|----|----|------|----|----|---|-------------------------|--------------------|------------------|
|                             | D                            | d  | c  | e  | a    | H  | p  | Z |                         |                    |                  |
| 2132 M-W D40                | 40                           | 16 | 12 | 8  | 8,4  | 40 | 16 | 3 | XPHX<br>1705.. FR ALU.. | M-VT40-6<br>3,0 Nm | M-BT15           |
| 2132 M-W D50                | 50                           | 22 | 18 | 21 | 10,4 | 40 | 16 | 4 |                         |                    |                  |
| 2132 M-W D63                | 63                           | 22 | 18 | 21 | 10,4 | 40 | 16 | 4 |                         |                    |                  |
| 2132 M-W D63-5              | 63                           | 22 | 18 | 21 | 10,4 | 40 | 16 | 5 |                         |                    |                  |
| 2132 M-W D80                | 80                           | 27 | 20 | 22 | 12,4 | 50 | 16 | 4 |                         |                    |                  |
| 2132 M-W D80-5              | 80                           | 27 | 20 | 22 | 12,4 | 50 | 16 | 5 |                         |                    |                  |
| 2132 M-W D100               | 100                          | 32 | 45 | 26 | 14,4 | 50 | 16 | 4 |                         |                    |                  |
| 2132 M-W D100-5             | 100                          | 32 | 45 | 26 | 14,4 | 50 | 16 | 5 |                         |                    |                  |
| 2132 M-W D125               | 125                          | 40 | 56 | 38 | 16,4 | 63 | 16 | 5 |                         |                    |                  |
| 2132 M-W D125-5             | 125                          | 40 | 56 | 38 | 16,4 | 63 | 16 | 6 |                         |                    |                  |

Bestellbeispiel / Order example: 2132 M-W D40

M-W = Kühlmittelbohrung / M-W = coolant bores

|  | Form Figure | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|--|-------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|  |             | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|  |             | 16,00                  | 9,45 | 5,26 |    | 0,8 | XPHX 1705 FR ALU           | M-VT40-6 | M-BT 15   |                                         | ■   |                                     |       |       |       |       | ■     |
|  |             | 16,00                  | 9,45 | 5,26 |    | 1,2 | XPHX 170512 FR ALU         | M-VT40-6 | M-BT 15   |                                         | □   |                                     |       |       |       |       | ■     |
|  |             | 16,00                  | 9,45 | 5,26 |    | 1,6 | XPHX 170516 FR ALU         | M-VT40-6 | M-BT 15   |                                         | □   |                                     |       |       |       |       | ■     |
|  |             | 16,00                  | 9,45 | 5,26 |    | 2,4 | XPHX 170524 FR ALU         | M-VT40-6 | M-BT 15   |                                         | □   |                                     |       |       |       |       | ■     |
|  |             | 16,00                  | 9,45 | 5,26 |    | 3,0 | XPHX 170530 FR ALU         | M-VT40-6 | M-BT 15   |                                         | □   |                                     |       |       |       |       | ■     |
|  |             | 16,00                  | 9,45 | 5,26 |    | 4,0 | XPHX 170540 FR ALU         | M-VT40-6 | M-BT 15   |                                         | □   |                                     |       |       |       |       | ■     |

| Vc<br>(m/min) |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       | Graphit<br>GFK<br>CFK |  |  |  |  |  |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|               | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| PTV28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| PTT35         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| KTE20         | 400               | 400 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       | 100                   |                                                                                       | ■                                                                                     |                                                                                       | □                                                                                     |                                                                                       |
| K10           | 300               | 300 | 300         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       | 100                   |                                                                                       | ■                                                                                     |                                                                                       | □                                                                                     |                                                                                       |
| fz            | 0,25              |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet □ bedingt geeignet                                                         |                                                                                       |                                                                                       |                                                                                       |                                                                                       |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

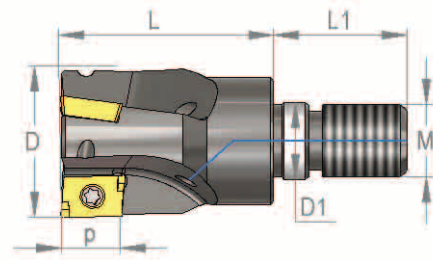
B

## Serie 2134 - ALU-Eckfräser 90° Series 2134 - Aluminium Milling cutter 90°



**Ausführung:** Einschraubfräser zylindrisch 90°, mit Innenbohrung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eckfräsen, Helixfräsen und universelle Einsatzmöglichkeiten

**Execution:** Endmill cutter cylindrical 90° with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- and shoulder milling, Helical milling and universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |    |     |      |   | Wendeplatte<br>Insert   | Schraube<br>Screw  | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|----|----|-----|------|---|-------------------------|--------------------|------------------|
|                             | D                            | p  | L  | L1 | M   | D1   | Z |                         |                    |                  |
| 2134 E-W D25                | 25                           | 16 | 45 | 22 | M12 | 12,5 | 2 | XPHX<br>1705.. FR ALU.. | M-VT40-6<br>3,0 Nm | M-BT15           |
| 2134 E-W D32                | 32                           | 16 | 52 | 24 | M16 | 17   | 3 |                         |                    |                  |
| 2134 E-W D40                | 40                           | 16 | 52 | 24 | M16 | 17   | 3 |                         |                    |                  |

Bestellbeispiel / Order example: 2134 E-W D25

E-W = Kühlmittelbohrung / E-W = coolant bores

Verlängerungen siehe Seite 392 - 400

Erweiterungen siehe Seite 392 - 400

|                                                                                    | Form Figure                                                                         | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                    |                                                                                     | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PT20                                | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|  |  | 16,00                  | 9,45 | 5,26 |    | 0,8 | XPHX 1705 FR ALU           | M-VT40-6 | M-BT 15   |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                    |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 1,2 | XPHX 170512 FR ALU         | M-VT40-6 | M-BT 15   |                                         | □   |                                     |       |       |       |       | ■     |
|                                                                                    |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 1,6 | XPHX 170516 FR ALU         | M-VT40-6 | M-BT 15   |                                         | □   |                                     |       |       |       |       | ■     |
|                                                                                    |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 2,4 | XPHX 170524 FR ALU         | M-VT40-6 | M-BT 15   |                                         | □   |                                     |       |       |       |       | ■     |
|                                                                                    |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 3,0 | XPHX 170530 FR ALU         | M-VT40-6 | M-BT 15   |                                         | □   |                                     |       |       |       |       | ■     |
|                                                                                    |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 4,0 | XPHX 170540 FR ALU         | M-VT40-6 | M-BT 15   |                                         | □   |                                     |       |       |       |       | ■     |
|                                                                                    |                                                                                     |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |

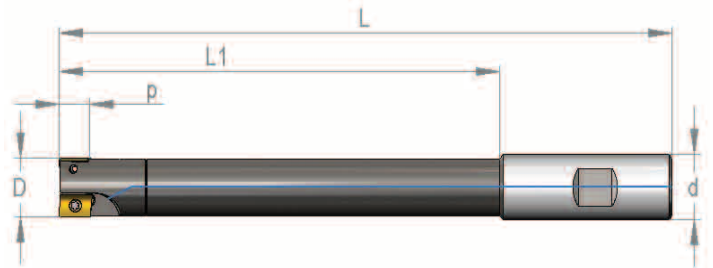
| Vc<br>(m/min) | Alu        |     |      | Stahl            |                  |                  |                   |                   |                   |                   |                   |                   |                   | INOX            |                 |       |       |     | Graphit<br>GFK<br>CFK         | Öl | Emulsion | MMS | Trocken | Druckluft |
|---------------|------------|-----|------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----|-------------------------------|----|----------|-----|---------|-----------|
|               | Kunststoff |     | Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN |     |                               |    |          |     |         |           |
| ISO-Code      | N          | N   | N    | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N   |                               |    |          |     |         |           |
| PTV28         |            |     |      |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |     |                               |    |          |     |         |           |
| PTT35         |            |     |      |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |     |                               |    |          |     |         |           |
| PAP28         |            |     |      |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |     |                               |    |          |     |         |           |
| MTM10         |            |     |      |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |     |                               |    |          |     |         |           |
| KTE20         | 400        | 400 | 400  |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       | 100 |                               | ■  |          | □   |         |           |
| K10           | 300        | 300 | 300  |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       | 100 |                               | ■  |          | □   |         |           |
| fz            | 0,25       |     |      |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |     | ■ geeignet □ bedingt geeignet |    |          |     |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

## Serie 2136 - ALU-Eckfräser 90° Series 2136 - Aluminium Milling cutter 90°



**Ausführung:** extra langer Schaftfräser zylindrisch 90°, mit Innenbohrung  
**Lieferumfang:** ohne Wendschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eckfräsen, Helixfräsen und universelle Einsatzmöglichkeiten  
**Execution:** extra long Enmill cutter cylindrical 90° with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove - and shoulder milling, Helical milling and universal application



schwingungsgedämpfte Ausführung  
anti Vibration damped execution

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |     |    |   | Wendeplatte<br>Insert   | Schraube<br>Screw  | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|-----|-----|----|---|-------------------------|--------------------|------------------|
|                             | D                            | d  | L   | L1  | p  | Z |                         |                    |                  |
| 2136 W-WVXL D25             | 25                           | 25 | 250 | 185 | 16 | 2 | XPHX<br>1705.. FR ALU.. | M-VT40-6<br>3,0 Nm | M-BT15           |
| 2136 W-WVXL D32             | 32                           | 32 | 263 | 193 | 16 | 3 |                         |                    |                  |
| 2136 W-WVXL D40             | 40                           | 32 | 263 | 193 | 16 | 3 |                         |                    |                  |

Bestellbeispiel / Order example: 2136 W-WVXL D25

W-W = Kühlmittelbohrung / W-W = coolant bores

|  | Form Figure | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|--|-------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|  |             | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTV20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|  |             | 16,00                  | 9,45 | 5,26 |    | 0,8 | XPHX 1705 FR ALU           | M-VT40-6 | M-BT 15   | ■                                       |     |                                     |       |       |       |       | ■     |
|  |             | 16,00                  | 9,45 | 5,26 |    | 1,2 | XPHX 170512 FR ALU         | M-VT40-6 | M-BT 15   | □                                       |     |                                     |       |       |       |       | ■     |
|  |             | 16,00                  | 9,45 | 5,26 |    | 1,6 | XPHX 170516 FR ALU         | M-VT40-6 | M-BT 15   | □                                       |     |                                     |       |       |       |       | ■     |
|  |             | 16,00                  | 9,45 | 5,26 |    | 2,4 | XPHX 170524 FR ALU         | M-VT40-6 | M-BT 15   | □                                       |     |                                     |       |       |       |       | ■     |
|  |             | 16,00                  | 9,45 | 5,26 |    | 3,0 | XPHX 170530 FR ALU         | M-VT40-6 | M-BT 15   | □                                       |     |                                     |       |       |       |       | ■     |
|  |             | 16,00                  | 9,45 | 5,26 |    | 4,0 | XPHX 170540 FR ALU         | M-VT40-6 | M-BT 15   | □                                       |     |                                     |       |       |       |       | ■     |

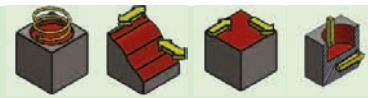
| Vc<br>(m/min) | Alu        |     |      | Stahl   |         |         |          |          |          |          |          |          |          | INOX    |         | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl                            | Emulsion | MMS | Trocken | Druckluft |
|---------------|------------|-----|------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|---------|---------|-------|-------|-----------------------|-------------------------------|----------|-----|---------|-----------|
|               | Kunststoff |     | Guss | < 500 N | < 750 N | < 900 N | < 1100 N | < 1400 N | < 55 HRC | < 60 HRC | < 65 HRC | < 67 HRC | < 70 HRC | < 900 N | > 900 N |       |       |                       |                               |          |     |         |           |
| ISO-Code      | N          | N   | N    | P       | P       | P       | P        | P        | H        | H        | H        | H        | H        | M       | M       | K     | S     | N                     |                               |          |     |         |           |
| PTV28         |            |     |      |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       |                               |          |     |         |           |
| PTT35         |            |     |      |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       |                               |          |     |         |           |
| PAP28         |            |     |      |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       |                               |          |     |         |           |
| MTM10         |            |     |      |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       |                               |          |     |         |           |
| KTE20         | 400        | 400 | 400  |         |         |         |          |          |          |          |          |          |          |         |         |       |       | 100                   |                               | ■        |     | □       |           |
| K10           | 300        | 300 | 300  |         |         |         |          |          |          |          |          |          |          |         |         |       |       | 100                   |                               | ■        |     | □       |           |
| fz            | 0,25       |     |      |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       | ■ geeignet □ bedingt geeignet |          |     |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

B

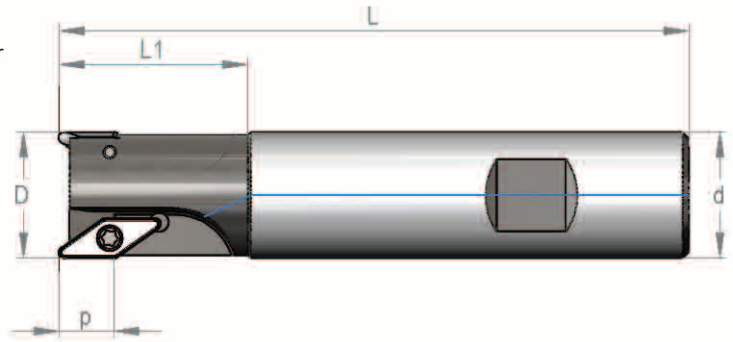


## Serie 2140 - ALU-Eckfräser 90° Series 2140 - Aluminium Milling cutter 90°



**Ausführung:** Schaftfräser zylindrisch 90°, mit Innenbohrung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eckfräsen, Helixfräsen und universelle Einsatzmöglichkeiten

**Execution:** Endmill cutter cylindrical 90° with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- and shoulder milling, Helical milling and universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |   |   | Wendepatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|----|-----|----|---|---|-------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
|                             | D                            | d  | L   | L1 | p | Z |                                                                                                             |                                                                                                          |                                                                                                         |
| 2140 W-W D12                | 12                           | 16 | 85  | 25 | 8 | 1 | VDKT<br>11T2.. ALU                                                                                          | M-VT256<br>0,9 Nm                                                                                        | M-BT07                                                                                                  |
| 2140 W-W D16                | 16                           | 16 | 90  | 25 | 8 | 2 |                                                                                                             |                                                                                                          |                                                                                                         |
| 2140 W-W D20                | 20                           | 20 | 100 | 30 | 8 | 2 |                                                                                                             |                                                                                                          |                                                                                                         |
| 2140 W-W D25                | 25                           | 25 | 115 | 35 | 8 | 3 |                                                                                                             |                                                                                                          |                                                                                                         |
| 2140 W-W D32                | 32                           | 32 | 125 | 40 | 8 | 4 |                                                                                                             |                                                                                                          |                                                                                                         |
| 2140 W-W D40                | 40                           | 32 | 130 | 42 | 8 | 5 |                                                                                                             |                                                                                                          |                                                                                                         |

Bestellbeispiel / Order example: 2140 W-W D12

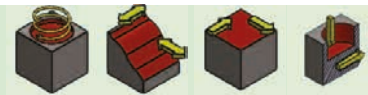
W-W = Kühlmittelbohrung / W-W = coolant bores

|                                                                                                   | Form Figure                                                                         | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|---------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                   |                                                                                     | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>VDKT .. ALU |  | 8,80                   | 6,35 | 2,87 |    | 1,0 | VDKT 11T210 ALU            | M-VT256  | M-BT 07   |                                         | ■   |                                     |       |       |       |       | □     |
|                                                                                                   |                                                                                     | 6,70                   | 6,35 | 2,87 |    | 2,0 | VDKT 11T220 ALU            | M-VT256  | M-BT 07   | □                                       |     |                                     |       |       |       |       | □     |
|                                                                                                   |                                                                                     |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |  |  |  |  |  |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|               | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| PTV28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| PTT35         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| KTE20         | 400               | 400 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       | 100                   |                                                                                       | ■                                                                                     |                                                                                       | □                                                                                     |                                                                                       |
| K10           | 300               | 300 | 300         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       | 100                   |                                                                                       | ■                                                                                     |                                                                                       | □                                                                                     |                                                                                       |
| fz            | 0,15              |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■geeignet □bedingt geeignet                                                           |                                                                                       |                                                                                       |                                                                                       |                                                                                       |

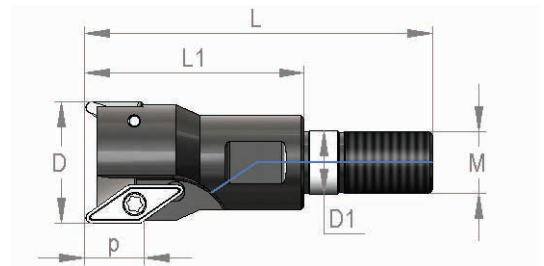
Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

## Serie 2141 - ALU-Eckfräser 90° Series 2141 - Aluminium Milling cutter 90°



**Ausführung:** Einschraubfräser zy indrisch 90°, mit Innenkühlung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eckfräsen, Helixfräsen und universelle Einsatzmöglichkeiten

**Execution:** Endmill cutter cylindrical 90° with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove - and shoulder milling, Helical milling and universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |   |    |    |     |      |   | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|---|----|----|-----|------|---|-----------------------|-------------------|------------------|
|                             | D                            | p | L  | L1 | M   | D1   | Z |                       |                   |                  |
| 2141 E-W D12                | 12                           | 8 | 48 | 33 | M6  | 6,5  | 1 | VDKT 11T2.. ALU       | M-VT256<br>0,9 Nm | M-BT07           |
| 2141 E-W D16                | 16                           | 8 | 53 | 36 | M8  | 8,5  | 2 |                       |                   |                  |
| 2141 E-W D20                | 20                           | 8 | 57 | 36 | M10 | 10,5 | 2 |                       |                   |                  |
| 2141 E-W D25                | 25                           | 8 | 65 | 41 | M12 | 12,5 | 3 |                       |                   |                  |
| 2141 E-W D32                | 32                           | 8 | 72 | 45 | M16 | 17   | 4 |                       |                   |                  |
| 2141 E-W D40                | 40                           | 8 | 72 | 45 | M16 | 17   | 5 |                       |                   |                  |

Bestellbeispiel / Order example: 2141 E-W D12

E-W = Kühlmittelbohrung / E-W = coolant bores

Verlängerungen siehe Seite 392 - 400

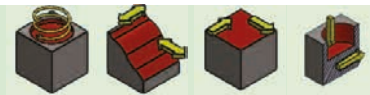
Extensions you can see on page 392 - 400

| Form Figure                                                                                       | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|---------------------------------------------------------------------------------------------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                   | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>VDKT .. ALU | 8,80                   | 6,35 | 2,87 |    | 1,0 | VDKT 11T210 ALU            | M-VT256  | M-BT 07   |                                         | ■   |                                     |       |       |       |       | □     |
|                                                                                                   | 6,70                   | 6,35 | 2,87 |    | 2,0 | VDKT 11T220 ALU            | M-VT256  | M-BT 07   |                                         | □   |                                     |       |       |       |       | □     |
|                                                                                                   |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       | Graphit<br>GFK<br>CFK |  |  |  |  |  |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|               | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| PTV28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| PTT35         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| KTE20         | 400               | 400 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       | 100                   |                                                                                       | ■                                                                                     |                                                                                       | □                                                                                     |                                                                                       |
| K10           | 300               | 300 | 300         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       | 100                   |                                                                                       | ■                                                                                     |                                                                                       | □                                                                                     |                                                                                       |
| fz            | 0,15              |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet □ bedingt geeignet                                                         |                                                                                       |                                                                                       |                                                                                       |                                                                                       |

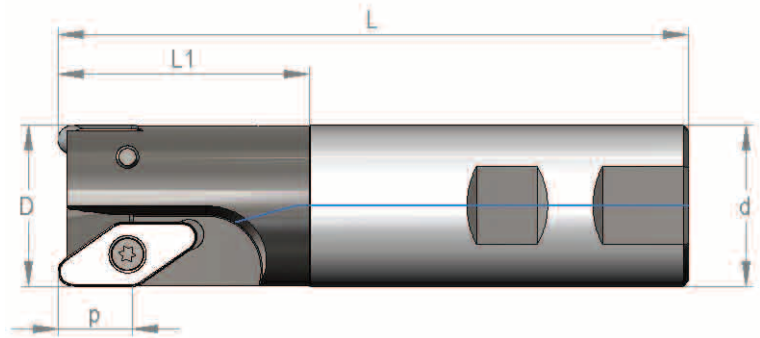
Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

## Serie 2142 - ALU-Eckfräser 90° Series 2142 - Aluminium Milling cutter 90°



**Ausführung:** Schaftfräser zylindrisch 90°, mit Innenbohrung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eckfräsen, Helixfräsen und universelle Einsatzmöglichkeiten

**Execution:** Endmill cutter cylindrical 90° with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- and shoulder milling, Helical milling and universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |    |   | Wendepatte<br>Insert                                                                | Schraube<br>Screw                                                                   | Schlüssel<br>Key                                                                    |
|-----------------------------|------------------------------|----|-----|----|----|---|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                             | D                            | d  | L   | L1 | p  | Z |  |  |  |
| 2142 W-W D32                | 32                           | 32 | 125 | 50 | 15 | 2 | VC.T<br>220530 ALU                                                                  | M-VT45<br>5,0 Nm                                                                    | M-BT20                                                                              |
| 2142 W-W D40                | 40                           | 32 | 140 | 50 | 15 | 3 |                                                                                     |                                                                                     |                                                                                     |
| 2142 W-W D40/40             | 40                           | 40 | 150 | 60 | 15 | 3 |                                                                                     |                                                                                     |                                                                                     |

Bestellbeispiel / Order example: 2142 W-W D32

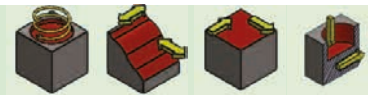
W-W = Kühlmittelbohrung / W-W = coolant bores

|                                                                                                   | Form Figure                                                                         | Abmessungen Dimensions |       |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|---------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|-------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                   |                                                                                     | l                      | d     | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>VCKT .. ALU |  | 15,60                  | 12,70 | 5,56 |    | 3,0 | VCKT 220530 ALU            | M-VT 45  | M-BT 20   |                                         | ■   |                                     |       |       |       |       |       |
|                                                                                                   |                                                                                     | 15,60                  | 12,70 | 5,56 |    | 3,0 | VCMT 220530 ALU            | M-VT 45  | M-BT 20   |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                   |                                                                                     |                        |       |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl | Emulsion   | MMS | Trocken            | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|----|------------|-----|--------------------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |    |            |     |                    |           |
| PTV28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |            |     |                    |           |
| PTT35         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |            |     |                    |           |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |            |     |                    |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |            |     |                    |           |
| KTE20         | 400               | 400 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       | 100                   |    | ■          |     | □                  |           |
| K10           | 300               | 300 | 300         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       | 100                   |    | ■          |     | □                  |           |
| fz            | 0,25              |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■ geeignet |     | □ bedingt geeignet |           |

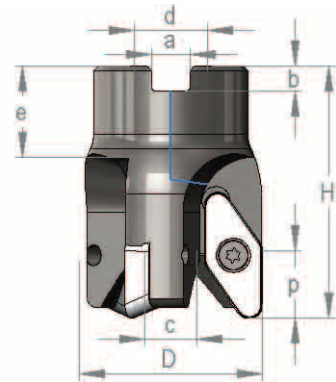
Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

## Serie 2143 - ALU-Eckfräser 90° Series 2143 - Aluminium Milling cutter 90°



**Ausführung:** Aufsteckfräser zylindrisch 90°, mit Innenbohrung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eckfräsen, Helixfräsen und universelle Einsatzmöglichkeiten

**Execution:** Endmill cutter cylindrical 90°, with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- and shoulder milling, Helical milling and universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |      |    |      |     |    |    |   | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|------|----|------|-----|----|----|---|-----------------------|-------------------|------------------|
|                             | D                            | d  | c    | e  | a    | b   | H  | p  | Z |                       |                   |                  |
| 2143 M-W D40                | 40                           | 16 | 11,5 | 20 | 8,4  | 5,6 | 55 | 15 | 3 | VC.T<br>220530 ALU    | M-VT45<br>5,0 Nm  | M-BT20           |
| 2143 M-W D50                | 50                           | 22 | 18   | 20 | 10,4 | 6,3 | 55 | 15 | 3 |                       |                   |                  |
| 2143 M-W D63                | 63                           | 22 | 18   | 20 | 10,4 | 6,3 | 60 | 15 | 4 |                       |                   |                  |
| 2143 M-W D80                | 80                           | 27 | 20   | 25 | 12,4 | 7   | 60 | 15 | 4 |                       |                   |                  |
| 2143 M-W D100               | 100                          | 32 | 26   | 26 | 14,4 | 8   | 60 | 15 | 5 |                       |                   |                  |

Bestellbeispiel / Order example: 2143 M-W D40

M-W = Kühlmittelbohrung / M-W = coolant bores

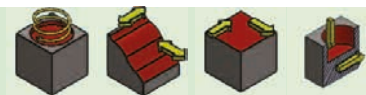
|                                                                                                   | Form Figure                                                                         | Abmessungen Dimensions |       |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     |  | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|---------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|-------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|--|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                   |                                                                                     | l                      | d     | s    | d1 | r   |                            |          |           | CT28                                    | K10 |  | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|                                                                                                   |                                                                                     |                        |       |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
| <br>VCKT .. ALU |  |                        |       |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
|                                                                                                   |                                                                                     | 15,60                  | 12,70 | 5,56 |    | 3,0 | VCKT 220530 ALU            | M-VT 45  | M-BT 20   |                                         | ■   |  |                                     |       |       |       |       |       |
|                                                                                                   |                                                                                     | 15,60                  | 12,70 | 5,56 |    | 3,0 | VCGT 220530 ALU            | M-VT 45  | M-BT 20   |                                         | ■   |  |                                     |       |       |       | ■     |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl       | Emulsion | MMS | Trocken | Druckluft        |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|----------|----------|-----|---------|------------------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |          |          |     |         |                  |
| PTV28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |          |          |     |         |                  |
| PTT35         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |          |          |     |         |                  |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |          |          |     |         |                  |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |          |          |     |         |                  |
| KTE20         | 400               | 400 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       | 100                   |          | ■        |     | □       |                  |
| K10           | 300               | 300 | 300         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       | 100                   |          | ■        |     | □       |                  |
| fz            | 0,25              |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | geeignet |          |     |         | bedingt geeignet |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

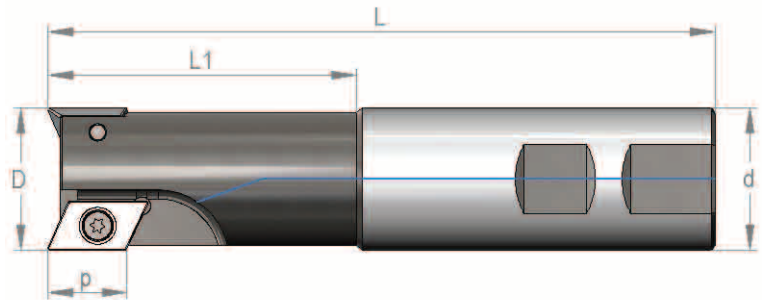
B

## Serie 2144 - ALU-Eckfräser 90° Series 2144 - Aluminium Milling cutter 90°



**Ausführung:** Schaftfräser zylindrisch 90°, mit Innenbohrung ohne Wendeschneidplatten, ohne Schraubendreher  
**Lieferumfang:** Nuten- und Eckfräsen, Helixfräsen und universelle Einsatzmöglichkeiten  
**Anwendung:**

**Execution:** Endmill cutter cylindrical 90° with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- and shoulder milling, Helical milling and universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |    |   | Wendepatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|-----|----|----|---|----------------------|-------------------|------------------|
|                             | D                            | d  | L   | L1 | p  | Z |                      |                   |                  |
| 2144 W-W D20                | 20                           | 20 | 130 | 60 | 17 | 1 | XEKT<br>19M5.. ALU   | M-VT48<br>3,0 Nm  | M-BT15           |
| 2144 W-W D25                | 25                           | 25 | 140 | 60 | 17 | 2 |                      |                   |                  |
| 2144 W-WL D25               | 25                           | 25 | 200 | 60 | 17 | 2 |                      |                   |                  |
| 2144 W-W D32                | 32                           | 32 | 150 | 70 | 17 | 2 |                      |                   |                  |
| 2144 W-WL D32               | 32                           | 32 | 220 | 70 | 17 | 2 |                      |                   |                  |
| 2144 W-WL D32/40            | 32                           | 40 | 160 | 70 | 17 | 3 |                      |                   |                  |
| 2144 W-W D40                | 40                           | 40 | 160 | 70 | 17 | 3 |                      |                   |                  |
| 2144 W-WL D40               | 40                           | 40 | 220 | 70 | 17 | 3 |                      |                   |                  |
| 2144 W-W D42                | 42                           | 40 | 160 | 70 | 17 | 3 |                      |                   |                  |

Bestellbeispiel / Order example: 2144 W-W D20

W-W = Kühlmittelbohrung / W-W = coolant bores

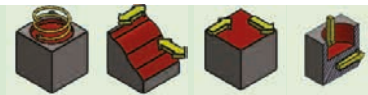
|  | Form Figure | Abmessungen Dimensions |      |      |       |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|--|-------------|------------------------|------|------|-------|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|  |             | l                      | d    | s    | d1    | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|  |             | 18,00                  | 1,40 | 5,00 | 16,40 | 0,4 | XEKT 19M504 ALU            | M-VT48   | M-BT 15   | ■                                       |     |                                     |       |       |       |       | □     |
|  |             | 18,00                  | 1,00 | 5,00 | 16,40 | 0,8 | XEKT 19M508 ALU            | M-VT48   | M-BT 15   | ■                                       |     |                                     |       |       |       |       | □     |
|  |             | 18,00                  | 0,60 | 5,00 | 16,40 | 1,2 | XEKT 19M512 ALU            | M-VT48   | M-BT 15   | ■                                       |     |                                     |       |       |       |       | □     |
|  |             | 17,50                  | 0,50 | 5,00 | 16,40 | 1,6 | XEKT 19M516 ALU            | M-VT48   | M-BT 15   | ■                                       |     |                                     |       |       |       |       | □     |
|  |             | 17,50                  | 0,50 | 5,00 | 16,40 | 1,8 | XEKT 19M518 ALU            | M-VT48   | M-BT 15   | □                                       |     |                                     |       |       |       |       | □     |
|  |             | 17,50                  | 0,50 | 5,00 | 16,40 | 2,0 | XEKT 19M520 ALU            | M-VT48   | M-BT 15   | ■                                       |     |                                     |       |       |       |       | □     |
|  |             | 17,00                  | 0,70 | 5,00 | 16,40 | 3,0 | XEKT 19M530 ALU            | M-VT48   | M-BT 15   | ■                                       |     |                                     |       |       |       |       | □     |
|  |             | 17,00                  | 0,50 | 5,00 | 16,40 | 3,2 | XEKT 19M532 ALU            | M-VT48   | M-BT 15   | ■                                       |     |                                     |       |       |       |       | □     |
|  |             | 16,50                  | 0,50 | 5,00 | 16,40 | 4,0 | XEKT 19M540 ALU            | M-VT48   | M-BT 15   | ■                                       |     |                                     |       |       |       |       | □     |
|  |             | 16,00                  | 0,40 | 5,00 | 16,40 | 5,0 | XEKT 19M550 ALU            | M-VT48   | M-BT 15   | ■                                       |     |                                     |       |       |       |       | □     |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl | Emulsion   | MMS                | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|----|------------|--------------------|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |    |            |                    |         |           |
| PTV28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |            |                    |         |           |
| PTT35         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |            |                    |         |           |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |            |                    |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |            |                    |         |           |
| KTE20         | 400               | 400 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       | 100                   |    | ■          | □                  | □       | □         |
| K10           | 300               | 300 | 300         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       | 100                   |    | ■          | □                  | □       | □         |
| fz            | 0,25              |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■ geeignet | □ bedingt geeignet |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

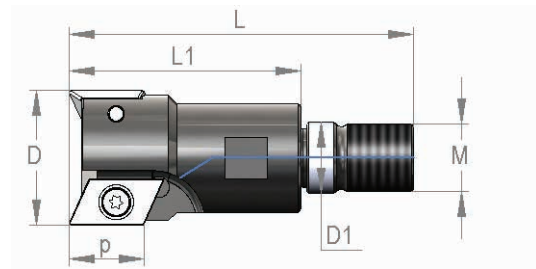


## Serie 2145- ALU-Eckfräser 90° Series 2145 - Aluminium Milling cutter 90°



**Ausführung:** Einschraubfräser zylindrisch 90°, mit Innenbohrung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eckfräsen, Helixfräsen und universelle Einsatzmöglichkeiten

**Execution:** Endmill cutter cylindrical 90° with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- and shoulder milling, Helical milling and universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |    |     |      |   | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|----|----|-----|------|---|-----------------------|-------------------|------------------|
|                             | D                            | p  | L  | L1 | M   | D1   | Z |                       |                   |                  |
| 2145 E-W D25                | 25                           | 17 | 79 | 55 | M12 | 12,5 | 2 | XEKT<br>19M5.. ALU    | M-VT48<br>3,0 Nm  | M-BT15           |
| 2145 E-W D32                | 32                           | 17 | 82 | 55 | M16 | 17   | 2 |                       |                   |                  |
| 2145 E-W D40                | 42                           | 17 | 82 | 55 | M16 | 17   | 3 |                       |                   |                  |

Bestellbeispiel / Order example: 2145 E-W D25

E-W = Kühlmittelbohrung / E-W = coolant bores

Verlängerungen siehe Seite 392 - 400

Extensions you can see on page 392 - 400

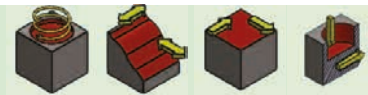
|                                                                                    | Form Figure                                                                         | Abmessungen Dimensions |      |      |       |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|-------|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                    |                                                                                     | l                      | d    | s    | d1    | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|  |  | 18,00                  | 1,40 | 5,00 | 16,40 | 0,4 | XEKT 19M504 ALU            | M-VT48   | M-BT 15   | ■                                       |     |                                     |       |       |       |       | □     |
|                                                                                    |                                                                                     | 18,00                  | 1,00 | 5,00 | 16,40 | 0,8 | XEKT 19M508 ALU            | M-VT48   | M-BT 15   | ■                                       |     |                                     |       |       |       |       | □     |
|                                                                                    |                                                                                     | 18,00                  | 0,60 | 5,00 | 16,40 | 1,2 | XEKT 19M512 ALU            | M-VT48   | M-BT 15   | ■                                       |     |                                     |       |       |       |       | □     |
|                                                                                    |                                                                                     | 17,50                  | 0,50 | 5,00 | 16,40 | 1,6 | XEKT 19M516 ALU            | M-VT48   | M-BT 15   | ■                                       |     |                                     |       |       |       |       | □     |
|                                                                                    |                                                                                     | 17,50                  | 0,50 | 5,00 | 16,40 | 1,8 | XEKT 19M518 ALU            | M-VT48   | M-BT 15   | □                                       |     |                                     |       |       |       |       | □     |
|                                                                                    |                                                                                     | 17,50                  | 0,50 | 5,00 | 16,40 | 2,0 | XEKT 19M520 ALU            | M-VT48   | M-BT 15   | ■                                       |     |                                     |       |       |       |       | □     |
|                                                                                    |                                                                                     | 17,00                  | 0,70 | 5,00 | 16,40 | 3,0 | XEKT 19M530 ALU            | M-VT48   | M-BT 15   | ■                                       |     |                                     |       |       |       |       | □     |
|                                                                                    |                                                                                     | 17,00                  | 0,50 | 5,00 | 16,40 | 3,2 | XEKT 19M532 ALU            | M-VT48   | M-BT 15   | ■                                       |     |                                     |       |       |       |       | □     |
|                                                                                    |                                                                                     | 16,50                  | 0,50 | 5,00 | 16,40 | 4,0 | XEKT 19M540 ALU            | M-VT48   | M-BT 15   | ■                                       |     |                                     |       |       |       |       | □     |
|                                                                                    |                                                                                     | 16,00                  | 0,40 | 5,00 | 16,40 | 5,0 | XEKT 19M550 ALU            | M-VT48   | M-BT 15   | ■                                       |     |                                     |       |       |       |       | □     |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion           | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|------------|--------------------|-----|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |            |                    |     |         |           |
| PTV28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| PTT35         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| KTE20         | 400               | 400 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       | 100                   |            | ■                  | □   | □       | □         |
| K10           | 300               | 300 | 300         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       | 100                   |            | ■                  | □   | □       | □         |
| fz            | 0,25              |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet | □ bedingt geeignet |     |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

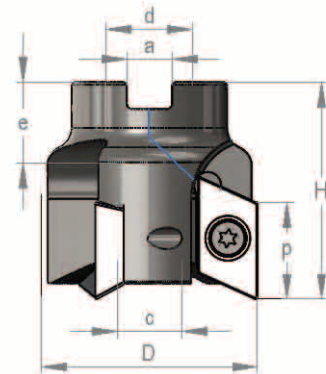
B

## Serie 2146 - ALU-Eckfräser 90° Series 2146 - Aluminium Milling cutter 90°



**Ausführung:** Aufsteckfräser zylindrisch 90°, mit Innenbohrung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eckrösen, Helikörsen und universelle Einsatzmöglichkeiten

**Execution:** Endmill cutter cylindrical 90°, with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- and shoulder milling, Helical milling and universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |    |      |    |    |   | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|----|----|------|----|----|---|-----------------------|-------------------|------------------|
|                             | D                            | d  | c  | e  | a    | H  | p  | Z |                       |                   |                  |
| 2146 M-W D40                | 40                           | 16 | 14 | 19 | 8,4  | 40 | 17 | 3 | XEKT<br>19M5.. ALU    | M-VT48<br>3,0 Nm  | M-BT15           |
| 2146 M-W D50                | 50                           | 22 | 18 | 21 | 10,4 | 50 | 17 | 4 |                       |                   |                  |
| 2146 M-W D63                | 63                           | 22 | 18 | 21 | 10,4 | 50 | 17 | 5 |                       |                   |                  |
| 2146 M-W D80                | 80                           | 27 | 20 | 23 | 12,4 | 50 | 17 | 5 |                       |                   |                  |
| 2146 M-W D100               | 100                          | 32 | 26 | 26 | 14,4 | 63 | 17 | 6 |                       |                   |                  |
| 2146 M-W D125               | 125                          | 40 | 32 | 29 | 16,4 | 63 | 17 | 7 |                       |                   |                  |

Bestellbeispiel / Order example: 2146 M-W D40

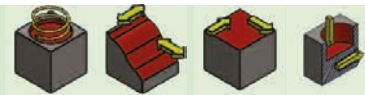
M-W = Kühlmittelbohrung / M-W = coolant bores

|                 | Form Figure | Abmessungen Dimensions |      |      |       |     | Bezeichnung<br>Designation | Schraube<br>Screw | Schlüssel<br>Key | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>Coated grades |       |       |       |       |       |
|-----------------|-------------|------------------------|------|------|-------|-----|----------------------------|-------------------|------------------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                 |             | l                      | d    | s    | d1    | r   |                            |                   |                  | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>XEKT .. ALU |             | 18,00                  | 1,40 | 5,00 | 16,40 | 0,4 | XEKT 19M504 ALU            | M-VT48            | M-BT 15          | ■                                       |     |                                     |       |       |       |       | □     |
|                 |             | 18,00                  | 1,00 | 5,00 | 16,40 | 0,8 | XEKT 19M508 ALU            | M-VT48            | M-BT 15          | ■                                       |     |                                     |       |       |       |       | □     |
|                 |             | 18,00                  | 0,60 | 5,00 | 16,40 | 1,2 | XEKT 19M512 ALU            | M-VT48            | M-BT 15          | ■                                       |     |                                     |       |       |       |       | □     |
|                 |             | 17,50                  | 0,50 | 5,00 | 16,40 | 1,6 | XEKT 19M516 ALU            | M-VT48            | M-BT 15          | ■                                       |     |                                     |       |       |       |       | □     |
|                 |             | 17,50                  | 0,50 | 5,00 | 16,40 | 1,8 | XEKT 19M518 ALU            | M-VT48            | M-BT 15          | □                                       |     |                                     |       |       |       |       | □     |
|                 |             | 17,50                  | 0,50 | 5,00 | 16,40 | 2,0 | XEKT 19M520 ALU            | M-VT48            | M-BT 15          | ■                                       |     |                                     |       |       |       |       | □     |
|                 |             | 17,00                  | 0,70 | 5,00 | 16,40 | 3,0 | XEKT 19M530 ALU            | M-VT48            | M-BT 15          | ■                                       |     |                                     |       |       |       |       | □     |
|                 |             | 17,00                  | 0,50 | 5,00 | 16,40 | 3,2 | XEKT 19M532 ALU            | M-VT48            | M-BT 15          | ■                                       |     |                                     |       |       |       |       | □     |
|                 |             | 16,50                  | 0,50 | 5,00 | 16,40 | 4,0 | XEKT 19M540 ALU            | M-VT48            | M-BT 15          | ■                                       |     |                                     |       |       |       |       | □     |
|                 |             | 16,00                  | 0,40 | 5,00 | 16,40 | 5,0 | XEKT 19M550 ALU            | M-VT48            | M-BT 15          | ■                                       |     |                                     |       |       |       |       | □     |
|                 |             |                        |      |      |       |     |                            |                   |                  |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |  |  |  |  |  |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|               | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| PTV28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| PTT35         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| KTE20         | 400               | 400 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       | 100                   |                                                                                       | ■                                                                                     | □                                                                                     | □                                                                                     |                                                                                       |
| K10           | 300               | 300 | 300         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       | 100                   |                                                                                       | ■                                                                                     | □                                                                                     | □                                                                                     |                                                                                       |
| fz            | 0,25              |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet □ bedingt geeignet                                                         |                                                                                       |                                                                                       |                                                                                       |                                                                                       |

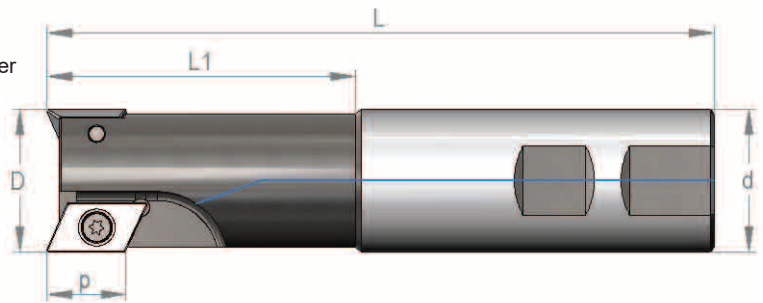
Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

## Serie 2147 - ALU-Eckfräser 90° Series 2147 - Aluminium Milling cutter 90°



**Ausführung:** Schaftfräser zylindrisch 90°, mit Innenbohrung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eckfräsen, Helixfräsen und universelle Einsatzmöglichkeiten

**Execution:** Endmill cutter cylindrical 90° with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- and shoulder milling, Helical milling and universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |    |   | Wendepatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|-----|----|----|---|----------------------|-------------------|------------------|
|                             | D                            | d  | L   | L1 | p  | Z |                      |                   |                  |
| 2147 W-W D25                | 25                           | 25 | 140 | 60 | 23 | 1 | XEKT<br>2506.. ALU   | M-VT50<br>5,0 Nm  | M-BT20           |
| 2147 W-WL D25               | 25                           | 25 | 200 | 60 | 23 | 1 |                      |                   |                  |
| 2147 W-W D32                | 32                           | 32 | 150 | 70 | 23 | 1 |                      |                   |                  |
| 2147 W-WL D32               | 32                           | 32 | 220 | 70 | 23 | 1 |                      |                   |                  |
| 2147 W-WL D40/32            | 40                           | 32 | 160 | 70 | 23 | 2 |                      |                   |                  |
| 2147 W-W D40                | 40                           | 40 | 160 | 70 | 23 | 2 |                      |                   |                  |
| 2147 W-WL D40               | 40                           | 32 | 220 | 70 | 23 | 2 |                      |                   |                  |

Bestellbeispiel / Order example: 2147 W-W D25

W-W = Kühlmittelbohrung / W-W = coolant bores

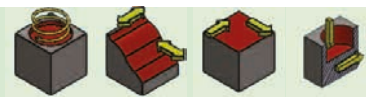
|  | Form Figure | Abmessungen Dimensions |      |      |       |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|--|-------------|------------------------|------|------|-------|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|  |             | l                      | d    | s    | d1    | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|  |             | 24,50                  | 1,50 | 6,35 | 21,90 | 0,4 | XEKT 250604 ALU            | M-VT 50  | M-BT 20   |                                         | ■   |                                     |       |       |       |       | □     |
|  |             | 24,50                  | 1,20 | 6,35 | 21,90 | 0,8 | XEKT 250608 ALU            | M-VT 50  | M-BT 20   |                                         | ■   |                                     |       |       |       |       | □     |
|  |             | 24,50                  | 0,80 | 6,35 | 21,90 | 1,2 | XEKT 250612 ALU            | M-VT 50  | M-BT 20   | □                                       |     |                                     |       |       |       |       | □     |
|  |             | 24,50                  | 0,40 | 6,35 | 21,90 | 1,6 | XEKT 250616 ALU            | M-VT 50  | M-BT 20   | □                                       |     |                                     |       |       |       |       | □     |
|  |             | 24,00                  | 0,50 | 6,35 | 21,90 | 2,0 | XEKT 250620 ALU            | M-VT 50  | M-BT 20   | □                                       |     |                                     |       |       |       |       | □     |
|  |             | 23,70                  | 0,60 | 6,35 | 21,90 | 3,0 | XEKT 250630 ALU            | M-VT 50  | M-BT 20   | □                                       |     |                                     |       |       |       |       | □     |
|  |             | 23,70                  | 0,40 | 6,35 | 21,90 | 3,2 | XEKT 250632 ALU            | M-VT 50  | M-BT 20   | □                                       |     |                                     |       |       |       |       | □     |
|  |             | 22,80                  | 1,20 | 6,35 | 21,90 | 4,0 | XEKT 250640 ALU            | M-VT 50  | M-BT 20   | □                                       |     |                                     |       |       |       |       | □     |
|  |             | 22,70                  | 0,40 | 6,35 | 21,90 | 5,0 | XEKT 250650 ALU            | M-VT 50  | M-BT 20   |                                         | ■   |                                     |       |       |       |       | □     |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl | Emulsion                      | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|----|-------------------------------|-----|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |    |                               |     |         |           |
| PTV28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |                               |     |         |           |
| PTT35         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |                               |     |         |           |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |                               |     |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |                               |     |         |           |
| KTE20         | 400               | 400 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       | 100                   |    | ■                             | □   | □       | □         |
| K10           | 300               | 300 | 300         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       | 100                   |    | ■                             | □   | □       | □         |
| fz            | 0,25              |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■ geeignet □ bedingt geeignet |     |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

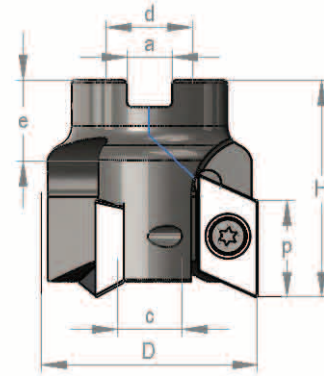
B

## Serie 2148 - ALU-Eckfräser 90° Series 2148 - Aluminium Milling cutter 90°



**Ausführung:** Aufsteckfräser zylindrisch 90°, mit Innenbohrung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eckfräsen, Helixfräsen und universelle Einsatzmöglichkeiten

**Execution:** Endmill cutter cylindrical 90°, with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- and shoulder milling, Helical milling and universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |    |      |    |    |   | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|----|----|------|----|----|---|-----------------------|-------------------|------------------|
|                             | D                            | d  | c  | e  | a    | H  | p  | Z |                       |                   |                  |
| 2148 M-W D50                | 50                           | 16 | 14 | 18 | 8,4  | 50 | 23 | 2 | XEKT 2506.. ALU       | M-VT50<br>5,0 Nm  | M-BT20           |
| 2148 M-W D63                | 63                           | 22 | 18 | 21 | 10,4 | 50 | 23 | 3 |                       |                   |                  |
| 2148 M-W D80                | 80                           | 27 | 20 | 23 | 12,4 | 50 | 23 | 4 |                       |                   |                  |
| 2148 M-W D100               | 100                          | 32 | 26 | 26 | 14,4 | 63 | 23 | 5 |                       |                   |                  |
| 2148 M-W D125               | 125                          | 40 | 32 | 29 | 16,4 | 63 | 23 | 6 |                       |                   |                  |

Bestellbeispiel / Order example: 2148 M-W D50

M-W = Kühlmittelbohrung / M-W = coolant bores

|                  | Form Figure | Abmessungen Dimensions |      |      |       |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|------------------|-------------|------------------------|------|------|-------|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                  |             | l                      | d    | s    | d1    | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>XEKT ... ALU |             | 24,50                  | 1,50 | 6,35 | 21,90 | 0,4 | XEKT 250604 ALU            | M-VT 50  | M-BT 20   |                                         | ■   |                                     |       |       |       |       | □     |
|                  |             | 24,50                  | 1,20 | 6,35 | 21,90 | 0,8 | XEKT 250608 ALU            | M-VT 50  | M-BT 20   |                                         | ■   |                                     |       |       |       |       | □     |
|                  |             | 24,50                  | 0,80 | 6,35 | 21,90 | 1,2 | XEKT 250612 ALU            | M-VT 50  | M-BT 20   |                                         | □   |                                     |       |       |       |       | □     |
|                  |             | 24,50                  | 0,40 | 6,35 | 21,90 | 1,6 | XEKT 250616 ALU            | M-VT 50  | M-BT 20   |                                         | □   |                                     |       |       |       |       | □     |
|                  |             | 24,00                  | 0,50 | 6,35 | 21,90 | 2,0 | XEKT 250620 ALU            | M-VT 50  | M-BT 20   |                                         | □   |                                     |       |       |       |       | □     |
|                  |             | 23,70                  | 0,60 | 6,35 | 21,90 | 3,0 | XEKT 250630 ALU            | M-VT 50  | M-BT 20   |                                         | □   |                                     |       |       |       |       | □     |
|                  |             | 23,70                  | 0,40 | 6,35 | 21,90 | 3,2 | XEKT 250632 ALU            | M-VT 50  | M-BT 20   |                                         | □   |                                     |       |       |       |       | □     |
|                  |             | 22,80                  | 1,20 | 6,35 | 21,90 | 4,0 | XEKT 250640 ALU            | M-VT 50  | M-BT 20   |                                         | □   |                                     |       |       |       |       | □     |
|                  |             | 22,70                  | 0,40 | 6,35 | 21,90 | 5,0 | XEKT 250650 ALU            | M-VT 50  | M-BT 20   |                                         | ■   |                                     |       |       |       |       | □     |
|                  |             |                        |      |      |       |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu        |     |             | Stahl            |                  |                  |                   |                   |                   |                   |                   |                   |                   | INOX            |                 |       |       | Graphit<br>GFK<br>CFK | Öl                                                                                    | Emulsion                                                                              | MMS                                                                                   | Trocken                                                                               | Druckluft                                                                             |
|---------------|------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|               | Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN |                       |  |  |  |  |  |
| ISO-Code      | N          | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| PTV28         |            |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| PTT35         |            |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| PAP28         |            |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| MTM10         |            |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| KTE20         | 400        | 400 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       | 100                   |                                                                                       | ■                                                                                     | □                                                                                     | □                                                                                     | □                                                                                     |
| K10           | 300        | 300 | 300         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       | 100                   |                                                                                       | ■                                                                                     | □                                                                                     | □                                                                                     | □                                                                                     |
| fz            | 0,25       |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet      □ bedingt geeignet                                                    |                                                                                       |                                                                                       |                                                                                       |                                                                                       |

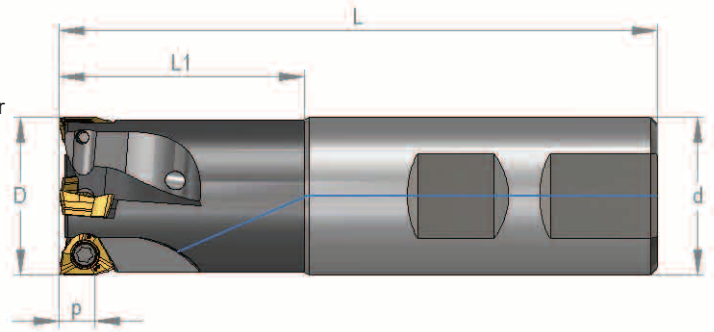
Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

# Serie 1010 - Eckfräser 90° Series 1010 - Milling cutter 90°



**Ausführung:** Schafffräser zylindrisch 90°, mit Innenbohrung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eckfräsen und universelle Einsatzmöglichkeiten

**Execution:** Endmill cutter cylindrical 90° with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove - and shoulder milling and universal application



B

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |     |   | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|-----|----|-----|---|-----------------------|-------------------|------------------|
|                             | D                            | d  | L   | L1 | p   | Z |                       |                   |                  |
| 1010 W-W D20                | 20                           | 20 | 95  | 40 | 4,5 | 3 | TPKT 0803..           | M-VT25<br>1,2 Nm  | M-BT08           |
| 1010 W-WL D20               | 20                           | 20 | 150 | 40 | 4,5 | 3 |                       |                   |                  |
| 1010 W-W D25                | 25                           | 25 | 100 | 40 | 4,5 | 4 |                       |                   |                  |
| 1010 W-WL D25               | 25                           | 25 | 150 | 40 | 4,5 | 4 |                       |                   |                  |
| 1010 W-W D32                | 32                           | 25 | 105 | 40 | 4,5 | 5 |                       |                   |                  |
| 1010 W-WL D32               | 32                           | 25 | 150 | 40 | 4,5 | 5 |                       |                   |                  |

Bestellbeispiel / Order example: 1010 W-W D20

W-W = Kühlmittelbohrung / W-W = coolant bores

|             | Form Figure | Abmessungen Dimensions |      |      |      |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|-------------|-------------|------------------------|------|------|------|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|             |             | l                      | d    | s    | d1   | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>TPKT .. |             | 8,00                   | 8,00 | 2,40 | 2,50 | 0,5 | TPKT 0803 PDSR             | M-VT 25  | M-BT 08   |                                         |     |                                     |       |       |       |       |       |
|             |             |                        |      |      |      |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |
|             |             |                        |      |      |      |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu        |     |             | Stahl   |         |         |          |          |          |          |          |          |          | INOX    |         | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl                            | Emulsion | MMS | Trocken | Druckluft |
|---------------|------------|-----|-------------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|---------|---------|-------|-------|-----------------------|-------------------------------|----------|-----|---------|-----------|
|               | Kunststoff | Alu | Alu<br>Guss | < 500 N | < 750 N | < 900 N | < 1100 N | < 1400 N | < 55 HRC | < 60 HRC | < 65 HRC | < 67 HRC | < 70 HRC | < 900 N | > 900 N |       |       |                       |                               |          |     |         |           |
| ISO-Code      | N          | N   | N           | P       | P       | P       | P        | P        | H        | H        | H        | H        | H        | M       | M       | K     | S     | N                     |                               |          |     |         |           |
| PTV28         |            |     |             |         | 300     | 250     | 230      | 200      |          |          |          |          |          |         |         |       |       |                       |                               |          |     |         |           |
| PTT35         |            |     |             |         |         |         | 230      | 200      |          |          |          |          |          |         |         |       |       |                       |                               |          |     |         |           |
| PAP28         |            |     |             |         |         |         |          |          |          |          |          |          |          | 200     | 180     |       |       |                       |                               |          |     |         |           |
| MTM10         |            |     |             |         |         |         |          |          |          |          |          |          |          |         |         | 220   |       |                       |                               |          |     |         |           |
| KTE20         | 600        | 600 | 400         |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       |                               |          |     |         |           |
| K10           |            |     |             |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       |                               |          |     |         |           |
| fz            | 0,1        |     |             |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       | ■ geeignet □ bedingt geeignet |          |     |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

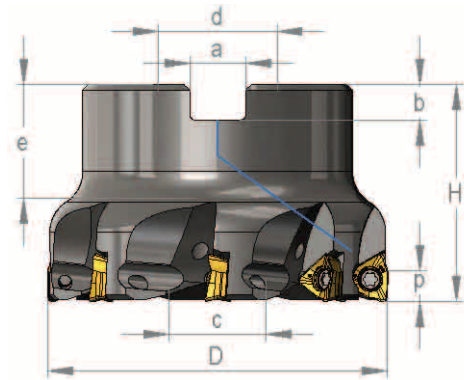


## Serie 1012 - Eckfräser 90° Series 1012 - Milling cutter 90°



**Ausführung:** Aufsteckfräser zylindrisch 90°, mit Innenbohrung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eckfräsen universelle Einsatzmöglichkeiten

**Execution:** Endmill cutter cylindrical 90°, with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- and shoulder milling and universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |    |      |     |    |     |    | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|----|----|------|-----|----|-----|----|-----------------------|-------------------|------------------|
|                             | D                            | d  | c  | e  | a    | b   | H  | p   | Z  |                       |                   |                  |
| 1012 M-W D32                | 32                           | 16 |    | 21 | 8,4  | 5,6 | 40 | 4,5 | 5  | TPKT 0803..           | M-VT25<br>1,2 Nm  | M-BT08           |
| 1012 M-W D40                | 40                           | 16 |    | 21 | 8,4  | 5,6 | 40 | 4,5 | 6  |                       |                   |                  |
| 1012 M-W D50                | 50                           | 22 | 17 | 21 | 10,4 | 6,3 | 40 | 4,5 | 7  |                       |                   |                  |
| 1012 M-W D63                | 63                           | 22 | 17 | 21 | 10,4 | 6,3 | 40 | 4,5 | 8  |                       |                   |                  |
| 1012 M-W D80                | 80                           | 27 | 20 | 22 | 12,4 | 7   | 50 | 4,5 | 11 |                       |                   |                  |

Bestellbeispiel / Order example: 1012 M-W D32

M-W = Kühlmittelbohrung / M-W = coolant bores

|                                                                                               | Form Figure                                                                         | Abmessungen Dimensions |      |      |      |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|-----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|------|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                               |                                                                                     | l                      | d    | s    | d1   | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>TPKT .. |  |                        |      |      |      |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                               |                                                                                     | 8,00                   | 8,00 | 2,40 | 2,50 | 0,5 | TPKT 0803 PDSR             | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     |       | ■     | ■     |
|                                                                                               |                                                                                     |                        |      |      |      |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu        |     |      | Stahl   |         |         |          |          |          |          |          |          |          | INOX    |         | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl                               | Emulsion | MMS | Trocken | Druckluft |
|---------------|------------|-----|------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|---------|---------|-------|-------|-----------------------|----------------------------------|----------|-----|---------|-----------|
|               | Kunststoff |     | Guss | < 500 N | < 750 N | < 900 N | < 1100 N | < 1400 N | < 55 HRC | < 60 HRC | < 65 HRC | < 67 HRC | < 70 HRC | < 900 N | > 900 N |       |       |                       |                                  |          |     |         |           |
| ISO-Code      | N          | N   | N    | P       | P       | P       | P        | P        | H        | H        | H        | H        | H        | M       | M       | K     | S     | N                     |                                  |          |     |         |           |
| PTV28         |            |     |      |         | 300     | 250     | 230      | 200      |          |          |          |          |          |         |         |       |       |                       |                                  | ■        |     | ■       |           |
| PTT35         |            |     |      |         |         |         | 230      | 200      |          |          |          |          |          |         |         |       |       |                       | ■                                |          | ■   |         |           |
| PAP28         |            |     |      |         |         |         |          |          |          |          |          |          |          | 200     | 180     |       |       |                       | ■                                |          | ■   |         |           |
| MTM10         |            |     |      |         |         |         |          |          |          |          |          |          |          |         |         | 220   |       |                       |                                  | ■        |     | ■       |           |
| KTE20         | 600        | 600 | 400  |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       | ■                                |          | ■   |         |           |
| K10           |            |     |      |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       | ■                                |          | ■   |         |           |
| fz            | 0,1        |     |      |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       | ■ geeignet    □ bedingt geeignet |          |     |         |           |

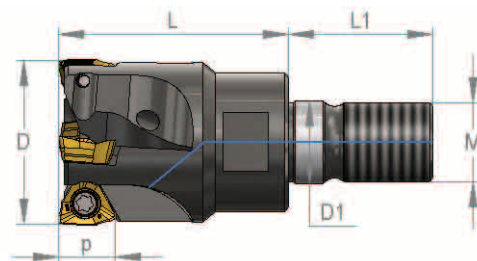
Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

# Serie 1014 - Eckfräser 90° Series 1014 - Milling cutter 90°



**Ausführung:** Einschraubfräser zylindrisch 90°, mit Innenbohrung ohne Wendeschneidplatten, ohne Schraubendreher  
**Lieferumfang:**  
**Anwendung:** Nuten- und Eckfräsen, Helixfräsen und universelle Einsatzmöglichkeiten

**Execution:** Endmill cutter cylindrical 90° with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- and shoulder milling, Helical milling and universal application



B

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |     |    |    |     |      |   | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|-----|----|----|-----|------|---|-----------------------|-------------------|------------------|
|                             | D                            | p   | L  | L1 | M   | D1   | Z |                       |                   |                  |
| 1014 E-W D20                | 20                           | 4,5 | 30 | 20 | M10 | 10,5 | 3 | TPKT 0803..           | M-VT25<br>1,2 Nm  | M-BT08           |
| 1014 E-W D25                | 25                           | 4,5 | 35 | 22 | M12 | 12,5 | 4 |                       |                   |                  |
| 1014 E-W D32                | 32                           | 4,5 | 43 | 24 | M16 | 17   | 5 |                       |                   |                  |
| 1014 E-W D42                | 42                           | 4,5 | 68 | 24 | M16 | 17   | 6 |                       |                   |                  |

Bestellbeispiel / Order example: 1014 E-W D20

E-W = Kühlmittelbohrung / E-W = coolant bores

Verlängerungen siehe Seite 392 - 400

Erweiterungen v u can see on page 392 - 400

|         | Form Figure | Abmessungen Dimensions |      |      |      |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|---------|-------------|------------------------|------|------|------|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|         |             | l                      | d    | s    | d1   | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| TPKT .. |             | 8,00                   | 8,00 | 2,40 | 2,50 | 0,5 | TPKT 0803 PDSR             | M-VT 25  | M-BT 08   |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl       | Emulsion | MMS | Trocken | Druckluft        |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|----------|----------|-----|---------|------------------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |          |          |     |         |                  |
| PTV28         |                   |     |             |                  | 300              | 250              | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |          |          |     |         |                  |
| PTT35         |                   |     |             |                  |                  |                  | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |          |          |     |         |                  |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 200             | 180             |       |       |                       |          |          |     |         |                  |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 220   |       |                       |          |          |     |         |                  |
| KTE20         | 600               | 600 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |          |          |     |         |                  |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |          |          |     |         |                  |
| fz            | 0,1               |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | geeignet |          |     |         | bedingt geeignet |

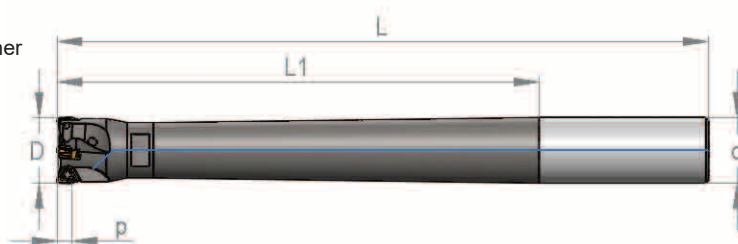
Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

## Serie 1016 - Eckfräser 90° Series 1016 - Milling cutter 90°



**Ausführung:** extra lange Schaftfräser zylindrisch 90°, mit Innenbohrung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eckfräsen, Helixfräsen und universelle Einsatzmöglichkeiten

**Execution:** extra long Enmill cutter cylindric 90° with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove - and shoulder milling, Helical milling and universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |     |     |   | Wendeplatte<br>Insert                                                               | Schraube<br>Screw                                                                   | Schlüssel<br>Key                                                                    |
|-----------------------------|------------------------------|----|-----|-----|-----|---|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                             | D                            | d  | L   | L1  | p   | Z |  |  |  |
| 1016 W-WXL D20              | 20                           | 20 | 230 | 170 | 4,5 | 3 | TPKT 0803..                                                                         | M-VT25<br>1,2 Nm                                                                    | M-BT08                                                                              |
| 1016 W-WXL D25              | 25                           | 25 | 250 | 185 | 4,5 | 4 |                                                                                     |                                                                                     |                                                                                     |
| 1016 W-WXL D32              | 32                           | 32 | 265 | 195 | 4,5 | 5 |                                                                                     |                                                                                     |                                                                                     |
| 1016 W-WXL D42              | 42                           | 32 | 288 | 218 | 4,5 | 6 |                                                                                     |                                                                                     |                                                                                     |

Bestellbeispiel / Order example: 1016 W-WXL D20

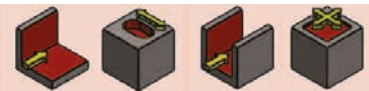
W-W = Kühlmittelbohrung / W-W = coolant bores

|                                                                                    | Form Figure                                                                         | Abmessungen Dimensions |      |      |      |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|------|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                    |                                                                                     | l                      | d    | s    | d1   | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|  |  | 8,00                   | 8,00 | 2,40 | 2,50 | 0,5 | TPKT 0803 PDSR             | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     |       | ■     | ■     |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion | MMS | Trocken            | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|------------|----------|-----|--------------------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |            |          |     |                    |           |
| PTV28         |                   |     |             |                  | 300              | 250              | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■        |     |                    | ■         |
| PTT35         |                   |     |             |                  |                  |                  | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■        |     |                    | ■         |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 200             | 180             |       |       |                       |            | ■        |     |                    | ■         |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       | 220   |                       |            | ■        |     |                    | ■         |
| KTE20         | 600               | 600 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■        |     |                    | ■         |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■        |     |                    | ■         |
| fz            | 0,1               |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet |          |     | □ bedingt geeignet |           |

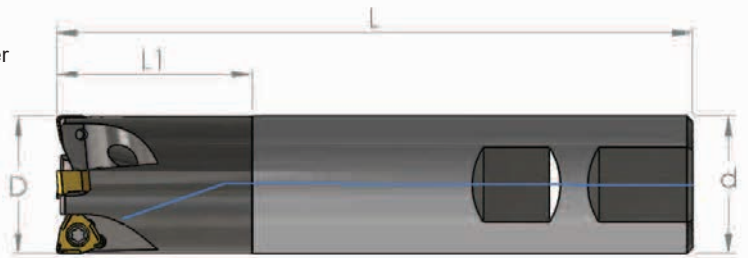
Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

**Serie 1018 W-W - Eckfräser 90°**  
**Series 1018 W-W - Milling cutter 90°**



**Ausführung:** Schaftfräser zylindrisch 90°, mit Innenkühlung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eckfräsen und universelle Einsatzmöglichkeiten

**Execution:** Endmill cutter cylindrical 90° with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove - and shoulder milling and universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |   |   | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|-----|----|---|---|-----------------------|-------------------|------------------|
|                             | D                            | d  | L   | L1 | p | Z |                       |                   |                  |
| 1018 W-W D20                | 20                           | 20 | 100 | 30 | 4 | 3 | WNEX 040304..         | M-VT 25           | M-BT 08          |
| 1018 W-L D20                | 20                           | 25 | 150 | 40 | 4 | 3 |                       |                   |                  |
| 1018 W-W D25                | 25                           | 25 | 115 | 35 | 4 | 4 |                       |                   |                  |
| 1018 W-L D25                | 25                           | 20 | 170 | 50 | 4 | 4 |                       |                   |                  |
| 1018 W-W D32                | 32                           | 25 | 125 | 40 | 4 | 5 |                       |                   |                  |
| 1018 W-L D32                | 32                           | 32 | 195 | 70 | 4 | 5 |                       |                   |                  |

Bestellbeispiel / Order example: 1018 W-W D20

W-W = Kühlmittelbohrung / W-W = coolant bores

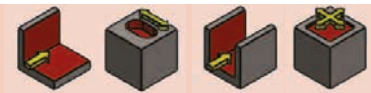
| Form Figure | Abmessungen Dimensions |      |      |      |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>Coated grades |       |       |       |       |       |
|-------------|------------------------|------|------|------|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|             | l                      | d    | s    | d1   | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| WNEX ..     | 4,00                   | 6,70 | 3,97 | 3,20 | 0,4 | WNEX 040304                |          |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl | Emulsion | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|----|----------|-----|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |    |          |     |         |           |
| PTV28         |                   |     |             |                  | 200              | 180              | 150               | 130               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |          |     |         |           |
| PTT35         |                   |     |             |                  |                  |                  | 150               | 130               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |          |     |         |           |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 160             | 140             |       |       |                       |    |          |     |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 180   |       |                       |    |          |     |         |           |
| KTE20         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |          |     |         |           |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |          |     |         |           |
| fz            | 0,1 - 0,15        |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |          |     |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

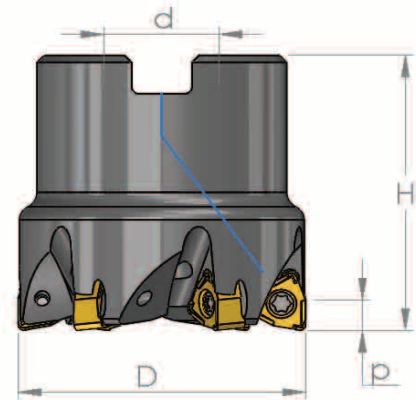
B

## Serie 1018 M-W - Eckfräser 90° Series 1018 M-W - Milling cutter 90°



**Ausführung:** Aufsteckfräser zylindrisch 90°, mit Innenbohrung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eckfräsen, universelle Einsatzmöglichkeiten

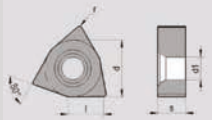
**Execution:** Endmill cutter cylindrical 90°, with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove - and shoulder milling and universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |   |   |   |   |    |   |   | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|---|---|---|---|----|---|---|-----------------------|-------------------|------------------|
|                             | D                            | d  | c | e | a | b | H  | p | Z |                       |                   |                  |
| 1018 M-W D32                | 32                           | 16 |   |   |   |   | 40 | 4 | 6 | WNEX<br>040304..      | M-VT 25           | M-BT 08          |
| 1018 M-W D40                | 40                           | 16 |   |   |   |   | 40 | 4 | 6 |                       |                   |                  |
| 1018 M-W D50                | 50                           | 22 |   |   |   |   | 40 | 4 | 8 |                       |                   |                  |
| 1018 M-W D63                | 63                           | 22 |   |   |   |   | 40 | 4 | 9 |                       |                   |                  |

Bestellbeispiel / Order example: 1018 M-W D32

M-W = Kühlmittelbohrung / M-W = coolant bores

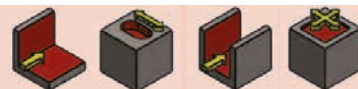
|                                                                                               | Form Figure                                                                         | Abmessungen Dimensions |      |      |      |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|-----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|------|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                               |                                                                                     | l                      | d    | s    | d1   | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>WNEX .. |  | 4,00                   | 6,70 | 3,97 | 3,20 | 0,4 | WNEX 040304                |          |           |                                         |     |                                     | ■     | ■     | ■     | ■     |       |
|                                                                                               |                                                                                     |                        |      |      |      |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                               |                                                                                     |                        |      |      |      |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion           | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|------------|--------------------|-----|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |            |                    |     |         |           |
| PTV28         |                   |     |             |                  | 200              | 180              | 150               | 130               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  | ■   | ■       | ■         |
| PTT35         |                   |     |             |                  |                  |                  | 150               | 130               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  | ■   | ■       | ■         |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 160             | 140             |       |       |                       |            | ■                  | ■   | ■       | ■         |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 180   |       |                       |            | ■                  | ■   | ■       | ■         |
| KTE20         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  | ■   | ■       | ■         |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| fz            | 0,1 - 0,15        |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet | ■ bedingt geeignet |     |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

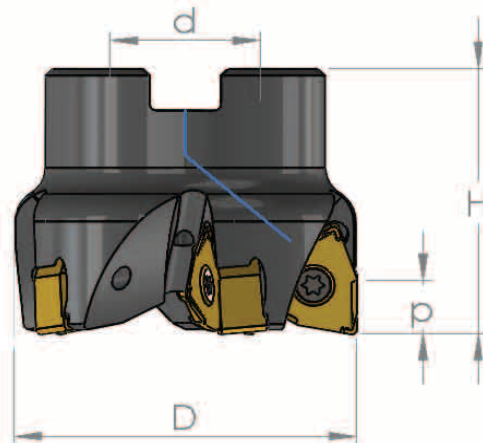


# Serie 1020 - Eckfräser 90° Series 1020 - Milling cutter 90°



**Ausführung:** Aufsteckfräser zylindrisch 90°, mit Innenbohrung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eckfräsen, universelle Einsatzmöglichkeiten

**Execution:** Endmill cutter cylindrical 90°, with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- and shoulder milling and universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |   |   |   |   |    |   |    | Wendepatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|---|---|---|---|----|---|----|----------------------|-------------------|------------------|
|                             | D                            | d  | c | e | a | b | H  | p | Z  |                      |                   |                  |
| 1020 M-W D50                | 50                           | 22 |   |   |   |   | 40 | 7 | 5  | WNEX<br>080608..     | M-VT 40           | M-BT 15          |
| 1020 M-W D63                | 63                           | 22 |   |   |   |   | 40 | 7 | 6  |                      |                   |                  |
| 1020 M-W D80                | 80                           | 27 |   |   |   |   | 50 | 7 | 7  |                      |                   |                  |
| 1020 M-W D100               | 100                          | 32 |   |   |   |   | 50 | 7 | 8  |                      |                   |                  |
| 1020 M-W D125               | 125                          | 40 |   |   |   |   | 63 | 7 | 10 |                      |                   |                  |
| 1020 M D160                 | 160                          | 40 |   |   |   |   | 63 | 7 | 11 |                      |                   |                  |

Bestellbeispiel / Order example: 1020 M-W D50

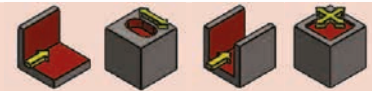
M-W = Kühlmittelbohrung / M-W = coolant bores

| Form Figure | Abmessungen Dimensions |       |      |      |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|-------------|------------------------|-------|------|------|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|             | l                      | d     | s    | d1   | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>WNEX .. |                        |       |      |      |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |
|             | 8,00                   | 12,70 | 6,55 | 4,60 | 0,8 | WNEX 080608                |          |           |                                         |     |                                     |       |       |       |       |       |
|             |                        |       |      |      |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl | Emulsion | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|----|----------|-----|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |    |          |     |         |           |
| PTV28         |                   |     |             |                  | 200              | 180              | 150               | 130               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |          |     |         |           |
| PTT35         |                   |     |             |                  |                  |                  | 150               | 130               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |          |     |         |           |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 160             | 140             |       |       |                       |    |          |     |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 180   |       |                       |    |          |     |         |           |
| KTE20         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |          |     |         |           |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |          |     |         |           |
| fz            | 0,15 - 0,25       |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |          |     |         |           |

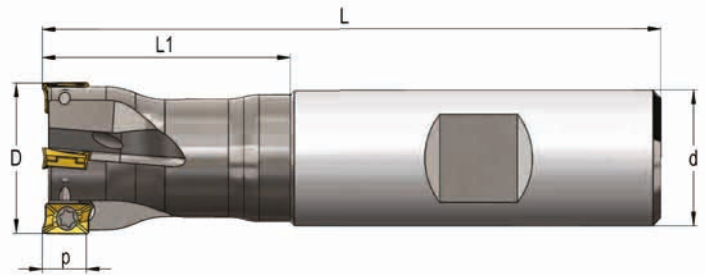
Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

**Serie 1030/06 - Eckfräser 90°**  
**Series 1030/06 - Milling cutter 90°**



**Ausführung:** Schaftfräser zylindrisch 90°, mit Innenkühlung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eckfräsen und universelle Einsatzmöglichkeiten

**Execution:** Endmill cutter cylindrical 90° with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- and shoulder milling and universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |     |   | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|-----|----|-----|---|-----------------------|-------------------|------------------|
|                             | D                            | d  | L   | L1 | p   | Z |                       |                   |                  |
| 1030/06 W-W D10             | 10                           | 10 | 80  | 32 | 5,2 | 2 | APKT<br>0602..        | M-VT18<br>0,6 Nm  | M-BT06           |
| 1030/06 W-W D12             | 12                           | 12 | 80  | 32 | 5,2 | 3 |                       |                   |                  |
| 1030/06 W-W D16             | 16                           | 16 | 85  | 32 | 5,2 | 4 |                       |                   |                  |
| 1030/06 W-W D20             | 20                           | 20 | 90  | 40 | 5,2 | 5 |                       |                   |                  |
| 1030/06 W-W D25             | 25                           | 20 | 105 | 40 | 5,2 | 7 |                       |                   |                  |

Bestellbeispiel / Order example: 1030/06 W-W D12

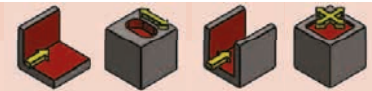
W-W = Kühlmittelbohrung / W-W = coolant bores

| Form Figure | Abmessungen Dimensions |      |      |      |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|-------------|------------------------|------|------|------|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|             | l                      | d    | s    | d1   | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| APKT...     | 6,00                   | 3,65 | 2,15 | 2,05 | 0,4 | APKT 060204 PDR            | M-VT18   | M-BT06    |                                         |     |                                     | ■     | ■     | ■     |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion           | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|------------|--------------------|-----|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |            |                    |     |         |           |
| PTV28         |                   |     |             |                  | 300              | 250              | 200               | 200               |                   |                   |                   |                   |                   |                 |                 | 220   |       |                       |            | ■                  |     |         | ■         |
| PTT35         |                   |     |             |                  |                  |                  | 200               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 170             | 130             |       |       |                       |            | ■                  |     |         | ■         |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| KTE20         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| fz            | 0,1               |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet | □ bedingt geeignet |     |         |           |

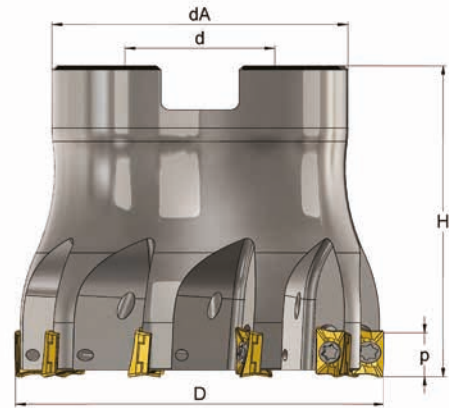
Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

# Serie 1035/06 - Eckfräser 90° Series 1035/06 - Milling cutter 90°



**Ausführung:** Aufsteckfräser zylindrisch 90°, mit Innenbohrung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eckfräsen, universelle Einsatzmöglichkeiten

**Execution:** Endmill cutter cylindrical 90°, with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- and shoulder milling and universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |    |      |     |    |     |    | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|----|----|------|-----|----|-----|----|-----------------------|-------------------|------------------|
|                             | D                            | d  | d1 | e  | a    | b   | H  | p   | Z  |                       |                   |                  |
| 1035/06 M-W D32             | 32                           | 16 | 25 | 21 | 8,4  | 5,6 | 40 | 5,2 | 8  | APKT<br>0602..        | M-VT18<br>0,6 Nm  | M-BT06           |
| 1035/06 M-W D40             | 40                           | 16 | 35 | 21 | 8,4  | 5,6 | 40 | 5,2 | 10 |                       |                   |                  |
| 1035/06 M-W D50             | 50                           | 22 | 43 | 21 | 10,4 | 6,3 | 40 | 5,2 | 11 |                       |                   |                  |

Bestellbeispiel / Order example: 1035/06 M-W D32

M-W = Kühlmittelbohrung / M-W = coolant bores

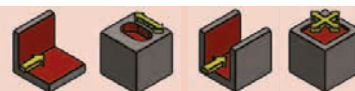
|         | Form Figure | Abmessungen Dimensions |      |      |      |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|---------|-------------|------------------------|------|------|------|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|         |             | l                      | d    | s    | d1   | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| APKT... |             | 6,00                   | 3,65 | 2,15 | 2,05 | 0,4 | APKT 060204 PDR            | M-VT18   | M-BT06    |                                         |     |                                     | ■     | ■     | ■     |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion           | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|------------|--------------------|-----|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |            |                    |     |         |           |
| PTV28         |                   |     |             |                  | 300              | 250              | 200               | 200               |                   |                   |                   |                   |                   |                 |                 | 220   |       |                       |            | ■                  |     |         | ■         |
| PTT35         |                   |     |             |                  |                  |                  | 200               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 170             | 130             |       |       |                       |            | ■                  |     |         | ■         |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| KTE20         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| fz            | 0,1               |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet | □ bedingt geeignet |     |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

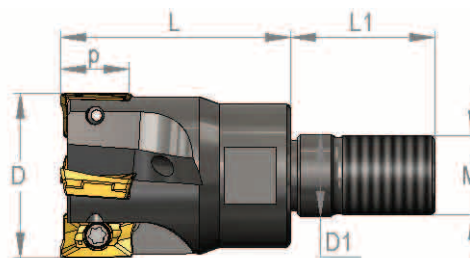
B

## Serie 1040/06 - Eckfräser 90° Series 1040/06 - Milling cutter 90°



**Ausführung:** Einschraubfräser zylindrisch 90°, mit Innenkühlung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eckfräsen, Helixfräsen und universelle Einsatzmöglichkeiten

**Execution:** Endmill cutter cylindrical 90° with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- and shoulder milling, Helical milling and universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |     |      |      |     |      |   | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|-----|------|------|-----|------|---|-----------------------|-------------------|------------------|
|                             | D                            | p   | L    | L1   | M   | D1   | Z |                       |                   |                  |
| 1040/06 EW D10              | 10                           | 5,2 | 15,5 | 14,5 | M6  | 6,5  | 2 | APKT<br>0602..        | M-VT 18<br>0,6 Nm | M-BT 06          |
| 1040/06 EW D12              | 12                           | 5,2 | 15,5 | 14,5 | M6  | 6,5  | 3 |                       |                   |                  |
| 1040/06 EW D16              | 16                           | 5,2 | 20,5 | 18   | M8  | 8,5  | 4 |                       |                   |                  |
| 1040/06 EW D20              | 20                           | 5,2 | 27   | 19   | M10 | 10,5 | 5 |                       |                   |                  |
| 1040/06 EW D25              | 25                           | 5,2 | 30   | 22   | M12 | 12,5 | 7 |                       |                   |                  |
| 1040/06 EW D32              | 32                           | 5,2 | 43   | 23   | M16 | 17   | 8 |                       |                   |                  |

Bestellbeispiel / Order example: 1040/06 EW D10

E-W = Kühlmittelbohrung / E-W = coolant bores

Verlängerungen siehe Seite 392 - 400

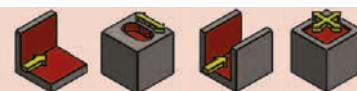
Extensions you can see on page 392 - 400

|         | Form Figure | Abmessungen Dimensions |      |      |      |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|---------|-------------|------------------------|------|------|------|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|         |             | l                      | d    | s    | d1   | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| APKT... |             | 6,00                   | 3,65 | 2,15 | 2,05 | 0,4 | APKT 060204 PDR            | M-VT18   | M-BT06    |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl       | Emulsion         | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|----------|------------------|-----|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |          |                  |     |         |           |
| PTV28         |                   |     |             |                  | 300              | 250              | 200               | 200               |                   |                   |                   |                   |                   |                 |                 |       | 220   |                       |          |                  |     |         |           |
| PTT35         |                   |     |             |                  |                  |                  | 200               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |          |                  |     |         |           |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 170             | 130             |       |       |                       |          |                  |     |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |          |                  |     |         |           |
| KTE20         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |          |                  |     |         |           |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |          |                  |     |         |           |
| fz            | 0,1               |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | geeignet | bedingt geeignet |     |         |           |

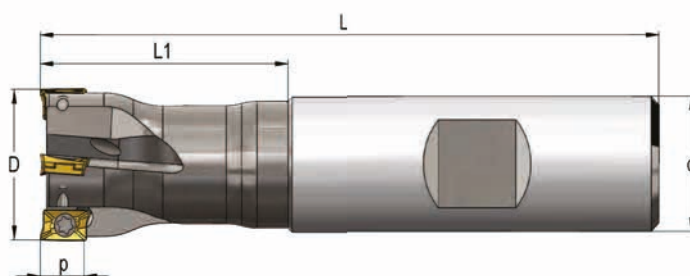
Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

# Serie 1030 - Eckfräser 90° Series 1030 - Milling cutter 90°



**Ausführung:** Schaftfräser zylindrisch 90°, mit Innenkühlung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eckfräsen und universelle Einsatzmöglichkeiten

**Execution:** Endmill cutter cylindrical 90° with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- and shoulder milling and universal application

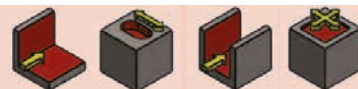


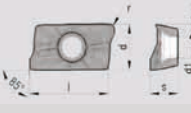
B

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |    |   | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|----|-----|----|----|---|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
|                             | D                            | d  | L   | L1 | p  | Z |                                                                                                              |                                                                                                          |                                                                                                         |
| 1030 W-W D9,7               | 9,7                          | 16 | 80  | 32 | 10 | 1 | APKT<br>1003.. PDSR ..                                                                                       | M-VT25<br>1,2 Nm                                                                                         | M-BT08                                                                                                  |
| 1030 W-W D10                | 10                           | 16 | 80  | 32 | 10 | 1 |                                                                                                              |                                                                                                          |                                                                                                         |
| 1030 W-WL D10               | 10                           | 16 | 150 | 32 | 10 | 1 |                                                                                                              |                                                                                                          |                                                                                                         |
| 1030 W-W D11,7              | 11,7                         | 16 | 80  | 32 | 10 | 1 |                                                                                                              |                                                                                                          |                                                                                                         |
| 1030 W-W D12                | 12                           | 16 | 80  | 32 | 10 | 1 |                                                                                                              |                                                                                                          |                                                                                                         |
| 1030 W-WL D12               | 12                           | 16 | 150 | 32 | 10 | 1 |                                                                                                              |                                                                                                          |                                                                                                         |
| 1030 W-W D14                | 14                           | 16 | 80  | 32 | 10 | 1 |                                                                                                              |                                                                                                          |                                                                                                         |
| 1030 W-W D15,7              | 15,7                         | 16 | 80  | 32 | 10 | 2 |                                                                                                              |                                                                                                          |                                                                                                         |
| 1030 W-W D16                | 16                           | 16 | 80  | 32 | 10 | 2 |                                                                                                              |                                                                                                          |                                                                                                         |
| 1030 W-WL D16               | 16                           | 16 | 150 | 32 | 10 | 2 |                                                                                                              |                                                                                                          |                                                                                                         |
| 1030 W-W D18                | 18                           | 20 | 80  | 30 | 10 | 2 |                                                                                                              |                                                                                                          |                                                                                                         |
| 1030 W-W D19,7              | 19,7                         | 20 | 90  | 40 | 10 | 3 |                                                                                                              |                                                                                                          |                                                                                                         |
| 1030 W-W D20                | 20                           | 20 | 90  | 40 | 10 | 3 |                                                                                                              |                                                                                                          |                                                                                                         |
| 1030 W-WL D20               | 20                           | 20 | 150 | 40 | 10 | 3 |                                                                                                              |                                                                                                          |                                                                                                         |
| 1030 W-W D22                | 22                           | 25 | 95  | 40 | 10 | 3 |                                                                                                              |                                                                                                          |                                                                                                         |
| 1030 W-W D24,7              | 24,7                         | 25 | 95  | 40 | 10 | 4 |                                                                                                              |                                                                                                          |                                                                                                         |
| 1030 W-W D25-3              | 25                           | 25 | 95  | 40 | 10 | 3 |                                                                                                              |                                                                                                          |                                                                                                         |
| 1030 W-W D25                | 25                           | 25 | 95  | 40 | 10 | 4 |                                                                                                              |                                                                                                          |                                                                                                         |
| 1030 W-WL D25               | 25                           | 25 | 150 | 40 | 10 | 4 |                                                                                                              |                                                                                                          |                                                                                                         |
| 1030 W-W D28                | 28                           | 25 | 95  | 40 | 10 | 4 |                                                                                                              |                                                                                                          |                                                                                                         |
| 1030 W-W D30                | 30                           | 25 | 95  | 40 | 10 | 4 |                                                                                                              |                                                                                                          |                                                                                                         |
| 1030 W-W D31,7              | 31,7                         | 25 | 95  | 40 | 10 | 5 |                                                                                                              |                                                                                                          |                                                                                                         |
| 1030 W-W D32                | 32                           | 25 | 95  | 40 | 10 | 5 |                                                                                                              |                                                                                                          |                                                                                                         |
| 1030 W-WL D32               | 32                           | 25 | 150 | 40 | 10 | 5 |                                                                                                              |                                                                                                          |                                                                                                         |
| 1030 W-W D40                | 40                           | 32 | 110 | 40 | 10 | 6 |                                                                                                              |                                                                                                          |                                                                                                         |



**Serie 1030 - Eckfräser 90°**  
**Series 1030 - Milling cutter 90°**

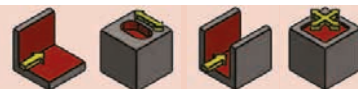


|                                                                                             | Form Figure                                                                       | Abmessungen Dimensions |      |      |    |     | Bezeichnung Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|---------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------|------|------|----|-----|-------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                             |                                                                                   | l                      | d    | s    | d1 | r   |                         |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>APKT... |  |                        |      |      |    |     |                         |          |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                             |                                                                                   | 10,50                  | 6,70 | 3,50 |    | 0,5 | APKT 1003 PDSR          | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                             |                                                                                   | 10,50                  | 6,70 | 3,50 |    | 0,8 | APKT 100308 PDSR        | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                             |                                                                                   | 10,50                  | 6,70 | 3,50 |    | 1,2 | APKT 100312 PDSR        | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                             |                                                                                   | 10,50                  | 6,70 | 3,50 |    | 1,6 | APKT 100316 PDSR        | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                             |                                                                                   | 10,50                  | 6,70 | 3,50 |    | 2,0 | APKT 100320 PDSR        | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |

| Vc<br>(m/min) |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | GG(G) | TITAN | Graphit<br>GFK<br>CFK |            |                    |     |         |           |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|------------|--------------------|-----|---------|-----------|
|               | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N |       |       |                       | Öl         | Emulsion           | MMS | Trocken | Druckluft |
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |            |                    |     |         |           |
| PTV28         |                   |     |             |                  | 300              | 250              | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| PTT35         |                   |     |             |                  |                  |                  | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 200             | 180             |       |       |                       |            | ■                  |     |         | ■         |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 220   |       |                       |            | ■                  |     |         | ■         |
| KTE20         | 600               | 600 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| fz            | 0,1 - 0,15        |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet | □ bedingt geeignet |     |         |           |

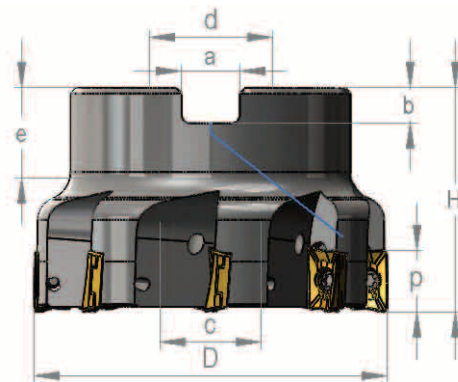
Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

## Serie 1035 - Eckfräser 90° Series 1035 - Milling cutter 90°



**Ausführung:** Aufsteckfräser zylindrisch 90°, mit Innenbohrung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eckfräsen, universelle Einsatzmöglichkeiten

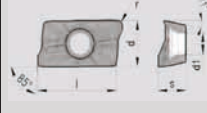
**Execution:** Endmill cutter cylindrical 90°, with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- and shoulder milling and universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |    |      |     |    |    |    | Wendeplatte<br>Insert  | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|----|----|------|-----|----|----|----|------------------------|-------------------|------------------|
|                             | D                            | d  | c  | e  | a    | b   | H  | p  | Z  |                        |                   |                  |
| 1035 M-W D32                | 32                           | 16 | -  | 21 | 8,4  | 5,6 | 40 | 10 | 5  | APKT<br>1003.. PDSR .. | M-VT25<br>1,2 Nm  | M-BT08           |
| 1035 M-W D40                | 40                           | 16 | -  | 21 | 8,4  | 5,6 | 40 | 10 | 6  |                        |                   |                  |
| 1035 M-W D50                | 50                           | 22 | 17 | 21 | 10,4 | 6,3 | 40 | 10 | 7  |                        |                   |                  |
| 1035 M-W D63                | 63                           | 22 | 17 | 21 | 10,4 | 6,3 | 40 | 10 | 8  |                        |                   |                  |
| 1035 M-W D80                | 80                           | 27 | 20 | 22 | 12,4 | 7   | 50 | 10 | 11 |                        |                   |                  |
| 1035 M-W D100               | 100                          | 32 | 25 | 26 | 14,4 | 8   | 50 | 10 | 13 |                        |                   |                  |

Bestellbeispiel / Order example: 1035 M-W D32

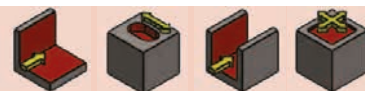
M-W = Kühlmittelbohrung / M-W = coolant bores

|                                                                                    | Form Figure                                                                         | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     |  | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|--|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                    |                                                                                     | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 |  | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|  |  | 10,50                  | 6,70 | 3,50 |    | 0,5 | APKT 1003 PDSR             | M-VT 25  | M-BT 08   |                                         |     |  |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 0,8 | APKT 100308 PDSR           | M-VT 25  | M-BT 08   |                                         |     |  |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 1,2 | APKT 100312 PDSR           | M-VT 25  | M-BT 08   |                                         |     |  |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 1,6 | APKT 100316 PDSR           | M-VT 25  | M-BT 08   |                                         |     |  |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 2,0 | APKT 100320 PDSR           | M-VT 25  | M-BT 08   |                                         |     |  |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     |                        |      |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |

| Vc<br>(m/min) |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                       |                                                                                       | Öl                                                                                    | Emulsion                                                                              | MMS                                                                                   | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------|-----------|
|               | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK |  |  |  |  |  |         |           |
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |         |           |
| PTV28         |                   |     |             |                  | 300              | 250              | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                       |                                                                                       | ■                                                                                     |                                                                                       |                                                                                       | ■       |           |
| PTT35         |                   |     |             |                  |                  |                  | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                       |                                                                                       | ■                                                                                     |                                                                                       |                                                                                       | ■       |           |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 200             | 180             |       |       |                       |                                                                                       |                                                                                       | ■                                                                                     |                                                                                       |                                                                                       | ■       |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 220   |       |                       |                                                                                       |                                                                                       | □                                                                                     |                                                                                       |                                                                                       | ■       |           |
| KTE20         | 600               | 600 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                       |                                                                                       | ■                                                                                     |                                                                                       |                                                                                       | ■       |           |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |         |           |
| fz            | 0,1 - 0,15        |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                       | ■ geeignet                                                                            |                                                                                       | □ bedingt geeignet                                                                    |                                                                                       |         |           |

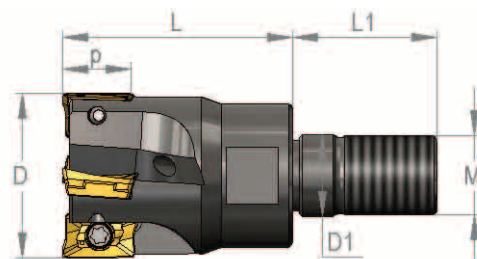
Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

# Serie 1040 - Eckfräser 90° Series 1040 - Milling cutter 90°



**Ausführung:** Einschraubfräser zylindrisch 90°, mit Innenkühlung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eckrösen, Helixrösen und universelle Einsatzmöglichkeiten

**Execution:** Endmill cutter cylindrical 90° with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- and shoulder milling, Helical milling and universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |      |     |      |   | Wendeplatte<br>Insert  | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|----|------|-----|------|---|------------------------|-------------------|------------------|
|                             | D                            | p  | L  | L1   | M   | D1   | Z |                        |                   |                  |
| 1040 EW D9,7                | 9,7                          | 10 | 20 | 14,5 | M6  | 6,5  | 1 | APKT<br>1003.. PDSR .. | M-VT25<br>1,2 Nm  | M-BT08           |
| 1040 EW D10                 | 10                           | 10 | 20 | 14,5 | M6  | 6,5  | 1 |                        |                   |                  |
| 1040 EW D11,7               | 11,7                         | 10 | 20 | 14,5 | M6  | 6,5  | 1 |                        |                   |                  |
| 1040 EW D12                 | 12                           | 10 | 20 | 14,5 | M6  | 6,5  | 1 |                        |                   |                  |
| 1040 EW D15,7               | 15,7                         | 10 | 25 | 17,5 | M8  | 8,5  | 2 |                        |                   |                  |
| 1040 EW D16                 | 16                           | 10 | 25 | 17,5 | M8  | 8,5  | 2 |                        |                   |                  |
| 1040 EW D19,7               | 19,7                         | 10 | 30 | 20   | M10 | 10,5 | 3 |                        |                   |                  |
| 1040 EW D20                 | 20                           | 10 | 30 | 20   | M10 | 10,5 | 3 |                        |                   |                  |
| 1040 EW D24,7               | 24,7                         | 10 | 35 | 22   | M12 | 12,5 | 4 |                        |                   |                  |
| 1040 EW D25                 | 25                           | 10 | 35 | 22   | M12 | 12,5 | 4 |                        |                   |                  |
| 1040 EW D31,7               | 31,7                         | 10 | 43 | 24   | M16 | 17   | 5 |                        |                   |                  |
| 1040 EW D32                 | 32                           | 10 | 43 | 24   | M16 | 17   | 5 |                        |                   |                  |

Bestellbeispiel / Order example: 1040 EW D9,7

E-W = Kühlmittelbohrung / E-W = coolant bores

Verlängerungen siehe Seite 392 - 400

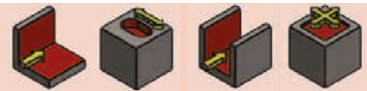
Erweiterungen vgl. Siehe auf Seite 392 - 400

| Form Figure | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|-------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|             | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>APKT... | 10,50                  | 6,70 | 3,50 |    | 0,5 | APKT 1003 PDSR             | M-VT 25  | M-BT 08   |                                         |     |                                     |       |       |       |       |       |
|             | 10,50                  | 6,70 | 3,50 |    | 0,8 | APKT 100308 PDSR           | M-VT 25  | M-BT 08   |                                         |     |                                     |       |       |       |       |       |
|             | 10,50                  | 6,70 | 3,50 |    | 1,2 | APKT 100312 PDSR           | M-VT 25  | M-BT 08   |                                         |     |                                     |       |       |       |       |       |
|             | 10,50                  | 6,70 | 3,50 |    | 1,6 | APKT 100316 PDSR           | M-VT 25  | M-BT 08   |                                         |     |                                     |       |       |       |       |       |
|             | 10,50                  | 6,70 | 3,50 |    | 2,0 | APKT 100320 PDSR           | M-VT 25  | M-BT 08   |                                         |     |                                     |       |       |       |       |       |
|             |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl       | Emulsion | MMS              | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|----------|----------|------------------|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |          |          |                  |         |           |
| PTV28         |                   |     |             |                  | 300              | 250              | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |          |          |                  |         |           |
| PTT35         |                   |     |             |                  |                  |                  | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |          |          |                  |         |           |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 200             | 180             |       |       |                       |          |          |                  |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 220   |       |                       |          |          |                  |         |           |
| KTE20         | 600               | 600 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |          |          |                  |         |           |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |          |          |                  |         |           |
| fz            | 0,1 - 0,15        |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | geeignet |          | bedingt geeignet |         |           |

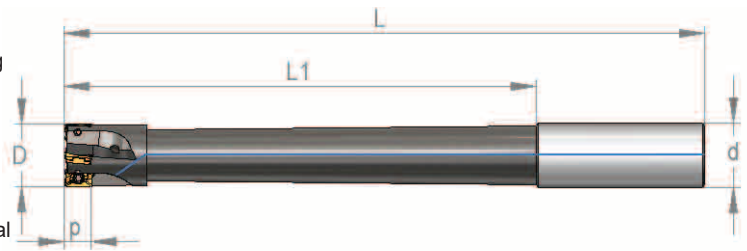
Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

## Serie 1045 - Eckfräser 90° Series 1045 - Milling cutter 90°



**Ausführung:** Eckfräse mit Schachtführer zylindrisch 90°, mit Innenbohrung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eckfräsen, Helixfräsen und universelle Einsatzmöglichkeiten

**Execution:** Extra long Enmill cutter cylindrical 90° with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove - and shoulder milling, Helical milling and universal application



B

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |     |    |   | Wendepatte<br>Insert                                                                | Schraube<br>Screw                                                                   | Schlüssel<br>Key                                                                    |
|-----------------------------|------------------------------|----|-----|-----|----|---|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                             | D                            | d  | L   | L1  | p  | Z |  |  |  |
| 1045 W-WXL D9,7             | 9,7                          | 10 | 155 | 80  | 10 | 1 | APKT<br>1003.. PDSR ..                                                              | M-VT25<br>1,2 Nm                                                                    | M-BT08                                                                              |
| 1045 W-WXL D10              | 10                           | 10 | 155 | 80  | 10 | 1 |                                                                                     |                                                                                     |                                                                                     |
| 1045 W-WXL D11,7            | 11,7                         | 12 | 175 | 120 | 10 | 1 |                                                                                     |                                                                                     |                                                                                     |
| 1045 W-WXL D12              | 12                           | 12 | 175 | 120 | 10 | 1 |                                                                                     |                                                                                     |                                                                                     |
| 1045 W-WXL D15,7            | 15,7                         | 16 | 200 | 145 | 10 | 2 |                                                                                     |                                                                                     |                                                                                     |
| 1045 W-WXL D16              | 16                           | 16 | 200 | 145 | 10 | 2 |                                                                                     |                                                                                     |                                                                                     |
| 1045 W-WXL D19,7            | 19,7                         | 20 | 230 | 170 | 10 | 3 |                                                                                     |                                                                                     |                                                                                     |
| 1045 W-WXL D20              | 20                           | 20 | 230 | 170 | 10 | 3 |                                                                                     |                                                                                     |                                                                                     |
| 1045 W-WXL D24,7            | 24,7                         | 25 | 250 | 195 | 10 | 4 |                                                                                     |                                                                                     |                                                                                     |
| 1045 W-WXL D25              | 25                           | 25 | 250 | 185 | 10 | 4 |                                                                                     |                                                                                     |                                                                                     |
| 1045 W-WXL D31,7            | 31,7                         | 32 | 265 | 195 | 10 | 5 |                                                                                     |                                                                                     |                                                                                     |
| 1045 W-WXL D32              | 32                           | 32 | 265 | 195 | 10 | 5 |                                                                                     |                                                                                     |                                                                                     |

Bestellbeispiel / Order example: 1045 W-WXL D9,7

W-W = Kühlmittelbohrung / W-W = coolant bores

|                                                                                               | Form Figure                                                                         | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     |  | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|-----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|--|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                               |                                                                                     | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 |  | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|                                                                                               |                                                                                     |                        |      |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
| <br>APKT... |  |                        |      |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
|                                                                                               |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 0,5 | APKT 1003 PDSR             | M-VT 25  | M-BT 08   |                                         |     |  |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                               |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 0,8 | APKT 100308 PDSR           | M-VT 25  | M-BT 08   |                                         |     |  |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                               |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 1,2 | APKT 100312 PDSR           | M-VT 25  | M-BT 08   |                                         |     |  |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                               |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 1,6 | APKT 100316 PDSR           | M-VT 25  | M-BT 08   |                                         |     |  |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                               |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 2,0 | APKT 100320 PDSR           | M-VT 25  | M-BT 08   |                                         |     |  |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                               |                                                                                     |                        |      |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion           | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|------------|--------------------|-----|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |            |                    |     |         |           |
| PTV28         |                   |     |             |                  | 300              | 250              | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| PTT35         |                   |     |             |                  |                  |                  | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 200             | 180             |       |       |                       |            | ■                  |     |         | ■         |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 220   |       |                       |            | ■                  |     |         | ■         |
| KTE20         | 600               | 600 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| fz            | 0,1 - 0,15        |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet | □ bedingt geeignet |     |         |           |

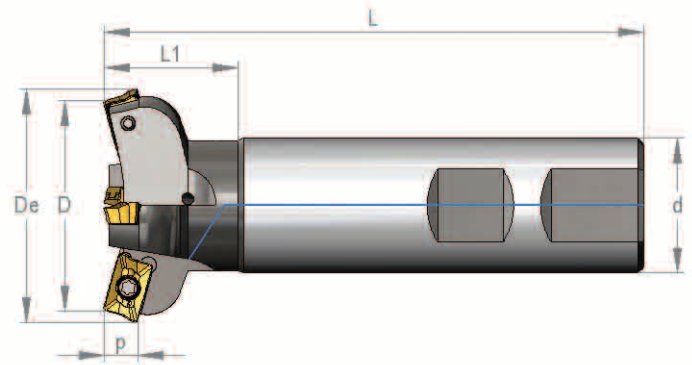
Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

## Serie 1080 - Planfräser 75° Series 1080 - Face milling cutter 75°



**Ausführung:** leichtschneidender Planfräser, vibrationsarmer Lauf durch stark positive Schneidengeometrie, mit Innenbohrung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** zur Schrupp- und Schlichtbearbeitung, universelle Einsatzmöglichkeiten

**Execution:** Soft-face milling cutter, less vibration, high positive cutting geometry, with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** for roughing and finishing, universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |      |    |     |    |   |   | Wendeplatte<br>Insert                                                               | Schraube<br>Screw                                                                   | Schlüssel<br>Key                                                                    |
|-----------------------------|------------------------------|------|----|-----|----|---|---|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                             | D                            | De   | d  | L   | L1 | p | Z |  |  |  |
| 1080 W-W D25                | 25                           | 28,6 | 20 | 95  | 25 | 3 | 2 | APKT<br>1003.. PDSR ..                                                              | M-VT25<br>1,2 Nm                                                                    | M-BT08                                                                              |
| 1080 W-W D32                | 32                           | 35,6 | 25 | 95  | 25 | 3 | 3 |                                                                                     |                                                                                     |                                                                                     |
| 1080 W-W D40                | 40                           | 43,6 | 25 | 100 | 25 | 3 | 4 |                                                                                     |                                                                                     |                                                                                     |

Bestellbeispiel / Order example: 1080 W-W D25

W-W = Kühlmittelbohrung / W-W = coolant bores

| Form Figure                                                                                   | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|-----------------------------------------------------------------------------------------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                               | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>APKT... | 10,50                  | 6,70 | 3,50 |    | 0,5 | APKT 1003 PDSR             | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                               | 10,50                  | 6,70 | 3,50 |    | 0,8 | APKT 100308 PDSR           | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                               | 10,50                  | 6,70 | 3,50 |    | 1,2 | APKT 100312 PDSR           | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                               | 10,50                  | 6,70 | 3,50 |    | 1,6 | APKT 100316 PDSR           | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                               | 10,50                  | 6,70 | 3,50 |    | 2,0 | APKT 100320 PDSR           | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                               |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion           | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|------------|--------------------|-----|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |            |                    |     |         |           |
| PTV28         |                   |     |             |                  | 300              | 250              | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| PTT35         |                   |     |             |                  |                  |                  | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 200             | 180             |       |       |                       |            | ■                  |     |         | ■         |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 220   |       |                       |            | ■                  |     |         | ■         |
| KTE20         | 600               | 600 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| fz            | 0,1 - 0,15        |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet | □ bedingt geeignet |     |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

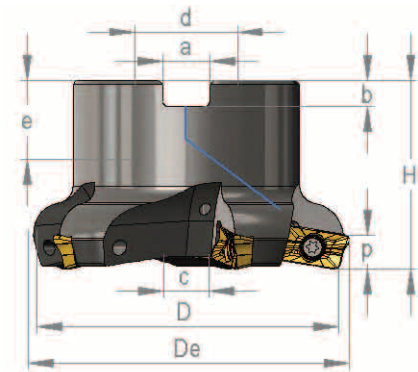


# Serie 1085 - Planfräser 75° Series 1085 - Face milling cutter 75°



**Ausführung:** leichtschneidender Planfräser, vibrationsarmer Lauf durch stark positive Schneidengeometrie, mit Innenkühlung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** zur Schrupp- und Schlichtbearbeitung, universelle Einsatzmöglichkeiten

**Execution:** Soft-face milling cutter, less vibration, high positive cutting geometry, with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** for roughing and finishing, universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |    |    |      |     |    |   |   | Wendeplatte<br>Insert                                                               | Schraube<br>Screw                                                                   | Schlüssel<br>Key                                                                    |
|-----------------------------|------------------------------|----|----|----|----|------|-----|----|---|---|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                             | D                            | De | d  | c  | e  | a    | b   | H  | p | Z |  |  |  |
| 1085 M-W D50                | 50                           | 54 | 22 | 17 | 21 | 10,4 | 6,3 | 40 | 3 | 5 | APKT<br>1003.. PDSR ..                                                              | M-VT25<br>1,2 Nm                                                                    | M-BT08                                                                              |
| 1085 M-W D63                | 63                           | 67 | 22 | 17 | 21 | 10,4 | 6,3 | 40 | 3 | 6 |                                                                                     |                                                                                     |                                                                                     |
| 1085 M-W D80                | 80                           | 87 | 27 | 20 | 22 | 12,4 | 7   | 50 | 3 | 7 |                                                                                     |                                                                                     |                                                                                     |

Bestellbeispiel / Order example: 1085 M-W D50

M-W = Kühlmittelbohrung / M-W = coolant bores

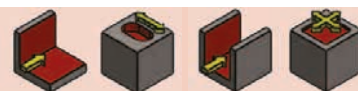
|                                                                                               | Form Figure                                                                         | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>Coated grades |       |       |       |       |       |
|-----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                               |                                                                                     | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>APKT... |  | 10,50                  | 6,70 | 3,50 |    | 0,5 | APKT 1003 PDSR             | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                               |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 0,8 | APKT 100308 PDSR           | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                               |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 1,2 | APKT 100312 PDSR           | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                               |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 1,6 | APKT 100316 PDSR           | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                               |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 2,0 | APKT 100320 PDSR           | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                               |                                                                                     |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | Öl                            | Emulsion | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|-------------------------------|----------|-----|---------|-----------|
|               | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK |                               |          |     |         |           |
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |                               |          |     |         |           |
| PTV28         |                   |     |             |                  | 300              | 250              | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                               |          |     |         |           |
| PTT35         |                   |     |             |                  |                  |                  | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                               |          |     |         |           |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 200             | 180             |       |       |                       |                               |          |     |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 220   |       |                       |                               |          |     |         |           |
| KTE20         | 600               | 600 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                               |          |     |         |           |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                               |          |     |         |           |
| fz            | 0,1 - 0,15        |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet □ bedingt geeignet |          |     |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

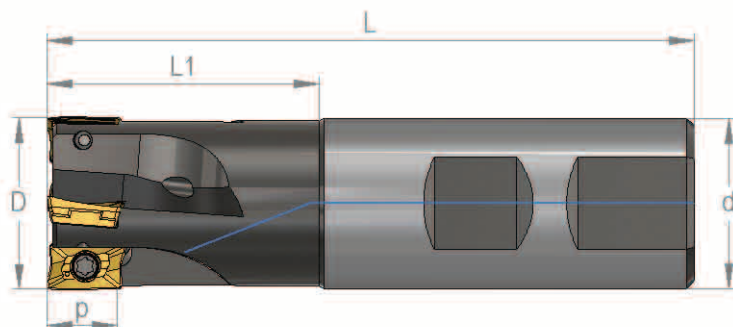
B

## Serie 1055 - Eckfräser 90° Series 1055 - Milling cutter 90°



**Ausführung:** Schafffräser zylindrisch 90°, mit Innenbohrung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eckfräsen und universelle Einsatzmöglichkeiten

**Execution:** Endmill cutter cylindrical 90° with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- and shoulder milling and universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |    |   | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|-----|----|----|---|-----------------------|-------------------|------------------|
|                             | D                            | d  | L   | L1 | p  | Z |                       |                   |                  |
| 1055 W-WL D22               | 22                           | 20 | 200 | 60 | 17 | 2 | APKT 1604..           | M-VT40<br>3,0 Nm  | M-BT15           |
| 1055 W-W D25                | 25                           | 25 | 100 | 44 | 17 | 2 |                       |                   |                  |
| 1055 W-WL D25               | 25                           | 25 | 200 | 60 | 17 | 2 |                       |                   |                  |
| 1055 W-W D30                | 30                           | 25 | 110 | 50 | 17 | 3 |                       |                   |                  |
| 1055 W-W D32                | 32                           | 32 | 110 | 50 | 17 | 3 |                       |                   |                  |
| 1055 W-WL D32               | 32                           | 32 | 200 | 60 | 17 | 3 |                       |                   |                  |
| 1055 W-W D40                | 40                           | 32 | 115 | 45 | 17 | 4 |                       |                   |                  |

Bestellbeispiel / Order example: 1055 W-WL D22

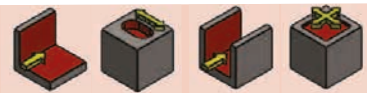
W-W = Kühlmittelbohrung / W-W = coolant bores

|             | Form Figure | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|-------------|-------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|             |             | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>APKT... |             | 16,00                  | 9,45 | 5,26 |    | 0,8 | APKT 1604 PDER             | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|             |             | 16,00                  | 9,45 | 5,26 |    | 1,2 | APKT 160412 PDER           | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|             |             | 16,00                  | 9,45 | 5,26 |    | 1,6 | APKT 160416 PDER           | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|             |             | 16,00                  | 9,45 | 5,26 |    | 2,4 | APKT 160424 PDER           | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|             |             | 16,00                  | 9,45 | 5,26 |    | 3,0 | APKT 160430 PDER           | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|             |             | 16,00                  | 9,45 | 5,26 |    | 4,0 | APKT 160440 PDER           | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|             |             |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion | MMS                | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|------------|----------|--------------------|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |            |          |                    |         |           |
| PTV28         |                   |     |             |                  | 300              | 250              | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■        |                    |         | ■         |
| PTT35         |                   |     |             |                  |                  |                  | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■        |                    |         | ■         |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 200             | 180             |       |       |                       |            | ■        |                    |         | ■         |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 220   |       |                       |            | ■        |                    |         | ■         |
| KTE20         | 600               | 600 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■        |                    |         | ■         |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |          |                    |         |           |
| fz            | 0,2 - 0,25        |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet | ■        | ■ bedingt geeignet | ■       | ■         |

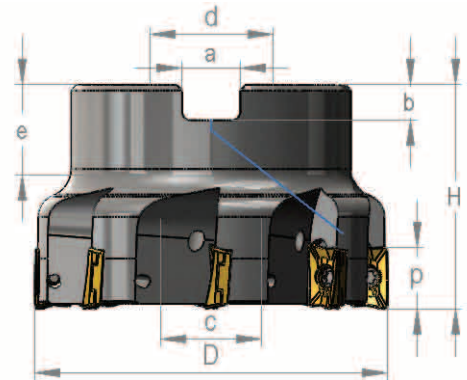
Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

# Serie 1060 - Eckfräser 90° Series 1060 - Milling cutter 90°



**Ausführung:** Aufsteckfräser zylindrisch 90°, mit Innenbohrung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eckfräsen, universelle Einsatzmöglichkeiten

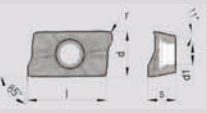
**Execution:** Endmill cutter cylindrical 90°, with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- and shoulder milling and universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |    |      |     |    |    |    | Wendepatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|----|----|------|-----|----|----|----|----------------------|-------------------|------------------|
|                             | D                            | d  | c  | e  | a    | b   | H  | p  | Z  |                      |                   |                  |
| 1060 M-W D40                | 40                           | 16 | 12 | 18 | 8,4  | 5,6 | 40 | 17 | 4  | APKT 1604..          | M-VT40<br>3,0 Nm  | M-BT15           |
| 1060 M-W D50                | 50                           | 22 | 18 | 21 | 10,4 | 6,3 | 40 | 17 | 5  |                      |                   |                  |
| 1060 M-W D63                | 63                           | 22 | 18 | 21 | 10,4 | 6,3 | 40 | 17 | 6  |                      |                   |                  |
| 1060 M-W D80                | 80                           | 27 | 20 | 22 | 12,4 | 8   | 50 | 17 | 7  |                      |                   |                  |
| 1060 M-W D100               | 100                          | 32 | 45 | 26 | 12,4 | 8   | 50 | 17 | 8  |                      |                   |                  |
| 1060 M-W D125               | 125                          | 40 | 56 | 38 | 16,4 | 9   | 63 | 17 | 9  |                      |                   |                  |
| 1060 M D160                 | 160                          | 40 | 87 | 32 | 16,4 | 9   | 63 | 17 | 10 |                      |                   |                  |

Bestellbeispiel / Order example: 1060 M-W D40

W-W = Kühlmittelbohrung / W-W = coolant bores

|                                                                                    | Form Figure                                                                         | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                    |                                                                                     | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|  |  | 16,00                  | 9,45 | 5,26 |    | 0,8 | APKT 1604 PDER             | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 1,2 | APKT 160412 PDER           | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 1,6 | APKT 160416 PDER           | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 2,4 | APKT 160424 PDER           | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 3,0 | APKT 160430 PDER           | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 4,0 | APKT 160440 PDER           | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl | Emulsion   | MMS                | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|----|------------|--------------------|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |    |            |                    |         |           |
| PTV28         |                   |     |             |                  | 300              | 250              | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■          |                    |         | ■         |
| PTT35         |                   |     |             |                  |                  |                  | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■          |                    |         | ■         |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 200             | 180             |       |       |                       |    | ■          |                    |         | ■         |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 220   |       |                       |    | ■          |                    |         | ■         |
| KTE20         | 600               | 600 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■          |                    |         | ■         |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |            |                    |         |           |
| fz            | 0,2 - 0,25        |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■ geeignet | ■ bedingt geeignet |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

# Serie 1090 - Planfräser 75° Series 1090 - Face milling cutter 75°



**Ausführung:** Leichtscheidender Planfräser, vibrationsarmer Lauf durch stark positive Schneidengeometrie, mit Innenkühlung ohne Wendeschneidplatten, ohne Schraubendreher zur Schrupp- und Schlichtbearbeitung, universelle Einsatzmöglichkeiten

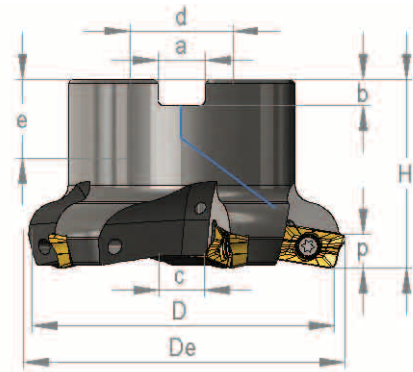
**Lieferumfang:**

**Anwendung:**

**Execution:** Soft-face milling cutter, less vibration, high positive cutting geometry, with inner coolant

**Delivery:** without insert, without screwdriver

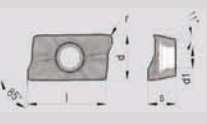
**Application:** for roughing and finishing, universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |     |    |    |    |      |     |    |     |   | Wendepatte<br>Insert                                                                | Schraube<br>Screw                                                                   | Schlüssel<br>Key                                                                    |
|-----------------------------|------------------------------|-----|----|----|----|------|-----|----|-----|---|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                             | D                            | De  | d  | c  | e  | a    | b   | H  | p   | Z |  |  |  |
| 1090 M-W D50                | 50                           | 54  | 16 | 14 | 21 | 8,4  | 5,6 | 40 | 6,5 | 3 | APKT 1604..                                                                         | M-VT40<br>3,0 Nm                                                                    | M-BT15                                                                              |
| 1090 M-W D63                | 63                           | 67  | 22 | 17 | 21 | 10,4 | 6,3 | 40 | 6,5 | 4 |                                                                                     |                                                                                     |                                                                                     |
| 1090 M-W D80                | 80                           | 84  | 27 | 20 | 22 | 12,4 | 7   | 50 | 6,5 | 5 |                                                                                     |                                                                                     |                                                                                     |
| 1090 M-W D100               | 100                          | 104 | 32 | 45 | 26 | 14,4 | 8   | 50 | 6,5 | 6 |                                                                                     |                                                                                     |                                                                                     |
| 1090 M-W D125               | 125                          | 129 | 40 | 56 | 32 | 16,4 | 9   | 63 | 6,5 | 7 |                                                                                     |                                                                                     |                                                                                     |

Bestellbeispiel / Order example: 1090 M-W D50

M-W = Kühlmittelbohrung / M-W = coolant bores

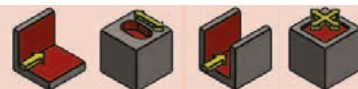
|                                                                                    | Form Figure                                                                         | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>Coated grades |       |       |       |       |       |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                    |                                                                                     | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|  |  | 16,00                  | 9,45 | 5,26 |    | 0,8 | APKT 1604 PDER             | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 1,2 | APKT 160412 PDER           | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 1,6 | APKT 160416 PDER           | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 2,4 | APKT 160424 PDER           | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 3,0 | APKT 160430 PDER           | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 4,0 | APKT 160440 PDER           | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu        |     |      | Stahl   |         |         |          |          |          |          |          |          |          | INOX    |         | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion           | MMS | Trocken | Druckluft |
|---------------|------------|-----|------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|---------|---------|-------|-------|-----------------------|------------|--------------------|-----|---------|-----------|
|               | Kunststoff | Alu | Guss | < 500 N | < 750 N | < 900 N | < 1100 N | < 1400 N | < 55 HRC | < 60 HRC | < 65 HRC | < 67 HRC | < 70 HRC | < 900 N | > 900 N |       |       |                       |            |                    |     |         |           |
| ISO-Code      | N          | N   | N    | P       | P       | P       | P        | P        | H        | H        | H        | H        | H        | M       | M       | K     | S     | N                     |            |                    |     |         |           |
| PTV28         |            |     |      |         | 300     | 250     | 230      | 200      |          |          |          |          |          |         |         |       |       |                       | ■          | ■                  |     | ■       |           |
| PTT35         |            |     |      |         |         |         | 230      | 200      |          |          |          |          |          |         |         |       |       |                       | ■          | ■                  |     | ■       |           |
| PAP28         |            |     |      |         |         |         |          |          |          |          |          |          |          | 200     | 180     |       |       |                       | ■          | ■                  |     | ■       |           |
| MTM10         |            |     |      |         |         |         |          |          |          |          |          |          |          |         |         | 220   |       |                       | ■          | ■                  |     | ■       |           |
| KTE20         | 600        | 600 | 400  |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       | ■          | ■                  |     | ■       |           |
| K10           |            |     |      |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       |            |                    |     |         |           |
| fz            | 0,2 - 0,25 |     |      |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       | ■ geeignet | ■ bedingt geeignet |     |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

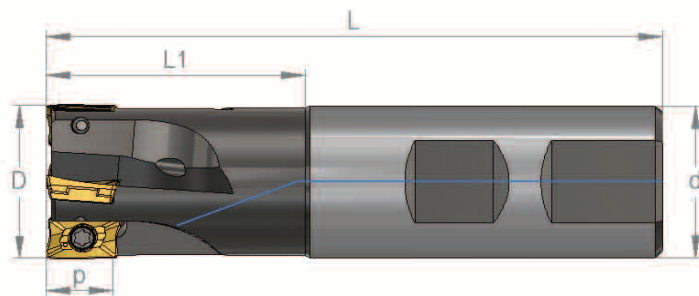
B

## Serie 1061 - Eckfräser 90° Series 1061 - Milling cutter 90°



**Ausführung:** Schaftfräser zylindrisch 90°, mit Innenbohrung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eckfräsen und universelle Einsatzmöglichkeiten

**Execution:** Endmill cutter cylindrical 90° with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- and shoulder milling and universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |      |   | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|-----|----|------|---|-----------------------|-------------------|------------------|
|                             | D                            | d  | L   | L1 | p    | Z |                       |                   |                  |
| 1061 W-W D25                | 25                           | 25 | 100 | 35 | 13,5 | 2 | ADKT 1505..           | M-VT40<br>3,0 Nm  | M-BT15           |
| 1061 W-W D32                | 32                           | 32 | 110 | 40 | 13,5 | 3 |                       |                   |                  |
| 1061 W-W D40                | 40                           | 32 | 115 | 40 | 13,5 | 4 |                       |                   |                  |

Bestellbeispiel / Order example: 1061 W-W D25

W-W = Kühlmittelbohrung / W-W = coolant bores

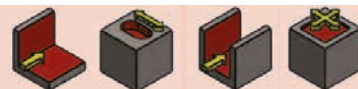
|         | Form Figure | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|---------|-------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|         |             | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| ADKT... |             | 16,30                  | 9,45 | 5,56 |    | 0,8 | ADKT 1505 PDER             | M-VT 40  | M-BT 15   |                                         |     |                                     |       | ■     |       | ■     |       |

| Vc<br>(m/min) | Alu        |   |      | Stahl   |         |         |          |          |          |          |          |          |          |         | INOX    |  | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion           | MMS | Trocken | Druckluft |
|---------------|------------|---|------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|---------|---------|--|-------|-------|-----------------------|------------|--------------------|-----|---------|-----------|
|               | Kunststoff |   | Guss | < 500 N | < 750 N | < 900 N | < 1100 N | < 1400 N | < 55 HRC | < 60 HRC | < 65 HRC | < 67 HRC | < 70 HRC | < 900 N | > 900 N |  |       |       |                       |            |                    |     |         |           |
| ISO-Code      | N          | N | N    | P       | P       | P       | P        | P        | H        | H        | H        | H        | H        | M       | M       |  | K     | S     | N                     |            |                    |     |         |           |
| PTV28         |            |   |      |         |         |         |          |          |          |          |          |          |          |         |         |  |       |       |                       |            |                    |     |         |           |
| PTT35         |            |   |      |         | 200     | 200     | 180      | 160      |          |          |          |          |          |         |         |  |       |       |                       |            | ■                  |     | ■       |           |
| PAP28         |            |   |      |         |         |         |          |          |          |          |          |          |          |         |         |  |       |       |                       |            |                    |     |         |           |
| MTM10         |            |   |      |         |         |         |          |          |          |          |          |          |          |         |         |  | 220   |       |                       |            | ■                  |     | ■       |           |
| KTE20         |            |   |      |         |         |         |          |          |          |          |          |          |          |         |         |  |       |       |                       |            |                    |     |         |           |
| K10           |            |   |      |         |         |         |          |          |          |          |          |          |          |         |         |  |       |       |                       |            |                    |     |         |           |
| fz            | 0,2 - 0,25 |   |      |         |         |         |          |          |          |          |          |          |          |         |         |  |       |       |                       | ■ geeignet | □ bedingt geeignet |     |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

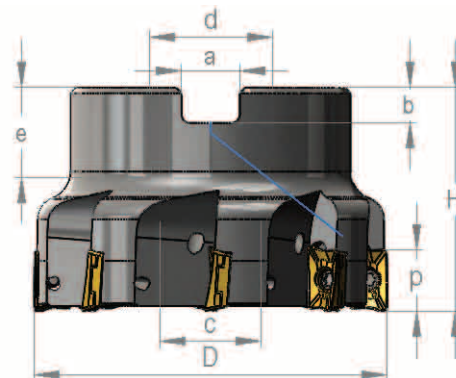


# Serie 1062 - Eckfräser 90° Series 1062 - Milling cutter 90°



**Ausführung:** Aufsteckfräser zylindrisch 90°, mit Innenkühlung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eckfräsen, universelle Einsatzmöglichkeiten

**Execution:** Endmill cutter cylindrical 90°, with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- and shoulder milling and universal application



B

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |    |      |     |    |      |   | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|----|----|------|-----|----|------|---|-----------------------|-------------------|------------------|
|                             | D                            | d  | c  | e  | a    | b   | H  | p    | Z |                       |                   |                  |
| 1062 M-W D40                | 40                           | 16 | 12 | 8  | 8,4  | 5,6 | 40 | 13,5 | 4 | ADKT 1505..           | M-VT40<br>3,0 Nm  | M-BT15           |
| 1062 M-W D50                | 50                           | 22 | 18 | 21 | 10,4 | 6,3 | 40 | 13,5 | 5 |                       |                   |                  |
| 1062 M-W D63                | 63                           | 22 | 18 | 21 | 10,4 | 6,3 | 40 | 13,5 | 6 |                       |                   |                  |
| 1062 M-W D80                | 80                           | 27 | 20 | 22 | 12,4 | 8   | 50 | 13,5 | 7 |                       |                   |                  |
| 1062 M-W D100               | 100                          | 32 | 45 | 26 | 12,4 | 8   | 50 | 13,5 | 8 |                       |                   |                  |
| 1062 M-W D125               | 125                          | 40 | 56 | 38 | 16,4 | 9   | 63 | 13,5 | 9 |                       |                   |                  |

Bestellbeispiel / Order example: 1062 M-W D40

M-W = Kühlmittelbohrung / M-W = coolant bores

|  | Form Figure | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|--|-------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|  |             | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|  |             | 16,30                  | 9,45 | 5,56 |    | 0,8 | ADKT 1505 PDER             | M-VT 40  | M-BT 15   |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl | Emulsion | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|----|----------|-----|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |    |          |     |         |           |
| PTV28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |          |     |         |           |
| PTT35         |                   |     |             |                  | 200              | 200              | 180               | 160               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |          |     |         |           |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |          |     |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 220   |       |                       |    |          |     |         |           |
| KTE20         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |          |     |         |           |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |          |     |         |           |
| fz            |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |          |     |         |           |

0,2 - 0,25

■ geeignet

□ bedingt geeignet

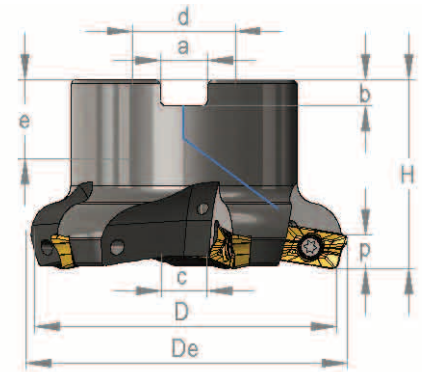
Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

## Serie 1091 - Planfräser 75° Series 1091 - Face milling cutter 75°



**Ausführung:** leichtschneidender Planfräser, vibrationsarmer Lauf durch stark positive Schneidengeometrie, mit Innenkühlung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** zur Schrubb- und Schlichtbearbeitung, universelle Einsatzmöglichkeiten

**Execution:** Soft-face milling cutter, less vibration, high positive cutting geometry, with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** for roughing and finishing, universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |     |    |    |    |      |     |    |     |   | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|-----|----|----|----|------|-----|----|-----|---|-----------------------|-------------------|------------------|
|                             | D                            | De  | d  | c  | e  | a    | b   | H  | p   | Z |                       |                   |                  |
| 1091 M-W D50                | 50                           | 54  | 16 | 14 | 21 | 8,4  | 5,6 | 40 | 6,5 | 3 | ADKT 1505..           | M-VT40<br>3,0 Nm  | M-BT15           |
| 1091 M-W D63                | 63                           | 67  | 22 | 17 | 21 | 10,4 | 6,3 | 40 | 6,5 | 4 |                       |                   |                  |
| 1091 M-W D80                | 80                           | 84  | 27 | 20 | 22 | 12,4 | 7   | 50 | 6,5 | 5 |                       |                   |                  |
| 1091 M-W D100               | 100                          | 104 | 32 | 45 | 26 | 14,4 | 8   | 50 | 6,5 | 6 |                       |                   |                  |
| 1091 M-W D125               | 125                          | 129 | 40 | 56 | 32 | 16,4 | 9   | 63 | 6,5 | 7 |                       |                   |                  |

Bestellbeispiel / Order example: 1091 M-W D50

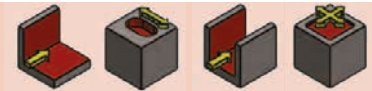
M-W = Kühlmittelbohrung / M-W = coolant bores

|         | Form Figure | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|---------|-------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|         |             | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| ADKT... |             | 16,30                  | 9,45 | 5,56 |    | 0,8 | ADKT 1505 PDER             | M-VT 40  | M-BT 15   |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl       | Emulsion         | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|----------|------------------|-----|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |          |                  |     |         |           |
| PTV28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |          |                  |     |         |           |
| PTT35         |                   |     |             |                  | 200              | 200              | 180               | 160               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |          |                  |     |         |           |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |          |                  |     |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 220   |       |                       |          |                  |     |         |           |
| KTE20         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |          |                  |     |         |           |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |          |                  |     |         |           |
| fz            | 0,2 - 0,25        |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | geeignet | bedingt geeignet |     |         |           |

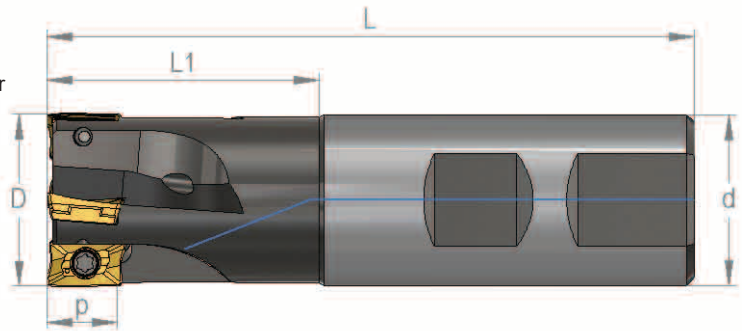
Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

**Serie 2010 - Eckfräser 90°**  
**Series 2010 - Milling cutter 90°**



**Ausführung:** Schaftfräser zylindrisch 90°, mit Innenkühlung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eckrösen und universelle Einsatzmöglichkeiten

**Execution:** Endmill cutter cylindrical 90° with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- and shoulder milling and universal application



B

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |    |   | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|-----|----|----|---|-----------------------|-------------------|------------------|
|                             | D                            | d  | L   | L1 | p  | Z |                       |                   |                  |
| 2010 W-W D16                | 16                           | 16 | 80  | 32 | 10 | 2 | XPKT<br>11T3.. PDR .. | M-VT25<br>1,2 Nm  | M-BT08           |
| 2010 W-WL D16               | 16                           | 16 | 150 | 32 | 10 | 2 |                       |                   |                  |
| 2010 W-W D20                | 20                           | 20 | 90  | 40 | 10 | 3 |                       |                   |                  |
| 2010 W-WL D20               | 20                           | 20 | 150 | 40 | 10 | 3 |                       |                   |                  |
| 2010 W-W D25                | 25                           | 25 | 95  | 40 | 10 | 4 |                       |                   |                  |
| 2010 W-WL D25               | 25                           | 25 | 150 | 40 | 10 | 4 |                       |                   |                  |
| 2010 W-W D32                | 32                           | 25 | 95  | 40 | 10 | 5 |                       |                   |                  |
| 2010 W-WL D32               | 32                           | 25 | 150 | 40 | 10 | 5 |                       |                   |                  |

Bestellbeispiel / Order example: 2010 W-W D16

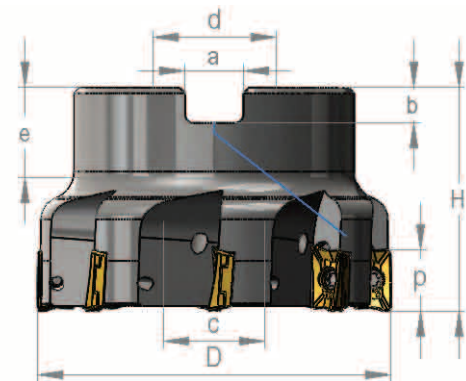
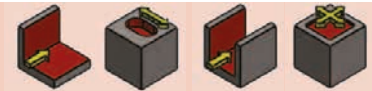
W-W = Kühlmittelbohrung / W-W = coolant bores

|  | Form Figure | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>Coated grades |       |       |       |       |       |
|--|-------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|  |             | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|  |             | 10,50                  | 6,70 | 3,50 |    | 0,5 | XPKT 11T305 PDR            | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|  |             | 10,50                  | 6,70 | 3,50 |    | 0,8 | XPKT 11T308 PDR            | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|  |             | 10,50                  | 6,70 | 3,50 |    | 1,2 | XPKT 11T312 PDR            | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|  |             | 10,50                  | 6,70 | 3,50 |    | 1,6 | XPKT 11T316 PDR            | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|  |             | 10,50                  | 6,70 | 3,50 |    | 2,0 | XPKT 11T320 PDR            | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|  |             |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl | Emulsion   | MMS                | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|----|------------|--------------------|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |    |            |                    |         |           |
| PTV28         |                   |     |             |                  | 300              | 250              | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■          |                    |         | ■         |
| PTT35         |                   |     |             |                  |                  |                  | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■          |                    |         | ■         |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 200             | 180             |       |       |                       |    | ■          |                    |         | ■         |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 220   |       |                       |    | ■          |                    |         | ■         |
| KTE20         | 600               | 600 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■          |                    |         | ■         |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |            |                    |         |           |
| fz            | 0,1 - 0,15        |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■ geeignet | □ bedingt geeignet |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

**Serie 2012 - Eckfräser 90°**  
**Series 2012 - Milling cutter 90°**



**Ausführung:** Aufsteckfräser zylindrisch 90°, mit Innenkühlung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eckfräsen universelle Einsatzmöglichkeiten

**Execution:** Endmill cutter cylindrical 90°, with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove - and shoulder milling and universal application

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |    |      |     |    |    |    | Wendeplatte<br>Insert                                                               | Schraube<br>Screw                                                                   | Schlüssel<br>Key                                                                    |
|-----------------------------|------------------------------|----|----|----|------|-----|----|----|----|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                             | D                            | d  | c  | e  | a    | b   | H  | p  | Z  |  |  |  |
| 2012 M-W D32                | 32                           | 16 |    | 21 | 8,4  | 5,6 | 40 | 10 | 5  | XPKT<br>11T3.. PDR ..                                                               | M-VT25<br>1,2 Nm                                                                    | M-BT08                                                                              |
| 2012 M-W D40                | 40                           | 16 |    | 21 | 8,4  | 5,6 | 40 | 10 | 6  |                                                                                     |                                                                                     |                                                                                     |
| 2012 M-W D50                | 50                           | 22 | 17 | 21 | 10,4 | 6,3 | 40 | 10 | 7  |                                                                                     |                                                                                     |                                                                                     |
| 2012 M-W D63                | 63                           | 22 | 17 | 21 | 10,4 | 6,3 | 40 | 10 | 8  |                                                                                     |                                                                                     |                                                                                     |
| 2012 M-W D80                | 80                           | 27 | 20 | 22 | 12,4 | 7   | 50 | 10 | 11 |                                                                                     |                                                                                     |                                                                                     |

Bestellbeispiel / Order example: 2012 M-W D32

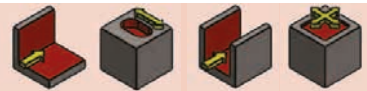
M-W = Kühlmittelbohrung / M-W = coolant bores

|                                                                                    | Form Figure                                                                         | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     |  | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|--|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                    |                                                                                     | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 |  | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|  |  | 10,50                  | 6,70 | 3,50 |    | 0,5 | XPKT 11T305 PDR            | M-VT 25  | M-BT 08   |                                         |     |  |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 0,8 | XPKT 11T308 PDR            | M-VT 25  | M-BT 08   |                                         |     |  |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 1,2 | XPKT 11T312 PDR            | M-VT 25  | M-BT 08   |                                         |     |  |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 1,6 | XPKT 11T316 PDR            | M-VT 25  | M-BT 08   |                                         |     |  |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 2,0 | XPKT 11T320 PDR            | M-VT 25  | M-BT 08   |                                         |     |  |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     |                        |      |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion           | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|------------|--------------------|-----|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |            |                    |     |         |           |
| PTV28         |                   |     |             |                  | 300              | 250              | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| PTT35         |                   |     |             |                  |                  |                  | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 200             | 180             |       |       |                       |            | ■                  |     |         | ■         |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 220   |       |                       |            | ■                  |     |         | ■         |
| KTE20         | 600               | 600 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| fz            | 0,1 - 0,15        |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet | □ bedingt geeignet |     |         |           |

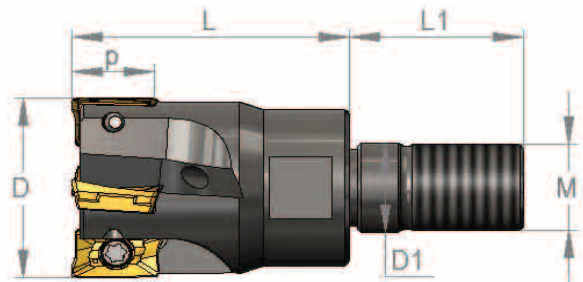
Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

# Serie 2014 - Eckfräser 90° Series 2014 - Milling cutter 90°



**Ausführung:** Einschraubfräser zylindrisch 90°, mit Innenbohrung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eckfräsen, Helixfräsen und universelle Einsatzmöglichkeiten

**Execution:** Endmill cutter cylindrical 90° with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- and shoulder milling, Helical milling and universal application



B

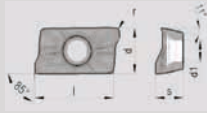
| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |      |     |      |   | Wendeplatte<br>Insert                                                               | Schraube<br>Screw                                                                   | Schlüssel<br>Key                                                                    |
|-----------------------------|------------------------------|----|----|------|-----|------|---|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                             | D                            | p  | L  | L1   | M   | D1   | Z |  |  |  |
| 2014 E-W D16                | 16                           | 10 | 25 | 17,5 | M8  | 8,5  | 2 | XPKT<br>11T3.. PDR ..                                                               | M-VT25<br>1,2 Nm                                                                    | M-BT08                                                                              |
| 2014 E-W D20                | 20                           | 10 | 30 | 20   | M10 | 10,5 | 3 |                                                                                     |                                                                                     |                                                                                     |
| 2014 E-W D25                | 25                           | 10 | 35 | 22   | M12 | 12,5 | 4 |                                                                                     |                                                                                     |                                                                                     |
| 2014 E-W D32                | 32                           | 10 | 43 | 24   | M16 | 17   | 5 |                                                                                     |                                                                                     |                                                                                     |

Bestellbeispiel / Order example: 2014 E-W D16

E-W = Kühlmittelbohrung / E-W = coolant bores

Verlängerungen siehe Seite 392 - 400

Erweiterungen you can see on page 392 - 400

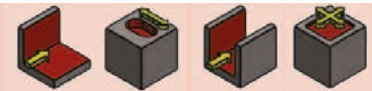
|                                                                                    | Form Figure                                                                         | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     |  | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|--|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                    |                                                                                     | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 |  | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|  |  | 10,50                  | 6,70 | 3,50 |    | 0,5 | XPKT 11T305 PDR            | M-VT 25  | M-BT 08   |                                         |     |  |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 0,8 | XPKT 11T308 PDR            | M-VT 25  | M-BT 08   |                                         |     |  |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 1,2 | XPKT 11T312 PDR            | M-VT 25  | M-BT 08   |                                         |     |  |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 1,6 | XPKT 11T316 PDR            | M-VT 25  | M-BT 08   |                                         |     |  |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 2,0 | XPKT 11T320 PDR            | M-VT 25  | M-BT 08   |                                         |     |  |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     |                        |      |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl | Emulsion   | MMS                | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|----|------------|--------------------|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |    |            |                    |         |           |
| PTV28         |                   |     |             |                  | 300              | 250              | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■          |                    |         | ■         |
| PTT35         |                   |     |             |                  |                  |                  | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■          |                    |         | ■         |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 200             | 180             |       |       |                       |    | ■          |                    |         | ■         |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 220   |       |                       |    | ■          |                    |         | ■         |
| KTE20         | 600               | 600 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■          |                    |         | ■         |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |            |                    |         |           |
| fz            | 0,1 - 0,15        |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■ geeignet | □ bedingt geeignet |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

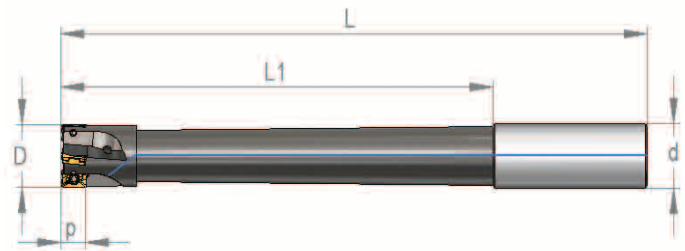


## Serie 2016 - Eckfräser 90° Series 2016 - Milling cutter 90°



**Ausführung:** Eckfräse mit 90° Innenbohrung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eckfräsen, Helixfräsen und universelle Einsatzmöglichkeiten

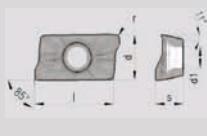
**Execution:** Extra long Endmill cutter with 90° inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- and shoulder milling, Helical milling and universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |     |    |   | Wendeplatte<br>Insert                                                               | Schraube<br>Screw                                                                   | Schlüssel<br>Key                                                                    |
|-----------------------------|------------------------------|----|-----|-----|----|---|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                             | D                            | d  | L   | L1  | p  | Z |  |  |  |
| 2016 W-WXL D16              | 16                           | 16 | 200 | 145 | 10 | 2 | XPKT<br>11T3.. PDR ..                                                               | M-VT25<br>1,2 Nm                                                                    | M-BT08                                                                              |
| 2016 W-WXL D20              | 20                           | 20 | 230 | 170 | 10 | 3 |                                                                                     |                                                                                     |                                                                                     |
| 2016 W-WXL D25              | 25                           | 25 | 250 | 185 | 10 | 4 |                                                                                     |                                                                                     |                                                                                     |
| 2016 W-WXL D32              | 32                           | 32 | 265 | 195 | 10 | 5 |                                                                                     |                                                                                     |                                                                                     |

Bestellbeispiel / Order example: 2016 W-WXL D16

W-W = Kühlmittelbohrung / W-W = coolant bores

|                                                                                    | Form Figure                                                                         | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                    |                                                                                     | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|  |  | 10,50                  | 6,70 | 3,50 |    | 0,5 | XPKT 11T305 PDR            | M-VT 25  | M-BT 08   |                                         |     |                                     |       |       |       |       |       |
|                                                                                    |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 0,8 | XPKT 11T308 PDR            | M-VT 25  | M-BT 08   |                                         |     |                                     |       |       |       |       |       |
|                                                                                    |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 1,2 | XPKT 11T312 PDR            | M-VT 25  | M-BT 08   |                                         |     |                                     |       |       |       |       |       |
|                                                                                    |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 1,6 | XPKT 11T316 PDR            | M-VT 25  | M-BT 08   |                                         |     |                                     |       |       |       |       |       |
|                                                                                    |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 2,0 | XPKT 11T320 PDR            | M-VT 25  | M-BT 08   |                                         |     |                                     |       |       |       |       |       |
|                                                                                    |                                                                                     |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu        |     |      | Stahl   |         |         |          |          |          |          |          |          |          | INOX    |         | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl                                                                                                                                                                                                    | Emulsion                                                                              | MMS                                                                                   | Trocken                                                                               | Druckluft                                                                             |
|---------------|------------|-----|------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|---------|---------|-------|-------|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|               | Kunststoff |     | Guss | < 500 N | < 750 N | < 900 N | < 1100 N | < 1400 N | < 55 HRC | < 60 HRC | < 65 HRC | < 67 HRC | < 70 HRC | < 900 N | > 900 N |       |       |                       |                                                                                                                  |  |  |  |  |
| ISO-Code      | N          | N   | N    | P       | P       | P       | P        | P        | H        | H        | H        | H        | H        | M       | M       | K     | S     | N                     |                                                                                                                                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| PTV28         |            |     |      |         | 300     | 250     | 230      | 200      |          |          |          |          |          |         |         |       |       |                       |                                                                                                                                                                                                       | ■                                                                                     |                                                                                       | ■                                                                                     |                                                                                       |
| PTT35         |            |     |      |         |         |         | 230      | 200      |          |          |          |          |          |         |         |       |       |                       |                                                                                                                                                                                                       | ■                                                                                     |                                                                                       | ■                                                                                     |                                                                                       |
| PAP28         |            |     |      |         |         |         |          |          |          |          |          |          |          | 200     | 180     |       |       |                       |                                                                                                                                                                                                       | ■                                                                                     |                                                                                       | ■                                                                                     |                                                                                       |
| MTM10         |            |     |      |         |         |         |          |          |          |          |          |          |          |         |         | 220   |       |                       |                                                                                                                                                                                                       |  |                                                                                       | ■                                                                                     |                                                                                       |
| KTE20         | 600        | 600 | 400  |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       |                                                                                                                                                                                                       | ■                                                                                     |                                                                                       | ■                                                                                     |                                                                                       |
| K10           |            |     |      |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       |                                                                                                                                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| fz            | 0,1 - 0,15 |     |      |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       |  geeignet  bedingt geeignet |                                                                                       |                                                                                       |                                                                                       |                                                                                       |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

# Serie 2024 - Planfräser 75° Series 2024 - Face milling cutter 75°



**Ausführung:** leichtschneidender Planfräser, vibrationsarmer Lauf durch stark positive Schneidengeometrie, mit Innenkühlung

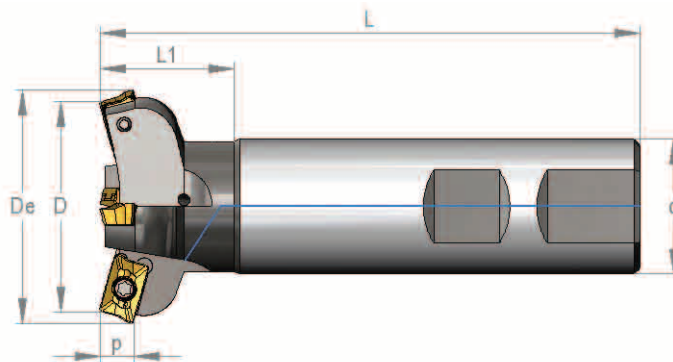
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher

**Anwendung:** zur Schrubb- und Schlichtbearbeitung, universelle Einsatzmöglichkeiten

**Execution:** Soft-face milling cutter, less vibration, high positive cutting geometry, with inner coolant

**Delivery:** without insert, without screwdriver

**Application:** for roughing and finishing, universal application

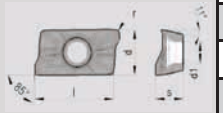


B

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |      |    |     |    |   |   | Wendepatte<br>Insert                                                                | Schraube<br>Screw                                                                   | Schlüssel<br>Key                                                                    |
|-----------------------------|------------------------------|------|----|-----|----|---|---|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                             | D                            | De   | d  | L   | L1 | p | Z |  |  |  |
| 2024 W-W D25                | 25                           | 28,6 | 20 | 95  | 25 | 3 | 2 | XPKT<br>11T3.. PDR ..                                                               | M-VT25<br>1,2 Nm                                                                    | M-BT08                                                                              |
| 2024 W-W D32                | 32                           | 35,6 | 25 | 95  | 25 | 3 | 3 |                                                                                     |                                                                                     |                                                                                     |
| 2024 W-W D40                | 40                           | 43,6 | 25 | 100 | 25 | 3 | 4 |                                                                                     |                                                                                     |                                                                                     |

Bestellbeispiel / Order example: 2024 W-W D25

W-W = Kühlmittelbohrung / W-W = coolant bores

|                                                                                    | Form Figure                                                                         | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                    |                                                                                     | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|  |  | 10,50                  | 6,70 | 3,50 |    | 0,5 | XPKT 11T305 PDR            | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 0,8 | XPKT 11T308 PDR            | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 1,2 | XPKT 11T312 PDR            | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 1,6 | XPKT 11T316 PDR            | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 2,0 | XPKT 11T320 PDR            | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |

| Vc<br>(m/min) | Alu        |     |      | Stahl   |         |         |          |          |          |          |          |          |          | INOX    |         | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl                                                                                    | Emulsion                                                                              | MMS                                                                                   | Trocken                                                                               | Druckluft                                                                             |
|---------------|------------|-----|------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|---------|---------|-------|-------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|               | Kunststoff |     | Guss | < 500 N | < 750 N | < 900 N | < 1100 N | < 1400 N | < 55 HRC | < 60 HRC | < 65 HRC | < 67 HRC | < 70 HRC | < 900 N | > 900 N |       |       |                       |  |  |  |  |  |
| ISO-Code      | N          | N   | N    | P       | P       | P       | P        | P        | H        | H        | H        | H        | H        | M       | M       | K     | S     | N                     |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| PTV28         |            |     |      |         | 300     | 250     | 230      | 200      |          |          |          |          |          |         |         |       |       |                       |                                                                                       | ■                                                                                     |                                                                                       |                                                                                       | ■                                                                                     |
| PTT35         |            |     |      |         |         |         | 230      | 200      |          |          |          |          |          |         |         |       |       |                       |                                                                                       | ■                                                                                     |                                                                                       |                                                                                       | ■                                                                                     |
| PAP28         |            |     |      |         |         |         |          |          |          |          |          |          |          | 200     | 180     |       |       |                       |                                                                                       | ■                                                                                     |                                                                                       |                                                                                       | ■                                                                                     |
| MTM10         |            |     |      |         |         |         |          |          |          |          |          |          |          |         |         | 220   |       |                       |                                                                                       | ■                                                                                     |                                                                                       |                                                                                       | ■                                                                                     |
| KTE20         | 600        | 600 | 400  |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       |                                                                                       | ■                                                                                     |                                                                                       |                                                                                       | ■                                                                                     |
| K10           |            |     |      |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| fz            | 0,1 - 0,15 |     |      |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       | ■ geeignet                                                                            | ■ bedingt geeignet                                                                    |                                                                                       |                                                                                       |                                                                                       |

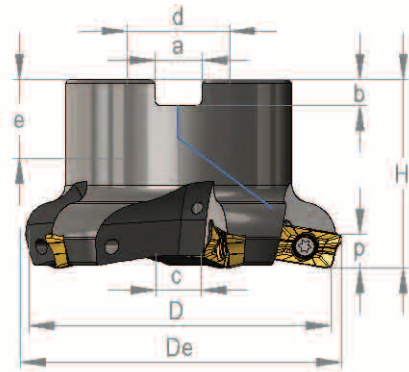
Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

## Serie 2026 - Planfräser 75° Series 2026 - Face milling cutter 75°



**Ausführung:** leichtschneidender Planfräser, vibrationsarmer Lauf durch stark positive Schneidengeometrie, mit Innenkühlung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** zur Schrubb- und Schlichtbearbeitung, universelle Einsatzmöglichkeiten

**Execution:** Soft-face milling cutter, less vibration, high positive cutting geometry, with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** for roughing and finishing, universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |    |    |      |     |    |   |   | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|----|----|----|------|-----|----|---|---|-----------------------|-------------------|------------------|
|                             | D                            | De | d  | c  | e  | a    | b   | H  | p | Z |                       |                   |                  |
| 2026 M-W D50                | 50                           | 54 | 22 | 17 | 21 | 10,4 | 6,3 | 40 | 3 | 5 | XPKT<br>11T3.. PDR .. | M-VT25<br>1,2 Nm  | M-BT08           |
| 2026 M-W D63                | 63                           | 67 | 22 | 17 | 21 | 10,4 | 6,3 | 40 | 3 | 6 |                       |                   |                  |
| 2026 M-W D80                | 80                           | 87 | 27 | 20 | 22 | 12,4 | 7   | 50 | 3 | 7 |                       |                   |                  |

Bestellbeispiel / Order example: 2026 M-W D50

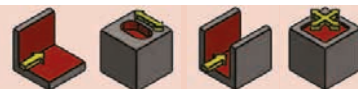
M-W = Kühlmittelbohrung / M-W = coolant bores

| Form Figure                                                                                   | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|-----------------------------------------------------------------------------------------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                               | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>XPKT... | 10,50                  | 6,70 | 3,50 |    | 0,5 | XPKT 11T305 PDR            | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                               | 10,50                  | 6,70 | 3,50 |    | 0,8 | XPKT 11T308 PDR            | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                               | 10,50                  | 6,70 | 3,50 |    | 1,2 | XPKT 11T312 PDR            | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                               | 10,50                  | 6,70 | 3,50 |    | 1,6 | XPKT 11T316 PDR            | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                               | 10,50                  | 6,70 | 3,50 |    | 2,0 | XPKT 11T320 PDR            | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                               |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       | Graphit<br>GFK<br>CFK |  |  |  |  |  |  |                                                                                     |                  |  |  |  |  |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------|------------------|--|--|--|--|
|               | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN |                       |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                      |  |                                                                                     |                  |  |  |  |  |
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                      |  |                                                                                     |                  |  |  |  |  |
| PTV28         |                   |     |             |                  | 300              | 250              | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                      |  |                                                                                     |                  |  |  |  |  |
| PTT35         |                   |     |             |                  |                  |                  | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                      |  |                                                                                     |                  |  |  |  |  |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 200             | 180             |       |       |                       |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                      |  |                                                                                     |                  |  |  |  |  |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 220   |       |                       |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                      |  |                                                                                     |                  |  |  |  |  |
| KTE20         | 600               | 600 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                      |  |                                                                                     |                  |  |  |  |  |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                      |  |                                                                                     |                  |  |  |  |  |
| fz            | 0,1 - 0,15        |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |  | geeignet                                                                            |                                                                                     |                                                                                     |                                                                                      |  |  | bedingt geeignet |  |  |  |  |

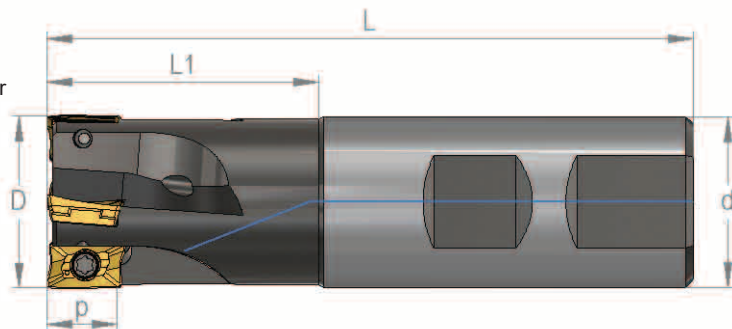
Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

# Serie 2030 - Eckfräser 90° Series 2030 - Milling cutter 90°



**Ausführung:** Schaftfräser zylindrisch 90°, mit Innenbohrung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eckfräsen und universelle Einsatzmöglichkeiten

**Execution:** Endmill cutter cylindrical 90° with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- and shoulder milling and universal application



B

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |    |   | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|-----|----|----|---|-----------------------|-------------------|------------------|
|                             | D                            | d  | L   | L1 | p  | Z |                       |                   |                  |
| 2030 W-WL D22               | 22                           | 20 | 200 | 60 | 17 | 2 | XPKT<br>1705.. PDR..  | M-VT40<br>3,0 Nm  | M-BT15           |
| 2030 W-W D25                | 25                           | 25 | 100 | 44 | 17 | 2 |                       |                   |                  |
| 2030 W-WL D25               | 25                           | 25 | 200 | 60 | 17 | 2 |                       |                   |                  |
| 2030 W-W D30                | 30                           | 25 | 110 | 50 | 17 | 3 |                       |                   |                  |
| 2030 W-W D32                | 32                           | 32 | 110 | 50 | 17 | 3 |                       |                   |                  |
| 2030 W-WL D32               | 32                           | 32 | 200 | 60 | 17 | 3 |                       |                   |                  |

Bestellbeispiel / Order example: 2030 W-W D25

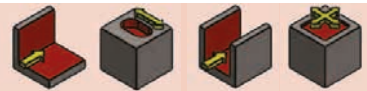
W-W = Kühlmittelbohrung / W-W = coolant bores

|  | Form Figure | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|--|-------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|  |             | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|  |             | 16,00                  | 9,45 | 5,26 |    | 0,8 | XPKT 170508 PDR            | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|  |             | 16,00                  | 9,45 | 5,26 |    | 1,2 | XPKT 170512 PDR            | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|  |             | 16,00                  | 9,45 | 5,26 |    | 1,6 | XPKT 170516 PDR            | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|  |             | 16,00                  | 9,45 | 5,26 |    | 2,4 | XPKT 170524 PDR            | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|  |             | 16,00                  | 9,45 | 5,26 |    | 3,0 | XPKT 170530 PDR            | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|  |             | 16,00                  | 9,45 | 5,26 |    | 4,0 | XPKT 170540 PDR            | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion           | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|------------|--------------------|-----|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |            |                    |     |         |           |
| PTV28         |                   |     |             |                  | 300              | 250              | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| PTT35         |                   |     |             |                  |                  |                  | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 200             | 180             |       |       |                       |            | ■                  |     |         | ■         |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 220   |       |                       |            | ■                  |     |         | ■         |
| KTE20         | 600               | 600 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| fz            | 0,2 - 0,25        |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet | □ bedingt geeignet |     |         |           |

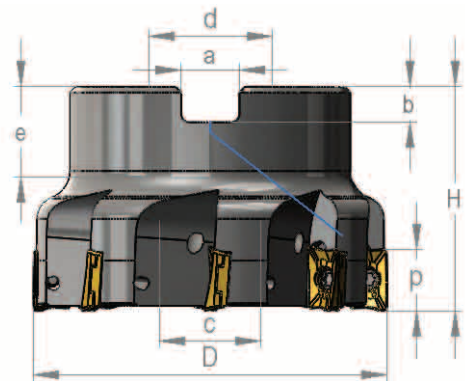
Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

## Serie 2032 - Eckfräser 90° Series 2032 - Milling cutter 90°



**Ausführung:** Aufsteckfräser zylindrisch 90°, mit Innenbohrung  
**Lieferumfang:** ohne Wendschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eckfräsen, universelle Einsatzmöglichkeiten

**Execution:** Endmill cutter cylindrical 90°, with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- and shoulder milling and universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |    |      |     |    |    |    | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|----|----|------|-----|----|----|----|-----------------------|-------------------|------------------|
|                             | D                            | d  | c  | e  | a    | b   | H  | p  | Z  |                       |                   |                  |
| 2032 M-W D40                | 40                           | 16 | 12 | 8  | 8,4  | 5,6 | 40 | 17 | 4  | XPKT<br>1705.. PDR..  | M-VT40<br>3,0 Nm  | M-BT15           |
| 2032 M-W D50                | 50                           | 22 | 18 | 21 | 10,4 | 6,3 | 40 | 17 | 5  |                       |                   |                  |
| 2032 M-W D63                | 63                           | 22 | 18 | 21 | 10,4 | 6,3 | 40 | 17 | 6  |                       |                   |                  |
| 2032 M-W D80                | 80                           | 27 | 20 | 22 | 12,4 | 8   | 50 | 17 | 7  |                       |                   |                  |
| 2032 M-W D100               | 100                          | 32 | 45 | 26 | 12,4 | 8   | 50 | 17 | 8  |                       |                   |                  |
| 2032 M-W D125               | 125                          | 40 | 56 | 38 | 16,4 | 9   | 63 | 17 | 9  |                       |                   |                  |
| 2032 M D160                 | 160                          | 40 | 87 | 32 | 16,4 | 9   | 63 | 17 | 10 |                       |                   |                  |

Bestellbeispiel / Order example: 2032 M-W D40

M-W = Kühlmittelbohrung / M-W = coolant bores

|  | Form Figure | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|--|-------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|  |             | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|  |             | 16,00                  | 9,45 | 5,26 |    | 0,8 | XPKT 170508 PDR            | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|  |             | 16,00                  | 9,45 | 5,26 |    | 1,2 | XPKT 170512 PDR            | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|  |             | 16,00                  | 9,45 | 5,26 |    | 1,6 | XPKT 170516 PDR            | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|  |             | 16,00                  | 9,45 | 5,26 |    | 2,4 | XPKT 170524 PDR            | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|  |             | 16,00                  | 9,45 | 5,26 |    | 3,0 | XPKT 170530 PDR            | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|  |             | 16,00                  | 9,45 | 5,26 |    | 4,0 | XPKT 170540 PDR            | M-VT 40  | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|  |             |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl | Emulsion   | MMS                | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|----|------------|--------------------|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |    |            |                    |         |           |
| PTV28         |                   |     |             |                  | 300              | 250              | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■          |                    |         | ■         |
| PTT35         |                   |     |             |                  |                  |                  | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■          |                    |         | ■         |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 200             | 180             |       |       |                       |    | ■          |                    |         | ■         |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 220   |       |                       |    | ■          |                    |         | ■         |
| KTE20         | 600               | 600 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■          |                    |         | ■         |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |            |                    |         |           |
| fz            | 0,2 - 0,25        |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■ geeignet | □ bedingt geeignet |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

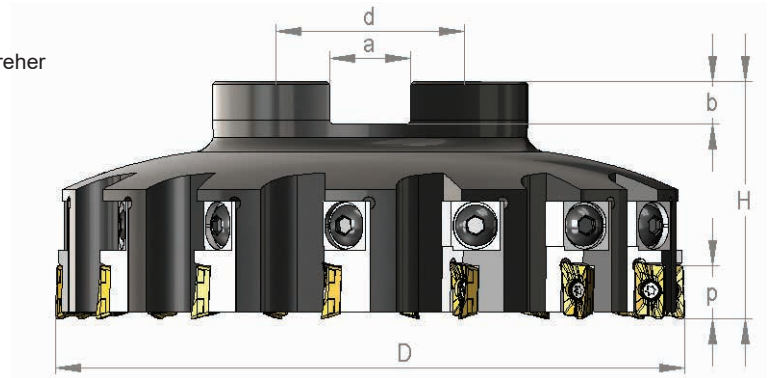


# Serie 2032 - Eckfräser 90° Series 2032 - Milling cutter 90°



**Ausführung:** Aufsteckfräser zylindrisch 90°  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eckfräsen, universelle Einsatzmöglichkeiten

**Execution:** Endmill cutter cylindrical 90°  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- and shoulder milling and universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |      |      |    |    |    | Wendepatte<br>Insert                                                                | Schraube<br>Screw                                                                   | Schlüssel<br>Key                                                                    |
|-----------------------------|------------------------------|----|------|------|----|----|----|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                             | D                            | d  | a    | b    | H  | p  | Z  |  |  |  |
| 2032 M D200                 | 200                          | 60 | 25,7 | 9    | 65 | 17 | 14 | XPKT<br>1705.. PDR..                                                                | M-VT40<br>3,0 Nm                                                                    | M-BT15                                                                              |
| 2032 M D250                 | 250                          | 60 | 25,7 | 13,5 | 65 | 17 | 16 |                                                                                     |                                                                                     |                                                                                     |
| 2032 M D315                 | 315                          | 60 | 25,7 | 13,5 | 65 | 17 | 18 |                                                                                     |                                                                                     |                                                                                     |
| 2032 M D350                 | 350                          | 60 | 25,7 | 13,5 | 65 | 17 | 10 |                                                                                     |                                                                                     |                                                                                     |

Bestellbeispiel / Order example: 2032 M D200

|                                   |                                                                                                                                     |                                                                                                                                                                             |                                                                                                                                                                       |                                                                                                                                                                                   |                                                                                                                                                                                |
|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Ersatzteile</b><br>Spare parts | <b>Kassette</b><br>Cassette<br><br><b>M-K 17</b> | <b>Spannschraube</b><br>für Kassette<br>Clamp screw<br>for cassette<br><br><b>M-BL 4</b> | <b>Schlüssel</b><br>für Spannschraube<br>Key for<br>clamp screw<br><br><b>I 5</b> | <b>Justierschraube</b><br>für Kassette<br>adjuster screw<br>for cassette<br><br><b>M-M 3</b> | <b>Schlüssel</b><br>für Justierschraube<br>Key for<br>adjuster screw<br><br><b>M-BT 6</b> |
|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                               | Form Figure                                                                         | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|-----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                               |                                                                                     | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>XPKT... |  | 16,00                  | 9,45 | 5,26 |    | 0,8 | XPKT 170508 PDR            | M-VT 40  | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|                                                                                               |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 1,2 | XPKT 170512 PDR            | M-VT 40  | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|                                                                                               |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 1,6 | XPKT 170516 PDR            | M-VT 40  | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|                                                                                               |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 2,4 | XPKT 170524 PDR            | M-VT 40  | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|                                                                                               |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 3,0 | XPKT 170530 PDR            | M-VT 40  | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|                                                                                               |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 4,0 | XPKT 170540 PDR            | M-VT 40  | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|                                                                                               |                                                                                     |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl                            | Emulsion | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|-------------------------------|----------|-----|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |                               |          |     |         |           |
| PTV28         |                   |     |             |                  | 300              | 250              | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                               |          |     |         |           |
| PTT35         |                   |     |             |                  |                  |                  | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                               |          |     |         |           |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 200             | 180             |       |       |                       |                               |          |     |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 220   |       |                       |                               |          |     |         |           |
| KTE20         | 600               | 600 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                               |          |     |         |           |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                               |          |     |         |           |
| fz            | 0,2 - 0,25        |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet □ bedingt geeignet |          |     |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

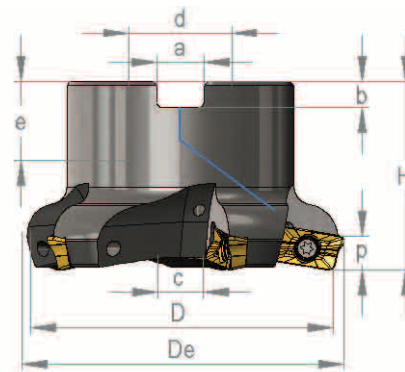
B

# Serie 2044 - Planfräser 75° Series 2044 - Face milling cutter 75°



B

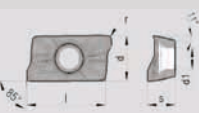
- Ausführung:** leichtschneidender Planfräser, vibrationsarmer Lauf durch stark positive Schneidengeometrie, mit Innenkühlung
- Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher
- Anwendung:** zur Schrubb- und Schlichtbearbeitung, universelle Einsatzmöglichkeiten
- Execution:** Soft-face milling cutter, less vibration, high positive cutting geometry, with inner coolant
- Delivery:** without insert, without screwdriver
- Application:** for roughing and finishing, universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |     |    |    |    |      |     |    |     |   | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|-----|----|----|----|------|-----|----|-----|---|-----------------------|-------------------|------------------|
|                             | D                            | De  | d  | c  | e  | a    | b   | H  | p   | Z |                       |                   |                  |
| 2044 M-W D50                | 50                           | 54  | 16 | 14 | 21 | 8,4  | 5,6 | 40 | 6,5 | 3 | XPKT<br>1705.. PDR..  | M-VT40<br>3,0 Nm  | M-BT15           |
| 2044 M-W D63                | 63                           | 67  | 22 | 17 | 21 | 10,4 | 6,3 | 40 | 6,5 | 4 |                       |                   |                  |
| 2044 M-W D80                | 80                           | 84  | 27 | 20 | 22 | 12,4 | 7   | 50 | 6,5 | 5 |                       |                   |                  |
| 2044 M-W D100               | 100                          | 104 | 32 | 45 | 26 | 14,4 | 8   | 50 | 6,5 | 6 |                       |                   |                  |
| 2044 M-W D125               | 125                          | 129 | 40 | 56 | 32 | 16,4 | 9   | 63 | 6,5 | 7 |                       |                   |                  |

Bestellbeispiel / Order example: 2044 M-W D50

M-W = Kühlmittelbohrung / M-W = coolant bores

|                                                                                               | Form Figure                                                                         | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>Coated grades |       |       |       |       |       |
|-----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                               |                                                                                     | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>XPKT... |  | 16,00                  | 9,45 | 5,26 |    | 0,8 | XPKT 170508 PDR            | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                               |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 1,2 | XPKT 170512 PDR            | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                               |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 1,6 | XPKT 170516 PDR            | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                               |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 2,4 | XPKT 170524 PDR            | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                               |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 3,0 | XPKT 170530 PDR            | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                               |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 4,0 | XPKT 170540 PDR            | M-VT 40  | M-BT 15   |                                         |     |                                     |       |       |       |       |       |

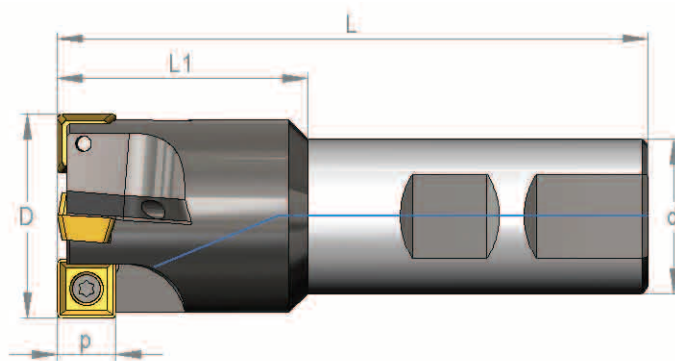
| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl | Emulsion   | MMS                | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|----|------------|--------------------|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |    |            |                    |         |           |
| PTV28         |                   |     |             |                  | 300              | 250              | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■          |                    |         | ■         |
| PTT35         |                   |     |             |                  |                  |                  | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■          |                    |         | ■         |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 200             | 180             |       |       |                       |    | ■          |                    |         | ■         |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 220   |       |                       |    | ■          |                    |         | ■         |
| KTE20         | 600               | 600 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■          |                    |         | ■         |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |            |                    |         |           |
| fz            | 0,2 - 0,25        |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■ geeignet | □ bedingt geeignet |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

## Serie 2045 - Eckfräser 90° Series 2045 - Milling cutter 90°

**Ausführung:** Schaftfräser zylindrisch 90°, mit Innenbohrung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eckfräsen und universelle Einsatzmöglichkeiten

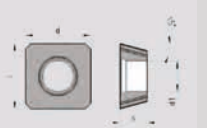
**Execution:** Endmill cutter cylindrical 90° with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- and shoulder milling and universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |   |   | Wendeplatte<br>Insert                                                               | Schraube<br>Screw                                                                   | Schlüssel<br>Key                                                                    |
|-----------------------------|------------------------------|----|-----|----|---|---|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                             | D                            | d  | L   | L1 | p | Z |  |  |  |
| 2045 W-W D25                | 25                           | 25 | 95  | 40 | 9 | 3 | SDKT<br>09T308..                                                                    | M-VT30<br>1,2 Nm                                                                    | M-BT08                                                                              |
| 2045 W-WL D25               | 25                           | 25 | 150 | 40 | 9 | 3 |                                                                                     |                                                                                     |                                                                                     |
| 2045 W-W D32                | 32                           | 25 | 95  | 40 | 9 | 4 |                                                                                     |                                                                                     |                                                                                     |
| 2045 W-WL D32               | 32                           | 25 | 150 | 40 | 9 | 4 |                                                                                     |                                                                                     |                                                                                     |

Bestellbeispiel / Order example: 2045 W-W D25

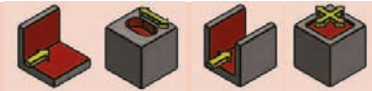
W-W = Kühlmittelbohrung / W-W = coolant bores

|                                                                                                | Form Figure                                                                         | Abmessungen Dimensions |      |      |      |      | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|------|------|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                |                                                                                     | l                      | d    | s    | d1   | r    |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>SDKT... |  | 9,52                   | 9,52 | 3,97 | 3,30 | 0,80 | SDKT 09T308 ALU            | M-VT 30  | M-BT 08   | ■                                       |     |                                     |       |       |       |       | ■     |
|                                                                                                |                                                                                     | 9,52                   | 9,52 | 3,97 | 3,30 | 0,80 | SDKT 09T308 WM             | M-VT 30  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     |       |
|                                                                                                |                                                                                     |                        |      |      |      |      |                            |          |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion           | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|------------|--------------------|-----|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |            |                    |     |         |           |
| PTV28         |                   |     |             |                  | 300              | 250              | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| PTT35         |                   |     |             |                  |                  |                  | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 200             | 180             |       |       |                       |            | ■                  |     |         | ■         |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 220   |       |                       |            | ■                  |     |         | ■         |
| KTE20         | 600               | 600 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| K10           | 450               | 450 | 300         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| fz            | 0,15 - 0,2        |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet | □ bedingt geeignet |     |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

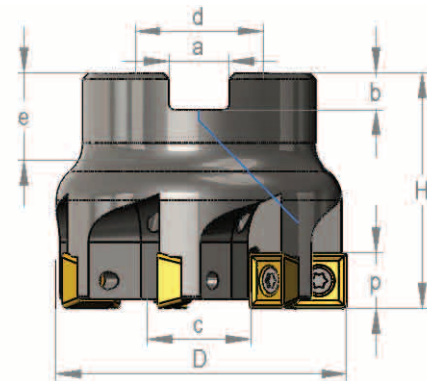
## Serie 2046 - Eckfräser 90° Series 2046 - Milling cutter 90°



B

**Ausführung:** Aufsteckfräser zylindrisch 90°, mit Innenbohrung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eckfräsen, universelle Einsatzmöglichkeiten

**Execution:** Endmill cutter cylindrical 90°, with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- and shoulder milling and universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |    |      |     |    |   |   | Wendepatte<br>Insert                                                                | Schraube<br>Screw                                                                   | Schlüssel<br>Key                                                                    |
|-----------------------------|------------------------------|----|----|----|------|-----|----|---|---|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                             | D                            | d  | c  | e  | a    | b   | H  | p | Z |  |  |  |
| 2046 M-W D32                | 32                           | 16 | -  | 21 | 8,4  | 5,6 | 40 | 9 | 5 | SDKT<br>09T308..                                                                    | M-VT30<br>1,2 Nm                                                                    | M-BT08                                                                              |
| 2046 M-W D40                | 40                           | 16 | -  | 21 | 8,4  | 5,6 | 40 | 9 | 5 |                                                                                     |                                                                                     |                                                                                     |
| 2046 M-W D50                | 50                           | 22 | 17 | 21 | 10,4 | 6,3 | 40 | 9 | 6 |                                                                                     |                                                                                     |                                                                                     |
| 2046 M-W D63                | 63                           | 22 | 17 | 21 | 10,4 | 6,3 | 40 | 9 | 7 |                                                                                     |                                                                                     |                                                                                     |
| 2046 M-W D80                | 80                           | 27 | 20 | 22 | 12,4 | 7   | 50 | 9 | 9 |                                                                                     |                                                                                     |                                                                                     |

Bestellbeispiel / Order example: 2046 M-W D32

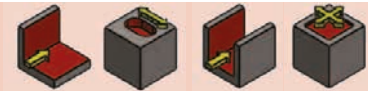
M-W = Kühlmittelbohrung / M-W = coolant bores

|                                                                                                | Form Figure                                                                         | Abmessungen Dimensions |      |      |      |      | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>Coated grades |       |       |       |       |       |
|------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|------|------|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                |                                                                                     | l                      | d    | s    | d1   | r    |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>SDKT... |  | 9,52                   | 9,52 | 3,97 | 3,30 | 0,80 | SDKT 09T308 ALU            | M-VT 30  | M-BT 08   | ■                                       |     |                                     |       |       |       |       | ■     |
|                                                                                                |                                                                                     | 9,52                   | 9,52 | 3,97 | 3,30 | 0,80 | SDKT 09T308 WM             | M-VT 30  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     |       |
|                                                                                                |                                                                                     |                        |      |      |      |      |                            |          |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion           | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|------------|--------------------|-----|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |            |                    |     |         |           |
| PTV28         |                   |     |             |                  | 300              | 250              | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| PTT35         |                   |     |             |                  |                  |                  | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 200             | 180             |       |       |                       |            | ■                  |     |         | ■         |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 220   |       |                       |            | ■                  |     |         | ■         |
| KTE20         | 600               | 600 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| K10           | 450               | 450 | 300         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| fz            | 0,15 - 0,2        |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet | □ bedingt geeignet |     |         |           |

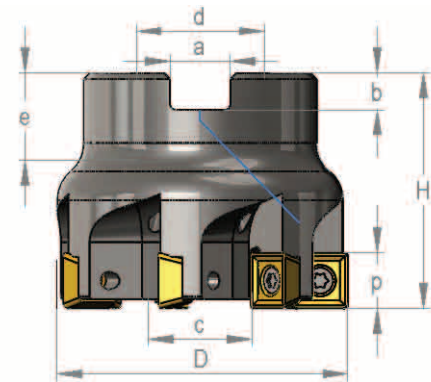
Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

**Serie 1063 N - Eckfräser 90°**  
**Series 1063 N - Milling cutter 90°**



**Ausführung:** Aufsteckfräser zylindrisch 90°, mit Innenbohrung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eckfräsen, universelle Einsatzmöglichkeiten

**Execution:** Endmill cutter cylindrical 90°, with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** for roughing and finishing, universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |    |      |     |    |      |   | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|----|----|------|-----|----|------|---|-----------------------|-------------------|------------------|
|                             | D                            | d  | c  | e  | a    | b   | H  | p    | Z |                       |                   |                  |
| 1063 N M-W D50              | 50                           | 22 | 17 | 21 | 10,4 | 6,3 | 40 | 10,5 | 5 | SDKT 1205..           | M-VT40<br>3,0 Nm  | M-BT15           |
| 1063 N M-W D63              | 63                           | 22 | 17 | 21 | 10,4 | 6,3 | 40 | 10,5 | 6 |                       |                   |                  |
| 1063 N M-W D80              | 80                           | 27 | 20 | 22 | 12,4 | 7   | 50 | 10,5 | 6 |                       |                   |                  |
| 1063 N M-W D100             | 100                          | 32 | 45 | 26 | 14,4 | 8   | 50 | 10,5 | 8 |                       |                   |                  |
| 1063 N M-W D125             | 125                          | 40 | 55 | 30 | 16,4 | 9   | 63 | 10,5 | 9 |                       |                   |                  |

Bestellbeispiel / Order example: 1063 M-W D50

M-W = Kühlmittelbohrung / M-W = coolant bores

|         | Form Figure | Abmessungen Dimensions |       |      |      |   | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|---------|-------------|------------------------|-------|------|------|---|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|         |             | l                      | d     | s    | d1   | r |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| SDKT... |             | 12,70                  | 12,70 | 5,00 | 5,00 |   | SDKT 1205 PDER             | M-VT 40  | M-BT 15   |                                         | ■   |                                     | ■     | ■     | ■     | ■     | ■     |

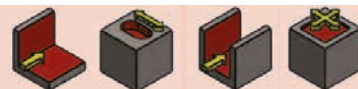
| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion           | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|------------|--------------------|-----|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |            |                    |     |         |           |
| PTV28         |                   |     |             |                  | 300              | 250              | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| PTT35         |                   |     |             |                  |                  |                  | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 200             | 180             |       |       |                       |            | ■                  |     |         | ■         |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 220   |       |                       |            | ■                  |     |         | ■         |
| KTE20         | 600               | 600 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| K10           | 450               | 450 | 300         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| fz            | 0,15 - 0,2        |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet | □ bedingt geeignet |     |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

B

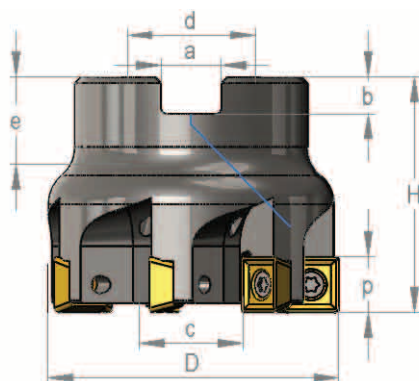


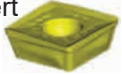
## Serie 1063 - Eckfräser 90° Series 1063 - Milling cutter 90°



**Ausführung:** Aufsteckfräser zylindrisch 90°, mit Innenkühlung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eckfräsen, universelle Einsatzmöglichkeiten

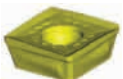
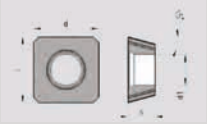
**Execution:** Endmill cutter cylindrical 90°, with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** for roughing and finishing, universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |    |      |     |    |      |   | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|----|----|----|------|-----|----|------|---|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
|                             | D                            | d  | c  | e  | a    | b   | H  | p    | Z |                                                                                                              |                                                                                                          |                                                                                                         |
| 1063 M-W D50                | 50                           | 22 | 17 | 21 | 10,4 | 6,3 | 40 | 10,5 | 5 | SDMT 1205..                                                                                                  | M-VT40<br>3,0 Nm                                                                                         | M-BT15                                                                                                  |
| 1063 M-W D63                | 63                           | 22 | 17 | 21 | 10,4 | 6,3 | 40 | 10,5 | 6 |                                                                                                              |                                                                                                          |                                                                                                         |
| 1063 M-W D80                | 80                           | 27 | 20 | 22 | 12,4 | 7   | 50 | 10,5 | 6 |                                                                                                              |                                                                                                          |                                                                                                         |
| 1063 M-W D100               | 100                          | 32 | 45 | 26 | 14,4 | 8   | 50 | 10,5 | 8 |                                                                                                              |                                                                                                          |                                                                                                         |
| 1063 M-W D125               | 125                          | 40 | 55 | 30 | 16,4 | 9   | 63 | 10,5 | 9 |                                                                                                              |                                                                                                          |                                                                                                         |

Bestellbeispiel / Order example: 1063 M-W D50

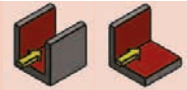
M-W = Kühlmittelbohrung / M-W = coolant bores

|                                                                                               | Form Figure                                                                         | Abmessungen Dimensions |       |      |      |   | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|-----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|-------|------|------|---|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                               |                                                                                     | l                      | d     | s    | d1   | r |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>SDMT... |  | 12,70                  | 12,70 | 5,00 | 5,00 |   | SDMT 1205 PDER             | M-VT 40  | M-BT 15   |                                         |     |                                     |       | ■     |       | ■     |       |
|                                                                                               |                                                                                     |                        |       |      |      |   |                            |          |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl | Emulsion   | MMS                | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|----|------------|--------------------|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |    |            |                    |         |           |
| PTV28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |            |                    |         |           |
| PTT35         |                   |     |             |                  | 250              | 250              | 220               | 220               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■          |                    |         | ■         |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |            |                    |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 220   |       |                       |    | □          |                    |         | ■         |
| KTE20         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |            |                    |         |           |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |            |                    |         |           |
| fz            | 0,2 - 0,25        |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■ geeignet | □ bedingt geeignet |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

## Serie 2074 - Eckfräser 90° Series 2074 - Milling cutter 90°



### Ausführung:

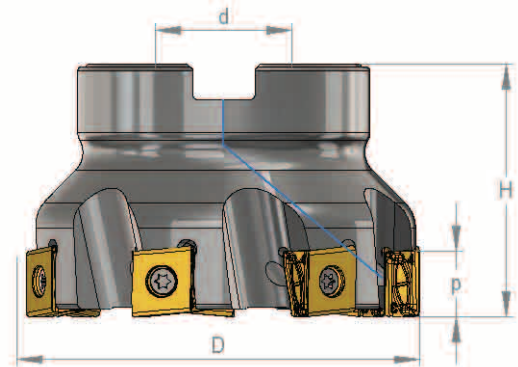
Durch tangentielle Klemmung der Platten ergibt sich ein sehr stabiles Werkzeugsystem

- Produktivität gewährleistet durch 4 Schneiden
- Hohe Bearbeitungssicherheit durch dicke Tangentialplatte
- Leichter Schnitt durch Helixgeometrie an den Schneidkanten

### Performance:

Due to tangential clamping of the inserts a very stable tool system

- productivity guaranteed through 4 cutting edges
- high machining security through thick tangential milling insert



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |    |    | Wendepatte<br>Insert | Schraube<br>Screw   | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|----|----|----|----------------------|---------------------|------------------|
|                             | D                            | d  | H  | p  | z  |                      |                     |                  |
| 2074 M-W D50                | 50                           | 22 | 40 | 12 | 4  | LNMX 131308...-R..   | M-VT40-50<br>3,0 Nm | M-BT 15          |
| 2074 M-W D63/4              | 63                           | 22 | 40 | 12 | 4  |                      |                     |                  |
| 2074 M-W D63/6              | 63                           | 22 | 40 | 12 | 6  |                      |                     |                  |
| 2074 M-W D80                | 80                           | 27 | 50 | 12 | 7  |                      |                     |                  |
| 2074 M-W D100               | 100                          | 32 | 50 | 12 | 8  |                      |                     |                  |
| 2074 M-W D125               | 125                          | 40 | 63 | 12 | 9  |                      |                     |                  |
| 2074 M D160                 | 160                          | 40 | 63 | 12 | 10 |                      |                     |                  |
| 2074 M D200                 | 200                          | 60 | 75 | 12 | 14 |                      |                     |                  |
| 2074 M D250                 | 250                          | 60 | 75 | 12 | 16 |                      |                     |                  |
| 2074 M D315                 | 315                          | 60 | 75 | 12 | 18 |                      |                     |                  |

Bestellbeispiel / Order example: 2074 M-W D80

M-W = Kühlmittelbohrung / M-W = coolant bores

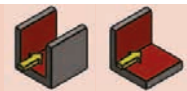
|            | Form Figure | Abmessungen Dimensions |      |       |      |      | Bezeichnung<br>Designation | Schraube  | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|------------|-------------|------------------------|------|-------|------|------|----------------------------|-----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|            |             | l                      | d    | s     | d1   | r    |                            |           |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>LNMX.. |             | 13,00                  | 7,94 | 13,00 | 4,60 | 0,80 | LNMX 131308 RP - R..       | M-VT40-50 | M-BT 15   |                                         |     |                                     | ■     | ■     |       | ■     |       |
|            |             | 13,00                  | 7,94 | 13,00 | 4,60 | 0,80 | LNMX 131308 MP - R..       | M-VT40-50 | M-BT 15   |                                         |     |                                     |       | ■     |       |       |       |
|            |             | 13,00                  | 7,94 | 13,00 | 4,60 | 0,80 | LNMX 131308 RK - R..       | M-VT40-50 | M-BT 15   |                                         |     |                                     |       |       |       |       | ■     |

| Vc<br>(m/min) | Alu        |   |      | Stahl   |         |         |          |          |          |          |          |          |          | INOX    |         | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion | MMS                | Trocken | Druckluft |
|---------------|------------|---|------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|---------|---------|-------|-------|-----------------------|------------|----------|--------------------|---------|-----------|
|               | Kunststoff |   | Guss | < 500 N | < 750 N | < 900 N | < 1100 N | < 1400 N | < 55 HRC | < 60 HRC | < 65 HRC | < 67 HRC | < 70 HRC | < 900 N | > 900 N |       |       |                       |            |          |                    |         |           |
| ISO-Code      | N          | N | N    | P       | P       | P       | P        | P        | H        | H        | H        | H        | H        | M       | M       | K     | S     | N                     |            |          |                    |         |           |
| PTV28         |            |   |      |         | 240     | 200     | 160      | 130      |          |          |          |          |          |         |         |       |       |                       |            | ■        |                    | ■       |           |
| PTT35         |            |   |      |         | 240     | 200     | 160      | 130      |          |          |          |          |          |         |         |       |       |                       |            | ■        |                    | ■       |           |
| PAP28         |            |   |      |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       |            |          |                    |         |           |
| MTM10         |            |   |      |         |         |         |          |          |          |          |          |          |          |         |         |       | 300   |                       |            |          |                    | ■       |           |
| KTE20         |            |   |      |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       |            |          |                    |         |           |
| K10           |            |   |      |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       |            |          |                    |         |           |
| fz            | 0,2 - 0,25 |   |      |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       | ■ geeignet |          | □ bedingt geeignet |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

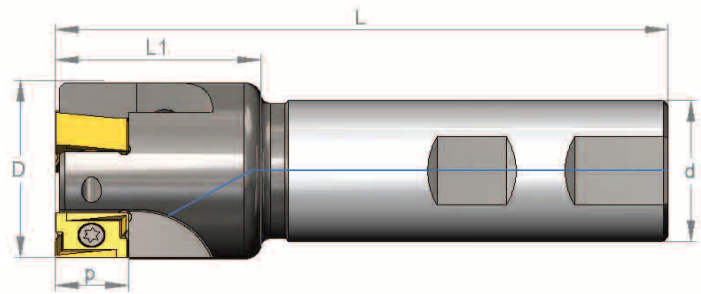
B

# Serie 2027 - Eckfräser 90° Series 2027 - Milling cutter 90°



**Ausführung:** Schaftfräser zylindrisch 90°, mit Innenkühlung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eckfräsen und universelle Einsatzmöglichkeiten

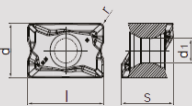
**Execution:** Endmill cutter cylindrical 90° with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- and shoulder milling and universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |   |   | Wendeplatte<br>Insert | Schraube<br>Screw  | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|-----|----|---|---|-----------------------|--------------------|------------------|
|                             | D                            | d  | L   | L1 | p | Z |                       |                    |                  |
| 2027 W-W D20-2              | 20                           | 20 | 100 | 30 | 9 | 2 | LNMX 1006..           | M-VT30-7<br>1,4 Nm | M-BT09           |
| 2027 W-L D20-2              | 20                           | 20 | 150 | 30 | 9 | 2 |                       |                    |                  |
| 2027 W-W D20-3              | 20                           | 20 | 100 | 30 | 9 | 3 |                       |                    |                  |
| 2027 W-W D25-2              | 25                           | 25 | 115 | 35 | 9 | 2 |                       |                    |                  |
| 2027 W-L D25-2              | 25                           | 25 | 150 | 35 | 9 | 2 |                       |                    |                  |
| 2027 W-W D25-3              | 25                           | 25 | 115 | 35 | 9 | 3 |                       |                    |                  |
| 2027 W-W D32-3              | 32                           | 32 | 125 | 40 | 9 | 3 |                       |                    |                  |
| 2027 W-L D32-3              | 32                           | 32 | 180 | 40 | 9 | 3 |                       |                    |                  |
| 2027 W-W D32-4              | 32                           | 32 | 125 | 40 | 9 | 4 |                       |                    |                  |
| 2027 W-W D40-4              | 40                           | 32 | 130 | 42 | 9 | 4 |                       |                    |                  |
| 2027 W-W D40-5              | 40                           | 32 | 130 | 42 | 9 | 5 |                       |                    |                  |

Bestellbeispiel / Order example: 2027 W-W D14-1

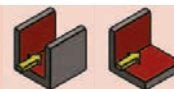
W-W = Kühlmittelbohrung / W-W = coolant bores

|                                                                                               | Form Figure                                                                         | Abmessungen Dimensions |      |      |      |     | Bezeichnung<br>Designation | Schraube  | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|-----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|------|-----|----------------------------|-----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                               |                                                                                     | l                      | d    | s    | d1   | r   |                            |           |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>LNMX .. |  | 10,00                  | 6,60 | 6,35 | 2,80 | 0,5 | LNMX 100605 SR - RP        | M-VT 30-7 | M-BT 09   |                                         |     |                                     |       |       |       |       |       |
|                                                                                               |                                                                                     | 10,00                  | 6,60 | 6,35 | 2,80 | 0,5 | LNMX 100605 SR - RK        | M-VT 30-7 | M-BT 09   |                                         |     |                                     |       |       |       |       |       |
|                                                                                               |                                                                                     |                        |      |      |      |     |                            |           |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl | Emulsion   | MMS                | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|----|------------|--------------------|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |    |            |                    |         |           |
| PTV28         |                   |     |             |                  | 300              | 250              | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |            |                    |         |           |
| PTT35         |                   |     |             |                  |                  |                  | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |            |                    |         |           |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 200             | 180             |       |       |                       |    |            |                    |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 220   |       |                       |    |            |                    |         |           |
| KTE20         | 600               | 600 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |            |                    |         |           |
| K10           | 500               | 500 | 300         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |            |                    |         |           |
| fz            | 0,1 - 0,15        |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■ geeignet | □ bedingt geeignet |         |           |

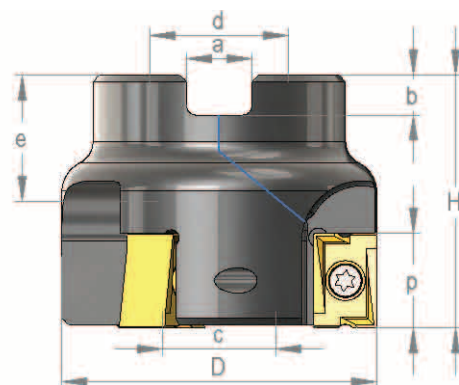
Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

# Serie 2029 - Eckfräser 90° Series 2029 - Milling cutter 90°



**Ausführung:** Aufsteckfräser zylindrisch 90°, mit Innenbohrung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eckfräsen, universelle Einsatzmöglichkeiten

**Execution:** Endmill cutter cylindrical 90°, with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- and shoulder milling and universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |    |      |     |    |   |    | Wendeplatte<br>Insert | Schraube<br>Screw  | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|----|----|------|-----|----|---|----|-----------------------|--------------------|------------------|
|                             | D                            | d  | c  | e  | a    | b   | H  | p | Z  |                       |                    |                  |
| 2029 M-W D40-4              | 40                           | 16 | 14 | 19 | 8,4  | 5,6 | 40 | 9 | 4  | LNMX 1006..           | M-VT30-7<br>1,4 Nm | M-BT09           |
| 2029 M-W D40-5              | 40                           | 16 | 14 | 19 | 8,4  | 5,6 | 40 | 9 | 5  |                       |                    |                  |
| 2029 M-W D50-5              | 50                           | 22 | 18 | 20 | 10,4 | 6,3 | 40 | 9 | 5  |                       |                    |                  |
| 2029 M-W D50-7              | 50                           | 22 | 18 | 20 | 10,4 | 6,3 | 40 | 9 | 7  |                       |                    |                  |
| 2029 M-W D63-6              | 63                           | 22 | 18 | 20 | 10,4 | 6,3 | 40 | 9 | 6  |                       |                    |                  |
| 2029 M-W D63-8              | 63                           | 22 | 18 | 20 | 10,4 | 6,3 | 40 | 9 | 8  |                       |                    |                  |
| 2029 M-W D80-8              | 80                           | 27 | 20 | 23 | 12,4 | 7   | 50 | 9 | 8  |                       |                    |                  |
| 2029 M-W D80-10             | 80                           | 27 | 20 | 23 | 12,4 | 7   | 50 | 9 | 10 |                       |                    |                  |

Bestellbeispiel / Order example: 2032 M-W D40

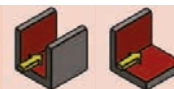
M-W = Kühlmittelbohrung / M-W = coolant bores

|  | Form Figure | Abmessungen Dimensions |      |      |      |     | Bezeichnung<br>Designation | Schraube  | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|--|-------------|------------------------|------|------|------|-----|----------------------------|-----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|  |             | l                      | d    | s    | d1   | r   |                            |           |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|  |             | 10,00                  | 6,60 | 6,35 | 2,80 | 0,5 | LNMX 100605 SR - RP        | M-VT 30-7 | M-BT 09   |                                         |     |                                     |       |       |       |       |       |
|  |             | 10,00                  | 6,60 | 6,35 | 2,80 | 0,5 | LNMX 100605 SR - RK        | M-VT 30-7 | M-BT 09   |                                         |     |                                     |       |       |       |       |       |
|  |             |                        |      |      |      |     |                            |           |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl | Emulsion | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|----|----------|-----|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |    |          |     |         |           |
| PTV28         |                   |     |             |                  | 300              | 250              | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |          |     |         |           |
| PTT35         |                   |     |             |                  |                  |                  | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |          |     |         |           |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 200             | 180             |       |       |                       |    |          |     |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 220   |       |                       |    |          |     |         |           |
| KTE20         | 600               | 600 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |          |     |         |           |
| K10           | 500               | 500 | 300         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |          |     |         |           |
| fz            | 0,1 - 0,15        |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |          |     |         |           |

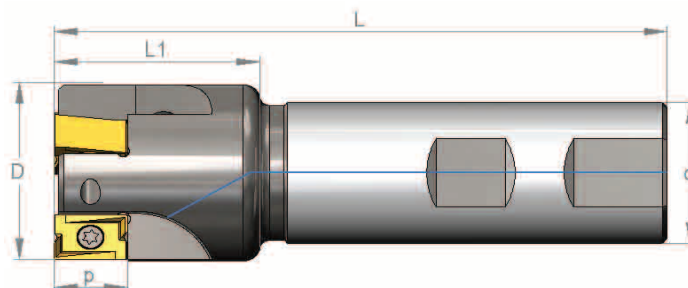
Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

# Serie 2047 - Eckfräser 90° Series 2047 - Milling cutter 90°



**Ausführung:** Schaftfräser zylindrisch 90°, mit Innenbohrung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eckfräsen und universelle Einsatzmöglichkeiten

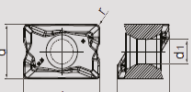
**Execution:** Endmill cutter cylindrical 90° with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove - and shoulder milling and universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |    |   | Wendeplatte<br>Insert | Schraube<br>Screw   | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|-----|----|----|---|-----------------------|---------------------|------------------|
|                             | D                            | d  | L   | L1 | p  | Z |                       |                     |                  |
| 2047 W-W D32-3              | 32                           | 32 | 125 | 40 | 14 | 3 | LNMX 1510..           | M-VT40-12<br>3,0 Nm | M-BT15           |
| 2047 W-W D40-3              | 40                           | 32 | 125 | 42 | 14 | 3 |                       |                     |                  |
| 2047 W-W D40-4              | 40                           | 40 | 125 | 42 | 14 | 4 |                       |                     |                  |

Bestellbeispiel / Order example: 2047 W-W D32-2

W-W = Kühlmittelbohrung / W-W = coolant

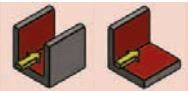
|                                                                                    | Form Figure                                                                         | Abmessungen Dimensions |      |       |      |     | Bezeichnung<br>Designation | Schraube   | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|-------|------|-----|----------------------------|------------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                    |                                                                                     | l                      | d    | s     | d1   | r   |                            |            |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|  |  | 15,00                  | 9,52 | 10,00 | 4,50 | 0,8 | LNMX 151008 SR - RP        | M-VT 40-12 | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|                                                                                    |                                                                                     | 15,00                  | 9,52 | 10,00 | 4,50 | 0,8 | LNMX 151008 SR - RK        | M-VT 40-12 | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|                                                                                    |                                                                                     |                        |      |       |      |     |                            |            |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion           | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|------------|--------------------|-----|---------|-----------|
|               | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |            |                    |     |         |           |
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |            |                    |     |         |           |
| PTV28         |                   |     |             |                  | 300              | 250              | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| PTT35         |                   |     |             |                  |                  |                  | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 200             | 180             |       |       |                       |            |                    |     |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       | 220   |                       |            |                    |     |         |           |
| KTE20         | 600               | 600 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| fz            | 0,2 - 0,25        |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet | □ bedingt geeignet |     |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

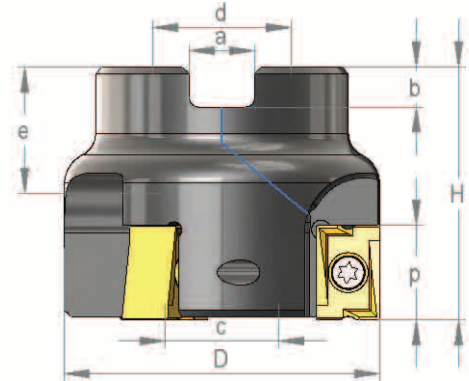


# Serie 2048- Eckfräser 90° Series 2048 - Milling cutter 90°



**Ausführung:** Aufsteckfräser zylindrisch 90°, mit Innenbohrung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eckfräsen, universelle Einsatzmöglichkeiten

**Execution:** Endmill cutter cylindrical 90°, with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- and shoulder milling and universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |      |     |    |    |    | Wendeplatte<br>Insert | Schraube<br>Screw   | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|-----|----|------|-----|----|----|----|-----------------------|---------------------|------------------|
|                             | D                            | d  | c   | e  | a    | b   | H  | p  | Z  |                       |                     |                  |
| 2048 M-W D50-3              | 50                           | 22 | 18  | 20 | 10,4 | 6,3 | 40 | 14 | 3  | LNMX 1510..           | M-VT40-12<br>3,0 Nm | M-BT15           |
| 2048 M-W D50-4              | 50                           | 22 | 18  | 20 | 10,4 | 6,3 | 40 | 14 | 4  |                       |                     |                  |
| 2048 M-W D63-4              | 63                           | 22 | 18  | 20 | 10,4 | 6,3 | 40 | 14 | 4  |                       |                     |                  |
| 2048 M-W D63-6              | 63                           | 22 | 18  | 20 | 10,4 | 6,3 | 40 | 14 | 6  |                       |                     |                  |
| 2048 M-W D80-5              | 80                           | 27 | 20  | 23 | 12,4 | 7   | 50 | 14 | 5  |                       |                     |                  |
| 2048 M-W D80-7              | 80                           | 27 | 20  | 23 | 12,4 | 7   | 50 | 14 | 7  |                       |                     |                  |
| 2048 M-W D100-8             | 100                          | 32 | 26  | 25 | 14,4 | 8   | 50 | 14 | 8  |                       |                     |                  |
| 2048 M-W D125-10            | 125                          | 40 | 32  | 30 | 16,4 | 9   | 63 | 14 | 10 |                       |                     |                  |
| 2048 M-W D160-11            | 160                          | 40 | 100 | 32 | 16,4 | 9   | 63 | 14 | 11 |                       |                     |                  |

Bestellbeispiel / Order example: 2048 M-W D50-3

M-W = Kühlmittelbohrung / M-W = coolant bores

|         | Form Figure | Abmessungen Dimensions |      |       |      |     | Bezeichnung<br>Designation | Schraube   | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|---------|-------------|------------------------|------|-------|------|-----|----------------------------|------------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|         |             | l                      | d    | s     | d1   | r   |                            |            |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| LNMX .. |             | 15,00                  | 9,52 | 10,00 | 4,50 | 0,8 | LNMX 151008 SR - RP        | M-VT 40-12 | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|         |             | 15,00                  | 9,52 | 10,00 | 4,50 | 0,8 | LNMX 151008 SR - RK        | M-VT 40-12 | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|         |             |                        |      |       |      |     |                            |            |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | Öl                            | Emulsion | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|-------------------------------|----------|-----|---------|-----------|
|               | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK |                               |          |     |         |           |
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |                               |          |     |         |           |
| PTV28         |                   |     |             |                  | 300              | 250              | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                               |          |     |         |           |
| PTT35         |                   |     |             |                  |                  |                  | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                               |          |     |         |           |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 200             | 180             |       |       |                       |                               |          |     |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 220   |       |                       |                               |          |     |         |           |
| KTE20         | 600               | 600 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                               |          |     |         |           |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                               |          |     |         |           |
| fz            | 0,2 - 0,25        |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet □ bedingt geeignet |          |     |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

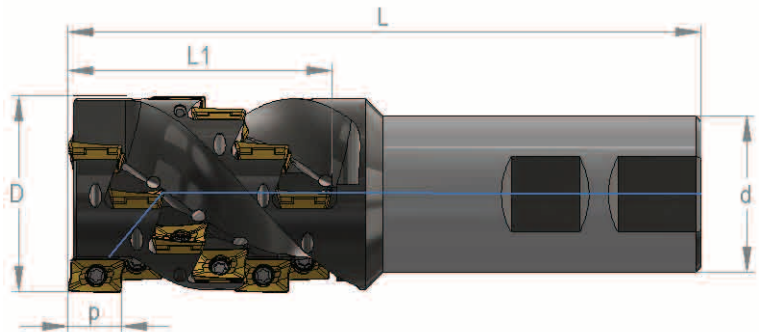
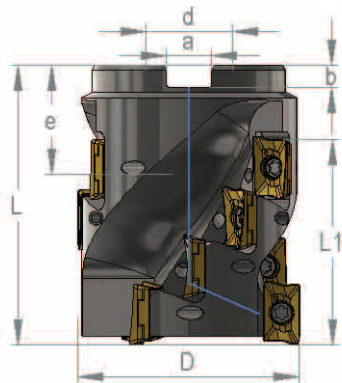
B

## Serie 1095 - Schaft-Schrupfräser 90° Series 1095 - Helical end mill 90°



**Ausführung:** Walzenstirnfräser zy indrisch 90°, mit Innenkühlung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eck- und Konturfraßen, universelle Einsatzmöglichkeiten

**Execution:** Helical endmill cutter cylindrical 90° with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- and shoulder and copy milling, universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |    |   |                                             | Wendeplatte<br>Insert  | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|-----|----|----|---|---------------------------------------------|------------------------|-------------------|------------------|
|                             | D                            | d  | L   | L1 | p  | Z | Wendeplattenanzahl<br>Complete insert units |                        |                   |                  |
| 1095 W-W D20                | 20                           | 20 | 89  | 28 | 10 | 1 | 4                                           | APKT<br>1003.. PDSR .. | M-VT25<br>1,2 Nm  | M-BT08           |
| 1095 W-W D25                | 25                           | 25 | 100 | 36 | 10 | 2 | 8                                           |                        |                   |                  |
| 1095 W-W D32                | 32                           | 32 | 120 | 45 | 10 | 3 | 15                                          |                        |                   |                  |
| 1095 W-W D40                | 40                           | 32 | 130 | 54 | 10 | 3 | 18                                          |                        |                   |                  |
| 1095 M-W D40                | 40                           | 16 | 52  | 38 | 10 | 3 | 12                                          |                        |                   |                  |

Bestellbeispiel / Order example: 1095 W-W D20

W-W = Kühlmittelbohrung / W-W = coolant bores

Zeff. = effektive Zähnezahl / Zeff. = effective teeth

|         | Form Figure | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|---------|-------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|         |             | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|         |             |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |
| APKT... |             | 10,50                  | 6,70 | 3,50 |    | 0,5 | APKT 1003 PDSR             | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|         |             | 10,50                  | 6,70 | 3,50 |    | 0,8 | APKT 100308 PDSR           | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|         |             | 10,50                  | 6,70 | 3,50 |    | 1,2 | APKT 100312 PDSR           | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|         |             | 10,50                  | 6,70 | 3,50 |    | 1,6 | APKT 100316 PDSR           | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|         |             | 10,50                  | 6,70 | 3,50 |    | 2,0 | APKT 100320 PDSR           | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|         |             |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl | Emulsion   | MMS                | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|----|------------|--------------------|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |    |            |                    |         |           |
| PTV28         |                   |     |             |                  | 300              | 250              | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■          |                    |         | ■         |
| PTT35         |                   |     |             |                  |                  |                  | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■          |                    |         | ■         |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 200             | 180             |       |       |                       |    | ■          |                    |         | ■         |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 220   |       |                       |    | ■          |                    |         | ■         |
| KTE20         | 600               | 600 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■          |                    |         | ■         |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |            |                    |         |           |
| fz            | 0,1 - 0,15        |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■ geeignet | □ bedingt geeignet |         |           |

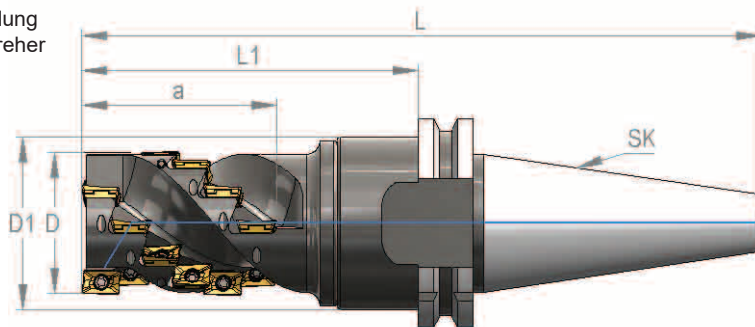
Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

# Serie 1100- Schaft-Schruppfräser 90° Series 1100 - Helical end mill 90°



**Ausführung:** Walzenstirnfräser zylindrisch 90°, mit Innenbohrung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eck- und Konturfäsen, universelle Einsatzmöglichkeiten

**Execution:** Helical endmill cutter cylindrical 90°  
 without insert, without screwdriver  
**Delivery:** Groove- and shoulder and copy milling,  
**Application:** universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |     |    |     |    |    |       |                                                     | Wendepatte<br>Insert                                                                | Schraube<br>Screw                                                                   | Schlüssel<br>Key                                                                    |
|-----------------------------|------------------------------|-----|----|-----|----|----|-------|-----------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                             | D                            | SK* | D1 | L   | L1 | a  | Zeфф. | Wendeplat-<br>tenanzahl<br>Complete<br>insert units |  |  |  |
| 1100 SK4 W-W D32            | 32                           | 40  | 50 | 162 | 74 | 45 | 3     | 15                                                  | APKT<br>1003.. PDSR ..                                                              | M-VT25<br>1,2 Nm                                                                    | M-BT08                                                                              |
| 1100 SK4 W-W D40/10         | 40                           | 40  | 50 | 171 | 83 | 54 | 3     | 18                                                  |                                                                                     |                                                                                     |                                                                                     |
| 1100 SK5 W-W D32            | 32                           | 50  | 50 | 195 | 74 | 45 | 3     | 15                                                  |                                                                                     |                                                                                     |                                                                                     |
| 1100 SK5 W-W D40/10         | 40                           | 50  | 50 | 204 | 83 | 54 | 3     | 18                                                  |                                                                                     |                                                                                     |                                                                                     |

Bestellbeispiel / Order example: 1100 SK4 W-W D32

W-W = Kühlmittelbohrung / W-W = coolant bores  
 Zeфф. = effektive Zähnezah / Zeфф. = effective teeth

a = max Frästiefe / a = max milling depth

SK\* = DIN69781AD+B

HSK- und BT-Aufnahmen kurzfristig lieferbar / HSK- and BT-Clamps short delivery times

|                                                                                    | Form Figure                                                                         | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                    |                                                                                     | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|  |  | 10,50                  | 6,70 | 3,50 |    | 0,5 | APKT 1003 PDSR             | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 0,8 | APKT 100308 PDSR           | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 1,2 | APKT 100312 PDSR           | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 1,6 | APKT 100316 PDSR           | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 2,0 | APKT 100320 PDSR           | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion           | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|------------|--------------------|-----|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |            |                    |     |         |           |
| PTV28         |                   |     |             |                  | 300              | 250              | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| PTT35         |                   |     |             |                  |                  |                  | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 200             | 180             |       |       |                       |            | ■                  |     |         | ■         |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 220   |       |                       |            | ■                  |     |         | ■         |
| KTE20         | 600               | 600 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| fz            | 0,1 - 0,15        |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet | ■ bedingt geeignet |     |         |           |

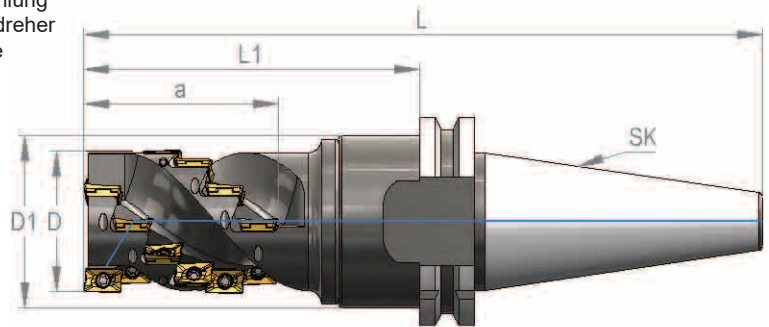
Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

# Serie 1100- Schaft-Schruppfräser 90° Series 1100 - Helical end mill 90°



**Ausführung:** Walzenstirnfräser zylindrisch 90°, mit Innenbohrung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eck- und Konturfraßen, universelle Einsatzmöglichkeiten

**Execution:** Helical endmill cutter cylindrical 90° with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- and shoulder and copy milling, universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |     |    |     |     |    |       |                                                     | Wendepatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|-----|----|-----|-----|----|-------|-----------------------------------------------------|----------------------|-------------------|------------------|
|                             | D                            | SK* | D1 | L   | L1  | a  | Zeff. | Wendeplat-<br>tenanzahl<br>Complete<br>insert units |                      |                   |                  |
| 1100 SK4 W-W D40/16         | 40                           | 40  | 48 | 175 | 87  | 58 | 2     | 8                                                   | APKT 1604..          | M-VT40<br>3,0 Nm  | M-BT15           |
| 1100 SK5 W-W D40/16         | 40                           | 50  | 48 | 208 | 87  | 58 | 2     | 8                                                   |                      |                   |                  |
| 1100 SK5 W-W D50            | 50                           | 50  | 48 | 222 | 101 | 72 | 3     | 15                                                  |                      |                   |                  |
| 1100 SK5 W-W D63            | 63                           | 50  | 48 | 225 | 101 | 72 | 4     | 20                                                  |                      |                   |                  |
| 1100 SK5 W-W D80/4          | 80                           | 50  | 75 | 243 | 120 | 90 | 4     | 28                                                  |                      |                   |                  |
| 1100 SK5 W-W D80/5          | 80                           | 50  | 75 | 243 | 120 | 90 | 5     | 35                                                  |                      |                   |                  |

Bestellbeispiel / Order example: 1100 SK4 W-W D40/16

W-W = Kühlmittelbohrung / W-W = coolant bores  
 Zeff. = effektive Zähnezahl / Zeff. = effective teeth

a = max Frästiefe / a = max milling depth

SK\* = DIN69781AD+B

HSK- und BT-Aufnahmen kurzfristig lieferbar / HSK- and BT-Clamps short delivery times

|             | Form Figure | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|-------------|-------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|             |             | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>APKT... |             | 16,00                  | 9,45 | 5,26 |    | 0,8 | APKT 1604 PDER             | M-VT 40  | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|             |             | 16,00                  | 9,45 | 5,26 |    | 1,2 | APKT 160412 PDER           | M-VT 40  | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|             |             | 16,00                  | 9,45 | 5,26 |    | 1,6 | APKT 160416 PDER           | M-VT 40  | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|             |             | 16,00                  | 9,45 | 5,26 |    | 2,4 | APKT 160424 PDER           | M-VT 40  | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|             |             | 16,00                  | 9,45 | 5,26 |    | 3,0 | APKT 160430 PDER           | M-VT 40  | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|             |             | 16,00                  | 9,45 | 5,26 |    | 4,0 | APKT 160440 PDER           | M-VT 40  | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|             |             |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl       | Emulsion         | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|----------|------------------|-----|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |          |                  |     |         |           |
| PTV28         |                   |     |             |                  | 300              | 250              | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |          |                  |     |         |           |
| PTT35         |                   |     |             |                  |                  |                  | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |          |                  |     |         |           |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 200             | 180             |       |       |                       |          |                  |     |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 220   |       |                       |          |                  |     |         |           |
| KTE20         | 600               | 600 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |          |                  |     |         |           |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |          |                  |     |         |           |
| fz            | 0,2 - 0,25        |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | geeignet | bedingt geeignet |     |         |           |

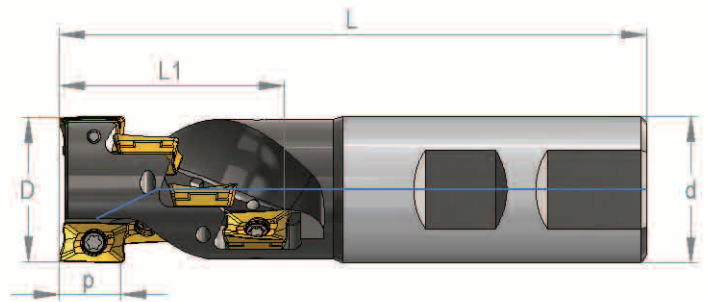
Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

## Serie 1105 - Schaft-Schruppfräser 90° Series 1105 - Helical end mill 90°



**Ausführung:** Walzenstirnfräser zylindrisch 90°, mit Innenbohrung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eck- und Konturfraßen, universelle Einsatzmöglichkeiten

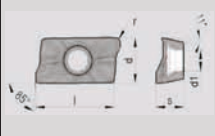
**Execution:** Helical endmill cutter cylindrical 90° with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- and shoulder and copy milling, universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |    |       |                                             | Wendeplatte<br>Insert                                                               | Schraube<br>Screw                                                                   | Schlüssel<br>Key                                                                    |
|-----------------------------|------------------------------|----|-----|----|----|-------|---------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                             | D                            | d  | L   | L1 | p  | Zeff. | Wendeplattenanzahl<br>Complete insert units |  |  |  |
| 1105 W-W D25                | 25                           | 25 | 105 | 29 | 17 | 1     | 2                                           | APKT 1604..                                                                         | M-VT40<br>3,0 Nm                                                                    | M-BT15                                                                              |
| 1105 W-W D32                | 32                           | 32 | 115 | 44 | 17 | 2     | 6                                           |                                                                                     |                                                                                     |                                                                                     |
| 1105 W-W D40                | 40                           | 32 | 130 | 58 | 17 | 2     | 8                                           |                                                                                     |                                                                                     |                                                                                     |

Bestellbeispiel / Order example: 1105 W-W D25  
 Zeff. = effektive Zähnezahl / Zeff. = effective teeth

W-W = Kühlmittelbohrung / W-W = coolant bores

|                                                                                    | Form Figure                                                                         | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                    |                                                                                     | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|  |  | 16,00                  | 9,45 | 5,26 |    | 0,8 | APKT 1604 PDER             | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 1,2 | APKT 160412 PDER           | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 1,6 | APKT 160416 PDER           | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 2,4 | APKT 160424 PDER           | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 3,0 | APKT 160430 PDER           | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 4,0 | APKT 160440 PDER           | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |

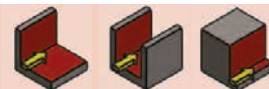
| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion           | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|------------|--------------------|-----|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |            |                    |     |         |           |
| PTV28         |                   |     |             |                  | 300              | 250              | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| PTT35         |                   |     |             |                  |                  |                  | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 200             | 180             |       |       |                       |            | ■                  |     |         | ■         |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 220   |       |                       |            | ■                  |     |         | ■         |
| KTE20         | 600               | 600 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| fz            | 0,2 - 0,25        |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet | □ bedingt geeignet |     |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

B

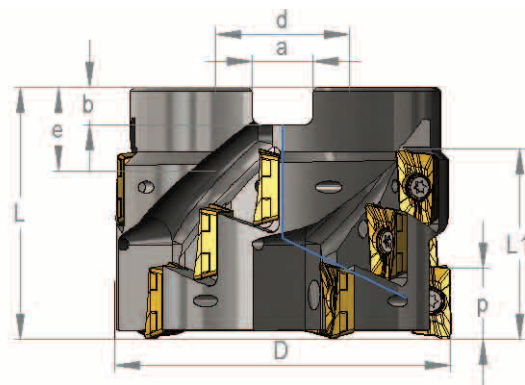


# Serie 1110 - Schaft-Schruppfräser 90° Series 1110 - Helical end mill 90°



**Ausführung:** Walzenstirnfräser zy indrisch 90°, mit Innenkühlung  
**Lieferumfang:** ohne Wendschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eck- und Konturfäsen, universelle Einsatzmöglichkeiten

**Execution:** Helical endmill cutter cylindrical 90° with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- and shoulder and copy milling, universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |    |    |      |   |       |                                             | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|----|----|----|------|---|-------|---------------------------------------------|-----------------------|-------------------|------------------|
|                             | D                            | d  | L  | L1 | e  | a    | b | Zeff. | Wendeplattenanzahl<br>Complete insert units |                       |                   |                  |
| 1110 M-W D50                | 50                           | 22 | 50 | 30 | 28 | 10,4 | 7 | 3     | 6                                           | APKT 1604..           | M-VT40<br>3,0 Nm  | M-BT15           |
| 1110 M-W D63                | 63                           | 27 | 60 | 44 | 28 | 12,4 | 7 | 4     | 12                                          |                       |                   |                  |
| 1110 M-W D80                | 80                           | 32 | 60 | 44 | 28 | 14,4 | 8 | 5     | 15                                          |                       |                   |                  |
| 1110 M-W D100               | 100                          | 40 | 60 | 44 | 30 | 16,4 | 9 | 6     | 18                                          |                       |                   |                  |

Bestellbeispiel / Order example: 1110 M-W D50

M-W = Kühlmittelbohrung / M-W = coolant bores

Zeff. = effektive Zähnezahl / Zeff. = effective teeth

|                                                                                    | Form Figure                                                                         | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                    |                                                                                     | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|                                                                                    |                                                                                     |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |
|  |  | 16,00                  | 9,45 | 5,26 |    | 0,8 | APKT 1604 PDER             | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 1,2 | APKT 160412 PDER           | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 1,6 | APKT 160416 PDER           | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 2,4 | APKT 160424 PDER           | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 3,0 | APKT 160430 PDER           | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 4,0 | APKT 160440 PDER           | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |           |  |                   |  |  |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|               | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK |                                                                                                |                                                                                       |                                                                                                        |                                                                                       |                                                                                       |
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |                                                                                                |                                                                                       |                                                                                                        |                                                                                       |                                                                                       |
| PTV28         |                   |     |             |                  | 300              | 250              | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                                |                                                                                       |                                                                                                        |                                                                                       |                                                                                       |
| PTT35         |                   |     |             |                  |                  |                  | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                                |                                                                                       |                                                                                                        |                                                                                       |                                                                                       |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 200             | 180             |       |       |                       |                                                                                                |                                                                                       |                                                                                                        |                                                                                       |                                                                                       |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 220   |       |                       |                                                                                                |                                                                                       |                                                                                                        |                                                                                       |                                                                                       |
| KTE20         | 600               | 600 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                                |                                                                                       |                                                                                                        |                                                                                       |                                                                                       |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                                |                                                                                       |                                                                                                        |                                                                                       |                                                                                       |
| fz            | 0,2 - 0,25        |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |  geeignet |                                                                                       |  bedingt geeignet |                                                                                       |                                                                                       |

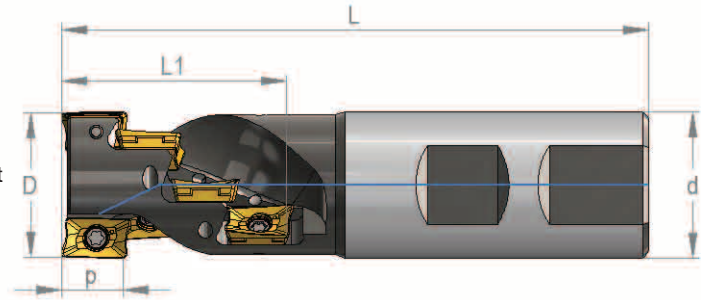
Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

## Serie 1111 - Schaft-Schruppfräser 90° Series 1111 - Helical end mill 90°



**Ausführung:** Walzenstirnfräser zylindrisch 90°, mit Innenbohrung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eck- und Konturfraßen, universelle Einsatzmöglichkeiten

**Execution:** Helical endmill cutter cylindrical 90° with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- and shoulder and copy milling, universal application



B

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |    |   |                                             | Wendeplatte<br>Insert                                                               | Schraube<br>Screw                                                                   | Schlüssel<br>Key                                                                    |
|-----------------------------|------------------------------|----|-----|----|----|---|---------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                             | D                            | d  | L   | L1 | p  | Z | Wendeplattenanzahl<br>Complete insert units |  |  |  |
| 1111 W-W D25                | 25                           | 25 | 105 | 29 | 17 | 1 | 2                                           | ADKT 1505..                                                                         | M-VT40<br>3,0 Nm                                                                    | M-BT15                                                                              |
| 1111 W-W D32                | 32                           | 32 | 115 | 44 | 17 | 2 | 6                                           |                                                                                     |                                                                                     |                                                                                     |
| 1111 W-W D40                | 40                           | 32 | 130 | 58 | 17 | 2 | 8                                           |                                                                                     |                                                                                     |                                                                                     |

Bestellbeispiel / Order example: 1111 W-W D25

W-W = Kühlmittelbohrung / W-W = coolant bores

|                                                                                               | Form Figure                                                                         | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|-----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                               |                                                                                     | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>ADKT... |  | 16,30                  | 9,45 | 5,56 |    | 0,8 | ADKT 1505 PDER             | M-VT 40  | M-BT 15   |                                         |     |                                     |       | ■     |       | ■     |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion | MMS                | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|------------|----------|--------------------|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |            |          |                    |         |           |
| PTV28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |          |                    |         |           |
| PTT35         |                   |     |             |                  | 200              | 200              | 180               | 160               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■        |                    |         |           |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |          |                    |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       | 220   |                       |            | ■        |                    |         |           |
| KTE20         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |          |                    |         |           |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |          |                    |         |           |
| fz            | 0,2 - 0,25        |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet |          | □ bedingt geeignet |         |           |

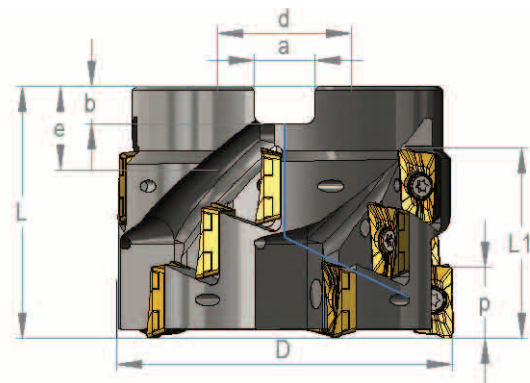
Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

## Serie 1112 - Schaft-Schruppfräser 90° Series 1112 - Helical end mill 90°



**Ausführung:** Walzenstirnfräser zylindrisch 90°, mit Innenbohrung  
**Lieferumfang:** ohne Wendschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eck- und Konturfäsen, universelle Einsatzmöglichkeiten

**Execution:** Helical endmill cutter cylindrical 90° with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- and shoulder and copy milling, universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |    |    |      |   |       |                                             | Wendeplatte<br>Insert                                                               | Schraube<br>Screw                                                                   | Schlüssel<br>Key                                                                    |
|-----------------------------|------------------------------|----|----|----|----|------|---|-------|---------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                             | D                            | d  | L  | L1 | e  | a    | b | Zeff. | Wendeplattenanzahl<br>Complete insert units |  |  |  |
| 1112 M-W D50                | 50                           | 22 | 50 | 30 | 28 | 10,4 | 7 | 3     | 6                                           | ADKT 1505..                                                                         | M-VT40<br>3,0 Nm                                                                    | M-BT15                                                                              |
| 1112 M-W D63                | 63                           | 27 | 60 | 44 | 28 | 12,4 | 7 | 4     | 12                                          |                                                                                     |                                                                                     |                                                                                     |
| 1112 M-W D80                | 80                           | 32 | 60 | 44 | 28 | 14,4 | 8 | 5     | 15                                          |                                                                                     |                                                                                     |                                                                                     |
| 1112 M-W D100               | 100                          | 40 | 60 | 44 | 30 | 16,4 | 9 | 6     | 18                                          |                                                                                     |                                                                                     |                                                                                     |

Bestellbeispiel / Order example: 1112 M-W D50

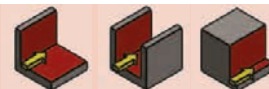
M-W = Kühlmittelbohrung / M-W = coolant bores

|                                                                                               | Form Figure                                                                         | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|-----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                               |                                                                                     | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>ADKT... |  | 16,30                  | 9,45 | 5,56 |    | 0,8 | ADKT 1505 PDER             | M-VT 40  | M-BT 15   |                                         |     |                                     |       | ■     |       | ■     |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl | Emulsion   | MMS                | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|----|------------|--------------------|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |    |            |                    |         |           |
| PTV28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |            |                    |         |           |
| PTT35         |                   |     |             |                  | 200              | 200              | 180               | 160               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■          |                    | ■       |           |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |            |                    |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 220   |       |                       |    | ■          |                    | ■       |           |
| KTE20         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |            |                    |         |           |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |            |                    |         |           |
| fz            | 0,2 - 0,25        |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■ geeignet | □ bedingt geeignet |         |           |

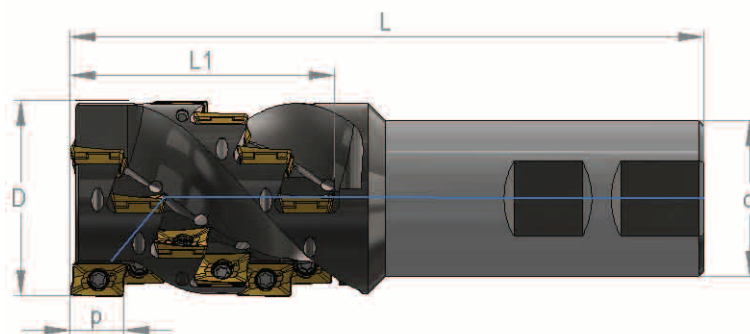
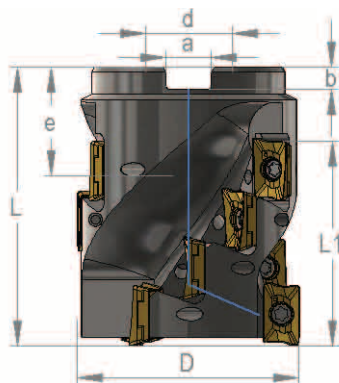
Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

## Serie 2020 - Schaft-Schrupfräser 90° Series 2020 - Helical end mill 90°



**Ausführung:** Walzenstirnfräser zylindrisch 90°, mit Innenkühlung  
**Lieferumfang:** ohne Wendschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eck- und Konturfräsen, universelle Einsatzmöglichkeiten

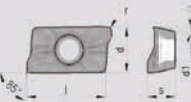
**Execution:** Helical endmill cutter cylindrical 90° with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- and shoulder and copy milling, universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |    |   |                                             | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|-----|----|----|---|---------------------------------------------|-----------------------|-------------------|------------------|
|                             | D                            | d  | L   | L1 | p  | Z | Wendeplattenanzahl<br>Complete insert units |                       |                   |                  |
| 2020 W-W D20                | 20                           | 20 | 89  | 28 | 10 | 1 | 4                                           | XPKT<br>11T3.. PDR .. | M-VT25<br>1,2 Nm  | M-BT08           |
| 2020 W-W D25                | 25                           | 25 | 100 | 36 | 10 | 2 | 8                                           |                       |                   |                  |
| 2020 W-W D32                | 32                           | 32 | 120 | 45 | 10 | 3 | 15                                          |                       |                   |                  |
| 2020 W-W D40                | 40                           | 32 | 130 | 54 | 10 | 3 | 18                                          |                       |                   |                  |
| 2020 M-W D40                | 40                           | 16 | 52  | 38 | 10 | 3 | 12                                          |                       |                   |                  |

Bestellbeispiel / Order example: 2020 W-W D20

W-W = Kühlmittelbohrung / W-W = coolant bores  
Z=effektiver Zahnvorschub / Z=effective feedspeed

|                                                                                               | Form Figure                                                                         | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>Coated grades |       |       |       |       |       |
|-----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                               |                                                                                     | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>XPKT... |  | 10,50                  | 6,70 | 3,50 |    | 0,5 | XPKT 11T305 PDR            | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                               |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 0,8 | XPKT 11T308 PDR            | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                               |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 1,2 | XPKT 11T312 PDR            | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                               |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 1,6 | XPKT 11T316 PDR            | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                               |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 2,0 | XPKT 11T320 PDR            | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                               |                                                                                     |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                     |                                                                                     | Öl                                                                                  | Emulsion                                                                            | MMS                                                                                 | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------|-----------|
|               | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK |  |  |  |  |  |         |           |
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |         |           |
| PTV28         |                   |     |             |                  | 300              | 250              | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                     |                                                                                     | ■                                                                                   |                                                                                     |                                                                                     | ■       |           |
| PTT35         |                   |     |             |                  |                  |                  | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                     |                                                                                     | ■                                                                                   |                                                                                     |                                                                                     | ■       |           |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 200             | 180             |       |       |                       |                                                                                     |                                                                                     | ■                                                                                   |                                                                                     |                                                                                     | ■       |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 220   |       |                       |                                                                                     |                                                                                     | □                                                                                   |                                                                                     |                                                                                     | ■       |           |
| KTE20         | 600               | 600 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                     |                                                                                     | ■                                                                                   |                                                                                     |                                                                                     | ■       |           |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |         |           |
| Fz            | 0,1 - 0,15        |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet                                                                          |                                                                                     | □ bedingt geeignet                                                                  |                                                                                     |                                                                                     |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

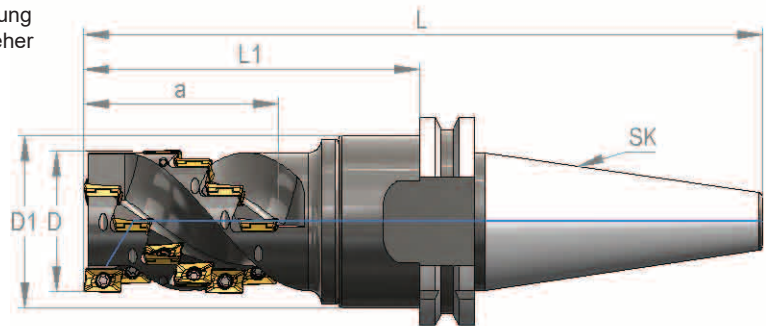
B

# Serie 2022 - Schaft-Schruppfräser 90° Series 2022 - Helical end mill 90°



**Ausführung:** Walzenstirnfräser zylindrisch 90°, mit Innenbohrung  
**Lieferumfang:** ohne Wendschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eck- und Konturfäsen, universelle Einsatzmöglichkeiten

**Execution:** Helical endmill cutter cylindrical 90°  
**Delivery:** with inner coolant  
**Application:** without insert, without screwdriver  
 Groove- and shoulder and copy milling, universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |     |    |     |    |    |   |                                             | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|-----|----|-----|----|----|---|---------------------------------------------|-----------------------|-------------------|------------------|
|                             | D                            | SK* | D1 | L   | L1 | a  | Z | Wendeplattenanzahl<br>Complete insert units |                       |                   |                  |
| 2022 SK4 W-W D32            | 32                           | 40  | 50 | 162 | 74 | 45 | 3 | 15                                          | XPKT<br>11T3.. PDR .. | M-VT25<br>1,2 Nm  | M-BT08           |
| 2022 SK4 W-W D40/11         | 40                           | 40  | 50 | 171 | 83 | 54 | 3 | 18                                          |                       |                   |                  |
| 2022 SK5 W-W D32            | 32                           | 50  | 50 | 195 | 74 | 45 | 3 | 15                                          |                       |                   |                  |
| 2022 SK5 W-W D40/11         | 40                           | 50  | 50 | 204 | 83 | 54 | 3 | 18                                          |                       |                   |                  |

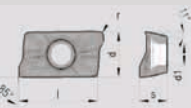
Bestellbeispiel / Order example: 2022 SK4 W-W D32

W-W = Kühlmittelbohrung / W-W = coolant bores  
 Z=effektiver Zahnvorschub / Z=effective feedspeed

a = max Frästiefe / a = max milling depth

SK\* = DIN69781AD+B

HSK- und BT-Aufnahmen kurzfristig lieferbar / HSK- and BT-Clamps short delivery times

|                                                                                               | Form Figure                                                                         | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|-----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                               |                                                                                     | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>XPKT... |  | 10,50                  | 6,70 | 3,50 |    | 0,5 | XPKT 11T305 PDR            | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                               |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 0,8 | XPKT 11T308 PDR            | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                               |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 1,2 | XPKT 11T312 PDR            | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                               |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 1,6 | XPKT 11T316 PDR            | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                               |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 2,0 | XPKT 11T320 PDR            | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |

| Vc<br>(m/min) | Alu<br>Kunststoff |     |     | Stahl |     |     |     |     |   |   |   |   |   |     | INOX |   | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion | MMS | Trocken            | Druckluft |
|---------------|-------------------|-----|-----|-------|-----|-----|-----|-----|---|---|---|---|---|-----|------|---|-------|-------|-----------------------|------------|----------|-----|--------------------|-----------|
|               | N                 | N   | N   | P     | P   | P   | P   | P   | H | H | H | H | H | M   | M    | K | S     | N     |                       |            |          |     |                    |           |
| ISO-Code      | N                 | N   | N   | P     | P   | P   | P   | P   | H | H | H | H | H | M   | M    | K | S     | N     |                       |            |          |     |                    |           |
| PTV28         |                   |     |     |       | 300 | 250 | 230 | 200 |   |   |   |   |   |     |      |   |       |       |                       | ■          |          |     | ■                  |           |
| PTT35         |                   |     |     |       |     |     | 230 | 200 |   |   |   |   |   |     |      |   |       |       |                       | ■          |          |     | ■                  |           |
| PAP28         |                   |     |     |       |     |     |     |     |   |   |   |   |   | 200 | 180  |   |       |       |                       | ■          |          |     | ■                  |           |
| MTM10         |                   |     |     |       |     |     |     |     |   |   |   |   |   |     |      |   | 220   |       |                       | ■          |          |     | ■                  |           |
| KTE20         | 600               | 600 | 400 |       |     |     |     |     |   |   |   |   |   |     |      |   |       |       |                       | ■          |          |     | ■                  |           |
| K10           |                   |     |     |       |     |     |     |     |   |   |   |   |   |     |      |   |       |       |                       |            |          |     |                    |           |
| Fz            | 0,1 - 0,15        |     |     |       |     |     |     |     |   |   |   |   |   |     |      |   |       |       |                       | ■ geeignet |          |     | □ bedingt geeignet |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

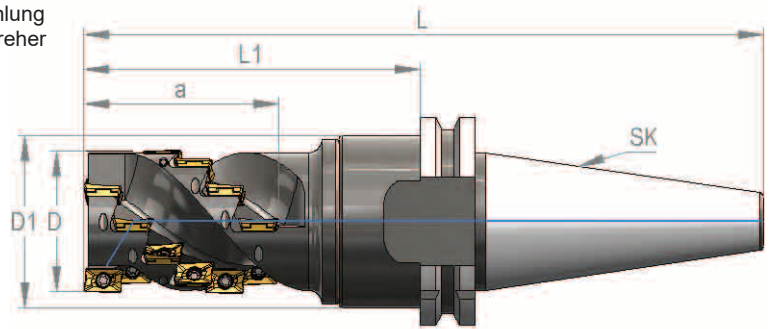


# Serie 2038 - Schaft-Schruppfräser 90° Series 2038 - Helical end mill 90°



**Ausführung:** Walzenstirnfräser zylindrisch 90°, mit Innenbohrung  
**Lieferumfang:** ohne Wendschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eck- und Konturfräsen, universelle Einsatzmöglichkeiten

**Execution:** Helical endmill cutter cylindrical 90°  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- and shoulder and copy milling, universal application



B

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |     |    |     |     |    |       |                                             | Wendeplatte<br>Insert                                                               | Schraube<br>Screw                                                                   | Schlüssel<br>Key                                                                    |
|-----------------------------|------------------------------|-----|----|-----|-----|----|-------|---------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                             | D                            | SK* | D1 | L   | L1  | a  | Zeff. | Wendeplattenanzahl<br>Complete insert units |  |  |  |
| 2038 SK4 W-W D40/17         | 40                           | 40  | 50 | 175 | 87  | 58 | 2     | 8                                           | XPKT<br>1705.. PDR..                                                                | M-VT40<br>3,0 Nm                                                                    | M-BT15                                                                              |
| 2038 SK5 W-W D40/17         | 40                           | 50  | 50 | 208 | 87  | 58 | 2     | 8                                           |                                                                                     |                                                                                     |                                                                                     |
| 2038 SK5 W-W D50            | 50                           | 50  | 50 | 22  | 101 | 72 | 3     | 15                                          |                                                                                     |                                                                                     |                                                                                     |
| 2038 SK5 W-W D63            | 63                           | 50  | 50 | 225 | 101 | 72 | 4     | 20                                          |                                                                                     |                                                                                     |                                                                                     |
| 2038 SK5 W-W D80/4          | 80                           | 50  | 80 | 243 | 120 | 90 | 4     | 28                                          |                                                                                     |                                                                                     |                                                                                     |
| 2038 SK5 W-W D80/5          | 80                           | 50  | 80 | 243 | 120 | 90 | 5     | 35                                          |                                                                                     |                                                                                     |                                                                                     |

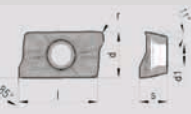
Bestellbeispiel / Order example: 2038 SK4 W-W D40/17

W-W = Kühlmittelbohrung / W-W = coolant bores  
 Zeff. = effektive Zähnezahl / Zeff. = effective teeth

a = max Frästiefe / a = max milling depth

SK\* = DIN69781AD+B

HSK- und BT-Aufnahmen kurzfristig lieferbar / HSK- and BT-Clamps short delivery times

|                                                                                    | Form Figure                                                                         | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>Coated grades |       |       |       |       |       |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                    |                                                                                     | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|                                                                                    |                                                                                     |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |
|  |  | 16,00                  | 9,45 | 5,26 |    | 0,8 | XPKT 170508 PDR            | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 1,2 | XPKT 170512 PDR            | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 1,6 | XPKT 170516 PDR            | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 2,4 | XPKT 170524 PDR            | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 3,0 | XPKT 170530 PDR            | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 4,0 | XPKT 170540 PDR            | M-VT 40  | M-BT 15   |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl | Emulsion   | MMS                | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|----|------------|--------------------|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |    |            |                    |         |           |
| PTV28         |                   |     |             |                  | 300              | 250              | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■          |                    |         | ■         |
| PTT35         |                   |     |             |                  |                  |                  | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■          |                    |         | ■         |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 200             | 180             |       |       |                       |    | ■          |                    |         | ■         |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 220   |       |                       |    | ■          |                    |         | ■         |
| KTE20         | 600               | 600 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■          |                    |         | ■         |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |            |                    |         |           |
| fz            | 0,2 - 0,25        |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■ geeignet | □ bedingt geeignet |         |           |

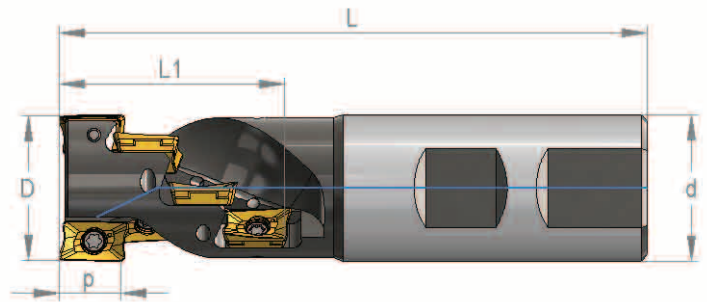
Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

## Serie 2040 - Schaft-Schrupfräser 90° Series 2040 - Helical end mill 90°



**Ausführung:** Walzenstirnfräser zylindrisch 90°, mit Innenbohrung  
**Lieferumfang:** ohne Wendschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eck- und Konturfäsen, universelle Einsatzmöglichkeiten

**Execution:** Helical endmill cutter cylindrical 90°  
with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- and shoulder and copy milling, universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |    |       |                                             | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|-----|----|----|-------|---------------------------------------------|-----------------------|-------------------|------------------|
|                             | D                            | d  | L   | L1 | p  | Zeff. | Wendeplattenanzahl<br>Complete insert units |                       |                   |                  |
| 2040 W-W D25                | 25                           | 25 | 105 | 29 | 17 | 1     | 2                                           | XPKT<br>1705.. PDR..  | M-VT40<br>3,0 Nm  | M-BT15           |
| 2040 W-W D32                | 32                           | 32 | 115 | 44 | 17 | 2     | 6                                           |                       |                   |                  |
| 2040 W-W D40                | 40                           | 32 | 130 | 58 | 17 | 2     | 8                                           |                       |                   |                  |

Bestellbeispiel / Order example: 2040 W-W D25

W-W = Kühlmittelbohrung / W-W = coolant bores

Zeff. = effektive Zähnezahl / Zeff. = effective teeth

|  | Form Figure | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|--|-------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|  |             | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|  |             | 16,00                  | 9,45 | 5,26 |    | 0,8 | XPKT 170508 PDR            | M-VT 40  | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|  |             | 16,00                  | 9,45 | 5,26 |    | 1,2 | XPKT 170512 PDR            | M-VT 40  | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|  |             | 16,00                  | 9,45 | 5,26 |    | 1,6 | XPKT 170516 PDR            | M-VT 40  | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|  |             | 16,00                  | 9,45 | 5,26 |    | 2,4 | XPKT 170524 PDR            | M-VT 40  | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|  |             | 16,00                  | 9,45 | 5,26 |    | 3,0 | XPKT 170530 PDR            | M-VT 40  | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|  |             | 16,00                  | 9,45 | 5,26 |    | 4,0 | XPKT 170540 PDR            | M-VT 40  | M-BT 15   |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl | Emulsion | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|----|----------|-----|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |    |          |     |         |           |
| PTV28         |                   |     |             |                  | 300              | 250              | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |          |     |         |           |
| PTT35         |                   |     |             |                  |                  |                  | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |          |     |         |           |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 200             | 180             |       |       |                       |    |          |     |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 220   |       |                       |    |          |     |         |           |
| KTE20         | 600               | 600 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |          |     |         |           |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |          |     |         |           |
| fz            | 0,2 - 0,25        |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |          |     |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

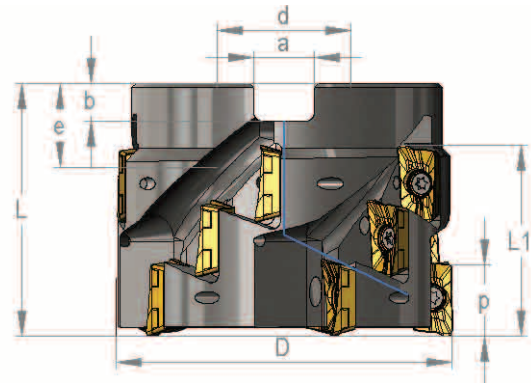
# Serie 2042 - Schaft-Schrupfräser 90° Series 2042 - Helical end mill 90°



**Ausführung:** Walzenstirnfräser zylindrisch 90°, mit Innenbohrung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eck- und Konturfräsen, universelle Einsatzmöglichkeiten

**Execution:** Helical endmill cutter cylindrical 90°  
 with inner coolant

**Delivery:** without insert, without screwdriver  
**Application:** Groove- and shoulder and copy milling, universal application

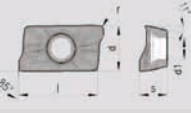


| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |    |    |      |   |       |                                             | Wendeplatte<br>Insert                                                               | Schraube<br>Screw                                                                   | Schlüssel<br>Key                                                                    |
|-----------------------------|------------------------------|----|----|----|----|------|---|-------|---------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                             | D                            | d  | L  | L1 | e  | a    | b | Zeff. | Wendeplattenanzahl<br>Complete insert units |  |  |  |
| 2042 M-W D50                | 50                           | 22 | 50 | 30 | 28 | 10,4 | 7 | 3     | 6                                           | XPKT<br>1705.. PDR..                                                                | M-VT40<br>3,0 Nm                                                                    | M-BT15                                                                              |
| 2042 M-W D63                | 63                           | 27 | 60 | 44 | 28 | 12,4 | 7 | 4     | 12                                          |                                                                                     |                                                                                     |                                                                                     |
| 2042 M-W D80                | 80                           | 32 | 60 | 44 | 28 | 14,4 | 8 | 5     | 15                                          |                                                                                     |                                                                                     |                                                                                     |
| 2042 M-W D100               | 100                          | 40 | 60 | 44 | 30 | 16,4 | 9 | 6     | 18                                          |                                                                                     |                                                                                     |                                                                                     |

Bestellbeispiel / Order example: 2042 M-W D50

M-W = Kühlmittelbohrung / M-W = coolant bores

Zeff. = effektive Zähnezahl / Zeff. = effective teeth

|                                                                                    | Form Figure                                                                         | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                    |                                                                                     | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|  |  | 16,00                  | 9,45 | 5,26 |    | 0,8 | XPKT 170508 PDR            | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 1,2 | XPKT 170512 PDR            | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 1,6 | XPKT 170516 PDR            | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 2,4 | XPKT 170524 PDR            | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 3,0 | XPKT 170530 PDR            | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 4,0 | XPKT 170540 PDR            | M-VT 40  | M-BT 15   |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion           | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|------------|--------------------|-----|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |            |                    |     |         |           |
| PTV28         |                   |     |             |                  | 300              | 250              | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| PTT35         |                   |     |             |                  |                  |                  | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 200             | 180             |       |       |                       |            | ■                  |     |         | ■         |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 220   |       |                       |            | ■                  |     |         | ■         |
| KTE20         | 600               | 600 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| fz            | 0,2 - 0,25        |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet | ■ bedingt geeignet |     |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

B

## Serie 2078 - Schaft-Schrupfräser 90° Series 2078 - Helical end mill 90°



**Ausführung:** Walzenstirnfräser zylindrisch 90°, rechts  $\varnothing$  drallt,  
mit Innenkühlung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eck- und Konturfräsen,  
universelle Einsatzmöglichkeiten

**Execution:** Helical endmill cutter cylindrical 90°, right twisted,  
with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- and shoulder and copy milling,  
universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |    |      |   |       |                                                     | Wendepatte<br>Insert                                                                | Schraube<br>Screw                                                                   | Schlüssel<br>Key                                                                    |
|-----------------------------|------------------------------|----|-----|----|----|------|---|-------|-----------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                             | D                            | d  | L   | Lt | e  | a    | b | Zeff. | Wendeplat-<br>tenanzahl<br>Complete<br>insert units |  |  |  |
| 2078 M-W D63                | 63                           | 27 | 60  | 33 | 22 | 12,4 | 7 | 4     | 12                                                  | LNMX 1313.. R                                                                       | M-VT40-50<br>3,0 Nm                                                                 | M-BT15                                                                              |
| 2078 M-W D63/L              | 63                           | 27 | 90  | 63 | 22 | 12,4 | 7 | 4     | 24                                                  |                                                                                     |                                                                                     |                                                                                     |
| 2078 M-W D80                | 80                           | 32 | 75  | 54 | 25 | 14,4 | 8 | 5     | 25                                                  |                                                                                     |                                                                                     |                                                                                     |
| 2078 M-W D80/L              | 80                           | 32 | 100 | 75 | 25 | 14,4 | 8 | 5     | 35                                                  |                                                                                     |                                                                                     |                                                                                     |
| 2078 M-W D100               | 100                          | 40 | 120 | 85 | 28 | 16,4 | 9 | 6     | 48                                                  |                                                                                     |                                                                                     |                                                                                     |
| 2078 M-W D125               | 125                          | 40 | 120 | 85 | 28 | 16,4 | 9 | 7     | 56                                                  |                                                                                     |                                                                                     |                                                                                     |

Bestellbeispiel / Order example: 2078 M-W D63

M-W = Kühlmittelbohrung / M-W = coolant bores

Zeff. = effektive Zähnezahl / Zeff. = effective teeth

|                                                                                               | Form Figure                                                                         | Abmessungen Dimensions |      |       |      |      | Bezeichnung<br>Designation | Schraube  | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|-----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|-------|------|------|----------------------------|-----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                               |                                                                                     | l                      | d    | s     | d1   | r    |                            |           |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>LNMX.. |  | 13,00                  | 7,94 | 13,00 | 4,60 | 0,80 | LNMX 131308 RP - R..       | M-VT40-50 | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|                                                                                               |                                                                                     | 13,00                  | 7,94 | 13,00 | 4,60 | 0,80 | LNMX 131308 MP - R..       | M-VT40-50 | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|                                                                                               |                                                                                     | 13,00                  | 7,94 | 13,00 | 4,60 | 0,80 | LNMX 131308 RK - R..       | M-VT40-50 | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|                                                                                               |                                                                                     | 13,00                  | 7,94 | 13,00 | 4,60 | 0,80 | LNMX 131308 RK - R..       | M-VT40-50 | M-BT 15   |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl | Emulsion | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|----|----------|-----|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |    |          |     |         |           |
| PTV28         |                   |     |             |                  | 240              | 200              | 160               | 130               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |          |     |         |           |
| PTT35         |                   |     |             |                  | 240              | 200              | 160               | 130               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |          |     |         |           |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |          |     |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 300   |       |                       |    |          |     |         |           |
| KTE20         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |          |     |         |           |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |          |     |         |           |
| fz            | 0,2 - 0,25        |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |          |     |         |           |

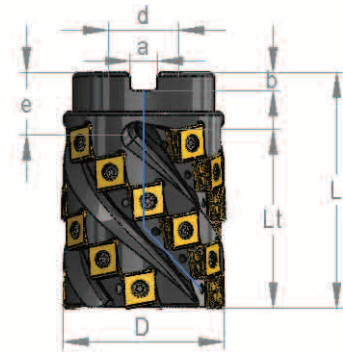
Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

## Serie 2079 - Schaft-Schruppfräser 90° Series 2079 - Helical end mill 90°



**Ausführung:** Walzenstirnfräser zylindrisch 90°, links gedreht, mit Innenkühlung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** Nuten- und Eck- und Konturfraßen, universelle Einsatzmöglichkeiten

**Execution:** Helical endmill cutter cylindrical 90°, left twisted, with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- and shoulder and copy milling, universal application



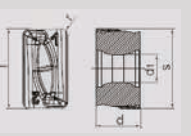
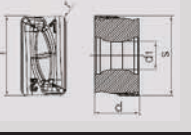
Erste Wendeschneidplatte entspricht rechter Schneidplatte, darauf folgende entsprechen linker Schneidplatte.  
 First insert corresponds to right insert, following inserts corresponds to left insert.

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |    |      |   |    |                                             | Wendeplatte<br>Insert          | Schraube<br>Screw   | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|-----|----|----|------|---|----|---------------------------------------------|--------------------------------|---------------------|------------------|
|                             | D                            | d  | L   | Lt | e  | a    | b | Ze | Wendeplattenanzahl<br>Complete insert units |                                |                     |                  |
| 2079 M-W D63                | 63                           | 27 | 60  | 33 | 22 | 12,4 | 7 | 4  | 12                                          | LNMX 1313.. R<br>LNMX 1313.. L | M-VT40-50<br>3,0 Nm | M-BT15           |
| 2079 M-W D63/L              | 63                           | 27 | 90  | 63 | 22 | 12,4 | 7 | 4  | 24                                          |                                |                     |                  |
| 2079 M-W D80                | 80                           | 32 | 75  | 54 | 25 | 14,4 | 8 | 5  | 25                                          |                                |                     |                  |
| 2079 M-W D80/L              | 80                           | 32 | 100 | 75 | 25 | 14,4 | 8 | 5  | 35                                          |                                |                     |                  |
| 2079 M-W D100               | 100                          | 40 | 120 | 85 | 28 | 16,4 | 9 | 6  | 48                                          |                                |                     |                  |
| 2079 M-W D125               | 125                          | 40 | 120 | 85 | 28 | 16,4 | 9 | 7  | 56                                          |                                |                     |                  |

Bestellbeispiel / Order example: 2078 M-W D63

M-W = Kühlmittelbohrung / M-W = coolant bores

Ze = effektive Zähnezahl / Ze = effective teeth

|                                                                                               | Form Figure                                                                         | Abmessungen Dimensions |      |       |      |      | Bezeichnung<br>Designation | Schraube  | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|-----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|-------|------|------|----------------------------|-----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                               |                                                                                     | l                      | d    | s     | d1   | r    |                            |           |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>LNMX.. |  | 13,00                  | 7,94 | 13,00 | 4,60 | 0,80 | LNMX 131308 RP - R..       | M-VT40-50 | M-BT 15   |                                         |     |                                     | ■     | ■     |       | ■     |       |
|                                                                                               |                                                                                     | 13,00                  | 7,94 | 13,00 | 4,60 | 0,80 | LNMX 131308 MP - R..       | M-VT40-50 | M-BT 15   |                                         |     |                                     |       | ■     |       |       |       |
|                                                                                               |                                                                                     | 13,00                  | 7,94 | 13,00 | 4,60 | 0,80 | LNMX 131308 RK - R..       | M-VT40-50 | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
| <br>LNMX.. |  | 13,00                  | 7,94 | 13,00 | 4,60 | 0,80 | LNMX 131308 RP - L..       | M-VT40-50 | M-BT 15   |                                         |     |                                     | ■     | ■     |       | ■     |       |
|                                                                                               |                                                                                     | 13,00                  | 7,94 | 13,00 | 4,60 | 0,80 | LNMX 131308 MP - L..       | M-VT40-50 | M-BT 15   |                                         |     |                                     |       | ■     |       |       |       |
|                                                                                               |                                                                                     | 13,00                  | 7,94 | 13,00 | 4,60 | 0,80 | LNMX 131308 RK - L..       | M-VT40-50 | M-BT 15   |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu        |   |      | Stahl   |         |         |          |          |          |          |          |          |          | INOX    |         | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl                            | Emulsion | MMS | Trocken | Druckluft |
|---------------|------------|---|------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|---------|---------|-------|-------|-----------------------|-------------------------------|----------|-----|---------|-----------|
|               | Kunststoff |   | Guss | < 500 N | < 750 N | < 900 N | < 1100 N | < 1400 N | < 55 HRC | < 60 HRC | < 65 HRC | < 67 HRC | < 70 HRC | < 900 N | > 900 N |       |       |                       |                               |          |     |         |           |
| ISO-Code      | N          | N | N    | P       | P       | P       | P        | P        | H        | H        | H        | H        | H        | M       | M       | K     | S     | N                     |                               |          |     |         |           |
| PTV28         |            |   |      |         | 240     | 200     | 160      | 130      |          |          |          |          |          |         |         |       |       |                       |                               | ■        |     | ■       |           |
| PTT35         |            |   |      |         | 240     | 200     | 160      | 130      |          |          |          |          |          |         |         |       |       |                       |                               | ■        |     | ■       |           |
| PAP28         |            |   |      |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       |                               |          |     |         |           |
| MTM10         |            |   |      |         |         |         |          |          |          |          |          |          |          |         |         | 300   |       |                       |                               | □        |     | ■       |           |
| KTE20         |            |   |      |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       |                               |          |     |         |           |
| K10           |            |   |      |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       |                               |          |     |         |           |
| fz            | 0,2 - 0,25 |   |      |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       | ■ geeignet □ bedingt geeignet |          |     |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

B



## Serie 3048 - Fasenfräser

### Series 3048 - Milling cutter for chamfering



**Ausführung:** stabiler Fasenfräser, ruhige und vibrationsarme Zerspanung durch stark positive Schneidengeometrie, mit Innenkühlung

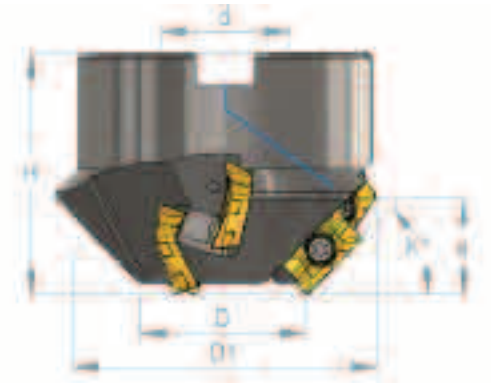
**Lieferumfang:** ohne Wendschneidplatten, ohne Schraubendreher

**Anwendung:** universeller Einsatz zum Fasen und Kantenfräsen

**Execution:** Facecutter, stable run and less vibration, with inner coolant

**Delivery:** without insert, without screwdriver

**Application:** universal application, face milling and chamfering

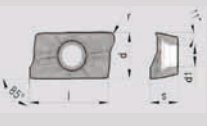


| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |    |     |      |       |                                                     | Wendeplatte<br>Insert                                                               | Schraube<br>Screw                                                                   | Schlüssel<br>Key                                                                    |
|-----------------------------|------------------------------|----|----|----|-----|------|-------|-----------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                             | D                            | D1 | d  | H  | K°  | a    | Zeff. | Wendeplat-<br>tenanzahl<br>Complete<br>insert units |  |  |  |
| 3048 MW 15°                 | 17                           | 53 | 16 | 40 | 15° | 5    | 3     | 6                                                   | APKT<br>1003.. PDSR ..                                                              | M-VT25<br>1,2 Nm                                                                    | M-BT08                                                                              |
| 3048 MW 30°                 | 17                           | 50 | 16 | 40 | 30° | 9,5  | 3     | 6                                                   |                                                                                     |                                                                                     |                                                                                     |
| 3048 MW 45°                 | 17                           | 44 | 16 | 40 | 45° | 13,5 | 3     | 6                                                   |                                                                                     |                                                                                     |                                                                                     |
| 3048 MW 60°                 | 17                           | 36 | 16 | 40 | 60° | 16,5 | 3     | 6                                                   |                                                                                     |                                                                                     |                                                                                     |
| 3048 MW 75°                 | 19                           | 29 | 16 | 60 | 75° | 18,5 | 3     | 6                                                   |                                                                                     |                                                                                     |                                                                                     |

Bestellbeispiel / Order example: 3048 MW 15°

MW = Kühlmittelbohrung / MW = coolant bores

Zeff. = effektive Zähnezahl / Zeff. = effective teeth

|                                                                                    | Form Figure                                                                         | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                    |                                                                                     | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|  |  | 10,50                  | 6,70 | 3,50 |    | 0,5 | APKT 1003 PDSR             | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 0,8 | APKT 100308 PDSR           | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 1,2 | APKT 100312 PDSR           | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 1,6 | APKT 100316 PDSR           | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 10,50                  | 6,70 | 3,50 |    | 2,0 | APKT 100320 PDSR           | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion           | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|------------|--------------------|-----|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |            |                    |     |         |           |
| PTV28         |                   |     |             |                  | 300              | 250              | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| PTT35         |                   |     |             |                  |                  |                  | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 200             | 180             |       |       |                       |            | ■                  |     |         | ■         |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 220   |       |                       |            | ■                  |     |         | ■         |
| KTE20         | 600               | 600 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| fz            | 0,1 - 0,15        |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet | ■ bedingt geeignet |     |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.

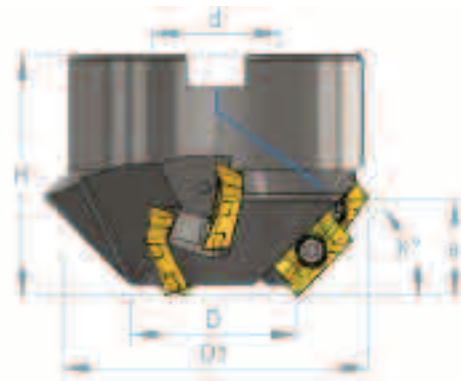
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

## Serie 3050 - Fasenfräser Series 3050 - Milling cutter for chamfering



**Ausführung:** stabiler Fasenfräser, ruhige und vibrationsarme Zerspanung durch stark positive Schneidengeometrie, mit Innenkühlung  
**Lieferumfang:** ohne Wendschneidplatten, ohne Schraubendreher  
**Anwendung:** universeller Einsatz zum Fasen und Kantenfräsen

**Execution:** Facecutter, stable run and less vibration, with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** universal application, face milling and chamfering



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |    |     |      |       |                                             | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|----|----|-----|------|-------|---------------------------------------------|-----------------------|-------------------|------------------|
|                             | D                            | D1 | d  | H  | K°  | a    | Zeff. | Wendeplattenanzahl<br>Complete insert units |                       |                   |                  |
| 3050 MW 15°                 | 35                           | 92 | 27 | 50 | 15° | 8    | 3     | 6                                           | APKT 1604..           | M-VT40<br>3,0 Nm  | M-BT15           |
| 3050 MW 30°                 | 35                           | 86 | 27 | 50 | 30° | 14,5 | 3     | 6                                           |                       |                   |                  |
| 3050 MW 45°                 | 35                           | 77 | 27 | 50 | 45° | 21   | 3     | 6                                           |                       |                   |                  |
| 3050 MW 60°                 | 35                           | 64 | 27 | 50 | 60° | 25,5 | 3     | 6                                           |                       |                   |                  |
| 3050 MW 75°                 | 35                           | 50 | 22 | 50 | 75° | 29,4 | 3     | 6                                           |                       |                   |                  |

Bestellbeispiel / Order example: 3050 MW 15°

MW = Kühlmittelbohrung / MW = coolant bores

Zeff. = effektive Zähnezahl / Zeff. = effective teeth

|  | Form Figure | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|--|-------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|  |             | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|  |             | 16,00                  | 9,45 | 5,26 |    | 0,8 | APKT 1604 PDER             | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|  |             | 16,00                  | 9,45 | 5,26 |    | 1,2 | APKT 160412 PDER           | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|  |             | 16,00                  | 9,45 | 5,26 |    | 1,6 | APKT 160416 PDER           | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|  |             | 16,00                  | 9,45 | 5,26 |    | 2,4 | APKT 160424 PDER           | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|  |             | 16,00                  | 9,45 | 5,26 |    | 3,0 | APKT 160430 PDER           | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|  |             | 16,00                  | 9,45 | 5,26 |    | 4,0 | APKT 160440 PDER           | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|  |             |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion           | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|------------|--------------------|-----|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |            |                    |     |         |           |
| PTV28         |                   |     |             |                  | 300              | 250              | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| PTT35         |                   |     |             |                  |                  |                  | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 200             | 180             |       |       |                       |            | ■                  |     |         | ■         |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 220   |       |                       |            | ■                  |     |         | ■         |
| KTE20         | 600               | 600 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| fz            | 0,2 - 0,25        |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet | ■ bedingt geeignet |     |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

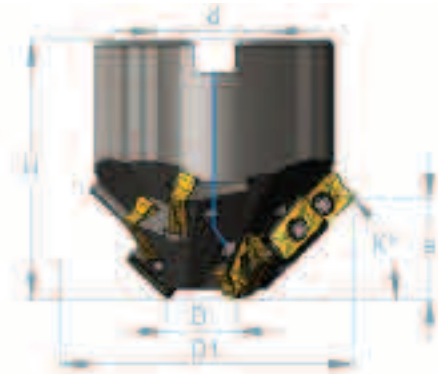
B

## Serie 2028 - Fasenfräser Series 2028 - Milling cutter for chamfering



**Ausführung:** stabiler Fasenfräser, ruhige und vibrationsarme Zerspanung durch stark positive Schneidengeometrie, mit Innenkühlung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** universeller Einsatz zum Fasen und Kantenfräsen

**Execution:** Facecutter, stable run and less vibration, with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** universal application, face milling and chamfering



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |    |     |      |       |                                                     | Wendepatte<br>Insert  | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|----|----|-----|------|-------|-----------------------------------------------------|-----------------------|-------------------|------------------|
|                             | D                            | D1 | d  | H  | K°  | a    | Zeff. | Wendeplat-<br>tenanzahl<br>Complete<br>insert units |                       |                   |                  |
| 2028 MW 15°                 | 17                           | 53 | 16 | 40 | 15° | 5    | 3     | 6                                                   | XPKT<br>11T3.. PDR .. | M-VT25<br>1,2 Nm  | M-BT08           |
| 2028 MWL 15°                | 17                           | 70 | 22 | 50 | 15° | 7,5  | 3     | 9                                                   |                       |                   |                  |
| 2028 MW 30°                 | 17                           | 50 | 16 | 40 | 30° | 9,5  | 3     | 6                                                   |                       |                   |                  |
| 2028 MWL 30°                | 17                           | 65 | 22 | 50 | 30° | 14   | 3     | 9                                                   |                       |                   |                  |
| 2028 MWL 40°                | 17                           | 59 | 22 | 50 | 40° | 18   | 3     | 9                                                   |                       |                   |                  |
| 2028 MW 45°                 | 17                           | 44 | 16 | 40 | 45° | 13,5 | 3     | 6                                                   |                       |                   |                  |
| 2028 MWL 45°                | 17                           | 56 | 22 | 50 | 45° | 20   | 3     | 9                                                   |                       |                   |                  |
| 2028 MW 60°                 | 17                           | 36 | 16 | 40 | 60° | 16,5 | 3     | 6                                                   |                       |                   |                  |
| 2028 MWL 60°                | 17                           | 45 | 22 | 50 | 60° | 24,5 | 3     | 9                                                   |                       |                   |                  |
| 2028 MW 75°                 | 19                           | 29 | 16 | 60 | 75° | 18,5 | 3     | 6                                                   |                       |                   |                  |
| 2028 MWL 75°                | 19                           | 33 | 16 | 60 | 75° | 27,5 | 3     | 9                                                   |                       |                   |                  |

Bestellbeispiel / Order example: 2028 MW 15°

MW = Kühlmittelbohrung / MW = coolant bores

Zeff. = effektive Zähnezahl / Zeff. = effective teeth

|  | Form Figure | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|--|-------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|  |             | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|  |             | 10,50                  | 6,70 | 3,50 |    | 0,5 | XPKT 11T305 PDR            | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|  |             | 10,50                  | 6,70 | 3,50 |    | 0,8 | XPKT 11T308 PDR            | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|  |             | 10,50                  | 6,70 | 3,50 |    | 1,2 | XPKT 11T312 PDR            | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|  |             | 10,50                  | 6,70 | 3,50 |    | 1,6 | XPKT 11T316 PDR            | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|  |             | 10,50                  | 6,70 | 3,50 |    | 2,0 | XPKT 11T320 PDR            | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|  |             |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion           | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|------------|--------------------|-----|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |            |                    |     |         |           |
| PTV28         |                   |     |             |                  | 300              | 250              | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         |           |
| PTT35         |                   |     |             |                  |                  |                  | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         |           |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 200             | 180             |       |       |                       |            | ■                  |     |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 220   |       |                       |            | ■                  |     |         |           |
| KTE20         | 600               | 600 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         |           |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| fz            | 0,1 - 0,15        |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet | □ bedingt geeignet |     |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

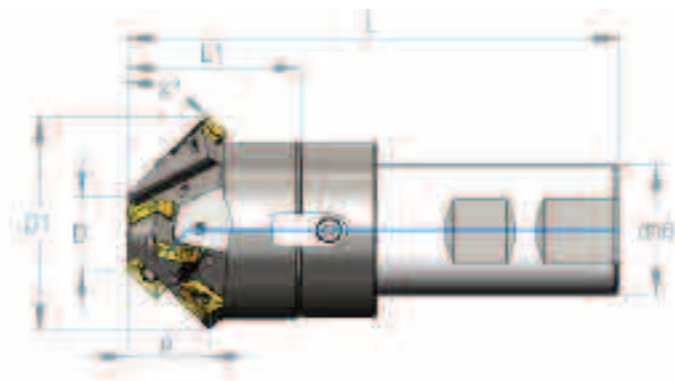
## Serie 2028 - Fasenfräser

### Series 2028 - Milling cutter for chamfering



**Ausführung:** stabiler Fasenfräser, mit Innenkühlung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** universeller Einsatz zum Fasen und Kantenfräsen

**Execution:** Facecutter, with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** universal application, face milling and chamfering



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |     |     |      |       |                                                     | Wendepatte<br>Insert  | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|-----|----|-----|-----|------|-------|-----------------------------------------------------|-----------------------|-------------------|------------------|
|                             | D                            | D1 | dh6 | L1 | L   | K°  | a    | Zeff. | Wendeplat-<br>tenanzahl<br>Complete<br>insert units |                       |                   |                  |
| 2028 W-W 15°                | 17                           | 53 | 25  | 40 | 115 | 15° | 5    | 3     | 6                                                   | XPKT<br>11T3.. PDR .. | M-VT25<br>1,2 Nm  | M-BT08           |
| 2028 W-W 30°                | 17                           | 50 | 25  | 40 | 115 | 30° | 9,5  | 3     | 6                                                   |                       |                   |                  |
| 2028 W-W 45°                | 17                           | 44 | 25  | 40 | 115 | 45° | 13,5 | 3     | 6                                                   |                       |                   |                  |
| 2028 W-W 60°                | 17                           | 36 | 25  | 40 | 115 | 60° | 16,5 | 3     | 6                                                   |                       |                   |                  |
| 2028 W-W 75°                | 19                           | 29 | 25  | 60 | 135 | 75° | 18,5 | 3     | 6                                                   |                       |                   |                  |

Bestellbeispiel / Order example: 2028 W-W 15°

W-W = Kühlmittelbohrung / W-W = coolant bores

Zeff. = effektive Zähnezahl / Zeff. = effective teeth

|  | Form Figure | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|--|-------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|  |             | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|  |             | 10,50                  | 6,70 | 3,50 |    | 0,5 | XPKT 11T305 PDR            | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|  |             | 10,50                  | 6,70 | 3,50 |    | 0,8 | XPKT 11T308 PDR            | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|  |             | 10,50                  | 6,70 | 3,50 |    | 1,2 | XPKT 11T312 PDR            | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|  |             | 10,50                  | 6,70 | 3,50 |    | 1,6 | XPKT 11T316 PDR            | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|  |             | 10,50                  | 6,70 | 3,50 |    | 2,0 | XPKT 11T320 PDR            | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |

| Vc<br>(m/min) | Alu        |     |      | Stahl   |         |         |          |          |          |          |          |          |          | INOX    |         | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl                            | Emulsion | MMS | Trocken | Druckluft |
|---------------|------------|-----|------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|---------|---------|-------|-------|-----------------------|-------------------------------|----------|-----|---------|-----------|
|               | Kunststoff |     | Guss | < 500 N | < 750 N | < 900 N | < 1100 N | < 1400 N | < 55 HRC | < 60 HRC | < 65 HRC | < 67 HRC | < 70 HRC | < 900 N | > 900 N |       |       |                       |                               |          |     |         |           |
| ISO-Code      | N          | N   | N    | P       | P       | P       | P        | P        | H        | H        | H        | H        | H        | M       | M       | K     | S     | N                     |                               |          |     |         |           |
| PTV28         |            |     |      |         | 300     | 250     | 230      | 200      |          |          |          |          |          |         |         |       |       |                       |                               |          |     |         |           |
| PTT35         |            |     |      |         |         |         | 230      | 200      |          |          |          |          |          |         |         |       |       |                       |                               |          |     |         |           |
| PAP28         |            |     |      |         |         |         |          |          |          |          |          |          |          | 200     | 180     |       |       |                       |                               |          |     |         |           |
| MTM10         |            |     |      |         |         |         |          |          |          |          |          |          |          |         |         | 220   |       |                       |                               |          |     |         |           |
| KTE20         | 600        | 600 | 400  |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       |                               |          |     |         |           |
| K10           |            |     |      |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       |                               |          |     |         |           |
| fz            | 0,1 - 0,15 |     |      |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       | ■ geeignet □ bedingt geeignet |          |     |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

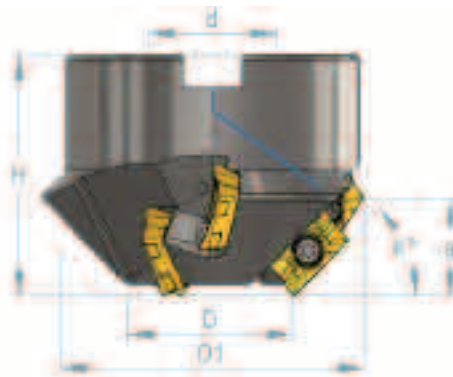
B

## Serie 2034 - Fasenfräser Series 2034 - Milling cutter for chamfering



**Ausführung:** stabiler Fasenfräser, ruhige und vibrationsarme Zerspanung durch stark positive Schneidengeometrie, mit Innenkühlung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** universeller Einsatz zum Fasen und Kantenfräsen

**Execution:** Facecutter, stable run and less vibration, with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** universal application, face milling and chamfering

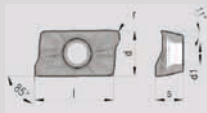


| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |    |     |      |       |                                                     | Wendepatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|----|----|-----|------|-------|-----------------------------------------------------|----------------------|-------------------|------------------|
|                             | D                            | D1 | d  | H  | K°  | a    | Zeff. | Wendeplat-<br>tenanzahl<br>Complete<br>insert units |                      |                   |                  |
| 2034 MW 15°                 | 35                           | 92 | 27 | 50 | 15° | 8    | 3     | 6                                                   | XPKT<br>1705.. PDR.. | M-VT40<br>3,0 Nm  | M-BT15           |
| 2034 MW 30°                 | 35                           | 84 | 27 | 50 | 30° | 15   | 3     | 6                                                   |                      |                   |                  |
| 2034 MW 45°                 | 35                           | 74 | 27 | 50 | 45° | 21   | 3     | 6                                                   |                      |                   |                  |
| 2034 MW 60°                 | 35                           | 62 | 27 | 50 | 60° | 26,5 | 3     | 6                                                   |                      |                   |                  |
| 2034 MW 75°                 | 35                           | 47 | 27 | 60 | 75° | 29,5 | 3     | 6                                                   |                      |                   |                  |

Bestellbeispiel / Order example: 2034 MW 15°

MW = Kühlmittelbohrung / MW = coolant bores

Zeff. = effektive Zähnezah / Zeff. = effective teeth

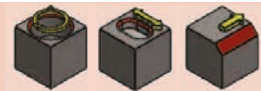
|                                                                                    | Form Figure                                                                         | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                    |                                                                                     | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|  |  | 16,00                  | 9,45 | 5,26 |    | 0,8 | XPKT 170508 PDR            | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 1,2 | XPKT 170512 PDR            | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 1,6 | XPKT 170516 PDR            | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 2,4 | XPKT 170524 PDR            | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 3,0 | XPKT 170530 PDR            | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 16,00                  | 9,45 | 5,26 |    | 4,0 | XPKT 170540 PDR            | M-VT 40  | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|                                                                                    |                                                                                     |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl | Emulsion   | MMS                | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|----|------------|--------------------|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |    |            |                    |         |           |
| PTV28         |                   |     |             |                  | 300              | 250              | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■          |                    |         | ■         |
| PTT35         |                   |     |             |                  |                  |                  | 230               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■          |                    |         | ■         |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 200             | 180             |       |       |                       |    | ■          |                    |         | ■         |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 220   |       |                       |    | ■          |                    |         | ■         |
| KTE20         | 600               | 600 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■          |                    |         | ■         |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |            |                    |         |           |
| fz            | 0,2 - 0,25        |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■ geeignet | ■ bedingt geeignet |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

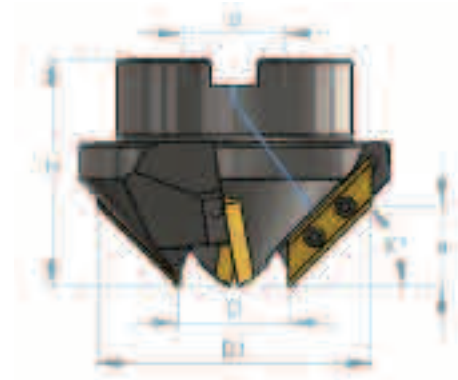


## Serie 2036 - Fasenfräser Series 2036 - Milling cutter for chamfering



**Ausführung:** stabiler Fasenfräser, mit Innenkühlung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** universeller Einsatz zum Fasen und Kantenfräsen

**Execution:** Facecutter, with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** universal application, face milling and chamfering



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |      |    |    |     |      |       | Wendeplatte<br>Insert                                                               | Schraube<br>Screw                                                                   | Schlüssel<br>Key                                                                    |
|-----------------------------|------------------------------|------|----|----|-----|------|-------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                             | D                            | D1   | d  | H  | K°  | a    | Zeff. |  |  |  |
| 2036 MW 15°                 | 30                           | 88   | 27 | 50 | 15° | 7,5  | 4     | LCEX<br>310404..                                                                    | M-VT40<br>3,0 Nm                                                                    | M-BT15                                                                              |
| 2036 MW 30°                 | 30                           | 82   | 27 | 50 | 30° | 15   | 4     |                                                                                     |                                                                                     |                                                                                     |
| 2036 MW 40°                 | 30                           | 76   | 27 | 50 | 40° | 19,5 | 4     |                                                                                     |                                                                                     |                                                                                     |
| 2036 MW 45°                 | 30                           | 72,7 | 27 | 50 | 45° | 21   | 4     |                                                                                     |                                                                                     |                                                                                     |
| 2036 MW 60°                 | 30                           | 60   | 27 | 50 | 60° | 26   | 4     |                                                                                     |                                                                                     |                                                                                     |
| 2036 MW 75°                 | 30                           | 45,7 | 22 | 60 | 75° | 29   | 4     |                                                                                     |                                                                                     |                                                                                     |

Bestellbeispiel / Order example: 2036 MW 15°

Zeff. = effektive Zähnezahl / Zeff. = effective teeth

Schnitttiefe max mal 2mm auf max Schneidenlänge

|                                                                                    | Form Figure                                                                         | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>Coated grades |       |       |       |       |       |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                    |                                                                                     | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|  |  | 30,90                  | 9,53 | 4,76 |    | 0,4 | LCEX 310404 WF             | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     |       |       |       |       |
|                                                                                    |                                                                                     | 30,90                  | 9,53 | 4,76 |    | 0,4 | LCEX 310404 WM             | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     |       |       |       |       |
|                                                                                    |                                                                                     |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion           | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|------------|--------------------|-----|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |            |                    |     |         |           |
| PTV28         |                   |     |             |                  | 250              | 250              | 200               | 180               |                   |                   |                   |                   |                   | 140             | 130             | 120   |       |                       |            | ■                  |     |         | ■         |
| PTT35         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| KTE20         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| fz            | 0,1-0,15          |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet | □ bedingt geeignet |     |         |           |

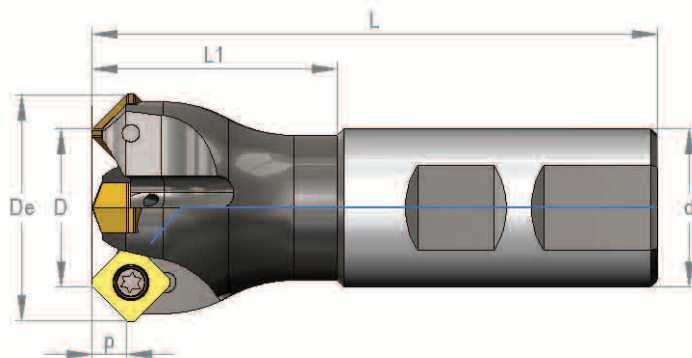
Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

B

## Serie 1071 - Planfräsen 45° Series 1071 - Face milling cutter 45°



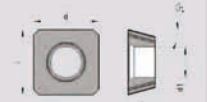
- Ausführung:** leichtschneidender Planfräser, vibrationsarmer Lauf durch stark positive Schneidengeometrie, mit Innenkühlung
- Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher
- Anwendung:** zur Schrupp- und Schlichtbearbeitung, universelle Einsatzmöglichkeiten
- Execution:** Soft-face milling cutter, less vibration, high positive cutting geometry, with inner coolant
- Delivery:** without insert, without screwdriver
- Application:** for roughing and finishing, universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |      |    |     |    |   |   | Wendepatte<br>Insert                                                                | Schraube<br>Screw                                                                   | Schlüssel<br>Key                                                                    |
|-----------------------------|------------------------------|------|----|-----|----|---|---|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                             | D                            | De   | d  | L   | L1 | p | Z |  |  |  |
| 1071 W-W D16                | 16                           | 24,5 | 20 | 90  | 40 | 3 | 2 | SDHT<br>SDHW<br>09T3AE                                                              | M-VT35<br>3,0 Nm                                                                    | M-BT15                                                                              |
| 1071 W-W D20                | 20                           | 28,5 | 20 | 90  | 40 | 3 | 3 |                                                                                     |                                                                                     |                                                                                     |
| 1071 W-W D25                | 25                           | 33,5 | 25 | 100 | 44 | 3 | 4 |                                                                                     |                                                                                     |                                                                                     |

Bestellbeispiel / Order example: 1071 W-W D16

W-W = Kühlmittelbohrung / W-W = coolant bores

|                                                                                              | Form Figure                                                                         | Abmessungen Dimensions |      |      |      |   | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|------|---|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                              |                                                                                     | l                      | d    | s    | d1   | r |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>SDHT.. |  | 9,52                   | 9,52 | 3,97 | 4,40 |   | SDHT 09T3AE                | M-VT 35  | M-BT 15   |                                         |     |                                     | ■     | ■     |       |       |       |
|                                                                                              |                                                                                     |                        |      |      |      |   |                            |          |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                              |                                                                                     |                        |      |      |      |   |                            |          |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu        |   |      | Stahl   |         |         |          |          |          |          |          |          |          | INOX    |         | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion           | MMS | Trocken | Druckluft |
|---------------|------------|---|------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|---------|---------|-------|-------|-----------------------|------------|--------------------|-----|---------|-----------|
|               | Kunststoff |   | Guss | < 500 N | < 750 N | < 900 N | < 1100 N | < 1400 N | < 55 HRC | < 60 HRC | < 65 HRC | < 67 HRC | < 70 HRC | < 900 N | > 900 N |       |       |                       |            |                    |     |         |           |
| ISO-Code      | N          | N | N    | P       | P       | P       | P        | P        | H        | H        | H        | H        | H        | M       | M       | K     | S     | N                     |            |                    |     |         |           |
| PTV28         |            |   |      |         | 250     | 240     | 220      | 200      |          |          |          |          |          |         |         |       |       |                       |            | ■                  |     | ■       |           |
| PTT35         |            |   |      |         |         |         | 220      | 200      |          |          |          |          |          |         |         |       |       |                       |            | ■                  |     | ■       |           |
| PAP28         |            |   |      |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       |            |                    |     |         |           |
| MTM10         |            |   |      |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       |            |                    |     |         |           |
| KTE20         |            |   |      |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       |            |                    |     |         |           |
| K10           |            |   |      |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       |            |                    |     |         |           |
| fz            | 0,15-0,2   |   |      |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       | ■ geeignet | □ bedingt geeignet |     |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

## Serie 1072 - Planfräsen 45° Series 1072 - Face milling cutter 45°

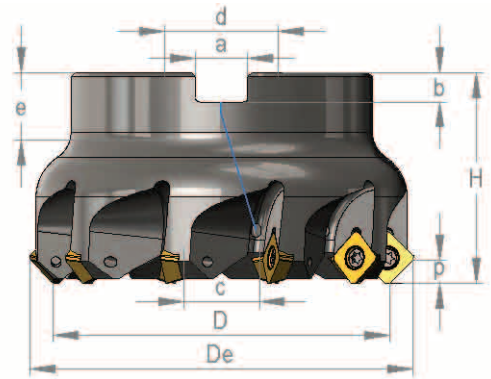


**Ausführung:** leichtschneidender Planfräser, vibrationsarmer Lauf durch stark positive Schneidengeometrie, mit Innenbohrung ohne Wendeschneidplatten, ohne Schraubendreher

**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher zur Schrump- und Schlichtbearbeitung, universelle Einsatzmöglichkeiten

**Execution:** Soft-face milling cutter, less vibration, high positive cutting geometry, with inner coolant without insert, without screwdriver

**Delivery:** for roughing and finishing, universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |       |    |    |    |      |     |    |   |    | Wendepatte<br>Insert                                                                | Schraube<br>Screw                                                                   | Schlüssel<br>Key                                                                    |
|-----------------------------|------------------------------|-------|----|----|----|------|-----|----|---|----|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                             | D                            | De    | d  | c  | e  | a    | b   | H  | p | Z  |  |  |  |
| 1072 M-W D32                | 32                           | 40,5  | 16 | -  | 21 | 8,4  | 5,6 | 40 | 3 | 4  | SDHT<br>SDHW<br>09T3AE                                                              | M-VT35<br>3,0 Nm                                                                    | M-BT15                                                                              |
| 1072 M-W D40                | 40                           | 48,5  | 16 | -  | 21 | 8,4  | 5,6 | 40 | 3 | 6  |                                                                                     |                                                                                     |                                                                                     |
| 1072 M-W D50                | 50                           | 58,5  | 22 | 17 | 21 | 10,4 | 6,3 | 40 | 3 | 8  |                                                                                     |                                                                                     |                                                                                     |
| 1072 M-W D63                | 63                           | 71,5  | 22 | 19 | 21 | 10,4 | 6,3 | 40 | 3 | 8  |                                                                                     |                                                                                     |                                                                                     |
| 1072 M-W D80                | 80                           | 88,5  | 27 | 38 | 24 | 12,4 | 7   | 50 | 3 | 10 |                                                                                     |                                                                                     |                                                                                     |
| 1072 M-W D100               | 100                          | 108,5 | 32 | 45 | 26 | 12,4 | 8   | 50 | 3 | 12 |                                                                                     |                                                                                     |                                                                                     |

Bestellbeispiel / Order example: 1072 M-W D32

M-W = Kühlmittelbohrung / M-W = coolant bores

|                                                                                    | Form Figure                                                                         | Abmessungen Dimensions |      |      |      |   | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|------|---|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                    |                                                                                     | l                      | d    | s    | d1   | r |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|  |  | 9,52                   | 9,52 | 3,97 | 4,40 |   | SDHT 09T3AE                | M-VT 35  | M-BT 15   |                                         |     |                                     |       | ■     | ■     |       |       |
|                                                                                    |                                                                                     |                        |      |      |      |   |                            |          |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                    |                                                                                     |                        |      |      |      |   |                            |          |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                    |                                                                                     |                        |      |      |      |   |                            |          |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion           | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|------------|--------------------|-----|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |            |                    |     |         |           |
| PTV28         |                   |     |             |                  | 250              | 240              | 220               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| PTT35         |                   |     |             |                  |                  |                  | 220               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| KTE20         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| fz            | 0,15-0,2          |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet | □ bedingt geeignet |     |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

B

# Serie 1070 - Planfräsen 45° Series 1070 - Face milling cutter 45°



**Ausführung:** leichtschneidender Planfräser, vibrationsarmer Lauf durch stark positive Schneidengeometrie, mit Innenkühlung ohne Wendeschneidplatten, ohne Schraubendreher zur Schrupp- und Schlichtbearbeitung, universelle Einsatzmöglichkeiten

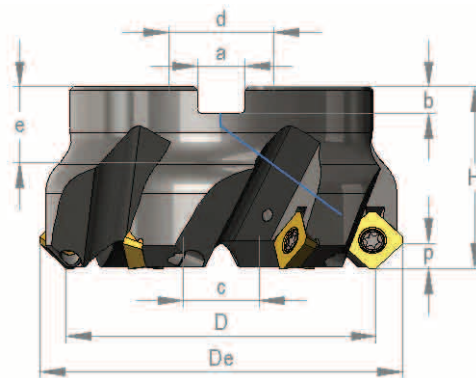
**Lieferumfang:**

**Anwendung:**

**Execution:** Soft-face milling cutter, less vibration, high positive cutting geometry, with inner coolant without insert, without screwdriver

**Delivery:**

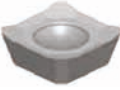
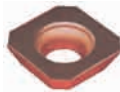
**Application:** for roughing and finishing, universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |     |    |    |    |      |      |    |   |    | Wendeplatte<br>Insert  | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|-----|----|----|----|------|------|----|---|----|------------------------|-------------------|------------------|
|                             | D                            | De  | d  | c  | e  | a    | b    | H  | p | Z  |                        |                   |                  |
| 1070 M-W D40                | 40                           | 53  | 16 | 14 | 18 | 8,4  | 5,6  | 40 | 6 | 3  | SEHT<br>SE.W<br>1204.. | M-VT50<br>5,0 Nm  | M-BT20           |
| 1070 M-W D50                | 50                           | 63  | 22 | 17 | 21 | 10,4 | 6,3  | 48 | 6 | 4  |                        |                   |                  |
| 1070 M-W D63                | 63                           | 76  | 22 | 19 | 21 | 10,4 | 6,3  | 48 | 6 | 5  |                        |                   |                  |
| 1070 M-W D80                | 80                           | 93  | 27 | 38 | 24 | 12,4 | 7    | 50 | 6 | 6  |                        |                   |                  |
| 1070 M-W D100               | 100                          | 113 | 32 | 45 | 26 | 14,4 | 8    | 50 | 6 | 6  |                        |                   |                  |
| 1070 M-W D125               | 125                          | 138 | 40 | 56 | 32 | 16,4 | 9    | 63 | 6 | 7  |                        |                   |                  |
| 1070 M D160                 | 160                          | 173 | 40 | -  | -  | -    | 9    | 63 | 6 | 8  |                        |                   |                  |
| 1070 M D200                 | 200                          | 213 | 60 | -  | -  | -    | 13,5 | 63 | 6 | 12 |                        |                   |                  |

Bestellbeispiel / Order example: 1070 M-W D40

M-W = Kühlmittelbohrung / M-W = coolant bores

|                                                                                                  | Form Figure                                                                         | Abmessungen Dimensions |       |      |      |   | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|--------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|-------|------|------|---|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                  |                                                                                     | l                      | d     | s    | d1   | r |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>SEHT.. ALU |  | 12,70                  | 12,70 | 4,76 | 5,50 |   | SEHT 1204 FR ALU           | M-VT 45  | M-BT 20   |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                  |                                                                                     |                        |       |      |      |   |                            |          |           |                                         |     |                                     |       |       |       |       |       |
| <br>SEHT..     |  | 12,70                  | 12,70 | 4,76 | 5,50 |   | SEHT 1204AF                | M-VT 45  | M-BT 20   |                                         |     |                                     |       | ■     | ■     | ■     |       |
|                                                                                                  |                                                                                     |                        |       |      |      |   |                            |          |           |                                         |     |                                     |       |       |       |       |       |
| <br>SEKW...    |  | 12,70                  | 12,70 | 4,76 | 5,50 |   | SEKW 1204 AF               | M-VT 50  | M-BT 20   |                                         |     |                                     | ■     | ■     | ■     | ■     |       |
|                                                                                                  |                                                                                     |                        |       |      |      |   |                            |          |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion           | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|------------|--------------------|-----|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |            |                    |     |         |           |
| PTV28         |                   |     |             |                  | 250              | 250              | 200               | 180               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| PTT35         |                   |     |             |                  |                  |                  | 200               | 180               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 220             | 180             |       |       |                       |            | ■                  |     |         | ■         |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 220   |       |                       |            | ■                  |     |         | ■         |
| KTE20         | 450               | 450 | 450         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| K10           | 350               | 350 | 350         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| fz            | 0,2 - 0,25        |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet | □ bedingt geeignet |     |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

# Serie 1075 - Planfräsen 45° Series 1075 - Face milling cutter 45°



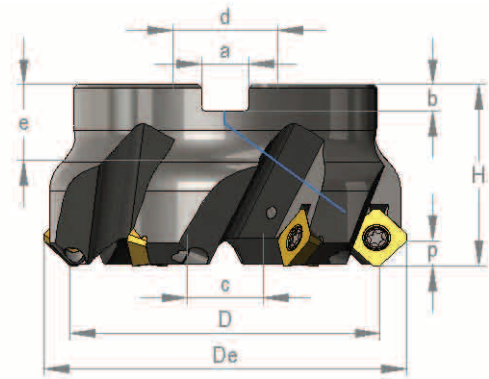
**Ausführung:** leichtschneidender Planfräser, vibrationsarmer Lauf durch stark positive Schneidengeometrie, mit Innenkühlung ohne Wendeschneidplatten, ohne Schraubendreher

**Lieferumfang:** zur Schrupp- und Schlichtbearbeitung, universelle Einsatzmöglichkeiten

**Execution:** Soft-face milling cutter, less vibration, high positive cutting geometry, with inner coolant without insert, without screwdriver

**Delivery:** for roughing and finishing, universal application

**Application:**



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |     |    |    |    |      |      |    |   |    | Wendeplatte<br>Insert  | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|-----|----|----|----|------|------|----|---|----|------------------------|-------------------|------------------|
|                             | D                            | De  | d  | c  | e  | a    | b    | H  | p | Z  |                        |                   |                  |
| 1075 M-W D50                | 50                           | 63  | 22 | 17 | 21 | 10,4 | 6,3  | 48 | 6 | 4  | SDHT<br>SD.W<br>1204.. | M-VT45<br>5,0 Nm  | M-BT20           |
| 1075 M-W D63                | 63                           | 76  | 22 | 19 | 21 | 10,4 | 6,3  | 48 | 6 | 5  |                        |                   |                  |
| 1075 M-W D80                | 80                           | 93  | 27 | 38 | 24 | 12,4 | 7    | 50 | 6 | 6  |                        |                   |                  |
| 1075 M-W D100               | 100                          | 113 | 32 | 45 | 26 | 14,4 | 8    | 50 | 6 | 6  |                        |                   |                  |
| 1075 M-W D125               | 125                          | 138 | 40 | 56 | 32 | 16,4 | 9    | 63 | 6 | 7  |                        |                   |                  |
| 1075 M D160                 | 160                          | 173 | 40 | -  | -  | -    | 9    | 63 | 6 | 8  |                        |                   |                  |
| 1075 M D200                 | 200                          | 213 | 60 | -  | -  | -    | 13,5 | 63 | 6 | 12 |                        |                   |                  |

Bestellbeispiel / Order example: 1075 M-W D50

M-W = Kühlmittelbohrung / M-W = coolant bores

| Form Figure | Abmessungen Dimensions |       |      |      |   | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|-------------|------------------------|-------|------|------|---|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|             | l                      | d     | s    | d1   | r |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| SDHT..      |                        |       |      |      |   |                            |          |           |                                         |     |                                     |       |       |       |       |       |
|             | 12,70                  | 12,70 | 4,76 | 5,50 |   | SDHT 1204AE                | M-VT 45  | M-BT 20   |                                         |     |                                     | ■     | ■     |       |       |       |
|             |                        |       |      |      |   |                            |          |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | Öl                            | Emulsion | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|-------------------------------|----------|-----|---------|-----------|
|               | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK |                               |          |     |         |           |
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |                               |          |     |         |           |
| PTV28         |                   |     |             |                  | 250              | 240              | 220               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                               |          |     |         |           |
| PTT35         |                   |     |             |                  |                  |                  | 220               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                               |          |     |         |           |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                               |          |     |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                               |          |     |         |           |
| KTE20         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                               |          |     |         |           |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                               |          |     |         |           |
| fz            | 0,2-0,25          |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet □ bedingt geeignet |          |     |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

B

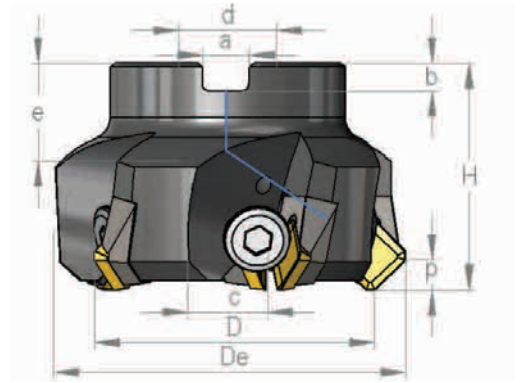


## Serie 1065 - Planfräsen 45° Series 1065 - Face milling cutter 45°



**Ausführung:** leichtschneidender Planfräser, vibrationsarmer Lauf durch stark positive Schneidengeometrie, mit Innenkühlung ohne Wendeschneidplatten, ohne Schraubendreher  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher zur Schrupp- und Schlichtbearbeitung, universelle Einsatzmöglichkeiten  
**Anwendung:**

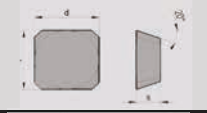
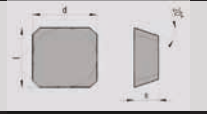
**Execution:** Soft-face milling cutter, less vibration, high positive cutting geometry, with inner coolant without insert, without screwdriver  
**Delivery:**  
**Application:** for roughing and finishing, universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |     |    |    |    |      |     |    |   |   | Wendepatte<br>Insert<br> |
|-----------------------------|------------------------------|-----|----|----|----|------|-----|----|---|---|-------------------------------------------------------------------------------------------------------------|
|                             | D                            | De  | d  | c  | e  | a    | b   | H  | p | Z |                                                                                                             |
| 1065 M D50                  | 50                           | 63  | 22 | 17 | 21 | 10,4 | 6,3 | 50 | 6 | 4 | SEKN<br>SEKR<br>1203..                                                                                      |
| 1065 M D63                  | 63                           | 76  | 22 | 19 | 21 | 10,4 | 6,3 | 50 | 6 | 5 |                                                                                                             |
| 1065 M D80                  | 80                           | 93  | 27 | 38 | 24 | 12,4 | 7   | 50 | 6 | 6 |                                                                                                             |
| 1065 M D100                 | 100                          | 113 | 32 | 45 | 26 | 14,4 | 8   | 50 | 6 | 6 |                                                                                                             |
| 1065 M D125                 | 125                          | 138 | 40 | 56 | 32 | 16,4 | 9   | 63 | 6 | 7 |                                                                                                             |
| 1065 M D160                 | 160                          | 173 | 40 | -  | -  | -    | 9   | 63 | 6 | 8 |                                                                                                             |

Bestellbeispiel / Order example: 1065 M D50

|                                   |                                                                                                                                   |                                                                                                                                                                 |                                                                                                                                                                |                                                                                                                                     |                                                                                                                                  |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| <b>Ersatzteile</b><br>Spare parts | <b>Kassette /Cassette</b><br><br><b>M-K550</b> | <b>Spannschraube f. Wendepatte</b><br>Screw for Insert<br><br><b>M-CVB55</b> | <b>Spannschraube f. Kassette</b><br>Screw for cassette<br><br><b>M-VT40</b> | <b>Torxdreher</b><br>Key<br><br><b>M-BT 15</b> | <b>Schlüssel</b><br>Key<br><br><b>M-CL2</b> |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|

|                                                                                               | Form Figure                                                                         | Abmessungen Dimensions |       |      |    |   | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|-----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|-------|------|----|---|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                               |                                                                                     | l                      | d     | s    | d1 | r |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>SEKN... |  | 12,70                  | 12,70 | 3,18 |    |   | SEKN 1203 AF               |          |           |                                         |     |                                     | ■     | ■     | ■     | ■     |       |
| <br>SEKR... |  | 12,70                  | 12,70 | 3,18 |    |   | SEKR 1203 AF EN            |          |           |                                         |     |                                     | ■     | ■     | ■     | ■     |       |

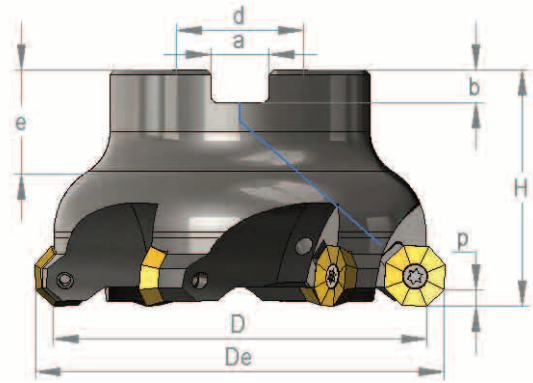
| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion           | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|------------|--------------------|-----|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |            |                    |     |         |           |
| PTV28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| PTT35         |                   |     |             |                  | 220              | 200              | 180               | 180               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 220   |       |                       |            |                    |     |         | ■         |
| KTE20         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| fz            | 0,2               |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet | □ bedingt geeignet |     |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

## Serie 1064 - Planfräsen 43° Series 1064 - Face milling cutter 43°



- Ausführung:** leichtschneidender Planfräser, vibrationsarmer Lauf durch stark positive Schneidengeometrie, mit Innenkühlung ohne Wendeschneidplatten, ohne Schraubendreher zur Schrubb- und Schlichtbearbeitung, universelle Einsatzmöglichkeiten
- Execution:** Soft-face milling cutter, less vibration, high positive cutting geometry, with inner coolant without insert, without screwdriver for roughing and finishing, universal application
- Lieferumfang:**
- Anwendung:**
- Delivery:**
- Application:**



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |     |    |    |      |     |    |     |   | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|-----|----|----|------|-----|----|-----|---|-----------------------|-------------------|------------------|
|                             | D                            | De  | d  | e  | a    | b   | H  | p   | Z |                       |                   |                  |
| 1064 M-W D32                | 32                           | 38  | 16 | 19 | 8,4  | 5,6 | 40 | 3,5 | 3 | OFMT<br>05T305        | M-VT40<br>3,0 Nm  | M-BT15           |
| 1064 M-W D40                | 40                           | 47  | 16 | 19 | 8,4  | 5,6 | 40 | 3,5 | 3 |                       |                   |                  |
| 1064 M-W D50                | 50                           | 57  | 22 | 22 | 10,4 | 6,3 | 40 | 3,5 | 4 |                       |                   |                  |
| 1064 M-W D63                | 63                           | 70  | 22 | 22 | 10,4 | 6,3 | 40 | 3,5 | 5 |                       |                   |                  |
| 1064 M-W D80                | 80                           | 87  | 27 | 28 | 12,4 | 7   | 50 | 3,5 | 6 |                       |                   |                  |
| 1064 M-W D100               | 100                          | 107 | 32 | 32 | 14,4 | 8   | 50 | 3,5 | 7 |                       |                   |                  |
| 1064 M-W D125               | 125                          | 132 | 40 | 41 | 16,4 | 9   | 63 | 3,5 | 8 |                       |                   |                  |

Bestellbeispiel / Order example: 1064 M-W D32

M-W = Kühlmittelbohrung / M-W = coolant bores

|  | Form Figure | Abmessungen Dimensions |       |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|--|-------------|------------------------|-------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|  |             | l                      | d     | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|  |             | 5,20                   | 12,70 | 3,76 |    | 0,5 | OFMT 05T305 WM             | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     | ■     |       | ■     |       |
|  |             |                        |       |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |
|  |             |                        |       |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion           | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|------------|--------------------|-----|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |            |                    |     |         |           |
| PTV28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| PTT35         |                   |     |             |                  | 220              | 200              | 180               | 180               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| KTE20         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| fz            | 0,2               |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet | □ bedingt geeignet |     |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

B

# Serie 2050 - Planfräsen 45° Series 2050 - Face milling cutter 45°



**Ausführung:** leichtschneidender Schruppplanfräser mit vibrationsarmen Lauf, durch stark negativ - positive Schneidengeometrie, mit Innenkühlung und 8 effektiven Schneiden, mit Innenkühlung ohne Wendeschneidplatten, ohne Schraubendreher zur Schrupp- und Schlichtbearbeitung, universelle Einsatzmöglichkeiten

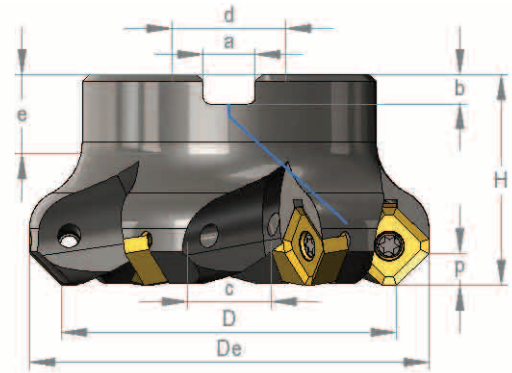
**Lieferumfang:**

**Anwendung:**

**Execution:** Soft-face milling cutter with less vibration through heavily negative - positive cutting geometry, with inner coolant without insert, without screwdriver for roughing and finishing, universal application

**Delivery:**

**Application:**



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |       |    |   |   |   |   |    |   |    | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|-------|----|---|---|---|---|----|---|----|-----------------------|-------------------|------------------|
|                             | D                            | De    | d  | c | e | a | b | H  | p | Z  |                       |                   |                  |
| 2050/12 M-W D40             | 40                           | 52,4  | 16 |   |   |   |   | 45 | 6 | 4  | SNKU 1205..           | M-VT40<br>3,0 Nm  | M-BT15           |
| 2050/12 M-W D50             | 50                           | 62,4  | 22 |   |   |   |   | 45 | 6 | 5  |                       |                   |                  |
| 2050/12 M-W D63             | 63                           | 75,4  | 22 |   |   |   |   | 45 | 6 | 6  |                       |                   |                  |
| 2050/12 M-W D80             | 80                           | 92,4  | 27 |   |   |   |   | 50 | 6 | 8  |                       |                   |                  |
| 2050/12 M-W D100            | 100                          | 112,4 | 32 |   |   |   |   | 50 | 6 | 10 |                       |                   |                  |
| 2050/12 M-W D125            | 125                          | 137,4 | 40 |   |   |   |   | 63 | 6 | 12 |                       |                   |                  |

Bestellbeispiel / Order example: 2050/12 M-W D40

M-W = Kühlmittelbohrung / M-W = coolant bores

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |     |    |    |    |      |      |    |     |    | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|-----|----|----|----|------|------|----|-----|----|-----------------------|-------------------|------------------|
|                             | D                            | De  | d  | c  | e  | a    | b    | H  | p   | Z  |                       |                   |                  |
| 2050 M-W D40                | 40                           | 55  | 16 | 14 | 19 | 8,4  | 5,6  | 45 | 6,5 | 4  | SNKU 1405..           | M-VT50<br>5,0 Nm  | M-BT20           |
| 2050 M-W D50                | 50                           | 65  | 22 | 17 | 20 | 10,4 | 6,3  | 45 | 6,5 | 4  |                       |                   |                  |
| 2050 M-W D63                | 63                           | 78  | 22 | 19 | 20 | 10,4 | 6,3  | 45 | 6,5 | 5  |                       |                   |                  |
| 2050 M-W D80                | 80                           | 95  | 27 | 38 | 22 | 12,4 | 7    | 50 | 6,5 | 6  |                       |                   |                  |
| 2050 M-W D100               | 100                          | 115 | 32 | 45 | 25 | 14,4 | 8    | 50 | 6,5 | 7  |                       |                   |                  |
| 2050 M-W D125               | 125                          | 140 | 40 | 56 | 33 | 16,4 | 9    | 63 | 6,5 | 8  |                       |                   |                  |
| 2050 M D160                 | 160                          | 175 | 40 | -  | -  | -    | 9    | 63 | 6,5 | 10 |                       |                   |                  |
| 2050 M D200 *               | 200                          | 215 | 60 | -  | -  | -    | 13,5 | 63 | 6,5 | 12 |                       |                   |                  |

Bestellbeispiel / Order example: 2050 M-W D40

M-W = Kühlmittelbohrung / M-W = coolant bores

| Form Figure                                                                                             | Abmessungen Dimensions |       |      |      |       | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|---------------------------------------------------------------------------------------------------------|------------------------|-------|------|------|-------|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                         | l                      | d     | s    | d1   | a/r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>SNKU... AZR SM.. | 13,00                  | 13,00 | 5,00 | 4,50 | 2/0,8 | SNKU 1205 AZR SM           | M-VT40   | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|                                                                                                         | 15,88                  | 15,88 | 6,00 | 5,70 | 2,7/1 | SNKU 1405 AZR SM           | M-VT 50  | M-BT 20   |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl       | Emulsion | MMS              | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|----------|----------|------------------|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |          |          |                  |         |           |
| PTV28         |                   |     |             |                  | 260              | 240              | 200               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |          |          |                  |         |           |
| PTT35         |                   |     |             |                  |                  |                  | 200               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |          |          |                  |         |           |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 180             | 160             |       |       |                       |          |          |                  |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 220   |       |                       |          |          |                  |         |           |
| KTE20         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |          |          |                  |         |           |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |          |          |                  |         |           |
| fz            | 0,2 - 0,3         |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | geeignet |          | bedingt geeignet |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

## Serie 2050 - Planfräsen 45° Series 2050 - Face milling cutter 45°



**Ausführung:** leichtschneidender Schruppplanfräser mit vibrationsarmen Lauf, durch stark negativ - positive Schneidengeometrie, mit Innenkühlung und 8 effektiven Schneiden, mit Innenkühlung ohne Wendeschneidplatten, ohne Schraubendreher

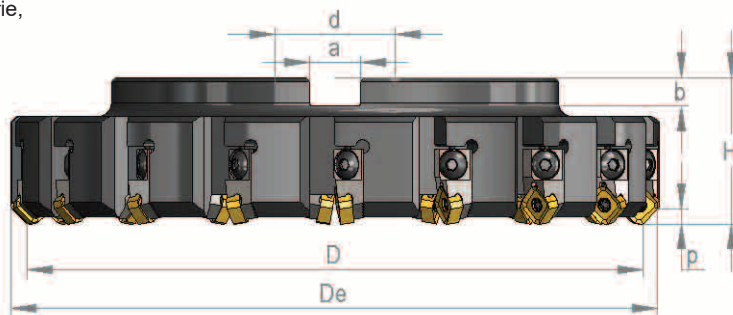
**Lieferumfang:** zur Schrupp- und Schlichtbearbeitung, universelle Einsatzmöglichkeiten

**Anwendung:**

**Execution:** Soft-face milling cutter with less vibration through heavily negative - positive cutting geometry, with inner coolant

**Delivery:** without insert, without screwdriver

**Application:** for roughing and finishing, universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |     |    |      |      |    |   |    | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|-----|----|------|------|----|---|----|-----------------------|-------------------|------------------|
|                             | D                            | De  | d  | a    | b    | H  | p | Z  |                       |                   |                  |
| 2050 M D200-K               | 200                          | 216 | 60 | 25,7 | 13,5 | 75 | 6 | 14 | SNKU 1405..           | M-VT50<br>5,0 Nm  | M-BT20           |
| 2050 M D250-K               | 250                          | 265 | 60 | 25,7 | 13,5 | 75 | 6 | 16 |                       |                   |                  |
| 2050 M D315-K               | 315                          | 330 | 60 | 25,7 | 13,5 | 75 | 6 | 18 |                       |                   |                  |

Bestellbeispiel / Order example: 2050 M D200-K

|                            |                                                                                                                              |                                                                                                                                                                      |                                                                                                                                                                |                                                                                                                                                                            |                                                                                                                                                                       |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ersatzteile<br>Spare parts | Kassette<br>Cassette<br><br><b>M-K 14</b> | Spannschraube<br>für Kassette<br>Clamp screw<br>for cassette<br><br><b>M-BL 4</b> | Schlüssel<br>für Spannschraube<br>Key for<br>clamp screw<br><br><b>I 5</b> | Justierschraube<br>für Kassette<br>adjuster screw<br>for cassette<br><br><b>M-M 3</b> | Schlüssel<br>für Justierschraube<br>Key for<br>adjuster screw<br><br><b>TX 6</b> |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                         | Form Figure                                                                         | Abmessungen Dimensions |       |      |      |       | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|---------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|-------|------|------|-------|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                         |                                                                                     | l                      | d     | s    | d1   | a/r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>SNKU... AZR SM.. |  |                        | 15,88 | 6,00 | 5,70 | 2,7/1 | SNKU 1405 AZR SM           | M-VT 50  | M-BT 20   |                                         |     |                                     | ■     | ■     | ■     | ■     |       |

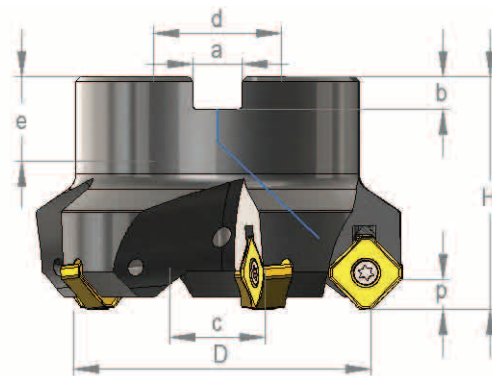
| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion | MMS                | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|------------|----------|--------------------|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |            |          |                    |         |           |
| PTV28         |                   |     |             |                  | 260              | 240              | 200               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■        |                    |         | ■         |
| PTT35         |                   |     |             |                  |                  |                  | 200               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■        |                    |         | ■         |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 180             | 160             |       |       |                       |            | ■        |                    |         | ■         |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 220   |       |                       |            | ■        |                    |         | ■         |
| KTE20         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |          |                    |         |           |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |          |                    |         |           |
| fz            | 0,2 - 0,3         |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet |          | □ bedingt geeignet |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

# Serie 2052 - Planfräsen 45° Series 2052 - Face milling cutter 45°



- Ausführung:** leichtschneidender Schruppplanfräser mit vibrationsarmen Lauf, durch stark negativ - positiv Schneidengeometrie, mit Innenkühlung und 8 effektiven Schneiden, mit Innenkühlung
- Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher
- Anwendung:** zur Schrupp- und Schlichtbearbeitung, universelle Einsatzmöglichkeiten
- Execution:** Soft-face milling cutter with less vibration through heavily negative - positive cutting geometry, with inner coolant
- Delivery:** without insert, without screwdriver
- Application:** for roughing and finishing, universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |      |     |     |      |    |   |    | Wendepatte<br>Insert      | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|------|-----|-----|------|----|---|----|---------------------------|-------------------|------------------|
|                             | D                            | d  | a    | b   | c   | e    | H  | p | Z  |                           |                   |                  |
| 2052 M-W D50-4              | 50                           | 22 | 10,4 | 6,3 | 18  | 20   | 40 | 6 | 4  | SNMX 1206...<br>..AN-WM.. | M-VT40<br>3,0 Nm  | M-BT15           |
| 2052 M-W D50-6              | 50                           | 22 | 10,4 | 6,3 | 18  | 20   | 40 | 6 | 6  |                           |                   |                  |
| 2052 M-W D63-6              | 63                           | 22 | 10,4 | 6,3 | 18  | 20   | 40 | 6 | 6  |                           |                   |                  |
| 2052 M-W D63-8              | 63                           | 22 | 10,4 | 6,3 | 18  | 20   | 40 | 6 | 8  |                           |                   |                  |
| 2052 M-W D80-7              | 80                           | 27 | 12,4 | 7   | 20  | 23   | 50 | 6 | 7  |                           |                   |                  |
| 2052 M-W D80-10             | 80                           | 27 | 12,4 | 7   | 20  | 23   | 50 | 6 | 10 |                           |                   |                  |
| 2052 M-W D100-8             | 100                          | 32 | 14,4 | 8   | 26  | 25,5 | 50 | 6 | 8  |                           |                   |                  |
| 2052 M-W D100-12            | 100                          | 32 | 14,4 | 8   | 26  | 25,5 | 50 | 6 | 12 |                           |                   |                  |
| 2052 M-W D125-10            | 125                          | 40 | 16,4 | 9   | 32  | 30   | 63 | 6 | 10 |                           |                   |                  |
| 2052 M-W D125-16            | 125                          | 40 | 16,4 | 9   | 32  | 30   | 63 | 6 | 16 |                           |                   |                  |
| 2052 M D160-12              | 160                          | 40 | 16,4 | 9   | 107 | 32   | 63 | 6 | 12 |                           |                   |                  |
| 2052 M D160-20              | 160                          | 40 | 16,4 | 9   | 107 | 32   | 63 | 6 | 20 |                           |                   |                  |
| 2052 M D200-18              | 200                          | 60 | 25,7 | 14  | 135 | 32   | 63 | 6 | 18 |                           |                   |                  |
| 2052 M D200-24              | 200                          | 60 | 25,7 | 14  | 135 | 32   | 63 | 6 | 24 |                           |                   |                  |
| 2052 M D250-20*             | 250                          | 60 | 25,7 | 14  | 180 | 32   | 63 | 6 | 20 |                           |                   |                  |
| 2052 M D250-30*             | 250                          | 60 | 25,7 | 14  | 180 | 32   | 63 | 6 | 30 |                           |                   |                  |

Bestellbeispiel / Order example: 2052 M-W D50-4

M-W = Kühlmittelbohrung / M-W = coolant bores

\*mit Kassettenausführung auf Anfrage

|                                                                                    | Form Figure                                                                         | Abmessungen Dimensions |       |      |      |      | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>Coated grades |       |       |       |       |       |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|-------|------|------|------|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                    |                                                                                     | l                      | d     | s    | d1   | a/r  |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|  |  |                        | 12,70 | 6,35 | 4,50 | 2,36 | SNMX 1206 AN - WM          | M-VT 40  | M-BT 15   |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu        |     |      | Stahl   |         |         |          |          |          |          |          |          |          | INOX    |         | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl                            | Emulsion | MMS | Trocken | Druckluft |
|---------------|------------|-----|------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|---------|---------|-------|-------|-----------------------|-------------------------------|----------|-----|---------|-----------|
|               | Kunststoff |     | Guss | < 500 N | < 750 N | < 900 N | < 1100 N | < 1400 N | < 55 HRC | < 60 HRC | < 65 HRC | < 67 HRC | < 70 HRC | < 900 N | > 900 N |       |       |                       |                               |          |     |         |           |
| ISO-Code      | N          | N   | N    | P       | P       | P       | P        | P        | H        | H        | H        | H        | H        | M       | M       | K     | S     | N                     |                               |          |     |         |           |
| PTV28         |            |     |      |         | 260     | 240     | 200      | 200      |          |          |          |          |          |         |         |       |       |                       |                               |          |     |         |           |
| PTT35         |            |     |      |         |         |         | 200      | 200      |          |          |          |          |          |         |         |       |       |                       |                               |          |     |         |           |
| PAP28         |            |     |      |         |         |         |          |          |          |          |          |          |          | 180     | 160     |       |       |                       |                               |          |     |         |           |
| MTM10         |            |     |      |         |         |         |          |          |          |          |          |          |          |         |         | 220   |       |                       |                               |          |     |         |           |
| KTE20         | 400        | 400 | 400  |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       |                               |          |     |         |           |
| K10           |            |     |      |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       |                               |          |     |         |           |
| fz            | 0,2 - 0,25 |     |      |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       | ■ geeignet □ bedingt geeignet |          |     |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.



# Serie 2054 - Planfräsen 88° Series 2054 - Face milling cutter 88°



**Ausführung:** leichtschneidender Schruppplanfräser mit vibrationsarmen Lauf, durch stark negativ - positiv Schneidengeometrie, mit Innenkühlung und 8 effektiven Schneiden, mit Innenkühlung ohne Wendeschneidplatten, ohne Schraubendreher zur Schrupp- und Schlichtbearbeitung, universelle Einsatzmöglichkeiten

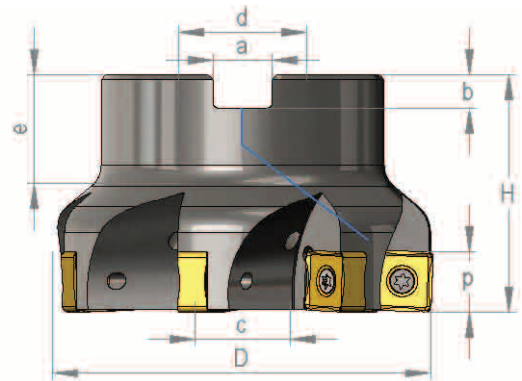
**Lieferumfang:**

**Anwendung:**

**Execution:** Soft-face milling cutter with less vibration through heavily negative - positive cutting geometry, with inner coolant without insert, without screwdriver for roughing and finishing, universal application

**Delivery:**

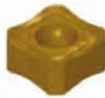
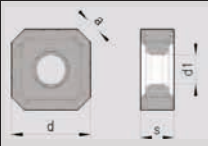
**Application:**



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |      |     |     |      |    |   |    | Wendepatte<br>Insert     | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|------|-----|-----|------|----|---|----|--------------------------|-------------------|------------------|
|                             | D                            | d  | a    | b   | c   | e    | H  | p | Z  |                          |                   |                  |
| 2054 M-W D50-4              | 50                           | 22 | 10,4 | 6,3 | 18  | 20   | 40 | 6 | 4  | SNMX 1206..<br>..QN-WM.. | M-VT40<br>3,0 Nm  | M-BT15           |
| 2054 M-W D63-6              | 63                           | 22 | 10,4 | 6,3 | 18  | 20   | 40 | 6 | 6  |                          |                   |                  |
| 2054 M-W D80-7              | 80                           | 27 | 12,4 | 7   | 20  | 23   | 50 | 6 | 7  |                          |                   |                  |
| 2054 M-W D80-9              | 80                           | 27 | 12,4 | 7   | 20  | 23   | 50 | 6 | 9  |                          |                   |                  |
| 2054 M-W D100-8             | 100                          | 32 | 14,4 | 8   | 26  | 25,5 | 50 | 6 | 8  |                          |                   |                  |
| 2054 M-W D100-11            | 100                          | 32 | 14,4 | 8   | 26  | 25,5 | 50 | 6 | 11 |                          |                   |                  |
| 2054 M-W D125-10            | 125                          | 40 | 16,4 | 9   | 32  | 30   | 63 | 6 | 10 |                          |                   |                  |
| 2054 M-W D125-14            | 125                          | 40 | 16,4 | 9   | 32  | 30   | 63 | 6 | 14 |                          |                   |                  |
| 2054 M D160-12              | 160                          | 40 | 16,4 | 9   | 107 | 32   | 63 | 6 | 12 |                          |                   |                  |
| 2054 M D160-18              | 160                          | 40 | 16,4 | 9   | 107 | 32   | 63 | 6 | 18 |                          |                   |                  |
| 2054 M D200-14              | 200                          | 60 | 25,7 | 14  | 135 | 32   | 63 | 6 | 14 |                          |                   |                  |
| 2054 M D200-22              | 200                          | 60 | 25,7 | 14  | 135 | 32   | 63 | 6 | 22 |                          |                   |                  |

Bestellbeispiel / Order example: 2056 M-W D63-6

M-W = Kühlmittelbohrung / M-W = coolant

|                                                                                                    | Form Figure                                                                         | Abmessungen Dimensions |       |      |      |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     |  | Beschichtet Sorten<br>coated grades |       |       |       |       |
|----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|-------|------|------|-----|----------------------------|----------|-----------|-----------------------------------------|-----|--|-------------------------------------|-------|-------|-------|-------|
|                                                                                                    |                                                                                     | l                      | d     | s    | d1   | a/r |                            |          |           | CT28                                    | K10 |  | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 |
| <br>SNMX ..QN-WM |  |                        |       |      |      |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |
|                                                                                                    |                                                                                     |                        | 12,70 | 6,35 | 5,20 | 0,8 | SNMX 120608 QN - WF        | M-VT 40  | M-BT 15   |                                         |     |  | ■                                   | ■     | ■     | ■     |       |
|                                                                                                    |                                                                                     | 1,20                   | 12,70 | 6,35 | 5,20 | 1,2 | SNHX 120612 QN - WF        | M-VT 40  | M-BT 15   |                                         |     |  | ■                                   | ■     | ■     | ■     |       |
|                                                                                                    |                                                                                     |                        |       |      |      |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl       | Emulsion         | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|----------|------------------|-----|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |          |                  |     |         |           |
| PTV28         |                   |     |             |                  | 260              | 240              | 200               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |          |                  |     |         |           |
| PTT35         |                   |     |             |                  |                  |                  | 200               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |          |                  |     |         |           |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 180             | 160             |       |       |                       |          |                  |     |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 220   |       |                       |          |                  |     |         |           |
| KTE20         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |          |                  |     |         |           |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |          |                  |     |         |           |
| fz            | 0,2 - 0,25        |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | geeignet | bedingt geeignet |     |         |           |

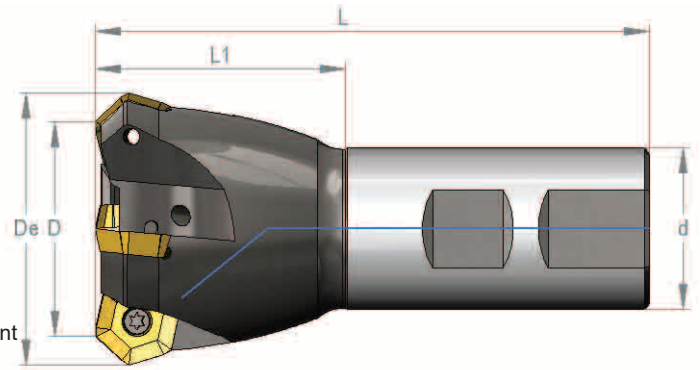
Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

B

# Serie 2060 - Planfräsen 45° Series 2060 - Face milling cutter 45°



- Ausführung:** leichtschneidender Schruppplanfräser mit vibrationsarmen Lauf, durch stark negativ - positive Schneidengeometrie, mit Innenkühlung und 8 effektiven Schneiden, mit Innenbohrung
- Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher
- Anwendung:** zur Schrupp- und Schlichtbearbeitung, universelle Einsatzmöglichkeiten
- Execution:** Soft-face milling cutter with less vibration through heavily negative - positive cutting geometry, with inner coolant without insert, without screwdriver
- Delivery:**
- Application:** for roughing and finishing, universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |     |    |   |   | Wendeplatte<br>Insert                                                               | Schraube<br>Screw                                                                   | Schlüssel<br>Key                                                                    |
|-----------------------------|------------------------------|----|----|-----|----|---|---|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                             | D                            | De | d  | L   | L1 | a | Z |  |  |  |
| 2060 W-W D40                | 40                           | 55 | 32 | 110 | 50 | 4 | 4 | HPKT 0704..                                                                         | M-VT40<br>3,0 Nm                                                                    | M-BT15                                                                              |

Bestellbeispiel / Order example: 2060 W-W D40

W-W = Kühlmittelbohrung / W-W = coolant bores

|                                                                                    | Form Figure                                                                         | Abmessungen Dimensions |       |      |      |      | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|-------|------|------|------|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                    |                                                                                     | l                      | d     | s    | d1   | a/r  |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|  |  | 14,00                  | 15,88 | 6,00 | 5,70 | 3,65 | HPKT 0704 AZR SM           | M-VT 40  | M-BT 15   |                                         | ■   |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                    |                                                                                     |                        |       |      |      |      |                            |          |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | Öl                            | Emulsion | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|-------------------------------|----------|-----|---------|-----------|
|               | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK |                               |          |     |         |           |
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |                               |          |     |         |           |
| PTV28         |                   |     |             |                  | 250              | 250              | 200               | 180               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                               |          |     |         |           |
| PTT35         |                   |     |             |                  |                  |                  | 200               | 180               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                               |          |     |         |           |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 220             | 180             |       |       |                       |                               |          |     |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 220   |       |                       |                               |          |     |         |           |
| KTE20         | 450               | 450 | 450         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                               |          |     |         |           |
| K10           | 350               | 350 | 350         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                               |          |     |         |           |
| fz            | 0,2 - 0,25        |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet □ bedingt geeignet |          |     |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

## Serie 2060 - Planfräsen 45° Series 2060 - Face milling cutter 45°



**Ausführung:** leichtschneidender Schruppplanfräser mit vibrationsarmen Lauf, durch stark negativ - positiv Schneidengeometrie, mit Innenkühlung und 8 effektiven Schneiden, mit Innenbohrung

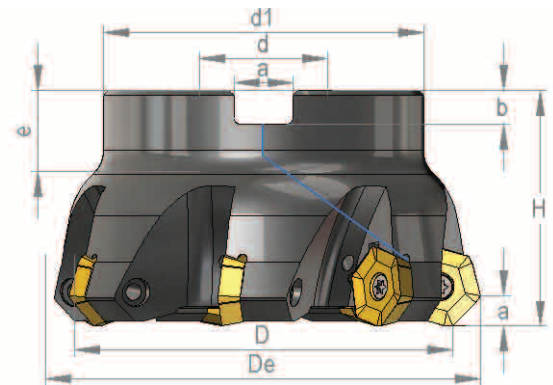
**Lieferumfang:** ohne Wendschneidplatten, ohne Schraubendreher

**Anwendung:** zur Schrupp- und Schlichtbearbeitung, universelle Einsatzmöglichkeiten

**Execution:** Soft-face milling cutter with less vibration through heavily negative - positive cutting geometry, with inner coolant

**Delivery:** without insert, without screwdriver

**Application:** for roughing and finishing, universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |     |    |    |    |    |   |    | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|-----|----|----|----|----|---|----|-----------------------|-------------------|------------------|
|                             | D                            | De  | d  | d1 | e  | H  | a | Z  |                       |                   |                  |
| 2060 M-W D40                | 40                           | 55  | 16 | 38 | 19 | 45 | 4 | 4  | HPKT 0704..           | M-VT40<br>3,0 Nm  | M-BT15           |
| 2060 M-W D50                | 50                           | 65  | 22 | 43 | 20 | 45 | 4 | 5  |                       |                   |                  |
| 2060 M-W D63                | 63                           | 78  | 22 | 48 | 20 | 45 | 4 | 6  |                       |                   |                  |
| 2060 M-W D80                | 80                           | 95  | 27 | 58 | 22 | 50 | 4 | 7  |                       |                   |                  |
| 2060 M-W D100               | 100                          | 115 | 32 | 68 | 25 | 50 | 4 | 8  |                       |                   |                  |
| 2060 M-W D125               | 125                          | 140 | 40 | 80 | 33 | 63 | 4 | 10 |                       |                   |                  |
| 2060 M D160                 | 160                          | 175 | 40 | 90 | 33 | 63 | 4 | 12 |                       |                   |                  |

Bestellbeispiel / Order example: 2060 M-W D40

M-W = Kühlmittelbohrung / M-W = coolant bores

|  | Form Figure | Abmessungen Dimensions |       |      |      |      | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     |  | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|--|-------------|------------------------|-------|------|------|------|----------------------------|----------|-----------|-----------------------------------------|-----|--|-------------------------------------|-------|-------|-------|-------|-------|
|  |             | l                      | d     | s    | d1   | a/r  |                            |          |           | CT28                                    | K10 |  | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|  |             | 14,00                  | 15,88 | 6,00 | 5,70 | 3,65 | HPKT 0704 AZR SM           | M-VT 40  | M-BT 15   |                                         | ■   |  |                                     | ■     | ■     | ■     | ■     | ■     |

| Vc<br>(m/min) | Alu        |     |      | Stahl   |         |         |          |          |          |          |          |          |          | INOX    |         | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion           | MMS | Trocken | Druckluft |
|---------------|------------|-----|------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|---------|---------|-------|-------|-----------------------|------------|--------------------|-----|---------|-----------|
|               | Kunststoff |     | Guss | < 500 N | < 750 N | < 900 N | < 1100 N | < 1400 N | < 55 HRC | < 60 HRC | < 65 HRC | < 67 HRC | < 70 HRC | < 900 N | > 900 N |       |       |                       |            |                    |     |         |           |
| ISO-Code      | N          | N   | N    | P       | P       | P       | P        | P        | H        | H        | H        | H        | H        | M       | M       | K     | S     | N                     |            |                    |     |         |           |
| PTV28         |            |     |      |         | 250     | 250     | 200      | 180      |          |          |          |          |          |         |         |       |       |                       |            | ■                  |     |         |           |
| PTT35         |            |     |      |         |         |         | 200      | 180      |          |          |          |          |          |         |         |       |       |                       |            | ■                  |     |         |           |
| PAP28         |            |     |      |         |         |         |          |          |          |          |          |          |          | 220     | 180     |       |       |                       |            | ■                  |     |         |           |
| MTM10         |            |     |      |         |         |         |          |          |          |          |          |          |          |         |         | 220   |       |                       |            | ■                  |     |         |           |
| KTE20         | 450        | 450 | 450  |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       |            | ■                  |     |         |           |
| K10           | 350        | 350 | 350  |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       |            | ■                  |     |         |           |
| fz            | 0,2 - 0,25 |     |      |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       | ■ geeignet | □ bedingt geeignet |     |         |           |

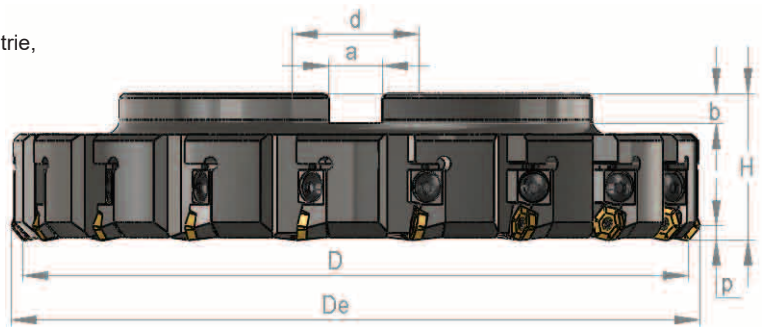
Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

B

## Serie 2060 - Planfräsen 45° Series 2060 - Face milling cutter 45°



- Ausführung:** leichtschneidender Schruppplanfräser mit vibrationsarmen Lauf, durch stark negativ - positive Schneidengeometrie, mit Innenkühlung und 8 effektiven Schneiden, mit Innenkühlung ohne Wendeschneidplatten, ohne Schraubendreher
- Lieferumfang:** zur Schrupp- und Schlichtbearbeitung, universelle Einsatzmöglichkeiten
- Execution:** Soft-face milling cutter with less vibration through heavily negative - positive cutting geometry, with inner coolant without insert, without screwdriver
- Delivery:** for roughing and finishing, universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |     |    |      |      |    |   |    | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|-----|----|------|------|----|---|----|-----------------------|-------------------|------------------|
|                             | D                            | De  | d  | a    | b    | H  | p | Z  |                       |                   |                  |
| 2060 M D200-K               | 200                          | 216 | 60 | 25,7 | 13,5 | 75 | 4 | 14 | HPKT 0704..           | M-VT40<br>3,0 Nm  | M-BT15           |
| 2060 M D250-K               | 250                          | 265 | 60 | 25,7 | 13,5 | 75 | 4 | 16 |                       |                   |                  |
| 2060 M D315-K               | 315                          | 330 | 60 | 25,7 | 13,5 | 75 | 4 | 18 |                       |                   |                  |

Bestellbeispiel / Order example: 2060 M D200-K

|                            |                                                                                                                       |                                                                                                                                                               |                                                                                                                                                        |                                                                                                                                                                     |                                                                                                                                                                |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ersatzteile<br>Spare parts | Kassette<br>Cassette<br><br>M-K 07 | Spannschraube<br>für Kassette<br>Clamp screw<br>for cassette<br><br>M-BL 4 | Schlüssel<br>für Spannschraube<br>Key for<br>clamp screw<br><br>I 5 | Justierschraube<br>für Kassette<br>adjuster screw<br>for cassette<br><br>M-M 3 | Schlüssel<br>für Justierschraube<br>Key for<br>adjuster screw<br><br>TX 6 |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                               | Form Figure                                                                         | Abmessungen Dimensions |       |      |      |      | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|-----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|-------|------|------|------|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                               |                                                                                     | l                      | d     | s    | d1   | a/r  |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>HPKT... |  | 14,00                  | 15,88 | 6,00 | 5,70 | 3,65 | HPKT 0704 AZR SM           | M-VT 40  | M-BT 15   |                                         | ■   |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                               |                                                                                     |                        |       |      |      |      |                            |          |           |                                         |     |                                     |       |       |       |       |       |

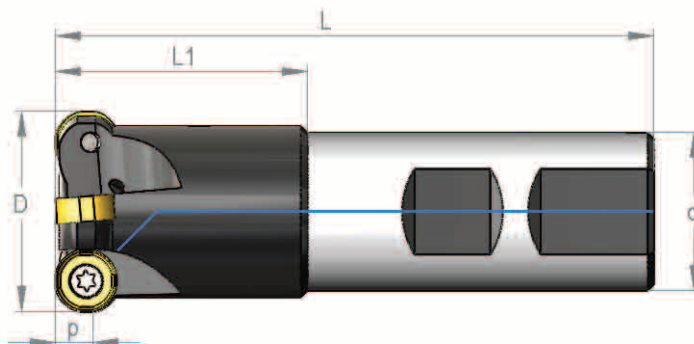
| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion           | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|------------|--------------------|-----|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |            |                    |     |         |           |
| PTV28         |                   |     |             |                  | 250              | 250              | 200               | 180               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| PTT35         |                   |     |             |                  |                  |                  | 200               | 180               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 220             | 180             |       |       |                       |            | ■                  |     |         | ■         |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 220   |       |                       |            | ■                  |     |         | ■         |
| KTE20         | 450               | 450 | 450         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| K10           | 350               | 350 | 350         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| fz            | 0,2 - 0,25        |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet | □ bedingt geeignet |     |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

## Serie 2066 - Planfräser Series 2066 - Face milling cutter



- Ausführung:** leichtschneidender Planfräser, vibrationsarmer Lauf durch stark positive Schneidengeometrie, mit Innenbohrung
- Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher
- Anwendung:** zur Schrupp- und Schlichtbearbeitung, universelle Einsatzmöglichkeiten
- Execution:** Soft-face milling cutter, less vibration, high positive cutting geometry, with inner coolant
- Delivery:** without insert, without screwdriver
- Application:** for roughing and finishing, universal application

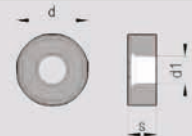


B

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |   |   | Wendeplatte<br>Insert                                                               | Schraube<br>Screw                                                                   | Schlüssel<br>Key                                                                    |
|-----------------------------|------------------------------|----|-----|----|---|---|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                             | D                            | d  | L   | L1 | p | Z |  |  |  |
| 2066 W-W D32                | 32                           | 25 | 95  | 40 | 8 | 3 | RNKU 1204<br>SM                                                                     | M-VT 40                                                                             | M-BT 15                                                                             |
| 2066 W-WL D32               | 32                           | 25 | 150 | 40 | 8 | 3 |                                                                                     |                                                                                     |                                                                                     |

Bestellbeispiel / Order example: 2066 W-W D25

W-W = Kühlmittelbohrung / W-W = coolant bores

|                                                                                                    | Form Figure                                                                         | Abmessungen Dimensions |       |      |      |   | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>Coated grades |       |       |       |       |       |
|----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|-------|------|------|---|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                    |                                                                                     | l                      | d     | s    | d1   | r |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>RNKU... SM.. |  |                        | 12,00 | 4,76 | 4,50 |   | RNKU 1204 SM               | M-VT 40  | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|                                                                                                    |                                                                                     |                        |       |      |      |   |                            |          |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                                    |                                                                                     |                        |       |      |      |   |                            |          |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                                    |                                                                                     |                        |       |      |      |   |                            |          |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff |     |     | Stahl   |         |         |          |          |          |          |          |          |          | INOX    |         | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl                                                                                    | Emulsion                                                                              | MMS                                                                                   | Trocken                                                                               | Druckluft                                                                             |
|---------------|-------------------|-----|-----|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|---------|---------|-------|-------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|               | N                 | N   | N   | < 500 N | < 750 N | < 900 N | < 1100 N | < 1400 N | < 55 HRC | < 60 HRC | < 65 HRC | < 67 HRC | < 70 HRC | < 900 N | > 900 N | K     | S     | N                     |  |  |  |  |  |
| ISO-Code      | N                 | N   | N   | P       | P       | P       | P        | P        | H        | H        | H        | H        | H        | M       | M       | K     | S     | N                     |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| PTV28         |                   |     |     |         | 260     | 240     | 200      | 200      |          |          |          |          |          |         |         |       |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| PTT35         |                   |     |     |         |         |         | 200      | 200      |          |          |          |          |          |         |         |       |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| PAP28         |                   |     |     |         |         |         |          |          |          |          |          |          |          | 180     | 160     |       |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| MTM10         |                   |     |     |         |         |         |          |          |          |          |          |          |          |         |         | 220   |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| KTE20         | 400               | 400 | 400 |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| K10           |                   |     |     |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| fz            | 0,2 - 0,25        |     |     |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       |  | geeignet                                                                              |  | bedingt geeignet                                                                      |                                                                                       |

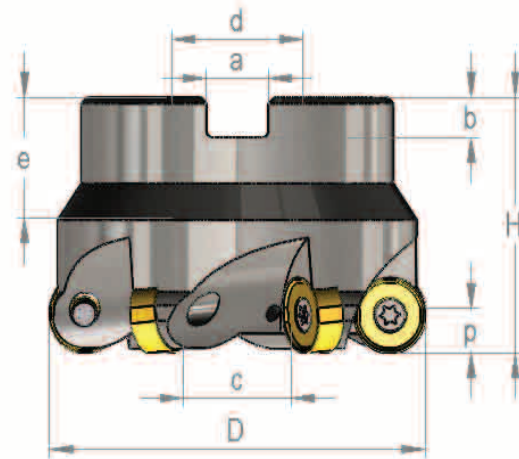
Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.



## Serie 2068 - Planfräser Series 2068 - Face milling cutter



- Ausführung:** leichtschneidender Planfräser, vibrationsarmer Lauf durch stark positive Schneidengeometrie, mit Innenkühlung
- Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher
- Anwendung:** zur Schrubb- und Schlichtbearbeitung, universelle Einsatzmöglichkeiten
- Execution:** Soft-face milling cutter, less vibration, high positive cutting geometry, with inner coolant
- Delivery:** without insert, without screwdriver
- Application:** for roughing and finishing, universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |    |      |     |    |   |    | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|----|----|------|-----|----|---|----|-----------------------|-------------------|------------------|
|                             | D                            | d  | c  | e  | a    | b   | H  | p | Z  |                       |                   |                  |
| 2068 M-W D40                | 40                           | 16 | 17 | 21 | 8,4  | 5,6 | 40 | 8 | 4  | RNKU<br>1204 SM..     | M-VT40<br>3,0 Nm  | M-BT15           |
| 2068 M-W D50                | 50                           | 22 | 17 | 21 | 10,4 | 6,3 | 40 | 8 | 5  |                       |                   |                  |
| 2068 M-W D63                | 63                           | 22 | 17 | 21 | 10,4 | 6,3 | 40 | 8 | 6  |                       |                   |                  |
| 2068 M-W D80                | 80                           | 27 | 20 | 22 | 12,4 | 7   | 50 | 8 | 8  |                       |                   |                  |
| 2068 M-W D100               | 100                          | 32 | 45 | 23 | 14,4 | 8   | 50 | 8 | 10 |                       |                   |                  |

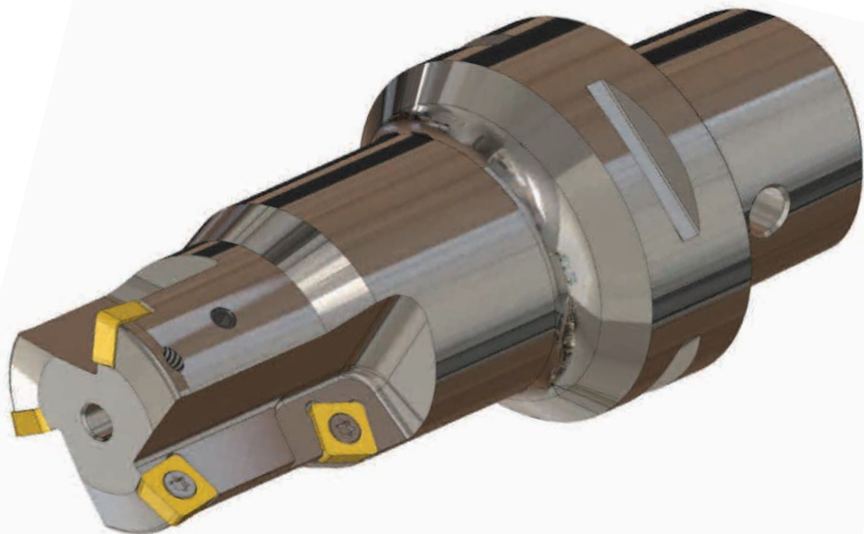
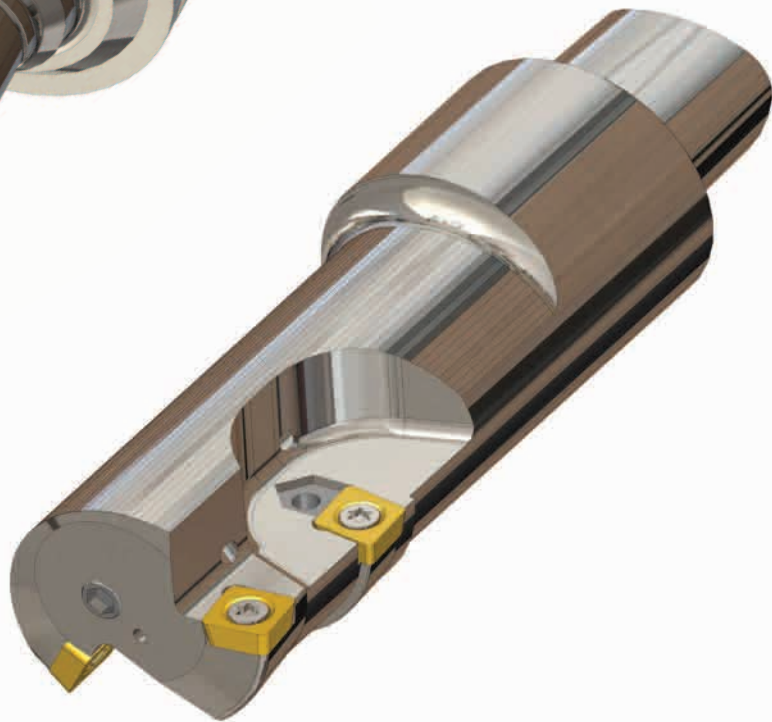
Bestellbeispiel / Order example: 2068 M-W D40

M-W = Kühlmittelbohrung / M-W = coolant bores

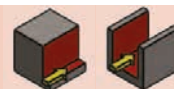
|                  | Form Figure | Abmessungen Dimensions |       |      |      |   | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|------------------|-------------|------------------------|-------|------|------|---|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                  |             | l                      | d     | s    | d1   | r |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>RNKU... SM.. |             |                        |       |      |      |   |                            |          |           |                                         |     |                                     |       |       |       |       |       |
|                  |             |                        | 12,00 | 4,76 | 4,50 |   | RNKU 1204 SM               | M-VT 40  | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|                  |             |                        |       |      |      |   |                            |          |           |                                         |     |                                     |       |       |       |       |       |
|                  |             |                        |       |      |      |   |                            |          |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl       | Emulsion | MMS | Trocken | Druckluft        |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|----------|----------|-----|---------|------------------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |          |          |     |         |                  |
| PTV28         |                   |     |             |                  | 260              | 240              | 200               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |          |          |     |         |                  |
| PTT35         |                   |     |             |                  |                  |                  | 200               | 200               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |          |          |     |         |                  |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 180             | 160             |       |       |                       |          |          |     |         |                  |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 220   |       |                       |          |          |     |         |                  |
| KTE20         | 400               | 400 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |          |          |     |         |                  |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |          |          |     |         |                  |
| fz            | 0,2 - 0,25        |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | geeignet |          |     |         | bedingt geeignet |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

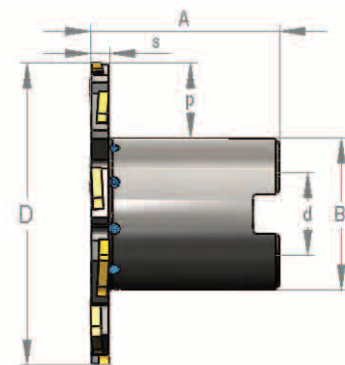


## Serie 1115 - Scheibenfräser Series 1115 - Grooving and cut-off mills



**Ausführung:** Scheibenfräser mit geschraubten Wendeplatten,  
Ak alwinke l 3° - Radialwinke l 12° - 3-seitig-schneidend  
**Lieferumfang:** ohne Wendschneidplatten, ohne Schraubendreher  
**Anwendung:** zum Nuten und Trennfräsen

**Execution:** Groove -cutter with screwed inserts,  
ak al angle 3° - radial angle 12° - three-side cutting  
**Delivery:** without insert, without screwdriver  
**Application:** Groove-cut-off milling



**Ausführung I**  
Execution I



SNHX..T..

**Ausführung II**  
Execution II



SNHX..T-90 R/L/T..

**Ebener Nutgrund**  
Plain on the ground

R = Rechts / right  
L = Links / left  
T = Neutral / neutral (ab S = 14-16)

auch mit Radien lieferbar  
also with radius possible

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |    |    |     |      | Wendeplatte<br>Insert       |                               |  | Schraube<br>Screw | Schlüssel<br>Key |                   |
|-----------------------------|------------------------------|----|-----|----|----|----|-----|------|-----------------------------|-------------------------------|-------------------------------------------------------------------------------------|-------------------|------------------|-------------------|
|                             | D                            | d  | s   | A  | B  | Z  | K   | p    | Ausführung I<br>Execution I | Ausführung II<br>Execution II |                                                                                     |                   |                  |                   |
|                             |                              |    |     |    |    |    |     |      |                             |                               |                                                                                     |                   |                  |                   |
| 1115 M-63-04                | 63                           | 16 | 4   | 35 | 30 | 8  | 4   | 15   | SNHX 1102T..                | SNHX 1102T-90R/L              | M-VTX3503                                                                           | M-BT09            |                  |                   |
| 1115 M-W-63-04              |                              |    |     |    |    |    |     |      |                             |                               |                                                                                     |                   |                  |                   |
| 1115 M-63-05                |                              |    | 63  |    |    | 16 | 5   | 8    | 4                           | 15                            |                                                                                     |                   | SNHX 1103T..     | SNHX 1103T-90R/L  |
| 1115 M-W-63-05              |                              |    |     |    |    |    |     |      |                             |                               |                                                                                     |                   |                  |                   |
| 1115 M-63-06                | 63                           | 16 | 6   | 35 | 30 | 6  | 3   | 15   | SNHX 1203T..                | SNHX 1203T-90R/L              | M-VTX405                                                                            | M-BT15            |                  |                   |
| 1115 M-W-63-06              |                              |    |     |    |    |    |     |      |                             |                               |                                                                                     |                   |                  |                   |
| 1115 M-63-07                |                              |    | 63  |    |    | 16 | 7   | 6    | 3                           | 15                            |                                                                                     |                   | SNHX 1204T..     | SNHX 1204T-90R/L  |
| 1115 M-W-63-07              |                              |    |     |    |    |    |     |      |                             |                               |                                                                                     |                   |                  |                   |
| 1115 M-63-08                | 63                           | 16 | 8   | 35 | 30 | 6  | 3   | 15   | SNHX 12045T..               | SNHX 12045T-90R/L             | M-VTX406                                                                            | M-BT15            |                  |                   |
| 1115 M-W-63-08              |                              |    |     |    |    |    |     |      |                             |                               |                                                                                     |                   |                  |                   |
| 1115 M-63-09                |                              |    | 63  |    |    | 16 | 9   | 6    | 3                           | 15                            |                                                                                     |                   | SNHX 1205T..     | SNHX 1205T-90R/L  |
| 1115 M-W-63-09              |                              |    |     |    |    |    |     |      |                             |                               |                                                                                     |                   |                  |                   |
| 1115 M-63-10                | 63                           | 16 | 10  | 35 | 30 | 6  | 3   | 15   | SNHX 1205T..                | SNHX 1205T-90R/L              | M-VTX408                                                                            | M-BT15            |                  |                   |
| 1115 M-80-04                |                              |    | 80  |    |    | 22 | 4   | 10   | 5                           | 19                            |                                                                                     |                   | SNHX 1102T..     | SNHX 1102T-90R/L  |
| 1115 M-W-80-04              |                              |    |     |    |    |    |     |      |                             |                               |                                                                                     |                   |                  |                   |
| 1115 M-80-05                |                              |    |     |    |    |    | 80  | 22   | 5                           | 10                            |                                                                                     |                   | 5                | 19                |
| 1115 M-W-80-05              |                              |    |     |    |    |    |     |      |                             |                               |                                                                                     |                   |                  |                   |
| 1115 M-80-06                | 80                           | 22 | 6   | 50 | 40 | 8  | 4   | 19   | SNHX 1203T..                | SNHX 1203T-90R/L              | M-VTX405                                                                            | M-BT15            |                  |                   |
| 1115 M-W-80-06              |                              |    |     |    |    |    |     |      |                             |                               |                                                                                     |                   |                  |                   |
| 1115 M-80-07                |                              |    | 80  |    |    | 22 | 7   | 8    | 4                           | 19                            |                                                                                     |                   | SNHX 1204T..     | SNHX 1204T-90R/L  |
| 1115 M-W-80-07              |                              |    |     |    |    |    |     |      |                             |                               |                                                                                     |                   |                  |                   |
| 1115 M-80-08                | 80                           | 22 | 8   | 50 | 40 | 8  | 4   | 19   | SNHX 12045T..               | SNHX 12045T-90R/L             | M-VTX406                                                                            | M-BT15            |                  |                   |
| 1115 M-W-80-08              |                              |    |     |    |    |    |     |      |                             |                               |                                                                                     |                   |                  |                   |
| 1115 M-80-09                |                              |    | 80  |    |    | 22 | 9   | 8    | 4                           | 19                            |                                                                                     |                   | SNHX 1205T..     | SNHX 1205T-90R/L  |
| 1115 M-W-80-09              |                              |    |     |    |    |    |     |      |                             |                               |                                                                                     |                   |                  |                   |
| 1115 M-80-10                | 80                           | 22 | 10  | 50 | 40 | 8  | 4   | 19   | SNHX 1205T..                | SNHX 1205T-90R/L              | M-VTX408                                                                            | M-BT15            |                  |                   |
| 1115 M-100-04               |                              |    | 100 |    |    | 27 | 4   | 12   | 6                           | 25                            |                                                                                     |                   | SNHX 1102T..     | SNHX 1102T-90R/L  |
| 1115 M-W-100-04             |                              |    |     |    |    |    |     |      |                             |                               |                                                                                     |                   |                  |                   |
| 1115 M-100-05               |                              |    |     |    |    |    | 100 | 27   | 5                           | 12                            |                                                                                     |                   | 6                | 25                |
| 1115 M-W-100-05             |                              |    |     |    |    |    |     |      |                             |                               |                                                                                     |                   |                  |                   |
| 1115 M-100-06               | 100                          | 27 | 6   | 50 | 48 | 10 | 5   | 25   | SNHX 1203T..                | SNHX 1203T-90R/L              | M-VTX405                                                                            | M-BT15            |                  |                   |
| 1115 M-W-100-06             |                              |    |     |    |    |    |     |      |                             |                               |                                                                                     |                   |                  |                   |
| 1115 M-100-07               |                              |    | 100 |    |    | 27 | 7   | 10   | 5                           | 25                            |                                                                                     |                   | SNHX 1204T..     | SNHX 1204T-90R/L  |
| 1115 M-W-100-07             |                              |    |     |    |    |    |     |      |                             |                               |                                                                                     |                   |                  |                   |
| 1115 M-100-08               | 100                          | 27 | 8   | 50 | 48 | 10 | 5   | 25   | SNHX 12045T..               | SNHX 12045T-90R/L             | M-VTX406                                                                            | M-BT15            |                  |                   |
| 1115 M-W-100-08             |                              |    |     |    |    |    |     |      |                             |                               |                                                                                     |                   |                  |                   |
| 1115 M-100-09               |                              |    | 100 |    |    | 27 | 9   | 10   | 5                           | 25                            |                                                                                     |                   | SNHX 1205T..     | SNHX 1205T-90R/L  |
| 1115 M-W-100-09             |                              |    |     |    |    |    |     |      |                             |                               |                                                                                     |                   |                  |                   |
| 1115 M-100-10               | 100                          | 27 | 10  | 50 | 48 | 10 | 5   | 25   | SNHX 1205T..                | SNHX 1205T-90R/L              | M-VTX408                                                                            | M-BT15            |                  |                   |
| 1115 M-W-100-10             |                              |    |     |    |    |    |     |      |                             |                               |                                                                                     |                   |                  |                   |
| 1115 M-100-12               |                              |    | 100 |    |    | 27 | 12  | 10   | 5                           | 25                            |                                                                                     |                   | SNHX 1207T..     | SNHX 1207T-90R/L  |
| 1115 M-W-100-12             |                              |    |     |    |    |    |     |      |                             |                               |                                                                                     |                   |                  |                   |
| 1115 M-125-04               | 125                          | 40 | 4   | 50 | 70 | 14 | 7   | 26,5 | SNHX 1102T..                | SNHX 1102T-90R/L              | M-VTX3503                                                                           | M-BT09            |                  |                   |
| 1115 M-W-125-04             |                              |    |     |    |    |    |     |      |                             |                               |                                                                                     |                   |                  |                   |
| 1115 M-125-04/32            |                              |    | 125 |    |    | 32 | 4   | 14   | 7                           | 33                            |                                                                                     |                   | SNHX 1102T..     | SNHX 1102T-90R/L  |
| 1115 M-W-125-04/32          |                              |    |     |    |    |    |     |      |                             |                               |                                                                                     |                   |                  |                   |
| 1115 M-125-05               | 125                          | 32 | 5   | 50 | 58 | 14 | 7   | 33   | SNHX 1103T..                | SNHX 1103T-90R/L              | M-VTX3504                                                                           | M-BT09            |                  |                   |
| 1115 M-125-06               |                              |    | 125 |    |    | 40 | 6   | 12   | 6                           | 26,5                          |                                                                                     |                   | SNHX 1203T..     | SNHX 1203T-90R/L  |
| 1115 M-W-125-06             |                              |    |     |    |    |    |     |      |                             |                               |                                                                                     |                   |                  |                   |
| 1115 M-125-06/32            |                              |    | 125 |    |    | 32 | 6   | 50   | 58                          | 12                            |                                                                                     |                   | 6                | 33                |
| 1115 M-W-125-06/32          |                              |    |     |    |    |    |     |      |                             |                               |                                                                                     |                   |                  |                   |
| 1115 M-125-07               | 125                          | 32 | 7   | 50 | 58 | 12 | 6   | 33   | SNHX 1204T..                | SNHX 1204T-90R/L              | M-VTX406                                                                            | M-BT15            |                  |                   |
| 1115 M-W-125-07             |                              |    | 125 |    |    | 32 | 8   | 12   | 6                           | 33                            |                                                                                     |                   | SNHX 12045T..    | SNHX 12045T-90R/L |
| 1115 M-125-08               |                              |    |     |    |    |    |     |      |                             |                               |                                                                                     |                   |                  |                   |
| 1115 M-W-125-08             |                              |    |     |    |    |    |     |      |                             |                               |                                                                                     |                   |                  |                   |
| 1115 M-125-09               | 125                          | 32 | 9   | 50 | 58 | 12 | 6   | 33   | SNHX 1205T..                | SNHX 1205T-90R/L              | M-VTX408                                                                            | M-BT15            |                  |                   |
| 1115 M-W-125-09             |                              |    |     |    |    |    |     |      |                             |                               |                                                                                     |                   |                  |                   |

Bestellbeispiel / Order example: 1115 M-63-04 M-W = Kühlmittelbohrung / M-W = coolant bores  
Sondermaße kurzfristig lieferbar! / Special dimensions available in short delivery time!

M-BT09 = 1,4 Nm  
M-BT15 = 3,0 Nm

**Serie 1115 - Scheibenfräser**  
**Series 1115 - Grooving and cut-off mills**



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |    |    |    |    |      | Wendeplatte<br>Insert       |                               |  | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|----|----|----|----|----|------|-----------------------------|-------------------------------|-------------------------------------------------------------------------------------|------------------|
|                             | D                            | d  | s  | A  | B  | Z  | K  | p    | Ausführung I<br>Execution I | Ausführung II<br>Execution II |                                                                                     |                  |
|                             |                              |    |    |    |    |    |    |      |                             |                               |                                                                                     |                  |
| 1115 M-125-10               | 125                          | 40 | 10 | 50 | 70 | 12 | 6  | 26,5 | SNHX 1205T..                | SNHX 1205T-90R/L              | M-VTX408                                                                            | M-BT15           |
| 1115 M-W-125-10             |                              | 32 | 10 | 50 | 58 | 12 | 6  | 33   | SNHX 1205T..                | SNHX 1205T-90R/L              |                                                                                     |                  |
| 1115 M-125-10/32            | 125                          | 32 | 10 | 50 | 58 | 12 | 6  | 33   | SNHX 1205T..                | SNHX 1205T-90R/L              | M-VTX408                                                                            | M-BT15           |
| 1115 M-W-125-10/32          |                              | 32 | 10 | 50 | 58 | 12 | 6  | 33   | SNHX 1205T..                | SNHX 1205T-90R/L              |                                                                                     |                  |
| 1115 M-W-125-12             | 125                          | 32 | 12 | 50 | 58 | 12 | 6  | 33   | SNHX 1207T..                | SNHX 1207T-90R/L              | M-VTX410                                                                            | M-BT15           |
| 1115 M-W-125-14             | 125                          | 40 | 14 | 50 | 70 | 12 | 6  | 26   |                             | SNHX 1210T-90R/L              | M-VTX414                                                                            | M-BT15           |
| 1115 M-W-125-15             | 125                          | 40 | 15 | 50 | 70 | 12 | 6  | 26   |                             | SNHX 1210T-90R/L              | M-VTX414                                                                            | M-BT15           |
| 1115 M-W-125-16             | 125                          | 40 | 16 | 50 | 70 | 12 | 6  | 26   |                             | SNHX 1210T-90R/L              | M-VTX414                                                                            | M-BT15           |
| 1115 M-W-125-17             | 125                          | 40 | 17 | 50 | 70 | 12 | 6  | 26   |                             | SNHX 1210T-90R/L              | M-VTX414                                                                            | M-BT15           |
| 1115 M-W-125-18             | 125                          | 40 | 18 | 50 | 70 | 12 | 6  | 26   |                             | SNHX 1210T-90R/L              | M-VTX414                                                                            | M-BT15           |
| 1115 M-W-125-19             | 125                          | 40 | 19 | 50 | 70 | 12 | 6  | 26   |                             | SNHX 1210T-90R/L              | M-VTX414                                                                            | M-BT15           |
| 1115 M-W-125-20             | 125                          | 40 | 20 | 50 | 70 | 12 | 6  | 26   |                             | SNHX 1210T-90R/L              | M-VTX414                                                                            | M-BT15           |
| 1115 M-W-160-04             | 160                          | 40 | 4  | 50 | 70 | 18 | 9  | 44   | SNHX 1102T..                | SNHX 1102T-90R/L              | M-VTX3503                                                                           | M-BT09           |
| 1115 M-W-160-05             | 160                          | 40 | 5  | 50 | 70 | 18 | 9  | 44   | SNHX 1103T..                | SNHX 1103T-90R/L              | M-VTX3504                                                                           | M-BT09           |
| 1115 M-160-06               | 160                          | 40 | 6  | 50 | 70 | 16 | 8  | 44   | SNHX 1203T..                | SNHX 1203T-90R/L              | M-VTX405                                                                            | M-BT15           |
| 1115 M-W-160-06             |                              | 40 | 6  | 50 | 70 | 16 | 8  | 44   | SNHX 1203T..                | SNHX 1203T-90R/L              |                                                                                     |                  |
| 1115 M-W-160-07             | 160                          | 40 | 7  | 50 | 70 | 16 | 8  | 44   | SNHX 1204T..                | SNHX 1204T-90R/L              | M-VTX406                                                                            | M-BT15           |
| 1115 M-W-160-08             | 160                          | 40 | 8  | 50 | 70 | 16 | 8  | 44   | SNHX 12045T..               | SNHX 12045T-90R/L             | M-VTX406                                                                            | M-BT15           |
| 1115 M-W-160-09             | 160                          | 40 | 9  | 50 | 70 | 16 | 8  | 44   | SNHX 1205T..                | SNHX 1205T-90R/L              | M-VTX408                                                                            | M-BT15           |
| 1115 M-160-10               | 160                          | 40 | 10 | 50 | 70 | 16 | 8  | 44   | SNHX 1205T..                | SNHX 1205T-90R/L              | M-VTX408                                                                            | M-BT15           |
| 1115 M-W-160-10             |                              | 40 | 10 | 50 | 70 | 16 | 8  | 44   | SNHX 1205T..                | SNHX 1205T-90R/L              |                                                                                     |                  |
| 1115 M-W-160-12             | 160                          | 40 | 12 | 50 | 70 | 16 | 8  | 44   | SNHX 1207T..                | SNHX 1207T-90R/L              | M-VTX410                                                                            | M-BT15           |
| 1115 M-W-160-14             | 160                          | 40 | 14 | 50 | 70 | 16 | 8  | 44   |                             | SNHX 1210T-90R/L              | M-VTX414                                                                            | M-BT15           |
| 1115 M-W-160-15             | 160                          | 40 | 15 | 50 | 70 | 16 | 8  | 44   |                             | SNHX 1210T-90R/L              | M-VTX414                                                                            | M-BT15           |
| 1115 M-W-160-16             | 160                          | 40 | 16 | 50 | 70 | 16 | 8  | 44   |                             | SNHX 1210T-90R/L              | M-VTX414                                                                            | M-BT15           |
| 1115 M-W-160-17             | 160                          | 40 | 17 | 50 | 70 | 16 | 8  | 44   |                             | SNHX 1210T-90R/L              | M-VTX414                                                                            | M-BT15           |
| 1115 M-W-160-18             | 160                          | 40 | 18 | 50 | 70 | 16 | 8  | 44   |                             | SNHX 1210T-90R/L              | M-VTX414                                                                            | M-BT15           |
| 1115 M-W-160-19             | 160                          | 40 | 19 | 50 | 70 | 16 | 8  | 44   |                             | SNHX 1210T-90R/L              | M-VTX414                                                                            | M-BT15           |
| 1115 M-W-160-20             | 160                          | 40 | 20 | 50 | 70 | 16 | 8  | 44   |                             | SNHX 1210T-90R/L              | M-VTX414                                                                            | M-BT15           |
| 1115 M-W-200-04             | 200                          | 40 | 4  | 50 | 70 | 18 | 9  | 62   | SNHX 1102T..                | SNHX 1102T-90R/L              | M-VTX3503                                                                           | M-BT09           |
| 1115 M-W-200-05             | 200                          | 40 | 5  | 50 | 70 | 18 | 9  | 62   | SNHX 1103T..                | SNHX 1103T-90R/L              | M-VTX3504                                                                           | M-BT09           |
| 1115 M-W-200-06             | 200                          | 40 | 6  | 50 | 70 | 18 | 9  | 62   | SNHX 1203T..                | SNHX 1203T-90R/L              | M-VTX405                                                                            | M-BT15           |
| 1115 M-W-200-08             | 200                          | 40 | 8  | 50 | 70 | 18 | 9  | 62   | SNHX 12045T..               | SNHX 12045T-90R/L             | M-VTX406                                                                            | M-BT15           |
| 1115 M-W-200-10             | 200                          | 40 | 10 | 50 | 70 | 18 | 9  | 62   | SNHX 1205T..                | SNHX 1205T-90R/L              | M-VTX408                                                                            | M-BT15           |
| 1115 M-W-200-12             | 200                          | 40 | 12 | 50 | 70 | 18 | 9  | 62   | SNHX 1207T..                | SNHX 1207T-90R/L              | M-VTX410                                                                            | M-BT15           |
| 1115 M-W-200-14             | 200                          | 40 | 14 | 50 | 70 | 18 | 9  | 62   |                             | SNHX 1210T-90R/L              | M-VTX414                                                                            | M-BT15           |
| 1115 M-W-200-15             | 200                          | 40 | 15 | 50 | 70 | 18 | 9  | 62   |                             | SNHX 1210T-90R/L              | M-VTX414                                                                            | M-BT15           |
| 1115 M-W-200-16             | 200                          | 40 | 16 | 50 | 70 | 18 | 9  | 62   |                             | SNHX 1210T-90R/L              | M-VTX414                                                                            | M-BT15           |
| 1115 M-W-200-17             | 200                          | 40 | 17 | 50 | 70 | 18 | 9  | 62   |                             | SNHX 1210T-90R/L              | M-VTX414                                                                            | M-BT15           |
| 1115 M-W-200-18             | 200                          | 40 | 18 | 50 | 70 | 18 | 9  | 62   |                             | SNHX 1210T-90R/L              | M-VTX414                                                                            | M-BT15           |
| 1115 M-W-200-19             | 200                          | 40 | 19 | 50 | 70 | 18 | 9  | 62   |                             | SNHX 1210T-90R/L              | M-VTX414                                                                            | M-BT15           |
| 1115 M-W-200-20             | 200                          | 40 | 20 | 50 | 70 | 18 | 9  | 62   |                             | SNHX 1210T-90R/L              | M-VTX414                                                                            | M-BT15           |
| 1115 M-W-250-06             | 250                          | 40 | 6  | 50 | 70 | 24 | 12 | 89   | SNHX 1203T..                | SNHX 1203T-90R/L              | M-VTX405                                                                            | M-BT15           |
| 1115 M-W-250-08             | 250                          | 40 | 8  | 50 | 70 | 24 | 12 | 89   | SNHX 12045T..               | SNHX 12045T-90R/L             | M-VTX406                                                                            | M-BT15           |
| 1115 M-W-250-10             | 250                          | 40 | 10 | 50 | 70 | 24 | 12 | 89   | SNHX 1205T..                | SNHX 1205T-90R/L              | M-VTX408                                                                            | M-BT15           |
| 1115 M-W-250-12             | 250                          | 40 | 12 | 50 | 70 | 24 | 12 | 89   | SNHX 1207T..                | SNHX 1207T-90R/L              | M-VTX410                                                                            | M-BT15           |
| 1115 M-W-250-14             | 250                          | 40 | 14 | 50 | 70 | 24 | 12 | 89   |                             | SNHX 1210T-90R/L              | M-VTX414                                                                            | M-BT15           |
| 1115 M-W-250-15             | 250                          | 40 | 15 | 50 | 70 | 24 | 12 | 89   |                             | SNHX 1210T-90R/L              | M-VTX414                                                                            | M-BT15           |
| 1115 M-W-250-16             | 250                          | 40 | 16 | 50 | 70 | 24 | 12 | 89   |                             | SNHX 1210T-90R/L              | M-VTX414                                                                            | M-BT15           |
| 1115 M-W-250-17             | 250                          | 40 | 17 | 50 | 70 | 24 | 12 | 89   |                             | SNHX 1210T-90R/L              | M-VTX414                                                                            | M-BT15           |
| 1115 M-W-250-18             | 250                          | 40 | 18 | 50 | 70 | 24 | 12 | 89   |                             | SNHX 1210T-90R/L              | M-VTX414                                                                            | M-BT15           |
| 1115 M-W-250-19             | 250                          | 40 | 19 | 50 | 70 | 24 | 12 | 89   |                             | SNHX 1210T-90R/L              | M-VTX414                                                                            | M-BT15           |
| 1115 M-W-250-20             | 250                          | 40 | 20 | 50 | 70 | 24 | 12 | 89   |                             | SNHX 1210T-90R/L              | M-VTX414                                                                            | M-BT15           |

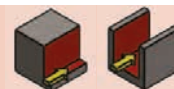
Bestellbeispiel / Order example: 1115 M-63-04 M-W = Kühlmittelbohrung / M-W = coolant bores

Sondermaße kurzfristig lieferbar! / Special dimensions available in short delivery time!

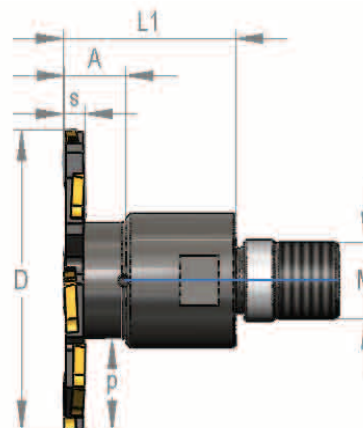
B



## Serie 1116 - Scheibenfräser Series 1116 - Grooving and cut-off mills



**Ausführung:** Scheibenfräser mit geschraubten Wendeplatten,  
Ak alwinke 13° - Radialwinke 12° - 3-seitig-schneidend  
**Lieferumfang:** ohne Wendschneidplatten, ohne Drehmomentschlüssel  
**Anwendung:** zum Nuten und Trennfräsen



**Execution:** Groove-cutter-with screwed inserts,  
ak al angle 3° - radial angle 12° - three-side cutting  
**Delivery:** without insert, without torque key  
**Application:** Groove-cut-off milling

### Ausführung II Execution II

### Ebener Nutgrund Plain on the ground



R = Rechts / right  
L = Links / left

auch mit Radien lieferbar  
also with radius possible

SNHX..T-90 R/L..

| Bestell-Nr.:<br>Order<br>Code: | Abmessungen / Dimension (mm) |     |    |    |    |    |   |    | Wendeplatte<br>Insert   |                           |  | Schraube<br>Screw                                                                    | Schlüssel<br>Key                                                                     |
|--------------------------------|------------------------------|-----|----|----|----|----|---|----|-------------------------|---------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|                                | D                            | s   | M  | A  | L1 | Z  | K | p  | linke WP<br>left insert | rechte WP<br>right insert |                                                                                     |  |  |
| 1116 EW-50-02                  | 50                           | 2   | 16 | 18 | 40 | 4  | 2 | 16 | SNHX 1111T-90 L..       | SNHX 1111T-90 R..         | M-VTX 3011                                                                          | M-BT06                                                                               |                                                                                      |
| 1116 EW-50-02.5                | 50                           | 2,5 | 16 | 18 | 40 | 4  | 2 | 16 | SNHX 1113T-90 L..       | SNHX 1113T-90 R..         | M-VTX 302                                                                           | M-BT06                                                                               |                                                                                      |
| 1116 EW-50-03                  | 50                           | 3   | 16 | 18 | 40 | 4  | 2 | 16 | SNHX 1116T-90 L..       | SNHX 1116T-90 R..         | M-VTX 3022                                                                          | M-BT06                                                                               |                                                                                      |
| 1116 EW-50-03.5                | 50                           | 3,5 | 16 | 18 | 40 | 4  | 2 | 16 | SNHX 1119T-90 L..       | SNHX 1119T-90 R..         | M-VTX 305                                                                           | M-BT09                                                                               |                                                                                      |
| 1116 EW-50-04                  | 50                           | 4   | 16 | 18 | 40 | 4  | 2 | 16 | SNHX 1102T-90 L..       | SNHX 1102T-90 R..         | M-VTX 3503                                                                          | M-BT09                                                                               |                                                                                      |
| 1116 EW-50-05                  | 50                           | 5   | 16 | 18 | 40 | 4  | 2 | 16 | SNHX 1103T-90 L..       | SNHX 1103T-90 R..         | M-VTX 3504                                                                          | M-BT09                                                                               |                                                                                      |
| 1116 EW-50-06                  | 50                           | 6   | 16 | 18 | 40 | 4  | 2 | 16 | SNHX 1203T-90 L..       | SNHX 1203T-90 R..         | M-VTX 405                                                                           | M-BT15                                                                               |                                                                                      |
| 1116 EW-63-02                  | 63                           | 2   | 16 | -  | 40 | 8  | 4 | 16 | SNHX 1111T-90 L..       | SNHX 1111T-90 R..         | M-VTX 3011                                                                          | M-BT06                                                                               |                                                                                      |
| 1116 EW-63-02.5                | 63                           | 2,5 | 16 | -  | 40 | 8  | 4 | 16 | SNHX 1113T-90 L..       | SNHX 1113T-90 R..         | M-VTX 302                                                                           | M-BT06                                                                               |                                                                                      |
| 1116 EW-63-03                  | 63                           | 3   | 16 | -  | 40 | 8  | 4 | 16 | SNHX 1116T-90 L..       | SNHX 1116T-90 R..         | M-VTX 3022                                                                          | M-BT06                                                                               |                                                                                      |
| 1116 EW-63-03.5                | 63                           | 3,5 | 16 | -  | 40 | 8  | 4 | 16 | SNHX 1119T-90 L..       | SNHX 1119T-90 R..         | M-VTX 305                                                                           | M-BT09                                                                               |                                                                                      |
| 1116 EW-63-04                  | 63                           | 4   | 16 | -  | 40 | 8  | 4 | 16 | SNHX 1102T-90 L..       | SNHX 1102T-90 R..         | M-VTX 3503                                                                          | M-BT09                                                                               |                                                                                      |
| 1116 EW-63-05                  | 63                           | 5   | 16 | -  | 40 | 8  | 4 | 16 | SNHX 1103T-90 L..       | SNHX 1103T-90 R..         | M-VTX 3504                                                                          | M-BT09                                                                               |                                                                                      |
| 1116 EW-63-06                  | 63                           | 6   | 16 | -  | 40 | 6  | 3 | 16 | SNHX 1203T-90 L..       | SNHX 1203T-90 R..         | M-VTX 405                                                                           | M-BT15                                                                               |                                                                                      |
| 1116 EW-80-02                  | 80                           | 2   | 16 | -  | 40 | 10 | 5 | 25 | SNHX 1111T-90 L..       | SNHX 1111T-90 R..         | M-VTX 3011                                                                          | M-BT06                                                                               |                                                                                      |
| 1116 EW-80-02.5                | 80                           | 2,5 | 16 | -  | 40 | 10 | 5 | 25 | SNHX 1113T-90 L..       | SNHX 1113T-90 R..         | M-VTX 302                                                                           | M-BT06                                                                               |                                                                                      |
| 1116 EW-80-03                  | 80                           | 3   | 16 | -  | 40 | 10 | 5 | 25 | SNHX 1116T-90 L..       | SNHX 1116T-90 R..         | M-VTX 3022                                                                          | M-BT06                                                                               |                                                                                      |
| 1116 EW-80-03.5                | 80                           | 3,5 | 16 | -  | 40 | 10 | 5 | 25 | SNHX 1119T-90 L..       | SNHX 1119T-90 R..         | M-VTX 305                                                                           | M-BT09                                                                               |                                                                                      |
| 1116 EW-80-04                  | 80                           | 4   | 16 | -  | 40 | 10 | 5 | 25 | SNHX 1102T-90 L..       | SNHX 1102T-90 R..         | M-VTX 3503                                                                          | M-BT09                                                                               |                                                                                      |
| 1116 EW-80-05                  | 80                           | 5   | 16 | -  | 40 | 10 | 5 | 25 | SNHX 1103T-90 L..       | SNHX 1103T-90 R..         | M-VTX 3504                                                                          | M-BT09                                                                               |                                                                                      |
| 1116 EW-80-06                  | 80                           | 6   | 16 | -  | 40 | 8  | 4 | 25 | SNHX 1203T-90 L..       | SNHX 1203T-90 R..         | M-VTX 405                                                                           | M-BT15                                                                               |                                                                                      |

Bestellbeispiel / Order example: 1116 E-W-50-03 E-W = Kühlmittelbohrung / E-W = coolant bores

Verlängerungen siehe Seite 392 - 400

Erweiterungen siehe Seite 392 - 400

Sondermaße kurzfristig lieferbar! / Special dimensions available in short delivery time!

M-BT06 = 0,6 Nm  
M-BT09 = 1,4 Nm  
M-BT15 = 3,0 Nm



# Serie 1119 - Trennfräser

## Series 1119 - Grooving and cut-off mills



**Ausführung:** Scheibenfräser mit geschraubten Wendeplatten,  
Ak alwinke 13° - Radialwinke 12° - 3-seitig-schneidend

**Lieferumfang:** ohne Wendschneidplatten, ohne Drehmomentschlüssel

**Anwendung:** zum Nuten und Trennfräsen

**Execution:** Groove -cutter-with screwed inserts,  
ak al angle 3° - radial angle 12° - three-side cutting

**Delivery:** without insert, without torque-key

**Application:** Groove-cut-off milling

### Ausführung II Execution II

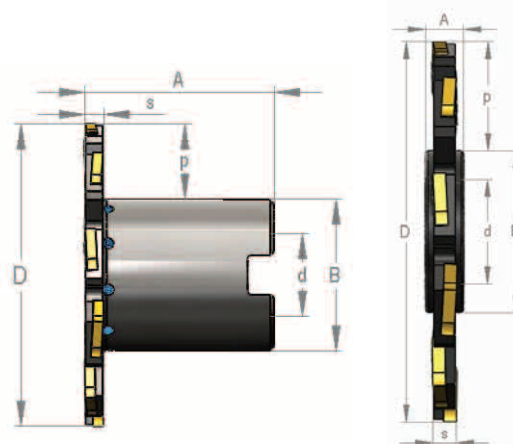


SNHX..T-90 R/L..

### Ebener Nutgrund Plain on the ground

R = Rechts / right  
L = Links / left

auch mit Radien lieferbar  
also with radius possible



1119 M-W-..

1119-..

| Bestell-Nr.:<br>Order<br>Code: | Abmessungen / Dimension (mm) |    |     |    |    |    |   |      | Wendeplatte<br>Insert   |                           | Schraube<br>Screw | Schlüssel<br>Key |
|--------------------------------|------------------------------|----|-----|----|----|----|---|------|-------------------------|---------------------------|-------------------|------------------|
|                                | D                            | d  | s   | A  | B  | Z  | K | p    | linke WP<br>left insert | rechte WP<br>right insert |                   |                  |
| 1119-63-02                     | 63                           | 22 | 2   | 8  | 34 | 8  | 4 | 14   | SNHX 1111T-90 L..       | SNHX 1111T-90 R..         | M-VTX 3011        | M-BT06           |
| 1119-63-02.5                   | 63                           | 22 | 2,5 | 8  | 34 | 8  | 4 | 14   | SNHX 1113T-90 L..       | SNHX 1113T-90 R..         | M-VTX 302         | M-BT06           |
| 1119-63-03                     | 63                           | 22 | 3   | 8  | 34 | 8  | 4 | 14   | SNHX 1116T-90 L..       | SNHX 1116T-90 R..         | M-VTX 3022        | M-BT06           |
| 1119-63-03.5                   | 63                           | 22 | 3,5 | 8  | 34 | 8  | 4 | 14   | SNHX 1119T-90 L..       | SNHX 1119T-90 R..         | M-VTX 305         | M-BT09           |
| 1119-80-02                     | 80                           | 22 | 2   | 8  | 34 | 10 | 5 | 22   | SNHX 1111T-90 L..       | SNHX 1111T-90 R..         | M-VTX 3011        | M-BT06           |
| 1119-80-02.5                   | 80                           | 22 | 2,5 | 8  | 34 | 10 | 5 | 22   | SNHX 1113T-90 L..       | SNHX 1113T-90 R..         | M-VTX 302         | M-BT06           |
| 1119-80-03                     | 80                           | 22 | 3   | 8  | 34 | 10 | 5 | 22   | SNHX 1116T-90 L..       | SNHX 1116T-90 R..         | M-VTX 3022        | M-BT06           |
| 1119-80-03.5                   | 80                           | 22 | 3,5 | 8  | 34 | 10 | 5 | 22   | SNHX 1119T-90 L..       | SNHX 1119T-90 R..         | M-VTX 305         | M-BT09           |
| 1119-100-02                    | 100                          | 27 | 2   | 12 | 45 | 12 | 6 | 27   | SNHX 1111T-90 L..       | SNHX 1111T-90 R..         | M-VTX 3011        | M-BT06           |
| 1119-100-02.5                  | 100                          | 27 | 2,5 | 12 | 45 | 12 | 6 | 27   | SNHX 1113T-90 L..       | SNHX 1113T-90 R..         | M-VTX 302         | M-BT06           |
| 1119-100-03                    | 100                          | 27 | 3   | 12 | 45 | 12 | 6 | 27   | SNHX 1116T-90 L..       | SNHX 1116T-90 R..         | M-VTX 3022        | M-BT06           |
| 1119-100-03.5                  | 100                          | 27 | 3,5 | 12 | 45 | 12 | 6 | 27   | SNHX 1119T-90 L..       | SNHX 1119T-90 R..         | M-VTX 305         | M-BT09           |
| 1119-125-02                    | 125                          | 32 | 2   | 12 | 58 | 14 | 7 | 33   | SNHX 1111T-90 L..       | SNHX 1111T-90 R..         | M-VTX 3011        | M-BT06           |
| 1119-125-02.5                  | 125                          | 32 | 2,5 | 12 | 58 | 14 | 7 | 33   | SNHX 1113T-90 L..       | SNHX 1113T-90 R..         | M-VTX 302         | M-BT06           |
| 1119-125-03                    | 125                          | 32 | 3   | 12 | 58 | 14 | 7 | 33   | SNHX 1116T-90 L..       | SNHX 1116T-90 R..         | M-VTX 3022        | M-BT06           |
| 1119-125-03.5                  | 125                          | 32 | 3,5 | 12 | 58 | 14 | 7 | 33   | SNHX 1119T-90 L..       | SNHX 1119T-90 R..         | M-VTX 305         | M-BT09           |
| 1119-160-02                    | 160                          | 40 | 2   | 12 | 68 | 18 | 9 | 45   | SNHX 1111T-90 L..       | SNHX 1111T-90 R..         | M-VTX 3011        | M-BT06           |
| 1119-160-02.5                  | 160                          | 40 | 2,5 | 12 | 68 | 18 | 9 | 45   | SNHX 1113T-90 L..       | SNHX 1113T-90 R..         | M-VTX 302         | M-BT06           |
| 1119-160-03                    | 160                          | 40 | 3   | 12 | 68 | 18 | 9 | 45   | SNHX 1116T-90 L..       | SNHX 1116T-90 R..         | M-VTX 3022        | M-BT06           |
| 1119-160-03.5                  | 160                          | 40 | 3,5 | 12 | 68 | 18 | 9 | 45   | SNHX 1119T-90 L..       | SNHX 1119T-90 R..         | M-VTX 305         | M-BT09           |
| 1119 M-W-63-02                 | 63                           | 22 | 2   | 35 | 30 | 8  | 4 | 15   | SNHX 1111T-90 L..       | SNHX 1111T-90 R..         | M-VTX 3011        | M-BT06           |
| 1119 M-W-63-02.5               | 63                           | 22 | 2,5 | 35 | 30 | 8  | 4 | 15   | SNHX 1113T-90 L..       | SNHX 1113T-90 R..         | M-VTX 302         | M-BT06           |
| 1119 M-W-63-03                 | 63                           | 22 | 3   | 35 | 30 | 8  | 4 | 15   | SNHX 1116T-90 L..       | SNHX 1116T-90 R..         | M-VTX 3022        | M-BT06           |
| 1119 M-W-63-03.5               | 63                           | 22 | 3,5 | 35 | 30 | 8  | 4 | 15   | SNHX 1119T-90 L..       | SNHX 1119T-90 R..         | M-VTX 305         | M-BT09           |
| 1119 M-W-80-02                 | 80                           | 22 | 2   | 50 | 39 | 10 | 5 | 19   | SNHX 1111T-90 L..       | SNHX 1111T-90 R..         | M-VTX 3011        | M-BT06           |
| 1119 M-W-80-02.5               | 80                           | 22 | 2,5 | 50 | 39 | 10 | 5 | 19   | SNHX 1113T-90 L..       | SNHX 1113T-90 R..         | M-VTX 302         | M-BT06           |
| 1119 M-W-80-03                 | 80                           | 22 | 3   | 50 | 39 | 10 | 5 | 19   | SNHX 1116T-90 L..       | SNHX 1116T-90 R..         | M-VTX 3022        | M-BT06           |
| 1119 M-W-80-03.5               | 80                           | 22 | 3,5 | 50 | 39 | 10 | 5 | 19   | SNHX 1119T-90 L..       | SNHX 1119T-90 R..         | M-VTX 305         | M-BT09           |
| 1119 M-W-100-02                | 100                          | 27 | 2   | 50 | 48 | 12 | 6 | 25   | SNHX 1111T-90 L..       | SNHX 1111T-90 R..         | M-VTX 3011        | M-BT06           |
| 1119 M-W-100-02.5              | 100                          | 27 | 2,5 | 50 | 48 | 12 | 6 | 25   | SNHX 1113T-90 L..       | SNHX 1113T-90 R..         | M-VTX 302         | M-BT06           |
| 1119 M-W-100-03                | 100                          | 27 | 3   | 50 | 48 | 12 | 6 | 25   | SNHX 1116T-90 L..       | SNHX 1116T-90 R..         | M-VTX 3022        | M-BT06           |
| 1119 M-W-100-03.5              | 100                          | 27 | 3,5 | 50 | 48 | 12 | 6 | 25   | SNHX 1119T-90 L..       | SNHX 1119T-90 R..         | M-VTX 305         | M-BT09           |
| 1119 M-W-125-02                | 125                          | 40 | 2   | 50 | 70 | 14 | 7 | 26,5 | SNHX 1111T-90 L..       | SNHX 1111T-90 R..         | M-VTX 3011        | M-BT06           |
| 1119 M-W-125-02/32             | 125                          | 32 | 2   | 50 | 58 | 14 | 7 | 33   | SNHX 1111T-90 L..       | SNHX 1111T-90 R..         | M-VTX 3011        | M-BT06           |
| 1119 M-W-125-02.5              | 125                          | 40 | 2,5 | 50 | 70 | 14 | 7 | 26,5 | SNHX 1113T-90 L..       | SNHX 1113T-90 R..         | M-VTX 302         | M-BT06           |
| 1119 M-W-125-02.5/32           | 125                          | 32 | 2,5 | 50 | 58 | 14 | 7 | 33   | SNHX 1113T-90 L..       | SNHX 1113T-90 R..         | M-VTX 302         | M-BT06           |
| 1119 M-W-125-03                | 125                          | 40 | 3   | 50 | 70 | 14 | 7 | 26,5 | SNHX 1116T-90 L..       | SNHX 1116T-90 R..         | M-VTX 3022        | M-BT06           |
| 1119 M-W-125-03/32             | 125                          | 32 | 3   | 50 | 58 | 14 | 7 | 33   | SNHX 1116T-90 L..       | SNHX 1116T-90 R..         | M-VTX 3022        | M-BT06           |
| 1119 M-W-125-03.5              | 125                          | 40 | 3,5 | 50 | 70 | 14 | 7 | 26,5 | SNHX 1119T-90 L..       | SNHX 1119T-90 R..         | M-VTX 305         | M-BT09           |
| 1119 M-W-125-03.5/32           | 125                          | 32 | 3,5 | 50 | 58 | 14 | 7 | 33   | SNHX 1119T-90 L..       | SNHX 1119T-90 R..         | M-VTX 305         | M-BT09           |
| 1119 M-W-160-02                | 160                          | 40 | 2   | 50 | 70 | 18 | 9 | 44   | SNHX 1111T-90 L..       | SNHX 1111T-90 R..         | M-VTX 3011        | M-BT06           |
| 1119 M-W-160-02.5              | 160                          | 40 | 2,5 | 50 | 70 | 18 | 9 | 44   | SNHX 1113T-90 L..       | SNHX 1113T-90 R..         | M-VTX 302         | M-BT06           |
| 1119 M-W-160-03                | 160                          | 40 | 3   | 50 | 70 | 18 | 9 | 44   | SNHX 1116T-90 L..       | SNHX 1116T-90 R..         | M-VTX 3022        | M-BT06           |
| 1119 M-W-160-03.5              | 160                          | 40 | 3,5 | 50 | 70 | 18 | 9 | 44   | SNHX 1119T-90 L..       | SNHX 1119T-90 R..         | M-VTX 305         | M-BT09           |

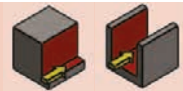
Bestellbeispiel / Order example: 1119 M-W-63- M-W = Kühlmittelbohrung / M-W = coolant bores

Sondermaße kurzfristig lieferbar! / Special dimensions available in short delivery time!

M-BT06 = 0,6 Nm  
M-BT09 = 1,4 Nm

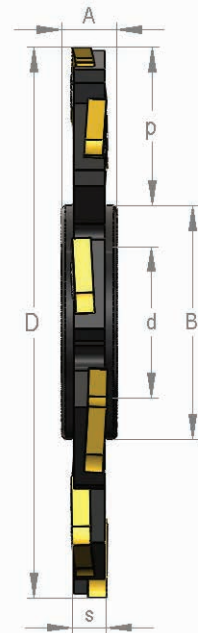
# Serie 1120 - Scheibenfräser

## Series 1120 - Grooving and cut-off mills



**Ausführung:** Scheibenfräser mit geschraubten Wendeplatten,  
Ak alwinke l 3° - Radialwinke l 12° - 3-seitig-schneidend  
**Lieferumfang:** ohne Wendschneidplatten, ohne Schraubendreher  
**Anwendung:** zum Nuten und Trennfräsen

**Execution:** Groove-cutter-with screwed inserts,  
ak al angle 3° - radial angle 12° - three-side cutting  
**Delivery:** without insert, without screwdriver  
**Application:** Groove-cut-off milling



**Ebener Nutgrund**  
**Plain on the ground**

R = Rechts / right  
L = Links / left  
T = Neutral / neutral ( ab S = 14-16)

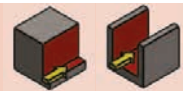
auch mit Radien lieferbar  
also with radius possible

| Bestell-Nr.:<br>Order<br>Code: | Abmessungen / Dimension (mm) |    |    |    |    |    |   |    | Wendeplatte<br>Insert     |                            |  | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|--------------------------------|------------------------------|----|----|----|----|----|---|----|---------------------------|----------------------------|--------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
|                                | D                            | d  | s  | A  | B  | Z  | K | p  | Ausführung I              | Ausführung II              |                                                                                      |                                                                                                            |                                                                                                           |
|                                |                              |    |    |    |    |    |   |    | E <sub>max</sub> cution I | E <sub>max</sub> cution II |                                                                                      |                                                                                                            |                                                                                                           |
| 1120-63-04                     | 63                           | 22 | 4  | 8  | 34 | 8  | 4 | 14 | SNHX 1102T..              | SNHX 1102T-90R/L           | M-VTX3503                                                                            | M-BT09                                                                                                     |                                                                                                           |
| 1120-63-05                     | 63                           | 22 | 5  | 8  | 34 | 8  | 4 | 14 | SNHX 1103T..              | SNHX 1103T-90R/L           | M-VTX3504                                                                            | M-BT09                                                                                                     |                                                                                                           |
| 1120-63-06                     | 63                           | 22 | 6  | 8  | 34 | 6  | 3 | 14 | SNHX 1203T..              | SNHX 1203T-90R/L           | M-VTX405                                                                             | M-BT15                                                                                                     |                                                                                                           |
| 1120-63-07                     | 63                           | 22 | 7  | 12 | 34 | 6  | 3 | 14 | SNHX 1204T..              | SNHX 1204T-90R/L           | M-VTX406                                                                             | M-BT15                                                                                                     |                                                                                                           |
| 1120-63-08                     | 63                           | 22 | 8  | 12 | 34 | 6  | 3 | 14 | SNHX 12045T..             | SNHX 12045-90R/L           | M-VTX406                                                                             | M-BT15                                                                                                     |                                                                                                           |
| 1120-63-09                     | 63                           | 22 | 9  | 12 | 34 | 6  | 3 | 14 | SNHX 1205T..              | SNHX 1205T-90R/L           | M-VTX408                                                                             | M-BT15                                                                                                     |                                                                                                           |
| 1120-63-10                     | 63                           | 22 | 10 | 12 | 34 | 6  | 3 | 14 | SNHX 1205T..              | SNHX 1205T-90R/L           | M-VTX408                                                                             | M-BT15                                                                                                     |                                                                                                           |
| 1120-80-04                     | 80                           | 22 | 4  | 8  | 34 | 10 | 5 | 22 | SNHX 1102T..              | SNHX 1102T-90R/L           | M-VTX3503                                                                            | M-BT09                                                                                                     |                                                                                                           |
| 1120-80-05                     | 80                           | 22 | 5  | 8  | 34 | 10 | 5 | 22 | SNHX 1103T..              | SNHX 1103T-90R/L           | M-VTX3504                                                                            | M-BT09                                                                                                     |                                                                                                           |
| 1120-80-06                     | 80                           | 22 | 6  | 8  | 34 | 8  | 4 | 22 | SNHX 1203T..              | SNHX 1203T-90R/L           | M-VTX405                                                                             | M-BT15                                                                                                     |                                                                                                           |
| 1120-80-07                     | 80                           | 22 | 7  | 12 | 34 | 8  | 4 | 22 | SNHX 1204T..              | SNHX 1204T-90R/L           | M-VTX406                                                                             | M-BT15                                                                                                     |                                                                                                           |
| 1120-80-08                     | 80                           | 22 | 8  | 12 | 34 | 8  | 4 | 22 | SNHX 12045T..             | SNHX 12045-90R/L           | M-VTX406                                                                             | M-BT15                                                                                                     |                                                                                                           |
| 1120-80-09                     | 80                           | 22 | 9  | 12 | 34 | 8  | 4 | 22 | SNHX 1205T..              | SNHX 1205T-90R/L           | M-VTX408                                                                             | M-BT15                                                                                                     |                                                                                                           |
| 1120-80-10                     | 80                           | 22 | 10 | 12 | 34 | 8  | 4 | 22 | SNHX 1205T..              | SNHX 1205T-90R/L           | M-VTX408                                                                             | M-BT15                                                                                                     |                                                                                                           |
| 1120-100-04                    | 100                          | 27 | 4  | 12 | 45 | 12 | 6 | 27 | SNHX 1102T..              | SNHX 1102T-90R/L           | M-VTX3503                                                                            | M-BT09                                                                                                     |                                                                                                           |
| 1120-100-05                    | 100                          | 27 | 5  | 12 | 45 | 12 | 6 | 27 | SNHX 1103T..              | SNHX 1103T-90R/L           | M-VTX3504                                                                            | M-BT09                                                                                                     |                                                                                                           |
| 1120-100-06                    | 100                          | 27 | 6  | 12 | 45 | 10 | 5 | 27 | SNHX 1203T..              | SNHX 1203T-90R/L           | M-VTX405                                                                             | M-BT15                                                                                                     |                                                                                                           |
| 1120-100-07                    | 100                          | 27 | 7  | 12 | 45 | 10 | 5 | 27 | SNHX 1204T..              | SNHX 1204T-90R/L           | M-VTX406                                                                             | M-BT15                                                                                                     |                                                                                                           |
| 1120-100-08                    | 100                          | 27 | 8  | 12 | 45 | 10 | 5 | 27 | SNHX 12045T..             | SNHX 12045-90R/L           | M-VTX406                                                                             | M-BT15                                                                                                     |                                                                                                           |
| 1120-100-09                    | 100                          | 27 | 9  | 12 | 45 | 10 | 5 | 27 | SNHX 1205T..              | SNHX 1205T-90R/L           | M-VTX408                                                                             | M-BT15                                                                                                     |                                                                                                           |
| 1120-100-10                    | 100                          | 27 | 10 | 12 | 45 | 10 | 5 | 27 | SNHX 1205T..              | SNHX 1205T-90R/L           | M-VTX408                                                                             | M-BT15                                                                                                     |                                                                                                           |
| 1120-100-12                    | 100                          | 27 | 12 | 14 | 45 | 10 | 5 | 27 | SNHX 1207T..              | SNHX 1207T-90R/L           | M-VTX410                                                                             | M-BT15                                                                                                     |                                                                                                           |
| 1120-125-04                    | 125                          | 32 | 4  | 12 | 58 | 14 | 7 | 33 | SNHX 1102T..              | SNHX 1102T-90R/L           | M-VTX3503                                                                            | M-BT09                                                                                                     |                                                                                                           |
| 1120-125-05                    | 125                          | 32 | 5  | 12 | 58 | 14 | 7 | 33 | SNHX 1103T..              | SNHX 1103T-90R/L           | M-VTX3504                                                                            | M-BT09                                                                                                     |                                                                                                           |
| 1120-125-06                    | 125                          | 32 | 6  | 12 | 58 | 12 | 6 | 33 | SNHX 1203T..              | SNHX 1203T-90R/L           | M-VTX405                                                                             | M-BT15                                                                                                     |                                                                                                           |
| 1120-125-07                    | 125                          | 32 | 7  | 12 | 58 | 12 | 6 | 33 | SNHX 1204T..              | SNHX 1204T-90R/L           | M-VTX406                                                                             | M-BT15                                                                                                     |                                                                                                           |
| 1120-125-08                    | 125                          | 32 | 8  | 12 | 58 | 12 | 6 | 33 | SNHX 12045T..             | SNHX 12045-90R/L           | M-VTX406                                                                             | M-BT15                                                                                                     |                                                                                                           |
| 1120-125-09                    | 125                          | 32 | 9  | 12 | 58 | 12 | 6 | 33 | SNHX 1205T..              | SNHX 1205T-90R/L           | M-VTX408                                                                             | M-BT15                                                                                                     |                                                                                                           |
| 1120-125-10                    | 125                          | 32 | 10 | 12 | 58 | 12 | 6 | 33 | SNHX 1205T..              | SNHX 1205T-90R/L           | M-VTX408                                                                             | M-BT15                                                                                                     |                                                                                                           |
| 1120-125-12                    | 125                          | 32 | 12 | 12 | 58 | 12 | 6 | 33 | SNHX 1207T..              | SNHX 1207T-90R/L           | M-VTX410                                                                             | M-BT15                                                                                                     |                                                                                                           |
| 1120-125-14                    | 125                          | 32 | 14 | 14 | 58 | 12 | 6 | 33 |                           | SNHX 1210T-90R/L           | M-VTX414                                                                             | M-BT15                                                                                                     |                                                                                                           |
| 1120-125-15                    | 125                          | 32 | 15 | 15 | 58 | 12 | 6 | 33 |                           | SNHX 1210T-90R/L           | M-VTX414                                                                             | M-BT15                                                                                                     |                                                                                                           |
| 1120-125-16                    | 125                          | 32 | 16 | 16 | 58 | 12 | 6 | 33 |                           | SNHX 1210T-90R/L           | M-VTX414                                                                             | M-BT15                                                                                                     |                                                                                                           |
| 1120-125-17                    | 125                          | 32 | 17 | 17 | 58 | 12 | 6 | 33 |                           | SNHX 1210T-90R/L           | M-VTX414                                                                             | M-BT15                                                                                                     |                                                                                                           |
| 1120-125-18                    | 125                          | 32 | 18 | 18 | 58 | 12 | 6 | 33 |                           | SNHX 1210T-90R/L           | M-VTX414                                                                             | M-BT15                                                                                                     |                                                                                                           |
| 1120-125-19                    | 125                          | 32 | 19 | 19 | 58 | 12 | 6 | 33 |                           | SNHX 1210T-90R/L           | M-VTX414                                                                             | M-BT15                                                                                                     |                                                                                                           |
| 1120-125-20                    | 125                          | 32 | 20 | 20 | 58 | 12 | 6 | 33 |                           | SNHX 1210T-90R/L           | M-VTX414                                                                             | M-BT15                                                                                                     |                                                                                                           |

Bestellbeispiel / Order example: 1120-63-04

M-BT09 = 1,4 Nm  
M-BT15 = 3,0 Nm

**Serie 1120 - Scheibenfräser**  
**Series 1120 - Grooving and cut-off mills**



| Bestell-Nr.:<br>Order<br>Code: | Abmessungen / Dimension (mm) |    |    |    |    |    |    |    | Wendeplatte<br>Insert       |                               | Schraube<br>Screw | Schlüssel<br>Key |
|--------------------------------|------------------------------|----|----|----|----|----|----|----|-----------------------------|-------------------------------|-------------------|------------------|
|                                | D                            | d  | s  | A  | B  | Z  | K  | p  | Ausführung I<br>Execution I | Ausführung II<br>Execution II |                   |                  |
| 1120-160-04                    | 160                          | 40 | 4  | 12 | 68 | 18 | 9  | 45 | SNHX 1102T..                | SNHX 1102T-90R/L              | M-VTX3503         | M-BT09           |
| 1120-160-05                    | 160                          | 40 | 5  | 12 | 68 | 18 | 9  | 45 | SNHX 1103T..                | SNHX 1103T-90R/L              | M-VTX3504         | M-BT09           |
| 1120-160-06                    | 160                          | 40 | 6  | 12 | 68 | 16 | 8  | 45 | SNHX 1203T..                | SNHX 1203T-90R/L              | M-VTX405          | M-BT15           |
| 1120-160-07                    | 160                          | 40 | 7  | 12 | 68 | 16 | 8  | 45 | SNHX 1204T..                | SNHX 1204T-90R/L              | M-VTX406          | M-BT15           |
| 1120-160-08                    | 160                          | 40 | 8  | 12 | 68 | 16 | 8  | 45 | SNHX 12045T..               | SNHX 12045-90R/L              | M-VTX406          | M-BT15           |
| 1120-160-09                    | 160                          | 40 | 9  | 12 | 68 | 16 | 8  | 45 | SNHX 1205T..                | SNHX 1205T-90R/L              | M-VTX408          | M-BT15           |
| 1120-160-10                    | 160                          | 40 | 10 | 12 | 68 | 16 | 8  | 45 | SNHX 1205T..                | SNHX 1205T-90R/L              | M-VTX408          | M-BT15           |
| 1120-160-12                    | 160                          | 40 | 12 | 12 | 68 | 16 | 8  | 45 | SNHX 1207T..                | SNHX 1207T-90R/L              | M-VTX410          | M-BT15           |
| 1120-160-14                    | 160                          | 40 | 14 | 14 | 68 | 16 | 8  | 45 |                             | SNHX 1210T-90R/L              | M-VTX414          | M-BT15           |
| 1120-160-15                    | 160                          | 40 | 15 | 16 | 68 | 16 | 8  | 45 |                             | SNHX 1210T-90R/L              | M-VTX414          | M-BT15           |
| 1120-160-16                    | 160                          | 40 | 16 | 16 | 68 | 16 | 8  | 45 |                             | SNHX 1210T-90R/L              | M-VTX414          | M-BT15           |
| 1120-160-17                    | 160                          | 40 | 17 | 17 | 68 | 16 | 8  | 45 |                             | SNHX 1210T-90R/L              | M-VTX414          | M-BT15           |
| 1120-160-18                    | 160                          | 40 | 18 | 18 | 68 | 16 | 8  | 45 |                             | SNHX 1210T-90R/L              | M-VTX414          | M-BT15           |
| 1120-160-19                    | 160                          | 40 | 19 | 19 | 68 | 16 | 8  | 45 |                             | SNHX 1210T-90R/L              | M-VTX414          | M-BT15           |
| 1120-160-20                    | 160                          | 40 | 20 | 20 | 68 | 16 | 8  | 45 |                             | SNHX 1210T-90R/L              | M-VTX414          | M-BT15           |
| 1120-200-04                    | 200                          | 50 | 4  | 12 | 72 | 18 | 9  | 63 | SNHX 1102T..                | SNHX 1102T-90R/L              | M-VTX3503         | M-BT09           |
| 1120-200-05                    | 200                          | 50 | 5  | 12 | 72 | 18 | 9  | 63 | SNHX 1103T..                | SNHX 1103T-90R/L              | M-VTX3504         | M-BT09           |
| 1120-200-06                    | 200                          | 50 | 6  | 12 | 72 | 18 | 9  | 63 | SNHX 1203T..                | SNHX 1203T-90R/L              | M-VTX405          | M-BT15           |
| 1120-200-08                    | 200                          | 50 | 8  | 12 | 72 | 18 | 9  | 63 | SNHX 12045T..               | SNHX 12045-90R/L              | M-VTX406          | M-BT15           |
| 1120-200-10                    | 200                          | 50 | 10 | 12 | 72 | 18 | 9  | 63 | SNHX 1205T..                | SNHX 1205T-90R/L              | M-VTX408          | M-BT15           |
| 1120-200-12                    | 200                          | 50 | 12 | 12 | 72 | 18 | 9  | 63 | SNHX 1207T..                | SNHX 1207T-90R/L              | M-VTX410          | M-BT15           |
| 1120-200-14                    | 200                          | 50 | 14 | 14 | 72 | 18 | 9  | 63 |                             | SNHX 1210T-90R/L              | M-VTX414          | M-BT15           |
| 1120-200-15                    | 200                          | 50 | 15 | 16 | 72 | 18 | 9  | 63 |                             | SNHX 1210T-90R/L              | M-VTX414          | M-BT15           |
| 1120-200-16                    | 200                          | 50 | 16 | 16 | 72 | 18 | 9  | 63 |                             | SNHX 1210T-90R/L              | M-VTX414          | M-BT15           |
| 1120-200-17                    | 200                          | 50 | 17 | 17 | 72 | 18 | 9  | 63 |                             | SNHX 1210T-90R/L              | M-VTX414          | M-BT15           |
| 1120-200-18                    | 200                          | 50 | 18 | 18 | 72 | 18 | 9  | 63 |                             | SNHX 1210T-90R/L              | M-VTX414          | M-BT15           |
| 1120-200-19                    | 200                          | 50 | 19 | 19 | 72 | 18 | 9  | 63 |                             | SNHX 1210T-90R/L              | M-VTX414          | M-BT15           |
| 1120-200-20                    | 200                          | 50 | 20 | 20 | 72 | 18 | 9  | 63 |                             | SNHX 1210T-90R/L              | M-VTX414          | M-BT15           |
| 1120-250-06                    | 250                          | 50 | 6  | 12 | 72 | 24 | 12 | 88 | SNHX 1203T..                | SNHX 1203T-90R/L              | M-VTX405          | M-BT15           |
| 1120-250-08                    | 250                          | 50 | 8  | 12 | 72 | 24 | 12 | 88 | SNHX 12045T..               | SNHX 12045-90R/L              | M-VTX406          | M-BT15           |
| 1120-250-10                    | 250                          | 50 | 10 | 12 | 72 | 24 | 12 | 88 | SNHX 1205T..                | SNHX 1205T-90R/L              | M-VTX408          | M-BT15           |
| 1120-250-12                    | 250                          | 50 | 12 | 12 | 72 | 24 | 12 | 88 | SNHX 1207T..                | SNHX 1207T-90R/L              | M-VTX410          | M-BT15           |
| 1120-250-14                    | 250                          | 50 | 14 | 14 | 72 | 24 | 12 | 88 |                             | SNHX 1210T-90R/L              | M-VTX414          | M-BT15           |
| 1120-250-15                    | 250                          | 50 | 15 | 16 | 72 | 24 | 12 | 88 |                             | SNHX 1210T-90R/L              | M-VTX414          | M-BT15           |
| 1120-250-16                    | 250                          | 50 | 16 | 16 | 72 | 24 | 12 | 88 |                             | SNHX 1210T-90R/L              | M-VTX414          | M-BT15           |
| 1120-250-17                    | 250                          | 50 | 17 | 17 | 72 | 24 | 12 | 88 |                             | SNHX 1210T-90R/L              | M-VTX414          | M-BT15           |
| 1120-250-18                    | 250                          | 50 | 18 | 18 | 72 | 24 | 12 | 88 |                             | SNHX 1210T-90R/L              | M-VTX414          | M-BT15           |
| 1120-250-19                    | 250                          | 50 | 19 | 19 | 72 | 24 | 12 | 88 |                             | SNHX 1210T-90R/L              | M-VTX414          | M-BT15           |
| 1120-250-20                    | 250                          | 50 | 20 | 20 | 72 | 24 | 12 | 88 |                             | SNHX 1210T-90R/L              | M-VTX414          | M-BT15           |

Bestellbeispiel / Order example: 1120-63-04

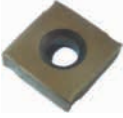
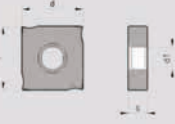
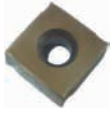
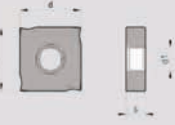
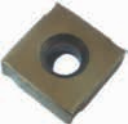
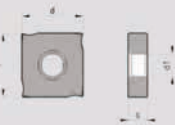
Sondermaße kurzfristig lieferbar! / Special dimensions available in short delivery time!

M-BT09 = 1,4 Nm  
M-BT15 = 3,0 Nm

B

# Wendeplatten für SNHX-Scheibenfräser Inser for SNHX - grooving and cut-off mills

B

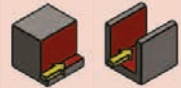
|                                                                                                                                                                         | Form Figure                                                                         | Abmessungen Dimensions |       |       |      |      | Bezeichnung<br>Designation | Schraube   | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|-------|-------|------|------|----------------------------|------------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                                                                                         |                                                                                     | l                      | d     | s     | d1   | r    |                            |            |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>SNHX ... T-90 R/L<br>R=rechts/right<br>L=links/left                                 |    |                        |       |       |      |      |                            |            |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                                                                                                         |                                                                                     | 11,00                  | 11,00 | 1,10  | 4,40 |      | SNHX 1111T - 90 R / L      | M-VTX302   | M-BT 06   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                                                                                                         |                                                                                     | 11,00                  | 11,00 | 1,35  | 4,40 |      | SNHX 1113T - 90 R / L      | M-VTX3022  | M-BT 06   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                                                                                                         |                                                                                     | 11,00                  | 11,00 | 1,65  | 4,40 |      | SNHX 1116T - 90 R / L      | M-VTX 303  | M-BT 09   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                                                                                                         |                                                                                     | 11,00                  | 11,00 | 1,90  | 4,40 |      | SNHX 1119T - 90 R / L      | M-VTX 305  | M-BT 09   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                                                                                                         |                                                                                     | 11,00                  | 11,00 | 2,30  | 4,40 |      | SNHX 1102T - 90 R / L      | M-VTX 3503 | M-BT 09   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                                                                                                         |                                                                                     | 11,00                  | 11,00 | 2,70  | 4,40 |      | SNHX 1103T - 90 R / L      | M-VTX 3504 | M-BT 09   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                                                                                                         |                                                                                     | 12,70                  | 12,70 | 3,20  | 5,30 |      | SNHX 1203T - 90 R / L      | M-VTX 405  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                                                                                                         |                                                                                     | 12,70                  | 12,70 | 4,00  | 5,30 |      | SNHX 1204T - 90 R / L      | M-VTX 405  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                                                                                                         |                                                                                     | 12,70                  | 12,70 | 4,50  | 5,30 |      | SNHX 12045T - 90 R / L     | M-VTX 405  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                                                                                                         |                                                                                     | 12,70                  | 12,70 | 5,40  | 5,30 |      | SNHX 1205T - 90 R / L      | M-VTX 408  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
| <br>SNHX ... R.-90 R/L<br>R=rechts/right<br>L=links/left<br>mit Radien<br>with radius |  |                        |       |       |      |      |                            |            |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                                                                                                         |                                                                                     | 11,00                  | 11,00 | 2,30  | 4,40 | 1,00 | SNHX 1102R1,0 - 90 R / L   | M-VTX 3503 | M-BT 09   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                                                                                                         |                                                                                     | 11,00                  | 11,00 | 2,70  | 4,40 | 1,00 | SNHX 1103R1,0 - 90 R / L   | M-VTX 3503 | M-BT 09   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                                                                                                         |                                                                                     | 11,00                  | 11,00 | 2,70  | 4,40 | 1,50 | SNHX 1103R1,5 - 90 R / L   | M-VTX 3503 | M-BT 09   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                                                                                                         |                                                                                     | 12,70                  | 12,70 | 3,20  | 5,30 | 1,00 | SNHX 1203R1,0 - 90 R / L   | M-VTX 405  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                                                                                                         |                                                                                     | 12,70                  | 12,70 | 3,20  | 5,30 | 1,50 | SNHX 1203R1,5 - 90 R / L   | M-VTX 405  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                                                                                                         |                                                                                     | 12,70                  | 12,70 | 4,00  | 5,30 | 1,00 | SNHX 1204R1,0 - 90 R / L   | M-VTX 405  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                                                                                                         |                                                                                     | 12,70                  | 12,70 | 4,00  | 5,30 | 1,50 | SNHX 1204R1,5 - 90 R / L   | M-VTX 405  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                                                                                                         |                                                                                     | 12,70                  | 12,70 | 4,50  | 5,30 | 1,00 | SNHX 12045R1,0 - 90 R / L  | M-VTX 405  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                                                                                                         |                                                                                     | 12,70                  | 12,70 | 4,50  | 5,30 | 1,50 | SNHX 12045R1,5 - 90 R / L  | M-VTX 405  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                                                                                                         |                                                                                     | 12,70                  | 12,70 | 5,40  | 5,30 | 1,00 | SNHX 1205R1,0 - 90 R / L   | M-VTX 408  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                                                                                                         |                                                                                     | 12,70                  | 12,70 | 5,40  | 5,30 | 1,50 | SNHX 1205R1,5 - 90 R / L   | M-VTX 408  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                                                                                                         |                                                                                     | 12,70                  | 12,70 | 5,40  | 5,30 | 2,00 | SNHX 1205R2,0 - 90 R / L   | M-VTX 408  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                                                                                                         |                                                                                     | 12,70                  | 12,70 | 7,00  | 5,30 | 1,00 | SNHX 1207R1,0 - 90 R / L   | M-VTX 408  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                                                                                                         |                                                                                     | 12,70                  | 12,70 | 7,00  | 5,30 | 1,50 | SNHX 1207R1,5 - 90 R / L   | M-VTX 408  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                                                                                                         |                                                                                     | 12,70                  | 12,70 | 7,00  | 5,30 | 2,00 | SNHX 1207R2,0 - 90 R / L   | M-VTX 408  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                                                                                                         |                                                                                     | 12,70                  | 12,70 | 7,00  | 5,30 | 2,50 | SNHX 1207R2,5 - 90 R / L   | M-VTX 408  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                                                                                                         |                                                                                     | 12,70                  | 12,70 | 10,50 | 5,30 | 1,00 | SNHX 1210R1,0 - 90 R / L   | M-VTX 414  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                                                                                                         |                                                                                     | 12,70                  | 12,70 | 10,50 | 5,30 | 1,50 | SNHX 1210R1,5 - 90 R / L   | M-VTX 414  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                                                                                                         |                                                                                     | 12,70                  | 12,70 | 10,50 | 5,30 | 2,00 | SNHX 1210R2,0 - 90 R / L   | M-VTX 414  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
| <br>SNHX ... T                                                                        |  |                        |       |       |      |      |                            |            |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                                                                                                         |                                                                                     | 11,00                  | 11,00 | 2,30  | 4,40 |      | SNHX 1102 T                | M-VTX 3503 | M-BT 09   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                                                                                                         |                                                                                     | 11,00                  | 11,00 | 2,70  | 4,40 |      | SNHX 1103 T                | M-VTX 3504 | M-BT 09   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                                                                                                         |                                                                                     | 12,70                  | 12,70 | 3,20  | 5,30 |      | SNHX 1203 T                | M-VTX 405  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                                                                                                         |                                                                                     | 12,70                  | 12,70 | 4,00  | 5,30 |      | SNHX 1204 T                | M-VTX 406  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                                                                                                         |                                                                                     | 12,70                  | 12,70 | 4,50  | 5,30 |      | SNHX 12045 T               | M-VTX 406  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                                                                                                         |                                                                                     | 12,70                  | 12,70 | 5,40  | 5,30 |      | SNHX 1205 T                | M-VTX 408  | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                                                                                                         |                                                                                     | 12,70                  | 12,70 | 7,00  | 5,30 |      | SNHX 1207 T                | M-VTX 40   | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     | ■     | ■     |

■ ab Lager / on stock

□ auf Anfrage / on request

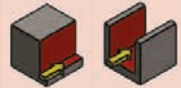


## Serie 1115 - Scheibenfräser Series 1115 - Grooving and cut-off mills



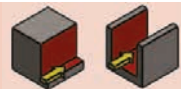
| Vc<br>(m/min) |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | Öl                            | Emulsion | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|-------------------------------|----------|-----|---------|-----------|
|               | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK |                               |          |     |         |           |
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |                               |          |     |         |           |
| PTV28         |                   |     |             |                  | 200              | 180              | 180               | 170               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                               |          |     |         |           |
| PTT35         |                   |     |             |                  | 200              | 180              | 180               | 170               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                               |          |     |         |           |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 120             | 100             |       |       |                       |                               |          |     |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 180   |       |                       |                               |          |     |         |           |
| KTE20         | 480               | 480 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                               |          |     |         |           |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                               |          |     |         |           |
| fz            | 0,1-0,3           |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet □ bedingt geeignet |          |     |         |           |

## Serie 1116 - Scheibenfräser Series 1116 - Grooving and cut-off mills



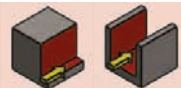
| Vc<br>(m/min) |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | Öl                            | Emulsion | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|-------------------------------|----------|-----|---------|-----------|
|               | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK |                               |          |     |         |           |
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |                               |          |     |         |           |
| PTV28         |                   |     |             |                  | 200              | 180              | 180               | 170               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                               |          |     |         |           |
| PTT35         |                   |     |             |                  | 200              | 180              | 180               | 170               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                               |          |     |         |           |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 120             | 100             |       |       |                       |                               |          |     |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 180   |       |                       |                               |          |     |         |           |
| KTE20         | 480               | 480 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                               |          |     |         |           |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                               |          |     |         |           |
| fz            | 0,1-0,15          |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet □ bedingt geeignet |          |     |         |           |

## Serie 1119 - Trennfräser Series 1119 - Grooving and cut-off mills



| Vc<br>(m/min) | Alu        |     |      | Stahl   |         |         |          |          |          |          |          |          |          | INOX    |         | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl                          | Emulsion | MMS | Trocken | Druckluft |
|---------------|------------|-----|------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|---------|---------|-------|-------|-----------------------|-----------------------------|----------|-----|---------|-----------|
|               | Kunststoff | Alu | Guss | < 500 N | < 750 N | < 900 N | < 1100 N | < 1400 N | < 55 HRC | < 60 HRC | < 65 HRC | < 67 HRC | < 70 HRC | < 900 N | > 900 N |       |       |                       |                             |          |     |         |           |
| ISO-Code      | N          | N   | N    | P       | P       | P       | P        | P        | H        | H        | H        | H        | H        | M       | M       | K     | S     | N                     |                             |          |     |         |           |
| PTV28         |            |     |      |         | 200     | 180     | 180      | 170      |          |          |          |          |          |         |         |       |       |                       |                             | ■        |     | ■       |           |
| PTT35         |            |     |      |         | 200     | 180     | 180      | 170      |          |          |          |          |          |         |         |       |       |                       |                             | ■        |     | ■       |           |
| PAP28         |            |     |      |         |         |         |          |          |          |          |          |          |          | 120     | 100     |       |       |                       |                             | ■        |     | ■       |           |
| MTM10         |            |     |      |         |         |         |          |          |          |          |          |          |          |         |         | 180   |       |                       |                             |          |     | ■       |           |
| KTE20         | 480        | 480 | 400  |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       |                             | ■        |     | ■       |           |
| K10           |            |     |      |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       |                             |          |     |         |           |
| fz            | 0,1-0,15   |     |      |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       | ■geeignet □bedingt geeignet |          |     |         |           |

## Serie 1120 - Scheibenfräser Series 1120 - Grooving and cut-off mills



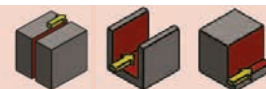
| Vc<br>(m/min) |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |   | Graphit<br>GFK<br>CFK                                                                          |                   |  |  |  |  |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|---|------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|               | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN |   |                                                                                                |                                                                                                        |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N |                                                                                                |                                                                                                        |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| PTV28         |                   |     |             |                  | 200              | 180              | 180               | 170               |                   |                   |                   |                   |                   |                 |                 |       |       |   |                                                                                                |                                                                                                        |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| PTT35         |                   |     |             |                  | 200              | 180              | 180               | 170               |                   |                   |                   |                   |                   |                 |                 |       |       |   |                                                                                                |                                                                                                        |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 120             | 100             |       |       |   |                                                                                                |                                                                                                        |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 180   |       |   |                                                                                                |                                                                                                        |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| KTE20         | 480               | 480 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |   |                                                                                                |                                                                                                        |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |   |                                                                                                |                                                                                                        |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| fz            | 0,1-0,3           |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |   |  geeignet |  bedingt geeignet |                                                                                       |                                                                                       |                                                                                       |                                                                                       |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

B

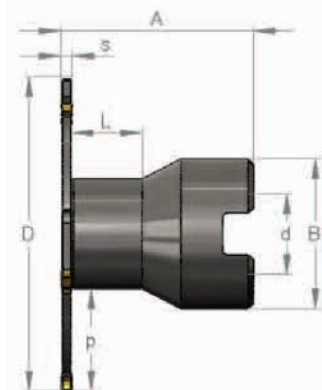


## Serie 1122 M - Schlitzscheibenfräser Series 1122 M - Slot disc cutter



**Ausführung:** Schlitzscheibenfräser mit gesteckten Wendeplatten,  
Radialwinkel 4° - 3-seitig-schneidend  
**Lieferumfang:** ohne Wendschneidplatten, ohne Montageschlüssel  
**Anwendung:** Schlitz- und Trennfräsen

**Execution:** Slot disc cutter with put inserts,  
radial angle 4° - three-side cutting  
**Delivery:** without insert, without assembly key  
**Application:** Slot- and cut-off-milling



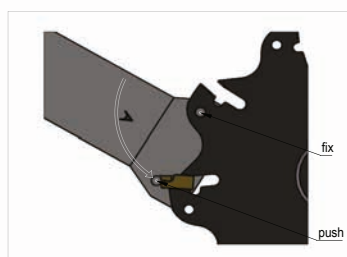
| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |      |    |      |    | Wendeplatte<br>Insert<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|----|-----|----|------|----|------|----|--------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
|                             | D                            | d  | s   | A  | L    | B  | p    | Z  |                                                                                                              |                                                                                                         |
| 1122 M-63-02                | 63                           | 16 | 2   | 35 | 13,5 | 30 | 20   | 5  | X 10M 2.00S-0.20-..                                                                                          | M-HK 33                                                                                                 |
| 1122 M-63-02.5              | 63                           | 16 | 2,5 | 35 | 13,5 | 30 | 20   | 5  | X 10M 2.50S-0.20-..                                                                                          | M-HK 33                                                                                                 |
| 1122 M-63-03                | 63                           | 16 | 3   | 35 | 13,5 | 30 | 20   | 5  | X 10M 3.00S-0.30-..                                                                                          | M-HK 33                                                                                                 |
| 1122 M-63-04                | 63                           | 16 | 4   | 35 | 13,5 | 30 | 20   | 5  | X 10M 4.00S-0.40-..                                                                                          | M-HK 33                                                                                                 |
| 1122 M-63-05                | 63                           | 16 | 5   | 35 | 13,5 | 30 | 20   | 5  | X 10M 5.00S-0.40-..                                                                                          | M-HK 33                                                                                                 |
| 1122 M-80-02                | 80                           | 22 | 2   | 50 |      | 40 | 20   | 7  | X 10M 2.00S-0.20-..                                                                                          | M-HK 34                                                                                                 |
| 1122 M-80-02.5              | 80                           | 22 | 2,5 | 50 |      | 40 | 20   | 7  | X 10M 2.50S-0.20-..                                                                                          | M-HK 34                                                                                                 |
| 1122 M-80-03                | 80                           | 22 | 3   | 50 |      | 40 | 20   | 7  | X 10M 3.00S-0.30-..                                                                                          | M-HK 34                                                                                                 |
| 1122 M-80-04                | 80                           | 22 | 4   | 50 |      | 40 | 20   | 7  | X 10M 4.00S-0.40-..                                                                                          | M-HK 34                                                                                                 |
| 1122 M-80-05                | 80                           | 22 | 5   | 50 |      | 40 | 20   | 7  | X 10M 5.00S-0.40-..                                                                                          | M-HK 34                                                                                                 |
| 1122 M-100-02               | 100                          | 27 | 2   | 50 |      | 48 | 26   | 9  | X 10M 2.00S-0.20-..                                                                                          | M-HK 34                                                                                                 |
| 1122 M-100-02.5             | 100                          | 27 | 2,5 | 50 |      | 48 | 26   | 9  | X 10M 2.50S-0.20-..                                                                                          | M-HK 34                                                                                                 |
| 1122 M-100-03               | 100                          | 27 | 3   | 50 |      | 48 | 26   | 9  | X 10M 3.00S-0.30-..                                                                                          | M-HK 34                                                                                                 |
| 1122 M-100-04               | 100                          | 27 | 4   | 50 |      | 48 | 26   | 9  | X 10M 4.00S-0.40-..                                                                                          | M-HK 34                                                                                                 |
| 1122 M-100-05               | 100                          | 27 | 5   | 50 |      | 48 | 26   | 9  | X 10M 5.00S-0.40-..                                                                                          | M-HK 34                                                                                                 |
| 1122 M-125-02               | 125                          | 40 | 2   | 50 |      | 70 | 27,5 | 11 | X 10M 2.00S-0.20-..                                                                                          | M-HK 34                                                                                                 |
| 1122 M-125-02.5             | 125                          | 40 | 2,5 | 50 |      | 70 | 27,5 | 11 | X 10M 2.50S-0.20-..                                                                                          | M-HK 34                                                                                                 |
| 1122 M-125-03               | 125                          | 40 | 3   | 50 |      | 70 | 27,5 | 11 | X 10M 3.00S-0.30-..                                                                                          | M-HK 34                                                                                                 |
| 1122 M-125-04               | 125                          | 40 | 4   | 50 |      | 70 | 27,5 | 11 | X 10M 4.00S-0.40-..                                                                                          | M-HK 34                                                                                                 |
| 1122 M-125-05               | 125                          | 40 | 5   | 50 |      | 70 | 27,5 | 11 | X 10M 5.00S-0.40-..                                                                                          | M-HK 34                                                                                                 |
| 1122 M-160-02               | 160                          | 40 | 2   | 50 |      | 70 | 45   | 15 | X 10M 2.00S-0.20-..                                                                                          | M-HK 34                                                                                                 |
| 1122 M-160-02.5             | 160                          | 40 | 2,5 | 50 |      | 70 | 45   | 15 | X 10M 2.50S-0.20-..                                                                                          | M-HK 34                                                                                                 |
| 1122 M-160-03               | 160                          | 40 | 3   | 50 |      | 70 | 45   | 15 | X 10M 3.00S-0.30-..                                                                                          | M-HK 34                                                                                                 |
| 1122 M-160-04               | 160                          | 40 | 4   | 50 |      | 70 | 45   | 15 | X 10M 4.00S-0.40-..                                                                                          | M-HK 34                                                                                                 |
| 1122 M-160-05               | 160                          | 40 | 5   | 50 |      | 70 | 45   | 15 | X 10M 5.00S-0.40-..                                                                                          | M-HK 34                                                                                                 |

Bestellbeispiel / Order example: 1122 M-63-02

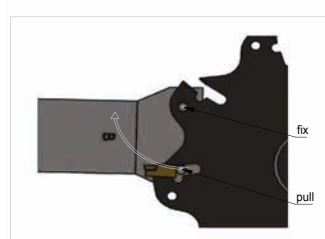
Sondermaße kurzfristig lieferbar! / Special dimensions available in short delivery time!

Anleitung zur Montage und Demontage der Wendeplatten  
Instructions for assembly and disassembly of the inserts

Montage  
Assembly



Demontage  
Disassembly

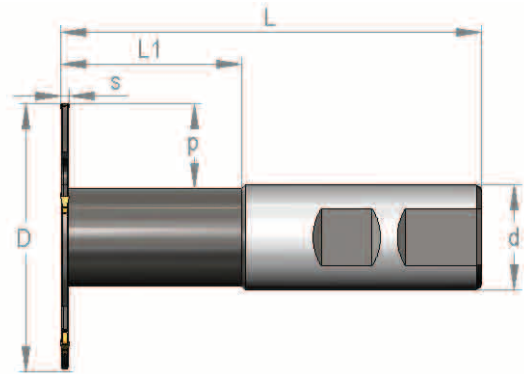


## Serie 1122 W - Schlitzscheibenfräser Series 1122 W - Slot disc cutter



**Ausführung:** Schlitzscheibenfräser mit gesteckten Wendepalten,  
Radialwinkel 14° - 3-seitig-schneidend  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Montageschlüssel  
**Anwendung:** Schlitz- und Trennfräsen

**Execution:** Slot disc cutter with put inserts,  
radial angle 4° - three-side cutting  
**Delivery:** without insert, without assembly key  
**Application:** Slot- and cut-off-milling



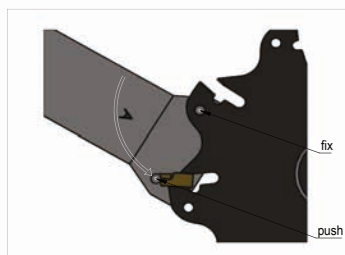
| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |     |    |      |   | Wendepalte<br>Insert                                                                | Schlüssel<br>Key                                                                    |
|-----------------------------|------------------------------|----|-----|-----|----|------|---|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                             | D                            | d  | s   | L   | L1 | p    | Z |  |  |
| 1122 W-63-02                | 63                           | 25 | 2   | 100 | 41 | 20   | 5 | X 10M 2.00S-0.20-..                                                                 | M-HK33                                                                              |
| 1122 W-63-02.5              | 63                           | 25 | 2,5 | 100 | 41 | 20   | 5 | X 10M 2.50S-0.20-..                                                                 | M-HK33                                                                              |
| 1122 W-63-03                | 63                           | 25 | 3   | 100 | 41 | 20   | 5 | X 10M 3.00S-0.30-..                                                                 | M-HK33                                                                              |
| 1122 W-63-04                | 63                           | 25 | 4   | 100 | 41 | 20   | 5 | X 10M 4.00S-0.40-..                                                                 | M-HK33                                                                              |
| 1122 W-63-05                | 63                           | 25 | 5   | 100 | 41 | 20   | 5 | X 10M 5.00S-0.40-..                                                                 | M-HK33                                                                              |
| 1122 W-80-02                | 80                           | 25 | 2   | 100 | 41 | 28,5 | 7 | X 10M 2.00S-0.20-..                                                                 | M-HK34                                                                              |
| 1122 W-80-02.5              | 80                           | 25 | 2,5 | 100 | 41 | 28,5 | 7 | X 10M 2.50S-0.20-..                                                                 | M-HK34                                                                              |
| 1122 W-80-03                | 80                           | 25 | 3   | 100 | 41 | 28,5 | 7 | X 10M 3.00S-0.30-..                                                                 | M-HK34                                                                              |
| 1122 W-80-04                | 80                           | 25 | 4   | 100 | 41 | 28,5 | 7 | X 10M 4.00S-0.40-..                                                                 | M-HK34                                                                              |
| 1122 W-80-05                | 80                           | 25 | 5   | 100 | 41 | 28,5 | 7 | X 10M 5.00S-0.40-..                                                                 | M-HK34                                                                              |
| 1122 W-100-02               | 100                          | 25 | 2   | 100 | 41 | 38,5 | 9 | X 10M 2.00S-0.20-..                                                                 | M-HK34                                                                              |
| 1122 W-100-02.5             | 100                          | 25 | 2,5 | 100 | 41 | 38,5 | 9 | X 10M 2.50S-0.20-..                                                                 | M-HK34                                                                              |
| 1122 W-100-03               | 100                          | 25 | 3   | 100 | 41 | 38,5 | 9 | X 10M 3.00S-0.30-..                                                                 | M-HK34                                                                              |
| 1122 W-100-04               | 100                          | 25 | 4   | 100 | 41 | 38,5 | 9 | X 10M 4.00S-0.40-..                                                                 | M-HK34                                                                              |
| 1122 W-100-05               | 100                          | 25 | 5   | 100 | 41 | 38,5 | 9 | X 10M 5.00S-0.40-..                                                                 | M-HK34                                                                              |

Bestellbeispiel / Order example: 1122 W-63-02

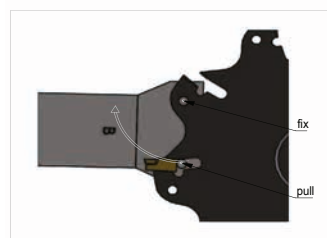
Sondermaße kurzfristig lieferbar! / Special dimensions available in short delivery time!

Anleitung zur Montage und Demontage der Wendepalten  
Instructions for assembly and disassembly of the inserts

Montage  
Assembly

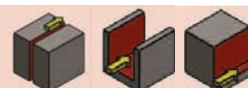


Demontage  
Disassembly



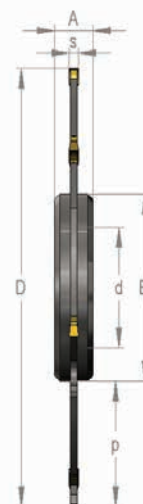
# Serie 1122 - Schlitzscheibenfräser

## Series 1122 - Slot disc cutter



**Ausführung:** Schlitzscheibenfräser mit gesteckten Wendeplatten,  
Radialwinkel 4° - 3-seitig-schneidend  
**Lieferumfang:** ohne Wendschneidplatten, ohne Montageschlüssel  
**Anwendung:** Schlitz- und Trennfräsen

**Execution:** Slot disc cutter with put inserts,  
radial angle 4° - three-side cutting  
**Delivery:** without insert, without assembly key  
**Application:** Slot- and cut-off-milling



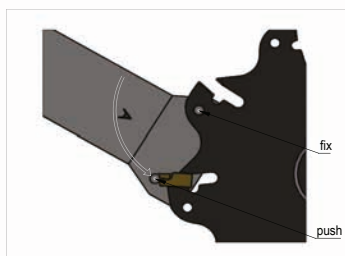
| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |    |    |    | Wendeplatte<br>Insert | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|-----|----|----|----|----|-----------------------|------------------|
|                             | D                            | d  | s   | A  | B  | p  | Z  |                       |                  |
| 1122-63-02                  | 63                           | 16 | 2   | 8  | 32 | 15 | 5  | X 10M 2.00S-0.20-..   | M-HK33           |
| 1122-63-02.5                | 63                           | 16 | 2,5 | 8  | 32 | 15 | 5  | X 10M 2.50S-0.20-..   | M-HK33           |
| 1122-63-03                  | 63                           | 16 | 3   | 8  | 32 | 15 | 5  | X 10M 3.00S-0.30-..   | M-HK33           |
| 1122-63-04                  | 63                           | 16 | 4   | 8  | 32 | 15 | 5  | X 10M 4.00S-0.40-..   | M-HK33           |
| 1122-63-05                  | 63                           | 16 | 5   | 8  | 32 | 15 | 5  | X 10M 5.00S-0.40-..   | M-HK33           |
| 1122-80-02                  | 80                           | 22 | 2   | 8  | 32 | 22 | 7  | X 10M 2.00S-0.20-..   | M-HK34           |
| 1122-80-02.5                | 80                           | 22 | 2,5 | 8  | 34 | 22 | 7  | X 10M 2.50S-0.20-..   | M-HK34           |
| 1122-80-03                  | 80                           | 22 | 3   | 8  | 34 | 22 | 7  | X 10M 3.00S-0.30-..   | M-HK34           |
| 1122-80-04                  | 80                           | 22 | 4   | 8  | 34 | 22 | 7  | X 10M 4.00S-0.40-..   | M-HK34           |
| 1122-80-05                  | 80                           | 22 | 5   | 8  | 34 | 22 | 7  | X 10M 5.00S-0.40-..   | M-HK34           |
| 1122-100-02                 | 100                          | 27 | 2   | 12 | 45 | 27 | 9  | X 10M 2.00S-0.20-..   | M-HK34           |
| 1122-100-02.5               | 100                          | 27 | 2,5 | 12 | 45 | 27 | 9  | X 10M 2.50S-0.20-..   | M-HK34           |
| 1122-100-03                 | 100                          | 27 | 3   | 12 | 45 | 27 | 9  | X 10M 3.00S-0.30-..   | M-HK34           |
| 1122-100-04                 | 100                          | 27 | 4   | 12 | 45 | 27 | 9  | X 10M 4.00S-0.40-..   | M-HK34           |
| 1122-100-05                 | 100                          | 27 | 5   | 12 | 45 | 27 | 9  | X 10M 5.00S-0.40-..   | M-HK34           |
| 1122-125-02                 | 125                          | 32 | 2   | 12 | 58 | 33 | 11 | X 10M 2.00S-0.20-..   | M-HK34           |
| 1122-125-02.5               | 125                          | 32 | 2,5 | 12 | 58 | 33 | 11 | X 10M 2.50S-0.20-..   | M-HK34           |
| 1122-125-03                 | 125                          | 32 | 3   | 12 | 58 | 33 | 11 | X 10M 3.00S-0.30-..   | M-HK34           |
| 1122-125-04                 | 125                          | 32 | 4   | 12 | 58 | 33 | 11 | X 10M 4.00S-0.40-..   | M-HK34           |
| 1122-125-05                 | 125                          | 32 | 5   | 12 | 58 | 33 | 11 | X 10M 5.00S-0.40-..   | M-HK34           |
| 1122-160-02                 | 160                          | 40 | 2   | 12 | 68 | 45 | 15 | X 10M 2.00S-0.20-..   | M-HK34           |
| 1122-160-02.5               | 160                          | 40 | 2,5 | 12 | 68 | 45 | 15 | X 10M 2.50S-0.20-..   | M-HK34           |
| 1122-160-03                 | 160                          | 40 | 3   | 12 | 68 | 45 | 15 | X 10M 3.00S-0.30-..   | M-HK34           |
| 1122-160-04                 | 160                          | 40 | 4   | 12 | 68 | 45 | 15 | X 10M 4.00S-0.40-..   | M-HK34           |
| 1122-160-05                 | 160                          | 40 | 5   | 12 | 68 | 45 | 15 | X 10M 5.00S-0.40-..   | M-HK34           |

Bestellbeispiel / Order example: 1122-63-02

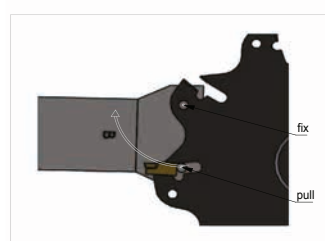
Sondermaße kurzfristig lieferbar! / Special dimensions available in short delivery time!

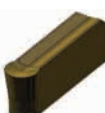
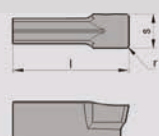
Anleitung zur Montage und Demontage der Wendeplatten  
Instructions for assembly and disassembly of the inserts

Montage  
Assembly

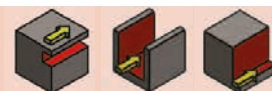


Demontage  
Disassembly



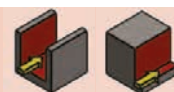
|                                                                                                                                                                                 | Form Figure                                                                       | Abmessungen Dimensions |   |      |    |     | Bezeichnung Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------|---|------|----|-----|-------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                                                                                                 |                                                                                   | l                      | d | s    | d1 | r   |                         |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br><br>X10M .. |  | 10,00                  |   | 2,00 |    | 0,2 | X10M 2.00S-0.20T        |          |           |                                         |     |                                     | ■     | ■     |       |       | ■     |
|                                                                                                                                                                                 |                                                                                   | 10,00                  |   | 2,50 |    | 0,2 | X10M 2.50S-0.20T        |          |           |                                         |     |                                     | ■     | ■     |       |       | ■     |
|                                                                                                                                                                                 |                                                                                   | 10,00                  |   | 3,00 |    | 0,3 | X10M 3.00S-0.30T        |          |           |                                         |     |                                     | ■     | ■     |       |       | ■     |
|                                                                                                                                                                                 |                                                                                   | 10,00                  |   | 3,00 |    | 1,5 | X10M 3.00R-1.50T        |          |           |                                         |     |                                     | ■     | ■     |       |       | ■     |
|                                                                                                                                                                                 |                                                                                   | 11,50                  |   | 4,00 |    | 0,4 | X10M 4.00S-0.40T        |          |           |                                         |     |                                     | ■     | ■     |       |       | ■     |
|                                                                                                                                                                                 |                                                                                   | 11,50                  |   | 4,00 |    | 2,0 | X10M 4.00R-2.00T        |          |           |                                         |     |                                     | ■     | ■     |       |       | ■     |
|                                                                                                                                                                                 |                                                                                   | 11,50                  |   | 5,00 |    | 0,4 | X10M 5.00S-0.40T        |          |           |                                         |     |                                     | ■     | ■     |       |       | ■     |
|                                                                                                                                                                                 |                                                                                   |                        |   |      |    |     |                         |          |           |                                         |     |                                     |       |       |       |       |       |

## Serie 1122 M - Schlitzscheibenfräser Series 1122 M - Slot disc cutter



| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion           | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|------------|--------------------|-----|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |            |                    |     |         |           |
| PTV28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| PTT35         |                   |     |             |                  | 200              | 160              | 160               | 120               |                   |                   |                   |                   |                   | 115             | 95              | 150   |       |                       |            | ■                  |     | ■       |           |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| KTE20         | 400               | 400 | 350         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     | ■       |           |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| fz            | 0,08-0,12         |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet | □ bedingt geeignet |     |         |           |

## Serie 1122 W - Schlitzscheibenfräser Series 1122 W - Slot disc cutter



| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion           | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|------------|--------------------|-----|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |            |                    |     |         |           |
| PTV28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| PTT35         |                   |     |             |                  | 200              | 160              | 160               | 120               |                   |                   |                   |                   |                   | 115             | 95              | 150   |       |                       |            | ■                  |     | ■       |           |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| KTE20         | 400               | 400 | 350         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     | ■       |           |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| fz            | 0,08-0,12         |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet | □ bedingt geeignet |     |         |           |

## Serie 1122 - Schlitzscheibenfräser Series 1122 - Slot disc cutter

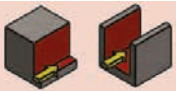


| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion           | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|------------|--------------------|-----|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |            |                    |     |         |           |
| PTV28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| PTT35         |                   |     |             |                  | 200              | 160              | 160               | 120               |                   |                   |                   |                   |                   | 115             | 95              | 150   |       |                       |            | ■                  |     | ■       |           |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| KTE20         | 400               | 400 | 350         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     | ■       |           |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| fz            | 0,08-0,12         |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet | □ bedingt geeignet |     |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

# Serie 1124 - Scheibenfräser

## Series 1124 - Grooving and cut-off mills



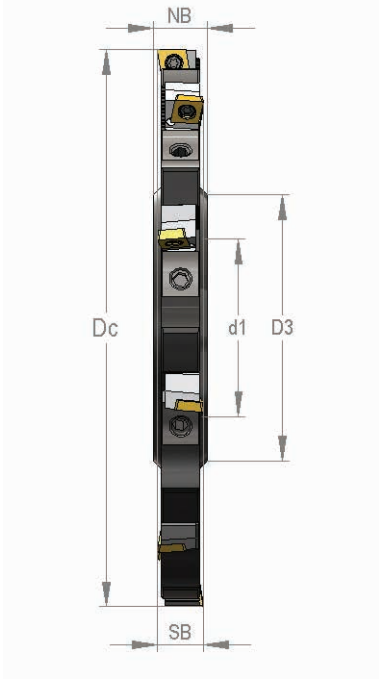
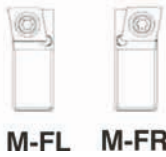
**Ausführung:** Scheibenfräser mit einstellbaren Kassetten, 3-seitig-schneidend  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** zum Nuten und Trennfräsen

**Execution:** Groove-cutter with adjustable cassettes  
 three-side cutting  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- cut-off milling

positiv, 90°

kreuzverzhnt  
 dreiseitig schneidend  
 alternate helical tooth  
 threeside-cutting

Schneidenbreite einstellbar  
 adjustable cutting widths



für Linksbesäumung ausschließlich Kassette M-FL  
 für Rechtsbesäumung ausschließlich Kassette M-FR  
 Körper- und Einbauteile sind im Lieferumfang enthalten.

for left-hand-cutting only cassettes M-FL  
 for right-hand-cutting only cassettes M-FR  
 Delivery with spare parts.

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |    |       |    |                       | Kassetten<br>Cassettes |                 | Wendeplatte<br>Insert<br> |
|-----------------------------|------------------------------|----|----|----|-------|----|-----------------------|------------------------|-----------------|----------------------------------------------------------------------------------------------------------------|
|                             | Dc                           | d1 | D3 | Z  | SB    | NB | Anz WP.<br>pcs/insert | Links<br>Left          | Rechts<br>Right |                                                                                                                |
| 1124B.100.04.12.1012        | 100                          | 27 | 50 | 24 | 10-12 | 12 | 24                    | M-FL 420               | M-FR 420        | XCMT/XCGT 0702                                                                                                 |
| 1124C.100.04.14.1218        | 100                          | 27 | 50 | 24 | 12-18 | 14 | 24                    | M-FL 421               | M-FR 421        | XCMT/XCGT 10T3                                                                                                 |
| 1124B.125.05.12.1012        | 125                          | 40 | 60 | 25 | 10-12 | 12 | 25                    | M-FL 420               | M-FR 420        | XCMT/XCGT 0702                                                                                                 |
| 1124C.125.05.14.1218        | 125                          | 40 | 60 | 25 | 12-18 | 14 | 25                    | M-FL 421               | M-FR 421        | XCMT/XCGT 10T3                                                                                                 |
| 1124B.160.06.12.1012        | 160                          | 40 | 66 | 26 | 10-12 | 12 | 26                    | M-FL 420               | M-FR 420        | XCMT/XCGT 0702                                                                                                 |
| 1124C.160.06.14.1218        | 160                          | 40 | 66 | 26 | 12-18 | 14 | 26                    | M-FL 421               | M-FR 421        | XCMT/XCGT 10T3                                                                                                 |
| 1124B.200.07.12.1012        | 200                          | 50 | 76 | 27 | 10-12 | 12 | 27                    | M-FL 420               | M-FR 420        | XCMT/XCGT 0702                                                                                                 |
| 1124C.200.07.14.1218        | 200                          | 50 | 76 | 27 | 12-18 | 14 | 27                    | M-FL 421               | M-FR 421        | XCMT/XCGT 10T3                                                                                                 |

Bestellbeispiel / Orderexample: 1124B.100.04.12.1012

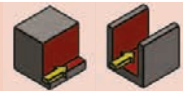
| Ersatzteile<br>Spare parts | Kassette/links<br>Cassette /left<br> | Kassette/rechts<br>Cassette /right<br> | Spannschraube<br>f. Wendeplatte<br>Insert<br>clamping screw<br> | Spannkeil<br>clamping element<br> | Spannschraube<br>f. Spannkeil<br>Screw for<br>clamping element<br> | Torxdreher<br>Key<br> |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| 1124 B. ...                | M-FL 420                                                                                                                | M-FR 420                                                                                                                  | M-VT 25                                                                                                                                            | M-SK1344                                                                                                              | M-MS1162                                                                                                                                                | M-BT 08                                                                                                    |
| 1124 C. ...                | M-FL 421                                                                                                                | M-FR 421                                                                                                                  | M-VT 40                                                                                                                                            | M-SK1345                                                                                                              |                                                                                                                                                         | M-BT 15                                                                                                    |

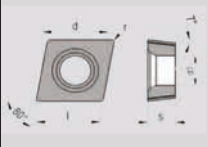
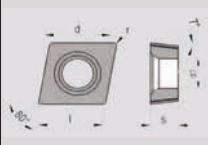
M-BT08 = 1,2 Nm  
 M-BT15 = 3,0 Nm



# Serie 1124 - Scheibenfräser

## Series 1124 - Grooving and cut-off mills



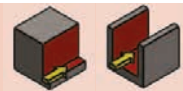
|                                                                                                    | Form Figure                                                                       | Abmessungen Dimensions |      |      |    |     | Bezeichnung Designation | Schrau-<br>be | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------|------|------|----|-----|-------------------------|---------------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                    |                                                                                   | l                      | d    | s    | d1 | r   |                         |               |           | CT28                                    | K10 |                                     | PTT20 | PTV28 | PTT35 | PAP28 | MTM10 |
| <br>XCMT .. (ALU) |  |                        |      |      |    |     |                         |               |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                                    |                                                                                   | 6,45                   | 6,35 | 2,38 |    | 0,4 | XCGT 070204 ALU         | M-VT25        | M-BT 08   |                                         |     |                                     |       |       |       |       | ■     |
|                                                                                                    |                                                                                   | 6,45                   | 6,35 | 2,38 |    | 0,8 | XCGT 070208 ALU         | M-VT25        | M-BT 08   |                                         |     |                                     |       |       |       |       | ■     |
|                                                                                                    |                                                                                   | 9,67                   | 9,52 | 3,97 |    | 0,4 | XCGT 10T304 ALU         | M-VT40        | M-BT 15   |                                         |     |                                     |       |       |       |       | ■     |
|                                                                                                    |                                                                                   | 9,67                   | 9,52 | 3,97 |    | 0,8 | XCGT 10T308 ALU         | M-VT40        | M-BT 15   |                                         |     |                                     |       |       |       |       | ■     |
|                                                                                                    |                                                                                   |                        |      |      |    |     |                         |               |           |                                         |     |                                     |       |       |       |       |       |
| <br>XCMT .. WM    |  |                        |      |      |    |     |                         |               |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                                    |                                                                                   | 6,45                   | 6,35 | 2,38 |    | 0,4 | XCMT 070204 WM          | M-VT25        | M-BT 08   |                                         |     |                                     | ■     |       | ■     | ■     | ■     |
|                                                                                                    |                                                                                   | 6,45                   | 6,35 | 2,38 |    | 0,8 | XCMT 070204 WM          | M-VT25        | M-BT 08   |                                         |     |                                     | ■     |       | ■     | ■     | ■     |
|                                                                                                    |                                                                                   | 9,67                   | 9,52 | 3,97 |    | 0,4 | XCMT 10T304 WM          | M-VT40        | M-BT 15   |                                         |     |                                     | ■     |       | ■     | ■     | ■     |
|                                                                                                    |                                                                                   | 9,67                   | 9,52 | 3,97 |    | 0,8 | XCMT 10T308 WM          | M-VT40        | M-BT 15   |                                         |     |                                     | ■     |       | ■     | ■     | ■     |
|                                                                                                    |                                                                                   |                        |      |      |    |     |                         |               |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl |     |     |     |     |   |   |   |   |   | INOX |     | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion | MMS                | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|-------|-----|-----|-----|-----|---|---|---|---|---|------|-----|-------|-------|-----------------------|------------|----------|--------------------|---------|-----------|
|               | N                 | N   | N           | P     | P   | P   | P   | P   | H | H | H | H | H | M    | M   | K     | S     | N                     |            |          |                    |         |           |
| ISO-Code      | N                 | N   | N           | P     | P   | P   | P   | P   | H | H | H | H | H | M    | M   | K     | S     | N                     |            |          |                    |         |           |
| PTT20         |                   |     |             |       | 180 | 180 | 160 | 110 |   |   |   |   |   |      |     |       |       |                       |            | ■        |                    | ■       |           |
| PTT35         |                   |     |             |       | 180 | 180 | 160 | 110 |   |   |   |   |   |      |     |       |       |                       |            | ■        |                    | ■       |           |
| PAP28         |                   |     |             |       |     |     |     |     |   |   |   |   |   | 130  | 100 |       |       |                       |            | ■        |                    | ■       |           |
| MTM10         |                   |     |             |       |     |     |     |     |   |   |   |   |   |      |     | 140   |       |                       |            |          |                    | ■       |           |
| KTE20         | 350               | 350 | 300         |       |     |     |     |     |   |   |   |   |   |      |     |       |       |                       |            | ■        |                    | ■       |           |
| K10           |                   |     |             |       |     |     |     |     |   |   |   |   |   |      |     |       |       |                       |            |          |                    |         |           |
| fz            | 0,1-0,2           |     |             |       |     |     |     |     |   |   |   |   |   |      |     |       |       |                       | ■ geeignet |          | □ bedingt geeignet |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

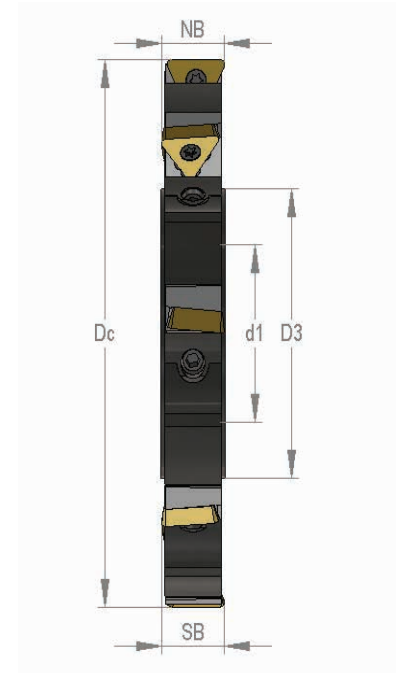
B

## Serie 1125 - Scheibenfräser Series 1125 - Grooving and cut-off mills



**Ausführung:** Scheibenfräser mit einstellbaren Kassetten, 3-seitig-schneidend  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** zum Nuten und Trennfräsen

**Execution:** Groove-cutter with adjustable cassettes  
 three-side cutting  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- cut-off milling



**positiv, 90°**

**kreuz erä hnt**  
**dreiseitig schneidend**  
 alternate helical tooth  
 threeside-cutting

**Schneidenbreite einstellbar**  
 adjustable cutting widths



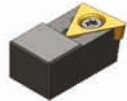
**M-FL M-FR**

für Linksbesäumung ausschließlich Kassette M-FL  
 für Rechtsbesäumung ausschließlich Kassette M-FR  
 Körper- und Einbauteile sind im Lieferumfang enthalten.

for left-hand-cutting only cassettes M-FL  
 for right-hand-cutting only cassettes M-FR  
 Delivery with spare parts.

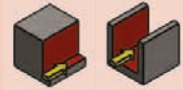
| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |    |       |    |                       | Kassetten<br>Cassettes |                 | Wendeplatte<br>Insert<br> |
|-----------------------------|------------------------------|----|----|----|-------|----|-----------------------|------------------------|-----------------|---------------------------------------------------------------------------------------------------------------|
|                             | Dc                           | d1 | D3 | Z  | SB    | NB | Anz WP.<br>pcs/insert | Links<br>Left          | Rechts<br>Right |                                                                                                               |
| 1125B.125.04.16.1619        | 125                          | 40 | 65 | 24 | 16-19 | 16 | 24                    | M-FL 422               | M-FR 422        | TCXT 16T3..                                                                                                   |
| 1125B.125.04.19.1922        | 125                          | 40 | 65 | 24 | 19-22 | 19 | 24                    | M-FL 422               | M-FR 422        | TCXT 16T3..                                                                                                   |
| 1125B.125.04.22.2225        | 125                          | 40 | 65 | 24 | 22-25 | 22 | 24                    | M-FL 422               | M-FR 422        | TCXT 16T3..                                                                                                   |
| 1125B.160.05.16.1619        | 160                          | 40 | 65 | 25 | 16-19 | 16 | 25                    | M-FL 422               | M-FR 422        | TCXT 16T3..                                                                                                   |
| 1125B.160.05.19.1922        | 160                          | 40 | 65 | 25 | 19-22 | 19 | 25                    | M-FL 422               | M-FR 422        | TCXT 16T3..                                                                                                   |
| 1125B.160.05.22.2225        | 160                          | 40 | 65 | 25 | 22-25 | 22 | 25                    | M-FL 422               | M-FR 422        | TCXT 16T3..                                                                                                   |
| 1125B.200.06.16.1619        | 200                          | 50 | 75 | 28 | 16-19 | 16 | 28                    | M-FL 422               | M-FR 422        | TCXT 16T3..                                                                                                   |
| 1125B.200.06.19.1922        | 200                          | 50 | 75 | 28 | 19-22 | 19 | 28                    | M-FL 422               | M-FR 422        | TCXT 16T3..                                                                                                   |
| 1125B.200.06.22.2225        | 200                          | 50 | 75 | 28 | 22-25 | 22 | 28                    | M-FL 422               | M-FR 422        | TCXT 16T3..                                                                                                   |
| 1125B.250.08.16.1619        | 250                          | 60 | 90 | 28 | 16-19 | 16 | 28                    | M-FL 422               | M-FR 422        | TCXT 16T3..                                                                                                   |
| 1125B.250.08.19.1922        | 250                          | 60 | 90 | 28 | 19-22 | 19 | 28                    | M-FL 422               | M-FR 422        | TCXT 16T3..                                                                                                   |
| 1125B.250.08.22.2225        | 250                          | 60 | 90 | 28 | 22-25 | 22 | 28                    | M-FL 422               | M-FR 422        | TCXT 16T3..                                                                                                   |

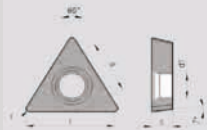
Bestellbeispiel / Order example: 1125B.125.04.16.1619

| Ersatzteile<br>Spare parts | Kassette/links<br>Cassette /left                                                                       | Kassette/rechts<br>Cassette /right                                                                     | Spannschraube<br>f. Wendeplatte<br>Insert<br>clamping screw                                                     | Spannkeil<br>clamping element                                                                           | Spannschraube<br>f. Spannkeil<br>Screw for<br>clamping element                                           | Torxdreher<br>Key                                                                                       |
|----------------------------|--------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
|                            | <br><b>M-FR 422</b> | <br><b>M-FL 422</b> | <br>3,0 Nm<br><b>M-VT 40</b> | <br><b>M-SK1346</b> | <br><b>M-MS1162</b> | <br><b>M-BT 15</b> |

# Serie 1125 - Scheibenfräser

## Series 1125 - Grooving and cut-off mills



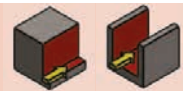
|                                                                                                 | Form Figure                                                                       | Abmessungen Dimensions |      |      |    |     | Bezeichnung Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|-------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------|------|------|----|-----|-------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                 |                                                                                   | l                      | d    | s    | d1 | r   |                         |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>TCXT .. WM |  |                        |      |      |    |     |                         |          |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                                 |                                                                                   | 16,50                  | 9,52 | 3,97 |    | 0,4 | TCXT 16T304 WM          | M-VT40   | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|                                                                                                 |                                                                                   | 16,50                  | 9,52 | 3,97 |    | 0,8 | TCXT 16T308 WM          | M-VT40   | M.BT 15   |                                         |     |                                     |       |       |       |       |       |
| <br>TCXT .. XM |  |                        |      |      |    |     |                         |          |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                                 |                                                                                   | 16,50                  | 9,52 | 3,97 |    | 0,4 | TCXT 16T304 XM          | M-VT40   | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|                                                                                                 |                                                                                   | 16,50                  | 9,52 | 3,97 |    | 0,8 | TCXT 16T308 XM          | M-VT40   | M.BT 15   |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu        |     |      | Stahl   |         |         |          |          |          |          |          |          |          | INOX    |         | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl                            | Emulsion | MMS | Trocken | Druckluft |
|---------------|------------|-----|------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|---------|---------|-------|-------|-----------------------|-------------------------------|----------|-----|---------|-----------|
|               | Kunststoff |     | Guss | < 500 N | < 750 N | < 900 N | < 1100 N | < 1400 N | < 55 HRC | < 60 HRC | < 65 HRC | < 67 HRC | < 70 HRC | < 900 N | > 900 N |       |       |                       |                               |          |     |         |           |
| ISO-Code      | N          | N   | N    | P       | P       | P       | P        | P        | H        | H        | H        | H        | H        | M       | M       | K     | S     | N                     |                               |          |     |         |           |
| PTT20         |            |     |      |         | 180     | 180     | 160      | 110      |          |          |          |          |          |         |         |       |       |                       |                               | ■        |     | ■       |           |
| PTT35         |            |     |      |         | 180     | 180     | 160      | 110      |          |          |          |          |          |         |         |       |       |                       |                               | ■        |     | ■       |           |
| PAP28         |            |     |      |         |         |         |          |          |          |          |          |          |          | 130     | 100     |       |       |                       |                               | ■        |     | ■       |           |
| MTM10         |            |     |      |         |         |         |          |          |          |          |          |          |          |         |         | 140   |       |                       |                               |          |     | ■       |           |
| KTE20         | 400        | 400 | 350  |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       |                               | ■        |     | ■       |           |
| K10           |            |     |      |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       |                               |          |     | ■       |           |
| fz            | 0,15-0,25  |     |      |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       | ■ geeignet □ bedingt geeignet |          |     |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

B

## Serie 2076 - Scheibenfräser Series 2076 - Grooving and cut-off mills



### Ausführung:

Scheibenfräser mit einstellbaren Kassetten

Durch tangentielle Klemmung der Platten ergibt sich ein sehr stabiles Werkzeug

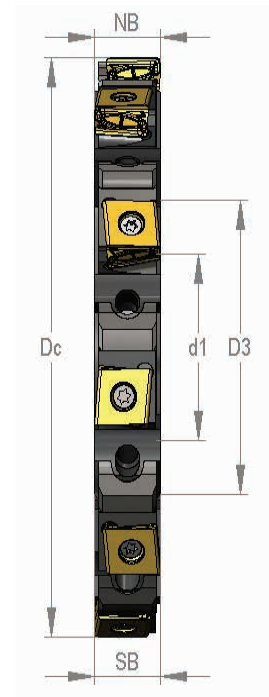
- Produktivität gewährleistet durch 4 Schneiden
- Hohe Bearbeitungssicherheit durch dicke Tangentialplatte
- Leichter Schnitt durch Helixgeometrie an den Schneidkanten
- 3-seitig schneidend, kreuzverzahnt, positiv 90°

### Performance:

Groove-cutter with adjustment cassettes

Due to tangential clamping of the inserts a very stable tool system

- productivity guaranteed through 4 cutting edges
- high machining security through thick tangential milling insert
- smooth cut through helix geometry on the cutting edges
- 3-side cutting, alternate helical tooth, threeside-cutting



### Schneidenbreite einstellbar adjustable cutting widths

für Linksbearbeitung ausschließlich Kassette M-FL

für Rechtsbearbeitung ausschließlich Kassette M-FR

Körper- und Einbauteile sind im Lieferumfang enthalten.

for left-hand-cutting only cassettes M-FL

for right-hand-cutting only cassettes M-FR

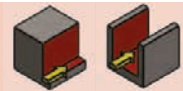
Delivered with spare parts.

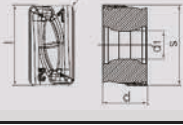
| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |       |    |      | Kassetten / Cassettes |                 | Wendepatte<br>Insert                                                                 |
|-----------------------------|------------------------------|----|----|-------|----|------|-----------------------|-----------------|--------------------------------------------------------------------------------------|
|                             | Dc                           | d1 | D3 | SB    | NB | z    | Links<br>Left         | Rechts<br>Right |  |
| 2076A.125.05.16.1619        | 125                          | 40 | 65 | 16-19 | 16 | 25   | M-FL 423              | M-FR 423        | LNMX 131308..-R..<br>LNMX 131308..- L..                                              |
| 2076B.125.05.19.1922        | 125                          | 40 | 65 | 19-22 | 19 | 25   |                       |                 |                                                                                      |
| 2076C.125.03.22.2225        | 125                          | 40 | 65 | 22-25 | 22 | 35   |                       |                 |                                                                                      |
| 2076A.160.06.16.1619        | 160                          | 40 | 65 | 16-19 | 16 | 28   |                       |                 |                                                                                      |
| 2076B.160.06.19.1922        | 160                          | 40 | 65 | 19-22 | 19 | 28   |                       |                 |                                                                                      |
| 2076C.160.04.22.2225        | 160                          | 40 | 65 | 22-25 | 22 | 34   |                       |                 |                                                                                      |
| 2076A.200.08.16.1619        | 200                          | 50 | 75 | 16-19 | 16 | 28   |                       |                 |                                                                                      |
| 2076B.200.08.19.1922        | 200                          | 50 | 75 | 19-22 | 19 | 28   |                       |                 |                                                                                      |
| 2076C.200.05.22.2225        | 200                          | 50 | 75 | 22-25 | 22 | 35   |                       |                 |                                                                                      |
| 2076A.250.10.16.1619        | 250                          | 60 | 90 | 16-19 | 16 | 21 0 |                       |                 |                                                                                      |
| 2076B.250.10.19.1922        | 250                          | 60 | 90 | 19-22 | 19 | 21 0 |                       |                 |                                                                                      |
| 2076C.250.07.22.2225        | 250                          | 60 | 90 | 22-25 | 22 | 37   |                       |                 |                                                                                      |
| 2076A.315.12.16.1619        | 315                          | 60 | 90 | 16-19 | 16 | 21 2 | M-FL 423              | M-FR 423        | LNMX 131308..-R..<br>LNMX 131308..- L..                                              |
| 2076B.315.12.19.1922        | 315                          | 60 | 90 | 19-22 | 19 | 21 2 |                       |                 |                                                                                      |
| 2076C.315.08.22.2225        | 315                          | 60 | 90 | 22-25 | 22 | 38   |                       |                 |                                                                                      |

Bestellbeispiel / Order example: 2076A-125.04.16.1619

| Ersatzteile<br>Spare parts | Kassette<br>links<br>Cassette left                                                  | Kassette<br>rechts<br>Cassette right                                                | Schraube für<br>Wendepatte<br>Screw for Insert                                      | Einstell-<br>schraube<br>Kassette<br>Adjustment<br>screw cassette                   | Spannkeil<br>Clamping<br>element                                                      | Schraube für<br>Spannkeil<br>Screw for clamping<br>element                            | Schlüssel<br>Key                                                                      |
|----------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| 2076B.                     |  |  |  |  |  |  |  |
| 2076A.<br>2076C.           | M-FL 423                                                                            | M-FR 423                                                                            | M-VT40-50<br>3,0 Nm                                                                 | M-M4-12                                                                             | M-SK 1348                                                                             | M-MS 1162                                                                             | M-BT 15                                                                               |

**Serie 2076 - Scheibenfräser**  
**Series 2076 - Grooving and cut-off mills**



|                                                                                             | Form Figure                                                                       | Abmessungen Dimensions |      |       |      |      | Bezeichnung Designation | Schraube  | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     |  | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|---------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------|------|-------|------|------|-------------------------|-----------|-----------|-----------------------------------------|-----|--|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                             |                                                                                   | l                      | d    | s     | d1   | r    |                         |           |           | CT28                                    | K10 |  | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>LNMX.. |  | 13,00                  | 7,94 | 13,00 | 4,60 | 0,80 | LNMX 131308 RP - R..    | M-VT40-50 | M-BT 15   |                                         |     |  |                                     | ■     | ■     |       | ■     |       |
|                                                                                             |                                                                                   | 13,00                  | 7,94 | 13,00 | 4,60 | 0,80 | LNMX 131308 MP - R..    | M-VT40-50 | M-BT 15   |                                         |     |  |                                     |       | ■     |       |       |       |
|                                                                                             |                                                                                   | 13,00                  | 7,94 | 13,00 | 4,60 | 0,80 | LNMX 131308 RK - R..    | M-VT40-50 | M-BT 15   |                                         |     |  |                                     |       |       |       |       | ■     |
| <br>LNMX.. |  | 13,00                  | 7,94 | 13,00 | 4,60 | 0,80 | LNMX 131308 RP - L..    | M-VT40-50 | M-BT 15   |                                         |     |  |                                     | ■     | ■     |       | ■     |       |
|                                                                                             |                                                                                   | 13,00                  | 7,94 | 13,00 | 4,60 | 0,80 | LNMX 131308 MP - L..    | M-VT40-50 | M-BT 15   |                                         |     |  |                                     |       | ■     |       |       |       |
|                                                                                             |                                                                                   | 13,00                  | 7,94 | 13,00 | 4,60 | 0,80 | LNMX 131308 RK - L..    | M-VT40-50 | M-BT 15   |                                         |     |  |                                     |       |       |       |       | ■     |

| Vc<br>(m/min) | Alu        |   |      | Stahl   |         |         |          |          |          |          |          |          |          |         | INOX    |  | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion | MMS | Trocken | Druckluft          |
|---------------|------------|---|------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|---------|---------|--|-------|-------|-----------------------|------------|----------|-----|---------|--------------------|
|               | Kunststoff |   | Guss | < 500 N | < 750 N | < 900 N | < 1100 N | < 1400 N | < 55 HRC | < 60 HRC | < 65 HRC | < 67 HRC | < 70 HRC | < 900 N | > 900 N |  |       |       |                       |            |          |     |         |                    |
| ISO-Code      | N          | N | N    | P       | P       | P       | P        | P        | H        | H        | H        | H        | H        | M       | M       |  | K     | S     | N                     |            |          |     |         |                    |
| PTV28         |            |   |      |         | 180     | 180     | 160      | 110      |          |          |          |          |          |         |         |  |       |       |                       |            | ■        |     |         | ■                  |
| PTT35         |            |   |      |         | 180     | 180     | 160      | 110      |          |          |          |          |          |         |         |  |       |       |                       |            | ■        |     |         | ■                  |
| PAP28         |            |   |      |         |         |         |          |          |          |          |          |          |          |         |         |  |       |       |                       |            |          |     |         |                    |
| MTM10         |            |   |      |         |         |         |          |          |          |          |          |          |          |         |         |  | 140   |       |                       |            |          |     |         | ■                  |
| KTE20         |            |   |      |         |         |         |          |          |          |          |          |          |          |         |         |  |       |       |                       |            |          |     |         |                    |
| K10           |            |   |      |         |         |         |          |          |          |          |          |          |          |         |         |  |       |       |                       |            |          |     |         |                    |
| fz            | 0,15-0,25  |   |      |         |         |         |          |          |          |          |          |          |          |         |         |  |       |       |                       | ■ geeignet |          |     |         | □ bedingt geeignet |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

B

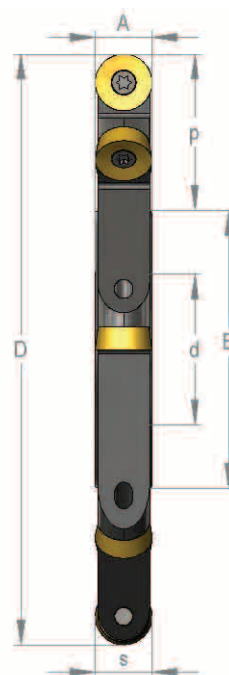


# Serie 1126, 1127, 1128, 1129 - Scheibenfräser Series 1126, 1127, 1128, 1129 - Grooving and cut-off mills



**Ausführung:** Scheibenfräser mit geschraubten Rundwendeplatten  
**Lieferumfang:** ohne Wendschneidplatten, ohne Schraubendreher  
**Anwendung:** zum Nuten und Trennfräsen

**Execution:** Groove-cutter with screwed round inserts  
**Delivery:** without insert, without screwdriver  
**Application:** Groove- cut-off milling



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |   |    |    |    |    | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|----|---|----|----|----|----|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
|                             | D                            | d  | s | A  | B  | Z  | p  |                                                                                                                |                                                                                                            |                                                                                                           |
| 1126-63-06                  | 63                           | 22 | 6 | 8  | 34 | 6  | 14 | RCGT 0602..<br>RCMT 0602..                                                                                     | M-VT25<br>1,2 Nm                                                                                           | M-BT08                                                                                                    |
| 1126-80-06                  | 80                           | 22 | 6 | 8  | 35 | 7  | 22 |                                                                                                                |                                                                                                            |                                                                                                           |
| 1126-100-06                 | 100                          | 27 | 6 | 12 | 45 | 7  | 27 |                                                                                                                |                                                                                                            |                                                                                                           |
| 1126-125-06                 | 125                          | 32 | 6 | 12 | 58 | 8  | 33 |                                                                                                                |                                                                                                            |                                                                                                           |
| 1126-160-06                 | 160                          | 40 | 6 | 12 | 68 | 9  | 45 |                                                                                                                |                                                                                                            |                                                                                                           |
| 1126-200-06                 | 200                          | 50 | 6 | 12 | 72 | 10 | 63 |                                                                                                                |                                                                                                            |                                                                                                           |

Bestellbeispiel / Order example: 1126-63-06

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |   |    |    |    |    | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|----|---|----|----|----|----|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
|                             | D                            | d  | s | A  | B  | Z  | p  |                                                                                                                |                                                                                                            |                                                                                                           |
| 1127-63-08                  | 63                           | 22 | 8 | 8  | 34 | 6  | 14 | RCGT 0803..<br>RCMT 0803..                                                                                     | M-VT30<br>1,2 Nm                                                                                           | M-BT08                                                                                                    |
| 1127-80-08                  | 80                           | 22 | 8 | 8  | 35 | 7  | 22 |                                                                                                                |                                                                                                            |                                                                                                           |
| 1127-100-08                 | 100                          | 27 | 8 | 12 | 45 | 7  | 27 |                                                                                                                |                                                                                                            |                                                                                                           |
| 1127-125-08                 | 125                          | 32 | 8 | 12 | 58 | 8  | 33 |                                                                                                                |                                                                                                            |                                                                                                           |
| 1127-160-08                 | 160                          | 40 | 8 | 12 | 68 | 9  | 45 |                                                                                                                |                                                                                                            |                                                                                                           |
| 1127-200-08                 | 200                          | 50 | 8 | 12 | 72 | 10 | 63 |                                                                                                                |                                                                                                            |                                                                                                           |

Bestellbeispiel / Order example: 1127-63-08

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |    |    |    |    | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|----|----|----|----|----|----|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
|                             | D                            | d  | s  | A  | B  | Z  | p  |                                                                                                                |                                                                                                            |                                                                                                           |
| 1128-80-10                  | 80                           | 27 | 10 | 12 | 35 | 6  | 22 | RCGT 1003..<br>RCMT 1003..                                                                                     | M-VT35<br>3,0 Nm                                                                                           | M-BT15                                                                                                    |
| 1128-100-10                 | 100                          | 27 | 10 | 12 | 45 | 7  | 27 |                                                                                                                |                                                                                                            |                                                                                                           |
| 1128-125-10                 | 125                          | 32 | 10 | 12 | 58 | 8  | 33 |                                                                                                                |                                                                                                            |                                                                                                           |
| 1128-160-10                 | 160                          | 40 | 10 | 12 | 68 | 9  | 45 |                                                                                                                |                                                                                                            |                                                                                                           |
| 1128-200-10                 | 200                          | 50 | 10 | 12 | 72 | 10 | 63 |                                                                                                                |                                                                                                            |                                                                                                           |

Bestellbeispiel / Order example: 1128-80-10

**Serie 1126, 1127, 1128, 1129 - Scheibenfräser**  
**Series 1126, 1127, 1128, 1129 - Grooving and cut-off mills**



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |    |    |    |    | Wendeplatte<br>Insert  | Schraube<br>Screw  | Schlüssel<br>Key  |
|-----------------------------|------------------------------|----|----|----|----|----|----|-----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
|                             | D                            | d  | s  | A  | B  | Z  | p  |                                                                                                           |                                                                                                       |                                                                                                      |
| 1129-80-12                  | 80                           | 27 | 12 | 12 | 35 | 6  | 22 | RCGT 1204..<br>RCMT 1204..                                                                                | M-VT40<br>3,0 Nm                                                                                      | M-BT15                                                                                               |
| 1129-100-12                 | 100                          | 27 | 12 | 12 | 45 | 7  | 27 |                                                                                                           |                                                                                                       |                                                                                                      |
| 1129-125-12                 | 125                          | 32 | 12 | 12 | 58 | 8  | 33 |                                                                                                           |                                                                                                       |                                                                                                      |
| 1129-160-12                 | 160                          | 40 | 12 | 12 | 68 | 9  | 45 |                                                                                                           |                                                                                                       |                                                                                                      |
| 1129-200-12                 | 200                          | 50 | 12 | 12 | 72 | 10 | 63 |                                                                                                           |                                                                                                       |                                                                                                      |

Bestellbeispiel / Order example: 1129-80-12

|                                                                                                                          | Form Figure                                                                        | Abmessungen Dimensions |       |      |    |   | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|--------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------|-------|------|----|---|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                                          |                                                                                    | l                      | d     | s    | d1 | r |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>RCGT - ALU<br>RCMT - WM<br>RCMT - XR |  |                        |       |      |    |   |                            |          |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                                                          |                                                                                    |                        | 6,00  | 2,38 |    |   | RCGT 0602 ALU              | M-VT 25  | M-BT08    |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                                          |                                                                                    |                        | 8,00  | 3,18 |    |   | RCGT 0803 ALU              | M-VT30   | M-BT08    |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                                          |                                                                                    |                        | 10,00 | 3,18 |    |   | RCGT 1003 ALU              | M-VT35   | M-BT15    |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                                          |                                                                                    |                        | 12,00 | 4,76 |    |   | RCGT 1204 ALU              | M-VT40   | M-BT15    |                                         | ■   |                                     |       |       |       |       |       |
|                                                                                                                          |                                                                                    |                        |       |      |    |   |                            |          |           |                                         |     |                                     |       | ■     |       |       |       |
|                                                                                                                          |                                                                                    |                        | 6,00  | 2,38 |    |   | RCMT 0602 WM               | M-VT 25  | M-BT08    |                                         |     |                                     |       | ■     |       |       |       |
|                                                                                                                          |                                                                                    |                        | 8,00  | 3,18 |    |   | RCMT 0803 WM               | M-VT30   | M-BT08    |                                         |     |                                     |       | ■     |       |       |       |
|                                                                                                                          |                                                                                    |                        | 10,00 | 3,18 |    |   | RCMT 1003 WM               | M-VT35   | M-BT15    |                                         |     |                                     |       | ■     |       |       |       |
|                                                                                                                          |                                                                                    |                        | 12,00 | 4,76 |    |   | RCMT 1204 WM               | M-VT40   | M-BT15    |                                         |     |                                     |       | ■     |       |       |       |
|                                                                                                                          |                                                                                    |                        | 16,00 | 6,35 |    |   | RCMT 1606 MO-XR            |          |           |                                         |     |                                     |       | ■     |       |       |       |
|                                                                                                                          |                                                                                    |                        | 20,00 | 6,35 |    |   | RCMT 2006 MO-XR            |          |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                                                          |                                                                                    |                        |       |      |    |   |                            |          |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion           | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|------------|--------------------|-----|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |            |                    |     |         |           |
| PTT20         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| PTT35         |                   |     |             |                  | 180              | 180              | 140               | 120               |                   |                   |                   |                   |                   |                 |                 | 120   |       |                       |            | ■                  |     |         | ■         |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| KTE20         | 400               | 400 | 350         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| K10           | 300               | 300 | 200         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| fz            | 0,1-0,2           |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet | □ bedingt geeignet |     |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

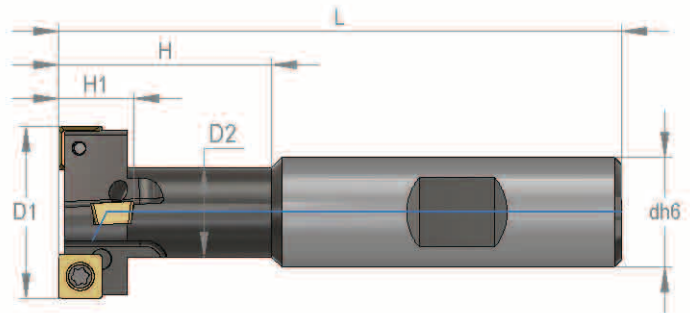
## Serie 1130 - T-Nutenfräser Series 1130 - T-Slot milling cutter



**Ausführung:** T-Nuten-Schaftfräser mit Innenkühlung,  
**Lieferumfang:** ohne Wendeschneidplatten,  
ohne Schraubendreher zum Fräsen von T-Nuten

**Anwendung:**

**Execution:** T-slot milling cutter with inner coolant bores  
**Delivery:** without insert, without screwdriver  
**Application:** for T-slot milling



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |    |     |   |   | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|-----|----|----|-----|---|---|-----------------------|-------------------|------------------|
|                             | D1                           | D2 | L   | H  | H1 | dh6 | K | Z |                       |                   |                  |
| 1130 W-W D21                | 21                           | 11 | 76  | 26 | 9  | 16  | 1 | 2 | SPLT 060304..         | M-VT25            | M-BT08           |
| 1130 W-W D25                | 25                           | 13 | 82  | 31 | 11 | 16  | 2 | 4 |                       |                   |                  |
| 1130 W-W D32                | 32                           | 17 | 88  | 38 | 14 | 20  | 2 | 4 | SDHT 09T3AE..         | M-VT35            | M-BT15           |
| 1130 W-W D40                | 40                           | 21 | 108 | 50 | 17 | 25  | 2 | 4 |                       |                   |                  |
| 1130 W-W D50                | 50                           | 27 | 120 | 56 | 22 | 32  | 2 | 4 | SPLT 120408..         | M-VT50            | M-BT20           |

Bestellbeispiel / Order example: 1130 W-W D21

W-W = Kühlmittelbohrung / W-W = coolant bores

M-BT08 = 1,2 Nm  
M-BT15 = 3,0 Nm  
M-BT20 = 4,0 Nm

Z = Zähnezahl / Number of flutes

K = Vorschubfaktor / Factor of feed

|                                                                                               | Form Figure                                                                         | Abmessungen Dimensions |       |      |      |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|-----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|-------|------|------|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                               |                                                                                     | l                      | d     | s    | d1   | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>SDHT..  |  | 9,52                   | 9,52  | 3,97 | 4,40 |     | SDHT 09T3AE                | M-VT 35  | M-BT 15   |                                         |     |                                     | ■     | ■     |       |       |       |
|                                                                                               |                                                                                     |                        |       |      |      |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |
| <br>SPLT... |  | 6,35                   | 6,35  | 3,18 | 2,85 | 0,4 | SPLT 060304                | M-VT 25  | M-BT 08   |                                         |     |                                     |       | ■     |       |       |       |
|                                                                                               |                                                                                     | 12,70                  | 12,70 | 4,76 | 5,50 | 0,8 | SPLT 120408                | M-VT50   | M-BT 20   |                                         |     |                                     | ■     | ■     |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl | Emulsion   | MMS                | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|----|------------|--------------------|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |    |            |                    |         |           |
| PTT20         |                   |     |             |                  | 170              | 160              | 120               | 100               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■          |                    |         | ■         |
| PTT35         |                   |     |             |                  | 170              | 160              | 120               | 100               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■          |                    |         | ■         |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |            |                    |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |            |                    |         |           |
| KTE20         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |            |                    |         |           |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |            |                    |         |           |
| fz            | 0,1-0,2           |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■ geeignet | □ bedingt geeignet |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

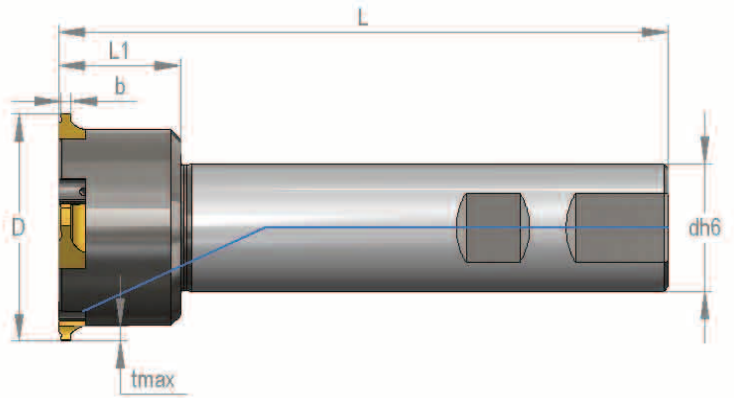


# Serie 1132 W-W - Zirkularfräser innen / außen Series 1132 W-W - Circulargroove milling inside / outside



**Ausführung:** Fräser für Nutenfräsen (zirkular) innen/außen  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** universeller Einsatz zum Fräsen von Nuten

**Execution:** Milling cutter groove milling (circular) inside/outside  
**Delivery:** without insert, without screwdriver  
**Application:** universal application for groove milling



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |     |    |     |   |           |             | Wendepatte<br>Insert | Schraube<br>Screw      | Schlüssel<br>Key |
|-----------------------------|------------------------------|-----|----|-----|---|-----------|-------------|----------------------|------------------------|------------------|
|                             | D                            | L   | L1 | dh6 | Z | t<br>max. | b<br>bis/to |                      |                        |                  |
| 1132-034 W-W                | 34                           | 125 | 25 | 25  | 3 | 1,75      | 1,71        | MN12..               | M-<br>VTX408<br>3,0 Nm | M-BT15           |
| 1132-034 W-WVL              | 34                           | 200 | 25 | 25  | 3 | 1,75      | 1,71        |                      |                        |                  |
| 1132-039 W-W                | 39                           | 125 | 25 | 25  | 4 | 2,5       | 2,26        |                      |                        |                  |
| 1132-039 W-WVL              | 39                           | 200 | 25 | 25  | 4 | 2,5       | 2,26        |                      |                        |                  |
| 1132-044 W-W                | 44                           | 125 | 25 | 25  | 5 | 3         | 3,26        |                      |                        |                  |
| 1132-044 W-WVL              | 44                           | 200 | 25 | 25  | 5 | 3         | 3,26        |                      |                        |                  |

Bestellbeispiel / Order example: 1132-034 W-W

W-W = Kühlmittelbohrung / W-W = coolant bores

|  | Form Figure | Abmessungen Dimensions |      |     |      |      |      | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|--|-------------|------------------------|------|-----|------|------|------|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|  |             | NB                     | tmax | s   | b    | r    | t    |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|  |             |                        |      |     |      |      |      |                            |          |           |                                         |     |                                     |       |       |       |       |       |
|  |             | 1,10                   | 0,50 | 5,4 | 1,21 | 0,10 | 0,49 | MN12.110.050 R / L         | M-VTX408 | M-BT 15   |                                         |     |                                     | ■     |       |       |       | ■     |
|  |             | 1,30                   | 0,70 | 5,4 | 1,41 | 0,10 | 0,67 | MN12.130.070 R / L         | M-VTX408 | M-BT 15   |                                         |     |                                     | ■     |       |       |       | ■     |
|  |             | 1,30                   | 0,85 | 5,4 | 1,41 | 0,10 | 0,83 | MN12.130.085 R / L         | M-VTX408 | M-BT 15   |                                         |     |                                     | ■     |       |       |       | ■     |
|  |             | 1,60                   | 0,85 | 5,4 | 1,71 | 0,15 | 0,83 | MN12.160.085 R / L         | M-VTX408 | M-BT 15   |                                         |     |                                     | ■     |       |       |       | ■     |
|  |             | 1,60                   | 1,00 | 5,4 | 1,71 | 0,15 | 0,97 | MN12.160.100 R / L         | M-VTX408 | M-BT 15   |                                         |     |                                     | ■     |       |       |       | ■     |
|  |             | 1,85                   | 1,25 | 5,4 | 1,96 | 0,15 | 1,23 | MN12.185.125 R / L         | M-VTX408 | M-BT 15   |                                         |     |                                     | ■     |       |       |       | ■     |
|  |             | 2,15                   | 1,50 | 5,4 | 2,26 | 0,15 | 1,47 | MN12.215.150 R / L         | M-VTX408 | M-BT 15   |                                         |     |                                     | ■     |       |       |       | ■     |
|  |             | 2,65                   | 1,50 | 5,4 | 2,76 | 0,15 | 1,47 | MN12.265.150 R / L         | M-VTX408 | M-BT 15   |                                         |     |                                     | ■     |       |       |       | ■     |
|  |             | 2,65                   | 1,75 | 5,4 | 2,76 | 0,15 | 1,72 | MN12.265.175 R / L         | M-VTX408 | M-BT 15   |                                         |     |                                     | ■     |       |       |       | ■     |
|  |             | 3,15                   | 1,75 | 5,4 | 3,26 | 0,15 | 1,72 | MN12.315.175 R / L         | M-VTX408 | M-BT 15   |                                         |     |                                     | ■     |       |       |       | ■     |
|  |             | 4,15                   | 2,00 | 5,4 | 4,26 | 0,15 | 1,97 | MN12.415.200 R / L         | M-VTX408 | M-BT 15   |                                         |     |                                     | ■     |       |       |       | ■     |
|  |             | 4,15                   | 2,50 | 5,4 | 4,26 | 0,15 | 2,47 | MN12.415.250 R / L         | M-VTX408 | M-BT 15   |                                         |     |                                     | ■     |       |       |       | ■     |
|  |             | 5,15                   | 3,00 | 5,4 | 5,26 | 0,15 | 2,97 | MN12.515.300 R / L         | M-VTX408 | M-BT 15   |                                         |     |                                     | ■     |       |       |       | ■     |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl | Emulsion   | MMS                | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|----|------------|--------------------|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |    |            |                    |         |           |
| PTV28         |                   |     |             |                  | 180              | 180              | 160               | 120               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■          |                    |         | ■         |
| PTT35         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |            |                    |         |           |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |            |                    |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |            |                    |         |           |
| KTE20         | 380               | 380 | 340         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■          |                    |         | ■         |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |            |                    |         |           |
| fz            | 0,03-0,06         |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■ geeignet | □ bedingt geeignet |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.



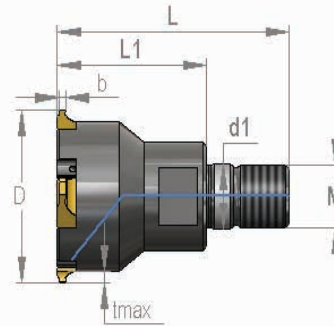
# Serie 1132 E-W - Zirkularfräser innen / außen

## Series 1132 E-W - Circulargroove milling inside / outside



**Ausführung:** Fräser für Nutenfräsen (zirkular) innen/außen  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** universeller Einsatz zum Fräsen von Nuten

**Execution:** Milling cutter groove milling (circular) inside/outside  
**Delivery:** without insert, without screwdriver  
**Application:** universal application for groove milling



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |    |     |   |        |          | Wendeplatte<br>Insert | Schraube<br>Screw  | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|----|----|-----|---|--------|----------|-----------------------|--------------------|------------------|
|                             | D                            | d1 | L1 | L  | M   | Z | t max. | b bis/to |                       |                    |                  |
| 1132-034 E-W                | 34                           | 17 | 43 | 67 | M16 | 3 | 1,75   | 1,71     | MN12..                | M-VTX408<br>3,0 Nm | M-BT15           |
| 1132-039 E-W                | 39                           | 17 | 43 | 67 | M16 | 4 | 2,5    | 2,26     |                       |                    |                  |
| 1132-044 E-W                | 44                           | 17 | 43 | 67 | M16 | 5 | 3      | 3,26     |                       |                    |                  |

Bestellbeispiel / Order example: 1132-034 E-W

E-W = Kühlmittelbohrung / E-W = coolant bores

Verlängerungen siehe Seite 392 - 400

Extensions you can see on page 392 - 400

|  | Form Figure | Abmessungen Dimensions |      |     |      |      |      | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|--|-------------|------------------------|------|-----|------|------|------|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|  |             | NB                     | tmax | s   | b    | r    | t    |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|  |             |                        |      |     |      |      |      |                            |          |           |                                         |     |                                     |       |       |       |       |       |
|  |             | 1,10                   | 0,50 | 5,4 | 1,21 | 0,10 | 0,49 | MN12.110.050 R / L         | M-VTX408 | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|  |             | 1,30                   | 0,70 | 5,4 | 1,41 | 0,10 | 0,67 | MN12.130.070 R / L         | M-VTX408 | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|  |             | 1,30                   | 0,85 | 5,4 | 1,41 | 0,10 | 0,83 | MN12.130.085 R / L         | M-VTX408 | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|  |             | 1,60                   | 0,85 | 5,4 | 1,71 | 0,15 | 0,83 | MN12.160.085 R / L         | M-VTX408 | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|  |             | 1,60                   | 1,00 | 5,4 | 1,71 | 0,15 | 0,97 | MN12.160.100 R / L         | M-VTX408 | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|  |             | 1,85                   | 1,25 | 5,4 | 1,96 | 0,15 | 1,23 | MN12.185.125 R / L         | M-VTX408 | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|  |             | 2,15                   | 1,50 | 5,4 | 2,26 | 0,15 | 1,47 | MN12.215.150 R / L         | M-VTX408 | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|  |             | 2,65                   | 1,50 | 5,4 | 2,76 | 0,15 | 1,47 | MN12.265.150 R / L         | M-VTX408 | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|  |             | 2,65                   | 1,75 | 5,4 | 2,76 | 0,15 | 1,72 | MN12.265.175 R / L         | M-VTX408 | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|  |             | 3,15                   | 1,75 | 5,4 | 3,26 | 0,15 | 1,72 | MN12.315.175 R / L         | M-VTX408 | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|  |             | 4,15                   | 2,00 | 5,4 | 4,26 | 0,15 | 1,97 | MN12.415.200 R / L         | M-VTX408 | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|  |             | 4,15                   | 2,50 | 5,4 | 4,26 | 0,15 | 2,47 | MN12.415.250 R / L         | M-VTX408 | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|  |             | 5,15                   | 3,00 | 5,4 | 5,26 | 0,15 | 2,97 | MN12.515.300 R / L         | M-VTX408 | M-BT 15   |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl | Emulsion | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|----|----------|-----|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |    |          |     |         |           |
| PTV28         |                   |     |             |                  | 180              | 180              | 160               | 120               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |          |     |         |           |
| PTT35         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |          |     |         |           |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |          |     |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |          |     |         |           |
| KTE20         | 380               | 380 | 340         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |          |     |         |           |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |          |     |         |           |
| fz            | 0,03-0,06         |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |          |     |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

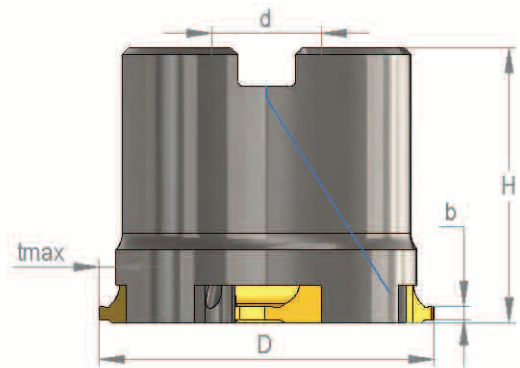
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# Serie 1132 M-W - Zirkularfräser innen / außen Series 1132 M-W - Circulargroove milling inside / outside



**Ausführung:** Fräser für Nutenfräsen (zirkular) innen/außen  
**Lieferumfang:** ohne Wendschneidplatten, ohne Schraubendreher  
**Anwendung:** universeller Einsatz zum Fräsen von Nuten

**Execution:** Milling cutter groove milling (circular) inside/outside  
**Delivery:** without insert, without screwdriver  
**Application:** universal application for groove milling



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |    |           |             | Wendeplatte<br>Insert | Schraube<br>Screw  | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|----|----|-----------|-------------|-----------------------|--------------------|------------------|
|                             | D                            | H  | d  | Z  | t<br>max. | b<br>bis/to |                       |                    |                  |
| 1132-049 M-W                | 49                           | 40 | 16 | 5  | 2,5       | 4,26        | MN12..                | M-VTX408<br>3,0 Nm | M-BT15           |
| 1132-063 M-W                | 63                           | 50 | 22 | 8  | 3         | 5,26        |                       |                    |                  |
| 1132-080 M-W                | 80                           | 50 | 27 | 10 | 3         | 5,26        |                       |                    |                  |

Bestellbeispiel / Order example: 1132-049 M-W

M-W = Kühlmittelbohrung / M-W = coolant bores

|  | Form Figure | Abmessungen Dimensions |      |     |      |      |      | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|--|-------------|------------------------|------|-----|------|------|------|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|  |             | NB                     | tmax | s   | b    | r    | t    |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|  |             |                        |      |     |      |      |      |                            |          |           |                                         |     |                                     |       |       |       |       |       |
|  |             | 1,10                   | 0,50 | 5,4 | 1,21 | 0,10 | 0,49 | MN12.110.050 R / L         | M-VTX408 | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|  |             | 1,30                   | 0,70 | 5,4 | 1,41 | 0,10 | 0,67 | MN12.130.070 R / L         | M-VTX408 | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|  |             | 1,30                   | 0,85 | 5,4 | 1,41 | 0,10 | 0,83 | MN12.130.085 R / L         | M-VTX408 | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|  |             | 1,60                   | 0,85 | 5,4 | 1,71 | 0,15 | 0,83 | MN12.160.085 R / L         | M-VTX408 | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|  |             | 1,60                   | 1,00 | 5,4 | 1,71 | 0,15 | 0,97 | MN12.160.100 R / L         | M-VTX408 | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|  |             | 1,85                   | 1,25 | 5,4 | 1,96 | 0,15 | 1,23 | MN12.185.125 R / L         | M-VTX408 | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|  |             | 2,15                   | 1,50 | 5,4 | 2,26 | 0,15 | 1,47 | MN12.215.150 R / L         | M-VTX408 | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|  |             | 2,65                   | 1,50 | 5,4 | 2,76 | 0,15 | 1,47 | MN12.265.150 R / L         | M-VTX408 | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|  |             | 2,65                   | 1,75 | 5,4 | 2,76 | 0,15 | 1,72 | MN12.265.175 R / L         | M-VTX408 | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|  |             | 3,15                   | 1,75 | 5,4 | 3,26 | 0,15 | 1,72 | MN12.315.175 R / L         | M-VTX408 | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|  |             | 4,15                   | 2,00 | 5,4 | 4,26 | 0,15 | 1,97 | MN12.415.200 R / L         | M-VTX408 | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|  |             | 4,15                   | 2,50 | 5,4 | 4,26 | 0,15 | 2,47 | MN12.415.250 R / L         | M-VTX408 | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|  |             | 5,15                   | 3,00 | 5,4 | 5,26 | 0,15 | 2,97 | MN12.515.300 R / L         | M-VTX408 | M-BT 15   |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       | Graphit<br>GFK<br>CFK |  |  |  |  |  |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|               | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| PTV28         |                   |     |             |                  | 180              | 180              | 160               | 120               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| PTT35         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| KTE20         | 380               | 380 | 340         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       | 140   |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| fz            | 0,03-0,06         |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | <div><div></div>geeignet</div> <div><div></div>bedingt geeignet</div>                 |                                                                                       |                                                                                       |                                                                                       |                                                                                       |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

# Serie 1132 S-W - Zirkularfräser innen / außen

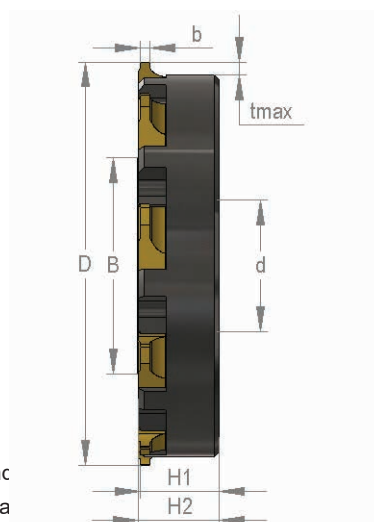
## Series 1132 S-W - Circulargroove milling inside / outside



**Ausführung:** Fräser für Nutenfräsen (zirkular) innen/außen  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** universeller Einsatz zum Fräsen von Nuten

**Execution:** Milling cutter groove milling (circular) inside/outside  
**Delivery:** without insert, without screwdriver  
**Application:** universal application for groove milling

R = Rechtsschneidend, links verzahnt (Abb.) / R = Right hand cutting direction, left hand indent  
 L = Rechtsschneidend, rechts verzahnt / L = Right hand cutting direction, right hand indent



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |      |    |    |    |           |             | Wendeplatte<br>Insert | Schraube<br>Screw  | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|------|----|----|----|-----------|-------------|-----------------------|--------------------|------------------|
|                             | D                            | H1 | H2   | B  | d  | Z  | t<br>max. | b<br>bis/to |                       |                    |                  |
| 1132-063 S-W- R/L           | 63                           | 14 | 14,2 | 34 | 22 | 8  | 3         | 5,26        | MN12..                | M-VTX408<br>3,0 Nm | M-BT15           |
| 1132-080 S-W- R/L           | 80                           | 16 | 16,2 | 43 | 27 | 10 | 3         | 5,26        |                       |                    |                  |
| 1132-100 S-W- R/L           | 100                          | 20 | 20,2 | 48 | 32 | 12 | 3         | 5,26        |                       |                    |                  |

Bestellbeispiel / Order example: 1132-063 S-W-R

|            | Form Figure | Abmessungen Dimensions |      |     |      |      |      | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|------------|-------------|------------------------|------|-----|------|------|------|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|            |             | NB                     | tmax | s   | b    | r    | t    |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>MN12.. |             |                        |      |     |      |      |      |                            |          |           |                                         |     |                                     |       |       |       |       |       |
|            |             | 1,10                   | 0,50 | 5,4 | 1,21 | 0,10 | 0,49 | MN12.110.050 R / L         | M-VTX408 | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|            |             | 1,30                   | 0,70 | 5,4 | 1,41 | 0,10 | 0,67 | MN12.130.070 R / L         | M-VTX408 | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|            |             | 1,30                   | 0,85 | 5,4 | 1,41 | 0,10 | 0,83 | MN12.130.085 R / L         | M-VTX408 | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|            |             | 1,60                   | 0,85 | 5,4 | 1,71 | 0,15 | 0,83 | MN12.160.085 R / L         | M-VTX408 | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|            |             | 1,60                   | 1,00 | 5,4 | 1,71 | 0,15 | 0,97 | MN12.160.100 R / L         | M-VTX408 | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|            |             | 1,85                   | 1,25 | 5,4 | 1,96 | 0,15 | 1,23 | MN12.185.125 R / L         | M-VTX408 | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|            |             | 2,15                   | 1,50 | 5,4 | 2,26 | 0,15 | 1,47 | MN12.215.150 R / L         | M-VTX408 | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|            |             | 2,65                   | 1,50 | 5,4 | 2,76 | 0,15 | 1,47 | MN12.265.150 R / L         | M-VTX408 | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|            |             | 2,65                   | 1,75 | 5,4 | 2,76 | 0,15 | 1,72 | MN12.265.175 R / L         | M-VTX408 | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|            |             | 3,15                   | 1,75 | 5,4 | 3,26 | 0,15 | 1,72 | MN12.315.175 R / L         | M-VTX408 | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|            |             | 4,15                   | 2,00 | 5,4 | 4,26 | 0,15 | 1,97 | MN12.415.200 R / L         | M-VTX408 | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|            |             | 4,15                   | 2,50 | 5,4 | 4,26 | 0,15 | 2,47 | MN12.415.250 R / L         | M-VTX408 | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|            |             | 5,15                   | 3,00 | 5,4 | 5,26 | 0,15 | 2,97 | MN12.515.300 R / L         | M-VTX408 | M-BT 15   |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion           | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|------------|--------------------|-----|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |            |                    |     |         |           |
| PTV28         |                   |     |             |                  | 180              | 180              | 160               | 120               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| PTT35         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| KTE20         | 380               | 380 | 340         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| fz            | 0,03-0,06         |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet | □ bedingt geeignet |     |         |           |

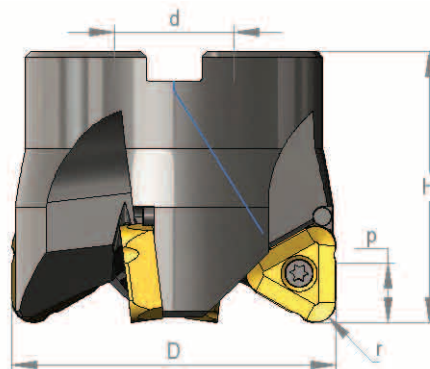
Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

## Serie 5010 - Kopierfräser Series 5010 - Copy milling cutter



**Ausführung:** Kopier-Aufsteckfräser mit Innenkühlung  
**Lieferumfang:** ohne Wendschneidplatten, ohne Schraubendreher  
**Anwendung:** zum Schrupp-Schlichtkopieren, Taschen- Nutenfräsen, Auskoffern, universelle Einsatzmöglichkeiten

**Execution:** Shell copy milling cutter with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** for roughing-finish-copy, pockets and holes, universal application



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |   |   |   | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|----|---|---|---|-----------------------|-------------------|------------------|
|                             | D                            | d  | H  | p | r | Z |                       |                   |                  |
| 5010 M-W D52-3              | 52                           | 22 | 50 | 4 | 4 | 3 | TOKX 160440           | M-VT40<br>3,0 Nm  | M-BT15           |
| 5010 M-W D52-4              | 52                           | 22 | 50 | 4 | 4 | 4 |                       |                   |                  |
| 5010 M-W D66-4              | 66                           | 27 | 50 | 4 | 4 | 4 |                       |                   |                  |
| 5010 M-W D66-5              | 66                           | 27 | 50 | 4 | 4 | 5 |                       |                   |                  |
| 5010 M-W D80-5              | 80                           | 27 | 60 | 4 | 4 | 5 |                       |                   |                  |
| 5010 M-W D80-6              | 80                           | 27 | 60 | 4 | 4 | 6 |                       |                   |                  |

Bestellbeispiel / Order example: 5010 M-W D52-3

M-W = Kühlmittelbohrung / M-W = coolant bores

- Definierter Radius
- Hohe Vorschübe (fz bis 2,5mm)
- Träger aus speziellem Werkzeugstahl
- Kühlmittelbohrungen für optimale Späneentsorgung
- Ideal für Schrupp- Schlichtkopieren, Taschen- Nutenfräsen, Auskoffern

- defined radius
- high cutting speeds (fz to 2,5mm)
- special tool steel
- coolant bores
- ideal for roughing-finish-copy, pockets and holes

|  | Form Figure | Abmessungen Dimensions |       |      |      |      | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|--|-------------|------------------------|-------|------|------|------|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|  |             | l                      | d     | s    | d1   | r    |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|  |             | 18,00                  | 11,70 | 4,76 | 4,40 | 4,00 | TOKX 160440                | M-VT 40  | M-BT 15   |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl | Emulsion   | MMS                | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|----|------------|--------------------|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |    |            |                    |         |           |
| PTV28         |                   |     |             |                  | 200              | 180              | 160               | 140               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |            |                    |         |           |
| PTT35         |                   |     |             |                  | 200              | 180              | 160               | 140               |                   |                   |                   |                   |                   | 160             | 120             |       |       |                       |    |            |                    |         |           |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |            |                    |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 200   |       |                       |    |            |                    |         |           |
| KTE20         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |            |                    |         |           |
| K10           | 400               | 400 | 320         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |            |                    |         |           |
| fz            | 0,25-2,5          |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■ geeignet | □ bedingt geeignet |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

# Serie 5012 - High-Speed Fräser

## Series 5012 - High-Speed Cutter



**Ausführung:** High-Speed Fräser, mit Innenbohrung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** zum Schrupp-Schlichtspieren, Taschen- Nutenfräsen, Auskoffern, universelle Einsatzmöglichkeit

**Execution:** High-Speed Cutter, with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** for roughing - finish copy, pockets and holes, universal application

Fig.: 1

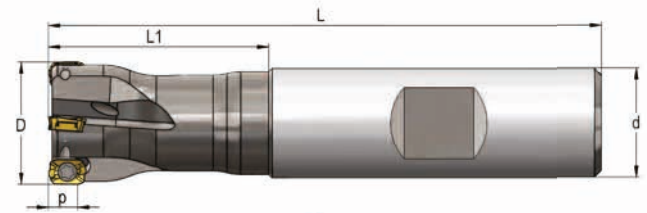
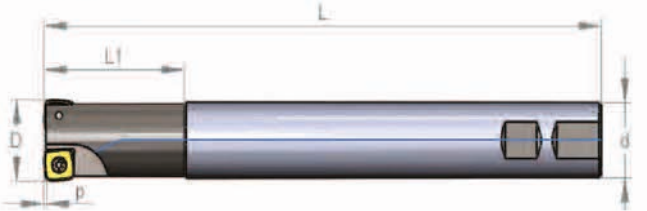


Fig.: 2



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |     |   |      | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|-----|----|-----|---|------|-----------------------|-------------------|------------------|
|                             | D                            | d  | L   | L1 | p   | Z | Fig. |                       |                   |                  |
| 5012/06 W-W D10-2           | 10                           | 10 | 80  | 32 | 5,2 | 2 | 1    | LPMX<br>060210-MMH    | M-VT 18<br>0,6 Nm | M-BT 06          |
| 5012/06 W-W D12-3           | 12                           | 12 | 80  | 32 | 5,2 | 3 | 1    |                       |                   |                  |
| 5012/06 W-W D16-4           | 16                           | 16 | 85  | 32 | 5,2 | 4 | 1    |                       |                   |                  |
| 5012/06 W-W D20-5           | 20                           | 20 | 90  | 40 | 5,2 | 5 | 1    |                       |                   |                  |
| 5012/06 W-W D25-7           | 25                           | 20 | 105 | 40 | 5,2 | 7 | 1    |                       |                   |                  |

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |     |   |      | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|-----|----|-----|---|------|-----------------------|-------------------|------------------|
|                             | D                            | d  | L   | L1 | p   | Z | Fig. |                       |                   |                  |
| 5012 W-W D16/07-2           | 16                           | 16 | 200 | 50 | 0,8 | 2 | 2    | SDLX<br>070305 SM..   | M-VT25<br>1,2 Nm  | M-BT08           |
| 5012 W-W D20/07-3           | 20                           | 20 | 200 | 50 | 0,8 | 3 | 2    |                       |                   |                  |
| 5012 W-W D25/07-4           | 25                           | 25 | 200 | 50 | 0,8 | 4 | 2    |                       |                   |                  |
| 5012 W-W D25-2              | 25                           | 25 | 225 | 50 | 1   | 2 | 2    | SDLX<br>10T308 SM..   | M-VT40<br>3,0 Nm  | M-BT15           |
| 5012 W-W D25-3              | 25                           | 25 | 225 | 50 | 1   | 3 | 2    |                       |                   |                  |
| 5012 W-W D32-2              | 32                           | 32 | 250 | 63 | 1   | 2 | 2    | SDLX<br>130410 SM..   | M-VT50<br>5,0 Nm  | M-BT20           |
| 5012 W-W D32-3              | 32                           | 32 | 250 | 63 | 2   | 3 | 2    |                       |                   |                  |
| 5012 W-W D35-3              | 35                           | 32 | 250 | 63 | 2   | 3 | 2    |                       |                   |                  |

Bestellbeispiel / Order example: 5012 W-W D25-2

W-W = Kühlmittelbohrung / W-W = coolant bores

|         | Form Figure | Abmessungen Dimensions |       |      |      |      | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|---------|-------------|------------------------|-------|------|------|------|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|         |             | l                      | d     | s    | d1   | r    |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| LPMX... |             | 0,70                   | 3,64  | 2,15 | 2,05 | 1,00 | LPMX 060210-MMH            | M-VT 18  | M-VT 06   |                                         |     |                                     |       |       |       |       |       |
| SDLX .. |             | 7,00                   | 7,10  | 3,18 | 3,50 | 0,5  | SDLX 070305 SM             | M-VT 25  | M-BT 08   |                                         |     |                                     |       |       |       |       |       |
|         |             | 10,00                  | 10,35 | 3,97 | 4,40 | 0,8  | SDLX 10T308 SM             | M-VT 40  | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|         |             | 13,00                  | 13,25 | 4,76 | 4,40 | 4,0  | SDLX 130410 SM             | M-VT 50  | M-BT 20   |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl | Emulsion   | MMS                | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|----|------------|--------------------|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |    |            |                    |         |           |
| PTV28         |                   |     |             |                  | 200              | 180              | 160               | 100               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |            |                    |         |           |
| PTT35         |                   |     |             |                  | 200              | 180              | 160               | 100               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |            |                    |         |           |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 160             | 120             |       |       |                       |    |            |                    |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 180   |       |                       |    |            |                    |         |           |
| KTE20         | 600               | 600 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |            |                    |         |           |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |            |                    |         |           |
| ftz           | 0,2-1,5           |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■ geeignet | □ bedingt geeignet |         |           |

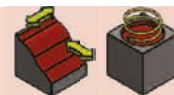
Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

B



# Serie 5013 - High-Speed Fräser

## Series 5013 - High-Speed Cutter



**Ausführung:** High-Speed Fräser, mit Innenkühlung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** zum Schrump-Schlichtbohren, Taschen- Nutenfräsen, Auskoffern, universelle Einsatzmöglichkeit

**Execution:** High-Speed Cutter, with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** for roughing - finish copy, pockets and holes, universal application

Fig.: 1

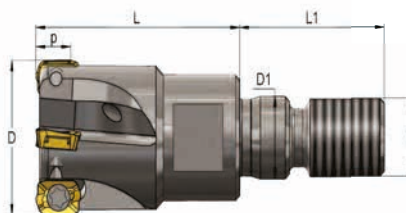
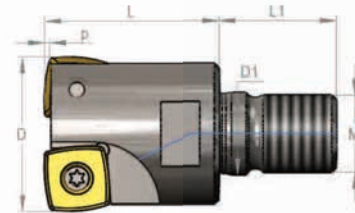


Fig.: 2



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |      |      |      |     |     |   |      | Wendepatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|------|------|------|-----|-----|---|------|----------------------|-------------------|------------------|
|                             | D                            | D1   | L    | L1   | M   | p   | Z | Fig. |                      |                   |                  |
| 5013/06 E-W D10             | 10                           | 6,5  | 15,5 | 14,5 | M6  | 5,2 | 2 | 1    | LPMX<br>060210-MMH   | M-VT 18<br>0,6 Nm | M-BT 06          |
| 5013/06 E-W D12             | 12                           | 6,5  | 15,5 | 14,5 | M6  | 5,2 | 3 | 1    |                      |                   |                  |
| 5013/06 E-W D16             | 16                           | 8,5  | 20,5 | 18   | M8  | 5,2 | 4 | 1    |                      |                   |                  |
| 5013/06 E-W D20             | 20                           | 10,5 | 27   | 19   | M10 | 5,2 | 5 | 1    |                      |                   |                  |
| 5013/06 E-W D25             | 25                           | 12,5 | 30   | 22   | M12 | 5,2 | 7 | 1    |                      |                   |                  |
| 5013/06 E-W D32             | 32                           | 17   | 43   | 23   | M16 | 5,2 | 8 | 1    |                      |                   |                  |

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |      |      |      |     |     |   |      | Wendepatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|------|------|------|-----|-----|---|------|----------------------|-------------------|------------------|
|                             | D                            | D1   | L    | L1   | M   | p   | Z | Fig. |                      |                   |                  |
| 5013 E-W D16/07-2           | 16                           | 8,5  | 25,5 | 17,5 | M8  | 0,8 | 2 | 2    | SDLX<br>070305 SM..  | M-VT 25<br>1,2 Nm | M-BT08           |
| 5013 E-W D20/07-3           | 20                           | 10,5 | 29   | 20   | M10 | 0,8 | 3 | 2    |                      |                   |                  |
| 5013 E-W D25/07-4           | 25                           | 12,5 | 35   | 22   | M12 | 0,8 | 4 | 2    |                      |                   |                  |
| 5013 E-W D25-2              | 25                           | 12,5 | 35   | 22   | M12 | 1   | 2 | 2    | SDLX<br>10T308 SM..  | M-VT40<br>3,0 Nm  | M-BT15           |
| 5013 E-W D25-3              | 25                           | 12,5 | 35   | 22   | M16 | 1   | 3 | 2    |                      |                   |                  |
| 5013 E-W D32-2              | 32                           | 17   | 35   | 24   | M16 | 1   | 3 | 2    |                      |                   |                  |
| 5013 E-W D32-3              | 32                           | 17   | 35   | 24   | M16 | 2   | 3 | 2    | SDLX<br>130410 SM..  | M-VT50<br>5,0 Nm  | M-BT20           |
| 5013 E-W D35-3              | 35                           | 17   | 35   | 24   | M16 | 2   | 3 | 2    |                      |                   |                  |

Bestellbeispiel / Order example: 5013 E-W D25-2

E-W = Kühlmittelbohrung / E-W = coolant bores

Verlängerungen siehe Seite 392 - 400

|         | Form Figure | Abmessungen Dimensions |       |      |      |      | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|---------|-------------|------------------------|-------|------|------|------|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|         |             | l                      | d     | s    | d1   | r    |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| LPMX... |             | 0,70                   | 3,64  | 2,15 | 2,05 | 1,00 | LPMX 060210-MMH            | M-VT 18  | M-VT 06   |                                         |     |                                     |       |       |       |       |       |
| SDLX .. |             | 7,00                   | 7,10  | 3,18 | 3,50 | 0,5  | SDLX 070305 SM             | M-VT 25  | M-BT 08   |                                         |     |                                     |       |       |       |       |       |
|         |             | 10,00                  | 10,35 | 3,97 | 4,40 | 0,8  | SDLX 10T308 SM             | M-VT 40  | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|         |             | 13,00                  | 13,25 | 4,76 | 4,40 | 4,0  | SDLX 130410 SM             | M-VT 50  | M-BT 20   |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | Öl                                                                                    | Emulsion                                                                              | MMS                                                                                   | Trocken                                                                               | Druckluft                                                                             |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|               | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK |  |  |  |  |  |
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| PTV28         |                   |     |             |                  | 200              | 180              | 160               | 100               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| PTT35         |                   |     |             |                  | 200              | 180              | 160               | 100               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 160             | 120             |       |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 180   |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| KTE20         | 600               | 600 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
| fz            | 0,2-1,5           |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet                                                                            |                                                                                       | □ bedingt geeignet                                                                    |                                                                                       |                                                                                       |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

# Serie 5014 - High-Speed Fräser

## Series 5014 - High-Speed Cutter



**Ausführung:** High-Speed Fräser, mit Innenbohrung ohne Wendeschneidplatten, ohne Schraubendreher  
**Lieferumfang:** zum Schrump-Schlichtbohren, Taschen- Nutenfräsen, Auskoffern, universelle Einsatzmöglichkeit

**Execution:** High-Speed Cutter, with inner coolant without insert, without screwdriver  
**Delivery:** for roughing - finish copy, pockets and holes, universal application

Fig.: 1

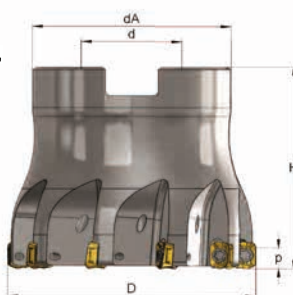
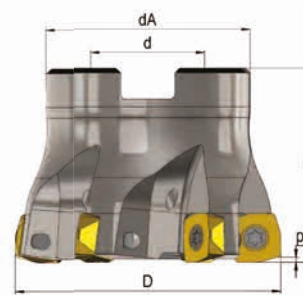


Fig.: 2



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |    |     |    |      | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|----|----|-----|----|------|-----------------------|-------------------|------------------|
|                             | D                            | dA | d  | H  | p   | Z  | Fig. |                       |                   |                  |
| 5014/06 M-W D32             | 32                           | 25 | 16 | 40 | 5,2 | 8  | 1    | LPMX<br>060210-MMH    | M-VT18<br>0,6 Nm  | M-BT06           |
| 5014/06 M-W D40             | 40                           | 35 | 16 | 40 | 5,2 | 10 | 1    |                       |                   |                  |
| 5014/06 M-W D50             | 50                           | 43 | 22 | 40 | 5,2 | 11 | 1    |                       |                   |                  |

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |    |   |   |      | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|----|----|---|---|------|-----------------------|-------------------|------------------|
|                             | D                            | dA | d  | H  | p | Z | Fig. |                       |                   |                  |
| 5014 M-W D32-3              | 32                           | 32 | 16 | 40 | 1 | 3 | 2    | SDLX<br>10T308 SM..   | M-VT40<br>3,0 Nm  | M-BT15           |
| 5014 M-W D35-4              | 35                           | 32 | 16 | 40 | 1 | 4 | 2    |                       |                   |                  |
| 5014 M-W D40-4              | 40                           | 32 | 16 | 40 | 1 | 4 | 2    |                       |                   |                  |
| 5014 M-W D42-5              | 42                           | 32 | 16 | 40 | 1 | 5 | 2    |                       |                   |                  |
| 5014 M-W D50-5              | 50                           | 40 | 22 | 40 | 1 | 5 | 2    |                       |                   |                  |
| 5014 M-W D52-6              | 52                           | 40 | 22 | 40 | 1 | 6 | 2    |                       |                   |                  |
| 5014 M-W D63-6              | 63                           | 40 | 22 | 40 | 1 | 6 | 2    |                       |                   |                  |
| 5014 M-W D66-7              | 66                           | 40 | 22 | 40 | 1 | 7 | 2    | SDLX<br>130410 SM..   | M-VT50<br>5,0 Nm  | M-BT20           |
| 5014 M-W D40-3              | 40                           | 32 | 16 | 40 | 2 | 3 | 2    |                       |                   |                  |
| 5014 M-W D42-4              | 42                           | 32 | 16 | 40 | 2 | 4 | 2    |                       |                   |                  |
| 5014 M-W D50-4              | 50                           | 40 | 22 | 40 | 2 | 4 | 2    |                       |                   |                  |
| 5014 M-W D52-5              | 52                           | 40 | 22 | 40 | 2 | 5 | 2    |                       |                   |                  |
| 5014 M-W D63-5              | 63                           | 40 | 22 | 40 | 2 | 5 | 2    |                       |                   |                  |
| 5014 M-W D66-6              | 66                           | 40 | 22 | 40 | 2 | 6 | 2    |                       |                   |                  |
| 5014 M-W D80-7              | 80                           | 48 | 27 | 50 | 2 | 7 | 2    |                       |                   |                  |
| 5014 M-W D100-8             | 100                          | 58 | 32 | 50 | 2 | 8 | 2    |                       |                   |                  |

Bestellbeispiel / Order example: 5014 M-W D32-3

M-W = Kühlmittelbohrung / M-W = coolant bores

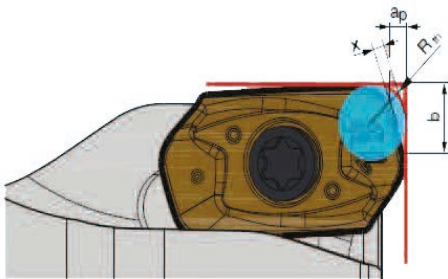
|         | Form Figure | Abmessungen Dimensions |       |      |      |      | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>Coated grades |       |       |       |       |       |
|---------|-------------|------------------------|-------|------|------|------|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|         |             | l                      | d     | s    | d1   | r    |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| LPMX... |             | 0,70                   | 3,64  | 2,15 | 2,05 | 1,00 | LPMX 060210-MMH            | M-VT 18  | M-VT 06   |                                         |     |                                     |       |       |       |       |       |
| SDLX .. |             | 10,00                  | 10,35 | 3,97 | 4,40 | 0,8  | SDLX 10T308 SM             | M-VT 40  | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|         |             | 13,00                  | 13,25 | 4,76 | 4,40 | 4,0  | SDLX 130410 SM             | M-VT 50  | M-BT 20   |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl       | Emulsion | MMS | Trocken | Druckluft        |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|----------|----------|-----|---------|------------------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |          |          |     |         |                  |
| PTV28         |                   |     |             |                  | 200              | 180              | 160               | 100               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |          |          |     |         |                  |
| PTT35         |                   |     |             |                  | 200              | 180              | 160               | 100               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |          |          |     |         |                  |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 160             | 120             |       |       |                       |          |          |     |         |                  |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       | 180   |                       |          |          |     |         |                  |
| KTE20         | 600               | 600 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |          |          |     |         |                  |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |          |          |     |         |                  |
| fz            | 0,2-1,5           |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | geeignet |          |     |         | bedingt geeignet |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

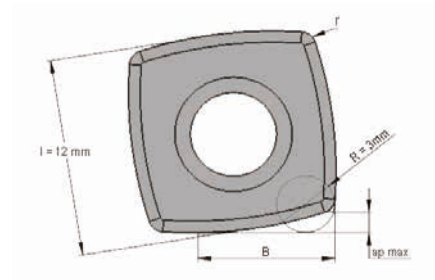


## Schnitttiefe und verbleibendes Material: Depth of cut and remaining material:



R = programmierter Radius  
Empfehlung :  $fz > 0,5$  / Zahn

R = programmed radius  
Recommendation:  $fz > 0.5$  / tooth



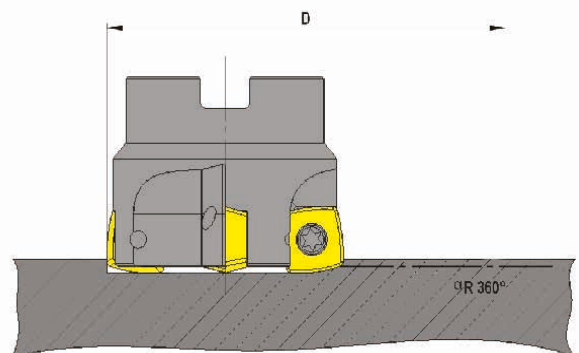
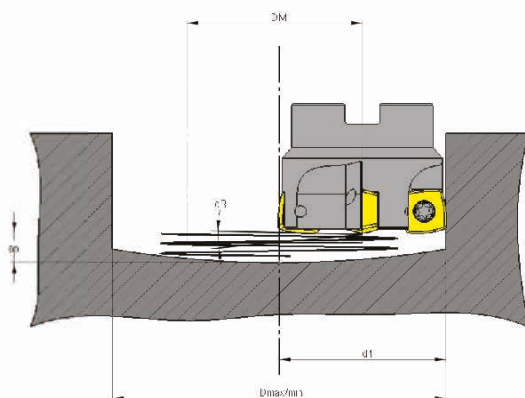
| Wendeplatte | l [mm] | R [mm] | b [mm] | r [mm] | ap max [mm] |
|-------------|--------|--------|--------|--------|-------------|
| LPMX 06     | 0,7    | 1,2    | 1,4    | 1,0    | 0,7         |
| SDLX 07     | 7      | 1,2    | 4,3    | 0,5    | 0,8         |
| SDLX 10     | 10     | 2,0    | 5,9    | 0,8    | 1,0         |
| SDLX 13     | 13     | 3,0    | 8,5    | 1,0    | 2,0         |

Profil nach Schulter- und Nutfräsen



**Anwendungsdaten:** Rampenfräsen LPMX / SDLX

**Application data:** ramp milling LPMX / SDLX



$D_{max}$  [mm] = Maximaler Durchmesser für Ebenen untergrund

$D_{min}$  [mm] = Minimaler Bohrungsdurchmesser

$D_m = D_{max} - d1$  oder  $D_{min} - d1$



| Artikel - Nr.       | d1 [mm] | Dmax [mm] | Dmin [mm] | $\alpha_R$ [°] |
|---------------------|---------|-----------|-----------|----------------|
| 5012/06 W-W D10-2   | 10      | 19        | 17        | 6,3°           |
| 5012/06 W-W D12-3   | 12      | 23        | 21        | 4,5°           |
| 5012/06 W-W D16-4   | 16      | 31        | 30        | 6,5°           |
| 5012/06 W-W D20-5   | 20      | 39        | 37        | 1,8°           |
| 5012/06 W-W D25-7   | 25      | 49        | 47        | 1,5°           |
| 5012 W-W D16/07 - 2 | 16      | 31        | 22        | 4,5°           |
| 5012 W-W D20/07 - 3 | 20      | 39        | 30        | 2,3°           |
| 5012 W-W D25/07 - 4 | 25      | 49        | 40        | 1,3°           |
| 5012 W-W D25-2      | 25      | 48        | 35        | 3,1°           |
| 5012 W-W D25-3      | 25      | 48        | 35        | 3,1°           |
| 5012 W-W D32-2      | 32      | 62        | 49        | 3,1°           |
| 5012 W-W D32-3      | 32      | 62        | 44        | 3,7°           |
| 5012 W-W D35-3      | 35      | 68        | 50        | 3,7°           |
| 5013/06 E-W D10     | 10      | 19        | 17        | 6,3°           |
| 5013/06 E-W D12     | 12      | 23        | 21        | 4,5°           |
| 5013/06 E-W D16     | 16      | 31        | 30        | 3,5°           |
| 5013/06 E-W D20     | 20      | 39        | 37        | 1,8°           |
| 5013/06 E-W D25     | 25      | 49        | 47        | 1,5°           |
| 5013/06 E-W D32     | 32      | 61        | 59        | 1,1°           |
| 5013 E-W D16/07 - 2 | 16      | 31        | 22        | 4,5°           |
| 5013 E-W D20/07 - 3 | 20      | 39        | 30        | 2,3°           |
| 5013 E-W D25/07 - 4 | 25      | 49        | 40        | 1,3°           |
| 5013 E-W D25-2      | 25      | 48        | 35        | 3,1°           |
| 5013 E-W D25-3      | 25      | 48        | 35        | 3,1°           |
| 5013 E-W D32-2      | 32      | 62        | 49        | 3,1°           |
| 5013 E-W D32-3      | 32      | 62        | 44        | 3,7°           |
| 5013 E-W D35-3      | 35      | 68        | 50        | 3,7°           |
| 5014/06 M-W D32     | 32      | 61        | 59        | 1,1°           |
| 5014/06 M-W D40     | 40      | 79        | 77        | 0,8°           |
| 5014/06 M-W D50     | 50      | 99        | 97        | 0,6°           |
| 5014 M-W D32-3      | 32      | 60        | 47        | 1,0°           |
| 5014 M-W D35-4      | 35      | 68        | 45        | 1,0°           |
| 5014 M-W D40-4      | 40      | 78        | 65        | 1,0°           |
| 5014 M-W D42-5      | 42      | 82        | 69        | 1,0°           |
| 5014 M-W D50-5      | 50      | 98        | 85        | 0,8°           |
| 5014 M-W D52-6      | 52      | 102       | 89        | 0,8°           |
| 5014 M-W D63-6      | 63      | 124       | 111       | 0,7°           |
| 5014 M-W D66-7      | 66      | 130       | 117       | 0,7°           |
| 5014 M-W D40-3      | 40      | 78        | 66        | 1,0°           |
| 5014 M-W D42-4      | 42      | 82        | 70        | 1,0°           |
| 5014 M-W D50-4      | 50      | 98        | 80        | 1,3°           |
| 5014 M-W D52-5      | 52      | 102       | 90        | 1,1°           |
| 5014 M-W D63-5      | 63      | 124       | 106       | 0,9°           |
| 5014 M-W D66-6      | 66      | 130       | 118       | 0,8°           |
| 5014 M-W D80-7      | 80      | 158       | 140       | 1,1°           |
| 5014 M-W D100-8     | 100     | 198       | 186       | 1,1°           |



# FRESE PER SCANALATURA E TAGLIO

**SERIE 1119**  
**LA PRIMA MONDIALE!**

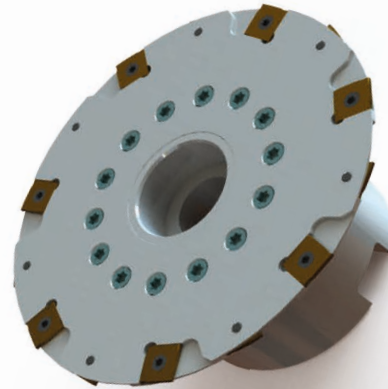
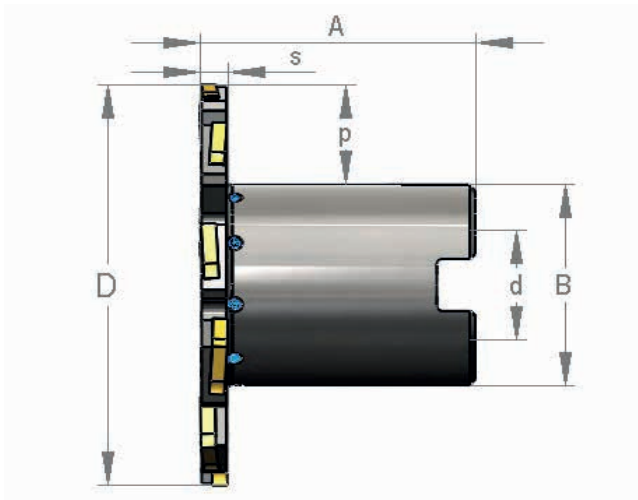
with screwed  
ISO-INSERTS!

## KATALOG

Catalogo 01/2024



# Serie 1119



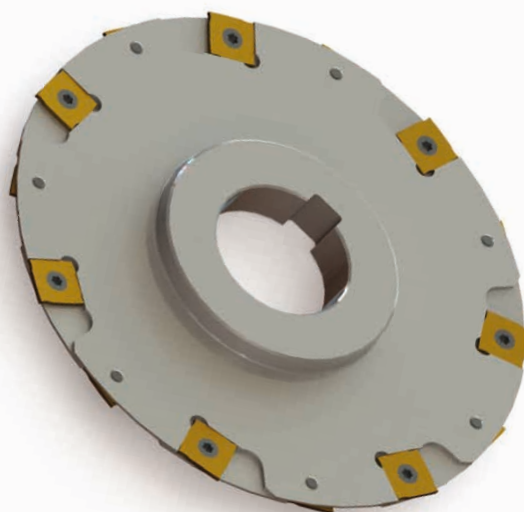
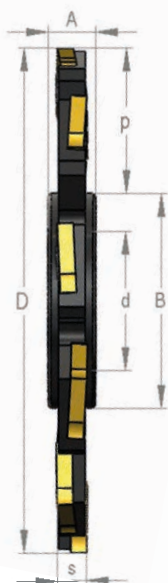
| Order Code:          | Dimension (mm) |    |     |    |    |    |   |      | Insert  M-BT06 = 0,6Nm<br>M-BT09 = 1,4Nm |                   | Screw  | Key  |
|----------------------|----------------|----|-----|----|----|----|---|------|----------------------------------------------------------------------------------------------------------------------------|-------------------|-------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
|                      | D              | d  | s   | A  | B  | Z  | K | p    | left insert                                                                                                                | right insert      |                                                                                           |                                                                                         |
|                      |                |    |     |    |    |    |   |      |                                                                                                                            |                   |                                                                                           |                                                                                         |
| 1119 M-W-63-03       | 63             | 22 | 3   | 35 | 30 | 8  | 4 | 15   | SNHX 1116T-90 L..                                                                                                          | SNHX 1116T-90 R.. | M-VTX 303                                                                                 | M-BT09                                                                                  |
| 1119 M-W-63-03.5     | 63             | 22 | 3,5 | 35 | 30 | 8  | 4 | 15   | SNHX 1119T-90 L..                                                                                                          | SNHX 1119T-90 R.. | M-VTX 305                                                                                 | M-BT09                                                                                  |
| 1119 M-W-80-03       | 80             | 22 | 3   | 50 | 39 | 10 | 5 | 19   | SNHX 1116T-90 L..                                                                                                          | SNHX 1116T-90 R.. | M-VTX 303                                                                                 | M-BT09                                                                                  |
| 1119 M-W-80-03.5     | 80             | 22 | 3,5 | 50 | 39 | 10 | 5 | 19   | SNHX 1119T-90 L..                                                                                                          | SNHX 1119T-90 R.. | M-VTX 305                                                                                 | M-BT09                                                                                  |
| 1119 M-W-100-03      | 100            | 27 | 3   | 50 | 48 | 12 | 6 | 25   | SNHX 1116T-90 L..                                                                                                          | SNHX 1116T-90 R.. | M-VTX 303                                                                                 | M-BT09                                                                                  |
| 1119 M-W-100-03.5    | 100            | 27 | 3,5 | 50 | 48 | 12 | 6 | 25   | SNHX 1119T-90 L..                                                                                                          | SNHX 1119T-90 R.. | M-VTX 305                                                                                 | M-BT09                                                                                  |
| 1119 M-W-125-03      | 125            | 40 | 3   | 50 | 70 | 14 | 7 | 26,5 | SNHX 1116T-90 L..                                                                                                          | SNHX 1116T-90 R.. | M-VTX 303                                                                                 | M-BT09                                                                                  |
| 1119 M-W-125-03/32   | 125            | 32 | 3   | 50 | 58 | 14 | 7 | 33   | SNHX 1116T-90 L..                                                                                                          | SNHX 1116T-90 R.. | M-VTX 303                                                                                 | M-BT09                                                                                  |
| 1119 M-W-125-03.5    | 125            | 40 | 3,5 | 50 | 70 | 14 | 7 | 26,5 | SNHX 1119T-90 L..                                                                                                          | SNHX 1119T-90 R.. | M-VTX 305                                                                                 | M-BT09                                                                                  |
| 1119 M-W-125-03.5/32 | 125            | 32 | 3,5 | 50 | 58 | 14 | 7 | 33   | SNHX 1119T-90 L..                                                                                                          | SNHX 1119T-90 R.. | M-VTX 305                                                                                 | M-BT09                                                                                  |
| 1119 M-W-160-03      | 160            | 40 | 3   | 50 | 70 | 18 | 9 | 44   | SNHX 1116T-90 L..                                                                                                          | SNHX 1116T-90 R.. | M-VTX 303                                                                                 | M-BT09                                                                                  |
| 1119 M-W-160-03.5    | 160            | 40 | 3,5 | 50 | 70 | 18 | 9 | 44   | SNHX 1119T-90 L..                                                                                                          | SNHX 1119T-90 R.. | M-VTX 305                                                                                 | M-BT09                                                                                  |

Orderexample: 1119 M-W-80-03

M-W = coolant bores

Special dimensions available in short delivery time!

# Serie 1119

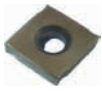
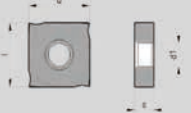


| Order Code:   | Dimension (mm) |    |     |    |    |    |   |    | Insert  M-BT06 = 0,6Nm<br>M-BT09 = 1,4Nm |                   | Screw  | Key  |
|---------------|----------------|----|-----|----|----|----|---|----|----------------------------------------------------------------------------------------------------------------------------|-------------------|--------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
|               | D              | d  | s   | A  | B  | Z  | K | p  | left insert                                                                                                                | right insert      |                                                                                            |                                                                                          |
|               |                |    |     |    |    |    |   |    |                                                                                                                            |                   |                                                                                            |                                                                                          |
| 1119-63-03    | 63             | 22 | 3   | 8  | 34 | 8  | 4 | 14 | SNHX 1116T-90 L..                                                                                                          | SNHX 1116T-90 R.. | M-VTX 303                                                                                  | M-BT09                                                                                   |
| 1119-63-03.5  | 63             | 22 | 3,5 | 8  | 34 | 8  | 4 | 14 | SNHX 1119T-90 L..                                                                                                          | SNHX 1119T-90 R.. | M-VTX 305                                                                                  | M-BT09                                                                                   |
| 1119-80-03    | 80             | 22 | 3   | 8  | 34 | 10 | 5 | 22 | SNHX 1116T-90 L..                                                                                                          | SNHX 1116T-90 R.. | M-VTX 303                                                                                  | M-BT09                                                                                   |
| 1119-80-03.5  | 80             | 22 | 3,5 | 8  | 34 | 10 | 5 | 22 | SNHX 1119T-90 L..                                                                                                          | SNHX 1119T-90 R.. | M-VTX 305                                                                                  | M-BT09                                                                                   |
| 1119-100-03   | 100            | 27 | 3   | 12 | 45 | 12 | 6 | 27 | SNHX 1116T-90 L..                                                                                                          | SNHX 1116T-90 R.. | M-VTX 303                                                                                  | M-BT09                                                                                   |
| 1119-100-03.5 | 100            | 27 | 3,5 | 12 | 45 | 12 | 6 | 27 | SNHX 1119T-90 L..                                                                                                          | SNHX 1119T-90 R.. | M-VTX 305                                                                                  | M-BT09                                                                                   |
| 1119-125-03   | 125            | 32 | 3   | 12 | 58 | 14 | 7 | 33 | SNHX 1116T-90 L..                                                                                                          | SNHX 1116T-90 R.. | M-VTX 303                                                                                  | M-BT09                                                                                   |
| 1119-125-03.5 | 125            | 32 | 3,5 | 12 | 58 | 14 | 7 | 33 | SNHX 1119T-90 L..                                                                                                          | SNHX 1119T-90 R.. | M-VTX 305                                                                                  | M-BT09                                                                                   |
| 1119-160-03   | 160            | 40 | 3   | 12 | 68 | 18 | 9 | 45 | SNHX 1116T-90 L..                                                                                                          | SNHX 1116T-90 R.. | M-VTX 303                                                                                  | M-BT09                                                                                   |
| 1119-160-03.5 | 160            | 40 | 3,5 | 12 | 68 | 18 | 9 | 45 | SNHX 1119T-90 L..                                                                                                          | SNHX 1119T-90 R.. | M-VTX 305                                                                                  | M-BT09                                                                                   |

Orderexample: 1119-100-03

// Special dimensions available in short delivery time!

# Serie 1119 Inserts

|                                                                                                     | Form Figure                                                                       | imensions |       |      |      |   | Designation       | Schraube   | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     |  | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|-----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------|-------|------|------|---|-------------------|------------|-----------|-----------------------------------------|-----|--|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                     |                                                                                   | l         | d     | s    | d1   | r |                   |            |           | CT28                                    | K10 |  | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>SNHX ... T-90.. |  |           |       |      |      |   |                   |            |           |                                         |     |  |                                     |       |       |       |       |       |
|                                                                                                     |                                                                                   | 11,00     | 11,00 | 1,10 | 4,40 |   | SNHX 1111T - 90 R | M-VTX302   | M-BT 06   |                                         |     |  |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                                     |                                                                                   | 11,00     | 11,00 | 1,35 | 4,40 |   | SNHX 1113T - 90 R | M-VTX3022  | M-BT 06   |                                         |     |  |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                                     |                                                                                   | 11,00     | 11,00 | 1,65 | 4,40 |   | SNHX 1116T - 90 R | M-VTX 303  | M-BT 09   |                                         |     |  |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                                     |                                                                                   | 11,00     | 11,00 | 1,90 | 4,40 |   | SNHX 1119T - 90 R | M-VTX 305  | M-BT 09   |                                         |     |  |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                                     |                                                                                   |           |       |      |      |   |                   |            |           |                                         |     |  |                                     |       |       |       |       |       |
|                                                                                                     |                                                                                   | 11,00     | 11,00 | 1,10 | 4,40 |   | SNHX 1111T - 90 L | M-VTX 302  | M-BT 06   |                                         |     |  |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                                     |                                                                                   | 11,00     | 11,00 | 1,35 | 4,40 |   | SNHX 1113T - 90 L | M-VTX 3022 | M-BT 06   |                                         |     |  |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                                     |                                                                                   | 11,00     | 11,00 | 1,65 | 4,40 |   | SNHX 1116T - 90 L | M-VTX 303  | M-BT 09   |                                         |     |  |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                                     |                                                                                   | 11,00     | 11,00 | 1,90 | 4,40 |   | SNHX 1119T - 90 L | M-VTX 305  | M-BT 09   |                                         |     |  |                                     | ■     | ■     | ■     | ■     | ■     |
|                                                                                                     |                                                                                   |           |       |      |      |   |                   |            |           |                                         |     |  |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion           | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|------------|--------------------|-----|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |            |                    |     |         |           |
| PTV28         |                   |     |             |                  | 200              | 180              | 180               | 170               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| PTT35         |                   |     |             |                  | 200              | 180              | 180               | 170               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 120             | 100             |       |       |                       |            | ■                  |     |         | ■         |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 180   |       |                       |            |                    |     |         | ■         |
| KTE20         | 480               | 480 | 400         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| fz            | 0,1-0,15          |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet | □ bedingt geeignet |     |         |           |

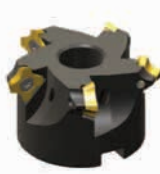
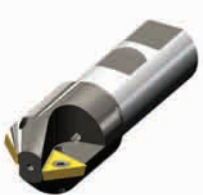


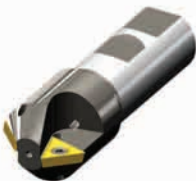
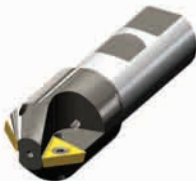
KATALOG FACE & CHAMFER TOOLS

Catalogo frese a svasare inserti





| Typ<br>Type                                                                                           | Serie<br>Series | Darstellung<br>Figure                                                               | WSP<br>Insert                                                              | Größe<br>Size | Seite<br>Page |
|-------------------------------------------------------------------------------------------------------|-----------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------|---------------|---------------|
| Fas- und Zentrierfräser<br>Chamfer and centering cutter                                               | 3010<br>W-W     |    | VC.X 16T308 ZR<br>TC.X 16T308 ZR<br>TC.X 16T308 ZR-12<br>TC.X 16T308 ZR-14 | Ø0 - Ø26      | 414 -<br>415  |
|                                                                                                       | 3011<br>E-W     |    | VC.X 16T308 ZR<br>TC.X 16T308 ZR<br>TC.X 16T308 ZR-12<br>TC.X 16T308 ZR-14 | Ø0 - Ø26      | 414 -<br>415  |
| Fasenfräser<br>Milling cutter for<br>chamfering                                                       | 3012<br>W-W     |    | LCEX 310404..                                                              | Ø5 - Ø57      | 416           |
| Spitz-/Rückwärtsenker<br>Milling cutter for chamfe-<br>ring and back chamfering                       | 3015<br>W-W     |   | CPMT 05T1..<br>SPLT 0603..<br>SCMT 09T3..                                  | Ø2 - Ø28      | 417           |
| Fräser für konvexe Radien an Außen-Ø und Bohrungen<br>Cutter for convex radius on outside-Ø and holes | 3016<br>W-W     |  | SEXT 09T3 R..<br>SEXT 1204 R..                                             | Ø12 - Ø32     | 418 -<br>419  |
|                                                                                                       | 3016<br>M-W     |  | SEXT 1204 R..<br>XPKN 2204 R..<br>XPKN 3106 R..                            | Ø32 - Ø80     | 418 -<br>419  |
| Fräsenker 15° - 75°<br>Milling cutter for chamfering 15° - 75°                                        | 3025<br>W-W     |  | TCMT 1102..<br>TCMT 16T3..                                                 | Ø34 - Ø53     | 420 -<br>421  |
|                                                                                                       | 3030<br>W-W     |  | TCMT 1102..<br>TCMT 16T3..                                                 | Ø32 - Ø50     | 420 -<br>421  |

| Typ<br>Type                                                           | Serie<br>Series | Darstellung<br>Figure                                                                 | WSP<br>Insert                                            | Größe<br>Size | Seite<br>Page |
|-----------------------------------------------------------------------|-----------------|---------------------------------------------------------------------------------------|----------------------------------------------------------|---------------|---------------|
| Fräsenker 15° - 75°<br>Milling cutter for chamfering 15° - 75°        | 3035<br>W-W     |    | TCMT 1102..<br>TCMT 16T3..                               | Ø16 - Ø32,5   | 420 -<br>421  |
|                                                                       | 3040<br>W-W     |    | TCMT 1102..<br>TCMT 16T3..                               | Ø16 - Ø 35,5  | 420 -<br>421  |
|                                                                       | 3045<br>W-W     |    | TCMT 1102..<br>TCMT 16T3..                               | Ø22 - Ø35     | 420 -<br>421  |
| Fasenfräser verstellbar<br>Milling cutter adjustable                  | 3055<br>W-W     |   | TCMT 16T3..<br>TCGT 16T3..                               |               | 422           |
|                                                                       | 3060<br>W-W     |  | SCMT 1204..<br>SCGT 1204..                               |               | 423           |
| Spot facing milling<br>cutter with changeable<br>solid carbide insert | 6010<br>HD3     |   | M-SI..                                                   | Ø10 - Ø33     | 424           |
| Senkfräser<br>Spot facing milling<br>cutter                           | 3065<br>W-W     |  | CCMT 0602..<br>CCGT 0602..<br>CCMT 09T3..<br>CCGT 09T3.. | Ø10 - Ø33     | 425 -<br>426  |
| Fräser zum Aufbohren<br>Boring milling cutter                         | 3070<br>W-W     |  | CCMT 0602..<br>CCGT 0602..<br>CCMT 09T3..<br>CCGT 09T3.. | Ø9,8 - Ø32    | 427 -<br>428  |

D



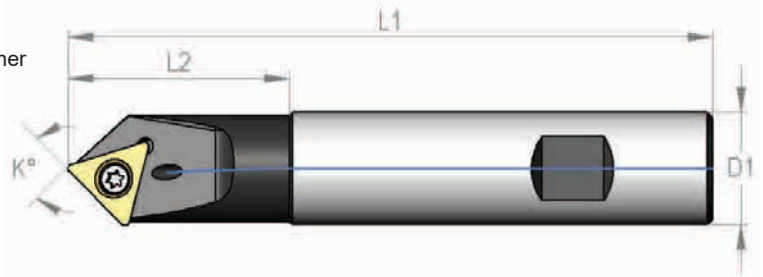
| Typ<br>Type                                                    | Serie<br>Series  | Darstellung<br>Figure                                                              | WSP<br>Insert                                                | Größe<br>Size                        | Seite<br>Page | Typ<br>Type | Serie<br>Series | Darstellung<br>Figure | WSP<br>Insert | Größe<br>Size | Seite<br>Page |
|----------------------------------------------------------------|------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------|---------------|-------------|-----------------|-----------------------|---------------|---------------|---------------|
| Fräser zum Aufbohren<br>Boring milling cutter                  | 3072<br>W-W      |   | XCMT....<br>XCGT....                                         | Ø16 - Ø50                            | 429 -<br>430  |             |                 |                       |               |               |               |
| Rückwärtssenker 180°<br>Back chamfering<br>milling cutter 180° | 3075<br>W-W      |   | CPMT 05T1..<br>CCMT....<br>CCGT....                          | Ø15 - Ø76                            | 431 -<br>432  |             |                 |                       |               |               |               |
| Rückwärtssenker 45°<br>Back chamfering<br>milling cutter 45°   | 3080<br>W-W      |   | TCMT 0802..<br>TCMT 1102..<br>TCGT 1102..                    | Ø15 - Ø31                            | 433           |             |                 |                       |               |               |               |
| Einstellbare<br>Ausspindelbohrstange<br>Adjustment boring bars | 3085<br>W-L<br>W |  | TPGX 0601.. L<br>TPGX 0802.. L<br>TCMT 1102..<br>TCMT 16T3.. | Dmin<br>Ø7 - Ø50<br>Dmax<br>Ø8 - Ø55 | 434 -<br>435  |             |                 |                       |               |               |               |
|                                                                |                  |                                                                                    |                                                              |                                      |               |             |                 |                       |               |               |               |
|                                                                |                  |                                                                                    |                                                              |                                      |               |             |                 |                       |               |               |               |
|                                                                |                  |                                                                                    |                                                              |                                      |               |             |                 |                       |               |               |               |
|                                                                |                  |                                                                                    |                                                              |                                      |               |             |                 |                       |               |               |               |

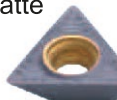
## Serie 3010 - Fas- und Zentrierfräser Series 3010 - Chamfer and centering cutter



**Ausführung:** Fas- und Zentrierfräser 45°, mit Innenbohrung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** zum zentrieren, Fasenfräsen, Kantenfräsen und V-Nuten

**Execution:** Milling cutter for chamfering and centering, 45°, with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** for centering, face milling and V-grooving



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |      |   |                | Wendeplatte<br>Insert |  | Schraube<br>Screw |  | Schlüssel<br>Key |  |
|-----------------------------|------------------------------|----|----|------|---|----------------|-----------------------|-------------------------------------------------------------------------------------|-------------------|-------------------------------------------------------------------------------------|------------------|-------------------------------------------------------------------------------------|
|                             | L1                           | L2 | D1 | K°   | Z | Dmin -<br>Dmax |                       |                                                                                     |                   |                                                                                     |                  |                                                                                     |
| 3010-020W-W 60°             | 115                          | 40 | 20 | 60°  | 1 | 0-16           | VC.X 1604.. ZR        | M-VT 40<br>3,0 Nm                                                                   |                   | M-BT 15                                                                             |                  |                                                                                     |
| 3010-020W-WL 60°            | 150                          | 60 | 20 | 60°  | 1 | 0-16           |                       |                                                                                     |                   |                                                                                     |                  |                                                                                     |
| 3010-020W-WXL 60°           | 200                          | 80 | 20 | 60°  | 1 | 0-16           |                       |                                                                                     |                   |                                                                                     |                  |                                                                                     |
| 3010-020W-W 90°             | 115                          | 40 | 20 | 90°  | 1 | 0-20           | TC.X 16T3.. ZR        |                                                                                     |                   |                                                                                     |                  |                                                                                     |
| 3010-020W-WL 90°            | 150                          | 60 | 20 | 90°  | 1 | 0-20           |                       |                                                                                     |                   |                                                                                     |                  |                                                                                     |
| 3010-020W-WXL 90°           | 200                          | 80 | 20 | 90°  | 1 | 0-20           |                       |                                                                                     |                   |                                                                                     |                  |                                                                                     |
| 3010-020W-W 120°            | 115                          | 40 | 20 | 120° | 1 | 0-24           | TC.X 16T3.. ZR-12     |                                                                                     |                   |                                                                                     |                  |                                                                                     |
| 3010-020W-WL 120°           | 150                          | 60 | 20 | 120° | 1 | 0-24           |                       |                                                                                     |                   |                                                                                     |                  |                                                                                     |
| 3010-020W-WXL 120°          | 200                          | 80 | 20 | 120° | 1 | 0-24           |                       |                                                                                     |                   |                                                                                     |                  |                                                                                     |
| 3010-025W-W 142°            | 115                          | 40 | 25 | 142° | 1 | 0-26           | TC.X 16T3.. ZR-14     |                                                                                     |                   |                                                                                     |                  |                                                                                     |
| 3010-025W-WL 142°           | 150                          | 60 | 25 | 142° | 1 | 0-26           |                       |                                                                                     |                   |                                                                                     |                  |                                                                                     |
| 3010-025W-WXL 142°          | 200                          | 80 | 25 | 142° | 1 | 0-26           |                       |                                                                                     |                   |                                                                                     |                  |                                                                                     |

Bestellbeispiel / Order example: 3010-020W-W

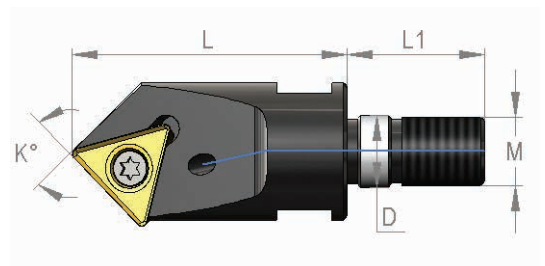
W-W = Kühlmittelbohrung / W-W = coolant bores

## Serie 3011 - Fas- und Zentrierfräser 60° - 160° Series 3011 - Chamfer and centering cutter 60° - 160°



**Ausführung:** Fas- und Zentrierfräser 60°, 90°, 120°, 142°, mit Innenbohrung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** zum zentrieren, Fasenfräsen, Kantenfräsen und V-Nuten

**Execution:** Chamfer and centering cutter, 60°, 90°, 120°, 142°, with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** for centering, face milling and V-grooving



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |      |      |   |                | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|----|------|------|---|----------------|-----------------------|-------------------|------------------|
|                             | M                            | L  | L1 | D    | K°   | Z | Dmin -<br>Dmax |                       |                   |                  |
| 3011-020 EW 60°             | M10                          | 40 | 20 | 10,5 | 60°  | 1 | 0-16           | VC.X 1604.. ZR        | M-VT40<br>3,0 Nm  | M-BT15           |
| 3011-020 EW 90°             | M10                          | 40 | 20 | 10,5 | 90°  | 1 | 0-20           | TC.X 16T3..-ZR        |                   |                  |
| 3011-020 EW 120°            | M12                          | 40 | 22 | 12,5 | 120° | 1 | 0-24           | TC.X 16T3..-ZR-12     |                   |                  |
| 3011-020 EW 142°            | M12                          | 40 | 22 | 12,5 | 142° | 1 | 0-26           | TC.X 16T3..-ZR-14     |                   |                  |

Bestellbeispiel / Order example: 3011-020 E-W 60°

E-W = Kühlmittelbohrung / E-W = coolant bores

Verlängerungen siehe Seite 392 - 400

Extensions you can see on page 392 - 400

|                                                                                                       | Form Figure                                                                       | Abmessungen Dimensions |   |      |    |     | Bezeichnung Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|-------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------|---|------|----|-----|-------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                       |                                                                                   | l                      | d | s    | d1 | r   |                         |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>TCMX ..           |  | 14,5                   |   | 3,97 |    | 0,8 | TCMX 16T308 ZR          | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     |       |       |       |       |
|                                                                                                       |                                                                                   | 14,5                   |   | 3,97 |    | 0,8 | TCMX 16T308 ZR-12       | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     |       |       |       |       |
|                                                                                                       |                                                                                   | 14,5                   |   | 3,97 |    | 0,8 | TCMX 16T308 ZR-14       | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     |       |       |       |       |
|                                                                                                       |                                                                                   |                        |   |      |    |     |                         |          |           |                                         |     |                                     |       |       |       |       |       |
| <br>TCGX ..           |  | 15,5                   |   | 3,97 |    | 0,8 | TCGX 16T308 ZR          | M-VT 40  | M-BT 15   |                                         |     |                                     |       |       |       |       | ■     |
|                                                                                                       |                                                                                   | 15,5                   |   | 3,97 |    | 0,8 | TCGX 16T308 ZR-12       | M-VT 40  | M-BT 15   |                                         |     |                                     |       |       |       |       | ■     |
|                                                                                                       |                                                                                   | 15,5                   |   | 3,97 |    | 0,8 | TCGX 16T308 ZR-14       | M-VT 40  | M-BT 15   |                                         |     |                                     |       |       |       |       | ■     |
|                                                                                                       |                                                                                   |                        |   |      |    |     |                         |          |           |                                         |     |                                     |       |       |       |       |       |
| <br>VCMX ..<br>VCGX.. |  |                        |   |      |    |     |                         |          |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                                       |                                                                                   | 14,0                   |   | 4,76 |    | 0,8 | VCMX 160408 ZR-6        | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     |       |       |       |       |
|                                                                                                       |                                                                                   | 14,0                   |   | 4,76 |    | 0,8 | VCGX 160408 ZR-6        | M-VT 40  | M-BT 15   |                                         |     |                                     |       |       |       |       | ■     |
|                                                                                                       |                                                                                   |                        |   |      |    |     |                         |          |           |                                         |     |                                     |       |       |       |       |       |

D

## Serie 3010/3011- Fas- und Zentrierfräser 45° Series 3010/3011 - Chamfer and centering cutter 45°



| Vc<br>(m/min) | Alu        |     |             | Stahl   |         |         |          |          |          |          |          |          |          | INOX    |         | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl                                                                                    | Emulsion                                                                              | MMS                                                                                   | Trocken                                                                               | Druckluft                                                                             |  |
|---------------|------------|-----|-------------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|---------|---------|-------|-------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--|
|               | Kunststoff | Alu | Alu<br>Guss | < 500 N | < 750 N | < 900 N | < 1100 N | < 1400 N | < 55 HRC | < 60 HRC | < 65 HRC | < 67 HRC | < 70 HRC | < 900 N | > 900 N |       |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |  |
| ISO-Code      | N          | N   | N           | P       | P       | P       | P        | P        | H        | H        | H        | H        | H        | M       | M       | K     | S     | N                     |  |  |  |  |  |  |
| PTV28         |            |     |             |         | 180     | 180     | 160      | 160      |          |          |          |          |          | 120     | 100     | 160   |       |                       |                                                                                       | ■                                                                                     |                                                                                       |                                                                                       | ■                                                                                     |  |
| PTT35         |            |     |             |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |  |
| PAP28         |            |     |             |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |  |
| MTM10         |            |     |             |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |  |
| KTE20         | 400        | 400 | 300         |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       |                                                                                       | ■                                                                                     |                                                                                       |                                                                                       | ■                                                                                     |  |
| K10           |            |     |             |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |  |
| fz            | 0,1-0,15   |     |             |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       | ■ geeignet                                                                            |                                                                                       | □ bedingt geeignet                                                                    |                                                                                       |                                                                                       |  |

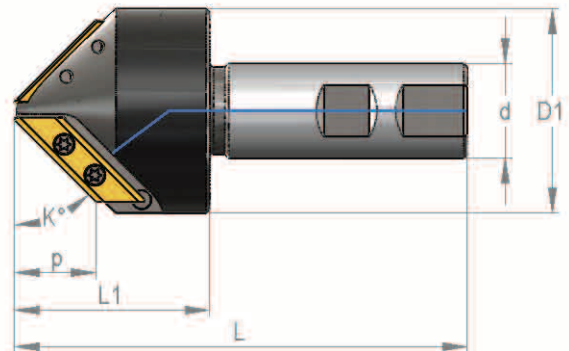
Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

## Serie 3012 - Fasenfräser Series 3012 - Milling cutter for chamfering



**Ausführung:** Fasenfräser, mit Innenkühlung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** zum Fasenfräsen und Kantenfräsen

**Execution:** Milling cutter for chamfering, with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** for face milling



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |                |    |    |      |     |   | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|----------------|----|----|------|-----|---|-----------------------|-------------------|------------------|
|                             | L                            | L1 | Dmin -<br>Dmax | d  | D1 | p    | K°  | Z |                       |                   |                  |
| 3012 W-W 15°                | 120                          | 50 | 5- 63,9        | 25 | 84 | 8    | 15° | 2 | LCEX 310404..         | M-VT40<br>3,0 Nm  | M-BT15           |
| 3012 W-W 30°                | 120                          | 50 | 5 - 57         | 25 | 76 | 15   | 30° | 2 |                       |                   |                  |
| 3012 W-W 45°                | 120                          | 50 | 5 - 48         | 25 | 54 | 21,5 | 45° | 2 |                       |                   |                  |
| 3012 W-W 60°                | 120                          | 50 | 5 - 35         | 25 | 45 | 26,5 | 60° | 1 |                       |                   |                  |
| 3012 W-W 75°                | 120                          | 50 | 10 -           | 25 | 24 | 29,5 | 75° | 1 |                       | M-VT40-6          |                  |

Bestellbeispiel / Order example: 3012 W-W 30°

W-W = Kühlmittelbohrung / W-W = coolant

|                                                                                    | Form Figure                                                                         | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>Coated grades |       |       |       |       |       |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                    |                                                                                     | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|  |  | 30,90                  | 9,53 | 4,76 |    | 0,4 | LCEX 310404 WF             | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     |       | ■     | ■     | ■     |
|                                                                                    |                                                                                     | 30,90                  | 9,53 | 4,76 |    | 0,4 | LCEX 310404 WM             | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     |       | ■     | ■     | ■     |
|                                                                                    |                                                                                     |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl | Emulsion   | MMS                | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|----|------------|--------------------|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |    |            |                    |         |           |
| PTV28         |                   |     |             |                  | 180              | 180              | 160               | 160               |                   |                   |                   |                   |                   | 140             | 100             |       |       |                       |    | ■          |                    |         |           |
| PTT35         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |            |                    |         |           |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |            |                    |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 140   |       |                       |    | ■          |                    | ■       |           |
| KTE20         | 400               | 400 | 300         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■          |                    | ■       |           |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    |            |                    |         |           |
| fz            | 0,1-0,15          |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■ geeignet | □ bedingt geeignet |         |           |

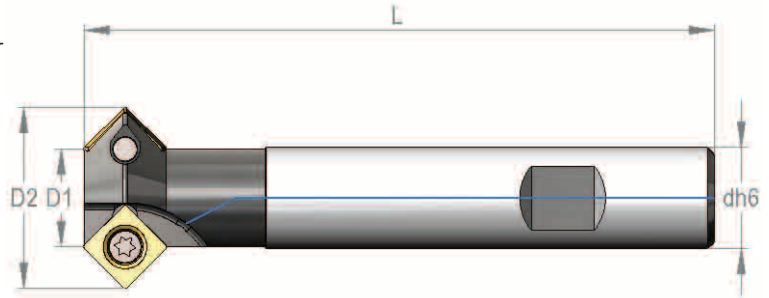
Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

# Serie 3015 - Fräser zum spitzsenken und Rückwärtssenken 45° Series 3015 - Milling cutter for chamfering and back chamfering 45°



**Ausführung:** Fas- und Frässen  $r, 45^\circ$ , mit Innenbohrung ohne Wendeschneidplatten, ohne Schraubendreher  
**Lieferumfang:** universeller Einsatz zum Fräsen von Fasen, Vor- und Rückwärtsentgraten  
**Anwendung:** \*nur zum Rückwärtssenken geeignet

**Execution:** Face milling cutter for chamfering  $45^\circ$ , with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** universal application, face milling, chamfering and back chamfering  
\*only suitable for forward sinking



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |      |     |     |   | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|------|-----|-----|---|-----------------------|-------------------|------------------|
|                             | D1                           | D2   | L   | dh6 | Z |                       |                   |                  |
| 3015-002 W*                 | 2                            | 5    | 80  | 12  | 1 | CPMT 05T1..           | M-VT22            | M-BT06           |
| 3015-004 W-W                | 5                            | 11   | 80  | 12  | 1 | SPLT 0603..           | M-VT25            | M-BT08           |
| 3015-011 W-W                | 11                           | 18   | 80  | 12  | 2 | SCMT 09T3..           | M-VT40            | M-BT15           |
| 3015-012 W-W                | 12                           | 23,7 | 100 | 16  | 1 |                       |                   |                  |
| 3015-012 WL                 | 12                           | 23,7 | 200 | 16  | 1 |                       |                   |                  |
| 3015-016 W-W                | 16                           | 28,8 | 100 | 16  | 2 |                       |                   |                  |
| 3015-016 WL                 | 16                           | 28,8 | 200 | 16  | 2 |                       |                   |                  |
| 3015-025 W-W                | 28                           | 40,3 | 100 | 25  | 3 |                       |                   |                  |
| 3015-025 WL                 | 28                           | 40,3 | 200 | 25  | 3 |                       |                   |                  |

Bestellbeispiel / Order example: 3015-002 W

W-W = Kühlmittelbohrung / W-W = coolant bores

M-BT06 = 0,6Nm  
M-BT08 = 1,2 Nm  
M-BT15 = 3,0 Nm

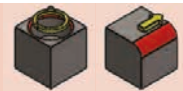
|  | Form Figure | Abmessungen Dimensions |      |      |      |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|--|-------------|------------------------|------|------|------|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|  |             | l                      | d    | s    | d1   | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|  |             | 5,60                   | 5,60 | 2,00 |      | 0,2 | CPMT 05T102                | M-VT 22  | M-BT 06   |                                         |     |                                     |       | ■     |       |       |       |
|  |             |                        |      |      |      |     |                            |          |           |                                         |     |                                     |       | ■     |       |       |       |
|  |             |                        |      |      |      |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |
|  |             | 6,35                   | 6,35 | 3,18 | 2,85 | 0,4 | SPLT 060304                | M-VT 25  | M-BT 08   |                                         |     |                                     |       | ■     |       |       |       |
|  |             |                        |      |      |      |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |
|  |             |                        |      |      |      |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |
|  |             | 9,10                   | 9,52 | 3,97 |      | 0,4 | SCMT 09T304 WM             | M-VT40   | M-BT15    |                                         |     | ■                                   |       |       | ■     | ■     |       |
|  |             | 8,70                   | 9,52 | 3,97 |      | 0,8 | SCMT 09T308 WM             | M-VT 40  | M-BT15    |                                         |     | ■                                   |       | ■     | ■     | ■     |       |
|  |             |                        |      |      |      |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu        |     |      | Stahl   |         |         |          |          |          |          |          |          |          | INOX    |         | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion           | MMS | Trocken | Druckluft |
|---------------|------------|-----|------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|---------|---------|-------|-------|-----------------------|------------|--------------------|-----|---------|-----------|
|               | Kunststoff | Alu | Guss | < 500 N | < 750 N | < 900 N | < 1100 N | < 1400 N | < 55 HRC | < 60 HRC | < 65 HRC | < 67 HRC | < 70 HRC | < 900 N | > 900 N |       |       |                       |            |                    |     |         |           |
| ISO-Code      | N          | N   | N    | P       | P       | P       | P        | P        | H        | H        | H        | H        | H        | M       | M       | K     | S     | N                     |            |                    |     |         |           |
| PTT20         |            |     |      |         | 160     | 160     | 130      | 100      |          |          |          |          |          |         |         |       |       |                       | ■          |                    |     | ■       |           |
| PTT35         |            |     |      |         | 160     | 160     | 130      | 100      |          |          |          |          |          | 120     | 100     |       |       |                       | ■          |                    |     | ■       |           |
| PAP28         |            |     |      |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       |            |                    |     |         |           |
| MTM10         |            |     |      |         |         |         |          |          |          |          |          |          |          |         |         | 140   |       |                       | ■          |                    |     | ■       |           |
| KTE20         |            |     |      |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       |            |                    |     |         |           |
| K10           |            |     |      |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       |            |                    |     |         |           |
| fz            | 0,1-0,15   |     |      |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       | ■ geeignet | □ bedingt geeignet |     |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

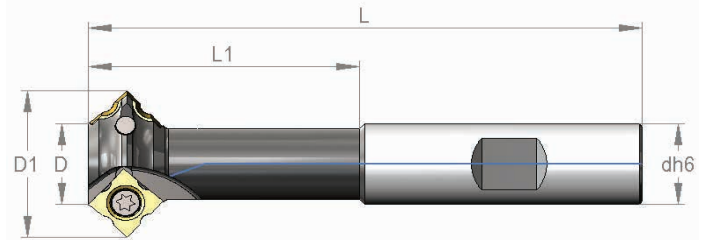
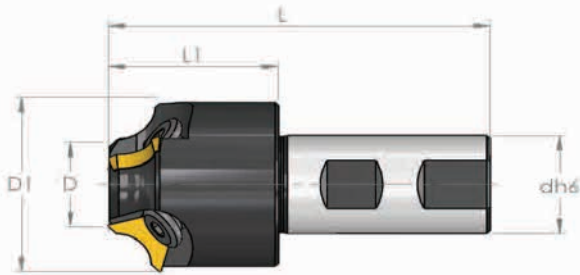


## Serie 3016 - Fräser für konvexe Radien an Außen-Ø und Bohrungen Series 3016 - Cutter for convex radius on outside-Ø and holes



**Ausführung:** Fräser für konvexe Radien an Außen-Ø und Bohrungen  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** universeller Einsatz zum fräsen von konvexen Radien

**Execution:** Milling cutter for radius on outside-Ø or holes  
**Delivery:** without insert, without screwdriver  
**Application:** universal application for milling convex radius



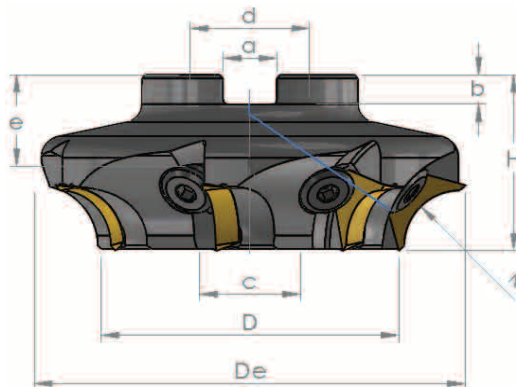
| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |      |     |    |     |   | Wendeplatte<br>Insert                   | Schraube<br>Screw  | Schlüssel<br>Key |
|-----------------------------|------------------------------|------|-----|----|-----|---|-----------------------------------------|--------------------|------------------|
|                             | D                            | D1   | L   | L1 | dh6 | Z |                                         |                    |                  |
| 3016-012 W-W                | 12                           | 23,7 | 100 | 50 | 16  | 1 | SCXT 09T3 R..<br>R1 / R2 / R3           | M-VT40-6<br>3,0 Nm | M-BT15           |
| 3016-012 WL                 | 12                           | 23,7 | 200 | 50 | 16  | 1 |                                         |                    |                  |
| 3016-016 W-W                | 16                           | 28,8 | 100 | 50 | 16  | 2 |                                         |                    |                  |
| 3016-016 WL                 | 16                           | 28,8 | 200 | 50 | 16  | 2 |                                         |                    |                  |
| 3016-025 W-W                | 25                           | 37,4 | 100 | 45 | 25  | 3 |                                         |                    |                  |
| 3016-025 WL                 | 25                           | 37,4 | 200 | 45 | 25  | 3 |                                         |                    |                  |
| 3016-025 W-W-12             | 25                           | 40,5 | 100 | 45 | 25  | 3 | SEXT 1204 R..<br>R1 / R2 / R3 / R4 / R5 | M-VT45<br>5,0 Nm   | M-BT20           |
| 3016-025 WL-12              | 25                           | 40,5 | 200 | 45 | 25  | 3 |                                         |                    |                  |
| 3016-032 W-W                | 32                           | 45   | 100 | 45 | 25  | 3 | XPKN 2204 R..<br>R6 / R7 / R8 / R10     | M-CVB55            | M-CL2            |
| 3016-032 WL                 | 32                           | 45   | 200 | 45 | 25  | 3 |                                         |                    |                  |
| 3016-005 W-W                | 5                            | 32,3 | 91  | 35 | 25  | 1 |                                         |                    |                  |
| 3016-032 W-W-22             | 32                           | 61   | 110 | 49 | 32  | 3 |                                         |                    |                  |

Bestellbeispiel / Order example: 3016-012 W-W

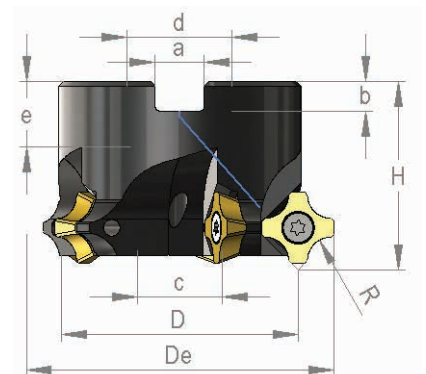
W-W = Kühlmittelbohrung / W-W = coolant bores

**Ausführung:** Fräser für konvexe Radien an Außen-Ø und Bohrungen  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** universeller Einsatz zum fräsen von konvexen Radien

**Execution:** Milling cutter for radius on outside-Ø or holes  
**Delivery:** without insert, without screwdriver  
**Application:** universal application for milling convex radius



3016 M-W (D63-D80)



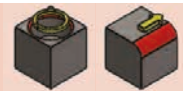
3016 M-W (D32-D50)

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |       |    |    |    |      |     |    |   | Wendeplatte<br>Insert                           | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|-------|----|----|----|------|-----|----|---|-------------------------------------------------|-------------------|------------------|
|                             | D                            | De    | d  | c  | e  | a    | b   | H  | Z |                                                 |                   |                  |
| 3016 M-W D32                | 32                           | 45    | 16 | 14 | 18 | 8,4  | 5,6 | 40 | 3 | SEXT 1204 R..<br>R1 / R2 / R3<br>R4 / R5        | M-VT45<br>5,0 Nm  | M-BT20           |
| 3016 M-W D40                | 40                           | 53    | 16 | 14 | 18 | 8,4  | 5,6 | 40 | 4 |                                                 |                   |                  |
| 3016 M-W D50                | 50                           | 63    | 22 | 18 | 20 | 10,4 | 6,3 | 48 | 5 |                                                 |                   |                  |
| 3016 M-W D63                | 63                           | 92,5  | 22 | 18 | 20 | 10,4 | 6,3 | 48 | 6 | XPKN 2204 R..<br>R6 / R7 / R8 / R10             | M-SK 1355         | M-CL2            |
| 3016 M-W D80                | 80                           | 115,8 | 32 | 27 | 25 | 14,4 | 8   | 48 | 7 | XPKN 3106 R..<br>R11 / R12 / R13 /<br>R14 / R15 | M-SK 1355         | M-CL2            |

Bestellbeispiel / Order example: 3016 M-W D32

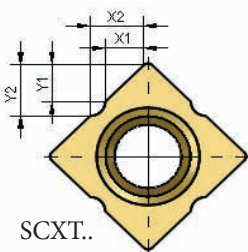
M-W = Kühlmittelbohrung / M-W = coolant bores

# Serie 3016 - Fräser für konvexe Radien an Außen-Ø und Bohrungen Series 3016 - Cutter for convex radius on outside-Ø and holes



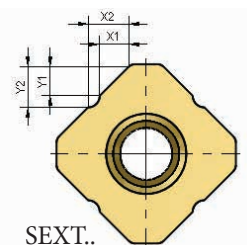
|         | Form Figure | Abmessungen Dimensions |   |      |    |      | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|---------|-------------|------------------------|---|------|----|------|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|         |             | l                      | d | s    | d1 | r    |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| SCXT .. |             | 9,52                   |   | 3,97 |    | 1,0  | SCXT 09T3 R1               | M-VT40-6 | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     |       | ■     |
|         |             | 9,52                   |   | 3,97 |    | 2,0  | SCXT 09T3 R2               | M-VT40-6 | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     |       | ■     |
|         |             | 9,52                   |   | 3,97 |    | 3,0  | SCXT 09T3 R3               | M-VT40-6 | M-BT 15   |                                         |     |                                     | ■     | ■     | ■     |       | ■     |
| SEXT .. |             | 12,70                  |   | 4,76 |    | 1,0  | SEXT 1204 R1               | M-VT 45  | M-BT 20   |                                         |     |                                     | ■     | ■     | ■     |       | ■     |
|         |             | 12,70                  |   | 4,76 |    | 2,0  | SEXT 1204 R2               | M-VT 45  | M-BT 20   |                                         |     |                                     | ■     | ■     | ■     |       | ■     |
|         |             | 12,70                  |   | 4,76 |    | 3,0  | SEXT 1204 R3               | M-VT 45  | M-BT 20   |                                         |     |                                     | ■     | ■     | ■     |       | ■     |
|         |             | 12,70                  |   | 4,76 |    | 4,0  | SEXT 1204 R4               | M-VT 45  | M-BT 20   |                                         |     |                                     | ■     | ■     | ■     |       | ■     |
|         |             | 12,70                  |   | 4,76 |    | 5,0  | SEXT 1204 R5               | M-VT 45  | M-BT 20   |                                         |     |                                     | ■     | ■     | ■     |       | ■     |
| XPKN .. |             | 21,00                  |   | 4,76 |    | 6,0  | XPKN 2204 R6               |          |           |                                         |     |                                     | □     | ■     |       |       | □     |
|         |             | 21,00                  |   | 4,76 |    | 7,0  | XPKN 2204 R7               |          |           |                                         |     |                                     | □     | ■     |       |       | □     |
|         |             | 21,00                  |   | 4,76 |    | 8,0  | XPKN 2204 R8               |          |           |                                         |     |                                     | □     | ■     |       |       | □     |
|         |             | 21,00                  |   | 4,76 |    | 10,0 | XPKN 2204 R10              |          |           |                                         |     |                                     | □     | ■     |       |       | □     |
|         |             | 25,35                  |   | 6,35 |    | 11,0 | XPKN 3106 R11              |          |           |                                         |     |                                     |       | ■     | □     |       |       |
|         |             | 25,35                  |   | 6,35 |    | 12,0 | XPKN 3106 R12              |          |           |                                         |     |                                     |       | ■     | □     |       |       |
|         |             | 25,35                  |   | 6,35 |    | 13,0 | XPKN 3106 R13              |          |           |                                         |     |                                     |       | ■     | □     |       |       |
|         |             | 25,35                  |   | 6,35 |    | 14,0 | XPKN 3106 R14              |          |           |                                         |     |                                     |       | ■     | □     |       |       |
|         |             | 25,35                  |   | 6,35 |    | 15,0 | XPKN 3106 R15              |          |           |                                         |     |                                     |       | ■     | □     |       |       |

|              | X1   | X2   | Y1   | Y2   |
|--------------|------|------|------|------|
| SCXT 09T3 R1 | 2,59 | 3,59 | 2,59 | 3,59 |
| SCXT 09T3 R2 | 2,09 | 4,09 | 2,09 | 4,09 |
| SCXT 09T3 R3 | 1,59 | 4,59 | 1,59 | 4,59 |



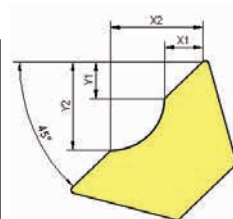
SCXT..

|              | X1   | X2   | Y1   | Y2   |
|--------------|------|------|------|------|
| SEXT 1204 R1 | 2,49 | 3,49 | 2,49 | 3,49 |
| SEXT 1204 R2 | 1,99 | 3,99 | 1,99 | 3,99 |
| SEXT 1204 R3 | 1,49 | 4,49 | 1,49 | 4,49 |
| SEXT 1204 R4 | 0,99 | 4,99 | 0,99 | 4,99 |
| SEXT 1204 R5 | 0,49 | 5,49 | 0,49 | 5,49 |



SEXT..

|               | X1   | X2    | Y1   | Y2    |
|---------------|------|-------|------|-------|
| XPKN 2204 R6  | 4,26 | 10,26 | 4,26 | 10,26 |
| XPKN 2204 R7  | 3,76 | 10,76 | 3,76 | 10,76 |
| XPKN 2204 R8  | 3,26 | 11,26 | 3,26 | 11,26 |
| XPKN 2204 R10 | 2,26 | 12,26 | 2,26 | 12,26 |
| XPKN 3106 R11 | 3,46 | 14,46 | 3,46 | 14,46 |
| XPKN 3106 R12 | 2,96 | 14,96 | 2,96 | 14,96 |
| XPKN 3106 R13 | 2,46 | 15,46 | 2,46 | 15,46 |
| XPKN 3106 R14 | 1,96 | 15,96 | 1,96 | 15,96 |
| XPKN 3106 R15 | 1,46 | 16,46 | 1,46 | 16,46 |



XPKN..

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion           | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|------------|--------------------|-----|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |            |                    |     |         |           |
| PTV28         |                   |     |             |                  | 180              | 180              | 160               | 120               |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■          | ■                  |     | ■       |           |
| PTT35         |                   |     |             |                  | 180              | 180              | 160               | 120               |                   |                   |                   |                   |                   | 120             | 100             |       |       |                       | ■          | ■                  |     | ■       |           |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       | 140   |                       | □          | ■                  |     | ■       |           |
| KTE20         | 400               | 400 | 300         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■          | ■                  |     | ■       |           |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| fz            | 0,1-0,15          |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet | □ bedingt geeignet |     |         |           |

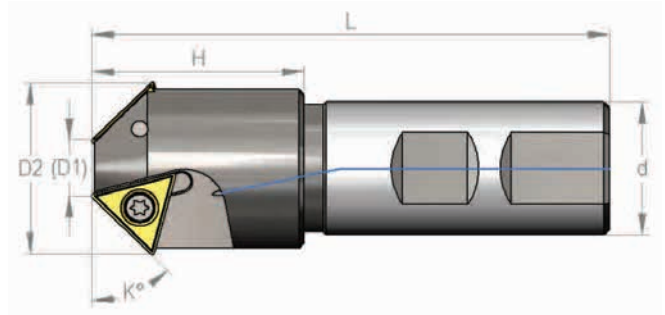
Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

**Serie 3025, 3030, 3035, 3040, 3045 - Frässenker 15° - 75°**  
**Series 3025, 3030, 3035, 3040, 3045 - Milling cutter for chamfering**



**Ausführung:** Fas- und Frässenker, auch für kleine Bohrungen geeignet, mit Innenbohrung  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** zum Einsatz zum Fasen und Kantenfräsen

**Execution:** Face Milling cutter for chamfering, for small holes, with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** universal application, face milling, chamfering

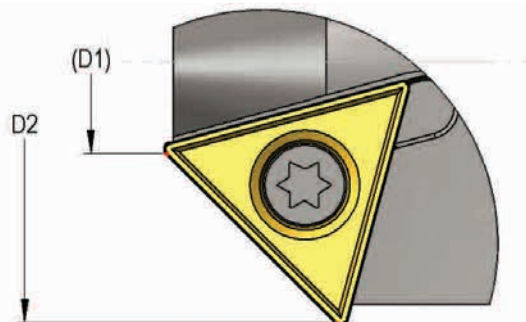


| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |      |     |    |    |     |   | Wendeplatte<br>Insert                                                               | Schraube<br>Screw                                                                   | Schlüssel<br>Key                                                                    |
|-----------------------------|------------------------------|------|-----|----|----|-----|---|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                             | (D1)                         | D2   | L   | H  | d  | K°  | Z |  |  |  |
| 3025-016 W-W                | (15,4)                       | 34   | 85  | 34 | 20 | 15° | 3 | TCMT 1102..                                                                         | M-VT25<br>1,2 Nm                                                                    | M-BT08                                                                              |
| 3025-016 WL                 | (15,4)                       | 34   | 200 | 30 | 20 | 15° | 3 |                                                                                     |                                                                                     |                                                                                     |
| 3025-025 W-W                | (23,8)                       | 53   | 85  | 28 | 25 | 15° | 3 | TCMT 16T3..                                                                         | M-VT40<br>3,0 Nm                                                                    | M-BT15                                                                              |
| 3025-025 WL                 | (23,8)                       | 53   | 200 | 30 | 25 | 15° | 3 |                                                                                     |                                                                                     |                                                                                     |
| 3030-016 W-W                | (15,3)                       | 32   | 85  | 34 | 20 | 30° | 3 | TCMT 1102..                                                                         | M-VT25<br>1,2 Nm                                                                    | M-BT08                                                                              |
| 3030-016 WL                 | (15,3)                       | 32   | 200 | 30 | 20 | 30° | 3 |                                                                                     |                                                                                     |                                                                                     |
| 3030-025 W-W                | (23,8)                       | 50   | 85  | 28 | 25 | 30° | 3 | TCMT 16T3..                                                                         | M-VT40<br>3,0 Nm                                                                    | M-BT15                                                                              |
| 3030-025 WL                 | (23,8)                       | 50   | 200 | 30 | 25 | 30° | 3 |                                                                                     |                                                                                     |                                                                                     |
| 3035-016 W-W                | (2,4)                        | 16   | 70  | 24 | 12 | 45° | 1 | TCMT 1102..                                                                         | M-VT25<br>1,2 Nm                                                                    | M-BT08                                                                              |
| 3035-016 WL                 | (2,4)                        | 16   | 200 | 20 | 12 | 45° | 1 |                                                                                     |                                                                                     |                                                                                     |
| 3035-021 W-W                | (7,4)                        | 21   | 90  | 35 | 20 | 45° | 2 |                                                                                     |                                                                                     |                                                                                     |
| 3035-021 WL                 | (7,4)                        | 21   | 200 | 35 | 20 | 45° | 2 | TCMT 16T3..                                                                         | M-VT40<br>3,0 Nm                                                                    | M-BT15                                                                              |
| 3035-032 W-W                | (11,1)                       | 32,5 | 95  | 38 | 25 | 45° | 2 |                                                                                     |                                                                                     |                                                                                     |
| 3035-032 WL                 | (11,1)                       | 32,5 | 200 | 39 | 25 | 45° | 2 |                                                                                     |                                                                                     |                                                                                     |
| 3040-016 W-W                | (6,4)                        | 16   | 70  | 19 | 12 | 60° | 1 | TCMT 1102..                                                                         | M-VT25<br>1,2 Nm                                                                    | M-BT08                                                                              |
| 3040-016 WL                 | (6,4)                        | 16   | 200 | 20 | 12 | 60° | 1 |                                                                                     |                                                                                     |                                                                                     |
| 3040-027 W-W                | (16,4)                       | 26   | 90  | 39 | 20 | 60° | 2 |                                                                                     |                                                                                     |                                                                                     |
| 3040-027 WL                 | (16,4)                       | 26   | 200 | 35 | 20 | 60° | 2 | TCMT 16T3..                                                                         | M-VT40<br>3,0 Nm                                                                    | M-BT15                                                                              |
| 3040-032 W-W                | (20,4)                       | 35,5 | 95  | 38 | 25 | 60° | 2 |                                                                                     |                                                                                     |                                                                                     |
| 3040-032 WL                 | (20,4)                       | 35,5 | 200 | 39 | 25 | 60° | 2 |                                                                                     |                                                                                     |                                                                                     |
| 3045-017 W-W                | (17)                         | 22   | 85  | 34 | 20 | 75° | 2 | TCMT 1102..                                                                         | M-VT25<br>1,2 Nm                                                                    | M-BT08                                                                              |
| 3045-017 WL                 | (17)                         | 22   | 200 | 20 | 20 | 75° | 2 |                                                                                     |                                                                                     |                                                                                     |
| 3045-022 W-W                | (22)                         | 27   | 85  | 34 | 20 | 75° | 2 |                                                                                     |                                                                                     |                                                                                     |
| 3045-022 WL                 | (22)                         | 27   | 200 | 35 | 20 | 75° | 2 | TCMT 16T3..                                                                         | M-VT40<br>3,0 Nm                                                                    | M-BT15                                                                              |
| 3045-027 W-W                | (27,2)                       | 35   | 95  | 38 | 25 | 75° | 2 |                                                                                     |                                                                                     |                                                                                     |
| 3045-027 WL                 | (27,2)                       | 35   | 200 | 39 | 25 | 75° | 2 |                                                                                     |                                                                                     |                                                                                     |

Bestellbeispiel / Order example: 3025-016 W-W

W-W = Kühlmittelbohrung / W-W = coolant bores

\* Aktualisierung 08.2018



Gemessen über TCMT R0,4 (Tatsächliche Schneide)

**Serie 3025, 3030, 3035, 3040, 3045 - Frässenker 15° - 75°**  
**Series 3025, 3030, 3035, 3040, 3045 - Milling cutter for chamfering**



|                | Form Figure | Abmessungen Dimensions |      |      |    |     | Bezeichnung Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     |  | Beschichtet Sorten<br>Coated grades |       |       |       |       |       |
|----------------|-------------|------------------------|------|------|----|-----|-------------------------|----------|-----------|-----------------------------------------|-----|--|-------------------------------------|-------|-------|-------|-------|-------|
|                |             | l                      | d    | s    | d1 | r   |                         |          |           | CT28                                    | K10 |  | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>TCMT .. WM |             |                        |      |      |    |     |                         |          |           |                                         |     |  |                                     |       |       |       |       |       |
|                |             |                        |      |      |    |     |                         |          |           |                                         |     |  |                                     |       |       |       |       |       |
|                |             | 11,00                  | 6,35 | 2,38 |    | 0,4 | TCMT 110204 WM          | M-VT25   | M-BT 08   |                                         |     |  | ■                                   |       | ■     | ■     | ■     |       |
|                |             | 11,00                  | 6,35 | 2,38 |    | 0,8 | TCMT 110208 WM          | M-VT 25  | M-BT 08   |                                         |     |  | ■                                   |       | ■     | ■     | ■     |       |
|                |             | 16,50                  | 9,52 | 3,97 |    | 0,4 | TCMT 16T304 WM          | M-VT 40  | M-BT 15   |                                         |     |  | ■                                   |       | ■     | ■     | ■     |       |
| <br>TCMT .. XM |             |                        |      |      |    |     |                         |          |           |                                         |     |  |                                     |       |       |       |       |       |
|                |             |                        |      |      |    |     |                         |          |           |                                         |     |  |                                     |       |       |       |       |       |
|                |             | 10,00                  | 6,35 | 2,38 |    | 0,4 | TCMT 110204 XM          | M-VT25   | M-BT 08   |                                         |     |  |                                     |       |       | ■     | ■     |       |
|                |             | 9,00                   | 6,35 | 2,38 |    | 0,8 | TCMT 110208 XM          | M-VT 25  | M-BT 08   |                                         |     |  |                                     |       |       | ■     | ■     |       |
|                |             | 15,50                  | 9,52 | 3,97 |    | 0,4 | TCMT 16T304 XM          | M-VT 40  | M-BT 15   |                                         |     |  |                                     |       |       | ■     | ■     |       |

| Vc<br>(m/min) |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | Öl                    | Emulsion                      | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|-----------------------|-------------------------------|-----|---------|-----------|
|               | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK |                       |                               |     |         |           |
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |                       |                               |     |         |           |
| PTT20         |                   |     |             |                  | 180              | 180              | 160               | 120               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                       |                               |     |         |           |
| PTT35         |                   |     |             |                  | 180              | 180              | 160               | 120               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                       |                               |     |         |           |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 120             | 120             |       |       |                       |                       |                               |     |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 140   |       |                       |                       |                               |     |         |           |
| KTE20         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                       |                               |     |         |           |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                       |                               |     |         |           |
| fz            | 0,1-0,2           |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | <div>■ geeignet</div> | <div>□ bedingt geeignet</div> |     |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

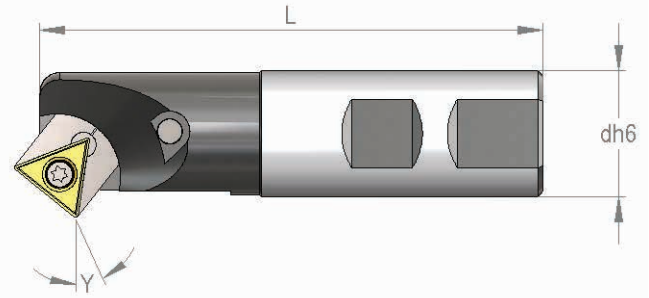
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**Serie 3055 - Fasenfräser , Winkelverstellbar von 10° - 80°**  
**Series 3055 - Milling cutter for chamfering , adjustable 10° - 80°**



**Ausführung:** verstellbarer Fasenfräser mit Kühlkanal  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** zum Einsatz zum Fasen und Kantenfräsen

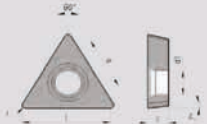
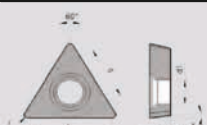
**Execution:** adjustable Facecutter with coolant channel  
**Delivery:** without insert, without screwdriver  
**Application:** universal application, face milling, chamfering



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |     |          | Support                                                                           | Wendeplatte<br>Insert                                                               | Schraube<br>Screw                                                                   | Schlüssel<br>Key                                                                    |
|-----------------------------|------------------------------|-----|----------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                             | dh6                          | L   | Y        |  |  |  |  |
| 3055 W-W 020                | 20                           | 100 | 10°- 80° | M-S16                                                                             | TCMT 16T3..<br>TCGT 16T3..                                                          | M-VT40<br>3,0 Nm<br>M-V1006                                                         | M-BT15                                                                              |
| 3055 WL 020                 | 20                           | 150 | 10°- 80° |                                                                                   |                                                                                     |                                                                                     |                                                                                     |
| 3055 WXL020                 | 20                           | 200 | 10°- 80° |                                                                                   |                                                                                     |                                                                                     |                                                                                     |
| 3055 W-W 025                | 25                           | 100 | 10°- 80° |                                                                                   |                                                                                     |                                                                                     |                                                                                     |
| 3055 WL 025                 | 25                           | 150 | 10°- 80° |                                                                                   |                                                                                     |                                                                                     |                                                                                     |
| 3055 WXL025                 | 25                           | 200 | 10°- 80° |                                                                                   |                                                                                     |                                                                                     |                                                                                     |

Bestellbeispiel / Order example: 3055 W-W 020

W-W = Kühlmittelbohrung / W-W = coolant bores

|                                                                                                      | Form Figure                                                                         | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                      |                                                                                     | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>TCMT .. WM    |  | 16,50                  | 9,52 | 3,97 |    | 0,4 | TCMT 16T304 WM             | M-VT 40  | M-BT 15   |                                         |     | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                      |                                                                                     | 16,50                  | 9,52 | 3,97 |    | 0,8 | TCMT 16T308 WM             | M-VT 40  | M-BT 15   |                                         |     | ■                                   |       | ■     | ■     | ■     |       |
| <br>TCMT .. XM    |  | 15,50                  | 9,52 | 3,97 |    | 0,4 | TCMT 16T304 XM             | M-VT 40  | M-BT 15   |                                         |     | ■                                   |       |       | ■     | ■     |       |
|                                                                                                      |                                                                                     | 14,50                  | 9,52 | 3,97 |    | 0,8 | TCMT 16T308 XM             | M-VT 40  | M-BT 15   |                                         |     | ■                                   |       |       | ■     | ■     |       |
| <br>TCGT .. ALU-M |  | 15,00                  | 9,52 | 3,97 |    | 0,4 | TCGT 16T304 ALU-M          | M-VT 40  | M-BT 15   | ■                                       |     |                                     |       |       |       |       | ■     |
|                                                                                                      |                                                                                     | 14,50                  | 9,52 | 3,97 |    | 0,8 | TCGT 16T308 ALU-M          | M-VT 40  | M-BT 15   | ■                                       |     |                                     |       |       |       |       | ■     |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion           | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|------------|--------------------|-----|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |            |                    |     |         |           |
| PTT20         |                   |     |             |                  | 180              | 180              | 140               | 140               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| PTT35         |                   |     |             |                  | 180              | 180              | 140               | 140               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 120             | 120             |       |       |                       |            | ■                  |     |         | ■         |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 140   |       |                       |            | ■                  |     |         | ■         |
| KTE20         | 400               | 400 | 300         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| fz            | 0,1-0,2           |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet | □ bedingt geeignet |     |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

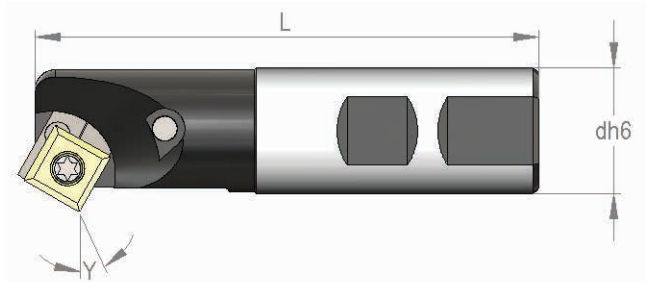


**Serie 3060 - Fasenfräser , Winkelverstellbar von 10° - 80°**  
**Series 3060 - Milling cutter for chamfering , adjustable 10° - 80°**



**Ausführung:** verstellbarer Fasenfräser mit Kühlkanal  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** zum Einsatz zum Fasen und Kantenfräsen

**Execution:** adjustable Facecutter with coolant channel  
**Delivery:** without insert, without screwdriver  
**Application:** universal application, face milling, chamfering



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |     |           | Support | Wendeplatte<br>Insert      | Schraube<br>Screw           | Schlüssel<br>Key |
|-----------------------------|------------------------------|-----|-----------|---------|----------------------------|-----------------------------|------------------|
|                             | dh6                          | L   | Y         |         |                            |                             |                  |
| 3060 W-W 020                | 20                           | 100 | 10° - 80° | M-S12   | SCMT 1204..<br>SCGT 1204.. | M-VT51<br>5,0 Nm<br>M-V1006 | M-BT20           |
| 3060 WL 020                 | 20                           | 150 | 10° - 80° |         |                            |                             |                  |
| 3060 WXL020                 | 20                           | 200 | 10° - 80° |         |                            |                             |                  |
| 3060 W-W 025                | 25                           | 100 | 10° - 80° |         |                            |                             |                  |
| 3060 WL 025                 | 25                           | 150 | 10° - 80° |         |                            |                             |                  |
| 3060 WXL025                 | 25                           | 200 | 10° - 80° |         |                            |                             |                  |

Bestellbeispiel / Order example: 3060 W-W 020

W-W = Kühlmittelbohrung / W-W = coolant bores

|               | Form Figure | Abmessungen Dimensions |       |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|---------------|-------------|------------------------|-------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|               |             | l                      | d     | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| SCMT .. WM    |             | 12,30                  | 12,70 | 4,76 |    | 0,4 | SCMT 120404 WM             | M-VT51   | M-BT20    |                                         |     |                                     |       |       |       |       |       |
|               |             | 11,90                  | 12,70 | 4,76 |    | 0,8 | SCMT 120408 WM             | M-VT51   | M-BT20    |                                         |     |                                     |       |       |       |       |       |
|               |             | 11,90                  | 12,70 | 4,76 |    | 1,2 | SCMT 120412 WM             | M-VT51   | M-BT20    |                                         |     |                                     |       |       |       |       |       |
| SCMT .. XM    |             | 12,30                  | 12,70 | 4,76 |    | 0,8 | SCMT 120408 XM             | M-VT51   | M-BT20    |                                         |     |                                     |       |       |       |       |       |
|               |             | 11,90                  | 12,70 | 4,76 |    | 1,2 | SCMT 120412 XM             | M-VT51   | M-BT20    |                                         |     |                                     |       |       |       |       |       |
|               |             |                        |       |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |
| SCGT .. ALU-M |             | 11,90                  | 12,70 | 4,76 |    | 0,8 | SCGT 120408 ALU-M          | M-VT51   | M-BT20    |                                         |     |                                     |       |       |       |       |       |
|               |             |                        |       |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl       | Emulsion | MMS              | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|----------|----------|------------------|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |          |          |                  |         |           |
| PTT20         |                   |     |             |                  | 180              | 180              | 140               | 140               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |          |          |                  |         |           |
| PTT35         |                   |     |             |                  | 180              | 180              | 140               | 140               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |          |          |                  |         |           |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 120             | 120             |       |       |                       |          |          |                  |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 140   |       |                       |          |          |                  |         |           |
| KTE20         | 400               | 400 | 300         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |          |          |                  |         |           |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |          |          |                  |         |           |
| fz            | 0,1-0,2           |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | geeignet |          | bedingt geeignet |         |           |

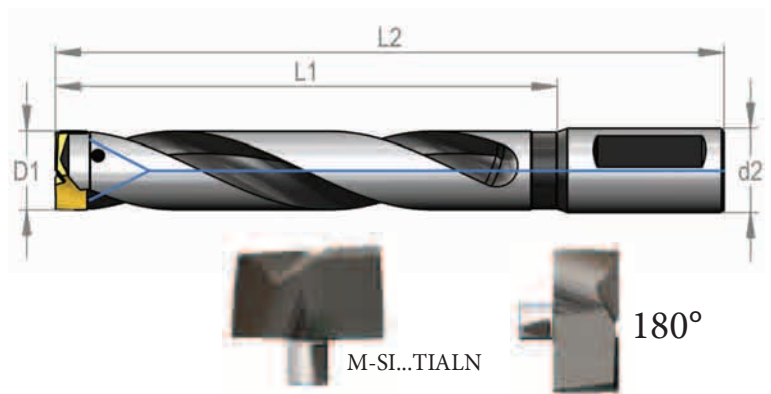
Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

## Serie 6010 - Senkfräser mit auswechselbaren VHM-Spitzen Series 6010 - Spot facing milling cutter with changeable Solid Carbide insert



**Ausführung:** Senkfräser mit wechselbaren  
Senkspitzen mit Innenkühlung  
**Lieferumfang:** ohne Wendschneidplatten,  
ohne Schraubendreher  
**Anwendung:** zum Aufbohren

**Execution:** Spot facing cutter with changeable inserts  
and inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** for spot facing



| Durchmesserbereich d1<br>Working diameter d1 | Bestell-Nummern für HM-Wechselschneiden für die<br>Arbeitsdurchmesser (mm)<br>Order number for HM-Inserts<br>with Workingdiameter (mm) | f<br>Vorschub | Schraubensenkungen<br>Screw boring<br>Form/Type H, J, K | Schraubensenkungen<br>Screw boring<br>Form/Type R |
|----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------------------------------------------------|---------------------------------------------------|
| 10,00                                        | M-SI 10,00 TIALN                                                                                                                       | 0,1           | M5                                                      |                                                   |
| 11,00                                        | M-SI 11,00 TIALN                                                                                                                       | 0,11          | M6                                                      | M5                                                |
| 13,00                                        | M-SI 13,00 TIALN                                                                                                                       | 0,13          |                                                         | M6                                                |
| 15,00                                        | M-SI 15,00 TIALN                                                                                                                       | 0,15          | M8                                                      |                                                   |
| 18,00                                        | M-SI 18,00 TIALN                                                                                                                       | 0,18          | M10                                                     | M8                                                |
| 20,00                                        | M-SI 20,00 TIALN                                                                                                                       | 0,2           | M12                                                     |                                                   |
| 22,00                                        | M-SI 22,00 TIALN                                                                                                                       | 0,22          |                                                         | M10                                               |
| 24,00                                        | M-SI 24,00 TIALN                                                                                                                       | 0,24          | M14                                                     |                                                   |
| 26,00                                        | M-SI 26,00 TIALN                                                                                                                       | 0,26          | M16                                                     | M12                                               |
| 30,00                                        | M-SI 30,00 TIALN                                                                                                                       | 0,3           | M18                                                     | M14                                               |
| 33,00                                        | M-SI 33,00 TIALN                                                                                                                       | 0,33          | M20                                                     | M16                                               |

Bestellbeispiel / Order example: M-SI 10,00 TIALN

| Bestell-Nr.:<br>Order Code:<br>HD3 = 3xD | Bearbeitungsdurchmesser<br>Working diameter | Abmessungen<br>Dimension (mm) |     |    |         | Ersatzteile / Spare parts |                  |
|------------------------------------------|---------------------------------------------|-------------------------------|-----|----|---------|---------------------------|------------------|
|                                          |                                             | D1                            | L1  | L2 | d2      | Schraube<br>Screw         | Schlüssel<br>Key |
| 6010 HD3 D10                             | 10.00                                       | 45                            | 90  | 12 | M-M 2,5 |                           | M-BT5            |
| 6010 HD3 D11                             | 11.00                                       | 45                            | 90  | 12 |         |                           |                  |
| 6010 HD3 D13                             | 13.00                                       | 57                            | 105 | 16 |         |                           |                  |
| 6010 HD3 D15                             | 15.00                                       | 65                            | 115 | 16 | M-M3    |                           | M-BT6            |
| 6010 HD3 D18                             | 18.00                                       | 90                            | 140 | 20 |         |                           |                  |
| 6010 HD3 D20                             | 20.00                                       | 95                            | 150 | 25 | M-M4    |                           | M-BT8            |
| 6010 HD3 D22                             | 22.00                                       | 105                           | 160 | 25 |         |                           |                  |
| 6010 HD3 D24                             | 24.00                                       | 110                           | 170 | 25 |         |                           |                  |
| 6010 HD3 D30                             | 30.00                                       | 140                           | 200 | 32 | M-M5    |                           | M-BT10           |
| 6010 HD3 D33                             | 33.00                                       | 150                           | 210 | 32 |         |                           |                  |

Bestellbeispiel / Order example: 6010 HD3 D10

| Vc<br>(m/min) |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | Öl                            | Emulsion | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|-------------------------------|----------|-----|---------|-----------|
|               | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK |                               |          |     |         |           |
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |                               |          |     |         |           |
| TIALN         | 120               | 120 | 100         |                  | 80               | 80               | 70                | 60                |                   |                   |                   |                   |                   | 60              | 50              | 70    |       |                       |                               |          |     |         |           |
| PTT20         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                               |          |     |         |           |
| PTT35         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                               |          |     |         |           |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                               |          |     |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                               |          |     |         |           |
| KTE20         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                               |          |     |         |           |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |                               |          |     |         |           |
| fz            | 0,1-0,2           |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet □ bedingt geeignet |          |     |         |           |

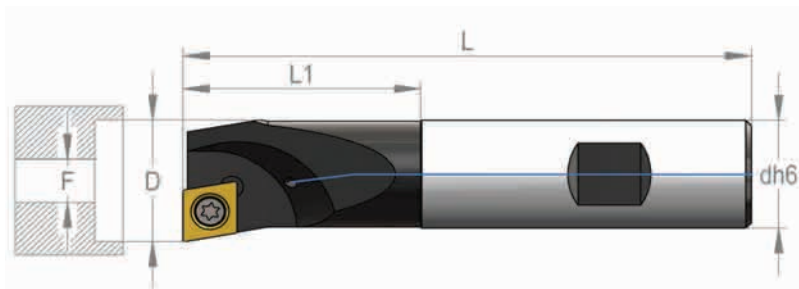
Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

## Serie 3065 - Senkfräser

### Series 3065 - Spot facing milling cutter



**Ausführung:** Senkfräser mit Innenbohrung  
**Lieferumfang:** ohne Wendeschneidplatten,  
ohne Schraubendreher  
**Anwendung:** zum Aufbohren  
**Execution:** Spot facing cutter with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** for spot facing



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |     |     |   | Wendeplatte<br>Insert                                                               | Schraube<br>Screw                                                                   | Schlüssel<br>Key                                                                    |
|-----------------------------|------------------------------|----|----|-----|-----|---|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                             | D                            | F  | L1 | L   | dh6 | Z |  |  |  |
| 3065 W-W D10                | 10                           | 4  | 23 | 70  | 8   | 1 | CCMT 0602..<br>CCGT 0602..                                                          | M-VT25<br>1,2 Nm                                                                    | M-BT08                                                                              |
| 3065 W-W D11                | 11                           | 4  | 24 | 75  | 10  | 1 |                                                                                     |                                                                                     |                                                                                     |
| 3065 W-W D12                | 12                           | 5  | 25 | 75  | 10  | 1 |                                                                                     |                                                                                     |                                                                                     |
| 3065 W-W D13                | 13                           | 5  | 27 | 85  | 12  | 1 |                                                                                     |                                                                                     |                                                                                     |
| 3065 W-W D14                | 14                           | 5  | 28 | 85  | 12  | 1 |                                                                                     |                                                                                     |                                                                                     |
| 3065 W-W D15                | 15                           | 5  | 29 | 90  | 12  | 1 |                                                                                     |                                                                                     |                                                                                     |
| 3065 W-W D16                | 16                           | 5  | 30 | 90  | 12  | 1 |                                                                                     |                                                                                     |                                                                                     |
| 3065 W-W D17                | 17                           | 5  | 30 | 95  | 16  | 1 | CCMT 09T3..<br>CCGT 09T3..                                                          | M-VT40<br>3,0 Nm                                                                    | M-BT15                                                                              |
| 3065 W-W D18                | 18                           | 5  | 40 | 95  | 16  | 1 |                                                                                     |                                                                                     |                                                                                     |
| 3065 W-W D19                | 19                           | 5  | 40 | 95  | 16  | 1 |                                                                                     |                                                                                     |                                                                                     |
| 3065 W-W D20                | 20                           | 5  | 40 | 95  | 16  | 1 |                                                                                     |                                                                                     |                                                                                     |
| 3065 W-W D21                | 21                           | 5  | 42 | 100 | 20  | 1 |                                                                                     |                                                                                     |                                                                                     |
| 3065 W-W D22                | 22                           | 6  | 42 | 100 | 20  | 1 |                                                                                     |                                                                                     |                                                                                     |
| 3065 W-W D23                | 23                           | 6  | 42 | 100 | 20  | 1 |                                                                                     |                                                                                     |                                                                                     |
| 3065 W-W D24                | 24                           | 7  | 42 | 100 | 20  | 1 |                                                                                     |                                                                                     |                                                                                     |
| 3065 W-W D25                | 25                           | 8  | 42 | 100 | 20  | 1 |                                                                                     |                                                                                     |                                                                                     |
| 3065 W-W D26                | 26                           | 8  | 56 | 120 | 25  | 1 |                                                                                     |                                                                                     |                                                                                     |
| 3065 W-W D27                | 27                           | 8  | 56 | 120 | 25  | 1 |                                                                                     |                                                                                     |                                                                                     |
| 3065 W-W D28                | 28                           | 10 | 56 | 120 | 25  | 1 |                                                                                     |                                                                                     |                                                                                     |
| 3065 W-W D29                | 29                           | 10 | 56 | 120 | 25  | 1 |                                                                                     |                                                                                     |                                                                                     |
| 3065 W-W D30                | 30                           | 10 | 56 | 120 | 25  | 1 |                                                                                     |                                                                                     |                                                                                     |
| 3065 W-W D31                | 31                           | 12 | 56 | 120 | 25  | 1 |                                                                                     |                                                                                     |                                                                                     |
| 3065 W-W D32                | 32                           | 12 | 56 | 120 | 25  | 1 |                                                                                     |                                                                                     |                                                                                     |
| 3065 W-W D33                | 33                           | 12 | 56 | 120 | 25  | 1 |                                                                                     |                                                                                     |                                                                                     |

Bestellbeispiel / Order example: 3065 W-W D10

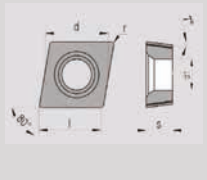
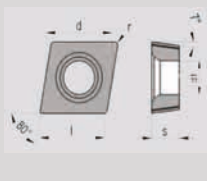
W-W = Kühlmittelbohrung / W-W = coolant bores

D

# Serie 3065 - Senkfräser

## Series 3065 - Spot facing milling cutter



|                                                                                                     | Form Figure                                                                       | Abmessungen Dimensions |      |      |    |     | Bezeichnung Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|-----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------|------|------|----|-----|-------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                     |                                                                                   | l                      | d    | s    | d1 | r   |                         |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>CCGT..<br>ALU-M |  | 6,20                   | 6,35 | 2,38 |    | 0,1 | CCGT 060201 ALU-M       | M-VT25   | M-BT 08   |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                     |                                                                                   | 6,20                   | 6,35 | 2,38 |    | 0,2 | CCGT 060202 ALU-M       | M-VT25   | M-BT 08   |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                     |                                                                                   | 6,00                   | 6,35 | 2,38 |    | 0,4 | CCGT 060204 ALU-M       | M-VT25   | M-BT 08   |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                     |                                                                                   | 9,40                   | 9,52 | 3,97 |    | 0,2 | CCGT 09T302 ALU-M       | M-VT40   | M-BT 15   |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                     |                                                                                   | 9,20                   | 9,52 | 3,97 |    | 0,4 | CCGT 09T304 ALU-M       | M-VT40   | M-BT 15   |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                     |                                                                                   | 8,80                   | 9,52 | 3,97 |    | 0,8 | CCGT 09T308 ALU-M       | M-VT40   | M-BT 15   |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                     |                                                                                   |                        |      |      |    |     |                         |          |           |                                         |     |                                     |       |       |       |       |       |
| <br>CCMT .. WM      |  | 6,45                   | 6,35 | 2,38 |    | 0,4 | CCMT 060204 WM          | M-VT25   | M-BT 08   |                                         |     | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                     |                                                                                   | 6,45                   | 6,35 | 2,38 |    | 0,8 | CCMT 060208 WM          | M-VT25   | M-BT 08   |                                         |     | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                     |                                                                                   | 9,67                   | 9,52 | 3,97 |    | 0,4 | CCMT 09T304 WM          | M-VT40   | M-BT 15   |                                         |     | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                     |                                                                                   | 9,67                   | 9,52 | 3,97 |    | 0,8 | CCMT 09T308 WM          | M-VT40   | M-BT 15   |                                         |     | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                     |                                                                                   |                        |      |      |    |     |                         |          |           |                                         |     |                                     |       |       |       |       |       |

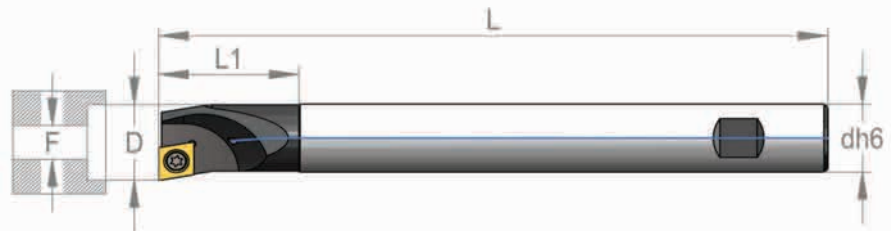
| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion           | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|------------|--------------------|-----|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |            |                    |     |         |           |
| PTT20         |                   |     |             |                  | 120              | 120              | 100               | 100               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| PTT35         |                   |     |             |                  | 120              | 120              | 100               | 100               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 120             | 90              |       |       |                       |            | ■                  |     |         | ■         |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 120   |       |                       |            | ■                  |     |         | ■         |
| KTE20         | 400               | 400 | 300         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| K10           | 300               | 300 | 200         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| fz            | 0,1-0,2           |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet | □ bedingt geeignet |     |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

## Serie 3070 - Fräser zum Aufbohren Series 3070 - Boring milling cutter



**Ausführung:** Senkfräser mit Innenbohrung  
**Lieferumfang:** ohne Wendeschneidplatten,  
 ohne Schraubendreher zum Aufbohren  
**Anwendung:**  
**Execution:** Spot facing cutter  
 with inner coolant  
**Delivery:** without insert,  
 without screwdriver  
**Application:** for spot facing



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |     |    |     |    |   | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|-----|----|-----|----|---|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
|                             | D                            | L   | L1 | dh6 | F  | Z |                                                                                                              |                                                                                                          |                                                                                                         |
| 3070 W-W D10                | 9,8                          | 90  | 23 | 8   | 4  | 1 | CCMT 0602..<br>CCGT 0602..                                                                                   | M-VT25<br>1,2 Nm                                                                                         | M-BT08                                                                                                  |
| 3070 W-W D11                | 10,8                         | 105 | 24 | 10  | 4  | 1 |                                                                                                              |                                                                                                          |                                                                                                         |
| 3070 W-W D12                | 11,8                         | 105 | 25 | 10  | 4  | 1 |                                                                                                              |                                                                                                          |                                                                                                         |
| 3070 W-W D13                | 12,8                         | 105 | 26 | 10  | 4  | 1 |                                                                                                              |                                                                                                          |                                                                                                         |
| 3070 W-W D14                | 13,8                         | 110 | 27 | 12  | 5  | 1 |                                                                                                              |                                                                                                          |                                                                                                         |
| 3070 W-W D15                | 14,8                         | 120 | 28 | 12  | 6  | 1 |                                                                                                              |                                                                                                          |                                                                                                         |
| 3070 W-W D16                | 15,8                         | 125 | 29 | 12  | 7  | 1 |                                                                                                              |                                                                                                          |                                                                                                         |
| 3070 W-W D17                | 16,8                         | 140 | 30 | 16  | 8  | 1 |                                                                                                              |                                                                                                          |                                                                                                         |
| 3070 W-W D18                | 17,8                         | 150 | 31 | 16  | 9  | 1 |                                                                                                              |                                                                                                          |                                                                                                         |
| 3070 W-W D19                | 18,8                         | 150 | 32 | 16  | 10 | 1 |                                                                                                              |                                                                                                          |                                                                                                         |
| 3070 W-W D20                | 19,8                         | 160 | 33 | 16  | 11 | 1 | CCMT 09T3..<br>CCGT 09T3..                                                                                   | M-VT40<br>3,0 Nm                                                                                         | M-BT15                                                                                                  |
| 3070 W-W D21                | 20,8                         | 160 | 34 | 16  | 8  | 1 |                                                                                                              |                                                                                                          |                                                                                                         |
| 3070 W-W D22                | 21,8                         | 165 | 35 | 20  | 9  | 1 |                                                                                                              |                                                                                                          |                                                                                                         |
| 3070 W-W D23                | 22,8                         | 170 | 36 | 20  | 10 | 1 |                                                                                                              |                                                                                                          |                                                                                                         |
| 3070 W-W D24                | 23,8                         | 180 | 37 | 20  | 11 | 1 |                                                                                                              |                                                                                                          |                                                                                                         |
| 3070 W-W D25                | 24,8                         | 185 | 38 | 20  | 12 | 1 |                                                                                                              |                                                                                                          |                                                                                                         |
| 3070 W-W D26                | 25,8                         | 190 | 39 | 20  | 13 | 1 |                                                                                                              |                                                                                                          |                                                                                                         |
| 3070 W-W D27                | 26,8                         | 190 | 40 | 20  | 14 | 1 |                                                                                                              |                                                                                                          |                                                                                                         |
| 3070 W-W D28                | 27,8                         | 200 | 41 | 20  | 15 | 1 |                                                                                                              |                                                                                                          |                                                                                                         |
| 3070 W-W D29                | 28,8                         | 200 | 42 | 25  | 16 | 1 |                                                                                                              |                                                                                                          |                                                                                                         |
| 3070 W-W D30                | 29,8                         | 200 | 43 | 25  | 17 | 1 |                                                                                                              |                                                                                                          |                                                                                                         |
| 3070 W-W D31                | 30,8                         | 200 | 44 | 25  | 18 | 1 |                                                                                                              |                                                                                                          |                                                                                                         |
| 3070 W-W D32                | 31,8                         | 200 | 45 | 25  | 19 | 1 |                                                                                                              |                                                                                                          |                                                                                                         |

Bestellbeispiel / Order example: 3070 W-W D10

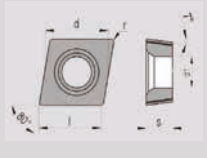
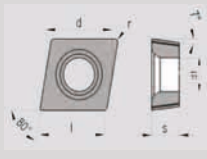
W-W = Kühlmittelbohrung / W-W = coolant bores

D



# Serie 3070 - Fräser zum Aufbohren Series 3070 - Boring milling cutter



|                                                                                                     | Form Figure                                                                       | Abmessungen Dimensions |      |      |    |     | Bezeichnung Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     |  | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|-----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------|------|------|----|-----|-------------------------|----------|-----------|-----------------------------------------|-----|--|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                     |                                                                                   | l                      | d    | s    | d1 | r   |                         |          |           | CT28                                    | K10 |  | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>CCGT..<br>ALU-M |  |                        |      |      |    |     |                         |          |           |                                         |     |  |                                     |       |       |       |       |       |
|                                                                                                     |                                                                                   | 6,20                   | 6,35 | 2,38 |    | 0,1 | CCGT 060201 ALU-M       | M-VT25   | M-BT 08   |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                     |                                                                                   | 6,20                   | 6,35 | 2,38 |    | 0,2 | CCGT 060202 ALU-M       | M-VT25   | M-BT 08   |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                     |                                                                                   | 6,00                   | 6,35 | 2,38 |    | 0,4 | CCGT 060204 ALU-M       | M-VT25   | M-BT 08   |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                     |                                                                                   | 9,40                   | 9,52 | 3,97 |    | 0,2 | CCGT 09T302 ALU-M       | M-VT40   | M-BT 15   |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                     |                                                                                   | 9,20                   | 9,52 | 3,97 |    | 0,4 | CCGT 09T304 ALU-M       | M-VT40   | M-BT 15   |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                     |                                                                                   | 8,80                   | 9,52 | 3,97 |    | 0,8 | CCGT 09T308 ALU-M       | M-VT40   | M-BT 15   |                                         | ■   |  |                                     |       |       |       |       | ■     |
| <br>CCMT .. WM      |  |                        |      |      |    |     |                         |          |           |                                         |     |  |                                     |       |       |       |       |       |
|                                                                                                     |                                                                                   | 6,45                   | 6,35 | 2,38 |    | 0,4 | CCMT 060204 WM          | M-VT25   | M-BT 08   |                                         |     |  | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                     |                                                                                   | 6,45                   | 6,35 | 2,38 |    | 0,8 | CCMT 060208 WM          | M-VT25   | M-BT 08   |                                         |     |  | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                     |                                                                                   | 9,67                   | 9,52 | 3,97 |    | 0,4 | CCMT 09T304 WM          | M-VT40   | M-BT 15   |                                         |     |  | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                     |                                                                                   | 9,67                   | 9,52 | 3,97 |    | 0,8 | CCMT 09T308 WM          | M-VT40   | M-BT 15   |                                         |     |  | ■                                   |       | ■     | ■     | ■     |       |

| Vc<br>(m/min) | Alu        |     |      | Stahl   |         |         |          |          |          |          |          |          |          | INOX    |         | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion | MMS                | Trocken | Druckluft |
|---------------|------------|-----|------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|---------|---------|-------|-------|-----------------------|------------|----------|--------------------|---------|-----------|
|               | Kunststoff |     | Guss | < 500 N | < 750 N | < 900 N | < 1100 N | < 1400 N | < 55 HRC | < 60 HRC | < 65 HRC | < 67 HRC | < 70 HRC | < 900 N | > 900 N |       |       |                       |            |          |                    |         |           |
| ISO-Code      | N          | N   | N    | P       | P       | P       | P        | P        | H        | H        | H        | H        | H        | M       | M       | K     | S     | N                     |            |          |                    |         |           |
| PTT20         |            |     |      |         | 120     | 120     | 100      | 100      |          |          |          |          |          |         |         |       |       |                       |            | ■        |                    |         | ■         |
| PTT35         |            |     |      |         | 120     | 120     | 100      | 100      |          |          |          |          |          |         |         |       |       |                       |            | ■        |                    |         | ■         |
| PAP28         |            |     |      |         |         |         |          |          |          |          |          |          |          | 120     | 90      |       |       |                       |            | ■        |                    |         | ■         |
| MTM10         |            |     |      |         |         |         |          |          |          |          |          |          |          |         |         | 120   |       |                       |            | ■        |                    |         | ■         |
| KTE20         | 400        | 400 | 300  |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       |            | ■        |                    |         | ■         |
| K10           | 300        | 300 | 200  |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       |            | ■        |                    |         | ■         |
| fz            | 0,1-0,2    |     |      |         |         |         |          |          |          |          |          |          |          |         |         |       |       |                       | ■ geeignet |          | □ bedingt geeignet |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

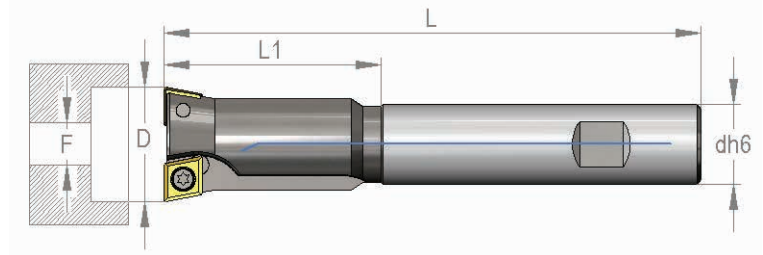
## Serie 3072 - Fräser zum Aufbohren Series 3072 - Boring milling cutter



**Ausführung:** Senkfräser mit Innenbohrung  
**Lieferumfang:** ohne Wendschneidplatten,  
ohne Schraubendreher zum Aufbohren

**Anwendung:**

**Execution:** Spot facing cutter  
with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** for spot facing



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |     |    |   | Wendeplatte<br>Insert                                                               | Schraube<br>Screw                                                                   | Schlüssel<br>Key                                                                    |
|-----------------------------|------------------------------|----|-----|-----|----|---|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                             | D                            | F  | dh6 | L   | L1 | Z |  |  |  |
| 3072 W-W D16                | 16                           | 5  | 12  | 90  | 30 | 2 | XCMT 0702..<br>XCGT 0702..                                                          | M-VT25<br>1,2 Nm                                                                    | M-BT08                                                                              |
| 3072 W-W D17                | 17                           | 6  | 16  | 95  | 32 | 2 |                                                                                     |                                                                                     |                                                                                     |
| 3072 W-W D18                | 18                           | 7  | 16  | 95  | 40 | 2 |                                                                                     |                                                                                     |                                                                                     |
| 3072 W-W D19                | 19                           | 8  | 16  | 100 | 40 | 2 |                                                                                     |                                                                                     |                                                                                     |
| 3072 W-W D20                | 20                           | 9  | 16  | 100 | 40 | 2 |                                                                                     |                                                                                     |                                                                                     |
| 3072 W-W D21                | 21                           | 10 | 16  | 110 | 40 | 2 |                                                                                     |                                                                                     |                                                                                     |
| 3072 W-W D22                | 22                           | 11 | 16  | 110 | 40 | 2 |                                                                                     |                                                                                     |                                                                                     |
| 3072 W-W D23                | 23                           | 12 | 16  | 110 | 40 | 2 |                                                                                     |                                                                                     |                                                                                     |
| 3072 W-W D24                | 24                           | 8  | 16  | 115 | 40 | 2 | XCMT 10T3..<br>XCGT 10T3..                                                          | M-VT40<br>3,0 Nm                                                                    | M-BT15                                                                              |
| 3072 W-W D25                | 25                           | 8  | 16  | 120 | 40 | 2 |                                                                                     |                                                                                     |                                                                                     |
| 3072 W-W D26                | 26                           | 9  | 20  | 125 | 55 | 2 |                                                                                     |                                                                                     |                                                                                     |
| 3072 W-W D27                | 27                           | 10 | 20  | 130 | 55 | 2 |                                                                                     |                                                                                     |                                                                                     |
| 3072 W-W D28                | 28                           | 11 | 20  | 130 | 55 | 2 |                                                                                     |                                                                                     |                                                                                     |
| 3072 W-W D29                | 29                           | 12 | 20  | 135 | 55 | 2 |                                                                                     |                                                                                     |                                                                                     |
| 3072 W-W D30                | 30                           | 13 | 20  | 135 | 55 | 2 |                                                                                     |                                                                                     |                                                                                     |
| 3072 W-W D31                | 31                           | 14 | 20  | 140 | 55 | 2 |                                                                                     |                                                                                     |                                                                                     |
| 3072 W-W D32                | 32                           | 15 | 20  | 140 | 55 | 2 |                                                                                     |                                                                                     |                                                                                     |
| 3072 W-W D33                | 33                           | 16 | 20  | 140 | 60 | 2 |                                                                                     |                                                                                     |                                                                                     |
| 3072 W-W D34                | 34                           | 16 | 25  | 140 | 60 | 2 |                                                                                     |                                                                                     |                                                                                     |
| 3072 W-W D35                | 35                           | 17 | 25  | 140 | 60 | 2 |                                                                                     |                                                                                     |                                                                                     |
| 3072 W-W D36                | 36                           | 13 | 25  | 140 | 60 | 2 | XCMT 1305..<br>XCGT 1305..                                                          | M-VT41<br>5,0 Nm                                                                    | M-BT20                                                                              |
| 3072 W-W D37                | 37                           | 14 | 25  | 140 | 60 | 2 |                                                                                     |                                                                                     |                                                                                     |
| 3072 W-W D38                | 38                           | 15 | 25  | 140 | 60 | 2 |                                                                                     |                                                                                     |                                                                                     |
| 3072 W-W D39                | 39                           | 16 | 25  | 140 | 60 | 2 |                                                                                     |                                                                                     |                                                                                     |
| 3072 W-W D40                | 40                           | 17 | 25  | 140 | 60 | 2 |                                                                                     |                                                                                     |                                                                                     |
| 3072 W-W D41                | 41                           | 18 | 25  | 140 | 60 | 2 |                                                                                     |                                                                                     |                                                                                     |
| 3072 W-W D42                | 42                           | 19 | 25  | 140 | 60 | 2 |                                                                                     |                                                                                     |                                                                                     |
| 3072 W-W D43                | 43                           | 20 | 32  | 150 | 65 | 2 |                                                                                     |                                                                                     |                                                                                     |
| 3072 W-W D44                | 44                           | 21 | 32  | 150 | 65 | 2 |                                                                                     |                                                                                     |                                                                                     |
| 3072 W-W D45                | 45                           | 22 | 32  | 150 | 65 | 2 |                                                                                     |                                                                                     |                                                                                     |
| 3072 W-W D46                | 46                           | 23 | 32  | 150 | 65 | 2 |                                                                                     |                                                                                     |                                                                                     |
| 3072 W-W D47                | 47                           | 24 | 32  | 150 | 65 | 2 |                                                                                     |                                                                                     |                                                                                     |
| 3072 W-W D48                | 48                           | 25 | 32  | 150 | 65 | 2 |                                                                                     |                                                                                     |                                                                                     |
| 3072 W-W D49                | 49                           | 26 | 32  | 150 | 65 | 2 |                                                                                     |                                                                                     |                                                                                     |
| 3072 W-W D50                | 50                           | 27 | 32  | 150 | 65 | 2 |                                                                                     |                                                                                     |                                                                                     |

Bestellbeispiel / Order example: 3072 W-W D16

W-W = Kühlmittelbohrung / W-W = coolant bores

D

# Serie 3072 - Fräser zum Aufbohren Series 3072 - Boring milling cutter



|                   | Form Figure | Abmessungen Dimensions |       |      |    |     | Bezeichnung Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|-------------------|-------------|------------------------|-------|------|----|-----|-------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                   |             | l                      | d     | s    | d1 | r   |                         |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>XCMT .. (ALU) |             | 6,45                   | 6,35  | 2,38 |    | 0,4 | XCMT 070204 ALU         | M-VT25   | M-BT 08   |                                         |     |                                     |       |       |       |       |       |
|                   |             | 6,45                   | 6,35  | 2,38 |    | 0,8 | XCMT 070208 ALU         | M-VT25   | M-BT 08   |                                         |     |                                     |       |       |       |       |       |
|                   |             | 9,67                   | 9,52  | 3,97 |    | 0,4 | XCMT 10T304 ALU         | M-VT40   | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|                   |             | 9,67                   | 9,52  | 3,97 |    | 0,8 | XCMT 10T308 ALU         | M-VT40   | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|                   |             |                        |       |      |    |     |                         |          |           |                                         |     |                                     |       |       |       |       |       |
| <br>XCMT .. WM    |             | 6,45                   | 6,35  | 2,38 |    | 0,4 | XCMT 070204 WM          | M-VT25   | M-BT 08   |                                         |     |                                     |       |       |       |       |       |
|                   |             | 6,45                   | 6,35  | 2,38 |    | 0,8 | XCMT 070208 WM          | M-VT25   | M-BT 08   |                                         |     |                                     |       |       |       |       |       |
|                   |             | 9,67                   | 9,52  | 3,97 |    | 0,4 | XCMT 10T304 WM          | M-VT40   | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|                   |             | 9,67                   | 9,52  | 3,97 |    | 0,8 | XCMT 10T308 WM          | M-VT40   | M-BT 15   |                                         |     |                                     |       |       |       |       |       |
|                   |             | 12,90                  | 12,70 | 4,76 |    | 0,4 | XCMT 130504 WM          | M-VT41   | M-BT 20   |                                         |     |                                     |       |       |       |       |       |
|                   |             | 12,90                  | 12,70 | 4,76 |    | 0,8 | XCMT 130408 WM          | M-VT41   | M-BT 20   |                                         |     |                                     |       |       |       |       |       |
|                   |             |                        |       |      |    |     |                         |          |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl       | Emulsion | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|----------|----------|-----|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |          |          |     |         |           |
| PTT20         |                   |     |             |                  | 120              | 120              | 100               | 100               |                   |                   |                   |                   |                   | 120             | 90              |       |       |                       |          |          |     |         |           |
| PTT35         |                   |     |             |                  | 120              | 120              | 100               | 100               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |          |          |     |         |           |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |          |          |     |         |           |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 120   |       |                       |          |          |     |         |           |
| KTE20         | 400               | 400 | 300         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |          |          |     |         |           |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |          |          |     |         |           |
| fz            | 0,1-0,2           |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | geeignet |          |     |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

## Serie 3075 - Rückwärtssenker 180° Series 3075 - Back chamfering milling cutter 180°

**Ausführung:** Rückwärts-Fräss-Senker, 180°, mit Innenkühlung

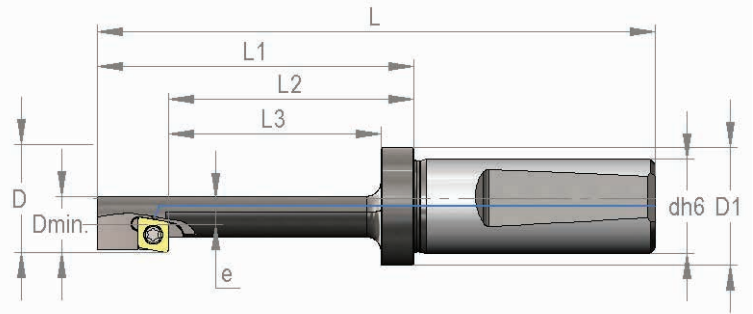
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher

**Anwendung:** zum Rückwärts-Senken

**Execution:** Back facing milling cutter, 180°, with inner coolant

**Delivery:** without insert, without screwdriver

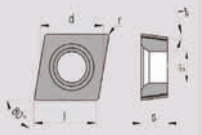
**Application:** for back facing



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |      |     |     |     |     |     |    |      | Wendepatte<br>Insert       | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|------|-----|-----|-----|-----|-----|----|------|----------------------------|-------------------|------------------|
|                             | D                            | Dmin | L   | L1  | L2  | L3  | dh6 | D1 | e    |                            |                   |                  |
| 3075 W D15                  | 15                           | 8,5  | 105 | 55  | 42  | 35  | 20  | 25 | 3,5  | CPMT 05T1..                | M-VT22            | M-BT06           |
| 3075 W D18                  | 18                           | 10,5 | 112 | 62  | 47  | 40  | 20  | 25 | 4    | CCMT 0602..<br>CCGT 0602.. | M-VT25<br>1,2 Nm  | M-BT08           |
| 3075 W-W D20                | 20                           | 13   | 117 | 67  | 52  | 45  | 20  | 25 | 3,75 |                            |                   |                  |
| 3075 W-W D24                | 24                           | 15   | 122 | 72  | 57  | 50  | 20  | 25 | 4,75 |                            |                   |                  |
| 3075 W-W D26                | 26                           | 17   | 132 | 82  | 67  | 60  | 20  | 25 | 5    |                            |                   |                  |
| 3075 W-W D30                | 30                           | 19   | 142 | 92  | 77  | 65  | 20  | 25 | 6    | CCMT 09T3..<br>CCGT 09T3.. | M-VT40<br>3,0 Nm  | M-BT15           |
| 3075 W-W D33                | 33                           | 21   | 152 | 102 | 82  | 75  | 20  | 25 | 6,6  |                            |                   |                  |
| 3075 W-W D36                | 36                           | 23   | 173 | 113 | 93  | 85  | 32  | 40 | 7    |                            |                   |                  |
| 3075 W-W D40                | 40                           | 25   | 183 | 123 | 103 | 95  | 32  | 40 | 8    |                            |                   |                  |
| 3075 W-W D43                | 43                           | 30   | 183 | 123 | 103 | 95  | 32  | 40 | 7    | CCMT 1204..<br>CCGT 1204.. | M-VT41<br>5,0 Nm  | M-BT20           |
| 3075 W-W D48                | 48                           | 33   | 223 | 163 | 143 | 135 | 32  | 40 | 8    |                            |                   |                  |
| 3075 W-W D53                | 53                           | 36   | 200 | 140 | 120 | 110 | 32  | 40 | 9    |                            |                   |                  |
| 3075 W-W D57                | 57                           | 39   | 210 | 150 | 130 | 120 | 32  | 40 | 9,5  |                            |                   |                  |
| 3075 W-W D66                | 66                           | 45   | 235 | 165 | 145 | 135 | 32  | 50 | 11   |                            |                   |                  |
| 3075 W-W D76                | 76                           | 52   | 255 | 185 | 165 | 155 | 32  | 50 | 12,5 |                            |                   |                  |

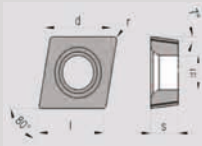
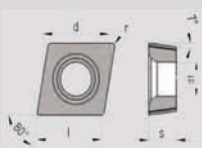
Bestellbeispiel / Order example: 3075 W D15

W-W = Kühlmittelbohrung / W-W = coolant bores

|                                                                                                       | Form Figure                                                                         | Abmessungen Dimensions |       |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|-------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|-------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                       |                                                                                     | l                      | d     | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>CPMT ..         |  | 5,60                   | 5,60  | 2,00 |    | 0,2 | CPMT 05T102                | M-VT 22  | M-BT 06   |                                         |     |                                     |       |       |       |       |       |
|                                                                                                       |                                                                                     | 5,60                   | 5,60  | 2,00 |    | 0,4 | CPMT 05T104                | M-VT 22  | M-BT 06   |                                         |     |                                     |       |       |       |       |       |
|                                                                                                       |                                                                                     |                        |       |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |
| <br>CCGT..<br>ALU-M |  | 6,20                   | 6,35  | 2,38 |    | 0,1 | CCGT 060201 ALU-M          | M-VT25   | M-BT 08   |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                       |                                                                                     | 6,20                   | 6,35  | 2,38 |    | 0,2 | CCGT 060202 ALU-M          | M-VT25   | M-BT 08   |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                       |                                                                                     | 6,00                   | 6,35  | 2,38 |    | 0,4 | CCGT 060204 ALU-M          | M-VT25   | M-BT 08   |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                       |                                                                                     | 9,40                   | 9,52  | 3,97 |    | 0,2 | CCGT 09T302 ALU-M          | M-VT40   | M-BT 15   |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                       |                                                                                     | 9,20                   | 9,52  | 3,97 |    | 0,4 | CCGT 09T304 ALU-M          | M-VT40   | M-BT 15   |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                       |                                                                                     | 8,80                   | 9,52  | 3,97 |    | 0,8 | CCGT 09T308 ALU-M          | M-VT40   | M-BT 15   |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                       |                                                                                     | 12,40                  | 12,70 | 4,76 |    | 0,4 | CCGT 120404 ALU-M          | M-VT41   | M-BT 20   |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                       |                                                                                     | 12,40                  | 12,70 | 4,76 |    | 0,8 | CCGT 120408 ALU-M          | M-VT41   | M-BT 20   |                                         | ■   |                                     |       |       |       |       | ■     |

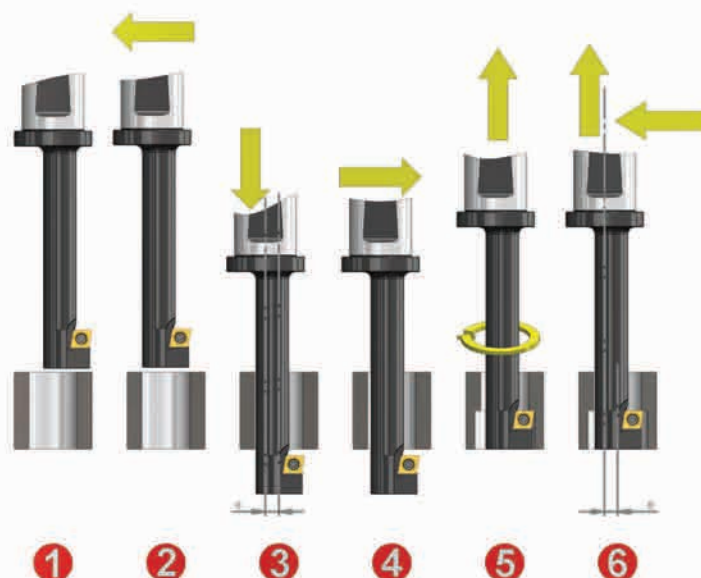
D

## Serie 3075 - Rückwärtssenker 180° Series 3075 - Back chamfering milling cutter 180°

|                                                                                                | Form Figure                                                                       | Abmessungen Dimensions |       |      |    |     | Bezeichnung Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------|-------|------|----|-----|-------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                |                                                                                   | l                      | d     | s    | d1 | r   |                         |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>CCMT .. WF |  | 6,20                   | 6,35  | 2,38 |    | 0,4 | CCMT 060202 WF          |          |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                                |                                                                                   | 6,00                   | 6,35  | 2,38 |    | 0,4 | CCMT 060204 WF          |          |           | ■                                       |     | ■                                   |       |       | ■     | ■     |       |
|                                                                                                |                                                                                   | 9,40                   | 9,52  | 3,97 |    | 0,2 | CCMT 09T302 WF          |          |           |                                         |     | ■                                   |       |       | ■     |       |       |
|                                                                                                |                                                                                   | 9,20                   | 9,52  | 3,97 |    | 0,4 | CCMT 09T304 WF          |          |           | ■                                       |     | ■                                   |       |       | ■     | ■     |       |
|                                                                                                |                                                                                   | 8,80                   | 9,52  | 3,97 |    | 0,8 | CCMT 09T308 WF          |          |           |                                         |     | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                |                                                                                   | 12,90                  | 12,70 | 4,76 |    | 0,4 | CCMT 120404 WF          |          |           |                                         |     | ■                                   |       |       | ■     |       |       |
|                                                                                                |                                                                                   |                        |       |      |    |     |                         |          |           |                                         |     |                                     |       |       |       |       |       |
| <br>CCMT .. WM |  | 6,45                   | 6,35  | 2,38 |    | 0,4 | CCMT 060204 WM          |          |           |                                         |     | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                |                                                                                   | 6,45                   | 6,35  | 2,38 |    | 0,8 | CCMT 060208 WM          |          |           |                                         |     | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                |                                                                                   | 9,67                   | 9,52  | 3,97 |    | 0,4 | CCMT 09T304 WM          |          |           |                                         |     | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                |                                                                                   | 9,67                   | 9,52  | 3,97 |    | 0,8 | CCMT 09T308 WM          |          |           |                                         |     | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                |                                                                                   | 12,90                  | 12,70 | 4,76 |    | 0,4 | CCMT 120404 WM          |          |           |                                         |     | ■                                   |       |       | ■     |       |       |
|                                                                                                |                                                                                   | 12,90                  | 12,70 | 4,76 |    | 0,8 | CCMT 120408 WM          |          |           |                                         |     | ■                                   |       |       | ■     | ■     |       |
|                                                                                                |                                                                                   | 12,90                  | 12,70 | 4,76 |    | 1,2 | CCMT 120412 WM          |          |           |                                         |     | ■                                   |       |       | ■     |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion           | MMS | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|------------|--------------------|-----|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |            |                    |     |         |           |
| PTT20         |                   |     |             |                  | 120              | 120              | 100               | 100               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| PTT35         |                   |     |             |                  | 120              | 120              | 100               | 100               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            | ■                  |     |         | ■         |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 120             | 90              |       |       |                       |            | ■                  |     |         | ■         |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 120   |       |                       |            | ■                  |     |         | ■         |
| KTE20         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| K10           |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |            |                    |     |         |           |
| fz            | 0,1-0,2           |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       | ■ geeignet | □ bedingt geeignet |     |         |           |

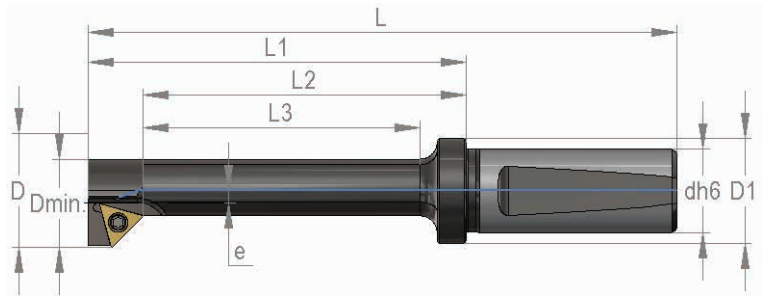
Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.





## Serie 3080 - Rückwärtssenker 45° Series 3080 - Back chamfering milling cutter 45°

**Ausführung:** Rückwärts-Fräss-Senker 45°, mit Innenkühlung  
**Lieferumfang:** ohne Wendeschneidplatten,  
 ohne Schraubendreher  
**Anwendung:** zum Rückwärtsfräsen 45°  
**Execution:** Back chamfering milling cutter 45°,  
 with inner coolant  
**Delivery:** without insert, without screwdriver  
**Application:** for back chamfering



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |      |     |     |    |    |     |    |     | Wendeplatte<br>Insert      | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|------|-----|-----|----|----|-----|----|-----|----------------------------|-------------------|------------------|
|                             | D                            | Dmin | L   | L1  | L2 | L3 | dh6 | D1 | e   |                            |                   |                  |
| 3080 W D15                  | 15                           | 10   | 105 | 55  | 42 | 35 | 20  | 25 | 2,7 | TCMT 0802..                | M-VT20<br>0,6 Nm  | M-BT06           |
| 3080 W-W D20                | 20                           | 15   | 110 | 60  | 47 | 40 | 20  | 25 | 3,2 |                            |                   |                  |
| 3080 W-W D23                | 23                           | 17   | 120 | 70  | 57 | 50 | 20  | 25 | 3,2 | TCMT 1102..<br>TCGT 1102.. | M-VT25<br>1,2 Nm  | M-BT08           |
| 3080 W-W D27                | 27                           | 21   | 140 | 90  | 77 | 70 | 20  | 25 | 3,2 |                            |                   |                  |
| 3080 W-W D31                | 31                           | 24   | 150 | 100 | 87 | 80 | 20  | 25 | 3,7 |                            |                   |                  |

Bestellbeispiel / Order example: 3080 W D15

W-W = Kühlmittelbohrung / W-W = coolant bores

|  | Form Figure | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|--|-------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|  |             | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|  |             | 7,60                   | 4,76 | 2,38 |    | 0,4 | TCMT 080204 WF             | M-VT 20  | M-BT 06   |                                         |     | ■                                   |       |       |       |       |       |
|  |             | 11,00                  | 6,35 | 2,38 |    | 0,4 | TCMT 110204 WM             | M-VT25   | M-BT 08   |                                         |     | ■                                   |       | ■     |       | ■     |       |
|  |             | 11,00                  | 6,35 | 2,38 |    | 0,8 | TCMT 110208 WM             | M-VT 25  | M-BT 08   |                                         |     | ■                                   |       | ■     |       | ■     |       |
|  |             | 10,50                  | 6,35 | 2,38 |    | 0,2 | TCGT 110202 ALU-M          | M-VT 25  | M-BT 08   | ■                                       |     |                                     |       |       |       |       | ■     |
|  |             | 10,00                  | 6,35 | 2,38 |    | 0,4 | TCGT 110204 ALU-M          | M-VT 25  | M-BT 08   | ■                                       |     |                                     |       |       |       |       | ■     |
|  |             |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu<br>Kunststoff | Alu | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl | Emulsion   | MMS                | Trocken | Druckluft |
|---------------|-------------------|-----|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|-------|-------|-----------------------|----|------------|--------------------|---------|-----------|
| ISO-Code      | N                 | N   | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K     | S     | N                     |    |            |                    |         |           |
| PTT20         |                   |     |             |                  | 120              | 120              | 100               | 100               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■          |                    |         | ■         |
| PTT35         |                   |     |             |                  | 120              | 120              | 100               | 100               |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■          |                    |         | ■         |
| PAP28         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   | 120             | 90              |       |       |                       |    | ■          |                    |         | ■         |
| MTM10         |                   |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 | 120   |       |                       |    | ■          |                    |         | ■         |
| KTE20         | 400               | 400 | 300         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■          |                    |         | ■         |
| K10           | 300               | 300 | 250         |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■          |                    |         | ■         |
| fr            | 0,1-0,2           |     |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |       |       |                       |    | ■ geeignet | □ bedingt geeignet |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
 Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.



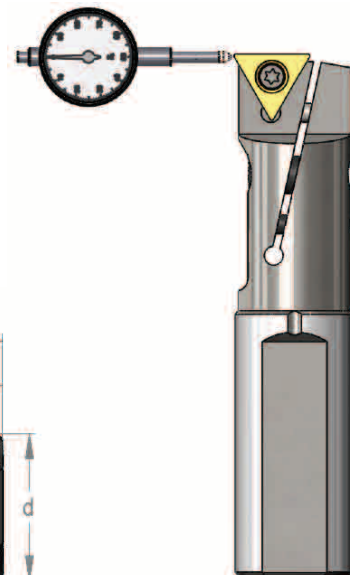
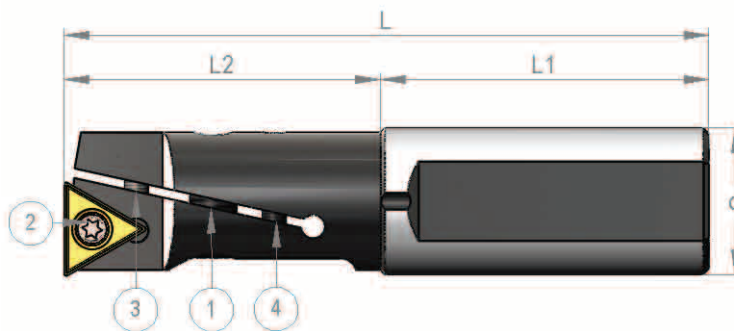
## Serie 3085 - Einstellbare Ausspindelbohrstange Series 3085 - Adjustment boring bars



**Ausführung:** Einstellbare Feinspindel-Bohrstange mit zyl. Schaft und Kühlkanal  
**Lieferumfang:** ohne Wendeschneidplatten, ohne Schraubendreher  
**Anwendung:** zum fertigen in Passungen

**Execution:** Adjustable boring-bars with cyl. shaft and coolant channel  
**Delivery:** without insert, without screwdriver  
**Application:** for finishing operations

**Einsatzbereich:** ab Ø 7mm bis 55mm  
**Working diameter:** from Ø 7mm to 55mm



Mit Kühlkanal  
With coolant channel

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |        |        | 1.                                   | 2.                                 | 3.                                           | 4.                                   | Wendeplatte  |
|-----------------------------|------------------------------|----|-----|----|--------|--------|--------------------------------------|------------------------------------|----------------------------------------------|--------------------------------------|--------------|
|                             | L                            | L1 | L2  | d  | D min. | D max. | Druck-<br>schraube<br>Clamp<br>screw | WP-<br>Schraube<br>insert<br>screw | Einstell-<br>schraube<br>Adjustment<br>screw | Druck-<br>schraube<br>Clamp<br>screw |              |
| 3085 M.E.B.-07 WL           | 90                           | 38 | 52  | 10 | 7      | 8      | M-BL9                                | M-VT 20                            | M-RE 9                                       | M-RE 9-1                             | TPGX 0601..L |
| 3085 M.E.B.-08 WL           | 90                           | 38 | 52  | 10 | 8      | 10     | M-B10                                | M-VT 20                            | M-RE 10                                      | M-RE 10-1                            |              |
| 3085 M.E.B.-10 WL           | 100                          | 40 | 60  | 10 | 10     | 12     | M-BL0                                | M-VT 20                            | M-RE 0                                       | M-RE 0-1                             | TPGX 0802..L |
| 3085 M.E.B.-12 WL           | 105                          | 45 | 60  | 12 | 12     | 15     | M-BL1                                | M-VT 20                            | M-RE 1                                       |                                      |              |
| 3085 M.E.B.-12 WXL          | 130                          | 45 | 85  | 12 | 12     | 15     | M-BL1                                | M-VT 20                            | M-RE 1                                       |                                      |              |
| 3085 M.E.B.-15 WL           | 110                          | 48 | 62  | 16 | 15     | 20     | M-BL2                                | M-VT 20                            | M-RE 2                                       | M-RE 2-1                             |              |
| 3085 M.E.B.-15 WXL          | 140                          | 48 | 92  | 16 | 15     | 20     | M-BL2                                | M-VT 20                            | M-RE 2                                       | M-RE 2-1                             | TCMT 1102..  |
| 3085 M.E.B.-20 W            | 100                          | 50 | 50  | 20 | 20     | 25     | M-BL3                                | M-VT 25                            | M-RE 3                                       | M-RE 3-1                             |              |
| 3085 M.E.B.-20 WL           | 120                          | 50 | 70  | 20 | 20     | 25     | M-BL3                                | M-VT 25                            | M-RE 3                                       | M-RE 3-1                             |              |
| 3085 M.E.B.-20 WXL          | 150                          | 50 | 100 | 20 | 20     | 25     | M-BL3                                | M-VT 25                            | M-RE 3                                       | M-RE 3-1                             |              |
| 3085 M.E.B.-25 W            | 110                          | 56 | 54  | 25 | 25     | 30     | M-BL4                                | M-VT 40                            | M-RE 4                                       | M-RE 4-1                             | TCMT 16T3..  |
| 3085 M.E.B.-25 WL           | 140                          | 56 | 84  | 25 | 25     | 30     | M-BL4                                | M-VT 40                            | M-RE 4                                       | M-RE 4-1                             |              |
| 3085 M.E.B.-25 WXL          | 170                          | 56 | 114 | 25 | 25     | 30     | M-BL4                                | M-VT 40                            | M-RE 4                                       | M-RE 4-1                             |              |
| 3085 M.E.B.-30 W            | 120                          | 56 | 64  | 25 | 30     | 35     | M-BL5                                | M-VT 40                            | M-RE 5                                       | M-RE 5-1                             |              |
| 3085 M.E.B.-30 WL           | 160                          | 56 | 104 | 25 | 30     | 35     | M-BL5                                | M-VT 40                            | M-RE 5                                       | M-RE 5-1                             |              |
| 3085 M.E.B.-30 WXL          | 190                          | 56 | 134 | 25 | 30     | 35     | M-BL5                                | M-VT 40                            | M-RE 5                                       | M-RE 5-1                             |              |
| 3085 M.E.B.-35 W            | 120                          | 60 | 60  | 32 | 35     | 40     | M-BL6                                | M-VT 40                            | M-RE 6                                       | M-RE 6-1                             |              |
| 3085 M.E.B.-35 WL           | 170                          | 60 | 110 | 32 | 35     | 40     | M-BL6                                | M-VT 40                            | M-RE 6                                       | M-RE 6-1                             |              |
| 3085 M.E.B.-35 WXL          | 220                          | 60 | 160 | 32 | 35     | 40     | M-BL6                                | M-VT 40                            | M-RE 6                                       | M-RE 6-1                             |              |
| 3085 M.E.B.-40 W            | 130                          | 60 | 70  | 32 | 40     | 45     | M-BL7                                | M-VT 40                            | M-RE 7                                       | M-RE 7-1                             |              |
| 3085 M.E.B.-40 WL           | 190                          | 60 | 130 | 32 | 40     | 45     | M-BL7                                | M-VT 40                            | M-RE 7                                       | M-RE 7-1                             |              |
| 3085 M.E.B.-45 W            | 150                          | 60 | 90  | 32 | 45     | 50     | M-BL8                                | M-VT 40                            | M-RE 8                                       | M-RE 8-1                             |              |
| 3085 M.E.B.-45 WL           | 220                          | 60 | 160 | 32 | 45     | 50     | M-BL8                                | M-VT 40                            | M-RE 8                                       | M-RE 8-1                             |              |
| 3085 M.E.B.-50 W            | 150                          | 60 | 90  | 32 | 50     | 55     | M-BL8                                | M-VT 40                            | M-RE 8                                       | M-RE 8-1                             |              |
| 3085 M.E.B.-50 WL           | 220                          | 60 | 160 | 32 | 50     | 55     | M-BL8                                | M-VT 40                            | M-RE 8                                       | M-RE 8-1                             |              |

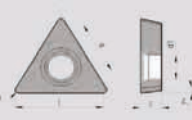
Bestellbeispiel / Order example: 3085 M.E.B.-07 WL

W = kurz                      WL = lang                      WXL = extra lang  
W = short                      WL = long                      WXL = extra long

# Serie 3085 - Einstellbare Ausspindelbohrstange

## Series 3085 - Adjustment boring bars



|                                                                                                 | Form Figure                                                                       | Abmessungen Dimensions |      |      |    |     | Bezeichnung Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     |  | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|-------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------|------|------|----|-----|-------------------------|----------|-----------|-----------------------------------------|-----|--|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                 |                                                                                   | l                      | d    | s    | d1 | r   |                         |          |           | CT28                                    | K10 |  | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>TPGX..      |  | 6,40                   | 3,97 | 1,59 |    | 0,2 | TPGX 060102 L           | M-VT 20  | M-BT 06   | ■                                       |     |  |                                     |       |       |       |       |       |
|                                                                                                 |                                                                                   | 5,80                   | 3,97 | 1,59 |    | 0,4 | TPGX 060104 L           | M-VT 20  | M-BT 06   | ■                                       |     |  |                                     |       |       |       |       |       |
|                                                                                                 |                                                                                   | 8,00                   | 4,76 | 2,18 |    | 0,2 | TPGX 080202 L           | M-VT 20  | M-BT 06   | ■                                       |     |  |                                     |       | ■     |       |       |       |
|                                                                                                 |                                                                                   | 8,00                   | 4,76 | 2,18 |    | 0,4 | TPGX 080204 L           | M-VT 20  | M-BT 06   |                                         |     |  |                                     |       | ■     |       |       |       |
| <br>TCMT .. WM |  | 11,00                  | 6,35 | 2,38 |    | 0,4 | TCMT 110204 WM          | M-VT25   | M-BT 08   |                                         |     |  | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                 |                                                                                   | 11,00                  | 6,35 | 2,38 |    | 0,8 | TCMT 110208 WM          | M-VT 25  | M-BT 08   |                                         |     |  | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                 |                                                                                   | 16,50                  | 9,52 | 3,97 |    | 0,4 | TCMT 16T304 WM          | M-VT 40  | M-BT 15   |                                         |     |  | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                 |                                                                                   | 16,50                  | 9,52 | 3,97 |    | 0,8 | TCMT 16T308 WM          | M-VT 40  | M-BT 15   |                                         |     |  | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                 |                                                                                   |                        |      |      |    |     |                         |          |           |                                         |     |  |                                     |       |       |       |       |       |

| Vc<br>(m/min) | Alu        |     |      | Stahl   |         |         |          |          |          |          |          |          |          |         | INOX    |     | GG(G) | TITAN | Graphit<br>GFK<br>CFK | Öl         | Emulsion | MMS                | Trocken | Druckluft |
|---------------|------------|-----|------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|---------|---------|-----|-------|-------|-----------------------|------------|----------|--------------------|---------|-----------|
|               | Kunststoff |     | Guss | < 500 N | < 750 N | < 900 N | < 1100 N | < 1400 N | < 55 HRC | < 60 HRC | < 65 HRC | < 67 HRC | < 70 HRC | < 900 N | > 900 N |     |       |       |                       |            |          |                    |         |           |
| ISO-Code      | N          | N   | N    | P       | P       | P       | P        | P        | H        | H        | H        | H        | H        | M       | M       | K   | S     | N     |                       |            |          |                    |         |           |
| PTT20         |            |     |      |         | 120     | 120     | 100      | 100      |          |          |          |          |          |         |         |     |       |       |                       | ■          |          |                    | ■       |           |
| PTT35         |            |     |      |         | 120     | 120     | 100      | 100      |          |          |          |          |          |         |         |     |       |       |                       | ■          |          |                    | ■       |           |
| PAP28         |            |     |      |         |         |         |          |          |          |          |          |          |          | 120     | 90      |     |       |       |                       | ■          |          |                    | ■       |           |
| MTM10         |            |     |      |         |         |         |          |          |          |          |          |          |          |         |         | 120 |       |       |                       | ■          |          |                    | ■       |           |
| KTE20         |            |     |      |         |         |         |          |          |          |          |          |          |          |         |         |     |       |       |                       |            |          |                    |         |           |
| CT28          | 100        | 100 | 80   |         |         |         |          |          |          |          |          |          |          |         |         |     |       |       |                       | ■          |          |                    | ■       |           |
| fz            | 0,05-0,15  |     |      |         |         |         |          |          |          |          |          |          |          |         |         |     |       |       |                       | ■ geeignet |          | □ bedingt geeignet |         |           |

Je nach Einsatzbedingung können die Schnittdaten nach oben oder nach unten korrigiert werden. Für die angegebenen Werte wird keine Haftung übernommen.  
Depending on the application condition, the cutting data can be corrected upwards or downwards. For the given values no liability is assumed.

D





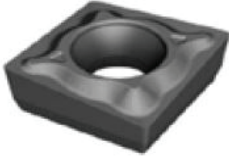
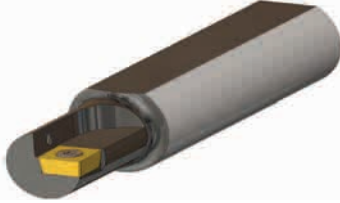
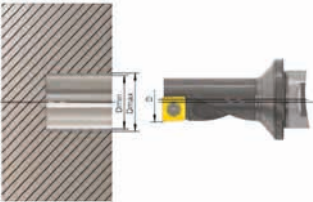
# KATALOG TURNING TOOLS

Catalogo Tornitura



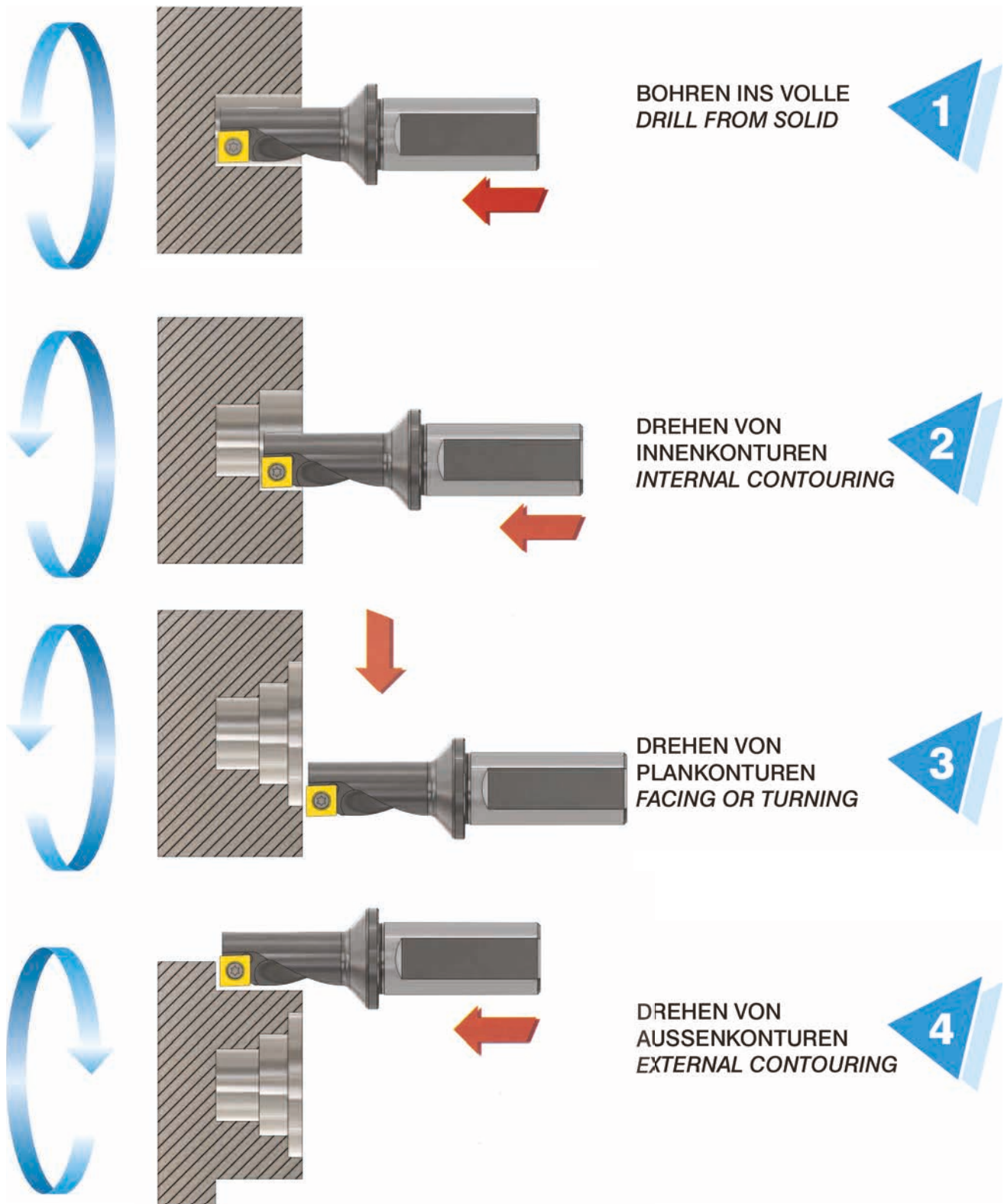
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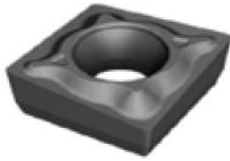


**4 Maschinen Operationen - Nur ein Werkzeug**  
**4 machining operations - only one tool**

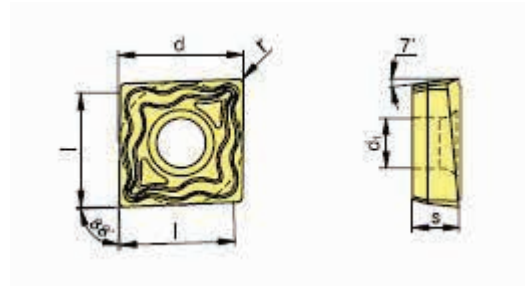


# Wendeplatten HD-Turn Drill G2

## Insert HD-Turn Drill G2



**XPNT-Stahl**  
**XPET-ALU**



| Bezeichnung<br>Designation | Abmessungen Dimensions |      |      |      |     | Unbeschichtet Sorten<br>uncoated grades |     |  |  | Beschichtet Sorten<br>coated grades                                               |                                                                                   |                                                                                   |                                                                                   |       |
|----------------------------|------------------------|------|------|------|-----|-----------------------------------------|-----|--|--|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------|
|                            | l                      | d    | s    | d1   | r   |                                         | K10 |  |  | PTT20                                                                             | PTT35                                                                             | PAP28                                                                             | MTM10                                                                             | KTE20 |
| XPNT 040204 EL             | 4                      | 4,5  | 1,8  | 2,1  | 0,4 |                                         |     |  |  |  |  |  |  |       |
| XPNT 040204 ER             | 4                      | 4,5  | 1,8  | 2,1  | 0,4 |                                         |     |  |  |  |  |  |  |       |
| XPNT 050204 EN             | 5                      | 5,8  | 2,1  | 2,25 | 0,4 |                                         |     |  |  |  |  |  |  |       |
| XPNT 060204 EN             | 6                      | 6,5  | 2,92 | 2,5  | 0,4 |                                         |     |  |  |  |  |  |  |       |
| XPNT 070304 EN             | 7                      | 7,6  | 3,87 | 2,8  | 0,4 |                                         |     |  |  |  |  |  |  |       |
| XPNT 080304 EN             | 8                      | 8,5  | 3,87 | 3,4  | 0,4 |                                         |     |  |  |  |  |  |  |       |
| XPNT 090404 EN             | 9                      | 9,6  | 4,66 | 3,4  | 0,4 |                                         |     |  |  |  |  |  |  |       |
| XPNT 100404 EN             | 10                     | 10,6 | 4,66 | 4,4  | 0,4 |                                         |     |  |  |  |  |  |  |       |
| XPNT 100408 EN             | 10                     | 10,6 | 4,66 | 4,4  | 0,8 |                                         |     |  |  |  |  |  |  |       |
| XPNT 130504 EN             | 12,5                   | 13,5 | 5,45 | 5,3  | 0,4 |                                         |     |  |  |  |  |  |  |       |
| XPNT 130508 EN             | 12,5                   | 13,5 | 5,45 | 5,3  | 0,8 |                                         |     |  |  |  |  |  |  |       |
| XPNT 170608 EN             | 16                     | 17,5 | 6,25 | 5,3  | 0,8 |                                         |     |  |  |  |  |  |  |       |

| Bezeichnung<br>Designation | Abmessungen Dimensions |      |      |      |     | Unbeschichtet Sorten<br>uncoated grades |     |  | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|----------------------------|------------------------|------|------|------|-----|-----------------------------------------|-----|--|-------------------------------------|-------|-------|-------|-------|-------|
|                            | l                      | d    | s    | d1   | r   |                                         | K10 |  |                                     | PTT20 | PTT35 | PAP28 | MTM10 | KTE20 |
| XPET 040204 FL ALU         | 4                      | 4,5  | 1,8  | 2,1  | 0,4 |                                         | ■   |  |                                     |       |       |       |       | □     |
| XPET 040204 FR ALU         | 4                      | 4,5  | 1,8  | 2,1  | 0,4 |                                         | ■   |  |                                     |       |       |       |       | □     |
| XPET 050204 FN ALU         | 5                      | 5,8  | 2,1  | 2,25 | 0,4 |                                         | ■   |  |                                     |       |       |       |       | □     |
| XPET 060204 FN ALU         | 6                      | 6,5  | 2,92 | 2,5  | 0,4 |                                         | ■   |  |                                     |       |       |       |       | □     |
| XPET 070304 FN ALU         | 7                      | 7,6  | 3,87 | 2,8  | 0,4 |                                         | ■   |  |                                     |       |       |       |       | □     |
| XPET 080304 FN ALU         | 8                      | 8,5  | 3,87 | 3,4  | 0,4 |                                         | ■   |  |                                     |       |       |       |       | □     |
| XPET 090404 FN ALU         | 9                      | 9,6  | 4,66 | 3,4  | 0,4 |                                         | ■   |  |                                     |       |       |       |       | □     |
| XPET 100404 FN ALU         | 10                     | 10,6 | 4,66 | 4,4  | 0,4 |                                         | ■   |  |                                     |       |       |       |       | □     |
| XPET 100408 FN ALU         | 10                     | 10,6 | 4,66 | 4,4  | 0,8 |                                         | ■   |  |                                     |       |       |       |       | □     |
| XPET 130504 FN ALU         | 12,5                   | 13,5 | 5,45 | 5,3  | 0,4 |                                         | ■   |  |                                     |       |       |       |       | □     |
| XPET 130508 FN ALU         | 12,5                   | 13,5 | 5,45 | 5,3  | 0,8 |                                         | ■   |  |                                     |       |       |       |       | □     |
| XPET 170608 FN ALU         | 16                     | 17,5 | 6,25 | 5,3  | 0,8 |                                         | ■   |  |                                     |       |       |       |       | □     |

■ auf Anfrage

# Serie 6080MC.. HD-Turn Drill G2

## Ausführung:

- Bohrstange aus speziellem Werkzeugstahl zum Bohren und Innen- / Aussendrehen
- geschliffener Schaft
- Innenkühlung

## Execution:

- boring bars made of special tool-steel for drilling and turning
- grinded shaft
- inner coolant

Fig. A

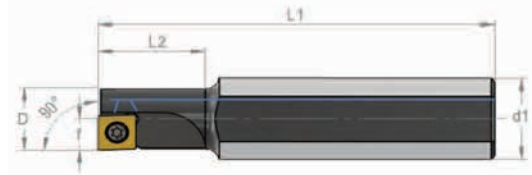


Fig. B

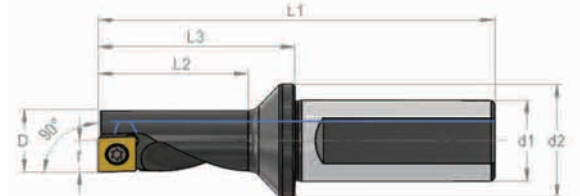


Abb. rechte Ausführung

Fig. A: 1,50 x D

Fig. B: 2,25 x D

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |      |      |      |    |      | Wendeplatte<br>Insert                                                               | Schraube<br>Screw                                                                   | Schlüssel<br>Key                                                                    |
|-----------------------------|------------------------------|----|----|------|------|------|----|------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                             | D                            | d1 | d2 | L1   | L2   | L3   | f  | Fig. |  |  |  |
| 6080MC 08L-1.50D 04         | 8                            | 12 |    | 80   | 12   |      | 4  | A    | XPNT 0402..EL<br>XPET 0402..FL                                                      | M-VTD18                                                                             | M-BT06                                                                              |
| 6080MC 08L-2.25D 04         | 8                            | 10 | 15 | 60   | 18   | 22   | 4  | B    |                                                                                     |                                                                                     |                                                                                     |
| 6080MC 08R-1.50D 04         | 8                            | 12 |    | 80   | 12   |      | 4  | A    | XPNT 0402..ER<br>XPET 0402..FR                                                      | M-VTD18                                                                             | M-BT06                                                                              |
| 6080MC 08R-2.25D 04         | 8                            | 10 | 15 | 60   | 18   | 22   | 4  | B    |                                                                                     |                                                                                     |                                                                                     |
| 6080MC 10R/L-1.50D 05       | 10                           | 12 |    | 90   | 15   |      | 5  | A    | XPNT 0502..<br>XPET 0502..                                                          | M-VTD20                                                                             | M-BT06                                                                              |
| 6080MC 10R/L-2.25D 05       | 10                           | 12 | 18 | 69,5 | 22,5 | 27,5 | 5  | B    |                                                                                     |                                                                                     |                                                                                     |
| 6080MC 12R/L-1.50D 06       | 12                           | 16 |    | 100  | 18   |      | 6  | A    | XPNT 0602..<br>XPET 0602..                                                          | M-VTD22                                                                             | M-BT07                                                                              |
| 6080MC 12R/L-2.25D 06       | 12                           | 16 | 22 | 78   | 27   | 33   | 6  | B    |                                                                                     |                                                                                     |                                                                                     |
| 6080MC 14R/L-1.50D 07       | 14                           | 16 |    | 110  | 21   |      | 7  | A    | XPNT 0703..<br>XPET 0703..                                                          | M-VTD25                                                                             | M-BT 08                                                                             |
| 6080MC 14R/L-2.25D 07       | 14                           | 16 | 23 | 83,5 | 31,5 | 38,5 | 7  | B    |                                                                                     |                                                                                     |                                                                                     |
| 6080MC 16R/L-1.50D 08       | 16                           | 20 |    | 125  | 24   |      | 8  | A    | XPNT 0803..<br>XPET 0803..                                                          | M-VTD30                                                                             | M-BT 09                                                                             |
| 6080MC 16R/L-2.25D 08       | 16                           | 20 | 28 | 94   | 36   | 44   | 8  | B    |                                                                                     |                                                                                     |                                                                                     |
| 6080MC 18R/L-1.50D 09       | 18                           | 25 |    | 135  | 27   |      | 9  | A    | XPNT 0904..<br>XPET 0904..                                                          | M-VTD30                                                                             | M-BT 09                                                                             |
| 6080MC 18R/L-2.25D 09       | 18                           | 25 | 36 |      | 40,5 | 53,5 | 9  | B    |                                                                                     |                                                                                     |                                                                                     |
| 6080MC 20R/L-1.50D 10       | 20                           | 25 |    | 150  | 30   |      | 10 | A    | XPNT 1004..<br>XPET 1004..                                                          | M-VTD35                                                                             | M-BT 15                                                                             |
| 6080MC 20R/L-2.25D 10       | 20                           | 25 | 35 | 111  | 45   | 55   | 10 | B    |                                                                                     |                                                                                     |                                                                                     |
| 6080MC 25R/L-1.50D 13       | 25                           | 32 |    | 180  | 37,5 |      |    | A    | XPNT 1304..<br>XPET 1304..                                                          | M-VTD45                                                                             | M-BT 20                                                                             |
| 6080MC 25R/L-2.25D 13       | 25                           | 32 | 44 | 129  | 56,5 | 69   |    | B    |                                                                                     |                                                                                     |                                                                                     |
| 6080MC 32R/L-1.50D 17       | 32                           | 40 |    | 200  | 48   |      | 16 | A    | XPNT 1706..<br>XPET 1706..                                                          | M-VTD45                                                                             | M-BT 20                                                                             |
| 6080MC 32R/L-2.25D 17       | 32                           | 40 | 54 | 158  | 72   | 88   | 16 | B    |                                                                                     |                                                                                     |                                                                                     |

Bestellbeispiel / Order example: 6080MC 08 R-2.25D 04

## Zubehör HD-Turn Drill G2

### Spare parts HD-Turn Drill G2

| Bezeichnung<br>Designation  | Gewinde<br>Thread size | Schlüsselgröße<br>Key size  |
|--------------------------------------------------------------------------------------------------------------|------------------------|--------------------------------------------------------------------------------------------------------------|
| M-VTD18                                                                                                      | M1,8 <del>8</del> ,6   | M-BT06                                                                                                       |
| M-VTD20                                                                                                      | M2,0 <del>4</del> ,3   | M-BT06                                                                                                       |
| M-VTD22                                                                                                      | M2,2 <del>5</del> ,0   | M-BT07                                                                                                       |
| M-VTD25                                                                                                      | M2,5 <del>8</del> ,0   | M-BT08                                                                                                       |
| M-VTD30                                                                                                      | M3,0 <del>7</del> ,0   | M-BT09                                                                                                       |
| M-VTD35                                                                                                      | M3,5 <del>8</del> ,6   | M-BT15                                                                                                       |
| M-VTD45                                                                                                      | M4,5 <del>4</del> 0,5  | M-BT20                                                                                                       |

# Schnittdaten HD-Turn Drill G2

## Cutting Data HD-Turn Drill G2

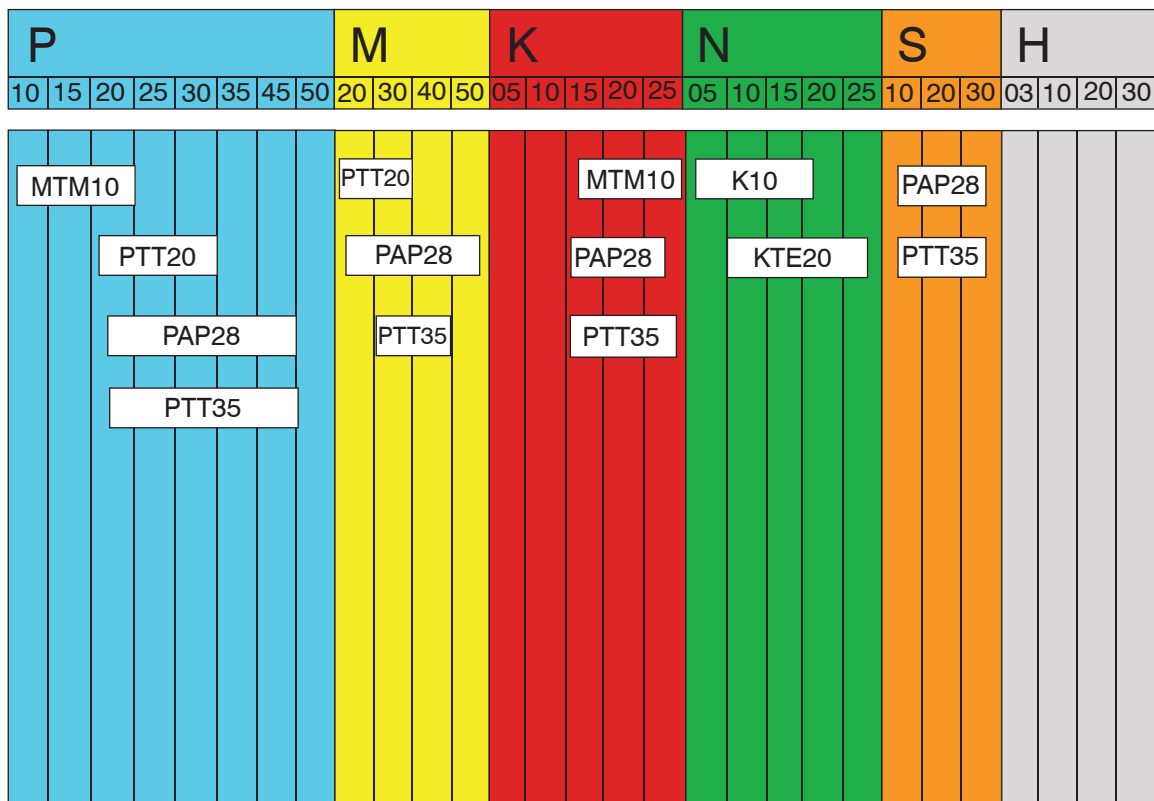
| Vc<br>(m/min) | Alu<br>Kunststoff | Alu     | Alu<br>Guss | Stahl<br>< 500 N | Stahl<br>< 750 N | Stahl<br>< 900 N | Stahl<br>< 1100 N | Stahl<br>< 1400 N | Stahl<br>< 55 HRC | Stahl<br>< 60 HRC | Stahl<br>< 65 HRC | Stahl<br>< 67 HRC | Stahl<br>< 70 HRC | INOX<br>< 900 N | INOX<br>> 900 N | GG(G)   | TITAN  | Graphit<br>GFK<br>CFK | Emulsion | MMS |  |  |  |  |
|---------------|-------------------|---------|-------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|-----------------|---------|--------|-----------------------|----------|-----|--|--|--|--|
| ISO-Code      | N                 | N       | N           | P                | P                | P                | P                 | P                 | H                 | H                 | H                 | H                 | H                 | M               | M               | K       | S      | N                     |          |     |  |  |  |  |
| PTT20         |                   |         |             | 270-90           | 270-90           | 270-70           | 170-60            |                   |                   |                   |                   |                   |                   |                 |                 | 250-120 |        |                       |          |     |  |  |  |  |
| PTT35         |                   |         |             | 250-70           | 250-70           | 180-60           | 160-50            |                   |                   |                   |                   |                   |                   | 180-90          |                 | 230-90  | 110-30 |                       |          |     |  |  |  |  |
| PAP28         |                   |         |             | 230-50           | 230-50           | 160-50           | 150-50            |                   |                   |                   |                   |                   |                   | 160-50          |                 | 180-90  | 90-30  |                       |          |     |  |  |  |  |
| MTM10         |                   |         |             | 270-90           | 270-90           | 270-70           | 170-60            |                   |                   |                   |                   |                   |                   |                 |                 | 250-120 |        |                       |          |     |  |  |  |  |
| KTE20         | 180-50            | 1800-70 | 1350-70     |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |         |        |                       |          |     |  |  |  |  |
| K10           | 180-50            | 1800-70 | 1350-70     |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |         |        |                       |          |     |  |  |  |  |
|               |                   |         |             |                  |                  |                  |                   |                   |                   |                   |                   |                   |                   |                 |                 |         |        |                       |          |     |  |  |  |  |

geeignet bedingt geeignet

## HM-Qualitäten

## HM-Grades

← Schnittgeschwindigkeit - Verschleissfestigkeit / cutting speed - wear resistance  
 Vorschub - Zähigkeit / advance-thoughness →



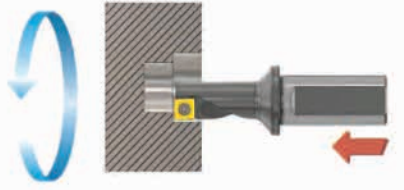
- P** MTM10, PTT20, PAP28, PTT35
- M** PTT20, PAP28, PTT35
- K** GG: MTM10  
GGG: PAP28, PTT35
- N** K10, KTE20
- S** PAP28, PTT35



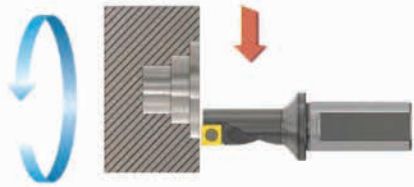
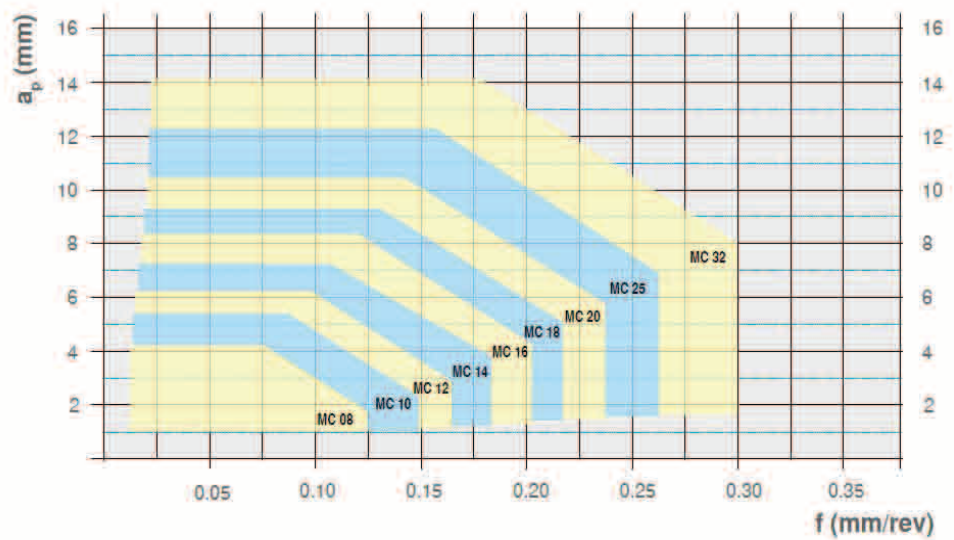
## Schnittdaten HD-Turn Drill G2

### Cutting Data HD-Turn Drill G2

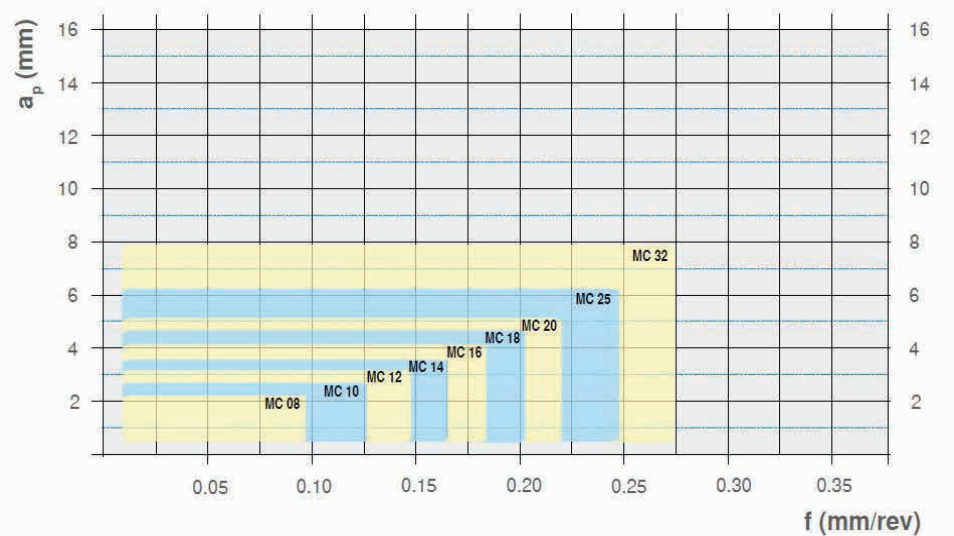
**Schnitttiefe / Vorschub - 1,50xD**  
**Depth of cut / feed rate - 1,50xD**



**Drehen von Innenkonturen**  
**Turning of internal profiles**



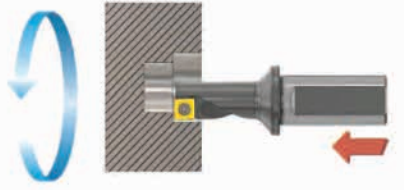
**Plandrehen**  
**Facing operations**



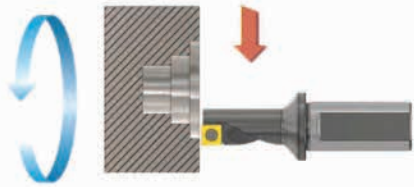
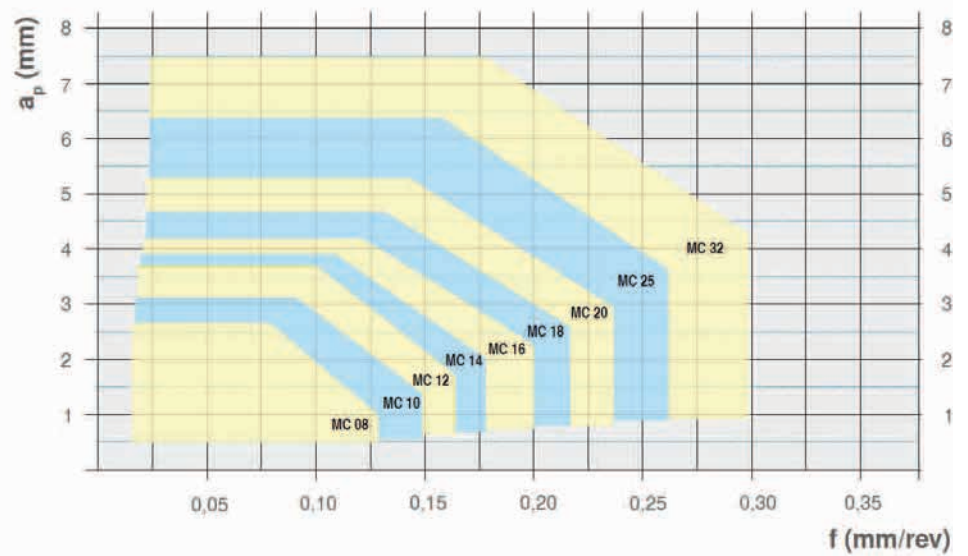
# Schnittdaten HD-Turn Drill G2

## Cutting Data HD-Turn Drill G2

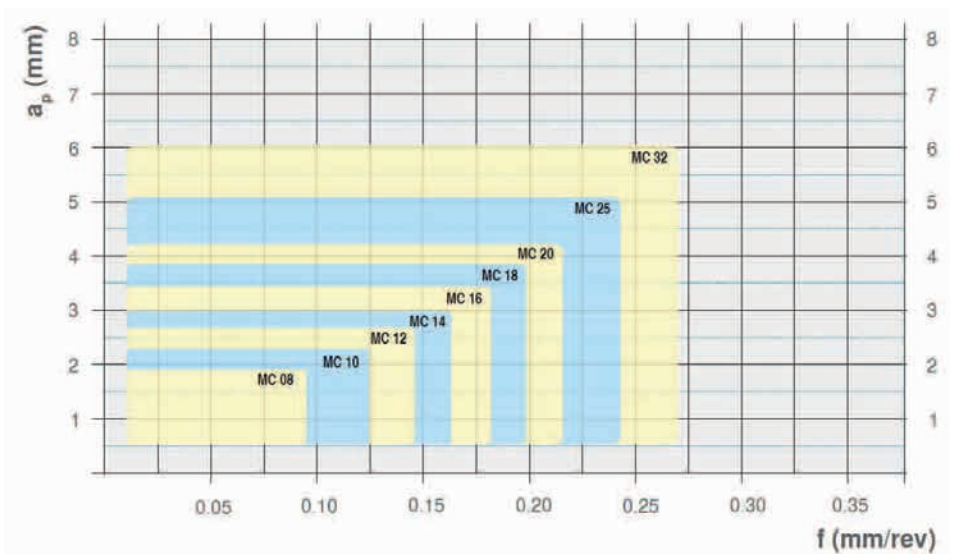
**Schnitttiefe / Vorschub - 2,25xD**  
**Depth of cut / feed rate - 2,25xD**



**Drehen von Innenkonturen**  
**Turning of internal profiles**



**Plandrehen**  
**Facing operations**



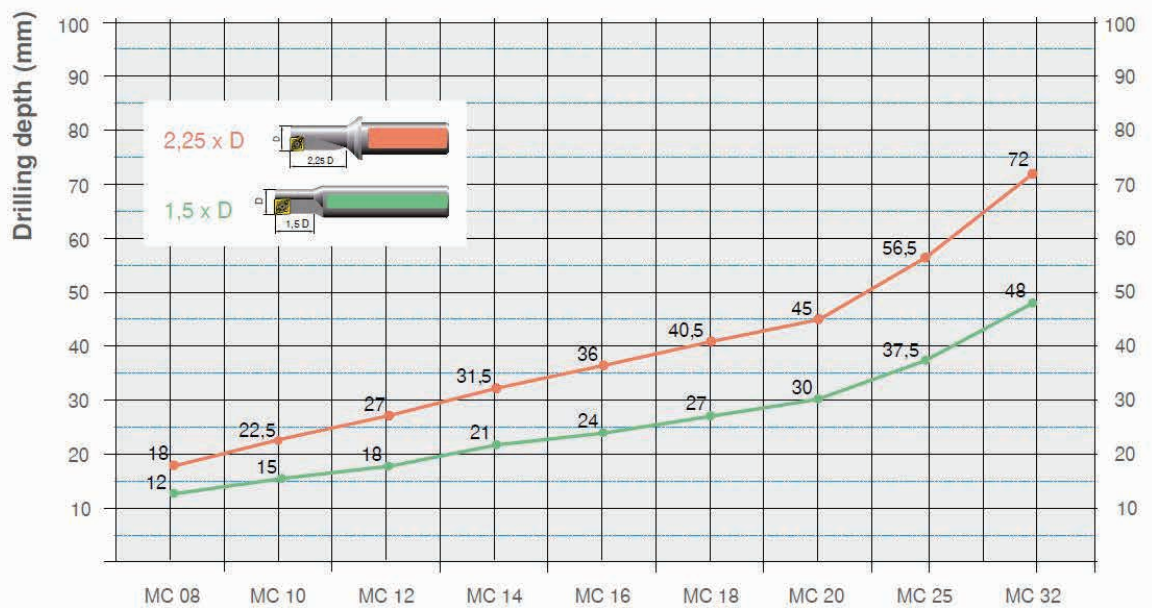
# Schnittdaten HD-Turn Drill G2

## Cutting Data HD-Turn Drill G2

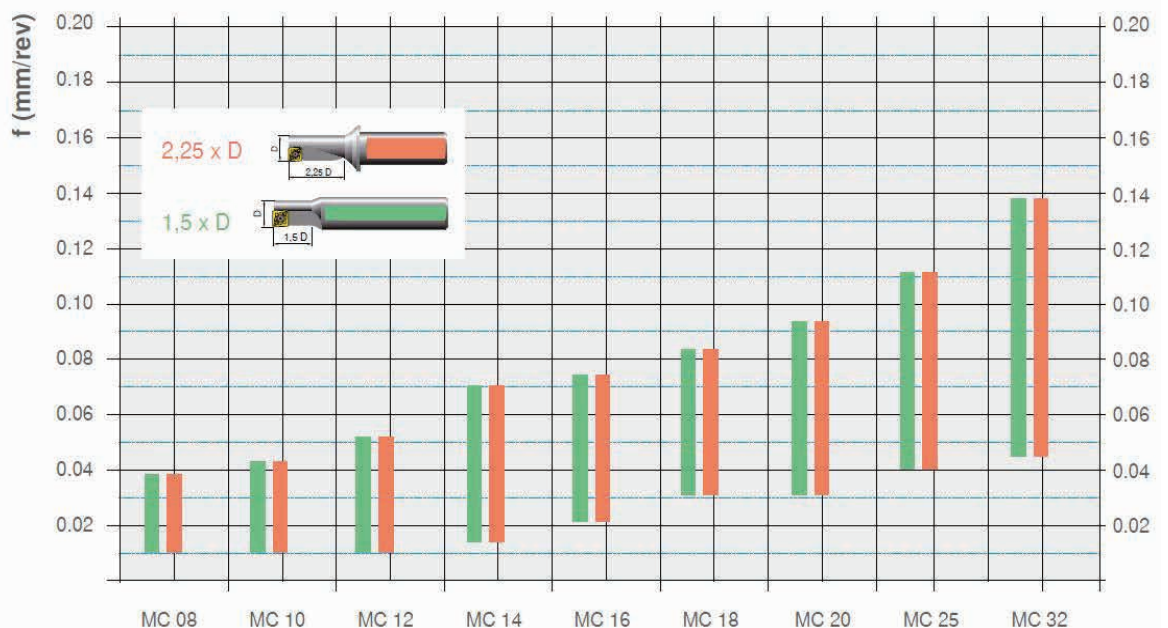
### Bohrtiefe / Vorschub

#### Drilling depth / feed rate

Bohrtiefe  
Drilling depth



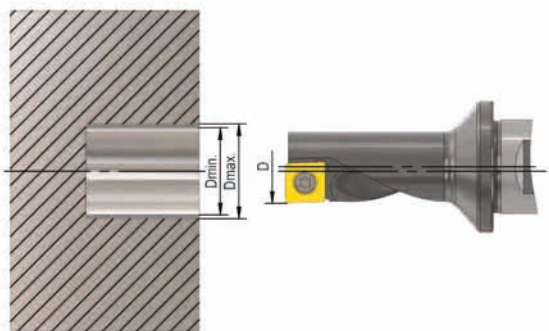
Bohrvorschub  
Drilling feed rate



## Bohren außer der Mitte HD-Turn Drill G2

### Off-centre drilling HD-Turn Drill G2

| Werkzeugtyp<br>Type of tool | D  | Werkstück Bohrdurchmesser |           |
|-----------------------------|----|---------------------------|-----------|
|                             |    | Dmin (mm)                 | Dmax (mm) |
| 6080MC 08R/L.... 04         | 8  | 7,85                      | 8,30      |
| 6080MC 10R/L.... 05         | 10 | 9,85                      | 10,50     |
| 6080MC 12R/L.... 06         | 12 | 11,85                     | 12,50     |
| 6080MC 14R/L.... 07         | 14 | 13,85                     | 14,50     |
| 6080MC 16R/L.... 08         | 16 | 15,85                     | 16,50     |
| 6080MC 18R/L.... 09         | 18 | 17,85                     | 18,50     |
| 6080MC 20R/L.... 10         | 20 | 19,80                     | 20,50     |
| 6080MC 25R/L.... 13         | 25 | 24,80                     | 25,80     |
| 6080MC 32R/L.... 17         | 32 | 31,80                     | 33,00     |



Dank dem speziellen Werkzeug design und der Form der Wendeplatte ist außermittiges Bohren möglich.

Thanks to the special design of the holder and the indexable inserts off centre drilling is possible.



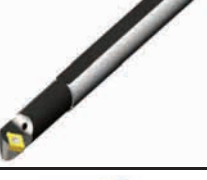


# KATALOG TURNING 1

Catalogo Tornitura-barenatura



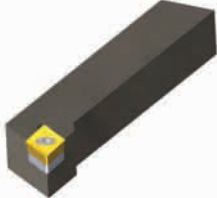
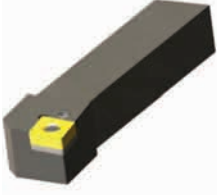


| Typ<br>Type                                                          | Serie<br>Series                                                      | Darstellung<br>Figure                                                               | WSP<br>Insert                             | Größe<br>Size     | Seite<br>Page |
|----------------------------------------------------------------------|----------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------|-------------------|---------------|
| Bohrstange mit Innenkühlung 95°<br>Boring bars with coolant 95°      | A.SCLC..<br>E.SCLC..<br>C.SCLC..                                     |    | CC.T 0602..<br>CC.T 09T3..<br>CC.T 1204.. | A08 - A25         | 470 -<br>471  |
|                                                                      | A.SCLD..<br>E.SCLD..<br>C.SCLD..                                     |    | CDGT 0401..                               | A04 - A06         | 472 -<br>473  |
|                                                                      | A.SCLD..<br>E.SCLD..<br>C.SCLD..<br>A.SCLC..<br>E.SCLC..<br>C.SCLC.. |    | CDGT 0401..<br>CC.T 0602..                | A0408 -<br>A1216  | 474 -<br>475  |
|                                                                      | SET<br>A.SCLC..<br>E.SCLC..<br>C.SCLC..                              |  | CC.T 0602..                               | A0608 -<br>A1216  | 474 -<br>475  |
| Bohrstange mit<br>Innenkühlung 80°<br>Boring bars with coolant 80°   | A.SCMC..<br>E.SCMC..<br>C.SCMC..                                     |  | CC.T 0602..                               | A0608 -<br>A1216  | 476 -<br>477  |
|                                                                      | SET<br>A.SCMC..<br>E.SCMC..<br>C.SCMC..                              |  | CC.T 0602..                               | A0608 -<br>A1216M | 476 -<br>477  |
| Bohrstange mit<br>Innenkühlung 100°<br>Boring bars with coolant 100° | A.SCXC..<br>E.SCXC..<br>C.SCXC..                                     |  | CC.T 0602..                               | A0608 -<br>A1216  | 478 -<br>479  |
|                                                                      | SET<br>A.SCXC..<br>E.SCXC..<br>C.SCXC..                              |  | CC.T 0602..                               | A0608 -<br>A1216  | 478 -<br>479  |

| Typ<br>Type                                                           | Serie<br>Series                             | Darstellung<br>Figure                                                                 | WSP<br>Insert                             | Größe<br>Size    | Seite<br>Page |
|-----------------------------------------------------------------------|---------------------------------------------|---------------------------------------------------------------------------------------|-------------------------------------------|------------------|---------------|
| Bohrstange mit Innenkühlung 93°<br>Boring bars with coolant 93°       | A.SDUC..<br>E.SDUC..<br>C.SDUC..            |    | DC.T 0702..<br>DC.T 11T3..                | A10 - A32        | 480 -<br>481  |
|                                                                       | A.SDUC..<br>E.SDUC..<br>C.SDUC..            |    | DCGT 04T0..<br>DC.T 0702..                | A0408 -<br>A1216 | 482 -<br>483  |
|                                                                       | SET<br>A.SDUC..<br>E.SDUC..<br>C.SDUC..     |    | DC.T 0702..                               | A0810 -<br>A1216 | 482 -<br>483  |
| Bohrstange mit Innenkühlung 107,5°<br>Boring bars with coolant 107,5° | A.SDQC..<br>E.SDQC..<br>C.SDQC..            |  | DC.T 0702..<br>DC.T 11T3..                | A12 - A32        | 484 -<br>485  |
|                                                                       | A.SDQC..<br>E.SDQC..<br>C.SDQC..            |  | DCGT 04T0..<br>DC.T 0702..                | A0408 -<br>A1216 | 486 -<br>487  |
| Bohrstange mit<br>Innenkühlung 93°<br>Boring bars with coolant 93°    | SET<br>A.SDQC..<br>E.SDQC..<br>C.SDQC..     |  | DC.T 0702..                               | A0810 -<br>A1216 | 488 -<br>489  |
|                                                                       | SDUC-EX<br>A.SDUC..<br>E.SDUC..<br>C.SDUC.. |  | DCGT 04T0..<br>DC.T 0702..<br>DC.T 11T3.. | A10 - A32        | 488 -<br>489  |
| Bohrstange mit<br>Innenkühlung 45°<br>Boring bars with coolant 45°    | A.SSSC..<br>E.SSSC..<br>C.SSSC..            |  | SC.T 09T3..<br>SC.T 1204..                | A16 - A32        | 490 -<br>491  |

| Typ<br>Type                                                              | Serie<br>Series                         | Darstellung<br>Figure | WSP<br>Insert                                            | Größe<br>Size | Seite<br>Page |
|--------------------------------------------------------------------------|-----------------------------------------|-----------------------|----------------------------------------------------------|---------------|---------------|
| Bohrstange mit<br>Innenkühlung 75°<br>Boring bars with coolant 75°       | A.SSKC..<br>E.SSKC..<br>C.SSKC..        |                       | SC.T 09T3..<br>SC.T 1204..                               | A16 - A32     | 492 -<br>493  |
| Bohrstange mit<br>Innenkühlung 90°<br>Boring bars with coolant 90°       | A.STFC..<br>E.STFC..<br>C.STFC..        |                       | TC.T 0902..<br>TC.T 1102..<br>TC.T 16T3..                | A10 - A32     | 494 -<br>495  |
| Bohrstange mit Innenkühlung 93°<br>Boring bars with coolant 93°          | A.STUC..<br>E.STUC..<br>C.STUC..        |                       | TC.T 1102..<br>TC.T 16T3..                               | A12 - A32     | 496 -<br>497  |
|                                                                          | A.SVUC..<br>E.SVUC..<br>C.SVUC..        |                       | VC.T 1103..<br>VC.T 1604..                               | A16 - A32     | 498 -<br>499  |
| Bohrstange mit Innenkühlung 52°<br>Boring bars with coolant 52°          | A.SVJC..<br>E.SVJC..<br>C.SVJC..        |                       | VC.T 0501..<br>VC.T 0702..<br>VC.T 1103..<br>VC.T 1604.. | A08 - A25     | 500 -<br>501  |
|                                                                          | SET<br>A.SVJC..<br>E.SVJC..<br>C.SVJC.. |                       | VC.T 0702..<br>VC.T 1103..                               | A16 - A20     | 500 -<br>501  |
| Bohrstange mit<br>Innenkühlung 107,5°<br>Boring bars with coolant 107,5° | A.SVQC..<br>E.SVQC..<br>C.SVQC..        |                       | VC.T 1103..<br>VC.T 1604..                               | A16 - A32     | 502 -<br>503  |
| Bohrstange mit<br>Innenkühlung 72,25°<br>Boring bars with coolant 72,25° | A.SVVC..<br>E.SVVC..<br>C.SVVC..        |                       | VC.T 0501..<br>VC.T 0702..<br>VC.T 1103..                | A08 - A16     | 504 -<br>505  |

| Typ<br>Type                                                          | Serie<br>Series                         | Darstellung<br>Figure | WSP<br>Insert              | Größe<br>Size    | Seite<br>Page |
|----------------------------------------------------------------------|-----------------------------------------|-----------------------|----------------------------|------------------|---------------|
| Bohrstange mit Innenkühlung 95°<br>Boring bars with coolant 95°      | A.SV95C..<br>E.SV95C..<br>C.SV95C..     |                       | VC.T 0501..<br>VC.T 0702.. | A08 - A16        | 506 -<br>507  |
|                                                                      | A.SVLC..<br>E.SVLC..<br>C.SVLC..        |                       | VC.T 0501..<br>VC.T 0702.. | A08 - A16        | 508 -<br>509  |
| Bohrstange mit<br>Innenkühlung 113°<br>Boring bars with coolant 113° | A.SVXC..<br>E.SVXC..<br>C.SVXC..        |                       | VC.T 0501..<br>VC.T 0702.. | A08 - A16        | 510 -<br>511  |
| Bohrstange mit Innenkühlung 93°<br>Boring bars with coolant 93°      | A.SWUC..<br>E.SWUC..<br>C.SWUC..        |                       | WCGT 0201..                | A0508 -<br>A0608 | 512 -<br>513  |
|                                                                      | SET<br>A.SWUC..<br>E.SWUC..<br>C.SWUC.. |                       | WCGT 020102                | A0508 -<br>A0608 | 512 -<br>513  |
| Bohrstange mit<br>Innenkühlung 95°<br>Boring bars with coolant 95°   | A.PCLN..<br>E.PCLN..<br>C.PCLN..        |                       | CN.. 0903..<br>CN.. 1204.. | A16 - A40        | 514 -<br>515  |
| Bohrstange mit<br>Innenkühlung 93°<br>Boring bars with coolant 93°   | A.PDUN..<br>E.PDUN..<br>C.PDUN..        |                       | DN.. 1104..<br>DN.. 1506.. | A25 - A40        | 516 -<br>517  |
| Bohrstange mit<br>Innenkühlung 95°<br>Boring bars with coolant 95°   | A.PWLN..<br>E.PWLN..<br>C.PWLN..        |                       | WN.. 0604..<br>WN.. 0804.. | A16 - A40        | 518 -<br>519  |

| Typ<br>Type                                                                | Serie<br>Series | Darstellung<br>Figure                                                               | WSP<br>Insert                                            | Größe<br>Size | Seite<br>Page |
|----------------------------------------------------------------------------|-----------------|-------------------------------------------------------------------------------------|----------------------------------------------------------|---------------|---------------|
| Drehhalter für die Außenbearbeitung 95°<br>External Turning tool 95°       | SCLC..          |    | CC.. 0602..<br>CC.. 09T3..<br>CC.. 1204..                | 0808 - 2525   | 520 - 521     |
| Drehhalter für die Außenbearbeitung 107,5°<br>External Turning tool 107,5° | SDHC..          |    | DC.. 11T3..                                              | 1616 - 2525   | 522 - 523     |
| Drehhalter für die Außenbearbeitung 93°<br>External Turning tool 93°       | SDJC..          |    | DC.. 0702..<br>DC.. 11T3..                               | 1010 - 2525   | 524 - 525     |
| Drehhalter für die Außenbearbeitung 45°<br>External Turning tool 45°       | SSSC..          |   | SC.. 09T3..<br>SC.. 1204..                               | 1212 - 2525   | 526 - 527     |
| Drehhalter für die Außenbearbeitung 107,3°<br>External Turning tool 107,3° | SVHC..          |  | VC.. 1604..                                              | 2020 - 2525   | 528 - 529     |
| Drehhalter für die Außenbearbeitung 93°<br>External Turning tool 93°       | SVJC..          |  | VC.. 1103..<br>VC.. 1604..                               | 1212 - 2525   | 530 - 531     |
| Drehhalter für die Außenbearbeitung 72,3°<br>External Turning tool 72,3°   | SVVC..          |  | VC.. 1103..<br>VC.. 1604..                               | 1212 - 2525   | 532 - 533     |
| Drehhalter für die Außenbearbeitung 95°<br>External Turning tool 95°       | PCLN..          |  | CN.. 0903..<br>CN.. 1204..<br>CN.. 1606..<br>CN.. 1906.. | 1616 - 4040   | 534 - 535     |

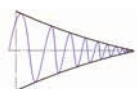
| Typ<br>Type                                                          | Serie<br>Series | Darstellung<br>Figure                                                                | WSP<br>Insert                                            | Größe<br>Size | Seite<br>Page |
|----------------------------------------------------------------------|-----------------|--------------------------------------------------------------------------------------|----------------------------------------------------------|---------------|---------------|
| Drehhalter für die Außenbearbeitung 93°<br>External Turning tool 93° | PDJN..          |    | DN.. 1104..<br>DN.. 1506..                               | 1616 - 4025   | 536 - 537     |
| Drehhalter für die Außenbearbeitung 93°<br>External Turning tool 93° | CKJN..          |    | KN.. 1604..                                              | 2020 - 3225   | 538 - 539     |
| Drehhalter für die Außenbearbeitung 45°<br>External Turning tool 45° | PSSN..          |    | SN.. 0903..<br>SN.. 1204..<br>SN.. 1506..<br>SN.. 1906.. | 1616 - 4040   | 540 - 541     |
| Drehhalter für die Außenbearbeitung 93°<br>External Turning tool 93° | MVJN..          |   | VN.. 1604..                                              | 2020 - 3225   | 542 - 543     |
| Drehhalter für die Außenbearbeitung 95°<br>External Turning tool 95° | PWLN..          |  | WN.. 0604..<br>WN.. 0804..                               | 1616 - 3232   | 544 - 545     |
| Bohrstangen Aufnahme<br>Boring bars adapter                          | A..             |  |                                                          | Ø4 - Ø6       | 472           |
|                                                                      |                 |                                                                                      |                                                          |               |               |
|                                                                      |                 |                                                                                      |                                                          |               |               |

F

A...: Bohrstangen mit geschliffenem Schaft und Innenkühlung  
A...: Boring bars with grinded shaft and inner coolant

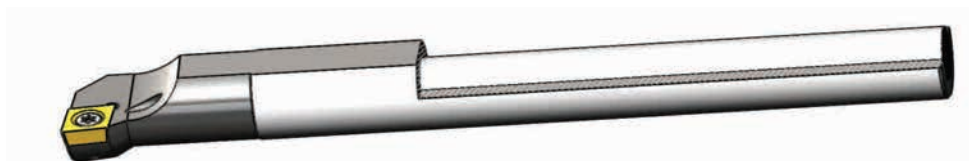


E-A...: Bohrstangen mit Vollhartmetallkern, geschliffenem Schaft und Innenkühlung  
E-A...: Boring bars with solid carbide core, grinded shaft and inner coolant

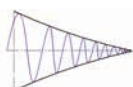


**SILENCE-HEAD®Master**

schwingungsgedämpft  
anti vibration



C-A...: Bohrstangen mit Carbonkern, geschliffenem Schaft und Innenkühlung  
C-A...: Boring bars with carbon fibre core, grinded shaft and inner coolant

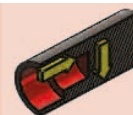


**SILENCE-HEAD®Master**

schwingungsgedämpft  
anti vibration



## Bohrstangen mit Innenkühlung 95° Boring bars with coolant 95°



### A.. - Stahlausführung / Steel execution

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |      | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|----|-----|----|------|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
|                             | dg7                          | f  | L1  | h  | Dmin |                                                                                                              |                                                                                                          |                                                                                                         |
| A 08F SCLC R/L 06           | 8                            | 6  | 80  | 7  | 12   | CC. T 0602..                                                                                                 | M-VT25                                                                                                   | M-BT08                                                                                                  |
| A 10H SCLC R/L 06           | 10                           | 7  | 100 | 9  | 14   |                                                                                                              |                                                                                                          |                                                                                                         |
| A 12K SCLC R/L 06           | 12                           | 9  | 125 | 11 | 18   |                                                                                                              |                                                                                                          |                                                                                                         |
| A 16M SCLC R/L 09           | 16                           | 11 | 150 | 14 | 22   | CC . T 09T3..                                                                                                | M-VT40                                                                                                   | M-BT15                                                                                                  |
| A 20Q SCLC R/L 09           | 20                           | 13 | 180 | 18 | 26   |                                                                                                              |                                                                                                          |                                                                                                         |
| A 25R SCLC R/L 09           | 25                           | 17 | 200 | 23 | 34   |                                                                                                              |                                                                                                          |                                                                                                         |
| A 32S SCLC R/L 12           | 32                           | 22 | 250 | 30 | 39   | CC . T 1204..                                                                                                | M-VT41                                                                                                   | M-BT20                                                                                                  |

Bestellbeispiel / Ordereꝑle: A08F SCLCR 06

M-BT08 = 1,2 Nm  
M-BT15 = 3,0 Nm  
M-BT20 = 5,0 Nm

### E-A.. - mit Vollhartmetallkern / with solid carbide core

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |      | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|----|-----|----|------|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
|                             | dg7                          | f  | L1  | h  | Dmin |                                                                                                                |                                                                                                            |                                                                                                           |
| E-A 08F SCLC R/L 06         | 8                            | 6  | 80  | 7  | 12   | CC. T 0602..                                                                                                   | M-VT25                                                                                                     | M-BT08                                                                                                    |
| E-A 10H SCLC R/L 06         | 10                           | 7  | 100 | 9  | 14   |                                                                                                                |                                                                                                            |                                                                                                           |
| E-A 12K SCLC R/L 06         | 12                           | 9  | 125 | 11 | 18   |                                                                                                                |                                                                                                            |                                                                                                           |
| E-A 16M SCLC R/L 09         | 16                           | 11 | 150 | 14 | 22   | CC . T 09T3..                                                                                                  | M-VT40                                                                                                     | M-BT15                                                                                                    |
| E-A 20Q SCLC R/L 09         | 20                           | 13 | 180 | 18 | 26   |                                                                                                                |                                                                                                            |                                                                                                           |
| E-A 25R SCLC R/L 09         | 25                           | 17 | 200 | 23 | 34   |                                                                                                                |                                                                                                            |                                                                                                           |
| E-A 32S SCLC R/L 12         | 32                           | 22 | 250 | 30 | 39   | CC . T 1204..                                                                                                  | M-VT41                                                                                                     | M-BT20                                                                                                    |

Bestellbeispiel / Ordereꝑle: E-A08F SCLCR 06

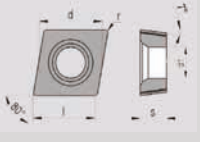
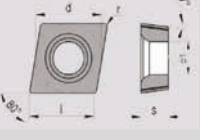
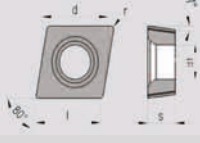
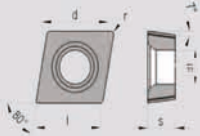
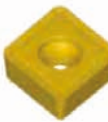
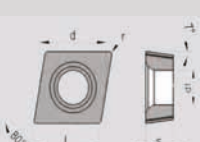
### C-A.. - mit Carbonkern / with carbon fibre core

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |      | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|----|-----|----|------|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
|                             | dg7                          | f  | L1  | h  | Dmin |                                                                                                                |                                                                                                            |                                                                                                           |
| C-A08F SCLC R/L 06          | 8                            | 6  | 80  | 7  | 12   | CC. T 0602..                                                                                                   | M-VT25                                                                                                     | M-BT08                                                                                                    |
| C-A10H SCLC R/L 06          | 10                           | 7  | 100 | 9  | 14   |                                                                                                                |                                                                                                            |                                                                                                           |
| C-A12K SCLC R/L 06          | 12                           | 9  | 125 | 11 | 18   |                                                                                                                |                                                                                                            |                                                                                                           |
| C-A16M SCLC R/L 09          | 16                           | 11 | 150 | 14 | 22   | CC . T 09T3..                                                                                                  | M-VT40                                                                                                     | M-BT15                                                                                                    |
| C-A20Q SCLC R/L 09          | 20                           | 13 | 180 | 18 | 26   |                                                                                                                |                                                                                                            |                                                                                                           |
| C-A25R SCLC R/L 09          | 25                           | 17 | 200 | 23 | 34   |                                                                                                                |                                                                                                            |                                                                                                           |
| C-A32S SCLC R/L 12          | 32                           | 22 | 250 | 30 | 39   | CC . T 1204..                                                                                                  | M-VT41                                                                                                     | M-BT20                                                                                                    |

Bestellbeispiel / Ordereꝑle: C-A08F SCLCR 06

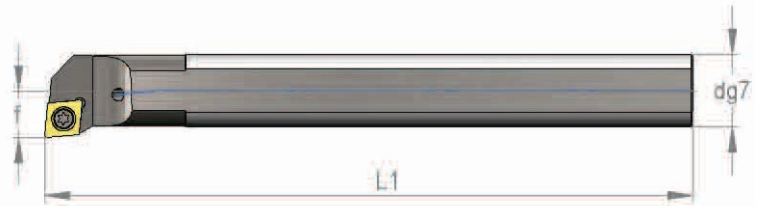


# Wendeplatte für Bohrstangen mit Innenkühlung 95° Insert for boring bars with coolant 95°

|                                                                                                     | Form Figure                                                                         | Abmessungen Dimensions |       |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     |  | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|-----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|-------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|--|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                     |                                                                                     | l                      | d     | s    | d1 | r   |                            |          |           | CT28                                    | K10 |  | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>CCGT..<br>ALU-M |    |                        |       |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
|                                                                                                     |                                                                                     | 6,20                   | 6,35  | 2,38 |    | 0,1 | CCGT 060201 ALU-M          | M-VT25   | M-BT 08   |                                         | ■   |  |                                     |       |       |       | ■     |       |
|                                                                                                     |                                                                                     | 6,20                   | 6,35  | 2,38 |    | 0,2 | CCGT 060202 ALU-M          | M-VT25   | M-BT 08   |                                         | ■   |  |                                     |       |       |       | ■     |       |
|                                                                                                     |                                                                                     | 6,00                   | 6,35  | 2,38 |    | 0,4 | CCGT 060204 ALU-M          | M-VT25   | M-BT 08   |                                         | ■   |  |                                     |       |       |       | ■     |       |
|                                                                                                     |                                                                                     | 9,40                   | 9,52  | 3,97 |    | 0,2 | CCGT 09T302 ALU-M          | M-VT40   | M-BT 15   |                                         | ■   |  |                                     |       |       |       | ■     |       |
|                                                                                                     |                                                                                     | 9,20                   | 9,52  | 3,97 |    | 0,4 | CCGT 09T304 ALU-M          | M-VT40   | M-BT 15   |                                         | ■   |  |                                     |       |       |       | ■     |       |
|                                                                                                     |                                                                                     | 8,80                   | 9,52  | 3,97 |    | 0,8 | CCGT 09T308 ALU-M          | M-VT40   | M-BT 15   |                                         | ■   |  |                                     |       |       |       | ■     |       |
|                                                                                                     |                                                                                     | 12,40                  | 12,70 | 4,76 |    | 0,4 | CCGT 120404 ALU-M          | M-VT41   | M-BT 20   |                                         | ■   |  |                                     |       |       |       | ■     |       |
|                                                                                                     |                                                                                     |                        |       |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
| <br>CCGT .. WFF     |    |                        |       |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
|                                                                                                     |                                                                                     | 6,20                   | 6,35  | 2,38 |    | 0,0 | CCGT 060200 WFF            | M-VT25   | M-BT 08   |                                         |     |  | ■                                   |       |       |       |       |       |
|                                                                                                     |                                                                                     | 6,00                   | 6,35  | 2,38 |    | 0,1 | CCGT 060201 WFF            | M-VT25   | M-BT 08   |                                         |     |  | ■                                   |       |       |       |       |       |
|                                                                                                     |                                                                                     | 9,20                   | 9,52  | 3,97 |    | 0,0 | CCGT 09T300 WFF            | M-VT40   | M-BT 15   |                                         |     |  | ■                                   |       |       |       |       |       |
|                                                                                                     |                                                                                     | 8,80                   | 9,52  | 3,97 |    | 0,1 | CCGT 09T301 WFF            | M-VT40   | M-BT 15   |                                         |     |  | ■                                   |       |       |       |       |       |
|                                                                                                     |                                                                                     |                        |       |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
| <br>CCMT .. WF    |  |                        |       |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
|                                                                                                     |                                                                                     | 6,20                   | 6,35  | 2,38 |    | 0,4 | CCMT 060202 WF             | M-VT25   | M-BT 08   |                                         |     |  | ■                                   |       |       | ■     |       |       |
|                                                                                                     |                                                                                     | 6,00                   | 6,35  | 2,38 |    | 0,4 | CCMT 060204 WF             | M-VT25   | M-BT 08   | ■                                       |     |  | ■                                   |       |       | ■     | ■     |       |
|                                                                                                     |                                                                                     | 9,40                   | 9,52  | 3,97 |    | 0,2 | CCMT 09T302 WF             | M-VT40   | M-BT 15   |                                         |     |  | ■                                   |       |       | ■     |       |       |
|                                                                                                     |                                                                                     | 9,20                   | 9,52  | 3,97 |    | 0,4 | CCMT 09T304 WF             | M-VT40   | M-BT 15   | ■                                       |     |  | ■                                   |       |       | ■     | ■     |       |
|                                                                                                     |                                                                                     | 8,80                   | 9,52  | 3,97 |    | 0,8 | CCMT 09T308 WF             | M-VT40   | M-BT 15   |                                         |     |  | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                     |                                                                                     |                        |       |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
| <br>CCMT .. WM    |  |                        |       |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
|                                                                                                     |                                                                                     | 6,45                   | 6,35  | 2,38 |    | 0,4 | CCMT 060204 WM             | M-VT25   | M-BT 08   |                                         |     |  | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                     |                                                                                     | 6,45                   | 6,35  | 2,38 |    | 0,8 | CCMT 060208 WM             | M-VT25   | M-BT 08   |                                         |     |  | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                     |                                                                                     | 9,67                   | 9,52  | 3,97 |    | 0,4 | CCMT 09T304 WM             | M-VT40   | M-BT 15   |                                         |     |  | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                     |                                                                                     | 9,67                   | 9,52  | 3,97 |    | 0,8 | CCMT 09T308 WM             | M-VT40   | M-BT 15   |                                         |     |  | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                     |                                                                                     | 12,90                  | 12,70 | 4,76 |    | 0,4 | CCMT 120404 WM             | M-VT41   | M-BT 20   |                                         |     |  | ■                                   |       |       | ■     |       |       |
|                                                                                                     |                                                                                     | 12,90                  | 12,70 | 4,76 |    | 0,8 | CCMT 120408 WM             | M-VT41   | M-BT 20   |                                         |     |  | ■                                   |       |       | ■     | ■     |       |
|                                                                                                     |                                                                                     | 12,90                  | 12,70 | 4,76 |    | 1,2 | CCMT 120412 WM             | M-VT41   | M-BT 20   |                                         |     |  | ■                                   |       |       | ■     |       |       |
|                                                                                                     |                                                                                     |                        |       |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
| <br>CCMT .. XM    |  |                        |       |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
|                                                                                                     |                                                                                     | 6,20                   | 6,35  | 2,38 |    | 0,2 | CCMT 060202 XM             | M-VT25   | M-BT 08   |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                     |                                                                                     | 6,00                   | 6,35  | 2,38 |    | 0,4 | CCMT 060204 XM             | M-VT25   | M-BT 08   |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                     |                                                                                     | 5,60                   | 6,35  | 2,38 |    | 0,8 | CCMT 060208 XM             | M-VT25   | M-BT 08   |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                     |                                                                                     | 9,20                   | 9,52  | 3,97 |    | 0,4 | CCMT 09T304 XM             | M-VT40   | M-BT 15   |                                         |     |  | ■                                   |       |       | ■     | ■     |       |
|                                                                                                     |                                                                                     | 8,80                   | 9,52  | 3,97 |    | 0,8 | CCMT 09T308 XM             | M-VT40   | M-BT 15   |                                         |     |  | ■                                   |       |       | ■     | ■     |       |
|                                                                                                     |                                                                                     | 12,40                  | 12,70 | 4,76 |    | 0,4 | CCMT 120404 XM             | M-VT41   | M-BT 20   |                                         |     |  | ■                                   |       |       | ■     | ■     |       |
|                                                                                                     |                                                                                     |                        |       |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
| <br>CCMX .. PWX   |  |                        |       |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
|                                                                                                     |                                                                                     | 9,20                   | 9,52  | 3,97 |    | 0,4 | CCMX 09T304 PWX            |          |           |                                         |     |  | ■                                   |       | ■     |       | ■     |       |
|                                                                                                     |                                                                                     | 8,80                   | 9,52  | 3,97 |    | 0,8 | CCMX 09T308 PWX            |          |           |                                         |     |  | ■                                   |       | ■     |       | ■     |       |
|                                                                                                     |                                                                                     |                        |       |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |

F

## Bohrstangen mit Innenkühlung 95° Boring bars with coolant 95°



### A.. - Stahlausführung / Steel execution

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |     |    |   |      | Wendeplatte<br>Insert                                                               | Schraube<br>Screw                                                                   | Schlüssel<br>Key                                                                    |
|-----------------------------|------------------------------|-----|----|---|------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                             | dg7                          | f   | L1 | h | Dmin |  |  |  |
| A 04E SCLD R/L 04           | 4                            | 2,4 | 70 |   | 4,8  | CDGT 0401..                                                                         | M-VT18<br>0,6 Nm                                                                    | M-BT06                                                                              |
| A 05E SCLD R/L 04           | 5                            | 2,9 | 70 |   | 5,8  |                                                                                     |                                                                                     |                                                                                     |
| A 06F SCLD R/L 04           | 6                            | 3,4 | 80 |   | 6,8  |                                                                                     |                                                                                     |                                                                                     |

Bestellbeispiel / Order example: A06F SCLDR 04

### E-A.. - mit Vollhartmetallkern / with solid carbide core

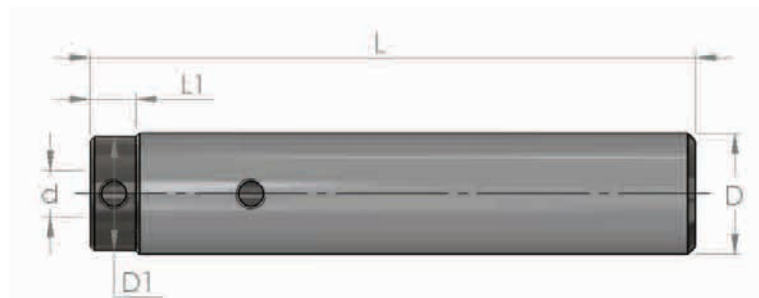
| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |     |    |   |      | Wendeplatte<br>Insert                                                               | Schraube<br>Screw                                                                   | Schlüssel<br>Key                                                                    |
|-----------------------------|------------------------------|-----|----|---|------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                             | dg7                          | f   | L1 | h | Dmin |  |  |  |
| E-A 04E SCLD R/L 04         | 4                            | 2,4 | 70 |   | 4,8  | CDGT 0401..                                                                         | M-VT18<br>0,6 Nm                                                                    | M-BT06                                                                              |
| E-A 05E SCLD R/L 04         | 5                            | 2,9 | 70 |   | 5,8  |                                                                                     |                                                                                     |                                                                                     |
| E-A 06F SCLD R/L 04         | 6                            | 3,4 | 80 |   | 6,8  |                                                                                     |                                                                                     |                                                                                     |

Bestellbeispiel / Order example: E-A06F SCLDR 04

### C-A.. - mit Carbonkern / with carbon fibre core

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |     |    |   |      | Wendeplatte<br>Insert                                                                 | Schraube<br>Screw                                                                     | Schlüssel<br>Key                                                                      |
|-----------------------------|------------------------------|-----|----|---|------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                             | dg7                          | f   | L1 | h | Dmin |  |  |  |
| C-A 04E SCLD R/L 04         | 4                            | 2,4 | 70 |   | 4,8  | CDGT 0401..                                                                           | M-VT18<br>0,6 Nm                                                                      | M-BT06                                                                                |
| C-A 05E SCLD R/L 04         | 5                            | 2,9 | 70 |   | 5,8  |                                                                                       |                                                                                       |                                                                                       |
| C-A 06F SCLD R/L 04         | 6                            | 3,4 | 80 |   | 6,8  |                                                                                       |                                                                                       |                                                                                       |

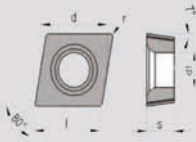
Bestellbeispiel / Order example: C-A06F SCLDR 04



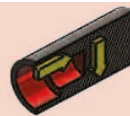
| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |    |    | Schraube<br>Screw                                                                     | Schlüssel<br>Key                                                                      |
|-----------------------------|------------------------------|----|----|----|----|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                             | d                            | D  | L  | L1 | D1 |  |  |
| A04-16                      | 4                            | 16 | 80 | 6  | 15 | M-M3                                                                                  | M-BT 06                                                                               |
| A05-16                      | 5                            | 16 | 80 | 6  | 15 |                                                                                       |                                                                                       |
| A06-16                      | 6                            | 16 | 80 | 6  | 15 |                                                                                       |                                                                                       |

Bestellbeispiel / Order example:

**Wendeplatte für Bohrstangen mit Innenkühlung 95°**  
**Insert for boring bars with coolant 95°**

|                                                                                             | Form Figure                                                                       | Abmessungen Dimensions |      |      |      |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     |  | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|---------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------|------|------|------|-----|----------------------------|----------|-----------|-----------------------------------------|-----|--|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                             |                                                                                   | l                      | d    | s    | d1   | r   |                            |          |           | CT28                                    | K10 |  | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>CDGT .. |  |                        |      |      |      |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
|                                                                                             |                                                                                   | 4,03                   | 3,97 | 1,00 | 2,10 | 0,2 | CDGT 040102 ALU-M          | M-VT18   | M-BT06    |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                             |                                                                                   |                        |      |      |      |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
|                                                                                             |                                                                                   |                        |      |      |      |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
|                                                                                             |                                                                                   |                        |      |      |      |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
|                                                                                             |                                                                                   |                        |      |      |      |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
|                                                                                             |                                                                                   |                        |      |      |      |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
|                                                                                             |                                                                                   | 4,03                   | 3,97 | 1,00 | 2,10 | 0,2 | CDGT 040102                | M-VT18   | M-BT06    |                                         |     |  | ■                                   |       |       |       |       |       |
|                                                                                             |                                                                                   |                        |      |      |      |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |

## Bohrstangen mit Innenkühlung 95° Boring bars with coolant 95°



### SET M-A-SCLC R/L 06

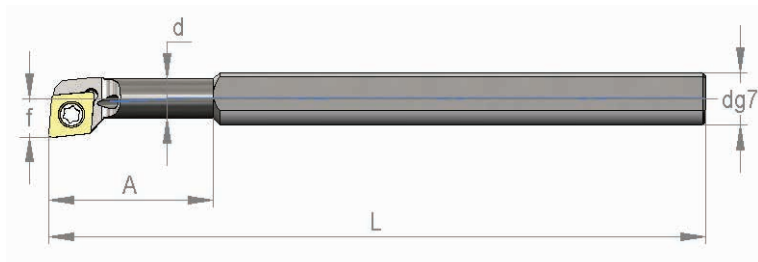
bestehend aus / consists of:

A0608F SCLC R/L 06

A0810H SCLC R/L 06

A1012K SCLC R/L 06

A1216M SCLC R/L 06



### A.. - Stahlausführung / Steel execution

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |     |      |    | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|----|-----|-----|------|----|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
|                             | dg7                          | d  | L   | f   | Dmin | A  |                                                                                                              |                                                                                                          |                                                                                                         |
| A 0408H SCLD R/L 04         | 8                            | 4  | 100 | 2,4 | 4,8  | 16 | CDGT 0401..                                                                                                  | M-VT18<br>0,6 Nm                                                                                         | M-BT06                                                                                                  |
| A 0508H SCLD R/L 04         | 8                            | 5  | 100 | 2,9 | 5,8  | 20 |                                                                                                              |                                                                                                          |                                                                                                         |
| A 0608H SCLD R/L 04         | 8                            | 6  | 100 | 3,4 | 6,8  | 24 |                                                                                                              |                                                                                                          |                                                                                                         |
| A 0608F SCLC R/L 06         | 8                            | 6  | 100 | 4   | 8    | 25 | CC . T 0602..                                                                                                | M-VT25<br>1,2 Nm                                                                                         | M-BT08                                                                                                  |
| A 0810H SCLC R/L 06         | 10                           | 8  | 110 | 6   | 12   | 32 |                                                                                                              |                                                                                                          |                                                                                                         |
| A 1012K SCLC R/L 06         | 12                           | 10 | 125 | 7   | 14   | 38 |                                                                                                              |                                                                                                          |                                                                                                         |
| A 1216M SCLC R/L 06         | 16                           | 12 | 150 | 9   | 18   | 50 |                                                                                                              |                                                                                                          |                                                                                                         |

Bestellbeispiel / Orderexample: A0608F SCLCR 06

### SET ME-A-SCLC R/L 06

bestehend aus / consists of:

E-A0608F SCLC R/L 06

E-A0810H SCLC R/L 06

E-A1012K SCLC R/L 06

E-A1216M SCLC R/L 06

### E-A.. - mit Vollhartmetallkern / with solid carbide core

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |     |      |    | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|----|-----|-----|------|----|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
|                             | dg7                          | d  | L   | f   | Bmin | A  |                                                                                                                |                                                                                                            |                                                                                                           |
| E-A 0408H SCLD R/L 04       | 8                            | 4  | 100 | 2,4 | 4,8  | 16 | CDGT 0401..                                                                                                    | M-VT18<br>0,6 Nm                                                                                           | M-BT06                                                                                                    |
| E-A 0508H SCLD R/L 04       | 8                            | 5  | 100 | 2,9 | 5,8  | 20 |                                                                                                                |                                                                                                            |                                                                                                           |
| E-A 0608H SCLD R/L 04       | 8                            | 6  | 100 | 3,4 | 6,8  | 24 |                                                                                                                |                                                                                                            |                                                                                                           |
| E-A 0608F SCLC R/L 06       | 8                            | 6  | 100 | 4   | 8    | 25 | CC . T 0602..                                                                                                  | M-VT25<br>1,2 Nm                                                                                           | M-BT08                                                                                                    |
| E-A 0810H SCLC R/L 06       | 10                           | 8  | 110 | 6   | 12   | 32 |                                                                                                                |                                                                                                            |                                                                                                           |
| E-A 1012K SCLC R/L 06       | 12                           | 10 | 125 | 7   | 14   | 38 |                                                                                                                |                                                                                                            |                                                                                                           |
| E-A 1216M SCLC R/L 06       | 16                           | 12 | 150 | 9   | 18   | 50 |                                                                                                                |                                                                                                            |                                                                                                           |

Bestellbeispiel / Orderexample: E-A0608F SCLCR 06

### SET MC-A-SCLC R/L 06

bestehend aus / consists of:

C-A0608F SCLC R/L 06

C-A0810H SCLC R/L 06

C-A1012K SCLC R/L 06

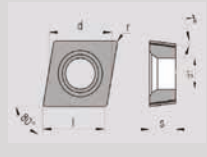
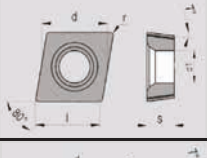
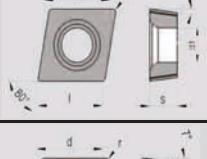
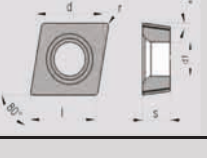
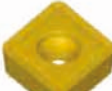
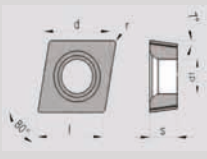
C-A1216M SCLC R/L 06

### C-A.. - mit Carbonkern / with carbon fibre core

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |     |      |    | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|----|-----|-----|------|----|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
|                             | dg7                          | d  | L   | f   | Bmin | A  |                                                                                                                |                                                                                                            |                                                                                                           |
| C-A 0408H SCLD R/L 04       | 8                            | 4  | 100 | 2,4 | 4,8  | 16 | CDGT 0401..                                                                                                    | M-VT18<br>0,6 Nm                                                                                           | M-BT06                                                                                                    |
| C-A 0508H SCLD R/L 04       | 8                            | 5  | 100 | 2,9 | 5,8  | 20 |                                                                                                                |                                                                                                            |                                                                                                           |
| C-A 0608H SCLD R/L 04       | 8                            | 6  | 100 | 3,4 | 6,8  | 24 |                                                                                                                |                                                                                                            |                                                                                                           |
| C-A0608F SCLC R/L 06        | 8                            | 6  | 100 | 4   | 8    | 25 | CC . T 0602..                                                                                                  | M-VT25<br>1,2 Nm                                                                                           | M-BT08                                                                                                    |
| C-A0810H SCLC R/L 06        | 10                           | 8  | 110 | 6   | 12   | 32 |                                                                                                                |                                                                                                            |                                                                                                           |
| C-A1012K SCLC R/L 06        | 12                           | 10 | 125 | 7   | 14   | 38 |                                                                                                                |                                                                                                            |                                                                                                           |
| C-A1216M SCLC R/L 06        | 16                           | 12 | 150 | 9   | 18   | 50 |                                                                                                                |                                                                                                            |                                                                                                           |

Bestellbeispiel / Orderexample: C-A0608F SCLCR 06

# Wendeplatten für Bohrstangen mit Innenkühlung 95° Insert for boring bars with coolant 95°

|                                                                                                     | Form Figure                                                                         | Abmessungen Dimensions |      |      |      |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     |  | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|-----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|------|-----|----------------------------|----------|-----------|-----------------------------------------|-----|--|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                     |                                                                                     | l                      | d    | s    | d1   | r   |                            |          |           | CT28                                    | K10 |  | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>CCGT..<br>ALU-M |    | 6,20                   | 6,35 | 2,38 |      | 0,1 | CCGT 060201 ALU-M          | M-VT25   | M-BT 08   |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                     |                                                                                     | 6,20                   | 6,35 | 2,38 |      | 0,2 | CCGT 060202 ALU-M          | M-VT25   | M-BT 08   |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                     |                                                                                     | 6,00                   | 6,35 | 2,38 |      | 0,4 | CCGT 060204 ALU-M          | M-VT25   | M-BT 08   |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                     |                                                                                     |                        |      |      |      |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
| <br>CCGT .. WFF     |    | 6,20                   | 6,35 | 2,38 |      | 0,0 | CCGT 060200 WFF            | M-VT25   | M-BT 08   |                                         |     |  | ■                                   |       |       |       |       |       |
|                                                                                                     |                                                                                     | 6,00                   | 6,35 | 2,38 |      | 0,1 | CCGT 060201 WFF            | M-VT25   | M-BT 08   |                                         |     |  | ■                                   |       |       |       |       |       |
|                                                                                                     |                                                                                     |                        |      |      |      |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
| <br>CCMT .. WF      |    | 6,20                   | 6,35 | 2,38 |      | 0,4 | CCMT 060202 WF             | M-VT25   | M-BT 08   |                                         |     |  | ■                                   |       |       | ■     |       |       |
|                                                                                                     |                                                                                     | 6,00                   | 6,35 | 2,38 |      | 0,4 | CCMT 060204 WF             | M-VT25   | M-BT 08   | ■                                       |     |  | ■                                   |       |       | ■     | ■     |       |
|                                                                                                     |                                                                                     |                        |      |      |      |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
| <br>CCMT .. WM      |   | 6,45                   | 6,35 | 2,38 |      | 0,4 | CCMT 060204 WM             | M-VT25   | M-BT 08   |                                         |     |  | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                     |                                                                                     | 6,45                   | 6,35 | 2,38 |      | 0,8 | CCMT 060208 WM             | M-VT25   | M-BT 08   |                                         |     |  | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                     |                                                                                     |                        |      |      |      |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
| <br>CCMT .. XM    |  | 6,20                   | 6,35 | 2,38 |      | 0,2 | CCMT 060202 XM             | M-VT25   | M-BT 08   |                                         |     |  | ■                                   |       |       |       |       | ■     |
|                                                                                                     |                                                                                     | 6,00                   | 6,35 | 2,38 |      | 0,4 | CCMT 060204 XM             | M-VT25   | M-BT 08   |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                     |                                                                                     | 5,60                   | 6,35 | 2,38 |      | 0,8 | CCMT 060208 XM             | M-VT25   | M-BT 08   |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                     |                                                                                     |                        |      |      |      |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
| <br>CDGT ..       |  | 4,03                   | 3,97 | 1,00 | 2,10 | 0,2 | CDGT 040102 ALU-M          | M-VT18   | M-BT06    |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                     |                                                                                     |                        |      |      |      |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
|                                                                                                     |                                                                                     |                        |      |      |      |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
|                                                                                                     |                                                                                     |                        |      |      |      |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
|                                                                                                     |                                                                                     | 4,03                   | 3,97 | 1,00 | 2,10 | 0,2 | CDGT 040102                | M-VT18   | M-BT06    |                                         |     |  | ■                                   |       |       |       |       |       |
|                                                                                                     |                                                                                     |                        |      |      |      |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |

F



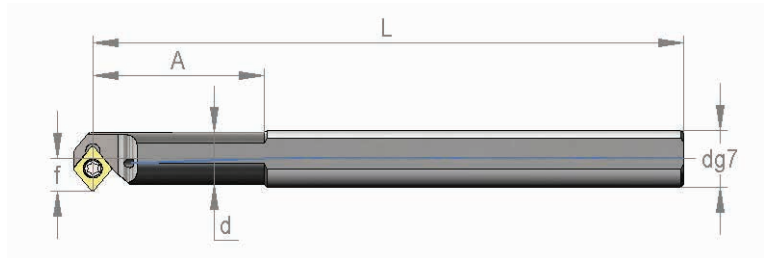
## Bohrstangen mit Innenkühlung 80° Boring bars with coolant 80°



### SET M-A-SCMC R/L 06

bestehend aus / consists of:

A0608F SCMC R/L 06  
A0810H SCMC R/L 06  
A1012K SCMC R/L 06  
A1216M SCMC R/L 06



### A.. - Stahlausführung / Steel execution

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |     |    |    |     |      |     | Wendeplatte<br>Inse | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|-----|----|----|-----|------|-----|---------------------|-------------------|------------------|
|                             | dg7                          | L   | A  | d  | f   | B    | I   |                     |                   |                  |
| A 0608H SCMC R/L 06         | 8                            | 100 | 20 | 6  | 5,5 | 10,5 | 15° | CC . T 0602..       | M-VT25<br>1,2 Nm  | M-BT08           |
| A 0810H SCMC R/L 06         | 10                           | 110 | 26 | 8  | 6   | 11   | 15° |                     |                   |                  |
| A 1012K SCMC R/L 06         | 12                           | 125 | 32 | 10 | 7   | 13   | 13° |                     |                   |                  |
| A 1216M SCMC R/L 06         | 16                           | 150 | 40 | 12 | 9   | 16   | 10° |                     |                   |                  |

Bestellbeispiel / Order example: A0608H SCMC R 06

### SET ME-A-SCMC R/L 06

bestehend aus / consists of:

E-A0608F SCMC R/L 06  
E-A0810H SCMC R/L 06  
E-A1012K SCMC R/L 06  
E-A1216M SCMC R/L 06

### E-A.. - mit Vollhartmetallkern / with solid carbide core

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |     |    |    |     |      |     | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|-----|----|----|-----|------|-----|-----------------------|-------------------|------------------|
|                             | dg7                          | L   | A  | d  | f   | B    | I   |                       |                   |                  |
| E-A 0608H SCMC R/L 06       | 8                            | 100 | 20 | 6  | 5,5 | 10,5 | 15° | CC . T 0602..         | M-VT25<br>1,2 Nm  | M-BT08           |
| E-A 0810H SCMC R/L 06       | 10                           | 110 | 26 | 8  | 6   | 11   | 15° |                       |                   |                  |
| E-A 1012K SCMC R/L 06       | 12                           | 125 | 32 | 10 | 7   | 13   | 13° |                       |                   |                  |
| E-A 1216M SCMC R/L 06       | 16                           | 150 | 40 | 12 | 9   | 16   | 10° |                       |                   |                  |

Bestellbeispiel / Order example: E-A0608H SCMC R 06

### SET MC-A-SCMC R/L 06

bestehend aus / consists of:

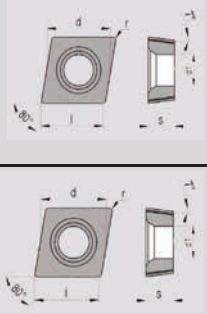
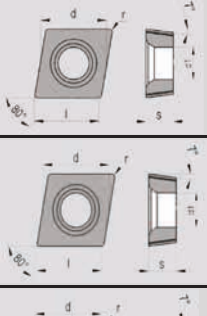
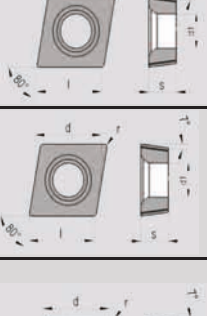
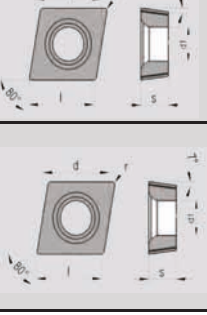
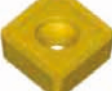
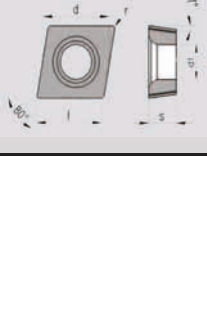
C-A0608F SCMC R/L 06  
C-A0810H SCMC R/L 06  
C-A1012K SCMC R/L 06  
C-A1216M SCMC R/L 06

### C-A.. - mit Carbonkern / with carbon fibre core

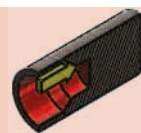
| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |     |    |    |     |      |     | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|-----|----|----|-----|------|-----|-----------------------|-------------------|------------------|
|                             | dg7                          | L   | A  | d  | f   | B    | I   |                       |                   |                  |
| C-A0608H SCMC R/L 06        | 8                            | 100 | 20 | 6  | 5,5 | 10,5 | 15° | CC . T 0602..         | M-VT25<br>1,2 Nm  | M-BT08           |
| C-A0810H SCMC R/L 06        | 10                           | 110 | 26 | 8  | 6   | 11   | 15° |                       |                   |                  |
| C-A1012K SCMC R/L 06        | 12                           | 125 | 32 | 10 | 7   | 13   | 13° |                       |                   |                  |
| C-A1216M SCMC R/L 06        | 16                           | 150 | 40 | 12 | 9   | 16   | 10° |                       |                   |                  |

Bestellbeispiel / Order example: C-A0608H SCMC R 06

# Wendeplatten für Bohrstangen mit Innenkühlung 80° Insert for boring bars with coolant 80°

|                                                                                                     | Form Figure                                                                         | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     |  | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|-----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|--|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                     |                                                                                     | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 |  | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>CCGT..<br>ALU-M |    | 6,20                   | 6,35 | 2,38 |    | 0,1 | CCGT 060201 ALU-M          | M-VT25   | M-BT 08   |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                     |                                                                                     | 6,20                   | 6,35 | 2,38 |    | 0,2 | CCGT 060202 ALU-M          | M-VT25   | M-BT 08   |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                     |                                                                                     | 6,00                   | 6,35 | 2,38 |    | 0,4 | CCGT 060204 ALU-M          | M-VT25   | M-BT 08   |                                         | ■   |  |                                     |       |       |       |       | ■     |
| <br>CCGT .. WFF     |    | 6,20                   | 6,35 | 2,38 |    | 0,0 | CCGT 060200 WFF            | M-VT25   | M-BT 08   |                                         |     |  | ■                                   |       |       |       |       |       |
|                                                                                                     |                                                                                     | 6,00                   | 6,35 | 2,38 |    | 0,1 | CCGT 060201 WFF            | M-VT25   | M-BT 08   |                                         |     |  | ■                                   |       |       |       |       |       |
|                                                                                                     |                                                                                     |                        |      |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
| <br>CCMT .. WF      |   | 6,20                   | 6,35 | 2,38 |    | 0,4 | CCMT 060202 WF             | M-VT25   | M-BT 08   |                                         |     |  | ■                                   |       |       | ■     |       |       |
|                                                                                                     |                                                                                     | 6,00                   | 6,35 | 2,38 |    | 0,4 | CCMT 060204 WF             | M-VT25   | M-BT 08   | ■                                       |     |  | ■                                   |       |       | ■     | ■     |       |
|                                                                                                     |                                                                                     |                        |      |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
| <br>CCMT .. WM      |   | 6,45                   | 6,35 | 2,38 |    | 0,4 | CCMT 060204 WM             | M-VT25   | M-BT 08   |                                         |     |  | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                     |                                                                                     | 6,45                   | 6,35 | 2,38 |    | 0,8 | CCMT 060208 WM             | M-VT25   | M-BT 08   |                                         |     |  | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                     |                                                                                     |                        |      |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
| <br>CCMT .. XM    |  | 6,20                   | 6,35 | 2,38 |    | 0,2 | CCMT 060202 XM             | M-VT25   | M-BT 08   |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                     |                                                                                     | 6,00                   | 6,35 | 2,38 |    | 0,4 | CCMT 060204 XM             | M-VT25   | M-BT 08   |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                     |                                                                                     | 5,60                   | 6,35 | 2,38 |    | 0,8 | CCMT 060208 XM             | M-VT25   | M-BT 08   |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                     |                                                                                     |                        |      |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |

## Bohrstangen mit Innenkühlung 100° Boring bars with coolant 100°



### SET M-A-SCXC R/L 06

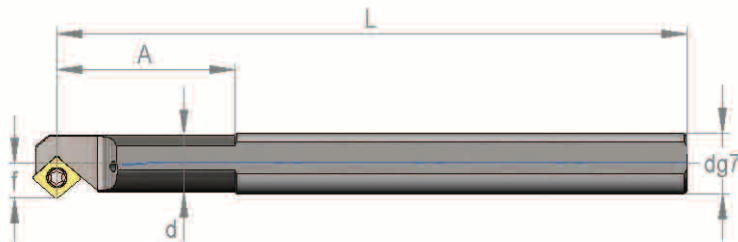
bestehend aus / consists of:

A0608F SCXC R/L 06

A0810H SCXC R/L 06

A1012K SCXC R/L 06

A1216M SCXC R/L 06



### A.. - Stahlausführung / Steel execution

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |     |    |    |   |     |     | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|-----|----|----|---|-----|-----|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
|                             | dg7                          | L   | A  | d  | f | B   | I   |                                                                                                              |                                                                                                          |                                                                                                         |
| A 0608H SCXC R/L 06         | 8                            | 100 | 20 | 6  | 5 | 9,5 | 15° | CC . T 0602..                                                                                                | M-VT25<br>1,2 Nm                                                                                         | M-BT08                                                                                                  |
| A 0810H SCXC R/L 06         | 10                           | 110 | 26 | 8  | 6 | 11  | 15° |                                                                                                              |                                                                                                          |                                                                                                         |
| A 1012K SCXC R/L 06         | 12                           | 125 | 32 | 10 | 7 | 13  | 13° |                                                                                                              |                                                                                                          |                                                                                                         |
| A 1216M SCXC R/L 06         | 16                           | 150 | 40 | 12 | 9 | 16  | 10° |                                                                                                              |                                                                                                          |                                                                                                         |

Bestellbeispiel / Ordereꝑle: A0608H SCXCR 06

### SET ME-A-SCXC R/L 06

bestehend aus / consists of:

E-A0608F SCXC R/L 06

E-A0810H SCXC R/L 06

E-A1012K SCXC R/L 06

E-A1216M SCXC R/L 06

### E-A.. - mit Vollhartmetallkern / with solid carbide core

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |     |    |    |   |     |     | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|-----|----|----|---|-----|-----|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
|                             | dg7                          | L   | A  | d  | f | B   | I   |                                                                                                                |                                                                                                            |                                                                                                           |
| E-A 0608H SCXC R/L 06       | 8                            | 100 | 20 | 6  | 5 | 9,5 | 15° | CC . T 0602..                                                                                                  | M-VT25<br>1,2 Nm                                                                                           | M-BT08                                                                                                    |
| E-A 0810H SCXC R/L 06       | 10                           | 110 | 26 | 8  | 6 | 11  | 15° |                                                                                                                |                                                                                                            |                                                                                                           |
| E-A 1012K SCXC R/L 06       | 12                           | 125 | 32 | 10 | 7 | 13  | 13° |                                                                                                                |                                                                                                            |                                                                                                           |
| E-A 1216M SCXC R/L 06       | 16                           | 150 | 40 | 12 | 9 | 16  | 10° |                                                                                                                |                                                                                                            |                                                                                                           |

Bestellbeispiel / Ordereꝑle: E-A0608H SCXCR 06

### SET MC-A-SCXC R/L 06

bestehend aus / consists of:

C-A0608F SCXC R/L 06

C-A0810H SCXC R/L 06

C-A1012K SCXC R/L 06

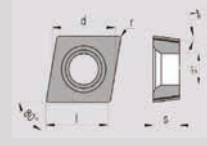
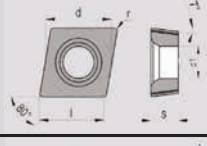
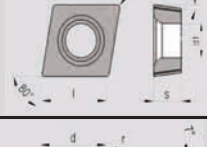
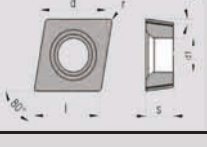
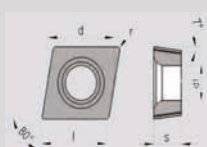
C-A1216M SCXC R/L 06

### C-A.. - mit Carbonkern / with carbon fibre core

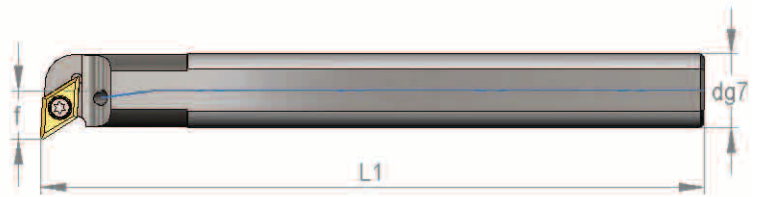
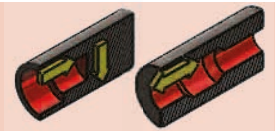
| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |     |    |    |   |     |     | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|-----|----|----|---|-----|-----|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
|                             | dg7                          | L   | A  | d  | f | B   | I   |                                                                                                                |                                                                                                            |                                                                                                           |
| C-A0608H SCXC R/L 06        | 8                            | 100 | 20 | 6  | 5 | 9,5 | 15° | CC . T 0602..                                                                                                  | M-VT25<br>1,2 Nm                                                                                           | M-BT08                                                                                                    |
| C-A0810H SCXC R/L 06        | 10                           | 110 | 26 | 8  | 6 | 11  | 15° |                                                                                                                |                                                                                                            |                                                                                                           |
| C-A1012K SCXC R/L 06        | 12                           | 125 | 32 | 10 | 7 | 13  | 13° |                                                                                                                |                                                                                                            |                                                                                                           |
| C-A1216M SCXC R/L 06        | 16                           | 150 | 40 | 12 | 9 | 16  | 10° |                                                                                                                |                                                                                                            |                                                                                                           |

Bestellbeispiel / Ordereꝑle: C-A0608H SCXCR 06

# Wendeplatten für Bohrstangen mit Innenkühlung 100° Insert for boring bars with coolant 100°

|                                                                                                     | Form Figure                                                                         | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     |  | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|-----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|--|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                     |                                                                                     | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 |  | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>CCGT..<br>ALU-M |    | 6,20                   | 6,35 | 2,38 |    | 0,1 | CCGT 060201 ALU-M          | M-VT25   | M-BT 08   |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                     |                                                                                     | 6,20                   | 6,35 | 2,38 |    | 0,2 | CCGT 060202 ALU-M          | M-VT25   | M-BT 08   |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                     |                                                                                     | 6,00                   | 6,35 | 2,38 |    | 0,4 | CCGT 060204 ALU-M          | M-VT25   | M-BT 08   |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                     |                                                                                     |                        |      |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
| <br>CCGT .. WFF     |    | 6,20                   | 6,35 | 2,38 |    | 0,0 | CCGT 060200 WFF            | M-VT25   | M-BT 08   |                                         |     |  | ■                                   |       |       |       |       |       |
|                                                                                                     |                                                                                     | 6,00                   | 6,35 | 2,38 |    | 0,1 | CCGT 060201 WFF            | M-VT25   | M-BT 08   |                                         |     |  | ■                                   |       |       |       |       |       |
|                                                                                                     |                                                                                     |                        |      |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
| <br>CCMT .. WF      |    | 6,20                   | 6,35 | 2,38 |    | 0,4 | CCMT 060202 WF             | M-VT25   | M-BT 08   |                                         |     |  | ■                                   |       |       | ■     |       |       |
|                                                                                                     |                                                                                     | 6,00                   | 6,35 | 2,38 |    | 0,4 | CCMT 060204 WF             | M-VT25   | M-BT 08   | ■                                       |     |  | ■                                   |       |       | ■     | ■     |       |
|                                                                                                     |                                                                                     |                        |      |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
| <br>CCMT .. WM      |   | 6,45                   | 6,35 | 2,38 |    | 0,4 | CCMT 060204 WM             | M-VT25   | M-BT 08   |                                         |     |  | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                     |                                                                                     | 6,45                   | 6,35 | 2,38 |    | 0,8 | CCMT 060208 WM             | M-VT25   | M-BT 08   |                                         |     |  | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                     |                                                                                     |                        |      |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
| <br>CCMT .. XM    |  | 6,20                   | 6,35 | 2,38 |    | 0,2 | CCMT 060202 XM             | M-VT25   | M-BT 08   |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                     |                                                                                     | 6,00                   | 6,35 | 2,38 |    | 0,4 | CCMT 060204 XM             | M-VT25   | M-BT 08   |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                     |                                                                                     | 5,60                   | 6,35 | 2,38 |    | 0,8 | CCMT 060208 XM             | M-VT25   | M-BT 08   |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                     |                                                                                     |                        |      |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |

## Bohrstangen mit Innenkühlung 93° Boring bars with coolant 93°



### A.. - Stahlausführung / Steel execution

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |      | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|----|-----|----|------|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
|                             | dg7                          | f  | L1  | h  | Dmin |                                                                                                              |                                                                                                          |                                                                                                         |
| A10H SDUC R/L 07            | 10                           | 8  | 100 | 9  | 13   | DC . T 0702..                                                                                                | M-VT25<br>1,2 Nm                                                                                         | M-BT08                                                                                                  |
| A12K SDUC R/L 07            | 12                           | 9  | 125 | 11 | 18   |                                                                                                              |                                                                                                          |                                                                                                         |
| A16M SDUC R/L 07            | 16                           | 11 | 150 | 14 | 22   |                                                                                                              |                                                                                                          |                                                                                                         |
| A20Q SDUC R/L 07            | 20                           | 13 | 180 | 18 | 26   |                                                                                                              |                                                                                                          |                                                                                                         |
| A20Q SDUC R/L 11            | 20                           | 13 | 180 | 18 | 26   | DC . T 11T3..                                                                                                | M-VT40<br>3,0 Nm                                                                                         | M-BT15                                                                                                  |
| A25R SDUC R/L 11            | 25                           | 17 | 200 | 23 | 34   |                                                                                                              |                                                                                                          |                                                                                                         |
| A32S SDUC R/L 11            | 32                           | 22 | 250 | 30 | 39   |                                                                                                              |                                                                                                          |                                                                                                         |

Bestellbeispiel / Order example: A10H SDUCR 07

### E-A.. - mit Vollhartmetallkern / with solid carbide core

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |      | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|----|-----|----|------|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
|                             | dg7                          | f  | L1  | h  | Dmin |                                                                                                                |                                                                                                            |                                                                                                           |
| E-A10H SDUC R/L 07          | 10                           | 8  | 100 | 9  | 13   | DC . T 0702..                                                                                                  | M-VT25<br>1,2 Nm                                                                                           | M-BT08                                                                                                    |
| E-A12K SDUC R/L 07          | 12                           | 9  | 125 | 11 | 18   |                                                                                                                |                                                                                                            |                                                                                                           |
| E-A16M SDUC R/L 07          | 16                           | 11 | 150 | 14 | 22   |                                                                                                                |                                                                                                            |                                                                                                           |
| E-A20Q SDUC R/L 07          | 20                           | 13 | 180 | 18 | 26   |                                                                                                                |                                                                                                            |                                                                                                           |
| E-A20Q SDUC R/L 11          | 20                           | 13 | 180 | 18 | 26   | DC . T 11T3..                                                                                                  | M-VT40<br>3,0 Nm                                                                                           | M-BT15                                                                                                    |
| E-A25R SDUC R/L 11          | 25                           | 17 | 200 | 23 | 34   |                                                                                                                |                                                                                                            |                                                                                                           |
| E-A32S SDUC R/L 11          | 32                           | 22 | 250 | 30 | 39   |                                                                                                                |                                                                                                            |                                                                                                           |

Bestellbeispiel / Order example: E-A10H SDUCR 07

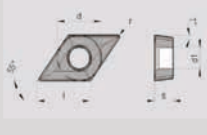
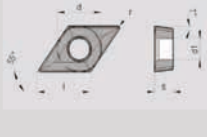
### C-A.. - mit Carbonkern / with carbon fibre core

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |      | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|----|-----|----|------|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
|                             | dg7                          | f  | L1  | h  | Dmin |                                                                                                                |                                                                                                            |                                                                                                           |
| C-A10H SDUC R/L 07          | 10                           | 8  | 100 | 9  | 13   | DC . T 0702..                                                                                                  | M-VT25<br>1,2 Nm                                                                                           | M-BT08                                                                                                    |
| C-A12K SDUC R/L 07          | 12                           | 9  | 125 | 11 | 18   |                                                                                                                |                                                                                                            |                                                                                                           |
| C-A16M SDUC R/L 07          | 16                           | 11 | 150 | 14 | 22   |                                                                                                                |                                                                                                            |                                                                                                           |
| C-A20Q SDUC R/L 07          | 20                           | 13 | 180 | 18 | 26   |                                                                                                                |                                                                                                            |                                                                                                           |
| C-A20Q SDUC R/L 11          | 20                           | 13 | 180 | 18 | 26   | DC . T 11T3..                                                                                                  | M-VT40<br>3,0 Nm                                                                                           | M-BT15                                                                                                    |
| C-A25R SDUC R/L 11          | 25                           | 17 | 200 | 23 | 34   |                                                                                                                |                                                                                                            |                                                                                                           |
| C-A32S SDUC R/L 11          | 32                           | 22 | 250 | 30 | 39   |                                                                                                                |                                                                                                            |                                                                                                           |

Bestellbeispiel / Order example: C-A10H SDUCR 07

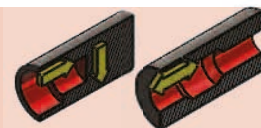


# Wendeplatten für Bohrstangen mit Innenkühlung 93° Insert for boring bars with coolant 93°

|                                                                                                      | Form Figure                                                                         | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                      |                                                                                     | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>DCGT ..<br>ALU-M |    | 7,30                   | 6,35 | 2,38 |    | 0,1 | DCGT 070201 ALU-M          | M-VT25   | M-BT08    |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                      |                                                                                     | 7,30                   | 6,35 | 2,38 |    | 0,2 | DCGT 070202 ALU-M          | M-VT25   | M-BT08    |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                      |                                                                                     | 7,30                   | 6,35 | 2,38 |    | 0,4 | DCGT 070204 ALU-M          | M-VT25   | M-BT08    |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                      |                                                                                     | 6,80                   | 6,35 | 2,38 |    | 0,4 | DCGT 070208 ALU-M          | M-VT25   | M-BT08    |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                      |                                                                                     | 11,40                  | 9,52 | 3,97 |    | 0,2 | DCGT 11T302 ALU-M          | M-VT40   | M-BT08    |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                      |                                                                                     | 11,20                  | 9,52 | 3,97 |    | 0,4 | DCGT 11T304 ALU-M          | M-VT40   | M-BT08    |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                      |                                                                                     | 10,80                  | 9,52 | 3,97 |    | 0,8 | DCGT 11T308 ALU-M          | M-VT40   | M-BT08    |                                         | ■   |                                     |       |       |       |       | ■     |
| <br>DCGT .. WFF      |    | 7,50                   | 6,35 | 2,38 |    | 0,0 | DCGT 070200 WFF            | M-VT25   | M-BT08    |                                         |     |                                     | ■     |       |       |       |       |
|                                                                                                      |                                                                                     | 7,50                   | 6,35 | 2,38 |    | 0,1 | DCGT 070201 WFF            | M-VT25   | M-BT08    |                                         |     |                                     | ■     |       |       |       |       |
|                                                                                                      |                                                                                     | 11,20                  | 9,52 | 3,97 |    | 0,0 | DCGT 11T300 WFF            | M-VT40   | M-BT08    |                                         |     |                                     | ■     |       |       |       |       |
|                                                                                                      |                                                                                     | 10,80                  | 9,52 | 3,97 |    | 0,1 | DCGT 11T301 WFF            | M-VT40   | M-BT08    |                                         |     |                                     | ■     |       |       |       |       |
| <br>DCMT .. WF     |  | 7,50                   | 6,35 | 2,38 |    | 0,2 | DCMT 070202 WF             | M-VT25   | M-BT08    |                                         |     |                                     | ■     |       |       | ■     | ■     |
|                                                                                                      |                                                                                     | 7,30                   | 6,35 | 2,38 |    | 0,4 | DCMT 070204 WF             | M-VT25   | M-BT08    | ■                                       |     |                                     | ■     |       |       | ■     | ■     |
|                                                                                                      |                                                                                     | 11,40                  | 9,52 | 3,97 |    | 0,2 | DCMT 11T302 WF             | M-VT40   | M-BT08    |                                         |     |                                     | ■     |       |       | ■     | ■     |
|                                                                                                      |                                                                                     | 11,20                  | 9,52 | 3,97 |    | 0,4 | DCMT 11T304 WF             | M-VT40   | M-BT08    | ■                                       |     |                                     | ■     |       |       | ■     |       |
|                                                                                                      |                                                                                     | 10,80                  | 9,52 | 3,97 |    | 0,8 | DCMT 11T308 WF             | M-VT40   | M-BT08    |                                         |     |                                     | ■     |       |       | ■     |       |
| <br>DCMT .. WM     |  | 7,50                   | 6,35 | 2,38 |    | 0,4 | DCMT 070204 WM             | M-VT25   | M-BT08    |                                         |     |                                     | ■     |       | ■     | ■     | ■     |
|                                                                                                      |                                                                                     | 7,30                   | 6,35 | 2,38 |    | 0,8 | DCMT 070208 WM             | M-VT25   | M-BT08    |                                         |     |                                     | ■     |       | ■     | ■     |       |
|                                                                                                      |                                                                                     | 11,20                  | 9,52 | 3,97 |    | 0,4 | DCMT 11T304 WM             | M-VT40   | M-BT08    |                                         |     |                                     | ■     |       | ■     | ■     | ■     |
|                                                                                                      |                                                                                     | 10,80                  | 9,52 | 3,97 |    | 0,8 | DCMT 11T308 WM             | M-VT40   | M-BT08    |                                         |     |                                     | ■     |       | ■     | ■     | ■     |
| <br>DCMX .. PWX    |  | 7,50                   | 6,35 | 2,38 |    | 0,4 | DCMX 070204 PWX            |          |           |                                         |     |                                     | ■     |       |       |       | ■     |
|                                                                                                      |                                                                                     | 11,20                  | 9,52 | 3,97 |    | 0,4 | DCMX 11T304 PWX            |          |           |                                         |     |                                     | ■     |       |       | ■     | ■     |
|                                                                                                      |                                                                                     | 10,80                  | 9,52 | 3,97 |    | 0,8 | DCMX 11T308 PWX            |          |           |                                         |     |                                     | ■     |       |       | ■     | ■     |
|                                                                                                      |                                                                                     |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |

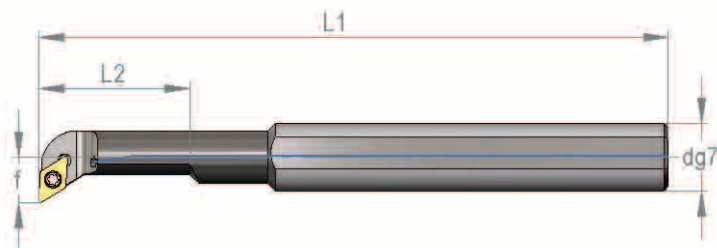
F

## Bohrstangen mit Innenkühlung 93° Boring bars with coolant 93°



### SET M-A-SDUC R/L 07

bestehend aus / consists of:  
A0810H SDUC R/L 07  
A1012K SDUC R/L 07  
A1216M SDUC R/L 07



### A.. - Stahlausführung / Steel execution

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |     |    |    |      |    | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|-----|----|----|------|----|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
|                             | dg7                          | L1  | L2 | f  | Dmin | h  |                                                                                                              |                                                                                                          |                                                                                                         |
| A0408F SDUC R/L 04          | 8                            | 80  | 15 | 3  | 5,6  | 7  | DCGT 04T0..                                                                                                  | M-VT16                                                                                                   | M-BT05                                                                                                  |
| A0810H SDUC R/L 07          | 10                           | 100 | 22 | 7  | 12,5 | 9  | DC . T 0702..                                                                                                | M-VT25                                                                                                   | M-BT08                                                                                                  |
| A1012K SDUC R/L 07          | 12                           | 125 | 28 | 9  | 15,5 | 11 |                                                                                                              |                                                                                                          |                                                                                                         |
| A1216M SDUC R/L 07          | 16                           | 150 | 36 | 11 | 19,5 | 15 |                                                                                                              |                                                                                                          |                                                                                                         |

M-BT05 = 0,6 Nm  
M-BT08 = 1,2 Nm

### SET ME-A-SDUC R/L 07

bestehend aus / consists of:  
E-A0810H SDUC R/L 07  
E-A1012K SDUC R/L 07  
E-A1216M SDUC R/L 07

### E-A.. - mit Vollhartmetallkern / with solid carbide core

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |     |    |    |      |    | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|-----|----|----|------|----|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
|                             | dg7                          | L1  | L2 | f  | Dmin | h  |                                                                                                                |                                                                                                            |                                                                                                           |
| E-A0408F SDUC R/L 04        | 8                            | 80  | 15 | 3  | 5,6  | 7  | DCGT 04T0..                                                                                                    | M-VT16                                                                                                     | M-BT05                                                                                                    |
| E-A0810H SDUC R/L 07        | 10                           | 100 | 22 | 7  | 12,5 | 9  | DC . T 0702..                                                                                                  | M-VT25                                                                                                     | M-BT08                                                                                                    |
| E-A1012K SDUC R/L 07        | 12                           | 125 | 28 | 9  | 15,5 | 11 |                                                                                                                |                                                                                                            |                                                                                                           |
| E-A1216M SDUC R/L 07        | 16                           | 150 | 36 | 11 | 19,5 | 15 |                                                                                                                |                                                                                                            |                                                                                                           |

Bestellbeispiel / Order example: E-A0810H SDUCR 07

### SET MC-A-SDUC R/L 07

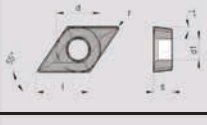
bestehend aus / consists of:  
C-A0810H SDUC R/L 07  
C-A1012K SDUC R/L 07  
C-A1216M SDUC R/L 07

### C-A.. - mit Carbonkern / with carbon fibre core

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |     |    |    |      |    | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|-----|----|----|------|----|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
|                             | dg7                          | L1  | L2 | f  | Dmin | h  |                                                                                                                |                                                                                                            |                                                                                                           |
| C-A0408F SDUC R/L 04        | 8                            | 80  | 15 | 3  | 5,6  | 7  | DCGT 04T0..                                                                                                    | M-VT16                                                                                                     | M-BT05                                                                                                    |
| C-A0810H SDUC R/L 07        | 10                           | 100 | 22 | 7  | 12,5 | 9  | DC . T 0702..                                                                                                  | M-VT25                                                                                                     | M-BT08                                                                                                    |
| C-A1012K SDUC R/L 07        | 12                           | 125 | 28 | 9  | 15,5 | 11 |                                                                                                                |                                                                                                            |                                                                                                           |
| C-A1216M SDUC R/L 07        | 16                           | 150 | 36 | 11 | 19,5 | 15 |                                                                                                                |                                                                                                            |                                                                                                           |

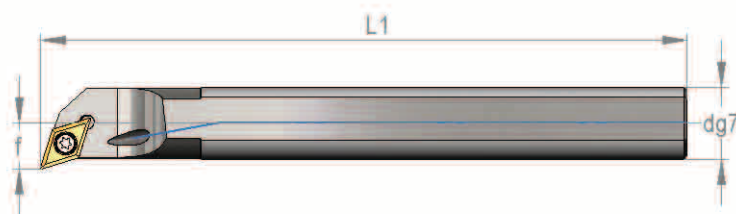
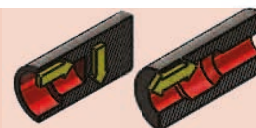
Bestellbeispiel / Order example: C-A0810H SDUCR 07

# Wendeplatten für Bohrstangen mit Innenkühlung 93° Insert for boring bars with coolant 93°

|                                                                                                      | Form Figure                                                                         | Abmessungen Dimensions |      |      |      |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|------|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                      |                                                                                     | l                      | d    | s    | d1   | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>DCGT ..<br>ALU-M |    | 3,78                   | 3,10 | 1,20 | 1,70 | 0,2 | DCGT 04T002 ALU-M          | M-VT16   | M-BT05    |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                      |                                                                                     | 7,30                   | 6,35 | 2,38 |      | 0,1 | DCGT 070201 ALU-M          | M-VT25   | M-BT08    |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                      |                                                                                     | 7,30                   | 6,35 | 2,38 |      | 0,2 | DCGT 070202 ALU-M          | M-VT25   | M-BT08    |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                      |                                                                                     | 7,30                   | 6,35 | 2,38 |      | 0,4 | DCGT 070204 ALU-M          | M-VT25   | M-BT08    |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                      |                                                                                     | 6,80                   | 6,35 | 2,38 |      | 0,4 | DCGT 070208 ALU-M          | M-VT25   | M-BT08    |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                      |                                                                                     |                        |      |      |      |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |
| <br>DCGT .. WFF      |    | 3,78                   | 3,10 | 1,20 | 1,70 | 0,2 | DCGT 04T002 WFF            | M-VT16   | M-BT05    |                                         |     | ■                                   |       |       |       |       |       |
|                                                                                                      |                                                                                     | 7,50                   | 6,35 | 2,38 |      | 0,0 | DCGT 070200 WFF            | M-VT25   | M-BT08    |                                         |     | ■                                   |       |       |       |       |       |
|                                                                                                      |                                                                                     | 7,50                   | 6,35 | 2,38 |      | 0,1 | DCGT 070201 WFF            | M-VT25   | M-BT08    |                                         |     | ■                                   |       |       |       |       |       |
|                                                                                                      |                                                                                     |                        |      |      |      |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |
| <br>DCMT .. WF       |    | 7,50                   | 6,35 | 2,38 |      | 0,2 | DCMT 070202 WF             | M-VT25   | M-BT08    |                                         |     | ■                                   |       |       | ■     | ■     |       |
|                                                                                                      |                                                                                     | 7,30                   | 6,35 | 2,38 |      | 0,4 | DCMT 070204 WF             | M-VT25   | M-BT08    | ■                                       |     | ■                                   |       |       | ■     | ■     |       |
|                                                                                                      |                                                                                     |                        |      |      |      |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |
| <br>DCMT .. WM      |   | 7,50                   | 6,35 | 2,38 |      | 0,4 | DCMT 070204 WM             | M-VT25   | M-BT08    |                                         |     | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                      |                                                                                     | 7,30                   | 6,35 | 2,38 |      | 0,8 | DCMT 070208 WM             | M-VT25   | M-BT08    |                                         |     | ■                                   |       | ■     | ■     |       |       |
|                                                                                                      |                                                                                     |                        |      |      |      |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |
| <br>DCMX .. PWX    |  | 7,50                   | 6,35 | 2,38 |      | 0,4 | DCMX 070204 PWX            |          |           |                                         |     | ■                                   |       |       |       | ■     |       |
|                                                                                                      |                                                                                     |                        |      |      |      |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                                      |                                                                                     |                        |      |      |      |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                                      |                                                                                     |                        |      |      |      |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |

F

## Bohrstangen mit Innenkühlung 107,5° Boring bars with coolant 107,5°



### A.. - Stahlausführung / Steel execution

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |      | Wendeplatte<br>Insert                                                               | Schraube<br>Screw                                                                   | Schlüssel<br>Key                                                                    |
|-----------------------------|------------------------------|----|-----|----|------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                             | dg7                          | f  | L1  | h  | Dmin |  |  |  |
| A12K SDQC R/L 07            | 12                           | 9  | 125 | 11 | 18   | DC . T 0702..                                                                       | M-VT25                                                                              | M-BT08                                                                              |
| A16M SDQC R/L 07            | 16                           | 11 | 150 | 14 | 22   |                                                                                     |                                                                                     |                                                                                     |
| A20Q SDQC R/L 07            | 20                           | 13 | 180 | 18 | 26   |                                                                                     |                                                                                     |                                                                                     |
| A20Q SDQC R/L 11            | 20                           | 13 | 180 | 18 | 26   | DC . T 11T3..                                                                       | M-VT40                                                                              | M-BT15                                                                              |
| A25R SDQC R/L 11            | 25                           | 17 | 200 | 23 | 34   |                                                                                     |                                                                                     |                                                                                     |
| A32S SDQC R/L 11            | 32                           | 22 | 250 | 30 | 39   |                                                                                     |                                                                                     |                                                                                     |

Bestellbeispiel / Order example: A12K SDQCR 07

M-BT08 = 1,2 Nm  
M-BT15 = 3,0 Nm

### E-A.. - mit Vollhartmetallkern / with solid carbide core

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |      | Wendeplatte<br>Insert                                                                 | Schraube<br>Screw                                                                     | Schlüssel<br>Key                                                                      |
|-----------------------------|------------------------------|----|-----|----|------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                             | dg7                          | f  | L1  | h  | Dmin |  |  |  |
| E-A12K SDQC R/L 07          | 12                           | 9  | 125 | 11 | 18   | DC . T 0702..                                                                         | M-VT25                                                                                | M-BT08                                                                                |
| E-A16M SDQC R/L 07          | 16                           | 11 | 150 | 14 | 22   |                                                                                       |                                                                                       |                                                                                       |
| E-A20Q SDQC R/L 07          | 20                           | 13 | 180 | 18 | 26   |                                                                                       |                                                                                       |                                                                                       |
| E-A20Q SDQC R/L 11          | 20                           | 13 | 180 | 18 | 26   | DC . T 11T3..                                                                         | M-VT40                                                                                | M-BT15                                                                                |
| E-A25R SDQC R/L 11          | 25                           | 17 | 200 | 23 | 34   |                                                                                       |                                                                                       |                                                                                       |
| E-A32S SDQC R/L 11          | 32                           | 22 | 250 | 30 | 39   |                                                                                       |                                                                                       |                                                                                       |

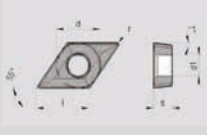
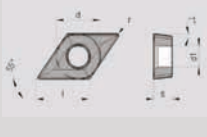
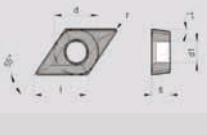
Bestellbeispiel / Order example: E-A12K SDQCR 07

### C-A.. - mit Carbonkern / with carbon fibre core

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |      | Wendeplatte<br>Insert                                                                 | Schraube<br>Screw                                                                     | Schlüssel<br>Key                                                                      |
|-----------------------------|------------------------------|----|-----|----|------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                             | dg7                          | f  | L1  | h  | Dmin |  |  |  |
| C-A12K SDQC R/L 07          | 12                           | 9  | 125 | 11 | 18   | DC . T 0702..                                                                         | M-VT25                                                                                | M-BT08                                                                                |
| C-A16M SDQC R/L 07          | 16                           | 11 | 150 | 14 | 22   |                                                                                       |                                                                                       |                                                                                       |
| C-A20Q SDQC R/L 07          | 20                           | 13 | 180 | 18 | 26   |                                                                                       |                                                                                       |                                                                                       |
| C-A20Q SDQC R/L 11          | 20                           | 13 | 180 | 18 | 26   | DC . T 11T3..                                                                         | M-VT40                                                                                | M-BT15                                                                                |
| C-A25R SDQC R/L 11          | 25                           | 17 | 200 | 23 | 34   |                                                                                       |                                                                                       |                                                                                       |
| C-A32S SDQC R/L 11          | 32                           | 22 | 250 | 30 | 39   |                                                                                       |                                                                                       |                                                                                       |

Bestellbeispiel / Order example: C-A12K SDQCR 07

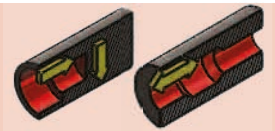
# Wendeplatten für Bohrstangen mit Innenkühlung 107,5° Insert for boring bars with coolant 107,5°

|                                                                                                   | Form Figure                                                                         | Abmessungen Dimensions |      |      |    |     | Bezeichnung Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     |  | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|---------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|----|-----|-------------------------|----------|-----------|-----------------------------------------|-----|--|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                   |                                                                                     | l                      | d    | s    | d1 | r   |                         |          |           | CT28                                    | K10 |  | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>DCGT .. ALU-M |    | 7,30                   | 6,35 | 2,38 |    | 0,1 | DCGT 070201 ALU-M       | M-VT25   | M-BT08    |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                   |                                                                                     | 7,30                   | 6,35 | 2,38 |    | 0,2 | DCGT 070202 ALU-M       | M-VT25   | M-BT08    |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                   |                                                                                     | 7,30                   | 6,35 | 2,38 |    | 0,4 | DCGT 070204 ALU-M       | M-VT25   | M-BT08    |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                   |                                                                                     | 6,80                   | 6,35 | 2,38 |    | 0,4 | DCGT 070208 ALU-M       | M-VT25   | M-BT08    |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                   |                                                                                     | 11,40                  | 9,52 | 3,97 |    | 0,2 | DCGT 11T302 ALU-M       | M-VT40   | M-BT15    |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                   |                                                                                     | 11,20                  | 9,52 | 3,97 |    | 0,4 | DCGT 11T304 ALU-M       | M-VT40   | M-BT15    |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                   |                                                                                     | 10,80                  | 9,52 | 3,97 |    | 0,8 | DCGT 11T308 ALU-M       | M-VT40   | M-BT15    |                                         | ■   |  |                                     |       |       |       |       | ■     |
| <br>DCGT .. WFF   |    | 7,50                   | 6,35 | 2,38 |    | 0,0 | DCGT 070200 WFF         | M-VT25   | M-BT08    |                                         |     |  | ■                                   |       |       |       |       |       |
|                                                                                                   |                                                                                     | 7,50                   | 6,35 | 2,38 |    | 0,1 | DCGT 070201 WFF         | M-VT25   | M-BT08    |                                         |     |  | ■                                   |       |       |       |       |       |
|                                                                                                   |                                                                                     | 11,20                  | 9,52 | 3,97 |    | 0,0 | DCGT 11T300 WFF         | M-VT40   | M-BT15    |                                         |     |  | ■                                   |       |       |       |       |       |
|                                                                                                   |                                                                                     | 10,80                  | 9,52 | 3,97 |    | 0,1 | DCGT 11T301 WFF         | M-VT40   | M-BT15    |                                         |     |  | ■                                   |       |       |       |       |       |
| <br>DCMT .. WF  |  | 7,50                   | 6,35 | 2,38 |    | 0,2 | DCMT 070202 WF          | M-VT25   | M-BT08    |                                         |     |  | ■                                   |       |       | ■     | ■     |       |
|                                                                                                   |                                                                                     | 7,30                   | 6,35 | 2,38 |    | 0,4 | DCMT 070204 WF          | M-VT25   | M-BT08    | ■                                       |     |  | ■                                   |       |       | ■     | ■     |       |
|                                                                                                   |                                                                                     | 11,40                  | 9,52 | 3,97 |    | 0,2 | DCMT 11T302 WF          | M-VT40   | M-BT15    |                                         |     |  | ■                                   |       |       | ■     | ■     |       |
|                                                                                                   |                                                                                     | 11,20                  | 9,52 | 3,97 |    | 0,4 | DCMT 11T304 WF          | M-VT40   | M-BT15    | ■                                       |     |  | ■                                   |       |       | ■     |       |       |
|                                                                                                   |                                                                                     | 10,80                  | 9,52 | 3,97 |    | 0,8 | DCMT 11T308 WF          | M-VT40   | M-BT15    |                                         |     |  | ■                                   |       |       | ■     |       |       |
| <br>DCMT .. WM  |  | 7,50                   | 6,35 | 2,38 |    | 0,4 | DCMT 070204 WM          | M-VT25   | M-BT08    |                                         |     |  | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                   |                                                                                     | 7,30                   | 6,35 | 2,38 |    | 0,8 | DCMT 070208 WM          | M-VT25   | M-BT08    |                                         |     |  | ■                                   |       | ■     | ■     |       |       |
|                                                                                                   |                                                                                     | 11,20                  | 9,52 | 3,97 |    | 0,4 | DCMT 11T304 WM          | M-VT40   | M-BT15    |                                         |     |  | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                   |                                                                                     | 10,80                  | 9,52 | 3,97 |    | 0,8 | DCMT 11T308 WM          | M-VT40   | M-BT15    |                                         |     |  | ■                                   |       | ■     | ■     | ■     |       |
| <br>DCMX .. PWX |  | 7,50                   | 6,35 | 2,38 |    | 0,4 | DCMX 070204 PWX         |          |           |                                         |     |  | ■                                   |       |       |       |       | ■     |
|                                                                                                   |                                                                                     | 11,20                  | 9,52 | 3,97 |    | 0,4 | DCMX 11T304 PWX         |          |           |                                         |     |  | ■                                   |       |       | ■     | ■     |       |
|                                                                                                   |                                                                                     | 10,80                  | 9,52 | 3,97 |    | 0,8 | DCMX 11T308 PWX         |          |           |                                         |     |  | ■                                   |       |       | ■     | ■     |       |
|                                                                                                   |                                                                                     |                        |      |      |    |     |                         |          |           |                                         |     |  |                                     |       |       |       |       |       |

F

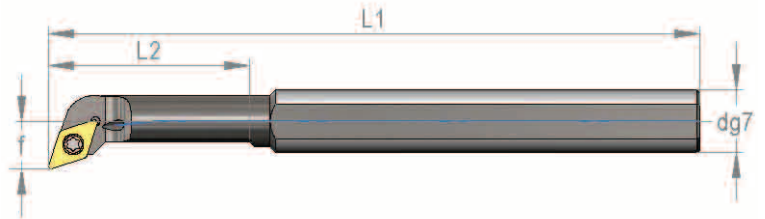


## Bohrstangen mit Innenkühlung 107,5° Boring bars with coolant 107,5°



### SET M-A-SDQC R/L 07

bestehend aus / consists of:  
A0810H SDQC R/L 07  
A1012K SDQC R/L 07  
A1216M SDQC R/L 07



### A.. - Stahlausführung / Steel execution

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |     |    |     |      |    | Wendeplatte<br>Inse                                                                 | Schraube<br>Screw                                                                   | Schlüssel<br>Key                                                                    |
|-----------------------------|------------------------------|-----|----|-----|------|----|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                             | dg7                          | L1  | L2 | f   | Dmin | H  |  |  |  |
| A0408F SDQC R/L 04          | 8                            | 80  | 15 | 2,6 | 5,2  | 7  | DCGT 04T0..                                                                         | M-VT16                                                                              | M-VT05                                                                              |
| A0810H SDQC R/L 07          | 10                           | 100 | 22 | 7   | 12,5 | 9  | DC . T 0702..                                                                       | M-VT25                                                                              | M-BT08                                                                              |
| A1012K SDQC R/L 07          | 12                           | 125 | 28 | 9   | 15,5 | 11 |                                                                                     |                                                                                     |                                                                                     |
| A1216M SDQC R/L 07          | 16                           | 150 | 36 | 11  | 19,5 | 15 |                                                                                     |                                                                                     |                                                                                     |

M-BT05 = 0,6 Nm  
M-BT08 = 1,2 Nm

### SET ME-A-SDQC R/L 07

bestehend aus / consists of:  
E-A0810H SDQC R/L 07  
E-A1012K SDQC R/L 07  
E-A1216M SDQC R/L 07

### E-A.. - mit Vollhartmetallkern / with solid carbide core

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |     |    |     |      |    | Wendeplatte<br>Insert                                                                 | Schraube<br>Screw                                                                     | Schlüssel<br>Key                                                                      |
|-----------------------------|------------------------------|-----|----|-----|------|----|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                             | dg7                          | L1  | L2 | f   | Dmin | H  |  |  |  |
| E-A0408F SDQC R/L 04        | 8                            | 80  | 15 | 2,6 | 5,2  | 7  | DCGT 04T0..                                                                           | M-VT16                                                                                | M-VT05                                                                                |
| E-A0810H SDQC R/L 07        | 10                           | 100 | 22 | 7   | 12,5 | 9  | DC . T 0702..                                                                         | M-VT25                                                                                | M-BT08                                                                                |
| E-A1012K SDQC R/L 07        | 12                           | 125 | 28 | 9   | 15,5 | 11 |                                                                                       |                                                                                       |                                                                                       |
| E-A1216M SDQC R/L 07        | 16                           | 150 | 36 | 11  | 19,5 | 15 |                                                                                       |                                                                                       |                                                                                       |

Bestellbeispiel / Order example: E-A0810H SDQCR 07

### SET MC-A-SDQC R/L 07

bestehend aus / consists of:  
C-A0810H SDQC R/L 07  
C-A1012K SDQC R/L 07  
C-A1216M SDQC R/L 07

### C-A.. - mit Carbonkern / with carbon fibre core

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |     |    |     |      |    | Wendeplatte<br>Insert                                                                 | Schraube<br>Screw                                                                     | Schlüssel<br>Key                                                                      |
|-----------------------------|------------------------------|-----|----|-----|------|----|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                             | dg7                          | L1  | L2 | f   | Dmin | H  |  |  |  |
| C-A0408F SDQC R/L 04        | 8                            | 80  | 15 | 2,6 | 5,2  | 7  | DCGT 04T0..                                                                           | M-VT16                                                                                | M-VT05                                                                                |
| C-A0810H SDQC R/L 07        | 10                           | 100 | 22 | 7   | 12,5 | 9  | DC . T 0702..                                                                         | M-VT25                                                                                | M-BT08                                                                                |
| C-A1012K SDQC R/L 07        | 12                           | 125 | 28 | 9   | 15,5 | 11 |                                                                                       |                                                                                       |                                                                                       |
| C-A1216M SDQC R/L 07        | 16                           | 150 | 36 | 11  | 19,5 | 15 |                                                                                       |                                                                                       |                                                                                       |

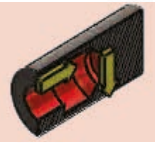
Bestellbeispiel / Order example: C-A0810H SDQCR 07

# Wendeplatten für Bohrstangen mit Innenkühlung 107,5° Insert for boring bars with coolant 107,5°

|                                                                                                       | Form Figure                                                                                         | Abmessungen Dimensions |      |      |      |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     |  | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|-------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|------------------------|------|------|------|-----|----------------------------|----------|-----------|-----------------------------------------|-----|--|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                       |                                                                                                     | l                      | d    | s    | d1   | r   |                            |          |           | CT28                                    | K10 |  | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>DCGT ..<br>ALU-M |                    | 3,78                   | 3,10 | 1,20 | 1,70 | 0,2 | DCGT 04T002 ALU-M          | M-VT16   | M-BT05    |                                         |     |  |                                     |       |       |       |       |       |
|                                                                                                       |                                                                                                     | 7,30                   | 6,35 | 2,38 |      | 0,1 | DCGT 070201 ALU-M          | M-VT25   | M-BT08    |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                       |                                                                                                     | 7,30                   | 6,35 | 2,38 |      | 0,2 | DCGT 070202 ALU-M          | M-VT25   | M-BT08    |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                       |                                                                                                     | 7,30                   | 6,35 | 2,38 |      | 0,4 | DCGT 070204 ALU-M          | M-VT25   | M-BT08    |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                       |                                                                                                     | 6,80                   | 6,35 | 2,38 |      | 0,4 | DCGT 070208 ALU-M          | M-VT25   | M-BT08    |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                       |                                                                                                     |                        |      |      |      |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
| <br>DCGT .. WFF      |                    | 3,78                   | 3,10 | 1,20 | 1,70 | 0,2 | DCGT 04T002 WFF            | M-VT16   | M-BT05    |                                         |     |  |                                     |       |       |       |       |       |
|                                                                                                       |                                                                                                     | 7,50                   | 6,35 | 2,38 |      | 0,0 | DCGT 070200 WFF            | M-VT25   | M-BT08    |                                         |     |  | ■                                   |       |       |       |       |       |
|                                                                                                       |                                                                                                     | 7,50                   | 6,35 | 2,38 |      | 0,1 | DCGT 070201 WFF            | M-VT25   | M-BT08    |                                         |     |  | ■                                   |       |       |       |       |       |
| <br>DCMT .. WF        |                    |                        |      |      |      |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
|                                                                                                       |                                                                                                     | 7,50                   | 6,35 | 2,38 |      | 0,2 | DCMT 070202 WF             | M-VT25   | M-BT08    |                                         |     |  | ■                                   |       |       | ■     |       |       |
|                                                                                                       |                                                                                                     | 7,30                   | 6,35 | 2,38 |      | 0,4 | DCMT 070204 WF             | M-VT25   | M-BT08    | ■                                       |     |  | ■                                   |       |       | ■     | ■     |       |
| <br>DCMT .. WM       |                   |                        |      |      |      |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
|                                                                                                       |                                                                                                     | 7,50                   | 6,35 | 2,38 |      | 0,4 | DCMT 070204 WM             | M-VT25   | M-BT08    |                                         |     |  | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                       |                                                                                                     | 7,30                   | 6,35 | 2,38 |      | 0,8 | DCMT 070208 WM             | M-VT25   | M-BT08    |                                         |     |  | ■                                   |       | ■     | ■     |       |       |
| <br>DCMX .. PWX    | <br>Masterfinish |                        |      |      |      |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
|                                                                                                       |                                                                                                     | 7,50                   | 6,35 | 2,38 |      | 0,4 | DCMX 070204 PWX            |          |           |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                       |                                                                                                     |                        |      |      |      |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
|                                                                                                       |                                                                                                     |                        |      |      |      |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |

F

## Bohrstangen mit Innenkühlung 93° Boring bars with coolant 93°



### A.. - Stahlausführung / Steel execution

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |      | Wendeplatte<br>Insert                                                               | Schraube<br>Screw                                                                   | Schlüssel<br>Key                                                                    |
|-----------------------------|------------------------------|----|-----|----|------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                             | dg7                          | f  | L   | h  | Dmin |  |  |  |
| A10H SDUC R/L 04-EX         | 10                           | 6  | 100 | 9  | 13   | DCGT 04T0..                                                                         | M-VT16                                                                              | M-BT05                                                                              |
| A12K SDUC R/L 07-EX         | 12                           | 9  | 125 | 11 | 16   | DC . T 0702..                                                                       | M-VT25                                                                              | M-BT08                                                                              |
| A16M SDUC R/L 07-EX         | 16                           | 11 | 150 | 15 | 20   |                                                                                     |                                                                                     |                                                                                     |
| A20Q SDUC R/L 07-EX         | 20                           | 13 | 180 | 18 | 24   |                                                                                     |                                                                                     |                                                                                     |
| A20Q SDUC R/L 11-EX         | 20                           | 13 | 180 | 18 | 24   | DC . T 11T3..                                                                       | M-VT40                                                                              | M-BT15                                                                              |
| A25R SDUC R/L 11-EX         | 25                           | 17 | 200 | 23 | 31   |                                                                                     |                                                                                     |                                                                                     |
| A32S SDUC R/L 11-EX         | 32                           | 22 | 250 | 30 | 39   |                                                                                     |                                                                                     |                                                                                     |

Bestellbeispiel / Ordereꝑle: A12K SDUCR 07-EX

M-BT05 = 0,6 Nm  
M-BT08 = 1,2 Nm  
M-BT15 = 3,0 Nm

### E-A.. - mit Vollhartmetallkern / with solid carbide core

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |      | Wendeplatte<br>Insert                                                                 | Schraube<br>Screw                                                                     | Schlüssel<br>Key                                                                      |
|-----------------------------|------------------------------|----|-----|----|------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                             | dg7                          | f  | L   | h  | Dmin |  |  |  |
| E-A10H SDUC R/L 04-EX       | 10                           | 6  | 100 | 9  | 13   | DCGT 04T0..                                                                           | M-VT16                                                                                | M-VT05                                                                                |
| E-A12K SDUC R/L 07-EX       | 12                           | 9  | 125 | 11 | 16   | DC . T 0702..                                                                         | M-VT25                                                                                | M-BT08                                                                                |
| E-A16M SDUC R/L 07-EX       | 16                           | 11 | 150 | 15 | 20   |                                                                                       |                                                                                       |                                                                                       |
| E-A20Q SDUC R/L 07-EX       | 20                           | 13 | 180 | 18 | 24   |                                                                                       |                                                                                       |                                                                                       |
| E-A20Q SDUC R/L 11-EX       | 20                           | 13 | 180 | 18 | 24   | DC . T 11T3..                                                                         | M-VT40                                                                                | M-BT15                                                                                |
| E-A25R SDUC R/L 11-EX       | 25                           | 17 | 200 | 23 | 31   |                                                                                       |                                                                                       |                                                                                       |
| E-A32S SDUC R/L 11-EX       | 32                           | 22 | 250 | 30 | 39   |                                                                                       |                                                                                       |                                                                                       |

Bestellbeispiel / Ordereꝑle: E-A12K SDUCR 07-EX

### C-A.. - mit Carbonkern / with carbon fibre core

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |      | Wendeplatte<br>Insert                                                                 | Schraube<br>Screw                                                                     | Schlüssel<br>Key                                                                      |
|-----------------------------|------------------------------|----|-----|----|------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                             | dg7                          | f  | L   | h  | Dmin |  |  |  |
| C-A10H SDUC R/L 04-EX       | 10                           | 6  | 100 | 9  | 13   | DCGT 04T0..                                                                           | M-VT16                                                                                | M-VT05                                                                                |
| C-A12K SDUC R/L 07-EX       | 12                           | 9  | 125 | 11 | 16   | DC . T 0702..                                                                         | M-VT25                                                                                | M-BT08                                                                                |
| C-A16M SDUC R/L 07-EX       | 16                           | 11 | 150 | 15 | 20   |                                                                                       |                                                                                       |                                                                                       |
| C-A20Q SDUC R/L 07-EX       | 20                           | 13 | 180 | 18 | 24   |                                                                                       |                                                                                       |                                                                                       |
| C-A20Q SDUC R/L 11-EX       | 20                           | 13 | 180 | 18 | 24   | DC . T 11T3..                                                                         | M-VT40                                                                                | M-BT15                                                                                |
| C-A25R SDUC R/L 11-EX       | 25                           | 17 | 200 | 23 | 31   |                                                                                       |                                                                                       |                                                                                       |
| C-A32S SDUC R/L 11-EX       | 32                           | 22 | 250 | 30 | 39   |                                                                                       |                                                                                       |                                                                                       |

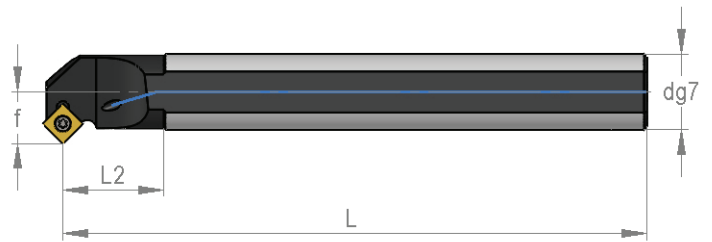
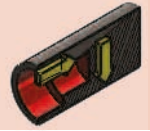
Bestellbeispiel / Ordereꝑle: C-A12K SDUCR 07-EX

# **Wendeplatten für Bohrstangen mit Innenkühlung 93°** **Insert for boring bars with coolant 93°**

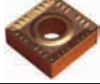
|                                                                                                      | Form Figure                                                                         | Abmessungen Dimensions |      |      |      |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     |  | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|------|-----|----------------------------|----------|-----------|-----------------------------------------|-----|--|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                      |                                                                                     | l                      | d    | s    | d1   | r   |                            |          |           | CT28                                    | K10 |  | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>DCGT ..<br>ALU-M |    |                        |      |      |      |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
|                                                                                                      |                                                                                     | 3,78                   | 3,10 | 1,20 | 1,70 | 0,2 | DCGT 04T002 ALU-M          | M-VT16   | M-BT05    |                                         | ■   |  |                                     |       |       |       | ■     |       |
|                                                                                                      |                                                                                     | 7,30                   | 6,35 | 2,38 |      | 0,1 | DCGT 070201 ALU-M          | M-VT25   | M-BT08    |                                         | ■   |  |                                     |       |       |       | ■     |       |
|                                                                                                      |                                                                                     | 7,30                   | 6,35 | 2,38 |      | 0,2 | DCGT 070202 ALU-M          | M-VT25   | M-BT08    |                                         | ■   |  |                                     |       |       |       | ■     |       |
|                                                                                                      |                                                                                     | 7,30                   | 6,35 | 2,38 |      | 0,4 | DCGT 070204 ALU-M          | M-VT25   | M-BT08    |                                         | ■   |  |                                     |       |       |       | ■     |       |
|                                                                                                      |                                                                                     | 6,80                   | 6,35 | 2,38 |      | 0,4 | DCGT 070208 ALU-M          | M-VT25   | M-BT08    |                                         | ■   |  |                                     |       |       |       | ■     |       |
|                                                                                                      |                                                                                     | 11,40                  | 9,52 | 3,97 |      | 0,2 | DCGT 11T302 ALU-M          | M-VT40   | M-BT15    |                                         | ■   |  |                                     |       |       |       | ■     |       |
|                                                                                                      |                                                                                     | 11,20                  | 9,52 | 3,97 |      | 0,4 | DCGT 11T304 ALU-M          | M-VT40   | M-BT15    |                                         | ■   |  |                                     |       |       |       | ■     |       |
|                                                                                                      |                                                                                     | 10,80                  | 9,52 | 3,97 |      | 0,8 | DCGT 11T308 ALU-M          | M-VT40   | M-BT15    |                                         | ■   |  |                                     |       |       |       | ■     |       |
|                                                                                                      |                                                                                     |                        |      |      |      |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
| <br>DCGT .. WFF      |    |                        |      |      |      |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
|                                                                                                      |                                                                                     | 3,78                   | 3,10 | 1,20 | 1,70 | 0,2 | DCGT 04T002 WFF            | M-VT16   | M-BT05    |                                         |     |  | ■                                   |       |       |       |       |       |
|                                                                                                      |                                                                                     | 7,50                   | 6,35 | 2,38 |      | 0,0 | DCGT 070200 WFF            | M-VT25   | M-BT08    |                                         |     |  | ■                                   |       |       |       |       |       |
|                                                                                                      |                                                                                     | 7,50                   | 6,35 | 2,38 |      | 0,1 | DCGT 070201 WFF            | M-VT25   | M-BT08    |                                         |     |  | ■                                   |       |       |       |       |       |
|                                                                                                      |                                                                                     | 11,20                  | 9,52 | 3,97 |      | 0,0 | DCGT 11T300 WFF            | M-VT40   | M-BT15    |                                         |     |  | ■                                   |       |       |       |       |       |
|                                                                                                      |                                                                                     | 10,80                  | 9,52 | 3,97 |      | 0,1 | DCGT 11T301 WFF            | M-VT40   | M-BT15    |                                         |     |  | ■                                   |       |       |       |       |       |
|                                                                                                      |                                                                                     |                        |      |      |      |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
| <br>DCMT .. WF     |  |                        |      |      |      |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
|                                                                                                      |                                                                                     | 7,50                   | 6,35 | 2,38 |      | 0,2 | DCMT 070202 WF             | M-VT25   | M-BT08    |                                         |     |  | ■                                   |       |       | ■     | ■     |       |
|                                                                                                      |                                                                                     | 7,30                   | 6,35 | 2,38 |      | 0,4 | DCMT 070204 WF             | M-VT25   | M-BT08    | ■                                       |     |  | ■                                   |       |       | ■     | ■     |       |
|                                                                                                      |                                                                                     | 11,40                  | 9,52 | 3,97 |      | 0,2 | DCMT 11T302 WF             | M-VT40   | M-BT15    |                                         |     |  | ■                                   |       |       | ■     | ■     |       |
|                                                                                                      |                                                                                     | 11,20                  | 9,52 | 3,97 |      | 0,4 | DCMT 11T304 WF             | M-VT40   | M-BT15    | ■                                       |     |  | ■                                   |       |       | ■     |       |       |
|                                                                                                      |                                                                                     | 10,80                  | 9,52 | 3,97 |      | 0,8 | DCMT 11T308 WF             | M-VT40   | M-BT15    |                                         |     |  | ■                                   |       |       | ■     |       |       |
|                                                                                                      |                                                                                     |                        |      |      |      |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
| <br>DCMT .. WM     |  |                        |      |      |      |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
|                                                                                                      |                                                                                     | 7,50                   | 6,35 | 2,38 |      | 0,4 | DCMT 070204 WM             | M-VT25   | M-BT08    |                                         |     |  | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                      |                                                                                     | 7,30                   | 6,35 | 2,38 |      | 0,8 | DCMT 070208 WM             | M-VT25   | M-BT08    |                                         |     |  | ■                                   |       | ■     | ■     |       |       |
|                                                                                                      |                                                                                     | 11,20                  | 9,52 | 3,97 |      | 0,4 | DCMT 11T304 WM             | M-VT40   | M-BT15    |                                         |     |  | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                      |                                                                                     | 10,80                  | 9,52 | 3,97 |      | 0,8 | DCMT 11T308 WM             | M-VT40   | M-BT15    |                                         |     |  | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                      |                                                                                     |                        |      |      |      |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |

F

## Bohrstangen mit Innenkühlung 45° Boring bars with coolant 45°



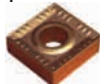
### A.. - Stahlausführung / Steel execution

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |     |    |    |    |      | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|-----|----|----|----|------|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
|                             | dg7                          | L   | L2 | f  | h  | Dmin |                                                                                                              |                                                                                                          |                                                                                                         |
| A16M SSSC R/L 09            | 16                           | 150 | 30 | 11 | 15 | 20   | SC . T 09T3..                                                                                                | M-VT40                                                                                                   | M-BT15                                                                                                  |
| A20Q SSSC R/L 09            | 20                           | 180 | 35 | 13 | 18 | 24   |                                                                                                              |                                                                                                          |                                                                                                         |
| A25R SSSC R/L 09            | 25                           | 200 | 40 | 17 | 23 | 31   |                                                                                                              |                                                                                                          |                                                                                                         |
| A32S SSSC R/L 12            | 32                           | 250 | 50 | 22 | 30 | 39   | SC . T 1204..                                                                                                | M-VT41                                                                                                   | M-BT20                                                                                                  |

Bestellbeispiel / Order example: A16M SSSCR 09

M-BT15 = 3,0 Nm  
M-BT20 = 5,0 Nm

### E-A.. - mit Vollhartmetallkern / with solid carbide core

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |     |    |    |    |      | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|-----|----|----|----|------|---------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
|                             | dg7                          | L   | L2 | f  | h  | Dmin |                                                                                                               |                                                                                                           |                                                                                                          |
| E-A16M SSSC R/L 09          | 16                           | 150 | 30 | 11 | 15 | 20   | SC . T 09T3..                                                                                                 | M-VT40                                                                                                    | M-BT15                                                                                                   |
| E-A20Q SSSC R/L 09          | 20                           | 180 | 35 | 13 | 18 | 24   |                                                                                                               |                                                                                                           |                                                                                                          |
| E-A25R SSSC R/L 09          | 25                           | 200 | 40 | 17 | 23 | 31   |                                                                                                               |                                                                                                           |                                                                                                          |
| E-A32S SSSC R/L 12          | 32                           | 250 | 50 | 22 | 30 | 39   | SC . T 1204..                                                                                                 | M-VT41                                                                                                    | M-BT20                                                                                                   |

Bestellbeispiel / Order example: E-A16M SSSCR 09

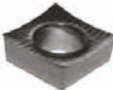
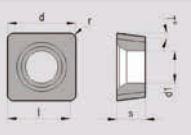
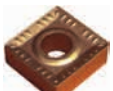
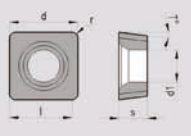
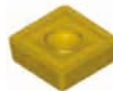
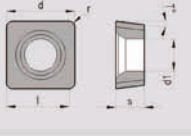
### C-A.. - mit Carbonkern / with carbon fibre core

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |     |    |    |    |      | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|-----|----|----|----|------|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
|                             | dg7                          | L   | L2 | f  | h  | Dmin |                                                                                                                |                                                                                                            |                                                                                                           |
| C-A16M SSSC R/L 09          | 16                           | 150 | 30 | 11 | 15 | 20   | SC . T 09T3..                                                                                                  | M-VT40                                                                                                     | M-BT15                                                                                                    |
| C-A20Q SSSC R/L 09          | 20                           | 180 | 35 | 13 | 18 | 24   |                                                                                                                |                                                                                                            |                                                                                                           |
| C-A25R SSSC R/L 09          | 25                           | 200 | 40 | 17 | 23 | 31   |                                                                                                                |                                                                                                            |                                                                                                           |
| C-A32S SSSC R/L 12          | 32                           | 250 | 50 | 22 | 30 | 39   | SC . T 1204..                                                                                                  | M-VT41                                                                                                     | M-BT20                                                                                                    |

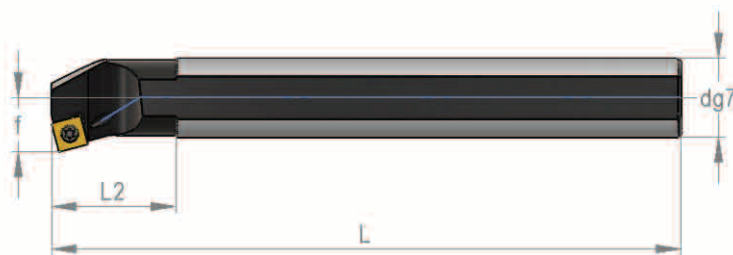
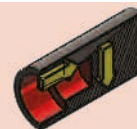
Bestellbeispiel / Order example: C-A16M SSSCR 09



# Wendeplatten für Bohrstangen mit Innenkühlung 45° Insert for boring bars with coolant 45°

|                                                                                                      | Form Figure                                                                        | Abmessungen Dimensions |       |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     |  | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------|-------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|--|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                      |                                                                                    | l                      | d     | s    | d1 | r   |                            |          |           | CT28                                    | K10 |  | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>SCGT ..<br>ALU-M |   | 9,10                   | 9,52  | 3,97 |    | 0,4 | SCGT 09T304 ALU-M          | M-VT40   | M-BT15    |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                      |                                                                                    | 8,70                   | 9,52  | 3,97 |    | 0,8 | SCGT 09T308 ALU-M          | M-VT40   | M-BT15    |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                      |                                                                                    | 11,90                  | 12,70 | 4,76 |    | 0,8 | SCGT 120408 ALU-M          | M-VT41   | M-BT20    |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                      |                                                                                    |                        |       |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
|                                                                                                      |                                                                                    |                        |       |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
| <br>SCMT .. WM       |   | 9,10                   | 9,52  | 3,97 |    | 0,4 | SCMT 09T304 WM             | M-VT40   | M-BT15    |                                         |     |  | ■                                   |       |       | ■     | ■     |       |
|                                                                                                      |                                                                                    | 8,70                   | 9,52  | 3,97 |    | 0,8 | SCMT 09T308 WM             | M-VT40   | M-BT15    |                                         |     |  | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                      |                                                                                    | 12,30                  | 12,70 | 4,76 |    | 0,4 | SCMT 120404 WM             | M-VT41   | M-BT20    |                                         |     |  | ■                                   |       |       | ■     | ■     |       |
|                                                                                                      |                                                                                    | 11,90                  | 12,70 | 4,76 |    | 0,8 | SCMT 120408 WM             | M-VT41   | M-BT20    |                                         |     |  | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                      |                                                                                    | 11,90                  | 12,70 | 4,76 |    | 1,2 | SCMT 120412 WM             | M-VT41   | M-BT20    |                                         |     |  | ■                                   |       | ■     | ■     |       |       |
| <br>SCMT .. XM      |  | 8,70                   | 9,52  | 3,97 |    | 0,8 | SCMT 09T308 XM             | M-VT40   | M-BT15    |                                         |     |  | ■                                   |       |       |       |       | ■     |
|                                                                                                      |                                                                                    | 12,30                  | 12,70 | 4,76 |    | 0,8 | SCMT 120408 XM             | M-VT41   | M-BT20    |                                         |     |  | ■                                   |       |       |       |       | ■     |
|                                                                                                      |                                                                                    | 11,90                  | 12,70 | 4,76 |    | 1,2 | SCMT 120412 XM             | M-VT41   | M-BT20    |                                         |     |  | ■                                   |       |       |       |       | ■     |
|                                                                                                      |                                                                                    |                        |       |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |

## Bohrstangen mit Innenkühlung 75° Boring bars with coolant 75°



### A.. - Stahlausführung / Steel execution

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |     |    |    |    |      | Wendeplatte<br>Insert  | Schraube<br>Screw  | Schlüssel<br>Key  |
|-----------------------------|------------------------------|-----|----|----|----|------|-----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
|                             | dg7                          | L   | L2 | f  | h  | Dmin |                                                                                                           |                                                                                                       |                                                                                                      |
| A16M SSKC R/L 09            | 16                           | 150 | 30 | 11 | 15 | 20   | SC . T 09T3..                                                                                             | M-VT40                                                                                                | M-BT15                                                                                               |
| A20Q SSKC R/L 09            | 20                           | 180 | 35 | 13 | 18 | 24   |                                                                                                           |                                                                                                       |                                                                                                      |
| A25R SSKC R/L 09            | 25                           | 200 | 40 | 17 | 23 | 31   |                                                                                                           |                                                                                                       |                                                                                                      |
| A32S SSKC R/L 12            | 32                           | 250 | 50 | 22 | 30 | 39   | SC . T 1204..                                                                                             | M-VT41                                                                                                | M-BT20                                                                                               |

Bestellbeispiel / Order example: A16M SSKCR 09

M-BT15 = 3,0 Nm  
M-BT20 = 5,0 Nm

### E-A.. - mit Vollhartmetallkern / with solid carbide core

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |     |    |    |    |      | Wendeplatte<br>Insert  | Schraube<br>Screw  | Schlüssel<br>Key  |
|-----------------------------|------------------------------|-----|----|----|----|------|------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
|                             | dg7                          | L   | L2 | f  | h  | Dmin |                                                                                                            |                                                                                                        |                                                                                                       |
| E-A16M SSKC R/L 09          | 16                           | 150 | 30 | 11 | 15 | 20   | SC . T 09T3..                                                                                              | M-VT40                                                                                                 | M-BT15                                                                                                |
| E-A20Q SSKC R/L 09          | 20                           | 180 | 35 | 13 | 18 | 24   |                                                                                                            |                                                                                                        |                                                                                                       |
| E-A25R SSKC R/L 09          | 25                           | 200 | 40 | 17 | 23 | 31   |                                                                                                            |                                                                                                        |                                                                                                       |
| E-A32S SSKC R/L 12          | 32                           | 250 | 50 | 22 | 30 | 39   | SC . T 1204..                                                                                              | M-VT41                                                                                                 | M-BT20                                                                                                |

Bestellbeispiel / Order example: E-A16M SSKCR 09

M-BT15 = 3,0 Nm  
M-BT20 = 5,0 Nm

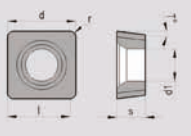
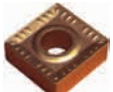
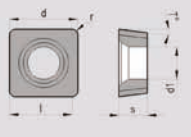
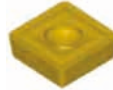
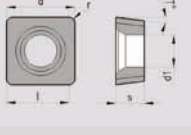
### C-A.. - mit Carbonkern / with carbon fibre core

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |     |    |    |    |      | Wendeplatte<br>Insert  | Schraube<br>Screw  | Schlüssel<br>Key  |
|-----------------------------|------------------------------|-----|----|----|----|------|-------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
|                             | dg7                          | L   | L2 | f  | h  | Dmin |                                                                                                             |                                                                                                         |                                                                                                        |
| C-A16M SSKC R/L 09          | 16                           | 150 | 30 | 11 | 15 | 20   | SC . T 09T3..                                                                                               | M-VT40                                                                                                  | M-BT15                                                                                                 |
| C-A20Q SSKC R/L 09          | 20                           | 180 | 35 | 13 | 18 | 24   |                                                                                                             |                                                                                                         |                                                                                                        |
| C-A25R SSKC R/L 09          | 25                           | 200 | 40 | 17 | 23 | 31   |                                                                                                             |                                                                                                         |                                                                                                        |
| C-A32S SSKC R/L 12          | 32                           | 250 | 50 | 22 | 30 | 39   | SC . T 1204..                                                                                               | M-VT41                                                                                                  | M-BT20                                                                                                 |

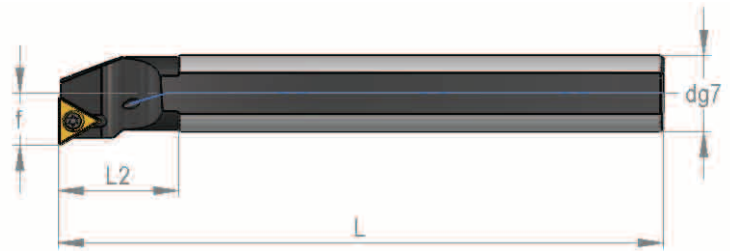
Bestellbeispiel / Order example: C-A16M SSKCR 09

M-BT15 = 3,0 Nm  
M-BT20 = 5,0 Nm

# Wendeplatten für Bohrstangen mit Innenkühlung 75° Insert for boring bars with coolant 75°

|                                                                                                      | Form Figure                                                                        | Abmessungen Dimensions |       |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     |  | Beschichtet Sorten<br>Coated grades |       |       |       |       |       |
|------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------|-------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|--|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                      |                                                                                    | l                      | d     | s    | d1 | r   |                            |          |           | CT28                                    | K10 |  | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>SCGT ..<br>ALU-M |   | 9,10                   | 9,52  | 3,97 |    | 0,4 | SCGT 09T304 ALU-M          | M-VT40   | M-BT15    |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                      |                                                                                    | 8,70                   | 9,52  | 3,97 |    | 0,8 | SCGT 09T308 ALU-M          | M-VT40   | M-BT15    |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                      |                                                                                    | 11,90                  | 12,70 | 4,76 |    | 0,8 | SCGT 120408 ALU-M          | M-VT41   | M-BT20    |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                      |                                                                                    |                        |       |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
| <br>SCMT .. WM       |   | 9,10                   | 9,52  | 3,97 |    | 0,4 | SCMT 09T304 WM             | M-VT40   | M-BT15    |                                         |     |  | ■                                   |       |       | ■     | ■     |       |
|                                                                                                      |                                                                                    | 8,70                   | 9,52  | 3,97 |    | 0,8 | SCMT 09T308 WM             | M-VT40   | M-BT15    |                                         |     |  | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                      |                                                                                    | 12,30                  | 12,70 | 4,76 |    | 0,4 | SCMT 120404 WM             | M-VT41   | M-BT20    |                                         |     |  | ■                                   |       |       | ■     | ■     |       |
|                                                                                                      |                                                                                    | 11,90                  | 12,70 | 4,76 |    | 0,8 | SCMT 120408 WM             | M-VT41   | M-BT20    |                                         |     |  | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                      |                                                                                    | 11,90                  | 12,70 | 4,76 |    | 1,2 | SCMT 120412 WM             | M-VT41   | M-BT20    |                                         |     |  | ■                                   |       | ■     | ■     |       |       |
|                                                                                                      |                                                                                    |                        |       |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
| <br>SCMT .. XM      |  | 8,70                   | 9,52  | 3,97 |    | 0,8 | SCMT 09T308 XM             | M-VT40   | M-BT15    |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                      |                                                                                    | 12,30                  | 12,70 | 4,76 |    | 0,8 | SCMT 120408 XM             | M-VT41   | M-BT20    |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                      |                                                                                    | 11,90                  | 12,70 | 4,76 |    | 1,2 | SCMT 120412 XM             | M-VT41   | M-BT20    |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                      |                                                                                    |                        |       |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |

## Bohrstangen mit Innenkühlung 90° Boring bars with coolant 90°



### A.. - Stahlausführung / Steel execution

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |    |      | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|----|-----|----|----|------|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
|                             | dg7                          | f  | L   | L2 | h  | Dmin |                                                                                                              |                                                                                                          |                                                                                                         |
| A10H STFC R/L 09            | 10                           | 7  | 100 | 25 | 9  | 13   | TC . T 0902..                                                                                                | M-VT22                                                                                                   | M-BT06                                                                                                  |
| A12K STFC R/L 11            | 12                           | 9  | 125 | 25 | 11 | 16   |                                                                                                              |                                                                                                          |                                                                                                         |
| A16M STFC R/L 11            | 16                           | 11 | 150 | 30 | 15 | 20   |                                                                                                              |                                                                                                          |                                                                                                         |
| A20Q STFC R/L 11            | 20                           | 13 | 180 | 35 | 18 | 24   |                                                                                                              |                                                                                                          |                                                                                                         |
| A20Q STFC R/L 16            | 20                           | 13 | 180 | 35 | 18 | 24   | TC . T 1102..                                                                                                | M-VT25                                                                                                   | M-BT08                                                                                                  |
| A25R STFC R/L 16            | 25                           | 17 | 200 | 40 | 23 | 31   |                                                                                                              |                                                                                                          |                                                                                                         |
| A32S STFC R/L 16            | 32                           | 22 | 250 | 50 | 30 | 39   |                                                                                                              |                                                                                                          |                                                                                                         |
|                             |                              |    |     |    |    |      | TC . T 16T3..                                                                                                | M-VT40                                                                                                   | M-BT15                                                                                                  |

Bestellbeispiel / Order example: A10H STFCR 09

M-BT06 = 0,6 Nm  
M-BT08 = 1,2 Nm  
M-BT15 = 3,0 Nm

### E-A.. - mit Vollhartmetallkern / with solid carbide core

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |    |      | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|----|-----|----|----|------|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
|                             | dg7                          | f  | L   | L2 | h  | Dmin |                                                                                                                |                                                                                                            |                                                                                                           |
| E-A10H STFC R/L 09          | 10                           | 7  | 100 | 25 | 9  | 13   | TC . T 0902..                                                                                                  | M-VT22                                                                                                     | M-BT06                                                                                                    |
| E-A12K STFC R/L 11          | 12                           | 9  | 125 | 25 | 11 | 16   |                                                                                                                |                                                                                                            |                                                                                                           |
| E-A16M STFC R/L 11          | 16                           | 11 | 150 | 30 | 15 | 20   |                                                                                                                |                                                                                                            |                                                                                                           |
| E-A20Q STFC R/L 11          | 20                           | 13 | 180 | 35 | 18 | 24   |                                                                                                                |                                                                                                            |                                                                                                           |
| E-A20Q STFC R/L 16          | 20                           | 13 | 180 | 35 | 18 | 24   | TC . T 1102..                                                                                                  | M-VT25                                                                                                     | M-BT08                                                                                                    |
| E-A25R STFC R/L 16          | 25                           | 17 | 200 | 40 | 23 | 31   |                                                                                                                |                                                                                                            |                                                                                                           |
| E-A32S STFC R/L 16          | 32                           | 22 | 250 | 50 | 30 | 39   |                                                                                                                |                                                                                                            |                                                                                                           |
|                             |                              |    |     |    |    |      | TC . T 16T3..                                                                                                  | M-VT40                                                                                                     | M-BT15                                                                                                    |

Bestellbeispiel / Order example: E-A10H STFCR 09

M-BT06 = 0,6 Nm  
M-BT08 = 1,2 Nm  
M-BT15 = 3,0 Nm

### C-A.. - mit Carbonkern / with carbon fibre core

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |    |      | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|----|-----|----|----|------|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
|                             | dg7                          | f  | L   | L2 | h  | Dmin |                                                                                                                |                                                                                                            |                                                                                                           |
| E-A10H STFC R/L 09          | 10                           | 7  | 100 | 25 | 9  | 13   | TC . T 0902..                                                                                                  | M-VT22                                                                                                     | M-BT06                                                                                                    |
| E-A12K STFC R/L 11          | 12                           | 9  | 125 | 25 | 11 | 16   |                                                                                                                |                                                                                                            |                                                                                                           |
| E-A16M STFC R/L 11          | 16                           | 11 | 150 | 30 | 15 | 20   |                                                                                                                |                                                                                                            |                                                                                                           |
| E-A20Q STFC R/L 11          | 20                           | 13 | 180 | 35 | 18 | 24   |                                                                                                                |                                                                                                            |                                                                                                           |
| E-A20Q STFC R/L 16          | 20                           | 13 | 180 | 35 | 18 | 24   | TC . T 1102..                                                                                                  | M-VT25                                                                                                     | M-BT08                                                                                                    |
| E-A25R STFC R/L 16          | 25                           | 17 | 200 | 40 | 23 | 31   |                                                                                                                |                                                                                                            |                                                                                                           |
| E-A32S STFC R/L 16          | 32                           | 22 | 250 | 50 | 30 | 39   |                                                                                                                |                                                                                                            |                                                                                                           |
|                             |                              |    |     |    |    |      | TC . T 16T3..                                                                                                  | M-VT40                                                                                                     | M-BT15                                                                                                    |

Bestellbeispiel / Order example: A10H STFCR 09

M-BT06 = 0,6 Nm  
M-BT08 = 1,2 Nm  
M-BT15 = 3,0 Nm

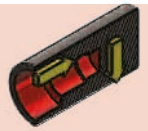
# Wendepplatten für Bohrstangen mit Innenkühlung 90° Insert for boring bars with coolant 90°

|                                                                                                    | Form Figure                                                                         | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                    |                                                                                     | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>TCGT .. ALU-M |    |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                                    |                                                                                     | 10,50                  | 6,35 | 2,38 |    | 0,2 | TCGT 110202 ALU-M          | M-VT25   | M-BT08    |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                    |                                                                                     | 10,00                  | 6,35 | 2,38 |    | 0,4 | TCGT 110204 ALU-M          | M-VT25   | M-BT08    |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                    |                                                                                     | 15,00                  | 9,52 | 3,97 |    | 0,4 | TCGT 16T304 ALU-M          | M-VT 40  | M-BT 15   |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                    |                                                                                     | 14,50                  | 9,52 | 3,97 |    | 0,8 | TCGT 16T308 ALU-M          | M-VT 40  | M-BT 15   |                                         | ■   |                                     |       |       |       |       | ■     |
| <br>TCMT .. WM    |    |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                                    |                                                                                     | 8,60                   | 5,56 | 2,38 |    | 0,4 | TCMT 090204 WM             | M-VT20   | M-BT06    |                                         |     |                                     | ■     |       |       | ■     | ■     |
|                                                                                                    |                                                                                     | 11,00                  | 6,35 | 2,38 |    | 0,4 | TCMT 110204 WM             | M-VT25   | M-BT 08   |                                         |     |                                     | ■     |       | ■     | ■     | ■     |
|                                                                                                    |                                                                                     | 11,00                  | 6,35 | 2,38 |    | 0,8 | TCMT 110208 WM             | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     |       | ■     | ■     | ■     |
|                                                                                                    |                                                                                     | 16,50                  | 9,52 | 3,97 |    | 0,4 | TCMT 16T304 WM             | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     |       | ■     | ■     | ■     |
| <br>TCMT .. XM  |   |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                                    |                                                                                     | 10,00                  | 6,35 | 2,38 |    | 0,4 | TCMT 110204 XM             | M-VT25   | M-BT 08   |                                         |     |                                     | ■     |       |       | ■     | ■     |
|                                                                                                    |                                                                                     | 9,00                   | 6,35 | 2,38 |    | 0,8 | TCMT 110208 XM             | M-VT 25  | M-BT 08   |                                         |     |                                     | ■     |       |       | ■     | ■     |
|                                                                                                    |                                                                                     | 15,50                  | 9,52 | 3,97 |    | 0,4 | TCMT 16T304 XM             | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     |       |       | ■     | ■     |
|                                                                                                    |                                                                                     | 14,50                  | 9,52 | 3,97 |    | 0,8 | TCMT 16T308 XM             | M-VT 40  | M-BT 15   |                                         |     |                                     | ■     |       |       | ■     | ■     |
| <br>TCXT .. WM  |  |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                                    |                                                                                     | 16,50                  | 9,52 | 3,97 |    | 0,4 | TCXT 16T304 WM             | M-VT40   | M-BT 15   |                                         |     |                                     |       |       | ■     |       | ■     |
|                                                                                                    |                                                                                     | 16,50                  | 9,52 | 3,97 |    | 0,8 | TCXT 16T308 WM             | M-VT40   | M.BT 15   |                                         |     |                                     |       |       | ■     |       | ■     |
| <br>TCXT .. XM  |  |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                                    |                                                                                     | 16,50                  | 9,52 | 3,97 |    | 0,4 | TCXT 16T304 XM             | M-VT40   | M-BT 15   |                                         |     |                                     |       |       | ■     |       |       |
|                                                                                                    |                                                                                     | 16,50                  | 9,52 | 3,97 |    | 0,8 | TCXT 16T308 XM             | M-VT40   | M.BT 15   |                                         |     |                                     |       |       | ■     |       |       |

F



## Bohrstangen mit Innenkühlung 93° Boring bars with coolant 93°



### A.. - Stahlausführung / Steel execution

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |    |      | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|----|-----|----|----|------|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
|                             | dg7                          | f  | L   | L2 | h  | Dmin |                                                                                                              |                                                                                                          |                                                                                                         |
| A12K STUC R/L 11            | 12                           | 9  | 125 | 25 | 11 | 16   | TC . T 1102..                                                                                                | M-VT25                                                                                                   | M-BT08                                                                                                  |
| A16M STUC R/L 11            | 16                           | 11 | 150 | 30 | 15 | 20   |                                                                                                              |                                                                                                          |                                                                                                         |
| A20Q STUC R/L 16            | 20                           | 13 | 180 | 35 | 18 | 24   |                                                                                                              |                                                                                                          |                                                                                                         |
| A25R STUC R/L 16            | 25                           | 17 | 200 | 40 | 23 | 31   | TC . T 16T3..                                                                                                | M-VT40                                                                                                   | M-BT15                                                                                                  |
| A32S STUC R/L 16            | 32                           | 22 | 250 | 50 | 30 | 39   |                                                                                                              |                                                                                                          |                                                                                                         |

Bestellbeispiel / Order example: A12K STUCR 11

M-BT08 = 1,2 Nm  
M-BT15 = 3,0 Nm

### E-A.. - mit Vollhartmetallkern / with solid carbide core

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |    |      | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|----|-----|----|----|------|---------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
|                             | dg7                          | f  | L   | L2 | h  | Dmin |                                                                                                               |                                                                                                           |                                                                                                          |
| E-A12K STUC R/L 11          | 12                           | 9  | 125 | 25 | 11 | 16   | TC . T 1102..                                                                                                 | M-VT25                                                                                                    | M-BT08                                                                                                   |
| E-A16M STUC R/L 11          | 16                           | 11 | 150 | 30 | 15 | 20   |                                                                                                               |                                                                                                           |                                                                                                          |
| E-A20Q STUC R/L 16          | 20                           | 13 | 180 | 35 | 18 | 24   |                                                                                                               |                                                                                                           |                                                                                                          |
| E-A25R STUC R/L 16          | 25                           | 17 | 200 | 40 | 23 | 31   | TC . T 16T3..                                                                                                 | M-VT40                                                                                                    | M-BT15                                                                                                   |
| E-A32S STUC R/L 16          | 32                           | 22 | 250 | 50 | 30 | 39   |                                                                                                               |                                                                                                           |                                                                                                          |

Bestellbeispiel / Order example: E-C-A12K STUCR 11

M-BT08 = 1,2 Nm  
M-BT15 = 3,0 Nm

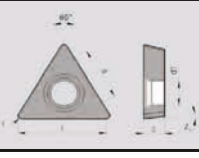
### C-A.. - mit Carbonkern / with carbon fibre core

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |    |      | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|----|-----|----|----|------|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
|                             | dg7                          | f  | L   | L2 | h  | Dmin |                                                                                                                |                                                                                                            |                                                                                                           |
| C-A12K STUC R/L 11          | 12                           | 9  | 125 | 25 | 11 | 16   | TC . T 1102..                                                                                                  | M-VT25                                                                                                     | M-BT08                                                                                                    |
| C-A16M STUC R/L 11          | 16                           | 11 | 150 | 30 | 15 | 20   |                                                                                                                |                                                                                                            |                                                                                                           |
| C-A20Q STUC R/L 16          | 20                           | 13 | 180 | 35 | 18 | 24   |                                                                                                                |                                                                                                            |                                                                                                           |
| C-A25R STUC R/L 16          | 25                           | 17 | 200 | 40 | 23 | 31   | TC . T 16T3..                                                                                                  | M-VT40                                                                                                     | M-BT15                                                                                                    |
| C-A32S STUC R/L 16          | 32                           | 22 | 250 | 50 | 30 | 39   |                                                                                                                |                                                                                                            |                                                                                                           |

Bestellbeispiel / Order example: C-A12K STUCR 11

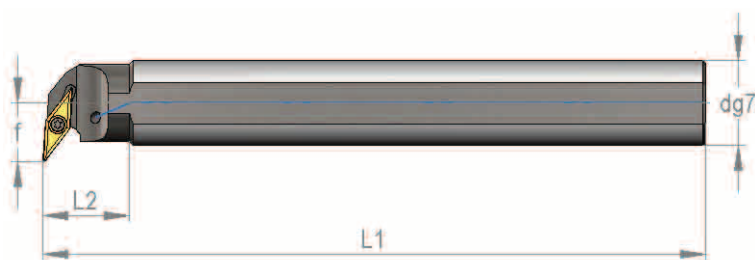
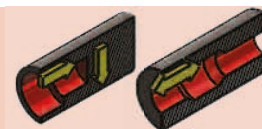
M-BT08 = 1,2 Nm  
M-BT15 = 3,0 Nm

# Wendeplatten für Bohrstangen mit Innenkühlung 93° Insert for boring bars with coolant 93°

|                                                                                                   | Form Figure                                                                         | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|---------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                   |                                                                                     | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>TCGT .. ALU-M |    | 10,50                  | 6,35 | 2,38 |    | 0,2 | TCGT 110202 ALU-M          | M-VT25   | M-BT08    |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                   |                                                                                     | 10,00                  | 6,35 | 2,38 |    | 0,4 | TCGT 110204 ALU-M          | M-VT25   | M-BT08    |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                   |                                                                                     | 15,00                  | 9,52 | 3,97 |    | 0,4 | TCGT 16T304 ALU-M          | M-VT 40  | M-BT 15   |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                   |                                                                                     | 14,50                  | 9,52 | 3,97 |    | 0,8 | TCGT 16T308 ALU-M          | M-VT 40  | M-BT 15   |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                   |                                                                                     |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |
| <br>TCMT .. WM    |    | 8,60                   | 5,56 | 2,38 |    | 0,4 | TCMT 090204 WM             | M-VT20   | M-BT06    |                                         |     | ■                                   |       |       | ■     | ■     |       |
|                                                                                                   |                                                                                     | 11,00                  | 6,35 | 2,38 |    | 0,4 | TCMT 110204 WM             | M-VT25   | M-BT 08   |                                         |     | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                   |                                                                                     | 11,00                  | 6,35 | 2,38 |    | 0,8 | TCMT 110208 WM             | M-VT 25  | M-BT 08   |                                         |     | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                   |                                                                                     | 16,50                  | 9,52 | 3,97 |    | 0,4 | TCMT 16T304 WM             | M-VT 40  | M-BT 15   |                                         |     | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                   |                                                                                     | 16,50                  | 9,52 | 3,97 |    | 0,8 | TCMT 16T308 WM             | M-VT 40  | M-BT 15   |                                         |     | ■                                   |       | ■     | ■     | ■     |       |
| <br>TCMT .. XM   |   | 10,00                  | 6,35 | 2,38 |    | 0,4 | TCMT 110204 XM             | M-VT25   | M-BT 08   |                                         |     | ■                                   |       |       | ■     | ■     |       |
|                                                                                                   |                                                                                     | 9,00                   | 6,35 | 2,38 |    | 0,8 | TCMT 110208 XM             | M-VT 25  | M-BT 08   |                                         |     | ■                                   |       |       | ■     | ■     |       |
|                                                                                                   |                                                                                     | 15,50                  | 9,52 | 3,97 |    | 0,4 | TCMT 16T304 XM             | M-VT 40  | M-BT 15   |                                         |     | ■                                   |       |       | ■     | ■     |       |
|                                                                                                   |                                                                                     | 14,50                  | 9,52 | 3,97 |    | 0,8 | TCMT 16T308 XM             | M-VT 40  | M-BT 15   |                                         |     | ■                                   |       |       | ■     | ■     |       |
| <br>TCXT .. WM  |  | 16,50                  | 9,52 | 3,97 |    | 0,4 | TCXT 16T304 WM             | M-VT40   | M-BT 15   |                                         |     |                                     |       | ■     |       |       | ■     |
|                                                                                                   |                                                                                     | 16,50                  | 9,52 | 3,97 |    | 0,8 | TCXT 16T308 WM             | M-VT40   | M.BT 15   |                                         |     |                                     |       | ■     |       |       | ■     |
|                                                                                                   |                                                                                     |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |
| <br>TCXT .. XM  |  | 16,50                  | 9,52 | 3,97 |    | 0,4 | TCXT 16T304 XM             | M-VT40   | M-BT 15   |                                         |     |                                     |       | ■     |       |       |       |
|                                                                                                   |                                                                                     | 16,50                  | 9,52 | 3,97 |    | 0,8 | TCXT 16T308 XM             | M-VT40   | M.BT 15   |                                         |     |                                     |       | ■     |       |       |       |
|                                                                                                   |                                                                                     |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |

F

## Bohrstangen mit Innenkühlung 93° Boring bars with coolant 93°



### A.. - Stahlausführung / Steel execution

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |      |      |      |      | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|----|-----|------|------|------|------|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
|                             | dg7                          | f  | L1  | L2   | h1   | h2   | Dmin |                                                                                                              |                                                                                                          |                                                                                                         |
| A16M SVUC R/L 11            | 16                           | 11 | 150 | 16,5 | 8    | 15,5 | 21   | VC . T 1103..                                                                                                | M-VT25                                                                                                   | M-BT08                                                                                                  |
| A20Q SVUC R/L 11            | 20                           | 13 | 180 | 20,5 | 10   | 19   | 25   |                                                                                                              |                                                                                                          |                                                                                                         |
| A25R SVUC R/L 11            | 25                           | 17 | 200 | 25,5 | 12,5 | 24   | 31   |                                                                                                              |                                                                                                          |                                                                                                         |
| A25R SVUC R/L 16            | 25                           | 17 | 200 | 25,5 | 12,5 | 24   | 31   | VC . T 1604..                                                                                                | M-VT40                                                                                                   | M-BT15                                                                                                  |
| A32S SVUC R/L 16            | 32                           | 22 | 250 | 32,5 | 15,5 | 32   | 39   |                                                                                                              |                                                                                                          |                                                                                                         |

Bestellbeispiel / Order example: A16M SVUCR 11

M-BT08 = 1,2 Nm  
M-BT15 = 3,0 Nm

### E-A.. - mit Vollhartmetallkern / with solid carbide core

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |      |      |      |      | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|----|-----|------|------|------|------|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
|                             | dg7                          | f  | L1  | L2   | h1   | h2   | Dmin |                                                                                                                |                                                                                                            |                                                                                                           |
| E-A16M SVUC R/L 11          | 16                           | 11 | 150 | 16,5 | 8    | 15,5 | 21   | VC . T 1103..                                                                                                  | M-VT25                                                                                                     | M-BT08                                                                                                    |
| E-A20Q SVUC R/L 11          | 20                           | 13 | 180 | 20,5 | 10   | 19   | 25   |                                                                                                                |                                                                                                            |                                                                                                           |
| E-A25R SVUC R/L 11          | 25                           | 17 | 200 | 25,5 | 12,5 | 24   | 31   |                                                                                                                |                                                                                                            |                                                                                                           |
| E-A25R SVUC R/L 16          | 25                           | 17 | 200 | 25,5 | 12,5 | 24   | 31   | VC . T 1604..                                                                                                  | M-VT40                                                                                                     | M-BT15                                                                                                    |
| E-A32S SVUC R/L 16          | 32                           | 22 | 250 | 32,5 | 15,5 | 32   | 39   |                                                                                                                |                                                                                                            |                                                                                                           |

Bestellbeispiel / Order example: E-A16M SVUCR 11

### C-A.. - mit Carbonkern / with carbon fibre core

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |      |      |      |      | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|----|-----|------|------|------|------|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
|                             | dg7                          | f  | L1  | L2   | h1   | h2   | Dmin |                                                                                                                |                                                                                                            |                                                                                                           |
| C-A16M SVUC R/L 11          | 16                           | 11 | 150 | 16,5 | 8    | 15,5 | 21   | VC . T 1103..                                                                                                  | M-VT25                                                                                                     | M-BT08                                                                                                    |
| C-A20Q SVUC R/L 11          | 20                           | 13 | 180 | 20,5 | 10   | 19   | 25   |                                                                                                                |                                                                                                            |                                                                                                           |
| C-A25R SVUC R/L 11          | 25                           | 17 | 200 | 25,5 | 12,5 | 24   | 31   |                                                                                                                |                                                                                                            |                                                                                                           |
| C-A25R SVUC R/L 16          | 25                           | 17 | 200 | 25,5 | 12,5 | 24   | 31   | VC . T 1604..                                                                                                  | M-VT40                                                                                                     | M-BT15                                                                                                    |
| C-A32S SVUC R/L 16          | 32                           | 22 | 250 | 32,5 | 15,5 | 32   | 39   |                                                                                                                |                                                                                                            |                                                                                                           |

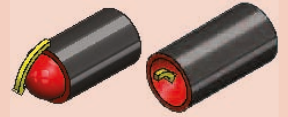
Bestellbeispiel / Order example: C-A16M SVUCR 11

# Wendeplatten für Bohrstangen mit Innenkühlung 93° Insert for boring bars with coolant 93°

|                                                                                                   | Form Figure                                                                         | Abmessungen Dimensions |      |      |    |     | Bezeichnung Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|---------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|----|-----|-------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                   |                                                                                     | l                      | d    | s    | d1 | r   |                         |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>VCMT .. ALU-M |    |                        |      |      |    |     |                         |          |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                                   |                                                                                     | 10,50                  | 6,35 | 3,18 |    | 0,2 | VCMT 110302 ALU-M       | M-VT25   | M-BT08    |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                   |                                                                                     | 10,00                  | 6,35 | 3,18 |    | 0,4 | VCMT 110304 ALU-M       | M-VT25   | M-BT08    |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                   |                                                                                     | 16,10                  | 9,52 | 4,76 |    | 0,2 | VCMT 160402 ALU-M       | M-VT40   | M-BT15    |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                   |                                                                                     | 15,60                  | 9,52 | 4,76 |    | 0,4 | VCMT 160404 ALU-M       | M-VT40   | M-BT15    |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                   |                                                                                     | 14,00                  | 9,52 | 4,76 |    | 0,8 | VCMT 160408 ALU-M       | M-VT40   | M-BT15    |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                   |                                                                                     | 13,60                  | 9,52 | 4,76 |    | 1,2 | VCMT 160412 ALU-M       | M-VT40   | M-BT15    |                                         | ■   |                                     |       |       |       |       | ■     |
| <br>VCMT .. WFF   |    |                        |      |      |    |     |                         |          |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                                   |                                                                                     | 10,00                  | 6,35 | 3,18 |    | 0,0 | VCMT 110300 WFF         | M-VT25   | M-BT08    |                                         |     | ■                                   |       |       |       |       |       |
|                                                                                                   |                                                                                     | 10,00                  | 6,35 | 3,18 |    | 0,1 | VCMT 110301 WFF         | M-VT25   | M-BT08    |                                         |     | ■                                   |       |       |       |       |       |
|                                                                                                   |                                                                                     | 16,00                  | 9,52 | 4,76 |    | 0,0 | VCMT 160400 WFF         | M-VT40   | M-BT15    |                                         |     | ■                                   |       |       |       |       |       |
|                                                                                                   |                                                                                     | 15,90                  | 9,52 | 4,76 |    | 0,1 | VCMT 160401 WFF         | M-VT40   | M-BT15    |                                         |     | ■                                   |       |       |       |       |       |
| <br>VCMT .. WF   |  |                        |      |      |    |     |                         |          |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                                   |                                                                                     | 11,00                  | 6,35 | 3,18 |    | 0,2 | VCMT 110302 WF          | M-VT25   | M-BT08    |                                         |     | ■                                   |       |       |       | ■     |       |
|                                                                                                   |                                                                                     | 11,00                  | 6,35 | 3,18 |    | 0,4 | VCMT 110304 WF          | M-VT25   | M-BT08    |                                         |     |                                     |       |       |       |       |       |
|                                                                                                   |                                                                                     | 16,00                  | 9,52 | 4,76 |    | 0,4 | VCMT 160404 WF          | M-VT40   | M-BT15    |                                         |     | ■                                   |       |       |       | ■     |       |
|                                                                                                   |                                                                                     | 16,00                  | 9,52 | 4,76 |    | 0,8 | VCMT 160408 WF          | M-VT40   | M-BT15    |                                         |     | ■                                   |       |       |       |       |       |
| <br>VCMT .. WM  |  |                        |      |      |    |     |                         |          |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                                   |                                                                                     | 11,00                  | 6,35 | 3,18 |    | 0,4 | VCMT 110304 WM          | M-VT25   | M-BT08    |                                         |     | ■                                   |       | ■     |       | ■     |       |
|                                                                                                   |                                                                                     | 11,00                  | 6,35 | 3,18 |    | 0,8 | VCMT 110308 WM          | M-VT25   | M-BT08    |                                         |     | ■                                   |       | ■     |       | ■     |       |
|                                                                                                   |                                                                                     | 16,00                  | 9,52 | 4,76 |    | 0,4 | VCMT 160404 WM          | M-VT40   | M-BT15    |                                         |     | ■                                   |       | ■     |       | ■     |       |
|                                                                                                   |                                                                                     | 16,00                  | 9,52 | 4,76 |    | 0,8 | VCMT 160408 WM          | M-VT40   | M-BT15    |                                         |     | ■                                   |       | ■     |       | ■     |       |

F

## Bohrstangen mit Innenkühlung 52° Boring bars with coolant 52°

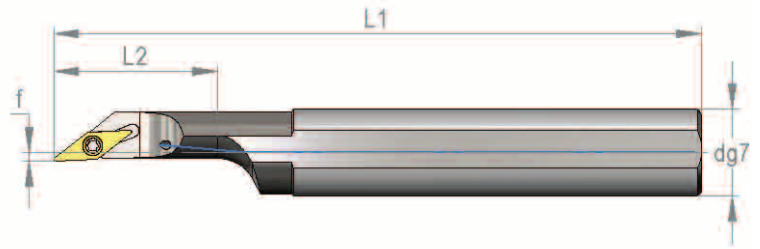


### SET M-A-SVJC R/L 11

bestehend aus / consists of:

A16M SVØ R/L 11

A20M SVØ R/L 11



### A.. - Stahlausführung / Steel execution

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |     |      |    | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|----|-----|-----|------|----|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
|                             | dg7                          | L2 | L1  | f   | Dmin | H  |                                                                                                              |                                                                                                          |                                                                                                         |
| A08F SVØ R/L 05             | 8                            | 15 | 80  | 1   | 8    |    | VC.T 0501..                                                                                                  | M-VT16                                                                                                   | M-BT05                                                                                                  |
| A10H SVØ R/L 07             | 10                           | 18 | 125 | 1,5 | 13   |    | VC.T 0702..                                                                                                  | M-VT20                                                                                                   | M-BT06                                                                                                  |
| A12L SVJC R/L 07            | 12                           | 18 | 140 | 1,5 | 13   |    |                                                                                                              |                                                                                                          |                                                                                                         |
| A16M SVØ R/L 11             | 16                           | 30 | 150 | 2   | 22   | 15 | VC . T 1103..                                                                                                | M-VT25                                                                                                   | M-BT08                                                                                                  |
| A20M SVØ R/L 11             | 20                           | 38 | 180 | 2   | 25   | 19 |                                                                                                              |                                                                                                          |                                                                                                         |
| A25M SVØ R/L 16             | 25                           | 44 | 200 | 5   | 28   | 24 | VC . T 1604..                                                                                                | M-VT40                                                                                                   | M-BT15                                                                                                  |

Bestellbeispiel / Order example: A16M SVØ R 11

M-BT05 = 0,6 Nm  
M-BT06 = 0,6 Nm  
M-BT08 = 1,2 Nm  
M-BT15 = 3,0 Nm

### SET ME-A-SVJC R/L 11

bestehend aus / consists of:

E-A16M SVØ R/L 11

E-A20M SVØ R/L 11

### E-A.. - mit Vollhartmetallkern / with solid carbide core

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |     |      |    | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|----|-----|-----|------|----|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
|                             | dg7                          | L2 | L1  | f   | Dmin | H  |                                                                                                                |                                                                                                            |                                                                                                           |
| E-A08F SVØ R/L 05           | 8                            | 15 | 80  | 1   | 8    |    | VC.T 0501..                                                                                                    | M-VT16                                                                                                     | M-BT05                                                                                                    |
| E-A10H SVØ R/L 07           | 10                           | 18 | 125 | 1,5 | 13   |    | VC.T 0702..                                                                                                    | M-VT20                                                                                                     | M-BT06                                                                                                    |
| E-A12L SVØ R/L 07           | 12                           | 18 | 140 | 1,5 | 13   |    |                                                                                                                |                                                                                                            |                                                                                                           |
| E-A16M SVØ R/L 11           | 16                           | 30 | 150 | 2   | 22   | 15 | VC . T 1103..                                                                                                  | M-VT25                                                                                                     | M-BT08                                                                                                    |
| E-A20M SVØ R/L 11           | 20                           | 38 | 180 | 2   | 25   | 19 |                                                                                                                |                                                                                                            |                                                                                                           |
| E-A25M SVØ R/L 16           | 25                           | 44 | 200 | 2   | 28   | 24 | VC . T 1604..                                                                                                  | M-VT40                                                                                                     | M-BT15                                                                                                    |

Bestellbeispiel / Order example: E-A16M SVØ R 11

### SET MC-A-SVJC R/L 11

bestehend aus / consists of:

C-A16M SVØ R/L 11

C-A20M SVØ R/L 11

### C-A.. - mit Carbonkern / with carbon fibre core

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |     |      |    | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|----|-----|-----|------|----|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
|                             | dg7                          | L2 | L1  | f   | Dmin | H  |                                                                                                                |                                                                                                            |                                                                                                           |
| C-A08F SVØ R/L 05           | 8                            | 15 | 80  | 1   | 8    |    | VC.T 0501..                                                                                                    | M-VT16                                                                                                     | M-BT05                                                                                                    |
| C-A10H SVØ R/L 07           | 10                           | 18 | 125 | 1,5 | 13   |    | VC.T 0702..                                                                                                    | M-VT20                                                                                                     | M-BT06                                                                                                    |
| C-A12L SVØ R/L 07           | 12                           | 18 | 140 | 1,5 | 13   |    |                                                                                                                |                                                                                                            |                                                                                                           |
| C-A16M SVØ R/L 11           | 16                           | 30 | 150 | 2   | 22   | 15 | VC . T 1103..                                                                                                  | M-VT25                                                                                                     | M-BT08                                                                                                    |
| C-A20M SVØ R/L 11           | 20                           | 38 | 180 | 2   | 25   | 19 |                                                                                                                |                                                                                                            |                                                                                                           |
| C-A25M SVØ R/L 16           | 25                           | 44 | 200 | 2   | 28   | 24 | VC . T 1604..                                                                                                  | M-VT40                                                                                                     | M-BT15                                                                                                    |

Bestellbeispiel / Order example: C-A16M SVØ R 11

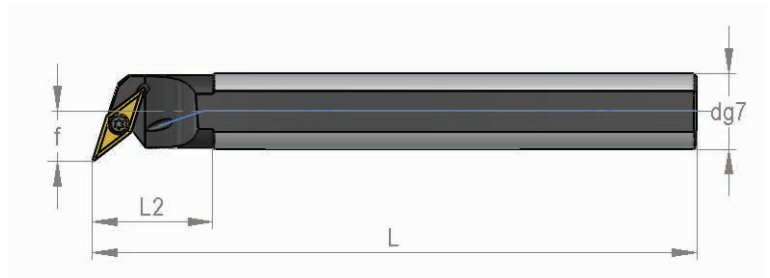
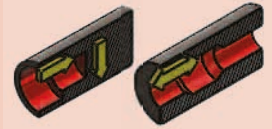


# Wendeplatten für Bohrstangen mit Innenkühlung 52° Insert for boring bars with coolant 52°

|                                                                                                   | Form Figure                                                                         | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|---------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                   |                                                                                     | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>VCMT .. ALU-M |    | 10,50                  | 6,35 | 3,18 |    | 0,2 | VCMT 110302 ALU-M          | M-VT25   | M-BT08    |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                   |                                                                                     | 10,00                  | 6,35 | 3,18 |    | 0,4 | VCMT 110304 ALU-M          | M-VT25   | M-BT08    |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                   |                                                                                     | 16,10                  | 9,52 | 4,76 |    | 0,2 | VCMT 160402 ALU-M          | M-VT40   | M-BT15    |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                   |                                                                                     | 15,60                  | 9,52 | 4,76 |    | 0,4 | VCMT 160404 ALU-M          | M-VT40   | M-BT15    |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                   |                                                                                     | 14,00                  | 9,52 | 4,76 |    | 0,8 | VCMT 160408 ALU-M          | M-VT40   | M-BT15    |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                   |                                                                                     | 13,60                  | 9,52 | 4,76 |    | 1,2 | VCMT 160412 ALU-M          | M-VT40   | M-BT15    |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                   |                                                                                     |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |
| <br>VCMT .. WFF   |    | 5,40                   | 3,10 | 1,59 |    | 0,2 | VCMT 050102 WFF            | M-VT16   | M-BT05    |                                         |     | ■                                   |       |       |       |       | ■     |
|                                                                                                   |                                                                                     | 10,00                  | 6,35 | 3,18 |    | 0,0 | VCMT 110300 WFF            | M-VT25   | M-BT08    |                                         |     | ■                                   |       |       |       |       |       |
|                                                                                                   |                                                                                     | 10,00                  | 6,35 | 3,18 |    | 0,1 | VCMT 110301 WFF            | M-VT25   | M-BT08    |                                         |     | ■                                   |       |       |       |       |       |
|                                                                                                   |                                                                                     | 16,00                  | 9,52 | 4,76 |    | 0,0 | VCMT 160400 WFF            | M-VT40   | M-BT15    |                                         |     | ■                                   |       |       |       |       |       |
|                                                                                                   |                                                                                     | 15,90                  | 9,52 | 4,76 |    | 0,1 | VCMT 160401 WFF            | M-VT40   | M-BT15    |                                         |     | ■                                   |       |       |       |       |       |
| <br>VCMT .. WF   |  | 7,70                   | 3,97 | 2,38 |    | 0,2 | VCMT 070202 WF             | M-VT20   | M-BT06    |                                         |     | ■                                   |       |       |       |       | ■     |
|                                                                                                   |                                                                                     | 7,70                   | 3,97 | 2,38 |    | 0,4 | VCMT 070204 WF             | M-VT20   | M-BT06    |                                         |     | ■                                   |       |       |       |       | ■     |
|                                                                                                   |                                                                                     | 11,00                  | 6,35 | 3,18 |    | 0,2 | VCMT 110302 WF             | M-VT25   | M-BT08    |                                         |     | ■                                   |       |       | ■     |       |       |
|                                                                                                   |                                                                                     | 11,00                  | 6,35 | 3,18 |    | 0,4 | VCMT 110304 WF             | M-VT25   | M-BT08    |                                         |     | ■                                   |       |       | ■     |       |       |
|                                                                                                   |                                                                                     | 16,00                  | 9,52 | 4,76 |    | 0,4 | VCMT 160404 WF             | M-VT40   | M-BT15    |                                         |     | ■                                   |       |       | ■     |       |       |
|                                                                                                   |                                                                                     | 16,00                  | 9,52 | 4,76 |    | 0,8 | VCMT 160408 WF             | M-VT40   | M-BT15    |                                         |     | ■                                   |       |       |       |       |       |
| <br>VCMT .. WM  |  | 7,70                   | 3,97 | 2,38 |    | 0,2 | VCMT 070202 WM             | M-VT20   | M-BT06    |                                         |     |                                     |       |       |       | ■     |       |
|                                                                                                   |                                                                                     | 7,70                   | 3,97 | 2,38 |    | 0,4 | VCMT 070204 WM             | M-VT20   | M-BT06    |                                         |     |                                     |       |       |       | ■     |       |
|                                                                                                   |                                                                                     | 11,00                  | 6,35 | 3,18 |    | 0,4 | VCMT 110304 WM             | M-VT25   | M-BT08    |                                         |     | ■                                   |       | ■     | ■     |       |       |
|                                                                                                   |                                                                                     | 11,00                  | 6,35 | 3,18 |    | 0,8 | VCMT 110308 WM             | M-VT25   | M-BT08    |                                         |     | ■                                   |       | ■     | ■     |       |       |
|                                                                                                   |                                                                                     | 16,00                  | 9,52 | 4,76 |    | 0,4 | VCMT 160404 WM             | M-VT40   | M-BT15    |                                         |     | ■                                   |       | ■     | ■     |       |       |
|                                                                                                   |                                                                                     | 16,00                  | 9,52 | 4,76 |    | 0,8 | VCMT 160408 WM             | M-VT40   | M-BT15    |                                         |     | ■                                   |       | ■     | ■     |       |       |
|                                                                                                   |                                                                                     |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |

F

## Bohrstangen mit Innenkühlung 107,5° Boring bars with coolant 107,5°



### A.. - Stahlausführung / Steel execution

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |    |      | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|----|-----|----|----|------|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
|                             | dg7                          | f  | L   | L2 | h  | Dmin |                                                                                                              |                                                                                                          |                                                                                                         |
| A16M SVQC R/L 11            | 16                           | 11 | 150 | 30 | 15 | 20   | VC . T 1103..                                                                                                | M-VT25                                                                                                   | M-BT08                                                                                                  |
| A20Q SVQC R/L 11            | 20                           | 13 | 180 | 35 | 18 | 24   |                                                                                                              |                                                                                                          |                                                                                                         |
| A25R SVQC R/L 16            | 25                           | 17 | 200 | 40 | 23 | 31   | VC . T 1604..                                                                                                | M-VT40                                                                                                   | M-BT15                                                                                                  |
| A32S SVQC R/L 16            | 32                           | 22 | 250 | 50 | 30 | 39   |                                                                                                              |                                                                                                          |                                                                                                         |

Bestellbeispiel / Order example: A16M SVQCR 11

M-BT08 = 1,2 Nm  
M-BT15 = 3,0 Nm

### E-A.. - mit Vollhartmetallkern / with solid carbide core

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |    |      | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|----|-----|----|----|------|---------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
|                             | dg7                          | f  | L   | L2 | h  | Dmin |                                                                                                               |                                                                                                           |                                                                                                          |
| E-A16M SVQC R/L 11          | 16                           | 11 | 150 | 30 | 15 | 20   | VC . T 1103..                                                                                                 | M-VT25                                                                                                    | M-BT08                                                                                                   |
| E-A20Q SVQC R/L 11          | 20                           | 13 | 180 | 35 | 18 | 24   |                                                                                                               |                                                                                                           |                                                                                                          |
| E-A25R SVQC R/L 16          | 25                           | 17 | 200 | 40 | 23 | 31   | VC . T 1604..                                                                                                 | M-VT40                                                                                                    | M-BT15                                                                                                   |
| E-A32S SVQC R/L 16          | 32                           | 22 | 250 | 50 | 30 | 39   |                                                                                                               |                                                                                                           |                                                                                                          |

Bestellbeispiel / Order example: E-A16M SVQCR 11

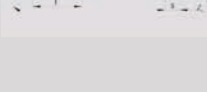
### C-A.. - mit Carbonkern / with carbon fibre core

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |    |      | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|----|-----|----|----|------|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
|                             | dg7                          | f  | L   | L2 | h  | Dmin |                                                                                                                |                                                                                                            |                                                                                                           |
| C-A16M SVQC R/L 11          | 16                           | 11 | 150 | 30 | 15 | 20   | VC . T 1103..                                                                                                  | M-VT25                                                                                                     | M-BT08                                                                                                    |
| C-A20Q SVQC R/L 11          | 20                           | 13 | 180 | 35 | 18 | 24   |                                                                                                                |                                                                                                            |                                                                                                           |
| C-A25R SVQC R/L 16          | 25                           | 17 | 200 | 40 | 23 | 31   | VC . T 1604..                                                                                                  | M-VT40                                                                                                     | M-BT15                                                                                                    |
| C-A32S SVQC R/L 16          | 32                           | 22 | 250 | 50 | 30 | 39   |                                                                                                                |                                                                                                            |                                                                                                           |

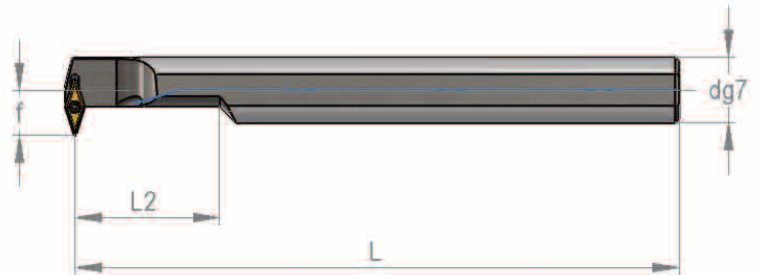
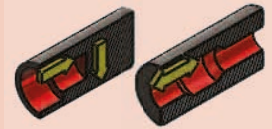
Bestellbeispiel / Order example: C-A16M SVQCR 11

F

# Wendeplatten für Bohrstangen mit Innenkühlung 107,5° Insert for boring bars with coolant 107,5°

|                                                                                                      | Form Figure                                                                         | Abmessungen Dimensions |      |      |    |     | Bezeichnung Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|----|-----|-------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                      |                                                                                     | l                      | d    | s    | d1 | r   |                         |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>VCMT ..<br>ALU-M |    | 10,50                  | 6,35 | 3,18 |    | 0,2 | VCMT 110302 ALU-M       | M-VT25   | M-BT08    |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                      |                                                                                     | 10,00                  | 6,35 | 3,18 |    | 0,4 | VCMT 110304 ALU-M       | M-VT25   | M-BT08    |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                      |                                                                                     | 16,10                  | 9,52 | 4,76 |    | 0,2 | VCMT 160402 ALU-M       | M-VT40   | M-BT15    |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                      |                                                                                     | 15,60                  | 9,52 | 4,76 |    | 0,4 | VCMT 160404 ALU-M       | M-VT40   | M-BT15    |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                      |                                                                                     | 14,00                  | 9,52 | 4,76 |    | 0,8 | VCMT 160408 ALU-M       | M-VT40   | M-BT15    |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                      |                                                                                     | 13,60                  | 9,52 | 4,76 |    | 1,2 | VCMT 160412 ALU-M       | M-VT40   | M-BT15    |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                      |                                                                                     |                        |      |      |    |     |                         |          |           |                                         |     |                                     |       |       |       |       |       |
| <br>VCMT .. WFF      |    | 10,00                  | 6,35 | 3,18 |    | 0,0 | VCMT 110300 WFF         | M-VT25   | M-BT08    |                                         |     | ■                                   |       |       |       |       |       |
|                                                                                                      |                                                                                     | 10,00                  | 6,35 | 3,18 |    | 0,1 | VCMT 110301 WFF         | M-VT25   | M-BT08    |                                         |     | ■                                   |       |       |       |       |       |
|                                                                                                      |                                                                                     | 16,00                  | 9,52 | 4,76 |    | 0,0 | VCMT 160400 WFF         | M-VT40   | M-BT15    |                                         |     | ■                                   |       |       |       |       |       |
|                                                                                                      |                                                                                     | 15,90                  | 9,52 | 4,76 |    | 0,1 | VCMT 160401 WFF         | M-VT40   | M-BT15    |                                         |     | ■                                   |       |       |       |       |       |
|                                                                                                      |                                                                                     |                        |      |      |    |     |                         |          |           |                                         |     |                                     |       |       |       |       |       |
| <br>VCMT .. WF      |  | 11,00                  | 6,35 | 3,18 |    | 0,2 | VCMT 110302 WF          | M-VT25   | M-BT08    |                                         |     | ■                                   |       |       | ■     |       |       |
|                                                                                                      |                                                                                     | 11,00                  | 6,35 | 3,18 |    | 0,4 | VCMT 110304 WF          | M-VT25   | M-BT08    |                                         |     |                                     |       |       |       |       |       |
|                                                                                                      |                                                                                     | 16,00                  | 9,52 | 4,76 |    | 0,4 | VCMT 160404 WF          | M-VT40   | M-BT15    |                                         |     | ■                                   |       |       | ■     |       |       |
|                                                                                                      |                                                                                     | 16,00                  | 9,52 | 4,76 |    | 0,8 | VCMT 160408 WF          | M-VT40   | M-BT15    |                                         |     | ■                                   |       |       |       |       |       |
|                                                                                                      |                                                                                     |                        |      |      |    |     |                         |          |           |                                         |     | ■                                   |       |       | ■     |       |       |
| <br>VCMT .. WM     |  | 11,00                  | 6,35 | 3,18 |    | 0,4 | VCMT 110304 WM          | M-VT25   | M-BT08    |                                         |     | ■                                   |       | ■     |       | ■     |       |
|                                                                                                      |                                                                                     | 11,00                  | 6,35 | 3,18 |    | 0,8 | VCMT 110308 WM          | M-VT25   | M-BT08    |                                         |     | ■                                   |       | ■     |       | ■     |       |
|                                                                                                      |                                                                                     | 16,00                  | 9,52 | 4,76 |    | 0,4 | VCMT 160404 WM          | M-VT40   | M-BT15    |                                         |     | ■                                   |       | ■     |       | ■     |       |
|                                                                                                      |                                                                                     | 16,00                  | 9,52 | 4,76 |    | 0,8 | VCMT 160408 WM          | M-VT40   | M-BT15    |                                         |     | ■                                   |       | ■     |       | ■     |       |
|                                                                                                      |                                                                                     |                        |      |      |    |     |                         |          |           |                                         |     |                                     |       |       |       |       |       |

# Bohrstangen mit Innenkühlung 72,25° Boring bars with coolant 72,25°



## A.. - Stahlausführung / Steel execution

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |      |     |     |    |    |      | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|------|-----|-----|----|----|------|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
|                             | dg7                          | f    | f1  | L   | L2 | h  | Dmin |                                                                                                              |                                                                                                          |                                                                                                         |
| A08F SVVC R/L 05            | 8                            | 5,5  | 3,5 | 80  | 15 | 7  | 9,7  | VC.T 0501..                                                                                                  | M-VT16                                                                                                   | M-BT05                                                                                                  |
| A10H SVVC R/L 07            | 10                           | 8    | 6   | 100 | 28 | 9  | 13,5 |                                                                                                              | M-VT 20                                                                                                  | M-BT 06                                                                                                 |
| A12K SVVC R/L 07            | 12                           | 9    | 6   | 125 | 28 | 11 | 15,5 |                                                                                                              |                                                                                                          |                                                                                                         |
| A16M SVVC R/L 07            | 16                           | 11   | 6   | 150 | 36 | 15 | 19,5 |                                                                                                              |                                                                                                          |                                                                                                         |
| A16M SVVC R/L 11            | 16                           | 13,9 | 9,5 | 150 | 40 | 15 | 23   | VC.T 1103..                                                                                                  | M-VT 25                                                                                                  | M-BT 08                                                                                                 |

Bestellbeispiel / Order example : A08F SVVC R 05

M-BT05 = 0,6 Nm  
M-BT06 = 0,6 Nm  
M-BT08 = 1,2 Nm

## E... - mit Vollhartmetallkern / with solid carbide core

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |      |     |     |    |    |      | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|------|-----|-----|----|----|------|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
|                             | dg7                          | f    | f1  | L   | L2 | h  | Dmin |                                                                                                                |                                                                                                            |                                                                                                           |
| E-A08F SVVC R/L 05          | 8                            | 5,5  | 3,5 | 80  | 15 | 7  | 9,7  | VC.T 0501..                                                                                                    | M-VT16                                                                                                     | M-BT05                                                                                                    |
| E-A10H SVVC R/L 07          | 10                           | 8    | 6   | 100 | 28 | 9  | 13,5 |                                                                                                                |                                                                                                            |                                                                                                           |
| E-A12K SVVC R/L 07          | 12                           | 9    | 6   | 125 | 28 | 11 | 15,5 |                                                                                                                |                                                                                                            |                                                                                                           |
| E-A16M SVVC R/L 07          | 16                           | 11   | 6   | 150 | 36 | 15 | 19,5 |                                                                                                                |                                                                                                            |                                                                                                           |
| E-A16M SVVC R/L 11          | 16                           | 13,9 | 9,5 | 150 | 40 | 15 | 23   | VC.T 1103..                                                                                                    | M-VT 25                                                                                                    | M-BT 08                                                                                                   |

Bestellbeispiel / Order example : E-A08F SVVC R 05

## C... - mit Carbonkern / with carbon fibre core

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |      |     |     |    |    |      | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|------|-----|-----|----|----|------|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
|                             | dg7                          | f    | f1  | L   | L2 | h  | Dmin |                                                                                                                |                                                                                                            |                                                                                                           |
| C-A08F SVVC R/L 05          | 8                            | 5,5  | 3,5 | 80  | 15 | 7  | 9,7  | VC.T 0501..                                                                                                    | M-VT16                                                                                                     | M-BT05                                                                                                    |
| C-A10H SVVC R/L 07          | 10                           | 8    | 6   | 100 | 28 | 9  | 13,5 |                                                                                                                |                                                                                                            |                                                                                                           |
| C-A12K SVVC R/L 07          | 12                           | 9    | 6   | 125 | 28 | 11 | 15,5 |                                                                                                                |                                                                                                            |                                                                                                           |
| C-A16M SVVC R/L 07          | 16                           | 11   | 6   | 150 | 36 | 15 | 19,5 |                                                                                                                |                                                                                                            |                                                                                                           |
| C-A16M SVVC R/L 11          | 16                           | 13,9 | 9,5 | 150 | 40 | 15 | 23   | VC.T 1103..                                                                                                    | M-VT 25                                                                                                    | M-BT 08                                                                                                   |

Bestellbeispiel / Order example : C-A08F SVVC R 05

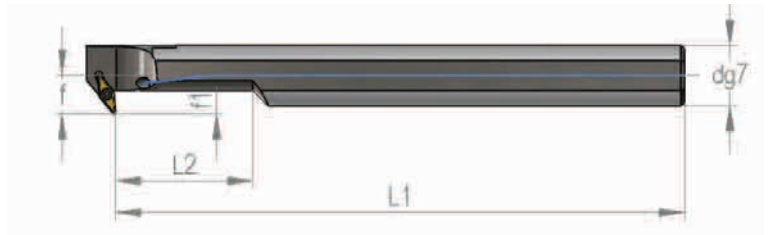
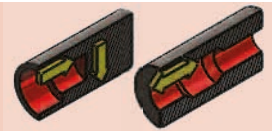
# Wendeplatten für Bohrstangen mit Innenkühlung 72,25° Insert for boring bars with coolant 72,25°

|                                                                                                      | Form Figure                                                                         | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     |  | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|--|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                      |                                                                                     | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 |  | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>VCMT .. WM       |    | 7,70                   | 3,97 | 2,38 |    | 0,2 | VCMT 070202 WM             | M-VT20   | M-BT06    |                                         |     |  |                                     |       |       | ■     |       |       |
|                                                                                                      |                                                                                     | 7,70                   | 3,97 | 2,38 |    | 0,4 | VCMT 070204 WM             | M-VT20   | M-BT06    |                                         |     |  |                                     |       |       | ■     |       |       |
|                                                                                                      |                                                                                     | 11,00                  | 6,35 | 3,18 |    | 0,4 | VCMT 110304 WM             | M-VT25   | M-BT08    |                                         |     |  | ■                                   |       | ■     | ■     |       |       |
|                                                                                                      |                                                                                     | 11,00                  | 6,35 | 3,18 |    | 0,8 | VCMT 110308 WM             | M-VT25   | M-BT08    |                                         |     |  | ■                                   |       | ■     | ■     |       |       |
|                                                                                                      |                                                                                     |                        |      |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
| <br>VCGT ..<br>ALU-M |    | 10,50                  | 6,35 | 3,18 |    | 0,2 | VCGT 110302 ALU-M          | M-VT25   | M-BT08    |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                      |                                                                                     | 10,00                  | 6,35 | 3,18 |    | 0,4 | VCGT 110304 ALU-M          | M-VT25   | M-BT08    |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                      |                                                                                     |                        |      |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
| <br>VCGT .. WFF      |    | 5,40                   | 3,10 | 1,59 |    | 0,2 | VCGT 050102 WFF            | M-VT16   | M-BT05    |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                      |                                                                                     | 10,00                  | 6,35 | 3,18 |    | 0,0 | VCGT 110300 WFF            | M-VT25   | M-BT08    |                                         |     |  | ■                                   |       |       |       |       |       |
|                                                                                                      |                                                                                     | 10,00                  | 6,35 | 3,18 |    | 0,1 | VCGT 110301 WFF            | M-VT25   | M-BT08    |                                         |     |  | ■                                   |       |       |       |       |       |
|                                                                                                      |                                                                                     |                        |      |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
| <br>VCMT .. WF     |  | 7,70                   | 3,97 | 2,38 |    | 0,2 | VCMT 070202 WF             | M-VT20   | M-BT06    |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                      |                                                                                     | 7,70                   | 3,97 | 2,38 |    | 0,4 | VCMT 070204 WF             | M-VT20   | M-BT06    |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                      |                                                                                     | 11,00                  | 6,35 | 3,18 |    | 0,2 | VCMT 110302 WF             | M-VT25   | M-BT08    |                                         |     |  | ■                                   |       |       | ■     |       |       |
|                                                                                                      |                                                                                     | 11,00                  | 6,35 | 3,18 |    | 0,4 | VCMT 110304 WF             | M-VT25   | M-BT08    |                                         |     |  | ■                                   |       |       | ■     |       |       |
|                                                                                                      |                                                                                     |                        |      |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |

F



## Bohrstangen mit Innenkühlung 95° Boring bars with coolant 95°



### A.. - Stahlausführung / Steel execution

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |   |    |     |    |    |      | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|---|----|-----|----|----|------|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
|                             | dg7                          | f | f1 | L   | L2 | h  | Dmin |                                                                                                              |                                                                                                          |                                                                                                         |
| A08F SV95C R/L 05           | 8                            | 5 | 3  | 85  | 15 | 7  | 9,2  | VC.T 0501..                                                                                                  | M-VT16                                                                                                   | M-BT05                                                                                                  |
| A10H SV95C R/L 07           | 10                           | 5 | 5  | 100 | 22 | 9  | 12,5 |                                                                                                              |                                                                                                          |                                                                                                         |
| A12K SV95C R/L 07           | 12                           | 6 | 6  | 125 | 28 | 11 | 15,5 |                                                                                                              |                                                                                                          |                                                                                                         |
| A16M SV95C R/L 07           | 16                           | 8 | 8  | 150 | 36 | 15 | 19,5 |                                                                                                              |                                                                                                          |                                                                                                         |

Bestellbeispiel / Order example : A10H SV95C R 07

M-BT05 = 0,6 Nm  
M-BT06 = 0,6 Nm

### E.. - mit Vollhartmetallkern / with solid carbide core

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |   |    |     |    |    |      | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|---|----|-----|----|----|------|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
|                             | dg7                          | f | f1 | L   | L2 | h  | Dmin |                                                                                                                |                                                                                                            |                                                                                                           |
| E-A08F SV95C R/L 05         | 8                            | 5 | 3  | 85  | 15 | 7  | 9,2  | VC.T 0501..                                                                                                    | M-VT16                                                                                                     | M-BT05                                                                                                    |
| E-A10H SV95C R/L 07         | 10                           | 5 | 5  | 100 | 22 | 9  | 12,5 |                                                                                                                |                                                                                                            |                                                                                                           |
| E-A12K SV95C R/L 07         | 12                           | 6 | 6  | 125 | 28 | 11 | 15,5 |                                                                                                                |                                                                                                            |                                                                                                           |
| E-A16M SV95C R/L 07         | 16                           | 8 | 8  | 150 | 36 | 15 | 19,5 |                                                                                                                |                                                                                                            |                                                                                                           |

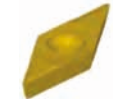
Bestellbeispiel / Order example : E-A10H SV95C R 07

### C.. - mit Carbonkern / with carbon fibre core

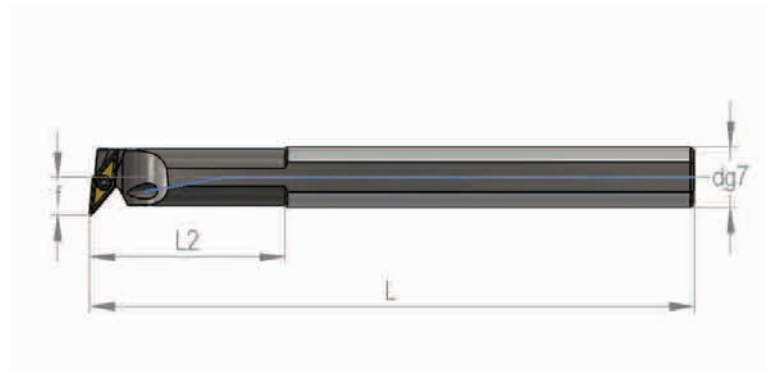
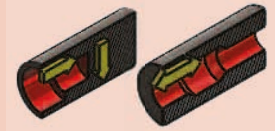
| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |   |    |     |    |    |      | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|---|----|-----|----|----|------|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
|                             | dg7                          | f | f1 | L   | L2 | h  | Dmin |                                                                                                                |                                                                                                            |                                                                                                           |
| C-A08F SV95C R/L 05         | 8                            | 5 | 3  | 85  | 15 | 7  | 9,2  | VC.T 0501..                                                                                                    | M-VT16                                                                                                     | M-BT05                                                                                                    |
| C-A10H SV95C R/L 07         | 10                           | 5 | 5  | 100 | 22 | 9  | 12,5 |                                                                                                                |                                                                                                            |                                                                                                           |
| C-A12K SV95C R/L 07         | 12                           | 6 | 6  | 125 | 28 | 11 | 15,5 |                                                                                                                |                                                                                                            |                                                                                                           |
| C-A16M SV95C R/L 07         | 16                           | 8 | 8  | 150 | 36 | 15 | 19,5 |                                                                                                                |                                                                                                            |                                                                                                           |

Bestellbeispiel / Order example : C-A10H SV95C R 07

# Wendeplatten für Bohrstangen mit Innenkühlung 95° Insert for boring bars with coolant 95°

|                                                                                                 | Form Figure                                                                        | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|-------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                 |                                                                                    | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>VCMT .. WM  |   |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                                 |                                                                                    | 7,70                   | 3,97 | 2,38 |    | 0,2 | VCMT 070202 WM             | M-VT20   | M-BT06    |                                         |     |                                     |       |       | ■     |       |       |
|                                                                                                 |                                                                                    | 7,70                   | 3,97 | 2,38 |    | 0,4 | VCMT 070204 WM             | M-VT20   | M-BT06    |                                         |     |                                     |       |       | ■     |       |       |
|                                                                                                 |                                                                                    | 11,00                  | 6,35 | 3,18 |    | 0,4 | VCMT 110304 WM             | M-VT25   | M-BT08    |                                         |     | ■                                   |       | ■     | ■     |       |       |
|                                                                                                 |                                                                                    | 11,00                  | 6,35 | 3,18 |    | 0,8 | VCMT 110308 WM             | M-VT25   | M-BT08    |                                         |     | ■                                   |       | ■     | ■     |       |       |
| <br>VCGT .. WFF |   |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                                 |                                                                                    | 5,40                   | 3,10 | 1,59 |    | 0,2 | VCGT 050102 WFF            | M-VT16   | M-BT05    |                                         |     | ■                                   |       |       |       | ■     |       |
|                                                                                                 |                                                                                    | 10,00                  | 6,35 | 3,18 |    | 0,0 | VCGT 110300 WFF            | M-VT25   | M-BT08    |                                         |     | ■                                   |       |       |       |       |       |
|                                                                                                 |                                                                                    | 10,00                  | 6,35 | 3,18 |    | 0,1 | VCGT 110301 WFF            | M-VT25   | M-BT08    |                                         |     | ■                                   |       |       |       |       |       |
| <br>VCMT .. WF  |  |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                                 |                                                                                    | 7,70                   | 3,97 | 2,38 |    | 0,2 | VCMT 070202 WF             | M-VT20   | M-BT06    |                                         |     | ■                                   |       |       |       | ■     |       |
|                                                                                                 |                                                                                    | 7,70                   | 3,97 | 2,38 |    | 0,4 | VCMT 070204 WF             | M-VT20   | M-BT06    |                                         |     | ■                                   |       |       |       | ■     |       |
|                                                                                                 |                                                                                    | 11,00                  | 6,35 | 3,18 |    | 0,2 | VCMT 110302 WF             | M-VT25   | M-BT08    |                                         |     | ■                                   |       |       | ■     |       |       |
|                                                                                                 |                                                                                    | 11,00                  | 6,35 | 3,18 |    | 0,4 | VCMT 110304 WF             | M-VT25   | M-BT08    |                                         |     | ■                                   |       |       | ■     |       |       |

## Bohrstangen mit Innenkühlung 95° Boring bars with coolant 95°



### A.. - Stahlausführung / Steel execution

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |    |      | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|----|-----|----|----|------|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
|                             | dg7                          | f  | L   | L2 | h  | Dmin |                                                                                                              |                                                                                                          |                                                                                                         |
| A08F SVLC R/L 05            | 8                            | 5  | 80  | 15 | 7  | 9,2  | VC.T 0501..                                                                                                  | M-VT16                                                                                                   | M-BT05                                                                                                  |
| A10H SVLC R/L 07            | 10                           | 7  | 100 | 22 | 9  | 12,5 |                                                                                                              |                                                                                                          |                                                                                                         |
| A12K SVLC R/L 07            | 12                           | 9  | 125 | 28 | 11 | 15,5 |                                                                                                              |                                                                                                          |                                                                                                         |
| A16M SVLC R/L 07            | 16                           | 11 | 150 | 36 | 15 | 19,5 |                                                                                                              |                                                                                                          |                                                                                                         |

Bestellbeispiel / Order example: A08F SVLC R 05

M-BT05 = 0,6 Nm  
M-BT06 = 0,6 Nm

### E.. - mit Vollhartmetallkern / with solid carbide core

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |    |      | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|----|-----|----|----|------|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
|                             | dg7                          | f  | L   | L2 | h  | Dmin |                                                                                                                |                                                                                                            |                                                                                                           |
| E-A08F SVLC R/L 05          | 8                            | 5  | 80  | 15 | 7  | 9,2  | VC.T 0501..                                                                                                    | M-VT16                                                                                                     | M-BT05                                                                                                    |
| E-A10H SVLC R/L 07          | 10                           | 7  | 100 | 22 | 9  | 12,5 |                                                                                                                |                                                                                                            |                                                                                                           |
| E-A12K SVLC R/L 07          | 12                           | 9  | 125 | 28 | 11 | 15,5 |                                                                                                                |                                                                                                            |                                                                                                           |
| E-A16M SVLC R/L 07          | 16                           | 11 | 150 | 36 | 15 | 19,5 |                                                                                                                |                                                                                                            |                                                                                                           |

Bestellbeispiel / Order example: E-A08F SVLC R 05

### C.. - mit Carbonkern / with carbon fibre core

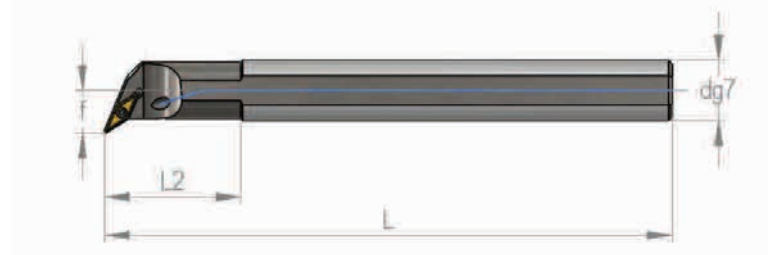
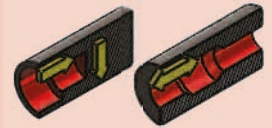
| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |    |      | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|----|-----|----|----|------|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
|                             | dg7                          | f  | L   | L2 | h  | Dmin |                                                                                                                |                                                                                                            |                                                                                                           |
| C-A08F SVLC R/L 05          | 8                            | 5  | 80  | 15 | 7  | 9,2  | VC.T 0501..                                                                                                    | M-VT16                                                                                                     | M-BT05                                                                                                    |
| C-A10H SVLC R/L 07          | 10                           | 7  | 100 | 22 | 9  | 12,5 |                                                                                                                |                                                                                                            |                                                                                                           |
| C-A12K SVLC R/L 07          | 12                           | 9  | 125 | 28 | 11 | 15,5 |                                                                                                                |                                                                                                            |                                                                                                           |
| C-A16M SVLC R/L 07          | 16                           | 11 | 150 | 36 | 15 | 19,5 |                                                                                                                |                                                                                                            |                                                                                                           |

Bestellbeispiel / Order example: C-A08F SVLC R 05

# Wendeplatten für Bohrstangen mit Innenkühlung 95° Insert for boring bars with coolant 95°

|                                                                                                 | Form Figure                                                                       | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     |  | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|-------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|--|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                 |                                                                                   | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 |  | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>VCMT .. WM  |  | 7,70                   | 3,97 | 2,38 |    | 0,2 | VCMT 070202 WM             | M-VT20   | M-BT06    |                                         |     |  |                                     |       |       | ■     |       |       |
|                                                                                                 |                                                                                   | 7,70                   | 3,97 | 2,38 |    | 0,4 | VCMT 070204 WM             | M-VT20   | M-BT06    |                                         |     |  |                                     |       |       | ■     |       |       |
|                                                                                                 |                                                                                   |                        |      |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
| <br>VCGT .. WFF |  | 5,40                   | 3,10 | 1,59 |    | 0,2 | VCGT 050102 WFF            | M-VT16   | M-BT05    |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                 |                                                                                   |                        |      |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
| <br>VCMT .. WF  |  | 7,70                   | 3,97 | 2,38 |    | 0,2 | VCMT 070202 WF             | M-VT20   | M-BT06    |                                         |     |  | ■                                   |       |       | ■     |       |       |
|                                                                                                 |                                                                                   | 7,70                   | 3,97 | 2,38 |    | 0,4 | VCMT 070204 WF             | M-VT20   | M-BT06    |                                         |     |  | ■                                   |       |       | ■     |       |       |
|                                                                                                 |                                                                                   | 11,00                  | 6,35 | 3,18 |    | 0,2 | VCMT 110302 WF             | M-VT25   | M-BT08    |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                 |                                                                                   | 11,00                  | 6,35 | 3,18 |    | 0,4 | VCMT 110304 WF             | M-VT25   | M-BT08    |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                 |                                                                                   |                        |      |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |

## Bohrstangen mit Innenkühlung 113° Boring bars with coolant 113°



### A.. - Stahlausführung / Steel execution

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |    |      | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|----|-----|----|----|------|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
|                             | dg7                          | f  | L   | L2 | h  | Dmin |                                                                                                              |                                                                                                          |                                                                                                         |
| A08F SVXC R/L 05            | 8                            | 5  | 80  | 15 | 7  | 9,2  | VC.T 0501..                                                                                                  | M-VT16                                                                                                   | M-BT05                                                                                                  |
| A10H SVXC R/L 07            | 10                           | 7  | 100 | 22 | 9  | 12,5 | VC.T 0702..                                                                                                  | M-VT 20                                                                                                  | M-BT 06                                                                                                 |
| A12K SVXC R/L 07            | 12                           | 9  | 125 | 28 | 11 | 15,5 |                                                                                                              |                                                                                                          |                                                                                                         |
| A16M SVXC R/L 07            | 16                           | 11 | 150 | 36 | 15 | 19,5 |                                                                                                              |                                                                                                          |                                                                                                         |

Bestellbeispiel / Order example : A08F SVXC R 07

M-BT05 = 0,6 Nm  
M-BT06 = 0,6 Nm

### E.. - mit Vollhartmetallkern / with solid carbide core

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |    |      | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|----|-----|----|----|------|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
|                             | dg7                          | f  | L   | L2 | h  | Dmin |                                                                                                                |                                                                                                            |                                                                                                           |
| E-A08F SVXC R/L 05          | 8                            | 5  | 80  | 15 | 7  | 9,2  | VC.T 0501..                                                                                                    | M-VT16                                                                                                     | M-BT05                                                                                                    |
| E-A10H SVXC R/L 07          | 10                           | 7  | 100 | 22 | 9  | 12,5 | VC.T 0702..                                                                                                    | M-VT 20                                                                                                    | M-BT 06                                                                                                   |
| E-A12K SVXC R/L 07          | 12                           | 9  | 125 | 28 | 11 | 15,5 |                                                                                                                |                                                                                                            |                                                                                                           |
| E-A16M SVXC R/L 07          | 16                           | 11 | 150 | 36 | 15 | 19,5 |                                                                                                                |                                                                                                            |                                                                                                           |

Bestellbeispiel / Order example : E-A SVXC R 07

### C.. - mit Carbonkern / with carbon fibre core

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |    |      | Wendeplatte<br>Insert<br> | Schraube<br>Screw<br> | Schlüssel<br>Key<br> |
|-----------------------------|------------------------------|----|-----|----|----|------|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
|                             | dg7                          | f  | L   | L2 | h  | Dmin |                                                                                                                |                                                                                                            |                                                                                                           |
| C-A08F SVXC R/L 05          | 8                            | 5  | 80  | 15 | 7  | 9,2  | VC.T 0501..                                                                                                    | M-VT16                                                                                                     | M-BT05                                                                                                    |
| C-A10H SVXC R/L 07          | 10                           | 7  | 100 | 22 | 9  | 12,5 | VC.T 0702..                                                                                                    | M-VT 20                                                                                                    | M-BT 06                                                                                                   |
| C-A12K SVXC R/L 07          | 12                           | 9  | 125 | 28 | 11 | 15,5 |                                                                                                                |                                                                                                            |                                                                                                           |
| C-A16M SVXC R/L 07          | 16                           | 11 | 150 | 36 | 15 | 19,5 |                                                                                                                |                                                                                                            |                                                                                                           |

Bestellbeispiel / Order example : C-A08F SVVC R 05

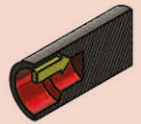
F



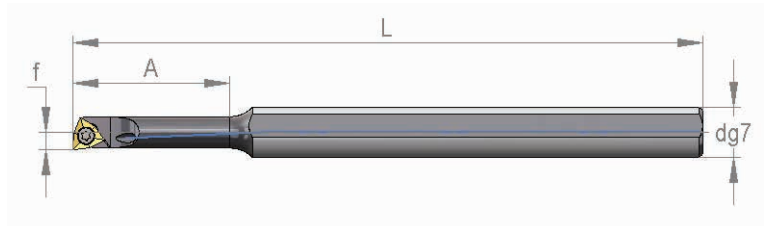
# Wendeplatten für Bohrstangen mit Innenkühlung 113° Insert for boring bars with coolant 113°

|                                                                                                  | Form Figure                                                                        | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|--------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                  |                                                                                    | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>VCMT .. WM   |   |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                                  |                                                                                    | 7,70                   | 3,97 | 2,38 |    | 0,2 | VCMT 070202 WM             |          |           |                                         |     |                                     |       |       | ■     |       |       |
|                                                                                                  |                                                                                    | 7,70                   | 3,97 | 2,38 |    | 0,4 | VCMT 070204 WM             |          |           |                                         |     |                                     |       |       | ■     |       |       |
|                                                                                                  |                                                                                    | 11,00                  | 6,35 | 3,18 |    | 0,4 | VCMT 110304 WM             | M-VT25   | M-BT08    |                                         |     | ■                                   |       | ■     | ■     |       |       |
|                                                                                                  |                                                                                    | 11,00                  | 6,35 | 3,18 |    | 0,8 | VCMT 110308 WM             | M-VT25   | M-BT08    |                                         |     | ■                                   |       | ■     | ■     |       |       |
| <br>VCGT .. WFF |   |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                                  |                                                                                    | 5,40                   | 3,10 | 1,59 |    | 0,2 | VCGT 050102 WFF            |          |           |                                         |     | ■                                   |       |       |       | ■     |       |
|                                                                                                  |                                                                                    | 10,00                  | 6,35 | 3,18 |    | 0,0 | VCGT 110300 WFF            | M-VT25   | M-BT08    |                                         |     | ■                                   |       |       |       |       |       |
|                                                                                                  |                                                                                    | 10,00                  | 6,35 | 3,18 |    | 0,1 | VCGT 110301 WFF            | M-VT25   | M-BT08    |                                         |     | ■                                   |       |       |       |       |       |
| <br>VCMT .. WF   |  |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                                  |                                                                                    | 7,70                   | 3,97 | 2,38 |    | 0,2 | VCMT 070202 WF             |          |           |                                         |     | ■                                   |       |       |       | ■     |       |
|                                                                                                  |                                                                                    | 7,70                   | 3,97 | 2,38 |    | 0,4 | VCMT 070204 WF             |          |           |                                         |     | ■                                   |       |       |       | ■     |       |
|                                                                                                  |                                                                                    | 11,00                  | 6,35 | 3,18 |    | 0,2 | VCMT 110302 WF             | M-VT25   | M-BT08    |                                         |     | ■                                   |       |       | ■     |       |       |
|                                                                                                  |                                                                                    | 11,00                  | 6,35 | 3,18 |    | 0,4 | VCMT 110304 WF             | M-VT25   | M-BT08    |                                         |     | ■                                   |       |       | ■     |       |       |

## Bohrstangen mit Innenkühlung 93° Boring bars with coolant 93°



**SET M-A-SWUC R/L 02**  
bestehend aus / consists of:  
A0508H SWUC R/L 02  
A0608H SWUC R/L 02  
10 St./pcs. WCGT 020102 CT28



### A.. - Stahlausführung / Steel execution

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |   |     |     |      |    |     | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|---|-----|-----|------|----|-----|-----------------------|-------------------|------------------|
|                             | dg7                          | d | L   | f   | Bmin | A  | I   |                       |                   |                  |
| A0508H SWUC R/L 02          | 8                            | 5 | 100 | 2,9 | 5,8  | 24 | 17° | WCGT 0201..           | M-VT20<br>0,6 Nm  | M-BT06           |
| A0608H SWUC R/L 02          | 8                            | 6 | 100 | 3,9 | 7,8  | 24 | 12° |                       |                   |                  |

Bestellbeispiel / Order example: A0508H SWUCR 02

**SET ME-A-SWUC R/L 02**  
bestehend aus / consists of:  
E-A0508H SWUC R/L 02  
E-A0608H SWUC R/L 02  
10 St./pcs. WCGT 020102 CT28

### E-A.. - mit Vollhartmetallkern / with solid carbide core

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |   |     |     |      |    |     | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|---|-----|-----|------|----|-----|-----------------------|-------------------|------------------|
|                             | dg7                          | d | L   | f   | Bmin | A  | I   |                       |                   |                  |
| E-A0508H SWUC R/L 02        | 8                            | 5 | 100 | 2,9 | 5,8  | 24 | 17° | WCGT 0201..           | M-VT20<br>0,6 Nm  | M-BT06           |
| E-A0608H SWUC R/L 02        | 8                            | 6 | 100 | 3,9 | 7,8  | 24 | 12° |                       |                   |                  |

Bestellbeispiel / Order example: E-A0508H SWUCR 02

**SET MC-A-SWUC R/L 02**  
bestehend aus / consists of:  
C-A0508H SWUC R/L 02  
C-A0608H SWUC R/L 02  
10 St./pcs. WCGT 020102 CT28

### C-A.. - mit Carbonkern / with carbon fibre core

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |   |     |     |      |    |     | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|---|-----|-----|------|----|-----|-----------------------|-------------------|------------------|
|                             | dg7                          | d | L   | f   | Bmin | A  | I   |                       |                   |                  |
| C-A0508H SWUC R/L 02        | 8                            | 5 | 100 | 2,9 | 5,8  | 24 | 17° | WCGT 0201..           | M-VT20<br>0,6 Nm  | M-BT06           |
| C-A0608H SWUC R/L 02        | 8                            | 6 | 100 | 3,9 | 7,8  | 24 | 12° |                       |                   |                  |

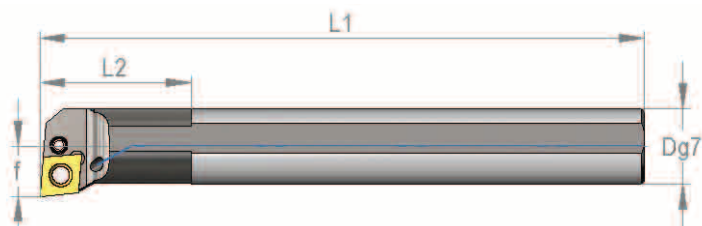
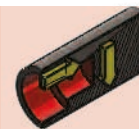
Bestellbeispiel / Order example: C-A0508H SWUCR 02

F

## Wendeplatten für Bohrstangen mit Innenkühlung 93° Insert for boring bars with coolant 93°

|                                                                                                         | Form Figure                                                                       | Abmessungen Dimensions |      |      |      |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     |  | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|---------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------|------|------|------|-----|----------------------------|----------|-----------|-----------------------------------------|-----|--|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                         |                                                                                   | l                      | d    | s    | d1   | r   |                            |          |           | CT28                                    | K10 |  | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>WCGT ..<br>WCMT .. |  |                        |      |      |      |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
|                                                                                                         |                                                                                   | 2,62                   | 3,97 | 1,59 | 2,30 | 0,2 | WCGT 020102..              | M-VT20   | M-BT06    | ■                                       |     |  |                                     |       |       |       |       |       |
|                                                                                                         |                                                                                   | 2,62                   | 3,97 | 1,59 | 2,30 | 0,4 | WCMT 020104..              | M-VT20   | M-BT06    |                                         |     |  |                                     |       | ■     |       |       |       |

## Bohrstangen mit Innenkühlung 95° Boring bars with coolant 95°



### A.. - Stahlausführung / Steel execution

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |      |     |    |    |    | Wendeplatte<br>Insert<br> |
|-----------------------------|------------------------------|----|------|-----|----|----|----|--------------------------------------------------------------------------------------------------------------|
|                             | dg7                          | H  | h1   | L1  | L2 | f  | A  |                                                                                                              |
| A16M PCLNR/L 09             | 16                           | 15 | 7,5  | 150 | 25 | 11 | 20 | CN.. 0903..                                                                                                  |
| A20Q PCLNR/L 09             | 20                           | 18 | 9    | 180 | 29 | 13 | 25 |                                                                                                              |
| A25R PCLNR/L 12             | 25                           | 23 | 11,5 | 200 | 40 | 17 | 31 |                                                                                                              |
| A32S PCLNR/L 12             | 32                           | 30 | 15   | 250 | 50 | 22 | 39 | CN.. 1204..                                                                                                  |
| A40T PCLNR/L 12             | 40                           | 37 | 18,5 | 300 | 60 | 27 | 48 |                                                                                                              |

Bestellbeispiel / Order example: A16M PCLNR 09

### E-A.. - mit Vollhartmetallkern / with solid carbide core

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |      |     |    |    |    | Wendeplatte<br>Insert<br> |
|-----------------------------|------------------------------|----|------|-----|----|----|----|---------------------------------------------------------------------------------------------------------------|
|                             | dg7                          | H  | h1   | L1  | L2 | f  | A  |                                                                                                               |
| E-A16M PCLNR/L 09           | 16                           | 15 | 7,5  | 150 | 25 | 11 | 20 | CN.. 0903..                                                                                                   |
| E-A20Q PCLNR/L 09           | 20                           | 18 | 9    | 180 | 29 | 13 | 25 |                                                                                                               |
| E-A25R PCLNR/L 12           | 25                           | 23 | 11,5 | 200 | 40 | 17 | 31 |                                                                                                               |
| E-A32S PCLNR/L 12           | 32                           | 30 | 15   | 250 | 50 | 22 | 39 | CN.. 1204..                                                                                                   |
| E-A40T PCLNR/L 12           | 40                           | 37 | 18,5 | 300 | 60 | 27 | 48 |                                                                                                               |

Bestellbeispiel / Order example: E-A16M PCLNR 09

### C-A.. - mit Carbonkern / with carbon fibre core

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |      |     |    |    |    | Wendeplatte<br>Insert<br> |
|-----------------------------|------------------------------|----|------|-----|----|----|----|----------------------------------------------------------------------------------------------------------------|
|                             | dg7                          | H  | h1   | L1  | L2 | f  | A  |                                                                                                                |
| C-A16M PCLNR/L 09           | 16                           | 15 | 7,5  | 150 | 25 | 11 | 20 | CN.. 0903..                                                                                                    |
| C-A20Q PCLNR/L 09           | 20                           | 18 | 9    | 180 | 29 | 13 | 25 |                                                                                                                |
| C-A25R PCLNR/L 12           | 25                           | 23 | 11,5 | 200 | 40 | 17 | 31 |                                                                                                                |
| C-A32S PCLNR/L 12           | 32                           | 30 | 15   | 250 | 50 | 22 | 39 | CN.. 1204..                                                                                                    |
| C-A40T PCLNR/L 12           | 40                           | 37 | 18,5 | 300 | 60 | 27 | 48 |                                                                                                                |

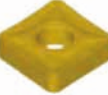
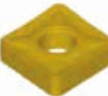
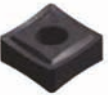
Bestellbeispiel / Order example: C-A16M PCLNR 09

### Ersatzteile: Spare parts:

| Bestell-Nr.:<br>Order Code: |  |  |  |  |  |  |
|-----------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| ..A16M PCLNR/L 09           | B-8005                                                                              | B-1715                                                                              | 5002                                                                                |                                                                                      |                                                                                       |                                                                                       |
| ..A20Q PCLNR/L 09           | B-8005                                                                              | B-1715                                                                              | 5002                                                                                |                                                                                      |                                                                                       |                                                                                       |
| ..A25R PCLNR/L 12           | B-8012                                                                              | B-1626                                                                              | 5025                                                                                | B-3612                                                                               | B-4112                                                                                | 0012                                                                                  |
| ..A32S PCLNR/L 12           | B-8012                                                                              | B-1626                                                                              | 5003                                                                                | B-3612                                                                               | B-4112                                                                                | 0012                                                                                  |
| ..A40T PCLNR/L 12           | B-8012                                                                              | B-1608                                                                              | 5003                                                                                | B-3612                                                                               | B-4112                                                                                | 0012                                                                                  |

Bestellbeispiel / Order example: 1225

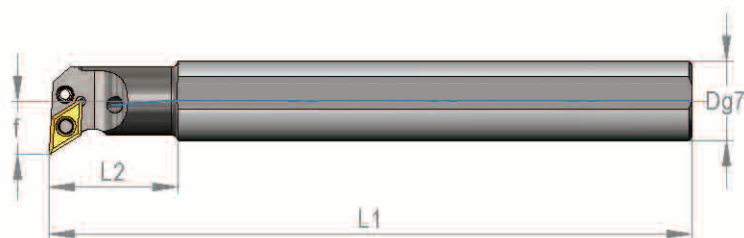
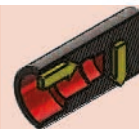
# Wendeplatten für Bohrstangen mit Innenkühlung 95° Insert for boring bars with coolant 95°

|                                                                                                   | Form Figure                                                                         | Abmessungen Dimensions |       |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|---------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|-------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                   |                                                                                     | l                      | d     | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>CNMG .. VA    |    | 9,20                   | 9,52  | 3,18 |    | 0,4 | CNMG 090304 VA             |          |           |                                         |     |                                     |       |       | ■     |       |       |
|                                                                                                   |                                                                                     | 8,80                   | 9,52  | 3,18 |    | 0,8 | CNMG 090308 VA             |          |           |                                         |     |                                     |       |       | ■     |       |       |
|                                                                                                   |                                                                                     | 12,40                  | 12,70 | 4,76 |    | 0,4 | CNMG 120404 VA             |          |           |                                         |     |                                     |       |       | ■     |       |       |
|                                                                                                   |                                                                                     | 12,00                  | 12,70 | 4,76 |    | 0,8 | CNMG 120408 VA             |          |           |                                         |     |                                     |       |       | ■     |       |       |
|                                                                                                   |                                                                                     |                        |       |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |
| <br>CNMG .. WM    |    | 9,20                   | 9,52  | 3,18 |    | 0,8 | CNMG 09T308 WM             |          |           |                                         |     | ■                                   |       | ■     |       | ■     |       |
|                                                                                                   |                                                                                     | 12,40                  | 12,70 | 4,76 |    | 0,4 | CNMG 120404 WM             |          |           |                                         |     | ■                                   |       |       |       | ■     |       |
|                                                                                                   |                                                                                     | 12,00                  | 12,70 | 4,76 |    | 0,8 | CNMG 120408 WM             |          |           |                                         |     | ■                                   |       | ■     |       | ■     |       |
|                                                                                                   |                                                                                     | 11,60                  | 12,70 | 4,76 |    | 1,2 | CNMG 120412 WM             |          |           |                                         |     | ■                                   |       | ■     |       | ■     |       |
|                                                                                                   |                                                                                     |                        |       |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |
| <br>CNMG .. WR   |   | 12,00                  | 12,70 | 4,76 |    | 0,8 | CNMG 120408 WR             |          |           |                                         |     | ■                                   |       |       |       | ■     |       |
|                                                                                                   |                                                                                     | 11,60                  | 12,70 | 4,76 |    | 1,2 | CNMG 120412 WR             |          |           |                                         |     | ■                                   |       | ■     |       |       |       |
|                                                                                                   |                                                                                     |                        |       |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |
| <br>CNMM .. WR  |  | 12,00                  | 12,70 | 4,76 |    | 0,8 | CNMM 120408 WR             |          |           |                                         |     | ■                                   |       | ■     |       | ■     |       |
|                                                                                                   |                                                                                     | 11,60                  | 12,70 | 4,76 |    | 1,2 | CNMM 120412 WR             |          |           |                                         |     | ■                                   |       | ■     |       | ■     |       |
|                                                                                                   |                                                                                     |                        |       |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |
| <br>CNMX .. SWX |  | 12,40                  | 12,70 | 4,76 |    | 0,4 | CNMX 120404 SWX            |          |           |                                         |     | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                   |                                                                                     | 12,00                  | 12,70 | 4,76 |    | 0,8 | CNMX 120408 SWX            |          |           |                                         |     | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                   |                                                                                     |                        |       |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |

F



## Bohrstangen mit Innenkühlung 93° Boring bars with coolant 93°



### A.. - Stahlausführung / Steel execution

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |      |     |    |    |    | Wendeplatte<br>Insert  |
|-----------------------------|------------------------------|----|------|-----|----|----|----|-----------------------------------------------------------------------------------------------------------|
|                             | dg7                          | H  | h1   | L1  | L2 | f  | A  |                                                                                                           |
| A25R PDUNR/L 11             | 25                           | 23 | 11,5 | 200 | 40 | 17 | 31 | DN.. 1104..                                                                                               |
| A32S PDUNR/L 15             | 32                           | 30 | 15   | 250 | 50 | 22 | 39 | DN.. 1506..                                                                                               |
| A40T PDUNR/L 15             | 40                           | 37 | 18,5 | 300 | 60 | 27 | 48 | DN.. 1506..                                                                                               |

Bestellbeispiel / Order example: A25R PDUNR 11

### E-A.. - mit Vollhartmetallkern / with solid carbide core

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |      |     |    |    |    | Wendeplatte<br>Insert  |
|-----------------------------|------------------------------|----|------|-----|----|----|----|-----------------------------------------------------------------------------------------------------------|
|                             | dg7                          | H  | h1   | L1  | L2 | f  | A  |                                                                                                           |
| E-A25R PDUNR/L 11           | 25                           | 23 | 11,5 | 200 | 40 | 17 | 31 | DN.. 1104..                                                                                               |
| E-A32S PDUNR/L 15           | 32                           | 30 | 15   | 250 | 50 | 22 | 39 | DN.. 1506..                                                                                               |
| E-A40T PDUNR/L 15           | 40                           | 37 | 18,5 | 300 | 60 | 27 | 48 | DN.. 1506..                                                                                               |

Bestellbeispiel / Order example: E-A25R PDUNR 11

### C-A.. - mit Carbonkern / with carbon fibre core

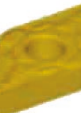
| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |      |     |    |    |    | Wendeplatte<br>Insert  |
|-----------------------------|------------------------------|----|------|-----|----|----|----|-------------------------------------------------------------------------------------------------------------|
|                             | dg7                          | H  | h1   | L1  | L2 | f  | A  |                                                                                                             |
| C-A25R PDUNR/L 11           | 25                           | 23 | 11,5 | 200 | 40 | 17 | 31 | DN.. 1104..                                                                                                 |
| C-A32S PDUNR/L 15           | 32                           | 30 | 15   | 250 | 50 | 22 | 39 | DN.. 1506..                                                                                                 |
| C-A40T PDUNR/L 15           | 40                           | 37 | 18,5 | 300 | 60 | 27 | 48 | DN.. 1506..                                                                                                 |

Bestellbeispiel / Order example: C-A25R PDUNR 11

### Ersatzteile: Spare parts:

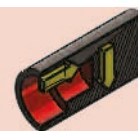
| Bestell-Nr.:<br>Order Code:           |  |  |  |  |  |  |  |  |
|---------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| ...A25R PDUNR/L 11                    | B-8009                                                                              | B-1606                                                                              | 5025                                                                                | B-3711                                                                              | B-4109                                                                               | 0009                                                                                  |                                                                                       |                                                                                       |
| ...A32S PDUNR/L 15                    | B-8415                                                                              | B-1608                                                                              | 5003                                                                                | B-3715                                                                              | B-4112                                                                               | 0012                                                                                  | B-3725                                                                                | B-4135                                                                                |
| ...A40T PDUNR/L 15                    | B-8415                                                                              | B-1608                                                                              | 5003                                                                                | B-3715                                                                              | B-4112                                                                               | 0012                                                                                  | B-3725                                                                                | B-4135                                                                                |
| Bestellbeispiel / Order example: 8009 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       | DN.. 1504                                                                             |                                                                                       |

# Wendeplatten für Bohrstangen mit Innenkühlung 93° Insert for boring bars with coolant 93°

|                                                                                                   | Form Figure                                                                                         | Abmessungen Dimensions |       |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     |  | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|---------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|------------------------|-------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|--|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                   |                                                                                                     | l                      | d     | s    | d1 | r   |                            |          |           | CT28                                    | K10 |  | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>DNMG .. VA   |                    | 11,20                  | 9,52  | 4,76 |    | 0,4 | DNMG 110404 VA             |          |           |                                         |     |  |                                     |       |       | ■     |       |       |
|                                                                                                   |                                                                                                     | 10,80                  | 9,52  | 4,76 |    | 0,8 | DNMG 110408 VA             |          |           |                                         |     |  |                                     |       |       | ■     |       |       |
|                                                                                                   |                                                                                                     | 15,10                  | 12,70 | 4,76 |    | 0,4 | DNMG 150404 VA             |          |           |                                         |     |  |                                     |       |       | ■     |       |       |
|                                                                                                   |                                                                                                     | 14,70                  | 12,70 | 4,76 |    | 0,8 | DNMG 150408 VA             |          |           |                                         |     |  |                                     |       |       | ■     |       |       |
|                                                                                                   |                                                                                                     | 15,10                  | 12,70 | 6,35 |    | 0,4 | DNMG 150604 VA             |          |           |                                         |     |  |                                     |       |       | ■     |       |       |
|                                                                                                   |                                                                                                     | 14,70                  | 12,70 | 6,35 |    | 0,8 | DNMG 150608 VA             |          |           |                                         |     |  |                                     |       |       | ■     |       |       |
| <br>DNMG .. WF   |                    | 11,20                  | 9,52  | 4,76 |    | 0,4 | DNMG 110404 WF             |          |           |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                   |                                                                                                     | 15,10                  | 12,70 | 6,35 |    | 0,4 | DNMG 150604 WF             |          |           |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                   |                                                                                                     | 14,70                  | 12,70 | 6,35 |    | 0,8 | DNMG 150608 WF             |          |           |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                   |                                                                                                     |                        |       |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
| <br>DNMG .. WM |                  | 11,20                  | 9,52  | 4,76 |    | 0,4 | DNMG 110404 WM             |          |           |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                   |                                                                                                     | 10,80                  | 9,52  | 4,76 |    | 0,8 | DNMG 110408 WM             |          |           |                                         |     |  | ■                                   |       | ■     |       | ■     |       |
|                                                                                                   |                                                                                                     | 15,10                  | 12,70 | 4,76 |    | 0,4 | DNMG 150404 WM             |          |           |                                         |     |  | ■                                   |       |       |       |       |       |
|                                                                                                   |                                                                                                     | 14,70                  | 12,70 | 4,76 |    | 0,8 | DNMG 150408 WM             |          |           |                                         |     |  | ■                                   |       |       |       |       |       |
|                                                                                                   |                                                                                                     | 15,10                  | 12,70 | 6,35 |    | 0,4 | DNMG 150604 WM             |          |           |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                   |                                                                                                     | 14,70                  | 12,70 | 6,35 |    | 0,8 | DNMG 150608 WM             |          |           |                                         |     |  | ■                                   |       | ■     |       | ■     |       |
|                                                                                                   |                                                                                                     | 14,40                  | 12,70 | 6,35 |    | 1,2 | DNMG 150612 WM             |          |           |                                         |     |  | ■                                   |       |       |       | ■     |       |
| <br>DNMM .. WR |                  | 14,70                  | 12,70 | 6,35 |    | 0,8 | DNMM 150608 WR             |          |           |                                         |     |  | ■                                   |       | ■     |       | ■     |       |
|                                                                                                   |                                                                                                     | 14,70                  | 12,70 | 6,35 |    | 1,2 | DNMM 150612 WR             |          |           |                                         |     |  | ■                                   |       | ■     |       | ■     |       |
|                                                                                                   |                                                                                                     | 14,70                  | 12,70 | 6,35 |    | 1,6 | DNMM 150616 WR             |          |           |                                         |     |  | ■                                   |       | ■     |       | ■     |       |
|                                                                                                   |                                                                                                     |                        |       |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
| <br>DNMX ..SWX | <br>Masterfinish | 15,10                  | 12,70 | 4,76 |    | 0,4 | DNMX 150404 SWX            |          |           |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                   |                                                                                                     | 14,70                  | 12,70 | 4,76 |    | 0,8 | DNMX 150408 SWX            |          |           |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                   |                                                                                                     |                        |       |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
|                                                                                                   |                                                                                                     |                        |       |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |

F

## Bohrstangen mit Innenkühlung 95° Boring bars with coolant 95°



### A.. - Stahlausführung / Steel execution

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |      |     |    |    |    | Wendeplatte<br>Insert  |
|-----------------------------|------------------------------|----|------|-----|----|----|----|-----------------------------------------------------------------------------------------------------------|
|                             | dg7                          | H  | h1   | L1  | L2 | f  | A  |                                                                                                           |
| A16M PWLNR/L 06             | 16                           | 14 | 7,5  | 150 | 24 | 11 | 20 | WN.. 0604..                                                                                               |
| A20Q PWLNR/L 06             | 20                           | 18 | 9    | 180 | 29 | 13 | 27 |                                                                                                           |
| A25R PWLNR/L 06             | 25                           | 23 | 11,5 | 200 | 40 | 17 | 25 |                                                                                                           |
| A25R PWLNR/L 08             | 25                           | 23 | 11,5 | 200 | 40 | 17 | 31 | WN.. 0804..                                                                                               |
| A32S PWLNR/L 08             | 32                           | 30 | 15   | 250 | 50 | 22 | 39 |                                                                                                           |
| A40T PWLNR/L 08             | 40                           | 37 | 18,5 | 300 | 60 | 27 | 48 |                                                                                                           |

Bestellbeispiel / Order example: A16M PWLNR 06

### E-A.. - mit Vollhartmetallkern / with solid carbide core

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |      |     |    |    |    | Wendeplatte<br>Insert  |
|-----------------------------|------------------------------|----|------|-----|----|----|----|-----------------------------------------------------------------------------------------------------------|
|                             | dg7                          | H  | h1   | L1  | L2 | f  | A  |                                                                                                           |
| E-A16M PWLNR/L 06           | 16                           | 14 | 7,5  | 150 | 24 | 11 | 20 | WN.. 0604..                                                                                               |
| E-A20Q PWLNR/L 06           | 20                           | 18 | 9    | 180 | 29 | 13 | 27 |                                                                                                           |
| E-A25R PWLNR/L 06           | 25                           | 23 | 11,5 | 200 | 40 | 17 | 25 |                                                                                                           |
| E-A25R PWLNR/L 08           | 25                           | 23 | 11,5 | 200 | 40 | 17 | 31 | WN.. 0804..                                                                                               |
| E-A32S PWLNR/L 08           | 32                           | 30 | 15   | 250 | 50 | 22 | 39 |                                                                                                           |
| E-A40T PWLNR/L 08           | 40                           | 37 | 18,5 | 300 | 60 | 27 | 48 |                                                                                                           |

Bestellbeispiel / Order example: E-A16M PWLNR 06

### C-A.. - mit Carbonkern / with carbon fibre core

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |      |     |    |    |    | Wendeplatte<br>Insert  |
|-----------------------------|------------------------------|----|------|-----|----|----|----|-------------------------------------------------------------------------------------------------------------|
|                             | dg7                          | H  | h1   | L1  | L2 | f  | A  |                                                                                                             |
| C-A16M PWLNR/L 06           | 16                           | 14 | 7,5  | 150 | 24 | 11 | 20 | WN.. 0604..                                                                                                 |
| C-A20Q PWLNR/L 06           | 20                           | 18 | 9    | 180 | 29 | 13 | 27 |                                                                                                             |
| C-A25R PWLNR/L 06           | 25                           | 23 | 11,5 | 200 | 40 | 17 | 25 |                                                                                                             |
| C-A25R PWLNR/L 08           | 25                           | 23 | 11,5 | 200 | 40 | 17 | 31 | WN.. 0804..                                                                                                 |
| C-A32S PWLNR/L 08           | 32                           | 30 | 15   | 250 | 50 | 22 | 39 |                                                                                                             |
| C-A40T PWLNR/L 08           | 40                           | 37 | 18,5 | 300 | 60 | 27 | 48 |                                                                                                             |

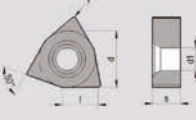
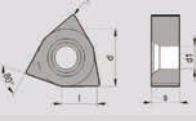
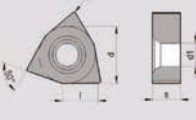
Bestellbeispiel / Order example: C-A16M PWLNR 06

### Ersatzteile: Spare parts:

| Bestell-Nr.:<br>Order Code: |  |  |  |  |  |  |
|-----------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| ..-A16M PWLNR/L 06          | B-8216                                                                              | B-1605                                                                              | 5002                                                                                |                                                                                      |                                                                                       |                                                                                       |
| ..-A20Q PWLNR/L 06          | B-8216                                                                              | B-1605                                                                              | 5002                                                                                |                                                                                      |                                                                                       |                                                                                       |
| ..-A25R PWLNR/L 06          | B-80091                                                                             | B-1606                                                                              | 5025                                                                                | B-3007                                                                               | B-4109                                                                                | 0009                                                                                  |
| ..-A25R PWLNR/L 08          | B-8012                                                                              | B-1626                                                                              | 5003                                                                                |                                                                                      |                                                                                       |                                                                                       |
| ..-A32S PWLNR/L 08          | B-8012                                                                              | B-1608                                                                              | 5003                                                                                | B-3008                                                                               | B-4112                                                                                | 0012                                                                                  |
| ..-A40T PWLNR/L 08          | B-8012                                                                              | B-1608                                                                              | 5003                                                                                | B-3008                                                                               | B-4112                                                                                | 0012                                                                                  |

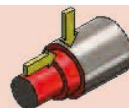
Bestellbeispiel / Order example: 8216

# Wendeplatten für Bohrstangen mit Innenkühlung 95° Insert for boring bars with coolant 95°

|                                                                                                    | Form Figure                                                                                      | Abmessungen Dimensions |       |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     |  | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|------------------------|-------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|--|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                    |                                                                                                  | l                      | d     | s    | d1 | r   |                            |          |           | CT28                                    | K10 |  | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>WNMG .. VA    |                 | 6,2                    | 9,52  | 4,76 |    | 0,4 | WNMG 060404 VA             |          |           |                                         |     |  |                                     |       |       | ■     |       |       |
|                                                                                                    |                                                                                                  | 6,2                    | 9,52  | 4,76 |    | 0,8 | WNMG 060408 VA             |          |           |                                         |     |  |                                     |       |       | ■     |       |       |
|                                                                                                    |                                                                                                  | 8,40                   | 12,70 | 4,76 |    | 0,4 | WNMG 080404 VA             |          |           |                                         |     |  |                                     |       |       | ■     |       |       |
|                                                                                                    |                                                                                                  | 8,30                   | 12,70 | 4,76 |    | 0,8 | WNMG 080408 VA             |          |           |                                         |     |  |                                     |       |       | ■     |       |       |
|                                                                                                    |                                                                                                  | 8,20                   | 12,70 | 4,76 |    | 1,2 | WNMG 080412 VA             |          |           |                                         |     |  |                                     |       |       | ■     |       |       |
|                                                                                                    |                                                                                                  |                        |       |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
| <br>WNMG .. WF    |                 | 6,20                   | 9,52  | 4,76 |    | 0,4 | WNMG 060404 WF             |          |           |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                    |                                                                                                  | 8,40                   | 12,70 | 4,76 |    | 0,4 | WNMG 080404 WF             |          |           |                                         |     |  | ■                                   |       |       |       | ■     |       |
| <br>WNMG .. WM    |                 | 6,20                   | 9,52  | 4,76 |    | 0,4 | WNMG 060404 WM             |          |           |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                    |                                                                                                  | 6,10                   | 9,52  | 4,76 |    | 0,8 | WNMG 060408 WM             |          |           |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                    |                                                                                                  | 8,40                   | 12,70 | 4,76 |    | 0,4 | WNMG 080404 WM             |          |           |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                    |                                                                                                  | 8,30                   | 12,70 | 4,76 |    | 0,8 | WNMG 080408 WM             |          |           |                                         |     |  | ■                                   |       | ■     |       | ■     |       |
|                                                                                                    |                                                                                                  | 8,30                   | 12,70 | 4,76 |    | 1,2 | WNMG 080412 WM             |          |           |                                         |     |  | ■                                   |       | ■     |       | ■     |       |
|                                                                                                    |                                                                                                  |                        |       |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
| <br>WNMG .. WR  |               | 8,30                   | 12,70 | 4,76 |    | 0,8 | WNMG 080408 WR             |          |           |                                         |     |  | ■                                   |       |       |       |       |       |
|                                                                                                    |                                                                                                  | 8,20                   | 12,70 | 4,76 |    | 1,2 | WNMG 080412 WR             |          |           |                                         |     |  | ■                                   |       |       |       |       |       |
| <br>WNMX .. SWX |               | 8,40                   | 12,70 | 4,76 |    | 0,4 | WNMX 080404 SWX            |          |           |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                    |                                                                                                  | 8,30                   | 12,70 | 4,76 |    | 0,8 | WNMX 080408 SWX            |          |           |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                    |                                                                                                  |                        |       |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
|                                                                                                    |                                                                                                  |                        |       |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
|                                                                                                    |  Masterfinish |                        |       |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |

F

## Drehhalter für die Außenbearbeitung 95° External Turning tools 95°



### Ausführung:

- S-Schraubenklemmsystem
- positionierbare Wendeplatte 80°
- Einsatz für mittlere bis Feinbearbeitung

### Execution:

- S-Clamp system
- positionable insert 80°
- for roughing and finishing



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |    | Wendeplatte<br>Insert<br> |
|-----------------------------|------------------------------|----|-----|----|----|--------------------------------------------------------------------------------------------------------------|
|                             | h=h1                         | b  | L1  | L2 | f  |                                                                                                              |
| SCLCR/L 0808 D06            | 8                            | 8  | 60  | 10 | 10 | CC.. 0602..                                                                                                  |
| SCLCR/L 1010 E06            | 10                           | 10 | 70  | 10 | 12 |                                                                                                              |
| SCLCR/L 1212 F09            | 12                           | 12 | 80  | 16 | 16 |                                                                                                              |
| SCLCR/L 1616 H09            | 16                           | 16 | 100 | 16 | 20 | CC.. 09T3..                                                                                                  |
| SCLCR/L 2020 K09            | 20                           | 20 | 125 | 16 | 25 |                                                                                                              |
| SCLCR/L 2020 K12            | 20                           | 20 | 125 | 25 | 25 |                                                                                                              |
| SCLCR/L 2525 M12            | 25                           | 25 | 150 | 25 | 32 | CC.. 1204..                                                                                                  |

Bestellbeispiel / Order example: SCLCR 0808 D06

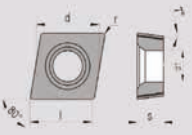
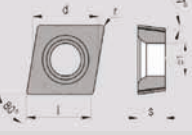
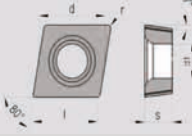
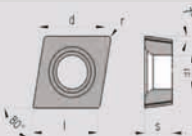
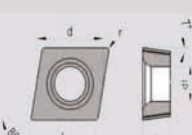
### Ersatzteile:

### Spare parts:

| Bestell-Nr.:<br>Order Code: |  |  |  |  |
|-----------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| SCLCR/L 0808 D06            | 1225                                                                                | 5507                                                                                |                                                                                     |                                                                                      |
| SCLCR/L 1010 E06            | 1225                                                                                | 5507                                                                                |                                                                                     |                                                                                      |
| SCLCR/L 1212 F09            | 1240                                                                                | 5515                                                                                |                                                                                     |                                                                                      |
| SCLCR/L 1616 H09            | 1240                                                                                | 5515                                                                                |                                                                                     |                                                                                      |
| SCLCR/L 2020 K09            | 1240                                                                                | 5515                                                                                |                                                                                     |                                                                                      |
| SCLCR/L 2020 K12            | 1540                                                                                | 5517                                                                                | 3614                                                                                | 1760                                                                                 |
| SCLCR/L 2525 M12            | 1540                                                                                | 5517                                                                                | 3614                                                                                | 1760                                                                                 |

Bestellbeispiel / Order example: 1225

# Wendeplatten für Drehhalter für die Außenbearbeitung 95° Insert for external Turning tools 95°

|                                                                                                     | Form Figure                                                                         | Abmessungen Dimensions |       |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|-----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|-------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                     |                                                                                     | l                      | d     | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>CCGT..<br>ALU-M |    | 6,20                   | 6,35  | 2,38 |    | 0,1 | CCGT 060201 ALU-M          | M-VT25   | M-BT 08   |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                     |                                                                                     | 6,20                   | 6,35  | 2,38 |    | 0,2 | CCGT 060202 ALU-M          | M-VT25   | M-BT 08   |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                     |                                                                                     | 6,00                   | 6,35  | 2,38 |    | 0,4 | CCGT 060204 ALU-M          | M-VT25   | M-BT 08   |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                     |                                                                                     | 9,40                   | 9,52  | 3,97 |    | 0,2 | CCGT 09T302 ALU-M          | M-VT40   | M-BT 15   |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                     |                                                                                     | 9,20                   | 9,52  | 3,97 |    | 0,4 | CCGT 09T304 ALU-M          | M-VT40   | M-BT 15   |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                     |                                                                                     | 8,80                   | 9,52  | 3,97 |    | 0,8 | CCGT 09T308 ALU-M          | M-VT40   | M-BT 15   |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                     |                                                                                     | 12,40                  | 12,70 | 4,76 |    | 0,4 | CCGT 120404 ALU-M          | M-VT41   | M-BT 20   |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                     |                                                                                     | 12,40                  | 12,70 | 4,76 |    | 0,8 | CCGT 120408 ALU-M          | M-VT41   | M-BT 20   |                                         | ■   |                                     |       |       |       |       | ■     |
| <br>CCGT .. WFF     |    | 6,20                   | 6,35  | 2,38 |    | 0,0 | CCGT 060200 WFF            |          |           |                                         |     | ■                                   |       |       |       |       |       |
|                                                                                                     |                                                                                     | 6,00                   | 6,35  | 2,38 |    | 0,1 | CCGT 060201 WFF            |          |           |                                         |     | ■                                   |       |       |       |       |       |
|                                                                                                     |                                                                                     | 9,20                   | 9,52  | 3,97 |    | 0,0 | CCGT 09T300 WFF            |          |           |                                         |     | ■                                   |       |       |       |       |       |
|                                                                                                     |                                                                                     | 8,80                   | 9,52  | 3,97 |    | 0,1 | CCGT 09T301 WFF            |          |           |                                         |     | ■                                   |       |       |       |       |       |
| <br>CCMT .. WF    |  | 6,20                   | 6,35  | 2,38 |    | 0,4 | CCMT 060202 WF             |          |           |                                         |     | ■                                   |       |       | ■     |       |       |
|                                                                                                     |                                                                                     | 6,00                   | 6,35  | 2,38 |    | 0,4 | CCMT 060204 WF             |          |           | ■                                       |     | ■                                   |       |       | ■     | ■     |       |
|                                                                                                     |                                                                                     | 9,40                   | 9,52  | 3,97 |    | 0,2 | CCMT 09T302 WF             |          |           |                                         |     | ■                                   |       |       | ■     |       |       |
|                                                                                                     |                                                                                     | 9,20                   | 9,52  | 3,97 |    | 0,4 | CCMT 09T304 WF             |          |           | ■                                       |     | ■                                   |       |       | ■     | ■     |       |
|                                                                                                     |                                                                                     | 8,80                   | 9,52  | 3,97 |    | 0,8 | CCMT 09T308 WF             |          |           |                                         |     | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                     |                                                                                     | 12,90                  | 12,70 | 4,76 |    | 0,4 | CCMT 120404 WF             |          |           |                                         |     | ■                                   |       |       | ■     |       |       |
| <br>CCMT .. WM    |  | 6,45                   | 6,35  | 2,38 |    | 0,4 | CCMT 060204 WM             |          |           |                                         |     | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                     |                                                                                     | 6,45                   | 6,35  | 2,38 |    | 0,8 | CCMT 060208 WM             |          |           |                                         |     | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                     |                                                                                     | 9,67                   | 9,52  | 3,97 |    | 0,4 | CCMT 09T304 WM             |          |           |                                         |     | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                     |                                                                                     | 9,67                   | 9,52  | 3,97 |    | 0,8 | CCMT 09T308 WM             |          |           |                                         |     | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                     |                                                                                     | 12,90                  | 12,70 | 4,76 |    | 0,4 | CCMT 120404 WM             |          |           |                                         |     | ■                                   |       |       | ■     |       |       |
|                                                                                                     |                                                                                     | 12,90                  | 12,70 | 4,76 |    | 0,8 | CCMT 120408 WM             |          |           |                                         |     | ■                                   |       |       | ■     | ■     |       |
|                                                                                                     |                                                                                     | 12,90                  | 12,70 | 4,76 |    | 1,2 | CCMT 120412 WM             |          |           |                                         |     | ■                                   |       |       | ■     |       |       |
| <br>CCMT .. XM    |  | 6,20                   | 6,35  | 2,38 |    | 0,2 | CCMT 060202 XM             |          |           |                                         |     | ■                                   |       |       |       | ■     |       |
|                                                                                                     |                                                                                     | 6,00                   | 6,35  | 2,38 |    | 0,4 | CCMT 060204 XM             |          |           |                                         |     | ■                                   |       |       |       | ■     |       |
|                                                                                                     |                                                                                     | 5,60                   | 6,35  | 2,38 |    | 0,8 | CCMT 060208 XM             |          |           |                                         |     | ■                                   |       |       |       | ■     |       |
|                                                                                                     |                                                                                     | 9,20                   | 9,52  | 3,97 |    | 0,4 | CCMT 09T304 XM             |          |           |                                         |     | ■                                   |       |       |       | ■     |       |
|                                                                                                     |                                                                                     | 8,80                   | 9,52  | 3,97 |    | 0,8 | CCMT 09T308 XM             |          |           |                                         |     | ■                                   |       |       |       | ■     |       |
|                                                                                                     |                                                                                     | 12,40                  | 12,70 | 4,76 |    | 0,4 | CCMT 120404 XM             |          |           |                                         |     | ■                                   |       |       |       | ■     |       |
|                                                                                                     |                                                                                     | 12,00                  | 12,70 | 4,76 |    | 0,8 | CCMT 120408 XM             |          |           |                                         |     | ■                                   |       |       |       | ■     |       |

F



## Drehhalter für die Außenbearbeitung 107,5° External Turning tools 107,5°



### Ausführung:

- S-Schraubenklemmsystem
- positionierte Wendeplatte 55°
- Einsatz für mittlere bis Feinbearbeitung

### Execution:

- S-Clampsystem
- positioned insert 55°
- for roughing and finishing



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |    | Wendeplatte<br>Insert<br> |
|-----------------------------|------------------------------|----|-----|----|----|--------------------------------------------------------------------------------------------------------------|
|                             | h=h1                         | b  | L1  | L2 | f  |                                                                                                              |
| SDHCR/L 1616 H11            | 16                           | 16 | 100 | 24 | 20 | DC.. 11T3..                                                                                                  |
| SDHCR/L 2020 K11            | 20                           | 20 | 125 | 24 | 25 |                                                                                                              |
| SDHCR/L 2525 M11            | 25                           | 25 | 150 | 29 | 32 |                                                                                                              |

Bestellbeispiel / Order example: SDHCR 1616 H11

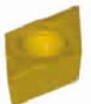
### Ersatzteile:

### Spare parts:

| Bestell-Nr.:<br>Order Code: |  |  |  |  |
|-----------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| SDHCR/L 1616 H11            | 1335                                                                                | 5516                                                                                | 3714                                                                                | 1750                                                                                 |
| SDHCR/L 2020 K11            | 1335                                                                                | 5516                                                                                | 3714                                                                                | 1750                                                                                 |
| SDHCR/L 2525 M11            | 1335                                                                                | 5516                                                                                | 3714                                                                                | 1750                                                                                 |

Bestellbeispiel / Order example: 1335

# **Wendeplatten für Drehhalter für die Außenbearbeitung 107,5°** **Insert for external Turning tools 107,5°**

|                                                                                                      | Form Figure                                                                        | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                      |                                                                                    | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>DCGT ..<br>ALU-M |   | 11,40                  | 9,52 | 3,97 |    | 0,2 | DCGT 11T302 ALU-M          |          |           |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                      |                                                                                    | 11,20                  | 9,52 | 3,97 |    | 0,4 | DCGT 11T304 ALU-M          |          |           |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                      |                                                                                    | 10,80                  | 9,52 | 3,97 |    | 0,8 | DCGT 11T308 ALU-M          |          |           |                                         | ■   |                                     |       |       |       |       | ■     |
|                                                                                                      |                                                                                    |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |
| <br>DCGT .. WFF      |   | 11,20                  | 9,52 | 3,97 |    | 0,0 | DCGT 11T300 WFF            |          |           |                                         |     | ■                                   |       |       |       |       |       |
|                                                                                                      |                                                                                    | 10,80                  | 9,52 | 3,97 |    | 0,1 | DCGT 11T301 WFF            |          |           |                                         |     | ■                                   |       |       |       |       |       |
|                                                                                                      |                                                                                    |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                                      |                                                                                    |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |
| <br>DCMT .. WF       |   | 11,40                  | 9,52 | 3,97 |    | 0,2 | DCMT 11T302 WF             |          |           |                                         |     | ■                                   |       |       | ■     |       |       |
|                                                                                                      |                                                                                    | 11,20                  | 9,52 | 3,97 |    | 0,4 | DCMT 11T304 WF             |          |           | ■                                       |     | ■                                   |       |       | ■     |       |       |
|                                                                                                      |                                                                                    | 10,80                  | 9,52 | 3,97 |    | 0,8 | DCMT 11T308 WF             |          |           |                                         |     | ■                                   |       |       | ■     |       |       |
|                                                                                                      |                                                                                    |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |
| <br>DCMT .. WM      |  | 11,20                  | 9,52 | 3,97 |    | 0,4 | DCMT 11T304 WM             |          |           |                                         |     | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                      |                                                                                    | 10,80                  | 9,52 | 3,97 |    | 0,8 | DCMT 11T308 WM             |          |           |                                         |     | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                      |                                                                                    |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                                      |                                                                                    |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |

# Drehhalter für die Außenbearbeitung 93° External Turning tools 93°



- Ausführung:**
- S-Schraubenklemmsystem
  - positive Wendeplatte 55°
  - Einsatz für mittlere bis Feinbearbeitung

- Execution:**
- S-Clampsystem
  - positive insert 55°
  - for roughing and finishing



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |    | Wendeplatte<br>Insert<br> |
|-----------------------------|------------------------------|----|-----|----|----|--------------------------------------------------------------------------------------------------------------|
|                             | h=h1                         | b  | L1  | L2 | f  |                                                                                                              |
| SDC R/L 1010 H07            | 10                           | 10 | 70  | 16 | 12 | DC.. 0702..                                                                                                  |
| SDC R/L 1212 F07            | 12                           | 12 | 80  | 18 | 16 |                                                                                                              |
| SDC R/L 1616 H11            | 16                           | 16 | 100 | 22 | 20 | DC.. 11T3..                                                                                                  |
| SDC R/L 2020 K11            | 20                           | 20 | 125 | 22 | 25 |                                                                                                              |
| SDC R/L 2525 M11            | 25                           | 25 | 150 | 22 | 32 |                                                                                                              |

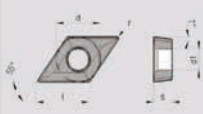
Bestellbeispiel / Orderexample: SDC R 1010 E07

## Ersatzteile: Spare parts:

| Bestell-Nr.:<br>Order Code: |  |  |  |  |
|-----------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| SDC R/L 1010 H07            | 1225                                                                                | 5507                                                                                |                                                                                     |                                                                                      |
| SDC R/L 1212 F07            | 1225                                                                                | 5507                                                                                |                                                                                     |                                                                                      |
| SDC R/L 1616 H11            | 1335                                                                                | 5516                                                                                | 3714                                                                                | 1750                                                                                 |
| SDC R/L 2020 K11            | 1335                                                                                | 5516                                                                                | 3714                                                                                | 1750                                                                                 |
| SDC R/L 2525 M11            | 1335                                                                                | 5516                                                                                | 3714                                                                                | 1750                                                                                 |

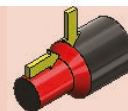
Bestellbeispiel / Orderexample: 1225

# Wendeplatten für Drehhalter für die Außenbearbeitung 93° Insert for external Turning tools 93°

|                                                                                                      | Form Figure                                                                         | Abmessungen Dimensions |      |      |    |     | Bezeichnung Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     |  | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|----|-----|-------------------------|----------|-----------|-----------------------------------------|-----|--|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                      |                                                                                     | l                      | d    | s    | d1 | r   |                         |          |           | CT28                                    | K10 |  | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>DCGT ..<br>ALU-M |    | 7,30                   | 6,35 | 2,38 |    | 0,1 | DCGT 070201 ALU-M       |          |           |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                      |                                                                                     | 7,30                   | 6,35 | 2,38 |    | 0,2 | DCGT 070202 ALU-M       |          |           |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                      |                                                                                     | 7,30                   | 6,35 | 2,38 |    | 0,4 | DCGT 070204 ALU-M       |          |           |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                      |                                                                                     | 6,80                   | 6,35 | 2,38 |    | 0,4 | DCGT 070208 ALU-M       |          |           |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                      |                                                                                     | 11,40                  | 9,52 | 3,97 |    | 0,2 | DCGT 11T302 ALU-M       |          |           |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                      |                                                                                     | 11,20                  | 9,52 | 3,97 |    | 0,4 | DCGT 11T304 ALU-M       |          |           |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                      |                                                                                     | 10,80                  | 9,52 | 3,97 |    | 0,8 | DCGT 11T308 ALU-M       |          |           |                                         | ■   |  |                                     |       |       |       |       | ■     |
| <br>DCGT .. WFF      |    | 7,50                   | 6,35 | 2,38 |    | 0,0 | DCGT 070200 WFF         |          |           |                                         |     |  | ■                                   |       |       |       |       |       |
|                                                                                                      |                                                                                     | 7,50                   | 6,35 | 2,38 |    | 0,1 | DCGT 070201 WFF         |          |           |                                         |     |  | ■                                   |       |       |       |       |       |
|                                                                                                      |                                                                                     | 11,20                  | 9,52 | 3,97 |    | 0,0 | DCGT 11T300 WFF         |          |           |                                         |     |  | ■                                   |       |       |       |       |       |
|                                                                                                      |                                                                                     | 10,80                  | 9,52 | 3,97 |    | 0,1 | DCGT 11T301 WFF         |          |           |                                         |     |  | ■                                   |       |       |       |       |       |
|                                                                                                      |                                                                                     |                        |      |      |    |     |                         |          |           |                                         |     |  |                                     |       |       |       |       |       |
| <br>DCMT .. WF     |  | 7,50                   | 6,35 | 2,38 |    | 0,2 | DCMT 070202 WF          |          |           |                                         |     |  | ■                                   |       |       | ■     | ■     |       |
|                                                                                                      |                                                                                     | 7,30                   | 6,35 | 2,38 |    | 0,4 | DCMT 070204 WF          |          |           | ■                                       |     |  | ■                                   |       |       | ■     | ■     |       |
|                                                                                                      |                                                                                     | 11,40                  | 9,52 | 3,97 |    | 0,2 | DCMT 11T302 WF          |          |           |                                         |     |  | ■                                   |       |       | ■     | ■     |       |
|                                                                                                      |                                                                                     | 11,20                  | 9,52 | 3,97 |    | 0,4 | DCMT 11T304 WF          |          |           | ■                                       |     |  | ■                                   |       |       | ■     |       |       |
|                                                                                                      |                                                                                     | 10,80                  | 9,52 | 3,97 |    | 0,8 | DCMT 11T308 WF          |          |           |                                         |     |  | ■                                   |       |       | ■     |       |       |
| <br>DCMT .. WM     |  | 7,50                   | 6,35 | 2,38 |    | 0,4 | DCMT 070204 WM          |          |           |                                         |     |  | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                      |                                                                                     | 7,30                   | 6,35 | 2,38 |    | 0,8 | DCMT 070208 WM          |          |           |                                         |     |  | ■                                   |       | ■     | ■     |       |       |
|                                                                                                      |                                                                                     | 11,20                  | 9,52 | 3,97 |    | 0,4 | DCMT 11T304 WM          |          |           |                                         |     |  | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                      |                                                                                     | 10,80                  | 9,52 | 3,97 |    | 0,8 | DCMT 11T308 WM          |          |           |                                         |     |  | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                      |                                                                                     |                        |      |      |    |     |                         |          |           |                                         |     |  |                                     |       |       |       |       |       |

F

## Drehhalter für die Außenbearbeitung 45° External Turning tools 45°



### Ausführung:

- S-Schraubenklemmsystem
- positionierte Wendeplatte 90°
- Einsatz für mittlere bis Feinbearbeitung

### Execution:

- S-Clamp system
- positioned insert 90°
- for roughing and finishing



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |    | Wendeplatte<br>Insert<br> |
|-----------------------------|------------------------------|----|-----|----|----|--------------------------------------------------------------------------------------------------------------|
|                             | h=h1                         | b  | L1  | L2 | f  |                                                                                                              |
| SSSCR/L 1212 F09            | 12                           | 12 | 80  | 11 | 16 | SC.. 09T3..                                                                                                  |
| SSSCR/L 1616 H09            | 16                           | 16 | 100 | 22 | 20 |                                                                                                              |
| SSSCR/L 2020 K12            | 20                           | 20 | 125 | 22 | 25 |                                                                                                              |
| SSSCR/L 2525 M12            | 25                           | 25 | 150 | 22 | 32 | SC.. 1204..                                                                                                  |

Bestellbeispiel / Order example: SSSCR R 1010 E07

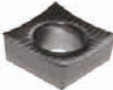
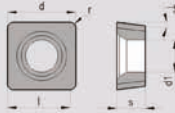
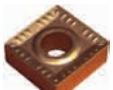
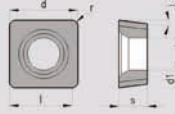
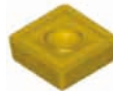
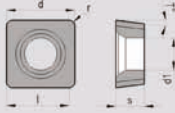
### Ersatzteile:

### Spare parts:

| Bestell-Nr.:<br>Order Code: |  |  |  |  |
|-----------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| SSSCR/L 1212 F09            | 1240                                                                                | 5515                                                                                |                                                                                     |                                                                                      |
| SSSCR/L 1616 H09            | 1240                                                                                | 5515                                                                                |                                                                                     |                                                                                      |
| SSSCR/L 2020 K12            | 1540                                                                                | 5517                                                                                | 3514                                                                                | 1760                                                                                 |
| SSSCR/L 2525 M12            | 1540                                                                                | 5517                                                                                | 3514                                                                                | 1760                                                                                 |

Bestellbeispiel / Order example: 1240

# Wendeplatten für Drehhalter für die Außenbearbeitung 45° Insert for external Turning tools 45°

|                                                                                                      | Form Figure                                                                       | Abmessungen Dimensions |       |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     |  | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------|-------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|--|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                      |                                                                                   | l                      | d     | s    | d1 | r   |                            |          |           | CT28                                    | K10 |  | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>SCGT ..<br>ALU-M |  | 9,10                   | 9,52  | 3,97 |    | 0,4 | SCGT 09T304 ALU-M          |          |           |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                      |                                                                                   | 8,70                   | 9,52  | 3,97 |    | 0,8 | SCGT 09T308 ALU-M          |          |           |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                      |                                                                                   | 11,90                  | 12,70 | 4,76 |    | 0,8 | SCGT 120408 ALU-M          |          |           |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                      |                                                                                   |                        |       |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
| <br>SCMT .. WM       |  | 9,10                   | 9,52  | 3,97 |    | 0,4 | SCMT 09T304 WM             |          |           |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                      |                                                                                   | 8,70                   | 9,52  | 3,97 |    | 0,8 | SCMT 09T308 WM             |          |           |                                         |     |  | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                      |                                                                                   | 12,30                  | 12,70 | 4,76 |    | 0,4 | SCMT 120404 WM             |          |           |                                         |     |  | ■                                   |       |       | ■     | ■     |       |
|                                                                                                      |                                                                                   | 11,90                  | 12,70 | 4,76 |    | 0,8 | SCMT 120408 WM             |          |           |                                         |     |  | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                      |                                                                                   | 11,90                  | 12,70 | 4,76 |    | 1,2 | SCMT 120412 WM             |          |           |                                         |     |  | ■                                   |       | ■     | ■     |       |       |
| <br>SCMT .. XM       |  | 8,70                   | 9,52  | 3,97 |    | 0,8 | SCMT 09T308 XM             |          |           |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                      |                                                                                   | 12,30                  | 12,70 | 4,76 |    | 0,8 | SCMT 120408 XM             |          |           |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                      |                                                                                   | 11,90                  | 12,70 | 4,76 |    | 1,2 | SCMT 120412 XM             |          |           |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                      |                                                                                   |                        |       |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |



Drehhalter für die Außenbearbeitung 107,3°  
External Turning tools 107,3°



- Ausführung:**  
 - S-Schraubenklemmsystem  
 - positionierte Wendeplatte 35°  
 - Einsatz für mittlere bis Feinbearbeitung
- Execution:**  
 - S-Clamp system  
 - positioned insert 35°  
 - for roughing and finishing



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |      |    | Wendeplatte<br>Insert<br> |
|-----------------------------|------------------------------|----|-----|------|----|--------------------------------------------------------------------------------------------------------------|
|                             | h=h1                         | b  | L1  | L2   | f  |                                                                                                              |
| SVHCR/L 2020 K16            | 20                           | 20 | 125 | 15,5 | 25 | VC.. 1604..                                                                                                  |
| SVHCR/L 2525 M16            | 25                           | 25 | 150 | 21   | 32 |                                                                                                              |

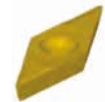
Bestellbeispiel / Order example: SVHCR 2020 K16

Ersatzteile:  
Spare parts:

| Bestell-Nr.:<br>Order Code: |  |  |  |  |
|-----------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| SVHCR/L 2020 K16            | 1335                                                                                | 5516                                                                                | 3718                                                                                | 1750                                                                                 |
| SVHCR/L 2525 M16            | 1335                                                                                | 5516                                                                                | 3718                                                                                | 1750                                                                                 |

Bestellbeispiel / Order example: 1335

# Wendeplatten für Drehhalter für die Außenbearbeitung 107,3° Insert for external Turning tools 107,3°

|                                                                                                      | Form Figure                                                                       | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     |  | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|--|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                      |                                                                                   | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 |  | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>VCMT ..<br>ALU-M |  | 16,10                  | 9,52 | 4,76 |    | 0,2 | VCMT 160402 ALU-M          |          |           |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                      |                                                                                   | 15,60                  | 9,52 | 4,76 |    | 0,4 | VCMT 160404 ALU-M          |          |           |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                      |                                                                                   | 14,00                  | 9,52 | 4,76 |    | 0,8 | VCMT 160408 ALU-M          |          |           |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                      |                                                                                   | 13,60                  | 9,52 | 4,76 |    | 1,2 | VCMT 160412 ALU-M          |          |           |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                      |                                                                                   |                        |      |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
| <br>VCMT .. WFF      |  | 16,00                  | 9,52 | 4,76 |    | 0,0 | VCMT 160400 WFF            |          |           |                                         |     |  | ■                                   |       |       |       |       |       |
|                                                                                                      |                                                                                   | 15,90                  | 9,52 | 4,76 |    | 0,1 | VCMT 160401 WFF            |          |           |                                         |     |  | ■                                   |       |       |       |       |       |
|                                                                                                      |                                                                                   |                        |      |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
| <br>VCMT .. WF       |  | 16,00                  | 9,52 | 4,76 |    | 0,4 | VCMT 160404 WF             |          |           |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                      |                                                                                   | 16,00                  | 9,52 | 4,76 |    | 0,8 | VCMT 160408 WF             |          |           |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                      |                                                                                   |                        |      |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
| <br>VCMT .. WM       |  | 16,00                  | 9,52 | 4,76 |    | 0,4 | VCMT 160404 WM             |          |           |                                         |     |  | ■                                   |       | ■     |       | ■     |       |
|                                                                                                      |                                                                                   | 16,00                  | 9,52 | 4,76 |    | 0,8 | VCMT 160408 WM             |          |           |                                         |     |  | ■                                   |       | ■     |       | ■     |       |
|                                                                                                      |                                                                                   |                        |      |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |

Drehhalter für die Außenbearbeitung 93°  
External Turning tools 93°



- Ausführung:**  
- S-Schraubenklemmsystem  
- positionierbare Wendeplatte 35°  
- Einsatz für mittlere bis Feinbearbeitung
- Execution:**  
- S-Clamp system  
- positionable insert 35°  
- for roughing and finishing



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |    | Wendeplatte<br>Insert<br> |
|-----------------------------|------------------------------|----|-----|----|----|--------------------------------------------------------------------------------------------------------------|
|                             | h=h1                         | b  | L1  | L2 | f  |                                                                                                              |
| SV  R/L 1212 F11            | 12                           | 12 | 80  | 25 | 16 | VC.. 1103..                                                                                                  |
| SV  R/L 1616 H11            | 16                           | 16 | 100 | 25 | 20 |                                                                                                              |
| SV  R/L 2020 K11            | 20                           | 20 | 125 | 25 | 25 |                                                                                                              |
| SV  R/L 2020 K16            | 20                           | 20 | 125 | 37 | 25 | VC.. 1604..                                                                                                  |
| SV  R/L 2525 M16            | 25                           | 25 | 150 | 37 | 32 |                                                                                                              |

Bestellbeispiel / Orderexample: SV R 1212 F11

Ersatzteile:  
Spare parts:

| Bestell-Nr.:<br>Order Code: |  |  |  |  |
|-----------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| SV  R/L 1212 F11            | 1225                                                                                | 5507                                                                                |                                                                                     |                                                                                      |
| SV  R/L 1616 H11            | 1225                                                                                | 5507                                                                                |                                                                                     |                                                                                      |
| SV  R/L 2020 K11            | 1225                                                                                | 5507                                                                                |                                                                                     |                                                                                      |
| SV  R/L 2020 K16            | 1335                                                                                | 5516                                                                                | 3718                                                                                | 1750                                                                                 |
| SV  R/L 2525 M16            | 1335                                                                                | 5516                                                                                | 3718                                                                                | 1750                                                                                 |

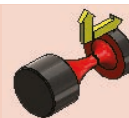
Bestellbeispiel / Orderexample: 1225

# Wendeplatten für Drehhalter für die Außenbearbeitung 93° Insert for external Turning tools 93°

|                                                                                                      | Form Figure                                                                         | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     |  | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|--|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                      |                                                                                     | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 |  | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>VCMT ..<br>ALU-M |    | 10,50                  | 6,35 | 3,18 |    | 0,2 | VCMT 110302 ALU-M          |          |           |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                      |                                                                                     | 10,00                  | 6,35 | 3,18 |    | 0,4 | VCMT 110304 ALU-M          |          |           |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                      |                                                                                     | 16,10                  | 9,52 | 4,76 |    | 0,2 | VCMT 160402 ALU-M          |          |           |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                      |                                                                                     | 15,60                  | 9,52 | 4,76 |    | 0,4 | VCMT 160404 ALU-M          |          |           |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                      |                                                                                     | 14,00                  | 9,52 | 4,76 |    | 0,8 | VCMT 160408 ALU-M          |          |           |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                      |                                                                                     | 13,60                  | 9,52 | 4,76 |    | 1,2 | VCMT 160412 ALU-M          |          |           |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                      |                                                                                     |                        |      |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       | ■     |
| <br>VCMT .. WFF      |    | 10,00                  | 6,35 | 3,18 |    | 0,0 | VCMT 110300 WFF            |          |           |                                         |     |  | ■                                   |       |       |       |       |       |
|                                                                                                      |                                                                                     | 10,00                  | 6,35 | 3,18 |    | 0,1 | VCMT 110301 WFF            |          |           |                                         |     |  | ■                                   |       |       |       |       |       |
|                                                                                                      |                                                                                     | 16,00                  | 9,52 | 4,76 |    | 0,0 | VCMT 160400 WFF            |          |           |                                         |     |  | ■                                   |       |       |       |       |       |
|                                                                                                      |                                                                                     | 15,90                  | 9,52 | 4,76 |    | 0,1 | VCMT 160401 WFF            |          |           |                                         |     |  | ■                                   |       |       |       |       |       |
|                                                                                                      |                                                                                     |                        |      |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
| <br>VCMT .. WF      |   | 11,00                  | 6,35 | 3,18 |    | 0,2 | VCMT 110302 WF             |          |           |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                      |                                                                                     | 11,00                  | 6,35 | 3,18 |    | 0,4 | VCMT 110304 WF             |          |           |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                      |                                                                                     | 16,00                  | 9,52 | 4,76 |    | 0,4 | VCMT 160404 WF             |          |           |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                      |                                                                                     | 16,00                  | 9,52 | 4,76 |    | 0,8 | VCMT 160408 WF             |          |           |                                         |     |  | ■                                   |       |       |       |       |       |
|                                                                                                      |                                                                                     |                        |      |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
| <br>VCMT .. WM     |  | 11,00                  | 6,35 | 3,18 |    | 0,4 | VCMT 110304 WM             |          |           |                                         |     |  | ■                                   |       | ■     |       | ■     |       |
|                                                                                                      |                                                                                     | 11,00                  | 6,35 | 3,18 |    | 0,8 | VCMT 110308 WM             |          |           |                                         |     |  | ■                                   |       | ■     |       | ■     |       |
|                                                                                                      |                                                                                     | 16,00                  | 9,52 | 4,76 |    | 0,4 | VCMT 160404 WM             |          |           |                                         |     |  | ■                                   |       | ■     |       | ■     |       |
|                                                                                                      |                                                                                     | 16,00                  | 9,52 | 4,76 |    | 0,8 | VCMT 160408 WM             |          |           |                                         |     |  | ■                                   |       | ■     |       | ■     |       |
|                                                                                                      |                                                                                     |                        |      |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |

F

## Drehhalter für die Außenbearbeitung 72,3° External Turning tools 72,3°



### Ausführung:

- S-Schrauben emmst em
- positie Wendeplatte 35°
- Einsatz für mittlere bis Feinbearbeitung

### Execution:

- S-Clamps em
- positie insert 35°
- for roughing and finishing



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |      | Wendeplatte<br>Insert<br> |
|-----------------------------|------------------------------|----|-----|----|------|--------------------------------------------------------------------------------------------------------------|
|                             | h=h1                         | b  | L1  | L2 | f    |                                                                                                              |
| SVVC N 1212 F11             | 12                           | 12 | 80  | 25 | 6,6  | VC.. 1103..                                                                                                  |
| SVVC N 1616 H11             | 16                           | 16 | 100 | 25 | 8,6  |                                                                                                              |
| SVVC N 2020 K11             | 20                           | 20 | 125 | 25 | 10,6 |                                                                                                              |
| SVVC N 2020 K16             | 20                           | 20 | 125 | 37 | 10,6 | VC.. 1604..                                                                                                  |
| SVVC N 2525 M16             | 25                           | 25 | 150 | 37 | 13,1 |                                                                                                              |

Bestellbeispiel / Order example: SVVCN 1212 F11

### Ersatzteile:

### Spare parts:

| Bestell-Nr.:<br>Order Code: |  |  |  |  |
|-----------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| SVVC N 1212 F11             | 1225                                                                                | 5507                                                                                |                                                                                     |                                                                                      |
| SVVC N 1616 H11             | 1225                                                                                | 5507                                                                                |                                                                                     |                                                                                      |
| SVVC N 2020 K11             | 1225                                                                                | 5507                                                                                |                                                                                     |                                                                                      |
| SVVC N 2020 K16             | 1335                                                                                | 5516                                                                                | 3718                                                                                | 1750                                                                                 |
| SVVC N 2525 M16             | 1335                                                                                | 5516                                                                                | 3718                                                                                | 1750                                                                                 |

Bestellbeispiel / Order example: 1225

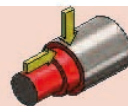
# Wendeplatten für Drehhalter für die Außenbearbeitung 72,3° Insert for external Turning tools 72,3°

|                                                                                                   | Form Figure                                                                         | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     |  | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|---------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|--|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                   |                                                                                     | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 |  | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>VCMT .. ALU-M |    |                        |      |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
|                                                                                                   |                                                                                     | 10,50                  | 6,35 | 3,18 |    | 0,2 | VCMT 110302 ALU-M          |          |           |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                   |                                                                                     | 10,00                  | 6,35 | 3,18 |    | 0,4 | VCMT 110304 ALU-M          |          |           |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                   |                                                                                     | 16,10                  | 9,52 | 4,76 |    | 0,2 | VCMT 160402 ALU-M          |          |           |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                   |                                                                                     | 15,60                  | 9,52 | 4,76 |    | 0,4 | VCMT 160404 ALU-M          |          |           |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                   |                                                                                     | 14,00                  | 9,52 | 4,76 |    | 0,8 | VCMT 160408 ALU-M          |          |           |                                         | ■   |  |                                     |       |       |       |       | ■     |
|                                                                                                   |                                                                                     | 13,60                  | 9,52 | 4,76 |    | 1,2 | VCMT 160412 ALU-M          |          |           |                                         | ■   |  |                                     |       |       |       |       | ■     |
| <br>VCMT .. WFF   |    |                        |      |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
|                                                                                                   |                                                                                     | 10,00                  | 6,35 | 3,18 |    | 0,0 | VCMT 110300 WFF            |          |           |                                         |     |  | ■                                   |       |       |       |       |       |
|                                                                                                   |                                                                                     | 10,00                  | 6,35 | 3,18 |    | 0,1 | VCMT 110301 WFF            |          |           |                                         |     |  | ■                                   |       |       |       |       |       |
|                                                                                                   |                                                                                     | 16,00                  | 9,52 | 4,76 |    | 0,0 | VCMT 160400 WFF            |          |           |                                         |     |  | ■                                   |       |       |       |       |       |
|                                                                                                   |                                                                                     | 15,90                  | 9,52 | 4,76 |    | 0,1 | VCMT 160401 WFF            |          |           |                                         |     |  | ■                                   |       |       |       |       |       |
| <br>VCMT .. WF   |   |                        |      |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
|                                                                                                   |                                                                                     | 11,00                  | 6,35 | 3,18 |    | 0,2 | VCMT 110302 WF             |          |           |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                   |                                                                                     | 11,00                  | 6,35 | 3,18 |    | 0,4 | VCMT 110304 WF             |          |           |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                   |                                                                                     | 16,00                  | 9,52 | 4,76 |    | 0,4 | VCMT 160404 WF             |          |           |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                   |                                                                                     | 16,00                  | 9,52 | 4,76 |    | 0,8 | VCMT 160408 WF             |          |           |                                         |     |  | ■                                   |       |       |       |       |       |
| <br>VCMT .. WM  |  |                        |      |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
|                                                                                                   |                                                                                     | 11,00                  | 6,35 | 3,18 |    | 0,4 | VCMT 110304 WM             |          |           |                                         |     |  | ■                                   |       | ■     |       | ■     |       |
|                                                                                                   |                                                                                     | 11,00                  | 6,35 | 3,18 |    | 0,8 | VCMT 110308 WM             |          |           |                                         |     |  | ■                                   |       | ■     |       | ■     |       |
|                                                                                                   |                                                                                     | 16,00                  | 9,52 | 4,76 |    | 0,4 | VCMT 160404 WM             |          |           |                                         |     |  | ■                                   |       | ■     |       | ■     |       |
|                                                                                                   |                                                                                     | 16,00                  | 9,52 | 4,76 |    | 0,8 | VCMT 160408 WM             |          |           |                                         |     |  | ■                                   |       | ■     |       | ■     |       |

F



## Drehhalter für die Außenbearbeitung 95° External Turning tools 95°



### Ausführung:

- P-Klemmsystem
- negative Wendeplatte 80°
- Einsatz für Schrupp- und  
Schlichtbearbeitung

### Execution:

- P-Clampsystem
- positive insert 80°
- for roughing and finishing



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |    | Wendeplatte<br>Insert<br> |
|-----------------------------|------------------------------|----|-----|----|----|--------------------------------------------------------------------------------------------------------------|
|                             | h=h1                         | b  | L1  | L2 | f  |                                                                                                              |
| PCLNR/L 1616 H09            | 16                           | 16 | 100 | 25 | 20 | CN.. 0903..                                                                                                  |
| PCLNR/L 2020 K09            | 20                           | 20 | 125 | 27 | 25 |                                                                                                              |
| PCLNR/L 2525 M09            | 25                           | 25 | 150 | 27 | 32 |                                                                                                              |
| PCLNR/L 1616 H12            | 16                           | 16 | 100 | 26 | 20 | CN.. 1204..                                                                                                  |
| PCLNR/L 2020 K12            | 20                           | 20 | 125 | 28 | 25 |                                                                                                              |
| PCLNR/L 2525 M12            | 25                           | 25 | 150 | 28 | 32 |                                                                                                              |
| PCLNR/L 3225 P12            | 32                           | 25 | 170 | 28 | 32 |                                                                                                              |
| PCLNR/L 3232 P12            | 32                           | 32 | 170 | 28 | 40 | CN.. 1606..                                                                                                  |
| PCLNR/L 2525 M16            | 25                           | 25 | 150 | 34 | 32 |                                                                                                              |
| PCLNR/L 3225 P16            | 32                           | 25 | 170 | 34 | 32 |                                                                                                              |
| PCLNR/L 3232 P16            | 32                           | 32 | 170 | 34 | 40 |                                                                                                              |
| PCLNR/L 4040 S16            | 40                           | 40 | 250 | 34 | 50 | CN.. 1906..                                                                                                  |
| PCLNR/L 2525 M19            | 25                           | 25 | 150 | 42 | 32 |                                                                                                              |
| PCLNR/L 3225 P19            | 32                           | 25 | 170 | 42 | 32 |                                                                                                              |
| PCLNR/L 3232 P19            | 32                           | 32 | 170 | 42 | 40 |                                                                                                              |
| PCLNR/L 4040 S19            | 40                           | 40 | 250 | 45 | 50 |                                                                                                              |

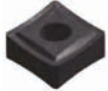
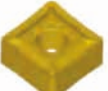
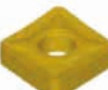
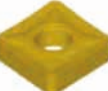
Bestellbeispiel / Order example: PCLNR 1616 H09

### Ersatzteile: Spare parts:

| Bestell-Nr.:<br>Order Code: |  |  |  |  |  |  |
|-----------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| PCLNR/L 1616 H09            | 8009                                                                                | 1606                                                                                | 5025                                                                                | 3609                                                                                 | 4109                                                                                  | 0009                                                                                  |
| PCLNR/L 2020 K09            | 8009                                                                                | 1606                                                                                | 5025                                                                                | 3609                                                                                 | 4109                                                                                  | 0009                                                                                  |
| PCLNR/L 2525 M09            | 8009                                                                                | 1606                                                                                | 5025                                                                                | 3609                                                                                 | 4109                                                                                  | 0009                                                                                  |
| PCLNR/L 1616 H12            | 8312                                                                                | 1648                                                                                | 5003                                                                                | 3612                                                                                 | 4112                                                                                  | 0012                                                                                  |
| PCLNR/L 2020 K12            | 8012                                                                                | 1608                                                                                | 5003                                                                                | 3612                                                                                 | 4112                                                                                  | 0012                                                                                  |
| PCLNR/L 2525 M12            | 8012                                                                                | 1608                                                                                | 5003                                                                                | 3612                                                                                 | 4112                                                                                  | 0012                                                                                  |
| PCLNR/L 3225 P12            | 8012                                                                                | 1608                                                                                | 5003                                                                                | 3612                                                                                 | 4112                                                                                  | 0012                                                                                  |
| PCLNR/L 3232 P12            | 8012                                                                                | 1608                                                                                | 5003                                                                                | 3612                                                                                 | 4112                                                                                  | 0012                                                                                  |
| PCLNR/L 2525 M16            | 8016                                                                                | 1618                                                                                | 5003                                                                                | 3616                                                                                 | 4115                                                                                  | 0015                                                                                  |
| PCLNR/L 3225 P16            | 8016                                                                                | 1618                                                                                | 5003                                                                                | 3616                                                                                 | 4115                                                                                  | 0015                                                                                  |
| PCLNR/L 3232 P16            | 8016                                                                                | 1618                                                                                | 5003                                                                                | 3616                                                                                 | 4115                                                                                  | 0015                                                                                  |
| PCLNR/L 4040 S16            | 8016                                                                                | 1618                                                                                | 5003                                                                                | 3616                                                                                 | 4115                                                                                  | 0015                                                                                  |
| PCLNR/L 2525 M19            | 8019                                                                                | 1610                                                                                | 5004                                                                                | 3619                                                                                 | 4119                                                                                  | 0019                                                                                  |
| PCLNR/L 3225 P19            | 8019                                                                                | 1610                                                                                | 5004                                                                                | 3619                                                                                 | 4119                                                                                  | 0019                                                                                  |
| PCLNR/L 3232 P19            | 8019                                                                                | 1610                                                                                | 5004                                                                                | 3619                                                                                 | 4119                                                                                  | 0019                                                                                  |
| PCLNR/L 4040 S19            | 8019                                                                                | 1610                                                                                | 5004                                                                                | 3619                                                                                 | 4119                                                                                  | 0019                                                                                  |

Bestellbeispiel / Order example: 8009

# Wendepplatten für Drehhalter für die Außenbearbeitung 95° Insert for external Turning tools 95°

|                                                                                                  | Form Figure                                                                         | Abmessungen Dimensions |       |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     |  | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|--------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|-------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|--|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                  |                                                                                     | l                      | d     | s    | d1 | r   |                            |          |           | CT28                                    | K10 |  | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>CNMG .. VA   |    | 9,20                   | 9,52  | 3,18 |    | 0,4 | CNMG 090304 VA             |          |           |                                         |     |  |                                     |       |       | ■     |       |       |
|                                                                                                  |                                                                                     | 8,80                   | 9,52  | 3,18 |    | 0,8 | CNMG 090308 VA             |          |           |                                         |     |  |                                     |       |       | ■     |       |       |
|                                                                                                  |                                                                                     | 12,40                  | 12,70 | 4,76 |    | 0,4 | CNMG 120404 VA             |          |           |                                         |     |  |                                     |       |       | ■     |       |       |
|                                                                                                  |                                                                                     | 12,00                  | 12,70 | 4,76 |    | 0,8 | CNMG 120408 VA             |          |           |                                         |     |  |                                     |       |       | ■     |       |       |
|                                                                                                  |                                                                                     |                        |       |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
| <br>CNMG .. WM   |    | 9,20                   | 9,52  | 3,18 |    | 0,8 | CNMG 09T308 WM             |          |           |                                         |     |  | ■                                   |       | ■     |       | ■     |       |
|                                                                                                  |                                                                                     | 12,40                  | 12,70 | 4,76 |    | 0,4 | CNMG 120404 WM             |          |           |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                  |                                                                                     | 12,00                  | 12,70 | 4,76 |    | 0,8 | CNMG 120408 WM             |          |           |                                         |     |  | ■                                   |       | ■     |       | ■     |       |
|                                                                                                  |                                                                                     | 11,60                  | 12,70 | 4,76 |    | 1,2 | CNMG 120412 WM             |          |           |                                         |     |  | ■                                   |       | ■     |       | ■     |       |
|                                                                                                  |                                                                                     |                        |       |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
| <br>CNMG .. WR   |    |                        |       |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
|                                                                                                  |                                                                                     | 12,00                  | 12,70 | 4,76 |    | 0,8 | CNMG 120408 WR             |          |           |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                  |                                                                                     | 11,60                  | 12,70 | 4,76 |    | 1,2 | CNMG 120412 WR             |          |           |                                         |     |  | ■                                   |       | ■     |       |       |       |
|                                                                                                  |                                                                                     | 15,30                  | 15,90 | 6,35 |    | 0,8 | CNMG 160608 WR             |          |           |                                         |     |  |                                     |       | ■     |       | ■     |       |
|                                                                                                  |                                                                                     | 14,80                  | 15,90 | 6,35 |    | 1,2 | CNMG 160612 WR             |          |           |                                         |     |  | ■                                   |       | ■     |       | ■     |       |
|                                                                                                  |                                                                                     | 18,10                  | 19,05 | 6,35 |    | 1,2 | CNMG 190612 WR             |          |           |                                         |     |  | ■                                   |       | ■     |       | ■     |       |
|                                                                                                  |                                                                                     | 17,70                  | 19,05 | 6,35 |    | 1,6 | CNMG 190616 WR             |          |           |                                         |     |  | ■                                   |       | ■     |       |       |       |
|                                                                                                  |                                                                                     |                        |       |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
| <br>CNMM .. WR |  |                        |       |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
|                                                                                                  |                                                                                     | 12,00                  | 12,70 | 4,76 |    | 0,8 | CNMM 120408 WR             |          |           |                                         |     |  | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                  |                                                                                     | 11,60                  | 12,70 | 4,76 |    | 1,2 | CNMM 120412 WR             |          |           |                                         |     |  | ■                                   |       | ■     | ■     | ■     |       |
|                                                                                                  |                                                                                     | 14,80                  | 15,90 | 6,35 |    | 1,2 | CNMM 160612 WR             |          |           |                                         |     |  | ■                                   |       | ■     |       | ■     |       |
|                                                                                                  |                                                                                     | 14,40                  | 15,90 | 6,35 |    | 1,6 | CNMM 160616 WR             |          |           |                                         |     |  | ■                                   |       | ■     |       | ■     |       |
|                                                                                                  |                                                                                     | 18,10                  | 19,05 | 6,35 |    | 1,2 | CNMM 190612 WR             |          |           |                                         |     |  | ■                                   |       | ■     |       | ■     |       |
|                                                                                                  |                                                                                     | 17,70                  | 19,05 | 6,35 |    | 1,6 | CNMM 190616 WR             |          |           |                                         |     |  | ■                                   |       | ■     |       | ■     |       |
|                                                                                                  |                                                                                     | 18,50                  | 19,05 | 6,35 |    | 2,4 | CNMM 190624 WR             |          |           |                                         |     |  | ■                                   |       | ■     |       | ■     |       |

## Drehhalter für die Außenbearbeitung 93° External Turning tools 93°



### Ausführung:

- P-Klemmsystem
- negative Wendepatte 55°
- Einsatz für Schrupp- und  
Schlichtbearbeitung

### Execution:

- P-Clamp system
- positive insert 55°
- for roughing and finishing



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |    | Wendepatte<br>Insert |
|-----------------------------|------------------------------|----|-----|----|----|----------------------|
|                             | h=h1                         | b  | L1  | L2 | f  |                      |
| PDW R/L 1616 H11            | 16                           | 16 | 100 | 28 | 20 | DN.. 1104..          |
| PDW R/L 2020 K11            | 20                           | 20 | 125 | 28 | 25 |                      |
| PDW R/L 2525 M11            | 25                           | 25 | 150 | 28 | 32 |                      |
| PDW R/L 3225 P11            | 32                           | 25 | 170 | 28 | 32 |                      |
| PDW R/L 2020 K15            | 20                           | 20 | 125 | 34 | 25 | DN.. 1506..          |
| PDW R/L 2525 M15            | 25                           | 25 | 150 | 34 | 32 |                      |
| PDW R/L 3225 P15            | 32                           | 25 | 170 | 34 | 32 |                      |
| PDW R/L 3232 P15            | 32                           | 32 | 170 | 34 | 40 |                      |
| PDW R/L 4025 S15            | 40                           | 25 | 200 | 34 | 32 |                      |

Bestellbeispiel / Order example: PDW R 1616 H11

### Ersatzteile:

### Spare parts:

| Bestell-Nr.:<br>Order Code:           |      |      |      |      |      |      |             |      |
|---------------------------------------|------|------|------|------|------|------|-------------|------|
| PDW R/L 1616 H11                      | 8009 | 1606 | 5025 | 3711 | 4109 | 0009 |             |      |
| PDW R/L 2020 K11                      | 8009 | 1606 | 5025 | 3711 | 4109 | 0009 |             |      |
| PDW R/L 2525 M11                      | 8009 | 1606 | 5025 | 3711 | 4109 | 0009 |             |      |
| PDW R/L 3225 P11                      | 8009 | 1606 | 5025 | 3711 | 4109 | 0009 |             |      |
| PDW R/L 2020 K15                      | 8415 | 1638 | 5003 | 3715 | 4112 | 0012 | 3725        | 4135 |
| PDW R/L 2525 M15                      | 8415 | 1638 | 5003 | 3715 | 4112 | 0012 | 3725        | 4135 |
| PDW R/L 3225 P15                      | 8415 | 1638 | 5003 | 3715 | 4112 | 0012 | 3725        | 4135 |
| PDW R/L 3232 P15                      | 8415 | 1638 | 5003 | 3715 | 4112 | 0012 | 3725        | 4135 |
| PDW R/L 4025 S15                      | 8415 | 1638 | 5003 | 3715 | 4112 | 0012 | 3725        | 4135 |
| Bestellbeispiel / Order example: 8009 |      |      |      |      |      |      | DN.. 1504.. |      |

F

# Wendeplatten für Drehhalter für die Außenbearbeitung 93° Insert for external Turning tools 93°

|                                                                                                   | Form Figure                                                                         | Abmessungen Dimensions |       |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     |  | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|---------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|-------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|--|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                   |                                                                                     | l                      | d     | s    | d1 | r   |                            |          |           | CT28                                    | K10 |  | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>DNMG .. VA   |    | 11,20                  | 9,52  | 4,76 |    | 0,4 | DNMG 110404 VA             |          |           |                                         |     |  |                                     |       |       | ■     |       |       |
|                                                                                                   |                                                                                     | 10,80                  | 9,52  | 4,76 |    | 0,8 | DNMG 110408 VA             |          |           |                                         |     |  |                                     |       |       | ■     |       |       |
|                                                                                                   |                                                                                     | 15,10                  | 12,70 | 4,76 |    | 0,4 | DNMG 150404 VA             |          |           |                                         |     |  |                                     |       |       | ■     |       |       |
|                                                                                                   |                                                                                     | 14,70                  | 12,70 | 4,76 |    | 0,8 | DNMG 150408 VA             |          |           |                                         |     |  |                                     |       |       | ■     |       |       |
|                                                                                                   |                                                                                     | 15,10                  | 12,70 | 6,35 |    | 0,4 | DNMG 150604 VA             |          |           |                                         |     |  |                                     |       |       | ■     |       |       |
|                                                                                                   |                                                                                     | 14,70                  | 12,70 | 6,35 |    | 0,8 | DNMG 150608 VA             |          |           |                                         |     |  |                                     |       |       | ■     |       |       |
|                                                                                                   |                                                                                     |                        |       |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
| <br>DNMG .. WF   |    | 11,20                  | 9,52  | 4,76 |    | 0,4 | DNMG 110404 WF             |          |           |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                   |                                                                                     | 15,10                  | 12,70 | 6,35 |    | 0,4 | DNMG 150604 WF             |          |           |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                   |                                                                                     | 14,70                  | 12,70 | 6,35 |    | 0,8 | DNMG 150608 WF             |          |           |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                   |                                                                                     |                        |       |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
| <br>DNMG .. WM |  | 11,20                  | 9,52  | 4,76 |    | 0,4 | DNMG 110404 WM             |          |           |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                   |                                                                                     | 10,80                  | 9,52  | 4,76 |    | 0,8 | DNMG 110408 WM             |          |           |                                         |     |  | ■                                   |       | ■     |       | ■     |       |
|                                                                                                   |                                                                                     | 15,10                  | 12,70 | 4,76 |    | 0,4 | DNMG 150404 WM             |          |           |                                         |     |  | ■                                   |       |       |       |       |       |
|                                                                                                   |                                                                                     | 14,70                  | 12,70 | 4,76 |    | 0,8 | DNMG 150408 WM             |          |           |                                         |     |  | ■                                   |       |       |       |       |       |
|                                                                                                   |                                                                                     | 15,10                  | 12,70 | 6,35 |    | 0,4 | DNMG 150604 WM             |          |           |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                   |                                                                                     | 14,70                  | 12,70 | 6,35 |    | 0,8 | DNMG 150608 WM             |          |           |                                         |     |  | ■                                   |       | ■     |       | ■     |       |
|                                                                                                   |                                                                                     | 14,40                  | 12,70 | 6,35 |    | 1,2 | DNMG 150612 WM             |          |           |                                         |     |  | ■                                   |       |       |       | ■     |       |
| <br>DNMM .. WR |  | 14,70                  | 12,70 | 6,35 |    | 0,8 | DNMM 150608 WR             |          |           |                                         |     |  | ■                                   |       | ■     |       | ■     |       |
|                                                                                                   |                                                                                     | 14,70                  | 12,70 | 6,35 |    | 1,2 | DNMM 150612 WR             |          |           |                                         |     |  | ■                                   |       | ■     |       | ■     |       |
|                                                                                                   |                                                                                     | 14,70                  | 12,70 | 6,35 |    | 1,6 | DNMM 150616 WR             |          |           |                                         |     |  | ■                                   |       | ■     |       | ■     |       |
|                                                                                                   |                                                                                     |                        |       |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |

F

## Drehhalter für die Außenbearbeitung 93° External Turning tools 93°

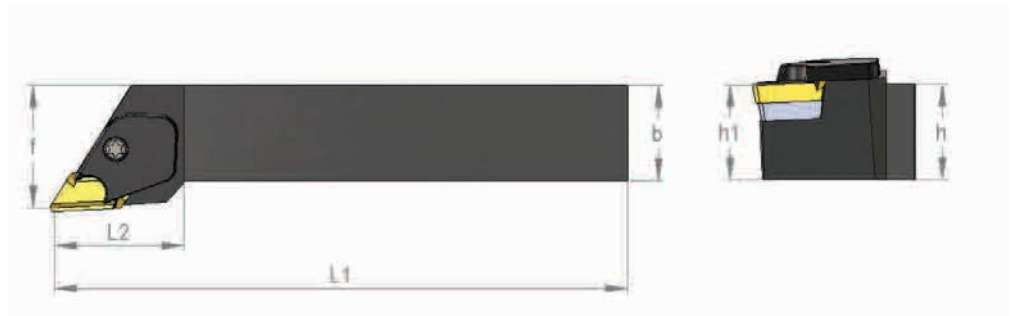


### Ausführung:

- C-Klemmsystem
- negative Wendeplatte
- Einsatz für Schrubb- und  
Schlichtbearbeitung

### Execution:

- C-Clampsystem
- positive insert
- for roughing and finishing



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |    | Wendeplatte<br>Insert<br> |
|-----------------------------|------------------------------|----|-----|----|----|--------------------------------------------------------------------------------------------------------------|
|                             | h=h1                         | b  | L1  | L2 | f  |                                                                                                              |
| CKN R/L 2020 K16            | 20                           | 20 | 125 | 34 | 30 | KN.. 1604..                                                                                                  |
| CKN R/L2525 M16             | 25                           | 25 | 150 | 34 | 32 |                                                                                                              |
| CKN R/L 3225 P16            | 32                           | 25 | 175 | 34 | 32 |                                                                                                              |

Bestellbeispiel / Orderexample: CKN R 2020 K16

### Ersatzteile:

### Spare parts:

| Bestell-Nr.:<br>Order Code: |  |  |  |  |  |  |  |
|-----------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| CKN R 2020 K16              | 2316                                                                                | 1614                                                                                | 5004                                                                                | 4295                                                                                | 4203                                                                                  | 3226                                                                                  | 4012                                                                                  |
| CKN R 2525 M16              | 2316                                                                                | 1614                                                                                | 5004                                                                                | 4295                                                                                | 4204                                                                                  | 3226                                                                                  | 4012                                                                                  |
| CKN R 3225 P16              | 2316                                                                                | 1614                                                                                | 5004                                                                                | 4295                                                                                | 4204                                                                                  | 3226                                                                                  | 4012                                                                                  |
| CKN L 2020 K16              | 2326                                                                                | 1614                                                                                | 5004                                                                                | 4295                                                                                | 4203                                                                                  | 3236                                                                                  | 4012                                                                                  |
| CKN L 2525 M16              | 2326                                                                                | 1614                                                                                | 5004                                                                                | 4295                                                                                | 4204                                                                                  | 3236                                                                                  | 4012                                                                                  |
| CKN L 3225 P16              | 2326                                                                                | 1614                                                                                | 5004                                                                                | 4295                                                                                | 4204                                                                                  | 3236                                                                                  | 4012                                                                                  |

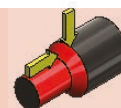
Bestellbeispiel / Orderexample: 2316

# Wendeplatten für Drehhalter für die Außenbearbeitung 93° Insert for external Turning tools 93°

|                                                                                                | Form Figure                                                                       | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     |  | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|--|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                |                                                                                   | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 |  | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>KNUX .. 11 |  |                        |      |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
|                                                                                                |                                                                                   | 19,20                  | 9,52 | 4,76 |    | 0,5 | KNUX 160405 EL - 11        |          |           |                                         |     |  | ■                                   |       |       |       |       |       |
|                                                                                                |                                                                                   | 18,80                  | 9,52 | 4,76 |    | 1,0 | KNUX 160410 EL - 11        |          |           |                                         |     |  | ■                                   |       |       |       |       |       |
|                                                                                                |                                                                                   | 19,20                  | 9,52 | 4,76 |    | 0,5 | KNUX 160405 ER - 11        |          |           |                                         |     |  | ■                                   |       |       |       |       |       |
|                                                                                                |                                                                                   | 18,80                  | 9,52 | 4,76 |    | 1,0 | KNUX 160410 ER - 11        |          |           |                                         |     |  | ■                                   |       |       |       |       |       |
|                                                                                                |                                                                                   |                        |      |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |



## Drehhalter für die Außenbearbeitung 45° External Turning tools 45°

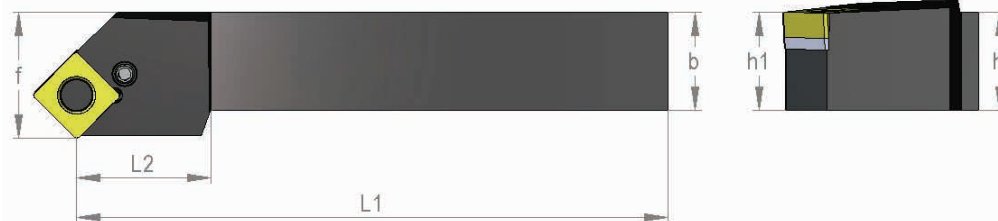


### Ausführung:

- P-Klemmsystem
- negative Wendeplatte 90°
- Einsatz für Schrupp- und  
Schlichtbearbeitung

### Execution:

- P-Clampsystem
- positive insert 90°
- for roughing and finishing



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |    | Wendeplatte<br>Insert  |
|-----------------------------|------------------------------|----|-----|----|----|-----------------------------------------------------------------------------------------------------------|
|                             | h=h1                         | b  | L1  | L2 | f  |                                                                                                           |
| PSSNR/L 1616 H09            | 16                           | 16 | 100 | 22 | 20 | SN.. 0903..                                                                                               |
| PSSNR/L 2020 K09            | 20                           | 20 | 125 | 22 | 25 |                                                                                                           |
| PSSNR/L 2020 K12            | 20                           | 20 | 125 | 28 | 25 |                                                                                                           |
| PSSNR/L 2525 M12            | 25                           | 25 | 150 | 28 | 32 | SN.. 1204..                                                                                               |
| PSSNR/L 3225 P12            | 32                           | 25 | 170 | 28 | 32 |                                                                                                           |
| PSSNR/L 2525 M15            | 25                           | 25 | 150 | 34 | 32 | SN.. 1506..                                                                                               |
| PSSNR/L 3232 P15            | 32                           | 32 | 170 | 34 | 40 |                                                                                                           |
| PSSNR/L 3232 M19            | 32                           | 32 | 170 | 42 | 40 | SN.. 1906..                                                                                               |
| PSSNR/L 4040 P19            | 40                           | 40 | 250 | 45 | 50 |                                                                                                           |

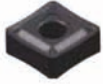
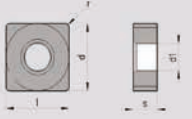
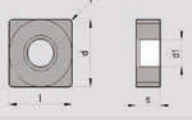
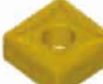
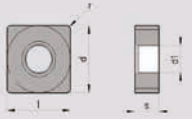
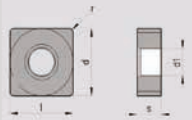
Bestellbeispiel / Order example: PSSNR 1616 H09

## Ersatzteile: Spare parts:

| Bestell-Nr.:<br>Order Code: |  |  |  |  |  |  |
|-----------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| PSSNR/L 1616 H09            | 8009                                                                                | 1606                                                                                | 5025                                                                                | 3509                                                                                 | 4110                                                                                  | 0009                                                                                  |
| PSSNR/L 2020 K09            | 8009                                                                                | 1606                                                                                | 5025                                                                                | 3509                                                                                 | 4110                                                                                  | 0009                                                                                  |
| PSSNR/L 2020 K12            | 8012                                                                                | 1608                                                                                | 5003                                                                                | 3512                                                                                 | 4112                                                                                  | 0012                                                                                  |
| PSSNR/L 2525 M12            | 8012                                                                                | 1608                                                                                | 5003                                                                                | 3512                                                                                 | 4112                                                                                  | 0012                                                                                  |
| PSSNR/L 3225 P12            | 8012                                                                                | 1608                                                                                | 5003                                                                                | 3512                                                                                 | 4112                                                                                  | 0012                                                                                  |
| PSSNR/L 2525 M15            | 8016                                                                                | 1618                                                                                | 5003                                                                                | 3515                                                                                 | 4115                                                                                  | 0015                                                                                  |
| PSSNR/L 3232 P15            | 8016                                                                                | 1618                                                                                | 5003                                                                                | 3515                                                                                 | 4115                                                                                  | 0015                                                                                  |
| PSSNR/L 3232 M19            | 8019                                                                                | 1610                                                                                | 5004                                                                                | 3519                                                                                 | 4119                                                                                  | 0019                                                                                  |
| PSSNR/L 4040 P19            | 8019                                                                                | 1610                                                                                | 5004                                                                                | 3519                                                                                 | 4119                                                                                  | 0019                                                                                  |

Bestellbeispiel / Order example: 8009

# Wendeplatten für Drehhalter für die Außenbearbeitung 45° Insert for external Turning tools 45°

|                                                                                                  | Form Figure                                                                         | Abmessungen Dimensions |       |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     |  | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|--------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|-------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|--|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                  |                                                                                     | l                      | d     | s    | d1 | r   |                            |          |           | CT28                                    | K10 |  | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>SNMG .. VA   |    | 9,52                   | 9,52  | 3,18 |    | 0,4 | SNMG 090304 VA             |          |           |                                         |     |  |                                     |       |       | ■     |       |       |
|                                                                                                  |                                                                                     | 11,90                  | 12,70 | 4,76 |    | 0,8 | SNMG 120408 VA             |          |           |                                         |     |  |                                     |       |       | ■     |       |       |
|                                                                                                  |                                                                                     |                        |       |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
| <br>SNMG .. WM  |    | 9,52                   | 9,52  | 3,18 |    | 0,4 | SNMG 090304 WN             |          |           |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                  |                                                                                     | 12,70                  | 12,70 | 4,76 |    | 0,8 | SNMG 120408 WM             |          |           |                                         |     |  | ■                                   |       | ■     |       | ■     |       |
|                                                                                                  |                                                                                     | 12,70                  | 12,70 | 4,76 |    | 1,2 | SNMG 120412 WM             |          |           |                                         |     |  | ■                                   |       | ■     |       | ■     |       |
| <br>SNMG .. WR   |    | 11,90                  | 12,70 | 4,76 |    | 0,8 | SNMG 120408 WR             |          |           |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                  |                                                                                     | 11,50                  | 12,70 | 4,76 |    | 1,2 | SNMG 120412 WR             |          |           |                                         |     |  | ■                                   |       |       |       |       |       |
|                                                                                                  |                                                                                     | 14,60                  | 15,87 | 6,35 |    | 1,2 | SNMG 150612 WR             |          |           |                                         |     |  | ■                                   |       | ■     |       |       |       |
|                                                                                                  |                                                                                     | 17,80                  | 19,05 | 6,35 |    | 1,2 | SNMG 190612 WR             |          |           |                                         |     |  | ■                                   |       | ■     |       |       |       |
|                                                                                                  |                                                                                     |                        |       |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
| <br>SNMM .. WR |  | 11,90                  | 12,70 | 4,76 |    | 0,8 | SNMM 120408 WR             |          |           |                                         |     |  | ■                                   |       | ■     |       | ■     |       |
|                                                                                                  |                                                                                     | 11,50                  | 12,70 | 4,76 |    | 1,2 | SNMM 120412 WR             |          |           |                                         |     |  | ■                                   |       | ■     |       | ■     |       |
|                                                                                                  |                                                                                     | 14,60                  | 15,87 | 6,35 |    | 1,2 | SNMM 150612 WR             |          |           |                                         |     |  | ■                                   |       | ■     |       | ■     |       |
|                                                                                                  |                                                                                     | 14,40                  | 15,87 | 6,35 |    | 1,6 | SNMM 150616 WR             |          |           |                                         |     |  | ■                                   |       | ■     |       | ■     |       |
|                                                                                                  |                                                                                     | 17,80                  | 19,05 | 6,35 |    | 1,2 | SNMM 190612 WR             |          |           |                                         |     |  | ■                                   |       | ■     |       | ■     |       |
|                                                                                                  |                                                                                     | 17,40                  | 19,05 | 6,35 |    | 1,6 | SNMM 190616 WR             |          |           |                                         |     |  | ■                                   |       | ■     |       | ■     |       |
|                                                                                                  |                                                                                     | 16,60                  | 19,05 | 6,35 |    | 2,4 | SNMM 190624 WR             |          |           |                                         |     |  | ■                                   |       | ■     |       | ■     |       |
|                                                                                                  |                                                                                     | 23,00                  | 25,04 | 7,94 |    | 2,4 | SNMM 250724 WR             |          |           |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                  |                                                                                     |                        |       |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |

F

## Drehhalter für die Außenbearbeitung 93° External Turning tools 93°



### Ausführung:

- M-Klemmsystem
- negative Wendeplatte 35°
- Einsatz für Schrupp- und  
Schlichtbearbeitung

### Execution:

- M-Clampsystem
- positive insert 35°
- for roughing and finishing



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |    | Wendeplatte<br>Insert<br> |
|-----------------------------|------------------------------|----|-----|----|----|--------------------------------------------------------------------------------------------------------------|
|                             | h=h1                         | b  | L1  | L2 | f  |                                                                                                              |
| MVW R/L 2020 K16            | 20                           | 20 | 125 | 43 | 25 | VN.. 1604..                                                                                                  |
| MVW R/L 2525 M16            | 25                           | 25 | 150 | 43 | 32 |                                                                                                              |
| MVW R/L 3225 P16            | 32                           | 25 | 170 | 43 | 32 |                                                                                                              |

Bestellbeispiel / Orderexample: MVW R 2020 K16

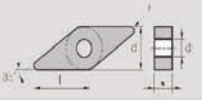
### Ersatzteile:

### Spare parts:

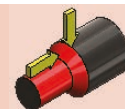
| Bestell-Nr.:<br>Order Code: |  |  |  |  |  |  |
|-----------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| MVW R/L 2020 K16            | 2616                                                                                | 1086                                                                                | 5003                                                                                | IVSN-322                                                                             | 1665                                                                                  | 5002                                                                                  |
| MVW R/L 2525 M16            | 2616                                                                                | 1086                                                                                | 5003                                                                                | IVSN-322                                                                             | 1665                                                                                  | 5002                                                                                  |
| MVW R/L 3225 P16            | 2616                                                                                | 1086                                                                                | 5003                                                                                | IVSN-322                                                                             | 1665                                                                                  | 5002                                                                                  |

Bestellbeispiel / Orderexample: 2616

# Wendeplatten für Drehhalter für die Außenbearbeitung 93° Insert for external Turning tools 93°

|                                                                                                 | Form Figure                                                                       | Abmessungen Dimensions |      |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|-------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------|------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                 |                                                                                   | l                      | d    | s    | d1 | r   |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>VNMG .. VA |  | 14,60                  | 9,52 | 4,76 |    | 0,8 | VNMG 160408 VA             |          |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                                 |                                                                                   |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                                 |                                                                                   |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |
| <br>VNMG .. WF |  | 15,60                  | 9,52 | 4,76 |    | 0,4 | VNMG 160404 WF             |          |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                                 |                                                                                   |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                                 |                                                                                   |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |
| <br>VNMG .. WM  |  | 15,60                  | 9,52 | 4,76 |    | 0,4 | VNMG 160404 WM             |          |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                                 |                                                                                   | 14,60                  | 9,52 | 4,76 |    | 0,8 | VNMG 160408 WM             |          |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                                 |                                                                                   |                        |      |      |    |     |                            |          |           |                                         |     |                                     |       |       |       |       |       |

## Drehhalter für die Außenbearbeitung 95° External Turning tools 95°

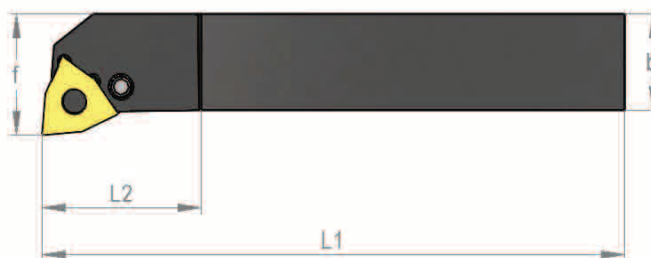


### Ausführung:

- P-Klemmsystem
- negative Wendeplatte 80°
- Einsatz für Schrupp- und Schlichtbearbeitung

### Execution:

- P-Clamp system
- positive insert 80°
- for roughing and finishing



| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |     |    |    | Wendeplatte<br>Insert |
|-----------------------------|------------------------------|----|-----|----|----|-----------------------|
|                             | h=h1                         | b  | L1  | L2 | f  |                       |
| PWLNR/L 1616 H06            | 16                           | 16 | 100 | 15 | 20 | WN.. 0604..           |
| PWLNR/L 2020 K06            | 20                           | 20 | 125 | 25 | 25 |                       |
| PWLNR/L 2525 M06            | 25                           | 25 | 150 | 25 | 32 |                       |
| PWLNR/L 2020 K08            | 20                           | 20 | 125 | 34 | 25 | WN.. 0804..           |
| PWLNR/L 2525 M08            | 25                           | 25 | 150 | 34 | 32 |                       |
| PWLNR/L 3225 P08            | 32                           | 25 | 170 | 34 | 32 |                       |
| PWLNR/L 3232 P08            | 32                           | 32 | 170 | 34 | 40 |                       |

Bestellbeispiel / Order example: PWLNR 1616 H06

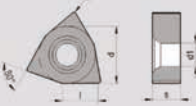
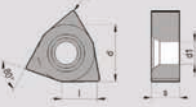
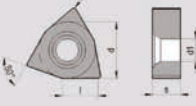
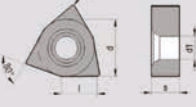
### Ersatzteile:

### Spare parts:

| Bestell-Nr.:<br>Order Code: |  |  |  |  |  |  |
|-----------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| PWLNR/L 1616 H06            | 8009                                                                                | 1606                                                                                | 5025                                                                                | 3007                                                                                 | 4109                                                                                  | 0009                                                                                  |
| PWLNR/L 2020 K06            | 8009                                                                                | 1606                                                                                | 5025                                                                                | 3007                                                                                 | 4109                                                                                  | 0009                                                                                  |
| PWLNR/L 2525 M06            | 8009                                                                                | 1606                                                                                | 5025                                                                                | 3007                                                                                 | 4109                                                                                  | 0009                                                                                  |
| PWLNR/L 2020 K08            | 8012                                                                                | 1608                                                                                | 5003                                                                                | 3008                                                                                 | 4112                                                                                  | 0012                                                                                  |
| PWLNR/L 2525 M08            | 8012                                                                                | 1608                                                                                | 5003                                                                                | 3008                                                                                 | 4112                                                                                  | 0012                                                                                  |
| PWLNR/L 3225 P08            | 8012                                                                                | 1608                                                                                | 5003                                                                                | 3008                                                                                 | 4112                                                                                  | 0012                                                                                  |
| PWLNR/L 3232 P08            | 8012                                                                                | 1608                                                                                | 5003                                                                                | 3008                                                                                 | 4112                                                                                  | 0012                                                                                  |

Bestellbeispiel / Order example: 8009

# Wendeplatten für Drehhalter für die Außenbearbeitung 95° Insert for external Turning tools 95°

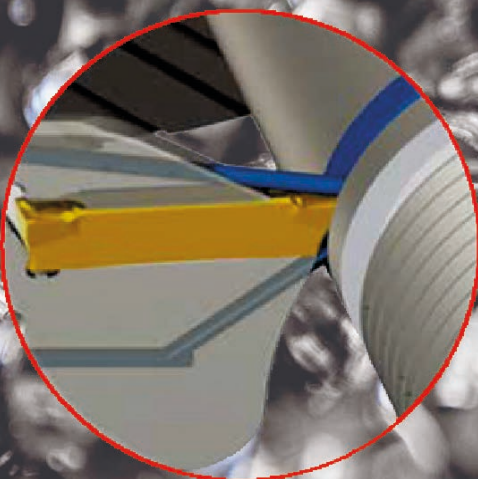
|                                                                                                   | Form Figure                                                                         | Abmessungen Dimensions |       |      |    |     | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     |  | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|---------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|-------|------|----|-----|----------------------------|----------|-----------|-----------------------------------------|-----|--|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                   |                                                                                     | l                      | d     | s    | d1 | r   |                            |          |           | CT28                                    | K10 |  | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
| <br>WNMG .. VA   |    | 6,2                    | 9,52  | 4,76 |    | 0,4 | WNMG 060404 VA             |          |           |                                         |     |  |                                     |       |       | ■     |       |       |
|                                                                                                   |                                                                                     | 6,2                    | 9,52  | 4,76 |    | 0,8 | WNMG 060408 VA             |          |           |                                         |     |  |                                     |       |       | ■     |       |       |
|                                                                                                   |                                                                                     | 8,40                   | 12,70 | 4,76 |    | 0,4 | WNMG 080404 VA             |          |           |                                         |     |  |                                     |       |       | ■     |       |       |
|                                                                                                   |                                                                                     | 8,30                   | 12,70 | 4,76 |    | 0,8 | WNMG 080408 VA             |          |           |                                         |     |  |                                     |       |       | ■     |       |       |
|                                                                                                   |                                                                                     | 8,20                   | 12,70 | 4,76 |    | 1,2 | WNMG 080412 VA             |          |           |                                         |     |  |                                     |       |       | ■     |       |       |
|                                                                                                   |                                                                                     |                        |       |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
| <br>WNMG .. WF   |    | 6,20                   | 9,52  | 4,76 |    | 0,4 | WNMG 060404 WF             |          |           |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                   |                                                                                     | 8,40                   | 12,70 | 4,76 |    | 0,4 | WNMG 080404 WF             |          |           |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                   |                                                                                     |                        |       |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
| <br>WNMG .. WM   |    | 6,20                   | 9,52  | 4,76 |    | 0,4 | WNMG 060404 WM             |          |           |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                   |                                                                                     | 6,10                   | 9,52  | 4,76 |    | 0,8 | WNMG 060408 WM             |          |           |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                   |                                                                                     | 8,40                   | 12,70 | 4,76 |    | 0,4 | WNMG 080404 WM             |          |           |                                         |     |  | ■                                   |       |       |       | ■     |       |
|                                                                                                   |                                                                                     | 8,30                   | 12,70 | 4,76 |    | 0,8 | WNMG 080408 WM             |          |           |                                         |     |  | ■                                   |       | ■     |       | ■     |       |
|                                                                                                   |                                                                                     | 8,30                   | 12,70 | 4,76 |    | 1,2 | WNMG 080412 WM             |          |           |                                         |     |  | ■                                   |       | ■     |       | ■     |       |
|                                                                                                   |                                                                                     |                        |       |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
| <br>WNMG .. WR |  | 8,30                   | 12,70 | 4,76 |    | 0,8 | WNMG 080408 WR             |          |           |                                         |     |  | ■                                   |       |       |       |       |       |
|                                                                                                   |                                                                                     | 8,20                   | 12,70 | 4,76 |    | 1,2 | WNMG 080412 WR             |          |           |                                         |     |  | ■                                   |       |       |       |       |       |
|                                                                                                   |                                                                                     |                        |       |      |    |     |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |



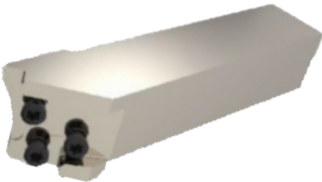
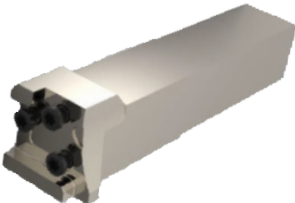
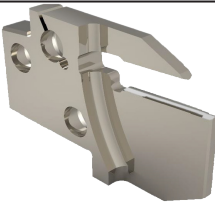


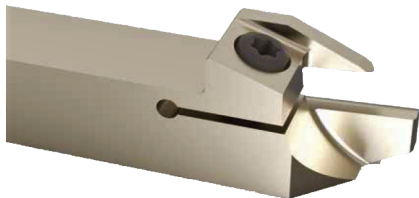
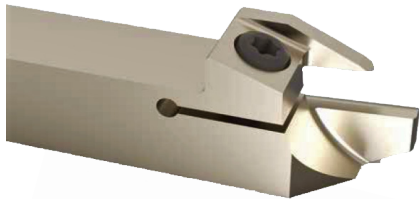
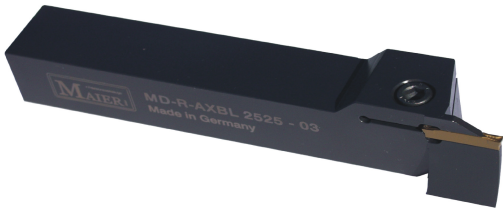
# TRONCATURA 01/2024

Catalogue of engravings

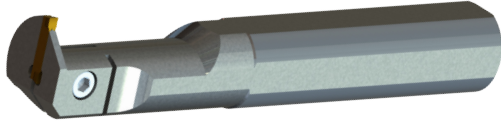
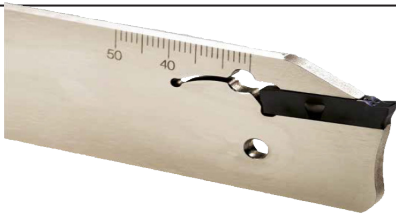
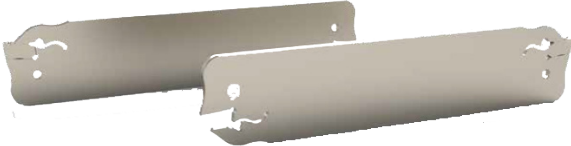


## Catalogue of engravings

| Bezeichnung<br>Designation             | Darstellung<br>Figure                                                                |  |
|----------------------------------------|--------------------------------------------------------------------------------------|--|
| Monoblocks                             |     |  |
| Monoblocks                             |     |  |
| Monoblocks                             |    |  |
| Module<br>Adapters                     |   |  |
| Monoblocks                             |  |  |
| Monoblocks<br>with internal<br>cooling |   |  |
|                                        |                                                                                      |  |

| Bezeichnung<br>Designation                           | Darstellung<br>Figure                                                                |  |
|------------------------------------------------------|--------------------------------------------------------------------------------------|--|
| Monoblocks<br>reinforced                             |     |  |
| Monoblocks<br>reinforced<br>with internal<br>cooling |     |  |
| Monoblocks<br>for<br>plunge-turning<br>(external)    |    |  |
| Monoblocks<br>for<br>plunge-turning<br>(axial)       |   |  |
|                                                      |  |  |
|                                                      |                                                                                      |  |

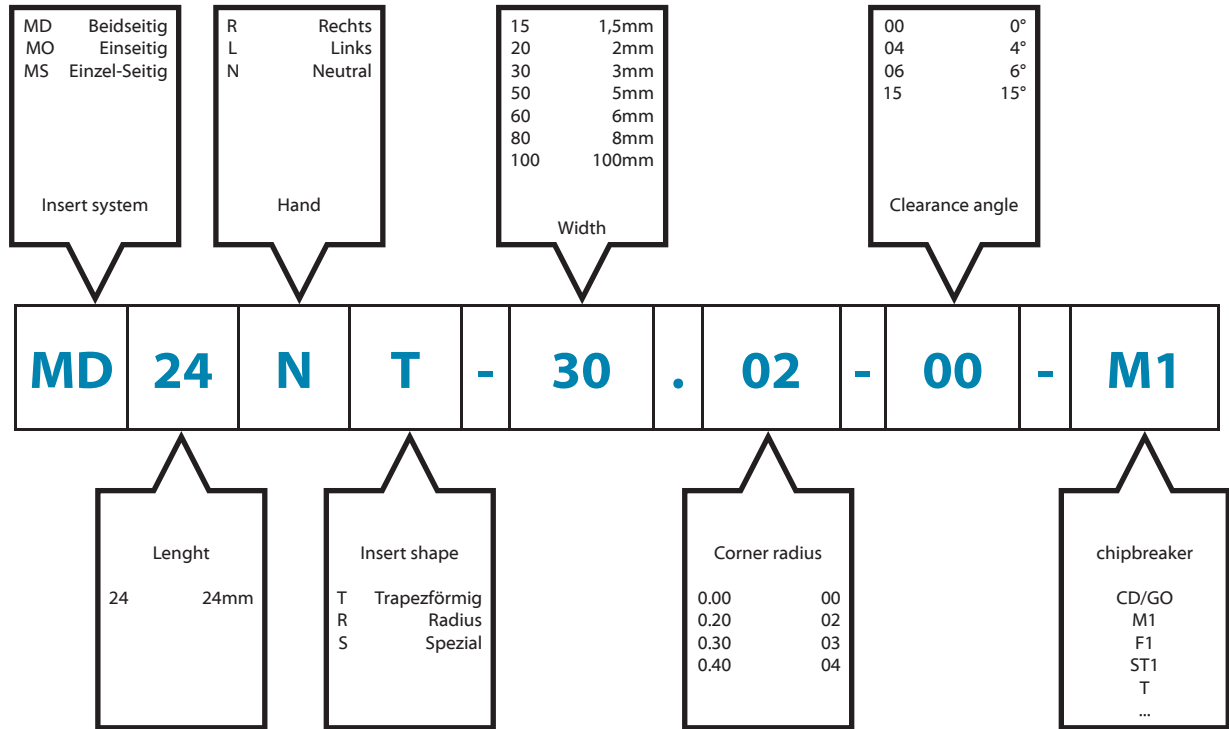
## Catalogue of engravings

| Bezeichnung<br>Designation        | Darstellung<br>Figure                                                               |  |
|-----------------------------------|-------------------------------------------------------------------------------------|--|
| Monoblocks<br>internal<br>turning |   |  |
| Blades                            |    |  |
| Blades                            |  |  |
| Clamping<br>blocks                |  |  |
|                                   |                                                                                     |  |
|                                   |                                                                                     |  |

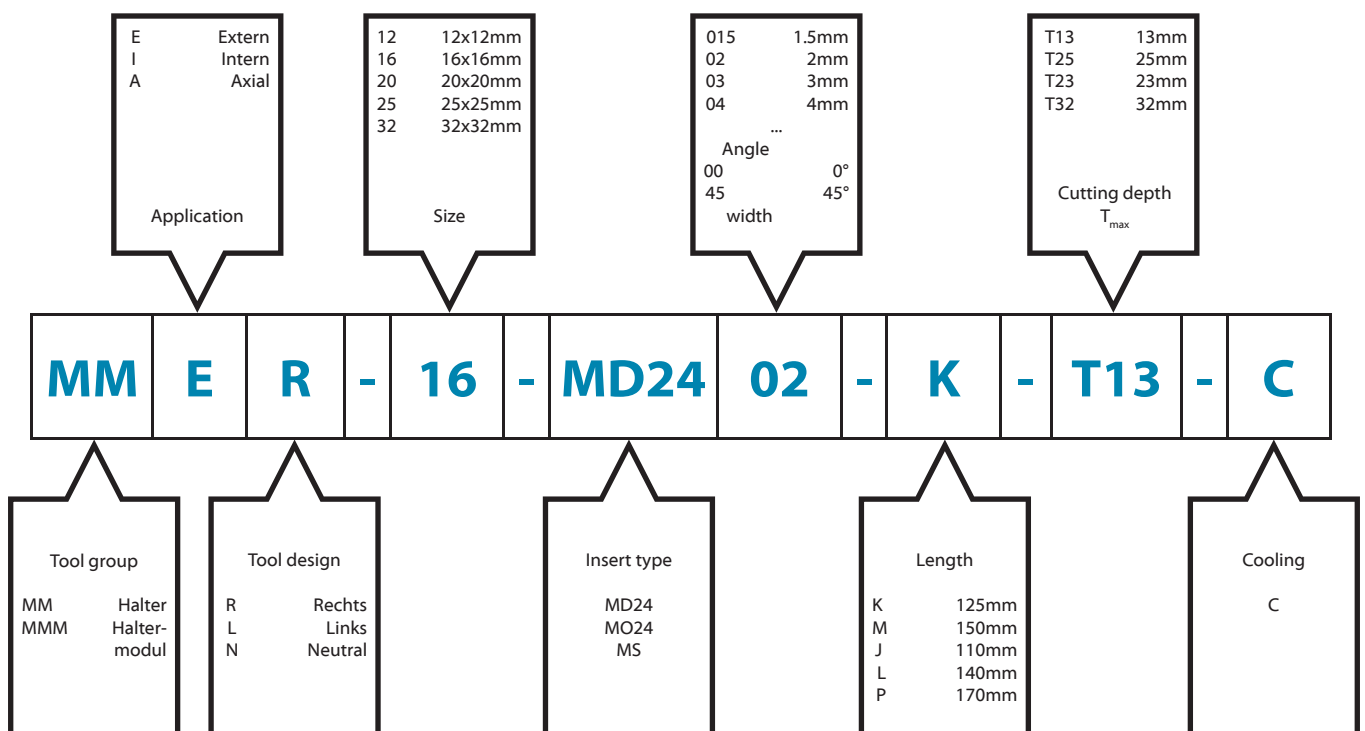
## Designation system

# Sistema di designazione

### Designation system for inserts

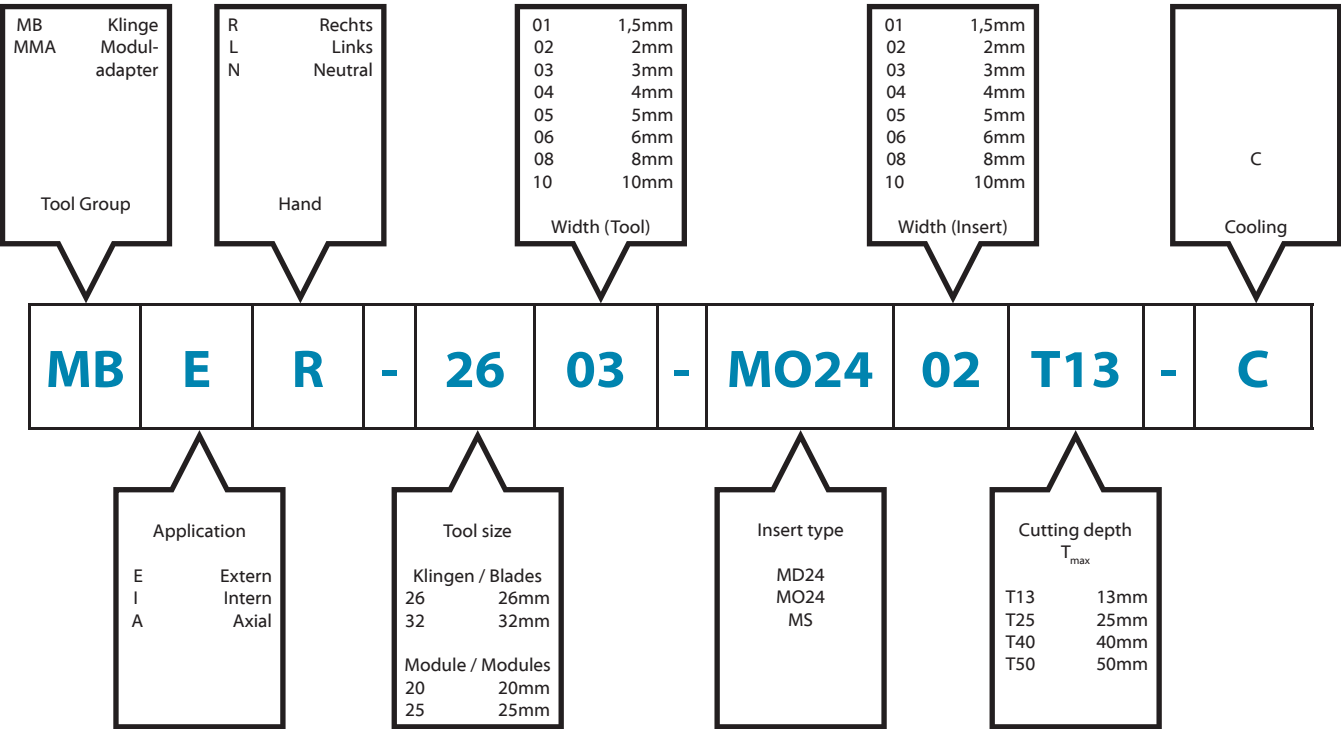


### Designation system for monoblocks

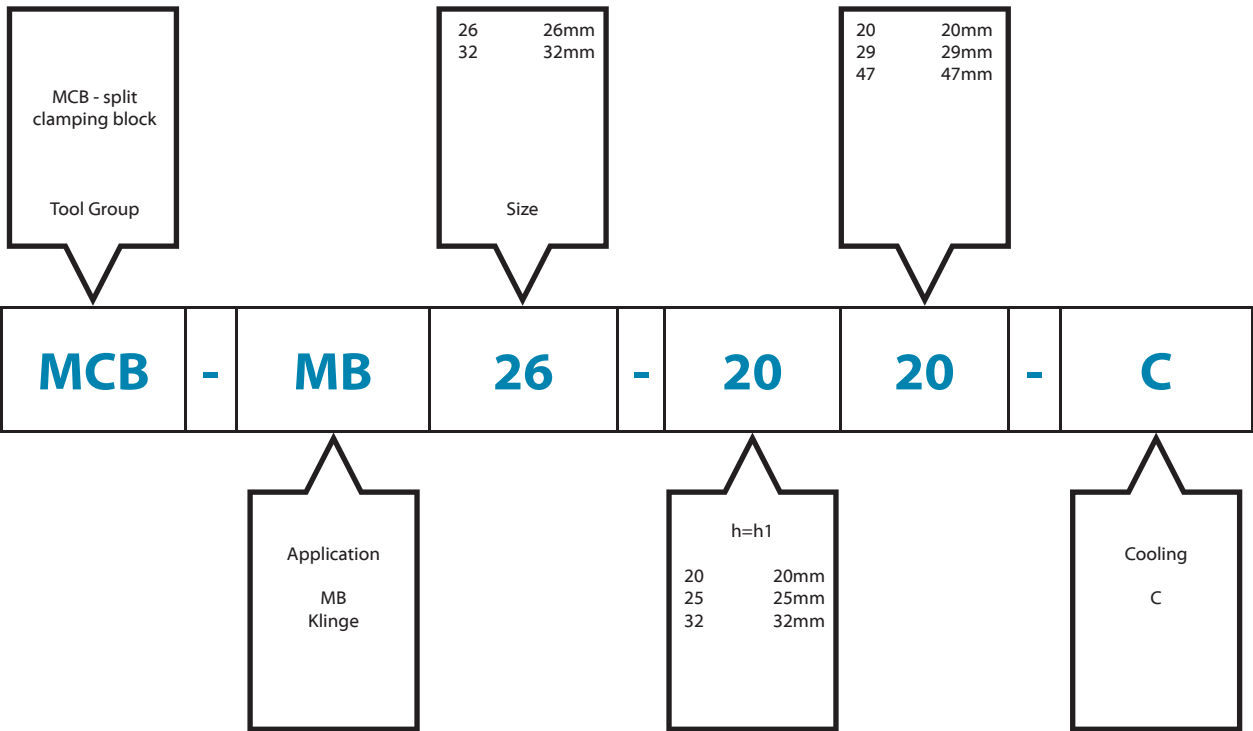


# Designation System

## Designation system for blades and modules



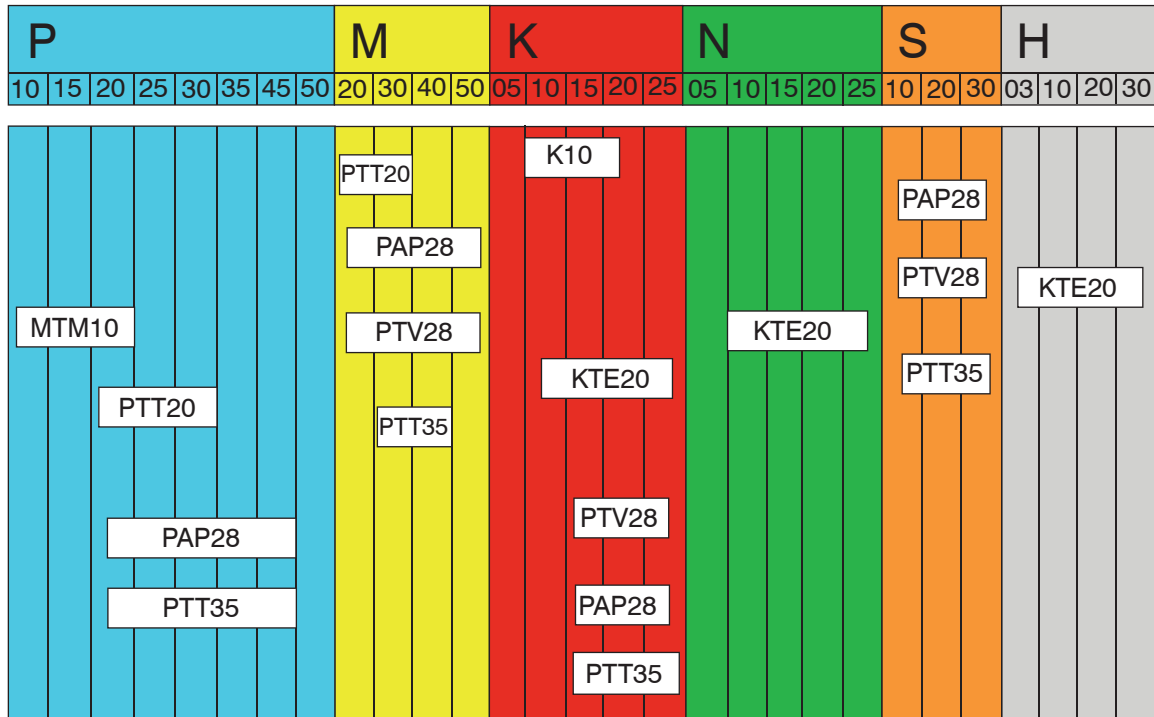
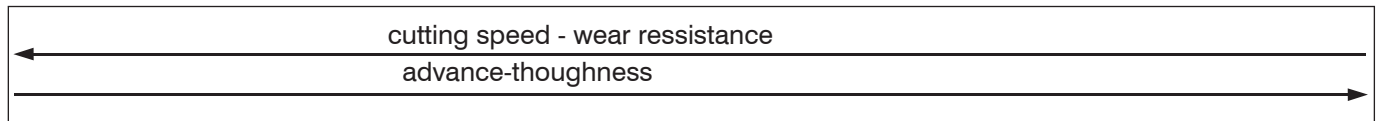
## Designation system for clamping blocks





## Coatings overview

# Panoramica



**P** MTM10, PTV28, PTT20, PAP28, PTT35

**M** PTV28, PTT20, PAP28, PTT35

**K** GG: KTE20, MTM10  
GGG: PTV28, PAP28, PTT35

**N** KTE20

**S** PTV28, PAP28, PTT35

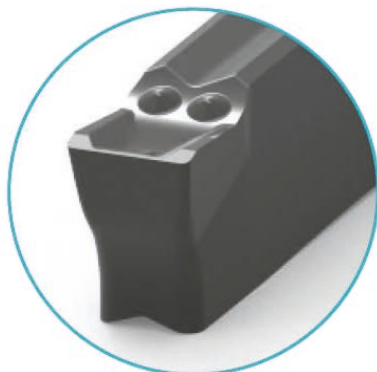
**H** KTE20

|       |                                                    |
|-------|----------------------------------------------------|
| KTE20 | TiAlN-beschichtet / TiAlN-coated                   |
| MTM10 | Aluminiumoxydbeschichtet / aluminiumoxydcoated PVD |
| PTV28 | TiAlN-beschichtet / TiAlN-coated                   |
| PAP28 | TiAlN/TiSiN-beschichtet / TiAlN/TiSiN-coated       |
| PTT35 | Aluminiumoxydbeschichtet / aluminiumoxydcoated PVD |

# Form MD

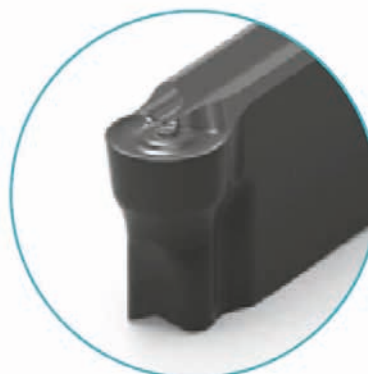


## M1 - Medium cutting chipbreaker



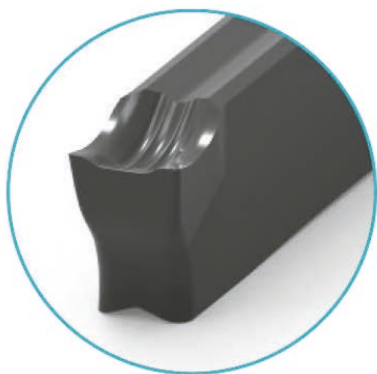
- Insert with narrow negative chamfer
- Suitable for all steel materials with high strength
- Suitable for all applications
- For steel and grey cast iron
- 1,5mm to 8mm

## M - Radius grooves



- Insert for radius grooves
- For copy turning
- Suitable for all steel and cast iron materials
- 2mm to 6mm

## F1 - Very soft cutting chipbreaker



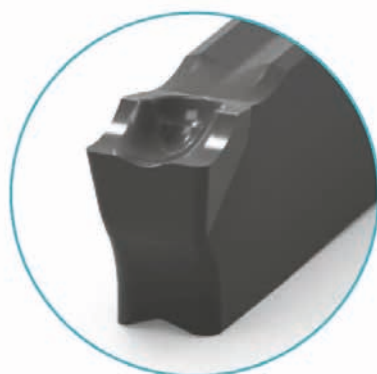
- Excellent cutting chipbreaker with low cutting forces
- For low or medium strength materials
- Particularly suitable for parting off tubes and thin-walled work pieces
- High cutting edge stability
- Excellent chip control also with low feed
- Low built up edge
- 2mm to 6mm

## LM - First choice in case of aluminium and non ferrous metals



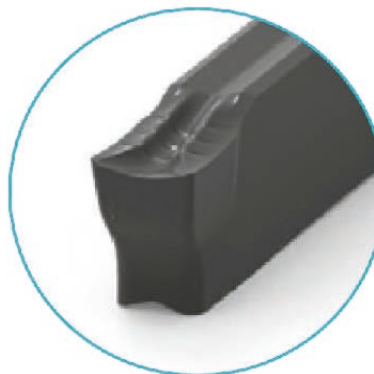
- Insert with highly positive cutting chipbreaker and sharp cutting edge
- Extra-smooth rake face through „microfinish“
- Reduced built-up edge
- 2mm to 4mm

## ST1 - Soft cutting chipbreaker



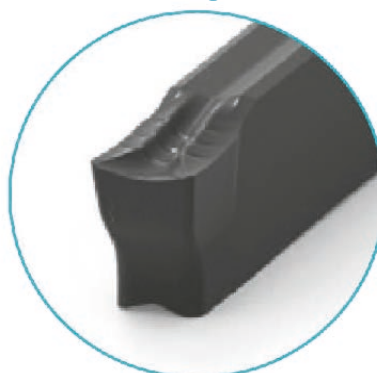
- Especially for stainless steel
- Problem solver for steel machining
- 1,5mm to 6mm

## T - Grooving and turning internal



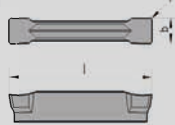
- For internal grooving and turning
- Suitable for all steel and stainless steel materials
- Very good chip control
- 2mm to 6mm

## TI - Grooving and Turning

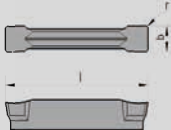


- For grooving and turning
- Suitable for all steel and stainless steel materials
- Very good chip control
- 2mm to 6mm

# MD - Range

|                                                                                    | Form Figure                                                                         | Abmessungen Dimensions |      |   |    |      | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|---|----|------|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                    |                                                                                     | l                      | b    | s | d1 | r    |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|  |  | 24,00                  | 1,50 |   |    | 0,15 | MD24NT-15.015-00M1         |          |           |                                         |     |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                    |                                                                                     | 24,00                  | 1,50 |   |    | 0,15 | MD24NT-15.015-00ST1        |          |           |                                         |     |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                    |                                                                                     |                        |      |   |    |      |                            |          |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                    |                                                                                     | 24,00                  | 2,00 |   |    | 0,15 | MD24LT-20.015-06-M1        |          |           |                                         |     |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                    |                                                                                     | 24,00                  | 2,00 |   |    | 0,20 | MD24NT-20.02-00-M1         |          |           |                                         |     |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                    |                                                                                     | 24,00                  | 2,00 |   |    | 0,15 | MD24RT-20.015-06-M1        |          |           |                                         |     |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                    |                                                                                     | 24,00                  | 2,00 |   |    | 0,15 | MD24LT-20.015-06-F1        |          |           |                                         |     |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                    |                                                                                     | 24,00                  | 2,00 |   |    | 0,20 | MD24NT-20.02-00-F1         |          |           |                                         |     |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                    |                                                                                     | 24,00                  | 2,00 |   |    | 0,15 | MD24RT-20.015-06-F1        |          |           |                                         |     |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                    |                                                                                     | 24,00                  | 2,00 |   |    | 0,15 | MD24LT-20.015-06-ST1       |          |           |                                         |     |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                    |                                                                                     | 24,00                  | 2,00 |   |    | 0,20 | MD24NT-20.02-00-ST1        |          |           |                                         |     |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                    |                                                                                     | 24,00                  | 2,00 |   |    | 0,15 | MD24RT-20.015-06-ST1       |          |           |                                         |     |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                    |                                                                                     | 24,00                  | 2,00 |   |    | 0,15 | MD24LT-20.02-06-T1         |          |           |                                         |     |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                    |                                                                                     | 24,00                  | 2,00 |   |    | 0,20 | MD24NT-20.02-00-T1         |          |           |                                         |     |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                    |                                                                                     | 24,00                  | 2,00 |   |    | 0,15 | MD24RT-20.02-06-T1         |          |           |                                         |     |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                    |                                                                                     | 24,00                  | 2,00 |   |    | 1,00 | MD24NR-20.00-00-M          |          |           |                                         |     |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                    |                                                                                     | 24,00                  | 2,00 |   |    | 0,15 | MD24NT-20.02-00-LM         |          |           | ☑                                       |     |                                     |       |       |       |       |       |
|                                                                                    |                                                                                     | 10,00                  | 2,00 |   |    | 0,20 | MD 10N 2.00S-0.20-T        |          |           |                                         |     |                                     | ☑     | ☑     |       |       | ☑     |
|                                                                                    |                                                                                     | 22,00                  | 2,00 |   |    | 0,20 | MD 22N 2.00S-0.20-T        |          |           |                                         |     |                                     | ☑     | ☑     |       |       | ☑     |
|                                                                                    |                                                                                     |                        |      |   |    |      |                            |          |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                    |                                                                                     | 10,00                  | 2,50 |   |    | 0,20 | MD 10N 2.50S-0.20-T        |          |           |                                         |     |                                     | ☑     | ☑     |       |       | ☑     |
|                                                                                    |                                                                                     | 22,00                  | 2,50 |   |    | 0,20 | MD 22N 2.50S-0.20-T        |          |           |                                         |     |                                     | ☑     | ☑     |       |       | ☑     |
|                                                                                    |                                                                                     |                        |      |   |    |      |                            |          |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                    |                                                                                     | 24,00                  | 3,00 |   |    | 0,20 | MD24LT-30.02-06-M1         |          |           |                                         |     |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                    |                                                                                     | 24,00                  | 3,00 |   |    | 0,20 | MD24NT-30.02-00-M1         |          |           |                                         |     |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                    |                                                                                     | 24,00                  | 3,00 |   |    | 0,20 | MD24RT-30.02-06-M1         |          |           |                                         |     |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                    |                                                                                     | 24,00                  | 3,00 |   |    | 0,20 | MD24LT-30.02-06-F1         |          |           |                                         |     |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                    |                                                                                     | 24,00                  | 3,00 |   |    | 0,20 | MD24NT-30.02-00-F1         |          |           |                                         |     |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                    |                                                                                     | 24,00                  | 3,00 |   |    | 0,20 | MD24RT-30.02-06-F1         |          |           |                                         |     |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                    |                                                                                     | 24,00                  | 3,00 |   |    | 0,20 | MD24LT-30.02-06-ST1        |          |           |                                         |     |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                    |                                                                                     | 24,00                  | 3,00 |   |    | 0,20 | MD24NT-30.02-00-ST1        |          |           |                                         |     |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                    |                                                                                     | 24,00                  | 3,00 |   |    | 0,20 | MD24RT-30.02-06-ST1        |          |           |                                         |     |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                    |                                                                                     | 24,00                  | 3,00 |   |    | 0,20 | MD24LT-30.02-06-T1         |          |           |                                         |     |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                    |                                                                                     | 24,00                  | 3,00 |   |    | 0,20 | MD24NT-30.03-00-T1         |          |           |                                         |     |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                    |                                                                                     | 24,00                  | 3,00 |   |    | 0,20 | MD24RT-30.02-06-T1         |          |           |                                         |     |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                    |                                                                                     | 24,00                  | 3,00 |   |    | 1,50 | MD24NR-30.00-00-M          |          |           |                                         |     |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                    |                                                                                     | 24,00                  | 3,00 |   |    | 0,15 | MD24NT-30.03-00-LM         |          |           | ☑                                       |     |                                     |       |       |       |       |       |
|                                                                                    |                                                                                     | 10,00                  | 3,00 |   |    | 0,30 | MD 10N 3.00S-0.30-T        |          |           |                                         |     |                                     | ☑     | ☑     |       |       | ☑     |
|                                                                                    |                                                                                     | 10,00                  | 3,00 |   |    | 1,50 | MD 10N 3.00S-1.50-RT       |          |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                    |                                                                                     | 22,00                  | 3,00 |   |    | 0,30 | MD 22N 3.00S-0.30-T        |          |           |                                         |     |                                     | ☑     | ☑     |       |       | ☑     |
|                                                                                    |                                                                                     | 22,00                  | 3,00 |   |    | 1,50 | MD 22N 3.00S-1.50-RT       |          |           |                                         |     |                                     | ☑     | ☑     |       |       | ☑     |

# MD - Range

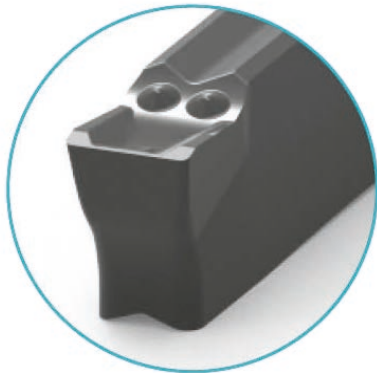
|                                                                                    | Form Figure                                                                         | Abmessungen Dimensions |      |   |    |      | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------|------|---|----|------|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                    |                                                                                     | l                      | b    | s | d1 | r    |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|  |  | 24,00                  | 4,00 |   |    | 0,30 | MD24LT-40.03-04-M1         |          |           |                                         |     |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                    |                                                                                     | 24,00                  | 4,00 |   |    | 0,30 | MD24NT-40.03-00-M1         |          |           |                                         |     |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                    |                                                                                     | 24,00                  | 4,00 |   |    | 0,30 | MD24RT-40.03-04-M1         |          |           |                                         |     |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                    |                                                                                     | 24,00                  | 4,00 |   |    | 0,30 | MD24LT-40.03-04-F1         |          |           |                                         |     |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                    |                                                                                     | 24,00                  | 4,00 |   |    | 0,30 | MD24NT-40.03-00-F1         |          |           |                                         |     |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                    |                                                                                     | 24,00                  | 4,00 |   |    | 0,30 | MD24RT-40.03-04-F1         |          |           |                                         |     |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                    |                                                                                     | 24,00                  | 4,00 |   |    | 0,30 | MD24LT-40.03-04-ST1        |          |           |                                         |     |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                    |                                                                                     | 24,00                  | 4,00 |   |    | 0,30 | MD24NT-40.03-00-ST1        |          |           |                                         |     |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                    |                                                                                     | 24,00                  | 4,00 |   |    | 0,30 | MD24RT-40.03-04-ST1        |          |           |                                         |     |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                    |                                                                                     | 24,00                  | 4,00 |   |    | 0,30 | MD24NT-40.04-00-T1         |          |           |                                         |     |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                    |                                                                                     | 24,00                  | 4,00 |   |    | 2,00 | MD24NR-40.00-00-M          |          |           |                                         |     |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                    |                                                                                     | 24,00                  | 4,00 |   |    | 0,40 | MD24NT-40.04-00-LM         |          |           |                                         | ☑   |                                     |       |       |       |       |       |
|                                                                                    |                                                                                     | 24,00                  | 4,00 |   |    | 0,40 | MD 24N 4.00S-0.40-T        |          |           |                                         |     |                                     | ☑     | ☑     |       |       | ☑     |
|                                                                                    |                                                                                     | 24,00                  | 4,00 |   |    | 2,00 | MD 24N 4.00S-2.00-RT       |          |           |                                         |     |                                     | ☑     | ☑     |       |       | ☑     |
|                                                                                    |                                                                                     |                        |      |   |    |      |                            |          |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                    |                                                                                     | 24,00                  | 5,00 |   |    | 0,40 | MD24LT-50.04-04-M1         |          |           |                                         |     |                                     | ☑     |       |       | ☑     |       |
|                                                                                    |                                                                                     | 24,00                  | 5,00 |   |    | 0,40 | MD24NT-50.04-00-M1         |          |           |                                         |     |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                    |                                                                                     | 24,00                  | 5,00 |   |    | 0,40 | MD24RT-50.04-04-M1         |          |           |                                         |     |                                     | ☑     |       |       | ☑     |       |
|                                                                                    |                                                                                     | 24,00                  | 5,00 |   |    | 0,40 | MD24LT-50.04-04-F1         |          |           |                                         |     |                                     | ☑     |       |       | ☑     |       |
|                                                                                    |                                                                                     | 24,00                  | 5,00 |   |    | 0,40 | MD24NT-50.04-00-F1         |          |           |                                         |     |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                    |                                                                                     | 24,00                  | 5,00 |   |    | 0,40 | MD24RT-50.04-04-F1         |          |           |                                         |     |                                     | ☑     |       |       | ☑     |       |
|                                                                                    |                                                                                     | 24,00                  | 5,00 |   |    | 0,40 | MD24NT-50.04-00-ST1        |          |           |                                         |     |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                    |                                                                                     | 24,00                  | 5,00 |   |    | 0,40 | MD24NT-50.04-00-T1         |          |           |                                         |     |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                    |                                                                                     | 24,00                  | 5,00 |   |    | 2,50 | MD24NR-50.00-00-M          |          |           |                                         |     |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                    |                                                                                     | 24,00                  | 5,00 |   |    | 0,40 | MD 24N 5.00S-0.40-T        |          |           |                                         |     |                                     | ☑     | ☑     |       |       | ☑     |
|                                                                                    |                                                                                     |                        |      |   |    |      |                            |          |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                    |                                                                                     | 24,00                  | 6,00 |   |    | 0,40 | MD24NT-60.04-00-M1         |          |           |                                         |     |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                    |                                                                                     | 24,00                  | 6,00 |   |    | 0,40 | MD24NT-60.04-00-F1         |          |           |                                         |     |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                    |                                                                                     | 24,00                  | 6,00 |   |    | 0,40 | MD24NT-60.04-00-ST1        |          |           |                                         |     |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                    |                                                                                     | 24,00                  | 6,00 |   |    | 0,40 | MD24NT-60.04-00-T1         |          |           |                                         |     |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                    |                                                                                     | 24,00                  | 6,00 |   |    | 3,00 | MD24NR-60.00-00-M          |          |           |                                         |     |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                    |                                                                                     | 24,00                  | 6,00 |   |    | 0,40 | MD 24N 6.00S-0.40-T        |          |           |                                         |     |                                     | ☑     | ☑     |       |       | ☑     |
|                                                                                    |                                                                                     | 24,00                  | 6,00 |   |    | 3,00 | MD 24N 6.00S-3.00-RT       |          |           |                                         |     |                                     | ☑     | ☑     |       |       | ☑     |
|                                                                                    |                                                                                     |                        |      |   |    |      |                            |          |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                    |                                                                                     | 35,00                  | 8,00 |   |    | 0,80 | MD 35NT 80.08.00 M1        |          |           |                                         |     |                                     |       | ☑     |       |       |       |

# Form MO



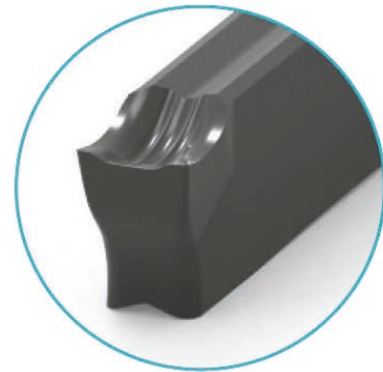
Deep grooving with excellent surface finish

## M1 - Medium cutting chipbreaker



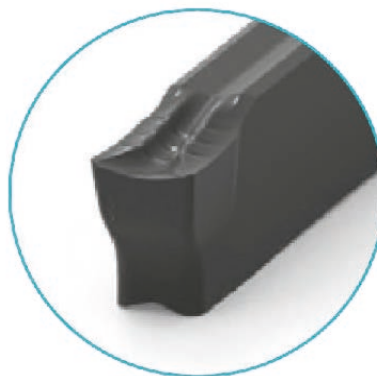
- Insert with narrow negative chamfer
- Suitable for all steel materials with high strength
- Suitable for all applications
- For steel and grey cast iron
- 1,5mm to 4mm

## F1 - Very soft cutting chipbreaker



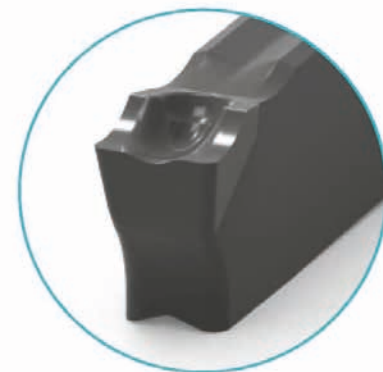
- Excellent cutting chipbreaker with low cutting forces
- For low or medium strength materials
- Particularly suitable for parting off tubes and thin-walled work pieces
- High cutting edge stability
- Excellent chip control also with low feed
- Low built up edge
- 2mm to 4mm

## TI - Grooving and Turning



- For grooving and turning
- Suitable for all steel and stainless steel materials
- Very good chip control
- 2mm to 4mm

## ST1 - Soft cutting chipbreaker



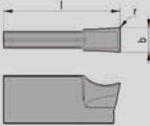
- Especially for stainless steel
- Problem solver for steel machining
- 1,5mm to 4mm

## LM - First choice in case of aluminium and non ferrous metals



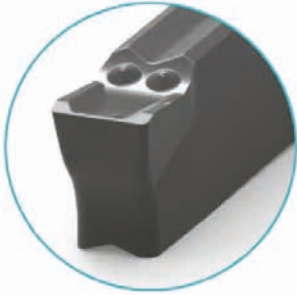
- Insert with highly positive cutting chipbreaker and sharp cutting edge
- Extra-smooth rake face through „microfinish“
- Reduced built-up edge
- 2mm to 4mm

# MO - Range

|                                                                                                                                                                     | Form Figure | Abmessungen Dimensions |      |   |    |      | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     |  | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------------------|------|---|----|------|----------------------------|----------|-----------|-----------------------------------------|-----|--|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                                                                                                     |             | l                      | b    | s | d1 | r    |                            |          |           | CT28                                    | K10 |  | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|   |             | 24,00                  | 2,00 |   |    | 0,15 | MO24LT-20.015-06-M1        |          |           |                                         |     |  |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                                                                                                     |             | 24,00                  | 2,00 |   |    | 0,20 | MO24NT-20.02-00-M1         |          |           |                                         |     |  |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                                                                                                     |             | 24,00                  | 2,00 |   |    | 0,15 | MO24RT-02.015-06-M1        |          |           |                                         |     |  |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                                                                                                     |             | 24,00                  | 2,00 |   |    | 0,15 | MO24LT-20.015-06-F1        |          |           |                                         |     |  |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                                                                                                     |             | 24,00                  | 2,00 |   |    | 0,20 | MO24NT-20.02-00-F1         |          |           |                                         |     |  |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                                                                                                     |             | 24,00                  | 2,00 |   |    | 0,15 | MO24RT-02.015-06-F1        |          |           |                                         |     |  |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                                                                                                     |             | 24,00                  | 2,00 |   |    | 0,2  | MO24NT-20.02-00-ST1        |          |           |                                         |     |  |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                                                                                                     |             | 24,00                  | 2,00 |   |    | 0,2  | MO24NT-20.02-00-T1         |          |           |                                         |     |  |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                                                                                                     |             | 24,00                  | 2,00 |   |    | 0,2  | MO24NT-20.02-00-LM         |          |           |                                         | ☑   |  |                                     |       |       |       |       |       |
|                                                                                                                                                                     |             |                        |      |   |    |      |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
|                                                                                                                                                                     |             | 24,00                  | 3,00 |   |    | 0,20 | MO24LT-30.02-06-M1         |          |           |                                         |     |  |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                                                                                                     |             | 24,00                  | 3,00 |   |    | 0,20 | MO24NT-30.02-00-M1         |          |           |                                         |     |  |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                                                                                                     |             | 24,00                  | 3,00 |   |    | 0,20 | MO24RT-30.02-06-M1         |          |           |                                         |     |  |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                                                                                                     |             | 24,00                  | 3,00 |   |    | 0,20 | MO24LT-30.02-06-F1         |          |           |                                         |     |  |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                                                                                                     |             | 24,00                  | 3,00 |   |    | 0,20 | MO24NT-30.02-00-F1         |          |           |                                         |     |  |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                                                                                                     |             | 24,00                  | 3,00 |   |    | 0,20 | MO24RT-30.02-06-F1         |          |           |                                         |     |  |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                                                                                                     |             | 24,00                  | 3,00 |   |    | 0,3  | MO24NT-30.03-00-ST1        |          |           |                                         |     |  |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                                                                                                     |             | 24,00                  | 3,00 |   |    | 0,3  | MO24NT-30.03-00-T1         |          |           |                                         |     |  |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                                                                                                     |             | 24,00                  | 3,00 |   |    | 0,3  | MO24NT-30.03-00-LM         |          |           |                                         | ☑   |  |                                     |       |       |       |       |       |
|                                                                                                                                                                     |             |                        |      |   |    |      |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |
|                                                                                                                                                                     |             | 24,00                  | 4,00 |   |    | 0,30 | MO24NT-40.03-00-M1         |          |           |                                         |     |  |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                                                                                                     |             | 24,00                  | 4,00 |   |    | 0,30 | MO24NT-40.03-00-F1         |          |           |                                         |     |  |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                                                                                                     |             | 24,00                  | 4,00 |   |    | 0,40 | MO24NT-40.04-00-ST1        |          |           |                                         |     |  |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                                                                                                     |             | 24,00                  | 4,00 |   |    | 0,4  | MO24NT-40.04-00-T1         |          |           |                                         |     |  |                                     | ☑     | ☑     |       | ☑     |       |
|                                                                                                                                                                     |             | 24,00                  | 4,00 |   |    | 0,40 | MO24NT-40.04-00-LM         |          |           |                                         | ☑   |  |                                     |       |       |       |       |       |
|                                                                                                                                                                     |             |                        |      |   |    |      |                            |          |           |                                         |     |  |                                     |       |       |       |       |       |

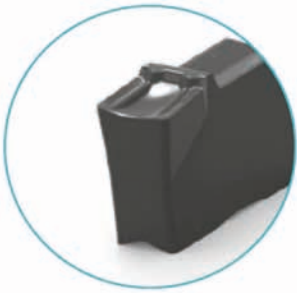


# Form MS



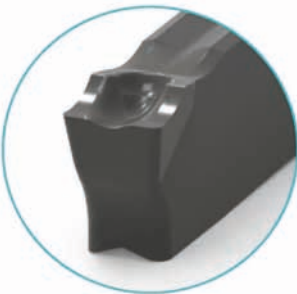
## M1 - Medium cutting chipbreaker

- Insert with narrow negative chamfer
- Suitable for all steel materials with high strength
- Suitable for all applications
- For steel and grey cast iron
- 1,5mm to 6mm



## M2 - First choice for all steel and cast iron materials

- For grooving and turning
- Suitable for all steel and cast iron materials
- Very good chip control
- 2mm to 6mm



## ST1 - Soft cutting chipbreaker

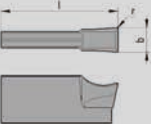
- Especially for stainless steel
- Problem solver for steel machining
- 1,5mm to 6mm



## LM - First choice in case of aluminium and non ferrous metals

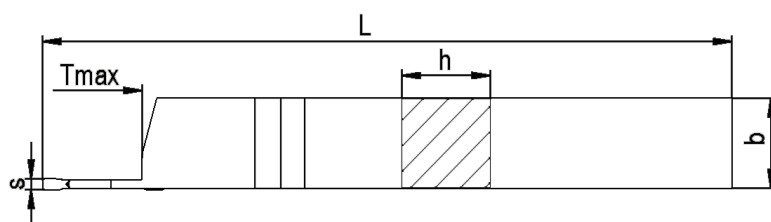
- Insert with highly positive cutting chipbreaker and sharp cutting edge
- Extra-smooth rake face through „microfinish“
- Reduced built-up edge
- 2mm to 4mm

# MS - Range

|                                                                                   | Form Figure                                                                       | Abmessungen Dimensions |      |   |    |      | Bezeichnung<br>Designation | Schraube | Schlüssel | Unbeschichtet Sorten<br>Uncoated grades |     | Beschichtet Sorten<br>coated grades |       |       |       |       |       |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------|------|---|----|------|----------------------------|----------|-----------|-----------------------------------------|-----|-------------------------------------|-------|-------|-------|-------|-------|
|                                                                                   |                                                                                   | l                      | b    | s | d1 | r    |                            |          |           | CT28                                    | K10 | PTT20                               | PTV28 | PTT35 | PAP28 | MTM10 | KTE20 |
|  |  |                        | 2,00 |   |    | 0,20 | MSNT-20.02-00-M1           |          |           |                                         |     |                                     | ☐     | ☐     |       | ☐     |       |
|                                                                                   |                                                                                   |                        | 2,00 |   |    | 0,20 | MSNT-20.02-00-M2           |          |           |                                         |     |                                     | ☐     | ☐     |       | ☐     |       |
|                                                                                   |                                                                                   |                        | 2,00 |   |    | 0,20 | MSNT-20.02-00-ST1          |          |           |                                         |     |                                     | ☐     | ☐     |       | ☐     |       |
|                                                                                   |                                                                                   |                        | 2,00 |   |    | 0,20 | MSNT-20.02-00-LM           |          |           |                                         | ☐   |                                     |       |       |       |       |       |
|                                                                                   |                                                                                   |                        |      |   |    |      |                            |          |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                   |                                                                                   |                        | 3,00 |   |    | 0,20 | MSNT-30.02-00-M1           |          |           |                                         |     |                                     | ☐     | ☐     |       | ☐     |       |
|                                                                                   |                                                                                   |                        | 3,00 |   |    | 0,30 | MSNT-30.03-00-M2           |          |           |                                         |     |                                     | ☐     | ☐     |       | ☐     |       |
|                                                                                   |                                                                                   |                        | 3,00 |   |    | 0,20 | MSNT-30.02-00-ST1          |          |           |                                         |     |                                     | ☐     | ☐     |       | ☐     |       |
|                                                                                   |                                                                                   |                        | 3,00 |   |    | 0,30 | MSNT-30.03-00-LM           |          |           |                                         | ☐   |                                     |       |       |       |       |       |
|                                                                                   |                                                                                   |                        |      |   |    |      |                            |          |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                   |                                                                                   |                        | 4,00 |   |    | 0,30 | MSNT-40.02-00-M1           |          |           |                                         |     |                                     | ☐     | ☐     |       | ☐     |       |
|                                                                                   |                                                                                   |                        | 4,00 |   |    | 0,40 | MSNT-40.04-00-M2           |          |           |                                         |     |                                     | ☐     | ☐     |       | ☐     |       |
|                                                                                   |                                                                                   |                        | 4,00 |   |    | 0,40 | MSNT-40.04-00-ST1          |          |           |                                         |     |                                     | ☐     | ☐     |       | ☐     |       |
|                                                                                   |                                                                                   |                        | 4,00 |   |    | 0,40 | MSNT-40.04-00-LM           |          |           |                                         | ☐   |                                     |       |       |       |       |       |
|                                                                                   |                                                                                   |                        |      |   |    |      |                            |          |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                   |                                                                                   |                        | 5,00 |   |    | 0,30 | MSNT-50.03-00-M1           |          |           |                                         |     |                                     | ☐     | ☐     |       | ☐     |       |
|                                                                                   |                                                                                   |                        | 5,00 |   |    | 0,40 | MSNT-50.04-00-M2           |          |           |                                         |     |                                     | ☐     | ☐     |       | ☐     |       |
|                                                                                   |                                                                                   |                        | 5,00 |   |    | 0,40 | MSNT-50.04-00-ST1          |          |           |                                         |     |                                     | ☐     | ☐     |       | ☐     |       |
|                                                                                   |                                                                                   |                        | 5,00 |   |    | 0,40 | MSNT-50.04-00-LM           |          |           |                                         | ☐   |                                     |       |       |       |       |       |
|                                                                                   |                                                                                   |                        |      |   |    |      |                            |          |           |                                         |     |                                     |       |       |       |       |       |
|                                                                                   |                                                                                   |                        | 6,00 |   |    | 0,40 | MSNT-60.04-00-M1           |          |           |                                         |     |                                     | ☐     | ☐     |       | ☐     |       |
|                                                                                   |                                                                                   |                        | 6,00 |   |    | 0,50 | MSNT-60.05-00-M2           |          |           |                                         |     |                                     | ☐     | ☐     |       | ☐     |       |
|                                                                                   |                                                                                   |                        | 6,00 |   |    | 0,40 | MSNT-60.04-00-ST1          |          |           |                                         |     |                                     | ☐     | ☐     |       | ☐     |       |
|                                                                                   |                                                                                   |                        | 6,00 |   |    | 0,40 | MSNT-60.04-00-LM           |          |           |                                         | ☐   |                                     |       |       |       |       |       |

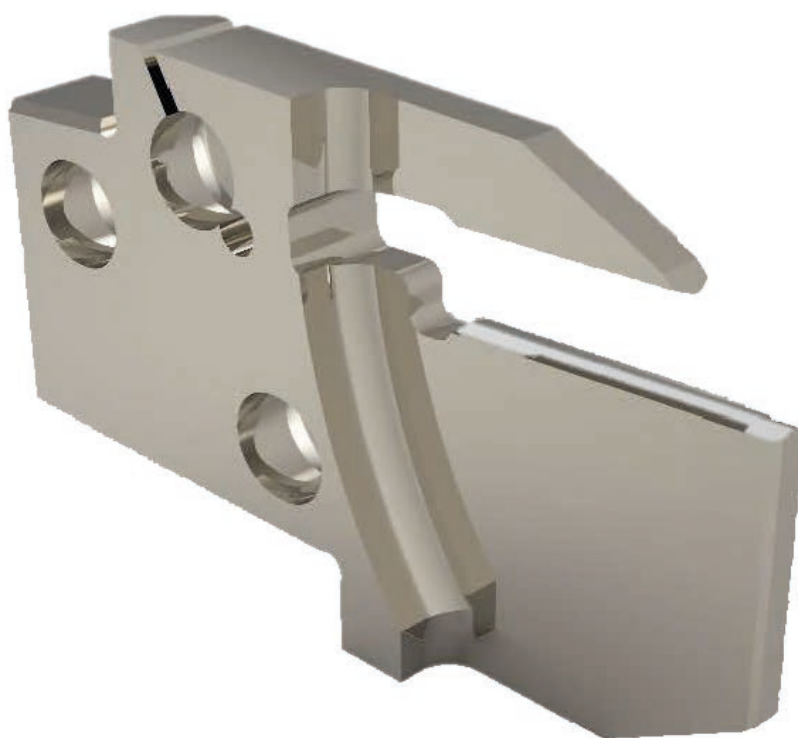


## MMM - Monoblocks



### Range Monoblocks

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |    |                  |   |     |    |                 | Modul<br>Module | Schraube<br>Screw  | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|----|----|------------------|---|-----|----|-----------------|-----------------|---------------------------------------------------------------------------------------------------------|------------------|
|                             | h                            | h1 | h2 | b  | T <sub>max</sub> | s | L   | L1 | Winkel<br>Angle |                 |                                                                                                         |                  |
| MMML-20MD2400-J             | 20                           |    |    | 20 |                  |   | 110 |    | 00°             | System MMA      | M4×14                                                                                                   | M-BT 15          |
| MMMR-20MD2400-J             |                              |    |    | 20 |                  |   | 110 |    | 45°             |                 | M4×14<br>M4×11                                                                                          |                  |
| MMML-20MD2445-J             |                              |    |    | 20 |                  |   | 110 |    | 90°             |                 | M4×14                                                                                                   |                  |
| MMMR-20MD2445-J             |                              |    |    | 20 |                  |   | 110 |    | 00°             |                 | M5×18                                                                                                   | M-BT 20          |
| MMML-20MD2490-J             | 25                           |    |    | 25 |                  |   | 110 |    | 45°             |                 | M5×18<br>M5×13,5                                                                                        |                  |
| MMMR-20MD2490-J             |                              |    |    | 25 |                  |   | 110 |    | 90°             |                 | M5×18                                                                                                   |                  |
| MMML-25MD2400-J             |                              |    |    | 25 |                  |   | 110 |    | 00°             |                 |                                                                                                         |                  |
| MMMR-25MD2400-J             |                              |    |    | 25 |                  |   | 110 |    | 45°             |                 |                                                                                                         |                  |
| MMML-25MD2445-J             | 25                           |    |    | 25 |                  |   | 110 |    | 90°             |                 |                                                                                                         |                  |
| MMMR-25MD2445-J             |                              |    |    | 25 |                  |   | 110 |    |                 |                 |                                                                                                         |                  |
| MMML-25MD2490-J             |                              |    |    | 25 |                  |   | 110 |    |                 |                 |                                                                                                         |                  |
| MMMR-25MD2490-J             |                              |    |    | 25 |                  |   | 110 |    |                 |                 |                                                                                                         |                  |



# Adapter

MMM - Module Adapters

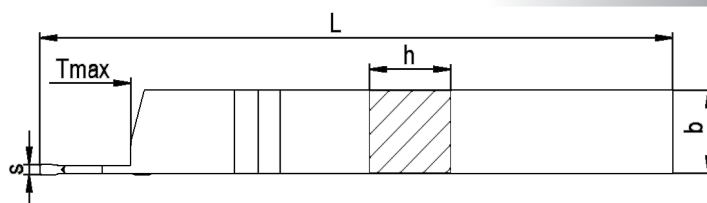
## Range Module Adapters

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |   |    |   |                  | Wendeplatte<br>Insert               | Schlüssel<br>Key  |
|-----------------------------|------------------------------|---|----|---|------------------|-------------------------------------|--------------------------------------------------------------------------------------------------------|
|                             | H                            | W | L  | h | T <sub>max</sub> |                                     |                                                                                                        |
| MMAEL-2002-MO2402-T25       |                              | 2 | 20 |   | 25               | System MO<br>System MD<br>(Tmax 23) | M-HK 3                                                                                                 |
| MMAER-2002-MO2402-T25       |                              |   |    |   |                  |                                     |                                                                                                        |
| MMAEL-2003-MO2403-T25       |                              | 3 | 20 |   | 25               |                                     |                                                                                                        |
| MMAER-2003-MO2403-T25       |                              |   |    |   |                  |                                     |                                                                                                        |
| MMAEL-2004-MO2404-T25       |                              | 4 | 20 |   | 25               |                                     |                                                                                                        |
| MMAER-2004-MO2404-T25       |                              |   |    |   |                  |                                     |                                                                                                        |
| MMAEL-2502-MO2402-T25       |                              | 2 | 25 |   | 25               |                                     | M-HK 4                                                                                                 |
| MMAER-2502-MO2402-T25       |                              |   |    |   |                  |                                     |                                                                                                        |
| MMAEL-2503-MO2403-T25       |                              | 3 | 25 |   | 25               |                                     |                                                                                                        |
| MMAER-2503-MO2403-T25       |                              |   |    |   |                  |                                     |                                                                                                        |
| MMAEL-2504-MO2404-T25       |                              | 4 | 25 |   | 25               |                                     |                                                                                                        |
| MMAER-2504-MO2404-T25       |                              |   |    |   |                  |                                     |                                                                                                        |



MD -Range

MD

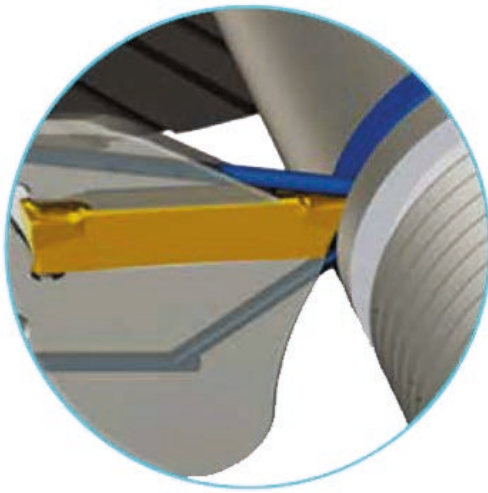


Range 2mm to 8mm

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |    |                  |   |     |    |    | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key   |
|-----------------------------|------------------------------|----|----|----|------------------|---|-----|----|----|-----------------------|-------------------|--------------------|
|                             | h                            | h1 | h2 | b  | T <sub>max</sub> | s | L   | L1 | L2 |                       |                   |                    |
| MMEL-12-MD2402-K-T13        | 12                           |    |    | 12 | 13               | 2 | 125 |    |    | System MD             | M3.5X14.0/T15     | M-BT 15<br>M-BT 20 |
| MMER-12-MD2402-K-T13        |                              |    |    |    |                  |   |     |    |    |                       |                   |                    |
| MMEL-16-MD2402-K-T13        | 16                           |    |    | 16 | 13               | 2 | 125 |    |    |                       | M4.0X16/T20       |                    |
| MMER-16-MD2402-K-T13        |                              |    |    |    |                  |   |     |    |    |                       |                   |                    |
| MMEL-20-MD2402-K-T13        | 20                           |    |    | 20 | 13               | 2 | 125 |    |    |                       | M4.0X18/T20       |                    |
| MMER-20-MD2402-K-T13        |                              |    |    |    |                  |   |     |    |    |                       |                   |                    |

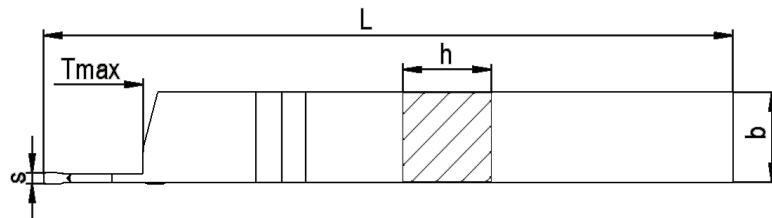
| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |    |                  |   |     |    |    | Wendeplatte<br>Insert  | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|----|----|------------------|---|-----|----|----|------------------------|-------------------|------------------|
|                             | h                            | h1 | h2 | b  | T <sub>max</sub> | s | L   | L1 | L2 |                        |                   |                  |
| MMEL-12-MD2403-K-T13        | 12                           |    |    | 12 | 13               | 3 | 125 |    |    | System MD              | M3.5X14.0/T15     | M-BT 15          |
| MMER-12-MD2403-K-T13        |                              |    |    |    |                  |   |     |    |    |                        |                   |                  |
| MMEL-16-MD2403-K-T13        | 16                           |    |    | 16 | 13               | 3 | 125 |    |    |                        | M4.0X16/T20       | M-BT 20          |
| MMER-16-MD2403-K-T13        |                              |    |    |    |                  |   |     |    |    |                        |                   |                  |
| MMEL-20-MD2403-K-T13        | 20                           |    |    | 20 | 13               | 3 | 125 |    |    |                        | M4.0X18/T20       |                  |
| MMER-20-MD2403-K-T13        |                              |    |    |    |                  |   |     |    |    |                        |                   |                  |
| MMEL-25-MD2403-K-T13        | 25                           |    |    | 25 | 13               | 3 | 125 |    |    |                        |                   |                  |
| MMER-25-MD2403-K-T13        |                              |    |    |    |                  |   |     |    |    |                        |                   |                  |
| MMEL-16-MD2403-K-T25        | 16                           |    |    | 16 | 25               | 3 | 125 |    |    | System MD<br>System MO | M4.0X16/T20       | M-BT 20          |
| MMER-16-MD2403-K-T25        |                              |    |    |    |                  |   |     |    |    |                        |                   |                  |
| MMEL-20-MD2403-K-T25        | 20                           |    |    | 20 | 25               | 3 | 125 |    |    |                        | M4.0X18/T20       |                  |
| MMER-20-MD2403-K-T25        |                              |    |    |    |                  |   |     |    |    |                        |                   |                  |
| MMEL-25-MD2403-K-T25        | 25                           |    |    | 25 | 25               | 3 | 125 |    |    |                        |                   |                  |
| MMER-25-MD2403-K-T25        |                              |    |    |    |                  |   |     |    |    |                        |                   |                  |

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |    |                  |   |     |    |    | Wendeplatte<br>Insert  | Schraube<br>Screw | Schlüssel<br>Key |         |
|-----------------------------|------------------------------|----|----|----|------------------|---|-----|----|----|------------------------|-------------------|------------------|---------|
|                             | h                            | h1 | h2 | b  | T <sub>max</sub> | s | L   | L1 | L2 |                        |                   |                  |         |
| MMEL-16-MD2404-K-T25        | 16                           |    |    | 16 | 25               | 4 | 125 |    |    | System MD<br>System MO | M4.0X16/T20       | M-BT 20          |         |
| MMER-16-MD2404-K-T25        |                              |    |    |    |                  |   |     |    |    |                        |                   |                  |         |
| MMEL-20-MD2404-K-T25        | 20                           |    |    | 20 | 25               | 4 | 125 |    |    |                        | M4.0X18/T20       |                  |         |
| MMER-20-MD2404-K-T25        |                              |    |    |    |                  |   |     |    |    |                        |                   |                  |         |
| MMEL-25-MD2404-K-T25        | 25                           |    |    | 25 | 25               | 4 | 125 |    |    |                        |                   |                  | M6.0X20 |
| MMER-25-MD2404-K-T25        |                              |    |    |    |                  |   |     |    |    |                        |                   |                  |         |
| MMEL-20-MD2405-M-T25        | 20                           |    |    | 20 | 25               | 5 | 150 |    |    |                        |                   |                  |         |
| MMER-20-MD2405-M-T25        |                              |    |    |    |                  |   |     |    |    |                        |                   |                  |         |
| MMEL-25-MD2405-M-T25        | 25                           |    |    | 25 | 25               | 5 | 150 |    |    |                        |                   |                  |         |
| MMER-25-MD2405-M-T25        |                              |    |    |    |                  |   |     |    |    |                        |                   |                  |         |
| MMEL-20-MD2406-M-T25        | 20                           |    |    | 20 | 25               | 6 | 150 |    |    |                        |                   |                  |         |
| MMER-20-MD2406-M-T25        |                              |    |    |    |                  |   |     |    |    |                        |                   |                  |         |
| MMEL-25-MD2406-M-T25        | 25                           |    |    | 25 | 25               | 6 | 150 |    |    |                        |                   |                  |         |
| MMER-25-MD2406-M-T25        |                              |    |    |    |                  |   |     |    |    |                        |                   |                  |         |
| MMER-25-MD3208-P-T32        | 25                           |    |    | 25 | 32               | 8 | 170 |    |    |                        |                   |                  |         |
| MMEL-25-MD3208-P-T32        |                              |    |    |    |                  |   |     |    |    |                        |                   |                  |         |
| MMER-32-MD3208-P-T32        |                              |    |    | 32 | 32               | 8 | 170 |    |    |                        |                   |                  |         |
| MMEL-32-MD3208-P-T32        | 32                           |    |    |    |                  |   |     |    |    |                        |                   |                  |         |



## Monoblocks with internal cooling

MD - Range



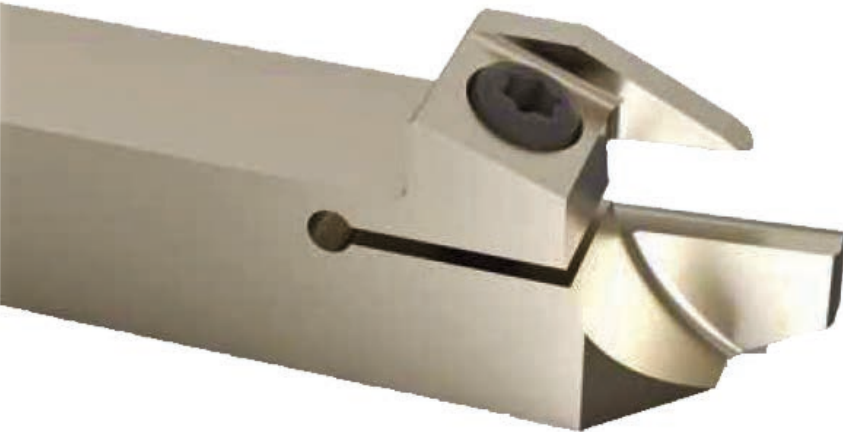
Range 2mm / 3mm / 4mm / 5mm / 6mm

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |    |                  |   |     |    |    | Wendeplatte<br>Insert  | Schraube<br>Screw  | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|----|----|------------------|---|-----|----|----|------------------------|---------------------------------------------------------------------------------------------------------|------------------|
|                             | h                            | h1 | h2 | b  | T <sub>max</sub> | s | L   | L1 | L2 |                        |                                                                                                         |                  |
| MMEL-16-MD2402-K-T13-C      | 16                           |    |    | 16 | 13               | 2 | 125 |    |    | System MD              | M6.0×20                                                                                                 | 15               |
| MMER-16-MD2402-K-T13-C      |                              |    |    |    |                  |   |     |    |    |                        |                                                                                                         |                  |
| MMEL-20-MD2402-K-T13-C      | 20                           |    |    | 20 | 13               |   |     |    |    |                        |                                                                                                         |                  |
| MMER-20-MD2402-K-T13-C      |                              |    |    |    |                  |   |     |    |    |                        |                                                                                                         |                  |
| MMEL-16-MD2403-K-T25-C      | 16                           |    |    | 16 | 25               | 3 | 125 |    |    | System MD<br>System MO | M6.0×20                                                                                                 |                  |
| MMER-16-MD2403-K-T25-C      |                              |    |    |    |                  |   |     |    |    |                        |                                                                                                         |                  |
| MMEL-20-MD2403-K-T25-C      | 20                           |    |    | 20 | 25               | 3 | 125 |    |    |                        | M6.0×20                                                                                                 |                  |
| MMER-20-MD2403-K-T25-C      |                              |    |    |    |                  |   |     |    |    |                        |                                                                                                         |                  |
| MMEL-25-MD2403-K-T25-C      | 25                           |    |    | 25 | 25               | 3 | 125 |    |    |                        | M6.0×20                                                                                                 |                  |
| MMER-25-MD2404-K-T25-C      |                              |    |    |    |                  |   |     |    |    |                        |                                                                                                         |                  |
| MMEL-16-MD2404-K-T25-C      | 16                           |    |    | 16 | 25               | 4 | 125 |    |    |                        | M6.0×20                                                                                                 |                  |
| MMER-16-MD2404-K-T25-C      |                              |    |    |    |                  |   |     |    |    |                        |                                                                                                         |                  |
| MMEL-20-MD2404-K-T25-C      | 20                           |    |    | 20 | 25               | 4 | 125 |    |    |                        | M6.0×20                                                                                                 |                  |
| MMER-20-MD2404-K-T25-C      |                              |    |    |    |                  |   |     |    |    |                        |                                                                                                         |                  |
| MMEL-25-MD2404-K-T25-C      | 25                           |    |    | 25 | 25               | 4 | 125 |    |    |                        | M6.0×20                                                                                                 |                  |
| MMER-25-MD2404-K-T25-C      |                              |    |    |    |                  |   |     |    |    |                        |                                                                                                         |                  |
| MMEL-20-MD2405-M-T25-C      | 20                           |    |    | 20 | 25               | 5 | 150 |    |    |                        | M6.0×20                                                                                                 |                  |
| MMER-20-MD2405-M-T25-C      |                              |    |    |    |                  |   |     |    |    |                        |                                                                                                         |                  |
| MMEL-25-MD2405-M-T25-C      | 25                           |    |    | 25 | 25               | 5 | 150 |    |    |                        | M6.0×20                                                                                                 |                  |
| MMER-25-MD2405-M-T25-C      |                              |    |    |    |                  |   |     |    |    |                        |                                                                                                         |                  |
| MMEL-20-MD2406-M-T25-C      | 20                           |    |    | 20 | 25               | 6 | 150 |    |    |                        | M6.0×20                                                                                                 |                  |
| MMER-20-MD2406-M-T25-C      |                              |    |    |    |                  |   |     |    |    |                        |                                                                                                         |                  |
| MMEL-25-MD2406-M-T25-C      | 25                           |    |    | 25 | 25               | 6 | 150 |    |    |                        | M6.0×20                                                                                                 |                  |
| MMER-25-MD2406-M-T25-C      |                              |    |    |    |                  |   |     |    |    |                        |                                                                                                         |                  |

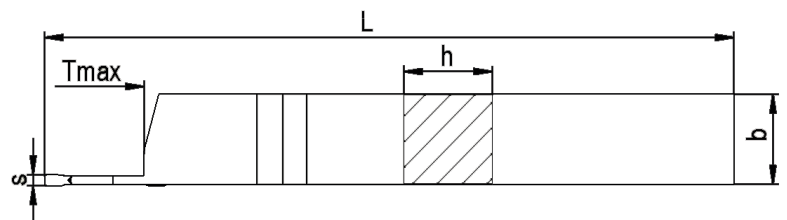




# MD



## Monoblocks reinforced



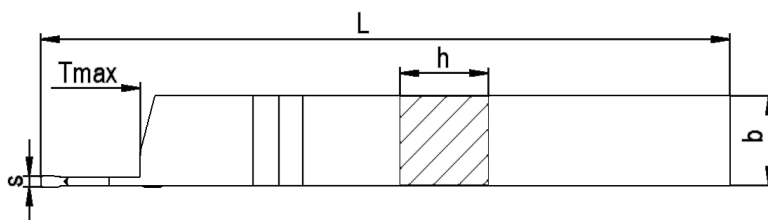
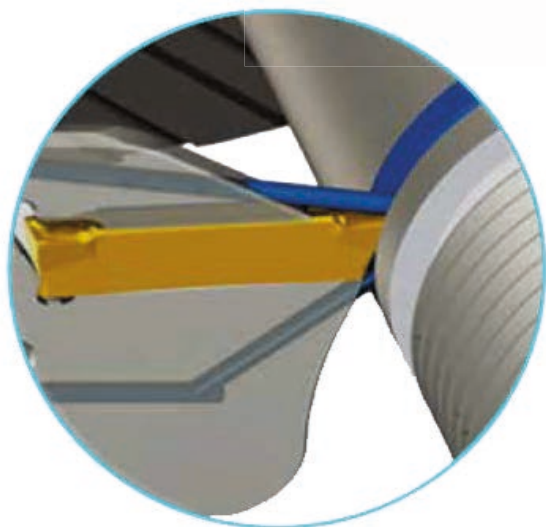
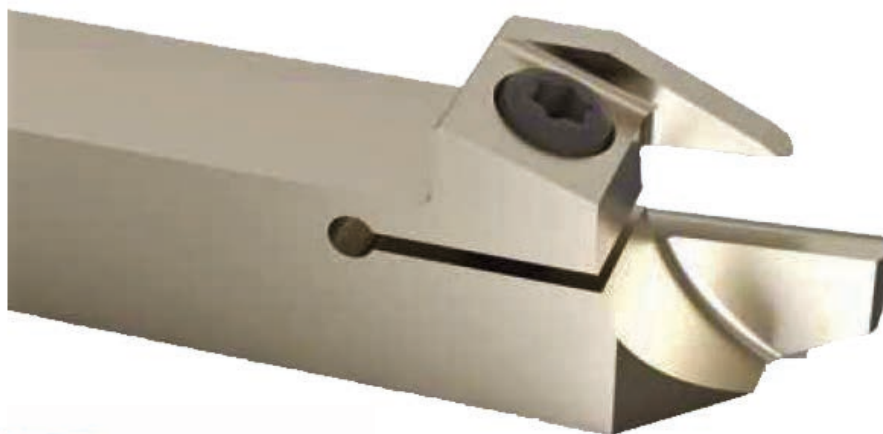
### MD - Range

Range 1,5mm / 2mm / 3mm

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |    |                  |     |     |    |    | Wendeplatte<br>Insert | Schraube<br>Screw  | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|----|----|------------------|-----|-----|----|----|-----------------------|---------------------------------------------------------------------------------------------------------|------------------|
|                             | h                            | h1 | h2 | b  | T <sub>max</sub> | s   | L   | L1 | L2 |                       |                                                                                                         |                  |
| MMEL-12-MD24015-K-T23-R     | 12                           |    |    | 12 | 23               | 1,5 | 125 |    |    | System MD             | M3.5X14.0/T15                                                                                           | M-BT 15          |
| MMER-12-MD24015-K-T23-R     |                              |    |    | 12 | 23               | 1,5 | 125 |    |    |                       | M3.5X14.0/T15                                                                                           | M-BT 15          |
| MMEL-16-MD24015-K-T23-R     | 16                           |    |    | 16 | 23               | 1,5 | 125 |    |    |                       | M4.0X16/T20                                                                                             | M-BT 20          |
| MMER-16-MD24015-K-T23-R     |                              |    |    | 16 | 23               | 1,5 | 125 |    |    |                       | M4.0X16/T20                                                                                             | M-BT 20          |
| MMEL-12-MD2402-K-T13-R      | 12                           |    |    | 12 | 13               | 2   | 125 |    |    |                       | M3.5X14.0/T15                                                                                           | M-BT 15          |
| MMER-12-MD2402-K-T13-R      |                              |    |    | 12 | 13               | 2   | 125 |    |    |                       | M3.5X14.0/T15                                                                                           | M-BT 15          |
| MMEL-16-MD2402-K-T13-R      | 16                           |    |    | 16 | 13               | 2   | 125 |    |    |                       | M4.0X16/T20                                                                                             | M-BT 20          |
| MMER-16-MD2402-K-T13-R      |                              |    |    | 16 | 13               | 2   | 125 |    |    |                       | M4.0X16/T20                                                                                             | M-BT 20          |
| MMEL-12-MD2402-K-T21-R      | 12                           |    |    | 12 | 21               | 2   | 125 |    |    |                       | M3.5X14.0/T15                                                                                           | M-BT 15          |
| MMER-12-MD2402-K-T21-R      |                              |    |    | 12 | 21               | 2   | 125 |    |    |                       | M3.5X14.0/T15                                                                                           | M-BT 15          |
| MMEL-16-MD2402-K-T21-R      | 16                           |    |    | 16 | 21               | 2   | 125 |    |    |                       | M4.0X16/T20                                                                                             | M-BT 20          |
| MMER-16-MD2402-K-T21-R      |                              |    |    | 16 | 21               | 2   | 125 |    |    |                       | M4.0X16/T20                                                                                             | M-BT 20          |
| MMEL-12-MD2403-K-T13-R      | 12                           |    |    | 12 | 13               | 3   | 125 |    |    |                       | M3.5X14.0/T15                                                                                           | M-BT 15          |
| MMER-12-MD2403-K-T13-R      |                              |    |    | 12 | 13               | 3   | 125 |    |    |                       | M3.5X14.0/T15                                                                                           | M-BT 15          |
| MMEL-16-MD2403-K-T13-R      | 16                           |    |    | 16 | 13               | 3   | 125 |    |    |                       | M4.0X16/T20                                                                                             | M-BT 20          |
| MMER-16-MD2403-K-T13-R      |                              |    |    | 16 | 13               | 3   | 125 |    |    |                       | M4.0X16/T20                                                                                             | M-BT 20          |
| MMEL-12-MD2403-K-T21-R      | 12                           |    |    | 12 | 21               | 3   | 125 |    |    |                       | M3.5X14.0/T15                                                                                           | M-BT 15          |
| MMER-12-MD2403-K-T21-R      |                              |    |    | 12 | 21               | 3   | 125 |    |    |                       | M3.5X14.0/T15                                                                                           | M-BT 15          |
| MMEL-16-MD2403-K-T21-R      | 16                           |    |    | 16 | 21               | 3   | 125 |    |    |                       | M4.0X16/T20                                                                                             | M-BT 20          |
| MMER-16-MD2403-K-T21-R      |                              |    |    | 16 | 21               | 3   | 125 |    |    |                       | M4.0X16/T20                                                                                             | M-BT 20          |

# Monoblocks reinforced with internal cooling

MD

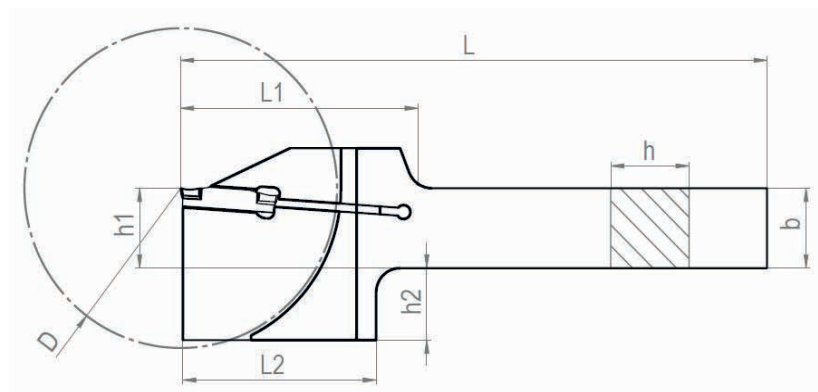


Range 2mm / 3mm

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |    |                  |   |     |    |    | Wendeplatte<br>Insert  | Schraube<br>Screw  | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|----|----|------------------|---|-----|----|----|------------------------|---------------------------------------------------------------------------------------------------------|------------------|
|                             | h                            | h1 | h2 | b  | T <sub>max</sub> | s | L   | L1 | L2 |                        |                                                                                                         |                  |
| MMEL-12-MD2402-K-T13-R-C    | 12                           |    |    | 12 | 13               | 2 | 125 |    |    | System MD<br>System MO | M3.5X14.0/T15                                                                                           | M-BT 15          |
| MMER-12-MD2402-K-T13-R-C    |                              |    |    |    |                  |   |     |    |    |                        |                                                                                                         |                  |
| MMEL-16-MD2402-K-T13-R-C    | 16                           |    |    | 16 | 13               | 2 | 125 |    |    |                        | M4.0X16/T20                                                                                             | M-BT 20          |
| MMER-16-MD2402-K-T13-R-C    |                              |    |    |    |                  |   |     |    |    |                        |                                                                                                         |                  |
| MMEL-16-MD2402-K-T21-R-C    | 16                           |    |    | 16 | 21               | 2 | 125 |    |    |                        | M4.0X16/T20                                                                                             |                  |
| MMER-16-MD2402-K-T21-R-C    |                              |    |    |    |                  |   |     |    |    |                        |                                                                                                         |                  |
| MMEL-12-MD2403-K-T13-R-C    | 12                           |    |    | 12 | 13               | 3 | 125 |    |    |                        | M3.5X14.0/T15                                                                                           |                  |
| MMER-12-MD2403-K-T13-R-C    |                              |    |    |    |                  |   |     |    |    |                        |                                                                                                         |                  |
| MMEL-16-MD2403-K-T13-R-C    | 16                           |    |    | 16 | 13               | 3 | 125 |    |    |                        | M4.0X16/T20                                                                                             |                  |
| MMER-16-MD2403-K-T13-R-C    |                              |    |    |    |                  |   |     |    |    |                        |                                                                                                         |                  |
| MMEL-16-MD2403-K-T25-R-C    | 16                           |    |    | 16 | 25               | 3 | 125 |    |    |                        | M4.0X16/T20                                                                                             |                  |
| MMER-16-MD2403-K-T25-R-C    |                              |    |    |    |                  |   |     |    |    |                        |                                                                                                         |                  |



Monoblocks for plunge-turning (external)



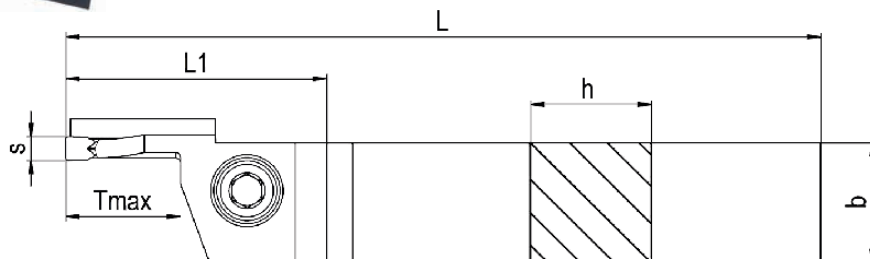
## MD - Range

Range 3mm / 4mm / 5mm / 6mm

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |    |                       |   |     |    |    | Wendeplatte<br>Insert | Schraube<br>Screw  | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|----|----|-----------------------|---|-----|----|----|-----------------------|---------------------------------------------------------------------------------------------------------|------------------|
|                             | h                            | h1 | h2 | b  | T <sub>max</sub><br>D | s | L   | L1 | L2 |                       |                                                                                                         |                  |
| MD-T-AXB R 2020-03          | 20                           | 20 | 17 | 20 | 65                    | 3 | 125 | 55 | 45 | MD 22N...T            | M6 - 1                                                                                                  | 15               |
| MD-T-AXB L 2020-03          |                              |    |    |    |                       |   |     |    |    | MD 22N...RT           |                                                                                                         |                  |
| MD-T-AXB R 2020-04          | 20                           | 20 | 17 | 20 | 65                    | 4 | 125 | 55 | 45 | MD 24N...T            |                                                                                                         |                  |
| MD-T-AXB L 2020-04          |                              |    |    |    |                       |   |     |    |    | MD 24N...RT           |                                                                                                         |                  |
| MD-T-AXB R 2020-05          | 20                           | 20 | 18 | 20 | 80                    | 5 | 150 | 60 | 50 | MD 24N...T            |                                                                                                         |                  |
| MD-T-AXB L 2020-05          |                              |    |    |    |                       |   |     |    |    | MD 24N...RT           |                                                                                                         |                  |
| MD-T-AXB R 2020-06          | 20                           | 20 | 18 | 20 | 80                    | 6 | 150 | 60 | 50 | MD 24N...T            |                                                                                                         |                  |
| MD-T-AXB L 2020-06          |                              |    |    |    |                       |   |     |    |    | MD 24N...RT           |                                                                                                         |                  |
| MD-T-AXB R 2525-03          | 25                           | 25 | 12 | 25 | 65                    | 3 | 150 | 55 | 45 | MD 22N...T            |                                                                                                         |                  |
| MD-T-AXB L 2525-03          |                              |    |    |    |                       |   |     |    |    | MD 22N...RT           |                                                                                                         |                  |
| MD-T-AXB R 2525-04          | 25                           | 25 | 12 | 25 | 65                    | 4 | 150 | 55 | 45 | MD 24N...T            |                                                                                                         |                  |
| MD-T-AXB L 2525-04          |                              |    |    |    |                       |   |     |    |    | MD 24N...RT           |                                                                                                         |                  |
| MD-T-AXB R 2525-05          | 25                           | 25 | 18 | 25 | 80                    | 5 | 160 | 60 | 50 | MD 24N...T            |                                                                                                         |                  |
| MD-T-AXB L 2525-05          |                              |    |    |    |                       |   |     |    |    | MD 24N...RT           |                                                                                                         |                  |
| MD-T-AXB R 2525-06          | 25                           | 25 | 18 | 25 | 80                    | 6 | 160 | 60 | 50 | MD 24N...T            |                                                                                                         |                  |
| MD-T-AXB L 2525-06          |                              |    |    |    |                       |   |     |    |    | MD 24N...RT           |                                                                                                         |                  |

# Monoblocks for plunge-turning (axial)

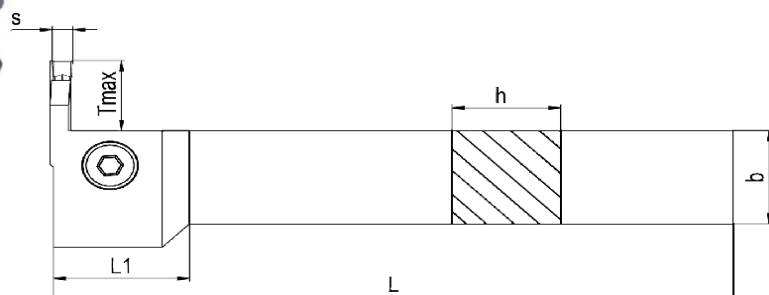
MD



Range 3mm / 4mm / 5mm

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |                                      |                  |   |     |    | Wendeplatte<br>Insert     | Schraube<br>Screw  | Schlüssel<br>Key |            |  |
|-----------------------------|------------------------------|----|----|--------------------------------------|------------------|---|-----|----|---------------------------|-------------------------------------------------------------------------------------------------------|------------------|------------|--|
|                             | h                            | h1 | b  | D <sub>min</sub><br>D <sub>max</sub> | T <sub>max</sub> | s | L   | L1 |                           |                                                                                                       |                  |            |  |
| MD-R-AXB R/L 2020-3.25      | 20                           | 20 | 20 | 19-30                                | 18               | 3 | 125 | 45 | MD 22N...T<br>MD 22N...RT | M6-1                                                                                                  | I5               |            |  |
| MD-R-AXB R/L 2020-3.30      | 20                           | 20 | 20 | 24-38                                | 18               | 3 | 125 | 45 |                           |                                                                                                       |                  |            |  |
| MD-R-AXB R/L 2020-3.38      | 20                           | 20 | 20 | 32-48                                | 18               | 3 | 125 | 45 |                           |                                                                                                       |                  |            |  |
| MD-R-AXB R/L 2020-3.48      | 20                           | 20 | 20 | 42-60                                | 18               | 3 | 125 | 45 |                           |                                                                                                       |                  |            |  |
| MD-R-AXB R/L 2020-3.60      | 20                           | 20 | 20 | 54-75                                | 18               | 3 | 125 | 45 |                           |                                                                                                       |                  |            |  |
| MD-R-AXB R/L 2020-3.75      | 20                           | 20 | 20 | 69-100                               | 18               | 3 | 125 | 45 |                           |                                                                                                       |                  |            |  |
| MD-R-AXB R/L 2020-3.100     | 20                           | 20 | 20 | 94-200                               | 19               | 3 | 125 | 45 |                           |                                                                                                       |                  |            |  |
| MD-R-AXB R/L 2020-4.34      | 20                           | 20 | 20 | 26-34                                | 19               | 4 | 125 | 45 | MD 24N...T<br>MD 24N...RT |                                                                                                       |                  |            |  |
| MD-R-AXB R/L 2020-4.40      | 20                           | 20 | 20 | 32-40                                | 19               | 4 | 125 | 45 |                           |                                                                                                       |                  |            |  |
| MD-R-AXB R/L 2020-4.48      | 20                           | 20 | 20 | 40-48                                | 19               | 4 | 125 | 45 |                           |                                                                                                       |                  |            |  |
| MD-R-AXB R/L 2020-4.60      | 20                           | 20 | 20 | 52-60                                | 19               | 4 | 125 | 45 |                           |                                                                                                       |                  |            |  |
| MD-R-AXB R/L 2020-4.75      | 20                           | 20 | 20 | 67-150                               | 19               | 4 | 125 | 45 |                           |                                                                                                       |                  |            |  |
| MD-R-AXB R/L 2020-4.150     | 20                           | 20 | 20 | 142-450                              | 19               | 4 | 125 | 45 |                           |                                                                                                       |                  |            |  |
| MD-R-AXB R/L 2020-5.42      | 20                           | 20 | 20 | 32-55                                | 19               | 5 | 125 | 45 |                           |                                                                                                       |                  | MD 24N...T |  |
| MD-R-AXB R/L 2020-5.55      | 20                           | 20 | 20 | 45-75                                | 19               | 5 | 125 | 45 |                           |                                                                                                       |                  |            |  |
| MD-R-AXB R/L 2020-5.75      | 20                           | 20 | 20 | 65-150                               | 19               | 5 | 125 | 45 |                           |                                                                                                       |                  |            |  |

|                         |    |    |    |         |    |   |     |    |                           |      |    |
|-------------------------|----|----|----|---------|----|---|-----|----|---------------------------|------|----|
| MD-R-AXB R/L 2525-3.25  | 25 | 25 | 25 | 19-30   | 18 | 3 | 150 | 45 | MD 22N...T<br>MD 22N...RT | M6-1 | I5 |
| MD-R-AXB R/L 2525-3.30  | 25 | 25 | 25 | 24-38   | 18 | 3 | 150 | 45 |                           |      |    |
| MD-R-AXB R/L 2525-3.38  | 25 | 25 | 25 | 32-48   | 18 | 3 | 150 | 45 |                           |      |    |
| MD-R-AXB R/L 2525-3.48  | 25 | 25 | 25 | 42-60   | 18 | 3 | 150 | 45 |                           |      |    |
| MD-R-AXB R/L 2525-3.60  | 25 | 25 | 25 | 54-75   | 18 | 3 | 150 | 45 |                           |      |    |
| MD-R-AXB R/L 2525-3.75  | 25 | 25 | 25 | 69-100  | 18 | 3 | 150 | 45 |                           |      |    |
| MD-R-AXB R/L 2525-3.100 | 25 | 25 | 25 | 94-200  | 18 | 3 | 150 | 45 |                           |      |    |
| MD-R-AXB R/L 2525-4.34  | 25 | 25 | 25 | 26-40   | 19 | 4 | 150 | 45 | MD 24N...T<br>MD 24N...RT |      |    |
| MD-R-AXB R/L 2525-4.40  | 25 | 25 | 25 | 32-48   | 19 | 4 | 150 | 45 |                           |      |    |
| MD-R-AXB R/L 2525-4.48  | 25 | 25 | 25 | 40-60   | 19 | 4 | 150 | 45 |                           |      |    |
| MD-R-AXB R/L 2525-4.60  | 25 | 25 | 25 | 52-75   | 19 | 4 | 150 | 45 |                           |      |    |
| MD-R-AXB R/L 2525-4.75  | 25 | 25 | 25 | 67-150  | 19 | 4 | 150 | 45 |                           |      |    |
| MD-R-AXB R/L 2525-4.150 | 25 | 25 | 25 | 142-450 | 19 | 4 | 150 | 45 |                           |      |    |
| MD-R-AXB R/L 2525-4.450 | 25 | 25 | 25 | 442-... | 19 | 4 | 150 | 45 |                           |      |    |
| MD-R-AXB R/L 2525-5.42  | 25 | 25 | 25 | 32-55   | 19 | 5 | 150 | 45 |                           |      |    |
| MD-R-AXB R/L 2525-5.55  | 25 | 25 | 25 | 45-75   | 19 | 5 | 150 | 45 |                           |      |    |
| MD-R-AXB R/L 2525-5.75  | 25 | 25 | 25 | 65-130  |    |   |     |    |                           |      |    |
| MD-R-AXB R/L 2525-5.130 | 25 | 25 | 25 | 120-200 | 19 | 5 | 150 | 45 |                           |      |    |
| MD-R-AXB R/L 2525-5.200 | 25 | 25 | 25 | 190-450 | 19 | 5 | 150 | 45 |                           |      |    |
| MD-R-AXB R/L 2525-450   | 25 | 25 | 25 | 440-... | 19 | 5 | 150 | 45 |                           |      |    |



Range 3mm / 4mm / 5mm

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |    |                                      |                  |   |     |    | Wendeplatte<br>Insert     | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|----|--------------------------------------|------------------|---|-----|----|---------------------------|-------------------|------------------|
|                             | h                            | h1 | b  | D <sub>min</sub><br>D <sub>max</sub> | T <sub>max</sub> | s | L   | L1 |                           |                   |                  |
| MD-R90-AXB R/L 2020-3.25    | 20                           | 20 | 20 | 19-30                                | 15               | 3 | 125 | 25 | MD 22N...T<br>MD 22N...RT | M6-1              | I5               |
| MD-R90-AXB R/L 2020-3.30    | 20                           | 20 | 20 | 24-35                                | 15               | 3 | 125 | 25 |                           |                   |                  |
| MD-R90-AXB R/L 2020-3.35    | 20                           | 20 | 20 | 29-42                                | 15               | 3 | 125 | 25 |                           |                   |                  |
| MD-R90-AXB R/L 2020-3.42    | 20                           | 20 | 20 | 36-50                                | 15               | 3 | 125 | 25 |                           |                   |                  |
| MD-R90-AXB R/L 2020-3.50    | 20                           | 20 | 20 | 44-58                                | 15               | 3 | 125 | 25 |                           |                   |                  |
| MD-R90-AXB R/L 2020-3.58    | 20                           | 20 | 20 | 52-66                                | 15               | 3 | 125 | 25 |                           |                   |                  |
| MD-R90-AXB R/L 2020-3.66    | 20                           | 20 | 20 | 60-75                                | 15               | 3 | 125 | 25 |                           |                   |                  |
| MD-R90-AXB R/L 2020-3.75    | 20                           | 20 | 20 | 69-100                               | 15               | 3 | 125 | 25 |                           |                   |                  |
| MD-R90-AXB R/L 2020-4.42    | 20                           | 20 | 20 | 34-50                                | 15               | 4 | 125 | 25 | MD 24N...T<br>MD 24N...RT |                   |                  |
| MD-R90-AXB R/L 2020-4.50    | 20                           | 20 | 20 | 42-58                                | 15               | 4 | 125 | 25 |                           |                   |                  |
| MD-R90-AXB R/L 2020-4.58    | 20                           | 20 | 20 | 50-66                                | 15               | 4 | 125 | 25 |                           |                   |                  |
| MD-R90-AXB R/L 2020-4.66    | 20                           | 20 | 20 | 58-75                                | 15               | 4 | 125 | 25 |                           |                   |                  |
| MD-R90-AXB R/L 2020-4.75    | 20                           | 20 | 20 | 67-100                               | 15               | 4 | 125 | 25 |                           |                   |                  |
| MD-R90-AXB R/L 2020-4.100   | 20                           | 20 | 20 | 92-200                               | 15               | 4 | 125 | 25 |                           |                   |                  |
| MD-R90-AXB R/L 2020-5.42    | 20                           | 20 | 20 | 32-55                                | 15               | 5 | 125 | 25 | MD 24N...T                |                   |                  |
| MD-R90-AXB R/L 2020-5.50    | 20                           | 20 | 20 | 40-58                                | 15               | 5 | 125 | 25 |                           |                   |                  |
| MD-R90-AXB R/L 2020-5.58    | 20                           | 20 | 20 | 48-66                                | 15               | 5 | 125 | 25 |                           |                   |                  |
| MD-R90-AXB R/L 2020-5.66    | 20                           | 20 | 20 | 56-75                                | 15               | 5 | 125 | 25 |                           |                   |                  |
| MD-R90-AXB R/L 2020-5.75    | 20                           | 20 | 20 | 65-100                               | 15               | 5 | 125 | 25 |                           |                   |                  |
| MD-R90-AXB R/L 2020-5.100   | 20                           | 20 | 20 | 90-200                               | 15               | 5 | 125 | 25 |                           |                   |                  |

|                           |    |    |    |        |    |   |     |    |                           |      |    |
|---------------------------|----|----|----|--------|----|---|-----|----|---------------------------|------|----|
| MD-R90-AXB R/L 2525-3.25  | 25 | 25 | 25 | 19-30  | 15 | 3 | 150 | 25 | MD 22N...T<br>MD 22N...RT | M6-1 | I5 |
| MD-R90-AXB R/L 2525-3.30  | 25 | 25 | 25 | 24-35  | 15 | 3 | 150 | 25 |                           |      |    |
| MD-R90-AXB R/L 2525-3.35  | 25 | 25 | 25 | 29-42  | 15 | 3 | 150 | 25 |                           |      |    |
| MD-R90-AXB R/L 2525-3.42  | 25 | 25 | 25 | 36-50  | 15 | 3 | 150 | 25 |                           |      |    |
| MD-R90-AXB R/L 2525-3.50  | 25 | 25 | 25 | 44-58  | 15 | 3 | 150 | 25 |                           |      |    |
| MD-R90-AXB R/L 2525-3.58  | 25 | 25 | 25 | 52-66  | 15 | 3 | 150 | 25 |                           |      |    |
| MD-R90-AXB R/L 2525-3.66  | 25 | 25 | 25 | 60-75  | 15 | 3 | 150 | 25 |                           |      |    |
| MD-R90-AXB R/L 2525-3.75  | 25 | 25 | 25 | 69-100 | 15 | 3 | 150 | 25 |                           |      |    |
| MD-R90-AXB R/L 2525-4.42  | 25 | 25 | 25 | 34-50  | 15 | 4 | 150 | 25 | MD 24N...T<br>MD 24N...RT |      |    |
| MD-R90-AXB R/L 2525-4.50  | 25 | 25 | 25 | 42-58  | 15 | 4 | 150 | 25 |                           |      |    |
| MD-R90-AXB R/L 2525-4.58  | 25 | 25 | 25 | 50-66  | 15 | 4 | 150 | 25 |                           |      |    |
| MD-R90-AXB R/L 2525-4.66  | 25 | 25 | 25 | 58-75  | 15 | 4 | 150 | 25 |                           |      |    |
| MD-R90-AXB R/L 2525-4.75  | 25 | 25 | 25 | 67-100 | 15 | 4 | 150 | 25 |                           |      |    |
| MD-R90-AXB R/L 2525-4.100 | 25 | 25 | 25 | 92-200 | 15 | 4 | 150 | 25 |                           |      |    |
| MD-R90-AXB R/L 2525-5.42  | 25 | 25 | 25 | 32-55  | 15 | 5 | 150 | 25 | MD 24N...T                |      |    |
| MD-R90-AXB R/L 2525-5.50  | 25 | 25 | 25 | 40-58  | 15 | 5 | 150 | 25 |                           |      |    |
| MD-R90-AXB R/L 2525-5.58  | 25 | 25 | 25 | 48-66  | 15 | 5 | 150 | 25 |                           |      |    |
| MD-R90-AXB R/L 2525-5.66  | 25 | 25 | 25 | 56-75  | 15 | 5 | 150 | 25 |                           |      |    |
| MD-R90-AXB R/L 2525-5.75  | 25 | 25 | 25 | 65-100 | 15 | 5 | 150 | 25 |                           |      |    |
| MD-R90-AXB R/L 2525-5.100 | 25 | 25 | 25 | 90-200 | 15 | 5 | 150 | 25 |                           |      |    |



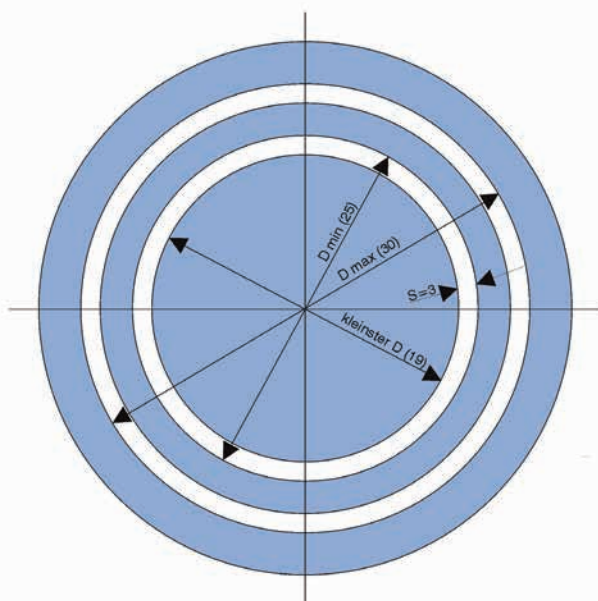
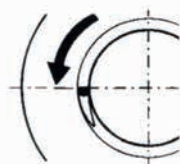
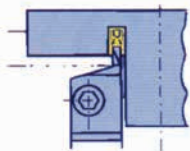
## MD - Examples

Examples for plunge-turning:

### MD-R-AXBL 2525 -03

↓  
Plattenbreite  
width of insert

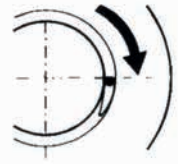
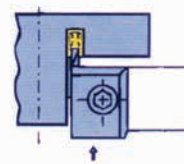
Linkslauf  
turning left



### MD-R90-AXBL 2525 -03

↓  
Plattenbreite  
width of insert

Rechtslauf  
turning right



Zum Beispiel:

1. bei Fertigung von Dmin 19mm wird Bearbeitungsdurchmesser 25mm program

2. bei Fertigung von Dmax 30mm wird Bearbeitungsdurchmesser 24mm program

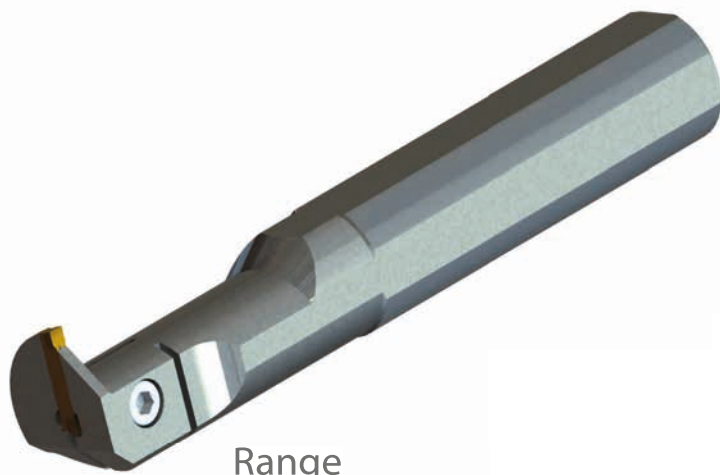
For Example:

1. By production of Dmin 19mm is programmed working diameter 25mm

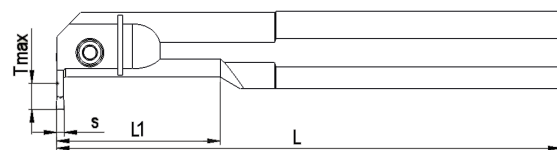
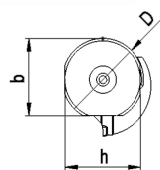
2. By production of Dmax 30mm is programmed working diameter 25mm



## Monoblocks internal turning

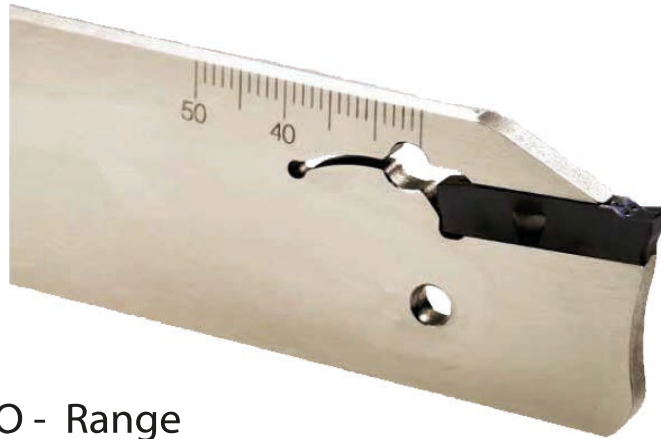
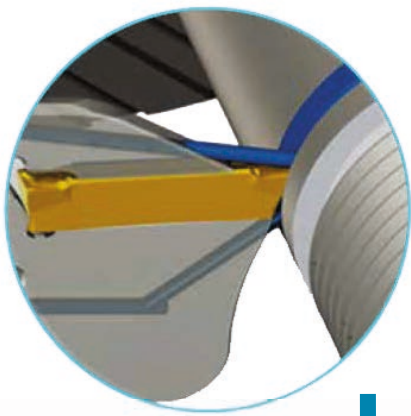


Range

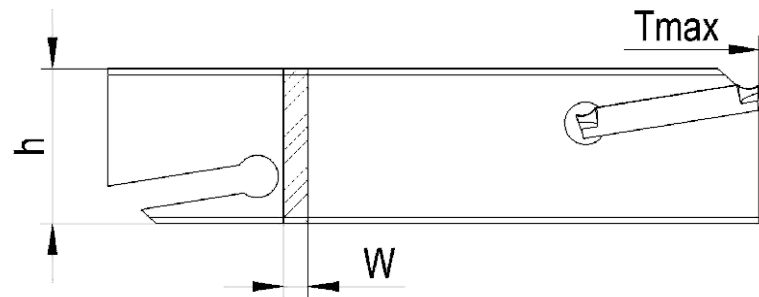


| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |    |                  |    |     |     |    |    | Wendeplatte<br>Insert     | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|----|------------------|----|-----|-----|----|----|---------------------------|-------------------|------------------|
|                             | D <sub>min</sub>             | D  | T <sub>max</sub> | L1 | s   | L   | h  | h  |                           |                   |                  |
| MD-IXBR 0012-02             | 15,5                         | 12 | 3                | 22 | 2   | 150 | 11 | 11 | MD 10...                  | M4-1              | I3               |
| MD-IXBL 0012-02             |                              |    |                  |    |     |     |    |    |                           |                   |                  |
| MD-IXBR 0012-02,5           | 15,5                         | 12 | 3                | 22 | 2,5 | 150 | 11 | 11 |                           |                   |                  |
| MD-IXBL 0012-02,5           |                              |    |                  |    |     |     |    |    |                           |                   |                  |
| MD-IXBR 0012-03             | 15,5                         | 12 | 3                | 22 | 3   | 150 | 11 | 11 |                           |                   |                  |
| MD-IXBL 0012-03             |                              |    |                  |    |     |     |    |    |                           |                   |                  |
| MD-IXBR 0016-02             | 20                           | 16 | 4                | 26 | 2   | 170 | 15 | 15 |                           |                   |                  |
| MD-IXBL 0016-02             |                              |    |                  |    |     |     |    |    |                           |                   |                  |
| MD-IXBR 0016-2,5            | 20                           | 16 | 4                | 26 | 2,5 | 170 | 15 | 15 |                           |                   |                  |
| MD-IXBL 0016-2,5            |                              |    |                  |    |     |     |    |    |                           |                   |                  |
| MD-IXBR 0016-03             | 20                           | 16 | 4                | 26 | 3   | 170 | 15 | 15 |                           |                   |                  |
| MD-IXBL 0016-03             |                              |    |                  |    |     |     |    |    |                           |                   |                  |
| MD-IXBR 0020-02             | 25                           | 20 | 7                | 40 | 2   | 180 | 18 | 18 |                           |                   |                  |
| MD-IXBL 0020-02             |                              |    |                  |    |     |     |    |    |                           |                   |                  |
| MD-IXBR 0020-02,5           | 25                           | 20 | 7                | 40 | 2,5 | 180 | 18 | 18 |                           |                   |                  |
| MD-IXBL 0020-02,5           |                              |    |                  |    |     |     |    |    |                           |                   |                  |
| MD-IXBR 0020-03             | 25                           | 20 | 7                | 40 | 3   | 180 | 18 | 18 |                           |                   |                  |
| MD-IXBL 0020-03             |                              |    |                  |    |     |     |    |    |                           |                   |                  |
| MD-IXBR 0025-02             | 32                           | 25 | 10               | 50 | 2   | 180 | 23 | 23 | MD 22N...T<br>MD 22N...RT | M6-3              | I5               |
| MD-IXBL 0025-02             |                              |    |                  |    |     |     |    |    |                           |                   |                  |
| MD-IXBR 0025-02,5           | 32                           | 25 | 10               | 50 | 2,5 | 180 | 23 | 23 |                           |                   |                  |
| MD-IXBL 0025-02,5           |                              |    |                  |    |     |     |    |    |                           |                   |                  |
| MD-IXBR 0025-03             | 32                           | 25 | 10               | 50 | 3   | 180 | 23 | 23 |                           |                   |                  |
| MD-IXBL 0025-03             |                              |    |                  |    |     |     |    |    |                           |                   |                  |
| MD-IXBR 0025-04             | 32                           | 25 | 10               | 50 | 4   | 180 | 23 | 23 | MD 24N...T<br>MD 24N...RT |                   |                  |
| MD-IXBL 0025-04             |                              |    |                  |    |     |     |    |    | MD 22N...T<br>MD22N...RT  |                   |                  |
| MD-IXBR 0032-03             | 40                           | 32 | 12               | 64 | 3   | 200 | 30 | 30 | MD 24N...T<br>MD 24N...RT | M6-1              |                  |
| MD-IXBL 0032-03             |                              |    |                  |    |     |     |    |    |                           |                   |                  |
| MD-IXBR 0032-04             | 40                           | 32 | 12               | 64 | 4   | 200 | 30 | 30 |                           |                   |                  |
| MD-IXBL 0032-04             |                              |    |                  |    |     |     |    |    |                           |                   |                  |
| MD-IXBR 0032-05             | 40                           | 32 | 12               | 64 | 5   | 200 | 30 | 30 |                           |                   |                  |
| MD-IXBL 0032-05             |                              |    |                  |    |     |     |    |    |                           |                   |                  |
| MD-IXBR 0032-06             | 40                           | 32 | 12               | 64 | 6   | 200 | 30 | 30 |                           |                   |                  |
| MD-IXBL 0032-06             |                              |    |                  |    |     |     |    |    |                           |                   |                  |
| MD-IXBR 0040-04             | 52                           | 40 | 16               | 80 | 4   | 250 | 38 | 38 |                           |                   |                  |
| MD-IXBL 0040-04             |                              |    |                  |    |     |     |    |    |                           |                   |                  |
| MD-IXBR 0040-05             | 52                           | 40 | 16               | 80 | 5   | 250 | 38 | 38 |                           |                   |                  |
| MD-IXBL 0040-05             |                              |    |                  |    |     |     |    |    |                           |                   |                  |
| MD-IXBR 0040-06             | 52                           | 40 | 16               | 80 | 6   | 250 | 38 | 38 |                           |                   |                  |
| MD-IXBL 0040-06             |                              |    |                  |    |     |     |    |    |                           |                   |                  |

| Ersatzteile:<br>Spare parts: | Schraube - Screw                                                                    |      | Schlüssel - Key                                                                       |    |
|------------------------------|-------------------------------------------------------------------------------------|------|---------------------------------------------------------------------------------------|----|
|                              |  | M4-1 |  | I3 |
|                              |                                                                                     | M6-3 |                                                                                       | I5 |
|                              |                                                                                     | M6-1 |                                                                                       |    |



MO - Range



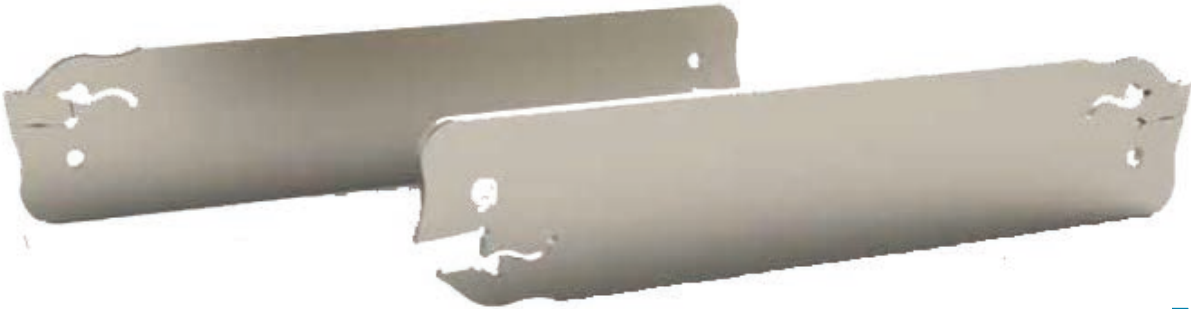
Range 2mm / 3mm / 4mm / 5mm / 6mm

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |   |   |    |                  | Wendeplatte<br>Insert | Schlüssel<br>Key |
|-----------------------------|------------------------------|---|---|----|------------------|-----------------------|------------------|
|                             | H                            | W | L | h  | T <sub>max</sub> |                       |                  |
| MBL-2602-MO2402             |                              | 2 |   | 26 | 25               | System MO             | M-HK-3           |
| MBL-3202-MO2402             |                              | 2 |   | 32 | 25               |                       |                  |
| MBR-2602-MO2402             |                              | 2 |   | 26 | 25               |                       |                  |
| MBR-3202-MO2402             |                              | 2 |   | 32 | 25               |                       |                  |
| MBN-2602-MO2402             |                              | 2 |   | 26 | 25               |                       |                  |
| MBN-3202-MO2402             |                              | 2 |   | 32 | 25               |                       |                  |
| MBN-2603-MO2403             |                              | 3 |   | 26 | 35               |                       | M-HK-4           |
| MBN-3203-MO2403             |                              | 3 |   | 32 | 50               |                       |                  |
| MBN-2604-MO2404             |                              | 4 |   | 26 | 35               |                       |                  |
| MBN-3204-MO2404             |                              | 4 |   | 32 | 50               |                       |                  |
| MBN-3205-MO2405             |                              | 5 |   | 32 | 50               |                       |                  |
| MBN-3206-MO2406             |                              | 6 |   | 32 | 50               |                       |                  |

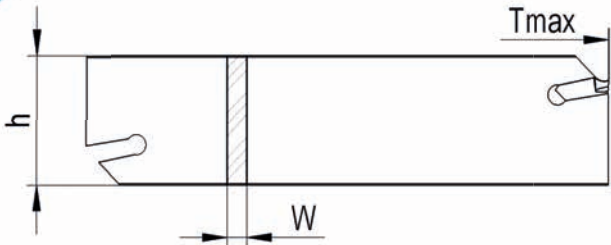
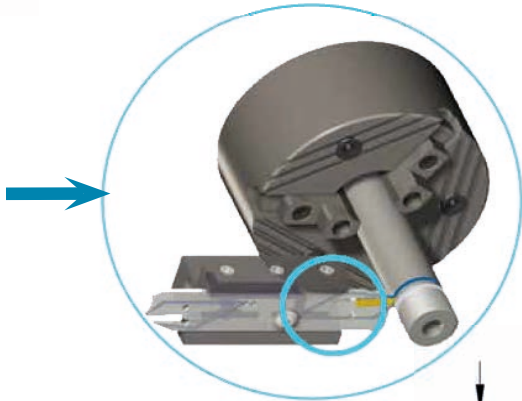
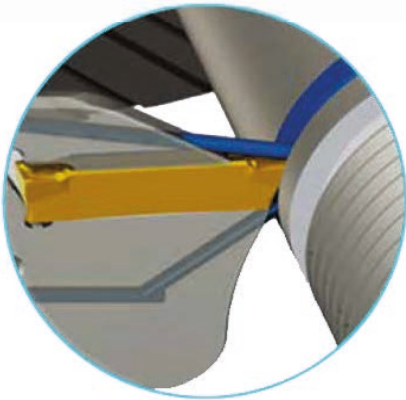
Range 2mm / 3mm / 4mm / 5mm / 6mm with internal cooling

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |   |   |    |                  | Wendeplatte<br>Insert | Schlüssel<br>Key |
|-----------------------------|------------------------------|---|---|----|------------------|-----------------------|------------------|
|                             | H                            | W | L | h  | T <sub>max</sub> |                       |                  |
| MBL-2602-MO2402-C           |                              | 2 |   | 26 | 25               | System MO             | M-HK-3           |
| MBL-3202-MO2402-C           |                              | 2 |   | 32 | 25               |                       |                  |
| MBR-2602-MO2402-C           |                              | 2 |   | 26 | 25               |                       |                  |
| MBR-3202-MO2402-C           |                              | 2 |   | 32 | 25               |                       |                  |
| MBN-2602-MO2402-C           |                              | 2 |   | 26 | 25               |                       |                  |
| MBN-3202-MO2402-C           |                              | 2 |   | 32 | 25               |                       |                  |
| MBN-2603-MO2403-C           |                              | 3 |   | 26 | 35               |                       | M-HK-4           |
| MBN-3203-MO2403-C           |                              | 3 |   | 32 | 50               |                       |                  |
| MBN-2604-MO2404-C           |                              | 4 |   | 26 | 35               |                       |                  |
| MBN-3204-MO2404-C           |                              | 4 |   | 32 | 50               |                       |                  |
| MBN-3205-MO2405-C           |                              | 5 |   | 32 | 50               |                       |                  |
| MBN-3206-MO2406-C           |                              | 6 |   | 32 | 50               |                       |                  |

36. MS - Sortiment / Range



MS



Range 2mm / 3mm / 4mm / 5mm / 6mm

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |   |   |    |                  | Wendeplatte<br>Insert | Schlüssel<br>Key |
|-----------------------------|------------------------------|---|---|----|------------------|-----------------------|------------------|
|                             | H                            | W | L | h  | T <sub>max</sub> |                       |                  |
| MBR-2602-MS02               |                              | 2 |   | 26 | 25               | System MS             | M-HK-3           |
| MBL-2602-MS02               |                              | 2 |   | 26 | 25               |                       |                  |
| MBR-3202-MS02               |                              | 2 |   | 32 | 25               |                       |                  |
| MBL-3202-MS02               |                              | 2 |   | 32 | 25               |                       |                  |
| MBN-2603-MS03               |                              | 3 |   | 26 | 40               |                       |                  |
| MBN-3203-MS03               |                              | 3 |   | 32 | 50               |                       |                  |
| MBN-2604-MS04               |                              | 4 |   | 26 | 40               |                       | M-HK-4           |
| MBN-3204-MS04               |                              | 4 |   | 32 | 50               |                       |                  |
| MBN-3205-MS05               |                              | 5 |   | 32 | 50               |                       |                  |
| MBN-3206-MS06               |                              | 6 |   | 32 | 50               |                       |                  |

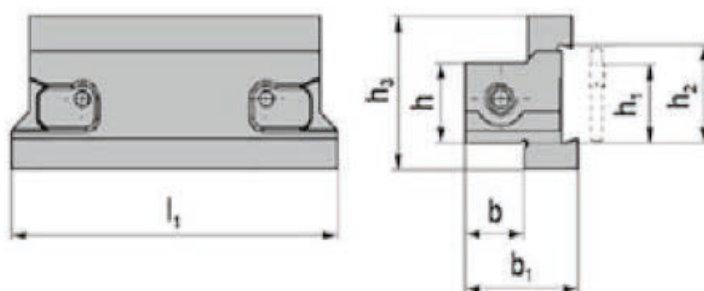
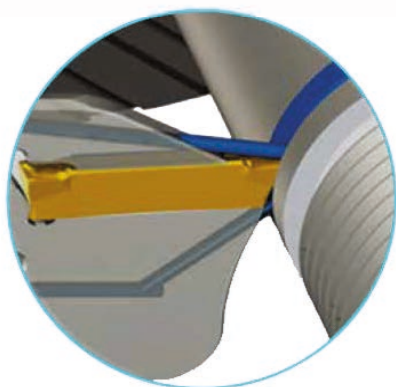
Range 2mm / 3mm / 4mm / 5mm / 6mm with internal cooling

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |   |   |    |                  | Wendeplatte<br>Insert | Schlüssel<br>Key |
|-----------------------------|------------------------------|---|---|----|------------------|-----------------------|------------------|
|                             | H                            | W | L | h  | T <sub>max</sub> |                       |                  |
| MBR-2602-MS02-C             |                              | 2 |   | 26 | 25               | System MS             | M-HK-3           |
| MBL-2602-MS02-C             |                              | 2 |   | 26 | 25               |                       |                  |
| MBR-3202-MS02-C             |                              | 2 |   | 32 | 25               |                       |                  |
| MBL-3202-MS02-C             |                              | 2 |   | 32 | 25               |                       |                  |
| MBN-2603-MS03-C             |                              | 3 |   | 26 | 40               |                       |                  |
| MBN-3203-MS03-C             |                              | 3 |   | 32 | 50               |                       |                  |
| MBN-2604-MS04-C             |                              | 4 |   | 26 | 40               |                       | M-HK-4           |
| MBN-3204-MS04-C             |                              | 4 |   | 32 | 50               |                       |                  |
|                             |                              |   |   |    |                  |                       |                  |
|                             |                              |   |   |    |                  |                       |                  |

## Clamping blocks



Range



## Range clamping blocks

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |     |       |       |       |     |       | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|-----|-------|-------|-------|-----|-------|-----------------------|-------------------|------------------|
|                             | $h_2$                        | $h$ | $h_1$ | $h_3$ | $l_1$ | $b$ | $b_1$ |                       |                   |                  |
| MCB-MB26-2020               | 26                           | 20  | 20    | 43    | 90    | 20  | 37    | MBN...26...           | M6.0×25           | 15               |
| MCB-MB32-2020               | 32                           | 20  | 25    | 49    | 100   | 25  | 38    | MBN...32...           | M6.0×25           |                  |
| MCB-MB26-2525               | 26                           | 25  | 20    | 43    | 90    | 20  | 42    | MBN...26...           | M6.0×25           |                  |
| MCB-MB32-2525               | 32                           | 25  | 25    | 49    | 110   | 20  | 38    | MBN...32...           | M6.0×25           |                  |

## Range clamping blocks with internal cooling

| Bestell-Nr.:<br>Order Code: | Abmessungen / Dimension (mm) |     |       |       |       |     |       | Wendeplatte<br>Insert | Schraube<br>Screw | Schlüssel<br>Key |
|-----------------------------|------------------------------|-----|-------|-------|-------|-----|-------|-----------------------|-------------------|------------------|
|                             | $h_2$                        | $h$ | $h_1$ | $h_3$ | $l_1$ | $b$ | $b_1$ |                       |                   |                  |
| MCB-MB26-2020-C             | 26                           | 20  | 20    | 43    | 90    | 20  | 37    | MBN...26...           | M6.0×25           | 15               |
| MCB-MB32-2020-C             | 32                           | 20  | 25    | 49    | 100   | 25  | 38    | MBN...32...           | M6.0×25           |                  |
| MCB-MB26-2525-C             | 26                           | 25  | 20    | 43    | 90    | 20  | 42    | MBN...26...           | M6.0×25           |                  |
| MCB-MB32-2525-C             | 32                           | 25  | 25    | 49    | 110   | 20  | 38    | MBN...32...           | M6.0×25           |                  |

## Feed rate recommendation

### (fz) Feed rates

| Schneidenbreite / Cutting width [mm] |            |            |            |            |           |           |           |
|--------------------------------------|------------|------------|------------|------------|-----------|-----------|-----------|
|                                      | 1,5        | 2          | 3          | 4          | 5         | 6         | 8         |
| M1                                   | 0,075-0,25 | 0,075-0,25 | 0,1-0,3    | 0,15-0,35  | 0,17-0,39 | 0,18-0,42 | 0,18-0,42 |
| F1                                   |            | 0,03-0,1   | 0,05-0,15  | 0,07-0,2   | 0,1-0,24  | 0,12-0,28 |           |
| M                                    |            | 0,075-0,25 | 0,1-0,3    | 0,15-0,35  | 0,17-0,39 | 0,18-0,42 |           |
| LM                                   |            | 0,05-0,2   | 0,05-0,25  | 0,05-0,3   |           |           |           |
| ST1                                  | 0,06-0,15  | 0,06-0,15  | 0,075-0,18 | 0,08-0,215 | 0,1-0,24  | 0,12-0,28 |           |
| T                                    |            | 0,055-0,12 | 0,07-0,15  | 0,08-0,21  | 0,1-0,23  | 0,12-0,26 |           |
| TI                                   |            | 0,075-0,25 | 0,1-0,3    | 0,15-0,35  | 0,17-0,39 | 0,18-0,42 |           |
| M2                                   |            | 0,05-0,15  | 0,075-0,2  | 0,1-0,23   | 0,1-0,28  | 0,14-0,3  |           |

### Cutting speed recommendation

|   |                                     |                                                                           | PTV28<br>v <sub>c</sub> [m/min] | PTT35<br>v <sub>c</sub> [m/min] | PAP28<br>v <sub>c</sub> [m/min] | MTM10<br>v <sub>c</sub> [m/min] | K10<br>v <sub>c</sub> [m/min] |
|---|-------------------------------------|---------------------------------------------------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|-------------------------------|
| P | Stahl<br>Steel                      | nicht legierter Stahl<br>non alloyed Steel                                | 80-180                          | 80-150                          | 80-180                          |                                 |                               |
|   |                                     | niedrig legierter Stahl gehärtet<br>low alloyed steel tempered            | 60-150                          | 70-120                          | 60-150                          |                                 |                               |
|   |                                     | hochlegierter Stahl gehärtet<br>high alloyed steel tempered               | 50-120                          | 60-100                          | 50-120                          |                                 |                               |
|   |                                     | korrosionsbeständiger Stahl gegläht<br>corrosion resistant steel annealed | 50-200                          | 90-160                          | 50-200                          |                                 |                               |
| M | Rostfreier Stahl<br>Stainless steel | geglüht perlitisch<br>annealed pearlitic                                  | 50-200                          |                                 | 50-200                          |                                 |                               |
|   |                                     | abgeschrecktes Austenit<br>quenched austenitic                            | 50-180                          |                                 | 50-180                          |                                 |                               |
|   |                                     | abgeschrecktes Duplex<br>quenched duplex                                  | 50-100                          |                                 | 50-100                          |                                 |                               |
|   |                                     | gehärtetes Martensit<br>hardened martensitic                              | 50-80                           |                                 | 50-80                           |                                 |                               |
| K | Gusseisen<br>Cast iron              | Grauguss<br>grey cast iron                                                |                                 |                                 |                                 | 100-120                         |                               |
|   |                                     | Kugelförmig<br>spheroidal                                                 |                                 |                                 |                                 | 100-180                         |                               |
|   |                                     | Formbar perlitisch<br>malleable pearlitic                                 |                                 |                                 |                                 | 80-160                          |                               |
| S | Exotisch<br>Exotic                  | Eisen-Basis<br>Fe base                                                    |                                 | 20-45                           |                                 |                                 |                               |
|   |                                     | Nickel- oder Kobaltbasis<br>Nickel or cobalt base                         |                                 | 15-25                           |                                 |                                 |                               |
|   |                                     | Titan<br>Titanium                                                         |                                 | 50-120                          |                                 |                                 |                               |
| N | Nicht-Eisen<br>Non-ferrous          | Alluminium-Knetlegierungen<br>Aluminium wrought alloys                    |                                 |                                 |                                 |                                 | 200-2000                      |
|   |                                     | Alluminium Gusslegierungen<br>Aluminium cast alloys                       |                                 |                                 |                                 |                                 | 400-1500                      |
|   |                                     | Kupferlegierungen (Bronze)<br>Copper alloys (bronze)                      |                                 |                                 |                                 |                                 | 200-600                       |



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