



w o r l d • s e l e c t i o n • t o o l s



W2019-1

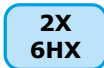
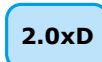
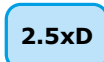
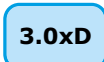
Icone Generali presenti in tutte le sezioni del catalogo

DIN	6537	371 376	1889	335 C		
Lunghezza tagliente / utensile						
	Extra corto	Corto	Lungo	Extra lungo		
Materiale	HSS	HSS-E	HSS EX	HSS Co8	HSS PM	MD
Trattamento	TiAlN	TiN	TiCN	WST	Rivestimento proprietario WST	
Tipo Gambo			CM	Refrigerazione		con fori di refrigerazione
	Cilindrico	Weldon	Cono morse			

Foratura

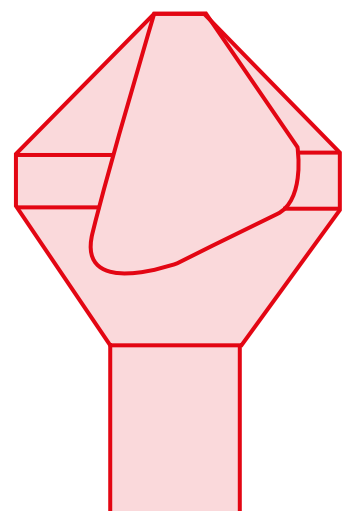
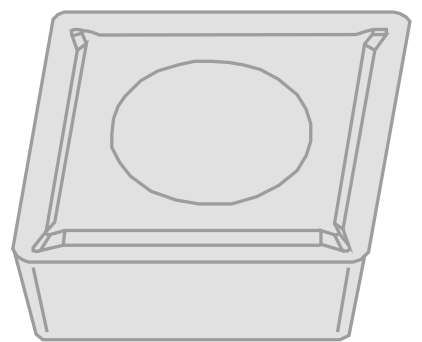
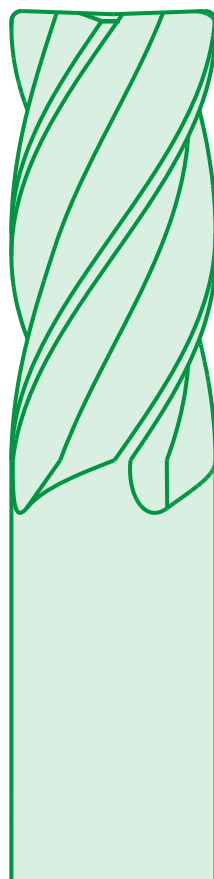
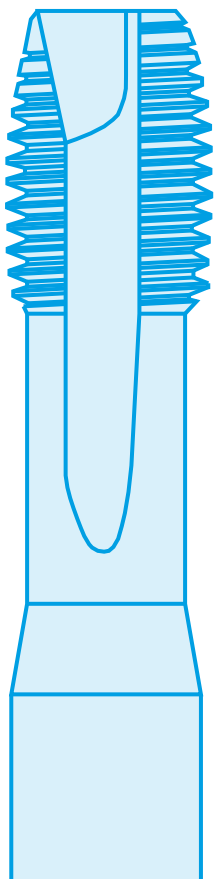
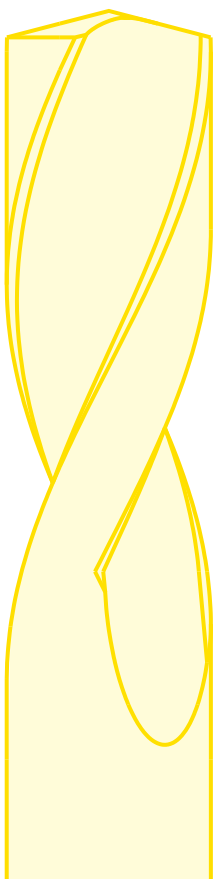
Trattamento	Vap	Profondità del foro	3xD	5xD	8xD	10xD
Angolo di testa	90° 	118° 	120° 	135° 	140° 	

Maschiatura

Tipo foro			Imbocco			
	Passante	Cieco		2 - 3 filetti	4 - 5 filetti	Preforo
Tipo filetto						
	Metrico	Metrico grosso	Metrico fine	Whitworth	Passo grosso per Helicoil	
Tolleranza						
Profondità di Maschiatura						

Fresatura

Numero taglienti	Z 1	Z 3,4	Z 4-6		
		3 e 4	da 4 a 6		
Angolo elica	30° 	30° 	30° 	P.V. 	P.V. 
	Spigolo vivo 30°	Torica 30°	Semisferica 30°	Torica Passo variabile	Sferica Passo variabile



CODICE		P4001	P4004	P4007	P4010	P4013
Range		5.0-50.0	13.0-30.0	13.0-30.0	13.0-30.0	1.0-13.0
Pagina		A2	A6	A7	A8	A9
Foto						
DIN		345	341	1870/1	1870/2	1897
Lunghezza utensile						
Materiale		HSS	HSS	HSS	HSS	HSS
Trattamento		Vap	Vap	Vap	Vap	Vap
Angolo di testa		118° 	118° 	118° 	118° 	118° 
Refrigerazione						
Gambo		CM	CM	CM	CM	
Acciaio < 500 N/mm ²	P1	✓✓	✓✓	✓✓	✓✓	✓✓
Acciaio < 750 N/mm ²	P2	✓✓	✓✓	✓✓	✓✓	✓✓
Acciaio < 900 N/mm ²	P3	✓✓	✓✓	✓✓	✓✓	✓✓
Acciaio < 1100 N/mm ²	P4	✓	✓	✓	✓	
Acciaio < 1500 N/mm ²	P5	✓	✓	✓	✓	
INOX < 800 N/mm ²	M1	✓	✓	✓	✓	✓
INOX > 800 N/mm ²	M2	✓	✓✓			
Ghisa	K1	✓	✓	✓	✓	✓
Leghe Alluminio < 10% Si	N1	✓	✓	✓	✓	✓
Leghe Alluminio > 10% Si	N2	✓	✓	✓	✓	✓
Materiali non ferrosi	N3					
Leghe di Titanio	S1					✓
Acciai Temprati > 45 HRC	H1					

I Scelta: ✓✓ | II Scelta: ✓

P4016	P4019	P3001	P3004	P3007	P3010	P3013	P3014
0.3-20.0	1.6-13.0	1.0-20.0	1.0-13.0	2.0-13.0	2.0-13.0	1.0-26.0	1.0-26.0
A14	A14	A14	A14	A21	A24	A9	A9
							
338	338	338	338	340	1869/1	1897	1897
							
HSS	HSS	HSS-E	HSS-E	HSS-E	HSS-E	HSS Co8	HSS Co8
Vap	TiN		TiN	Vap			TiCN
118°	118°	135°	135°	130°	130°	135°	135°
							
✓✓	✓✓	✓✓	✓✓	✓✓	✓	✓✓	✓✓
✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
✓✓	✓✓	✓✓	✓✓	✓		✓✓	✓✓
✓	✓	✓✓	✓✓		✓	✓✓	✓✓
			✓				✓
✓		✓		✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓
✓		✓					
✓	✓	✓	✓		✓	✓	✓

I Scelta: ✓✓ | II Scelta: ✓

CODICE		P3016	P3019	P1001	P1004	P1010
Range		1.0-20.0	2.0-12.0	1.0-13.0	3.0-20.0	3.0-20.0
Pagina		A14	A21	A25	A25	A29
Foto						
DIN		338	340	6539	6539	6537
Lunghezza utensile					3xD	3xD
Materiale		HSS Co8	HSS Co8	MD	MD	MD
Trattamento					TiAIN	TiAIN
Angolo di testa		135° 	135° 	118° 	140° 	140° 
Refrigerazione						
Gambo						
Acciaio < 500 N/mm ²	P1	✓	✓	✓✓	✓	✓
Acciaio < 750 N/mm ²	P2	✓✓	✓✓	✓✓	✓✓	✓✓
Acciaio < 900 N/mm ²	P3	✓✓	✓✓	✓✓	✓✓	✓✓
Acciaio < 1100 N/mm ²	P4				✓✓	✓✓
Acciaio < 1500 N/mm ²	P5				✓	✓
INOX < 800 N/mm ²	M1	✓✓	✓✓	✓	✓	✓
INOX > 800 N/mm ²	M2					
Ghisa	K1	✓	✓	✓	✓	✓
Leghe Alluminio < 10% Si	N1	✓	✓	✓		
Leghe Alluminio > 10% Si	N2					
Materiali non ferrosi	N3					
Leghe di Titanio	S1	✓	✓	✓		
Acciai Temprati > 45 HRC	H1					

I Scelta: ✓✓ | II Scelta: ✓

P1013	P1016	P1019	P1022	P1025	P1007	P1028
3.0-20.0	3.0-20.0	1.0-20.0	1.0-20.0	1.0-20.0	1.0-13.0	3.0-14.0
A29	A29	A33	A33	A33	A39	A41
						
6537	6537	6537	6537	6537	338	6537
3xD	3xD	5xD	5xD	5xD		8xD
MD	MD	MD	MD	MD	MD	MD
TiAIN	TiAIN	TiAIN	TiAIN	TiAIN		TiAIN
140°	140°	140°	140°	140°	118°	140°
						
						
✓	✓✓	✓	✓	✓✓	✓✓	✓
✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
✓✓		✓✓	✓✓			✓✓
✓		✓	✓			✓
✓	✓✓	✓	✓	✓✓	✓	✓
	✓✓			✓✓		
✓		✓	✓		✓	✓
	✓			✓	✓	
	✓			✓	✓	

I Scelta: ✓✓ | II Scelta: ✓

CODICE		P1031	P1034	P3022	P3025	P1040
Range		3.0-14.0	3.0-13.0	3.0-20.0	3.0-20.0	6.0-16.0
Pagina		A41	A44	A45	A45	A46
Foto						
DIN		6537		NC	NC	NC
Lunghezza utensile		8xD	10xD			
Materiale		MD	MD	HSS Co8	HSS Co8	MD
Trattamento		TiAIN	TiAIN			
Angolo di testa		140° 	140° 	90° 	120° 	90° 
Refrigerazione						
Gambo						
Acciaio < 500 N/mm ²	P1	✓✓	✓✓	✓	✓	✓✓
Acciaio < 750 N/mm ²	P2	✓✓	✓✓	✓✓	✓✓	✓✓
Acciaio < 900 N/mm ²	P3	✓✓	✓✓	✓✓	✓✓	✓✓
Acciaio < 1100 N/mm ²	P4		✓			✓✓
Acciaio < 1500 N/mm ²	P5					✓✓
INOX < 800 N/mm ²	M1	✓✓		✓	✓	✓
INOX > 800 N/mm ²	M2	✓✓				
Ghisa	K1			✓	✓	✓
Leghe Alluminio < 10% Si	N1	✓		✓	✓	✓
Leghe Alluminio > 10% Si	N2					
Materiali non ferrosi	N3					
Leghe di Titanio	S1	✓				✓
Acciai Temprati > 45 HRC	H1					

I Scelta: ✓✓ | II Scelta: ✓

P1043	P4022	P4025	P4028	P3028	P3031	P1037
6.0-12.0	0.5-10.0	1.0-6.3	1.6-8.0	0.5-6.3	1.0-5.0	1.0-4.0
A46	A47	A48	A49	A47	A50	A51
NC	333	333	333	333	333	333
MD	HSS	HSS	HSS	HSS EX	HSS EX	MD
120°	120°	120°	120°	120°	120°	120°
✓✓	✓	✓	✓	✓	✓	✓✓
✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓
✓✓						✓
✓	✓	✓	✓	✓	✓	✓
						✓
✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓

I Scelta: ✓✓ | II Scelta: ✓

CODICE	M4001	M3001	M4004	M3004	M3016	M3007
Tipo foro						
Tipo filetto	M	M	G (BSP)	M	M	M
Range	M2 M36	M3 M20	G1/16" G1"	M2 M30	M2 M30	M3 M30
Pagina	B2	B4	B5	B6	B6	B7

Foto



DIN	352	352	5157	371 376	371 376	376
Tolleranza	2/6H	2/6H		6H	6H	2/6H
Materiale	HSS	HSS-E	HSS	HSS-E	HSS-E	HSS-E
Trattamento					TiN	
Imbocco				B	B	B
Prof. Maschiatura	2.0xD	2.0xD	2.0xD	3.0xD	3.0xD	3.0xD

Refrigerazione

Angolo elica

Acciaio < 500 N/mm ²	P1	✓✓		✓✓	✓✓	✓✓	✓✓
Acciaio < 750 N/mm ²	P2	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
Acciaio < 900 N/mm ²	P3	✓✓	✓✓	✓✓	✓	✓	✓✓
Acciaio < 1100 N/mm ²	P4		✓✓				
Acciaio < 1500 N/mm ²	P5						
INOX < 800 N/mm ²	M1				✓✓	✓✓	
INOX > 800 N/mm ²	M2						
Ghisa	K1						
Leghe Alluminio < 10% Si	N1				✓✓	✓✓	
Leghe Alluminio > 10% Si	N2						
Materiali non ferrosi	N3				✓	✓	
Leghe di Titanio	S1						
Acciai Temprati > 45 HRC	H1						

I Scelta: ✓✓ | II Scelta: ✓

● N.B. Maschio finitore singolo pagina B3

M3010	M3034	M3037	M3013	M3019	M3043	M2001
						
M	M	M	M	M	M	M
M2.5 M20	M3 M16	M3 M24	M2 M16	M2 M20	M14 M20	M2 M12
B8	B9	B10	B11	B12	B13	B14
						
371 376	371 376	371 376	371 376	371 376	371 376	371 376
2/6H	2/6H	2/6H	2X 6HX	2X 6HX	6H	6H
HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS PM
	TiAlN	TiAlN	WST	Vap	Vap	Vap
B	B	B	B	B	B	B
3.0xD	3.0xD	3.0xD	3.0xD	3.0xD	3.0xD	3.0xD

			✓✓	✓✓	✓	✓
✓✓	✓	✓✓	✓✓	✓✓		
✓✓	✓✓	✓✓	✓	✓		
✓✓	✓✓	✓✓				
	✓					
			✓✓	✓✓	✓✓	✓✓
			✓✓	✓✓	✓✓	✓✓

I Scelta: ✓✓ | II Scelta: ✓

CODICE	M2004	M3040	M3022	M3025	M3028	M3031
Tipo foro						
Tipo filetto	M	M	M	M	M	M
Range	M2.5 M12	M3 M20	M2 M16	M2 M16	M2 M12	M2 M16
Pagina	B15	B16	B17	B18	B19	B20

Foto



DIN	371 376	371 376	371 376	371 376	371 376	371 376
Tolleranza	2/6H	2X 6HX	2X 6HX	3X 6GX	2X 6HX	2X 6HX
Materiale	HSS PM	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E
Trattamento	Vap	NI	TiN	TiN	TiN	TiAlN
Imbocco	B	C	C	C	C	C
Prof. Maschiatura	3.0xD	2.0xD	3.0xD	3.0xD	2.0xD	3.0xD
Refrigerazione						

Angolo elica

Acciaio < 500 N/mm ²	P1	✓		✓	✓	✓	✓
Acciaio < 750 N/mm ²	P2						
Acciaio < 900 N/mm ²	P3						
Acciaio < 1100 N/mm ²	P4						
Acciaio < 1500 N/mm ²	P5						
INOX < 800 N/mm ²	M1	✓✓		✓	✓	✓	✓
INOX > 800 N/mm ²	M2	✓✓					
Ghisa	K1		✓✓				
Leghe Alluminio < 10% Si	N1			✓✓	✓✓	✓✓	✓✓
Leghe Alluminio > 10% Si	N2						
Materiali non ferrosi	N3						
Leghe di Titanio	S1						
Acciai Temprati > 45 HRC	H1						

I Scelta: ✓✓ | II Scelta: ✓

M3046	M3049	M3052	M3130	M3133	M3142	M3145
						
M-Az	MF	MF	UNC	UNC	UNF	UNF
M2 M12	M4 M30	M4 M30	#4 1	#4 1	#4 1	#4 1
B21	B22	B22	B23	B23	B24	B24
						
371 376	374	374	371 376	371 376	371 374	371 374
2/6H	6H	6H	2B	2B	2B	2B
HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E
		TiN		TiN		TiN
B	B	B	B	B	B	B
3.0xD	3.0xD	3.0xD	3.0xD	3.0xD	3.0xD	3.0xD

	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
	✓	✓	✓✓	✓✓	✓✓	✓✓
			✓	✓	✓	✓
	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
			✓	✓	✓	✓
			✓✓	✓✓	✓✓	✓✓
✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
✓				✓		✓
✓	✓	✓				
			✓	✓✓	✓	✓✓

I Scelta: ✓✓ | II Scelta: ✓

CODICE	M3055	M3058 ●	M3061	M3076	M3067	M3070
Tipo foro						
Tipo filetto	G (BSP)	EG-M	M	M	M	M
Range	G1/8" G1"	M2.5 M16	M2 M30	M2 M30	M3 M16	M3 M30
Pagina	B25	B26	B27	B27	B28	B29
Foto						
DIN	5157	371 376	371 376	371 376	371 376	371 376
Tolleranza		6H	6H	6H	2/6H	2/6H
Materiale	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E
Trattamento				TiN		
Imbocco	B	B	C	C	C	C
Prof. Maschiatura	3.0xD	3.0xD	2.5xD	2.5xD	2.5xD	2.5xD
Refrigerazione						
Angolo elica						
Acciaio < 500 N/mm ²	P1	✓✓	✓✓	✓✓	✓✓	
Acciaio < 750 N/mm ²	P2	✓✓	✓✓	✓✓	✓✓	✓✓
Acciaio < 900 N/mm ²	P3	✓✓	✓	✓	✓✓	✓✓
Acciaio < 1100 N/mm ²	P4					✓✓
Acciaio < 1500 N/mm ²	P5					
INOX < 800 N/mm ²	M1		✓✓	✓✓		
INOX > 800 N/mm ²	M2					
Ghisa	K1					
Leghe Alluminio < 10% Si	N1	✓✓	✓✓	✓✓		
Leghe Alluminio > 10% Si	N2	✓				
Materiali non ferrosi	N3	✓	✓	✓		
Leghe di Titanio	S1					
Acciai Temprati > 45 HRC	H1					

I Scelta: ✓✓ | II Scelta: ✓

● Maschio per Helicoil

M3085	M3088	M3091	M3079	M3082	M3073*	M3094*
						
M	M	M	M	M	M	M
M3 M20	M3 M24	M3 M30	M3 M30	M3 M16	M2 M16	M2 M20
B30	B31	B32	B33	B34	B35	B36
						
371 376	371 376	371 376	371 376	371 376	371 376	371 376
2/6H	2/6H	2/6H	2/6H	2/6H	2/6H	2/6H
HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E
Vap	Vap	Vap	TiAlN	TiAlN	WST	Vap
C	C	C	C	C	C	C
2.5xD	2.5xD	2.5xD	2.5xD	2.5xD	2.5xD	2.5xD
						
✓✓	✓✓	✓	✓✓		✓✓	✓✓
	✓✓	✓✓	✓✓	✓	✓✓	✓✓
	✓✓	✓✓	✓✓	✓✓	✓	✓
		✓		✓✓		
				✓		
✓					✓✓	✓✓
					✓✓	✓✓

I Scelta: ✓✓ | II Scelta: ✓

* Maschio rastremato

CODICE	M3097	M2007	M2010	M3064	M3100	M3103
Tipo foro						
Tipo filetto	M	M	M	M	MF	MF
Range	M14 M20	M2 M12	M2.5 M12	M2 M12	M4 M30	M4 M30
Pagina	B37	B38	B39	B40	B41	B41

Foto



DIN	371 376	371 376	371 376	371 376	374	374
Tolleranza	6H	6H	2/6H	2/6H	6H	6H
Materiale	HSS-E	HSS PM	HSS PM	HSS-E	HSS-E	HSS-E
Trattamento	Vap	Vap	Vap			TiN
Imbocco	C	C	C	C	C	C
Prof. Maschiatura	2.5xD	2.5xD	2.5xD	2.5xD	2.5xD	2.5xD

Refrigerazione

Angolo elica							
Acciaio < 500 N/mm ²	P1	✓	✓	✓		✓✓	✓✓
Acciaio < 750 N/mm ²	P2					✓✓	✓✓
Acciaio < 900 N/mm ²	P3					✓	✓
Acciaio < 1100 N/mm ²	P4						
Acciaio < 1500 N/mm ²	P5						
INOX < 800 N/mm ²	M1	✓✓	✓✓	✓✓		✓✓	✓✓
INOX > 800 N/mm ²	M2	✓✓	✓✓	✓✓			
Ghisa	K1						
Leghe Alluminio < 10% Si	N1				✓✓	✓✓	✓✓
Leghe Alluminio > 10% Si	N2				✓		
Materiali non ferrosi	N3				✓	✓	✓
Leghe di Titanio	S1						
Acciai Temprati > 45 HRC	H1						

I Scelta: ✓✓ | II Scelta: ✓

M3124	M3127	M3136	M3139	M3106	M3109	M3112
						
UNC	UNC	UNF	UNF	G (BSP)	G (BSP)	G (BSP)
#4 1	#4 1	#4 1	#4 1	G1/8" G1"	G1/8" G1"	G1/8" G1"
B42	B42	B43	B43	B44	B45	B46
						
371 376	371 376	371 374	371 374	5156	5156	5156
2B	2B	2B	2B			
HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E
	TiN		TiN			Vap
C	C	C	C	C	C	C
2.5xD	2.5xD	2.5xD	2.5xD	2.5xD	2.5xD	2.5xD
						
✓✓	✓✓	✓✓	✓✓	✓✓		✓✓
✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓
✓	✓	✓	✓		✓✓	
✓✓	✓✓	✓✓	✓✓			✓✓
✓	✓	✓	✓			✓✓
✓✓	✓✓	✓✓	✓✓			
✓✓	✓✓	✓✓	✓✓			
	✓		✓			
✓	✓✓	✓	✓✓			

I Scelta: ✓✓ | II Scelta: ✓

CODICE	M3115	M4007	M3118	M4010	M3121		
Tipo foro							
Tipo filetto	EG-M	M/MF	M/MF	G (BSP)	G (BSP)		
Range	M2.5 M16	M2 M30	MF4 MF30	M2 M20	MF4 MF20	G1/8" G1"	G1/8" G1"
Pagina	B47	B48	B50	B51	B51		

Foto



DIN	371 376	13	13	228	228
Tolleranza	6H	6G	6G	6G	6G
Materiale	HSS-E	HSS	HSS-E	HSS	HSS-E
Trattamento					
Imbocco	C				
Prof. Maschiatura	2.5xD				
Refrigerazione					

Angolo elica



Acciaio < 500 N/mm ²	P1		✓✓		✓✓	
Acciaio < 750 N/mm ²	P2		✓✓	✓✓	✓✓	✓✓
Acciaio < 900 N/mm ²	P3		✓	✓✓	✓	✓✓
Acciaio < 1100 N/mm ²	P4			✓		✓
Acciaio < 1500 N/mm ²	P5					
INOX < 800 N/mm ²	M1			✓✓		✓✓
INOX > 800 N/mm ²	M2			✓		✓
Ghisa	K1					
Leghe Alluminio < 10% Si	N1	✓✓	✓		✓	
Leghe Alluminio > 10% Si	N2	✓				
Materiali non ferrosi	N3	✓				
Leghe di Titanio	S1					
Acciai Temprati > 45 HRC	H1					

I Scelta: ✓✓ | II Scelta: ✓

● Maschio per Helicoil

M1001	M1004	M1007
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M	M	MF
M3 M20	M6 M20	M8 M20
B52	B53	B54



13

13

13

MD

MD

MD

TiAlN

TiAlN

TiAlN



✓	✓	✓
✓✓	✓✓	✓✓
✓✓	✓✓	✓✓
✓✓	✓✓	✓✓
✓✓	✓✓	✓✓
✓	✓	✓
✓	✓	✓
✓✓	✓✓	✓✓
✓	✓	✓

I Scelta: ✓✓ | II Scelta: ✓

CODICE		F3001	F1001	F3004	F3013	F2001	F1004	F1010
Range		3.0-9.0	2.0-12.0	1.0-40.0	1.0-40.0	2.0-20.0	2.0-20.0	2.0-20.0
Pagina		C2	C3	C4	C4	C6	C7	C7
Foto								
Modello		Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo
DIN				327	327	327	6527	6527
Lunghezza Tagliente								
Materiale		HSS-E	MD	HSS Co8	HSS Co8	HSS PM	MD	MD
Trattamento					WST	WST		WST
N° Taglienti		Z 1	Z 1	Z 2	Z 2	Z 2	Z 2	Z 2
Angolo Elica		30°	30°	30°	30°	30°	30°	30°
Gambo								
Acciaio < 500 N/mm ²	P1	✓✓		✓✓	✓✓	✓✓	✓✓	✓✓
Acciaio < 750 N/mm ²	P2	✓✓		✓✓	✓✓	✓✓	✓✓	✓✓
Acciaio < 900 N/mm ²	P3			✓✓	✓✓	✓✓	✓✓	✓✓
Acciaio < 1100 N/mm ²	P4			✓✓	✓✓	✓✓	✓✓	✓✓
Acciaio < 1500 N/mm ²	P5			✓	✓		✓✓	✓✓
INOX < 800 N/mm ²	M1			✓	✓	✓✓	✓	✓
INOX > 800 N/mm ²	M2					✓	✓	✓
Ghisa	K1			✓✓	✓	✓✓	✓	✓
Leghe Alluminio < 10% Si	N1	✓	✓✓	✓	✓		✓	✓
Leghe Alluminio > 10% Si	N2		✓✓					
Materiali non ferrosi	N3		✓✓			✓		
Leghe di Titanio	S1			✓	✓		✓	✓
Acciai Temprati > 45 HRc	H1							

I Scelta: ✓✓ | II Scelta: ✓

F3022	F3025	F3007	F3031	F3034	F2004	F1022	F1025	F1028
1.5-40.0	2.5-20.0	1.0-32.0	1.5-40.0	2.5-20.0	3.0-20.0	2.0-20.0	3.5-20.0	2.0-20.0
C8	C9	C10	C8	C9	C11	C12	C13	C14
								
Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo
844	844	844	844	844	844	6527	6528	
								
HSS Co8	HSS Co8	HSS Co8	HSS Co8	HSS Co8	HSS PM	MD	MD	MD
			TiAlN	TiAlN	WST			
Z 2	Z 2	Z 2	Z 2	Z 2	Z 2	Z 2	Z 2	Z 2
30°	30°	42°	30°	30°	30°	30°	30°	45°
								
✓✓	✓✓	✓	✓✓	✓✓	✓✓	✓✓	✓✓	
✓✓	✓✓		✓✓	✓✓	✓✓	✓✓	✓✓	
✓	✓		✓✓	✓✓	✓✓	✓✓	✓✓	
			✓	✓	✓✓	✓✓	✓✓	
			✓	✓	✓	✓✓	✓✓	
					✓✓	✓	✓	
					✓✓	✓	✓	
					✓✓	✓	✓	
✓	✓	✓✓	✓	✓		✓	✓	✓✓
					✓			✓
						✓	✓	

I Scelta: ✓✓ | II Scelta: ✓

CODICE		F1034	F1037	F1019	F1016	F3028	F1007	F1013
Range		2.0-20.0	3.5-20.0	0.5-18.0	1.0-16.0	2.0-20.0	1.0-12.0	1.0-12.0
Pagina		C12	C13	C15	C15	C16	C17	C17
Foto								
Modello		Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo
DIN		6527	6528			844		
Lunghezza Tagliente								
Materiale		MD	MD	MD	MD	HSS Co8	MD	MD
Trattamento		WST	WST	TiAlN	TiAlN			WST
N° Taglienti		Z 2	Z 2	Z 2	Z 2	Z 2	Z 2	Z 2
Angolo Elica		30°	30°	30°	35°	42°	30°	30°
Gambo								
Acciaio < 500 N/mm ²	P1	✓✓	✓✓	✓	✓	✓	✓✓	✓✓
Acciaio < 750 N/mm ²	P2	✓✓	✓✓	✓✓	✓✓		✓✓	✓✓
Acciaio < 900 N/mm ²	P3	✓✓	✓✓	✓✓	✓✓		✓✓	✓✓
Acciaio < 1100 N/mm ²	P4	✓✓	✓✓	✓✓	✓✓		✓✓	✓✓
Acciaio < 1500 N/mm ²	P5	✓✓	✓✓	✓	✓		✓✓	✓✓
INOX < 800 N/mm ²	M1	✓	✓		✓✓		✓	✓
INOX > 800 N/mm ²	M2	✓	✓		✓✓		✓	✓
Ghisa	K1	✓	✓	✓			✓	✓
Leghe Alluminio < 10% Si	N1	✓	✓			✓✓	✓	✓
Leghe Alluminio > 10% Si	N2							
Materiali non ferrosi	N3					✓		
Leghe di Titanio	S1	✓	✓		✓✓		✓	✓
Acciai Temprati > 45 HRc	H1							

I Scelta: ✓✓ | II Scelta: ✓

F1031	F1040	F1043	F1046	F1052	F1055	F1061	F1064	F1049
1.0-20.0	2.0-16.0	3.0-20.0	3.0-20.0	0.5-1.8	2.0-20.0	0.5-1.8	2.0-20.0	1.0-16.0
C18	C19	C20	C21	C22	C22	C22	C22	C23
								
Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo
								
MD	MD	MD	MD	MD	MD	MD	MD	MD
WST	TiAlN		WST			WST	WST	TiAlN
Z 2	Z 2	Z 2	Z 2	Z 3	Z 3	Z 3	Z 3	Z 3
30°	30°	30°	30°	30°	30°	30°	30°	30°
								
✓✓	✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓
✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓
✓	✓	✓	✓	✓	✓	✓	✓	✓
✓		✓	✓	✓	✓	✓	✓	
✓	✓	✓	✓	✓	✓	✓	✓	✓
✓		✓	✓	✓	✓	✓	✓	
✓			✓	✓	✓	✓	✓	
	✓							

I Scelta: ✓✓ | II Scelta: ✓

CODICE	F3037	F3052	F3010	F3043	F3061	F3019	F2007
Range	1.0-40.0	1.5-10.0	2.0-25.0	1.0-40.0	1.5-10.0	2.0-25.0	3.0-20.0
Pagina	C24	C25	C26	C24	C25	C26	C11
Foto							

Modello		Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo
DIN		844		844		844	844
Lunghezza Tagliente							
Materiale		HSS Co8	HSS Co8	HSS Co8	HSS Co8	HSS Co8	HSS PM
Trattamento				WST	WST	TiAlN	WST
N° Taglienti		Z 3	Z 3	Z 2-4	Z 3	Z 3	Z 2-4
Angolo Elica		30°	30°	50°	30°	30°	50°
Gambo							
Acciaio < 500 N/mm²	P1	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
Acciaio < 750 N/mm²	P2	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
Acciaio < 900 N/mm²	P3	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
Acciaio < 1100 N/mm²	P4	✓	✓✓	✓	✓✓	✓✓	✓✓
Acciaio < 1500 N/mm²	P5		✓		✓	✓	✓
INOX < 800 N/mm²	M1	✓	✓		✓	✓	✓✓
INOX > 800 N/mm²	M2				✓		✓
Ghisa	K1	✓	✓		✓	✓	✓✓
Leghe Alluminio < 10% Si	N1	✓	✓	✓	✓	✓	
Leghe Alluminio > 10% Si	N2						
Materiali non ferrosi	N3						✓
Leghe di Titanio	S1	✓	✓		✓	✓	
Acciai Temprati > 45 HRc	H1						

I Scelta: ✓✓ | II Scelta: ✓

F1073	F1076	F1079	F1085	F1088	F1091	F1094	F3058	F1058
3.0-16.0	3.5-20.0	3.0-20.0	3.0-16.0	3.5-20.0	3.0-20.0	6.0-12.0	10.0-20.0	2.0-20.0
C27	C13	C28	C27	C13	C28	C29	C16	C17
								

Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo
6527	6528	6527	6527	6528	6527		844	
								
MD	MD	MD	MD	MD	MD	MD	HSS Co8	MD
			WST	WST	WST	TiAlN		
Z 3	Z 3	Z 3	Z 3	Z 3	Z 3	Z 3	Z 3	Z 3
								
								
✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓	✓✓	✓✓
✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓	✓✓
✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓		✓✓
✓✓	✓✓	✓✓	✓✓	✓✓		✓		✓✓
✓	✓	✓	✓	✓	✓	✓✓		✓
✓	✓		✓	✓		✓		✓
✓	✓	✓	✓	✓	✓			✓
✓	✓	✓✓	✓	✓	✓✓		✓✓	✓
							✓	
✓	✓	✓	✓	✓	✓	✓✓		✓

I Scelta: ✓✓ | II Scelta: ✓

CODICE	F1082	F1067	F1070	F3055	F3064	F1118	F3076
Range	3.0-20.0	1.0-20.0	1.0-16.0	2.0-32.0	2.0-32.0	6.0-16.0	6.0-25.0
Pagina	C30	C17	C31	C32	C32	C33	C34
Foto							

Modello	Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo
DIN				844	844		844
Lunghezza Tagliente							
Materiale	MD	MD	MD	HSS Co8	HSS Co8	MD	HSS Co8
Trattamento		WST	TiAIN		WST	TiAIN	
N° Taglienti	Z 3	Z 3	Z 3	Z 3	Z 3	Z 4,5	Z 3-5
Angolo Elica	45°	30°	38°	30°	30°	45°	30°
Gambo							

Acciaio < 500 N/mm ²	P1		✓✓	✓	✓✓	✓✓	✓	✓✓
Acciaio < 750 N/mm ²	P2		✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
Acciaio < 900 N/mm ²	P3		✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
Acciaio < 1100 N/mm ²	P4		✓✓	✓✓	✓✓	✓✓	✓✓	
Acciaio < 1500 N/mm ²	P5		✓✓	✓✓	✓	✓	✓	
INOX < 800 N/mm ²	M1		✓	✓	✓	✓	✓✓	✓
INOX > 800 N/mm ²	M2		✓			✓	✓	
Ghisa	K1		✓	✓	✓	✓		✓
Leghe Alluminio < 10% Si	N1	✓✓	✓		✓	✓		✓
Leghe Alluminio > 10% Si	N2							
Materiali non ferrosi	N3							
Leghe di Titanio	S1		✓		✓	✓	✓✓	✓
Acciai Temprati > 45 HRc	H1			✓				

I Scelta: ✓✓ | II Scelta: ✓

F3079	F3070	F3082	F3088	F3091	F2010	F2013	F2016	F1127
6.0-30.0	2.0-25.0	2.0-25.0	6.0-25.0	6.0-25.0	3.0-20.0	6.0-25.0	4.0-25.0	3.0-20.0
C35	C36	C36	C34	C35	C37	C38	C39	C40

Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo
844	844	327	327	327	844	844	844	6527
HSS Co8	HSS Co8	HSS Co8	HSS Co8	HSS Co8	HSS PM	HSS PM	HSS PM	MD
		WST	WST	WST	WST	WST	WST	
Z 3-6	Z 4	Z 4	Z 3-5	Z 3-5	Z 4	Z 3-5	Z 3-6	Z 4
30°	30°	30°	30°	30°	30°	30°	45°	30°
✓✓	✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
	✓	✓	✓	✓	✓	✓✓	✓✓	✓✓
	✓	✓	✓	✓	✓	✓	✓	✓✓
✓	✓	✓	✓	✓	✓✓	✓✓	✓✓	✓
						✓	✓	✓
✓	✓	✓	✓	✓	✓✓	✓✓	✓✓	✓
✓	✓	✓	✓	✓				✓
					✓			
✓	✓	✓	✓	✓				✓

I Scelta: ✓✓ | II Scelta: ✓

CODICE	F1097	F1289	F1130	F1133	F1103	F1112	F1115
Range	2.0-20.0	4.0-20.0	3.0-20.0	4.0-20.0	2.0-20.0	2.0-20.0	2.0-16.0
Pagina	C41	C42	C40	C42	C41	C43	C15
Foto							

Modello		Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo
DIN		6527	6528	6527	6528	6527	
Lunghezza Tagliente							
Materiale		MD	MD	MD	MD	MD	MD
Trattamento				WST	WST	WST	TiAIN
N° Taglienti		Z 4	Z 4	Z 4	Z 4	Z 4	Z 4
Angolo Elica		30°	30°	30°	30°	30°	35°
Gambo							
Acciaio < 500 N/mm²	P1	✓✓	✓✓	✓✓	✓✓	✓✓	✓
Acciaio < 750 N/mm²	P2	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
Acciaio < 900 N/mm²	P3	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
Acciaio < 1100 N/mm²	P4	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
Acciaio < 1500 N/mm²	P5	✓✓	✓✓	✓✓	✓✓	✓✓	✓
INOX < 800 N/mm²	M1	✓	✓	✓	✓	✓	✓✓
INOX > 800 N/mm²	M2	✓	✓	✓	✓	✓	✓
Ghisa	K1	✓	✓	✓	✓	✓	
Leghe Alluminio < 10% Si	N1	✓	✓	✓	✓	✓	
Leghe Alluminio > 10% Si	N2						
Materiali non ferrosi	N3						
Leghe di Titanio	S1	✓	✓	✓	✓	✓	✓✓
Acciai Temprati > 45 HRc	H1					✓	

I Scelta: ✓✓ | II Scelta: ✓

F1121	F1124	F1151	F1154	F3100	F3094	F3103	F3097	F2019
3.0-20.0	3.0-20.0	3.0-20.0	3.0-20.0	2.0-20.0	6.0-20.0	2.0-20.0	6.0-20.0	3.0-25.0
C44	C45	C46	C46	C47	C48	C47	C48	C16

Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo
6527		6527		844	844	844	844	844
MD	MD	MD	MD	HSS Co8	HSS Co8	HSS Co8	HSS Co8	HSS PM
TiAIN	TiAIN	TiAIN	TiAIN			TiAIN	TiAIN	WST
Z 4	Z 4	Z 4	Z 4	Z 4	Z 3,4	Z 4	Z 3,4	Z 4
P.V.	P.V.	P.V.	P.V.	30°	30°	30°	30°	30°
✓	✓✓	✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
✓✓	✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
✓✓	✓	✓✓	✓✓	✓	✓✓	✓	✓✓	✓✓
✓✓	✓	✓✓	✓	✓	✓	✓	✓✓	✓
✓		✓			✓		✓	
	✓✓		✓✓					✓✓
	✓		✓					
✓✓		✓						✓✓
				✓	✓	✓	✓	
								✓✓
	✓✓		✓✓					

I Scelta: ✓✓ | II Scelta: ✓

CODICE	F1100	F1106	F1109	F1148	F1136	F1139	F1142
Range	2.0-16.0	2.0-16.0	1.0-8.0	6.0-20.0	2.0-20.0	6.0-20.0	6.0-20.0
Pagina	C17	C17	C18	C49	C19	C49	C49
Foto							

Modello		Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo
DIN							
Lunghezza Tagliente							
Materiale		MD	MD	MD	MD	MD	MD
Trattamento			WST	WST	WST	TiAIN	TiAIN
N° Taglienti		Z 4	Z 4	Z 4	Z 3,4	Z 4	Z 3,4
Angolo Elica		30°	30°	30°	30°	20°	30°
Gambo							
Acciaio < 500 N/mm ²	P1	✓✓	✓✓	✓✓	✓✓	✓	✓
Acciaio < 750 N/mm ²	P2	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
Acciaio < 900 N/mm ²	P3	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
Acciaio < 1100 N/mm ²	P4	✓✓	✓✓	✓✓	✓✓	✓✓	✓
Acciaio < 1500 N/mm ²	P5	✓✓	✓✓	✓✓	✓✓	✓	✓
INOX < 800 N/mm ²	M1	✓	✓	✓	✓		✓✓
INOX > 800 N/mm ²	M2	✓	✓	✓	✓		✓
Ghisa	K1	✓	✓	✓	✓	✓	
Leghe Alluminio < 10% Si	N1	✓	✓	✓	✓		
Leghe Alluminio > 10% Si	N2						
Materiali non ferrosi	N3						
Leghe di Titanio	S1	✓	✓	✓	✓		✓✓
Acciai Temprati > 45 HRc	H1					✓	✓

I Scelta: ✓✓ | II Scelta: ✓

F1145	F2022	F1157	F1160	F1163	F3106	F3109	F1172	F1175
4.0-16.0	6.0-25.0	3.0-20.0	3.0-20.0	6.0-20.0	22.0-40.0	22.0-32.0	6.0-20.0	6.0-16.0
C50	C51	C20	C52	C46	C53	C53	C54	C54
								
Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo
	844				844	844		
								
MD	HSS PM	MD	MD	MD	HSS Co8	HSS Co8	MD	MD
TiAlN	WST		WST	TiAlN		TiAlN	TiAlN	TiAlN
Z 3-5	Z 3-5	Z 4	Z 4	Z 5	Z 6	Z 6	Z 6,8	Z 6
45°	30°	30°	30°	P.V.	30°	30°	45°	45°
								
✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓	✓
✓✓	✓✓	✓✓	✓✓	✓	✓✓	✓✓	✓✓	✓✓
✓✓	✓✓	✓✓	✓✓	✓	✓	✓	✓✓	✓✓
✓	✓✓	✓✓	✓✓				✓✓	✓✓
✓	✓	✓✓	✓✓				✓✓	✓✓
✓✓	✓✓	✓	✓	✓✓	✓	✓		✓✓
✓	✓	✓	✓	✓✓				✓✓
	✓✓	✓	✓		✓	✓	✓	
		✓	✓		✓	✓		
✓✓		✓	✓		✓	✓		
							✓✓	

I Scelta: ✓✓ | II Scelta: ✓

CODICE		F1166	F1169	F3112	F3115	F1178	F1181	F1190
Range		3.0-20.0	12.0-20.0	22.0-32.0	22.0-32.0	6.0-20.0	2.0-12.0	3.0-12.0
Pagina		C55	C56	C57	C57	C58	C59	C60
Foto								
Modello		Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo	Spigolo vivo	Torica	Torica
DIN				844	844			
Lunghezza Tagliente								
Materiale		MD	MD	HSS Co8	HSS Co8	MD	MD	MD
Trattamento		WST	WST		TiAIN	TiAIN	WST	WST
N° Taglienti		Z 4,6	Z 6	Z 6	Z 6	Z 6	Z 2	Z 2
Angolo Elica		45°	45°	30°	30°	45°	30°	30°
Gambo								
Acciaio < 500 N/mm ²	P1	✓	✓	✓✓	✓✓	✓	✓✓	✓✓
Acciaio < 750 N/mm ²	P2	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
Acciaio < 900 N/mm ²	P3	✓✓	✓✓	✓	✓	✓✓	✓✓	✓✓
Acciaio < 1100 N/mm ²	P4	✓✓	✓✓			✓✓	✓✓	✓✓
Acciaio < 1500 N/mm ²	P5	✓	✓✓			✓✓	✓✓	✓✓
INOX < 800 N/mm ²	M1						✓	✓
INOX > 800 N/mm ²	M2							
Ghisa	K1	✓	✓			✓	✓	✓
Leghe Alluminio < 10% Si	N1			✓	✓		✓	✓
Leghe Alluminio > 10% Si	N2							
Materiali non ferrosi	N3							
Leghe di Titanio	S1							
Acciai Temprati > 45 HRc	H1		✓			✓✓		

I Scelta: ✓✓ | II Scelta: ✓

F1193	F1184	F1196	F1187	F1202	F1199	F3118	F3121	F1205
3.0-16.0	2.0-12.0	3.0-12.0	3.0-20.0	3.0-20.0	3.0-16.0	2.0-25.0	2.0-25.0	2.0-20.0
C61	C59	C60	C62	C63	C64	C65	C65	C66
Torica	Torica	Torica	Torica	Torica	Torica	Semi sferica	Semi sferica	Semi sferica
						327	327	
	WST	WST	TiAlN	TiAlN	TiAlN		WST	
Z 3	Z 4	Z 4	Z 4	Z 4	Z 4	Z 2	Z 2	Z 2
45°	30°	30°	P.V.	P.V.	30°	30°	30°	30°
	✓✓	✓✓	✓✓	✓✓	✓	✓✓	✓✓	✓✓
	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
	✓✓	✓✓	✓	✓✓	✓✓	✓✓	✓✓	✓✓
	✓✓	✓✓	✓	✓	✓✓	✓	✓	✓✓
	✓	✓	✓✓	✓✓		✓	✓	✓
			✓✓	✓✓	✓	✓	✓	
	✓	✓			✓	✓	✓	✓
✓✓	✓	✓				✓	✓	✓
			✓✓	✓✓		✓	✓	✓
					✓			

I Scelta: ✓✓ | II Scelta: ✓

CODICE		F1208	F1217	F1211	F1214	F1280	F1223	F1220
Range		2.0-20.0	1.0-12.0	3.0-16.0	3.0-16.0	1.0-12.0	2.0-12.0	1.0-20.0
Pagina		C66	C67	C68	C68	C69	C70	C71
Foto								
Modello		Semi sferica	Semi sferica	Semi sferica	Semi sferica	Semi sferica	Semi sferica	Semi sferica
DIN								
Lunghezza Tagliente								
Materiale		MD	MD	MD	MD	MD	MD	MD
Trattamento		WST	TiAIN		WST	TiAIN	TiAIN	WST
N° Taglienti		Z 2	Z 2	Z 2	Z 2	Z 2	Z 2	Z 2
Angolo Elica		30°	30°	30°	30°	30°	30°	30°
Gambo								
Acciaio < 500 N/mm ²	P1	✓✓	✓	✓✓	✓✓	✓	✓	✓✓
Acciaio < 750 N/mm ²	P2	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
Acciaio < 900 N/mm ²	P3	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
Acciaio < 1100 N/mm ²	P4	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
Acciaio < 1500 N/mm ²	P5	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
INOX < 800 N/mm ²	M1	✓		✓	✓			✓
INOX > 800 N/mm ²	M2							
Ghisa	K1	✓	✓	✓	✓	✓	✓	✓
Leghe Alluminio < 10% Si	N1	✓		✓	✓			✓
Leghe Alluminio > 10% Si	N2							
Materiali non ferrosi	N3							
Leghe di Titanio	S1	✓		✓	✓			✓
Acciai Temprati > 45 HRc	H1	✓	✓✓	✓	✓	✓	✓✓	✓

I Scelta: ✓✓ | II Scelta: ✓

F1226	F1229	F1232	F3124	F3127	F1235	F1238	F1241	F1244
3.0-16.0	3.0-16.0	2.0-16.0	6.0-20.0	6.0-20.0	2.0-12.0	3.0-16.0	0.4-4.0	0.5-6.0
C72	C73	C66	C74	C74	C69	C75	C76	C78
								
Semi sferica	Semi sferica	Semi sferica	Semi sferica	Semi sferica	Semi sferica	Semi sferica	Per nervature	Per nervature
			1889	1889				
								
MD	MD	MD	HSS Co8	HSS Co8	MD	MD	MD	MD
	WST	WST		TiAIN	TiAIN	TiAIN	WST	TiAIN
Z 2	Z 2	Z 4	Z 4	Z 4	Z 4	Z 4	Z 2	Z 2
30°	30°	30°	30°	30°	30°	P.V.	30°	30°
								
✓✓	✓✓	✓✓	✓✓	✓✓	✓	✓✓	✓✓	✓
✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓	✓✓	✓✓
✓✓	✓✓	✓✓	✓	✓	✓✓	✓	✓✓	✓✓
✓✓	✓✓	✓✓			✓✓		✓✓	✓✓
	✓	✓				✓✓	✓	
						✓✓		
	✓	✓			✓		✓	✓
✓	✓	✓	✓	✓			✓	
	✓	✓				✓✓	✓	
✓	✓	✓			✓✓		✓	✓✓

I Scelta: ✓✓ | II Scelta: ✓

CODICE		F1265	F1274	F1277	F1283	F1286	F1247	F1250
Range		0.8-6.0	0.4-4.0	0.5-6.0	3.0-12.0	1.0-12.0	3.0-20.0	6.0-20.0
Pagina		C80	C82	C83	C85	C86	C87	C88
Foto								
		Per nervature	Per nervature	Per nervature	Sferica	Semi sferica	Scaricata Spigolo vivo	Scaricata Spigolo vivo
DIN								
Lunghezza Tagliente								
Materiale		MD	MD	MD	MD	MD	MD	MD
Trattamento		TiAlN	WST	TiAlN	TiAlN	TiAlN		
N° Taglienti		Z 2	Z 2	Z 2	Z 2	Z 2	Z 3	Z 3
Angolo Elica		30°	30°	30°	30°	30°	45°	30°
Gambo								
Acciaio < 500 N/mm ²	P1	✓	✓✓	✓	✓	✓		
Acciaio < 750 N/mm ²	P2	✓✓	✓✓	✓✓	✓✓	✓✓		
Acciaio < 900 N/mm ²	P3	✓✓	✓✓	✓✓	✓✓	✓✓		
Acciaio < 1100 N/mm ²	P4	✓✓	✓✓	✓✓	✓✓	✓✓		
Acciaio < 1500 N/mm ²	P5	✓✓	✓	✓✓	✓✓	✓✓		
INOX < 800 N/mm ²	M1		✓					
INOX > 800 N/mm ²	M2							
Ghisa	K1	✓	✓	✓	✓	✓		
Leghe Alluminio < 10% Si	N1		✓				✓✓	✓✓
Leghe Alluminio > 10% Si	N2							
Materiali non ferrosi	N3							
Leghe di Titanio	S1							
Acciai Temprati > 45 HRc	H1	✓		✓	✓	✓		

I Scelta: ✓✓ | II Scelta: ✓

F1256	F1259	F1262	F1268	F1253	F1271
3.0-20.0	3.0-16.0	6.0-16.0	2.0-12.0	3.0-20.0	3.0-20.0
C89	C89	C90	C91	C92	C92
					

Scaricata Spigolo vivo	Scaricata Spigolo vivo	Scaricata Spigolo vivo	Scaricata torica	Scaricata torica	Scaricata torica
					
MD	MD	MD	MD	MD	MD
TiAlN	TiAlN	TiAlN	TiAlN	TiAlN	TiAlN
Z 4	Z 4	Z 4,5	Z 4	Z 4	Z 4
P.V.	P.V.	45°	30°	P.V.	P.V.
					
✓✓	✓✓	✓	✓	✓✓	✓✓
✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
✓	✓	✓✓	✓✓	✓	✓✓
✓	✓	✓✓	✓✓	✓	✓✓
		✓	✓✓		✓✓
✓✓		✓✓		✓✓	✓
✓✓	✓	✓✓		✓✓	
	✓		✓		✓
✓✓		✓✓		✓✓	
			✓		

I Scelta: ✓✓ | II Scelta: ✓

CODICE	T1001	T1004	T1007	T1010	T1013	T1016
Range	1.5-25.0	1.5-25.0	6.0-12.7	1.5-19.0	1.5-19.0	9.5-12.7
Pagina	D2	D2	D2	D3	D3	D3

Foto



Forma		A	A	A	B	B	B
Acciaio < 500 N/mm ²	P1	✓	✓		✓	✓	
Acciaio < 750 N/mm ²	P2	✓	✓		✓	✓	
Acciaio < 900 N/mm ²	P3	✓	✓		✓	✓	
Acciaio < 1100 N/mm ²	P4	✓	✓		✓	✓	
Acciaio < 1500 N/mm ²	P5	✓	✓		✓	✓	
INOX < 800 N/mm ²	M1	✓	✓		✓	✓	
INOX > 800 N/mm ²	M2						
Ghisa	K1	✓	✓		✓	✓	
Leghe Alluminio < 10% Si	N1			✓			✓
Leghe Alluminio > 10% Si	N2			✓			✓
Materiali non ferrosi	N3			✓			✓
Leghe di Titanio	S1	✓	✓		✓	✓	
Acciai Temprati > 45 HRc	H1	✓	✓		✓	✓	

I Scelta: ✓✓ | II Scelta: ✓

LIME ROTATIVE

T1019	T1022	T1025	T1028	T1031	T1034	T1037	T1040
3.0-19.0	3.0-19.0	6.0-12.7	2.5-19.0	2.5-19.0	9.5-12.7	3.0-16.0	3.0-16.0
D4	D4	D4	D5	D5	D5	D6	D6
							

C	C	C	D	D	D	E	E
✓	✓		✓	✓		✓	✓
✓	✓		✓	✓		✓	✓
✓	✓		✓	✓		✓	✓
✓	✓		✓	✓		✓	✓
✓	✓		✓	✓		✓	✓
✓	✓		✓	✓		✓	✓
✓	✓		✓	✓		✓	✓
		✓			✓		
		✓			✓		
		✓			✓		
✓	✓		✓	✓		✓	✓
✓	✓		✓	✓		✓	✓

I Scelta: ✓✓ | II Scelta: ✓

CODICE	T1043	T1046	T1049	T1052	T1055	T1058
Range	12.7-16.0	3.0-16.0	3.0-16.0	6.0-19.0	3.0-12.7	3.0-12.7
Pagina	D6	D7	D7	D7	D8	D8

Foto



Forma		E	F	F	F	G	G
Acciaio < 500 N/mm ²	P1		✓	✓		✓	✓
Acciaio < 750 N/mm ²	P2		✓	✓		✓	✓
Acciaio < 900 N/mm ²	P3		✓	✓		✓	✓
Acciaio < 1100 N/mm ²	P4		✓	✓		✓	✓
Acciaio < 1500 N/mm ²	P5		✓	✓		✓	✓
INOX < 800 N/mm ²	M1		✓	✓		✓	✓
INOX > 800 N/mm ²	M2						
Ghisa	K1		✓	✓		✓	✓
Leghe Alluminio < 10% Si	N1	✓			✓		
Leghe Alluminio > 10% Si	N2	✓			✓		
Materiali non ferrosi	N3	✓			✓		
Leghe di Titanio	S1		✓	✓		✓	✓
Acciai Temprati > 45 HRC	H1		✓	✓		✓	✓

I Scelta: ✓✓ | II Scelta: ✓

LIME ROTATIVE

T1061	T1064	T1067	T1070	T1073	T1076	T1079	T1082
3.0-16.0	3.0-16.0	3.0-16.0	3.0-16.0	3.0-19.0	3.0-19.0	3.0-16.0	3.0-16.0
D9	D9	D10	D10	D11	D11	D12	D12
							

H	H	J	J	K	K	L	L
✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓

I Scelta: ✓✓ | II Scelta: ✓

CODICE	T1085	T1088	T1091	T1094	T1097
Range	12.7-16.0	3.0-16.0	3.0-16.0	3.0-12.7	3.0-12.7
Pagina	D12	D13	D13	D14	D14

Foto



Forma		L	M	M	N	N
Acciaio < 500 N/mm ²	P1		✓	✓	✓	✓
Acciaio < 750 N/mm ²	P2		✓	✓	✓	✓
Acciaio < 900 N/mm ²	P3		✓	✓	✓	✓
Acciaio < 1100 N/mm ²	P4		✓	✓	✓	✓
Acciaio < 1500 N/mm ²	P5		✓	✓	✓	✓
INOX < 800 N/mm ²	M1		✓	✓	✓	✓
INOX > 800 N/mm ²	M2					
Ghisa	K1		✓	✓	✓	✓
Leghe Alluminio < 10% Si	N1	✓				
Leghe Alluminio > 10% Si	N2	✓				
Materiali non ferrosi	N3	✓				
Leghe di Titanio	S1		✓	✓	✓	✓
Acciai Temprati > 45 HRc	H1		✓	✓	✓	✓

I Scelta: ✓✓ | II Scelta: ✓

CODICE	T3004	T3007	T4001	T3010	T3013
Range	10.0-30.0	10.0-30.0	6.3-31.0	6.3-31.0	6.3-30.0
Pagina	D16	D17	D18	D18	D19

Foto



DIN			335 C	335 C	335 C
Materiale	HSS Co8	HSS Co8	HSS	HSS Co8	HSS Co8
Rivestimento					TICN
Taglienti / tipo	Foro	Z 1	Z 3	Z 3	Z 3
Angolo	90°	90°	90°	90°	90°
Acciaio < 500 N/mm²	P1	✓	✓	✓	✓
Acciaio < 750 N/mm²	P2	✓	✓	✓	✓
Acciaio < 900 N/mm²	P3	✓	✓	✓	✓
Acciaio < 1100 N/mm²	P4				
Acciaio < 1500 N/mm²	P5				
INOX < 800 N/mm²	M1	✓	✓	✓	✓
INOX > 800 N/mm²	M2				
Ghisa	K1	✓	✓	✓	✓
Leghe Alluminio < 10% Si	N1	✓	✓	✓	✓
Leghe Alluminio > 10% Si	N2				
Materiali non ferrosi	N3	✓	✓	✓	✓
Leghe di Titanio	S1				
Acciai Temprati > 45 HRC	H1				

I Scelta: ✓✓ | II Scelta: ✓

CODICE	T3016	T3019	T3022	T3001
Range	2.0-20.0	10.0-35.0	2.0-20.0	6.0-20.0
Pagina	D20	D21	D22	D15
Foto				
DIN	212	208		373
Per fori	H7	H7	H7	
Materiale	HSS-E	HSS-E	HSS-E	HSS-E
Gambo	h8	CM	h6	
Tipo taglio	T-DX	T-DX	T-DX	
Elica	E-SX	E-SX	E-SX	
Angolo imbocco	15/45°	45°	15/45°	
Tolleranza D1	DIN 1420		DIN 1420	
N° Taglienti				Z 3
Acciaio < 500 N/mm²	P1	✓	✓	✓
Acciaio < 750 N/mm²	P2	✓	✓	✓
Acciaio < 900 N/mm²	P3	✓	✓	✓
Acciaio < 1100 N/mm²	P4	✓	✓	✓
Acciaio < 1500 N/mm²	P5			
INOX < 800 N/mm²	M1	✓	✓	
INOX > 800 N/mm²	M2			
Ghisa	K1	✓	✓	
Leghe Alluminio < 10% Si	N1	✓	✓	✓
Leghe Alluminio > 10% Si	N2			
Materiali non ferrosi	N3	✓	✓	
Leghe di Titanio	S1			
Acciai Temprati > 45 HRc	H1			

ALESATORI

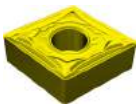
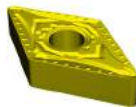
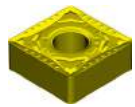
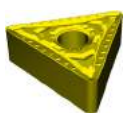
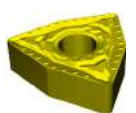
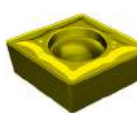
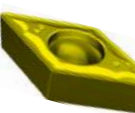
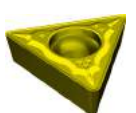
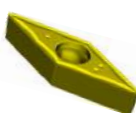
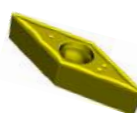
LAMATORI

I Scelta: ✓✓ | II Scelta: ✓

CODICE		T1100	T3025	T3028	T3031	T3034	T3037	T3040	T3043
Range		3.0-20.0	8.0-56.0	50.0-160.0	16.0-38.0	16.0-50.0	16.0-38.0	10.5-45.5	12.5-40.0
Pagina		D27	D28	D29	D30	D31	D32	D33	D35
Foto									
DIN			6518	885-A	1833	1833	1833	850	851
Lunghezza									
Materiale		MD	HSS Co8	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E
Trattamento									
N° Taglienti		Z 2	Z 4						
Angolo Elica		30°	0°				0°	10-12°	10°
Gambo									
Acciaio < 500 N/mm²	P1	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
Acciaio < 750 N/mm²	P2	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
Acciaio < 900 N/mm²	P3	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
Acciaio < 1100 N/mm²	P4	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
Acciaio < 1500 N/mm²	P5	✓✓	✓	✓	✓	✓	✓	✓	✓
INOX < 800 N/mm²	M1	✓							
INOX > 800 N/mm²	M2								
Ghisa	K1	✓							
Leghe Alluminio < 10% Si	N1	✓	✓	✓	✓	✓	✓	✓	✓
Leghe Alluminio > 10% Si	N2								
Materiali non ferrosi	N3								
Leghe di Titanio	S1								
Acciai Temprati > 45 HRC	H1								

I Scelta: ✓✓ | II Scelta: ✓

INSERTI DI TORNITURA - TURNING

Cod: ICNMG pag: E3  CNMG INFO TECNICHE PAG.E11	Cod: IDNMG pag: E3  DNMG INFO TECNICHE PAG.E11	Cod: IKNUX pag: E3  KNUX INFO TECNICHE PAG.E12	Cod: ISNMG pag: E4  SNMG INFO TECNICHE PAG.E12
Cod: ITNMG pag: E4  TNMG INFO TECNICHE PAG.E12	Cod: IWNMG pag: E4  WNMG INFO TECNICHE PAG.E13	Cod: ICCMT pag: E5  CCMT INFO TECNICHE PAG.E15	Cod: IDCMT pag: E5  DCMT INFO TECNICHE PAG.E15
Cod: ITCMT pag: E5  TCMT INFO TECNICHE PAG.E15	Cod: IVBMT pag: E6  VBMT INFO TECNICHE PAG.E16	Cod: IVCMT pag: E6  VCMT INFO TECNICHE PAG.E16	

INSERTI DI FRESATURA - MILLING

Cod: IAOMT pag: E7  AOMT INFO TECNICHE PAG.E16	Cod: IAPKT pag: E7  APKT INFO TECNICHE PAG.E17	Cod: IAPMT pag: E7  APMT INFO TECNICHE PAG.E17	Cod: IODMW pag: E8  ODMW INFO TECNICHE PAG.E18
Cod: ISEKN pag: E8  SEKN INFO TECNICHE PAG.E18	Cod: ISEKR pag: E8  SEKR INFO TECNICHE PAG.E18	Cod: ISPKN pag: E9  SPKN INFO TECNICHE PAG.E18	Cod: ITPKN pag: E9  TPKN INFO TECNICHE PAG.E19
Cod: ITPKR pag: E9  TPKR INFO TECNICHE PAG.E19			

INSERTI DI FORATURA - DRILLING

Cod: ISPMX pag: E10  SPMX INFO TECNICHE PAG.E20	Cod: IWCMX pag: E10  WCMX INFO TECNICHE PAG.E21
--	--

GRADI UNIVERSALI

Caratteristiche

Gradi universali multi applicazione per lavorazione su una vasta gamma di materiali come acciaio, acciaio INOX e ghisa

WST6

Rivestimento PVD per applicazioni di FRESATURA e FORATURA

- Rivestimento PVD ultra compatto, eccellente resistenza al calore e alle sollecitazioni.
- Rivestimento Sub-Micro grano progettato per applicazioni gravose.

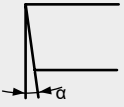
P	M	K	S
P30 - P40	M20 - M30	K20 - K30	S10 - S20

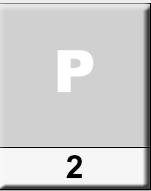
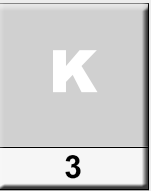
WST8

Rivestimento PVD per applicazioni di TORNITURA

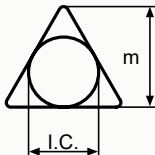
- Rivestimento PVD sviluppato per ridurre l'usura nel taglio continuo e incrementare la tenacità del tagliente
- Eccellenti performance di taglio anche in condizioni gravose.

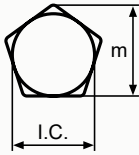
P	M	K	S
P20 - P40	M20 - M40	K10 - K25	S05 - S25

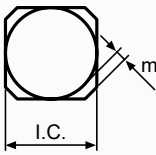
1. Forma dell'inserto				2. Angolo di spoglia inferiore				4. Tipo bloccaggio e forma in sezione		
										
A	B	C	D					A	F	G
				5°	7°	15°	20°			
E	H	K	L	B	C	D	E	M	N	R
				25°	30°	0°	11°			speciale
O	P	R	S	F	G	N	P	T	W	X
		speciale								
T	W	X								

			
1	2	3	4

3. Tolleranza									
	Tolleranza (mm)			Dimensione cerchio inscritto (mm)					
	m	t	I.C.	6.35	9.525	12.7	15.875	19.05	25.4
A	± 0.005	± 0.025	± 0.025	●	●	●	●	●	●
C	± 0.013	± 0.025	± 0.025	●	●	●	●	●	●
E	± 0.025	± 0.025	± 0.025	●	●	●	●	●	●
F	± 0.005	± 0.025	± 0.013	●	●	●	●	●	●
G	± 0.025	± 0.13	± 0.025	●	●	●	●	●	●
H	± 0.013	± 0.025	± 0.013	●	●	●	●	●	●
K	± 0.013	± 0.025	± 0.05	●	●				
			± 0.08			●			
			± 0.10				●	●	
			± 0.13						●
M	± 0.08	± 0.13	± 0.05	●	●				
	± 0.13		± 0.08			●			
	± 0.15		± 0.10				●	●	
	± 0.18		± 0.13						●

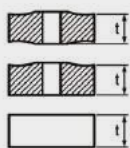






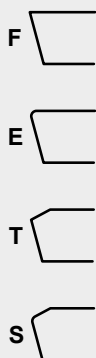


6. Spessore (mm)

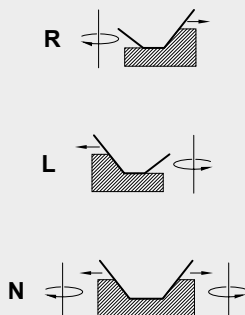


t	mm
02	2.38
03	3.18
T3	3.97
04	4.76
06	6.35
07	7.94
09	9.52

8. Preparazione tagliente



9. direzione taglio



10. Forma truciolo

In funzione
dell'applicazione

12

5

03

6

ED

7

T

8

R

9

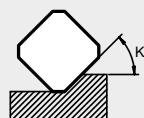
FORMA
TRUCIOLO

10

5. Lunghezza tagliente (mm)

I.C.	C	S	R	T	H	O
L						
5.56				09		
6.35	06	06	06	11		
7.94	08			13		
9.525	09	09	09	16		
12.7	12	12	12	22	05	05
15.875	16	15	15	27	09	
17.94						07
19.05	19	19	19	33	10	
25.4	25	25	25			

7. Angolo di attacco e spoglia posteriore del tagliente



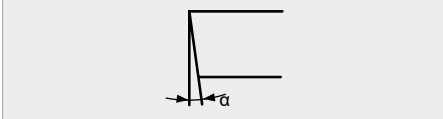
Angolo attacco

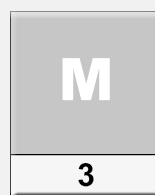
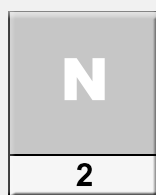
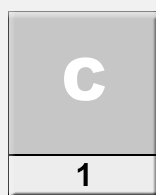
A	45°
D	60°
E	75°
F	85°
P	90°
Z	Speciale



spoglia posteriore del tagliente

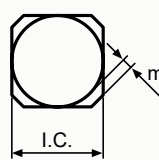
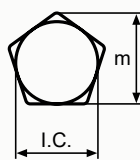
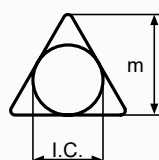
B	5°
C	7°
D	15°
E	20°
F	25°
G	30°
N	0°
P	11°
Z	Speciale

1. Forma dell'inserto				2. Angolo di spoglia inferiore				4. Fissaggio/Rompitruciolo		
										
A	B	C	D					A	F	G
				5°	7°	15°	20°			
E	H	K	L	B	C	D	E	M	N	R
				25°	30°	0°	11°			speciale
O	P	R	S	F	G	N	P	T	W	X
			speciale					C'Sink40°~60°		
T	V	W	X							



3. Tolleranza

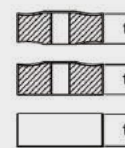
	Tolleranza (mm)			Dimensione cerchio inscritto (mm)					
	m	t	I.C.	6.35	9.525	12.7	15.875	19.05	25.4
A	± 0.005	± 0.025	± 0.025	●	●	●	●	●	●
C	± 0.013	± 0.025	± 0.025	●	●	●	●	●	●
E	± 0.025	± 0.025	± 0.025	●	●	●	●	●	●
F	± 0.005	± 0.025	± 0.013	●	●	●	●	●	●
G	± 0.025	± 0.13	± 0.025	●	●	●	●	●	●
H	± 0.013	± 0.025	± 0.013	●	●	●	●	●	●
K	± 0.013	± 0.025	± 0.05	●	●				
			± 0.08			●			
			± 0.10				●	●	
			± 0.13						●
M	± 0.08	± 0.13	± 0.05	●	●				
	± 0.13		± 0.08			●			
	± 0.15		± 0.10				●	●	
	± 0.18		± 0.13						●



5. Lunghezza tagliente (mm)

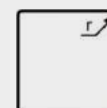
I.C.	C	D	R	S	T	V	W	K	H
L									
3.97	03	04		03	06		02		
4.76	04	05		04	08	08			
5.56	05	06		05	09	09	03		
6.35	06	07		06	11	11	04		
7.94	08	09		07	13	13	05		
9.525	09	11	09	09	16	16	06	16	
12.7	12	15		12	22	22	08		05
15.875	16	19	15	15	27	27	10		
19.05	19	23	19	19	33	33	13		10
25.4	25	31	25	25	44	44	17		

6. Spessore (mm)



t	mm
02	2.38
03	3.18
T3	3.97
04	4.76
06	6.35
07	7.94
09	9.52

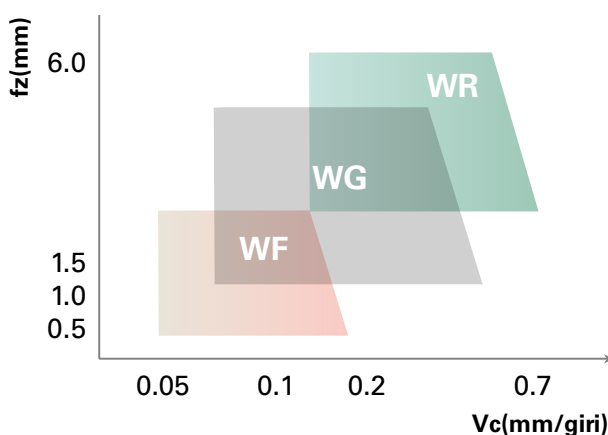
7. Raggio (mm)



r	mm
02	0.2
04	0.4
08	0.8
10	1.0
12	1.2
16	1.6
20	2.0

8. Forma truciolo

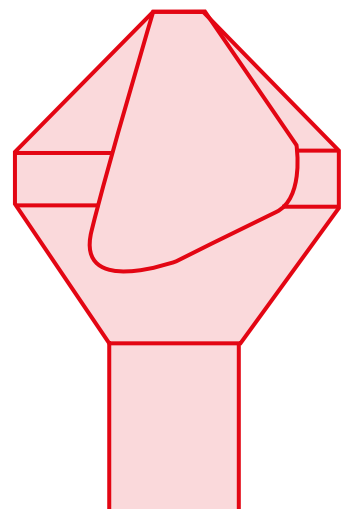
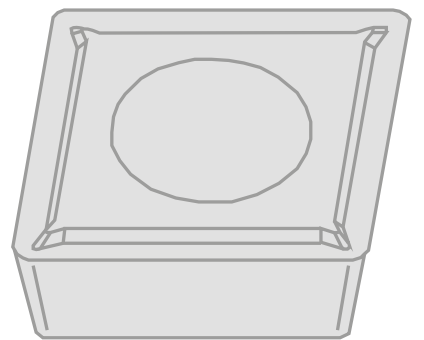
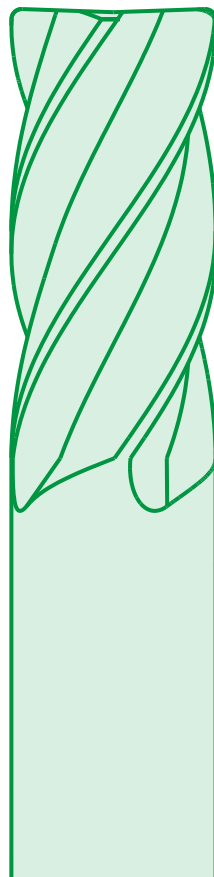
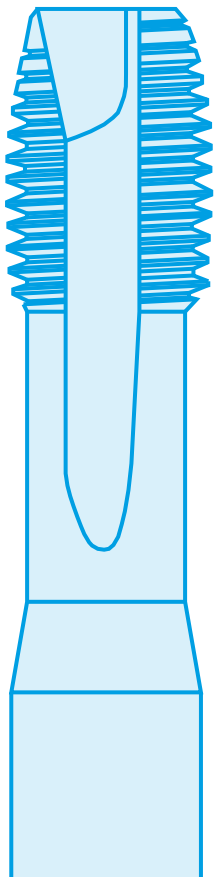
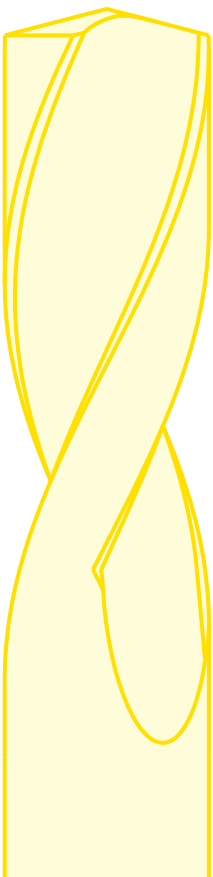
In funzione dell'applicazione



- WR = operazioni di sgrossatura
- WG = operazioni generiche
- WF = operazioni di finitura

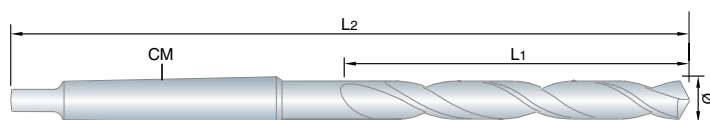
Forma truciolo inserti di tornitura

Aree rottura truciolo



FORATURA





P4001

INF. TEC. PAG.
A52

345



HSS

Vap

118°

CM

P1 P2 P3

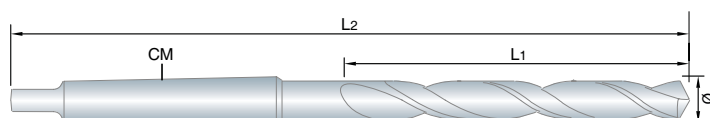
P4 P5 M1 M2
K1 N1 N2

Unità : mm

Ø	L1	L2	CM N°	
5.0	52	133	1	P40010500
5.5	57	138	1	P40010550
6.0	57	138	1	P40010600
6.5	63	144	1	P40010650
7.0	69	150	1	P40010700
7.5	69	150	1	P40010750
8.0	75	156	1	P40010800
8.5	75	156	1	P40010850
9.0	81	162	1	P40010900
9.5	81	162	1	P40010950
10.0	87	168	1	P40011000
10.5	87	168	1	P40011050
11.0	94	175	1	P40011100
11.5	94	175	1	P40011150
12.0	101	182	1	P40011200
12.5	101	182	1	P40011250
13.0	101	182	1	P40011300
13.2	101	182	1	P40011320
13.25	108	189	1	P40011325
13.5	108	189	1	P40011350
13.75	108	189	1	P40011375
13.8	108	189	1	P40011380
14.0	108	189	1	P40011400
14.25	114	212	2	P40011425
14.5	114	212	2	P40011450
14.75	114	212	2	P40011475
15.0	114	212	2	P40011500
15.25	120	218	2	P40011525
15.5	120	218	2	P40011550
15.75	120	218	2	P40011575
16.0	120	218	2	P40011600
16.25	125	223	2	P40011625
16.5	125	223	2	P40011650
16.75	125	223	2	P40011675
17.0	125	223	2	P40011700

PUNTA ELICOIDALE HSS ATTACCO CM

HSS MORSE TAPER SHANK TWIST DRILL



Unità : mm

Ø	L1	L2	CM N°	
17.25	130	228	2	P40011725
17.5	130	228	2	P40011750
17.75	130	228	2	P40011775
18.0	130	228	2	P40011800
18.25	135	233	2	P40011825
18.5	135	233	2	P40011850
18.75	135	233	2	P40011875
19.0	135	233	2	P40011900
19.25	140	238	2	P40011925
19.5	140	238	2	P40011950
19.75	140	238	2	P40011975
20.0	140	238	2	P40012000
20.25	145	243	2	P40012025
20.5	145	243	2	P40012050
20.75	145	243	2	P40012075
21.0	145	243	2	P40012100
21.25	150	248	2	P40012125
21.5	150	248	2	P40012150
21.75	150	248	2	P40012175
22.0	150	248	2	P40012200
22.25	150	248	2	P40012225
22.5	155	253	2	P40012250
22.75	155	253	2	P40012275
23.0	155	253	2	P40012300
23.25	155	276	3	P40012325
23.5	155	276	3	P40012350
23.75	160	281	3	P40012375
24.0	160	281	3	P40012400
24.25	160	281	3	P40012425
24.5	160	281	3	P40012450
24.75	160	281	3	P40012475
25.0	160	281	3	P40012500
25.25	165	286	3	P40012525
25.5	165	286	3	P40012550
25.75	165	286	3	P40012575

P4001

INF. TEC. PAG.
A52

345



HSS

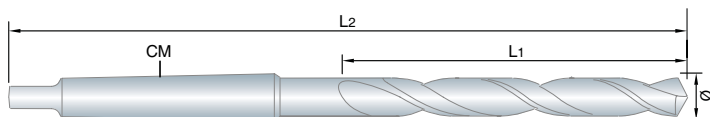
Vap

118°

CM

P1 P2 P3

P4 P5 M1 M2
K1 N1 N2



P4001

INF. TEC. PAG.
A52

345



HSS

Vap

118°

CM

P1 P2 P3

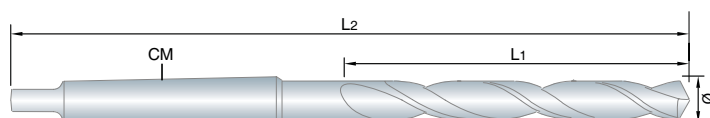
P4 P5 M1 M2
K1 N1 N2

Unità : mm

Ø	L1	L2	CM N°	
26.0	165	286	3	P40012600
26.25	165	286	3	P40012625
26.5	165	286	3	P40012650
26.75	170	291	3	P40012675
27.0	170	291	3	P40012700
27.25	170	291	3	P40012725
27.5	170	291	3	P40012750
27.75	170	291	3	P40012775
28.0	170	291	3	P40012800
28.25	175	296	3	P40012825
28.5	175	296	3	P40012850
28.75	175	296	3	P40012875
29.0	175	296	3	P40012900
29.25	175	296	3	P40012925
29.5	175	296	3	P40012950
29.75	175	296	3	P40012975
30.0	175	296	3	P40013000
30.25	180	301	3	P40013025
30.5	180	301	3	P40013050
30.75	180	301	3	P40013075
31.0	180	301	3	P40013100
31.25	180	301	3	P40013125
31.5	180	301	3	P40013150
31.75	185	306	3	P40013175
32.0	185	334	4	P40013200
32.5	185	334	4	P40013250
33.0	185	334	4	P40013300
33.5	185	334	4	P40013350
34.0	190	339	4	P40013400
34.5	190	339	4	P40013450
35.0	190	339	4	P40013500
35.5	190	339	4	P40013550
36.0	195	344	4	P40013600
36.5	195	344	4	P40013650
37.0	195	344	4	P40013700

PUNTA ELICOIDALE HSS ATTACCO CM

HSS MORSE TAPER SHANK TWIST DRILL



Unità : mm

Ø	L1	L2	CM N°	
37.5	195	344	4	P40013750
38.0	200	349	4	P40013800
38.5	200	349	4	P40013850
39.0	200	349	4	P40013900
39.5	200	349	4	P40013950
40.0	200	349	4	P40014000
40.5	205	354	4	P40014050
41.0	205	354	4	P40014100
41.5	205	354	4	P40014150
42.0	205	354	4	P40014200
42.5	205	354	4	P40014250
43.0	210	359	4	P40014300
43.5	210	359	4	P40014350
44.0	210	359	4	P40014400
44.5	210	359	4	P40014450
45.0	210	359	4	P40014500
45.5	215	364	4	P40014550
46.0	215	364	4	P40014600
46.5	215	364	4	P40014650
47.0	215	364	4	P40014700
47.5	215	364	4	P40014750
48.0	220	369	4	P40014800
48.5	220	369	4	P40014850
49.0	220	369	4	P40014900
49.5	220	369	4	P40014950
50.0	220	369	4	P40015000

P4001

INF. TEC. PAG.
A52

345



HSS

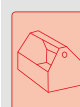
Vap

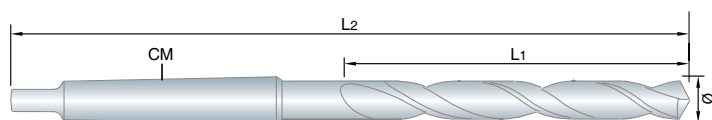
118°

CM

P1 P2 P3

P4 P5 M1 M2
K1 N1 N2





P4004

INF. TEC. PAG.
A52

341



HSS

Vap

118°



CM

Unità : mm

Ø	L1	L2	CM N°	
13.0	134	215	1	P40041300
13.5	142	223	1	P40041350
14.0	142	223	1	P40041400
14.5	147	245	2	P40041450
15.0	147	245	2	P40041500
15.5	153	251	2	P40041550
16.0	153	251	2	P40041600
16.5	159	257	2	P40041650
17.0	159	257	2	P40041700
17.5	165	263	2	P40041750
18.0	165	263	2	P40041800
18.5	171	269	2	P40041850
19.0	171	269	2	P40041900
19.5	177	275	2	P40041950
20.0	177	275	2	P40042000
21.0	184	282	2	P40042100
22.0	191	289	2	P40042200
23.0	198	296	2	P40042300
24.0	206	327	3	P40042400
25.0	206	327	3	P40042500
26.0	214	335	3	P40042600
27.0	222	343	3	P40042700
28.0	222	343	3	P40042800
29.0	230	351	3	P40042900
30.0	230	351	3	P40043000

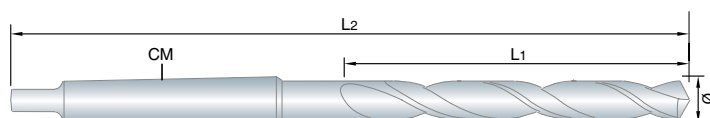


P1 P2 P3 M2

P4 P5 M1
K1 N1 N2

PUNTA ELICOIDALE HSS ATTACCO CM

HSS MORSE TAPER SHANK TWIST DRILL



P4007

INF. TEC. PAG.
A52

1870/1



HSS

Vap

118°

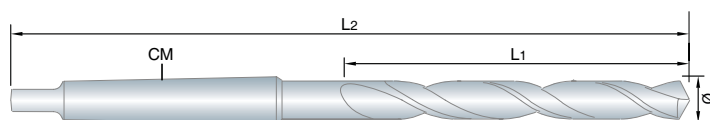
CM

P1 P2 P3

**P4 P5 M1
K1 N1 N2**

Unità : mm

Ø	L1	L2	CM N°	
13.0	205	310	1	P40071300
13.5	220	325	1	P40071350
14.0	220	325	1	P40071400
14.5	220	340	2	P40071450
15.0	220	340	2	P40071500
15.5	230	355	2	P40071550
16.0	230	355	2	P40071600
16.5	230	355	2	P40071650
17.0	230	355	2	P40071700
17.5	245	370	2	P40071750
18.0	245	370	2	P40071800
18.5	245	370	2	P40071850
19.0	245	370	2	P40071900
19.5	260	385	2	P40071950
20.0	260	385	2	P40072000
20.5	260	385	2	P40072050
21.0	260	385	2	P40072100
21.5	270	405	2	P40072150
22.0	270	405	2	P40072200
22.5	270	405	2	P40072250
23.0	270	405	2	P40072300
23.5	270	425	3	P40072350
24.0	290	440	3	P40072400
24.5	290	440	3	P40072450
25.0	290	440	3	P40072500
25.5	290	440	3	P40072550
26.0	290	440	3	P40072600
26.5	290	440	3	P40072650
27.0	305	460	3	P40072700
27.5	305	460	3	P40072750
28.0	305	460	3	P40072800
28.5	305	460	3	P40072850
29.0	305	460	3	P40072900
29.5	305	460	3	P40072950
30.0	305	460	3	P40073000



P4010

INF. TEC. PAG.
A52

1870/2



HSS

Vap

118°

CM

P1 P2 P3

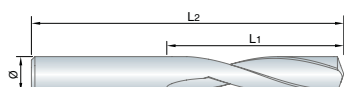
P4 P5 N1 N2
M1 K1

Unità : mm

Ø	L1	L2	CM N°	
13.0	260	395	1	P40101300
13.5	275	410	1	P40101350
14.0	275	410	1	P40101400
14.5	275	425	2	P40101450
15.0	275	425	2	P40101500
15.5	295	445	2	P40101550
16.0	295	445	2	P40101600
16.5	295	445	2	P40101650
17.0	295	445	2	P40101700
17.5	310	465	2	P40101750
18.0	310	465	2	P40101800
18.5	310	465	2	P40101850
19.0	310	465	2	P40101900
19.5	325	490	2	P40101950
20.0	325	490	2	P40102000
20.5	325	490	2	P40102050
21.0	325	490	2	P40102100
21.5	345	515	2	P40102150
22.0	345	515	2	P40102200
22.5	345	515	2	P40102250
23.0	345	515	2	P40102300
23.5	345	535	3	P40102350
24.0	365	555	3	P40102400
24.5	365	555	3	P40102450
25.0	365	555	3	P40102500
25.5	365	555	3	P40102550
26.0	365	555	3	P40102600
26.5	365	555	3	P40102650
27.0	385	580	3	P40102700
27.5	385	580	3	P40102750
28.0	385	580	3	P40102800
28.5	385	580	3	P40102850
29.0	385	580	3	P40102900
29.5	385	580	3	P40102950
30.0	385	580	3	P40103000

PUNTA ELICOIDALE GAMBO CILINDRICO HSS / HSS Co8

HSS / HSS Co8 STRAIGHT SHANK TWIST DRILL STUB

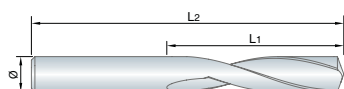


NEW

P4013	P3013	P3014
INF. TEC. PAG. A52	INF. TEC. PAG. A52	INF. TEC. PAG. A52
1897	1897	1897
HSS	HSS Co8	HSS Co8
Vap		TiCN
118°	135°	135°
✓ P1 P2 P3	P1 P2 P3 M1	P1 P2 P3 M1
✓ M1 K1 N1 N2 S1	K1 N1 S1	M2 K1 N1 S1

Unità : mm

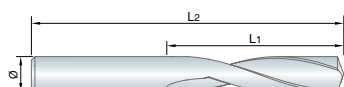
Ø	L1	L2			
1.0	6	26	P40130100	P30130100	-
1.1	7	28	P40130110	P30130110	-
1.2	8	30	P40130120	P30130120	-
1.25	8	30	P40130125	P30130125	-
1.3	8	30	P40130130	P30130130	-
1.4	9	32	P40130140	P30130140	-
1.5	9	32	P40130150	P30130150	-
1.6	10	34	P40130160	P30130160	-
1.7	10	34	P40130170	P30130170	-
1.75	11	36	P40130175	P30130175	-
1.8	11	36	P40130180	P30130180	-
1.9	11	36	P40130190	P30130190	-
2.0	12	38	P40130200	P30130200	-
2.1	12	38	P40130210	P30130210	-
2.2	13	40	P40130220	P30130220	-
2.3	13	40	P40130230	P30130230	-
2.4	14	43	P40130240	P30130240	-
2.5	14	43	P40130250	P30130250	P30140250
2.55	13	40	-	P30130255	-
2.6	14	43	P40130260	P30130260	-
2.7	16	46	P40130270	P30130270	-
2.75	16	46	P40130275	P30130275	-
2.8	16	46	P40130280	P30130280	-
2.9	16	46	P40130290	P30130290	-
3.0	16	46	P40130300	P30130300	P30140300
3.1	18	49	P40130310	P30130310	-
3.2	18	49	P40130320	P30130320	-
3.25	18	49	P40130325	P30130325	-
3.3	18	49	P40130330	P30130330	P30140330
3.4	20	52	P40130340	P30130340	-
3.5	20	52	P40130350	P30130350	P30140350
3.6	20	52	P40130360	P30130360	-
3.7	20	52	P40130370	P30130370	-
3.75	20	52	P40130375	P30130375	-



P4013	P3013	P3014
INF. TEC. PAG. A52	INF. TEC. PAG. A52	INF. TEC. PAG. A52
1897	1897	1897
		
HSS	HSS Co8	HSS Co8
Vap		TiCN
118°	135°	135°
		
✓ P1 P2 P3	P1 P2 P3 M1	P1 P2 P3 M1
✓ M1 K1 N1 N2 S1	K1 N1 S1	M2 K1 N1 S1

Unità : mm

Ø	L1	L2	
3.8	22	55	P40130380 P30130380 -
3.9	22	55	P40130390 P30130390 -
4.0	22	55	P40130400 P30130400 P30140400
4.1	22	55	P40130410 P30130410 -
4.2	22	55	P40130420 P30130420 P30140420
4.25	22	55	P40130425 P30130425 -
4.3	24	58	P40130430 P30130430 -
4.4	24	58	P40130440 P30130440 -
4.5	24	58	P40130450 P30130450 P30140450
4.6	24	58	P40130460 P30130460 -
4.65	24	58	- P30130465 -
4.7	24	58	P40130470 P30130470 -
4.75	24	58	P40130475 P30130475 -
4.8	26	62	P40130480 P30130480 -
4.9	26	62	P40130490 P30130490 -
5.0	26	62	P40130500 P30130500 P30140500
5.1	26	62	P40130510 P30130510 -
5.2	26	62	P40130520 P30130520 -
5.25	26	62	P40130525 P30130525 -
5.3	26	62	P40130530 P30130530 -
5.4	28	66	P40130540 P30130540 -
5.5	28	66	P40130550 P30130550 P30140550
5.55	28	66	- P30130555 -
5.6	28	66	P40130560 P30130560 -
5.7	28	66	P40130570 P30130570 -
5.75	28	66	P40130575 P30130575 -
5.8	28	66	P40130580 P30130580 -
5.9	28	66	P40130590 P30130590 -
6.0	28	66	P40130600 P30130600 P30140600
6.1	31	70	P40130610 P30130610 -
6.2	31	70	P40130620 P30130620 -
6.25	31	70	P40130625 P30130625 -
6.3	31	70	P40130630 P30130630 -
6.4	31	70	P40130640 P30130640 -
6.5	31	70	P40130650 P30130650 P30140650

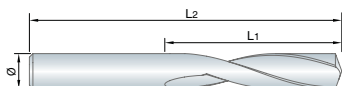


NEW

P4013	P3013	P3014
INF. TEC. PAG. A52	INF. TEC. PAG. A52	INF. TEC. PAG. A52
1897	1897	1897
HSS	HSS Co8	HSS Co8
Vap		TiCN
118°	135°	135°
✓ P1 P2 P3	P1 P2 P3 M1	P1 P2 P3 M1
✓ M1 K1 N1 N2 S1	K1 N1 S1	M2 K1 N1 S1

Unità : mm

Ø	L1	L2			
6.6	31	70	P40130660	P30130660	-
6.7	31	70	P40130670	P30130670	-
6.75	34	74	P40130675	P30130675	-
6.8	34	74	P40130680	P30130680	P30140680
6.9	34	74	P40130690	P30130690	-
7.0	34	74	P40130700	P30130700	P30140700
7.1	34	74	P40130710	P30130710	-
7.2	34	74	P40130720	P30130720	-
7.25	34	74	-	P30130725	-
7.3	34	74	P40130730	P30130730	-
7.4	34	74	P40130740	P30130740	-
7.45	34	74	-	P30130745	-
7.5	34	74	P40130750	P30130750	P30140750
7.6	37	79	P40130760	P30130760	-
7.7	37	79	P40130770	P30130770	-
7.75	37	79	-	P30130775	-
7.8	37	79	P40130780	P30130780	-
7.9	37	79	P40130790	P30130790	-
8.0	37	79	P40130800	P30130800	P30140800
8.1	37	79	P40130810	P30130810	-
8.2	37	79	P40130820	P30130820	-
8.25	37	79	-	P30130825	-
8.3	37	79	P40130830	P30130830	-
8.4	37	79	P40130840	P30130840	-
8.5	37	79	P40130850	P30130850	P30140850
8.6	40	84	P40130860	P30130860	-
8.7	40	84	P40130870	P30130870	-
8.75	40	84	-	P30130875	-
8.8	40	84	P40130880	P30130880	-
8.9	40	84	P40130890	P30130890	-
9.0	40	84	P40130900	P30130900	P30140900
9.1	40	84	P40130910	P30130910	-
9.2	40	84	P40130920	P30130920	-
9.25	40	84	-	P30130925	-
9.3	40	84	P40130930	P30130930	-



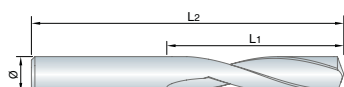
P4013	P3013	P3014
INF. TEC. PAG. A52	INF. TEC. PAG. A52	INF. TEC. PAG. A52
1897	1897	1897
		
HSS	HSS Co8	HSS Co8
Vap		TiCN
118°	135°	135°
		
✓ P1 P2 P3	P1 P2 P3 M1	P1 P2 P3 M1
✓ M1 K1 N1 N2 S1	K1 N1 S1	M2 K1 N1 S1

Unità : mm

Ø	L1	L2			
9.35	40	84	-	P30130935	-
9.4	40	84	P40130940	P30130940	-
9.5	40	84	P40130950	P30130950	P30140950
9.6	43	89	P40130960	P30130960	-
9.7	43	89	P40130970	P30130970	-
9.75	43	89	-	P30130975	-
9.8	43	89	P40130980	P30130980	-
9.9	43	89	P40130990	P30130990	-
10.0	43	89	P40131000	P30131000	P30141000
10.2	43	89	-	P30131020	P30141020
10.25	43	89	P40131025	P30131025	-
10.5	43	89	P40131050	P30131050	-
10.75	47	95	P40131075	P30131075	-
11.0	47	95	P40131100	P30131100	-
11.25	47	95	P40131125	P30131125	-
11.5	47	95	P40131150	P30131150	-
11.75	47	95	P40131175	P30131175	-
11.8	47	95	-	P30131180	-
12.0	51	102	P40131200	P30131200	P30141200
12.25	51	102	P40131225	P30131225	-
12.5	51	102	P40131250	P30131250	-
12.75	51	102	P40131275	P30131275	-
13.0	51	102	P40131300	P30131300	-
13.25	54	107	-	P30131325	-
13.5	54	107	-	P30131350	-
13.75	54	107	-	P30131375	-
13.8	54	107	-	P30131380	-
14.0	54	107	-	P30131400	P30141400
14.25	56	111	-	P30131425	-
14.5	56	111	-	P30131450	-
14.75	56	111	-	P30131475	-
15.0	56	111	-	P30131500	-
15.25	58	115	-	P30131525	-
15.5	58	115	-	P30131550	-
15.75	58	115	-	P30131575	-

PUNTA ELICOIDALE GAMBO CILINDRICO HSS / HSS Co8

HSS / HSS Co8 STRAIGHT SHANK TWIST DRILL STUB

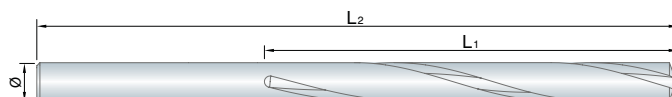


NEW

P4013	P3013	P3014
INF. TEC. PAG. A52	INF. TEC. PAG. A52	INF. TEC. PAG. A52
1897	1897	1897
HSS	HSS Co8	HSS Co8
Vap		TiCN
118°	135°	135°
✓ ✓ ✓	P1 P2 P3	P1 P2 P3 M1
M1 K1 N1 N2 S1	K1 N1 S1	M2 K1 N1 S1
16.0	58	115
16.25	60	119
16.5	60	119
16.75	60	119
17.0	60	119
17.25	62	123
17.5	62	123
17.75	62	123
18.0	62	123
18.25	64	127
18.5	64	127
18.75	64	127
19.0	64	127
19.25	66	131
19.5	66	131
19.75	66	131
20.0	66	131
20.5	68	136
21.0	68	136
21.5	70	141
22.0	70	141
22.5	72	146
23.0	72	146
23.5	72	146
24.0	75	151
24.5	75	151
25.0	75	151
26.0	78	156

Unità : mm

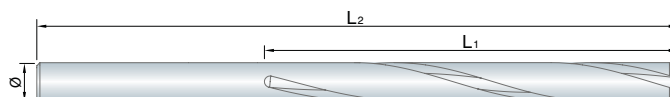
Ø	L1	L2
16.0	58	115
16.25	60	119
16.5	60	119
16.75	60	119
17.0	60	119
17.25	62	123
17.5	62	123
17.75	62	123
18.0	62	123
18.25	64	127
18.5	64	127
18.75	64	127
19.0	64	127
19.25	66	131
19.5	66	131
19.75	66	131
20.0	66	131
20.5	68	136
21.0	68	136
21.5	70	141
22.0	70	141
22.5	72	146
23.0	72	146
23.5	72	146
24.0	75	151
24.5	75	151
25.0	75	151
26.0	78	156



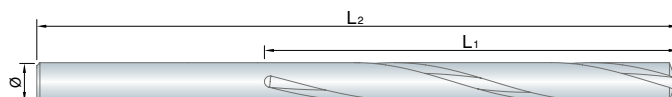
	P4016	P4019	P3001	P3004	P3016
	INF. TEC. PAG. A52	INF. TEC. PAG. A53	INF. TEC. PAG. A52	INF. TEC. PAG. A53	INF. TEC. PAG. A52
	338	338	338	338	338
					
	HSS	HSS	HSS-E	HSS-E	HSS Co8
	Vap	TiN		TiN	
	118° 	118° 	135° 	135° 	135° 
					
	P1 P2 P3	P1 P2 P3	P1 P2 P3 M1	P1 P2 P3 M1	P2 P3 M1
	M1 K1 N1 N2 S1	M1 N1 S1	K1 N1 N2 S1	M2 N1 S1	P1 K1 N1 S1

Unità : mm

Ø	L1	L2	✓	M1 K1 N1 N2 S1	M1 N1 S1	K1 N1 N2 S1	M2 N1 S1	P1 K1 N1 S1
0.3	3	19		P40160030	-	-	-	-
0.4	5	20		P40160040	-	-	-	-
0.5	6	22		P40160050	-	-	-	-
0.6	7	24		P40160060	-	-	-	-
0.7	9	28		P40160070	-	-	-	-
0.8	10	30		P40160080	-	-	-	-
0.9	11	32		P40160090	-	-	-	-
1.0	12	34		P40160100	-	P30010100	P30040100	P30160100
1.05	12	34		P40160105	-	-	-	-
1.1	14	36		P40160110	-	P30010110	P30040110	P30160110
1.15	14	36		P40160115	-	-	-	-
1.2	16	38		P40160120	-	P30010120	P30040120	P30160120
1.25	16	38		P40160125	-	P30010125	-	P30160125
1.3	16	38		P40160130	-	P30010130	P30040130	P30160130
1.35	18	40		P40160135	-	-	-	-
1.4	18	40		P40160140	-	P30010140	P30040140	P30160140
1.45	18	40		P40160145	-	-	-	-
1.5	18	40		P40160150	-	P30010150	P30040150	P30160150
1.55	20	43		P40160155	-	-	-	-
1.6	20	43		P40160160	P40190160	P30010160	P30040160	P30160160
1.65	20	43		P40160165	-	-	-	-
1.7	20	43		P40160170	P40190170	P30010170	P30040170	P30160170
1.75	22	46		P40160175	-	P30010175	-	P30160175
1.8	22	46		P40160180	P40190180	P30010180	P30040180	P30160180
1.85	22	46		P40160185	-	-	-	-
1.9	22	46		P40160190	P40190190	P30010190	P30040190	P30160190
1.95	24	49		P40160195	-	-	-	-
2.0	24	49		P40160200	P40190200	P30010200	P30040200	P30160200
2.05	24	49		P40160205	-	-	-	-
2.1	24	49		P40160210	P40190210	P30010210	P30040210	P30160210
2.15	27	53		P40160215	-	-	-	-
2.2	27	53		P40160220	P40190220	P30010220	P30040220	P30160220
2.25	27	53		P40160225	-	P30010225	-	P30160225
2.3	27	53		P40160230	P40190230	P30010230	P30040230	P30160230
2.35	27	53		P40160235	-	-	-	-
2.4	30	57		P40160240	P40190240	P30010240	P30040240	P30160240

Unità : mm

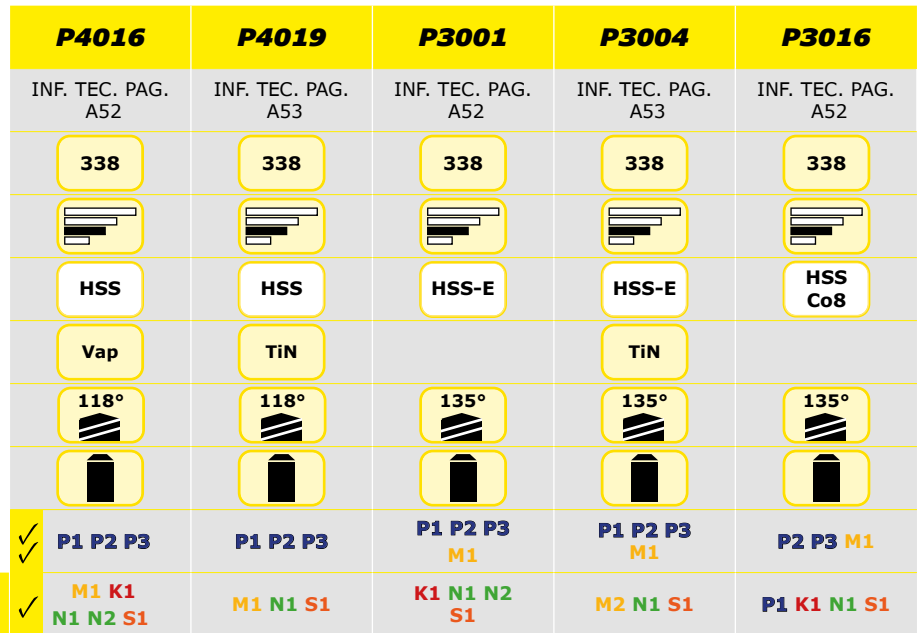
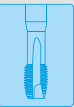
www.WST.tools



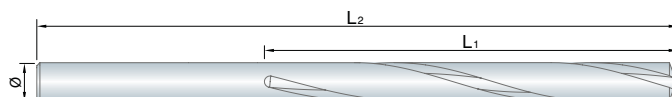
	P4016	P4019	P3001	P3004	P3016
	INF. TEC. PAG. A52	INF. TEC. PAG. A53	INF. TEC. PAG. A52	INF. TEC. PAG. A53	INF. TEC. PAG. A52
	338	338	338	338	338
					
	HSS	HSS	HSS-E	HSS-E	HSS Co8
	Vap	TiN		TiN	
	118° 	118° 	135° 	135° 	135° 
					
	P1 P2 P3	P1 P2 P3	P1 P2 P3 M1	P1 P2 P3 M1	P2 P3 M1
	M1 K1 N1 N2 S1	M1 N1 S1	K1 N1 N2 S1	M2 N1 S1	P1 K1 N1 S1

Unità : mm

Ø	L1	L2	✓	M1 K1 N1 N2 S1	M1 N1 S1	K1 N1 N2 S1	M2 N1 S1	P1 K1 N1 S1
4.25	43	75		P40160425	-	P30010425	-	P30160425
4.3	47	80		P40160430	P40190430	P30010430	P30040430	P30160430
4.35	47	80		P40160435	-	-	-	-
4.4	47	80		P40160440	P40190440	P30010440	P30040440	P30160440
4.45	47	80		P40160445	-	-	-	-
4.5	47	80		P40160450	P40190450	P30010450	P30040450	P30160450
4.55	47	80		P40160455	-	-	-	-
4.6	47	80		P40160460	P40190460	P30010460	P30040460	P30160460
4.65	47	80		P40160465	-	-	-	-
4.7	47	80		P40160470	P40190470	P30010470	P30040470	P30160470
4.75	47	80		P40160475	-	P30010475	-	P30160475
4.8	52	86		P40160480	P40190480	P30010480	P30040480	P30160480
4.85	52	86		P40160485	-	-	-	-
4.9	52	86		P40160490	P40190490	P30010490	P30040490	P30160490
4.95	52	86		P40160495	-	-	-	-
5.0	52	86		P40160500	P40190500	P30010500	P30040500	P30160500
5.05	52	86		P40160505	-	-	-	-
5.1	52	86		P40160510	P40190510	P30010510	P30040510	P30160510
5.15	52	86		P40160515	-	-	-	-
5.2	52	86		P40160520	P40190520	P30010520	P30040520	P30160520
5.25	52	86		P40160525	-	P30010525	-	P30160525
5.3	52	86		P40160530	P40190530	P30010530	P30040530	P30160530
5.35	57	93		P40160535	-	-	-	-
5.4	57	93		P40160540	P40190540	P30010540	P30040540	P30160540
5.45	57	93		P40160545	-	-	-	-
5.5	57	93		P40160550	P40190550	P30010550	P30040550	P30160550
5.55	57	93		P40160555	-	-	-	-
5.6	57	93		P40160560	P40190560	P30010560	P30040560	P30160560
5.65	57	93		P40160565	-	-	-	-
5.7	57	93		P40160570	P40190570	P30010570	P30040570	P30160570
5.75	57	93		P40160575	-	P30010575	-	P30160575
5.8	57	93		P40160580	P40190580	P30010580	P30040580	P30160580
5.85	57	93		P40160585	-	-	-	-
5.9	57	93		P40160590	P40190590	P30010590	P30040590	P30160590
5.95	57	93		P40160595	-	-	-	-
6.0	57	93		P40160600	P40190600	P30010600	P30040600	P30160600



Ø	L1	L2	✓	M1 K1 N1 N2 S1	M1 N1 S1	K1 N1 N2 S1	M2 N1 S1	P1 K1 N1 S1
6.05	63	101		P40160605	-	-	-	-
6.1	63	101		P40160610	P40190610	P30010610	P30040610	P30160610
6.15	63	101		P40160615	-	-	-	-
6.2	63	101		P40160620	P40190620	P30010620	P30040620	P30160620
6.25	63	101		P40160625	-	P30010625	-	P30160625
6.3	63	101		P40160630	P40190630	P30010630	P30040630	P30160630
6.35	63	101		P40160635	-	-	-	-
6.4	63	101		P40160640	P40190640	P30010640	P30040640	P30160640
6.45	63	101		P40160645	-	-	-	-
6.5	63	101		P40160650	P40190650	P30010650	P30040650	P30160650
6.55	63	101		P40160655	-	-	-	-
6.6	63	101		P40160660	P40190660	P30010660	P30040660	P30160660
6.65	63	101		P40160665	-	-	-	-
6.7	63	101		P40160670	P40190670	P30010670	P30040670	P30160670
6.75	69	109		P40160675	-	P30010675	-	P30160675
6.8	69	109		P40160680	P40190680	P30010680	P30040680	P30160680
6.85	69	109		P40160685	-	-	-	-
6.9	69	109		P40160690	P40190690	P30010690	P30040690	P30160690
6.95	69	109		P40160695	-	-	-	-
7.0	69	109		P40160700	P40190700	P30010700	P30040700	P30160700
7.05	69	109		P40160705	-	-	-	-
7.1	69	109		P40160710	P40190710	P30010710	P30040710	P30160710
7.15	69	109		P40160715	-	-	-	-
7.2	69	109		P40160720	P40190720	P30010720	P30040720	P30160720
7.25	69	109		P40160725	-	P30010725	-	P30160725
7.3	69	109		P40160730	P40190730	P30010730	P30040730	P30160730
7.35	69	109		P40160735	-	-	-	-
7.4	69	109		P40160740	P40190740	P30010740	P30040740	P30160740
7.45	69	109		P40160745	-	-	-	-
7.5	69	109		P40160750	P40190750	P30010750	P30040750	P30160750
7.55	75	117		P40160755	-	-	-	-
7.6	75	117		P40160760	P40190760	P30010760	P30040760	P30160760
7.65	75	117		P40160765	-	-	-	-
7.7	75	117		P40160770	P40190770	P30010770	P30040770	P30160770
7.75	75	117		P40160775	-	P30010775	-	P30160775
7.8	75	117		P40160780	P40190780	P30010780	P30040780	P30160780



	P4016	P4019	P3001	P3004	P3016
	INF. TEC. PAG. A52	INF. TEC. PAG. A53	INF. TEC. PAG. A52	INF. TEC. PAG. A53	INF. TEC. PAG. A52
	338	338	338	338	338
					
	HSS	HSS	HSS-E	HSS-E	HSS Co8
	Vap	TiN		TiN	
	118° 	118° 	135° 	135° 	135° 
					
	P1 P2 P3	P1 P2 P3	P1 P2 P3 M1	P1 P2 P3 M1	P2 P3 M1
	M1 K1 N1 N2 S1	M1 N1 S1	K1 N1 N2 S1	M2 N1 S1	P1 K1 N1 S1

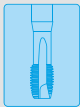
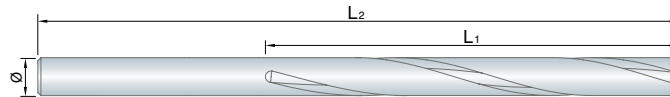
Unità : mm

Ø	L1	L2	✓	M1 K1 N1 N2 S1	M1 N1 S1	K1 N1 N2 S1	M2 N1 S1	P1 K1 N1 S1
7.85	75	117		P40160785	-	-	-	-
7.9	75	117		P40160790	P40190790	P30010790	P30040790	P30160790
7.95	75	117		P40160795	-	-	-	-
8.0	75	117		P40160800	P40190800	P30010800	P30040800	P30160800
8.1	75	117		P40160810	P40190810	P30010810	P30040810	P30160810
8.2	75	117		P40160820	P40190820	P30010820	P30040820	P30160820
8.25	75	117		P40160825	-	P30010825	-	P30160825
8.3	75	117		P40160830	P40190830	P30010830	P30040830	P30160830
8.4	75	117		P40160840	P40190840	P30010840	P30040840	P30160840
8.5	75	117		P40160850	P40190850	P30010850	P30040850	P30160850
8.6	81	125		P40160860	P40190860	P30010860	P30040860	P30160860
8.7	81	125		P40160870	P40190870	P30010870	P30040870	P30160870
8.75	81	125		P40160875	-	P30010875	-	P30160875
8.8	81	125		P40160880	P40190880	P30010880	P30040880	P30160880
8.9	81	125		P40160890	P40190890	P30010890	P30040890	P30160890
9.0	81	125		P40160900	P40190900	P30010900	P30040900	P30160900
9.1	81	125		P40160910	P40190910	P30010910	P30040910	P30160910
9.2	81	125		P40160920	P40190920	P30010920	P30040920	P30160920
9.25	81	125		P40160925	-	P30010925	-	P30160925
9.3	81	125		P40160930	P40190930	P30010930	P30040930	P30160930
9.4	81	125		P40160940	P40190940	P30010940	P30040940	P30160940
9.5	81	125		P40160950	P40190950	P30010950	P30040950	P30160950
9.6	87	133		P40160960	P40190960	P30010960	P30040960	P30160960
9.7	87	133		P40160970	P40190970	P30010970	P30040970	P30160970
9.75	87	133		P40160975	-	P30010975	-	P30160975
9.8	87	133		P40160980	P40190980	P30010980	P30040980	P30160980
9.9	87	133		P40160990	P40190990	P30010990	P30040990	P30160990
10.0	87	133		P40161000	P40191000	P30011000	P30041000	P30161000
10.1	87	133		P40161010	P40191010	-	P30041010	-
10.2	87	133		P40161020	P40191020	P30011020	P30041020	P30161020
10.25	87	133		P40161025	-	-	-	-
10.3	87	133		P40161030	P40191030	-	P30041030	-
10.4	87	133		P40161040	P40191040	-	P30041040	-
10.5	87	133		P40161050	P40191050	P30011050	P30041050	P30161050
10.6	87	133		P40161060	P40191060	-	P30041060	-
10.7	94	142		P40161070	P40191070	-	P30041070	-

PUNTA ELICOIDALE GAMBO CILINDRICO HSS / HSS-E / HSS Co8



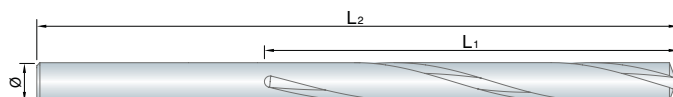
HSS / HSS-E / HSS Co8 STRAIGHT SHANK TWIST DRILL



P4016	P4019	P3001	P3004	P3016
INF. TEC. PAG. A52	INF. TEC. PAG. A53	INF. TEC. PAG. A52	INF. TEC. PAG. A53	INF. TEC. PAG. A52
338	338	338	338	338
HSS	HSS	HSS-E	HSS-E	HSS Co8
Vap	TiN		TiN	
118°	118°	135°	135°	135°

Unità : mm

Ø	L1	L2	✓ ✓ ✓ M1 K1 N1 N2 S1	P1 P2 P3	P1 P2 P3 M1	K1 N1 N2 S1	M2 N1 S1	P1 K1 N1 S1
10.75	94	142		P40161075	-	-	-	-
10.8	94	142		P40161080	P40191080	-	P30041080	-
10.9	94	142		P40161090	P40191090	-	P30041090	-
11.0	94	142		P40161100	P40191100	P30011100	P30041100	P30161100
11.1	94	142		P40161110	P40191110	-	P30041110	-
11.2	94	142		P40161120	P40191120	-	P30041120	-
11.25	94	142		P40161125	-	-	-	-
11.3	94	142		P40161130	P40191130	-	P30041130	-
11.4	94	142		P40161140	P40191140	-	P30041140	-
11.5	94	142		P40161150	P40191150	P30011150	P30041150	P30161150
11.6	94	142		P40161160	P40191160	-	P30041160	-
11.7	94	142		P40161170	P40191170	-	P30041170	-
11.75	94	142		P40161175	-	-	-	-
11.8	94	142		P40161180	P40191180	-	P30041180	-
11.9	101	151		P40161190	P40191190	-	P30041190	-
12.0	101	151		P40161200	P40191200	P30011200	P30041200	P30161200
12.1	101	151		P40161210	P40191210	-	P30041210	-
12.2	101	151		P40161220	P40191220	-	P30041220	-
12.25	101	151		P40161225	-	-	-	-
12.3	101	151		P40161230	P40191230	-	P30041230	-
12.4	101	151		P40161240	P40191240	-	P30041240	-
12.5	101	151		P40161250	P40191250	P30011250	P30041250	P30161250
12.6	101	151		P40161260	P40191260	-	P30041260	-
12.7	101	151		P40161270	P40191270	-	P30041270	-
12.75	101	151		P40161275	-	-	-	-
12.8	101	151		P40161280	P40191280	-	P30041280	-
12.9	101	151		P40161290	P40191290	-	P30041290	-
13.0	101	151		P40161300	P40191300	P30011300	P30041300	P30161300
13.25	108	160		P40161325	-	-	-	-
13.5	108	160		P40161350	-	P30011350	-	P30161350
13.75	108	160		P40161375	-	-	-	-
14.0	108	160		P40161400	-	P30011400	-	P30161400
14.25	114	169		P40161425	-	-	-	-
14.5	114	169		P40161450	-	P30011450	-	P30161450
14.75	114	169		P40161475	-	-	-	-
15.0	114	169		P40161500	-	P30011500	-	P30161500

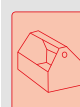
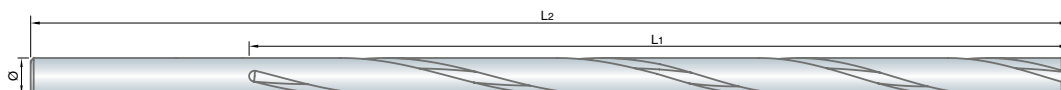


P4016	P4019	P3001	P3004	P3016
INF. TEC. PAG. A52	INF. TEC. PAG. A53	INF. TEC. PAG. A52	INF. TEC. PAG. A53	INF. TEC. PAG. A52
338	338	338	338	338
				
HSS	HSS	HSS-E	HSS-E	HSS Co8
Vap	TiN		TiN	
118°	118°	135°	135°	135°
				
✓ ✓ P1 P2 P3	P1 P2 P3	P1 P2 P3 M1	P1 P2 P3 M1	P2 P3 M1
✓ M1 K1 N1 N2 S1	M1 N1 S1	K1 N1 N2 S1	M2 N1 S1	P1 K1 N1 S1

Unità : mm

Ø	L1	L2	
15.25	120	178	P40161525 - - - -
15.5	120	178	P40161550 - P30011550 - P30161550
15.75	120	178	P40161575 - - - -
16.0	120	178	P40161600 - P30011600 - P30161600
16.25	125	184	P40161625 - - - -
16.5	125	184	P40161650 - P30011650 - P30161650
16.75	125	184	P40161675 - - - -
17.0	125	184	P40161700 - P30011700 - P30161700
17.25	130	191	P40161725 - - - -
17.5	130	191	P40161750 - P30011750 - P30161750
17.75	130	191	P40161775 - - - -
18.0	130	191	P40161800 - P30011800 - P30161800
18.25	135	198	P40161825 - - - -
18.5	135	198	P40161850 - P30011850 - P30161850
18.75	135	198	P40161875 - - - -
19.0	135	198	P40161900 - P30011900 - P30161900
19.25	140	205	P40161925 - - - -
19.5	140	205	P40161950 - P30011950 - P30161950
19.75	140	205	P40161975 - - - -
20.0	140	205	P40162000 - P30012000 - P30162000

PUNTA ELICOIDALE HSS-E / HSS Co8
GAMBO CILINDRICO PER FORI NO - STOP
HSS-E / HSS Co8 STRAIGHT SHANK TWIST DRILL
FOR DEEP HOLES

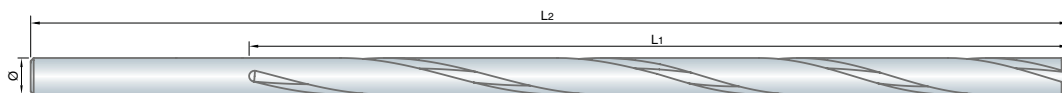


P3007	P3019
INF. TEC. PAG. A53	INF. TEC. PAG. A52
340	340
HSS-E	HSS Co8
Vap	
130°	135°
P1 P2	P2 P3 M1
P3 K1 N1	P1 K1 N1 S1

Unità : mm

Ø	L1	L2		
2.0	56	85	P30070200	P30190200
2.1	56	85	P30070210	P30190210
2.2	59	90	P30070220	P30190220
2.3	59	90	P30070230	P30190230
2.4	62	95	P30070240	P30190240
2.5	62	95	P30070250	P30190250
2.6	62	95	P30070260	P30190260
2.7	66	100	P30070270	P30190270
2.8	66	100	P30070280	P30190280
2.9	66	100	P30070290	P30190290
3.0	66	100	P30070300	P30190300
3.1	69	106	P30070310	P30190310
3.2	69	106	P30070320	P30190320
3.3	69	106	P30070330	P30190330
3.4	73	112	P30070340	P30190340
3.5	73	112	P30070350	P30190350
3.6	73	112	P30070360	P30190360
3.7	73	112	P30070370	P30190370
3.8	78	119	P30070380	P30190380
3.9	78	119	P30070390	P30190390
4.0	78	119	P30070400	P30190400
4.1	78	119	-	P30190410
4.2	78	119	P30070420	P30190420
4.3	82	126	-	P30190430
4.4	82	126	-	P30190440
4.5	82	126	P30070450	P30190450
4.6	82	126	-	P30190460
4.7	82	126	-	P30190470
4.8	87	132	P30070480	P30190480
4.9	87	132	-	P30190490
5.0	87	132	P30070500	P30190500
5.1	87	132	-	P30190510
5.2	87	132	P30070520	P30190520
5.3	87	132	-	P30190530
5.4	91	139	-	P30190540
5.5	91	139	P30070550	P30190550

PUNTA ELICOIDALE HSS-E / HSS Co8
GAMBO CILINDRICO PER FORI NO - STOP
HSS-E / HSS Co8 STRAIGHT SHANK TWIST DRILL
FOR DEEP HOLES

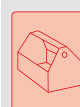
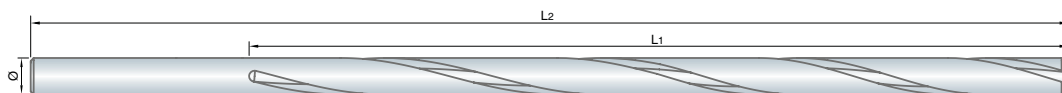


P3007	P3019
INF. TEC. PAG. A53	INF. TEC. PAG. A52
340	340
	
HSS-E	HSS Co8
Vap	
130°	135°
	
P1 P2	P2 P3 M1
P3 K1 N1	P1 K1 N1 S1

Unità : mm

Ø	L1	L2		
5.6	91	139	-	P30190560
5.7	91	139	-	P30190570
5.8	91	139	P30070580	P30190580
5.9	91	139	-	P30190590
6.0	91	139	P30070600	P30190600
6.1	97	148	-	P30190610
6.2	97	148	P30070620	P30190620
6.3	97	148	-	P30190630
6.4	97	148	-	P30190640
6.5	97	148	P30070650	P30190650
6.6	97	148	-	P30190660
6.7	97	148	-	P30190670
6.8	102	156	P30070680	P30190680
6.9	102	156	-	P30190690
7.0	102	156	P30070700	P30190700
7.1	102	156	-	P30190710
7.2	102	156	P30070720	P30190720
7.3	102	156	-	P30190730
7.4	102	156	-	P30190740
7.5	102	156	P30070750	P30190750
7.6	109	165	-	P30190760
7.7	109	165	-	P30190770
7.8	109	165	P30070780	P30190780
7.9	109	165	-	P30190790
8.0	109	165	P30070800	P30190800
8.1	109	165	-	P30190810
8.2	109	165	P30070820	P30190820
8.3	109	165	-	P30190830
8.4	109	165	-	P30190840
8.5	109	165	P30070850	P30190850
8.6	115	175	-	P30190860
8.7	115	175	-	P30190870
8.8	115	175	-	P30190880
8.9	115	175	-	P30190890
9.0	115	175	P30070900	P30190900
9.1	115	175	-	P30190910

PUNTA ELICOIDALE HSS-E / HSS Co8
GAMBO CILINDRICO PER FORI NO - STOP
HSS-E / HSS Co8 STRAIGHT SHANK TWIST DRILL
FOR DEEP HOLES



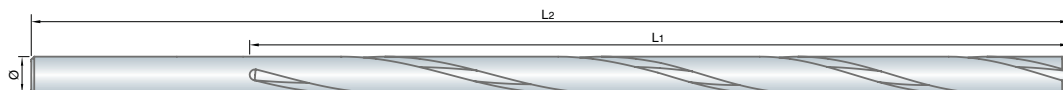
P3007	P3019
INF. TEC. PAG. A53	INF. TEC. PAG. A52
340	340
HSS-E	HSS Co8
Vap	
130°	135°
P1 P2	P2 P3 M1
P3 K1 N1	P1 K1 N1 S1

Unità : mm

Ø	L1	L2		
9.2	115	175	-	P30190920
9.3	115	175	-	P30190930
9.4	115	175	-	P30190940
9.5	115	175	P30070950	P30190950
9.6	121	184	-	P30190960
9.7	121	184	-	P30190970
9.8	121	184	P30070980	P30190980
9.9	121	184	-	P30190990
10.0	121	184	P30071000	P30191000
10.2	121	184	-	P30191020
10.5	121	184	P30071050	P30191050
10.8	128	195	-	P30191080
11.0	128	195	P30071100	P30191100
11.2	128	195	-	P30191120
11.5	128	195	P30071150	P30191150
11.8	128	195	-	P30191180
12.0	134	205	P30071200	P30191200
12.5	134	205	P30071250	-
13.0	134	205	P30071300	-

PUNTA ELICOIDALE HSS-E GAMBO CILINDRICO PER FORI NO - STOP

HSS-E STRAIGHT SHANK TWIST DRILL FOR DEEP HOLES


P3010

 INF. TEC. PAG.
A53

1869/1



HSS-E

130°

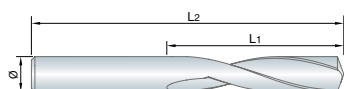


P2

Unità : mm

Ø	L1	L2	P3010
2.0	85	125	P30100200
2.25	90	135	P30100225
2.5	95	140	P30100250
2.75	100	150	P30100275
3.0	100	150	P30100300
3.25	105	155	P30100325
3.5	115	165	P30100350
3.75	115	165	P30100375
4.0	120	175	P30100400
4.25	120	175	P30100425
4.5	125	185	P30100450
4.75	125	185	P30100475
5.0	135	195	P30100500
5.25	135	195	P30100525
5.5	140	205	P30100550
5.75	140	205	P30100575
6.0	140	205	P30100600
6.25	150	215	P30100625
6.5	150	215	P30100650
6.75	155	225	P30100675

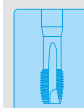
Ø	L1	L2	P1 M1 K1 N1 S1
7.0	155	225	P30100700
7.25	155	225	P30100725
7.5	155	225	P30100750
7.75	165	240	P30100775
8.0	165	240	P30100800
8.25	165	240	P30100825
8.5	165	240	P30100850
8.75	175	250	P30100875
9.0	175	250	P30100900
9.25	175	250	P30100925
9.5	175	250	P30100950
9.75	185	265	P30100975
10.0	185	265	P30101000
10.5	185	265	P30101050
11.0	195	280	P30101100
11.5	195	280	P30101150
12.0	205	295	P30101200
12.5	205	295	P30101250
13.0	205	295	P30101300

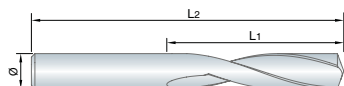


Unità : mm

Ø	L1	L2	✓	M1 K1 N1 S1	P1 P5 M1 K1
1.0	6	26		P10010100	-
1.1	7	28		P10010110	-
1.2	8	30		P10010120	-
1.3	8	30		P10010130	-
1.4	9	32		P10010140	-
1.5	9	32		P10010150	-
1.6	10	34		P10010160	-
1.7	10	34		P10010170	-
1.8	11	36		P10010180	-
1.9	11	36		P10010190	-
2.0	12	38		P10010200	-
2.1	12	38		P10010210	-
2.2	13	40		P10010220	-
2.3	13	40		P10010230	-
2.4	14	43		P10010240	-
2.5	14	43		P10010250	-
2.6	14	43		P10010260	-
2.7	16	46		P10010270	-
2.8	16	46		P10010280	-
2.9	16	46		P10010290	-
3.0	16	46		P10010300	P10040300
3.1	18	49		P10010310	P10040310
3.2	18	49		P10010320	P10040320
3.3	18	49		P10010330	P10040330
3.4	20	52		P10010340	P10040340
3.5	20	52		P10010350	P10040350
3.6	20	52		P10010360	P10040360
3.7	20	52		P10010370	P10040370
3.8	20	52		P10010380	-
3.8	22	55		-	P10040380
3.9	22	55		P10010390	P10040390
4.0	22	55		P10010400	P10040400
4.1	22	55		P10010410	P10040410
4.2	22	55		P10010420	P10040420
4.3	24	58		P10010430	P10040430

P1001	P1004
INF. TEC. PAG. A53	INF. TEC. PAG. A54
6539	6539
	3xD
MD	MD
	TiAlN
118°	140°
P1 P2 P3	P2 P3 P4
M1 K1 N1 S1	P1 P5 M1 K1

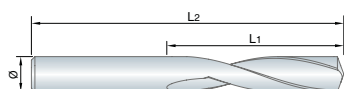




P1001	P1004
INF. TEC. PAG. A53	INF. TEC. PAG. A54
6539	6539
	3xD
MD	MD
	TiAlN
118°	140°
	
P1 P2 P3	P2 P3 P4
M1 K1 N1 S1	P1 P5 M1 K1

Unità : mm

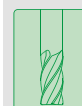
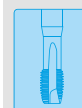
Ø	L1	L2		
4.4	24	58	P10010440	P10040440
4.5	24	58	P10010450	P10040450
4.6	24	58	P10010460	P10040460
4.7	24	58	P10010470	P10040470
4.8	26	62	P10010480	P10040480
4.9	26	62	P10010490	P10040490
5.0	26	62	P10010500	P10040500
5.1	26	62	P10010510	P10040510
5.2	26	62	P10010520	P10040520
5.3	26	62	P10010530	P10040530
5.4	28	66	P10010540	P10040540
5.5	28	66	P10010550	P10040550
5.6	28	66	P10010560	P10040560
5.7	28	66	P10010570	P10040570
5.8	28	66	P10010580	P10040580
5.9	28	66	P10010590	P10040590
6.0	28	66	P10010600	P10040600
6.1	31	70	P10010610	P10040610
6.2	31	70	P10010620	P10040620
6.3	31	70	P10010630	P10040630
6.4	31	70	P10010640	P10040640
6.5	31	70	P10010650	P10040650
6.6	31	70	P10010660	P10040660
6.7	31	70	P10010670	P10040670
6.8	34	74	P10010680	P10040680
6.9	34	74	P10010690	P10040690
7.0	34	74	P10010700	P10040700
7.1	34	74	P10010710	P10040710
7.2	34	74	P10010720	P10040720
7.3	34	74	P10010730	P10040730
7.4	34	74	P10010740	P10040740
7.5	34	74	P10010750	P10040750
7.6	37	79	P10010760	P10040760
7.7	37	79	P10010770	P10040770

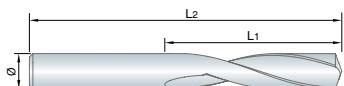


Unità : mm

Ø	L1	L2	✓	M1 K1 N1 S1	P1 P5 M1 K1
7.8	37	79		P10010780	P10040780
7.9	37	79		P10010790	P10040790
8.0	37	79		P10010800	P10040800
8.1	37	79		P10010810	P10040810
8.2	37	79		P10010820	P10040820
8.3	37	79		P10010830	P10040830
8.4	37	79		P10010840	P10040840
8.5	37	79		P10010850	P10040850
8.6	40	84		P10010860	P10040860
8.7	40	84		P10010870	P10040870
8.8	40	84		P10010880	P10040880
8.9	40	84		P10010890	P10040890
9.0	40	84		P10010900	P10040900
9.1	40	84		P10010910	P10040910
9.2	40	84		P10010920	P10040920
9.3	40	84		P10010930	P10040930
9.4	40	84		P10010940	P10040940
9.5	40	84		P10010950	P10040950
9.6	43	89		P10010960	P10040960
9.7	43	89		P10010970	P10040970
9.8	43	89		P10010980	P10040980
9.9	43	89		P10010990	P10040990
10.0	43	89		P10011000	P10041000
10.2	43	89		P10011020	P10041020
10.5	43	89		P10011050	P10041050
11.0	47	95		P10011100	P10041100
11.5	47	95		P10011150	P10041150
12.0	51	102		P10011200	P10041200
12.5	51	102		-	P10041250
13.0	51	102		P10011300	P10041300
13.5	54	107		-	P10041350
14.0	54	107		-	P10041400
14.5	56	111		-	P10041450
15.0	56	111		-	P10041500

P1001	P1004
INF. TEC. PAG. A53	INF. TEC. PAG. A54
6539	6539
	3xD
MD	MD
	TiAlN
118°	140°
P1 P2 P3	P2 P3 P4
M1 K1 N1 S1	P1 P5 M1 K1





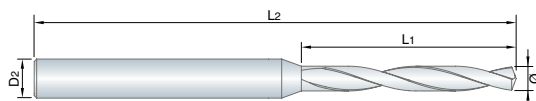
Unità : mm

Ø	L1	L2		
15.5	58	115	-	P10041550
16.0	58	115	-	P10041600
16.5	60	119	-	P10041650
17.0	60	119	-	P10041700
17.5	62	123	-	P10041750
18.0	62	123	-	P10041800
18.5	64	127	-	P10041850
19.0	64	127	-	P10041900
19.5	66	131	-	P10041950
20.0	66	131	-	P10042000

P1001	P1004
INF. TEC. PAG. A53	INF. TEC. PAG. A54
6539	6539
	3xD
MD	MD
	TiAlN
118°	140°
	
P1 P2 P3	P2 P3 P4
M1 K1 N1 S1	P1 P5 M1 K1

PUNTA ELICOIDALE MD (con e senza fori di refrigerazione)

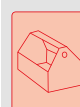
CARBIDE DRILL WITH AND WITHOUT COOLANT HOLES

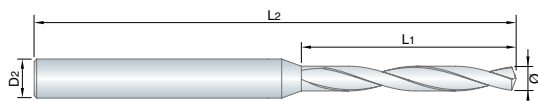


Unità : mm

Ø	D2	L1	L2	✓ ✓ ✓	P1 P5 M1 K1	P1 P5 M1 K1	N1 S1
3.0	6	20	62		P10100300	P10130300	P10160300
3.1	6	20	62		P10100310	P10130310	P10160310
3.2	6	20	62		P10100320	P10130320	P10160320
3.3	6	20	62		P10100330	P10130330	P10160330
3.4	6	20	62		P10100340	P10130340	P10160340
3.5	6	20	62		P10100350	P10130350	P10160350
3.6	6	20	62		P10100360	P10130360	P10160360
3.7	6	20	62		P10100370	P10130370	P10160370
3.8	6	24	66		P10100380	P10130380	P10160380
3.9	6	24	66		P10100390	P10130390	P10160390
4.0	6	24	66		P10100400	P10130400	P10160400
4.1	6	24	66		P10100410	P10130410	P10160410
4.2	6	24	66		P10100420	P10130420	P10160420
4.3	6	24	66		P10100430	P10130430	P10160430
4.4	6	24	66		P10100440	P10130440	P10160440
4.5	6	24	66		P10100450	P10130450	P10160450
4.6	6	24	66		P10100460	P10130460	P10160460
4.7	6	24	66		P10100470	P10130470	P10160470
4.8	6	28	66		P10100480	P10130480	P10160480
4.9	6	28	66		P10100490	P10130490	P10160490
5.0	6	28	66		P10100500	P10130500	P10160500
5.1	6	28	66		P10100510	P10130510	P10160510
5.2	6	28	66		P10100520	P10130520	P10160520
5.3	6	28	66		P10100530	P10130530	P10160530
5.4	6	28	66		P10100540	P10130540	P10160540
5.5	6	28	66		P10100550	P10130550	P10160550
5.6	6	28	66		P10100560	P10130560	P10160560
5.7	6	28	66		P10100570	P10130570	P10160570
5.8	6	28	66		P10100580	P10130580	P10160580
5.9	6	28	66		P10100590	P10130590	P10160590
6.0	6	28	66		P10100600	P10130600	P10160600
6.1	8	34	79		P10100610	P10130610	P10160610
6.2	8	34	79		P10100620	P10130620	P10160620
6.3	8	34	79		P10100630	P10130630	P10160630
6.4	8	34	79		P10100640	P10130640	P10160640
6.5	8	34	79		P10100650	P10130650	P10160650

P1010	P1013	P1016
INF. TEC. PAG. A54	INF. TEC. PAG. A54	INF. TEC. PAG. A54
6537	6537	6537
3xD	3xD	3xD
MD	MD	MD
TiAIN	TiAIN	TiAIN
140°	140°	140°
✓ ✓ ✓	P2 P3 P4	P1 P2 P3 M1 M2
✓	P1 P5 M1 K1	P1 P5 M1 K1 N1 S1





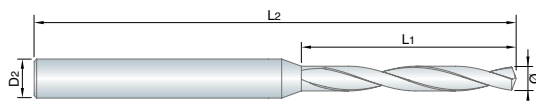
P1010	P1013	P1016
INF. TEC. PAG. A54	INF. TEC. PAG. A54	INF. TEC. PAG. A54
6537	6537	6537
3xD	3xD	3xD
MD	MD	MD
TiAIN	TiAIN	TiAIN
140°	140°	140°
		
		
✓ ✓ ✓	P2 P3 P4	P1 P2 P3 M1 M2
✓	P1 P5 M1 K1	N1 S1

Unità : mm

Ø	D2	L1	L2			
6.6	8	34	79	P10100660	P10130660	P10160660
6.7	8	34	79	P10100670	P10130670	P10160670
6.8	8	34	79	P10100680	P10130680	P10160680
6.9	8	34	79	P10100690	P10130690	P10160690
7.0	8	34	79	P10100700	P10130700	P10160700
7.1	8	41	79	P10100710	P10130710	P10160710
7.2	8	41	79	P10100720	P10130720	P10160720
7.3	8	41	79	P10100730	P10130730	P10160730
7.4	8	41	79	P10100740	P10130740	P10160740
7.5	8	41	79	P10100750	P10130750	P10160750
7.6	8	41	79	P10100760	P10130760	P10160760
7.7	8	41	79	P10100770	P10130770	P10160770
7.8	8	41	79	P10100780	P10130780	P10160780
7.9	8	41	79	P10100790	P10130790	P10160790
8.0	8	41	79	P10100800	P10130800	P10160800
8.1	10	47	89	P10100810	P10130810	P10160810
8.2	10	47	89	P10100820	P10130820	P10160820
8.3	10	47	89	P10100830	P10130830	P10160830
8.4	10	47	89	P10100840	P10130840	P10160840
8.5	10	47	89	P10100850	P10130850	P10160850
8.6	10	47	89	P10100860	P10130860	P10160860
8.7	10	47	89	P10100870	P10130870	P10160870
8.8	10	47	89	P10100880	P10130880	P10160880
8.9	10	47	89	P10100890	P10130890	P10160890
9.0	10	47	89	P10100900	P10130900	P10160900
9.1	10	47	89	P10100910	P10130910	P10160910
9.2	10	47	89	P10100920	P10130920	P10160920
9.3	10	47	89	P10100930	P10130930	P10160930
9.4	10	47	89	P10100940	P10130940	P10160940
9.5	10	47	89	P10100950	P10130950	P10160950
9.6	10	47	89	P10100960	P10130960	P10160960
9.7	10	47	89	P10100970	P10130970	P10160970
9.8	10	47	89	P10100980	P10130980	P10160980
9.9	10	47	89	P10100990	P10130990	P10160990
10.0	10	47	89	P10101000	P10131000	P10161000
10.1	12	55	102	P10101010	P10131010	P10161010
10.2	12	55	102	P10101020	P10131020	P10161020

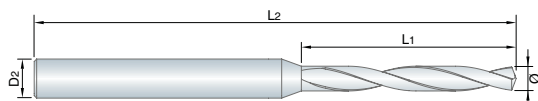
PUNTA ELICOIDALE MD (con e senza fori di refrigerazione)

CARBIDE DRILL WITH AND WITHOUT COOLANT HOLES



Unità : mm

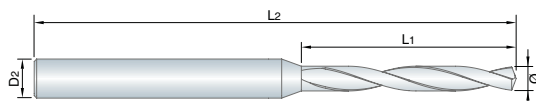
Ø	D2	L1	L2	✓ ✓ ✓	P1010	P1013	P1016
					INF. TEC. PAG. A54	INF. TEC. PAG. A54	INF. TEC. PAG. A54
					6537	6537	6537
					3xD	3xD	3xD
					MD	MD	MD
					TiAIN	TiAIN	TiAIN
					140°	140°	140°
					P2 P3 P4	P2 P3 P4	P1 P2 P3 M1 M2
					P1 P5 M1 K1	P1 P5 M1 K1	N1 S1
10.3	12	55	102		P10101030	P10131030	P10161030
10.4	12	55	102		P10101040	P10131040	P10161040
10.5	12	55	102		P10101050	P10131050	P10161050
10.6	12	55	102		P10101060	P10131060	P10161060
10.7	12	55	102		P10101070	P10131070	P10161070
10.8	12	55	102		P10101080	P10131080	P10161080
10.9	12	55	102		P10101090	P10131090	P10161090
11.0	12	55	102		P10101100	P10131100	P10161100
11.1	12	55	102		P10101110	P10131110	P10161110
11.2	12	55	102		P10101120	P10131120	P10161120
11.3	12	55	102		P10101130	P10131130	P10161130
11.4	12	55	102		P10101140	P10131140	P10161140
11.5	12	55	102		P10101150	P10131150	P10161150
11.6	12	55	102		P10101160	P10131160	P10161160
11.7	12	55	102		P10101170	P10131170	P10161170
11.8	12	55	102		P10101180	P10131180	P10161180
11.9	12	55	102		P10101190	P10131190	P10161190
12.0	12	55	102		P10101200	P10131200	P10161200
12.1	14	60	107		-	P10131210	-
12.2	14	60	107		-	P10131220	-
12.3	14	60	107		P10101230	P10131230	-
12.4	14	60	107		-	P10131240	-
12.5	14	60	107		P10101250	P10131250	P10161250
12.6	14	60	107		-	P10131260	-
12.7	14	60	107		-	P10131270	-
12.8	14	60	107		P10101280	P10131280	-
12.9	14	60	107		-	P10131290	-
13.0	14	60	107		P10101300	P10131300	P10161300
13.1	14	60	107		-	P10131310	-
13.2	14	60	107		-	P10131320	-
13.3	14	60	107		-	P10131330	-
13.4	14	60	107		-	P10131340	-
13.5	14	60	107		P10101350	P10131350	P10161350
13.6	14	60	107		-	P10131360	-
13.7	14	60	107		-	P10131370	-
13.8	14	60	107		P10101380	P10131380	-
13.9	14	60	107		-	P10131390	-



P1010	P1013	P1016
INF. TEC. PAG. A54	INF. TEC. PAG. A54	INF. TEC. PAG. A54
6537	6537	6537
3xD	3xD	3xD
MD	MD	MD
TiAIN	TiAIN	TiAIN
140°	140°	140°
		
		
✓ ✓ ✓	P2 P3 P4	P1 P2 P3 M1 M2
✓	P1 P5 M1 K1	N1 S1

Unità : mm

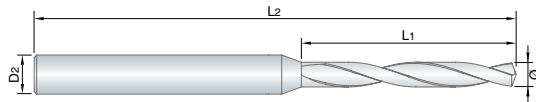
Ø	D2	L1	L2			
14.0	14	60	107	P10101400	P10131400	P10161400
14.1	16	65	115	-	P10131410	-
14.2	16	65	115	-	P10131420	-
14.3	16	65	115	-	P10131430	-
14.4	16	65	115	-	P10131440	-
14.5	16	65	115	P10101450	P10131450	P10161450
14.6	16	65	115	-	P10131460	-
14.7	16	65	115	-	P10131470	-
14.8	16	65	115	P10101480	P10131480	-
14.9	16	65	115	-	P10131490	-
15.0	16	65	115	P10101500	P10131500	P10161500
15.1	16	65	115	-	P10131510	-
15.2	16	65	115	-	P10131520	-
15.3	16	65	115	-	P10131530	-
15.4	16	65	115	-	P10131540	-
15.5	16	65	115	P10101550	P10131550	P10161550
15.6	16	65	115	-	P10131560	-
15.7	16	65	115	-	P10131570	-
15.8	16	65	115	P10101580	P10131580	-
15.9	16	65	115	-	P10131590	-
16.0	16	65	115	P10101600	P10131600	P10161600
16.1	18	73	123	-	P10131610	-
16.2	18	73	123	-	P10131620	-
16.3	18	73	123	-	P10131630	-
16.4	18	73	123	-	P10131640	-
16.5	18	73	123	P10101650	P10131650	P10161650
16.8	18	73	123	P10101680	-	-
17.0	18	73	123	P10101700	P10131700	P10161700
17.5	18	73	123	P10101750	P10131750	P10161750
17.8	18	73	123	P10101780	-	-
18.0	18	73	123	P10101800	P10131800	P10161800
18.5	20	79	131	P10101850	P10131850	P10161850
19.0	20	79	131	P10101900	P10131900	P10161900
19.5	20	79	131	P10101950	P10131950	P10161950
19.8	20	79	131	P10101980	-	-
20.0	20	79	131	P10102000	P10132000	P10162000



	P1019	P1022	P1025
	INF. TEC. PAG. A54	INF. TEC. PAG. A54	INF. TEC. PAG. A54
	6537	6537	6537
	5xD	5xD	5xD
	MD	MD	MD
	TiAlN	TiAlN	TiAlN
	140° 	140° 	140° 
			
			
	P2 P3 P4	P2 P3 P4	P1 P2 P3 M1 M2
	P1 P5 M1 K1	P1 P5 M1 K1	N1 S1

Ø	D2	L1	L2	✓	P1 P5 M1 K1	P1 P5 M1 K1	N1 S1
1.0	3	8	55		P10190100	P10220100	P10250100
1.1	3	12	55		P10190110	P10220110	P10250110
1.2	3	12	55		P10190120	P10220120	P10250120
1.3	3	12	55		P10190130	P10220130	P10250130
1.4	3	12	55		P10190140	P10220140	P10250140
1.5	3	16	55		P10190150	P10220150	P10250150
1.6	3	16	55		P10190160	P10220160	P10250160
1.7	3	16	55		P10190170	P10220170	P10250170
1.8	3	16	55		P10190180	P10220180	P10250180
1.9	3	16	55		P10190190	P10220190	P10250190
2.0	4	21	57		P10190200	P10220200	P10250200
2.1	4	21	57		P10190210	P10220210	P10250210
2.2	4	21	57		P10190220	P10220220	P10250220
2.3	4	21	57		P10190230	P10220230	P10250230
2.4	4	21	57		P10190240	P10220240	P10250240
2.5	4	21	57		P10190250	P10220250	P10250250
2.6	4	21	57		P10190260	P10220260	P10250260
2.7	4	21	57		P10190270	P10220270	P10250270
2.8	4	21	57		P10190280	P10220280	P10250280
2.9	4	21	57		P10190290	P10220290	P10250290
3.0	6	28	66		P10190300	P10220300	P10250300
3.1	6	28	66		P10190310	P10220310	P10250310
3.2	6	28	66		P10190320	P10220320	P10250320
3.3	6	28	66		P10190330	P10220330	P10250330
3.4	6	28	66		P10190340	P10220340	P10250340
3.5	6	28	66		P10190350	P10220350	P10250350
3.6	6	28	66		P10190360	P10220360	P10250360
3.7	6	28	66		P10190370	P10220370	P10250370
3.8	6	36	74		P10190380	P10220380	P10250380
3.9	6	36	74		P10190390	P10220390	P10250390
4.0	6	36	74		P10190400	P10220400	P10250400
4.1	6	36	74		P10190410	P10220410	P10250410
4.2	6	36	74		P10190420	P10220420	P10250420
4.3	6	36	74		P10190430	P10220430	P10250430
4.4	6	36	74		P10190440	P10220440	P10250440
4.5	6	36	74		P10190450	P10220450	P10250450





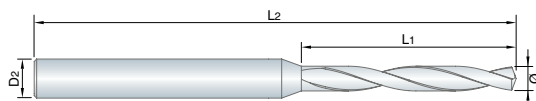
P1019	P1022	P1025
INF. TEC. PAG. A54	INF. TEC. PAG. A54	INF. TEC. PAG. A54
6537	6537	6537
5xD	5xD	5xD
MD	MD	MD
TiAIN	TiAIN	TiAIN
140°	140°	140°
		
		

Unità : mm

Ø	D2	L1	L2	✓ ✓ ✓	P2 P3 P4 P1 P5 M1 K1	P2 P3 P4 P1 P5 M1 K1	P1 P2 P3 M1 M2 N1 S1
4.6	6	36	74		P10190460	P10220460	P10250460
4.7	6	36	74		P10190470	P10220470	P10250470
4.8	6	44	82		P10190480	P10220480	P10250480
4.9	6	44	82		P10190490	P10220490	P10250490
5.0	6	44	82		P10190500	P10220500	P10250500
5.1	6	44	82		P10190510	P10220510	P10250510
5.2	6	44	82		P10190520	P10220520	P10250520
5.3	6	44	82		P10190530	P10220530	P10250530
5.4	6	44	82		P10190540	P10220540	P10250540
5.5	6	44	82		P10190550	P10220550	P10250550
5.6	6	44	82		P10190560	P10220560	P10250560
5.7	6	44	82		P10190570	P10220570	P10250570
5.8	6	44	82		P10190580	P10220580	P10250580
5.9	6	44	82		P10190590	P10220590	P10250590
6.0	6	44	82		P10190600	P10220600	P10250600
6.1	8	53	91		P10190610	P10220610	P10250610
6.2	8	53	91		P10190620	P10220620	P10250620
6.3	8	53	91		P10190630	P10220630	P10250630
6.4	8	53	91		P10190640	P10220640	P10250640
6.5	8	53	91		P10190650	P10220650	P10250650
6.6	8	53	91		P10190660	P10220660	P10250660
6.7	8	53	91		P10190670	P10220670	P10250670
6.8	8	53	91		P10190680	P10220680	P10250680
6.9	8	53	91		P10190690	P10220690	P10250690
7.0	8	53	91		P10190700	P10220700	P10250700
7.1	8	53	91		P10190710	P10220710	P10250710
7.2	8	53	91		P10190720	P10220720	P10250720
7.3	8	53	91		P10190730	P10220730	P10250730
7.4	8	53	91		P10190740	P10220740	P10250740
7.5	8	53	91		P10190750	P10220750	P10250750
7.6	8	53	91		P10190760	P10220760	P10250760
7.7	8	53	91		P10190770	P10220770	P10250770
7.8	8	53	91		P10190780	P10220780	P10250780
7.9	8	53	91		P10190790	P10220790	P10250790
8.0	8	53	91		P10190800	P10220800	P10250800
8.1	10	61	103		P10190810	P10220810	P10250810

PUNTA ELICOIDALE MD (con e senza fori di refrigerazione)

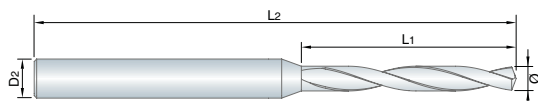
CARBIDE DRILL WITH AND WITHOUT COOLANT HOLES



Unità : mm

Ø	D2	L1	L2		P1019	P1022	P1025
					INF. TEC. PAG. A54	INF. TEC. PAG. A54	INF. TEC. PAG. A54
					6537	6537	6537
					5xD	5xD	5xD
					MD	MD	MD
					TiAIN	TiAIN	TiAIN
					140°	140°	140°
				✓	P2 P3 P4	P2 P3 P4	P1 P2 P3
				✓	P1 P5 M1 K1	P1 P5 M1 K1	M1 M2
				✓			N1 S1
8.2	10	61	103		P10190820	P10220820	P10250820
8.3	10	61	103		P10190830	P10220830	P10250830
8.4	10	61	103		P10190840	P10220840	P10250840
8.5	10	61	103		P10190850	P10220850	P10250850
8.6	10	61	103		P10190860	P10220860	P10250860
8.7	10	61	103		P10190870	P10220870	P10250870
8.8	10	61	103		P10190880	P10220880	P10250880
8.9	10	61	103		P10190890	P10220890	P10250890
9.0	10	61	103		P10190900	P10220900	P10250900
9.1	10	61	103		P10190910	P10220910	P10250910
9.2	10	61	103		P10190920	P10220920	P10250920
9.3	10	61	103		P10190930	P10220930	P10250930
9.4	10	61	103		P10190940	P10220940	P10250940
9.5	10	61	103		P10190950	P10220950	P10250950
9.6	10	61	103		P10190960	P10220960	P10250960
9.7	10	61	103		P10190970	P10220970	P10250970
9.8	10	61	103		P10190980	P10220980	P10250980
9.9	10	61	103		P10190990	P10220990	P10250990
10.0	10	61	103		P10191000	P10221000	P10251000
10.1	12	71	118		P10191010	P10221010	P10251010
10.2	12	71	118		P10191020	P10221020	P10251020
10.3	12	71	118		P10191030	P10221030	P10251030
10.4	12	71	118		P10191040	P10221040	P10251040
10.5	12	71	118		P10191050	P10221050	P10251050
10.6	12	71	118		P10191060	P10221060	P10251060
10.7	12	71	118		P10191070	P10221070	P10251070
10.8	12	71	118		P10191080	P10221080	P10251080
10.9	12	71	118		P10191090	P10221090	P10251090
11.0	12	71	118		P10191100	P10221100	P10251100
11.1	12	71	118		P10191110	P10221110	P10251110
11.2	12	71	118		P10191120	P10221120	P10251120
11.3	12	71	118		P10191130	P10221130	P10251130
11.4	12	71	118		P10191140	P10221140	P10251140
11.5	12	71	118		P10191150	P10221150	P10251150
11.6	12	71	118		P10191160	P10221160	P10251160
11.7	12	71	118		P10191170	P10221170	P10251170





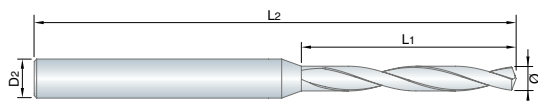
P1019	P1022	P1025
INF. TEC. PAG. A54	INF. TEC. PAG. A54	INF. TEC. PAG. A54
6537	6537	6537
5xD	5xD	5xD
MD	MD	MD
TiAlN	TiAlN	TiAlN
140°	140°	140°
		
		
✓ ✓ ✓	P2 P3 P4	P1 P2 P3 M1 M2
✓	P1 P5 M1 K1	P1 P5 M1 K1 N1 S1

Unità : mm

Ø	D2	L1	L2			
11.8	12	71	118	P10191180	P10221180	P10251180
11.9	12	71	118	P10191190	P10221190	P10251190
12.0	12	71	118	P10191200	P10221200	P10251200
12.1	14	77	124	-	P10221210	-
12.2	14	77	124	-	P10221220	-
12.3	14	77	124	P10191230	P10221230	-
12.4	14	77	124	-	P10221240	-
12.5	14	77	124	P10191250	P10221250	P10251250
12.6	14	77	124	-	P10221260	-
12.7	14	77	124	-	P10221270	-
12.8	14	77	124	P10191280	P10221280	-
12.9	14	77	124	-	P10221290	-
13.0	14	77	124	P10191300	P10221300	P10251300
13.1	14	77	124	-	P10221310	-
13.2	14	77	124	-	P10221320	-
13.3	14	77	124	-	P10221330	-
13.4	14	77	124	-	P10221340	-
13.5	14	77	124	P10191350	P10221350	P10251350
13.6	14	77	124	-	P10221360	-
13.7	14	77	124	-	P10221370	-
13.8	14	77	124	P10191380	P10221380	-
13.9	14	77	124	-	P10221390	-
14.0	14	77	124	P10191400	P10221400	P10251400
14.1	16	83	133	-	P10221410	-
14.2	16	83	133	-	P10221420	-
14.3	16	83	133	-	P10221430	-
14.4	16	83	133	-	P10221440	-
14.5	16	83	133	P10191450	P10221450	P10251450
14.6	16	83	133	-	P10221460	-
14.7	16	83	133	-	P10221470	-
14.8	16	83	133	P10191480	P10221480	-
14.9	16	83	133	-	P10221490	-
15.0	16	83	133	P10191500	P10221500	P10251500
15.1	16	83	133	-	P10221510	-
15.2	16	83	133	-	P10221520	-
15.3	16	83	133	-	P10221530	-

PUNTA ELICOIDALE MD (con e senza fori di refrigerazione)

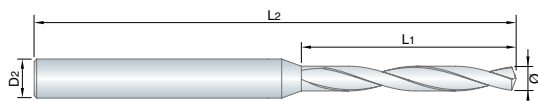
CARBIDE DRILL WITH AND WITHOUT COOLANT HOLES



P1019	P1022	P1025
INF. TEC. PAG. A54	INF. TEC. PAG. A54	INF. TEC. PAG. A54
6537	6537	6537
5xD	5xD	5xD
MD	MD	MD
TiAIN	TiAIN	TiAIN
140°	140°	140°
✓ ✓ ✓	P2 P3 P4	P1 P2 P3 M1 M2
✓	P1 P5 M1 K1	P1 P5 M1 K1 N1 S1

Unità : mm

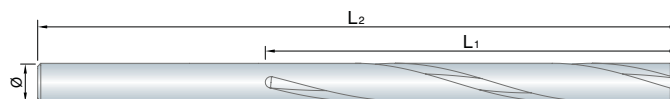
Ø	D2	L1	L2			
15.4	16	83	133	-	P10221540	-
15.5	16	83	133	P10191550	P10221550	P10251550
15.6	16	83	133	-	P10221560	-
15.7	16	83	133	-	P10221570	-
15.8	16	83	133	P10191580	P10221580	-
15.9	16	83	133	-	P10221590	-
16.0	16	83	133	P10191600	P10221600	P10251600
16.1	18	93	143	-	P10221610	-
16.2	18	93	143	-	P10221620	-
16.3	18	93	143	-	P10221630	-
16.4	18	93	143	-	P10221640	-
16.5	18	93	143	P10191650	P10221650	P10251650
16.6	18	93	143	-	P10221660	-
16.7	18	93	143	-	P10221670	-
16.8	18	93	143	P10191680	P10221680	-
16.9	18	93	143	-	P10221690	-
17.0	18	93	143	P10191700	P10221700	P10251700
17.1	18	93	143	-	P10221710	-
17.2	18	93	143	-	P10221720	-
17.3	18	93	143	-	P10221730	-
17.4	18	93	143	-	P10221740	-
17.5	18	93	143	P10191750	P10221750	P10251750
17.6	18	93	143	-	P10221760	-
17.7	18	93	143	-	P10221770	-
17.8	18	93	143	P10191780	P10221780	-
17.9	18	93	143	-	P10221790	-
18.0	18	93	143	P10191800	P10221800	P10251800
18.1	20	101	153	-	P10221810	-
18.2	20	101	153	-	P10221820	-
18.3	20	101	153	-	P10221830	-
18.4	20	101	153	-	P10221840	-
18.5	20	101	153	P10191850	P10221850	P10251850
18.6	20	101	153	-	P10221860	-
18.7	20	101	153	-	P10221870	-
18.8	20	101	153	-	P10221880	-
18.9	20	101	153	-	P10221890	-



P1019	P1022	P1025
INF. TEC. PAG. A54	INF. TEC. PAG. A54	INF. TEC. PAG. A54
6537	6537	6537
5xD	5xD	5xD
MD	MD	MD
TiAlN	TiAlN	TiAlN
140°	140°	140°
		
		

Unità : mm

Ø	D2	L1	L2	✓ ✓ ✓	P2 P3 P4 P1 P5 M1 K1	P2 P3 P4 P1 P5 M1 K1	P1 P2 P3 M1 M2 N1 S1
19.0	20	101	153		P10191900	P10221900	P10251900
19.1	20	101	153		-	P10221910	-
19.2	20	101	153		-	P10221920	-
19.3	20	101	153		-	P10221930	-
19.4	20	101	153		-	P10221940	-
19.5	20	101	153		P10191950	P10221950	P10251950
19.6	20	101	153		-	P10221960	-
19.7	20	101	153		-	P10221970	-
19.8	20	101	153		P10191980	P10221980	-
19.9	20	101	153		-	P10221990	-
20.0	20	101	153		P10192000	P10222000	P10252000



P1007

INF. TEC. PAG.
A53

338



MD

118°



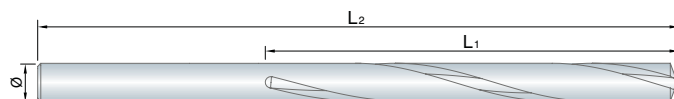
P1 P2
P3

M1 K1
N1 S1

Unità : mm

Ø	L1	L2	P1007
1.0	12	34	P10070100
1.1	14	36	P10070110
1.2	16	38	P10070120
1.3	16	38	P10070130
1.4	18	40	P10070140
1.5	18	40	P10070150
1.6	20	43	P10070160
1.7	20	43	P10070170
1.8	22	46	P10070180
1.9	22	46	P10070190
2.0	24	49	P10070200
2.1	24	49	P10070210
2.2	27	53	P10070220
2.3	27	53	P10070230
2.4	30	57	P10070240
2.5	30	57	P10070250
2.6	30	57	P10070260
2.7	33	61	P10070270
2.8	33	61	P10070280
2.9	33	61	P10070290
3.0	33	61	P10070300
3.1	36	65	P10070310

Ø	L1	L2	
3.2	36	65	P10070320
3.3	36	65	P10070330
3.4	39	70	P10070340
3.5	39	70	P10070350
3.6	39	70	P10070360
3.7	39	70	P10070370
3.8	43	75	P10070380
3.9	43	75	P10070390
4.0	43	75	P10070400
4.1	43	75	P10070410
4.2	43	75	P10070420
4.3	47	80	P10070430
4.4	47	80	P10070440
4.5	47	80	P10070450
4.6	47	80	P10070460
4.7	47	80	P10070470
4.8	52	86	P10070480
4.9	52	86	P10070490
5.0	52	86	P10070500
5.1	52	86	P10070510
5.2	52	86	P10070520
5.3	52	86	P10070530



P1007

INF. TEC. PAG.
A53

338



MD

118°



P1 P2
P3

M1 K1
N1 S1

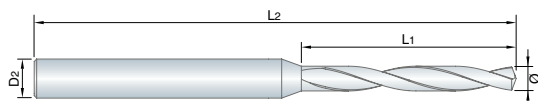
Unità : mm

Ø	L1	L2	P1007
5.4	57	93	P10070540
5.5	57	93	P10070550
5.6	57	93	P10070560
5.7	57	93	P10070570
5.8	57	93	P10070580
5.9	57	93	P10070590
6.0	57	93	P10070600
6.1	63	101	P10070610
6.2	63	101	P10070620
6.3	63	101	P10070630
6.4	63	101	P10070640
6.5	63	101	P10070650
6.6	63	101	P10070660
6.7	63	101	P10070670
6.8	69	109	P10070680
6.9	69	109	P10070690
7.0	69	109	P10070700
7.1	69	109	P10070710
7.2	69	109	P10070720

Ø	L1	L2	
7.3	69	109	P10070730
7.4	69	109	P10070740
7.5	69	109	P10070750
7.6	75	117	P10070760
7.7	75	117	P10070770
7.8	75	117	P10070780
7.9	75	117	P10070790
8.0	75	117	P10070800
8.5	75	117	P10070850
9.0	81	125	P10070900
9.5	81	125	P10070950
10.0	87	133	P10071000
10.2	87	133	P10071020
10.5	87	133	P10071050
11.0	94	142	P10071100
11.5	94	142	P10071150
12.0	101	151	P10071200
13.0	101	151	P10071300

PUNTA ELICOIDALE MD (con fori di refrigerazione)

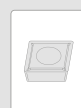
CARBIDE DRILL WITH COOLANT HOLES

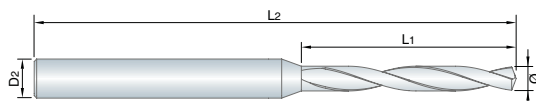


Unità : mm

Ø	D2	L1	L2	✓ ✓ ✓	P1 P5 M1 K1	N1 S1
3.0	6	34	72		P10280300	P10310300
3.1	6	34	72		P10280310	P10310310
3.2	6	34	72		P10280320	P10310320
3.3	6	34	72		P10280330	P10310330
3.4	6	34	72		P10280340	P10310340
3.5	6	34	72		P10280350	P10310350
3.6	6	34	72		P10280360	P10310360
3.7	6	34	72		P10280370	P10310370
3.8	6	43	81		P10280380	P10310380
3.9	6	43	81		P10280390	P10310390
4.0	6	43	81		P10280400	P10310400
4.1	6	43	81		P10280410	P10310410
4.2	6	43	81		P10280420	P10310420
4.3	6	43	81		P10280430	P10310430
4.4	6	43	81		P10280440	P10310440
4.5	6	43	81		P10280450	P10310450
4.6	6	43	81		P10280460	P10310460
4.7	6	43	81		P10280470	P10310470
4.8	6	57	95		P10280480	P10310480
4.9	6	57	95		P10280490	P10310490
5.0	6	57	95		P10280500	P10310500
5.1	6	57	95		P10280510	P10310510
5.2	6	57	95		P10280520	P10310520
5.3	6	57	95		P10280530	P10310530
5.4	6	57	95		P10280540	P10310540
5.5	6	57	95		P10280550	P10310550
5.6	6	57	95		P10280560	P10310560
5.7	6	57	95		P10280570	P10310570
5.8	6	57	95		P10280580	P10310580
5.9	6	57	95		P10280590	P10310590
6.0	6	57	95		P10280600	P10310600
6.1	8	76	114		P10280610	P10310610
6.2	8	76	114		P10280620	P10310620
6.3	8	76	114		P10280630	P10310630

P1028	P1031
INF. TEC. PAG. A54	INF. TEC. PAG. A54
6537	6537
8xD	8xD
MD	MD
TiAIN	TiAIN
140°	140°
✓ ✓ ✓ P2 P3 P4	P1 P2 P3 M1 M2
✓ P1 P5 M1 K1	N1 S1





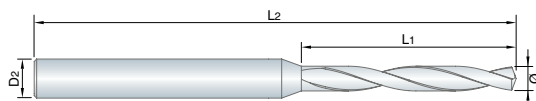
P1028	P1031
INF. TEC. PAG. A54	INF. TEC. PAG. A54
6537	6537
8xD	8xD
MD	MD
TiAIN	TiAIN
140°	140°
	
	
✓ ✓ ✓ P2 P3 P4	P1 P2 P3 M1 M2
✓ P1 P5 M1 K1	N1 S1

Unità : mm

Ø	D2	L1	L2		
6.4	8	76	114	P10280640	P10310640
6.5	8	76	114	P10280650	P10310650
6.6	8	76	114	P10280660	P10310660
6.7	8	76	114	P10280670	P10310670
6.8	8	76	114	P10280680	P10310680
6.9	8	76	114	P10280690	P10310690
7.0	8	76	114	P10280700	P10310700
7.1	8	76	114	P10280710	P10310710
7.2	8	76	114	P10280720	P10310720
7.3	8	76	114	P10280730	P10310730
7.4	8	76	114	P10280740	P10310740
7.5	8	76	114	P10280750	P10310750
7.6	8	76	114	P10280760	P10310760
7.7	8	76	114	P10280770	P10310770
7.8	8	76	114	P10280780	P10310780
7.9	8	76	114	P10280790	P10310790
8.0	8	76	114	P10280800	P10310800
8.1	10	95	142	P10280810	P10310810
8.2	10	95	142	P10280820	P10310820
8.3	10	95	142	P10280830	P10310830
8.4	10	95	142	P10280840	P10310840
8.5	10	95	142	P10280850	P10310850
8.6	10	95	142	P10280860	P10310860
8.7	10	95	142	P10280870	P10310870
8.8	10	95	142	P10280880	P10310880
8.9	10	95	142	P10280890	P10310890
9.0	10	95	142	P10280900	P10310900
9.1	10	95	142	P10280910	P10310910
9.2	10	95	142	P10280920	P10310920
9.3	10	95	142	P10280930	P10310930
9.4	10	95	142	P10280940	P10310940
9.5	10	95	142	P10280950	P10310950
9.6	10	95	142	P10280960	P10310960
9.7	10	95	142	P10280970	P10310970

PUNTA ELICOIDALE MD (con fori di refrigerazione)

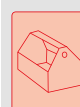
CARBIDE DRILL WITH COOLANT HOLES



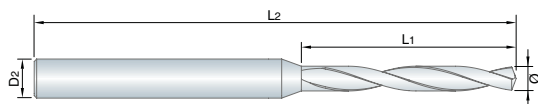
Unità : mm

Ø	D2	L1	L2	✓ ✓ ✓	P1 P5 M1 K1	N1 S1
9.8	10	95	142		P10280980	P10310980
9.9	10	95	142		P10280990	P10310990
10.0	10	95	142		P10281000	P10311000
10.1	12	114	162		P10281010	P10311010
10.2	12	114	162		P10281020	P10311020
10.3	12	114	162		P10281030	P10311030
10.4	12	114	162		P10281040	P10311040
10.5	12	114	162		P10281050	P10311050
10.6	12	114	162		P10281060	P10311060
10.7	12	114	162		P10281070	P10311070
10.8	12	114	162		P10281080	P10311080
10.9	12	114	162		P10281090	P10311090
11.0	12	114	162		P10281100	P10311100
11.1	12	114	162		P10281110	P10311110
11.2	12	114	162		P10281120	P10311120
11.3	12	114	162		P10281130	P10311130
11.4	12	114	162		P10281140	P10311140
11.5	12	114	162		P10281150	P10311150
11.6	12	114	162		P10281160	P10311160
11.7	12	114	162		P10281170	P10311170
11.8	12	114	162		P10281180	P10311180
11.9	12	114	162		P10281190	P10311190
12.0	12	114	162		P10281200	P10311200
12.5	14	133	178		P10281250	P10311250
13.0	14	133	178		P10281300	P10311300
13.5	14	133	178		P10281350	P10311350
14.0	14	133	178		P10281400	P10311400

P1028	P1031
INF. TEC. PAG. A54	INF. TEC. PAG. A54
6537	6537
8xD	8xD
MD	MD
TiAIN	TiAIN
140°	140°
✓ ✓ ✓ P2 P3 P4	P1 P2 P3 M1 M2
✓ P1 P5 M1 K1	N1 S1



PUNTA ELICOIDALE MD, 10 x D
(con fori di refrigerazione)
CARBIDE 10 x D WITH COOLANT HOLES



P1034

INF. TEC. PAG.
A55

10xD

MD

TiAIN

140°



P1 P2 P3

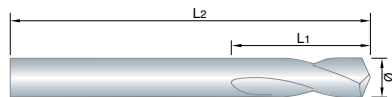
P4

Unità : mm

Ø	D2	L1	L2	
3.0	3	39	90	P10340300
3.3	4	46	97	P10340330
3.5	4	46	97	P10340350
4.0	4	52	103	P10340400
4.2	5	59	112	P10340420
4.5	5	59	112	P10340450
5.0	5	65	118	P10340500
5.5	6	72	127	P10340550
6.0	6	78	133	P10340600
6.5	7	85	141	P10340650
6.8	7	91	147	P10340680
7.0	7	91	147	P10340700
7.5	8	98	155	P10340750
8.0	8	104	161	P10340800
8.5	9	111	169	P10340850
9.0	9	117	175	P10340900
9.5	10	124	182	P10340950
10.0	10	130	188	P10341000
10.5	11	137	201	P10341050
11.0	11	143	207	P10341100
11.5	12	150	215	P10341150
12.0	12	156	221	P10341200
12.5	13	163	229	P10341250
13.0	13	169	235	P10341300

PUNTA A CENTRARE HSS Co8 NC 90° / 120°

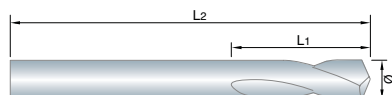
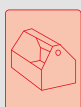
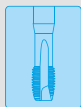
HSS Co8 NC-SPOTTING DRILL 90° / 120°



Unità : mm

Ø	L1	L2		P3022	P3025
				INF. TEC. PAG. A56	INF. TEC. PAG. A56
				NC	NC
				HSS Co8	HSS Co8
				90°	120°
			✓	P2 P3	P2 P3
			✓	P1 M1 K1 N1	P1 M1 K1 N1
3.0	12	46		P30220300	P30250300
4.0	12	55		P30220400	P30250400
5.0	15	60		P30220500	P30250500
6.0	20	66		P30220600	P30250600
8.0	25	79		P30220800	P30250800
10.0	25	89		P30221000	P30251000
12.0	30	102		P30221200	P30251200
16.0	35	115		P30221600	P30251600
20.0	40	131		P30222000	P30252000





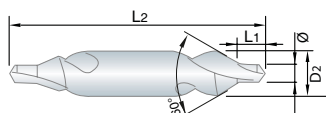
	P1040	P1043
	INF. TEC. PAG. A55	INF. TEC. PAG. A55
	NC	NC
		
	MD	MD
	90°	120°
		
✓	P1 P2 P3 P4 P5	P1 P2 P3 P4 P5
✓	M1 K1 N1 S1	M1 K1 N1 S1
	P10400600	P10430600
	P10400800	P10430800
	P10401000	P10431000
	P10401200	P10431200
	P10401600	-

Unità : mm

Ø	L1	L2
6.0	13	50
8.0	23	60
10.0	24	70
12.0	24	70
16.0	29	75

PUNTA A CENTRARE PER TORNI HSS / HSS EX FORMA A

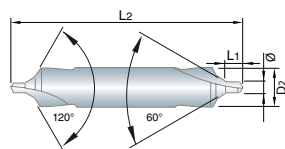
HSS / HSS EX CENTER DRILL FORM A



P4022	P3028
INF. TEC. PAG. A56	INF. TEC. PAG. A56
333	333
HSS	HSS EX
120°	120°
✓ ✓ ✓	P2 P3 P4
P1 M1 K1 N1 S1	P1 M1 K1 N1 S1

Unità : mm

Ø	D2	L2	L1		
0.5	3.15	25	0.8	P40220050	P30280050
0.8	3.15	25	1.1	P40220080	P30280080
1.0	3.15	31.5	1.3	P40220100	P30280100
1.25	3.15	31.5	1.6	P40220125	P30280125
1.6	4	35.5	2	P40220160	P30280160
2.0	5	40	2.5	P40220200	P30280200
2.5	6.3	45	3.1	P40220250	P30280250
3.15	8	50	3.9	P40220315	P30280315
4.0	10	56	5	P40220400	P30280400
5.0	12.5	63	6.3	P40220500	P30280500
6.3	16	71	8	P40220630	P30280630
8.0	20	80	10.1	P40220800	-
10.0	25	100	12.8	P40221000	-



P4025

INF. TEC. PAG.
A56

333



HSS

120°



P2 P3 P4

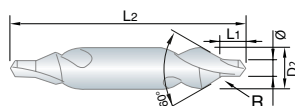
P1 M1 K1
N1 S1

Unità : mm

Ø	D2	L2	L1	
1.0	4	35.5	1.3	P40250100
1.25	5	40	1.6	P40250125
1.6	6.3	45	2	P40250160
2.0	8	50	2.5	P40250200
2.5	10	55	3.1	P40250250
3.15	11.2	60	3.9	P40250315
4.0	14	67	5	P40250400
5.0	18	75	6.3	P40250500
6.3	20	80	8	P40250630

PUNTA A CENTRARE PER TORNI HSS FORMA R

HSS CENTER DRILL FORM R



P4028

INF. TEC. PAG.
A56

333



HSS

120°

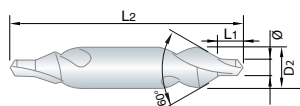


P2 P3 P4

**P1 M1 K1
N1 S1**

Unità : mm

Ø	D2	L2	L1	R	
1.6	4	35.5	4.25	4	P40280160
2.0	5	40	5.3	5	P40280200
2.5	6.3	45	6.7	6.3	P40280250
3.15	8	50	8.5	8	P40280315
4.0	10	56	10.6	10	P40280400
5.0	12.5	63	13.2	12.5	P40280500
6.3	16	71	17	16	P40280630
8.0	20	80	21.2	20	P40280800



P3031

INF. TEC. PAG.
A56

333



HSS
EX

120°



P2 P3 P4

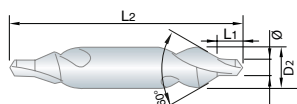
P1 M1 K1
N1 S1

Unità : mm

Ø	D2	L2	L1	
1.0	4	120	1.3	P30310100
1.6	5	120	2	P30310160
2.0	6	120	2.5	P30310200
2.5	8	120	3.1	P30310250
3.15	10	120	3.9	P30310315
4.0	12	120	5	P30310400
5.0	14	120	6.3	P30310500

PUNTA A CENTRARE MD

CARBIDE CENTER DRILL



Unità : mm

Ø	D2	L2	L1	
1.0	3.15	31.5	1.3	P10370100
1.6	4	35.5	2	P10370160
2.0	5	40	2.5	P10370200
2.5	6.3	45	3.1	P10370250
3.15	8	50	3.9	P10370315
4.0	10	56	5	P10370400

P1037

INF. TEC. PAG.
A55

333



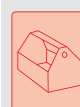
MD

120°



P1 P2 P3

P4 P5 M1 M2
K1 N1 S1



CODICE: P4001, P4004, P4007, P4010

MATERIALI	Parametri	Ø(mm)				
		13,00	19,00	32,00	50,00	60,00
Acciai < 500 N/mm ²	n (giri/min)	645	440	260	165	140
	fn (mm/giro)	0,17	0,23	0,28	0,33	0,40
Acciai < 750 N/mm ²	n (giri/min)	480	330	195	125	105
	fn (mm/giro)	0,17	0,23	0,28	0,33	0,40
Acciai < 900 N/mm ²	n (giri/min)	370	255	145	93	78
	fn (mm/giro)	0,09	0,13	0,18	0,20	0,23
Acciai < 1100 N/mm ²	n (giri/min)	440	300	180	115	95
	fn (mm/giro)	0,17	0,23	0,28	0,33	0,40
Acciai < 1500 N/mm ²	n (giri/min)	265	180	107	68	57
	fn (mm/giro)	0,05	0,05	0,08	0,08	0,10
Inox < 800 N/mm ²	n (giri/min)	480	330	195	125	105
	fn (mm/giro)	0,17	0,23	0,28	0,33	0,40
Leghe di Titanio 410 N/mm ²	n (giri/min)	265	180	107	68	57
	fn (mm/giro)	0,09	0,13	0,18	0,20	0,23
Ghisa ~ 800 N/mm ²	n (giri/min)	480	330	195	125	105
	fn (mm/giro)	0,17	0,23	0,28	0,33	0,40
Alluminio e sue leghe	n (giri/min)	1200	820	490	310	260
	fn (mm/giro)	0,26	0,30	0,38	0,46	0,50
Materiali non ferrosi	n (giri/min)	645	440	260	165	140
	fn (mm/giro)	0,17	0,23	0,28	0,33	0,40

CODICE: P4013, P3013, P3014, P4016, P3016, P3001, P3019

MATERIALI	Parametri	Ø(mm)						
		2,50	3,00	5,00	8,00	11,00	19,00	31,00
Acciai < 500 N/mm ²	n (giri/min)	3380	2700	1700	1050	750	440	260
	fn (mm/giro)	0,025	0,050	0,063	0,130	0,150	0,230	0,280
Acciai < 750 N/mm ²	n (giri/min)	2550	2000	1280	780	560	330	195
	fn (mm/giro)	0,025	0,050	0,063	0,130	0,150	0,230	0,280
Acciai legati < 900 N/mm ²	n (giri/min)	1900	1500	960	590	425	255	145
	fn (mm/giro)	0,015	0,025	0,038	0,076	0,076	0,130	0,180
Acciai legati < 1100 N/mm ²	n (giri/min)	2380	1880	1190	730	520	300	180
	fn (mm/giro)	0,020	0,050	0,063	0,130	0,180	0,230	0,280
Acciai legati < 1500 N/mm ²	n (giri/min)	1400	1100	700	430	310	180	107
	fn (mm/giro)	0,015	0,020	0,025	0,038	0,050	0,050	0,076
Inox < 800 N/mm ²	n (giri/min)	2550	2000	1280	780	560	330	195
	fn (mm/giro)	0,025	0,050	0,063	0,130	0,150	0,230	0,280
Leghe di Titanio 410 N/mm ²	n (giri/min)	1400	1100	700	430	430	180	107
	fn (mm/giro)	0,020	0,025	0,038	0,076	0,076	0,130	0,180
Ghisa 800 N/mm ²	n (giri/min)	2250	2000	1280	780	560	330	195
	fn (mm/giro)	0,025	0,050	0,063	0,130	0,150	0,230	0,280
Leghe di Alluminio	n (giri/min)	6400	5000	3200	2000	1400	820	490
	fn (mm/giro)	0,038	0,063	0,076	0,180	0,200	0,300	0,380
Materiali non ferrosi	n (giri/min)	3380	2700	1700	1050	750	440	260
	fn (mm/giro)	0,025	0,050	0,063	0,130	0,150	0,230	0,280

CODICE: P4019, P3004

MATERIALI	Parametri	Ø(mm)												
		1,00	2,00	3,00	4,00	5,00	6,00	7,00	8,00	9,00	10,00	11,00	12,00	13,00
Acciai < 500 N/mm ²	n (giri/min)	14000	7000	4650	3500	2800	2350	2000	1750	1550	1400	1250	1150	1050
	fn (mm/giro)	0,02	0,06	0,10	0,11	0,12	0,14	0,16	0,18	0,20	0,21	0,22	0,23	0,23
Acciai < 750 N/mm ²	n (giri/min)	12500	6100	4100	3050	2450	2050	1750	1550	1350	1250	1100	1000	950
	fn (mm/giro)	0,02	0,06	0,08	0,11	0,11	0,13	0,15	0,18	0,22	0,22	0,22	0,22	0,22
Acciai < 1100 N/mm ²	n (giri/min)	7700	3850	2550	1950	1550	1300	1100	960	855	770	700	650	595
	fn (mm/giro)	0,02	0,06	0,08	0,10	0,10	0,12	0,14	0,15	0,18	0,18	0,18	0,20	0,20
Inox < 900 N/mm ²	n (giri/min)	7000	3500	2350	1750	1400	1150	1000	875	780	700	650	585	540
	fn (mm/giro)	0,02	0,06	0,08	0,10	0,10	0,12	0,14	0,15	0,18	0,18	0,18	0,20	0,20
Leghe di Titanio ~ 410 N/mm ²	n (giri/min)	8050	4050	2700	2000	1600	1350	1150	1000	895	805	730	670	620
	fn (mm/giro)	0,02	0,06	0,08	0,09	0,10	0,12	0,14	0,15	0,17	0,18	0,18	0,20	0,20
Leghe di Alluminio	n (giri/min)	30000	15000	9900	7450	5950	4950	4250	3700	3300	3000	2700	2480	2300
	fn (mm/giro)	0,02	0,06	0,10	0,11	0,12	0,14	0,16	0,18	0,20	0,23	0,23	0,23	0,23

CODICE: P3007, P3010

MATERIALI	Parametri	Ø(mm)												
		1,00	2,00	3,00	4,00	5,00	6,00	7,00	8,00	9,00	10,00	11,00	12,00	13,00
Acciai < 900 N/mm ²	n (giri/min)	2630	2100	1680	1310	1050	840	660	530	420	330	260	210	170
	fn (mm/giro)	0,03	0,04	0,05	0,06	0,06	0,08	0,10	0,13	0,13	0,15	0,20	0,25	0,25
Acciai < 1100 N/mm ²	n (giri/min)	2100	1680	1310	1050	840	660	530	420	330	260	210	170	130
	fn (mm/giro)	0,025	0,03	0,04	0,05	0,05	0,06	0,08	0,10	0,10	0,13	0,15	0,20	0,20
Ghisa grigia	n (giri/min)	4200	3300	2630	2100	1680	1310	1050	840	660	530	420	330	260
	fn (mm/giro)	0,06	0,08	0,10	0,13	0,13	0,16	0,20	0,25	0,25	0,30	0,40	0,50	0,50

CODICE: P1001, P1007

MATERIALI	Parametri	Ø(mm)												
		1,00	2,00	3,00	4,00	5,00	6,00	7,00	8,00	9,00	10,00	11,00	12,00	13,00
Acciai < 750 N/mm ²	n (giri/min)	23000	11500	7800	5800	4700	3900	3350	2900	2600	2350	2150	1950	1800
	fn (mm/giro)	0,03	0,04	0,05	0,06	0,07	0,08	0,09	0,10	0,11	0,12	0,13	0,14	0,16
Acciai < 900 N/mm ²	n (giri/min)	17200	8600	5750	4300	3450	2850	2450	2150	1900	1700	1600	1450	1350
	fn (mm/giro)	0,03	0,04	0,05	0,06	0,07	0,08	0,09	0,10	0,11	0,12	0,13	0,14	0,16
Ghisa < HB240	n (giri/min)	32000	16000	10500	7800	6200	5200	4500	3900	3450	3100	2850	2600	2400
	fn (mm/giro)	0,04	0,05	0,06	0,07	0,08	0,09	0,10	0,12	0,14	0,16	0,18	0,20	0,20
Ghisa < HB300	n (giri/min)	23000	11500	7600	5700	4550	3800	3250	2850	2550	2300	2100	1900	1750
	fn (mm/giro)	0,04	0,05	0,06	0,07	0,08	0,09	0,10	0,12	0,14	0,16	0,18	0,20	0,20
Inox < 800 N/mm ²	n (giri/min)	12000	6000	4000	3000	2400	2000	1700	1500	1350	1200	1100	1000	950
	fn (mm/giro)	0,04	0,03	0,04	0,05	0,06	0,07	0,08	0,09	0,10	0,11	0,12	0,13	0,13
Leghe di Alluminio (Si <10%)	n (giri/min)	54000	27000	18000	13000	10500	8800	7600	6600	5900	5300	4850	4450	4100
	fn (mm/giro)	0,05	0,06	0,07	0,08	0,09	0,11	0,13	0,15	0,17	0,19	0,21	0,23	0,25
Leghe di Alluminio (Si >10%)	n (giri/min)	42000	21000	14000	10500	8500	7100	6100	5350	4750	4250	3900	3550	3300
	fn (mm/giro)	0,05	0,06	0,07	0,08	0,09	0,11	0,13	0,15	0,17	0,19	0,21	0,23	0,25

CODICE: P1004, P1010, P1019

MATERIALI	Parametri	Ø(mm)														
		1,00	2,00	3,00	4,00	5,00	6,00	7,00	8,00	9,00	10,00	12,00	14,00	16,00	18,00	20,00
Acciai < 750 N/mm²	n (giri/min)	13000	13000	13000	9500	7600	6400	5500	4800	4200	3800	3200	2750	2400	2100	1900
	fn (mm/giro)	0,04	0,06	0,13	0,14	0,15	0,17	0,19	0,21	0,23	0,25	0,27	0,29	0,31	0,33	0,35
Acciai < 1100 N/mm²	n (giri/min)	11250	11250	11000	8400	6700	5600	4800	4200	3700	3350	2800	2400	2100	1850	1650
	fn (mm/giro)	0,04	0,06	0,13	0,14	0,15	0,17	0,19	0,21	0,23	0,25	0,27	0,29	0,31	0,33	0,35
Ghisa < HB250	n (giri/min)	21300	21300	21000	16000	13000	11000	9100	8000	7100	6400	5300	4550	4000	3550	3200
	fn (mm/giro)	0,04	0,06	0,13	0,14	0,15	0,17	0,19	0,21	0,23	0,25	0,27	0,29	0,31	0,33	0,35
Ghisa < HB300	n (giri/min)	14200	14200	14000	10500	8300	6900	5900	5200	4600	4150	3450	3000	2600	2300	2100
	fn (mm/giro)	0,04	0,06	0,13	0,14	0,15	0,17	0,19	0,21	0,23	0,25	0,27	0,29	0,31	0,33	0,35

CODICE: P1013, P1022, P1028

MATERIALI	Parametri	Ø(mm)															
		1,00	2,00	3,00	4,00	5,00	6,00	7,00	8,00	9,00	10,00	12,00	14,00	16,00	18,00	20,00	
Acciai < 750 N/mm²	n (giri/min)	16250	16250	16000	12000	9550	8000	6800	6000	5300	4800	4000	3400	3000	2650	2400	
	fn (mm/giro)	0,05	0,07	0,16	0,17	0,18	0,20	0,22	0,24	0,27	0,30	0,33	0,36	0,39	0,42	0,45	
Acciai < 1100 N/mm²	n (giri/min)	14800	14800	14500	11000	8600	7200	6100	5400	4800	4300	3600	3050	2700	2400	2150	
	fn (mm/giro)	0,05	0,07	0,16	0,17	0,18	0,20	0,22	0,24	0,27	0,30	0,33	0,36	0,39	0,42	0,45	
Ghisa < HB250	n (giri/min)	26600	26600	26000	20000	16000	13000	11500	9900	8800	8000	6600	5700	5000	4400	4000	
	fn (mm/giro)	0,05	0,07	0,16	0,17	0,18	0,20	0,22	0,24	0,27	0,30	0,33	0,36	0,39	0,42	0,45	
Ghisa < HB300	n (giri/min)	17300	17300	17000	13000	10000	8500	7300	6400	5700	5100	4250	3650	3200	2850	2550	
	fn (mm/giro)	0,05	0,07	0,16	0,17	0,18	0,20	0,22	0,24	0,27	0,30	0,33	0,36	0,39	0,42	0,45	

CODICE: P1016, P1025, P1031

MATERIALI	Parametri	Ø(mm)													
		1,00	1,50	2,50	3,00	4,00	5,00	6,00	8,00	10,00	12,00	14,00	16,00	18,00	20,00
Inox < 800 N/mm²	n (giri/min)	12000	9000	7000	7400	5600	4400	3700	2800	2200	1900	1600	1400	1250	1120
	fn (mm/giro)	0,02	0,03	0,04	0,04	0,05	0,05	0,06	0,08	0,10	0,12	0,15	0,20	0,22	0,24
Inox > 800 N/mm²	n (giri/min)	6200	5400	4200	4700	3600	2800	2400	1800	1400	1200	1000	900	800	720
	fn (mm/giro)	0,02	0,02	0,03	0,02	0,03	0,03	0,04	0,06	0,08	0,10	0,12	0,15	0,17	0,19
Leghe di Alluminio (Si <10%)	n (giri/min)	48000	43000	25500	23000	17500	14000	11700	8800	7000	5800	5000	4380	3900	3500
	fn (mm/giro)	0,04	0,05	0,08	0,12	0,18	0,20	0,25	0,30	0,40	0,50	0,60	0,80	1,00	1,20
Leghe di Alluminio (Si >10%)	n (giri/min)	38000	32000	19500	18500	13900	11000	9300	7000	5600	4600	4000	3500	3100	2800
	fn (mm/giro)	0,03	0,04	0,06	0,10	0,15	0,18	0,25	0,30	0,35	0,40	0,50	0,60	0,70	0,80
Leghe di Titanio	n (giri/min)	8100	7500	4500	5300	4000	3200	2650	2000	1600	1300	1100	1000	900	800
	fn (mm/giro)	0,01	0,01	0,02	0,03	0,04	0,05	0,06	0,07	0,08	0,10	0,12	0,14	0,16	0,18
Acciai al carbonio	n (giri/min)	26000	18000	10800	13000	10000	8000	6600	5000	4000	3300	2800	2500	2200	2000
	fn (mm/giro)	0,02	0,03	0,05	0,04	0,05	0,05	0,06	0,08	0,10	0,12	0,15	0,20	0,22	0,24
Materiali non ferrosi	n (giri/min)	38000	25500	15500	16000	11900	9500	8000	6000	4800	4000	3400	3000	2650	2400
	fn (mm/giro)	0,02	0,03	0,05	0,08	0,10	0,12	0,15	0,18	0,22	0,26	0,30	0,40	0,45	0,50

CODICE: P1034

MATERIALI	Parametri	Ø(mm)							
		3,00	4,00	5,00	6,00	8,00	10,00	12,00	14,00
Acciai < 1100 N/mm ²	n (giri/min)	7500	6400	5800	4800	3600	2900	2400	2050
	fn (mm/giro)	0,06~0,12	0,08~0,16	0,10~0,20	0,12~0,24	0,16~0,28	0,20~0,35	0,24~0,42	0,28~0,46
Ghisa 250 ~ 350 N/mm ²	n (giri/min)	7500	6400	5800	4800	3600	2900	2400	2050
	fn (mm/giro)	0,06~0,12	0,08~0,16	0,10~0,20	0,12~0,24	0,16~0,28	0,20~0,35	0,24~0,42	0,28~0,46
Ghisa 400 ~ 500 N/mm ²	n (giri/min)	7500	5600	4500	3800	2800	2300	1900	1600
	fn (mm/giro)	0,06~0,12	0,08~0,16	0,10~0,20	0,12~0,24	0,16~0,28	0,20~0,35	0,24~0,42	0,28~0,46

CODICE: P1037

MATERIALI	Parametri	Ø(mm)					
		1,00	2,00	3,00	4,00	5,00	6,00
Acciai < 1100 N/mm ²	n (giri/min)	12739	6369	4246	3185	2548	2123
	fn (mm/giro)	0.01~0.03	0.01~0.035	0.015~0.05	0.02~0.06	0.03~0.07	0.04~0.07
Acciai < 1500N/mm ²	n (giri/min)	12739	6369	4246	3185	2548	2123
	fn (mm/giro)	0.01~0.03	0.01~0.035	0.015~0.05	0.02~0.06	0.03~0.07	0.04~0.07
Ghisa	n (giri/min)	9554	4777	3185	2389	1911	1592
	fn (mm/giro)	0.01~0.03	0.01~0.035	0.015~0.05	0.02~0.06	0.03~0.07	0.04~0.07

CODICE: P1040, P1043

MATERIALI	Parametri	Ø(mm)					
		6,00	8,00	10,00	12,00	16,00	20,00
Acciai < 750 N/mm ²	n (giri/min)	3900	2900	2350	1950	1450	1150
	fn (mm/giro)	0,008	0,010	0,012	0,014	0,017	0,019
Acciai < 1100 N/mm ²	n (giri/min)	2850	2150	1700	1450	1100	850
	fn (mm/giro)	0,008	0,010	0,012	0,014	0,017	0,019
Ghisa < HB240, GG25	n (giri/min)	5200	3900	3100	2600	1950	1550
	fn (mm/giro)	0,009	0,012	0,016	0,020	0,024	0,028
Ghisa < HB300, GG40	n (giri/min)	3800	2850	2300	1900	1450	1150
	fn (mm/giro)	0,009	0,012	0,016	0,020	0,024	0,028
Inox < 800 N/mm ²	n (giri/min)	2000	1500	1200	1000	755	590
	fn (mm/giro)	0,007	0,009	0,011	0,013	0,017	0,020
Leghe di Alluminio (Si <10%)	n (giri/min)	8800	6600	5300	4450	3300	2650
	fn (mm/giro)	0,011	0,015	0,019	0,023	0,027	0,031
Leghe di Alluminio (Si >10%)	n (giri/min)	7100	5350	4250	3550	2650	2150
	fn (mm/giro)	0,011	0,015	0,019	0,023	0,027	0,031
Leghe di Titanio	n (giri/min)	1950	1450	1200	980	735	590
	fn (mm/giro)	0,007	0,009	0,011	0,013	0,017	0,020

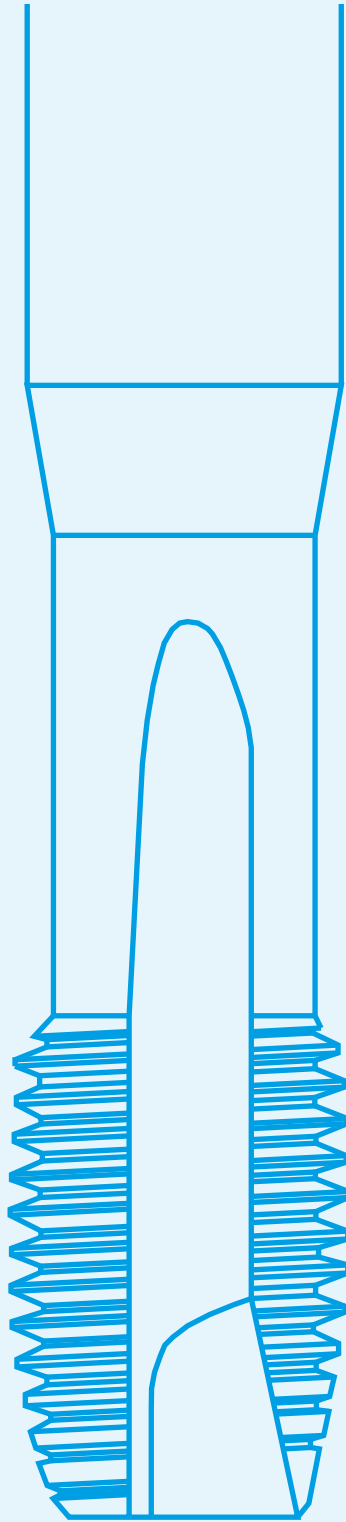
CODICE: P3022, P3025

MATERIALI	Parametri	Ø(mm)								
		3,00	4,00	5,00	6,00	8,00	10,00	12,00	16,00	20,00
Acciai < 750 N/mm ²	n (giri/min)	2460	1850	1510	1170	880	700	590	460	350
	fn (mm/giro)	0,06	0,07	0,08	0,09	0,11	0,12	0,14	0,20	0,24
Acciai < 900 N/mm ²	n (giri/min)	2110	1580	1300	1030	790	630	530	400	320
	fn (mm/giro)	0,060	0,070	0,080	0,090	0,110	0,120	0,140	0,200	0,240
Acciai < 1100 N/mm ²	n (giri/min)	1080	800	670	540	400	320	260	200	150
	fn (mm/giro)	0,06	0,07	0,08	0,09	0,11	0,12	0,14	0,20	0,24
Inox < 800 N/mm ²	n (giri/min)	940	700	580	460	350	290	240	180	140
	fn (mm/giro)	0,06	0,07	0,08	0,09	0,11	0,12	0,14	0,20	0,24
Leghe di Alluminio	n (giri/min)	7040	5280	4400	3520	2640	2110	1760	1320	1060
	fn (mm/giro)	0,14	0,15	0,17	0,19	0,22	0,25	0,28	0,33	0,45

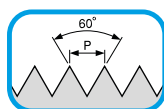
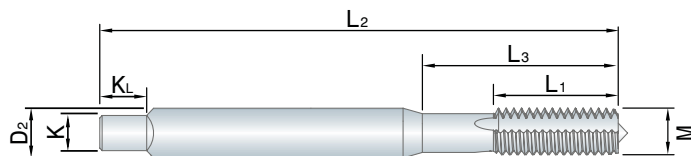
CODICE: P3031, P4022, P3028, P4025, P4028

MATERIALI	Parametri	Ø(mm)			
		2,00	3,00	6,00	10,00
Acciai < 750 N/mm ²	n (giri/min)	5573	3715	1858	1115
	fn (mm/giro)	0.02~0.05	0,06	0,08	0,15
Acciai < 900 N/mm ²	n (giri/min)	3981	2654	1327	796
	fn (mm/giro)	0.02~0.05	0,06	0,08	0,15
Acciai < 1100 N/mm ²	n (giri/min)	3185	2123	1062	637
	fn (mm/giro)	0.01~0.03	0,04	0,06	0,1
Inox < 800 N/mm ²	n (giri/min)	1115	743	372	223
	fn (mm/giro)	0.01~0.03	0,04	0,06	0,1

MASCHIATURA



 **WST**

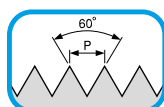
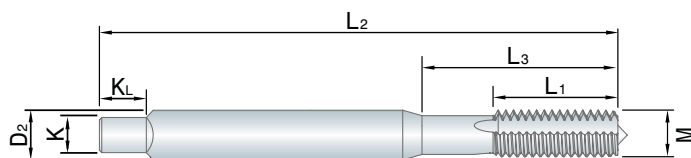

M4001

 INF. TEC. PAG.
B55

M
352
2/6H
HSS
2.0xD
N.B. Maschio finitore singolo pagina successiva

Unità : mm

	M	P	D2	K	KL	L1	L2	L3	Z	✓	P1 P2 P3
1.6	M2	0.4	2.8	2.1	5	8	36	13	3		M40010160
2.05	M2.5	0.45	2.8	2.1	5	9	40	15	3		M40010205
2.5	M3	0.5	3.5	2.7	6	11	40	18	3		M40010250
2.9	M3.5	0.6	4	3	6	13	45	21	3		M40010290
3.3	M4	0.7	4.5	3.4	6	13	45	21	3		M40010330
4.2	M5	0.8	6	4.9	8	16	52	26	3		M40010420
5	M6	1	6	4.9	8	18	56	27	3		M40010500
6	M7	1	6	4.9	8	18	56	28.5	3		M40010600
6.8	M8	1.25	6	4.9	8	20	63	34	3		M40010680
7.8	M9	1.25	7	5.5	8	20	63	34	4		M40010780
8.5	M10	1.5	7	5.5	8	22	70	38	4		M40010850
9.5	M11	1.5	8	6.2	9	22	70	38	4		M40010950
10.2	M12	1.75	9	7	10	24	80	45	4		M40011020
12	M14	2	11	9	12	26	80	45	4		M40011200
14	M16	2	12	9	12	27	80	45	4		M40011400
15.5	M18	2.5	14	11	14	30	95	58	4		M40011550
17.5	M20	2.5	16	12	15	32	95	58	4		M40011750
19.5	M22	2.5	18	14.5	17	32	100	62	4		M40011950
21	M24	3	18	14.5	17	34	110	69	4		M40012100
24	M27	3	20	16	19	36	110	69	4		M40012400
26.5	M30	3.5	22	18	21	40	125	77	4		M40012650
32	M36	4	28	22	25	50	150	88	4		M40013200



M4001...C

INF. TEC. PAG.
B55

M

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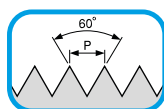
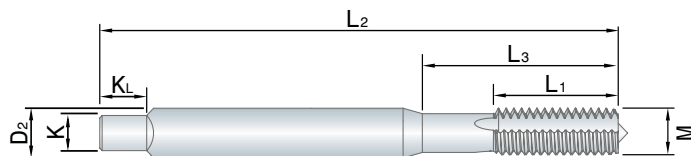
2/6H

HSS

2.0xD

Unità : mm

	M	P	D2	K	KL	L1	L2	L3	Z	✓	P1 P2 P3
1.6	M2	0.4	2.8	2.1	5	8	36	13	3		M40010160C
2.05	M2.5	0.45	2.8	2.1	5	9	40	15	3		M40010205C
2.5	M3	0.5	3.5	2.7	6	11	40	18	3		M40010250C
2.9	M3.5	0.6	4	3	6	13	45	21	3		M40010290C
3.3	M4	0.7	4.5	3.4	6	13	45	21	3		M40010330C
4.2	M5	0.8	6	4.9	8	16	52	26	3		M40010420C
5	M6	1	6	4.9	8	18	56	27	3		M40010500C
6	M7	1	6	4.9	8	18	56	28.5	3		M40010600C
6.8	M8	1.25	6	4.9	8	20	63	34	3		M40010680C
7.8	M9	1.25	7	5.5	8	20	63	34	4		M40010780C
8.5	M10	1.5	7	5.5	8	22	70	38	4		M40010850C
10.2	M12	1.75	9	7	10	24	80	45	4		M40011020C
12	M14	2	11	9	12	26	80	45	4		M40011200C
14	M16	2	12	9	12	27	80	45	4		M40011400C
15.5	M18	2.5	14	11	14	30	95	58	4		M40011550C
17.5	M20	2.5	16	12	15	32	95	58	4		M40011750C
19.5	M22	2.5	18	14.5	17	32	100	62	4		M40011950C
21	M24	3	18	14.5	17	34	110	69	4		M40012100C
24	M27	3	20	16	19	36	110	69	4		M40012400C
26.5	M30	3.5	22	18	21	40	125	77	4		M40012650C



M3001

INF. TEC. PAG.
B55

M

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2/6H

HSS-E

2.0xD

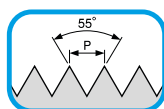
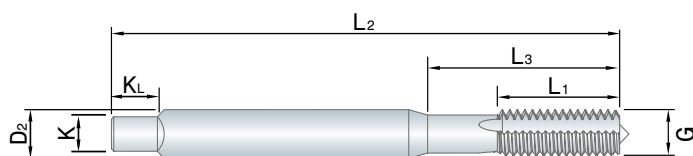
Unità : mm

	M	P	D2	K	KL	L1	L2	L3	Z	✓	P2 P3 P4
2.5	M3	0.5	3.5	2.7	6	11	40	18	3		M30010250
3.3	M4	0.7	4.5	3.4	6	13	45	21	3		M30010330
4.2	M5	0.8	6	4.9	8	16	52	26	3		M30010420
5	M6	1	6	4.9	8	18	56	27	3		M30010500
6.8	M8	1.25	6	4.9	8	20	63	34	3		M30010680
8.5	M10	1.5	7	5.5	8	22	70	38	4		M30010850
10.2	M12	1.75	9	7	10	24	80	45	4		M30011020
12	M14	2	11	9	12	26	80	45	4		M30011200
14	M16	2	12	9	12	27	80	45	4		M30011400
15.5	M18	2.5	14	11	14	30	95	58	4		M30011550
17.5	M20	2.5	16	12	15	32	95	58	4		M30011750

SET DI MASCHI FILETTATURA WHITWORTH PER TUBI DIN ISO 228/1



SET PIPE TAPS WHITWORTH PIPE THREADS DIN ISO 228/1



M4004

INF. TEC. PAG.
B55



G
(BSP)

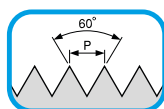
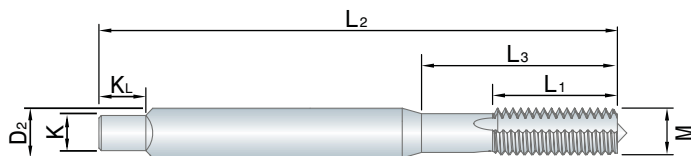
5157

HSS

2.0xD

Unità : mm

	G	P	D2	K	KL	L1	L2	L3	Z	✓	P1 P2 P3
6.8	G1/16"	28	6	4.9	8	17	63	26	3		M40040680
8.8	G1/8"	28	7	5.5	8	18	63	27	4		M40040880
11.8	G1/4"	19	11	9	12	20	70	32	4		M40041180
15.25	G3/8"	19	12	9	12	20	70	32	4		M40041525
19	G1/2"	14	16	12	15	22	80	35	4		M40041900
24.5	G3/4"	14	20	16	19	22	90	40	4		M40042450
30.75	G1"	11	25	20	23	25	100	45	6		M40043075



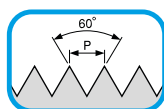
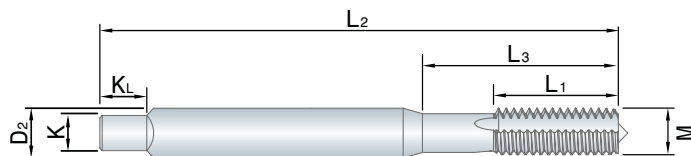
M3004	M3016
INF. TEC. PAG. B55	INF. TEC. PAG. B55
	
M	M
371 376	371 376
6H	6H
HSS-E	HSS-E
	TiN
B	B
3.0xD	3.0xD
✓ P1 P2 ✓ M1 N1	✓ P1 P2 ✓ M1 N1
✓ P3 N3	✓ P3 N3

	M	P	D2	K	KL	L1	L2	L3	Z		
1.6	M2	0.4	2.8	2.1	5	8	45	13	3	M30040160	M30160160
2.05	M2.5	0.45	2.8	2.1	5	9	50	15	3	M30040205	M30160205
2.1	M2.6	0.45	2.8	2.1	5	9	50	15	3	M30040210	M30160210
2.5	M3	0.5	3.5	2.7	6	11	56	18	3	M30040250	M30160250
2.9	M3.5	0.6	4	3	6	12	56	20	3	M30040290	M30160290
3.3	M4	0.7	4.5	3.4	6	13	63	21	3	M30040330	M30160330
4.2	M5	0.8	6	4.9	8	15	70	25	3	M30040420	M30160420
5	M6	1.0	6	4.9	8	17	80	30	3	M30040500	M30160500
6	M7	1.0	7	5.5	8	17	80	30	3	M30040600	M30160600
6.8	M8	1.25	8	6.2	9	20	90	35	3	M30040680	M30160680
7.8	M9	1.25	9	7	10	20	90	35	3	M30040780	M30160780
8.5	M10	1.5	10	8	11	22	100	39	3	M30040850	M30160850
10.2	M12	1.75	9	7	10	24	110	44	3	M30041020	M30161020
12	M14	2.0	11	9	12	26	110	44	3	M30041200	M30161200
14	M16	2.0	12	9	12	27	110	44	3	M30041400	M30161400
15.5	M18	2.5	14	11	14	30	125	50	4	M30041550	M30161550
17.5	M20	2.5	16	12	15	32	140	54	4	M30041750	M30161750
18.5	M22	2.5	18	14.5	17	32	140	54	4	M30041850	M30161850
21	M24	3.0	18	14.5	17	34	160	60	4	M30042100	M30162100
24	M27	3.0	20	16	19	36	160	60	4	M30042400	M30162400
26.5	M30	3.5	22	18	21	40	180	70	4	M30042650	M30162650

MASCHIO FORO PASSANTE ISO METRICO PASSO GROSSO DIN 13



SPIRAL POINT TAP ISO METRIC COARSE THREADS DIN 13



M3007

INF. TEC. PAG.
B55



M

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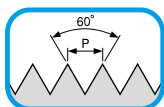
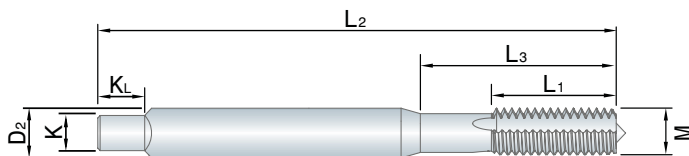
2/6H

HSS-E

B

3.0xD

	M	P	D2	K	KL	L1	L2	L3	Z	✓	P1 P2 P3
2.5	M3	0.5	2.2	1.8	5	11	56	18	3		M30070250
3.3	M4	0.7	2.8	2.1	5	13	63	21	3		M30070330
4.2	M5	0.8	3.5	2.7	6	15	70	25	3		M30070420
5	M6	1	4.5	3.4	6	17	80	30	3		M30070500
6.8	M8	1.25	6	4.9	8	20	90	36	3		M30070680
8.5	M10	1.5	7	5.5	8	22	100	40	3		M30070850
10.2	M12	1.75	9	7	10	24	110	44	3		M30071020
12	M14	2	11	9	12	26	110	44	3		M30071200
14	M16	2	12	9	12	27	110	44	3		M30071400
15.5	M18	2.5	14	11	14	30	125	50	4		M30071550
17.5	M20	2.5	16	12	15	32	140	54	4		M30071750
21	M24	3	18	14.5	17	34	160	60	4		M30072100
24	M27	3	20	16	19	36	160	60	4		M30072400
26.5	M30	3.5	22	18	21	40	180	70	4		M30072650



M3010

INF. TEC. PAG.
B55



M

371
376

2/6H

HSS-E

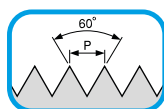
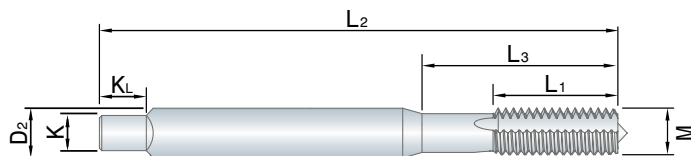
B

3.0xD

	M	P	D2	K	KL	L1	L2	L3	Z	✓	P2 P3 P4
2.05	M2.5	0.45	2.8	2.1	5	9	50	15	3		M30100205
2.5	M3	0.5	3.5	2.7	6	11	56	18	3		M30100250
3.3	M4	0.7	4.5	3.4	6	13	63	21	3		M30100330
4.2	M5	0.8	6	4.9	8	15	70	25	3		M30100420
5	M6	1	6	4.9	8	17	80	30	3		M30100500
6.8	M8	1.25	8	6.2	9	20	90	35	3		M30100680
8.5	M10	1.5	10	8	11	22	100	39	3		M30100850
10.2	M12	1.75	9	7	10	24	110	44	3		M30101020
12	M14	2	11	9	12	26	110	44	3		M30101200
14	M16	2	12	9	12	27	110	44	3		M30101400
15.5	M18	2.5	14	11	14	30	125	50	4		M30101550
17.5	M20	2.5	16	12	15	32	140	54	4		M30101750

MASCHIO FORO PASSANTE ISO METRICO PASSO GROSSO DIN 13

SPIRAL POINT TAP ISO METRIC COARSE THREADS DIN 13



M3034

INF. TEC. PAG.
B55



M

371
376

2/6H

HSS-E

TiAlN

B

3.0xD

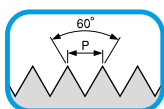
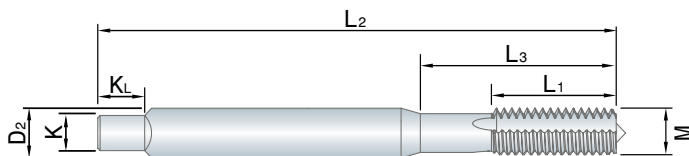


P3 P4



P2 P5

	M	P	D2	K	KL	L1	L2	L3	Z	
2.5	M3	0.5	3.5	2.7	6	11	56	18	3	M30340250
3.3	M4	0.7	4.5	3.4	6	13	63	21	3	M30340330
4.2	M5	0.8	6	4.9	8	15	70	25	3	M30340420
5	M6	1	6	4.9	8	17	80	30	3	M30340500
6.8	M8	1.25	8	6.2	9	20	90	35	3	M30340680
8.5	M10	1.5	10	8	11	22	100	39	3	M30340850
10.2	M12	1.75	9	7	10	24	110	44	3	M30341020
12	M14	2	11	9	12	26	110	44	3	M30341200
14	M16	2	12	9	12	27	110	44	3	M30341400



M3037

INF. TEC. PAG.
B55



M

371
376

2/6H

HSS-E

TiAlN

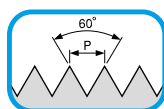
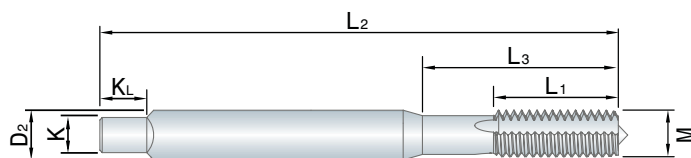
B

3.0xD

 P.F.	M	P	D2	K	KL	L1	L2	L3	Z	✓	P2 P3 P4
2.5	M3	0.5	3.5	2.7	6	11	56	18	3		M30370250
3.3	M4	0.7	4.5	3.4	6	13	63	21	3		M30370330
4.2	M5	0.8	6	4.9	8	15	70	25	3		M30370420
5	M6	1	6	4.9	8	17	80	30	3		M30370500
6.8	M8	1.25	8	6.2	9	20	90	35	3		M30370680
8.5	M10	1.5	10	8	11	22	100	39	3		M30370850
10.2	M12	1.75	9	7	10	24	110	44	3		M30371020
12	M14	2	11	9	12	26	110	44	3		M30371200
14	M16	2	12	9	12	27	110	44	3		M30371400
15.5	M18	2.5	14	11	14	30	125	50	4		M30371550
17.5	M20	2.5	16	12	15	32	140	54	4		M30371750
21	M24	3	18	14.5	17	34	160	60	4		M30372100

MASCHIO FORO PASSANTE ISO METRICO PASSO GROSSO DIN 13

SPIRAL POINT TAP ISO METRIC COARSE THREADS DIN 13



M3013

INF. TEC. PAG.
B55



M

371
376

2X
6HX

HSS-E

WST

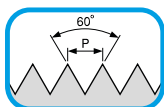
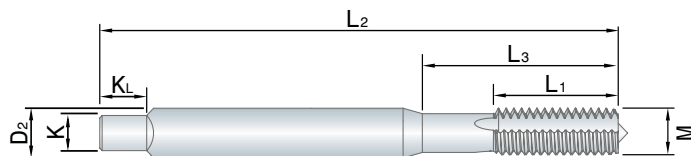
B

3.0xD

✓ P1 P2
✓ M1 M2

✓ P3

	M	P	D2	K	KL	L1	L2	L3	Z	
1.6	M2	0.4	2.8	2.1	5	8	45	13	3	M30130160
2.05	M2.5	0.45	2.8	2.1	5	9	50	15	3	M30130205
2.5	M3	0.5	3.5	2.7	6	11	56	18	3	M30130250
3.3	M4	0.7	4.5	3.4	6	13	63	21	3	M30130330
4.2	M5	0.8	6	4.9	8	15	70	25	3	M30130420
5	M6	1	6	4.9	8	17	80	30	3	M30130500
6.8	M8	1.25	8	6.2	9	20	90	35	3	M30130680
8.5	M10	1.5	10	8	11	22	100	39	3	M30130850
10.2	M12	1.75	9	7	10	24	110	44	4	M30131020
12	M14	2	11	9	12	26	110	44	4	M30131200
14	M16	2	12	9	12	27	110	44	4	M30131400



M3019

INF. TEC. PAG.
B55



M

371
376

2X
6HX

HSS-E

Vap

B

3.0xD

✓ P1 P2
✓ M1 M2

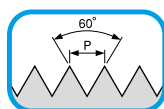
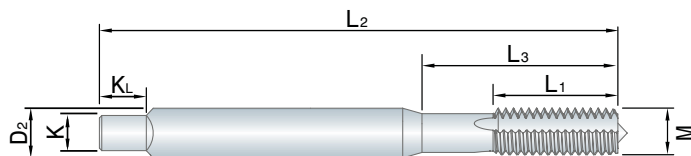
✓ P3

 P.F.	M	P	D2	K	KL	L1	L2	L3	Z	
1.6	M2	0.4	2.8	2.1	5	8	45	13	3	M30190160
2.05	M2.5	0.45	2.8	2.1	5	9	50	15	3	M30190205
2.5	M3	0.5	3.5	2.7	6	11	56	18	3	M30190250
3.3	M4	0.7	4.5	3.4	6	13	63	21	3	M30190330
4.2	M5	0.8	6	4.9	8	15	70	25	3	M30190420
5	M6	1	6	4.9	8	17	80	30	3	M30190500
6.8	M8	1.25	8	6.2	9	20	90	35	3	M30190680
8.5	M10	1.5	10	8	11	22	100	39	3	M30190850
10.2	M12	1.75	9	7	10	24	110	44	4	M30191020
12	M14	2	11	9	12	26	110	44	4	M30191200
14	M16	2	12	9	12	27	110	44	4	M30191400
17.5	M20	2.5	16	12	15	32	140	54	4	M30191750

MASCHIO FORO PASSANTE ISO METRICO PASSO GROSSO DIN 13



SPIRAL POINT TAP ISO METRIC COARSE THREADS DIN 13



M3043

INF. TEC. PAG.
B55



M

371
376

6H

HSS-E

Vap

B

3.0xD

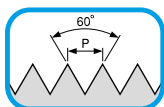
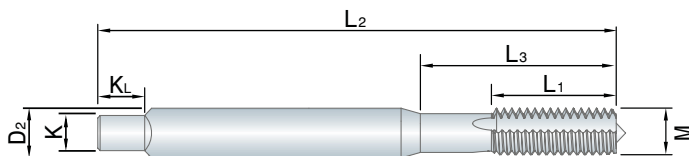


M1 M2



P1

	M	P	D2	K	KL	L1	L2	L3	Z	
12	M14	2.0	11	9	12	26	110	44	3	M30431200
14	M16	2.0	12	9	12	27	110	44	3	M30431400
17.5	M20	2.5	16	12	15	32	140	54	4	M30431750



M2001

INF. TEC. PAG.
B55



M

371
376

6H

HSS
PM

Vap

B

3.0xD



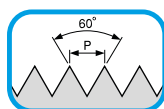
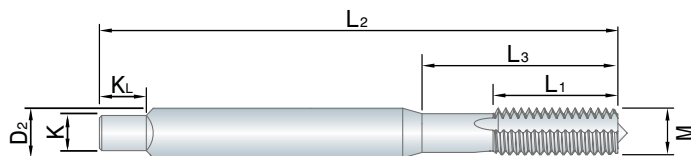
M1 M2

P1

	M	P	D2	K	KL	L1	L2	L3	Z	
1.6	M2	0.4	2.8	2.1	5	8	45	13	3	M20010160
2.05	M2.5	0.45	2.8	2.1	5	9	50	15	3	M20010205
2.5	M3	0.5	3.5	2.7	6	11	56	18	3	M20010250
3.3	M4	0.7	4.5	3.4	6	13	63	21	3	M20010330
4.2	M5	0.8	6	4.9	8	15	70	25	3	M20010420
5	M6	1.0	6	4.9	8	17	80	30	3	M20010500
6.8	M8	1.25	8	6.2	9	20	90	35	3	M20010680
8.5	M10	1.5	10	8	11	22	100	39	3	M20010850
10.2	M12	1.75	9	7	10	24	110	44	3	M20011020

MASCHIO FORO PASSANTE ISO METRICO PASSO GROSSO DIN 13

SPIRAL POINT TAP ISO METRIC COARSE THREADS DIN 13



M2004

INF. TEC. PAG.
B55



M

371
376

2/6H

HSS
PM

Vap

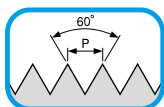
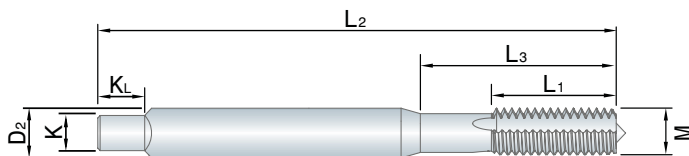
B

3.0xD

✓
✓ M1 M2

✓ P1

	M	P	D2	K	KL	L1	L2	L3	Z	
2.05	M2.5	0.45	2.8	2.1	5	9	50	15	3	M20040205
2.5	M3	0.5	3.5	2.7	6	11	56	18	3	M20040250
3.3	M4	0.7	4.5	3.4	6	13	63	21	3	M20040330
4.2	M5	0.8	6	4.9	8	15	70	25	3	M20040420
5	M6	1	6	4.9	8	17	80	30	3	M20040500
6.8	M8	1.25	8	6.2	9	20	90	35	3	M20040680
8.5	M10	1.5	10	8	11	22	100	39	3	M20040850
10.2	M12	1.75	9	7	10	24	110	44	3	M20041020



M3040

INF. TEC. PAG.
B55



M

371
376

2X
6HX

HSS-E

NI

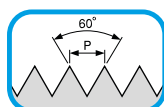
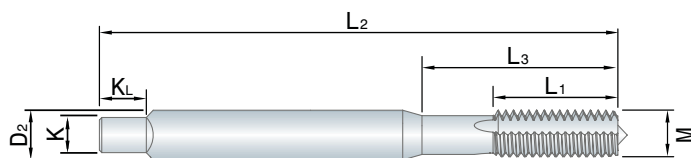
C

2.0xD

	M	P	D2	K	KL	L1	L2	L3	Z	✓	K1
2.5	M3	0.5	3.5	2.7	6	11	56	18	3	✓	M30400250
3.3	M4	0.7	4.5	3.4	6	13	63	21	3	✓	M30400330
4.2	M5	0.8	6	4.9	8	15	70	25	4	✓	M30400420
5	M6	1	6	4.9	8	17	80	30	4	✓	M30400500
6.8	M8	1.25	8	6.2	9	20	90	35	4	✓	M30400680
8.5	M10	1.5	10	8	11	22	100	39	4	✓	M30400850
10.2	M12	1.75	9	7	10	24	110	44	4	✓	M30401020
12	M14	2	11	9	12	26	110	44	4	✓	M30401200
14	M16	2	12	9	12	27	110	44	4	✓	M30401400
15.5	M18	2.5	14	11	14	30	125	50	4	✓	M30401550
17.5	M20	2.5	16	12	15	32	140	54	4	✓	M30401750

MASCHIO A RULLARE ISO METRICO PASSO GROSSO DIN 13 CON CANALINI DI LUBRIFICAZIONE

COLD FORMING TAP ISO METRIC DIN 13
WITH OIL GROOVES



M3022

INF. TEC. PAG.
B55



M

371
376

2X
6HX

HSS-E

TiN

C

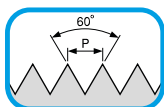
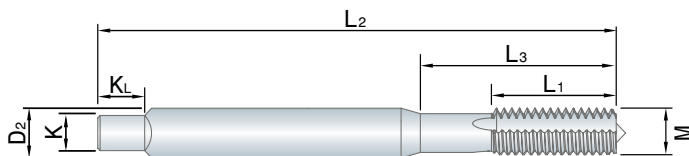
3.0xD



N1

P1 M1

		M	P	D2	K	KL	L1	L2	L3	
1.83		M2	0.4	2.8	2.1	5	8	45	13	M30220183
2.3		M2.5	0.45	2.8	2.1	5	9	50	15	M30220230
2.8		M3	0.5	3.5	2.7	6	11	56	18	M30220280
3.7		M4	0.7	4.5	3.4	6	13	63	21	M30220370
4.65		M5	0.8	6	4.9	8	15	70	25	M30220465
5.55		M6	1	6	4.9	8	17	80	30	M30220555
7.4		M8	1.25	8	6.2	9	20	90	35	M30220740
9.3		M10	1.5	10	8	11	22	100	39	M30220930
11.2		M12	1.75	9	7	10	24	110	44	M30221120
13		M14	2	11	9	12	26	110	44	M30221300
15		M16	2	12	9	12	27	110	44	M30221500



M3025

INF. TEC. PAG.
B55



M

371
376

3X
6GX

HSS-E

TiN

C

3.0xD



N1

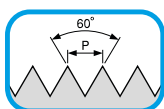
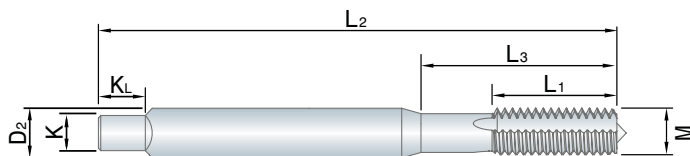


P1 M1

	M	P	D2	K	KL	L1	L2	L3	
1.83	M2	0.4	2.8	2.1	5	8	45	13	M30250183
2.3	M2.5	0.45	2.8	2.1	5	9	50	15	M30250230
2.8	M3	0.5	3.5	2.7	6	11	56	18	M30250280
3.7	M4	0.7	4.5	3.4	6	13	63	21	M30250370
4.65	M5	0.8	6	4.9	8	15	70	25	M30250465
5.55	M6	1	6	4.9	8	17	80	30	M30250555
7.4	M8	1.25	8	6.2	9	20	90	35	M30250740
9.3	M10	1.5	10	8	11	22	100	39	M30250930
11.2	M12	1.75	9	7	10	24	110	44	M30251120
13	M14	2	11	9	12	26	110	44	M30251300
15	M16	2	12	9	12	27	110	44	M30251500

MASCHIO A RULLARE ISO METRICO PASSO GROSSO DIN 13

COLD FORMING TAP ISO METRIC DIN 13



M3028

INF. TEC. PAG.
B55



M

371
376

2X
6HX

HSS-E

TiN

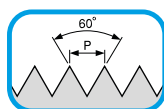
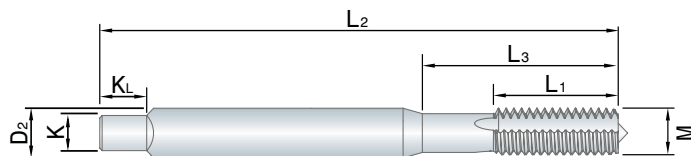
C

2.0xD

N1

P1 M1

 P.F.	M	P	D2	K	KL	L1	L2	L3	
1.83	M2	0.4	2.8	2.1	5	8	45	13	M30280183
2.3	M2.5	0.45	2.8	2.1	5	9	50	15	M30280230
2.8	M3	0.5	3.5	2.7	6	11	56	18	M30280280
3.7	M4	0.7	4.5	3.4	6	13	63	21	M30280370
4.65	M5	0.8	6	4.9	8	15	70	25	M30280465
5.55	M6	1	6	4.9	8	17	80	30	M30280555
7.4	M8	1.25	8	6.2	9	20	90	35	M30280740
9.3	M10	1.5	10	8	11	22	100	39	M30280930
11.2	M12	1.75	9	7	10	24	110	44	M30281120



M3031

INF. TEC. PAG.
B55



M

371
376

2X
6HX

HSS-E

TiAlN

C

3.0xD



N1



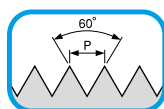
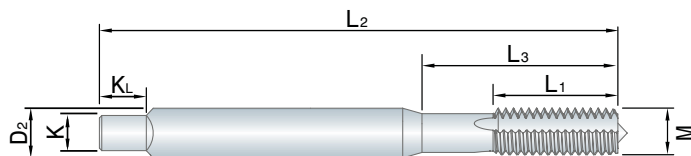
P1 M1

	M	P	D2	K	KL	L1	L2	L3	
1.83	M2	0.4	2.8	2.1	5	8	45	13	M30310183
2.3	M2.5	0.45	2.8	2.1	5	9	50	15	M30310230
2.8	M3	0.5	3.5	2.7	6	11	56	18	M30310280
3.7	M4	0.7	4.5	3.4	6	13	63	21	M30310370
4.65	M5	0.8	6	4.9	8	15	70	25	M30310465
5.55	M6	1	6	4.9	8	17	80	30	M30310555
7.4	M8	1.25	8	6.2	9	20	90	35	M30310740
9.3	M10	1.5	10	8	11	22	100	39	M30310930
11.2	M12	1.75	9	7	10	24	110	44	M30311120
13	M14	2	11	9	12	26	110	44	M30311300
15	M16	2	12	9	12	27	110	44	M30311500

MASCHIO FORO PASSANTE ISO METRICO PASSO GROSSO DIN 13



SPIRAL POINT TAP ISO METRIC COARSE THREADS DIN 13



M3046

INF. TEC. PAG.
B55



M-Az

371
376

2/6H

HSS-E

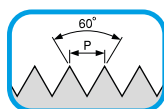
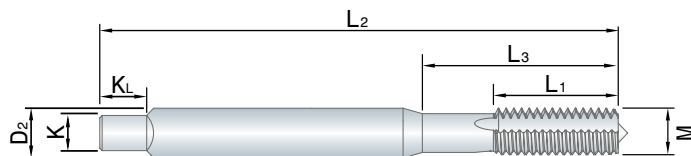
B

3.0xD

N1

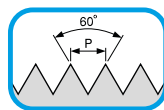
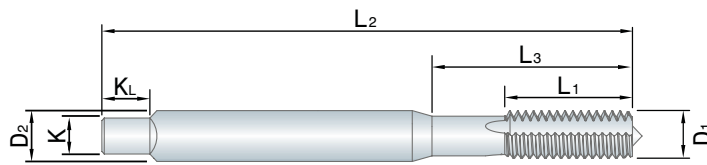
N2 N3

	M	P	D2	K	KL	L1	L2	L3	Z	
1.6	M2	0.4	2.8	2.1	5	8	45	13	3	M30460160
2.05	M2.5	0.45	2.8	2.1	5	9	50	15	3	M30460205
2.5	M3	0.5	3.5	2.7	6	11	56	18	3	M30460250
3.3	M4	0.7	4.5	3.4	6	13	63	21	3	M30460330
4.2	M5	0.8	6	4.9	8	15	70	25	3	M30460420
5	M6	1	6	4.9	8	17	80	30	3	M30460500
6.8	M8	1.25	8	6.2	9	20	90	35	3	M30460680
8.5	M10	1.5	10	8	11	22	100	39	3	M30460850
10.2	M12	1.75	9	7	10	24	110	44	3	M30461020



M3049	M3052
INF. TEC. PAG. B55	INF. TEC. PAG. B55
	
MF	MF
374	374
6H	6H
HSS-E	HSS-E
	TiN
B	B
3.0xD	3.0xD
✓ P1 P2 M1 N1	✓ P1 P2 M1 N1
✓ P3 N3	✓ P3 N3

	M	P	D2	K	KL	L1	L2	L3	Z		
3.5	M4	0.5	2.8	2.1	5	10	63	21	3	M30490350	M30520350
4.5	M5	0.5	3.5	2.7	6	11	70	25	3	M30490450	M30520450
5.2	M6	0.75	4.5	3.4	6	13	80	30	3	M30490520	M30520520
5.5	M6	0.5	4.5	3.4	6	13	80	30	3	M30490550	M30520550
6.2	M7	0.75	5.5	4.3	7	14	80	30	3	M30490620	M30520620
7	M8	1.0	6	4.9	8	17	90	36	3	M30490700	M30520700
7.2	M8	0.75	6	4.9	8	14	80	36	3	M30490720	M30520720
8.8	M10	1.25	7	5.5	8	22	100	40	3	M30490880	M30520880
9	M10	1.0	7	5.5	8	18	90	40	3	M30490900	M30520900
9.2	M10	0.75	7	5.5	8	18	90	40	3	M30490920	M30520920
10.5	M12	1.5	9	7	10	22	100	40	3	M30491050	M30521050
10.8	M12	1.25	9	7	10	22	100	40	3	M30491080	M30521080
11	M12	1.0	9	7	10	18	100	40	3	M30491100	M30521100
12.5	M14	1.5	11	9	12	22	100	40	3	M30491250	M30521250
13	M14	1.0	11	9	12	18	100	40	3	M30491300	M30521300
14.5	M16	1.5	12	9	12	22	100	40	3	M30491450	M30521450
15	M16	1.0	12	9	12	18	100	40	3	M30491500	M30521500
16.5	M18	1.5	14	11	14	25	110	44	4	M30491650	M30521650
17	M18	1.0	14	11	14	20	110	44	4	M30491700	M30521700
18.5	M20	1.5	16	12	15	25	125	50	4	M30491850	M30521850
19	M20	1.0	16	12	15	20	125	50	4	M30491900	M30521900
20.5	M22	1.5	18	14.5	17	25	125	50	4	M30492050	M30522050
22	M24	2.0	18	14.5	17	27	140	54	4	M30492200	M30522200
22.5	M24	1.5	18	14.5	17	27	140	54	4	M30492250	M30522250
25	M27	2.0	20	16	19	28	140	54	4	M30492500	M30522500
28	M30	2.0	22	18	21	30	150	57	4	M30492800	M30522800
28.5	M30	1.5	22	18	21	30	150	57	4	M30492850	M30522850



NEW

M3130

INF. TEC. PAG. B55



UNC

371
376

2B

HSS-E

B

3.0xD

✓ P1 P2 P3
✓ M1 K1 N1
✓ P4 M2 S1

NEW

M3133

INF. TEC. PAG. B55



UNC

371
376

2B

HSS-E

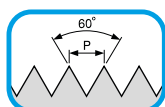
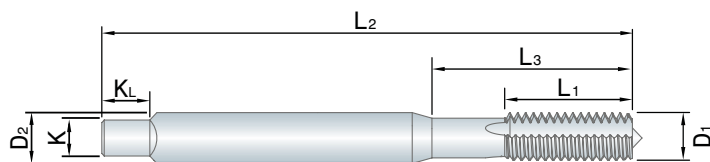
TiN

B

3.0xD

✓ P1 P2 P3
✓ M1 K1 N1 S1
✓ P4 M2 N2

	D1	TPI	D2	K	KL	L1	L2	L3	Z		
2.3	#4	40 UNC	3.5	2.7	6	11	56	18	3	M31300230	M31330230
2.6	#5	40 UNC	3.5	2.7	6	11	56	18	3	M31300260	M31330260
2.85	#6	32 UNC	4	3	6	12	56	20	3	M31300285	M31330285
3.5	#8	32 UNC	4.5	3.4	6	13	63	21	3	M31300350	M31330350
3.9	#10	24 UNC	6	4.9	8	15	70	25	3	M31300390	M31330390
4.5	#12	24 UNC	6	4.9	8	16	80	30	3	M31300450	M31330450
5.2	1/4	20 UNC	7	5.5	8	17	80	30	3	M31300520	M31330520
6.6	5/16	18 UNC	8	6.2	9	20	90	35	3	M31300660	M31330660
8	3/8	16 UNC	9	7	10	22	100	39	3	M31300800	M31330800
9.4	7/16	14 UNC	8	6.2	9	22	100	40	3	M31300940	M31330940
10.75	1/2	13 UNC	9	7	10	25	110	44	3	M31301075	M31331075
12.25	9/16	12 UNC	11	9	12	26	110	44	3	M31301225	M31331225
13.5	5/8	11 UNC	12	9	12	27	110	44	3	M31301350	M31331350
16.5	3/4	10 UNC	14	11	14	30	125	50	4	M31301650	M31331650
19.5	7/8	9 UNC	18	14.5	17	32	140	54	4	M31301950	M31331950
22.25	1	8 UNC	20	16	19	36	160	60	4	M31302225	M31332225



NEW

M3142

INF. TEC. PAG.
B55



UNF

371
374

2B

HSS-E

B

3.0xD

✓ **P1 P2 P3**
✓ **M1 K1 N1**

✓ **P4 M2 S1**

NEW

M3145

INF. TEC. PAG.
B55



UNF

371
374

2B

HSS-E

TiN

B

3.0xD

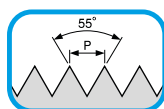
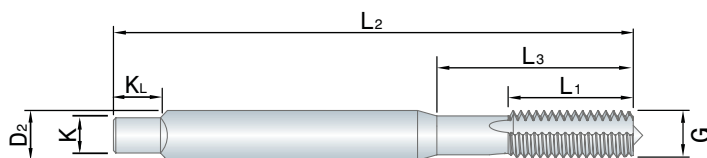
✓ **P1 P2 P3**
✓ **M1 K1 N1 S1**

✓ **P4 M2 N2**

	D1	TPI	D2	K	KL	L1	L2	L3	Z		
2.4	#4	48 UNF	3.5	2.7	6	11	56	18	3	M31420240	M31450240
2.7	#5	44 UNF	3.5	2.7	6	11	56	18	3	M31420270	M31450270
3	#6	40 UNF	4	3	6	12	56	20	3	M31420300	M31450300
3.5	#8	36 UNF	4.5	3.4	6	13	63	21	3	M31420350	M31450350
4.1	#10	32 UNF	6	4.9	8	15	70	25	3	M31420410	M31450410
4.7	#12	28 UNF	6	4.9	8	16	80	30	3	M31420470	M31450470
5.5	1/4	28 UNF	7	5.5	8	17	80	30	3	M31420550	M31450550
6.9	5/16	24 UNF	8	6.2	9	17	90	35	3	M31420690	M31450690
8.5	3/8	24 UNF	9	7	10	18	100	39	3	M31420850	M31450850
9.9	7/16	20 UNF	8	6.2	9	22	100	40	3	M31420990	M31450990
11.5	1/2	20 UNF	9	7	10	22	100	40	3	M31421150	M31451150
12.9	9/16	18 UNF	11	9	12	22	100	40	3	M31421290	M31451290
14.5	5/8	18 UNF	12	9	12	22	100	40	3	M31421450	M31451450
17.5	3/4	16 UNF	14	11	14	25	110	44	4	M31421750	M31451750
20.5	7/8	14 UNF	18	14.5	17	26	125	50	4	M31422050	M31452050
23.25	1	12 UNF	20	16	19	28	140	54	4	M31422325	M31452325

MASCHIO FORO PASSANTE FILETTATURA GAS (BSP) DIN ISO 228/1

BSP TAP THREADS DIN ISO 228/1



M3055

INF. TEC. PAG.
B55



G
(BSP)

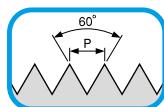
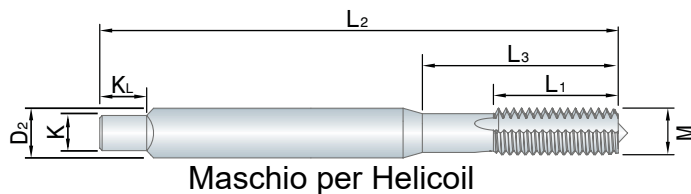
5156

HSS-E

B

3.0xD

	G	P	D2	K	KL	L1	L2	L3	Z	✓	P1 P2 P3
8.8	G1/8"	28	7	5.5	8	20	90	36	3		M30550880
11.8	G1/4"	19	11	9	12	22	100	40	3		M30551180
15.25	G3/8"	19	12	9	12	22	100	40	3		M30551525
19	G1/2"	14	16	12	15	25	125	50	4		M30551900
24.5	G3/4"	14	20	16	19	28	140	54	4		M30552450
30.75	G1"	11	25	20	23	30	160	60	4		M30553075



M3058

INF. TEC. PAG.
B55



EG-M

371
376

6H

HSS-E

B

3.0xD



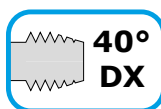
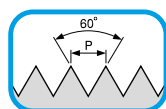
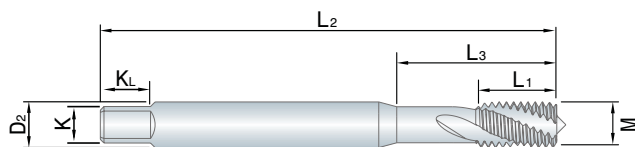
N1

N2 N3

	M	P	D2	K	KL	L1	L2	L3	Z	
2.65	M2.5	0.45	3.5	2.7	6	11	56	18	3	M30580265
3.15	M3	0.5	4.5	3.4	6	10	63	21	3	M30580315
4.2	M4	0.7	6	4.9	8	13	70	25	3	M30580420
5.25	M5	0.8	6	4.9	8	13	80	30	3	M30580525
6.3	M6	1	8	6.2	9	17	90	35	3	M30580630
8.4	M8	1.25	10	8	11	18	100	39	3	M30580840
10.4	M10	1.5	9	7	10	22	110	44	3	M30581040
12.5	M12	1.75	11	9	12	26	110	44	3	M30581250
14.5	M14	2	12	9	12	27	110	44	3	M30581450
16.5	M16	2	14	11	14	30	125	50	4	M30581650

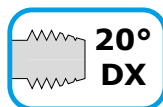
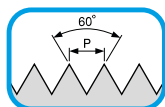
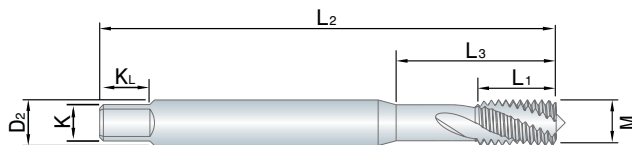
MASCHIO FORO CIECO ISO METRICO PASSO GROSSO DIN 13

SPIRAL FLUTE TAP ISO METRIC
COARSE THREADS DIN 13



M3061	M3076
INF. TEC. PAG. B55	INF. TEC. PAG. B55
M	M
371 376	371 376
6H	6H
HSS-E	HSS-E
	TiN
C	C
2.5xD	2.5xD
✓ P1 P2 M1 N1	✓ P1 P2 M1 N1
✓ P3 N3	✓ P3 N3

	M	P	D2	K	KL	L1	L2	L3	Z		
1.6	M2	0.4	2.8	2.1	5	8	45	13	3	M30610160	M30760160
2.05	M2.5	0.45	2.8	2.1	5	9	50	15	3	M30610205	M30760205
2.1	M2.6	0.45	2.8	2.1	5	9	50	15	3	M30610210	M30760210
2.5	M3	0.5	3.5	2.7	6	6	56	18	3	M30610250	M30760250
2.9	M3.5	0.6	4	3	6	7	56	20	3	M30610290	M30760290
3.3	M4	0.7	4.5	3.4	6	7	63	21	3	M30610330	M30760330
4.2	M5	0.8	6	4.9	8	8	70	25	3	M30610420	M30760420
5	M6	1.0	6	4.9	8	10	80	30	3	M30610500	M30760500
6	M7	1.0	7	5.5	8	10	80	30	3	M30610600	M30760600
6.8	M8	1.25	8	6.2	9	13	90	35	3	M30610680	M30760680
7.8	M9	1.25	9	7	10	13	90	35	3	M30610780	-
8.5	M10	1.5	10	8	11	15	100	39	3	M30610850	M30760850
10.2	M12	1.75	9	7	10	18	110	44	3	M30611020	M30761020
12	M14	2.0	11	9	12	20	110	44	3	M30611200	M30761200
14	M16	2.0	12	9	12	20	110	44	3	M30611400	M30761400
15.5	M18	2.5	14	11	14	25	125	50	4	M30611550	M30761550
17.5	M20	2.5	16	12	15	25	140	54	4	M30611750	M30761750
19.5	M22	2.5	18	14.5	17	25	140	54	4	M30611950	M30761950
21	M24	3.0	18	14.5	17	30	160	60	4	M30612100	M30762100
24	M27	3.0	20	16	19	30	160	60	4	M30612400	M30762400
26.5	M30	3.5	22	18	21	35	180	70	4	M30612650	M30762650



M3067

INF. TEC. PAG.
B55



M

371
376

2/6H

HSS-E

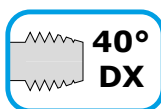
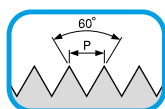
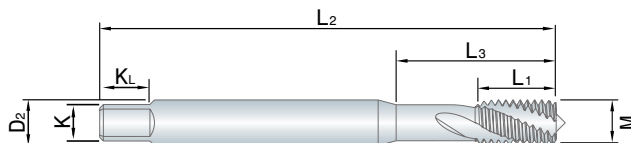
C

2.5xD

 P.F.	M	P	D2	K	KL	L1	L2	L3	Z	✓	P1 P2 P3
2.5	M3	0.5	3.5	2.7	6	6	56	18	3		M30670250
3.3	M4	0.7	4.5	3.4	6	7	63	21	3		M30670330
4.2	M5	0.8	6	4.9	8	8	70	25	3		M30670420
5	M6	1	6	4.9	8	10	80	30	3		M30670500
6.8	M8	1.25	8	6.2	9	13	90	35	3		M30670680
8.5	M10	1.5	10	8	11	15	100	39	3		M30670850
10.2	M12	1.75	9	7	10	18	110	44	3		M30671020
12	M14	2	11	9	12	20	110	44	3		M30671200
14	M16	2	12	9	12	20	110	44	3		M30671400

MASCHIO FORO CIECO ISO METRICO PASSO GROSSO DIN 13

SPIRAL FLUTE TAP ISO METRIC
COARSE THREADS DIN 13



M3070

INF. TEC. PAG.
B55



M

371
376

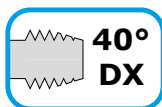
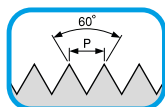
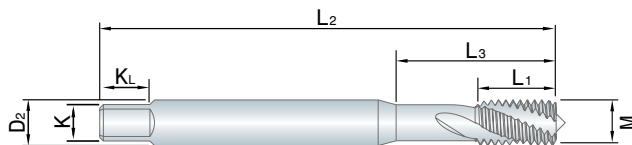
2/6H

HSS-E

C

2.5xD

	M	P	D2	K	KL	L1	L2	L3	Z	✓	P2 P3 P4
2.5	M3	0.5	3.5	2.7	6	6	56	18	3		M30700250
3.3	M4	0.7	4.5	3.4	6	7	63	21	3		M30700330
4.2	M5	0.8	6	4.9	8	8	70	25	3		M30700420
5	M6	1	6	4.9	8	10	80	30	3		M30700500
6.8	M8	1.25	8	6.2	9	13	90	35	3		M30700680
8.5	M10	1.5	10	8	11	15	100	39	3		M30700850
10.2	M12	1.75	9	7	10	18	110	44	3		M30701020
12	M14	2	11	9	12	20	110	44	3		M30701200
14	M16	2	12	9	12	20	110	44	3		M30701400
17.5	M20	2.5	16	12	15	25	140	54	4		M30701750
21	M24	3	18	14.5	17	30	160	60	4		M30702100
26.5	M30	3.5	22	18	21	35	180	70	4		M30702650



M3085

INF. TEC. PAG.
B55



M

371
376

2/6H

HSS-E

Vap

C

2.5xD

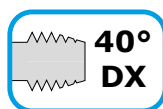
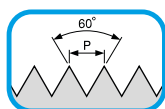
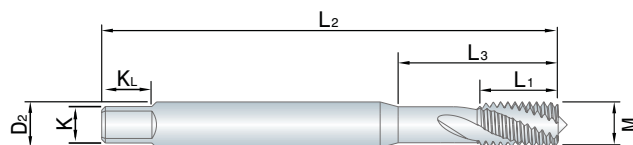
P1

M1

	M	P	D2	K	KL	L1	L2	L3	Z	
2.5	M3	0.5	3.5	2.7	6	6	56	18	3	M30850250
3.3	M4	0.7	4.5	3.4	6	7	63	21	3	M30850330
4.2	M5	0.8	6	4.9	8	8	70	25	3	M30850420
5	M6	1	6	4.9	8	10	80	30	3	M30850500
6.8	M8	1.25	8	6.2	9	13	90	35	3	M30850680
8.5	M10	1.5	10	8	11	15	100	39	3	M30850850
10.2	M12	1.75	9	7	10	18	110	44	3	M30851020
14	M16	2	12	9	12	20	110	44	3	M30851400
15.5	M18	2.5	14	11	14	25	125	50	4	M30851550
17.5	M20	2.5	16	12	15	25	140	54	4	M30851750

MASCHIO FORO CIECO ISO METRICO PASSO GROSSO DIN 13

SPIRAL FLUTE TAP ISO METRIC
COARSE THREADS DIN 13



M3088

INF. TEC. PAG.
B55



M

371
376

2/6H

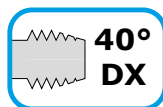
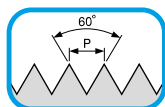
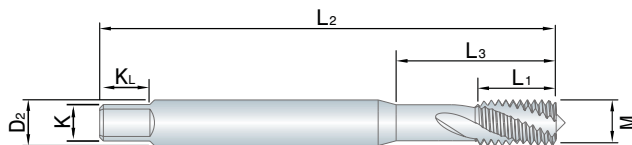
HSS-E

Vap

C

2.5xD

	M	P	D2	K	KL	L1	L2	L3	Z	✓	P1 P2 P3
2.5	M3	0.5	3.5	2.7	6	6	56	18	3		M30880250
3.3	M4	0.7	4.5	3.4	6	7	63	21	3		M30880330
4.2	M5	0.8	6	4.9	8	8	70	25	3		M30880420
5	M6	1	6	4.9	8	10	80	30	3		M30880500
6.8	M8	1.25	8	6.2	9	13	90	35	3		M30880680
8.5	M10	1.5	10	8	11	15	100	39	3		M30880850
10.2	M12	1.75	9	7	10	18	110	44	3		M30881020
12	M14	2	11	9	12	20	110	44	3		M30881200
14	M16	2	12	9	12	20	110	44	3		M30881400
17.5	M20	2.5	16	12	15	25	140	54	4		M30881750
21	M24	3	18	14.5	17	30	160	60	4		M30882100



M3091

INF. TEC. PAG.
B55



M

371
376

2/6H

HSS-E

Vap

C

2.5xD



P2 P3

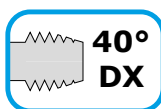
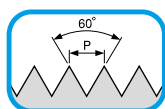
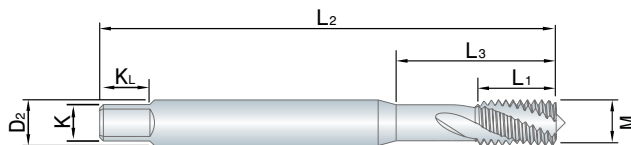


P1 P4

	M	P	D2	K	KL	L1	L2	L3	Z	
2.5	M3	0.5	3.5	2.7	6	6	56	18	3	M30910250
3.3	M4	0.7	4.5	3.4	6	7	63	21	3	M30910330
4.2	M5	0.8	6	4.9	8	8	70	25	3	M30910420
5	M6	1	6	4.9	8	10	80	30	3	M30910500
6.8	M8	1.25	8	6.2	9	13	90	35	3	M30910680
8.5	M10	1.5	10	8	11	15	100	39	3	M30910850
10.2	M12	1.75	9	7	10	18	110	44	3	M30911020
12	M14	2	11	9	12	20	110	44	3	M30911200
14	M16	2	12	9	12	20	110	44	3	M30911400
17.5	M20	2.5	16	12	15	25	140	54	4	M30911750
21	M24	3	18	14.5	17	30	160	60	4	M30912100
26.5	M30	3.5	22	18	21	35	180	70	4	M30912650

MASCHIO FORO CIECO ISO METRICO PASSO GROSSO DIN 13

SPIRAL FLUTE TAP ISO METRIC
COARSE THREADS DIN 13



M3079

INF. TEC. PAG.
B55



M

371
376

2/6H

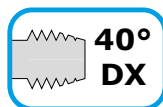
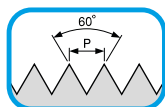
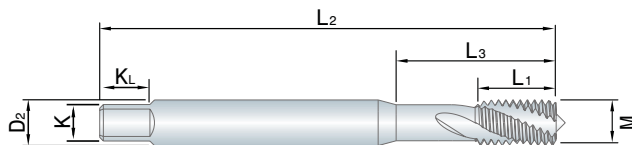
HSS-E

TiAlN

C

2.5xD

	M	P	D2	K	KL	L1	L2	L3	Z	✓	P1 P2 P3
2.5	M3	0.5	3.5	2.7	6	6	56	18	3		M30790250
3.3	M4	0.7	4.5	3.4	6	7	63	21	3		M30790330
4.2	M5	0.8	6	4.9	8	8	70	25	3		M30790420
5	M6	1	6	4.9	8	10	80	30	3		M30790500
6.8	M8	1.25	8	6.2	9	13	90	35	3		M30790680
8.5	M10	1.5	10	8	11	15	100	39	3		M30790850
10.2	M12	1.75	9	7	10	18	110	44	3		M30791020
12	M14	2	11	9	12	20	110	44	3		M30791200
14	M16	2	12	9	12	20	110	44	3		M30791400
15.5	M18	2.5	14	11	14	25	125	50	4		M30791550
17.5	M20	2.5	16	12	15	25	140	54	4		M30791750
21	M24	3	18	14.5	17	30	160	60	4		M30792100
24	M27	3	20	16	19	30	160	60	4		M30792400
26.5	M30	3.5	22	18	21	35	180	70	4		M30792650



M3082

INF. TEC. PAG.
B55



M

371
376

2/6H

HSS-E

TiAlN

C

2.5xD



P3 P4

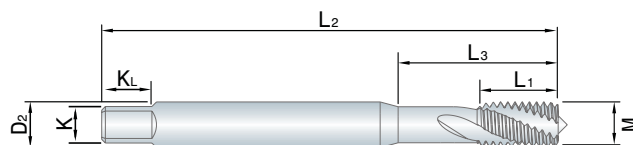


P2 P5

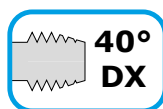
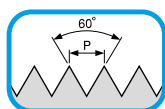
 P.F.	M	P	D2	K	KL	L1	L2	L3	Z	
2.5	M3	0.5	3.5	2.7	6	6	56	18	3	M30820250
3.3	M4	0.7	4.5	3.4	6	7	63	21	3	M30820330
4.2	M5	0.8	6	4.9	8	8	70	25	3	M30820420
5	M6	1	6	4.9	8	10	80	30	3	M30820500
6.8	M8	1.25	8	6.2	9	13	90	35	3	M30820680
8.5	M10	1.5	10	8	11	15	100	39	3	M30820850
10.2	M12	1.75	9	7	10	18	110	44	3	M30821020
12	M14	2	11	9	12	20	110	44	3	M30821200
14	M16	2	12	9	12	20	110	44	3	M30821400

MASCHIO FORO CIECO ISO METRICO PASSO GROSSO DIN 13

SPIRAL FLUTE TAP ISO METRIC
COARSE THREADS DIN 13



Maschio rastremato



M3073

INF. TEC. PAG.
B55



M

371
376

2/6H

HSS-E

WST

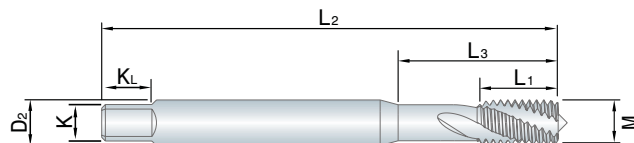
C

2.5xD

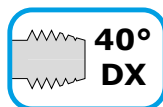
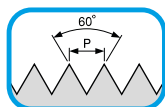
✓ P1 P2
✓ M1 M2

✓ P3

	M	P	D2	K	KL	L1	L2	L3	Z	
1.6	M2	0.4	2.8	2.1	5	8	45	13	3	M30730160
2.05	M2.5	0.45	2.8	2.1	5	9	50	15	3	M30730205
2.5	M3	0.5	3.5	2.7	6	6	56	18	3	M30730250
3.3	M4	0.7	4.5	3.4	6	7	63	21	3	M30730330
4.2	M5	0.8	6	4.9	8	8	70	25	3	M30730420
5	M6	1	6	4.9	8	10	80	30	3	M30730500
6.8	M8	1.25	8	6.2	9	13	90	35	3	M30730680
8.5	M10	1.5	10	8	11	15	100	39	3	M30730850
10.2	M12	1.75	9	7	10	18	110	44	3	M30731020
12	M14	2	11	9	12	20	110	44	3	M30731200
14	M16	2	12	9	12	20	110	44	3	M30731400



Maschio rastremato



M3094

INF. TEC. PAG.
B55



M

371
376

2/6H

HSS-E

Vap

C

2.5xD



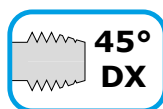
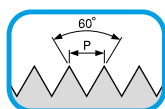
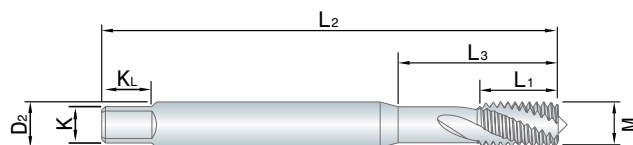
P1 P2
M1 M2

P3

 P.F.	M	P	D2	K	KL	L1	L2	L3	Z	
1.6	M2	0.4	2.8	2.1	5	8	45	13	3	M30940160
2.05	M2.5	0.45	2.8	2.1	5	9	50	15	3	M30940205
2.5	M3	0.5	3.5	2.7	6	6	56	18	3	M30940250
3.3	M4	0.7	4.5	3.4	6	7	63	21	3	M30940330
4.2	M5	0.8	6	4.9	8	8	70	25	3	M30940420
5	M6	1	6	4.9	8	10	80	30	3	M30940500
6.8	M8	1.25	8	6.2	9	13	90	35	3	M30940680
8.5	M10	1.5	10	8	11	15	100	39	3	M30940850
10.2	M12	1.75	9	7	10	18	110	44	3	M30941020
12	M14	2	11	9	12	20	110	44	3	M30941200
14	M16	2	12	9	12	20	110	44	3	M30941400
15.5	M18	2.5	14	11	14	25	125	50	4	M30941550
17.5	M20	2.5	16	12	15	25	140	54	4	M30941750

**MASCHIO FORO CIECO ISO METRICO
PASSO GROSSO DIN 13**

**SPIRAL FLUTE TAP ISO METRIC
COARSE THREADS DIN 13**



M3097

INF. TEC. PAG.
B55



M

**371
376**

6H

HSS-E

Vap

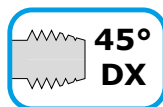
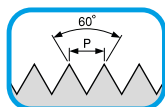
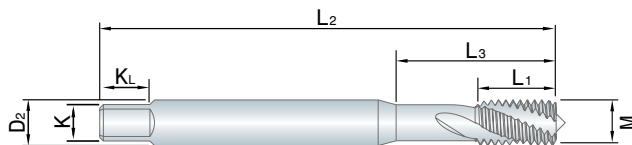
C

2.5xD

✓
✓ **M1 M2**

✓ **P1**

	M	P	D2	K	KL	L1	L2	L3	Z	
12	M14	2.0	11.0	9	12	20	110	44	3	M30971200
14	M16	2.0	12.0	9	12	20	110	44	3	M30971400
17.5	M20	2.5	16.0	12	15	25	140	54	4	M30971750



M2007

INF. TEC. PAG.
B55



M

371
376

6H

HSS
PM

Vap

C

2.5xD



M1 M2

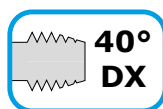
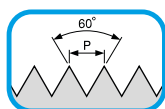
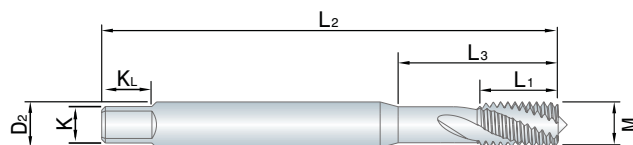


P1

 P.F.	M	P	D2	K	KL	L1	L2	L3	Z	
1.6	M2	0.4	2.8	2.1	5	8	45	13	2	M20070160
2.05	M2.5	0.45	2.8	2.1	5	9	50	15	2	M20070205
2.5	M3	0.5	3.5	2.7	6	6	56	18	3	M20070250
3.3	M4	0.7	4.5	3.4	6	7	63	21	3	M20070330
4.2	M5	0.8	6.0	4.9	8	8	70	25	3	M20070420
5	M6	1.0	6.0	4.9	8	10	80	30	3	M20070500
6.8	M8	1.25	8.0	6.2	9	13	90	35	3	M20070680
8.5	M10	1.5	10.0	8	11	15	100	39	3	M20070850
10.2	M12	1.75	9.0	7	10	18	110	44	3	M20071020

MASCHIO FORO CIECO ISO METRICO PASSO GROSSO DIN 13

SPIRAL FLUTE TAP ISO METRIC
COARSE THREADS DIN 13



M2010

INF. TEC. PAG.
B55



M

371
376

2/6H

HSS
PM

Vap

C

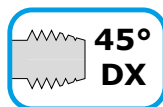
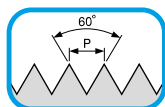
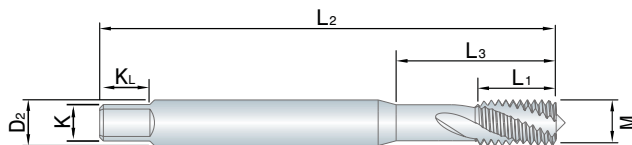
2.5xD



M1 M2

P1

	M	P	D2	K	KL	L1	L2	L3	Z	
2.05	M2.5	0.45	2.8	2.1	5	9	50	15	3	M20100205
2.5	M3	0.5	3.5	2.7	6	6	56	18	3	M20100250
3.3	M4	0.7	4.5	3.4	6	7	63	21	3	M20100330
4.2	M5	0.8	6	4.9	8	8	70	25	3	M20100420
5	M6	1	6	4.9	8	10	80	30	3	M20100500
6.8	M8	1.25	8	6.2	9	13	90	35	3	M20100680
8.5	M10	1.5	10	8	11	15	100	39	3	M20100850
10.2	M12	1.75	9	7	10	18	110	44	3	M20101020



M3064

INF. TEC. PAG.
B55



M

371
376

2/6H

HSS-E

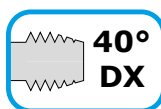
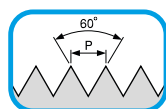
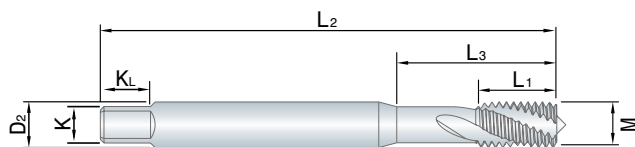
C

2.5xD

N1

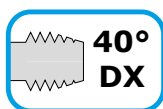
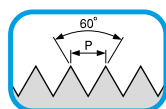
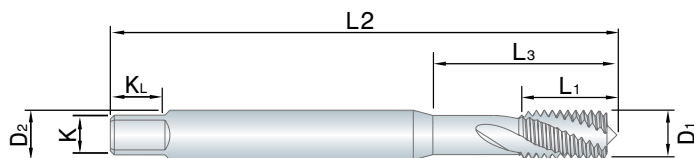
N2 N3

	M	P	D2	K	KL	L1	L2	L3	Z	
1.6	M2	0.4	2.8	2.1	5	8	45	13	2	M30640160
2.05	M2.5	0.45	2.8	2.1	5	9	50	15	2	M30640205
2.5	M3	0.5	3.5	2.7	6	6	56	18	2	M30640250
3.3	M4	0.7	4.5	3.4	6	7	63	21	2	M30640330
4.2	M5	0.8	6	4.9	8	8	70	25	2	M30640420
5	M6	1	6	4.9	8	10	80	30	2	M30640500
6.8	M8	1.25	8	6.2	9	13	90	35	2	M30640680
8.5	M10	1.5	10	8	11	15	100	39	2	M30640850
10.2	M12	1.75	9	7	10	18	110	44	2	M30641020



M3100	M3103
INF. TEC. PAG. B55	INF. TEC. PAG. B55
MF	MF
374	374
6H	6H
HSS-E	HSS-E
	TiN
C	C
2.5xD	2.5xD
✓ P1 P2 ✓ M1 N1	P1 P2 M1 N1
✓ P3 N3	P3 N3

	M	P	D2	K	KL	L1	L2	L3	Z		
3.5	M4	0.5	2.8	2.1	5	5	63	21	3	M31000350	M31030350
4.5	M5	0.5	3.5	2.7	6	5	70	25	3	M31000450	M31030450
5.2	M6	0.75	4.5	3.4	6	8	80	30	3	M31000520	M31030520
5.5	M6	0.5	4.5	3.4	6	5	80	30	3	M31000550	M31030550
6.2	M7	0.75	5.5	4.3	7	10	80	30	3	M31000620	M31030620
7	M8	1.0	6	4.9	8	10	90	36	3	M31000700	M31030700
7.2	M8	0.75	6	4.9	8	8	80	30	3	M31000720	M31030720
8.8	M10	1.25	7	5.5	8	16	100	40	3	M31000880	M31030880
9	M10	1.0	7	5.5	8	10	90	36	3	M31000900	M31030900
9.2	M10	0.75	7	5.5	8	10	90	36	3	M31000920	M31030920
10.5	M12	1.5	9	7	10	15	100	40	3	M31001050	M31031050
10.8	M12	1.25	9	7	10	15	100	40	3	M31001080	M31031080
11	M12	1.0	9	7	10	11	100	40	3	M31001100	M31031100
12.5	M14	1.5	11	9	12	15	100	40	3	M31001250	M31031250
13	M14	1.0	11	9	12	11	100	40	3	M31001300	M31031300
14.5	M16	1.5	12	9	12	15	100	40	3	M31001450	M31031450
15	M16	1.0	12	9	12	12	100	40	3	M31001500	M31031500
16.5	M18	1.5	14	11	14	17	110	44	4	M31001650	M31031650
17	M18	1.0	14	11	14	13	110	44	4	M31001700	M31031700
18.5	M20	1.5	16	12	15	17	125	50	4	M31001850	M31031850
19	M20	1.0	16	12	15	14	125	50	4	M31001900	M31031900
20.5	M22	1.5	18	14.5	17	17	125	50	4	M31002050	M31032050
22	M24	2.0	18	14.5	17	20	140	54	4	M31002200	M31032200
22.5	M24	1.5	18	14.5	17	20	140	54	4	M31002250	M31032250
25	M27	2.0	20	16	19	20	140	54	4	M31002500	M31032500
28	M30	2.0	22	18	21	22	150	57	4	M31002800	M31032800
28.5	M30	1.5	22	18	21	22	150	57	4	M31002850	M31032850



NEW

M3124

INF. TEC. PAG.
B55



UNC

371

376

2B

HSS-E

C

2.5xD

✓ P1 P2 P3
✓ M1 K1 N1

✓ P4 M2 S1

NEW

M3127

INF. TEC. PAG.
B55



UNC

371

376

2B

HSS-E

TiN

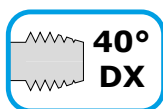
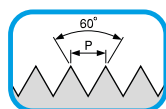
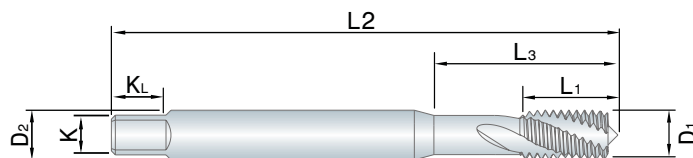
C

2.5xD

✓ P1 P2 P3
✓ M1 K1 N1 S1

✓ P4 M2 N2

	D1	TPI	D2	K	KL	L1	L2	L3	Z		
2.3	#4	40 UNC	3.5	2.7	6	6	56	18	3	M31240230	M31270230
2.6	#5	40 UNC	3.5	2.7	6	7	56	18	3	M31240260	M31270260
2.85	#6	32 UNC	4	3	6	7	56	20	3	M31240285	M31270285
3.5	#8	32 UNC	4.5	3.4	6	8	63	21	3	M31240350	M31270350
3.9	#10	24 UNC	6	4.9	8	10	70	25	3	M31240390	M31270390
4.5	#12	24 UNC	6	4.9	8	10	80	30	3	M31240450	M31270450
5.2	1/4	20 UNC	7	5.5	8	13	80	30	3	M31240520	M31270520
6.6	5/16	18 UNC	8	6.2	9	14	90	35	3	M31240660	M31270660
8	3/8	16 UNC	9	7	10	16	100	39	3	M31240800	M31270800
9.4	7/16	14 UNC	8	6.2	9	17	100	40	3	M31240940	M31270940
10.75	1/2	13 UNC	9	7	10	20	110	44	3	M31241075	M31271075
12.25	9/16	12 UNC	11	9	12	20	110	44	3	M31241225	M31271225
13.5	5/8	11 UNC	12	9	12	22	110	44	3	M31241350	M31271350
16.5	3/4	10 UNC	14	11	14	25	125	50	4	M31241650	M31271650
19.5	7/8	9 UNC	18	14.5	17	27	140	54	4	M31241950	M31271950
22.25	1	8 UNC	20	16	19	30	160	60	4	M31242225	M31272225



NEW

M3136

INF. TEC. PAG.
B55



UNF

371
374

2B

HSS-E

C

2.5xD

✓ **P1 P2 P3**
✓ **M1 K1 N1**

✓ **P4 M2 S1**

NEW

M3139

INF. TEC. PAG.
B55



UNF

371
374

2B

HSS-E

TiN

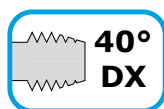
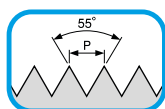
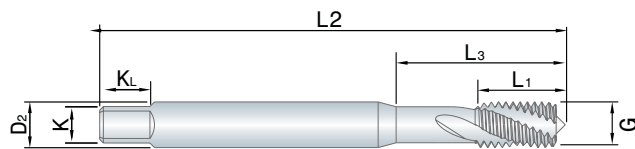
C

2.5xD

✓ **P1 P2 P3**
✓ **M1 K1 N1 S1**

✓ **P4 M2 N2**

	D1	TPI	D2	K	KL	L1	L2	L3	Z		
2.4	#4	48 UNF	3.5	2.7	6	6	56	18	3	M31360240	M31390240
2.7	#5	44 UNF	3.5	2.7	6	7	56	18	3	M31360270	M31390270
3	#6	40 UNF	4	3	6	7	56	20	3	M31360300	M31390300
3.5	#8	36 UNF	4.5	3.4	6	8	63	21	3	M31360350	M31390350
4.1	#10	32 UNF	6	4.9	8	10	70	25	3	M31360410	M31390410
4.7	#12	28 UNF	6	4.9	8	10	80	30	3	M31360470	M31390470
5.5	1/4	28 UNF	7	5.5	8	10	80	30	3	M31360550	M31390550
6.9	5/16	24 UNF	8	6.2	9	10	90	35	3	M31360690	M31390690
8.5	3/8	24 UNF	9	7	10	10	100	39	3	M31360850	M31390850
9.9	7/16	20 UNF	8	6.2	9	13	100	40	3	M31360990	M31390990
11.5	1/2	20 UNF	9	7	10	13	100	40	3	M31361150	M31391150
12.9	9/16	18 UNF	11	9	12	15	100	40	3	M31361290	M31391290
14.5	5/8	18 UNF	12	9	12	15	100	40	3	M31361450	M31391450
17.5	3/4	16 UNF	14	11	14	17	110	44	4	M31361750	M31391750
20.5	7/8	14 UNF	18	14.5	17	17	125	50	4	M31362050	M31392050
23.25	1	12 UNF	20	16	19	20	140	54	4	M31362325	M31392325



M3106

INF. TEC. PAG.
B55



G
(BSP)

5156

HSS-E

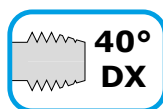
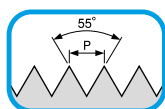
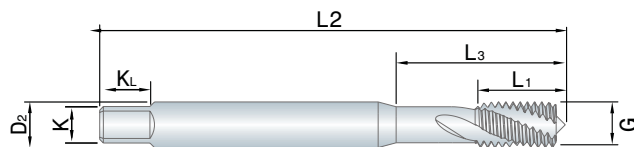
C

2.5xD

	G	P	D2	K	KL	L1	L2	L3	Z	✓	P1 P2 P3
8.8	G1/8"	28	7	5.5	8	20	90	36	3	✓	M31060880
11.8	G1/4"	19	11	9	12	22	100	40	3	✓	M31061180
15.25	G3/8"	19	12	9	12	22	100	40	3	✓	M31061525
19	G1/2"	14	16	12	15	25	125	50	4	✓	M31061900
24.5	G3/4"	14	20	16	19	28	140	54	4	✓	M31062450
30.75	G1"	11	25	20	23	30	160	60	4	✓	M31063075

MASCHIO FORO CIECO FILETTATURA GAS (BSP) DIN ISO 228/1

BSP TAP THREADS DIN ISO 228/1



M3109

INF. TEC. PAG.
B55



G
(BSP)

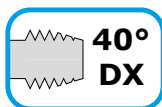
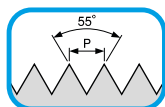
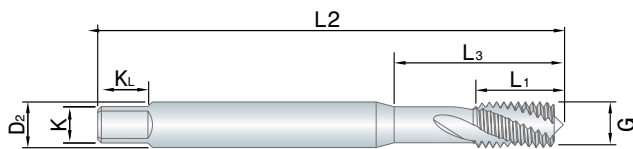
5156

HSS-E

C

2.5xD

	G	P	D2	K	KL	L1	L2	L3	Z	✓ ✓	P2 P3 P4
8.8	G1/8"	28	7	5.5	8	20	90	36	3		M31090880
11.8	G1/4"	19	11	9	12	22	100	40	3		M31091180
15.25	G3/8"	19	12	9	12	22	100	40	3		M31091525
19	G1/2"	14	16	12	15	25	125	50	4		M31091900
24.5	G3/4"	14	20	16	19	28	140	54	4		M31092450
30.75	G1"	11	25	20	23	30	160	60	4		M31093075



M3112

INF. TEC. PAG.
B55



G
(BSP)

5156

HSS-E

Vap

C

2.5xD

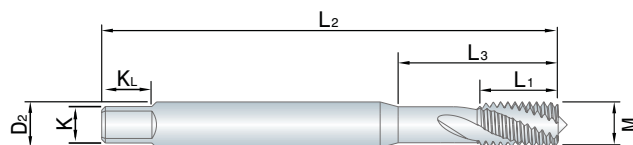
✓
✓
P1 P2
M1 M2

✓
P3

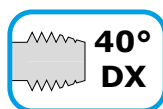
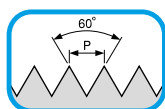
	G	P	D2	K	KL	L1	L2	L3	Z	✓
8.8	G1/8"	28	7	5.5	8	20	90	36	3	M31120880
11.8	G1/4"	19	11	9	12	22	100	40	3	M31121180
15.25	G3/8"	19	12	9	12	22	100	40	3	M31121525
19	G1/2"	14	16	12	15	25	125	50	4	M31121900
24.5	G3/4"	14	20	16	19	28	140	54	4	M31122450
30.75	G1"	11	25	20	23	30	160	60	4	M31123075

MASCHIO FORO CIECO ISO METRICO PASSO GROSSO PER HELICOIL

ISO METRIC TAP COARSE THREADS
FOR SCREW THREAD INSERT



Maschio per Helicoil



M3115

INF. TEC. PAG.
B55



EG-M

371
376

6H

HSS-E

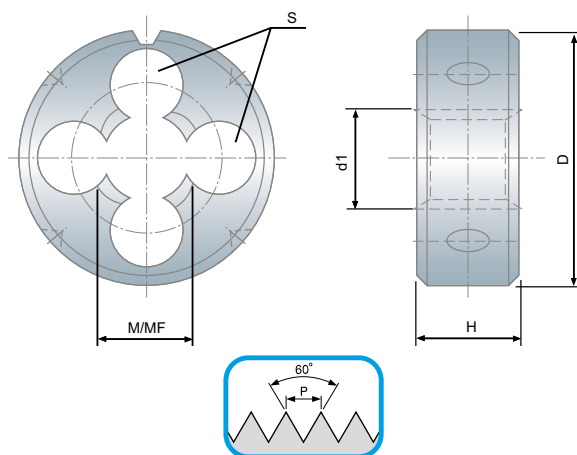
C

2.5xD

N1

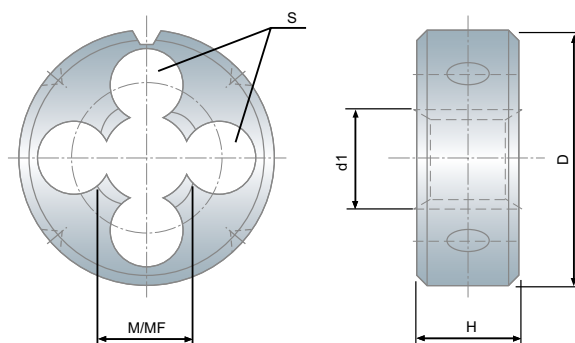
N2 N3

	M	P	D2	K	KL	L1	L2	L3	Z	
2.65	M2.5	0.45	3.5	2.7	6	6	56	18	3	M31150265
3.15	M3	0.5	4.5	3.4	6	5	63	21	3	M31150315
4.2	M4	0.7	6	4.9	8	8	70	25	3	M31150420
5.25	M5	0.8	6	4.9	8	8	80	30	3	M31150525
6.3	M6	1	8	6.2	9	10	90	35	3	M31150630
8.4	M8	1.25	10	8	11	16	100	39	3	M31150840
10.4	M10	1.5	9	7	10	15	110	44	3	M31151040
12.5	M12	1.75	11	9	12	20	110	44	3	M31151250
14.5	M14	2	12	9	12	22	110	44	3	M31151450
16.5	M16	2	14	11	14	25	125	50	4	M31151650



M4007	
M/MF	
13	
6G	
HSS	
✓	P1 P2
✓	P3 N1

M / MF	P	D	H	S	d1	
M 2	0,4	16	5	3	1,93	M40070160
M 2,5	0,45	16	5	3	2,43	M40070205
M 3	0,5	20	5	3	2,92	M40070250
M 4	0,7	20	5	3	3,91	M40070330
MF 4	0,5	20	5	3	3,93	M40070350
M 5	0,8	20	7	4	4,9	M40070420
MF 5	0,5	20	5	4	4,93	M40070450
M 6	1	20	7	4	5,88	M40070500
MF 6	0,75	20	7	4	5,91	M40070520
MF 6	0,5	20	7	4	5,91	M40070550
M 8	1,25	25	9	4	7,87	M40070680
MF 8	1	25	9	4	7,88	M40070700
MF 8	0,75	25	9	4	7,9	M40070720
M 10	1,5	30	11	4	9,85	M40070850
MF 10	1,25	30	11	4	9,86	M40070880
MF 10	1	30	11	4	9,88	M40070900
MF 10	0,75	30	11	4	9,9	M40070920
M 12	1,75	38	14	4	11,83	M40071020
MF 12	1,5	38	10	4	11,85	M40071050
MF 12	1,25	38	10	4	11,86	M40071080
MF 12	1	38	10	4	11,88	M40071100
M 14	2	38	14	5	13,82	M40071200
MF 14	1,5	38	10	5	13,85	M40071250
MF 14	1	38	10	5	13,88	M40071300
M 16	2	45	18	5	15,82	M40071400
MF 16	1,5	45	14	5	15,85	M40071450
MF 16	1	45	14	5	15,88	M40071500
M 18	2,5	45	18	5	17,79	M40071550
MF 18	1,5	45	14	5	17,85	M40071650
MF 18	1	45	14	5	17,88	M40071700



M4007

M/MF

13

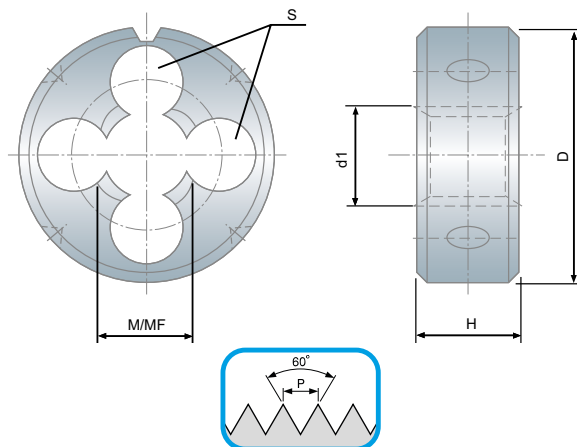
6G

HSS

P1 P2

P3 N1

M / MF	P	D	H	S	d1	
M 20	2,5	45	18	6	19,79	M40071750
MF 20	2	45	14	6	19,82	M40071800
MF 20	1,5	45	14	6	19,85	M40071850
MF 20	1	45	14	6	19,88	M40071900
M 22	2,5	55	22	5	21,79	M40071950
MF 22	2	55	16	5	21,82	M40072000
MF 22	1,5	55	16	5	21,85	M40072050
MF 22	1	55	16	5	21,88	M40072099
M 24	3	55	22	6	23,76	M40072100
MF 24	2	55	16	6	23,82	M40072200
MF 24	1,5	55	16	6	23,85	M40072250
MF 24	1	55	16	6	23,88	M40072300
MF 25	1,5	55	16	6	24,85	M40072350
MF 26	1,5	55	16	6	25,85	M40072398
M 27	3	65	25	6	26,76	M40072400
MF 27	2	65	18	6	26,82	M40072500
MF 27	1,5	65	18	6	26,85	M40072550
MF 27	1	65	18	6	26,88	M40072600
MF 28	1,5	65	18	6	27,85	M40072649
M 30	3,5	65	25	7	29,73	M40072650
MF 30	2	65	18	6	29,82	M40072800
MF 30	1,5	65	18	6	29,85	M40072850
MF 30	1	65	18	6	29,88	M40072900



M3118

M/MF

13

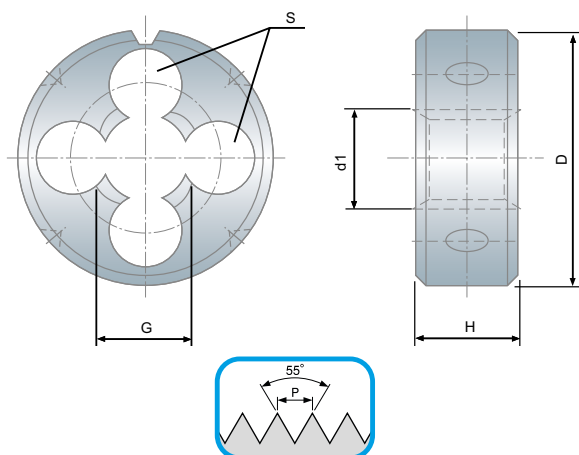
6G

HSS-E

✓ P2 P3 M1

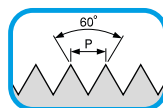
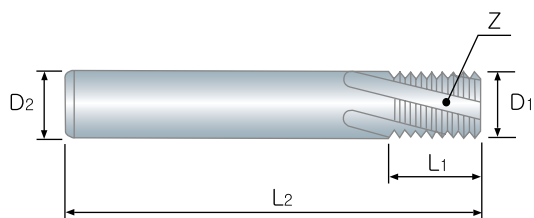
✓ P4 M2

M / MF	P	D	H	S	d1	
M 2	0,4	16	5	4	1,93	M31180160
M 2,5	0,45	16	5	4	2,43	M31180205
M 3	0,5	20	5	4	2,92	M31180250
M 4	0,7	20	5	4	3,91	M31180330
MF 4	0,5	20	5	4	3,93	M31180350
M 5	0,8	20	7	4	4,9	M31180420
MF 5	0,5	20	5	4	4,93	M31180450
M 6	1	20	7	4	5,88	M31180500
MF 6	0,75	20	7	4	5,91	M31180520
MF 6	0,5	20	7	4	5,91	M31180550
M 8	1,25	25	9	5	7,87	M31180680
MF 8	1	25	9	5	7,87	M31180700
MF 8	0,75	25	9	5	7,9	M31180720
M 10	1,5	30	11	5	9,85	M31180850
MF 10	1,25	30	11	5	9,86	M31180880
MF 10	1	30	11	5	9,88	M31180900
MF 10	0,75	30	11	5	9,9	M31180920
M 12	1,75	38	14	5	11,83	M31181020
MF 12	1,5	38	10	5	11,85	M31181050
MF 12	1,25	38	10	5	11,86	M31181080
MF 12	1	38	10	5	11,88	M31181100
M 14	2	38	14	5	13,82	M31181200
MF 14	1,5	38	10	5	13,85	M31181250
MF 14	1	38	10	5	13,88	M31181300
M 16	2	45	18	5	15,82	M31181400
MF 16	1,5	45	14	5	15,85	M31181450
MF 16	1	45	14	5	15,88	M31181500
M 18	2,5	45	18	5	17,79	M31181550
MF 18	1,5	45	14	5	17,85	M31181650
MF 18	1	45	14	5	17,88	M31181700
M 20	2,5	45	18	5	19,79	M31181750
MF 20	2	45	14	5	19,82	M31181800
MF 20	1,5	45	14	5	19,85	M31181850
MF 20	1	45	14	5	19,88	M31181900



M4010	M3121
G (BSP)	G (BSP)
228	228
6G	6G
HSS	HSS-E
✓ P1 P2	P2 P3 M1
✓ P3 N1	P4 M2

G	Z/1"	P	D	H	S	d1		
G 1/8"	28	0,907	30	11	4	9,62	M40100880	M31210880
G 1/4"	19	1,337	38	10	5	13,03	M40101180	M31211180
G 3/8"	19	1,337	45	14	5	16,54	M40101525	M31211525
G 1/2"	14	1,814	45	14	6	20,81	M40101900	M31211900
G 3/4"	14	1,814	55	16	6	26,3	M40102450	M31212450
G 1"	11	2,309	65	18	8	33,07	M40103075	M31213075



Gambo	DIN 6535 HA
Shank	
Angolo D'elica	15°
Helix Angle	
L. Max di filettatura	2×D
Thread Length	

M1001

INF. TEC. PAG.
B55

M

13

MD

TiAlN

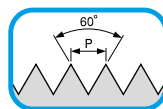
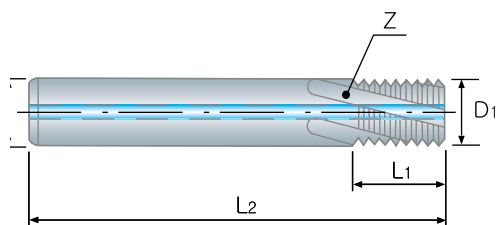
✓ P2 P3 P4
✓ P5 K1

✓ P1 M1
M2 S1

M	P	D1	D2	L1	L2	Z	
M3	0.5	2.2	6	5	57	3	M10010250
M4	0.7	2.9	6	7	57	3	M10010330
M5	0.8	3.8	6	8	57	3	M10010420
M6	1.0	4.5	6	13	57	3	M10010500
M8	1.25	6.0	6	17.5	65	3	M10010680
M10	1.5	7.5	8	21	72	4	M10010850
M12	1.75	9.5	10	26.25	80	4	M10011020
M14	2.0	10.0	10	30	83	4	M10011200
M16	2.0	12.0	12	34	92	4	M10011400
M18	2.5	14.0	14	37.5	92	5	M10011550
M20	2.5	16.0	16	42.5	105	5	M10011750

FRESA PER FILETTATURE INTERNE CON FORI DI REFRIGERAZIONE ISO METRICHE PASSO GROSSO - DIN 13

SOLID CARBIDE THREAD MILL WITH COOLANT HOLE FOR ISO METRIC INTERNAL THREAD - DIN 13



Gambo	DIN 6535 HA
Shank	
Angolo D'elica	15°
Helix Angle	
L. Max di filettatura	2×D
Thread Length	

M1004

INF. TEC. PAG.
B55

M

13

MD

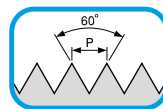
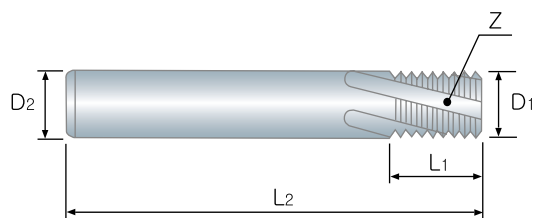
TiAlN



P2 P3 P4
P5 K1

P1 M1
M2 S1

M	P	D1	D2	L1	L2	Z	
M6	1.0	4.5	6	13.0	57	3	M10040500
M8	1.25	6.0	6	17.5	65	3	M10040680
M10	1.5	7.5	8	21.0	72	4	M10040850
M12	1.75	9.5	10	26.25	80	4	M10041020
M16	2.0	12.0	12	34.0	92	4	M10041400
M20	2.5	16.0	16	42.5	105	5	M10041750



Gambo	DIN 6535 HA
Shank	
Angolo D'elica	15°
Helix Angle	
L. Max di filettatura	1.5×D
Thread Length	

M1007

INF. TEC. PAG.
B55

MF

13

MD

TiAlN

✓ P2 P3 P4
✓ P5 K1
✓ P1 M1
M2 S1

M	P	D1	D2	L1	L2	Z	
M8	1.0	6.0	6	13	57	3	M10070700
M8	0.75	6.0	6	12.75	57	3	M10070720
M10	1.0	8.0	8	16	63	4	M10070900
M12	1.5	9.5	10	19.5	72	4	M10071050
M12	1.25	9.5	10	18.75	72	4	M10071080
M12	1.0	9.5	10	19	72	4	M10071100
M14	1.5	10.0	10	22.5	83	4	M10071250
M14	1.0	10.0	10	22	83	4	M10071300
M16	1.5	12.0	12	25.5	83	4	M10071450
M16	1.0	12.0	12	25	83	4	M10071500
M20	1.5	16.0	16	31.5	92	5	M10071850

MASCHI - TAPS

DESCRIZIONE MATERIALI	Vc Maschi ad asportazione	Vc Maschi a rullare
Acciaio < 500 N/mm ²	15 - 20	30 - 40
Acciaio < 750 N/mm ²	12 - 18	24 - 36
Acciaio < 900 N/mm ²	10 - 15	20 - 30
Acciaio < 1100 N/mm ²	6 - 10	10 - 20
Acciaio < 1500 N/mm ²	3 - 5	-
INOX < 800 N/mm ²	7 - 10	15 - 20
INOX > 800 N/mm ²	4 - 6	-
Ghisa	10 - 15	-
Leghe Alluminio < 10% Si	15 - 20	35 - 40
Leghe Alluminio > 10% Si	10 - 15	-
Materiali non ferrosi	20 - 30	-
Leghe di Titanio	8 - 12	-
Acciai Temprati > 45 HRc	3 - 5	-

Formulario

Vc - Velocità di taglio
N - Numero di giri
Ø - Diametro nominale

$$Vc = \frac{\pi \times \varnothing \times N}{1000} = \text{(m/min.)}$$

$$N = \frac{Vc \times 1000}{\pi \times \varnothing} = \text{(giri/min.)}$$

FRESE A FILETTARE - THREAD MILLS

DESCRIZIONE MATERIALI	Vc
Acciaio < 500 N/mm ²	80 - 120
Acciaio < 750 N/mm ²	
Acciaio < 900 N/mm ²	
Acciaio < 1100 N/mm ²	
Acciaio < 1500 N/mm ²	
INOX < 800 N/mm ²	40 - 80
INOX > 800 N/mm ²	
Ghisa	50 - 100
Materiali non ferrosi	100 - 300
Leghe di Titanio	20 - 60
Acciai Temprati > 45 HRc	30 - 70

Formulario

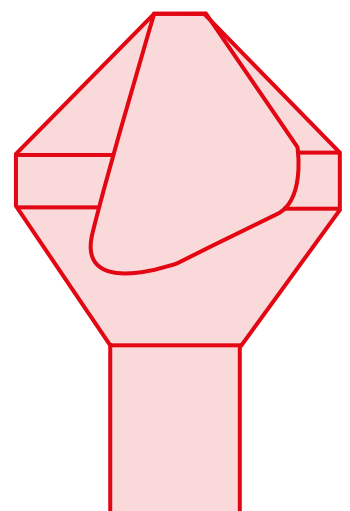
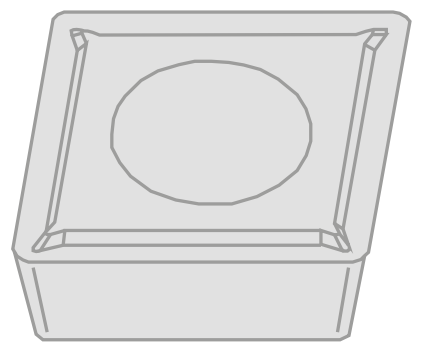
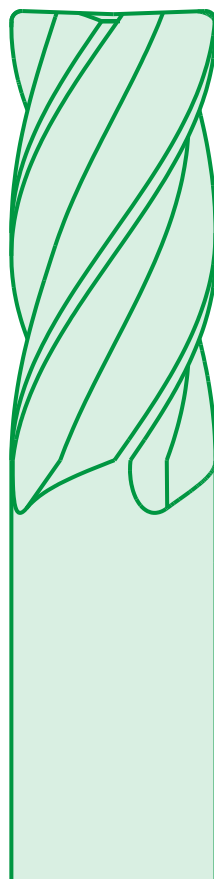
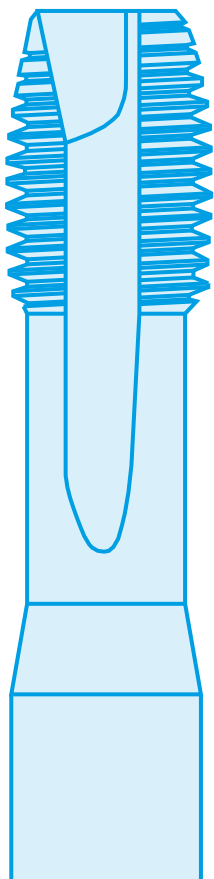
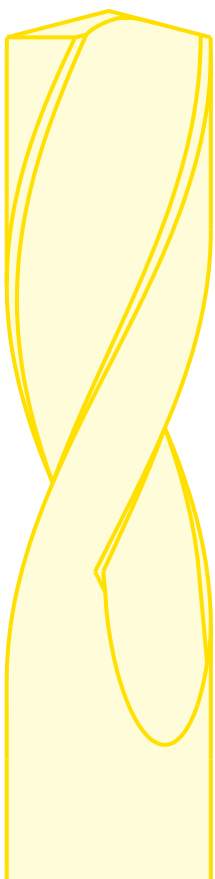
$$Vc = \frac{\pi \times \varnothing \times N}{1000} = \text{(m/min.)}$$

$$N = \frac{Vc \times 1000}{\pi \times \varnothing} = \text{(giri/min.)}$$

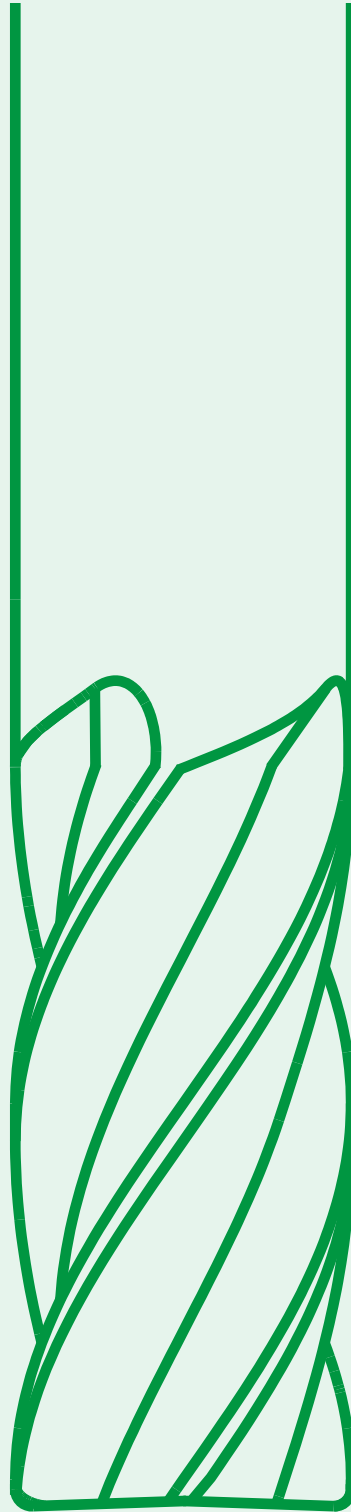
$$Vf = fz \times z \times N = \text{(mm/min.)}$$

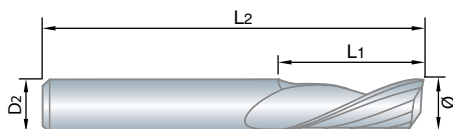
$$Vf^1 = \frac{Vf \times (d - \varnothing)}{d} = \text{(giri/min.)}$$

Vc - Velocità di taglio
N - Numero di giri
Ø - Diametro nominale fresa a filettare
Vf - Avanzamento tavola
Vf¹ - Avanzamento tavola a centro fresa
fz - Avanzamento dente
z - Numero di denti
d - Diametro del pezzo da filettare



FRESATURA





F3001

INF. TEC. PAG.
C94, C98



HSS-E

Z 1

30°



P1 P2

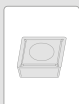
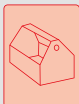
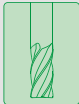
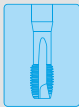
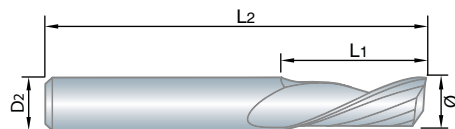
N1

Unità : mm

Ø	D2	L1	L2	
3.0	8	12	60	F30010300
4.0	8	12	60	F30010400
5.0	8	12	60	F30010500
6.0	8	14	60	F30010600
7.0	8	14	60	F30010700
8.0	8	14	80	F30010800
9.0	8	14	80	F30010900

FRESA MONO TAGLIANTE MD ELICA 30°

CARBIDE 1 FLUTE 30° HELIX END MILL



F1001

INF. TEC. PAG.
C93, C96



MD

Z 1

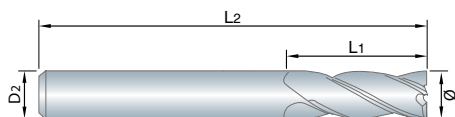
30°



N1 N2 N3

Unità : mm

Ø	D2	L1	L2	✓	N1 N2 N3
2.0	3	8	50		F10010200
3.0	3	12	50		F10010300
4.0	4	15	60		F10010400
5.0	5	17	60		F10010500
6.0	6	20	65		F10010600
8.0	8	22	65		F10010800
10.0	10	25	75		F10011000
12.0	12	30	80		F10011200



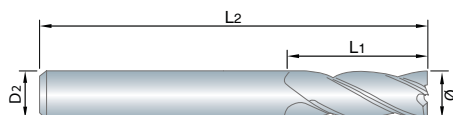
F3004	F3013
INF. TEC. PAG. C94, C98	INF. TEC. PAG. C94, C101
327	327
	
HSS Co8	HSS Co8
	WST
Z 2	Z 2
30°	30°
	
✓ ✓ ✓ P1 P2 P3 P4 K1 P5 M1 N1 S1	P1 P2 P3 P4 P5 M1 K1 N1 S1

Unità : mm

Ø	D2	L1	L2		
1.0	6	2.5	47	F30040100	F30130100
1.5	6	3	47	F30040150	F30130150
2.0	6	4	48	F30040200	F30130200
2.5	6	5	49	F30040250	F30130250
3.0	6	5	49	F30040300	F30130300
3.5	6	6	50	F30040350	F30130350
4.0	6	7	51	F30040400	F30130400
4.5	6	7	51	F30040450	F30130450
5.0	6	8	52	F30040500	F30130500
5.5	6	8	52	F30040550	F30130550
5.75	6	8	52	F30040575	F30130575
6.0	6	8	52	F30040600	F30130600
6.5	10	10	60	F30040650	F30130650
6.75	10	10	60	F30040675	F30130675
7.0	10	10	60	F30040700	F30130700
7.5	10	10	60	F30040750	F30130750
7.75	10	11	61	F30040775	F30130775
8.0	10	11	61	F30040800	F30130800
8.5	10	11	61	F30040850	F30130850
9.0	10	11	61	F30040900	F30130900
9.5	10	11	61	F30040950	F30130950
9.7	10	13	63	F30040970	F30130970
10.0	10	13	63	F30041000	F30131000
10.5	12	13	70	F30041050	F30131050
10.7	12	13	70	F30041070	F30131070
11.0	12	13	70	F30041100	F30131100
11.5	12	13	70	F30041150	F30131150
11.7	12	16	73	F30041170	F30131170
12.0	12	16	73	F30041200	F30131200
12.5	12	16	73	F30041250	F30131250

FRESA 2 TAGLIENTI HSS Co8

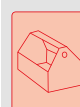
HSS Co8 2 FLUTE END MILL

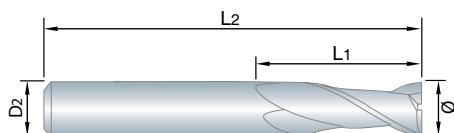


Unità : mm

Ø	D2	L1	L2		
13.0	12	16	73	F30041300	F30131300
13.5	12	16	73	F30041350	F30131350
14.0	12	16	73	F30041400	F30131400
15.0	12	16	73	F30041500	F30131500
16.0	16	19	79	F30041600	F30131600
17.0	16	19	79	F30041700	F30131700
18.0	16	19	79	F30041800	F30131800
19.0	16	19	79	F30041900	F30131900
20.0	16	22	82	F3004200A	F3013200A
20.0	20	22	88	F30042000	F30132000
21.0	20	22	88	F30042100	F30132100
22.0	20	22	88	F30042200	F30132200
24.0	25	26	102	F30042400	F30132400
25.0	25	26	102	F30042500	F30132500
26.0	25	26	102	F30042600	F30132600
27.0	25	26	102	F30042700	F30132700
28.0	25	26	102	F30042800	F30132800
29.0	25	26	102	F30042900	F30132900
30.0	25	26	102	F30043000	F30133000
32.0	32	32	112	F30043200	F30133200
34.0	32	32	112	F30043400	F30133400
35.0	32	32	112	F30043500	F30133500
36.0	32	32	112	F30043600	F30133600
38.0	32	38	118	F30043800	F30133800
40.0	32	38	118	F30044000	F30134000

F3004	F3013
INF. TEC. PAG. C94, C98	INF. TEC. PAG. C94, C101
327	327
HSS Co8	HSS Co8
	WST
Z 2	Z 2
30°	30°
✓ ✓ ✓ P1 P2 P3 P4 K1 P5 M1 N1 S1	P1 P2 P3 P4 P5 M1 K1 N1 S1





F2001

INF. TEC. PAG.
C94, C97, C104

327



HSS
PM

WST

Z 2

30°



P1 P2 P3
P4 M1 K1

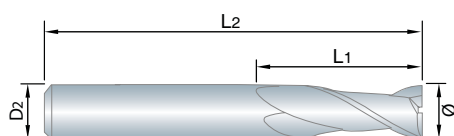
M2 N3

Unità : mm

Ø	D2	L1	L2	
2.0	6	4	48	F20010200
3.0	6	5	49	F20010300
4.0	6	7	51	F20010400
5.0	6	8	52	F20010500
6.0	6	8	52	F20010600
7.0	10	10	60	F20010700
8.0	10	11	61	F20010800
9.0	10	11	61	F20010900
10.0	10	13	63	F20011000
12.0	12	16	73	F20011200
14.0	12	16	73	F20011400
16.0	16	19	79	F20011600
18.0	16	19	79	F20011800
20.0	20	22	88	F20012000

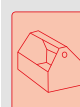
FRESA 2 TAGLIENTI MD

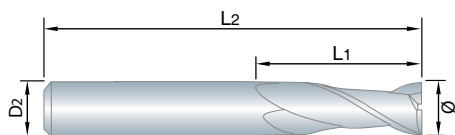
CARBIDE 2 FLUTE END MILL



Unità : mm

Ø	D2	L1	L2	✓ ✓ ✓	F1004	F1010
					INF. TEC. PAG. C93, C96, C100, C104	INF. TEC. PAG. C93, C96, C100, C104
					6527	6527
					MD	MD
						WST
					Z 2	Z 2
					30°	30°
				✓ ✓ ✓	P1 P2 P3 P4 P5	P1 P2 P3 P4 P5
				✓	M1 M2 K1 N1 S1	M1 M2 K1 N1 S1
2.0	6	3	50		F10040200	F10100200
3.0	6	4	50		F10040300	F10100300
3.5	6	4	50		F10040350	F10100350
4.0	6	5	54		F10040400	F10100400
4.5	6	5	54		F10040450	F10100450
5.0	6	6	54		F10040500	F10100500
6.0	6	7	54		F10040600	F10100600
7.0	8	8	58		F10040700	F10100700
8.0	8	9	58		F10040800	F10100800
9.0	10	10	66		F10040900	F10100900
10.0	10	11	66		F10041000	F10101000
12.0	12	12	73		F10041200	F10101200
14.0	14	14	75		F10041400	F10101400
16.0	16	16	82		F10041600	F10101600
18.0	18	18	84		F10041800	F10101800
20.0	20	20	92		F10042000	F10102000





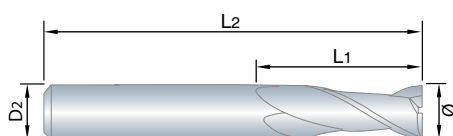
F3022		F3031	
INF. TEC. PAG. C95, C98		INF. TEC. PAG. C95, C98	
844		844	
			
HSS Co8		HSS Co8	
		TiAlN	
Z 2		Z 2	
30° 		30° 	
			
✓ ✓	P1 P2	P1 P2 P3	
	P3 N1	P4 P5 N1	
	F30220150	F30310150	
	F30220200	F30310200	
	F30220250	F30310250	
	F30220300	F30310300	
	F30220350	F30310350	
	F30220400	F30310400	
	F30220450	F30310450	
	F30220500	F30310500	
	F30220550	F30310550	
	F30220600	F30310600	
	F30220650	F30310650	
	F30220700	F30310700	
	F30220750	F30310750	
	F30220800	F30310800	
	F30220850	F30310850	
	F30220900	F30310900	
	F30220950	F30310950	
	F30221000	F30311000	
	F30221100	F30311100	
	F30221200	F30311200	
	F30221300	F30311300	
	F30221400	F30311400	
	F30221500	F30311500	
	F30221600	F30311600	
	F30221800	F30311800	
	F30222000	F30312000	
	F30222200	F30312200	
	F30222400	F30312400	
	F30222500	F30312500	
	F30222600	F30312600	
	F30223000	F30313000	
	F30223200	F30313200	
	F30224000	F30314000	

Unità : mm

Ø	D2	L1	L2
1.5	6	7	51
2.0	6	7	51
2.5	6	8	52
3.0	6	8	52
3.5	6	10	54
4.0	6	11	55
4.5	6	11	55
5.0	6	13	57
5.5	6	13	57
6.0	6	13	57
6.5	10	16	66
7.0	10	16	66
7.5	10	16	66
8.0	10	19	69
8.5	10	19	69
9.0	10	19	69
9.5	10	19	69
10.0	10	22	72
11.0	12	22	79
12.0	12	26	83
13.0	12	26	83
14.0	12	26	83
15.0	12	26	83
16.0	16	32	92
18.0	16	32	92
20.0	20	38	104
22.0	20	38	104
24.0	25	45	121
25.0	25	45	121
26.0	25	45	121
30.0	25	45	121
32.0	32	53	133
40.0	40	63	155

FRESA 2 TAGLIENTI HSS Co8

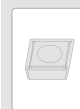
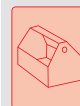
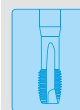
HSS Co8 2 FLUTE END MILL

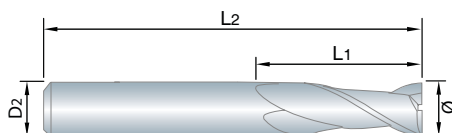


Unità : mm

Ø	D2	L1	L2			
2.5	6	8	56		F30250250	F30340250
3.0	6	8	56		F30250300	F30340300
3.5	6	10	59		F30250350	F30340350
4.0	6	11	63		F30250400	F30340400
4.5	6	11	63		F30250450	F30340450
5.0	6	13	68		F30250500	F30340500
5.5	6	13	68		F30250550	F30340550
6.0	6	13	68		F30250600	F30340600
6.5	10	16	80		F30250650	F30340650
7.0	10	16	80		F30250700	F30340700
8.0	10	19	88		F30250800	F30340800
8.5	10	19	88		F30250850	F30340850
9.0	10	19	88		F30250900	F30340900
10.0	10	22	95		F30251000	F30341000
12.0	12	26	110		F30251200	F30341200
14.0	12	26	110		F30251400	F30341400
16.0	16	32	123		F30251600	F30341600
18.0	16	32	123		F30251800	F30341800
20.0	20	38	141		F30252000	F30342000

F3025	F3034
INF. TEC. PAG. C95, C98	INF. TEC. PAG. C95, C98
844	844
HSS Co8	HSS Co8
	TiAlN
Z 2	Z 2
30°	30°
✓ ✓ ✓	P1 P2 P3
✓	P3 N1
	P4 P5 N1





F3007

INF. TEC. PAG.
C94, C98, C100

844



HSS
Co8

Z 2



N1

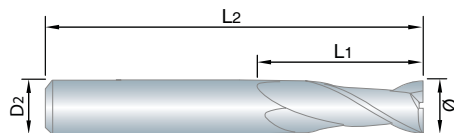
P1

Unità : mm

Ø	D2	L1	L2	
1.0	6	3	49	F30070100
1.5	6	5	49	F30070150
2.0	6	7	51	F30070200
2.5	6	8	52	F30070250
3.0	6	8	52	F30070300
3.5	6	10	54	F30070350
4.0	6	11	55	F30070400
4.5	6	11	55	F30070450
5.0	6	13	57	F30070500
5.5	6	13	57	F30070550
6.0	6	13	57	F30070600
6.5	10	16	66	F30070650
7.0	10	16	66	F30070700
7.5	10	16	66	F30070750
8.0	10	19	69	F30070800
8.5	10	19	69	F30070850
9.0	10	19	69	F30070900
10.0	10	22	72	F30071000
11.0	12	22	79	F30071100
12.0	12	26	83	F30071200
13.0	12	26	83	F30071300
14.0	12	26	83	F30071400
15.0	12	26	83	F30071500
16.0	16	32	92	F30071600
17.0	16	32	92	F30071700
18.0	16	32	92	F30071800
19.0	16	32	92	F30071900
20.0	20	38	104	F30072000
22.0	20	38	104	F30072200
24.0	25	45	121	F30072400
25.0	25	45	121	F30072500
26.0	25	45	121	F30072600
28.0	25	45	121	F30072800
30.0	25	45	121	F30073000
32.0	32	53	133	F30073200

FRESA 2 & 3 TAGLIENTI HSS-PM

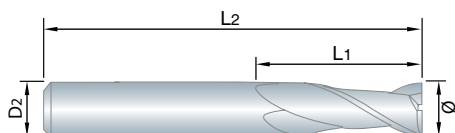
HSS-PM 2 & 3 FLUTE END MILL



F2004		F2007	
INF. TEC. PAG. C94, C97, C104		INF. TEC. PAG. C94, C97, C100, C104	
844		844	
			
HSS PM		HSS PM	
WST		WST	
Z 2		Z 3	
30° 		30° 	
			
✓	P1 P2 P3 P4	✓	P1 P2 P3
✓	M1 M2 K1	✓	P4 M1 K1
✓	P5 N3	✓	P5 M2 N3
F20040300		F20070300	
F20040400		F20070400	
F20040500		F20070500	
F20040600		F20070600	
F20040800		F20070800	
F20041000		F20071000	
F20041200		F20071200	
-		F20071400	
F20041600		F20071600	
-		F20071800	
F20042000		F20072000	

Unità : mm

Ø	D2	L1	L2
3.0	6	8	52
4.0	6	11	55
5.0	6	13	57
6.0	6	13	57
8.0	10	19	69
10.0	10	22	72
12.0	12	26	83
14.0	12	26	83
16.0	16	32	92
18.0	16	32	92
20.0	20	38	104

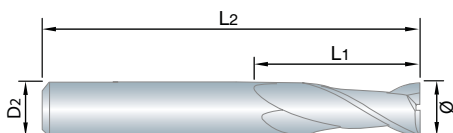


F1022		F1034	
INF. TEC. PAG. C93, C96, C102, C104		INF. TEC. PAG. C93, C96, C102, C104	
6527		6527	
			
MD		MD	
		WST	
Z 2		Z 2	
			
			
✓✓ ✓	P1 P2 P3 P4 P5	P1 P2 P3 P4 P5	
	M1 M2 K1 N1 S1	M1 M2 K1 N1 S1	
	F1022020A	F1034020A	
	F10220280	F10340280	
	F10220300	F10340300	
	F10220350	F10340350	
	F10220380	F10340380	
	F10220400	F10340400	
	F10220450	F10340450	
	F10220480	F10340480	
	F10220500	F10340500	
	F10220575	F10340575	
	F10220600	F10340600	
	F10220700	F10340700	
	F10220775	F10340775	
	F10220800	F10340800	
	F10220870	F10340870	
	F10220900	F10340900	
	F10221000	F10341000	
	F10221170	F10341170	
	F10221200	F10341200	
	F10221370	F10341370	
	F10221400	F10341400	
	F10221600	F10341600	
	F10222000	-	

Unità : mm

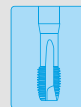
FRESA 2 & 3 TAGLIENTI MD

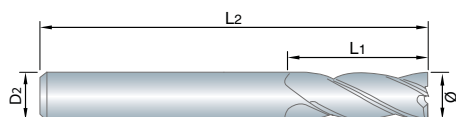
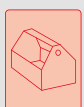
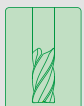
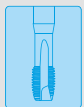
CARBIDE 2 & 3 FLUTE END MILL



Unità : mm

Ø	D2	L1	L2	✓ ✓ ✓	F1025	F1076	F1037	F1088
					INF. TEC. PAG. C93, C96, C102, C104	INF. TEC. PAG. C93, C96, C99 C102, C104	INF. TEC. PAG. C93, C96, C102, C104	INF. TEC. PAG. C93, C96, C99 C102, C104
					6528	6528	6528	6528
					MD	MD	MD	MD
							WST	WST
					Z 2	Z 3	Z 2	Z 3
					30°	30°	30°	30°
					P1 P2 P3 P4 P5	P1 P2 P3 P4 P5	P1 P2 P3 P4 P5	P1 P2 P3 P4 P5
					M1 M2 K1 N1 S1	M1 M2 K1 N1 S1	M1 M2 K1 N1 S1	M1 M2 K1 N1 S1
3.5	3.5	7	50		F10250350	F10760350	F10370350	F10880350
4.0	4	8	50		F10250400	F10760400	F10370400	F10880400
4.5	4.5	8	50		F10250450	F10760450	F10370450	F10880450
5.0	5	10	50		F10250500	F10760500	F10370500	F10880500
5.5	5.5	10	57		F10250550	F10760550	F10370550	F10880550
6.0	6	10	57		F10250600	F10760600	F10370600	F10880600
6.5	6.5	13	60		F10250650	F10760650	F10370650	F10880650
7.0	7	13	60		F10250700	F10760700	F10370700	F10880700
7.5	7.5	16	63		F10250750	F10760750	F10370750	F10880750
8.0	8	16	63		F10250800	F10760800	F10370800	F10880800
8.5	8.5	16	67		F10250850	F10760850	F10370850	F10880850
9.0	9	16	67		F10250900	F10760900	F10370900	F10880900
9.5	9.5	19	72		F10250950	F10760950	F10370950	F10880950
10.0	10	19	72		F10251000	F10761000	F10371000	F10881000
11.0	11	22	83		F10251100	F10761100	F10371100	F10881100
12.0	12	22	83		F10251200	F10761200	F10371200	F10881200
13.0	13	22	83		F10251300	F10761300	F10371300	F10881300
14.0	14	22	83		F10251400	F10761400	F10371400	F10881400
15.0	15	26	92		F10251500	F10761500	F10371500	F10881500
16.0	16	26	92		F10251600	F10761600	F10371600	F10881600
18.0	18	26	92		F10251800	F10761800	F10371800	F10881800
20.0	20	32	104		F10252000	F10762000	F10372000	F10882000





F1028

INF. TEC. PAG.
C93, C96, C99



MD

Z 2

45°



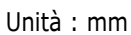
N1

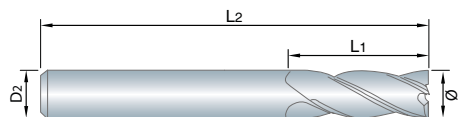
N3

Unità : mm

Ø	D2	L1	L2	
2.0	3	7	38	F10280200
3.0	6	8	57	F10280300
4.0	6	11	57	F10280400
5.0	6	13	57	F10280500
6.0	6	13	57	F10280600
8.0	8	19	63	F10280800
10.0	10	22	72	F10281000
12.0	12	26	83	F10281200
14.0	14	26	83	F10281400
16.0	16	32	92	F10281600
20.0	20	38	104	F10282000

CARBIDE 2 & 4 FLUTE END END MILL

**C15**



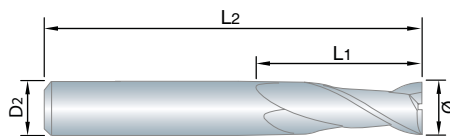
F3028	F3058	F2019
INF. TEC. PAG. C95, C98, C101, C105	INF. TEC. PAG. C95, C101, C105	INF. TEC. PAG. C94, C100, C105
844	844	844
		
HSS Co8	HSS Co8	HSS PM
		WST
Z 2	Z 3	Z 4
42°	37°	30°
		
	Bombato Grosso	
✓ ✓ ✓	N1	P1 P2 N1
	P1 N3	P1 P2 P3 M1 K1 N2
	P3 N2	P4

Unità : mm

Ø	D2	L1	L2			
2.0	6	10	54	F30280200	-	-
3.0	6	12	56	F30280300	-	F20190300
4.0	6	19	63	F30280400	-	F20190400
5.0	6	24	68	F30280500	-	F20190500
6.0	6	24	68	F30280600	-	F20190600
7.0	10	30	80	F30280700	-	-
8.0	10	38	88	F30280800	-	F20190800
9.0	10	38	88	F30280900	-	-
10.0	10	45	95	F30281000	F30581000	F20191000
11.0	12	45	102	F30281100	-	-
12.0	12	53	110	F30281200	F30581200	F20191200
13.0	12	53	110	F30281300	-	-
14.0	12	53	110	F30281400	F30581400	F20191400
15.0	12	53	110	F30281500	-	-
16.0	16	63	123	F30281600	F30581600	F20191600
18.0	16	63	123	F30281800	F30581800	-
20.0	20	75	141	F30282000	F30582000	F20192000
25.0	25	90	166	-	-	F20192500

FRESA 2 - 4 TAGLIENTI MD

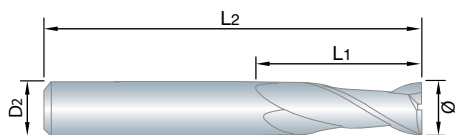
CARBIDE 2 - 4 FLUTE END MILL



F1007	F1058	F1100	F1013	F1067	F1106
INF. TEC. PAG. C93, C96, C99, C102, C104	INF. TEC. PAG. C93, C96, C99, C102, C104	INF. TEC. PAG. C93, C99, C102, C104	INF. TEC. PAG. C93, C99, C102, C104	INF. TEC. PAG. C93, C96, C99, C102, C104	INF. TEC. PAG. C93, C99, C102, C104
MD	MD	MD	MD	MD	MD
			WST	WST	WST
Z 2	Z 3	Z 4	Z 2	Z 3	Z 4
30°	30°	30°	30°	30°	30°
✓ ✓ ✓ P1 P2 P3 P4 P5	P1 P2 P3 P4 P5	P1 P2 P3 P4 P5	P1 P2 P3 P4 P5	P1 P2 P3 P4 P5	P1 P2 P3 P4 P5
M1 M2 K1 N1 S1	M1 M2 K1 N1 S1	M1 M2 K1 N1 S1	M1 M2 K1 N1 S1	M1 M2 K1 N1 S1	M1 M2 K1 N1 S1

Unità : mm

Ø	D2	L1	L2						
1.0	4	3	40	F10070100	-	-	F10130100	F10670100	-
1.5	4	4.5	40	F10070150	-	-	F10130150	F10670150	-
2.0	2	8	32	F10070200	F10580200	F11000200	F10130200	F10670200	F11060200
2.5	2.5	8	32	F10070250	F10580250	F11000250	F10130250	F10670250	F11060250
3.0	3	12	32	F10070300	F10580300	F11000300	F10130300	F10670300	F11060300
3.5	3.5	12	32	F10070350	F10580350	F11000350	F10130350	F10670350	F11060350
4.0	4	12	40	F10070400	F10580400	F11000400	F10130400	F10670400	F11060400
4.5	4.5	14	50	F10070450	F10580450	F11000450	F10130450	F10670450	F11060450
5.0	5	14	50	F10070500	F10580500	F11000500	F10130500	F10670500	F11060500
5.5	5.5	16	50	F10070550	F10580550	F11000550	F10130550	F10670550	F11060550
6.0	6	16	50	F10070600	F10580600	F11000600	F10130600	F10670600	F11060600
7.0	7	20	60	F10070700	F10580700	F11000700	F10130700	F10670700	F11060700
8.0	8	20	60	F10070800	F10580800	F11000800	F10130800	F10670800	F11060800
9.0	9	20	60	F10070900	F10580900	F11000900	F10130900	F10670900	F11060900
10.0	10	22	70	F10071000	F10581000	F11001000	F10131000	F10671000	F11061000
12.0	12	22	70	F10071200	F10581200	F11001200	F10131200	F10671200	F11061200
14.0	14	25	75	-	F10581400	F11001400	-	F10671400	F11061400
16.0	16	25	75	-	F10581600	F11001600	-	F10671600	F11061600
20.0	20	32	100	-	F10582000	-	-	F10672000	-



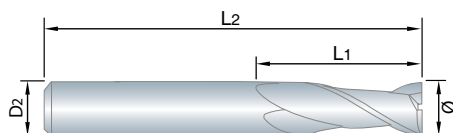
F1031	F1109
INF. TEC. PAG. C93, C96, C102, C104	INF. TEC. PAG. C93, C99, C102, C104
	
MD	MD
WST	WST
Z 2	Z 4
30°	30°
	
P1 P2 P3 P4 P5	P1 P2 P3 P4 P5
M1 M2 K1 N1 S1	N1 M1 M2 S1 K1

Unità : mm

Ø	D2	L1	L2		
1.0	3	3	39	F10310100	F11090100
1.5	3	5	39	F10310150	F11090150
2.0	3	7	39	F10310200	F11090200
2.5	3	7	39	F10310250	F11090250
3.0	3	10	39	-	F11090300
3.0	3	9	39	F10310300	-
4.0	4	14	51	F10310400	F11090400
5.0	5	16	51	F10310500	F11090500
6.0	6	19	64	F10310600	F11090600
8.0	8	21	64	F10310800	F11090800
10.0	10	22	70	F10311000	-
12.0	12	25	76	F10311200	-
16.0	16	32	89	F10311600	-
20.0	20	38	102	F10312000	-

FRESA 2 & 4 TAGLIENTI MD

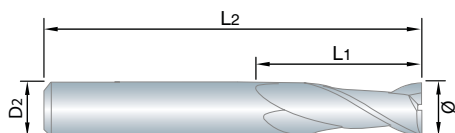
CARBIDE 2 & 4 FLUTE END MILL



F1040	F1136
INF. TEC. PAG. C93, C96	INF. TEC. PAG. C93, C99
MD	MD
TiAlN	TiAlN
Z 2	Z 4
30°	30°
✓ ✓ ✓	
P2 P3 P4 P5	P2 P3 P4 P5
P1 M1 K1 H1	P1 K1 H1

Unità : mm

Ø	D2	L1	L2		
2.0	4	8	40	F10400200	F11360200
3.0	6	12	50	F10400300	F11360300
4.0	6	15	50	F10400400	F11360400
5.0	6	20	60	F10400500	F11360500
6.0	6	20	60	F10400600	F11360600
8.0	8	25	70	F10400800	F11360800
10.0	10	30	90	F10401000	F11361000
12.0	12	30	90	F10401200	F11361200
14.0	16	40	110	F10401400	F11361400
16.0	16	50	110	F10401600	F11361600
20.0	20	55	110	-	F11362000



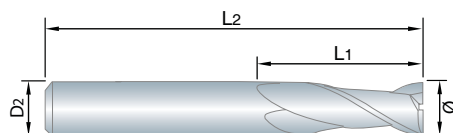
F1043		F1157	
INF. TEC. PAG. C93, C96, C103, C104		INF. TEC. PAG. C93, C100, C103, C104	
			
MD		MD	
Z 2		Z 4	
			
			
✓	P1 P2 P3	✓	P1 P2 P3
✓	P4 P5	✓	P4 P5
✓	M1 M2 K1 N1	✓	N1 M1 M2 S1 K1
	F10430300		F11570300
	F10430400		F11570400
	F10430500		F11570500
	F10430600		F11570600
	F10430800		F11570800
	F10431000		F11571000
	F10431200		F11571200
	F10431400		F11571400
	F10431600		F11571600
	F10431800		F11571800
	F10432000		F11572000

Unità : mm

Ø	D2	L1	L2
3.0	3	30	75
4.0	4	30	75
5.0	5	40	100
6.0	6	50	150
8.0	8	50	150
10.0	10	60	150
12.0	12	75	150
14.0	14	65	150
16.0	16	65	150
18.0	18	65	150
20.0	20	65	150

FRESA 2 TAGLIANTI MD

CARBIDE 2 FLUTE END END MILL



F1046

INF. TEC. PAG.
C93, C96, C102, C104



MD

WST

Z 2

30°

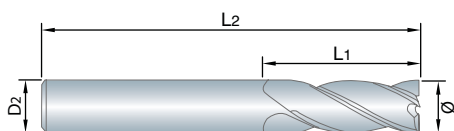


P1 P2 P3
P4 P5

M1 M2 K1
N1 S1

Unità : mm

Ø	D2	L1	L2	
3.0	3	20	60	F10460300
4.0	4	20	60	F10460400
5.0	5	25	75	F10460500
6.0	6	30	75	F10460600
8.0	8	30	75	F10460800
10.0	10	40	100	F10461000
12.0	12	45	100	F10461200
14.0	14	45	100	F10461400
16.0	16	45	100	F10461600
18.0	18	45	100	F10461800
20.0	20	45	100	F10462000



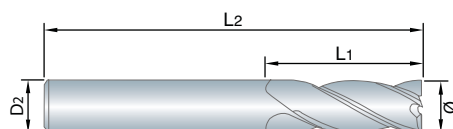
F1052	F1055	F1061	F1064
INF. TEC. PAG. C93, C96, C99, C102, C104	INF. TEC. PAG. C93, C96, C99, C102, C104	INF. TEC. PAG. C93, C96, C99, C102, C104	INF. TEC. PAG. C93, C96, C99, C102, C104
			
MD	MD	MD	MD
		WST	WST
Z 3	Z 3	Z 3	Z 3
30°	30°	30°	30°
			
P1 P2 P3 P4 P5	P1 P2 P3 P4 P5	P1 P2 P3 P4 P5	P1 P2 P3 P4 P5
M1 M2 K1 N1 S1	M1 M2 K1 N1 S1	M1 M2 K1 N1 S1	M1 M2 K1 N1 S1

Unità : mm

Ø	D2	L1	L2	
0.5	3	1.5	38	F10520050
0.6	3	1.5	38	F10520060
0.8	3	2	38	F10520080
1.0	3	2	38	F10520100
1.2	3	2	38	F10520120
1.5	3	2	38	F10520150
1.8	3	2	38	F10520180
2.0	6	4	35	-
2.5	6	5	36	-
3.0	6	5	36	-
3.5	6	6	37	-
4.0	6	7	38	-
4.5	6	8	38	-
5.0	6	8	39	-
5.5	6	8	39	-
5.75	6	8	39	-
6.0	6	8	39	-
7.0	8	10	42	-
7.75	8	10	42	-
8.0	8	11	43	-
9.0	10	11	48	-
9.7	10	11	48	-
10.0	10	13	50	-
12.0	12	15	55	-
14.0	14	15	58	-
16.0	16	18	62	-
18.0	18	20	70	-
20.0	20	22	75	-

FRESA 3 TAGLIENTI MD

CARBIDE 3 FLUTE END END MILL



F1049

INF. TEC. PAG.
C93, C96, C99



MD

TiAlN

Z 3

30°

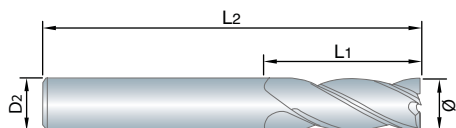


P2 P3 P4

P1 P5 M1 K1

Unità : mm

Ø	D2	L1	L2	
1.0	4	2	35	F10490100
2.0	4	4	35	F10490200
3.0	6	5	36	F10490300
4.0	6	7	38	F10490400
5.0	6	8	39	F10490500
6.0	6	8	39	F10490600
8.0	8	11	43	F10490800
10.0	10	13	50	F10491000
12.0	12	15	55	F10491200
14.0	14	15	58	F10491400
16.0	16	18	62	F10491600



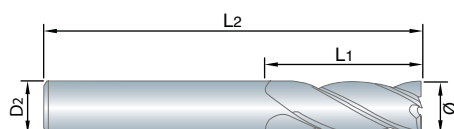
F3037	F3043
INF. TEC. PAG. C95, C98, C101	INF. TEC. PAG. C95, C98, C101
844	844
	
HSS Co8	HSS Co8
	WST
Z 3	Z 3
30°	30°
	
✓ ✓ ✓ P1 P2 P3	P1 P2 P3 P4
P4 M1 K1 N1 S1	P5 M1 K1 N1 S1

Unità : mm

Ø	D2	L1	L2		
1.0	6	3	47	F30370100	F30430100
1.5	6	7	51	F30370150	F30430150
2.0	6	7	51	F30370200	F30430200
2.5	6	8	52	F30370250	F30430250
3.0	6	8	52	F30370300	F30430300
3.5	6	10	54	F30370350	F30430350
4.0	6	11	55	F30370400	F30430400
4.5	6	11	55	F30370450	F30430450
5.0	6	13	57	F30370500	F30430500
5.5	6	13	57	F30370550	F30430550
6.0	6	13	57	F30370600	F30430600
6.5	10	16	66	F30370650	F30430650
7.0	10	16	66	F30370700	F30430700
7.5	10	16	66	F30370750	F30430750
8.0	10	19	69	F30370800	F30430800
8.5	10	19	69	F30370850	F30430850
9.0	10	19	69	F30370900	F30430900
9.5	10	19	69	F30370950	F30430950
10.0	10	22	72	F30371000	F30431000
12.0	12	26	83	F30371200	F30431200
14.0	12	26	83	F30371400	F30431400
15.0	12	26	83	F30371500	F30431500
16.0	16	32	92	F30371600	F30431600
18.0	16	32	92	F30371800	F30431800
20.0	20	38	104	F30372000	F30432000
22.0	20	38	104	F30372200	F30432200
24.0	25	45	121	F30372400	F30432400
25.0	25	45	121	F30372500	F30432500
26.0	25	45	121	F30372600	F30432600
28.0	25	45	121	F30372800	F30432800
30.0	25	45	121	F30373000	F30433000
32.0	32	53	133	F30373200	F30433200
40.0	40	63	155	F30374000	F30434000

FRESA 3 TAGLIENTI HSS Co8

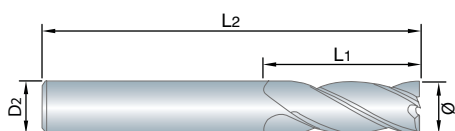
HSS Co8 3 FLUTE END MILL



F3052	F3061
INF. TEC. PAG. C95, C98, C101	INF. TEC. PAG. C95, C98, C101
HSS Co8	HSS Co8
	WST
Z 3	Z 3
30°	30°
✓ ✓ ✓	P1 P2 P3 P4
P5 M1 K1 N1 S1	P5 M1 M2 K1 N1 S1

Unità : mm

Ø	D2	L1	L2		
1.5	6	4	35	F30520150	F30610150
2.0	6	7	38	F30520200	F30610200
2.5	6	8	39	F30520250	F30610250
3.0	6	8	39	F30520300	F30610300
3.5	6	10	41	F30520350	F30610350
4.0	6	11	42	F30520400	F30610400
4.5	6	11	42	F30520450	F30610450
5.0	6	13	44	F30520500	F30610500
5.5	6	13	44	F30520550	F30610550
6.0	6	13	44	F30520600	F30610600
6.5	8	16	48	F30520650	F30610650
7.0	8	16	48	F30520700	F30610700
7.5	8	16	48	F30520750	F30610750
8.0	8	19	51	F30520800	F30610800
8.5	10	19	56	F30520850	F30610850
9.0	10	19	56	F30520900	F30610900
9.5	10	19	56	F30520950	F30610950
10.0	10	22	59	F30521000	F30611000



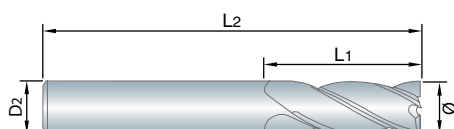
F3010	F3019
INF. TEC. PAG. C94, C100	INF. TEC. PAG. C94, C101
844	844
	
HSS Co8	HSS Co8
	TiAIN
Z 2-4	Z 2-4
50°	50°
	
✓ ✓ ✓ P1 P2 P3	P1 P2 P3 P4
P4 N1	P5 N1

Unità : mm

Ø	D2	L1	L2	Z		
2.0	6	7	51	2	F30100200	F30190200
3.0	6	8	52	2	F30100300	F30190300
4.0	6	11	55	2	F30100400	F30190400
5.0	6	13	57	2	F30100500	F30190500
6.0	6	13	57	3	F30100600	F30190600
7.0	10	16	66	3	F30100700	F30190700
8.0	10	19	69	3	F30100800	F30190800
9.0	10	19	69	3	F30100900	F30190900
10.0	10	22	72	3	F30101000	F30191000
11.0	12	22	79	3	F30101100	F30191100
12.0	12	26	83	3	F30101200	F30191200
13.0	12	26	83	3	F30101300	F30191300
14.0	12	26	83	3	F30101400	F30191400
15.0	12	26	83	3	F30101500	F30191500
16.0	16	32	92	3	F30101600	F30191600
18.0	16	32	92	3	F30101800	F30191800
20.0	20	38	104	3	F30102000	F30192000
25.0	25	45	121	4	F30102500	F30192500

FRESA 3 TAGLIENTI MD

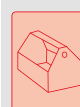
CARBIDE 3 FLUTE END MILL

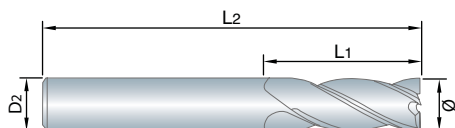


Unità : mm

Ø	D2	L1	L2		
3.0	6	7	57	✓	F10730300
4.0	6	8	57	✓	F10730400
5.0	6	10	57	✓	F10730500
6.0	6	10	57	✓	F10730600
8.0	8	16	63	✓	F10730800
10.0	10	19	72	✓	F10731000
12.0	12	22	83	✓	F10731200
16.0	16	26	92	✓	F10731600

F1073	F1085
INF. TEC. PAG. C93, C96, C99, C102, C104	INF. TEC. PAG. C93, C96, C99, C102, C104
6527	6527
MD	MD
	WST
Z 3	Z 3
30°	30°
P1 P2 P3 P4 P5	P1 P2 P3 P4 P5
M1 M2 K1 N1 S1	M1 M2 K1 N1 S1
F10730300	F10850300
F10730400	F10850400
F10730500	F10850500
F10730600	F10850600
F10730800	F10850800
F10731000	F10851000
F10731200	F10851200
F10731600	F10851600





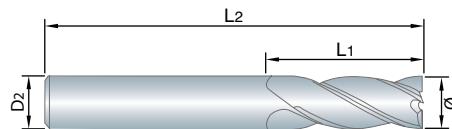
F1079	F1091
INF. TEC. PAG. C93, C96, C99, C102, C104	INF. TEC. PAG. C93, C96, C99, C102, C104
6527	6527
	
MD	MD
	WST
Z 3	Z 3
45°	45°
	
✓ ✓ ✓	P1 P2 P3 P4 P5 N1
M1 K1 S1	M1 K1 S1

Unità : mm

Ø	D2	L1	L2		
3.0	6	7	57	F10790300	F10910300
3.5	6	7	57	F10790350	F10910350
4.0	6	8	57	F10790400	F10910400
4.5	6	8	57	F10790450	F10910450
5.0	6	10	57	F10790500	F10910500
6.0	6	10	57	F10790600	F10910600
7.0	8	13	63	F10790700	F10910700
8.0	8	16	63	F10790800	F10910800
9.0	10	16	72	F10790900	F10910900
10.0	10	19	72	F10791000	F10911000
12.0	12	22	83	F10791200	F10911200
14.0	14	22	83	F10791400	F10911400
16.0	16	26	92	F10791600	F10911600
18.0	18	26	92	F10791800	F10911800
20.0	20	32	104	F10792000	F10912000

FRESA 3 TAGLIENTI MD ELICA 50°

CARBIDE 3 FLUTE 50° HELIX END MILL



Unità : mm

Ø	D2	L1	L2	Z	
6.0	6	13	50	3	F10940600
8.0	8	19	60	3	F10940800
10.0	10	22	70	3	F10941000
12.0	12	25	75	3	F10941200

F1094

INF. TEC. PAG.
C93, C96, C99



MD

TiAlN

Z 3

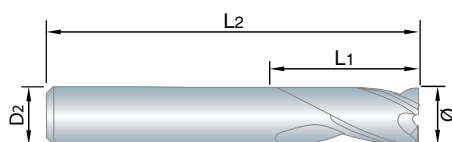
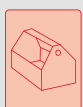
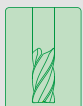
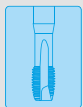
50°



P2 P3 P4
M1 S1

P1 P5 M2




F1082

 INF. TEC. PAG.
C93, C96, C99

MD
Z 3
45°

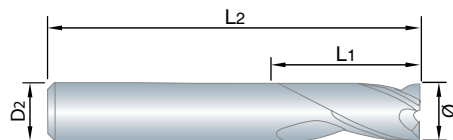
N1

Unità : mm

Ø	D2	L1	L2	✓	
3.0	6	12	57		F10820300
4.0	6	15	57		F10820400
5.0	6	20	57		F10820500
6.0	6	20	65		F10820600
8.0	8	22	65		F10820800
10.0	10	25	70		F10821000
12.0	12	25	75		F10821200
16.0	16	35	90		F10821600
20.0	20	40	100		F10822000

FRESA 3 TAGLIENTI MD ELICA 38°

CARBIDE 3 FLUTE 38° HELIX END END MILL



F1070

INF. TEC. PAG.
C93, C96, C99



MD

TiAlN

Z 3

38°

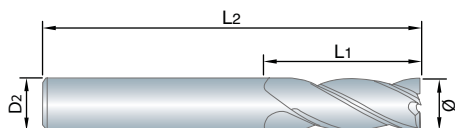


P2 P3 P4 P5

P1 M1
K1 H1

Unità : mm

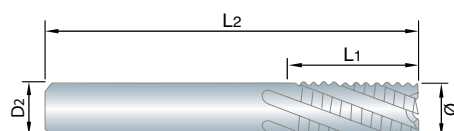
Ø	D2	L1	L2	
1.0	3	2.5	38	F10700100
1.5	4	5	50	F10700150
2.0	6	7	50	F10700200
2.5	3	7	38	F10700250
3.0	3	10	38	F10700300
3.0	6	10	50	F1070030A
3.5	4	12	50	F10700350
3.5	6	12	50	F1070035A
4.0	4	12	50	F10700400
4.0	6	12	50	F1070040A
4.5	6	14	57	F10700450
5.0	5	14	50	F10700500
5.0	6	14	57	F1070050A
6.0	6	16	57	F10700600
8.0	8	20	63	F10700800
10.0	10	22	72	F10701000
12.0	12	25	73	F10701200
14.0	14	25	75	F10701400
16.0	16	32	82	F10701600



F3055		F3064	
INF. TEC. PAG. C95, C98, C101		INF. TEC. PAG. C95, C98, C101	
844		844	
			
HSS Co8		HSS Co8	
		WST	
Z 3		Z 3	
			
			
	P1 P2 P3 P4	P1 P2 P3 P4	
	P5 M1 K1 N1 S1	P5 M1 M2 K1 N1 S1	
	F30550200	F30640200	
	F30550250	F30640250	
	F30550300	F30640300	
	F30550350	F30640350	
	F30550400	F30640400	
	F30550450	F30640450	
	F30550500	F30640500	
	F30550550	F30640550	
	F30550600	F30640600	
	F30550700	F30640700	
	F30550750	F30640750	
	F30550800	F30640800	
	F30550900	F30640900	
	F30551000	F30641000	
	F30551100	F30641100	
	F30551200	F30641200	
	F30551300	F30641300	
	F30551400	F30641400	
	F30551500	F30641500	
	F30551600	F30641600	
	F30551700	F30641700	
	F30551800	F30641800	
	F30551900	F30641900	
	F3055200A	F3064200A	
	F30552000	F30642000	
	F30552200	F30642200	
	F30552400	F30642400	
	F30552600	F30642600	
	F30552800	F30642800	
	F30553000	F30643000	
	F30553200	F30643200	

Unità : mm

**FRESA 4 & 5 TAGLIENTI MD ELICA 45°
PER SGROSSATURA BOMBATO FINE**
CARBIDE 4 & 5 FLUTE 45° HELIX ROUGHING END MILL
FINE



F1118

INF. TEC. PAG.
C93, C96, C99



MD

TiAIN

Z 4,5

45°



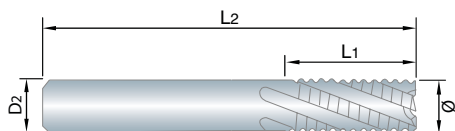
**Bombato
Fine**

**P2 P3 P4
M1 S1**

P1 P5 M2

Unità : mm

Ø	D2	L1	L2	Z	
6.0	6	7	54	4	F11180600
8.0	8	9	58	4	F11180800
10.0	10	14	66	4	F11181000
12.0	12	16	73	4	F11181200
16.0	16	22	82	5	F11181600



Nessun tagliente a centro fresa dal Ø 20

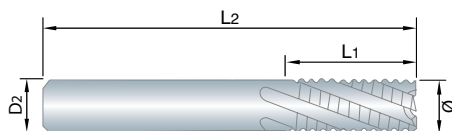
F3076	F3088
INF. TEC. PAG. C95, C101	INF. TEC. PAG. C95, C101
844	327
	
HSS Co8	HSS Co8
	WST
Z 3-5	Z 3-5
30°	30°
	
Bombato Fine	Bombato Fine
✓ ✓ ✓ P1 P2 P3	P1 P2 P3
M1 K1 N1 S1	P4 P5 M1 K1 N1 S1

Unità : mm

Ø	D2	L1	L2	Z		
6.0	6	13	57	3	F30760600	F30880600
7.0	10	16	66	3	F30760700	F30880700
8.0	10	19	69	3	F30760800	F30880800
9.0	10	19	69	3	F30760900	F30880900
10.0	10	22	72	4	F30761000	F30881000
11.0	12	22	79	4	F30761100	F30881100
12.0	12	26	83	4	F30761200	F30881200
13.0	12	26	83	4	F30761300	F30881300
14.0	12	26	83	4	F30761400	F30881400
15.0	12	26	83	4	F30761500	F30881500
16.0	16	32	92	4	F30761600	F30881600
17.0	16	32	92	4	F30761700	F30881700
18.0	16	32	92	4	F30761800	F30881800
20.0	20	38	104	4	F30762000	F30882000
25.0	25	45	121	5	F30762500	F30882500

FRESA MULTI TAGLIANTE HSS Co8 PER SGROSSATURA BOMBATO GROSSO

HSS Co8 MULTI FLUTE ROUGHING END MILL - COARSE

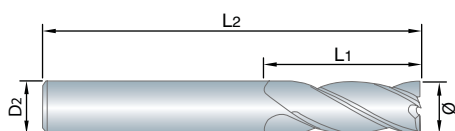


Nessun tagliente a centro fresa dal Ø 20

F3079	F3091
INF. TEC. PAG. C95, C101	INF. TEC. PAG. C95, C101
844	327
HSS Co8	HSS Co8
	WST
Z 3-6	Z 3-5
30°	30°
Bombato Grosso	Bombato Grosso
✓ ✓ ✓ P1 P2 P3	P1 P2 P3
M1 K1 N1 S1	P4 P5 M1 K1 N1 S1

Unità : mm

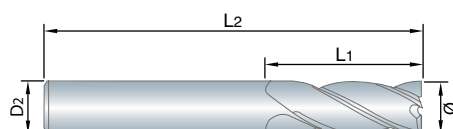
Ø	D2	L1	L2	Z		
6.0	6	13	57	3	F30790600	F30910600
7.0	10	16	66	3	F30790700	F30910700
8.0	10	19	69	3	F30790800	F30910800
9.0	10	19	69	3	F30790900	F30910900
10.0	10	22	72	4	F30791000	F30911000
11.0	12	22	79	4	F30791100	F30911100
12.0	12	26	83	4	F30791200	F30911200
13.0	12	26	83	4	F30791300	F30911300
14.0	12	26	83	4	F30791400	F30911400
15.0	12	26	83	4	F30791500	F30911500
16.0	16	32	92	4	F30791600	F30911600
17.0	16	32	92	4	F30791700	F30911700
18.0	16	32	92	4	F30791800	F30911800
19.0	16	32	92	4	F30791900	F30911900
20.0	20	38	104	4	F30792000	F30912000
22.0	20	38	104	5	F30792200	F30912200
24.0	25	45	121	5	F30792400	F30912400
25.0	25	45	121	5	F30792500	F30912500
26.0	25	45	121	6	F30792600	-
28.0	25	45	121	6	F30792800	-
30.0	25	45	121	6	F30793000	-



F3070	F3082
INF. TEC. PAG. C95, C101	INF. TEC. PAG. C95, C101
844	327
	
HSS Co8	HSS Co8
	WST
Z 4	Z 4
30°	30°
	
✓ ✓ ✓ P2 P3	P1 P2 P3
P1 P4 P5 M1 K1 N1 S1	P4 P5 M1 K1 N1 S1

Unità : mm

Ø	D2	L1	L2		
2.0	6	7	51	F30700200	F30820200
3.0	6	8	52	F30700300	F30820300
4.0	6	11	55	F30700400	F30820400
5.0	6	13	57	F30700500	F30820500
6.0	6	13	57	F30700600	F30820600
7.0	10	16	66	F30700700	F30820700
8.0	10	19	69	F30700800	F30820800
9.0	10	19	69	F30700900	F30820900
10.0	10	22	72	F30701000	F30821000
11.0	12	22	79	F30701100	F30821100
12.0	12	26	83	F30701200	F30821200
13.0	12	26	83	F30701300	F30821300
14.0	12	26	83	F30701400	F30821400
15.0	12	26	83	F30701500	F30821500
16.0	16	32	92	F30701600	F30821600
17.0	16	32	92	F30701700	F30821700
18.0	16	32	92	F30701800	F30821800
19.0	16	32	92	F30701900	F30821900
20.0	20	38	104	F30702000	F30822000
22.0	20	38	104	F30702200	F30822200
25.0	25	45	121	F30702500	F30822500



Unità : mm

Ø	D2	L1	L2	
3.0	6	8	52	F20100300
4.0	6	11	55	F20100400
5.0	6	13	57	F20100500
6.0	6	13	57	F20100600
8.0	10	19	69	F20100800
10.0	10	22	72	F20101000
12.0	12	26	83	F20101200
14.0	12	26	83	F20101400
16.0	16	32	92	F20101600
18.0	16	32	92	F20101800
20.0	20	38	104	F20102000

F2010

INF. TEC. PAG.
C94, C98, C100, C105

844



HSS
PM

WST

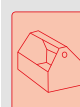
Z 4

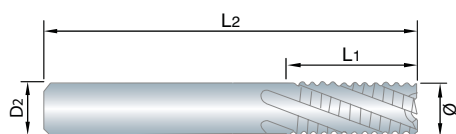
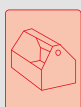
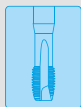
30°



P1 P2 P3
M1 K1

P4 P5 N3





Nessun tagliente a centro fresa dal Ø 20

F2013

INF. TEC. PAG.
C94, C100, C105

844



HSS
PM

WST

Z 3-5



Bombato
Fine

P1 P2 P3
P4 M1 K1

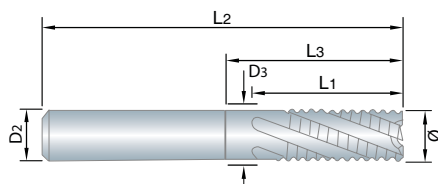
P5 M2

Unità : mm

Ø	D2	L1	L2	Z	
6.0	6	13	57	3	F20130600
8.0	10	19	69	3	F20130800
9.0	10	19	69	3	F20130900
10.0	10	22	72	4	F20131000
12.0	12	26	83	4	F20131200
14.0	12	26	83	4	F20131400
16.0	16	32	92	4	F20131600
18.0	16	32	92	4	F20131800
20.0	20	38	104	4	F20132000
22.0	20	38	104	5	F20132200
25.0	25	45	121	5	F20132500

FRESA MULTI TAGLIANTE HSS-PM ELICA 45° PER SGROSSATURA - BOMBATO FINE

HSS-PM MULTI FLUTE 45° HELIX ROUGHING END MILL - FINE



F2016

INF. TEC. PAG.
C94, C100, C105

844



**HSS
PM**

WST

Z 3-6

45°



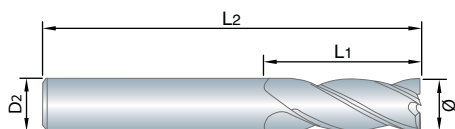
**Bombato
Fine**

✓ **P1 P2 P3**
✓ **P4 M1 K1**

✓ **P5 M2**

Unità : mm

Ø	D2	D3	L1	L2	L3	Z	
4.0	6	-	11	57	-	3	F20160400
5.0	6	-	13	57	-	4	F20160500
6.0	6	-	13	57	-	4	F20160600
8.0	10	-	19	69	-	4	F20160800
10.0	10	9.5	22	72	31	4	F20161000
12.0	12	11.5	26	83	37	4	F20161200
14.0	12	-	26	83	-	5	F20161400
16.0	16	15	32	92	44	5	F20161600
18.0	16	-	32	92	-	6	F20161800
20.0	20	19	38	104	54	6	F20162000
25.0	25	24	45	121	63	6	F20162500



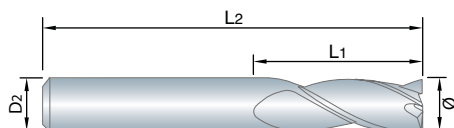
F1127		F1130	
INF. TEC. PAG. C93, C99, C103, C105		INF. TEC. PAG. C93, C99, C103, C105	
6527		6527	
			
MD		MD	
		WST	
Z 4		Z 4	
			
			
✓	P1 P2 P3 P4 P5	✓	P1 P2 P3 P4 P5
✓	M1 M2 K1 N1 S1	✓	M1 M2 K1 N1 S1
	F11270300		F11300300
	F11270350		F11300350
	F11270400		F11300400
	F11270500		F11300500
	F11270600		F11300600
	F11270700		F11300700
	F11270800		F11300800
	F11270900		F11300900
	F11271000		F11301000
	F11271200		F11301200
	F11271400		F11301400
	F11271600		F11301600
	F11272000		F11302000

Unità : mm

Ø	D2	L1	L2
3.0	6	8	57
3.5	6	10	57
4.0	6	11	57
5.0	6	13	57
6.0	6	13	57
7.0	8	16	63
8.0	8	19	63
9.0	10	19	72
10.0	10	22	72
12.0	12	26	83
14.0	14	26	83
16.0	16	32	92
20.0	20	38	104

FRESA 4 TAGLIENTI MD

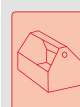
CARBIDE 4 FLUTE END MILL

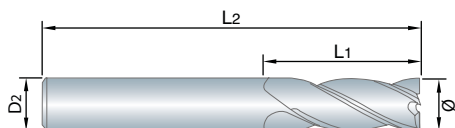


Unità : mm

Ø	D2	L1	L2			
2.0	6	4	50		F10970200	F11030200
2.5	6	4	50		F10970250	F11030250
3.0	6	5	50		F10970300	F11030300
3.5	6	6	50		F10970350	F11030350
4.0	6	8	54		F10970400	F11030400
5.0	6	9	54		F10970500	F11030500
6.0	6	10	54		F10970600	F11030600
7.0	8	11	58		F10970700	F11030700
8.0	8	12	58		F10970800	F11030800
10.0	10	14	66		F10971000	F11031000
12.0	12	16	73		F10971200	F11031200
16.0	16	22	82		F10971600	F11031600
20.0	20	26	92		F10972000	F11032000

F1097	F1103
INF. TEC. PAG. C93, C99, C103, C105	INF. TEC. PAG. C93, C99, C103, C105
6527	6527
MD	MD
	WST
Z 4	Z 4
30°	30°
P1 P2 P3 P4 P5	P1 P2 P3 P4 P5
M1 M2 K1 N1 S1	M1 M2 K1 N1 S1





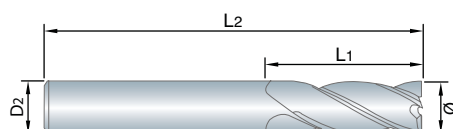
F1289		F1133	
INF. TEC. PAG. C94, C100, C103, C105		INF. TEC. PAG. C93, C99, C103, C105	
6528		6528	
			
MD		MD	
		WST	
Z 4		Z 4	
			
			
✓ ✓ ✓ P1 P2 P3 P4 P5		P1 P2 P3 P4 P5	
M1 M2 K1 N1 S1		M1 M2 K1 N1 S1	
F12890400		F11330400	
F12890500		F11330500	
F12890600		F11330600	
F12890650		F11330650	
F12890800		F11330800	
F12890850		F11330850	
F12891000		F11331000	
F12891100		F11331100	
F12891200		F11331200	
F12891300		F11331300	
F12891400		F11331400	
F12891500		F11331500	
F12891600		F11331600	
F12891800		F11331800	
F12892000		F11332000	

Unità : mm

Ø	D2	L1	L2
4.0	4	11	50
5.0	5	13	50
6.0	6	13	57
6.5	6.5	16	60
8.0	8	19	63
8.5	8.5	19	67
10.0	10	22	72
11.0	11	26	83
12.0	12	26	83
13.0	13	26	83
14.0	14	26	83
15.0	15	32	92
16.0	16	32	92
18.0	18	32	92
20.0	20	38	104

FRESA 4 TAGLIENTI MD

CARBIDE 4 FLUTE END MILL



F1112

INF. TEC. PAG.
C93, C99



MD

TiAlN

Z 4

30°

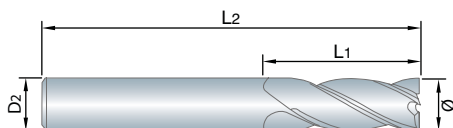
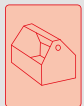
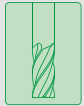
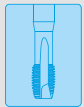


P2 P3 P4 P5

P1 M1 K1 H1

Unità : mm

Ø	D2	L1	L2	
2.0	4	6	40	F11120200
2.0	6	6	40	F1112020A
2.5	4	8	40	F11120250
2.5	6	8	40	F1112025A
3.0	6	8	45	F11120300
3.5	6	10	45	F11120350
4.0	6	11	45	F11120400
4.5	6	11	45	F11120450
5.0	6	13	50	F11120500
5.5	6	13	50	F11120550
6.0	6	13	50	F11120600
6.5	8	16	60	F11120650
7.0	8	16	60	F11120700
7.5	8	16	60	F11120750
8.0	8	19	60	F11120800
8.5	10	19	70	F11120850
9.0	10	19	70	F11120900
9.5	10	19	70	F11120950
10.0	10	22	70	F11121000
10.5	12	22	75	F11121050
11.0	12	22	75	F11121100
11.5	12	22	75	F11121150
12.0	12	26	75	F11121200
13.0	12	26	85	F11121300
14.0	12	26	85	F1112140A
14.0	14	26	85	F11121400
15.0	16	26	90	F11121500
16.0	16	32	100	F11121600
17.0	16	32	100	F11121700
18.0	16	32	100	F1112180A
18.0	18	32	100	F11121800
19.0	20	32	100	F11121900
20.0	20	38	105	F11122000



F1121

INF. TEC. PAG.
C93, C96, C99

6527



MD

TiAlN

Z 4

P.V.



P2 P3 P4 K1

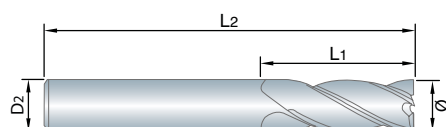
P1 P5

Unità : mm

Ø	D2	L1	L2	
3.0	6	5	50	F11210300
4.0	6	8	54	F11210400
5.0	6	9	54	F11210500
6.0	6	10	54	F11210600
8.0	8	12	58	F11210800
10.0	10	14	66	F11211000
12.0	12	16	73	F11211200
14.0	14	18	75	F11211400
16.0	16	22	82	F11211600
20.0	20	26	92	F11212000

FRESA 4 TAGLIENTI MD PASSO VARIABILE

CARBIDE 4 FLUTE MULTIPLE HELIX END MILL



F1124

INF. TEC. PAG.
C93, C97, C99



MD

TiAlN

Z 4

P.V.

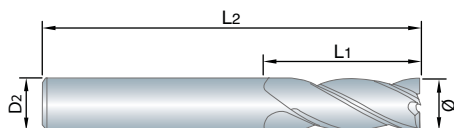


P1 M1 S1

P2 P3 P4 M2

Unità : mm

Ø	D2	L1	L2	
3.0	6	7	54	F11240300
4.0	6	8	54	F11240400
5.0	6	10	54	F11240500
6.0	6	10	54	F11240600
8.0	8	12	58	F11240800
10.0	10	14	66	F11241000
12.0	12	16	73	F11241200
14.0	14	18	75	F11241400
16.0	16	22	82	F11241600
20.0	20	26	92	F11242000



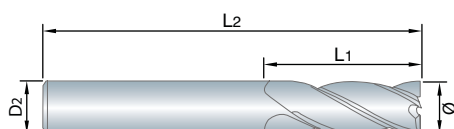
F1154	F1151	F1163
INF. TEC. PAG. C93, C97, C100	INF. TEC. PAG. C93, C97, C100	INF. TEC. PAG. C93, C100
	6527	
		
MD	MD	MD
TiAIN	TiAIN	TiAIN
Z 4	Z 4	Z 5
P.V.	P.V.	P.V.
		
✓ P1 P2 P3 ✓ M1 S1	P2 P3 P4	P1 M1 M2
✓ P4 M2	P1 P5 K1	P2 P3

Unità : mm

Ø	D2	L1	L2	
3.0	6	8	57	F11540300
4.0	6	11	57	F11540400
5.0	6	13	57	F11540500
6.0	6	13	57	F11540600
8.0	8	19	63	F11540800
10.0	10	22	72	F11541000
12.0	12	26	83	F11541200
14.0	14	26	83	F11541400
16.0	16	32	92	F11541600
18.0	18	32	92	F11541800
20.0	20	38	104	F11542000

FRESA 4 TAGLIENTI HSS Co8 TAGLIANTE A CENTRO FRESA

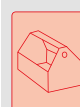
HSS Co8 4 FLUTE CENTER CUTTING END MILL

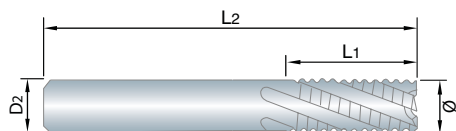


Unità : mm

Ø	D2	L1	L2		P3 P4 N1	P3 P4 N1
2.0	6	10	54		F31000200	F31030200
2.5	6	12	56		F31000250	F31030250
3.0	6	12	56		F31000300	F31030300
3.5	6	15	59		F31000350	F31030350
4.0	6	19	63		F31000400	F31030400
4.5	6	19	63		F31000450	F31030450
5.0	6	24	68		F31000500	F31030500
5.5	6	24	68		F31000550	F31030550
6.0	6	24	68		F31000600	F31030600
7.0	10	30	80		F31000700	F31030700
8.0	10	38	88		F31000800	F31030800
9.0	10	38	88		F31000900	F31030900
10.0	10	45	95		F31001000	F31031000
11.0	12	45	102		F31001100	F31031100
12.0	12	53	110		F31001200	F31031200
13.0	12	53	110		F31001300	F31031300
14.0	12	53	110		F31001400	F31031400
15.0	12	53	110		F31001500	F31031500
16.0	16	63	123		F31001600	F31031600
17.0	16	63	123		F31001700	F31031700
18.0	16	63	123		F31001800	F31031800
19.0	16	63	123		F31001900	F31031900
20.0	20	75	141		F31002000	F31032000

F3100	F3103
INF. TEC. PAG. C95, C101	INF. TEC. PAG. C95, C101
844	844
HSS Co8	HSS Co8
	TiAlN
Z 4	Z 4
30°	30°
P1 P2	P1 P2
P3 P4 N1	P3 P4 N1





Nessun tagliente a centro fresa dal Ø 20

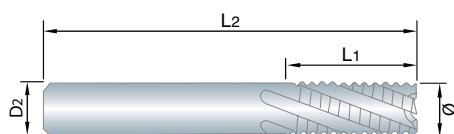
Unità : mm

Ø	D2	L1	L2	Z		
6.0	6	24	68	3	F30940600	F30970600
8.0	10	38	88	3	F30940800	F30970800
10.0	10	45	95	4	F30941000	F30971000
12.0	12	53	110	4	F30941200	F30971200
16.0	16	63	123	4	F30941600	F30971600
20.0	20	75	141	4	F30942000	F30972000

F3094	F3097
INF. TEC. PAG. C95, C101	INF. TEC. PAG. C95, C101
844	844
	
HSS Co8	HSS Co8
	TiAlN
Z 3,4	Z 3,4
30°	30°
	
Bombato Fine	Bombato Fine
P1 P2 P3	P1 P2 P3 P4
P4 P5 N1	P5 N1

FRESA MULTI TAGLIANTE MD PER SGROSSATURA BOMBATO FINE & GROSSO

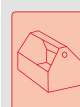
CARBIDE MULTI FLUTE ROUGHING END MILL
FINE & COARSE



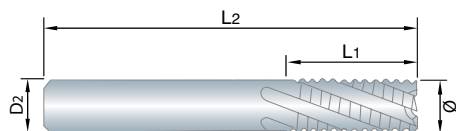
Unità : mm

Ø	D2	L1	L2	Z			
6.0	6	16	57	3	F11390600	F11420600	F11480600
7.0	8	16	63	3	F11390700	-	-
8.0	8	16	63	3	F11390800	F11420800	F11480800
9.0	10	19	72	4	F11390900	-	-
10.0	10	22	72	4	F11391000	F11421000	F11481000
12.0	12	26	83	4	F11391200	F11421200	F11481200
14.0	14	26	83	4	F11391400	F11421400	F11481400
16.0	16	32	92	4	F11391600	F11421600	F11481600
18.0	18	32	92	4	-	F11421800	F11481800
20.0	20	38	104	4	F11392000	F11422000	F11482000

F1139	F1142	F1148
INF. TEC. PAG. C93, C99	INF. TEC. PAG. C93, C97, C99	INF. TEC. PAG. C93, C100
MD	MD	MD
TiAlN	TiAlN	WST
Z 3,4	Z 3,4	Z 3,4
20°	30°	30°
Bombato Fine	Bombato Fine	Bombato Grosso
✓ ✓ ✓	P2 P3 P4	P1 P2 P3 P4 P5
P1 P5 M1 K1 H1	P1 P4 P5 M2	M1 M2 K1 N1 S1



**FRESA MULTI TAGLIANTE MD ELICA 45°
PER SGROSSATURA BOMBATO FINE**
CARBIDE MULTI FLUTE 45° HELIX ROUGHING END MILL
FINE



F1145

INF. TEC. PAG.
C93, C97, C99



MD

TiAIN

Z 3-5

45°



**Bombato
Fine**



P2 P3 M1 S1



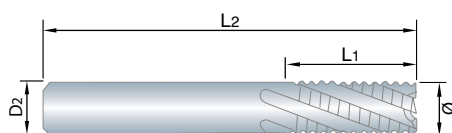
P1 P4 P5 M2

Unità : mm

Ø	D2	L1	L2	Z	
4.0	6	11	57	3	F11450400
5.0	6	13	57	4	F11450500
6.0	6	16	57	4	F11450600
7.0	8	16	63	4	F11450700
8.0	8	16	63	4	F11450800
10.0	10	22	72	4	F11451000
12.0	12	26	83	4	F11451200
14.0	14	26	83	5	F11451400
16.0	16	32	92	5	F11451600

FRESA MULTI TAGLIENTE HSS-PM PER SGROSSATURA BOMBATO FINE

HSS-PM MULTI FLUTE ROUGHING END MILL - FINE



Nessun tagliente a centro fresa dal Ø 20

F2022

INF. TEC. PAG.
C94, C100, C105

844



HSS
PM

WST

Z 3-5



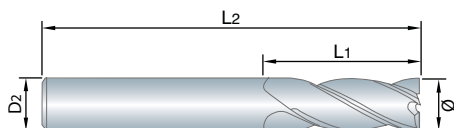
Bombato
Fine

P1 P2 P3
P4 M1 K1

P5 M2

Unità : mm

Ø	D2	L1	L2	Z	
6.0	6	24	68	3	F20220600
7.0	10	30	80	3	F20220700
8.0	10	38	88	3	F20220800
9.0	10	38	88	3	F20220900
10.0	10	45	95	4	F20221000
12.0	12	53	110	4	F20221200
14.0	12	53	110	4	F20221400
16.0	16	63	123	4	F20221600
18.0	16	63	123	4	F20221800
20.0	20	75	141	4	F20222000
25.0	25	90	166	5	F20222500


F1160

 INF. TEC. PAG.
C93, C100, C103, C105

MD
WST
Z 4
30°

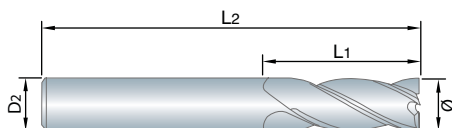
P1 P2 P3
P4 P5
M1 M2 K1
N1 S1

Unità : mm

Ø	D2	L1	L2	
3.0	3	20	60	F11600300
4.0	4	20	60	F11600400
5.0	5	25	75	F11600500
6.0	6	30	75	F11600600
8.0	8	30	75	F11600800
10.0	10	40	100	F11601000
12.0	12	45	100	F11601200
14.0	14	45	100	F11601400
16.0	16	45	100	F11601600
18.0	18	45	100	F11601800
20.0	20	45	100	F11602000

FRESA 6 TAGLIENTI HSS Co8 TAGLIANTE A CENTRO FRESA

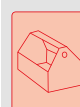
HSS Co8 6 FLUTE CENTER CUTTING END MILL

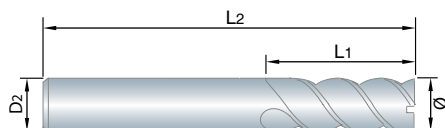


Unità : mm

Ø	D2	L1	L2		
22.0	20	38	104		
24.0	25	45	121		
25.0	25	45	121		
26.0	25	45	121		
28.0	25	45	121		
30.0	25	45	121		
32.0	32	53	133		

F3106	F3109
INF. TEC. PAG. C95, C101	INF. TEC. PAG. C95, C101
844	844
HSS Co8	HSS Co8
	TiAlN
Z 6	Z 6
30°	30°
✓ ✓ ✓	P1 P2
P3 M1 K1 N1 S1	P3 M1 K1 N1 S1
F31062200	F31092200
F31062400	F31092400
F31062500	F31092500
F31062600	F31092600
F31062800	F31092800
F31063000	F31093000
F31063200	F31093200





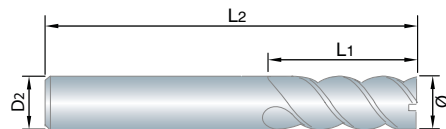
F1172	F1175
INF. TEC. PAG. C94, C100	INF. TEC. PAG. C94, C100
	
MD	MD
TiAlN	TiAlN
Z 6,8	Z 6
45°	45°
	
✓ ✓ ✓ P2 P3 P4 P5 H1	P2 P3 P4 P5 M1 M2
✓ P1 K1	P1
F11720600	F11750600
F11720800	F11750800
F11721000	F11751000
F11721200	F11751200
F11721600	F11751600
F11722000	-

Unità : mm

Ø	D2	L1	L2	Z
6.0	6	13	57	6
8.0	8	19	63	6
10.0	10	22	72	6
12.0	12	26	83	6
16.0	16	32	92	6
20.0	20	38	104	8

FRESA 4 & 6 TAGLIENTI MD ELICA 45°

CARBIDE 4 & 6 FLUTE 45° HELIX END MILL



Nessun tagliente a centro fresa dal Ø 4

F1166

INF. TEC. PAG.
C93, C100, C105



MD

WST

Z 4,6

45°

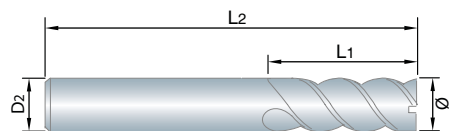
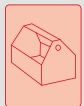
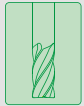
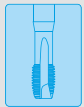


P2 P3 P4

P1 P5 K1

Unità : mm

Ø	D2	L1	L2	Z	
3.0	4	8	50	4	F11660300
4.0	4	11	50	4	F11660400
5.0	6	13	50	6	F11660500
6.0	6	16	50	6	F11660600
8.0	8	19	60	6	F11660800
10.0	10	22	75	6	F11661000
12.0	12	26	75	6	F11661200
14.0	14	30	90	6	F11661400
16.0	16	32	100	6	F11661600
18.0	18	38	100	6	F11661800
20.0	20	38	100	6	F11662000



Nessun tagliente a centro fresa

F1169

INF. TEC. PAG.
C94, C100, C105



MD

WST

Z 6

45°



P2 P3 P4 P5



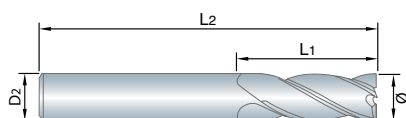
P1 K1 H1

Unità : mm

Ø	D2	L1	L2	Z	
12.0	12	50	100	6	F11691200
16.0	16	65	150	6	F11691600
20.0	20	70	150	6	F11692000

FRESA 6 TAGLIENTI HSS Co8 TAGLIANTE A CENTRO FRESA

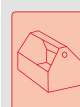
HSS Co8 6 FLUTE CENTER CUTTING END MILL

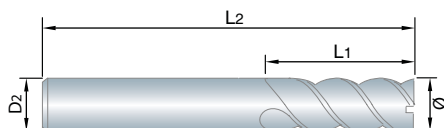
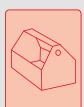
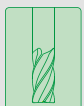
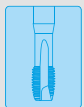


Unità : mm

Ø	D2	L1	L2			
22.0	20	75	141		F31122200	F31152200
24.0	25	90	166		F31122400	F31152400
25.0	25	90	166		F31122500	F31152500
28.0	25	90	166		F31122800	F31152800
30.0	25	90	166		F31123000	F31153000
32.0	32	106	186		F31123200	F31153200

F3112	F3115
INF. TEC. PAG. C95, C101	INF. TEC. PAG. C95, C101
844	844
HSS Co8	HSS Co8
	TiAIN
Z 6	Z 6
30°	30°
✓ ✓ ✓	P1 P2
	P3 N1





F1178

INF. TEC. PAG.
C94, C100



MD

TiAlN

Z 6

45°



P2 P3 P4
P5 H1

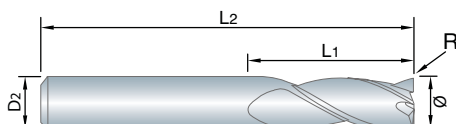
P1 K1

Unità : mm

Ø	D2	L1	L2	
6.0	6	26	70	F11780600
8.0	8	36	90	F11780800
10.0	10	46	100	F11781000
12.0	12	56	110	F11781200
16.0	16	66	130	F11781600
20.0	20	76	140	F11782000

FRESA 2 & 4 TAGLIENTI MD TORICA

CARBIDE 2 & 4 FLUTE CORNER RADIUS END MILL

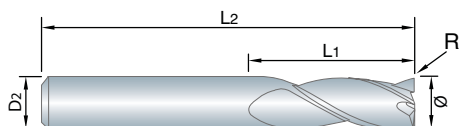


Unità : mm

Ø	D2	L1	L2	R	✓ ✓ ✓ M1 K1 N1	F1181	F1184
2.0	4	4	50	R0.2		F11810200	F11840200
2.0	4	4	50	R0.3		F1181020A	F1184020A
2.0	4	4	50	R0.5		F1181020B	F1184020B
2.5	4	5	50	R0.2		F11810250	F11840250
2.5	4	5	50	R0.3		-	F1184025A
2.5	4	5	50	R0.5		F1181025B	-
3.0	4	6	50	R0.2		F11810300	F11840300
3.0	4	6	50	R0.3		F1181030A	F1184030A
3.0	4	6	50	R0.5		F1181030B	F1184030B
3.0	4	6	50	R1.0		-	F1184030C
4.0	4	8	50	R0.2		-	F11840400
4.0	4	8	50	R0.3		F1181040A	F1184040A
4.0	4	8	50	R0.5		F1181040B	F1184040B
4.0	4	8	50	R1.0		F1181040C	F1184040C
5.0	6	10	50	R0.3		-	F1184050A
5.0	6	10	50	R0.5		F1181050B	F1184050B
5.0	6	10	50	R1.0		-	F1184050C
6.0	6	12	50	R0.2		F11810600	F11840600
6.0	6	12	50	R0.3		-	F1184060A
6.0	6	12	50	R0.5		F1181060B	F1184060B
6.0	6	12	50	R1.0		F1181060C	F1184060C
8.0	8	16	60	R0.5		F11810800	F11840800
8.0	8	16	60	R1.0		F1181080A	F1184080A
8.0	8	16	60	R2.0		F1181080C	F1184080C
10.0	10	20	75	R0.5		F11811000	F11841000
10.0	10	20	75	R1.0		F1181100A	F1184100A
10.0	10	20	75	R1.5		F1181100B	F1184100B
10.0	10	20	75	R2.0		F1181100C	F1184100C
12.0	12	24	75	R0.5		F11811200	F11841200
12.0	12	24	75	R1.0		F1181120A	F1184120A
12.0	12	24	75	R1.5		F1181120B	-
12.0	12	24	75	R2.0		-	F1184120C
12.0	12	24	75	R2.5		-	F1184120D

F1181	F1184
INF. TEC. PAG. C94, C97, C102, C104	INF. TEC. PAG. C94, C100, C102, C104
MD	MD
WST	WST
Z 2	Z 4
30°	30°
P1 P2 P3 P4 P5	P1 P2 P3 P4 P5
M1 K1 N1	M1 K1 N1





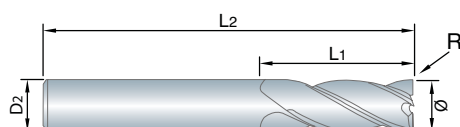
F1190	F1196
INF. TEC. PAG. C94, C97, C102, C104	INF. TEC. PAG. C94, C100, C102, C104
	
MD	MD
WST	WST
Z 2	Z 4
	
	
✓ ✓ ✓ P1 P2 P3 P4 P5	P1 P2 P3 P4 P5
M1 K1 N1	M1 K1 N1

Unità : mm

Ø	D2	L1	L2	R		
3.0	4	6	75	R0.5	F11900300	F11960300
3.0	4	6	75	R1.0	F1190030A	F1196030A
4.0	4	8	75	R0.5	F11900400	F11960400
4.0	4	8	75	R1.0	F1190040A	F1196040A
5.0	6	10	75	R0.5	F11900500	F11960500
5.0	6	10	75	R1.0	F1190050A	F1196050A
6.0	6	12	75	R0.5	F11900600	F11960600
6.0	6	12	75	R1.0	F1190060A	F1196060A
8.0	8	16	100	R0.5	F11900800	F11960800
8.0	8	16	100	R1.0	F1190080A	F1196080A
8.0	8	16	100	R1.5	F1190080B	-
8.0	8	16	100	R2.0	F1190080C	F1196080C
10.0	10	20	100	R0.5	F11901000	F11961000
10.0	10	20	100	R1.0	F1190100A	F1196100A
10.0	10	20	100	R2.0	-	F1196100C
12.0	12	24	100	R0.5	F11901200	F11961200
12.0	12	24	100	R1.0	F1190120A	F1196120A
12.0	12	24	100	R1.5	F1190120B	-
12.0	12	24	100	R2.0	F1190120C	F1196120C
12.0	12	24	100	R2.5	F1190120D	F1196120D

FRESA 3 TAGLIENTI MD ELICA 45° TORICA

CARBIDE 3 FLUTE 45° HELIX CORNER RADIUS END MILL



F1193

INF. TEC. PAG.
C94, C97, C100



MD

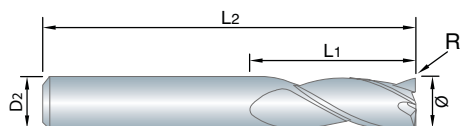
Z 3



N1

Unità : mm

Ø	D2	L1	L2	R	✓	
3.0	6	12	57	R0.5		F11930300
4.0	6	15	57	R0.5		F11930400
4.0	6	15	57	R1.0		F1193040A
5.0	6	20	57	R0.5		F11930500
5.0	6	20	57	R1.0		F1193050A
6.0	6	20	65	R0.5		F11930600
6.0	6	20	65	R1.0		F1193060A
8.0	8	22	65	R0.5		F11930800
8.0	8	22	65	R1.0		F1193080A
10.0	10	25	70	R0.5		F11931000
10.0	10	25	70	R1.0		F1193100A
10.0	10	25	70	R2.0		F1193100B
12.0	12	25	75	R0.5		F11931200
12.0	12	25	75	R1.0		F1193120A
12.0	12	25	75	R2.0		F1193120B
16.0	16	35	90	R0.5		F11931600
16.0	16	35	90	R1.0		F1193160A
16.0	16	35	90	R2.0		F1193160B



F1187

INF. TEC. PAG.
C94, C97, C100



MD

TiAlN

Z 4

P.V.



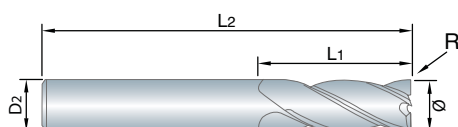
**P1 P2 M1
M2 S1**

P3 P4

Unità : mm

Ø	D2	L1	L2	R	
3.0	6	7	54	R0.3	F11870300
4.0	6	8	54	R0.3	F11870400
5.0	6	10	54	R0.3	F11870500
6.0	6	10	54	R0.5	F11870600
8.0	8	12	58	R0.5	F11870800
10.0	10	14	66	R0.5	F11871000
12.0	12	16	73	R0.7	F11871200
14.0	14	18	75	R0.7	F11871400
16.0	16	22	82	R1.0	F11871600
18.0	18	24	84	R1.0	F11871800
20.0	20	26	92	R1.0	F11872000

FRESA 4 TAGLIENTI MD TORICA PASSO VARIABILE
CARBIDE 4 FLUTE CORNER RADIUS MULTIPLE HELIX
END MILL



F1202

INF. TEC. PAG.
C94, C97, C100



MD

TiAlN

Z 4

P.V.

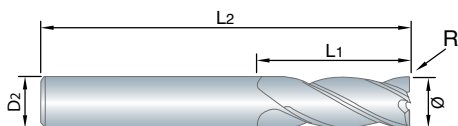


P1 P2 P3
M1 M2 S1

P4 P5

Unità : mm

$\emptyset$	D2	L1	L2	R	
3.0	6	8	57	R0.3	F12020300
4.0	6	11	57	R0.3	F12020400
5.0	6	13	57	R0.3	F12020500
6.0	6	13	57	R0.5	F12020600
8.0	8	19	63	R0.5	F12020800
10.0	10	22	72	R0.5	F12021000
12.0	12	26	83	R0.7	F12021200
14.0	14	26	83	R0.7	F12021400
16.0	16	32	92	R1.0	F12021600
20.0	20	38	104	R1.0	F12022000



F1199

INF. TEC. PAG.
C94, C100



MD

TiAlN

Z 4

30°



**P2 P3
P4 P5**

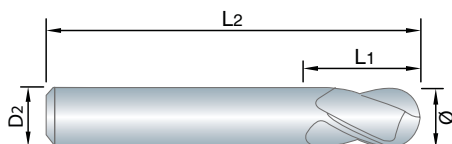
**P1 M2
K1 H1**

Unità : mm

Ø	D2	L1	L2	R	
3.0	6	12	50	R0.3	F11990300
4.0	6	15	50	R0.3	F11990400
4.0	6	15	50	R0.5	F1199040A
5.0	6	20	60	R0.3	F11990500
5.0	6	20	60	R0.5	F1199050A
6.0	6	20	60	R0.3	F1199060A
6.0	6	20	60	R0.5	F11990600
6.0	6	20	60	R1.0	F1199060B
8.0	8	25	70	R0.3	F1199080A
8.0	8	25	70	R0.5	F11990800
8.0	8	25	70	R1.0	F1199080B
8.0	8	25	70	R1.5	F1199080C
8.0	8	25	70	R2.0	F1199080D
10.0	10	30	90	R0.5	F11991000
10.0	10	30	90	R1.0	F1199100B
10.0	10	30	90	R2.0	F1199100D
12.0	12	30	90	R0.5	F11991200
12.0	12	30	90	R1.0	F1199120A
12.0	12	30	90	R1.5	F1199120B
12.0	12	30	90	R2.0	F1199120C
16.0	16	50	110	R0.5	F11991600
16.0	16	50	110	R1.0	F1199160A
16.0	16	50	110	R2.0	F1199160C

FRESA 2 TAGLIENTI HSS Co8 SEMISFERICA

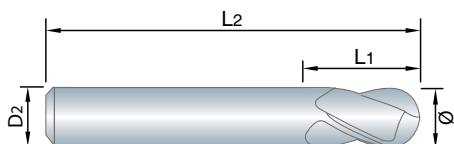
HSS Co8 2 FLUTE BALL NOSE END MILL



F3118	F3121
INF. TEC. PAG. C95, C98	INF. TEC. PAG. C95, C98
327	327
HSS Co8	HSS Co8
	WST
Z 2	Z 2
30°	30°
✓✓ P1 P2 P3 P4	P1 P2 P3 P4
✓ P5 M1 M2 K1 N1 S1	P5 M1 M2 K1 N1 S1

Unità : mm

Ø	D2	L1	L2	R		
2.0	6	4	48	R1.0	F31180200	F31210200
2.5	6	5	49	R1.25	F31180250	F31210250
3.0	6	5	49	R1.5	F31180300	F31210300
3.5	6	6	50	R1.75	F31180350	F31210350
4.0	6	7	51	R2.0	F31180400	F31210400
4.5	6	7	51	R2.25	F31180450	F31210450
5.0	6	8	52	R2.5	F31180500	F31210500
5.5	6	8	52	R2.75	F31180550	F31210550
6.0	6	8	52	R3.0	F31180600	F31210600
7.0	10	10	60	R3.5	F31180700	F31210700
8.0	10	11	61	R4.0	F31180800	F31210800
9.0	10	11	61	R4.5	F31180900	F31210900
10.0	10	13	63	R5.0	F31181000	F31211000
11.0	12	13	70	R5.5	F31181100	F31211100
12.0	12	16	73	R6.0	F31181200	F31211200
13.0	12	16	73	R6.5	F31181300	F31211300
14.0	12	16	73	R7.0	F31181400	F31211400
15.0	12	16	73	R7.5	F31181500	F31211500
16.0	16	19	79	R8.0	F31181600	F31211600
17.0	16	19	79	R8.5	F31181700	F31211700
18.0	16	19	79	R9.0	F31181800	F31211800
19.0	16	19	79	R9.5	F31181900	F31211900
20.0	20	22	88	R10.0	F31182000	F31212000
22.0	20	22	88	R11.0	F31182200	F31212200
24.0	25	26	102	R12.0	F31182400	F31212400
25.0	25	26	102	R12.5	F31182500	F31212500



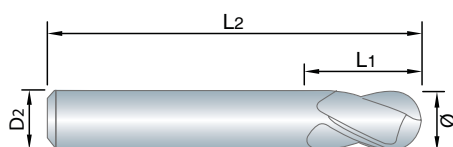
F1205	F1208	F1232
INF. TEC. PAG. C94, C97, C104	INF. TEC. PAG. C94, C97, C104	INF. TEC. PAG. C94, C97, C104
		
MD	MD	MD
	WST	WST
Z 2	Z 2	Z 4
		
		
✓ ✓ ✓ P1 P2 P3 P4 P5 M1 K1 N1 S1	P1 P2 P3 P4 P5 M1 K1 N1 S1 H1	P1 P2 P3 P4 P5 M1 K1 N1 S1 H1

Unità : mm

Ø	D2	L1	L2	R			
2.0	6	4	48	R 1.0	F12050200	F12080200	F12320200
2.5	6	4	48	R 1.25	F12050250	F12080250	-
3.0	6	4	48	R 1.5	F12050300	F12080300	F12320300
4.0	4	12	40	R 2.0	F1205040A	F1208040A	-
4.0	6	6	50	R 2.0	F12050400	F12080400	F12320400
5.0	5	14	50	R 2.5	F1205050A	F1208050A	-
5.0	6	7	51	R 2.5	F12050500	F12080500	F12320500
6.0	6	7	51	R 3.0	F12050600	F12080600	F12320600
8.0	8	9	59	R 4.0	F12050800	F12080800	F12320800
10.0	10	10	60	R 5.0	F12051000	F12081000	F12321000
12.0	12	14	71	R 6.0	F12051200	F12081200	F12321200
14.0	14	14	71	R 7.0	F12051400	F12081400	F12321400
16.0	16	16	76	R 8.0	F12051600	F12081600	F12321600
18.0	18	18	76	R 9.0	F12051800	F12081800	-
20.0	20	20	82	R 10.0	F12052000	F12082000	-

FRESA 2 TAGLIENTI MD SEMISFERICA

CARBIDE 2 FLUTE BALL NOSE END MILL



F1217

INF. TEC. PAG.
C94, C97



MD

TiAIN

Z 2

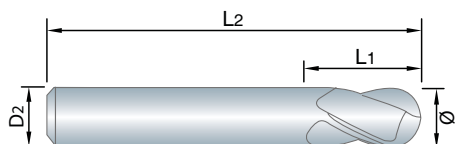


P2 P3 P4
P5 H1

P1 K1

Unità : mm

Ø	D2	L1	L2	R	
1.0	3	3	38	R0.5	F12170100
2.0	6	3	50	R1.0	F12170200
2.5	6	4	50	R1.25	F12170250
3.0	6	4	50	R1.5	F12170300
4.0	6	5	54	R2.0	F12170400
5.0	6	6	54	R2.5	F12170500
6.0	6	7	54	R3.0	F12170600
7.0	8	8	58	R3.5	F12170700
8.0	8	9	58	R4.0	F12170800
9.0	10	10	66	R4.5	F12170900
10.0	10	11	66	R5.0	F12171000
12.0	12	12	73	R6.0	F12171200



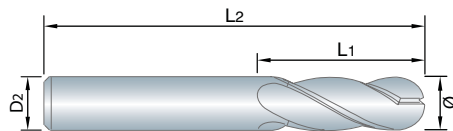
F1211	F1214
INF. TEC. PAG. C94, C97, C104	INF. TEC. PAG. C94, C97, C104
	
MD	MD
	WST
Z 2	Z 2
30°	30°
	
✓ ✓ ✓ P1 P2 P3 P4 P5 M1 K1 N1 S1 H1	P1 P2 P3 P4 P5 M1 K1 N1 S1 H1
F12110300	F12140300
F12110400	F12140400
F12110500	F12140500
F12110600	F12140600
F12110800	F12140800
F12111000	F12141000
F12111200	F12141200
F12111600	F12141600

Unità : mm

Ø	D2	L1	L2	R
3.0	3	5	75	R 1.5
4.0	4	8	75	R 2.0
5.0	5	9	75	R 2.5
6.0	6	10	100	R 3.0
8.0	8	12	100	R 4.0
10.0	10	14	100	R 5.0
12.0	12	16	100	R 6.0
16.0	16	22	150	R 8.0

FRESA 2 & 4 TAGLIENTI MD SEMISFERICA

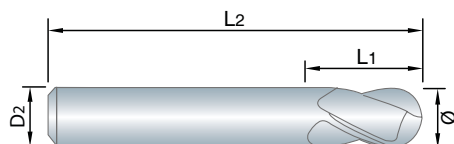
CARBIDE 2 & 4 FLUTE BALL NOSE END MILL



F1280	F1235
INF. TEC. PAG. C94, C97	INF. TEC. PAG. C94, C97
MD	MD
TiAlN	TiAlN
Z 2	Z 4
30°	30°
✓ ✓ ✓ P2 P3 P4 P5	P2 P3 P4 P5 H1
✓ P1 K1 H1	P1 K1

Unità : mm

Ø	D2	L1	L2	R		
1.0	4	2.5	50	R0.5	F12800100	-
1.0	6	2.5	50	R0.5	F1280010A	-
1.5	4	4	50	R0.75	F12800150	-
1.5	6	4	50	R0.75	F1280015A	-
2.0	6	5	50	R1.0	F12800200	F12350200
2.5	6	6	60	R1.25	F12800250	-
3.0	6	8	60	R1.5	F12800300	F12350300
3.5	6	8	70	R1.75	F12800350	-
4.0	6	8	70	R2.0	F12800400	F12350400
5.0	6	10	80	R2.5	F12800500	F12350500
6.0	6	12	90	R3.0	F12800600	F12350600
7.0	8	14	90	R3.5	F12800700	-
8.0	8	14	100	R4.0	F12800800	F12350800
9.0	10	18	100	R4.5	F12800900	-
10.0	10	18	100	R5.0	F12801000	F12351000
12.0	12	22	110	R6.0	F12801200	F12351200



F1223

INF. TEC. PAG.
C94, C97



MD

TiAlN

Z 2



**P2 P3 P4
P5 H1**

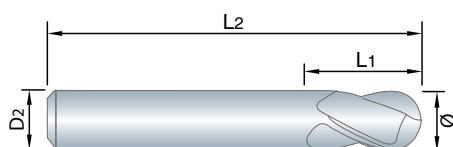
P1 K1

Unità : mm

Ø	D2	L1	L2	R	
2.0	3	6	80	R1.0	F12230200
3.0	3	8	100	R1.5	F12230300
4.0	4	8	100	R2.0	F12230400
5.0	6	10	120	R2.5	F12230500
6.0	6	10	120	R3.0	F12230600
8.0	8	14	140	R4.0	F12230800
10.0	10	18	180	R5.0	F12231000
12.0	12	22	200	R6.0	F12231200

FRESA 2 TAGLIENTI MD SEMISFERICA

CARBIDE 2 FLUTE BALL NOSE END MILL



F1220

INF. TEC. PAG.
C94, C97, C104



MD

WST

Z 2

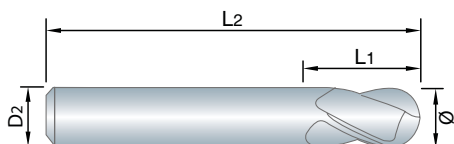


P1 P2 P3
P4 P5

M1 K1 N1
S1 H1

Unità : mm

Ø	D2	L1	L2	R	
1.0	3	3	39	R 0.5	F12200100
1.5	3	5	39	R 0.75	F12200150
2.0	3	7	39	R 1.0	F12200200
2.5	3	8	39	R 1.25	F12200250
3.0	3	9	39	R 1.5	F12200300
4.0	4	14	51	R 2.0	F12200400
5.0	5	16	51	R 2.5	F12200500
6.0	6	19	64	R 3.0	F12200600
8.0	8	21	64	R 4.0	F12200800
10.0	10	22	70	R 5.0	F12201000
11.0	11	25	70	R 5.5	F12201100
12.0	12	25	76	R 6.0	F12201200
16.0	16	32	89	R 8.0	F12201600
20.0	20	38	102	R 10.0	F12202000



F1226

INF. TEC. PAG.
C94, C97, C104



MD

Z 2

30°



**P1 P2 P3
P4 P5**

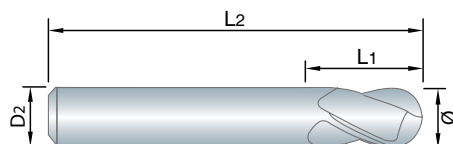
N1 H1

Unità : mm

Ø	D2	L1	L2	R	
3.0	3	30	75	R1.5	F12260300
4.0	4	30	75	R2.0	F12260400
5.0	5	40	100	R2.5	F12260500
6.0	6	50	150	R3.0	F12260600
8.0	8	50	150	R4.0	F12260800
10.0	10	60	150	R5.0	F12261000
12.0	12	75	150	R6.0	F12261200
16.0	16	75	150	R8.0	F12261600

FRESA 2 TAGLIENTI MD SEMISFERICA

CARBIDE 2 FLUTE BALL NOSE END MILL



F1229

INF. TEC. PAG.
C94, C97, C104



MD

WST

Z 2

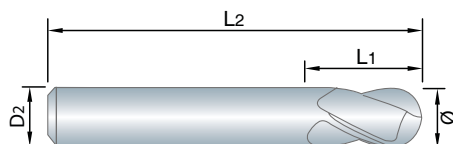


P1 P2 P3
P4 P5

M1 K1 N1
S1 H1

Unità : mm

Ø	D2	L1	L2	R	
3.0	3	20	60	R 1.5	F12290300
4.0	4	20	60	R 2.0	F12290400
5.0	5	25	75	R 2.5	F12290500
6.0	6	30	75	R 3.0	F12290600
8.0	8	30	75	R 4.0	F12290800
10.0	10	40	100	R 5.0	F12291000
12.0	12	45	100	R 6.0	F12291200
16.0	16	45	100	R 8.0	F12291600



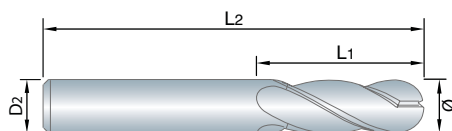
F3124	F3127
INF. TEC. PAG. C95, C98	INF. TEC. PAG. C95, C98
1889	1889
	
HSS Co8	HSS Co8
	TiAlN
Z 4	Z 4
30°	30°
	
✓ ✓ ✓ P1 P2 P3	P1 P2 P3
✓ P4 N1	P4 N1
6.0	F31240600
8.0	F31240800
10.0	F31241000
12.0	F31241200
16.0	F31241600
20.0	F31242000

Unità : mm

Ø	D2	L1	L2	R	Z		
6.0	6	13	57	R3.0	4	F31240600	F31270600
8.0	10	19	69	R4.0	4	F31240800	F31270800
10.0	10	22	72	R5.0	4	F31241000	F31271000
12.0	12	26	83	R6.0	4	F31241200	F31271200
16.0	16	32	92	R8.0	4	F31241600	F31271600
20.0	20	38	104	R10.0	4	F31242000	F31272000

FRESA 4 TAGLIENTI MD SEMISFERICA PASSO VARIABILE

CARBIDE 4 FLUTE BALL NOSE MULTIPLE HELIX END MILL



F1238

INF. TEC. PAG.
C94, C97



MD

TiAIN

Z 4

P.V.

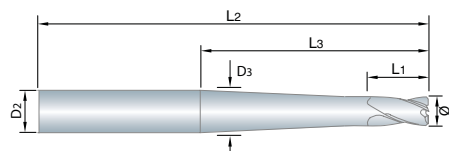


**P1 P2 M1
M2 S1**

P3 P4

Unità : mm

Ø	D2	L1	L2	R	
3.0	6	8	57	R1.5	F12380300
4.0	6	11	57	R2.0	F12380400
5.0	6	13	57	R2.5	F12380500
6.0	6	13	57	R3.0	F12380600
8.0	8	19	63	R4.0	F12380800
10.0	10	22	72	R5.0	F12381000
12.0	12	26	83	R6.0	F12381200
16.0	16	32	92	R8.0	F12381600



F1241

INF. TEC. PAG.
C94, C106



MD

WST

Z 2

30°



**P1 P2 P3
P4 P5**

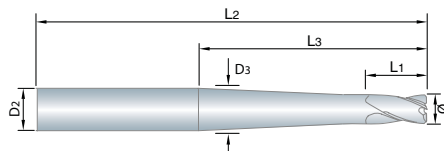
**M1 K1 N1
S1 H1**

Unità : mm

Ø	D2	D3	L1	L2	L3	
0.4	4	0.37	0.7	50	2	F12410040
0.5	4	0.45	0.75	50	2	F12410050
0.5	4	0.45	0.75	50	4	F1241005A
0.5	4	0.45	0.75	50	6	F1241005B
0.6	4	0.55	0.9	50	2	F12410060
0.8	4	0.75	1.2	50	4	F12410080
0.8	4	0.75	1.2	50	6	F1241008A
1.0	4	0.95	1.5	50	6	F12410100
1.0	4	0.95	1.5	50	8	F1241010A
1.0	4	0.95	1.5	50	10	F1241010B
1.0	4	0.95	1.5	50	12	F1241010C
1.2	4	1.15	1.8	50	6	F12410120
1.2	4	1.15	1.8	50	10	F1241012B
1.5	4	1.45	2.3	50	6	F12410150
1.5	4	1.45	2.3	50	8	F1241015A
1.5	4	1.45	2.3	50	10	F1241015B
1.5	4	1.45	2.3	50	12	F1241015C
1.5	4	1.45	2.3	50	14	F1241015D
1.5	4	1.45	2.3	50	16	F1241015E
1.5	4	1.45	2.3	50	20	F1241015G
2.0	4	1.95	3	50	6	F12410200
2.0	4	1.95	3	50	8	F1241020A
2.0	4	1.95	3	50	10	F1241020B
2.0	4	1.95	3	50	12	F1241020C
2.0	4	1.95	3	50	14	F1241020D
2.0	4	1.95	3	50	16	F1241020E
2.0	4	1.95	3	50	18	F1241020F
2.0	4	1.95	3	50	20	F1241020G

FRESA 2 TAGLIENTI MD SCARICATA PER NERVATURE

CARBIDE 2 FLUTE RIB PROCESSING END MILL



Unità : mm

Ø	D2	D3	L1	L2	L3	
2.5	4	2.40	3.7	50	8	F12410250
2.5	4	2.40	3.7	50	12	F1241025A
2.5	4	2.40	3.7	50	16	F1241025B
2.5	4	2.40	3.7	50	20	F1241025C
3.0	6	2.85	4.5	50	8	F12410300
3.0	6	2.85	4.5	50	12	F1241030A
3.0	6	2.85	4.5	60	16	F1241030B
3.0	6	2.85	4.5	60	20	F1241030C
3.0	6	2.85	4.5	75	25	F1241030D
4.0	6	3.85	6	50	12	F12410400
4.0	6	3.85	6	60	16	F1241040A
4.0	6	3.85	6	75	20	F1241040B
4.0	6	3.85	6	75	25	F1241040C
4.0	6	3.85	6	75	30	F1241040D
4.0	6	3.85	6	75	35	F1241040E

F1241

INF. TEC. PAG.
C94, C106



MD

WST

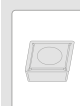
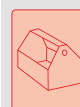
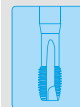
Z 2

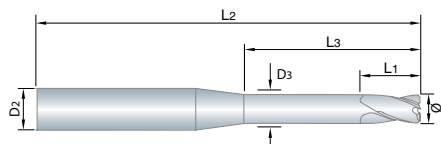
30°



**P1 P2 P3
P4 P5**

**M1 K1 N1
S1 H1**




F1244

 INF. TEC. PAG.
C94, C106

MD
TiAlN
Z 2
30°

**P2 P3 P4
P5 H1**

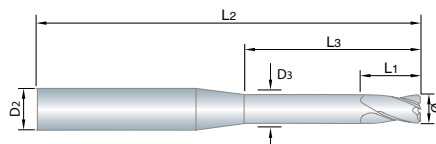
P1 K1

Unità : mm

Ø	D2	D3	L1	L2	L3	
0.5	4	0.45	0.7	45	2	F12440050
0.6	4	0.55	0.9	45	4	F1244006A
0.8	4	0.75	1.2	45	4	F12440080
0.8	4	0.75	1.2	45	12	F1244008A
1.0	4	0.95	1.5	45	4	F1244010A
1.0	4	0.95	1.5	45	6	F12440100
1.0	4	0.95	1.5	45	8	F1244010B
1.0	4	0.95	1.5	45	10	F1244010C
1.0	4	0.95	1.5	45	12	F1244010D
1.0	4	0.95	1.5	50	16	F1244010E
1.0	4	0.95	1.5	55	20	F1244010F
1.5	4	1.45	2.3	45	6	F12440150
1.5	4	1.45	2.3	45	8	F1244015A
1.5	4	1.45	2.3	45	10	F1244015B
1.5	4	1.45	2.3	45	12	F1244015C
1.5	4	1.45	2.3	50	16	F1244015E
1.5	4	1.45	2.3	55	20	F1244015F
1.6	4	1.55	2.4	45	6	F1244016A
1.8	4	1.75	2.7	45	6	F12440180
2.0	4	1.95	3.0	45	6	F1244020A
2.0	4	1.95	3.0	45	8	F12440200
2.0	4	1.95	3.0	45	10	F1244020B
2.0	4	1.95	3.0	45	12	F1244020C
2.0	4	1.95	3.0	50	16	F1244020E
2.0	4	1.95	3.0	55	18	F1244020F
2.0	4	1.95	3.0	55	20	F1244020G
2.0	4	1.95	3.0	60	25	F1244020H
2.0	4	1.95	3.0	70	30	F1244020I
2.5	4	2.40	3.7	55	16	F1244025C

FRESA 2 TAGLIENTI MD SCARICATA PER NERVATURE

CARBIDE 2 FLUTE FOR RIB PROCESSING END MILL



F1244

INF. TEC. PAG.
C94, C106



MD

TiAlN

Z 2

30°

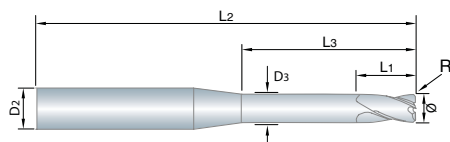


P2 P3 P4
P5 H1

P1 K1

Unità : mm

Ø	D2	D3	L1	L2	L3	
2.5	4	2.40	3.7	80	30	F1244025G
3.0	6	2.85	4.5	45	8	F12440300
3.0	6	2.85	4.5	45	10	F1244030A
3.0	6	2.85	4.5	45	12	F1244030B
3.0	6	2.85	4.5	55	16	F1244030D
3.0	6	2.85	4.5	60	20	F1244030F
3.0	6	2.85	4.5	65	25	F1244030G
3.0	6	2.85	4.5	70	30	F1244030I
3.0	6	2.85	4.5	90	40	F1244030H
4.0	6	3.85	6	70	25	F1244040A
4.0	6	3.85	6	70	30	F1244040B
5.0	6	4.85	7.5	80	30	F1244050A
6.0	6	5.85	9	100	40	F1244060A



F1265

INF. TEC. PAG.
C94, C106



MD

TiAlN

Z 2

30°



P2 P3
P4 P5

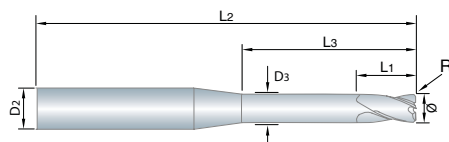
P1 K1 H1

Unità : mm

Ø	D2	D3	L1	L2	L3	R	
0.8	4	0.75	1.2	45	6	R0.1	F1265080A
1.0	4	0.95	1.5	45	4	R0.1	F1265100A
1.0	4	0.95	1.5	45	6	R0.1	F12650100
1.0	4	0.95	1.5	45	8	R0.1	F1265100B
1.0	4	0.95	1.5	45	10	R0.1	F1265100C
1.0	4	0.95	1.5	45	12	R0.1	F1265100D
1.2	4	1.15	1.8	45	6	R0.2	F12650120
1.2	4	1.15	1.8	45	10	R0.2	F1265120B
1.2	4	1.15	1.8	45	12	R0.2	F1265120C
1.2	4	1.15	1.8	50	16	R0.2	F1265120D
1.4	4	1.35	2.1	45	10	R0.2	F1265140B
1.5	4	1.45	2.3	45	6	R0.2	F12650150
1.5	4	1.45	2.3	45	8	R0.2	F1265015A
1.5	4	1.45	2.3	45	10	R0.2	F1265015B
1.5	4	1.45	2.3	45	12	R0.2	F1265015C
1.5	4	1.45	2.3	50	14	R0.2	F1265015D
1.5	4	1.45	2.3	50	16	R0.2	F1265015E
1.5	4	1.45	2.3	55	18	R0.2	F1265015F
1.5	4	1.45	2.3	55	20	R0.2	F1265015G
1.8	4	1.75	2.7	50	14	R0.2	F1265018D
2.0	4	1.95	3	45	6	R0.2	F1265020A
2.0	4	1.95	3	45	8	R0.2	F12650200
2.0	4	1.95	3	45	10	R0.2	F1265020B
2.0	4	1.95	3	45	12	R0.2	F1265020C
2.0	4	1.95	3	50	14	R0.2	F1265020D
2.0	4	1.95	3	50	16	R0.2	F1265020E
2.0	4	1.95	3	55	18	R0.2	F1265020F
2.0	4	1.95	3	55	20	R0.2	F1265020G
2.0	4	1.95	3	60	25	R0.2	F1265020H
2.0	4	1.95	3	70	30	R0.2	F1265020I
2.5	4	2.40	3.7	45	12	R0.2	F1265025B
2.5	4	2.40	3.7	55	16	R0.2	F1265025D
2.5	4	2.40	3.7	60	20	R0.2	F1265025F
2.5	4	2.40	3.7	80	30	R0.2	F1265025H

FRESA 2 TAGLIENTI MD TORICA PER NERVATURE

CARBIDE 2 FLUTE CORNER RADIUS
FOR RIB PROCESSING END MILL



F1265

INF. TEC. PAG.
C94, C106



MD

TiAlN

Z 2

30°

30°

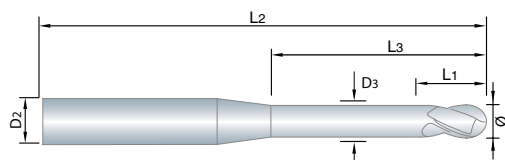
P2 P3

P4 P5

P1 K1 H1

Unità : mm

Ø	D2	D3	L1	L2	L3	R	
3.0	6	2.85	4.5	45	10	R0.3	F1265030A
3.0	6	2.85	4.5	45	12	R0.3	F1265030B
3.0	6	2.85	4.5	50	14	R0.3	F1265030C
3.0	6	2.85	4.5	55	16	R0.3	F1265030D
3.0	6	2.85	4.5	60	20	R0.3	F1265030F
3.0	6	2.85	4.5	65	25	R0.3	F1265030G
3.0	6	2.85	4.5	70	30	R0.3	F1265030H
3.0	6	2.85	4.5	90	40	R0.3	F1265030L
4.0	6	3.85	6	100	50	R0.3	F1265040H
4.0	6	3.85	6	50	12	R0.3	F12650400
4.0	6	3.85	6	60	16	R0.3	F1265040A
4.0	6	3.85	6	60	20	R0.3	F1265040B
4.0	6	3.85	6	70	25	R0.3	F1265040C
5.0	6	4.85	7.5	110	50	R0.5	F1265050F
6.0	6	5.85	9	80	20	R0.5	F12650600
6.0	6	5.85	9	90	30	R0.5	F1265060A


F1274

 INF. TEC. PAG.
C94, C106

MD
WST
Z 2
30°

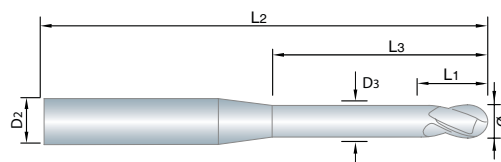
**P1 P2
P3 P4**
**P5 M1
K1 N1**

Unità : mm

Ø	D2	D3	L1	L2	L3	R	
0.4	4	0.37	0.7	50	2	R0.2	F12740040
0.5	4	0.45	0.75	50	2	R0.25	F12740050
0.5	4	0.45	0.75	50	4	R0.25	F1274005A
0.5	4	0.45	0.75	50	6	R0.25	F1274005B
0.6	4	0.55	0.9	50	2	R0.3	F12740060
0.6	4	0.55	0.9	50	4	R0.3	F1274006A
0.8	4	0.75	1.2	50	4	R0.4	F12740080
1.0	4	0.95	1.5	50	6	R0.5	F12740100
1.0	4	0.95	1.5	50	8	R0.5	F1274010A
1.0	4	0.95	1.5	50	10	R0.5	F1274010B
1.0	4	0.95	1.5	50	12	R0.5	F1274010C
1.2	4	1.15	1.8	50	8	R0.6	F12740120
1.5	4	1.45	2.3	50	6	R0.75	F12740150
1.5	4	1.45	2.3	50	8	R0.75	F1274015A
1.5	4	1.45	2.3	50	10	R0.75	F1274015B
1.5	4	1.45	2.3	50	12	R0.75	F1274015C
1.5	4	1.45	2.3	50	16	R0.75	F1274015D
1.5	4	1.45	2.3	50	20	R0.75	F1274015E
2.0	4	1.95	3	50	8	R1.0	F12740200
2.0	4	1.95	3	50	10	R1.0	F1274020A
2.0	4	1.95	3	50	12	R1.0	F1274020B
2.0	4	1.95	3	50	14	R1.0	F1274020C
2.0	4	1.95	3	50	16	R1.0	F1274020D
2.0	4	1.95	3	50	20	R1.0	F1274020E
3.0	6	2.85	4.5	50	10	R1.5	F12740300
3.0	6	2.85	4.5	50	12	R1.5	F1274030A
3.0	6	2.85	4.5	60	16	R1.5	F1274030B
3.0	6	2.85	4.5	60	20	R1.5	F1274030C
3.0	6	2.85	4.5	75	25	R1.5	F1274030D
4.0	6	3.85	6	50	12	R2.0	F12740400
4.0	6	3.85	6	60	16	R2.0	F1274040A
4.0	6	3.85	6	75	20	R2.0	F1274040B
4.0	6	3.85	6	75	25	R2.0	F1274040C
4.0	6	3.85	6	75	30	R2.0	F1274040D

FRESA 2 TAGLIENTI MD SEMISFERICA PER NERVATURE

CARBIDE 2 FLUTE BALL NOSE FOR RIB PROCESSING
END MILL



F1277

INF. TEC. PAG.
C94, C106



MD

TiAlN

Z 2

30°

**P2 P3
P4 P5**

✓

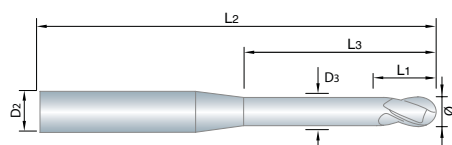
✓

✓

P1 K1 H1

Unità : mm

Ø	D2	D3	L1	L2	L3	R	
0.5	4	0.45	0.7	45	2	R0.25	F12770050
0.5	4	0.45	0.7	45	4	R0.25	F1277005A
0.6	4	0.55	0.9	45	2	R0.3	F1277006A
0.8	4	0.75	1.2	45	2	R0.4	F1277008A
0.8	4	0.75	1.2	45	4	R0.4	F1277008B
0.8	4	0.75	1.2	45	6	R0.4	F12770080
0.8	4	0.75	1.2	45	10	R0.4	F1277008C
1.0	4	0.95	1.5	45	3	R0.5	F1277010A
1.0	4	0.95	1.5	45	4	R0.5	F1277010B
1.0	4	0.95	1.5	45	5	R0.5	F1277010C
1.0	4	0.95	1.5	45	6	R0.5	F12770100
1.0	4	0.95	1.5	45	8	R0.5	F1277010E
1.0	4	0.95	1.5	45	10	R0.5	F1277010G
1.0	4	0.95	1.5	45	12	R0.5	F1277010H
1.0	4	0.95	1.5	50	16	R0.5	F1277010L
1.5	4	1.45	2.3	45	6	R0.75	F1277015A
1.5	4	1.45	2.3	45	8	R0.75	F12770150
1.5	4	1.45	2.3	45	10	R0.75	F1277015B
1.5	4	1.45	2.3	45	12	R0.75	F1277015C
1.5	4	1.45	2.3	50	16	R0.75	F1277015D
2.0	4	1.95	3	45	4	R1.0	F1277020A
2.0	4	1.95	3	45	6	R1.0	F1277020B
2.0	4	1.95	3	45	8	R1.0	F12770200
2.0	4	1.95	3	45	10	R1.0	F1277020C
2.0	4	1.95	3	50	12	R1.0	F1277020D
2.0	4	1.95	3	50	14	R1.0	F1277020E
2.0	4	1.95	3	50	16	R1.0	F1277020F
2.0	4	1.95	3	55	20	R1.0	F1277020G
2.0	4	1.95	3	60	25	R1.0	F1277020I
2.0	4	1.95	3	70	30	R1.0	F1277020L
3.0	6	2.85	4.5	50	8	R1.5	F1277030A
3.0	6	2.85	4.5	50	10	R1.5	F1277030B
3.0	6	2.85	4.5	50	12	R1.5	F1277030C
3.0	6	2.85	4.5	55	16	R1.5	F12770300
3.0	6	2.85	4.5	60	20	R1.5	F1277030D


F1277

 INF. TEC. PAG.
C94, C106

MD
TiAlN
Z 2
30°

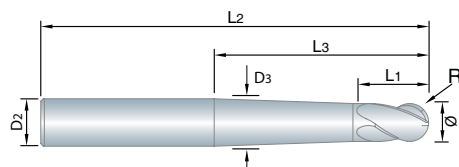
**P2 P3
P4 P5**
P1 K1 H1

Unità : mm

Ø	D2	D3	L1	L2	L3	R	
3.0	6	2.85	4.5	65	25	R1.5	F1277030E
3.0	6	2.85	4.5	70	30	R1.5	F1277030F
3.0	6	2.85	4.5	80	35	R1.5	F1277030G
4.0	6	3.85	6	60	10	R2.0	F1277040A
4.0	6	3.85	6	60	16	R2.0	F12770400
4.0	6	3.85	6	65	20	R2.0	F1277040B
4.0	6	3.85	6	70	25	R2.0	F1277040C
4.0	6	3.85	6	70	30	R2.0	F1277040D
4.0	6	3.85	6	80	35	R2.0	F1277040E
4.0	6	3.85	6	90	40	R2.0	F1277040F
4.0	6	3.85	6	100	50	R2.0	F1277040G
6.0	6	5.85	9	90	30	R3.0	F1277060A
6.0	6	5.85	9	100	40	R3.0	F1277060B

FRESA 2 TAGLIENTI MD SFERICA SCARICO CONICO

CARBIDE 2 FLUTE LONG LENGTH SPHERE END MILL



- 15° di inclinazione
- 15° inclination

F1283

INF. TEC. PAG.
C94, C97



MD

TiAlN

Z 2

30°

30°



P2 P3



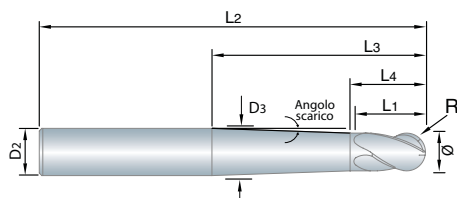
P4 P5



P1 K1 H1

Unità : mm

Ø	D2	D3	L1	L2	L3	R	
3.0	6	2.5	2.3	80	30	R1.5	F12830300
4.0	6	3.3	3.1	80	30	R2.0	F12830400
5.0	6	4.1	3.9	80	38	R2.5	F12830500
6.0	6	4.7	4.9	100	28	R3.0	F12830600
8.0	8	6.5	6.3	100	33	R4.0	F12830800
10.0	10	8.2	7.9	100	40	R5.0	F12831000
12.0	12	9.8	9.5	100	49	R6.0	F12831200



F1286

INF. TEC. PAG.
C94, C97



MD

TiAlN

Z 2

30°



P2 P3
P4 P5

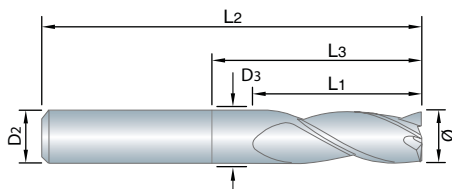
P1 K1
H1

Unità : mm

Ø	D2	D3	L1	L2	L3	L4	R	Angolo Scarico	
1.0	6	2	2	60	23	4	R0.5	1°30'	F12860100
1.0	6	4.3	2	60	23	4	R0.5	5°	F1286010A
1.0	6	5	2	80	42	4	R0.5	3°	F1286010B
2.0	6	2.9	4	60	23	6	R1.0	1°30'	F12860200
2.0	6	5	4	60	23	6	R1.0	5°	F1286020A
2.0	6	5.7	4	80	41	6	R1.0	3°	F1286020B
3.0	6	5.6	6	70	32	8	R1.5	3°	F12860300
3.0	6	5.3	6	90	52	8	R1.5	1°30'	F1286030A
4.0	6	6	8	70	28	10	R2.0	3°	F12860400
4.0	6	6	8	90	49	10	R2.0	1°30'	F1286040A
5.0	8	7	10	110	61	12	R2.5	1°30'	F1286050A
5.0	8	8	10	90	41	12	R2.5	3°	F12860500
6.0	8	8	12	110	53	15	R3.0	1°30'	F1286060A
6.0	8	8	12	90	34	15	R3.0	3°	F12860600
8.0	10	10	14	100	36	17	R4.0	3°	F12860800
8.0	10	10	14	120	55	17	R4.0	1°30'	F1286080A
10.0	12	12	18	110	40	21	R5.0	3°	F12861000
10.0	12	12	18	130	59	21	R5.0	1°30'	F1286100A
12.0	16	16	22	140	63	25	R6.0	3°	F12861200
12.0	16	15	22	160	83	25	R6.0	1°30'	F1286120A

FRESA 3 TAGLIENTI MD ELICA 45° SCARICATA

CARBIDE 3 FLUTE 45° HELIX WITH NECK END MILL



F1247

INF. TEC. PAG.
C94, C97, C100



MD

Z 3

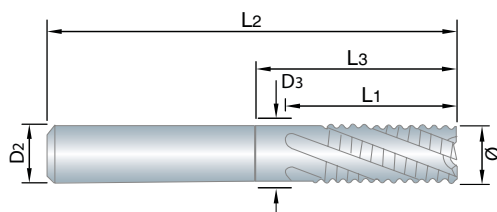
45°



N1

Unità : mm

Ø	D2	D3	L1	L2	L3	✓	N1
3.0	6	2.7	8	57	12		F12470300
4.0	6	3.7	11	57	18		F12470400
5.0	6	4.7	13	57	18		F12470500
6.0	6	5.7	13	57	18		F12470600
8.0	8	7.4	21	63	25		F12470800
10.0	10	9.2	22	72	30		F12471000
12.0	12	11	26	83	36		F12471200
16.0	16	15	36	92	42		F12471600
20.0	20	19	41	104	52		F12472000



F1250

INF. TEC. PAG.
C94, C97, C100



MD

Z 3

30°



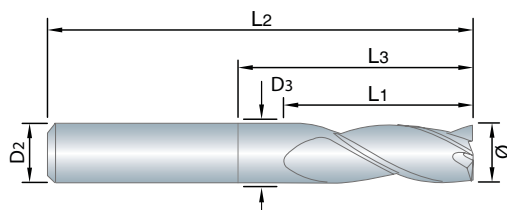
**Bombato
Grosso**

Unità : mm

Ø	D2	D3	L1	L2	L3	✓	N1
6.0	6	5	16	57	20		F12500600
8.0	8	7	16	63	25		F12500800
10.0	10	9	22	72	30		F12501000
12.0	12	10.5	26	83	36		F12501200
16.0	16	14.5	32	92	42		F12501600
20.0	20	18.5	38	104	52		F12502000

FRESA 4 TAGLIENTI MD PASSO VARIABILE

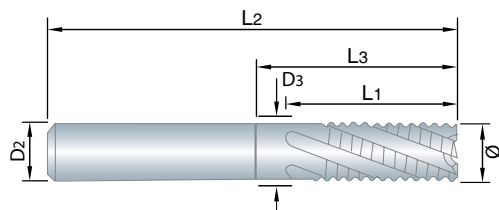
CARBIDE 4 FLUTE MULTIPLE HELIX END MILL



F1256	F1259
INF. TEC. PAG. C94, C97, C100	INF. TEC. PAG. C94, C97, C100
MD	MD
TiAlN	TiAlN
Z 4	Z 4
P1 P2 M1 M2 S1	P1 P2
P3 P4	P3 P4 M2 K1

Unità : mm

Ø	D2	D3	L1	L2	L3		
3.0	6	2.7	7	54	12	F12560300	F12590300
3.0	6	2.7	7	57	17	F1256030A	F1259030A
4.0	6	3.7	8	57	15	F12560400	-
4.0	6	3.7	8	63	22	F1256040A	F1259040A
5.0	6	4.7	10	57	17	F12560500	F12590500
5.0	6	4.7	10	67	27	F1256050A	-
6.0	6	5.5	10	57	15	F12560600	F12590600
6.0	6	5.5	10	62	20	F1256060A	F1259060A
6.0	6	5.5	10	74	32	F1256060B	F1259060B
8.0	8	7.5	12	63	20	F12560800	F12590800
8.0	8	7.5	12	73	30	F1256080A	F1259080A
8.0	8	7.5	12	90	46	F1256080B	F1259080B
10.0	10	9.2	14	72	25	F12561000	F12591000
10.0	10	9.2	14	82	35	F1256100A	F1259100A
10.0	10	9.2	14	102	55	F1256100B	F1259100B
12.0	12	11	16	83	30	F12561200	F12591200
12.0	12	11	16	93	40	F1256120A	F1259120A
12.0	12	11	16	117	64	F1256120C	F1259120B
16.0	16	15	22	92	38	F12561600	-
16.0	16	15	22	109	55	F1256160A	F1259160A
16.0	16	15	22	141	87	F1256160B	F1259160B
20.0	20	19	26	104	50	F12562000	-
20.0	20	19	26	124	70	F1256200A	-



F1262

INF. TEC. PAG.
C94, C97, C100



MD

TiAlN

Z 4,5

45°



Bombato
Fine

✓ P2 P3 P4
✓ M1 M2 S1

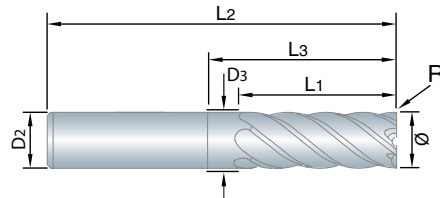
✓ P1 P5

Unità : mm

Ø	D2	D3	L1	L2	L3	Z	
6.0	6	5.5	16	57	20	4	F12620600
8.0	8	7.5	16	63	26	4	F12620800
10.0	10	9.5	22	72	31	4	F12621000
12.0	12	11.5	26	83	37	4	F12621200
16.0	16	15.5	32	100	51	5	F12621600

FRESA 4 TAGLIANTI MD TORICA TAGLIANTE CORTO SCARICATA

CARBIDE 4 FLUTE STUB LENGTH CORNER RADIUS END MILL



F1268

INF. TEC. PAG.
C94, C100



MD

TiAlN

Z 4

30°



✓ **P2 P3**
✓ **P4 P5**

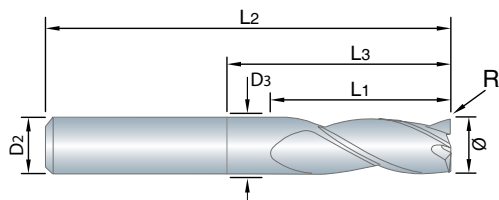
✓ **P1 K1 H1**

Unità : mm

Ø	D2	D3	L1	L2	L3	R	
2.0	6	1.9	2.5	50	5	R0.2	F12680200
2.5	6	2.4	3	50	6	R0.25	F12680250
3.0	6	2.8	4	50	7	R0.3	F12680300
4.0	6	3.7	5	50	9	R0.4	F12680400
5.0	6	4.6	6	50	12	R0.5	F12680500
6.0	6	5.6	7	55	14	R0.6	F12680600
8.0	8	7.4	10	60	18	R0.8	F12680800
10.0	10	9.4	12	70	25	R1.0	F12681000
12.0	12	11.4	15	80	30	R1.2	F12681200

FRESA 4 TAGLIENTI MD CON SCARICO TORICA PASSO VARIABILE

CARBIDE 4 FLUTE WITH EXTENDED NECK
CORNER RADIUS MULTIPLE HELIX END MILL



F1253	F1271
INF. TEC. PAG. C94, C97, C100	INF. TEC. PAG. C94, C97, C100
	
MD	MD
TiAlN	TiAlN
Z 4	Z 4
	
	
✓ P1 P2 M1 ✓ M2 S1	P1 P2 P3 P4 P5
✓ P3 P4	M1 K1

Unità : mm

Ø	D2	D3	L1	L2	L3	R		
3.0	6	2.7	7	54	12	R0.3	F12530300	F12710300
3.0	6	2.7	7	57	17	R0.3	F1253030A	F1271030A
4.0	6	3.7	8	57	15	R0.3	F12530400	F12710400
4.0	6	3.7	8	63	22	R0.3	F1253040A	F1271040A
5.0	6	4.7	10	57	17	R0.3	F12530500	F12710500
5.0	6	4.7	10	67	27	R0.3	F1253050A	F1271050A
6.0	6	5.5	10	57	15	R0.5	F12530600	F12710600
6.0	6	5.5	10	62	20	R0.5	F1253060A	F1271060A
6.0	6	5.5	10	74	32	R0.5	F1253060B	F1271060B
8.0	8	7.5	12	63	20	R0.5	F12530800	F12710800
8.0	8	7.5	12	73	30	R0.5	F1253080A	F1271080A
8.0	8	7.5	12	90	46	R0.5	F1253080B	F1271080B
10.0	10	9.2	14	72	25	R0.5	F12531000	F12711000
10.0	10	9.2	14	82	35	R0.5	F1253100A	F1271100A
10.0	10	9.2	14	102	55	R0.5	F1253100B	F1271100B
12.0	12	11	16	83	30	R0.7	F12531200	F12711200
12.0	12	11	16	93	40	R0.7	F1253120A	F1271120A
12.0	12	11	16	117	64	R0.7	F1253120B	F1271120B
16.0	16	15	22	92	38	R1.0	F12531600	F12711600
16.0	16	15	22	109	55	R1.0	F1253160A	-
16.0	16	15	22	141	87	R1.0	F1253160B	-
20.0	20	19	26	104	50	R1.0	F12532000	F12712000
20.0	20	19	26	164	110	R1.0	F1253200B	-

VELOCITÀ DI TAGLIO

$V_c = m/min.$

CUTTING SPEED

$V_c = m/min.$

Codice	Acciai					Inox		Ghisa	Alluminio & Materiali non ferrosi			Leghe di Titanio	Acciai Temprati
	< 500 N/mm ²	< 750 N/mm ²	< 900 N/mm ²	< 1100 N/mm ²	< 1500 N/mm ²	< 800 N/mm ²	> 800 N/mm ²		Alu Si <10%	Alu Si >10%	Mat. non Ferrosi		
F1001	-	-	-	-	-	-	-	-	190	190	-	-	-
F1004	70	70	70	45	-	35	-	55	145	145	105	-	-
F1007	70	70	70	45	-	35	-	55	145	145	105	-	-
F1010	70	70	70	45	-	35	-	55	145	145	105	-	-
F1013	70	70	70	45	-	35	-	55	145	145	105	-	-
F1016	105	105	105	65	65	55	-	-	-	-	-	55	-
F1019	85	85	85	50	50	45	-	-	-	-	-	-	30
F1022	70	70	70	45	-	35	-	55	145	145	105	-	-
F1025	70	70	70	45	-	35	-	55	145	145	105	-	-
F1028	-	-	-	-	-	-	-	-	350	350	-	-	-
F1031	70	70	70	45	-	35	-	55	145	145	105	-	-
F1034	70	70	70	45	-	35	-	55	145	145	105	-	-
F1037	70	70	70	45	-	35	-	55	145	145	105	-	-
F1040	60	60	60	50	50	-	-	-	-	-	-	-	30
F1043	35	35	30	25	-	50	-	40	100	100	75	50	-
F1046	70	70	70	45	-	35	-	55	145	145	105	-	-
F1049	105	105	105	65	65	55	-	-	-	-	-	-	40
F1052	70	70	70	45	-	35	-	55	145	145	105	-	-
F1055	70	70	70	45	-	35	-	55	145	145	105	-	-
F1058	70	70	70	45	-	35	-	55	145	145	105	-	-
F1061	70	70	70	45	-	35	-	55	145	145	105	-	-
F1064	70	70	70	45	-	35	-	55	145	145	105	-	-
F1067	70	70	70	45	-	35	-	55	145	145	105	-	-
F1070	105	105	105	65	65	55	-	-	-	-	-	-	40
F1073	70	70	70	45	-	35	-	55	145	145	105	-	-
F1076	70	70	70	45	-	35	-	55	145	145	105	-	-
F1079	70	70	70	45	-	35	-	55	145	145	105	-	-
F1082	-	-	-	-	-	-	-	-	350	350	-	-	-
F1085	70	70	70	45	-	35	-	55	145	145	105	-	-
F1088	70	70	70	45	-	35	-	55	145	145	105	-	-
F1091	70	70	70	45	-	35	-	55	145	145	105	-	-
F1094	105	105	105	65	-	55	-	-	-	-	-	55	-
F1097	90	90	90	55	-	45	-	55	145	145	105	-	-
F1100	90	90	90	55	-	45	-	55	145	145	105	-	-
F1103	90	90	90	55	-	45	-	55	145	145	105	-	-
F1106	90	90	90	55	-	45	-	55	145	145	105	-	-
F1109	90	90	90	55	-	45	-	55	145	145	105	-	-
F1112	105	105	105	65	65	55	-	-	-	-	-	-	40
F1115	105	105	105	65	65	55	-	-	-	-	-	55	-
F1118	294	294	294	234	234	158	-	-	-	-	-	158	-
F1121	125	125	125	90	-	-	-	-	-	-	-	-	-
F1124	125	125	125	95	95	135	95	-	-	-	-	95	-
F1127	90	90	90	55	-	45	-	55	145	145	105	-	-
F1130	90	90	90	55	-	45	-	55	145	145	105	-	-
F1133	90	90	90	55	-	45	-	55	145	145	105	-	-
F1136	70	70	70	40	40	-	-	-	-	-	-	-	25
F1139	295	295	295	235	-	-	160	-	-	-	-	-	65
F1142	294	294	294	234	234	158	-	-	-	-	-	158	-
F1145	294	294	294	234	234	158	-	-	-	-	-	158	-
F1148	250	250	250	200	-	-	135	-	-	-	-	-	-
F1151	125	125	125	90	-	-	-	-	-	-	-	-	-
F1154	125	125	125	95	95	135	95	-	-	-	-	95	-
F1157	35	30	30	25	-	50	-	40	100	100	75	50	-
F1160	90	90	90	55	-	45	-	55	145	145	105	-	-
F1163	135	135	135	-	-	105	115	-	-	-	-	85	-
F1166	98	98	98	65	65	-	-	98	-	-	-	-	50
F1169	98	98	98	65	65	-	-	98	-	-	-	-	50
F1172	105	105	105	75	75	-	-	-	-	-	-	-	30



VELOCITÀ DI TAGLIO

 $V_c = m/min.$

CUTTING SPEED

 $V_c = m/min.$

Codice	Acciai					Inox		Ghisa	Alluminio & Materiali non ferrosi			Leghe di Titanio	Acciai Temprati
	< 500 N/mm ²	< 750 N/mm ²	< 900 N/mm ²	< 1100 N/mm ²	< 1500 N/mm ²	< 800 N/mm ²	> 800 N/mm ²		Alu Si <10%	Alu Si >10%	Mat. non Ferrosi		
F1175	105	105	105	75	75	65	-	-	-	-	-	65	-
F1178	40	40	40	40	30	-	-	-	-	-	-	-	25
F1181	70	70	70	45	45	35	-	55	145	145	105	-	-
F1184	90	90	90	55	55	45	-	55	145	145	105	-	-
F1187	125	125	125	95	95	135	95	-	-	-	-	95	-
F1190	70	70	70	45	45	35	-	55	145	145	105	-	-
F1193	-	-	-	-	-	-	-	-	350	350	-	-	-
F1196	90	90	90	55	55	45	-	55	145	145	105	-	-
F1199	75	75	75	50	30	-	-	-	-	-	-	-	20
F1202	125	125	125	95	95	135	95	-	-	-	-	95	-
F1205	135	135	135	110	50	-	-	65	195	195	-	-	-
F1208	135	135	135	110	50	-	-	65	195	195	-	-	-
F1211	135	135	135	110	50	-	-	65	195	195	-	-	-
F1214	135	135	135	110	50	-	-	65	195	195	-	-	-
F1217	160	160	160	130	60	-	-	-	-	-	-	-	60
F1220	135	135	135	110	50	-	-	65	195	195	-	-	-
F1223	130	130	130	105	50	-	-	-	-	-	-	-	50
F1226	30	30	25	-	-	-	-	45	135	135	-	-	-
F1229	135	135	135	110	50	-	-	65	195	195	-	-	-
F1232	135	135	135	110	110	-	-	-	-	-	-	-	50
F1235	160	160	160	130	60	-	-	160	-	-	-	-	60
F1238	140	140	140	-	-	70	75	-	-	-	-	55	-
F1241	70	70	70	50	50	-	-	-	-	-	-	-	-
F1244	80	80	80	55	55	-	-	-	-	-	-	-	35
F1247	-	-	-	-	-	-	-	-	350	350	-	-	-
F1250	-	-	-	-	-	-	-	-	198	198	-	-	-
F1253	125	125	125	95	95	135	95	-	-	-	-	95	-
F1256	125	125	125	95	95	135	95	-	-	-	-	95	-
F1259	125	125	125	90	-	-	-	-	-	-	-	-	-
F1262	294	294	294	234	234	158	-	-	-	-	-	158	-
F1265	80	80	80	55	55	-	-	-	-	-	-	-	35
F1268	125	125	125	75	45	-	-	-	-	-	-	-	25
F1271	125	125	125	90	-	-	-	-	-	-	-	-	-
F1274	90	90	90	82	82	-	-	-	-	-	-	-	-
F1277	100	100	100	70	45	-	-	-	-	-	-	-	45
F1280	160	160	160	130	60	-	-	-	-	-	-	-	60
F1283	320	320	320	300	115	-	-	320	-	-	-	-	-
F1286	105	105	105	105	130	-	-	-	-	-	-	-	125
F1289	90	90	90	55	-	45	-	55	145	145	105	-	-
F2001	65	55	45	25	-	-	20	55	-	-	-	-	-
F2004	65	55	45	25	-	-	20	55	-	-	-	-	-
F2007	65	55	45	25	-	-	20	55	-	-	-	-	-
F2010	75	70	50	35	-	-	25	70	-	-	-	-	-
F2013	55	40	30	25	-	25	-	40	-	-	-	-	-
F2016	55	40	30	25	-	25	-	40	-	-	-	-	-
F2019	75	70	50	35	-	-	25	70	-	-	-	-	-
F2022	55	40	30	25	-	25	-	-	-	-	-	-	-
F3001	-	-	-	-	-	-	-	-	207	207	-	-	-
F3004	35	30	30	15	-	-	-	-	105	105	-	-	-
F3007	-	-	-	-	-	-	-	-	130	130	130	-	-
F3010	35	35	25	15	-	-	-	-	-	-	-	-	-
F3013	35	30	30	15	-	-	-	-	105	105	-	-	-
F3019	35	35	25	15	-	-	-	-	-	-	-	-	-
F3022	35	30	30	15	-	-	-	-	105	105	-	-	-
F3025	35	30	30	15	-	-	-	-	105	105	-	-	-
F3028	-	-	-	-	-	-	-	-	130	130	130	-	-
F3031	35	30	30	15	-	-	-	-	105	105	-	-	-
F3034	35	30	30	15	-	-	-	-	105	105	-	-	-

VELOCITÀ DI TAGLIO
Vc = m/min.

CUTTING SPEED
Vc = m/min.

Codice	Acciai					Inox		Ghisa	Alluminio & Materiali non ferrosi			Leghe di Titanio	Acciai Temprati
	< 500 N/mm ²	< 750 N/mm ²	< 900 N/mm ²	< 1100 N/mm ²	< 1500 N/mm ²	< 800 N/mm ²	> 800 N/mm ²		Alu Si <10%	Alu Si >10%	Mat. non Ferrosi		
F3037	35	30	25	15	-	-	-	-	105	105	-	-	-
F3040	35	35	25	15	-	-	-	-	-	-	-	-	-
F3043	35	30	25	15	-	-	-	-	105	105	-	-	-
F3049	35	35	25	15	-	-	-	-	-	-	-	-	-
F3052	35	30	25	15	-	-	-	-	105	105	-	-	-
F3055	35	30	25	15	-	-	-	-	105	105	-	-	-
F3058	35	30	25	15	-	-	-	-	85	85	-	-	-
F3061	35	30	25	15	-	-	-	-	105	105	-	-	-
F3064	35	30	25	15	-	-	-	-	105	105	-	-	-
F3070	35	30	25	15	-	-	-	-	105	105	-	-	-
F3073	35	35	25	15	-	-	-	-	-	-	-	-	-
F3076	35	30	25	15	-	-	-	-	85	85	-	-	-
F3079	35	30	25	15	-	-	-	-	85	85	-	-	-
F3082	35	30	25	15	-	-	-	-	105	105	-	-	-
F3085	35	35	25	15	-	-	-	-	-	-	-	-	-
F3088	35	30	25	15	-	-	-	-	85	85	-	-	-
F3091	35	30	25	15	-	-	-	-	85	85	-	-	-
F3094	35	30	25	15	-	-	-	-	85	85	-	-	-
F3097	35	30	25	15	-	-	-	-	85	85	-	-	-
F3100	35	30	25	15	-	-	-	-	105	105	-	-	-
F3103	35	30	25	15	-	-	-	-	105	105	-	-	-
F3106	35	30	25	15	-	-	-	-	105	105	-	-	-
F3109	35	30	25	15	-	-	-	-	105	105	-	-	-
F3112	35	30	25	15	-	-	-	-	105	105	-	-	-
F3115	35	30	25	15	-	-	-	-	105	105	-	-	-
F3118	40	30	15	10	-	-	-	-	95	95	-	-	-
F3121	40	30	15	10	-	-	-	-	95	95	-	-	-
F3124	40	30	20	15	-	-	-	-	100	-	-	-	-
F3127	40	30	20	15	-	-	-	-	100	-	-	-	-



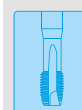
LAVORAZIONI IN CAVA
SLOTING

			Fz(mm)												
			Ø(mm)												
Cod.	ap(mm) <3.00 & >3.00	ae (mm)	2,00	4,00	6,00	8,00	10,00	12,00	14,00	16,00	18,00	20,00	25,00	32,00	40,00
F1001	1,5 X Ø	Ø	0,065	0,12	0,18	0,244	0,333	0,44	-	-	-	-	-	-	-
F1004	fino a Ø3 ► 0,2 X Ø Da Ø4 ► 0,5 x Ø	Ø	0,010	0,025	0,041	0,05	0,05	0,048	0,048	0,05	-	0,05	-	-	-
F1007	fino a Ø3 ► 0,2 X Ø Da Ø4 ► 0,5 x Ø	Ø	0,010	0,025	0,041	0,05	0,05	0,048	0,048	0,05	-	0,05	-	-	-
F1010	fino a Ø3 ► 0,2 X Ø Da Ø4 ► 0,5 x Ø	Ø	0,010	0,025	0,041	0,05	0,05	0,048	0,048	0,05	-	0,05	-	-	-
F1013	fino a Ø3 ► 0,2 X Ø Da Ø4 ► 0,5 x Ø	Ø	0,010	0,025	0,041	0,05	0,05	0,048	0,048	0,05	-	0,05	-	-	-
F1016	fino a Ø3 ► 0,2 X Ø Da Ø4 ► 0,5 x Ø	Ø	0,007	0,019	0,032	0,043	0,048	0,048	-	0,052	-	0,048	0,044	-	-
F1019	0,05 X Ø	Ø	0,004	0,009	0,017	0,028	0,028	0,03	-	0,028	-	0,027	-	-	-
F1022	fino a Ø3 ► 0,2 X Ø Da Ø4 ► 0,5 x Ø	Ø	0,010	0,025	0,041	0,05	0,05	0,048	0,048	0,05	-	0,05	-	-	-
F1025	fino a Ø3 ► 0,2 X Ø Da Ø4 ► 0,5 x Ø	Ø	0,010	0,025	0,041	0,05	0,05	0,048	0,048	0,05	-	0,05	-	-	-
F1028	0,5 X Ø	Ø	-	0,03	0,045	0,065	0,072	0,09	0,12	0,13	0,14	0,16	-	-	-
F1031	fino a Ø3 ► 0,2 X Ø Da Ø4 ► 0,5 x Ø	Ø	0,010	0,025	0,041	0,05	0,05	0,048	0,048	0,05	-	0,05	-	-	-
F1034	fino a Ø3 ► 0,2 X Ø Da Ø4 ► 0,5 x Ø	Ø	0,010	0,025	0,041	0,05	0,05	0,048	0,048	0,05	-	0,05	-	-	-
F1037	fino a Ø3 ► 0,2 X Ø Da Ø4 ► 0,5 x Ø	Ø	0,010	0,025	0,041	0,05	0,05	0,048	0,048	0,05	-	0,05	-	-	-
F1040	0,05 X Ø	Ø	0,004	0,009	0,018	0,024	0,03	0,027	-	0,03	-	0,03	-	-	-
F1043	1X Ø	Ø	0,007	0,015	0,023	0,03	0,038	0,045	0,053	0,075	-	0,094	-	-	-
F1046	fino a Ø3 ► 0,2 X Ø Da Ø4 ► 0,5 x Ø	Ø	0,010	0,025	0,041	0,05	0,05	0,048	0,048	0,05	-	0,05	-	-	-
F1049	0,05 X Ø	Ø	0,002	0,004	0,008	0,013	0,013	0,014	-	0,013	0,013	0,012	-	-	-
F1052	fino a Ø3 ► 0,2 X Ø Da Ø4 ► 0,5 x Ø	Ø	0,005	0,012	0,02	0,024	0,023	0,022	0,022	0,023	-	0,024	-	-	-
F1055	fino a Ø3 ► 0,2 X Ø Da Ø4 ► 0,5 x Ø	Ø	0,005	0,012	0,02	0,024	0,023	0,022	0,022	0,023	-	0,024	-	-	-
F1058	fino a Ø3 ► 0,2 X Ø Da Ø4 ► 0,5 x Ø	Ø	0,005	0,012	0,02	0,024	0,023	0,022	0,022	0,023	-	0,024	-	-	-
F1061	fino a Ø3 ► 0,2 X Ø Da Ø4 ► 0,5 x Ø	Ø	0,005	0,012	0,02	0,024	0,023	0,022	0,022	0,023	-	0,024	-	-	-
F1064	fino a Ø3 ► 0,2 X Ø Da Ø4 ► 0,5 x Ø	Ø	0,005	0,012	0,02	0,024	0,023	0,022	0,022	0,023	-	0,024	-	-	-
F1067	fino a Ø3 ► 0,2 X Ø Da Ø4 ► 0,5 x Ø	Ø	0,005	0,012	0,02	0,024	0,023	0,022	0,022	0,023	-	0,024	-	-	-
F1070	0,05 X Ø	Ø	0,002	0,004	0,008	0,013	0,013	0,014	-	0,013	0,013	0,012	-	-	-
F1073	fino a Ø3 ► 0,2 X Ø Da Ø4 ► 0,5 x Ø	Ø	0,005	0,012	0,02	0,024	0,023	0,022	0,022	0,023	-	0,024	-	-	-
F1076	fino a Ø3 ► 0,2 X Ø Da Ø4 ► 0,5 x Ø	Ø	0,005	0,012	0,02	0,024	0,023	0,022	0,022	0,023	-	0,024	-	-	-
F1079	fino a Ø3 ► 0,2 X Ø Da Ø4 ► 0,5 x Ø	Ø	0,005	0,012	0,02	0,024	0,023	0,022	0,022	0,023	-	0,024	-	-	-
F1082	0,5 X Ø	Ø	-	0,019	0,029	0,042	0,051	0,063	-	0,075	-	0,096	-	-	-
F1085	fino a Ø3 ► 0,2 X Ø Da Ø4 ► 0,5 x Ø	Ø	0,005	0,012	0,02	0,024	0,023	0,022	0,022	0,023	-	0,024	-	-	-
F1088	fino a Ø3 ► 0,2 X Ø Da Ø4 ► 0,5 x Ø	Ø	0,005	0,012	0,02	0,024	0,023	0,022	0,022	0,023	-	0,024	-	-	-
F1091	fino a Ø3 ► 0,2 X Ø Da Ø4 ► 0,5 x Ø	Ø	0,005	0,012	0,02	0,024	0,023	0,022	0,022	0,023	-	0,024	-	-	-
F1094	0,5 X Ø	Ø	-	-	0,019	0,025	0,028	0,029	-	0,032	0,03	0,021	0,022	-	-
F1118	Da Ø4 a Ø10 ► 0,25 x Ø Da Ø12 a Ø16 ► 0,15 X Ø Da Ø18 a Ø25 ► 0,10 X Ø	Ø	-	-	0,01	0,013	0,017	0,02	-	0,019	-	0,015	-	-	-
F1121	Ø	Ø	-	0,008	0,016	0,027	0,039	0,047	0,049	0,053	0,059	0,065	0,063	-	-

LAVORAZIONI IN CAVA

SLOTING

			Fz(mm)													
			Ø(mm)													
Cod.	ap(mm) <3.00 & >3.00	ae (mm)	2,00	4,00	6,00	8,00	10,00	12,00	14,00	16,00	18,00	20,00	25,00	32,00	40,00	
F1124	Ø	Ø	-	0,008	0,018	0,028	0,048	0,056	0,06	0,063	0,07	0,077	0,078	-	-	
F1142	Da Ø4 a Ø10 ► 0,25 x Ø Da Ø12 a Ø16 ► 0,15 X Ø Da Ø18 a Ø25 ► 0,10 X Ø	Ø	-	-	0,013	0,018	0,017	0,02	0,024	0,023	0,023	0,023	0,023	-	-	
F1145	Da Ø4 a Ø10 ► 0,25 x Ø Da Ø12 a Ø16 ► 0,15 X Ø Da Ø18 a Ø25 ► 0,10 X Ø	Ø	-	0,009	0,01	0,013	0,017	0,02	0,019	0,019	-	0,015	0,019	-	-	
F1151	Ø	Ø	-	0,008	0,016	0,027	0,039	0,047	0,049	0,053	0,059	0,065	0,063	-	-	
F1154	Ø	Ø	-	0,008	0,018	0,028	0,048	0,056	0,06	0,063	0,07	0,077	0,078	-	-	
F1181	Da Ø1 a Ø6 ► 0,2 X Ø Da Ø8 a Ø20 ► 0,3 X Ø	Ø	0,010	0,025	0,041	0,05	0,05	0,048	-	-	-	-	-	-	-	
F1187	Ø	Ø	-	0,008	0,018	0,028	0,048	0,056	0,06	0,063	0,07	0,077	0,078	-	-	
F1190	Da Ø1 a Ø6 ► 0,2 X Ø Da Ø8 a Ø20 ► 0,3 X Ø	Ø	0,010	0,025	0,041	0,05	0,05	0,048	-	-	-	-	-	-	-	
F1193	0,5 X Ø	Ø	-	0,019	0,029	0,042	0,051	0,063	-	0,075	-	0,096	-	-	-	
F1202	Ø	Ø	-	0,008	0,018	0,028	0,048	0,056	0,06	0,063	0,07	0,077	0,078	-	-	
F1205	Da Ø1 a Ø6 ► 0,2 X Ø Da Ø8 a Ø20 ► 0,3 X Ø	0,2 X Ø	0,023	0,031	0,06	0,08	0,1	0,12	0,128	0,141	0,148	0,158	-	-	-	
F1208	Da Ø1 a Ø6 ► 0,2 X Ø Da Ø8 a Ø20 ► 0,3 X Ø	0,2 X Ø	0,023	0,031	0,06	0,08	0,1	0,12	0,128	0,141	0,148	0,158	-	-	-	
F1211	Da Ø1 a Ø6 ► 0,2 X Ø Da Ø8 a Ø20 ► 0,3 X Ø	0,2 X Ø	0,023	0,031	0,06	0,08	0,1	0,12	0,128	0,141	0,148	0,158	-	-	-	
F1214	Da Ø1 a Ø6 ► 0,2 X Ø Da Ø8 a Ø20 ► 0,3 X Ø	0,2 X Ø	0,023	0,031	0,06	0,08	0,1	0,12	0,128	0,141	0,148	0,158	-	-	-	
F1217	Da Ø1 a Ø6 ► 0,2 X Ø Da Ø8 a Ø20 ► 0,3 X Ø	0,1 X Ø	0,016	0,021	0,03	0,045	0,055	0,07	-	0,091	-	0,113	-	-	-	
F1220	Da Ø1 a Ø6 ► 0,2 X Ø Da Ø8 a Ø20 ► 0,3 X Ø	0,2 X Ø	0,023	0,031	0,06	0,08	0,1	0,12	0,128	0,141	0,148	0,158	-	-	-	
F1223	Da Ø1 a Ø6 ► 0,2 X Ø Da Ø8 a Ø20 ► 0,3 X Ø	0,1 X Ø	0,012	0,021	0,029	0,044	0,055	0,07	-	0,089	-	0,112	-	-	-	
F1226	0,3 X Ø	0,7 X Ø	0,005	0,011	0,016	0,02	0,026	0,031	0,036	0,042	0,047	0,052	-	-	-	
F1229	Da Ø1 a Ø6 ► 0,2 X Ø Da Ø8 a Ø20 ► 0,3 X Ø	0,2 X Ø	0,023	0,031	0,06	0,08	0,1	0,12	0,128	0,141	0,148	0,158	-	-	-	
F1232	Da Ø1 a Ø6 ► 0,2 X Ø Da Ø8 a Ø20 ► 0,3 X Ø	0,2 X Ø	0,010	0,024	0,046	0,06	0,076	0,089	0,099	0,108	0,111	0,119	-	-	-	
F1235	Da Ø1 a Ø6 ► 0,2 X Ø Da Ø8 a Ø20 ► 0,3 X Ø	0,1 X Ø	0,008	0,016	0,022	0,033	0,042	0,053	-	0,069	-	0,084	-	-	-	
F1238	Ø	0,5 X Ø	-	0,02	0,041	0,045	0,05	0,055	-	0,06	0,064	0,065	0,069	-	-	
F1247	0,5 X Ø	Ø	-	0,019	0,029	0,042	0,051	0,063	-	0,075	-	0,096	-	-	-	
F1250	1,5 X Ø	Ø	-	-	0,168	0,167	0,179	0,167	-	0,167	-	0,165	-	-	-	
F1253	Ø	Ø	-	0,008	0,018	0,028	0,048	0,056	0,06	0,063	0,07	0,077	0,078	-	-	
F1256	Ø	Ø	-	0,008	0,018	0,028	0,048	0,056	0,06	0,063	0,07	0,077	0,078	-	-	
F1259	Ø	Ø	-	0,008	0,016	0,027	0,039	0,047	0,049	0,053	0,059	0,065	0,063	-	-	
F1262	Da Ø4 a Ø10 ► 0,25 x Ø Da Ø12 a Ø16 ► 0,15 X Ø Da Ø18 a Ø25 ► 0,10 X Ø	Ø	-	-	0,01	0,013	0,017	0,02	-	0,019	-	0,015	-	-	-	
F1271	Ø	Ø	-	0,008	0,016	0,027	0,039	0,047	0,049	0,053	0,059	0,065	0,063	-	-	
F1280	Da Ø1 a Ø6 ► 0,2 X Ø Da Ø8 a Ø20 ► 0,3 X Ø	0,1 X Ø	0,016	0,021	0,03	0,045	0,055	0,07	-	0,091	-	0,113	-	-	-	
F1283	0,02 X Ø	0,05 X Ø	-	0,044	0,054	0,061	0,071	0,075	-	0,1	-	-	-	-	-	
F1286	Da Ø1 a Ø4 ► 0,05 X Ø Da Ø5 a Ø12 ► 0,25 X Ø	0,1 X Ø	0,026	0,052	0,068	0,075	0,083	0,093	-	-	-	-	-	-	-	
F2001	0,5 X Ø	Ø	0,010	0,023	0,037	0,048	0,073	0,073	0,08	0,091	0,094	0,097	0,104	-	-	
F2004	0,5 X Ø	Ø	0,010	0,023	0,037	0,048	0,073	0,073	0,08	0,091	0,094	0,097	0,104	-	-	
F2007	0,5 X Ø	Ø	0,005	0,012	0,023	0,032	0,045	0,053	0,057	0,064	0,067	0,074	0,113	-	-	



LAVORAZIONI IN CAVA
SLOTING

			Fz(mm)												
			Ø(mm)												
Cod.	ap(mm) <3.00 & >3.00	ae (mm)	2,00	4,00	6,00	8,00	10,00	12,00	14,00	16,00	18,00	20,00	25,00	32,00	40,00
F3001	fino a Ø3 ► 0,2 X Ø Da Ø 4 ► 0,5 x Ø	Ø	-	0,053	0,055	0,053	0,054	-	-	-	-	-	-	-	-
F3004	0,5 X Ø	Ø	0,004	0,013	0,025	0,039	0,05	0,063	0,071	0,078	0,088	0,088	0,097	0,102	0,111
F3007	0,5 X Ø	Ø	-	-	0,05	0,071	0,12	0,12	0,177	0,177	0,283	-	-	-	-
F3013	0,5 X Ø	Ø	0,004	0,013	0,025	0,039	0,05	0,063	0,071	0,078	0,088	0,088	0,097	0,102	0,111
F3013	0,5 X Ø	Ø	0,004	0,013	0,025	0,039	0,05	0,063	0,071	0,078	0,088	0,088	0,097	0,102	0,111
F3022	0,5 X Ø	Ø	0,004	0,013	0,025	0,039	0,05	0,063	0,071	0,078	0,088	0,088	0,097	0,102	0,111
F3025	0,5 X Ø	Ø	0,004	0,013	0,025	0,039	0,05	0,063	0,071	0,078	0,088	0,088	0,097	0,102	0,111
F3028	0,5 X Ø	Ø	-	-	0,05	0,071	0,12	0,12	0,177	0,177	0,283	-	-	-	-
F3031	0,5 X Ø	Ø	0,004	0,013	0,025	0,039	0,05	0,063	0,071	0,078	0,088	0,088	0,097	0,102	0,111
F3034	0,5 X Ø	Ø	0,004	0,013	0,025	0,039	0,05	0,063	0,071	0,078	0,088	0,088	0,097	0,102	0,111
F3037	0,5 X Ø	Ø	0,002	0,006	0,011	0,019	0,023	0,029	0,033	0,037	0,042	0,042	0,043	0,04	0,046
F3043	0,5 X Ø	Ø	0,002	0,006	0,011	0,019	0,023	0,029	0,033	0,037	0,042	0,042	0,043	0,04	0,046
F3043	0,5 X Ø	Ø	0,002	0,006	0,011	0,019	0,023	0,029	0,033	0,037	0,042	0,042	0,043	0,04	0,046
F3052	0,5 X Ø	Ø	0,002	0,006	0,011	0,019	0,023	0,029	0,033	0,037	0,042	0,042	0,043	0,04	0,046
F3055	0,5 X Ø	Ø	0,002	0,006	0,011	0,019	0,023	0,029	0,033	0,037	0,042	0,042	0,043	0,04	0,046
F3061	0,5 X Ø	Ø	0,002	0,006	0,011	0,019	0,023	0,029	0,033	0,037	0,042	0,042	0,043	0,04	0,046
F3064	0,5 X Ø	Ø	0,002	0,006	0,011	0,019	0,023	0,029	0,033	0,037	0,042	0,042	0,043	0,04	0,046
F3064	0,5 X Ø	Ø	0,002	0,006	0,011	0,019	0,023	0,029	0,033	0,037	0,042	0,042	0,043	0,04	0,046
F3118	0,3 X Ø	0,7 X Ø	-	0,013	0,023	0,036	0,054	0,061	-	0,079	-	0,083	0,091	-	-
F3121	0,3 X Ø	0,7 X Ø	-	0,013	0,023	0,036	0,054	0,061	-	0,079	-	0,083	0,091	-	-
F3124	0,3 X Ø	0,7 X Ø	-	0,013	0,023	0,036	0,054	0,061	-	0,079	-	0,083	0,091	-	-
F3127	0,3 X Ø	0,7 X Ø	-	0,013	0,023	0,036	0,054	0,061	-	0,079	-	0,083	0,091	-	-
T1100	-	-	-	0,028	0,044	0,06	0,066	-	-	0,114	-	0,133		-	-

LAVORAZIONI SUL FIANCO

SIDE CUTTING

			Fz(mm)														
			Ø(mm)														
Cod.	ap(mm) <3.00	ae (mm)	2,00	4,00	6,00	8,00	10,00	12,00	14,00	16,00	18,00	20,00	25,00	32,00	40,00	50,00	
F1028	Ø	Da Ø3 a Ø10 ► 0,25 x Ø Da Ø12 a Ø20 ► 0,5 x Ø	-	0,035	0,050	0,070	0,075	0,100	0,130	0,140	0,150	0,180	-	-	-	-	
F1049	Ø	0,05 X Ø	0,002	0,005	0,010	0,016	0,017	0,017	-	0,017	0,015	0,015	-	-	-	-	
F1052	Ø	0,1 X Ø	0,006	0,002	0,031	0,038	0,038	0,037	0,037	0,038	-	0,037	-	-	-	-	
F1055	Ø	0,1 X Ø	0,006	0,002	0,031	0,038	0,038	0,037	0,037	0,038	-	0,037	-	-	-	-	
F1058	Ø	0,1 X Ø	0,006	0,002	0,031	0,038	0,038	0,037	0,037	0,038	-	0,037	-	-	-	-	
F1061	Ø	0,1 X Ø	0,006	0,002	0,031	0,038	0,038	0,037	0,037	0,038	-	0,037	-	-	-	-	
F1064	Ø	0,1 X Ø	0,006	0,002	0,031	0,038	0,038	0,037	0,037	0,038	-	0,037	-	-	-	-	
F1067	Ø	0,1 X Ø	0,006	0,002	0,031	0,038	0,038	0,037	0,037	0,038	-	0,037	-	-	-	-	
F1070	Ø	0,05 X Ø	0,002	0,005	0,010	0,016	0,017	0,017	-	0,017	0,015	0,015	-	-	-	-	
F1073	Ø	0,1 X Ø	0,006	0,002	0,031	0,038	0,038	0,037	0,037	0,038	-	0,037	-	-	-	-	
F1076	Ø	0,1 X Ø	0,006	0,002	0,031	0,038	0,038	0,037	0,037	0,038	-	0,037	-	-	-	-	
F1079	Ø	0,1 X Ø	0,006	0,002	0,031	0,038	0,038	0,037	0,037	0,038	-	0,037	-	-	-	-	
F1082	Da Ø1,5 a Ø2,5 ► X Ø	0,15 X Ø	-	0,024	0,036	0,051	0,052	0,063	-	0,096	-	0,114	-	-	-	-	
F1085	Ø	0,1 X Ø	0,006	0,002	0,031	0,038	0,038	0,037	0,037	0,038	-	0,037	-	-	-	-	
F1088	Ø	0,1 X Ø	0,006	0,002	0,031	0,038	0,038	0,037	0,037	0,038	-	0,037	-	-	-	-	
F1091	Ø	0,1 X Ø	0,006	0,002	0,031	0,038	0,038	0,037	0,037	0,038	-	0,037	-	-	-	-	
F1094	Ø	0,05 X Ø	-	-	0,029	0,042	0,046	0,044	-	0,048	0,046	0,034	0,034	-	-	-	
F1097	Ø	0,1 X Ø	0,006	0,002	0,031	0,038	0,038	0,037	0,038	0,037	-	0,038	-	-	-	-	
F1100	Ø	0,1 X Ø	0,006	0,002	0,031	0,038	0,038	0,037	0,038	0,037	-	0,038	-	-	-	-	
F1103	Ø	0,1 X Ø	0,006	0,002	0,031	0,038	0,038	0,037	0,038	0,037	-	0,038	-	-	-	-	
F1106	Ø	0,1 X Ø	0,006	0,002	0,031	0,038	0,038	0,037	0,038	0,037	-	0,038	-	-	-	-	
F1109	Ø	0,1 X Ø	0,006	0,002	0,031	0,038	0,038	0,037	0,038	0,037	-	0,038	-	-	-	-	
F1112	Ø	0,05 X Ø	0,002	0,005	0,010	0,016	0,017	0,017	-	0,017	-	0,015	0,014	-	-	-	
F1115	Ø	0,05 X Ø	0,006	0,018	0,029	0,042	0,045	0,044	-	0,047	-	0,045	0,044	-	-	-	
F1118	1,5 X Ø	Da Ø4 a Ø10 ► 0,015 x Ø Da Ø12 a Ø16 ► 0,01 x Ø Da Ø18 a Ø25 ► 0,05 x Ø	-	-	0,017	0,023	0,028	0,034	-	0,031	-	0,025	-	-	-	-	
F1121	1,2 X Ø	0,5 X Ø	-	0,008	0,016	0,027	0,039	0,047	0,049	0,053	0,059	0,065	0,063	-	-	-	
F1124	1,2 X Ø	0,5 X Ø	-	0,008	0,018	0,028	0,048	0,056	0,060	0,063	0,070	0,077	0,078	-	-	-	
F1127	Ø	0,1 X Ø	0,006	0,002	0,031	0,038	0,038	0,037	0,038	0,037	-	0,038	-	-	-	-	
F1130	Ø	0,1 X Ø	0,006	0,002	0,031	0,038	0,038	0,037	0,038	0,037	-	0,038	-	-	-	-	
F1133	Ø	0,1 X Ø	0,006	0,002	0,031	0,038	0,038	0,037	0,038	0,037	-	0,038	-	-	-	-	
F1136	Ø	0,02 X Ø	0,004	0,008	0,016	0,021	0,027	0,025	-	0,027	-	0,027	-	-	-	-	
F1139	Ø	0,05 X Ø	-	-	0,025	0,033	0,036	0,039	0,036	0,033	0,034	0,038	0,036	-	-	-	
F1142	1,5 X Ø	Da Ø4 a Ø10 ► 0,015 x Ø Da Ø12 a Ø16 ► 0,01 x Ø Da Ø18 a Ø25 ► 0,05 x Ø	-	-	0,023	0,030	0,028	0,034	0,040	0,039	0,039	0,038	0,038	-	-	-	



LAVORAZIONI SUL FIANCO
SIDE CUTTING

			Fz(mm)														
			Ø(mm)														
Cod.	ap(mm) <3.00	ae (mm)	2,00	4,00	6,00	8,00	10,00	12,00	14,00	16,00	18,00	20,00	25,00	32,00	40,00	50,00	
F1145	1,5 X Ø	Da Ø4 a Ø10 ► 0,015 x Ø Da Ø12 a Ø16 ► 0,01 x Ø Da Ø18 a Ø25 ► 0,05 x Ø	-	0,015	0,017	0,023	0,028	0,034	0,032	0,031	-	0,025	0,032	-	-	-	
F1148	1,5 X Ø	0,3 X Ø	-	-	0,022	0,023	0,028	0,033	0,040	0,040	0,041	0,039	0,039	-	-	-	
F1151	1,5 X Ø	0,5 X Ø	-	0,008	0,016	0,027	0,039	0,047	0,049	0,053	0,059	0,065	0,063	-	-	-	
F1154	1,5 X Ø	0,5 X Ø	-	0,008	0,018	0,028	0,048	0,056	0,060	0,063	0,070	0,077	0,078	-	-	-	
F1157	1,5 X Ø	0,1 X Ø	0,010	0,023	0,035	0,045	0,056	0,068	0,079	0,110	-	0,138	-	-	-	-	
F1160	Ø	0,1 X Ø	0,006	0,002	0,031	0,038	0,038	0,037	0,038	0,037	-	0,038	-	-	-	-	
F1163	1,25 X Ø	0,25 X Ø	-	-	0,030	0,032	0,038	0,063	0,065	0,069	-	0,076	-	-	-	-	
F1166	1,5 X Ø	0,03 X Ø		0,033	0,030	0,038	0,045	0,053	0,057	0,062	0,066	0,070	-	-	-	-	
F1169	1,5 X Ø	0,03 X Ø	-	-	-	-	-	0,025	-	0,030	-	0,035	-	-	-	-	
F1172	Ø	0,05 X Ø	-	-	0,022	0,030	0,035	0,036	-	0,034	-	0,028	0,026	-	-	-	
F1175	1,5 X Ø	0,05 X Ø	-	-	0,054	0,074	0,095	0,104	-	0,111	-	0,086	0,079	-	-	-	
F1178	3 X Ø	0,005 X Ø	-	-	0,030	0,038	0,046	0,051	-	0,053	-	0,060	0,064	-	-	-	
F1184	Ø	0,1 X Ø	0,006	0,019	0,031	0,038	0,038	0,037	-	-	-	-	-	-	-	-	
F1187	1,2 X Ø	0,5 X Ø	-	0,008	0,018	0,028	0,048	0,056	0,060	0,063	0,070	0,077	0,078	-	-	-	
F1193	2,5 X Ø	0,15 X Ø	-	0,024	0,036	0,051	0,053	0,063	-	0,096	-	0,114	-	-	-	-	
F1196	Ø	0,1 X Ø	0,006	0,019	0,031	0,038	0,038	0,037	-	-	-	-	-	-	-	-	
F1199	2 X Ø	0,02 X Ø	-	0,008	0,013	0,017	0,021	0,021	-	0,022	-	0,023	-	-	-	-	
F1202	1,5 X Ø	0,5 X Ø	-	0,008	0,018	0,028	0,048	0,056	0,060	0,063	0,070	0,077	0,078	-	-	-	
F1247	Da Ø1,5 a Ø2,5 ► X Ø	0,15 X Ø	-	0,024	0,036	0,051	0,052	0,063	-	0,096	-	0,114	-	-	-	-	
F1250	Ø	0,5 X Ø	-	-	0,168	0,168	0,169	0,165	-	0,167	-	0,163	-	-	-	-	
F1253	1,2 X Ø	0,5 X Ø	-	0,008	0,018	0,028	0,048	0,056	0,060	0,063	0,070	0,077	0,078	-	-	-	
F1256	1,2 X Ø	0,5 X Ø	-	0,008	0,018	0,028	0,048	0,056	0,060	0,063	0,070	0,077	0,078	-	-	-	
F1259	1,2 X Ø	0,5 X Ø	-	0,008	0,016	0,027	0,039	0,047	0,049	0,053	0,059	0,065	0,063	-	-	-	
F1262	1,5 X Ø	Da Ø4 a Ø10 ► 0,015 x Ø Da Ø12 a Ø16 ► 0,01 x Ø Da Ø18 a Ø25 ► 0,05 x Ø	-	-	0,017	0,023	0,028	0,034	-	0,031	-	0,025	-	-	-	-	
F1268	Ø	0,05 X Ø	0,002	0,005	0,01	0,016	0,017	0,017	-	0,016	-	-	-	-	-	-	
F1271	1,2 X Ø	0,5 X Ø	-	0,008	0,016	0,027	0,039	0,047	0,049	0,053	0,059	0,065	0,063	-	-	-	
F1289	Ø	0,1 X Ø	0,006	0,002	0,031	0,038	0,038	0,037	0,038	0,037	-	0,038	-	-	-	-	
F2007	1,5 X Ø	0,1 X Ø	0,006	0,013	0,022	0,035	0,047	0,056	0,063	0,070	0,073	0,083	0,111	-	-	-	
F2010	1,5 X Ø	0,1 X Ø	0,006	0,019	0,031	0,040	0,056	0,064	0,067	0,075	0,075	0,080	0,087	-	-	-	
F2013	1,5 X Ø	0,5 X Ø	-	-	0,025	0,039	0,045	0,064	0,074	0,085	0,093	0,107	0,103	-	-	-	
F2016	1,5 X Ø	0,5 X Ø	-	-	0,019	0,029	0,045	0,064	0,059	0,068	0,062	0,071	0,085	-	-	-	
F2019	1,5 X Ø	0,1 X Ø	0,006	0,019	0,031	0,040	0,056	0,064	0,067	0,075	0,075	0,080	0,087	-	-	-	
F2022	1,5 X Ø	0,5 X Ø	-	-	0,025	0,039	0,045	0,064	0,074	0,085	0,093	0,107	0,103	-	-	-	
F3007	Ø	Da Ø3 a Ø10 ► 0,25 x Ø Da Ø12 a Ø20 ► 0,5 x Ø	-	-	0,064	0,092	0,150	0,150	0,229	0,229	0,370	0,370	-	-	-	-	

LAVORAZIONI SUL FIANCO

SIDE CUTTING

			Fz(mm)													
			Ø(mm)													
Cod.	ap(mm) ≤3.00	ae (mm)	2,00	4,00	6,00	8,00	10,00	12,00	14,00	16,00	18,00	20,00	25,00	32,00	40,00	50,00
F3010	1,5 X Ø	0,3 X Ø	0,002	0,010	0,013	0,022	0,027	0,033	0,038	0,044	0,048	0,053	0,038	-	-	-
F3019	1,5 X Ø	0,3 X Ø	0,002	0,010	0,013	0,022	0,027	0,033	0,038	0,044	0,048	0,053	0,038	-	-	-
F3028	Ø	Da Ø3 a Ø10 ► 0,25 x Ø Da Ø12 a Ø20 ► 0,5 x Ø	-	-	0,064	0,092	0,150	0,150	0,229	0,229	0,370	0,370	-	-	-	-
F3037	1,5 X Ø	0,1 X Ø	0,003	0,009	0,018	0,030	0,038	0,048	0,054	0,059	0,067	0,067	0,070	0,076	0,083	-
F3040	1,5 X Ø	0,3 X Ø	0,002	0,010	0,013	0,022	0,027	0,033	0,038	0,044	0,048	0,053	0,038	-	-	-
F3043	1,5 X Ø	0,1 X Ø	0,003	0,009	0,018	0,030	0,038	0,048	0,054	0,059	0,067	0,067	0,070	0,076	0,083	-
F3049	1,5 X Ø	0,3 X Ø	0,002	0,010	0,013	0,022	0,027	0,033	0,038	0,044	0,048	0,053	0,038	-	-	-
F3052	1,5 X Ø	0,1 X Ø	0,003	0,009	0,018	0,030	0,038	0,048	0,054	0,059	0,067	0,067	0,073	0,076	0,083	-
F3055	1,5 X Ø	0,1 X Ø	0,003	0,009	0,018	0,030	0,038	0,048	0,054	0,059	0,067	0,067	0,070	0,076	0,083	-
F3058	1,5 X Ø	0,5 X Ø	-	-	0,015	0,025	0,047	0,067	0,078	0,094	0,112	0,139	0,150	-	-	-
F3061	1,5 X Ø	0,1 X Ø	0,003	0,009	0,018	0,030	0,038	0,048	0,054	0,059	0,067	0,067	0,070	0,076	0,083	-
F3064	1,5 X Ø	0,1 X Ø	0,003	0,009	0,018	0,030	0,038	0,048	0,054	0,059	0,067	0,067	0,070	0,076	0,083	-
F3070	1,5 X Ø	0,1 X Ø	0,003	0,009	0,018	0,030	0,038	0,048	0,054	0,059	0,067	0,067	0,073	0,049	0,056	-
F3073	1,5 X Ø	0,3 X Ø	0,002	0,010	0,013	0,022	0,027	0,033	0,038	0,044	0,048	0,053	0,038	-	-	-
F3076	1,5 X Ø	0,5 X Ø	-	-	0,015	0,024	0,034	0,044	0,049	0,061	0,069	0,069	0,090	0,098	0,111	0,146
F3079	1,5 X Ø	0,5 X Ø	-	-	0,015	0,024	0,034	0,044	0,049	0,061	0,069	0,069	0,090	0,098	0,111	0,146
F3082	1,5 X Ø	0,1 X Ø	0,003	0,009	0,018	0,030	0,038	0,048	0,054	0,059	0,067	0,067	0,073	0,049	0,056	-
F3085	1,5 X Ø	0,3 X Ø	0,002	0,010	0,013	0,022	0,027	0,033	0,038	0,044	0,048	0,053	0,038	-	-	-
F3088	1,5 X Ø	0,5 X Ø	-	-	0,015	0,024	0,034	0,044	0,049	0,061	0,069	0,069	0,090	0,098	0,111	0,146
F3091	1,5 X Ø	0,5 X Ø	-	-	0,015	0,024	0,034	0,044	0,049	0,061	0,069	0,069	0,090	0,098	0,111	0,146
F3094	1,5 X Ø	0,5 X Ø	-	-	0,015	0,024	0,034	0,044	0,049	0,061	0,069	0,069	0,090	0,098	0,111	0,146
F3097	1,5 X Ø	0,5 X Ø	-	-	0,015	0,024	0,034	0,044	0,049	0,061	0,069	0,069	0,090	0,098	0,111	0,146
F3100	1,5 X Ø	0,1 X Ø	0,003	0,009	0,018	0,030	0,038	0,048	0,054	0,059	0,067	0,067	0,048	0,049	0,056	-
F3103	1,5 X Ø	0,1 X Ø	0,003	0,009	0,018	0,030	0,038	0,048	0,054	0,059	0,067	0,067	0,048	0,049	0,056	-
F3106	1,5 X Ø	0,1 X Ø	0,003	0,009	0,018	0,030	0,038	0,048	0,054	0,059	0,067	0,067	0,073	0,049	0,056	-
F3109	1,5 X Ø	0,1 X Ø	0,003	0,009	0,018	0,030	0,038	0,048	0,054	0,059	0,067	0,067	0,073	0,049	0,056	-
F3112	1,5 X Ø	0,1 X Ø	0,003	0,009	0,018	0,030	0,038	0,048	0,054	0,059	0,067	0,067	0,048	0,049	0,056	-
F3115	1,5 X Ø	0,1 X Ø	0,003	0,009	0,018	0,030	0,038	0,048	0,054	0,059	0,067	0,067	0,048	0,049	0,056	-



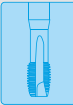
**LAVORAZIONI IN CAVA
ACCIAI INOX**
**SLOTING FOR
STAINLESS STEELS**

Cod.	ap(mm) <3,00 & >3,00	ae (mm)	Fz(mm)									
			Ø(mm)									
			2,00	4,00	6,00	8,00	10,00	12,00	14,00	16,00	18,00	20,00
F1004	fino a D3 ► 0,2 X Ø da D3 ► 0,5 X Ø	Ø	0,009	0,025	0,04	0,053	0,059	0,058	0,059	0,068	-	0,064
F1007	fino a D3 ► 0,2 X Ø da D3 ► 0,5 X Ø	Ø	0,009	0,025	0,04	0,053	0,059	0,058	0,059	0,068	-	0,064
F1010	fino a D3 ► 0,2 X Ø da D3 ► 0,5 X Ø	Ø	0,009	0,025	0,04	0,053	0,059	0,058	0,059	0,068	-	0,064
F1013	fino a D3 ► 0,2 X Ø da D3 ► 0,5 X Ø	Ø	0,009	0,025	0,04	0,053	0,059	0,058	0,059	0,068	-	0,064
F1022	fino a D3 ► 0,2 X Ø da D3 ► 0,5 X Ø	Ø	0,009	0,025	0,04	0,053	0,059	0,058	0,059	0,068	-	0,064
F1025	fino a D3 ► 0,2 X Ø da D3 ► 0,5 X Ø	Ø	0,009	0,025	0,04	0,053	0,059	0,058	0,059	0,068	-	0,064
F1031	fino a D3 ► 0,2 X Ø da D3 ► 0,5 X Ø	Ø	0,009	0,025	0,04	0,053	0,059	0,058	0,059	0,068	-	0,064
F1034	fino a D3 ► 0,2 X Ø da D3 ► 0,5 X Ø	Ø	0,009	0,025	0,04	0,053	0,059	0,058	0,059	0,068	-	0,064
F1037	fino a D3 ► 0,2 X Ø da D3 ► 0,5 X Ø	Ø	0,009	0,025	0,04	0,053	0,059	0,058	0,059	0,068	-	0,064
F1046	fino a D3 ► 0,2 X Ø da D3 ► 0,5 X Ø	Ø	0,009	0,025	0,04	0,053	0,059	0,058	0,059	0,068	-	0,064
F1052	fino a D3 ► 0,2 X Ø da D3 ► 0,5 X Ø	Ø	0,004	0,011	0,019	0,025	0,028	0,026	0,027	0,031	-	0,03
F1055	fino a D3 ► 0,2 X Ø da D3 ► 0,5 X Ø	Ø	0,004	0,011	0,019	0,025	0,028	0,026	0,027	0,031	-	0,03
F1058	fino a D3 ► 0,2 X Ø da D3 ► 0,5 X Ø	Ø	0,004	0,011	0,019	0,025	0,028	0,026	0,027	0,031	-	0,03
F1061	fino a D3 ► 0,2 X Ø da D3 ► 0,5 X Ø	Ø	0,004	0,011	0,019	0,025	0,028	0,026	0,027	0,031	-	0,03
F1064	fino a D3 ► 0,2 X Ø da D3 ► 0,5 X Ø	Ø	0,004	0,011	0,019	0,025	0,028	0,026	0,027	0,031	-	0,03
F1067	fino a D3 ► 0,2 X Ø da D3 ► 0,5 X Ø	Ø	0,004	0,011	0,019	0,025	0,028	0,026	0,027	0,031	-	0,03
F1073	fino a D3 ► 0,2 X Ø da D3 ► 0,5 X Ø	Ø	0,004	0,011	0,019	0,025	0,028	0,026	0,027	0,031	-	0,03
F1076	fino a D3 ► 0,2 X Ø da D3 ► 0,5 X Ø	Ø	0,004	0,011	0,019	0,025	0,028	0,026	0,027	0,031	-	0,03
F1079	fino a D3 ► 0,2 X Ø da D3 ► 0,5 X Ø	Ø	0,004	0,011	0,019	0,025	0,028	0,026	0,027	0,031	-	0,03
F1085	fino a D3 ► 0,2 X Ø da D3 ► 0,5 X Ø	Ø	0,004	0,011	0,019	0,025	0,028	0,026	0,027	0,031	-	0,03
F1088	fino a D3 ► 0,2 X Ø da D3 ► 0,5 X Ø	Ø	0,004	0,011	0,019	0,025	0,028	0,026	0,027	0,031	-	0,03
F1091	fino a D3 ► 0,2 X Ø da D3 ► 0,5 X Ø	Ø	0,004	0,011	0,019	0,025	0,028	0,026	0,027	0,031	-	0,03
F1181	fino a D3 ► 0,2 X Ø da D3 ► 0,5 X Ø	Ø	0,009	0,025	0,04	0,053	0,059	0,058	-	-	-	-
F1190	fino a D3 ► 0,2 X Ø da D3 ► 0,5 X Ø	Ø	0,009	0,025	0,04	0,053	0,059	0,058	-	-	-	-

LAVORAZIONI SUL FIANCO
ACCIAI INOX

SIDE CUTTING
STAINLESS STEELS

Cod.	ap(mm) <3.00	ap(mm) >3.00	ae (mm)	Fz(mm)									
				Ø(mm)									
				2,00	4,00	6,00	8,00	10,00	12,00	14,00	16,00	18,00	20,00
F1052	Ø	-	0,1 X Ø	0,006	0,018	0,03	0,042	0,045	0,045	0,044	0,048	-	0,048
F1055	Ø	-	0,1 X Ø	0,006	0,018	0,03	0,042	0,045	0,045	0,044	0,048	-	0,048
F1058	Ø	-	0,1 X Ø	0,006	0,018	0,03	0,042	0,045	0,045	0,044	0,048	-	0,048
F1061	Ø	-	0,1 X Ø	0,006	0,018	0,03	0,042	0,045	0,045	0,044	0,048	-	0,048
F1064	Ø	-	0,1 X Ø	0,006	0,018	0,03	0,042	0,045	0,045	0,044	0,048	-	0,048
F1067	Ø	-	0,1 X Ø	0,006	0,018	0,03	0,042	0,045	0,045	0,044	0,048	-	0,048
F1073	Ø	-	0,1 X Ø	0,006	0,018	0,03	0,042	0,045	0,045	0,044	0,048	-	0,048
F1076	Ø	-	0,1 X Ø	0,006	0,018	0,03	0,042	0,045	0,045	0,044	0,048	-	0,048
F1079	Ø	-	0,1 X Ø	0,006	0,018	0,03	0,042	0,045	0,045	0,044	0,048	-	0,048
F1085	Ø	-	0,1 X Ø	0,006	0,018	0,03	0,042	0,045	0,045	0,044	0,048	-	0,048
F1088	Ø	-	0,1 X Ø	0,006	0,018	0,03	0,042	0,045	0,045	0,044	0,048	-	0,048
F1091	Ø	-	0,1 X Ø	0,006	0,018	0,03	0,042	0,045	0,045	0,044	0,048	-	0,048
F1097	Ø	-	0,1 X Ø	0,006	0,018	0,03	0,042	0,045	0,045	0,044	0,048	-	0,048
F1100	Ø	-	0,1 X Ø	0,006	0,018	0,03	0,042	0,045	0,045	0,044	0,048	-	0,048
F1103	Ø	-	0,1 X Ø	0,006	0,018	0,03	0,042	0,045	0,045	0,044	0,048	-	0,048
F1106	Ø	-	0,1 X Ø	0,006	0,018	0,03	0,042	0,045	0,045	0,044	0,048	-	0,048
F1109	Ø	-	0,1 X Ø	0,006	0,018	0,03	0,042	0,045	0,045	0,044	0,048	-	0,048
F1127	Ø	-	0,1 X Ø	0,006	0,018	0,03	0,042	0,045	0,045	0,044	0,048	-	0,048
F1130	Ø	-	0,1 X Ø	0,006	0,018	0,03	0,042	0,045	0,045	0,044	0,048	-	0,048
F1133	Ø	-	0,1 X Ø	0,006	0,018	0,03	0,042	0,045	0,045	0,044	0,048	-	0,048
F1157	1,5 X Ø	-	0,1 X Ø	0,006	0,013	0,019	0,025	0,031	0,038	0,045	0,056	-	0,075
F1160	Ø	-	0,1 X Ø	0,006	0,018	0,03	0,042	0,045	0,045	0,044	0,048	-	0,048
F1184	Ø	-	0,1 X Ø	0,006	0,018	0,029	0,042	0,045	0,045	-	-	-	-
F1196	Ø	-	0,1 X Ø	0,006	0,018	0,029	0,042	0,045	0,045	-	-	-	-



**LAVORAZIONI IN CAVA
GHISA**
**SLOTING FOR
CAST IRON**

Cod.	ap(mm) <3.00	ae (mm)	Fz(mm)										
			Ø(mm)										
			2,00	4,00	6,00	8,00	10,00	12,00	14,00	16,00	18,00	20,00	25,00
F1004	Ø	Ø	0,012	0,024	0,043	0,063	0,077	0,102	0,119	0,145	-	0,189	-
F1007	Ø	Ø	0,012	0,024	0,043	0,063	0,077	0,102	0,119	0,145	-	0,189	-
F1010	Ø	Ø	0,012	0,024	0,043	0,063	0,077	0,102	0,119	0,145	-	0,189	-
F1013	Ø	Ø	0,012	0,024	0,043	0,063	0,077	0,102	0,119	0,145	-	0,189	-
F1022	Ø	Ø	0,012	0,024	0,043	0,063	0,077	0,102	0,119	0,145	-	0,189	-
F1025	Ø	Ø	0,012	0,024	0,043	0,063	0,077	0,102	0,119	0,145	-	0,189	-
F1031	Ø	Ø	0,012	0,024	0,043	0,063	0,077	0,102	0,119	0,145	-	0,189	-
F1034	Ø	Ø	0,012	0,024	0,043	0,063	0,077	0,102	0,119	0,145	-	0,189	-
F1037	Ø	Ø	0,012	0,024	0,043	0,063	0,077	0,102	0,119	0,145	-	0,189	-
F1043	Ø	Ø	0,012	0,023	0,043	0,059	0,077	0,105	0,122	0,141	-	0,188	-
F1046	Ø	Ø	0,012	0,024	0,043	0,063	0,077	0,102	0,119	0,145	-	0,189	-
F1052	Ø	Ø	0,007	0,013	0,026	0,036	0,046	0,063	0,073	0,086	-	0,115	-
F1055	Ø	Ø	0,007	0,013	0,026	0,036	0,046	0,063	0,073	0,086	-	0,115	-
F1058	Ø	Ø	0,007	0,013	0,026	0,036	0,046	0,063	0,073	0,086	-	0,115	-
F1061	Ø	Ø	0,007	0,013	0,026	0,036	0,046	0,063	0,073	0,086	-	0,115	-
F1064	Ø	Ø	0,007	0,013	0,026	0,036	0,046	0,063	0,073	0,086	-	0,115	-
F1067	Ø	Ø	0,007	0,013	0,026	0,036	0,046	0,063	0,073	0,086	-	0,115	-
F1073	Ø	Ø	0,007	0,013	0,026	0,036	0,046	0,063	0,073	0,086	-	0,115	-
F1076	Ø	Ø	0,007	0,013	0,026	0,036	0,046	0,063	0,073	0,086	-	0,115	-
F1079	Ø	Ø	0,007	0,013	0,026	0,036	0,046	0,063	0,073	0,086	-	0,115	-
F1085	Ø	Ø	0,007	0,013	0,026	0,036	0,046	0,063	0,073	0,086	-	0,115	-
F1088	Ø	Ø	0,007	0,013	0,026	0,036	0,046	0,063	0,073	0,086	-	0,115	-
F1091	Ø	Ø	0,007	0,013	0,026	0,036	0,046	0,063	0,073	0,086	-	0,115	-
F1157	Ø	Ø	-	-	0,035	0,048	0,062	0,083	0,096	0,113	-	0,151	-
F1181	Ø	Ø	0,012	0,024	0,043	0,063	0,077	0,102	-	-	-	-	-
F1190	Ø	Ø	0,012	0,024	0,043	0,063	0,077	0,102	-	-	-	-	-
F1205	0,3 X Ø	0,7 X Ø	0,01	0,028	0,053	0,092	0,112	0,131	0,164	0,177	0,209	0,2	-
F1208	0,3 X Ø	0,7 X Ø	0,01	0,028	0,053	0,092	0,112	0,131	0,164	0,177	0,209	0,2	-
F1211	0,3 X Ø	0,7 X Ø	0,01	0,028	0,053	0,092	0,112	0,131	0,164	0,177	0,209	0,2	-
F1214	0,3 X Ø	0,7 X Ø	0,01	0,028	0,053	0,092	0,112	0,131	0,164	0,177	0,209	0,2	-
F1220	0,3 X Ø	0,7 X Ø	0,01	0,028	0,053	0,092	0,112	0,131	0,164	0,177	0,209	0,2	-
F1226	0,3 X Ø	0,7 X Ø	0,01	0,028	0,053	0,092	0,112	0,131	0,164	0,177	0,209	0,2	-
F1229	0,3 X Ø	0,7 X Ø	0,01	0,028	0,053	0,092	0,112	0,131	0,164	0,177	0,209	0,2	-
F1232	0,3 X Ø	0,7 X Ø	0,008	0,021	0,04	0,068	0,083	0,097	0,125	0,135	0,159	0,15	-
F2001	0,5 X Ø	Ø	0,008	0,024	0,036	0,055	0,074	0,083	0,084	0,085	0,103	0,106	0,111
F2004	0,5 X Ø	Ø	0,008	0,024	0,036	0,055	0,074	0,083	0,084	0,085	0,103	0,106	0,111
F2007	0,5 X Ø	Ø	0,003	0,011	0,023	0,032	0,039	0,053	0,054	0,061	0,071	0,08	0,111

LAVORAZIONI SUL FIANCO
GHISA

SIDE CUTTING
CAST IRON

Cod.	ap(mm) <3,00	ae (mm)	Fz(mm)										
			Ø(mm)										
			2,00	4,00	6,00	8,00	10,00	12,00	14,00	16,00	18,00	20,00	25,00
F1046	1,5 X Ø	0,1 X Ø	0,017	0,035	0,064	0,093	0,115	0,154	0,181	0,22	-	0,285	-
F1052	1,5 X Ø	0,1 X Ø	0,017	0,035	0,064	0,093	0,115	0,154	0,181	0,22	-	0,285	-
F1055	1,5 X Ø	0,1 X Ø	0,017	0,035	0,064	0,093	0,115	0,154	0,181	0,22	-	0,285	-
F1058	1,5 X Ø	0,1 X Ø	0,017	0,035	0,064	0,093	0,115	0,154	0,181	0,22	-	0,285	-
F1061	1,5 X Ø	0,1 X Ø	0,017	0,035	0,064	0,093	0,115	0,154	0,181	0,22	-	0,285	-
F1064	1,5 X Ø	0,1 X Ø	0,017	0,035	0,064	0,093	0,115	0,154	0,181	0,22	-	0,285	-
F1067	1,5 X Ø	0,1 X Ø	0,017	0,035	0,064	0,093	0,115	0,154	0,181	0,22	-	0,285	-
F1073	1,5 X Ø	0,1 X Ø	0,017	0,035	0,064	0,093	0,115	0,154	0,181	0,22	-	0,285	-
F1076	1,5 X Ø	0,1 X Ø	0,017	0,035	0,064	0,093	0,115	0,154	0,181	0,22	-	0,285	-
F1079	1,5 X Ø	0,1 X Ø	0,017	0,035	0,064	0,093	0,115	0,154	0,181	0,22	-	0,285	-
F1085	1,5 X Ø	0,1 X Ø	0,017	0,035	0,064	0,093	0,115	0,154	0,181	0,22	-	0,285	-
F1088	1,5 X Ø	0,1 X Ø	0,017	0,035	0,064	0,093	0,115	0,154	0,181	0,22	-	0,285	-
F1091	1,5 X Ø	0,1 X Ø	0,017	0,035	0,064	0,093	0,115	0,154	0,181	0,22	-	0,285	-
F1097	1,5 X Ø	0,1 X Ø	0,017	0,035	0,064	0,093	0,115	0,154	0,181	0,22	-	0,285	-
F1100	1,5 X Ø	0,1 X Ø	0,017	0,035	0,064	0,093	0,115	0,154	0,181	0,22	-	0,285	-
F1103	1,5 X Ø	0,1 X Ø	0,017	0,035	0,064	0,093	0,115	0,154	0,181	0,22	-	0,285	-
F1106	1,5 X Ø	0,1 X Ø	0,017	0,035	0,064	0,093	0,115	0,154	0,181	0,22	-	0,285	-
F1109	1,5 X Ø	0,1 X Ø	0,017	0,035	0,064	0,093	0,115	0,154	0,181	0,22	-	0,285	-
F1127	1,5 X Ø	0,1 X Ø	0,017	0,035	0,064	0,093	0,115	0,154	0,181	0,22	-	0,285	-
F1130	1,5 X Ø	0,1 X Ø	0,017	0,035	0,064	0,093	0,115	0,154	0,181	0,22	-	0,285	-
F1133	1,5 X Ø	0,1 X Ø	0,017	0,035	0,064	0,093	0,115	0,154	0,181	0,22	-	0,285	-
F1157	1,5 X Ø	0,1 X Ø	0,017	0,035	0,064	0,089	0,115	0,158	0,181	0,213	-	0,281	-
F1160	1,5 X Ø	0,1 X Ø	0,017	0,035	0,064	0,093	0,115	0,154	0,181	0,22	-	0,285	-
F1166	1,5 X Ø	0,05 x Ø	-	0,033	0,03	0,038	0,045	0,053	0,058	0,062	0,065	0,069	-
F1169	1,5 X Ø	0,05 x Ø	-	-	-	-	-	0,053	-	0,062	-	0,069	-
F1184	1,5 X Ø	0,1 X Ø	0,017	0,035	0,065	0,093	0,116	0,155	-	-	-	-	-
F1196	1,5 X Ø	0,1 X Ø	0,017	0,035	0,065	0,093	0,116	0,155	-	-	-	-	-
F1289	1,5 X Ø	0,1 X Ø	0,017	0,035	0,064	0,093	0,115	0,154	0,181	0,22	-	0,285	-
F2007	1,5 X Ø	0,1 X Ø	0,004	0,012	0,023	0,035	0,046	0,056	0,063	0,071	0,077	0,081	0,109
F2010	1,5 X Ø	0,1 X Ø	0,007	0,021	0,031	0,046	0,063	0,067	0,072	0,077	0,08	0,088	0,091
F2013	1,5 X Ø	0,5 X Ø	-	-	0,027	0,04	0,053	0,069	0,079	0,087	0,093	0,109	0,105
F2016	1,5 X Ø	0,5 X Ø	-	-	0,02	0,03	0,053	0,069	0,063	0,069	0,062	0,072	0,088
F2019	1,5 X Ø	0,1 X Ø	0,007	0,021	0,031	0,046	0,063	0,067	0,072	0,077	0,08	0,088	0,091
F2022	1,5 X Ø	0,5 X Ø	-	-	0,027	0,04	0,053	0,069	0,079	0,087	0,093	0,109	0,105



**LAVORAZIONI IN CAVITÀ PROFONDE
GHISA**
**FOR DEEP MACHINING
CAST IRON**

Cod.	Parametri	Ø(mm)								
		0,50	0,70	1,00	1,50	2,00	3,00	4,00	5,00	6,00
F1244	n (giri/min)	31000~40000	31000~40000	22500~28000	14500~18500	12000~14500	8000~10000	6000~7500	4800~6000	4000~5000
	Vf	200~440	250~570	280~810	280~900	280~900	280~900	280~900	280~900	280~900
	ap (mm)	0.009~0.022	0.012~0.031	0.045~0.090	0.070~0.135	0.090~0.180	0.135~0.270	0.180~0.360	0.225~0.450	0.270~0.540
F1265	Vc	49~63	68~88	71~88	68~87	75~91	75~94	75~94	75~94	75~94
	Fz (mm)	0.003~0.006	0.004~0.007	0.006~0.014	0.010~0.024	0.012~0.031	0.018~0.045	0.023~0.060	0.029~0.075	0.035~0.090
F1277	n (giri/min)	31000~40000	31000~40000	29000~36500	19000~24000	15500~19000	10500~13000	8500~11000	6800~8800	5700~7300
	Vf	175~490	225~630	250~700	250~780	250~780	250~780	250~780	250~780	250~780
	ap (mm)	0.023~0.045	0.036~0.072	0.045~0.090	0.070~0.135	0.090~0.180	0.135~0.270	0.180~0.360	0.225~0.450	0.270~0.540
	Vc	49~63	78~101	91~115	90~113	97~119	99~123	107~138	107~138	107~138
	Fz (mm)	0.003~0.006	0.004~0.008	0.004~0.010	0.007~0.016	0.008~0.021	0.012~0.030	0.015~0.035	0.018~0.044	0.022~0.053

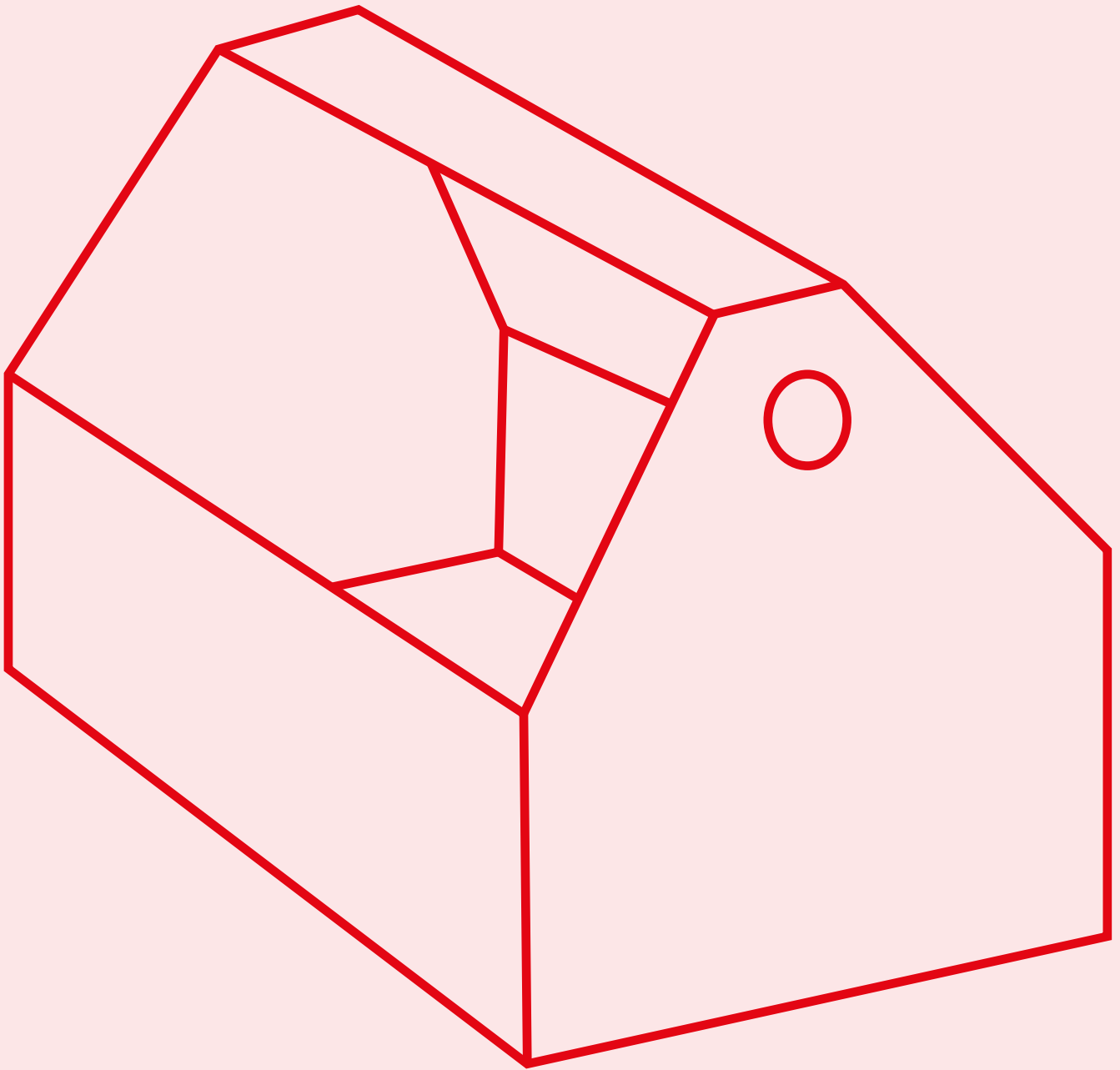
**LAVORAZIONI IN CAVITÀ PROFONDE
ACCIAI**
**FOR DEEP MACHINING
STEELS**

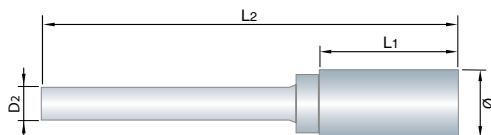
Cod.	Parametri	Ø(mm)								
		0,50	0,70	1,00	1,50	2,00	3,00	4,00	5,00	6,00
F1244	n (giri/min)	14300~17000	14300~17000	10000~12500	6700~8200	5300~6600	3500~4400	2600~3300	2100~2600	1750~2600
	Vf	30~90	40~110	65~130	65~130	65~130	65~130	65~130	65~130	65~130
	ap (mm)	0.004~0.009	0.006~0.013	0.009~0.018	0.014~0.028	0.018~0.035	0.028~0.055	0.036~0.072	0.045~0.090	0.054~0.108
F1265	Vc	22~27	31~37	31~39	32~39	33~41	33~41	33~41	33~41	33~49
	Fz (mm)	0.001~0.003	0.001~0.003	0.003~0.005	0.005~0.008	0.006~0.010	0.009~0.015	0.013~0.020	0.015~0.025	0.019~0.025
F1277	n (giri/min)	14300~18000	14300~18000	13000~16300	8700~10700	6900~8600	4600~5700	3900~4900	3100~3900	2600~3300
	Vf	88~175	110~225	125~250	125~250	125~250	125~250	125~250	125~250	125~250
	ap (mm)	0.005~0.009	0.007~0.014	0.009~0.018	0.014~0.028	0.018~0.035	0.028~0.055	0.035~0.070	0.044~0.088	0.053~0.105
	Vc	22~28	36~45	41~51	41~50	43~54	43~54	49~62	49~61	49~62
	Fz (mm)	0.003~0.005	0.004~0.006	0.005~0.008	0.007~0.012	0.009~0.015	0.014~0.022	0.016~0.026	0.020~0.032	0.024~0.038

**LAVORAZIONI PER NERVATURE
ACCIAI**
**FOR RIB PROCESSING
STEELS**

Cod.	Parametri	Ø(mm)						
		0,50	0,80	1,00	1,50	2,00	3,00	4,00
F1241	n (giri/min)	19000~24000	19000~24000	13500~17000	8950~11500	7000~8950	4700~6000	3500~4500
	Vf	72~290	95~365	160~510	160~510	160~510	160~510	160~510
	ap (mm)	0.009~0.022	0.012~0.031	0.045~0.090	0.070~0.135	0.090~0.180	0.135~0.270	0.180~0.360
	Vc	30~38	42~53	42~53	42~54	44~56	44~57	44~57
	Fz (mm)	0.002~0.006	0.003~0.008	0.006~0.015	0.009~0.022	0.011~0.028	0.017~0.043	0.023~0.057
F1274	n (giri/min)	19100~24200	19100~24200	17400~22100	11500~14900	9400~11500	6000~11500	5000~6600
	Vf	75~230	95~300	105~330	105~330	105~330	105~330	105~330
	ap (mm)	0.023~0.045	0.036~0.072	0.045~0.090	0.070~0.135	0.090~0.180	0.135~0.270	0.180~0.360
	Vc	30~38	48~61	55~69	54~70	59~72	57~108	63~83
	Fz (mm)	0.002~0.005	0.002~0.006	0.003~0.007	0.005~0.011	0.006~0.014	0.009~0.014	0.011~0.025

UTENSILI



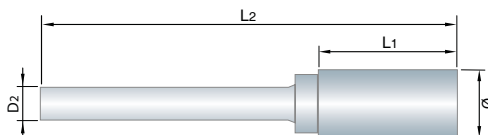


Unità : mm

				T1001	T1004	T1007
Ø	D2	L1	L2			
1.5	3	6	50	T100101550	T100401550	-
3.0	6	12.7	60	T100103060	T100403060	-
3.0	3	14	38	T100103038	T100403038	-
3.0	3	14	50	T100103050	T100403050	-
4.0	3	12.7	38	T100104038	T100404038	-
4.0	6	16	50	T100104050	T100404050	-
5.0	3	12.7	38	T100105038	T100405038	-
6.0	6	16	50	T10010605A	T10040605A	-
6.0	6	19	50	-	-	T100706050
6.0	6	25	50	T100106050	T100406050	-
6.3	3	12.7	50	T100106350	T100406350	-
8.0	6	19	63	T100108063	T100408063	-
9.5	6	19	63	T100109563	T100409563	T100709563
9.5	6	25	69	T100109569	T100409569	-
12.7	6	25	69	T100112769	T100412769	T100712769
16.0	6	25	69	T100116069	T100416069	-
19.0	6	25	69	T100119069	T100419069	-
25.0	6	25	69	T100125069	T100425069	-

LIMA ROTATIVA CILINDRICA CON TAGLIO FRONTALE (FORMA B)

ROTARY BURR CYLINDER SHAPE WITH END CUT (FORM B)

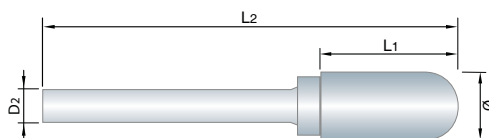


Unità : mm

				T1010	T1013	T1016
Ø	D2	L1	L2			
1.5	3	6	50	T101001550	T101301550	-
2.5	3	11	38	T101002538	T101302538	-
3.0	3	14	38	T101003038	T101303038	-
3.0	3	14	50	T101003050	T101303050	-
3.0	6	12.7	60	T101003060	T101303060	-
4.0	6	16	50	T101004050	T101304050	-
5.0	6	16	50	T101005050	T101305050	-
6.0	6	16	50	T101006050	T101306050	-
6.0	6	25	50	T10100605A	T10130605A	-
6.3	3	4.7	43	T101006343	T101306343	-
8.0	6	19	63	T101008063	T101308063	-
9.5	6	19	63	T101009563	T101309563	T101609563
9.5	6	25	69	T101009569	T101309569	-
11.0	6	25	69	T101011069	T101311069	-
12.7	6	25	69	T101012769	T101312769	T101612769
16.0	6	25	69	T101016069	T101316069	-
19.0	6	25	69	T101019069	T101319069	-

LIMA ROTATIVA CILINDRICA A TESTA SEMISFERICA (FORMA C)

ROTARY BURR CYLINDER SHAPE WITH RADIUS END
(FORM C)

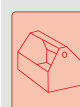
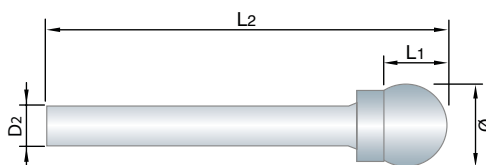


Unità : mm

				T1019	T1022	T1025
Ø	D2	L1	L2			
3.0	3	14	38	T101903038	T102203038	-
3.0	3	14	50	T101903050	T102203050	-
3.0	3	14	75	T101903075	T102203075	-
4.0	3	12.7	38	T101904038	T102204038	-
5.0	6	16	50	T101905050	T102205050	-
6.0	6	16	50	T101906050	T102206050	-
6.0	6	19	50	-	-	T102506050
6.0	6	25	50	T10190605A	T10220605A	-
6.3	3	12.7	50	T101906350	T102206350	-
8.0	6	19	63	T101908063	T102208063	-
9.5	6	19	63	T101909563	T102209563	-
9.5	6	25	69	T101909569	T102209569	-
11.0	6	25	69	T101911069	T102211069	-
12.7	6	25	69	T101912769	T102212769	T102512769
16.0	6	25	69	T101916069	T102216069	-
19.0	6	25	69	T101919069	T102219069	-

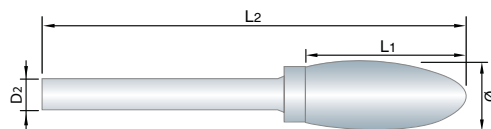
LIMA ROTATIVA SFERICA (FORMA D)

ROTARY BURR BALL SHAPE (FORM D)



Unità : mm

				T1028	T1031	T1034
Ø	D2	L1	L2			
2.5	3	2.3	38	T102802538	T103102538	-
3.0	3	2.8	38	T102803038	T103103038	-
3.0	3	2.8	50	T102803050	T103103050	-
3.0	3	2.8	75	T102803075	T103103075	-
3.0	6	2.8	50	T10280305A	T10310305A	-
5.0	3	4	38	T102805038	T103105038	-
5.0	6	4	50	T102805050	T103105050	-
6.0	6	5	50	T102806050	T103106050	-
6.3	3	5	44	T102806344	T103106344	-
8.0	6	6.4	50	T102808050	T103108050	-
9.5	6	8	52	T102809552	T103109552	T103409552
11.0	6	9.5	54	T102811054	T103111054	-
12.7	6	11	55	T102812755	T103112755	T103412755
16.0	6	14	58	T102816058	T103116058	-
19.0	6	16	62	T102819062	T103119062	-

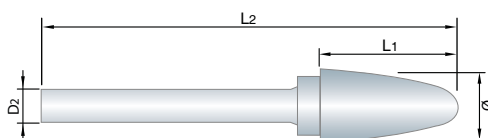


Unità : mm

				T1037	T1040	T1043
Ø	D2	L1	L2			
3.0	3	5.5	50	T103703050	T104003050	-
5.0	3	7.1	38	T103705038	T104005038	-
6.0	6	9.5	50	T103706050	T104006050	-
6.3	3	9.5	47	T103706347	T104006347	-
9.5	6	16	60	T103709560	T104009560	-
12.7	6	22	66	T103712766	T104012766	T104312766
16.0	6	25	69	T103716069	T104016069	T104316069

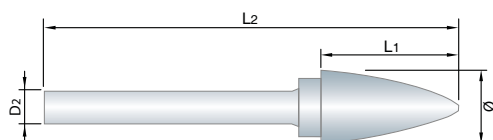
LIMA ROTATIVA OGIVA RAGGIATA (FORMA F)

ROTARY BURR TREE SHAPE WITH RADIUS END (FORM F)



Unità : mm

				T1046	T1049	T1052
Ø	D2	L1	L2			
3.0	3	12.7	38	T104603038	T104903038	-
3.0	3	12.7	50	T104603050	T104903050	-
3.0	3	12.7	75	T104603075	T104903075	-
3.0	6	12.7	56	T104603056	T104903056	-
5.0	3	12.7	38	T104605038	T104905038	-
6.0	6	16	50	T104606050	T104906050	-
6.0	6	19	50	-	-	T105206050
6.3	3	12.7	50	T104606350	T104906350	-
9.5	6	19	63	T104609563	T104909563	T105209563
11.0	6	25	69	T104611069	T104911069	-
12.7	6	19	63	T104612763	T104912763	-
12.7	6	25	69	T104612769	T104912769	T105212769
16.0	6	25	69	T104616069	T104916069	T105216069
19.0	6	32	76	-	-	T105219076

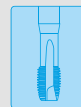
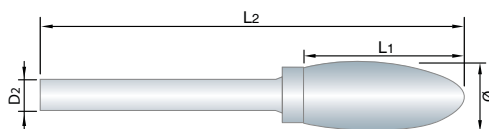


Unità : mm

				T1055	T1058
Ø	D2	L1	L2		
3.0	3	6	38	T105503038	T105803038
3.0	3	9.5	38	T10550303A	T10580303A
3.0	3	12.7	38	T10550303B	T10580303B
3.0	3	12.7	50	T105503050	T105803050
5.0	3	12.7	38	T105505038	T105805038
6.0	6	16	50	T105506050	T105806050
6.3	3	12.7	50	T105506350	T105806350
8.0	6	19	63	T105508063	T105808063
9.5	6	19	63	T105509563	T105809563
12.7	6	19	63	T105512763	T105812763
12.7	6	25	69	T105512769	T105812769

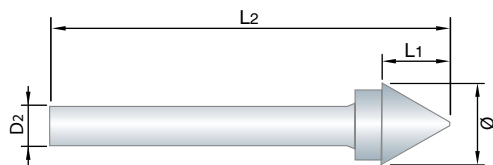
LIMA ROTATIVA A FIAMMA (FORMA H)

ROTARY BURR FLAME SHAPE (FORM H)



Unità : mm

				T1061	T1064
Ø	D2	L1	L2		
3.0	3	6.3	50	T106103050	T106403050
3.0	3	6.3	75	T106103075	T106403075
5.0	3	9.5	38	T106105038	T106405038
8.0	6	19	63	T106108063	T106408063
12.7	6	32	76	T106112776	T106412776
16.0	6	36	80	T106116080	T106416080

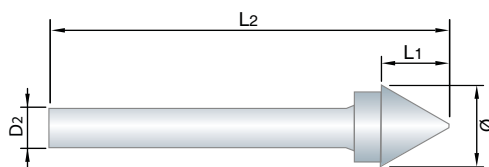


Unità : mm

				T1067	T1070
Ø	D2	L1	L2		
3.0	3	2.5	38	T106703038	T107003038
6.0	6	4	50	T106706050	T107006050
12.7	6	11	58	T106712758	T107012758
16.0	6	13.5	61	T106716061	T107016061

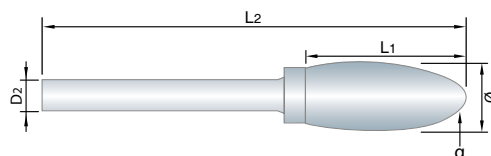
LIMA ROTATIVA CONICA A 90° (FORMA K)

ROTARY BURR 90° CONE SHAPE (FORM K)



Unità : mm

				T1073	T1076
Ø	D2	L1	L2		
3.0	3	1.5	38	T107303038	T107603038
6.0	6	3	50	T107306050	T107606050
9.5	6	4.7	52	T107309552	T107609552
12.7	6	6.3	54	T107312754	T107612754
16.0	6	8	57	T107316057	T107616057
19.0	6	9.5	58	T107319058	T107619058

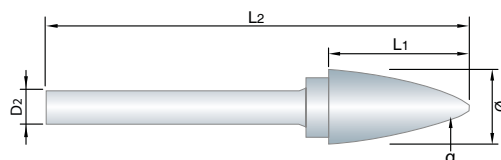


Unità : mm

					T1079	T1082	T1085
Ø	D2	L1	L2	α			
3.0	3	9.5	38	8°	T107903038	T108203038	-
3.0	3	12.7	38	8°	T10790303A	T10820303A	-
3.0	3	12.7	50	8°	T107903050	T108203050	-
5.0	3	12.7	38	14°	T107905038	T108205038	-
6.0	6	16	50	14°	T107906050	T108206050	-
8.0	6	22	69	14°	T107908069	T108208069	-
9.5	6	27	74	14°	T107909574	T108209574	-
12.7	6	28	76	14°	T107912776	T108212776	T108512776
16.0	6	30	77	14°	T107916077	T108216077	T108516077

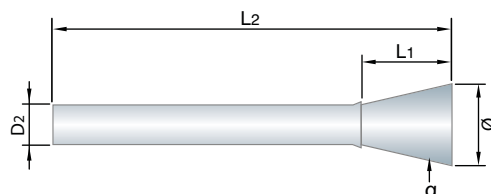
LIMA ROTATIVA CONICA A PUNTA (FORMA M)

ROTARY BURR CONE SHAPE (FORM M)



Unità : mm

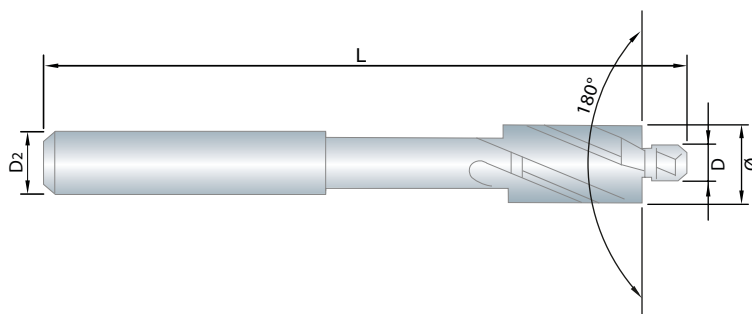
					T1088	T1091
Ø	D2	L1	L2	α		
3.0	3	8.9	38	12°	T108803038	T109103038
3.0	3	11	38	14°	T10880303A	T10910303A
3.0	3	11	50	14°	T108803050	T109103050
3.0	3	11	75	14°	T108803075	T109103075
3.0	3	16	38	7°	T10880303B	T10910303B
5.0	3	12.7	38	16°	T108805038	T109105038
6.0	6	12.7	50	22°	T108806050	T109106050
6.0	6	19	50	14°	T10880605A	T10910605A
6.0	6	25	50	10°	T10880605B	T10910605B
6.3	3	12.7	53	22°	T108806353	T109106353
9.5	6	16	63	28°	T108809563	T109109563
12.7	6	22	69	28°	T108812769	T109112769
16.0	6	25	73	31°	T108816073	T109116073



Unità : mm

					T1094	T1097
Ø	D2	L1	L2	α		
3.0	3	4	38	10°	T109403038	T109703038
5.0	3	6.3	38	10°	T109405038	T109705038
6.0	6	8	50	10°	T109406050	T109706050
6.3	3	6	44	10°	T109406344	T109706344
9.5	6	9.5	53	13°	T109409553	T109709553
12.7	6	12.7	57	28°	T109412757	T109712757

**LAMATORE A 3 TAGLIENTI IN HSS-E
PER SEDI DI VITI A TESTA CILINDRICA A 180°**
HSS-E 3 FLUTE COUNTERBORE FOR 180° CAPSCREW



T3001

INF. TEC. PAG.
D39

373

HSS-E

Z 3

STANDARD

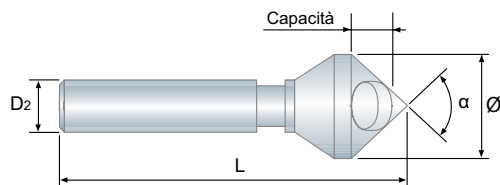
Unità : mm

Ø	D	D2	D Vite	L	✓	P1 P2 P3 P4 N1
6.0	3.4	5	M3	71		T30010340
8.0	4.5	5	M4	71		T30010450
10.0	5.5	8	M5	80		T30010550
11.0	6.6	8	M6	80		T30010660
15.0	9.0	12.5	M8	100		T30010900
18.0	11.0	12.5	M10	100		T30011100
20.0	14.0	12.5	M12	100		T30011400

PRECISO

Unità : mm

Ø	D	D2	D Vite	L	T3001
6.0	3.2	5	M3	71	T30010320
8.0	4.3	5	M4	71	T30010430
10.0	5.3	8	M5	80	T30010530
11.0	6.4	8	M6	80	T30010640
15.0	8.4	12.5	M8	100	T30010840
18.0	10.5	12.5	M10	100	T30011050
20.0	13.0	12.5	M12	100	T30011300



T3004

INF. TEC. PAG.
D36

**HSS
Co8**

Foro

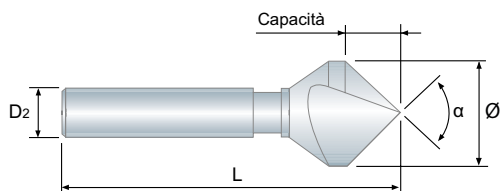
90°

Unità : mm

Ø	D2	L	α	Capacità Min - Max	✓	P1 P2 P3 M1 K1 N1 N3
10.0	6	45	90°	2 - 5		T30041000
15.0	8	55	90°	6 - 14		T30041500
20.0	10	65	90°	8 - 18		T30042000
25.0	12	78	90°	10 - 23		T30042500
30.0	12	88	90°	12 - 28		T30043000

SVASATORE MONOTAGLIANTE - HSS Co8 (90°)

HSS Co8 SINGLE FLUTE CHAMFERING CUTTER (90°)



T3007

INF. TEC. PAG.
D36

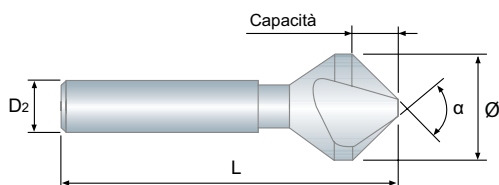
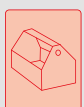
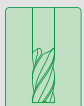
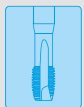
**HSS
Co8**

Z 1

90°

Unità : mm

Ø	D2	L	α	Capacità Min - Max	✓	P1 P2 P3 M1 K1 N1 N3
10.0	6	45	90°	1 - 10		T30071000
15.0	8	55	90°	2 - 15		T30071500
20.0	10	65	90°	2 - 20		T30072000
25.0	12	78	90°	3 - 25		T30072500
30.0	12	88	90°	3 - 30		T30073000



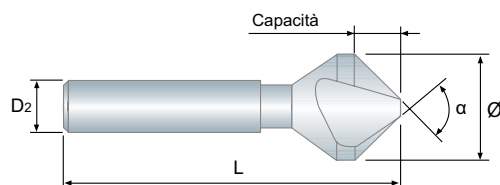
T4001	T3010
INF. TEC. PAG. D37	INF. TEC. PAG. D37
335 C	335 C
HSS	HSS Co8
Z 3	Z 3
90°	90°

Unità : mm

Ø	D2	L	α	Capacità Min - Max	✓	P1 P2 P3 M1 K1 N1 N3	P1 P2 P3 M1 K1 N1 N3
6.3	5	45	90°	1.5 - 6.3		T40010630	T30100630
8.3	6	50	90°	2 - 8.3		T40010830	T30100830
10.0	6	50	90°	2.5 - 10		T40011000	T30101000
10.4	6	50	90°	2.5 - 10.4		T40011040	T30101040
12.4	8	56	90°	2.8 - 12.4		T40011240	T30101240
15.0	10	60	90°	3.2 - 15		T40011500	T30101500
16.5	10	60	90°	3.2 - 16.5		T40011650	T30101650
20.5	10	63	90°	3.5 - 20.5		T40012050	T30102050
25.0	10	67	90°	3.8 - 25		T40012500	T30102500
30.0	12	71	90°	4.2 - 30		T40013000	T30103000
31.0	12	71	90°	4.2 - 31		T40013100	T30103100

SVASATORE A TRE TAGLIENTI - HSS Co8 (90°) RIVESTIMENTO TiCN

HSSCO8 THREE FLUTE COUNTERSINK (90°)
TiCN COATING



T3013

INF. TEC. PAG.
D37

335 C

**HSS
Co8**

TiCN

Z 3

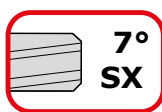
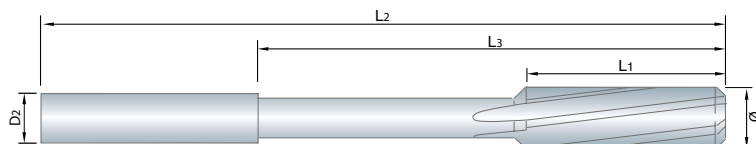
90°

Unità : mm

Ø	D2	L	α	Capacità Min - Max	✓	P1 P2 P3 M1 K1 N1 N3
6.3	5	45	90°	1.5 - 6.3		T30130630
8.3	6	50	90°	2.0 - 8.3		T30130830
10.0	6	50	90°	2.5 - 10		T30131000
12.4	8	56	90°	2.8 - 12.4		T30131240
15.0	10	60	90°	3.2 - 15		T30131500
20.5	10	63	90°	3.5 - 20.5		T30132050
25.0	10	67	90°	3.8 - 25		T30132500
30.0	12	71	90°	4.2 - 30		T30133000

ALESATORE ATTACCO CILINDRICO HSS-E ELICA SINISTRA

HSS-E STRAIGHT SHANK CHUCKING REAMER LH SPIRAL FLUTES


T3016

 INF. TEC. PAG.
D37

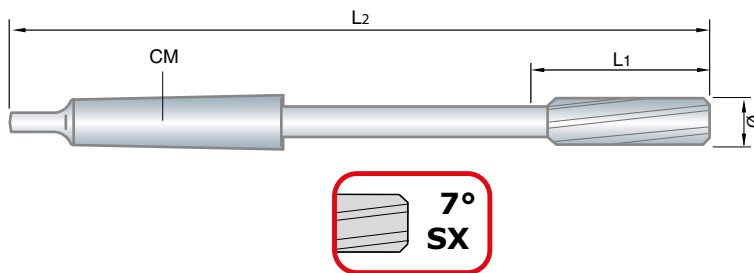
212
H7
HSS-E
h8
T-DX
E-SX
15/45°
**DIN
1420**

Unità : mm

Ø	D2	L1	L3	L2	Z	✓	P1 P2 P3 P4 M1 K1 N1 N3
2.0	2	11	-	49	4		T30160200
2.5	2.5	14	-	57	4		T30160250
3.0	3	15	-	61	6		T30160300
4.0	4	19	42	75	6		T30160400
5.0	5	23	51	86	6		T30160500
6.0	5.6	26	56	93	6		T30160600
8.0	8	33	74	117	6		T30160800
10.0	10	38	86	133	6		T30161000
12.0	10	44	104	151	6		T30161200
14.0	12.5	47	108	160	8		T30161400
15.0	12.5	50	110	162	8		T30161500
16.0	12.5	52	118	170	8		T30161600
18.0	14	56	128	182	8		T30161800
20.0	16	60	135	195	8		T30162000

ALESATORE ATTACCO CM HSS-E ELICA SINISTRA

HSS-E MORSE TAPER SHANK CHUCKING REAMER
LH SPIRAL FLUTES



T3019

INF. TEC. PAG.
D37

208

H7

HSS-E

CM

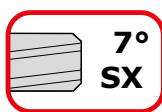
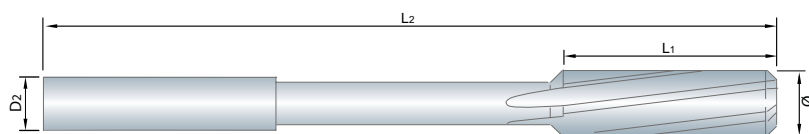
T-DX

E-SX

45°

Unità : mm

Ø	CM	L1	L2	Z	✓	P1 P2 P3 P4 M1 K1 N1 N3
10.0	1	38	168	6		T30191000
12.0	1	44	182	6		T30191200
14.0	1	47	189	8		T30191400
15.0	2	50	204	8		T30191500
16.0	2	52	210	8		T30191600
18.0	2	56	219	8		T30191800
20.0	2	60	228	8		T30192000
22.0	2	64	237	8		T30192200
24.0	3	68	268	8		T30192400
25.0	3	68	268	8		T30192500
26.0	3	70	273	8		T30192600
28.0	3	71	277	10		T30192800
30.0	3	73	281	10		T30193000
32.0	4	77	317	10		T30193200
34.0	4	78	321	10		T30193400
35.0	4	78	321	10		T30193500



T3022

INF. TEC. PAG.
D37

H7

HSS-E

h6

T-DX

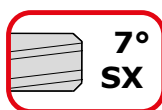
E-SX

15/45°

DIN
1420

Unità : mm

Ø	D2	L1	L2	✓	P1 P2 P3 P4 M1 K1 N1 N3
2.0	2	11	49		T30220200
2.01	2	11	49		T30220201
2.02	2	11	49		T30220202
2.03	2	11	49		T30220203
2.1	2	11	49		T30220210
2.2	3	12	53		T30220220
2.3	3	12	53		T30220230
2.4	3	14	57		T30220240
2.47	3	14	57		T30220247
2.48	3	14	57		T30220248
2.49	3	14	57		T30220249
2.5	3	14	57		T30220250
2.51	3	14	57		T30220251
2.52	3	14	57		T30220252
2.53	3	14	57		T30220253
2.6	3	14	57		T30220260
2.7	3	15	61		T30220270
2.8	3	15	61		T30220280
2.9	3	15	61		T30220290
2.97	3	15	61		T30220297
2.98	3	15	61		T30220298
2.99	3	15	61		T30220299
3.0	3	15	61		T30220300
3.01	4	16	65		T30220301
3.02	4	16	65		T30220302
3.03	4	16	65		T30220303
3.1	4	16	65		T30220310
3.2	4	16	65		T30220320
3.3	4	16	65		T30220330
3.4	4	18	70		T30220340
3.5	4	18	70		T30220350
3.6	4	18	70		T30220360
3.7	4	18	70		T30220370

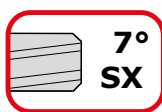
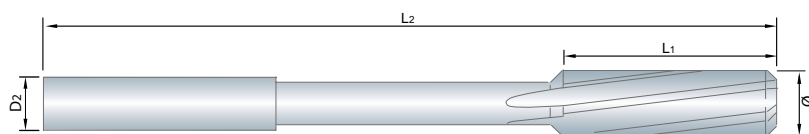

T3022

 INF. TEC. PAG.
D37

H7
HSS-E
h6
T-DX
E-SX
15/45°
**DIN
1420**

Unità : mm

Ø	D2	L1	L2	✓	P1 P2 P3 P4 M1 K1 N1 N3
3.8	4	19	75		T30220380
3.9	4	19	75		T30220390
3.97	4	19	75		T30220397
3.98	4	19	75		T30220398
3.99	4	19	75		T30220399
4.0	4	19	75		T30220400
4.01	4	19	75		T30220401
4.02	4	19	75		T30220402
4.03	4	19	75		T30220403
4.1	4	19	75		T30220410
4.2	4	19	75		T30220420
4.3	5	21	80		T30220430
4.4	5	21	80		T30220440
4.5	5	21	80		T30220450
4.6	5	21	80		T30220460
4.7	5	21	80		T30220470
4.8	5	23	86		T30220480
4.9	5	23	86		T30220490
4.97	5	23	86		T30220497
4.98	5	23	86		T30220498
4.99	5	23	86		T30220499
5.0	5	23	86		T30220500
5.01	5	23	86		T30220501
5.02	5	23	86		T30220502
5.03	5	23	86		T30220503
5.1	5	23	86		T30220510
5.2	5	23	86		T30220520
5.3	5	23	86		T30220530
5.4	6	26	93		T30220540
5.5	6	26	93		T30220550
5.6	6	26	93		T30220560
5.7	6	26	93		T30220570
5.8	6	26	93		T30220580



T3022

INF. TEC. PAG.
D37

H7

HSS-E

h6

T-DX

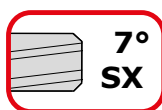
E-SX

15/45°

**DIN
1420**

Unità : mm

Ø	D2	L1	L2	✓	P1 P2 P3 P4 M1 K1 N1 N3
5.9	6	26	93		T30220590
5.97	6	26	93		T30220597
5.98	6	26	93		T30220598
5.99	6	26	93		T30220599
6.0	6	26	93		T30220600
6.01	6	28	101		T30220601
6.02	6	28	101		T30220602
6.03	6	28	101		T30220603
6.1	6	28	101		T30220610
6.2	6	28	101		T30220620
6.3	6	28	101		T30220630
6.4	6	28	101		T30220640
6.5	6	28	101		T30220650
6.6	6	28	101		T30220660
6.7	6	28	101		T30220670
6.8	8	31	109		T30220680
6.9	8	31	109		T30220690
7.0	8	31	109		T30220700
7.1	8	31	109		T30220710
7.2	8	31	109		T30220720
7.3	8	31	109		T30220730
7.4	8	31	109		T30220740
7.5	8	31	109		T30220750
7.6	8	33	117		T30220760
7.7	8	33	117		T30220770
7.8	8	33	117		T30220780
7.9	8	33	117		T30220790
7.97	8	33	117		T30220797
7.98	8	33	117		T30220798
7.99	8	33	117		T30220799
8.0	8	33	117		T30220800
8.01	8	33	117		T30220801
8.02	8	33	117		T30220802



T3022

INF. TEC. PAG.
D37

H7

HSS-E

h6

T-DX

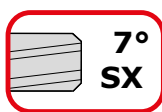
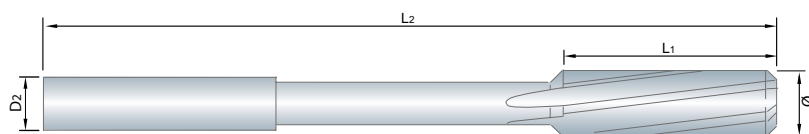
E-SX

15/45°

**DIN
1420**

Unità : mm

Ø	D2	L1	L2	✓	P1 P2 P3 P4 M1 K1 N1 N3
8.03	8	33	117		T30220803
8.1	8	33	117		T30220810
8.2	8	33	117		T30220820
8.3	8	33	117		T30220830
8.4	8	33	117		T30220840
8.5	8	33	117		T30220850
8.6	10	36	125		T30220860
8.7	10	36	125		T30220870
8.8	10	36	125		T30220880
8.9	10	36	125		T30220890
9.0	10	36	125		T30220900
9.01	10	36	125		T30220901
9.02	10	36	125		T30220902
9.03	10	36	125		T30220903
9.1	10	36	125		T30220910
9.2	10	36	125		T30220920
9.3	10	36	125		T30220930
9.4	10	36	125		T30220940
9.5	10	36	125		T30220950
9.6	10	38	133		T30220960
9.7	10	38	133		T30220970
9.8	10	38	133		T30220980
9.9	10	38	133		T30220990
9.97	10	38	133		T30220997
9.98	10	38	133		T30220998
9.99	10	38	133		T30220999
10.0	10	38	133		T30221000
10.01	10	38	133		T30221001
10.02	10	38	133		T30221002
10.03	10	38	133		T30221003
11.0	10	41	142		T30221100
11.97	10	41	151		T30221197
11.98	10	41	151		T30221198



T3022

INF. TEC. PAG.
D37

H7

HSS-E

h6

T-DX

E-SX

15/45°

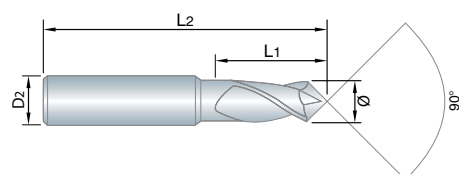
DIN
1420

Unità : mm

Ø	D2	L1	L2	✓	P1 P2 P3 P4 M1 K1 N1 N3
11.99	10	41	151		T30221199
12.0	10	44	151		T30221200
12.01	10	44	151		T30221201
12.02	10	44	151		T30221202
12.03	10	44	151		T30221203
13.0	10	44	151		T30221300
14.0	14	47	160		T30221400
15.0	14	50	162		T30221500
16.0	14	52	170		T30221600
17.0	14	54	175		T30221700
18.0	14	56	182		T30221800
19.0	16	58	189		T30221900
20.0	16	60	195		T30222000

FRESA 2 TAGLIENTI MD A 90° (PER SMUSSATURA - FORATURA)

CARBIDE 2 FLUTE 90° END MILLS



T1100

INF. TEC. PAG.
D40



MD

Z 2

30°

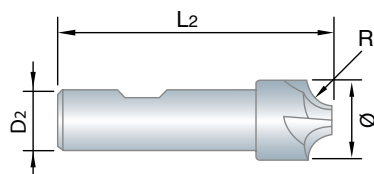


**P1 P2 P3
P4 P5**

M1 K1 N1

Unità : mm

Ø	D2	L1	L2	
3.0	4	6	50	T11000300
4.0	5	8	50	T11000400
5.0	6	10	50	T11000500
6.0	8	12	60	T11000600
8.0	10	16	70	T11000800
10.0	12	18	70	T11001000
12.0	12	20	70	T11001200
16.0	16	26	80	T11001600
20.0	20	32	100	T11002000



T3025

INF. TEC. PAG.
D40

6518



**HSS
Co8**

Z 4



P1 P2 P3 P4

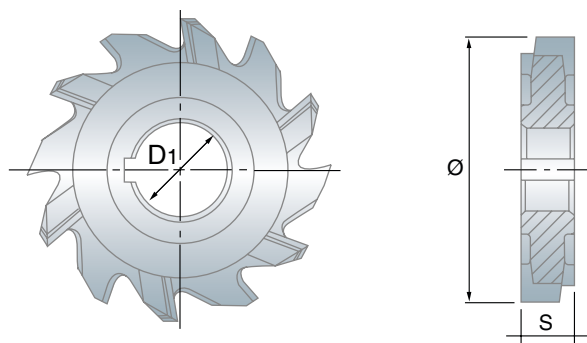
P5 N1

Unità : mm

Ø	D2	L2	R	
8.0	10	60	R1.0	T30250800
9.0	10	60	R1.5	T30250900
10.0	10	60	R2.0	T30251000
11.0	10	60	R2.5	T30251100
12.0	12	60	R3.0	T30251200
13.0	12	60	R3.5	T30251300
14.0	12	60	R4.0	T30251400
15.0	12	60	R4.5	T30251500
16.0	12	60	R5.0	T30251600
19.0	16	67	R5.5	T30251900
20.0	16	67	R6.0	T30252000
21.0	16	71	R6.5	T30252100
22.0	16	71	R7.0	T30252200
23.0	16	71	R7.5	T30252300
24.0	16	71	R8.0	T30252400
25.0	25	85	R8.5	T30252500
26.0	25	85	R9.0	T30252600
27.0	25	85	R9.5	T30252700
28.0	25	85	R10.0	T30252800
31.0	25	90	R10.5	T30253100
32.0	25	90	R11.0	T30253200
34.0	25	90	R12.0	T30253400
41.0	25	100	R12.5	T30254100
42.0	25	100	R13.0	T30254200
44.0	25	100	R14.0	T30254400
46.0	25	100	R15.0	T30254600
48.0	25	100	R16.0	T30254800
52.0	32	112	R18.0	T30255200
56.0	32	112	R20.0	T30255600

FRESA A DISCO HSS-E A DENTI ALTERNATI

HSS-E SIDE AND FACE MILLING CUTTERS
WITH STAGGERED TEETH



T3028

INF. TEC. PAG.
D38

885-A

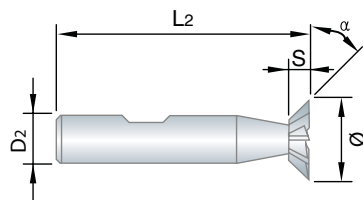
HSS-E

P1 P2 P3 P4

P5 N1

Unità : mm

Ø	S	D1	Z	
50.0	4	16	14	T302805004
50.0	5	16	14	T302805005
50.0	6	16	14	T302805006
50.0	7	16	14	T302805007
50.0	8	16	14	T302805008
50.0	10	16	14	T302805010
63.0	3	22	16	T302806303
63.0	4	22	16	T302806304
63.0	5	22	16	T302806305
63.0	6	22	16	T302806306
63.0	8	22	16	T302806308
63.0	10	22	16	T302806310
63.0	12	22	16	T302806312
80.0	3	22	18	T302808003
80.0	4	22	18	T302808004
80.0	5	22	18	T302808005
80.0	6	22	18	T302808006
80.0	7	22	18	T302808007
80.0	8	22	18	T302808008
80.0	10	22	18	T302808010
80.0	12	22	18	T302808012
80.0	14	22	18	T302808014
100.0	3	27	20	T302810003
100.0	4	27	20	T302810004
100.0	5	27	20	T302810005
100.0	6	27	20	T302810006
100.0	8	27	20	T302810008
100.0	10	27	20	T302810010
125.0	5	32	22	T302812505
125.0	6	32	22	T302812506
125.0	8	32	22	T302812508
125.0	10	32	22	T302812510
125.0	12	32	22	T302812512
160.0	6	32	26	T302816006
160.0	8	32	26	T302816008
160.0	10	32	26	T302816010


T3031

 INF. TEC. PAG.
D38

1833
HSS-E

 P1 P2
P3 P4

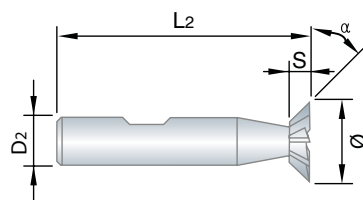
P5 N1

Unità : mm

Ø	S	α	D2	L2	Z	
16.0	4	45°	12	60	6	T30311600
20.0	5	45°	12	63	6	T30312000
22.0	6	45°	12	67	6	T30312200
25.0	6.3	45°	16	67	8	T30312500
28.0	7.5	45°	16	67	8	T30312800
32.0	8	45°	16	71	10	T30313200
38.0	10	45°	16	80	12	T30313800

FRESA HSS-E AD ANGOLO DIVERGENTE TIPO "A", "C", "E"

HSS-E DOVETAIL CUTTER TYPE "A", "C", "E" END MILL



T3034

INF. TEC. PAG.
D38

1833

HSS-E

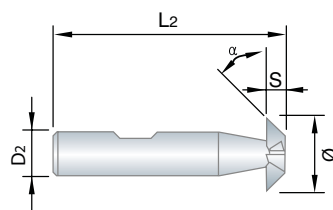


**P1 P2
P3 P4**

P5 N1

Unità : mm

Ø	S	α	D2	L2	Z	
16.0	6.3	60°	12	60	6	T30341600
20.0	8	60°	12	63	6	T30342000
22.0	9	60°	12	67	6	T30342200
25.0	10	60°	16	67	8	T30342500
28.0	11	60°	16	67	8	T30342800
32.0	12.5	60°	16	71	10	T30343200
38.0	16	60°	16	80	12	T30343800
40.0	13	60°	25	85	12	T30344000
50.0	16	60°	25	100	16	T30345000



T3037

INF. TEC. PAG.
D38

1833

HSS-E

0°



**P1 P2
P3 P4**

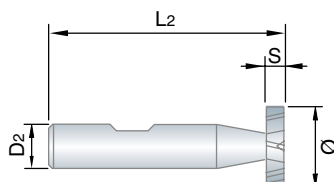
P5 N1

Unità : mm

ϕ	S	α	D2	L2	Z	
16.0	4	45°	12	60	6	T30371600
20.0	5	45°	12	63	6	T30372000
22.0	6	45°	12	67	6	T30372200
25.0	6.3	45°	16	67	8	T30372500
28.0	7.5	45°	16	67	8	T30372800
32.0	8	45°	16	71	10	T30373200
38.0	10	45°	16	80	12	T30373800

FRESA HSS-E PER CHIAVETTE WOODRUFF TIPO "B", "D", "F"

HSS-E WOODRUFF KEYSEAT CUTTER
TYPE "B", "D", "F" END MILL



T3040

INF. TEC. PAG.
D39

850

HSS-E

10-12°

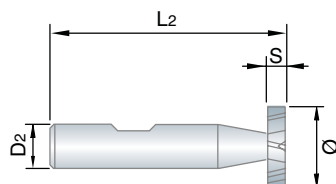


P1 P2 P3 P4

P5 N1

Unità : mm

Ø	S	D2	L2	Z	
10.5	2	6	50	8	T304010502
10.5	2.5	6	50	8	T304010525
10.5	3	6	50	8	T304010503
13.5	2	10	56	8	T304013502
13.5	2.5	10	56	8	T304013525
13.5	3	10	56	8	T304013503
13.5	4	10	56	8	T304013504
16.5	2.5	10	56	8	T304016525
16.5	3	10	56	8	T304016503
16.5	4	10	56	8	T304016504
16.5	5	10	56	8	T304016505
19.5	3	10	56	8	T304019503
19.5	4	10	63	8	T304019504
19.5	5	10	63	8	T304019505
19.5	6	10	63	8	T304019506
22.5	4	10	63	10	T304022504
22.5	5	10	63	10	T304022505
22.5	6	10	63	10	T304022506
22.5	8	10	63	10	T304022508
25.5	5	10	63	10	T304025505
25.5	6	10	63	10	T304025506
25.5	7	10	63	10	T304025507
25.5	8	10	63	10	T304025508
28.5	5	10	63	10	T304028505
28.5	6	10	63	10	T304028506
28.5	7	10	63	10	T304028507
28.5	8	10	63	10	T304028508
28.5	10	12	71	10	T304028510


T3040

 INF. TEC. PAG.
D39

850
HSS-E
10-12°

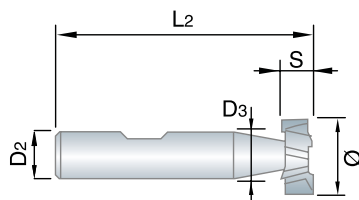
P1 P2 P3 P4
P5 N1

Unità : mm

Ø	S	D2	L2	Z	
32.5	5	12	71	12	T304032505
32.5	6	12	71	12	T304032506
32.5	7	12	71	12	T304032507
32.5	8	12	71	12	T304032508
32.5	10	12	71	12	T304032510
38.5	7	12	71	12	T304038507
38.5	8	12	71	12	T304038508
38.5	9	12	71	12	T304038509
38.5	10	12	71	12	T304038510
45.5	10	12	71	14	T304045510

FRESA HSS-E PER SCANALATURE A T DENTI ALTERNATI

HSS-E T-SLOT CUTTER TYPE "AA", "AB", "AD" END MILL



T3043

INF. TEC. PAG.
D39

851

HSS-E

10°



**P1 P2
P3 P4**

P5 N1

Unità : mm

Ø	S	D2	D3	L2	Z	
12.5	6	10	5	57	6	T30431250
16.0	8	10	6.5	62	6	T30431600
18.0	8	12	8	70	6	T30431800
19.0	9	12	8	71	6	T30431900
21.0	9	12	10	74	6	T30432100
22.0	10	12	10	75	6	T30432200
25.0	11	16	12	82	6	T30432500
28.0	12	16	13	83	6	T30432800
32.0	14	16	15	90	8	T30433200
36.0	16	25	17	103	8	T30433600
40.0	18	25	19	108	8	T30434000

T3004

MATERIALI	Vc	fn		
		Ø ≤10	Ø ≤20	Ø ≤30
Acciaio < 500 N/mm²	35 - 40	0,20	0,22	0,24
Acciaio < 750 N/mm²	20 - 30	0,14	0,17	0,20
Acciaio < 900 N/mm²	15 - 20	0,11	0,12	0,14
Acciaio < 1100 N/mm²	12 - 15	0,10	0,12	0,15
Acciaio < 1500 N/mm²				
INOX < 800 N/mm²	12 - 15	0,10	0,12	0,15
INOX > 800 N/mm²	6 - 8	0,07	0,08	0,09
Ghisa	20 - 40	0,15	0,24	0,28
Leghe Alluminio < 10% Si	50 - 60	0,22	0,25	0,27
Leghe Alluminio > 10% Si				
Materiali non ferrosi	50 - 100	0,50	0,60	0,65

T3007

MATERIALI	Vc	fn		
		Ø ≤10	Ø ≤20	Ø ≤30
Acciaio < 500 N/mm²	35 - 40	0,20	0,22	0,24
Acciaio < 750 N/mm²	20 - 30	0,14	0,17	0,20
Acciaio < 900 N/mm²	15 - 20	0,11	0,12	0,14
Acciaio < 1100 N/mm²	12 - 15	0,10	0,12	0,15
Acciaio < 1500 N/mm²				
INOX < 800 N/mm²	12 - 15	0,10	0,12	0,15
INOX > 800 N/mm²	6 - 8	0,07	0,08	0,09
Ghisa	20 - 40	0,15	0,24	0,28
Leghe Alluminio < 10% Si	50 - 60	0,22	0,25	0,27
Leghe Alluminio > 10% Si				
Materiali non ferrosi	50 - 100	0,50	0,60	0,65

T3010 - T3013 - T4001

MATERIALI	Vc	fn		
		Ø ≤ 10	Ø ≤ 20	Ø ≤ 30
Acciaio < 500 N/mm²	17 - 22	0,30	0,32	0,36
Acciaio < 750 N/mm²	10 - 15	0,28	0,30	0,31
Acciaio < 900 N/mm²	8 - 12	0,24	0,26	0,28
Acciaio < 1100 N/mm²	6 - 8	0,20	0,20	0,22
Acciaio < 1500 N/mm²				
INOX < 800 N/mm²	6 - 8	0,20	0,20	0,22
INOX > 800 N/mm²	4 - 6	0,08	0,09	0,10
Ghisa	15 - 25	0,13	0,19	0,24
Leghe Alluminio < 10% Si	35 - 45	0,27	0,30	0,35
Leghe Alluminio > 10% Si				
Materiali non ferrosi	35 - 70	0,40	0,45	0,50

T3016 - T3019 - T3022

MATERIALI	Vc	fn					
		Ø ≤ 4	Ø ≤ 8	Ø ≤ 13	Ø ≤ 20	Ø ≤ 30	Ø > 30
Acciaio < 500 N/mm²	12 - 16	0,05 - 0,15	0,10 - 0,20	0,15 - 0,25	0,20 - 0,30	0,25 - 0,40	0,35 - 0,50
Acciaio < 750 N/mm²	10 - 12	0,05 - 0,15	0,10 - 0,20	0,15 - 0,25	0,20 - 0,30	0,25 - 0,40	0,35 - 0,50
Acciaio < 900 N/mm²	6 - 8	0,05 - 0,10	0,08 - 0,16	0,10 - 0,20	0,15 - 0,25	0,20 - 0,30	0,30 - 0,40
INOX < 800 N/mm²	4 - 6	0,03 - 0,08	0,06 - 0,10	0,08 - 0,15	0,10 - 0,20	0,15 - 0,25	0,20 - 0,30
INOX > 800 N/mm²							
Ghisa	10 - 12	0,05 - 0,10	0,08 - 0,16	0,10 - 0,20	0,15 - 0,25	0,20 - 0,30	0,30 - 0,40
Leghe Alluminio < 10% Si	16 - 20	0,10 - 0,20	0,15 - 0,25	0,20 - 0,30	0,25 - 0,40	0,35 - 0,50	0,40 - 0,60
Leghe Alluminio > 10% Si							
Materiali non ferrosi	8 - 12	0,10 - 0,20	0,20 - 0,30	0,30 - 0,40	0,40 - 0,50	0,50 - 0,60	0,60 - 0,80

T3028

MATERIALI	UNITÀ	Ø(mm)						
		50,00	63,00	80,00	100,00	125,00	160,00	200,00
Acciai < 500 N/mm ²	n (giri/min)	160	125	100	80	63	50	40
	Vf (mm/min)	130	160	145	130	100	105	95
Acciai < 750 N/mm ²	n (giri/min)	115	90	70	60	45	37	31
	Vf (mm/min)	85	75	69	60	54	48	45
Acciai < 1100 N/mm ²	n (giri/min)	95	75	60	47	38	30	25
	Vf (mm/min)	58	51	48	41	38	34	31
Acciai < 1500 N/mm ²	n (giri/min)	76	60	47	38	30	23	19
	Vf (mm/min)	42	38	34	30	26	24	22
Leghe di Alluminio	n (giri/min)	630	500	400	320	250	200	160
	Vf (giri/min)	200	250	250	200	200	150	150

T3031 - T3034

MATERIALI	UNITÀ	Ø(mm)						
		16,00	20,00	25,00	32,00	40,00	50,00	63,00
Acciai < 500 N/mm ²	n (giri/min)	615	500	380	300	250	190	150
	Vf (mm/min)	110	110	80	125	130	90	75
Acciai < 750 N/mm ²	n (giri/min)	305	255	190	155	125	100	80
	Vf (mm/min)	57	55	47	64	64	42	40
Acciai < 1100 N/mm ²	n (giri/min)	215	180	135	100	90	75	60
	Vf (mm/min)	40	38	30	40	45	36	32
Acciai < 1500 N/mm ²	n (giri/min)	160	125	100	80	60	50	40
	Vf (mm/min)	20	15	16	16	16	16	15
Leghe di Alluminio	n (giri/min)	1850	1350	1150	920	765	550	450
	Vf (giri/min)	336	324	270	375	387	265	240

T3037

MATERIALI	UNITÀ	Ø(mm)			
		16,00	20,00	25,00	32,00
Acciai < 500 N/mm ²	n (giri/min)	615	500	380	300
	Vf (mm/min)	110	110	80	125
Acciai < 750 N/mm ²	n (giri/min)	305	255	190	155
	Vf (mm/min)	57	55	47	64
Acciai < 1100 N/mm ²	n (giri/min)	215	180	135	100
	Vf (mm/min)	40	38	30	40
Acciai < 1500 N/mm ²	n (giri/min)	160	125	100	80
	Vf (mm/min)	20	15	16	16
Leghe di Alluminio	n (giri/min)	1850	1350	1150	920
	Vf (giri/min)	336	324	270	375

T3040

MATERIALI	UNITÀ	Ø(mm)							
		10,50	13,50	16,50	19,50	22,50	28,50	32,50	45,50
Acciai < 500 N/mm ²	n (giri/min)	900	700	570	480	420	330	290	210
	Vf (mm/min)	72	56	114	134	168	165	209	206
Acciai < 750 N/mm ²	n (giri/min)	600	470	380	320	280	220	190	130
	Vf (mm/min)	48	38	76	90	112	110	137	127
Acciai < 1100 N/mm ²	n (giri/min)	480	370	300	260	220	180	155	110
	Vf (mm/min)	38	30	60	73	88	90	112	108
Acciai < 1500 N/mm ²	n (giri/min)	300	230	190	160	140	110	90	70
	Vf (mm/min)	24	18	38	45	56	55	65	69
Leghe di Alluminio	n (giri/min)	3000	2300	1900	1600	1400	1100	900	700
	Vf (giri/min)	240	184	380	448	560	550	648	686

T3043

MATERIALI	UNITÀ	Ø(mm)										
		12,50	16,00	18,00	19,00	21,00	22,00	25,00	28,00	32,00	50,00	63,00
Acciai < 500 N/mm ²	n (giri/min)	770	600	550	500	470	440	390	345	310	270	240
	Vf (mm/min)	38	45	47	50	52	55	65	75	90	80	70
Acciai < 750 N/mm ²	n (giri/min)	380	300	270	250	230	220	190	170	150	135	120
	Vf (mm/min)	16	19	20	20	22	25	30	38	42	40	38
Acciai < 1100 N/mm ²	n (giri/min)	270	210	195	180	160	150	135	120	100	90	85
	Vf (mm/min)	8	9	12	15	16	17	18	20	20	20	20
Leghe di Alluminio	n (giri/min)	2350	1830	1680	1540	1430	1330	1170	1040	910	800	730
	Vf (giri/min)	110	140	150	160	165	170	180	210	250	230	210

T3001

MATERIALI	UNITÀ	Ø(mm)							
		6,00	6,50	8,00	10,00	11,00	15,00	18,00	20,00
Leghe di Alluminio	n (giri/min)	2100	2100	1700	1200	1100	840	670	550
Acciai < 500 N/mm ²	n (giri/min)	590	590	470	380	300	240	190	160
Acciai < 900 N/mm ²	n (giri/min)	480	480	380	320	240	195	160	125
Acciai < 1100 N/mm ²	n (giri/min)	380	380	300	260	190	155	120	95
Acciai < 1500 N/mm ²	n (giri/min)	320	320	250	170	160	130	80	70

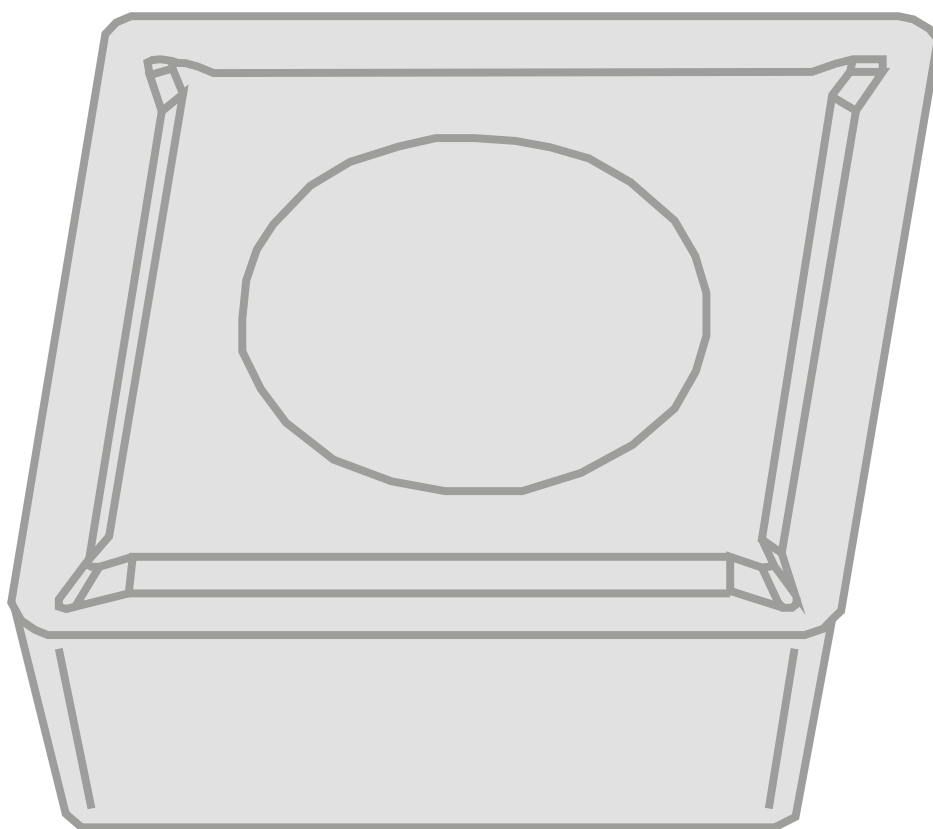
T1100

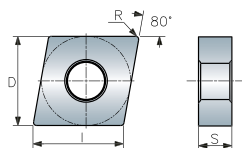
MATERIALI	UNITÀ	Ø(mm)								
		3,00	4,00	5,00	6,00	8,00	10,00	12,00	16,00	20,00
Acciai < 750 N/mm ²	n (giri/min)	5900	4800	3800	3000	2300	2000	1760	1300	1100
	Vf (mm/min)	95	95	100	110	115	120	130	140	140
Acciai < 900 N/mm ²	n (giri/min)	3900	3200	2500	2000	1540	1300	1100	900	700
	Vf (mm/min)	65	65	65	70	75	80	90	90	90
Acciai < 1100 N/mm ²	n (giri/min)	3300	2800	2200	1800	1300	1200	1000	770	600
	Vf (mm/min)	50	50	55	60	65	65	70	70	70
Acciai Temprati > 45 HRC	n (giri/min)	2400	2000	1760	1400	1100	1000	840	660	440
	Vf (mm/min)	40	40	45	50	55	55	60	60	60
Leghe di Alluminio	n (giri/min)	14000	12000	9500	7700	5800	5100	4400	3300	2640
	Vf (giri/min)	230	240	250	300	350	380	400	330	340

T3025

MATERIALI	UNITÀ	Ø(mm)											
		8,00	9,00	10,00	11,00	12,00	14,00	16,00	20,00	24,00	28,00	34,00	48,00
		R 1	R 1,5	R 2	R 2,5	R 3	R 4	R 5	R 6	R 8	R 10	R 12	R 16
Leghe di Alluminio	n (giri/min)	3500	2800	2800	2400	2400	2000	1600	1400	1200	950	800	600
	Vf (giri/min)	245	230	220	220	210	200	200	190	180	170	160	140
Acciai < 500 N/mm ²	n (giri/min)	800	630	630	530	530	450	350	310	260	210	180	130
	Vf (mm/min)	55	55	50	45	45	45	40	40	40	35	35	30
Acciai < 750 N/mm ²	n (giri/min)	600	470	470	390	390	330	260	230	190	155	130	95
	Vf (mm/min)	35	30	30	30	30	30	30	30	30	25	25	20
Acciai < 1100 N/mm ²	n (giri/min)	480	380	380	315	315	270	210	185	155	125	105	75
	Vf (mm/min)	35	35	30	30	30	25	25	25	25	25	20	15

INSERTI

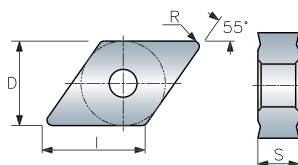




Info
tecniche
Pag.: E11

Unità:mm

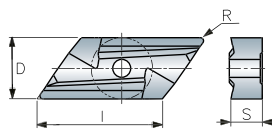
Codice	Descrizione	Dimensioni				fn		ap	
		L	D	S	R	min	max	min	max
ICNMG010	CNMG 120408-WG	12.90	12.70	4.76	0.80	0.11	0.50	0.80	5.00
ICNMG020	CNMG 120412-WR	12.90	12.70	4.76	1.20	0.14	0.68	1.20	6.00



Info
tecniche
Pag.: E11

Unità:mm

Codice	Descrizione	Dimensioni				fn		ap	
		L	D	S	R	min	max	min	max
IDNMG010	DNMG 150608-WG	15.50	12.70	6.35	0.80	0.11	0.50	0.80	5.00
IDNMG020	DNMG 150612-WR	15.50	12.70	6.35	1.20	0.14	0.68	1.20	6.00

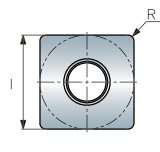


Info
tecniche
Pag.: E12

Unità:mm

Codice	Descrizione	Dimensioni				fn		ap	
		L	D	S	R	min	max	min	max
IKNUX010	KNUX 160405 R	16.00	9.53	4.76	0.5	0.05	0.23	0.50	5.00

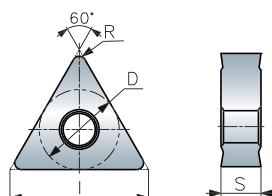
- WR = operazioni di sgrossatura
- WG = operazioni generiche
- WF = operazioni di finitura



Info
tecniche
Pag.: E12

Unità: mm

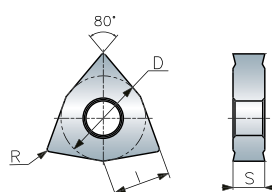
Codice	Descrizione	Dimensioni				fn		ap	
		I	D	S	R	min	max	min	max
ISNMG010	SNMG 120408-WG	12.70	12.70	4.76	0.80	0.16	0.70	0.80	5.00



Info
tecniche
Pag.: E12

Unità: mm

Codice	Descrizione	Dimensioni				fn		ap	
		I	D	S	R	min	max	min	max
ITNMG010	TNMG 160408-WG	16.50	9.53	4.76	0.80	0.11	0.50	0.80	5.00
ITNMG020	TNMG 220408-WG	22.00	12.70	4.76	0.80	0.11	0.50	0.80	5.00

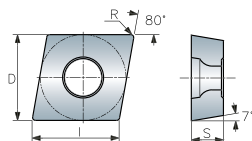
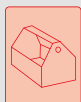
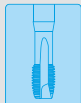


Info
tecniche
Pag.: E13

Unità: mm

Codice	Descrizione	Dimensioni				fn		ap	
		I	D	S	R	min	max	min	max
IWNMG010	WNMG 060404-WF	6.60	9.53	4.76	0.40	0.05	0.23	0.50	3.00
IWNMG020	WNMG 060408-WG	6.60	9.53	4.76	0.80	0.11	0.50	0.80	3.00
IWNMG030	WNMG 080408-WG	8.70	12.70	4.76	0.80	0.11	0.50	0.80	3.50
IWNMG040	WNMG 080412-WR	8.70	12.70	4.76	1.20	0.13	0.65	1.20	3.50

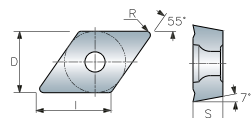
- WR = operazioni di sgrossatura
- WG = operazioni generiche
- WF = operazioni di finitura



Info
tecniche
Pag.: E15

Unità:mm

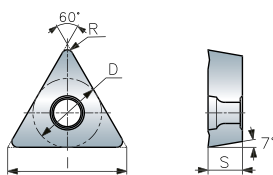
Codice	Descrizione	Dimensioni				fn		ap	
		I	D	S	R	min	max	min	max
ICMT030	CCMT 09T308-WG	9.70	9.53	3.97	0.80	0.11	0.50	0.80	4.00



Info
tecniche
Pag.: E15

Unità:mm

Codice	Descrizione	Dimensioni				fn		ap	
		I	D	S	R	min	max	min	max
IDCMT030	DCMT 11T308-WG	11.60	9.53	3.97	0.80	0.11	0.50	0.80	4.00

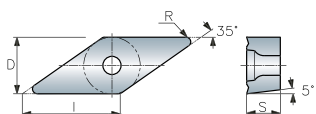


Info
tecniche
Pag.: E15

Unità:mm

Codice	Descrizione	Dimensioni				fn		ap	
		I	D	S	R	min	max	min	max
ITCMT020	TCMT 16T308-WG	16.50	9.53	3.97	0.80	0.11	0.43	0.80	5.00

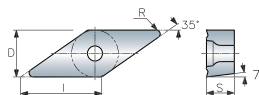
- WR = operazioni di sgrossatura
- WG = operazioni generiche
- WF = operazioni di finitura



Info
tecniche
Pag.: E16

Unità: mm

Codice	Descrizione	Dimensioni				fn		ap	
		I	D	S	R	min	max	min	max
IVBMT020	VBMT 160408-WG	16.00	9.53	4.76	0.80	0.10	0.40	0.80	3.50

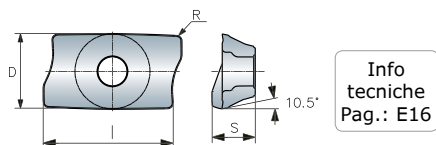
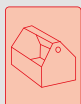
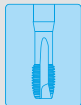


Info
tecniche
Pag.: E16

Unità: mm

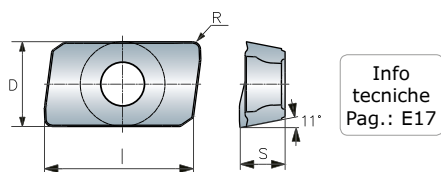
Codice	Descrizione	Dimensioni				fn		ap	
		I	D	S	R	min	max	min	max
IVCMT020	VCMT 160408-WG	16.00	9.53	4.76	0.80	0.10	0.40	0.80	3.50

- WR = operazioni di sgrossatura
- WG = operazioni generiche
- WF = operazioni di finitura



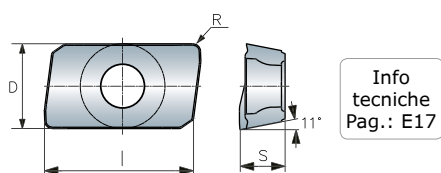
Unità:mm

Codice	Descrizione	Dimensioni					fn		ap	
		I	D	S	Ω	R	min	max	min	max
IAOMT010	AOMT 123608PDTR	11.30	6.60	3.60	11.00	0.80	0.07	0.22	0.50	11.00



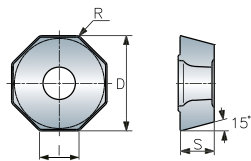
Unità:mm

Codice	Descrizione	Dimensioni					fn		ap	
		I	D	S	Ω	R	min	max	min	max
IAPKT010	APKT 100305 PDTR	10.58	6.70	3.60	11.00	0.50	0.07	0.26	0.50	9.00
IAPKT020	APKT 160408 PDTR	16.30	9.40	5.27	11.00	0.80	0.10	0.32	0.50	15.00



Unità:mm

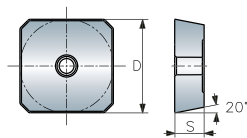
Codice	Descrizione	Dimensioni					fn		ap	
		I	D	S	Ω	R	min	max	min	max
IAPMT010	APMT 160408 PDTR(M)	16.25	9.53	5.15	11.00	0.80	0.09	0.30	0.50	15.00



Info
tecniche
Pag.: E18

Unità:mm

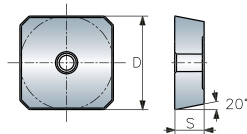
Codice	Descrizione	Dimensioni					fn		ap	
		I	D	S	Ω	R	min	max	min	max
IODMW010	ODMW 060508	6.60	15.88	5.50	15.00	0.80	0.12	0.58	0.40	4.00



Info
tecniche
Pag.: E18

Unità:mm

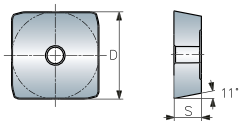
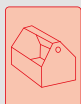
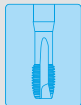
Codice	Descrizione	Dimensioni					fn		ap	
		I	D	S	Ω	R	min	max	min	max
ISEKN010	SEKN 1203 AFTN	-	12.70	3.18	20.00	-	0.10	0.46	0.50	7.00



Info
tecniche
Pag.: E18

Unità:mm

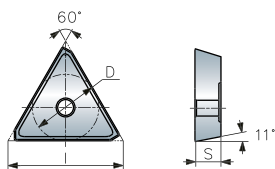
Codice	Descrizione	Dimensioni					fn		ap	
		I	D	S	Ω	R	min	max	min	max
ISEKR010	SEKR 1203 AFTN	-	12.70	3.18	20.00	-	0.10	0.46	0.50	7.00



Info
tecniche
Pag.: E18

Unità:mm

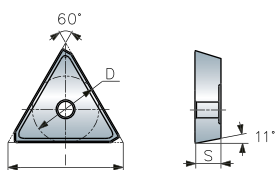
Codice	Descrizione	Dimensioni					fn		ap	
		I	D	S	Ω	R	min	max	min	max
ISPKN010	SPKN 1203 EDTR	-	12.70	3.18	11.00	-	0.10	0.43	0.50	7.00



Info
tecniche
Pag.: E19

Unità:mm

Codice	Descrizione	Dimensioni					fn		ap	
		I	D	S	Ω	R	min	max	min	max
ITPKN010	TPKN 1603 PDTR	16.50	9.53	3.18	11.00	-	0.08	0.27	0.50	12.00
ITPKN020	TPKN 2204 PDTR	22.00	12.70	4.76	11.00	-	0.09	0.27	0.50	18.00



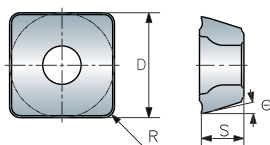
Info
tecniche
Pag.: E19

Unità:mm

Codice	Descrizione	Dimensioni					fn		ap	
		I	D	S	Ω	R	min	max	min	max
ITPKR010	TPKR 1603 PDTR	16.50	9.53	3.18	11.00	-	0.09	0.22	0.50	12.00
ITPKR020	TPKR 2204 PDTR	22.00	12.70	4.76	11.00	-	0.09	0.22	0.50	18.00

INSERTI DI FORATURA

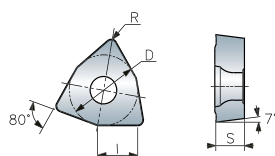
INSERTS FOR DRILLING



Info
tecniche
Pag.: E20

Unità:mm

Codice	Descrizione	Dimensioni					fn	
		I	S	D	Ω	R	min	max
ISPMX010	SPMX 050204	-	2.38	5.00	11.00	0.40	0.04	0.14
ISPMX020	SPMX 060204	-	2.41	6.00	11.00	0.40	0.04	0.16
ISPMX030	SPMX 07T308	-	3.97	7.94	11.00	0.80	0.06	0.16



Info
tecniche
Pag.: E21

Unità:mm

Codice	Descrizione	Dimensioni					fn	
		I	S	D	Ω	R	min	max
IWCMX010	WCMX 040208	-	2.38	6.35	7.00	0.80	0.05	0.14
IWCMX020	WCMX 050308	-	3.18	7.94	7.00	0.80	0.06	0.16
IWCMX030	WCMX 06T308	-	3.97	9.52	7.00	0.80	0.06	0.16
IWCMX040	WCMX 080412	-	4.76	12.70	7.00	1.20	0.06	0.16

CNMG 1204..-WG

Materiali			Parametri								
Gruppo materiali	Sotto gruppo	Durezza (HB)	fz (mm/dente)			Vc (m/min.)			ap (mm)		
			Min.	Max.	Recomandato	Min.	Max.	Recomandato	Min.	Max.	Recomandato
P	Acciai non legati	120	0.21	0.50	0.35	180	330	250	0.5	5.0	3.0
	Acciai basso legati	200	0.21	0.45	0.30	120	280	200	0.5	5.0	3.0
	Acciai alto legati	220	0.18	0.40	0.25	70	190	130	0.5	4.0	2.5
M	Austenitici	190	0.20	0.40	0.30	170	270	220	0.5	5.0	3.0
	Ferritici	220	0.18	0.40	0.26	130	210	170	0.5	5.0	3.0
	Martensitici	372	0.16	0.36	0.24	90	150	120	0.5	4.0	2.5
K	Ghisa nodulare	150	0.15	0.58	0.34	170	250	200	0.5	5.0	3.0
	Ghisa grigia	150	0.15	0.60	0.35	170	250	210	0.5	5.0	3.0
S	Super leghe	240	0.20	0.35	0.28	25	50	38	0.5	3.0	2.0

CNMG 1204..-WR

Materiali			Parametri								
Gruppo materiali	Sotto gruppo	Durezza (HB)	fz (mm/dente)			Vc (m/min.)			ap (mm)		
			Min.	Max.	Recomandato	Min.	Max.	Recomandato	Min.	Max.	Recomandato
P	Acciai non legati	120	0.26	0.68	0.47	180	330	250	0.7	6.0	4.0
	Acciai basso legati	200	0.26	0.61	0.44	120	280	200	0.7	6.0	4.0
	Acciai alto legati	220	0.23	0.54	0.39	70	190	130	0.7	4.8	3.4
M	Austenitici	190	0.25	0.54	0.40	170	270	220	0.7	6.0	4.0
	Ferritici	220	0.24	0.50	0.38	130	210	180	0.7	6.0	4.0
	Martensitici	372	0.22	0.48	0.34	90	150	120	0.7	5.0	3.5
K	Ghisa nodulare	150	0.20	0.78	0.50	160	240	200	0.7	6.0	4.0
	Ghisa grigia	150	0.20	0.81	0.51	170	250	210	0.7	6.0	4.0
S	Super leghe	240	0.25	0.47	0.36	25	45	35	0.7	3.6	2.7

DNMG 1506..-WG

Materiali			Parametri								
Gruppo materiali	Sotto gruppo	Durezza (HB)	fz (mm/dente)			Vc (m/min.)			ap (mm)		
			Min.	Max.	Recomandato	Min.	Max.	Recomandato	Min.	Max.	Recomandato
P	Acciai non legati	120	0.21	0.50	0.36	180	330	250	0.5	5.0	3.0
	Acciai basso legati	200	0.21	0.45	0.33	120	280	200	0.5	5.0	3.0
	Acciai alto legati	220	0.18	0.40	0.29	70	190	130	0.5	4.0	2.5
M	Austenitici	190	0.20	0.40	0.30	170	270	220	0.5	5.0	3.0
	Ferritici	220	0.20	0.38	0.28	130	200	170	0.5	5.0	3.0
	Martensitici	372	0.18	0.34	0.26	90	140	110	0.5	4.0	2.5
K	Ghisa nodulare	150	0.14	0.58	0.36	160	240	200	0.5	5.0	3.0
	Ghisa grigia	150	0.15	0.60	0.38	170	250	210	0.5	5.0	3.0
S	Super leghe	240	0.20	0.35	0.28	25	45	35	0.5	3.0	2.0

DNMG 1506..-WR

Materiali			Parametri								
Gruppo materiali	Sotto gruppo	Durezza (HB)	fz (mm/dente)			Vc (m/min.)			ap (mm)		
			Min.	Max.	Recomandato	Min.	Max.	Recomandato	Min.	Max.	Recomandato
P	Acciai non legati	120	0.26	0.68	0.47	180	330	250	0.7	6.0	4.0
	Acciai basso legati	200	0.26	0.61	0.44	120	280	200	0.7	6.0	4.0
	Acciai alto legati	220	0.23	0.54	0.39	70	190	130	0.7	4.8	3.4
M	Austenitici	190	0.25	0.54	0.40	170	270	220	0.7	6.0	4.0
	Ferritici	220	0.25	0.52	0.38	130	200	170	0.7	6.0	4.0
	Martensitici	372	0.22	0.48	0.34	90	140	110	0.7	4.5	3.0
K	Ghisa nodulare	150	0.20	0.76	0.48	160	240	200	0.7	6.0	4.0
	Ghisa grigia	150	0.20	0.80	0.50	170	250	210	0.7	6.0	4.0
S	Super leghe	240	0.25	0.47	0.36	25	45	35	0.7	3.6	2.7

KNUX 160405 R

Materiali			Parametri								
Gruppo materiali	Sotto gruppo	Durezza (HB)	fz (mm/dente)			Vc (m/min.)			ap (mm)		
			Min.	Max.	Recomandato	Min.	Max.	Recomandato	Min.	Max.	Recomandato
P	Acciai non legati	120	0.11	0.23	0.18	180	330	260	0.2	4.2	3.0
	Acciai basso legati	200	0.10	0.20	0.15	120	250	240	0.2	4.2	3.0
	Acciai alto legati	220	0.09	0.16	0.56	70	150	140	0.2	4.2	2.0
M	Austenitici	190	0.10	0.18	0.15	170	270	260	0.2	4.2	3.0
	Ferritici	220	0.10	0.18	0.15	130	200	170	0.2	4.2	3.0
	Martensitici	40 HRc	0.10	0.16	0.15	90	140	110	0.2	3.6	2.4
K	Ghisa nodulare	150	0.08	0.20	0.18	160	240	220	0.2	5.0	3.0
	Ghisa grigia	150	0.08	0.20	0.18	170	250	240	0.2	5.0	3.0
S	Super leghe	240	0.09	0.15	0.12	25	50	40	0.2	3.3	2.0
H	Acciai Induriti	45 HRc	0.05	0.12	0.11	50	100	90	0.2	3.0	1.8

SNMG 1204..-WG

Materiali			Parametri								
Gruppo materiali	Sotto gruppo	Durezza (HB)	fz (mm/dente)			Vc (m/min.)			ap (mm)		
			Min.	Max.	Recomandato	Min.	Max.	Recomandato	Min.	Max.	Recomandato
P	Acciai non legati	120	0.30	0.70	0.50	180	330	250	0.5	5.0	3.0
	Acciai basso legati	200	0.30	0.63	0.47	120	280	200	0.5	5.0	3.0
	Acciai alto legati	220	0.25	0.56	0.40	70	190	130	0.5	4.0	2.5
M	Austenitici	190	0.28	0.56	0.42	170	270	220	0.5	5.0	3.0
	Ferritici	220	0.26	0.52	0.38	130	200	170	0.5	5.0	3.0
	Martensitici	372	0.22	0.48	0.34	90	140	110	0.5	4.0	2.5
K	Ghisa nodulare	150	0.20	0.80	0.52	160	240	200	0.5	5.0	3.0
	Ghisa grigia	150	0.21	0.84	0.53	170	250	210	0.5	5.0	3.0
S	Super leghe	240	0.28	0.49	0.39	25	45	35	0.5	3.0	2.0

TNMG 1604..-WG

Materiali			Parametri								
Gruppo materiali	Sotto gruppo	Durezza (HB)	fz (mm/dente)			Vc (m/min.)			ap (mm)		
			Min.	Max.	Recomandato	Min.	Max.	Recomandato	Min.	Max.	Recomandato
P	Acciai non legati	120	0.21	0.50	0.35	180	330	250	0.5	5.0	3.0
	Acciai basso legati	200	0.21	0.45	0.33	120	280	200	0.5	5.0	3.0
	Acciai alto legati	220	0.18	0.40	0.29	70	190	130	0.5	4.0	2.5
M	Austenitici	190	0.20	0.40	0.30	170	270	220	0.5	5.0	3.0
	Ferritici	220	0.20	0.36	3.00	130	200	170	0.5	5.0	3.0
	Martensitici	372	0.20	0.34	0.26	90	140	110	0.5	4.0	2.5
K	Ghisa nodulare	150	0.14	0.58	0.36	160	240	200	0.5	5.0	3.0
	Ghisa grigia	150	0.15	0.60	0.38	170	250	210	0.5	5.0	3.0
S	Super leghe	240	0.20	0.35	0.28	25	45	35	0.5	3.0	2.0

TNMG 2204..-WG

Materiali			Parametri								
Gruppo materiali	Sotto gruppo	Durezza (HB)	fz (mm/dente)			Vc (m/min.)			ap (mm)		
			Min.	Max.	Recomandato	Min.	Max.	Recomandato	Min.	Max.	Recomandato
P	Acciai non legati	120	0.21	0.50	0.36	180	330	250	0.5	7.0	3.0
	Acciai basso legati	200	0.21	0.45	0.33	120	280	200	0.5	7.0	3.0
	Acciai alto legati	220	0.18	0.40	0.29	70	190	130	0.5	5.6	2.5
M	Austenitici	190	0.20	0.40	0.30	170	270	200	0.5	7.0	3.0
	Ferritici	220	0.20	0.38	0.30	130	200	170	0.5	7.0	3.0
	Martensitici	372	0.16	0.34	0.26	90	140	110	0.5	5.0	2.5
K	Ghisa nodulare	150	0.16	0.58	0.36	160	240	200	0.5	7.0	3.0
	Ghisa grigia	150	0.16	0.60	0.38	170	250	210	0.5	7.0	3.0
S	Super leghe	240	0.20	0.35	0.28	25	45	35	0.5	4.2	2.0

WNMG 0604..-WF

Materiali			Parametri								
Gruppo materiali	Sotto gruppo	Durezza (HB)	fz (mm/dente)			Vc (m/min.)			ap (mm)		
			Min.	Max.	Recomandato	Min.	Max.	Recomandato	Min.	Max.	Recomandato
P	Acciai non legati	120	0.11	0.23	0.17	180	330	300	0.2	3.0	2.0
	Acciai basso legati	200	0.10	0.20	0.15	120	280	250	0.2	2.5	2.0
	Acciai alto legati	220	0.09	0.18	0.14	70	190	170	0.2	2.5	2.0
M	Austenitici	190	0.10	0.18	0.14	170	270	250	0.2	2.5	2.0
	Ferritici	220	0.10	0.16	0.14	130	200	170	0.2	2.5	2.0
	Martensitici	372	0.08	0.16	0.12	90	150	120	0.2	2.5	2.0
K	Ghisa nodulare	150	0.08	0.20	0.14	160	240	220	0.2	3.0	2.0
	Ghisa grigia	150	0.08	0.20	0.14	170	250	240	0.2	3.0	2.0
S	Super leghe	240	0.09	0.15	0.12	25	50	35	0.2	2.0	2.0

WNMG 0604..-WG

Materiali			Parametri								
Gruppo materiali	Sotto gruppo	Durezza (HB)	fz (mm/dente)			Vc (m/min.)			ap (mm)		
			Min.	Max.	Recomandato	Min.	Max.	Recomandato	Min.	Max.	Recomandato
P	Acciai non legati	120	0.21	0.50	0.36	180	330	250	0.5	2.5	2.2
	Acciai basso legati	200	0.21	0.45	0.33	120	280	200	0.5	2.5	2.2
	Acciai alto legati	220	0.18	0.40	0.29	70	190	130	0.5	2.0	1.8
M	Austenitici	190	0.20	0.40	0.30	170	270	200	0.5	2.5	2.2
	Ferritici	220	0.18	0.38	0.28	130	200	170	0.5	2.5	2.2
	Martensitici	372	0.16	0.34	0.24	90	140	120	0.5	2.0	1.5
K	Ghisa nodulare	150	0.14	0.58	0.36	160	240	200	0.5	2.5	2.2
	Ghisa grigia	150	0.15	0.60	0.38	170	250	210	0.5	2.5	2.2
S	Super leghe	240	0.20	0.35	0.28	25	45	30	0.5	1.5	1.5

WNMG 0804..-WG

Materiali			Parametri								
Gruppo materiali	Sotto gruppo	Durezza (HB)	fz (mm/dente)			Vc (m/min.)			ap (mm)		
			Min.	Max.	Recomandato	Min.	Max.	Recomandato	Min.	Max.	Recomandato
P	Acciai non legati	120	0.21	0.50	0.36	180	330	250	0.5	3.5	2.4
	Acciai basso legati	200	0.21	0.45	0.33	120	280	200	0.5	3.5	2.4
	Acciai alto legati	220	0.18	0.40	0.29	70	190	130	0.5	2.8	2.0
M	Austenitici	190	0.20	0.40	0.30	170	270	200	0.5	3.5	2.4
	Ferritici	220	0.18	0.38	0.28	130	200	170	0.5	3.5	2.4
	Martensitici	372	0.16	0.34	0.24	90	140	120	0.5	3.0	2.0
K	Ghisa nodulare	150	0.15	0.58	0.36	160	240	200	0.5	3.5	2.4
	Ghisa grigia	150	0.15	0.60	0.38	170	250	210	0.5	3.5	2.4
S	Super leghe	240	0.20	0.35	0.28	25	45	30	0.5	2.1	1.6

WNMG 0804..-WR

Materiali			Parametri								
Gruppo materiali	Sotto gruppo	Durezza (HB)	fz (mm/dente)			Vc (m/min.)			ap (mm)		
			Min.	Max.	Recomandato	Min.	Max.	Recomandato	Min.	Max.	Recomandato
P	Acciai non legati	120	0.25	0.65	0.45	180	330	250	0.7	3.5	3.0
	Acciai basso legati	200	0.25	0.59	0.40	120	280	200	0.7	3.5	3.0
	Acciai alto legati	220	0.22	0.52	0.35	70	190	130	0.7	2.8	2.5
M	Austenitici	190	0.24	0.52	0.35	170	270	200	0.7	3.5	3.0
	Ferritici	220	0.24	0.48	0.34	130	200	170	0.7	3.5	3.0
	Martensitici	372	0.20	0.46	0.28	90	140	120	0.7	3.0	2.5
K	Ghisa nodulare	150	0.18	0.74	0.42	160	240	200	0.7	3.5	3.0
	Ghisa grigia	150	0.18	0.78	0.45	170	250	210	0.7	3.5	3.0
S	Super leghe	240	0.24	0.46	0.35	25	45	30	0.7	2.1	2.0

CCMT 09T308-WG

Materiali			Parametri								
Gruppo materiali	Sotto gruppo	Durezza (HB)	fz (mm/dente)			Vc (m/min.)			ap (mm)		
			Min.	Max.	Recomandato	Min.	Max.	Recomandato	Min.	Max.	Recomandato
P	Acciai non legati	120	0.21	0.50	0.36	180	330	255	0.5	5.0	3.0
	Acciai basso legati	200	0.21	0.45	0.33	120	280	200	0.5	5.0	3.0
	Acciai alto legati	220	0.18	0.40	0.29	70	190	130	0.5	4.0	2.5
M	Austenitici	190	0.20	0.40	0.30	170	270	220	0.5	5.0	3.0
	Ferritici	220	0.16	0.36	0.28	130	200	170	0.5	5.0	3.0
	Martensitici	372	0.14	0.32	0.22	90	140	110	0.5	4.0	2.5
K	Ghisa nodulare	150	0.14	0.54	0.36	160	240	200	0.5	5.0	3.0
	Ghisa grigia	150	0.15	0.60	0.38	170	250	210	0.5	5.0	3.0
S	Super leghe	240	0.20	0.35	0.28	25	45	35	0.5	3.0	2.0

DCMT 11T308-WG

Materiali			Parametri								
Gruppo materiali	Sotto gruppo	Durezza (HB)	fz (mm/dente)			Vc (m/min.)			ap (mm)		
			Min.	Max.	Recomandato	Min.	Max.	Recomandato	Min.	Max.	Recomandato
P	Acciai non legati	120	0.21	0.50	0.36	180	330	255	0.5	4.0	3.0
	Acciai basso legati	200	0.21	0.45	0.33	120	280	200	0.5	4.0	3.0
	Acciai alto legati	220	0.18	0.40	0.29	70	190	130	0.5	3.2	2.5
M	Austenitici	190	0.20	0.40	0.30	170	270	200	0.5	4.0	3.0
	Ferritici	220	0.19	0.36	0.26	130	200	170	0.5	4.0	3.0
	Martensitici	372	0.16	0.32	0.22	90	140	110	0.5	3.0	2.0
K	Ghisa nodulare	150	0.15	0.56	0.34	160	240	200	0.5	4.0	3.0
	Ghisa grigia	150	0.15	0.60	0.38	170	250	210	0.5	4.0	3.0
S	Super leghe	240	0.20	0.35	0.28	25	45	35	0.5	2.4	2.0

TCMT 16T308-WG

Materiali			Parametri								
Gruppo materiali	Sotto gruppo	Durezza (HB)	fz (mm/dente)			Vc (m/min.)			ap (mm)		
			Min.	Max.	Recomandato	Min.	Max.	Recomandato	Min.	Max.	Recomandato
P	Acciai non legati	120	0.11	0.23	0.20	180	330	250	0.2	3.0	3.0
	Acciai basso legati	200	0.10	0.20	0.15	120	280	200	0.2	2.5	3.0
	Acciai alto legati	220	0.09	0.18	0.12	70	190	130	0.2	2.5	2.5
M	Austenitici	190	0.10	0.20	0.16	170	270	220	0.2	2.5	2.0
	Ferritici	220	0.10	0.18	0.15	130	200	170	0.2	2.5	2.0
	Martensitici	372	0.08	0.16	0.14	90	140	110	0.2	2.0	1.5
K	Ghisa nodulare	150	0.08	0.22	0.14	160	240	200	0.2	2.5	3.0
	Ghisa grigia	150	0.08	0.20	0.15	170	250	210	0.2	2.5	3.0
S	Super leghe	240	0.20	0.30	0.25	25	45	35	0.5	3.0	2.0

VBMT 160408-WG

Materiali			Parametri								
Gruppo materiali	Sotto gruppo	Durezza (HB)	fz (mm/dente)			Vc (m/min.)			ap (mm)		
			Min.	Max.	Recomandato	Min.	Max.	Recomandato	Min.	Max.	Recomandato
P	Acciai non legati	120	0.19	0.40	0.30	180	330	255	0.5	3.5	2.5
	Acciai basso legati	200	0.19	0.36	0.28	120	280	200	0.5	3.5	2.5
	Acciai alto legati	220	0.16	0.32	0.24	70	190	130	0.5	2.8	2.1
M	Austenitici	190	0.18	0.32	0.26	170	270	220	0.5	3.5	2.5
	Ferritici	220	0.18	0.30	0.26	130	200	170	0.5	3.5	2.5
	Martensitici	372	0.14	0.28	0.22	90	140	110	0.5	3.0	2.2
K	Ghisa nodulare	150	0.14	0.44	0.30	160	240	200	0.5	3.5	2.5
	Ghisa grigia	150	0.14	0.48	0.31	170	250	210	0.5	3.5	2.5
S	Super leghe	240	0.18	0.28	0.23	25	45	35	0.5	2.1	2.0

VCMT 1604..-WG

Materiali			Parametri								
Gruppo materiali	Sotto gruppo	Durezza (HB)	fz (mm/dente)			Vc (m/min.)			ap (mm)		
			Min.	Max.	Recomandato	Min.	Max.	Recomandato	Min.	Max.	Recomandato
P	Acciai non legati	120	0.19	0.40	0.30	180	330	255	0.5	3.5	2.5
	Acciai basso legati	200	0.19	0.36	0.28	120	280	200	0.5	3.5	2.5
	Acciai alto legati	220	0.16	0.32	0.24	70	190	130	0.5	2.8	2.1
M	Austenitici	190	0.18	0.32	0.25	170	270	220	0.5	3.5	2.5
	Ferritici	220	0.16	0.30	0.25	130	200	170	0.5	3.5	2.5
	Martensitici	372	0.14	0.28	0.22	90	140	110	0.5	3.0	2.0
K	Ghisa nodulare	150	0.14	0.46	0.30	160	240	200	0.5	3.5	2.5
	Ghisa grigia	150	0.14	0.48	0.31	170	250	210	0.5	3.5	2.5
S	Super leghe	240	0.18	0.28	0.23	25	45	35	0.5	2.1	2.0

AOMT 1236..

Materiali			Parametri								
Gruppo materiali	Sotto gruppo	Durezza (HB)	fz (mm/dente)			Vc (m/min.)			ap (mm)		
			Min.	Max.	Recomandato	Min.	Max.	Recomandato	Min.	Max.	Recomandato
P	Acciai non legati	120	0.14	0.22	0.15	190	330	220	0.5	11.0	2.0
	Acciai basso legati	200	0.11	0.18	0.13	150	210	180	0.5	11.0	2.0
	Acciai alto legati	220	0.08	0.15	0.12	90	150	120	0.5	8.0	1.5
M	Austenitici	190	0.14	0.24	0.18	190	250	220	0.5	11.0	2.0
	Ferritici	220	0.12	0.20	0.16	140	220	180	0.5	9.0	3.0
	Martensitici	372	0.12	0.18	0.14	80	150	120	0.5	6.0	2.0
K	Ghisa nodulare	150	0.12	0.24	0.18	140	230	190	0.5	9.0	2.0
	Ghisa grigia	150	0.13	0.22	0.15	150	240	190	0.5	11.0	2.0
S	Super leghe	240	0.08	0.13	0.10	25	45	30	0.5	8.0	1.5

APKT 1003 PDTR

Materiali			Parametri								
Gruppo materiali	Sotto gruppo	Durezza (HB)	fz (mm/dente)			Vc (m/min.)			ap (mm)		
			Min.	Max.	Recomandato	Min.	Max.	Recomandato	Min.	Max.	Recomandato
P	Acciai non legati	120	0.13	0.26	0.20	190	330	250	0.5	9.0	2.0
	Acciai basso legati	200	0.11	0.21	0.16	150	240	200	0.5	9.0	2.0
	Acciai alto legati	220	0.08	0.18	0.13	90	150	120	0.5	6.4	1.5
M	Austenitici	190	0.11	0.21	0.16	190	250	220	0.5	9.0	2.0
	Ferritici	220	0.12	0.18	0.15	130	220	170	0.5	9.0	3.0
	Martensitici	372	0.12	0.18	0.14	70	140	110	0.5	6.0	2.0
K	Ghisa nodulare	150	0.12	0.24	0.18	140	230	190	0.5	9.0	2.0
	Ghisa grigia	150	0.13	0.26	0.20	150	240	200	0.5	9.0	2.0
S	Super leghe	240	0.08	0.15	0.12	25	45	35	0.5	6.4	1.5

APKT 1604..

Materiali			Parametri								
Gruppo materiali	Sotto gruppo	Durezza (HB)	fz (mm/dente)			Vc (m/min.)			ap (mm)		
			Min.	Max.	Recomandato	Min.	Max.	Recomandato	Min.	Max.	Recomandato
P	Acciai non legati	120	0.18	0.32	0.25	190	330	250	0.5	15.0	4.0
	Acciai basso legati	200	0.15	0.25	0.20	150	240	195	0.5	15.0	4.0
	Acciai alto legati	220	0.12	0.22	0.17	90	150	120	0.5	10.7	4.0
M	Austenitici	190	0.14	0.24	0.18	190	250	220	0.5	15.0	3.0
	Ferritici	220	0.12	0.20	0.16	140	220	180	0.5	14.0	3.0
	Martensitici	372	0.12	0.18	0.14	80	160	120	0.5	14.0	3.0
K	Ghisa nodulare	150	0.18	0.32	0.24	150	230	190	0.5	15.0	4.0
	Ghisa grigia	150	0.18	0.32	0.24	150	240	190	0.5	15.0	4.0
S	Super leghe	240	0.12	0.18	0.15	25	45	35	0.5	10.7	3.0

APMT 1604..

Materiali			Parametri								
Gruppo materiali	Sotto gruppo	Durezza (HB)	fz (mm/dente)			Vc (m/min.)			ap (mm)		
			Min.	Max.	Recomandato	Min.	Max.	Recomandato	Min.	Max.	Recomandato
P	Acciai non legati	120	0.16	0.30	0.23	190	330	250	0.5	15.0	4.0
	Acciai basso legati	200	0.14	0.23	0.19	150	240	200	0.5	15.0	4.0
	Acciai alto legati	220	0.11	0.20	0.16	90	150	120	0.5	10.7	4.0
M	Austenitici	190	0.14	0.23	0.19	190	250	220	0.5	15.0	4.0
	Ferritici	220	0.16	0.22	0.18	140	220	180	0.5	14.0	3.0
	Martensitici	372	0.14	0.22	0.16	70	140	100	0.5	14.0	3.0
K	Ghisa nodulare	150	0.16	0.30	0.22	140	230	200	0.5	15.0	4.0
	Ghisa grigia	150	0.16	0.30	0.22	150	240	200	0.5	15.0	4.0
S	Super leghe	240	0.11	0.17	0.14	25	45	35	0.5	10.7	3.0

ODMW 0605..

Materiali			Parametri								
Gruppo materiali	Sotto gruppo	Durezza (HB)	fz (mm/dente)			Vc (m/min.)			ap (mm)		
			Min.	Max.	Recomandato	Min.	Max.	Recomandato	Min.	Max.	Recomandato
P	Acciai non legati	120	0.22	0.58	0.40	190	330	250	0.5	4.0	3.0
	Acciai basso legati	200	0.18	0.45	0.32	150	240	195	0.5	4.0	3.0
	Acciai alto legati	220	0.14	0.40	0.27	90	150	120	0.5	2.9	2.3
K	Ghisa nodulare	150	0.24	0.48	0.34	140	230	190	0.5	4.5	3.0
	Grey Cast Iron	150	0.22	0.58	0.40	150	240	195	0.5	4.0	3.0

SEKN 1203 AFTN

Materiali			Parametri								
Gruppo materiali	Sotto gruppo	Durezza (HB)	fz (mm/dente)			Vc (m/min.)			ap (mm)		
			Min.	Max.	Recomandato	Min.	Max.	Recomandato	Min.	Max.	Recomandato
P	Acciai non legati	120	0.18	0.46	0.32	190	330	250	0.5	7.0	3.0
	Acciai basso legati	200	0.15	0.36	0.26	150	240	195	0.5	7.0	3.0
	Acciai alto legati	220	0.12	0.32	0.22	90	150	120	0.5	5.0	2.3
M	Austenitici	190	0.15	0.32	0.24	190	250	220	0.5	7.0	3.0
	Ferritici	220	0.18	0.30	0.23	130	210	160	0.5	4.0	2.5
	Martensitici	372	0.15	0.26	0.20	70	140	110	0.5	4.0	2.0
K	Ghisa nodulare	150	0.16	0.44	0.30	140	230	190	0.5	7.0	3.0
	Ghisa grigia	150	0.18	0.46	0.32	150	240	190	0.5	7.0	3.0
S	Super leghe	240	0.10	0.26	0.18	30	60	35	0.5	5.0	2.3

SEKR 1203 AFTN

Materiali			Parametri								
Gruppo materiali	Sotto gruppo	Durezza (HB)	fz (mm/dente)			Vc (m/min.)			ap (mm)		
			Min.	Max.	Recomandato	Min.	Max.	Recomandato	Min.	Max.	Recomandato
P	Acciai non legati	120	0.18	0.46	0.32	190	330	250	0.5	7.0	3.0
	Acciai basso legati	200	0.15	0.36	0.26	150	240	195	0.5	7.0	3.0
	Acciai alto legati	220	0.12	0.32	0.22	90	150	120	0.5	5.0	2.3
M	Austenitici	190	0.15	0.32	0.24	190	250	220	0.5	7.0	3.0
	Ferritici	220	0.16	0.28	0.22	140	210	160	0.5	4.0	2.5
	Martensitici	372	0.14	0.26	0.20	70	140	110	0.5	4.0	2.0
K	Ghisa nodulare	150	0.16	0.44	0.30	140	230	190	0.5	7.0	3.0
	Ghisa grigia	150	0.18	0.46	0.32	150	240	190	0.5	7.0	3.0
S	Super leghe	240	0.12	0.26	0.19	25	45	35	0.5	5.0	2.3

SPKN 1203 EDTR

Materiali			Parametri								
Gruppo materiali	Sotto gruppo	Durezza (HB)	fz (mm/dente)			Vc (m/min.)			ap (mm)		
			Min.	Max.	Recomandato	Min.	Max.	Recomandato	Min.	Max.	Recomandato
P	Acciai non legati	120	0.18	0.43	0.30	190	330	250	0.5	7.0	3.0
	Acciai basso legati	200	0.15	0.34	0.25	150	240	200	0.5	7.0	3.0
	Acciai alto legati	220	0.12	0.30	0.20	90	150	120	0.5	5.0	2.5
K	Ghisa nodulare	150	0.18	0.42	0.30	140	230	190	0.5	7.0	3.0
	Ghisa grigia	150	0.18	0.43	0.30	150	240	200	0.5	7.0	3.0

TPKN 1603 PDTR

Materiali			Parametri								
Gruppo materiali	Sotto gruppo	Durezza (HB)	fz (mm/dente)			Vc (m/min.)			ap (mm)		
			Min.	Max.	Recomandato	Min.	Max.	Recomandato	Min.	Max.	Recomandato
P	Acciai non legati	120	0.14	0.27	0.21	190	330	260	0.5	12.0	3.0
	Acciai basso legati	200	0.12	0.21	0.17	150	240	195	0.5	12.0	3.0
	Acciai alto legati	220	0.10	0.19	0.15	90	150	120	0.5	8.6	2.5
K	Ghisa nodulare	150	0.14	0.26	0.20	140	240	190	0.5	12.0	3.0
	Ghisa grigia	150	0.14	0.27	0.21	150	240	190	0.5	12.0	3.0

TPKN 2204 PDTR

Materiali			Parametri								
Gruppo materiali	Sotto gruppo	Durezza (HB)	fz (mm/dente)			Vc (m/min.)			ap (mm)		
			Min.	Max.	Recomandato	Min.	Max.	Recomandato	Min.	Max.	Recomandato
P	Acciai non legati	120	0.16	0.27	0.22	190	330	260	0.5	18.0	4.0
	Acciai basso legati	200	0.14	0.21	0.18	150	240	195	0.5	18.0	4.0
	Acciai alto legati	220	0.11	0.19	0.15	90	150	120	0.5	12.9	3.0
K	Ghisa nodulare	150	0.16	0.26	0.20	150	240	190	0.5	18.0	4.0
	Ghisa grigia	150	0.16	0.27	0.22	150	240	190	0.5	18.0	4.0

TPKR 1603 PDTR

Materiali			Parametri								
Gruppo materiali	Sotto gruppo	Durezza (HB)	fz (mm/dente)			Vc (m/min.)			ap (mm)		
			Min.	Max.	Recomandato	Min.	Max.	Recomandato	Min.	Max.	Recomandato
P	Acciai non legati	120	0.16	0.22	0.19	190	330	260	0.5	12.0	3.0
	Acciai basso legati	200	0.14	0.18	0.16	150	240	195	0.5	12.0	3.0
	Acciai alto legati	220	0.11	0.15	0.13	90	150	120	0.5	8.6	2.5
M	Austenitici	190	0.14	0.18	0.16	190	250	220	0.5	12.0	3.0
	Ferritici	220	0.12	0.17	0.13	130	210	180	0.5	9.0	3.0
	Martensitici	372	0.10	0.16	0.11	80	150	120	0.5	9.0	3.0
K	Ghisa nodulare	150	0.16	0.22	0.18	140	240	190	0.5	12.0	3.0
	Ghisa grigia	150	0.16	0.22	0.19	150	240	190	0.5	12.0	3.0
S	Super leghe	240	0.11	0.13	0.12	25	45	35	0.5	8.6	2.3

TPKR 2204 PDTR

Materiali			Parametri								
Gruppo materiali	Sotto gruppo	Durezza (HB)	fz (mm/dente)			Vc (m/min.)			ap (mm)		
			Min.	Max.	Recomandato	Min.	Max.	Recomandato	Min.	Max.	Recomandato
P	Acciai non legati	120	0.16	0.22	0.19	190	330	260	0.5	18.0	4.0
	Acciai basso legati	200	0.14	0.18	0.16	150	240	195	0.5	18.0	4.0
	Acciai alto legati	220	0.11	0.15	0.13	90	150	120	0.5	12.9	3.0
M	Austenitici	190	0.14	0.24	0.18	190	250	220	0.5	18.0	4.0
	Ferritici	220	0.12	0.22	0.17	130	210	180	0.5	12.0	3.5
	Martensitici	372	0.12	0.2	0.14	80	150	110	0.5	12.0	3.5
K	Ghisa nodulare	150	0.16	0.22	0.18	150	240	195	0.5	18.0	4.0
	Ghisa grigia	150	0.16	0.22	0.19	150	240	195	0.5	18.0	4.0
S	Super leghe	240	0.11	0.13	0.12	25	45	35	0.5	12.9	3.0

SPMX 050204

Materiali			Parametri					
Gruppo materiale	Sotto gruppo	Durezza (HB)	fz (mm/giro)			Vc (m/min.)		
			Min.	Max.	Recomandato	Min.	Max.	Recomandato
P	Acciai non legati	120	0.06	0.12	0.10	180	270	220
	Acciai basso legati	200	0.06	0.12	0.10	120	230	175
	Acciai alto legati	220	0.05	0.10	0.08	70	180	120
M	Austenitici	190	0.06	0.12	0.10	170	230	200
	Ferritici & Martensitici	220	0.04	0.10	0.07	50	130	80
K	Ghisa nodulare	150	0.06	0.13	0.10	140	250	170
	Ghisa grigia	150	0.07	0.11	0.09	140	220	180
S	Super leghe	240	0.08	0.11	0.09	80	140	100

SPMX 060204

Materiali			Parametri					
Gruppo materiale	Sotto gruppo	Durezza (HB)	fz (mm/giro)			Vc (m/min.)		
			Min.	Max.	Recomandato	Min.	Max.	Recomandato
P	Acciai non legati	120	0.06	0.14	0.11	180	280	220
	Acciai basso legati	200	0.06	0.12	0.10	120	230	175
	Acciai alto legati	220	0.05	0.10	0.08	70	180	120
M	Austenitici	190	0.06	0.12	0.10	170	230	200
	Ferritici & Martensitici	220	0.04	0.10	0.07	50	130	90
K	Ghisa nodulare	150	0.06	0.13	0.10	150	250	180
	Ghisa grigia	150	0.07	0.11	0.09	150	230	190
S	Super leghe	240	0.06	0.12	0.10	90	130	100

SPMX 07T308

Materiali			Parametri					
Gruppo materiale	Sotto gruppo	Durezza (HB)	fz (mm/giro)			Vc (m/min.)		
			Min.	Max.	Recomandato	Min.	Max.	Recomandato
P	Acciai non legati	120	0.06	0.15	0.12	180	300	240
	Acciai basso legati	200	0.06	0.12	0.10	120	180	150
	Acciai alto legati	220	0.06	0.10	0.08	80	180	120
M	Austenitici	190	0.06	0.12	0.10	170	230	200
	Ferritici & Martensitici	220	0.06	0.10	0.08	50	140	100
K	Ghisa nodulare	150	0.08	0.14	0.10	150	250	180
	Ghisa grigia	150	0.08	0.12	0.10	150	230	200
S	Super leghe	240	0.06	0.13	0.10	90	130	100

WCMX 040208

Materiali			Parametri					
Gruppo materiale	Sotto gruppo	Durezza (HB)	fz (mm/giro)			Vc (m/min.)		
			Min.	Max.	Recomandato	Min.	Max.	Recomandato
P	Acciai non legati	120	0.06	0.12	0.10	180	270	220
	Acciai basso legati	200	0.06	0.12	0.10	120	230	175
	Acciai alto legati	220	0.05	0.10	0.08	70	180	120
M	Austenitici	190	0.06	0.12	0.10	170	230	200
	Ferritici & Martensitici	220	0.04	0.10	0.07	50	130	80
K	Ghisa nodulare	150	0.06	0.13	0.10	140	250	170
	Ghisa grigia	150	0.07	0.11	0.09	140	220	180
S	Super leghe	240	0.08	0.11	0.09	80	140	100

WCMX 050308

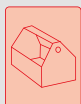
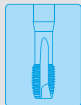
Materiali			Parametri					
Gruppo materiale	Sotto gruppo	Durezza (HB)	fz (mm/giro)			Vc (m/min.)		
			Min.	Max.	Recomandato	Min.	Max.	Recomandato
P	Acciai non legati	120	0.06	0.14	0.10	180	300	220
	Acciai basso legati	200	0.06	0.12	0.10	120	250	180
	Acciai alto legati	220	0.05	0.10	0.08	70	180	120
M	Austenitici	190	0.06	0.12	0.10	170	230	200
	Ferritici & Martensitici	220	0.04	0.10	0.80	50	130	90
K	Ghisa nodulare	150	0.06	0.13	0.10	150	250	180
	Ghisa grigia	150	0.08	0.12	0.10	140	230	190
S	Super leghe	240	0.08	0.13	0.11	80	130	100

WCMX 06T308

Materiali			Parametri					
Gruppo materiale	Sotto gruppo	Durezza (HB)	fz (mm/giro)			Vc (m/min.)		
			Min.	Max.	Recomandato	Min.	Max.	Recomandato
P	Acciai non legati	120	0.06	0.14	0.12	180	300	220
	Acciai basso legati	200	0.06	0.12	0.10	120	180	150
	Acciai alto legati	220	0.06	0.10	0.08	80	180	120
M	Austenitici	190	0.06	0.12	0.10	170	230	200
	Ferritici & Martensitici	220	0.06	0.10	0.08	50	140	100
K	Ghisa nodulare	150	0.08	0.14	0.10	150	250	180
	Ghisa grigia	150	0.08	0.12	0.10	150	230	200
S	Super leghe	240	0.08	0.13	0.11	80	130	100

WCMX 080412

Materiali			Parametri					
Gruppo materiale	Sotto gruppo	Durezza (HB)	fz (mm/giro)			Vc (m/min.)		
			Min.	Max.	Recomandato	Min.	Max.	Recomandato
P	Acciai non legati	120	0.08	0.16	0.12	180	280	230
	Acciai basso legati	200	0.08	0.14	0.10	110	180	150
	Acciai alto legati	220	0.06	0.10	0.08	80	180	120
M	Austenitici	190	0.08	0.14	0.10	170	230	200
	Ferritici & Martensitici	220	0.08	0.14	0.10	50	150	100
K	Ghisa nodulare	150	0.08	0.16	0.12	130	230	170
	Ghisa grigia	150	0.08	0.14	0.12	150	210	190
S	Super leghe	240	0.08	0.14	0.12	80	130	100



CODICE	PAGINA
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F1007	C17
F1010	C7
F1013	C17
F1016	C15
F1019	C15
F1022	C12
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F1028	C14
F1031	C18
F1034	C12
F1037	C13
F1040	C19
F1043	C20
F1046	C21
F1049	C23
F1052	C22
F1055	C22
F1058	C17
F1061	C22
F1064	C22
F1067	C17
F1070	C31
F1073	C27
F1076	C13
F1079	C28
F1082	C30
F1085	C27
F1088	C13
F1091	C28
F1094	C29
F1097	C41
F1100	C17
F1103	C41
F1106	C17
F1109	C18
F1112	C43
F1115	C15
F1118	C33
F1121	C44
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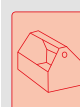
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F2019	C16
F2022	C51
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F3004	C4
F3007	C10
F3010	C26
F3013	C4
F3019	C26
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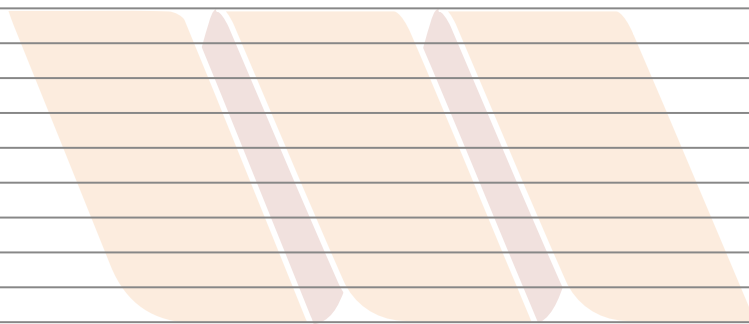
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IODMW	E8
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ISPMX	E10
ITCMT	E5
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IVBMT	E6
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M3106	B44
M3109	B45
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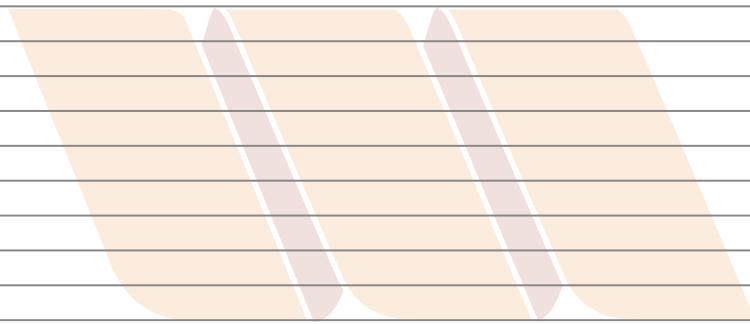
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T1007	D2
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T1055	D8
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T1061	D9
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CODICE	PAGINA
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T1073	D11
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T3022	D22
T3025	D28
T3028	D29
T3031	D30
T3034	D31
T3037	D32
T3040	D33
T3043	D35
T4001	D18





WST



WST

FORATURA - DRILLING

MASCHIATURA - THREADING

FRESATURA - MILLING

UTENSILI - TOOLS

INSERTI - INSERT