DORMER PRAMET

FRESADO INTERCAMBIABLE

2024

PRAMET

FRESADO INTERCAMBIABLE – CONTENIDO GENERAL

FRESADO INTERCAMBIABLE

Planeado		Plaquitas negativas	SON06C 16 APMX 4	SHN06C 12 APMX 3	SHN09C 12 APMX 5	SPN13 10 APMX 10			7
		Plaquitas cuadradas positivas	SSD13F 4 APMX 6.4	SSE09 4 APMX 4.5	SSN12Z 4 APMX 6.5	FSB22X 4 APMX 15			25
		Plaquitas positivas octogonales y redondas	SOD05 8 APMX 2.7	SOD06D 8 APMX 3.1	SOE06Z 8 APMX 3.3				41
Escuadrado		Plaquitas negativas	STN10 6 APMX 5	STN16 6 APMX 10	SLN12 4 APMX 9	SLN16 4 APMX 13	SLN12X 04 APMX 10		65
		Plaquitas positivas paralelogramo (forma A)	SAD07D 2 APMX 5	SAD11E 2 APMX 9	SAD16E 2 APMX 13	SAP10D 2 APMX 9	SAP16D 2 APMX 13		89
		Plaquitas cuadradas y triangulares positivas	SSO09 4 APMX 8	SSD12 4 APMX 12	FTB27X 3 APMX 18				121
Escuadrado profundo		Fresas helicoidales	J(T)-SAD11E	J(T)-SAD16E	J(T)-SSAP	J(T)-CSD12X	J(T)-SLSN		133
Copiado (fresas de botón)		Asiento de plaquita redonda (plaquitas RD.. con flanco a 15°)	SRD05 a_p 1.5	SRD07 a_p 2	SRD10 a_p 2.5	SRD12 a_p 3	SRD16 a_p 4		159
		Asiento con planos de fijación (plaquitas RC.. con flanco a 7°)	SRC10 8 a_p 1.46	SRC12 6 a_p 3	SRC16 8 a_p 2.3	SRC20 8 a_p 2.9			185
Perfilado		Punta esférica	L2-SZP	K2-SRC	K2-SLC	K2-PPH	K3-CXP		205
		Toroidal	SVC22C 2 APMX 16	SCN05C 4 APMX 0.5	SWN04 6 APMX 0.5				239
Fresado de alto avance		Plaquitas negativas	SBN10 4 APMX 1	SSN11 8 APMX 1.7					251
		Plaquitas positivos	SSO12 4 APMX 1.9	SPD09 5 APMX 2	SZD07 4 APMX 1	SZD09 4 APMX 1			265
Biselado		Plaquitas positivas	SSD09 4 APMX 4.5	N-SSO09 4 APMX 4.5	STC 3 APMX 8.5	2516 3 APMX 8.5	2636 3 APMX 8.5	J(T)-SXP16	291
Ranurado		Fresas de disco y de ranura en T	S90SN	S90CN (XN)	F-SCC				313
Otras plaquitas de fresado									330

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¿Cómo leer los datos del catálogo? (ISO 13399, iconos, navegación...)		352
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Grupos de materiales de pieza (WMG)		376

FAMILIA DE PRODUCTOS	🕮
2	
2516	301
2636	304
F	
FSB22X	38
F-SCC	325
FTB27X	128
J(T)	
J(T)-CSD12X	150
J(T)-SAD11E	134
J(T)-SAD16E	139
J(T)-SLSN	153
J(T)-SSAP	145
J(T)-SXP16	307
K2	
K2-PPH	222
K2-SLC	218
K2-SRC	211
K3-CXP	234
L2	
L2-SZP	206
N	
N-SS009	295

FAMILIA DE PRODUCTOS	🕮
S90	
S90CN(XN)	320
S90SN	314
SAD	
SAD07D	90
SAD11E	97
SAD16E	106
SAP	
SAP10D	114
SAP16D	117
SBN	
SBN10	252
SCN	
SCN05C	243
SHN	
SHN06C	13
SHN09C	17
SLN	
SLN12	75
SLN12X	85
SLN16	81
SOD	
SOD05	42
SOD06D	51

FAMILIA DE PRODUCTOS	🕮
SOE	
SOE06Z	55
SON	
SON06C	8
SPD	
SPD09	270
SPN	
SPN13	21
SRC	
SRC10	186
SRC12	190
SRC16	194
SRC20	198
SRD	
SRD05	160
SRD07	163
SRD10	168
SRD12	174
SRD16	180
SSD	
SSD09	292
SSD12	125
SSD13F	26

FAMILIA DE PRODUCTOS	🕮
SSE	
SSE09	31
SSN	
SSN11	258
SSN12Z	35
SSO	
SS009	122
SS012	266
STC	
STC	298
STN	
STN10	66
STN16	70
SVC	
SVC22C	240
SWN	
SWN04C	246
SZD	
SZD07	276
SZD09	280
SZD12	284

FAMILIA DE PRODUCTOS	🕮
A	
ADEX 07-FA	92
ADEX 07-HF	93
ADEX 11-FA	101
ADEX 11-FA	137
ADEX 11-HF	101
ADEX 16	109
ADEX 16	142
ADEX 16-FA	109
ADEX 16-FA	142
ADEX 16-HF	110
ADKT 15	330
ADKX 15	330
ADMX 07	91
ADMX 11	99
ADMX 11	135
ADMX 16	107
ADMX 16	140
ANHX 10	254
APET 15	146
APET 16-FA	119
APEW 15	146
APKT 10	115
APKT 16	118
APMT 16	331
B	
BNGX 10	253
C	
CCMX	326
CNHQ	322
CNHX 05	244
CNM	332
H	
HNEF 09	332
HNGX 06	14
HNGX 09	18
HNMF 09	333
L	
LC	219
LNET 16	154
LNEX 12	86
LNGU 12	78
LNGU 16	82
LNGU 16-FA	83
LNGX 12	76
LNGX 12-FA	78
LNMU 16	82

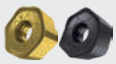
FAMILIA DE PRODUCTOS	🕮
O	
ODEW 06	52
ODKT 05IM	43
ODMT 05	333
ODMT 05IM	44
ODMT 06	52
OEHT 06	56
OEHT 06-FA	57
OFKR 07	334
ONMX 06	9
P	
PDKT 09	272
PDKX 09	272
PDMW 09	273
PDMX 09	271
PNMQ 13	22
PNMU 13	22
PPH	224
PPHF	226
PPHT	225
R	
RC	212
RCMT 10	187
RCMT 12	191
RCMT 16	195
RCMT 20	199
RDET	334
RDGT 07	164
RDGT 10	169
RDGT 12	175
RDGT 12IM	44
RDGT 16	181
RDHT 07-FA	165
RDHT 10-FA	171
RDHT 12-FA	177
RDHT 16-FA	182
RDHX 05	161
RDHX 07	164
RDHX 10	170
RDHX 12	176
RDHX 16	182
RDHX 20	335
RDMT 10	169
RDMT 12	175
RDMT 12IM	45
RDMX 10	170
RDMX 12	176
RDMX 16	181
REHT 16	57
RPET 12	335
RPET 15	53
RPEW 12	336
RPEX	336

FAMILIA DE PRODUCTOS	🕮
S	
SBKX 22	39
SBMR 22	39
SDET 13	27
SDEW 09	293
SDEX 09	293
SDGX 12	151
SDKT 12IM	45
SDMT 12	126
SDMT 12IM	46
SDMT 13	28
SDMX 12	151
SEEN	337
SEER	338
SEET 09	33
SEET 12	338
SEET 12-FA	340
SEET 12-PM	339
SEEW 12	340
SEMT 09	32
SNGX 11	259
SNGX 13	154
SNHF	341
SNHN	341
SNHQ AZ	316
SNHQ TRL	317
SNKT 12	36
SNMT 12	36
SNMX 17	10
SNUN	342
SOHT 12	267
SOMT 05	342
SOMT 09	123
SOMT 09	296
SPET 12	147
SPET 12 AD	147
SPEW 12 AD	148
SPGN	343
SPGN 25 DZ	343
SPKN	344
SPKR	345
SPUN	345

FAMILIA DE PRODUCTOS	🕮
T	
TBMR 27	129
TCMT	302
TCMT	305
TCXT 16 STC	299
TNGX 10	67
TNGX 10-FA	68
TNGX 16	71
TNGX 16-FA	72
TPCN 16	346
TPKN	347
TPKR	348
TPUN	348
V	
VCGT 22-FA	241
W	
WNHX 04	247
X	
XDET 13	29
XDHW	349
XEHT 06	58
XNGX 06	15
XNGX 09	19
XNGX 13	23
XNHQ	322
XP	235
XPHT 16	308
XPHT 16-FA	308
Z	
ZDCW 07	277
ZDCW 09	281
ZDEW 12	285
ZP	208

PLANEADO

PLANEADO

	SON06C	SHN06C	SHN09C	SPN13		
	43°	45°	45°	57°		
	APMX (mm) 4.0 (7.0)	APMX (mm) 3.0	APMX (mm) 5.0	APMX (mm) 10.0		
	DC (mm) 50 – 250	DC (mm) 25 – 125	DC (mm) 50 – 315	DC (mm) 100 – 315		
Mango cilíndrico						
Weldon		DC = 25, 32 (mm)				
Modular						
Portafresas		DC = 40 – 125 (mm)				
Página	8	13	17	21		
ISO	P M K S H	P M K H	P M K H	P M K S H		
Forma de la plaquita						
Plaquitas de corte	ONMX 0605 SNMX 1705	HNGX 0604 XNGX 0604	HNGX 0906 XNGX 0906	PNM. 1308 XN.. 1308		
N.º de filos de corte	16 / 8	12 / 1	12 / 1	10 / 1		
Planeado	■	■	■	■		
Fresado de chaflanes	■	■	■			
Fresado axial progresivo		■	■			
Mecanizado en rampa	◪	■	■			

■ Primera Opción ◪ Opción Alternativa

SON06C

P M K S H

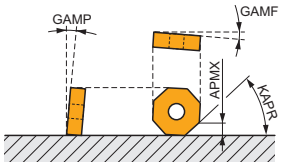
PRAMET

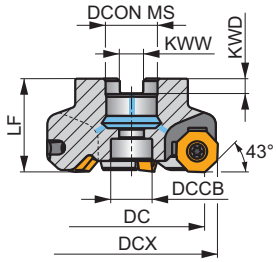
S

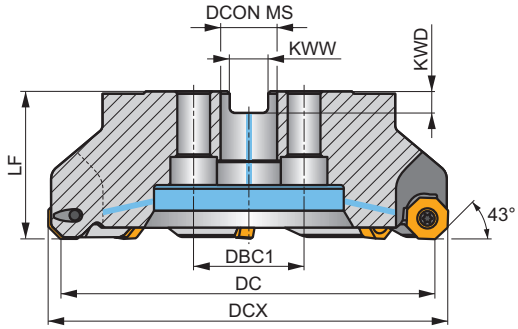
Fresa de planear de 43° ECON ON06 con diseño doble negativo y refrigeración interna

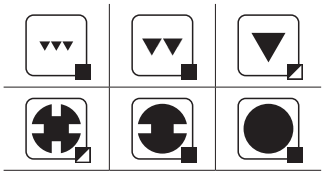
Fresa de planear muy económica y productiva que utiliza dos tipos de plaquitas negativas de doble cara. Plaquitas octogonales económicas ON..06 con 16 filos de corte y APMX de 4 mm y plaquitas cuadradas productivas SN.. 17 plaquitas con 8 filos de corte y APMX de 7 mm. Disponible para portafresas con paso diferencial. Cuerpo tratado para prolongar la vida de la herramienta.

KAPR	43°
APMX	4.0 (7.0) mm









h_m 0.04 - 0.25

	Producto	DC (mm)	DCX (mm)	DCON MS (mm)	DCCB (mm)	DBC1 (mm)	LF (mm)	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		kg			
	50A04R-S45ON06-C	50	60.8	22	16.5	–	40	10.4	6.3	-10	-5	4	✓	9400	✓	0.42	GI342	C0621	–
	50A05R-S45ON06-C	50	60.8	22	16.5	–	40	10.4	6.3	-10	-5	5	–	9400	✓	0.39	GI342	C0621	–
	63A05R-S45ON06-C	63	73.8	22	18.1	–	40	10.4	6.3	-10	-5	5	✓	8400	✓	0.71	GI342	C0621	–
	63A06R-S45ON06-C	63	73.8	22	18.1	–	40	10.4	6.3	-10	-5	6	✓	8400	✓	0.55	GI342	C0621	–
	80A06R-S45ON06-C	80	90.8	27	22.1	–	50	12.4	7	-10	-5	6	✓	7500	✓	1.27	GI342	C0622	–
	80A08R-S45ON06-C	80	90.8	27	22.1	–	50	12.4	7	-10	-5	8	–	7500	✓	1.19	GI342	C0622	–
	100A08R-S45ON06-C	100	110.8	32	30.1	–	50	14.4	8	-10	-5	8	✓	6700	✓	1.88	GI342	C0620	AC002
	100A10R-S45ON06-C	100	110.8	32	30.1	–	50	14.4	8	-10	-5	10	–	6700	✓	1.81	GI342	C0620	AC002
ISO 6462 DIN 8030	**125A08R-S45ON06-C**	125	135.8	40	56.1	–	63	16.4	9	-10	-5	8	✓	6000	✓	3.80	GI342	C0620	AC003
	125A10R-S45ON06-C	125	135.8	40	56.1	–	63	16.4	9	-10	-5	10	✓	6000	✓	3.65	GI342	C0620	AC003
	125A12R-S45ON06-C	125	135.8	40	56.1	–	63	16.4	9	-11	-5	12	–	6000	✓	3.70	GI342	C0620	AC003
	160C08R-S45ON06-C	160	170.8	40	–	66.7	63	16.4	9.25	-10	-5	8	✓	5700	✓	6.48	GI342	C0623	–
	160C12R-S45ON06-C	160	170.8	40	–	66.7	63	16.4	9.25	-10	-5	12	✓	5700	✓	5.74	GI342	C0623	–
	160C14R-S45ON06-C	160	170.8	40	–	66.7	63	16.4	9.25	-11	-5	14	–	5700	✓	5.65	GI342	C0623	–
	200C12R-S45ON06-C	200	210.8	60	–	101.6	63	25.8	14.25	-10	-5	12	✓	4700	✓	9.06	GI342	C0624	–
	200C16R-S45ON06-C	200	210.8	60	–	101.6	63	25.8	14.25	-10	-5	16	–	4700	✓	9.02	GI342	C0624	–
	250C14R-S45ON06-C	250	260.8	60	–	101.6	63	25.8	14.25	-10	-5	14	✓	4300	✓	15.71	GI342	C0625	–
	250C18R-S45ON06-C	250	260.8	60	–	101.6	63	25.8	14.25	-10	-5	18	–	4300	✓	15.51	GI342	C0625	–

GI342	ONMX 0605..	ONMX 0605..-W..	SNMX 1705..

C0620	US 45013A-T20P	5.0 Nm	M 5	13	SDR T20P-T	–	–	–	–

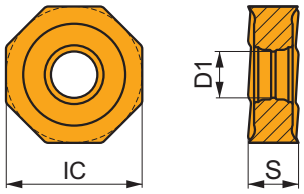
		Nm							
C0621	US 45013A-T20P	5.0	M 5	13	SDR T20P-T	HS 1030C	–	–	–
C0622	US 45013A-T20P	5.0	M 5	13	SDR T20P-T	HS 1230C	–	–	–
C0623	US 45013A-T20P	5.0	M 5	13	SDR T20P-T	HS 1240C	CAC 160C	HSD 0825C	HXK 5
C0624	US 45013A-T20P	5.0	M 5	13	SDR T20P-T	HS 1655C	CAC 200C	HSD 1025C	HXK 7
C0625	US 45013A-T20P	5.0	M 5	13	SDR T20P-T	HS 1655C	CAC 250C	HSD 1025C	HXK 7

AC002	KS 1635	K.FMH32
AC003	KS 2040	K.FMH40

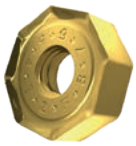
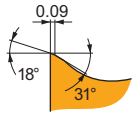
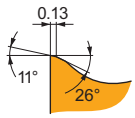
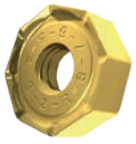
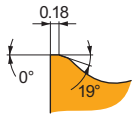
ONMX 06

PRAMET

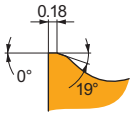
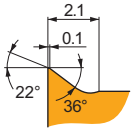
	IC (mm)	D1 (mm)	S (mm)
0605	17.000	5.70	7.08



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
																				
F la geometría es afilada y se utiliza para acabado, adecuada para aplicaciones con gran voladizo y piezas finas o de paredes delgadas. Diseñada con un ángulo de desprendimiento muy positivo, una faceta T estrecha y un redondeado de filo para mecanizado ligero.																				
ONMX 060508SR-F:8215		0.8	275	0.10	2.0	165	0.09	2.0	–	–	–	–	–	–	65	0.07	1.6	–	–	–
ONMX 060508SR-F:M6330		0.8	230	0.10	2.0	165	0.09	2.0	–	–	–	–	–	–	65	0.07	1.6	–	–	–
ONMX 060508SR-F:M8330		0.8	270	0.10	2.0	160	0.09	2.0	–	–	–	–	–	–	65	0.07	1.6	–	–	–
ONMX 060508SR-F:M8340		0.8	245	0.10	2.0	145	0.09	2.0	–	–	–	–	–	–	60	0.07	1.6	–	–	–
ONMX 060508SR-F:M9340		0.8	320	0.10	2.0	190	0.09	2.0	–	–	–	–	–	–	80	0.07	1.6	–	–	–
																				
M la geometría es versátil y es la primera opción para una amplia variedad de condiciones de trabajo. Diseñada con un ángulo de desprendimiento positivo, una faceta T media y un redondeado de filo para mecanizado medio.																				
ONMX 060508SR-M:8215		0.8	230	0.20	2.0	135	0.18	2.0	–	–	–	–	–	–	55	0.14	1.6	45	0.14	1.0
ONMX 060508SR-M:M6330		0.8	195	0.20	2.0	140	0.18	2.0	–	–	–	–	–	–	55	0.14	1.6	–	–	–
ONMX 060508SR-M:M8330		0.8	230	0.20	2.0	135	0.18	2.0	–	–	–	–	–	–	55	0.14	1.6	45	0.14	1.0
ONMX 060508SR-M:M8340		0.8	210	0.20	2.0	125	0.18	2.0	–	–	–	–	–	–	50	0.14	1.6	–	–	–
ONMX 060508SR-M:M9325		0.8	285	0.20	2.0	–	–	–	–	–	–	–	–	–	–	–	–	55	0.14	1.0
ONMX 060508SR-M:M9340		0.8	255	0.20	2.0	150	0.18	2.0	–	–	–	–	–	–	60	0.14	1.6	–	–	–
																				
R la geometría es resistente y se utiliza para desbaste y condiciones de trabajo duras. Diseñada con un ángulo de desprendimiento ligeramente positivo, una faceta T ancha y un redondeado de filo para mecanizado en desbaste.																				
ONMX 060508SR-R:8215		0.8	210	0.30	2.0	–	–	–	195	0.30	2.0	–	–	–	–	–	–	40	0.21	1.0
ONMX 060508SR-R:M5315		0.8	255	0.30	2.0	–	–	–	240	0.30	2.0	–	–	–	–	–	–	50	0.21	1.0
ONMX 060508SR-R:M8330		0.8	210	0.30	2.0	–	–	–	195	0.30	2.0	–	–	–	–	–	–	40	0.21	1.0

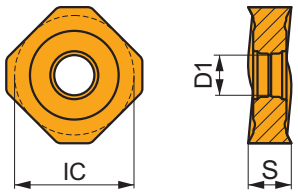
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
																			
R la geometría es resistente y se utiliza para desbaste y condiciones de trabajo duras. Diseñada con un ángulo de desprendimiento ligeramente positivo, una faceta T ancha y un redondeado de filo para mecanizado en desbaste.																			
ONMX 060508SR-R:M8340	0.8	190	0.30	2.0	–	–	–	180	0.30	2.0	–	–	–	–	–	–	–	–	–
ONMX 060508SR-R:M9325	0.8	250	0.30	2.0	–	–	–	235	0.30	2.0	–	–	–	–	–	–	50	0.21	1.0
																			
W diseño wiper un acabado superficial mejorado al mecanizar con fresas de gran tamaño y alta velocidad de avance.																			
ONMX 060508SR-W:8215	0.8	340	0.10	0.3	200	0.09	0.3	–	–	–	–	–	–	–	–	–	–	–	–
ONMX 060508SR-W:M8330	0.8	325	0.10	0.3	195	0.09	0.3	–	–	–	–	–	–	–	–	–	–	–	–

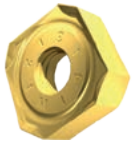
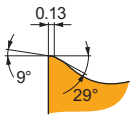
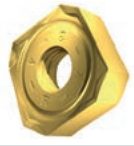
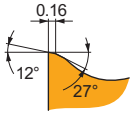
SNMX 17

PRAMET

	IC (mm)	D1 (mm)	S (mm)
1705	17.000	5.70	5.56

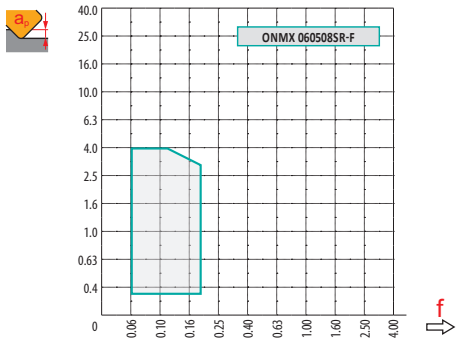


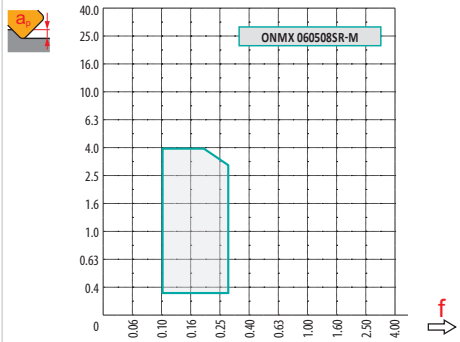
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

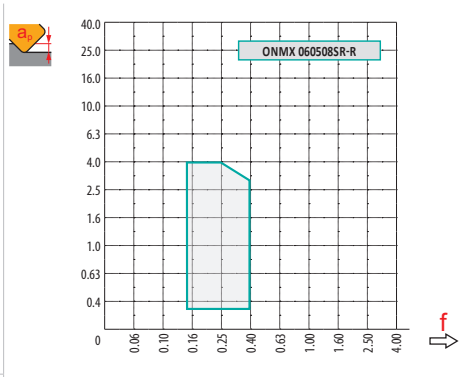
Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
 																			
M la geometría es versátil y es la primera opción para una amplia variedad de condiciones de trabajo. Diseñada con un ángulo de desprendimiento positivo, una faceta T media y un redondeado de filo para mecanizado medio.																			
SNMX 170508SR-M:8215	0.8	265	0.20	4.0	155	0.18	4.0	–	–	–	–	–	–	65	0.14	3.2	50	0.14	1.0
SNMX 170508SR-M:M6330	0.8	225	0.20	4.0	160	0.18	4.0	–	–	–	–	–	–	65	0.14	3.2	–	–	–
SNMX 170508SR-M:M8330	0.8	265	0.20	4.0	155	0.18	4.0	–	–	–	–	–	–	65	0.14	3.2	50	0.14	1.0
SNMX 170508SR-M:M8340	0.8	240	0.20	4.0	140	0.18	4.0	–	–	–	–	–	–	60	0.14	3.2	–	–	–
SNMX 170508SR-M:M9325	0.8	325	0.20	4.0	–	–	–	–	–	–	–	–	–	–	–	–	65	0.14	1.0
SNMX 170508SR-M:M9340	0.8	295	0.20	4.0	175	0.18	4.0	–	–	–	–	–	–	70	0.14	3.2	–	–	–
 																			
R la geometría es resistente y se utiliza para desbaste y condiciones de trabajo duras. Diseñada con un ángulo de desprendimiento ligeramente positivo, una faceta T ancha y un redondeado de filo para mecanizado en desbaste.																			
SNMX 170508SR-R:8215	0.8	240	0.30	4.0	–	–	–	225	0.30	4.0	–	–	–	–	–	–	45	0.21	1.0
SNMX 170508SR-R:M5315	0.8	300	0.30	4.0	–	–	–	285	0.30	4.0	–	–	–	–	–	–	60	0.21	1.0
SNMX 170508SR-R:M8330	0.8	240	0.30	4.0	–	–	–	225	0.30	4.0	–	–	–	–	–	–	45	0.21	1.0
SNMX 170508SR-R:M8340	0.8	220	0.30	4.0	–	–	–	205	0.30	4.0	–	–	–	–	–	–	–	–	–
SNMX 170508SR-R:M9325	0.8	290	0.30	4.0	–	–	–	275	0.30	4.0	–	–	–	–	–	–	55	0.21	1.0

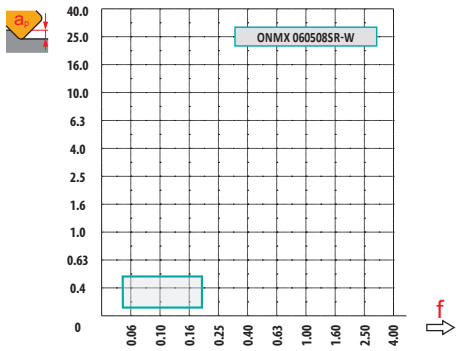
a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

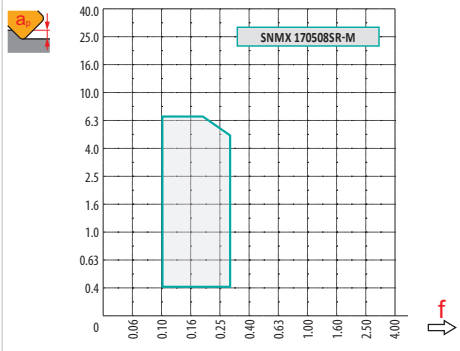
	ONMX 06-F	ONMX 06-M	ONMX 06-R	ONMX 06-W	SNMX 17-M	SNMX 17-R
RE	0.80	0.80	0.80	0.80	0.80	0.80
BS	0.75	0.75	0.75	4.30	0.70	0.70

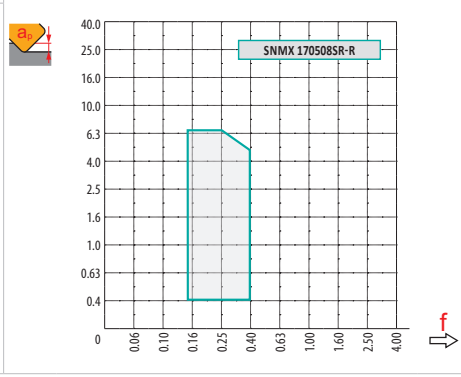












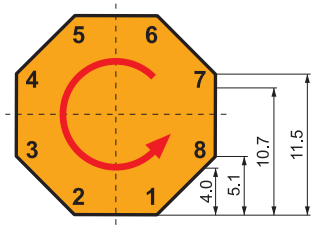
DC	a_p	0.50	1.00	1.50	2.00	2.50	3.00	3.50	4.00
50	DEF	51.06	52.11	53.19	54.27	55.35	56.43	57.51	58.59
63		64.06	65.11	66.19	67.27	68.35	69.43	70.51	71.59
80		81.06	82.11	83.19	84.27	85.35	86.43	87.51	88.59
100		101.06	102.11	103.19	104.27	105.35	106.43	107.51	108.59
125		126.06	127.11	128.19	129.27	130.35	131.43	132.51	133.59
160		161.06	162.11	163.19	164.27	165.35	166.43	167.51	168.59
200		201.06	202.11	203.19	204.27	205.35	206.43	207.51	208.59
250		251.06	252.11	253.19	254.27	255.35	256.43	257.51	258.59

DC	a_p	0.00	1.00	2.00	3.00	4.00	5.00	6.00	7.00
		S							
50	DEF	47.24	49.40	51.56	53.73	55.90	58.06	60.23	62.40
63		60.24	62.40	64.56	66.73	68.90	71.06	73.23	75.40
80		77.24	79.40	81.56	83.73	85.90	88.06	90.23	92.40
100		97.24	99.40	101.56	103.73	105.90	108.06	110.23	112.40
125		122.24	124.40	126.56	128.73	130.90	133.06	135.23	137.40
160		157.24	159.40	161.56	163.73	165.90	168.06	170.23	172.40
200		197.24	199.40	201.56	203.73	205.90	208.06	210.23	212.40
250		247.24	249.40	251.56	253.73	255.90	258.06	260.23	262.40

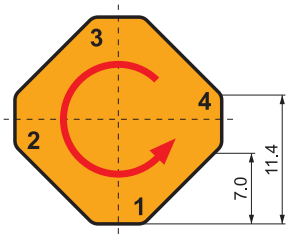
DC	X.V	f_{max}
50	1.35	0.36
63	1.39	0.40
80	1.44	0.45
100	1.48	0.51
125	1.53	0.57
160	1.58	0.64
200	1.63	0.72
250	1.68	0.80

	O	
DC	RPMX	APMX/I
50	0.3	0.4/100
63	0.2	0.25/100
80	0.2	0.2/100
100	0.1	0.1/100
125	0.1	0.05/100

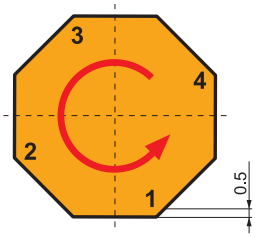
	S	
DC	RPMX	APMX/I
47.24	0.1	0.1/100
60.24	0.1	0.05/100
77.24	0.1	0.05/100



a_p	
-> 4.0	16
-> 5.1	14
-> 10.7	8
-> 11.5	6



a_p	
-> 7.0	8
-> 11.4	4



ONMX 06-W	
a_p	
-> 0.5	8

SHN06C

P M K H

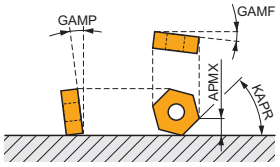
PRAMET

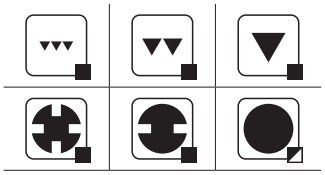
S

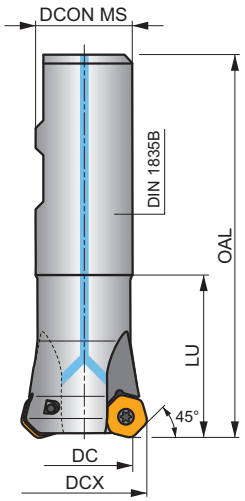
ECON LN12 Fresa de Planeado con diseño doble negativo y Refrigeración Interna

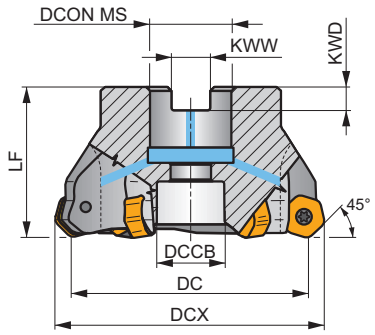
Fresa de planear a 45° de alta productividad que utiliza plaquitas de doble cara HN.. 06 y APMX de 3 mm. Para desbaste, acabado y achaflanado. Plaquita económica con 12 filos de corte. Paso diferencial. Disponible con mango Weldon y portafresas. Cuerpo tratado para alargar la vida de herramienta.

KAPR	45°
APMX	3.0 mm









h_m	0.06 - 0.15
h_m	0.06 - 0.15

	Producto	DC (mm)	DCX (mm)	OAL (mm)	DCON MS (mm)	DCCB (mm)	LU (mm)	LF (mm)	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		kg			
DIN 1835B	25N2R042B25-SHN06C-C	25	32.2	99	25	–	42	–	–	–	-7	-7	2	–	17400	✓	0.35	GI204	FA010	–
DIN 1835B	32N3R042B32-SHN06C-C	32	39.3	103	32	–	42	–	–	–	-7	-7	3	–	15400	✓	0.59	GI204	FA010	–
	40A05R-S45HN06C-C	40	47.3	–	16	14	–	40	8.4	5.6	-7	-7	5	✓	13800	✓	0.37	GI204	FA012	–
	50A04R-S45HN06C-C	50	57.3	–	22	18	–	40	10.4	6.3	-7	-7	4	✓	12300	✓	0.54	GI204	FA013	–
	50A06R-S45HN06C-C	50	57.3	–	22	18	–	40	10.4	6.3	-7	-7	6	✓	12300	✓	0.41	GI204	FA013	–
	63A06R-S45HN06C-C	63	70.3	–	22	18	–	40	10.4	6.3	-7	-7	6	✓	11000	✓	0.68	GI204	FA013	–
ISO 6462 DIN 8030	63A08R-S45HN06C-C	63	70.3	–	22	18	–	40	10.4	6.3	-7	-7	8	✓	11000	✓	0.68	GI204	FA013	–
	80A07R-S45HN06C-C	80	86.8	–	27	38	–	50	12.4	7	-7	-7	7	✓	9700	✓	1.10	GI204	FA011	AC001
	80A10R-S45HN06C-C	80	86.8	–	27	38	–	50	12.4	7	-7	-7	10	✓	9700	✓	1.10	GI204	FA011	AC001
	100A08R-S45HN06C-C	100	107.1	–	32	45	–	50	14.4	8	-7	-7	8	✓	8700	✓	2.00	GI204	FA011	AC002
	100A12R-S45HN06C-C	100	107.1	–	32	45	–	50	14.4	8	-7	-7	12	✓	8700	✓	1.82	GI204	FA011	AC002
	125A10R-S45HN06C-C	125	132.2	–	40	56	–	63	16.4	9	-7	-7	10	✓	7800	✓	3.53	GI204	FA011	AC003

GI204	HNGX 0604AN..	XNGX 0604AN..

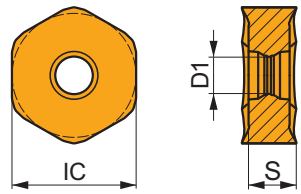
		Nm						
FA010	US 3007-T09P	2.0	M 3	7.3	–	–	Flag T09P	–
FA011	US 3007-T09P	2.0	M 3	7.3	D-T07P/T09P	FG-15	–	–
FA012	US 3007-T09P	2.0	M 3	7.3	D-T07P/T09P	FG-15	–	HS 0830C
FA013	US 3007-T09P	2.0	M 3	7.3	D-T07P/T09P	FG-15	–	HS 1030C

AC001	KS 1230	K.FMH27
AC002	KS 1635	K.FMH32
AC003	KS 2040	K.FMH40

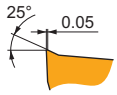
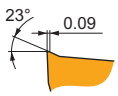
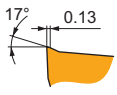
HNGX 06

PRAMET

	IC (mm)	D1 (mm)	S (mm)
0604	10.500	3.70	4.76

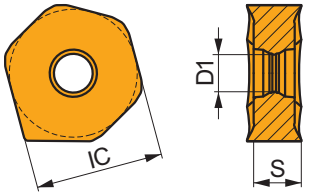


Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
								**F** geometría muy positiva para mecanizado ligero.											
HNGX 0604ANSN-F:8215	–	315	0.11	1.7	185	0.10	1.7	–	–	–	–	–	–	–	–	–	–	–	–
HNGX 0604ANSN-F:M6330	–	265	0.11	1.7	185	0.10	1.7	–	–	–	–	–	–	–	–	–	–	–	–
HNGX 0604ANSN-F:M8330	–	305	0.11	1.7	180	0.10	1.7	–	–	–	–	–	–	–	–	–	–	–	–
HNGX 0604ANSN-F:M8340	–	285	0.11	1.7	170	0.10	1.7	–	–	–	–	–	–	–	–	–	–	–	–
HNGX 0604ANSN-F:M9340	–	365	0.11	1.7	215	0.10	1.7	–	–	–	–	–	–	–	–	–	–	–	–
								**M** geometría muy positiva para mecanizado medio.											
HNGX 0604ANSN-M:8215	–	300	0.13	2.0	180	0.13	2.0	285	0.13	2.0	–	–	–	–	–	–	–	–	–
HNGX 0604ANSN-M:M5315	–	425	0.13	2.0	–	–	–	400	0.13	2.0	–	–	–	–	–	–	–	–	–
HNGX 0604ANSN-M:M6330	–	255	0.13	2.0	180	0.13	2.0	–	–	–	–	–	–	–	–	–	–	–	–
HNGX 0604ANSN-M:M8310	–	325	0.13	2.0	165	0.13	2.0	305	0.13	2.0	–	–	–	–	–	–	–	–	–
HNGX 0604ANSN-M:M8330	–	295	0.13	2.0	175	0.13	2.0	280	0.13	2.0	–	–	–	–	–	–	–	–	–
HNGX 0604ANSN-M:M8340	–	265	0.13	2.0	155	0.13	2.0	250	0.13	2.0	–	–	–	–	–	–	–	–	–
HNGX 0604ANSN-M:M9315	–	410	0.13	2.0	–	–	–	385	0.13	2.0	–	–	–	–	–	–	–	–	–
HNGX 0604ANSN-M:M9325	–	375	0.13	2.0	–	–	–	355	0.13	2.0	–	–	–	–	–	–	–	–	–
HNGX 0604ANSN-M:M9340	–	345	0.13	2.0	205	0.13	2.0	–	–	–	–	–	–	–	–	–	–	–	–
								**R** geometría muy positiva para mecanizado medio a pesado.											
HNGX 0604ANSN-R:8215	–	280	0.18	1.8	165	0.18	1.8	265	0.18	1.8	–	–	–	–	–	–	55	0.12	1.0
HNGX 0604ANSN-R:M5315	–	370	0.18	1.8	–	–	–	350	0.18	1.8	–	–	–	–	–	–	70	0.12	1.0
HNGX 0604ANSN-R:M8310	–	300	0.18	1.8	150	0.18	1.8	285	0.18	1.8	–	–	–	–	–	–	60	0.12	1.0
HNGX 0604ANSN-R:M8330	–	275	0.18	1.8	165	0.18	1.8	260	0.18	1.8	–	–	–	–	–	–	55	0.12	1.0
HNGX 0604ANSN-R:M8340	–	250	0.18	1.8	150	0.18	1.8	235	0.18	1.8	–	–	–	–	–	–	–	–	–
HNGX 0604ANSN-R:M9325	–	345	0.18	1.8	–	–	–	325	0.18	1.8	–	–	–	–	–	–	65	0.12	1.0

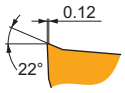
XNGX 06

	IC	D1	S
	(mm)	(mm)	(mm)
0604	10.500	3.70	4.76



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto	RE	**P**			**M**			**K**			**N**			**S**			**H**		
		vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)

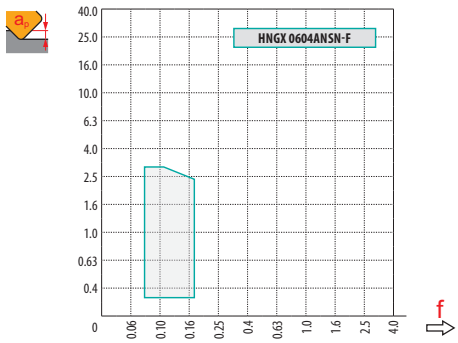


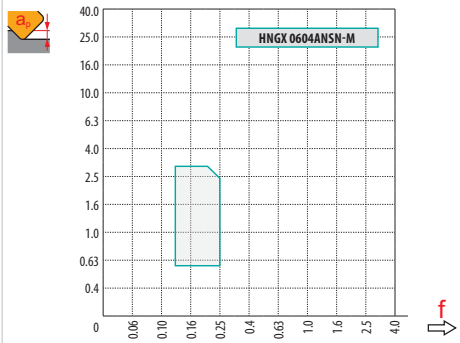
W geometría rascadora (Wiper) para un acabado superficial mejorado.

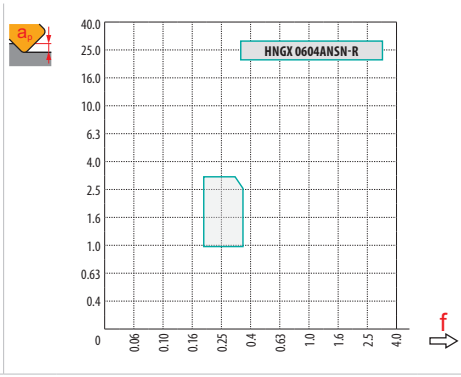
XNGX 0604ANSN:8215	–	290	0.13	1.8	170	0.12	1.8	275	0.13	1.8	–	–	–	–	–	–	–	–	–

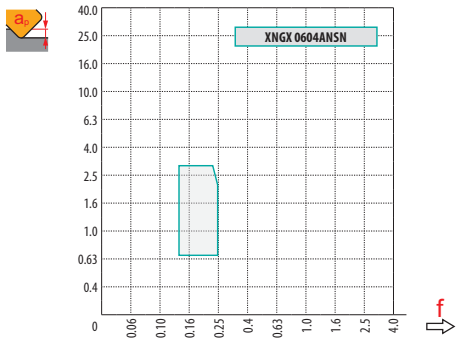
a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	HNGX 06-F	HNGX 06-M	HNGX 06-R	XNGX 06
RE	–	–	–	–
BS	1.12	0.80	0.80	4.15









DC	X.V	f_{max}
25	1.31	0.24
32	1.36	0.28
40	1.40	0.31
50	1.45	0.35
63	1.49	0.39
80	1.54	0.44
100	1.59	0.49
125	1.64	0.55

DC	RPMX	APMX/I
25	2.7°	3.0/65
32	1.9°	3.0/89
40	1.5°	2.5/100
50	1.1°	1.9/100
63	0.9°	1.4/100
80	0.6°	1.0/100
100	0.5°	0.8/100
125	0.4°	0.6/100

a_p
0.9

SHN09C

P M K H

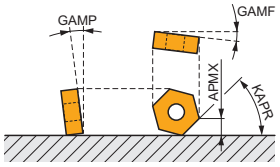
PRAMET

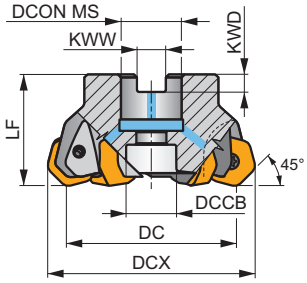
S

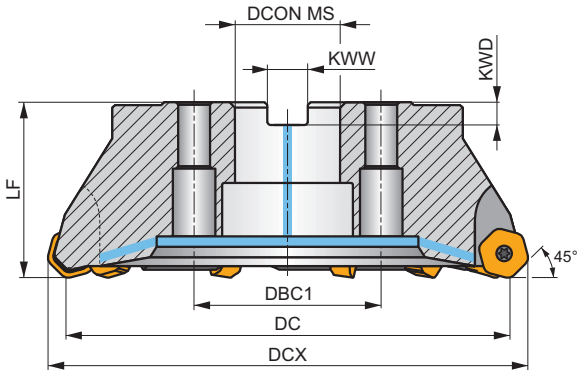
ECON HN09 45° Fresa de Planeado con diseño doble negativo y Refrigeración Interna

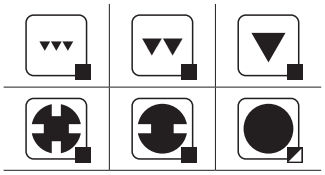
Fresa de planear a 45° de alta productividad que utiliza plaquitas de doble cara HN.. 09 y APMX de 5 mm. Para desbaste, acabado y achaflanado. Plaquita económica con 12 filos de corte. Paso diferencial. Disponible únicamente para portafresas. Cuerpo tratado para alargar la vida de herramienta.

KAPR	45°
APMX	5.0 mm









h_m 0.08 - 0.25

	Producto	DC (mm)	DCX (mm)	LF (mm)	DCON MS (mm)	DCCB (mm)	DBC1 (mm)	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		kg			
ISO 6462 DIN 8030	50A04R-S45HN09C-CF	50	61.7	40	22	18	–	10.4	6.3	-7	-7	4	✓	7900	✓	0.38	GI252	FA023	–
	63A06R-S45HN09C-CF	63	74.7	40	22	18	–	10.4	6.3	-7	-7	6	✓	7000	✓	0.54	GI252	FA023	–
	80A06R-S45HN09C-CF	80	91.7	50	27	38	–	12.4	7	-7	-7	6	✓	6200	✓	1.06	GI252	FA021	AC001
	80A08R-S45HN09C-CF	80	91.7	50	27	38	–	12.4	7	-7	-7	8	✓	6200	✓	1.06	GI252	FA021	AC001
	100A06R-S45HN09C-CF	100	111.7	50	32	45	–	14.4	8	-7	-7	6	✓	5600	✓	1.95	GI252	FA021	AC002
	100A08R-S45HN09C-CF	100	111.7	50	32	45	–	14.4	8	-7	-7	8	✓	5600	✓	1.99	GI252	FA021	AC002
	100A10R-S45HN09C-CF	100	111.7	50	32	45	–	14.4	8	-8	-7	10	–	5600	✓	1.99	GI252	FA021	AC002
	125A06R-S45HN09C-CF	125	136.7	63	40	56	–	16.4	9	-7	-7	6	✓	5000	✓	3.36	GI252	FA021	AC003
	125A08R-S45HN09C-CF	125	136.7	63	40	56	–	16.4	9	-7	-7	8	✓	4900	✓	3.66	GI252	FA021	AC003
	125A10R-S45HN09C-CF	125	136.7	63	40	56	–	16.4	9	-7	-7	10	✓	5000	✓	3.52	GI252	FA021	AC003
	125A12R-S45HN09C-CF	125	136.7	63	40	56	–	16.4	9	-8	-7	12	–	5000	✓	3.36	GI252	FA021	AC003
	160C08R-S45HN09C-CF	160	171.7	63	40	–	66.7	16.4	9	-7	-7	8	✓	4400	✓	6.24	GI252	FA026	–
	160C12R-S45HN09C-CF	160	171.7	63	40	–	66.7	16.4	9	-7	-7	12	✓	4400	✓	6.45	GI252	FA026	–
	160C14R-S45HN09C-CF	160	171.7	63	40	–	66.7	16.4	9	-7	-7	14	✓	4400	✓	6.39	GI252	FA026	–
	200C10R-S45HN09C-CF	200	211.7	63	60	–	101.6	25.7	14	-7	-7	10	✓	3900	✓	11.37	GI252	FA027	–
	250C14R-S45HN09C-CF	250	261.7	63	60	–	101.6	25.7	14	-7	-7	14	✓	3500	✓	18.50	GI252	FA028	–
	315C16R-S45HN09C-CF	315	326.7	80	60	–	101.6	25.7	14	-7	-7	16	✓	3100	✓	37.00	GI252	FA029	–

GI252	HNGX 0906AN..	XNGX 0906AN..

		Nm											
FA021	US 54511-T15P	5.0	M 4.5	11	D-T08P/T15P	FG-15	–	–	–	–	–	–
FA023	US 54511-T15P	5.0	M 4.5	11	D-T08P/T15P	FG-15	HS 1030C	–	–	–	–	–

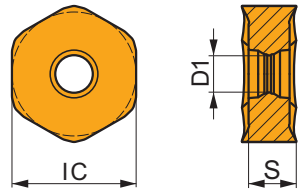
		Nm										
FA026	US 54511-T15P	5.0	M 4.5	11	D-T08P/T15P	FG-15	HS 1240C	CAC 160C	HSD 0825C	HXK 5	–	–
FA027	US 54511-T15P	5.0	M 4.5	11	D-T08P/T15P	FG-15	HS 1655C	CAC 200C	HSD 1025C	HXK 7	–	–
FA028	US 54511-T15P	5.0	M 4.5	11	D-T08P/T15P	FG-15	HS 1655C	CAC 250C	HSD 1025C	HXK 7	–	–
FA029	US 54511-T15P	5.0	M 4.5	11	D-T08P/T15P	FG-15	HS 1655C	CAC 315C	HSD 1035C	HXK 7	CACP 3150C	RRH 34

AC001	KS 1230	K.FMH27
AC002	KS 1635	K.FMH32
AC003	KS 2040	K.FMH40

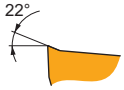
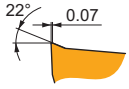
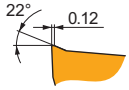
HNGX 09

PRAMET

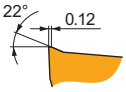
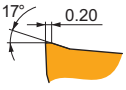
	IC (mm)	D1 (mm)	S (mm)
0906	16.500	4.90	6.35



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
			**FF** geometría muy positiva para mecanizado ligero.																	
HNGX 0906ANEN-FF:8215	●	–	345	0.10	1.0	205	0.09	1.0	–	–	–	–	–	–	–	–	–	–	–	–
HNGX 0906ANEN-FF:M8330	●	–	335	0.10	1.0	200	0.09	1.0	–	–	–	–	–	–	–	–	–	–	–	–
HNGX 0906ANEN-FF:M9340	●	–	405	0.10	1.0	240	0.09	1.0	–	–	–	–	–	–	–	–	–	–	–	–
			**F** geometría muy positiva para mecanizado ligero a medio.																	
HNGX 0906ANSN-F:8215	✱	–	300	0.12	2.1	180	0.11	2.1	–	–	–	–	–	–	–	–	–	–	–	–
HNGX 0906ANSN-F:M6330	✱	–	255	0.12	2.1	180	0.11	2.1	–	–	–	–	–	–	–	–	–	–	–	–
HNGX 0906ANSN-F:M8310	✱	–	330	0.12	2.1	165	0.11	2.1	–	–	–	–	–	–	–	–	–	–	–	–
HNGX 0906ANSN-F:M8330	✱	–	300	0.12	2.1	180	0.11	2.1	–	–	–	–	–	–	–	–	–	–	–	–
HNGX 0906ANSN-F:M8340	✱	–	270	0.12	2.1	160	0.11	2.1	–	–	–	–	–	–	–	–	–	–	–	–
			**M** geometría muy positiva para mecanizado medio.																	
HNGX 0906ANSN-M:8215	✱	–	255	0.20	2.7	150	0.18	2.7	240	0.20	2.7	–	–	–	–	–	–	–	–	–
HNGX 0906ANSN-M:M5315	✱	–	340	0.20	2.7	–	–	–	320	0.20	2.7	–	–	–	–	–	–	–	–	–

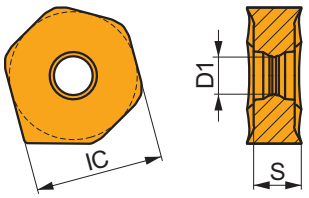
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
																			
M geometría muy positiva para mecanizado medio.																			
HNGX 0906ANSN-M:M6330	–	220	0.20	2.7	155	0.18	2.7	–	–	–	–	–	–	–	–	–	–	–	–
HNGX 0906ANSN-M:M8310	–	280	0.20	2.7	140	0.18	2.7	265	0.20	2.7	–	–	–	–	–	–	–	–	–
HNGX 0906ANSN-M:M8330	–	255	0.20	2.7	150	0.18	2.7	240	0.20	2.7	–	–	–	–	–	–	–	–	–
HNGX 0906ANSN-M:M8340	–	235	0.20	2.7	140	0.18	2.7	220	0.20	2.7	–	–	–	–	–	–	–	–	–
HNGX 0906ANSN-M:M9315	–	340	0.20	2.7	–	–	–	320	0.20	2.7	–	–	–	–	–	–	–	–	–
HNGX 0906ANSN-M:M9325	–	315	0.20	2.7	–	–	–	295	0.20	2.7	–	–	–	–	–	–	–	–	–
HNGX 0906ANSN-M:M9340	–	290	0.20	2.7	170	0.18	2.7	–	–	–	–	–	–	–	–	–	–	–	–
																			
R geometría con diseño positivo para mecanizado medio a pesado.																			
HNGX 0906ANSN-R:8215	–	240	0.25	3.0	140	0.25	3.0	225	0.25	3.0	–	–	–	–	–	–	45	0.13	1.0
HNGX 0906ANSN-R:M5315	–	305	0.25	3.0	–	–	–	285	0.25	3.0	–	–	–	–	–	–	60	0.13	1.0
HNGX 0906ANSN-R:M8310	–	260	0.25	3.0	130	0.25	3.0	245	0.25	3.0	–	–	–	–	–	–	50	0.13	1.0
HNGX 0906ANSN-R:M8330	–	240	0.25	3.0	140	0.25	3.0	225	0.25	3.0	–	–	–	–	–	–	45	0.13	1.0
HNGX 0906ANSN-R:M8340	–	220	0.25	3.0	130	0.25	3.0	205	0.25	3.0	–	–	–	–	–	–	–	–	–
HNGX 0906ANSN-R:M9315	–	310	0.25	3.0	–	–	–	290	0.25	3.0	–	–	–	–	–	–	60	0.13	1.0
HNGX 0906ANSN-R:M9325	–	295	0.25	3.0	–	–	–	280	0.25	3.0	–	–	–	–	–	–	55	0.13	1.0

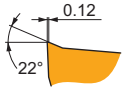
XNGX 09

PRAMET

	IC (mm)	D1 (mm)	S (mm)
0906	16.500	4.90	6.35

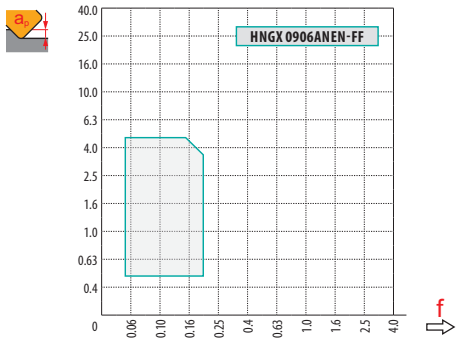


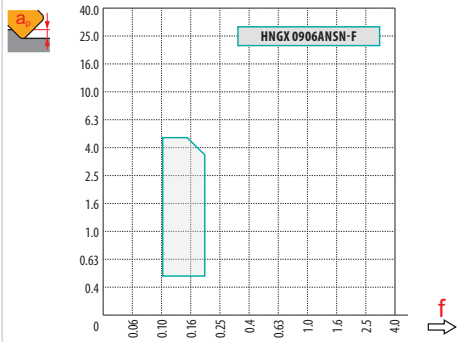
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

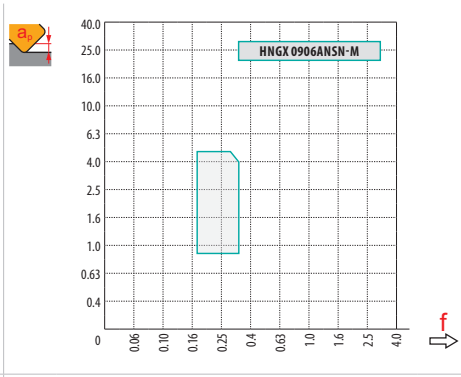
Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
																			
W geometría rascadora (Wiper) para un acabado superficial mejorado.																			
XNGX 0906ANSN:8215	–	245	0.20	2.7	145	0.18	2.7	230	0.20	2.7	–	–	–	–	–	–	–	–	–
XNGX 0906ANSN:M8330	–	245	0.20	2.7	145	0.18	2.7	230	0.20	2.7	–	–	–	–	–	–	–	–	–

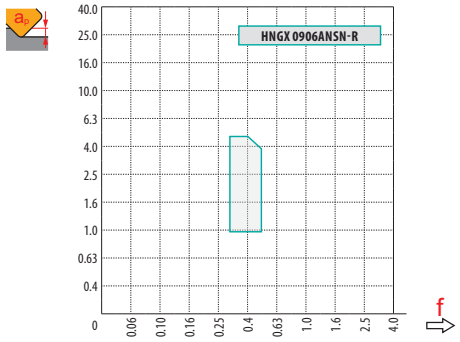
a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

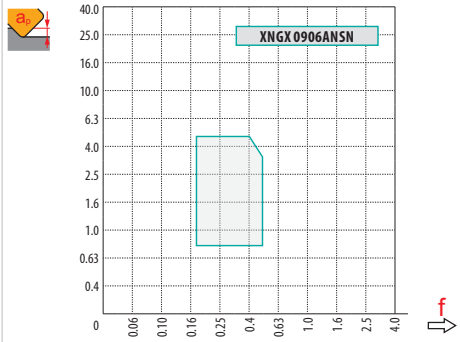
	HNGX 09-FF	HNGX 09-F	HNGX 09-M	HNGX 09-R	XNGX 09
RE	–	–	–	–	–
BS	1.50	1.17	1.17	1.17	7.53











DC	X.V	f_{max}
50	1.35	0.36
63	1.39	0.40
80	1.44	0.45
100	1.48	0.51
125	1.53	0.57
160	1.58	0.64
200	1.63	0.72
250	1.68	0.80
315	1.74	0.90

DC	RPMX	APMX/I
50	2.1°	3.5/100
63	1.5°	2.5/100
80	1.1°	1.8/100
100	0.9°	1.4/100
125	0.7°	1.1/100
160	0.5°	0.7/100

a_p
1.9

SPN13

P M K S H

PRAMET

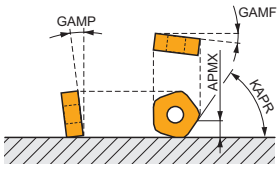
S

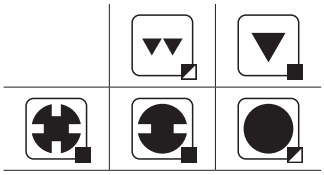
PENTA HD Fresa de Planeado a 57° con Diseño Doble Negativo para Fresado Pesado

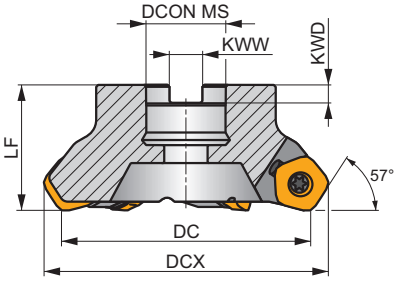
Fresa de planear a 57° de alta productividad que utiliza plaquitas de doble cara PN.. 13 y XN.. 13 y APMX de 10 mm. Adecuada para planeado. Disponible únicamente para portafresas. El asiento de las plaquitas está protegido por plaquitas de apoyo. Cuerpo tratado para alargar la vida de herramienta.

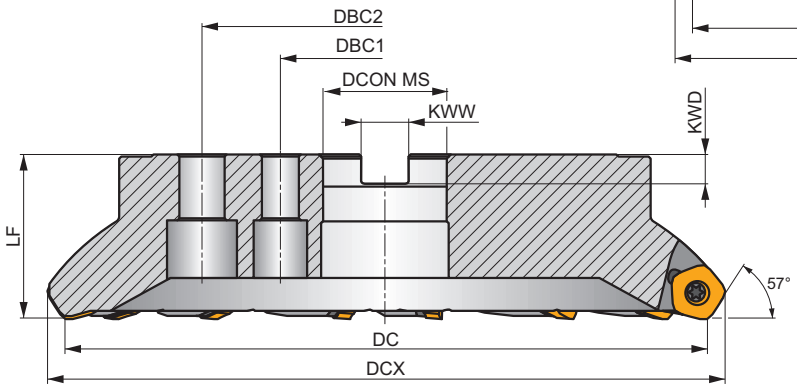
PENTA HD

KAPR	57°
APMX	10.0 mm









h_m 0.20 - 0.50

	Producto	DC (mm)	DCX (mm)	LF (mm)	DCON MS (mm)	DBC1 (mm)	DBC2 (mm)	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		kg			
	100A05R-S57PN13	100	115.8	50	32	–	–	14.4	8	-8.2	-4	5	–	3400	–	1.22	GI261	FA081	AC002
	125A06R-S57PN13	125	140.8	63	40	–	–	16.4	9	-7	-4	6	–	3100	–	2.79	GI261	FA081	AC003
ISO 6462 DIN 8030	**160C08R-S57PN13**	160	175.8	63	40	66.7	–	16.4	9	-6	-4	8	–	2700	–	3.58	GI261	FA081	–
	200C10R-S57PN13	200	215.8	63	60	101.6	–	25.7	14	-5	-4	10	–	2400	–	9.17	GI261	FA081	–
	250C12R-S57PN13	250	265.8	63	60	101.6	–	25.7	14	-5	-4	12	–	2200	–	15.39	GI261	FA081	–
	315C14R-S57PN13	315	330.8	80	60	101.6	177.8	25.7	14	-5	-4	14	–	1900	–	29.17	GI261	FA081	–

GI261	PNMU 1308DN..	XNGX 1308DNSN	PNMQ 1308DN..

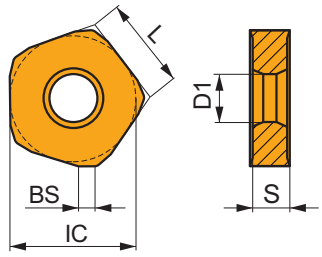
FA081	SPN 13T3DN	US 64010-T15P	SDR T15P	US 68026-T30P	15.0 Nm	M 8	26	SDR T30P-T

AC002	KS 1635	K.FMH32
AC003	KS 2040	K.FMH40

PNMU 13

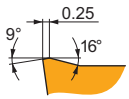
PRAMET

	BS	IC	D1	L	S
	(mm)	(mm)	(mm)	(mm)	(mm)
1308	3.00	24.400	10.00	13.00	7.94



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
PNMU 1308DNSR-M:8215		–	■ 165	0.35	6.5	◪ 95	0.32	6.5	■ 155	0.35	6.5	–	–	–	◪ 40	0.28	5.2	◪ 30	0.18	2.0
PNMU 1308DNSR-M:M8330		–	■ 190	0.35	6.5	◪ 110	0.32	6.5	■ 180	0.35	6.5	–	–	–	◪ 45	0.28	5.2	◪ 35	0.18	2.0
PNMU 1308DNSR-M:M8345		–	■ 135	0.35	6.5	◪ 80	0.32	6.5	–	–	–	–	–	–	◪ 30	0.28	5.2	–	–	–
PNMU 1308DNSR-M:M9315		–	■ 210	0.35	6.5	–	–	–	■ 195	0.35	6.5	–	–	–	–	–	–	◪ 40	0.18	2.0
PNMU 1308DNSR-M:M9340		–	■ 170	0.35	6.5	◪ 100	0.32	6.5	–	–	–	–	–	–	◪ 40	0.28	5.2	–	–	–

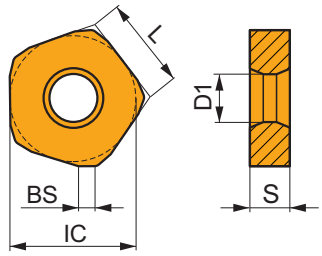


M geometría con diseño positivo para mecanizado en desbaste.

PNMQ 13

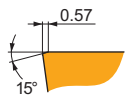
PRAMET

	BS	IC	D1	L	S
	(mm)	(mm)	(mm)	(mm)	(mm)
1308	3.00	24.400	10.00	13.00	7.94



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

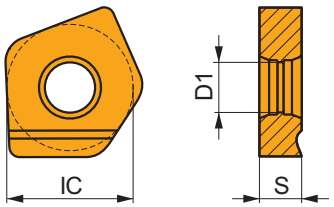
Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
PNMQ 1308DNSN:M8330		–	◪ 165	0.60	6.5	–	–	–	■ 155	0.60	6.5	–	–	–	–	–	–	◪ 30	0.30	2.0
PNMQ 1308DNSN:M8345		–	◪ 120	0.60	6.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–



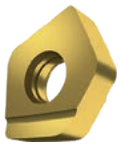
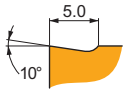
SN ángulo de desprendimiento de 0° especialmente indicado para fresado en desbaste.

XNGX 13

	IC	D1	S
	(mm)	(mm)	(mm)
1308	24.180	10.00	7.94



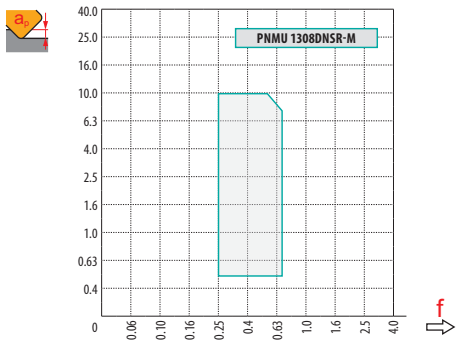
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

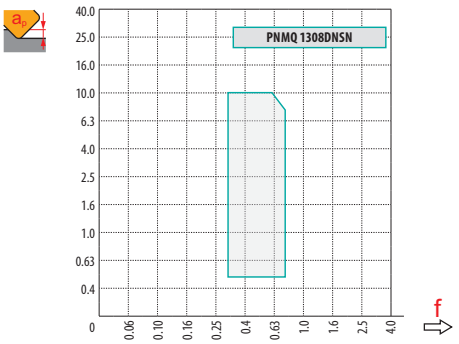
Producto		RE	**P**			**M**			**K**			**N**			**S**			**H**		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
																				
XNGX 1308DNSN:M8330	✤	–	■ 245	0.45	2.5	–	–	–	■ 230	0.45	2.5	–	–	–	–	–	–	–	–	–

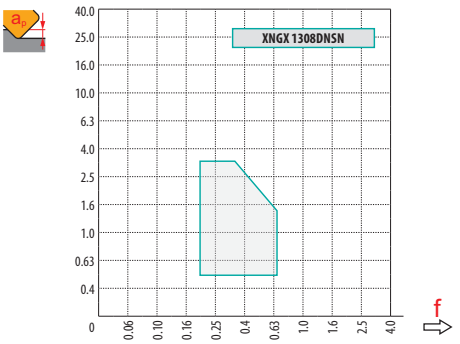
W geometría rascadora (Wiper) para un acabado superficial mejorado.

a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ X.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
⇨ X.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	PNMU 13-M	PNMQ 13	XNGX 13
RE	–	–	–
BS	3.00	3.00	12.71







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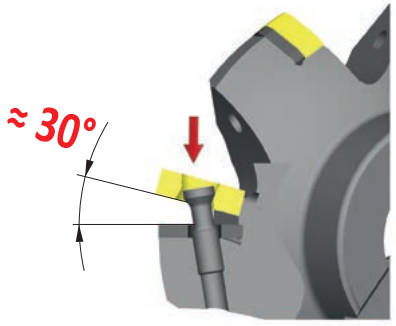

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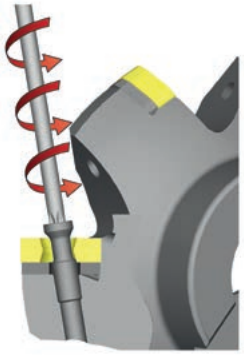
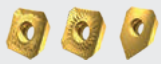
3



4

PLANEADO

	SSD13F	SSE09	SSN12Z	FSB22X		
	45°	45°	45°	60°		
	APMX (mm) 6.4	APMX (mm) 4.5	APMX (mm) 6.5	APMX (mm) 15.0		
	DC (mm) 32 – 250	DC (mm) 20 – 160	DC (mm) 63 – 125	DC (mm) 125 – 250		
Mango cilíndrico						
Weldon	DC = 32, 40 (mm)	DC = 20 – 32 (mm)				
Modular						
Portafresas	DC = 40 – 250 (mm)	DC = 32 – 160 (mm)				
Página	26	31	35	38		
ISO	P M K N S H	P M K S	P M K S	P M K		
Forma de la plaquita						
Plaquitas de corte	SDET 13T3 SDMT 13T3 XDET 13T3	SE.T 09T3	SN.T 1205	SB.. 2207		
N.º de filos de corte	4 / 4 / 1	4	4	4 / 1		
Planeado	■	■	■	■		
Fresado de chaflanes	■	■	■			
Interpolación helicoidal	◪					
Fresado axial progresivo	◪					
Mecanizado en rampa	◪					

■ Primera Opción ◪ Opción Alternativa

SSD13F

P M K N S H

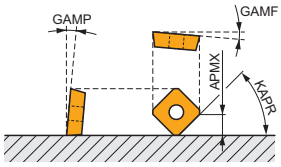
PRAMET

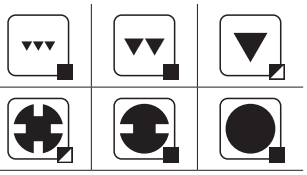
S

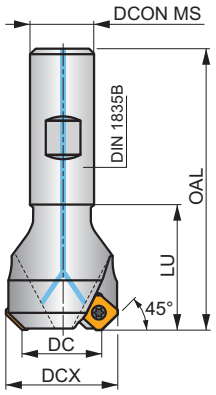
Fresa de planear de 45° VER SD13 con diseño positivo y refrigeración interna

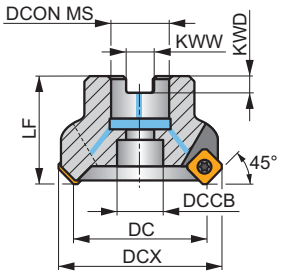
Fresa de planear de 45° versátil que utiliza plaquitas de una sola cara SD.. 13 tipos de plaquita con APMX de 6,4 mm. Adecuada para una amplia gama de aplicaciones en cualquier material. Disponible en tipo Weldon y para portafresas, con paso diferencial. Cuerpo tratado para una mayor vida de herramienta, plaquitas de apoyo de metal duro en lugar de asiento directo para mayor seguridad del proceso.

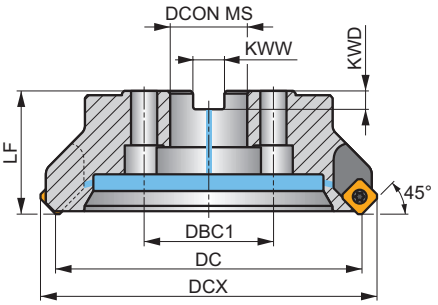
KAPR	45°
APMX	6.4 mm











h_m	0.04 - 0.28
h_m	0.04 - 0.32

	Producto	DC (mm)	DCX (mm)	OAL (mm)	DCON MS (mm)	DCCB (mm)	DBC1 (mm)	LU (mm)	LF (mm)	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)	max.	kg	
DIN 1835B	32N3R045B25-SSD13F-C	32	44.9	120	25	–	–	45	–	–	–	-15	15	3	–	16100 ✓ 0.43 GI341 C0610 –
DIN 1835B	40N3R045B32-SSD13F-C	40	53.5	120	32	–	–	45	–	–	–	-7	15	3	–	14400 ✓ 0.72 GI341 C0610 –
	40A03R-S45SD13F-C	40	53.5	–	16	14	–	–	40	8.4	5.6	-7	15	3	–	14400 ✓ 0.27 GI341 C0611 –
	50A04R-S45SD13F-C	50	63.5	–	22	18	–	–	40	10.4	6.3	-7	15	4	✓	12900 ✓ 0.51 GI341 C0612 –
	63A05R-S45SD13F-C	63	76.4	–	22	18	–	–	40	10.4	6.3	-7	15	5	✓	11500 ✓ 0.53 GI341 C0612 –
	80A07R-S45SD13F-C	80	93.4	–	27	22	–	–	50	12.4	7	-7	15	7	✓	10200 ✓ 1.21 GI341 C0613 AC001
	100A08R-S45SD13F-C	100	112.9	–	32	45	–	–	50	14.4	8	-12	15	8	✓	9100 ✓ 1.83 GI341 C0613 AC002
	100A10R-S45SD13F-C	100	112.9	–	32	45	–	–	50	14.4	8	-12	15	10	–	9100 ✓ 1.94 GI341 C0613 AC002
ISO 6462 DIN 8030	125A08R-S45SD13F-C	125	137.8	–	40	56	–	–	63	16.4	9	-12	15	8	✓	8100 ✓ 3.41 GI341 C0613 AC003
ISO 6462 DIN 8030	125A12R-S45SD13F-C	125	137.8	–	40	56	–	–	63	16.4	9	-12	15	12	–	8100 ✓ 3.31 GI341 C0613 AC003
	160C10R-S45SD13F-C	160	172.8	–	40	–	66.7	–	63	16.4	9	-12	15	10	✓	7200 ✓ 6.68 GI341 C0614 –
	160C14R-S45SD13F-C	160	172.8	–	40	–	66.7	–	63	16.4	9	-12	15	14	✓	7200 ✓ 6.62 GI341 C0614 –
	200C12R-S45SD13F-C	200	212.8	–	60	–	101.6	–	63	25.7	14	-12	15	12	✓	6400 ✓ 9.06 GI341 C0615 –
	200C16R-S45SD13F-C	200	212.8	–	60	–	101.6	–	63	25.7	14	-12	15	16	✓	6400 ✓ 11.85 GI341 C0615 –
	250C14R-S45SD13F-C	250	262.8	–	60	–	101.6	–	63	25.7	14	-12	15	14	✓	5700 ✓ 19.50 GI341 C0616 –
	250C20R-S45SD13F-C	250	262.8	–	60	–	101.6	–	63	25.7	14	-12	15	20	✓	5700 ✓ 19.20 GI341 C0616 –

GI341	SDET 13T3..	SDMT 13T3..	XDET 13T3..

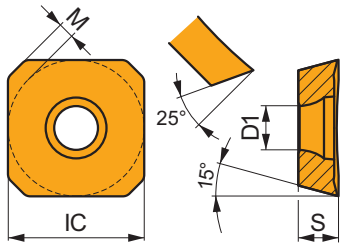
		Nm												
C0610	US 63513-T15P	3.0	M 3.5	13	Flag T15P	–	–	–	SDW 1103AF	MS 3507	HXK 3.5	–	–	–
C0611	US 63513-T15P	3.0	M 3.5	13	–	D-T08P/T15P	FG-15	HS 0830C	SDW 1103AF	MS 3507	HXK 3.5	–	–	–
C0612	US 63513-T15P	3.0	M 3.5	13	–	D-T08P/T15P	FG-15	HSD 1025C	SDW 1103AF	MS 3507	HXK 3.5	–	–	–
C0613	US 63513-T15P	3.0	M 3.5	13	–	D-T08P/T15P	FG-15	–	SDW 1103AF	MS 3507	HXK 3.5	–	–	–
C0614	US 63513-T15P	3.0	M 3.5	13	–	D-T08P/T15P	FG-15	HS 1240C	SDW 1103AF	MS 3507	HXK 3.5	CAC 160C	HSD 0825C	HXK 5
C0615	US 63513-T15P	3.0	M 3.5	13	–	D-T08P/T15P	FG-15	HS 1655C	SDW 1103AF	MS 3507	HXK 3.5	CAC 200C	HSD 1025C	HXK 7
C0616	US 63513-T15P	3.0	M 3.5	13	–	D-T08P/T15P	FG-15	HS 1655C	SDW 1103AF	MS 3507	HXK 3.5	CAC 250C	HSD 1025C	HXK 7

AC001	KS 1230	K.FMH27
AC002	KS 1635	K.FMH32
AC003	KS 2040	K.FMH40

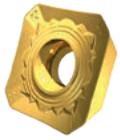
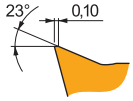
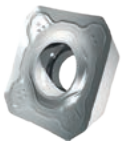
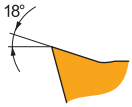
SDET 13

PRAMET

	IC (mm)	D1 (mm)	M (mm)	S (mm)
13T3	13.385	4.40	1.5	3.97

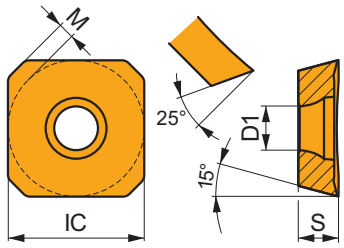


Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

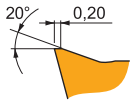
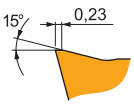
Producto		RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
																				
F la geometría es afilada y se utiliza para acabado, adecuada para aplicaciones con gran voladizo y piezas finas o de paredes delgadas. Diseñada con un ángulo de desprendimiento muy positivo, una faceta T estrecha y un redondeado de filo para mecanizado ligero.																				
SDET 13T3AFSN-F:M6330	✱	–	250	0.15	3.0	175	0.14	3.0	–	–	–	–	–	–	70	0.11	2.4	–	–	–
SDET 13T3AFSN-F:M8310	⬌	–	315	0.15	3.0	160	0.14	3.0	295	0.15	3.0	–	–	–	–	–	–	–	–	–
SDET 13T3AFSN-F:M8330	✱	–	285	0.15	3.0	170	0.14	3.0	270	0.15	3.0	855	0.18	3.0	70	0.11	2.4	–	–	–
SDET 13T3AFSN-F:M8340	✱	–	265	0.15	3.0	155	0.14	3.0	250	0.15	3.0	–	–	–	65	0.11	2.4	–	–	–
SDET 13T3AFSN-F:M9340	⬌	–	330	0.15	3.0	195	0.14	3.0	–	–	–	–	–	–	80	0.11	2.4	–	–	–
																				
FA la geometría es muy afilada y se utiliza para el mecanizado de aleaciones no férreas, adecuada para aplicaciones con gran voladizo y piezas finas o de paredes delgadas. Diseño pulido y rectificado con un ángulo de desprendimiento muy positivo.																				
SDET 13T3AFFN-FA:HF7	⬌	–	–	–	–	–	–	–	–	–	–	360	0.12	3.0	–	–	–	–	–	–
SDET 13T3AFFN-FA:M0315	⬌	–	–	–	–	–	–	–	–	–	–	840	0.12	3.0	–	–	–	–	–	–

SDMT 13

	IC (mm)	D1 (mm)	M (mm)	S (mm)
13T3	13.385	4.40	1.5	3.97

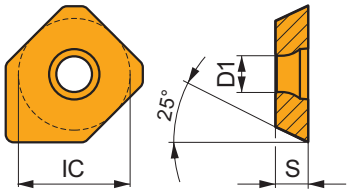


Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
																				
M la geometría es versátil y es la primera opción para una amplia variedad de condiciones de trabajo. Diseñada con un ángulo de desprendimiento positivo, una faceta T media y un redondeado de filo para mecanizado medio.																				
SDMT 13T3AFSN-M:8215		–	■ 245	0.30	3.0	◪ 145	0.27	3.0	■ 230	0.30	3.0	–	–	–	◪ 60	0.24	2.4	■ 45	0.21	1.0
SDMT 13T3AFSN-M:M6330		–	■ 215	0.30	3.0	■ 150	0.27	3.0	–	–	–	–	–	–	■ 60	0.24	2.4	–	–	–
SDMT 13T3AFSN-M:M8330		–	■ 245	0.30	3.0	■ 145	0.27	3.0	■ 230	0.30	3.0	–	–	–	◪ 60	0.24	2.4	◪ 45	0.21	1.0
SDMT 13T3AFSN-M:M8340		–	■ 225	0.30	3.0	■ 135	0.27	3.0	◪ 210	0.30	3.0	–	–	–	■ 55	0.24	2.4	–	–	–
SDMT 13T3AFSN-M:M9325		–	■ 295	0.30	3.0	–	–	–	■ 280	0.30	3.0	–	–	–	–	–	–	◪ 55	0.21	1.0
SDMT 13T3AFSN-M:M9340		–	■ 265	0.30	3.0	■ 155	0.27	3.0	–	–	–	–	–	–	■ 65	0.24	2.4	–	–	–
																				
R la geometría es resistente y se utiliza para desbaste y condiciones de trabajo duras. Diseñada con un ángulo de desprendimiento ligeramente positivo, una faceta T ancha y un redondeado de filo para mecanizado en desbaste.																				
SDMT 13T3AFSN-R:M5315		–	◪ 285	0.35	3.0	–	–	–	■ 270	0.35	3.0	–	–	–	–	–	–	■ 55	0.25	1.0
SDMT 13T3AFSN-R:M8310		–	■ 255	0.35	3.0	◪ 130	0.32	3.0	■ 240	0.35	3.0	–	–	–	–	–	–	■ 50	0.25	1.0
SDMT 13T3AFSN-R:M8330		–	■ 240	0.35	3.0	◪ 140	0.32	3.0	■ 225	0.35	3.0	–	–	–	–	–	–	◪ 45	0.25	1.0
SDMT 13T3AFSN-R:M8340		–	■ 220	0.35	3.0	◪ 130	0.32	3.0	◪ 205	0.35	3.0	–	–	–	–	–	–	–	–	–
SDMT 13T3AFSN-R:M9325		–	■ 280	0.35	3.0	–	–	–	■ 265	0.35	3.0	–	–	–	–	–	–	◪ 55	0.25	1.0

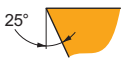
XDET 13

	IC	D1	S
	(mm)	(mm)	(mm)
13T3	13.385	4.40	3.97



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

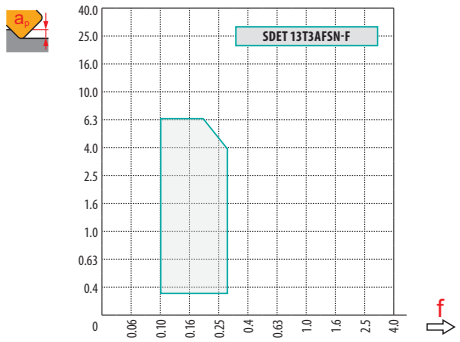
Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
XDET 13T3AFER:8215		–	■ 420	0.10	0.2	◪ 250	0.09	0.2	■ 395	0.10	0.2	–	–	–	–	–	–	–	–	–
XDET 13T3AFER:M8330		–	■ 395	0.10	0.2	◪ 235	0.09	0.2	■ 375	0.10	0.2	–	–	–	–	–	–	–	–	–

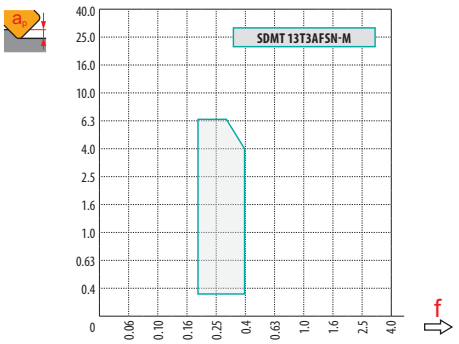


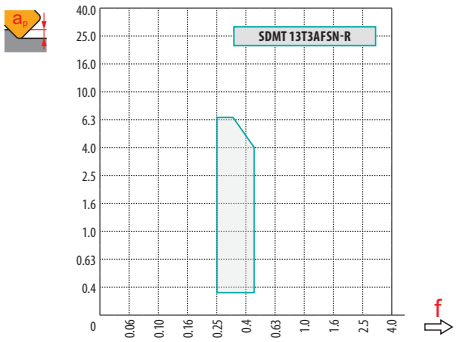
W diseño wiper para un acabado superficial mejorado al mecanizar con fresas de gran tamaño y alta velocidad de avance.

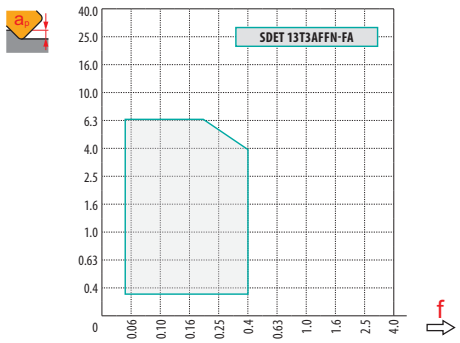
a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

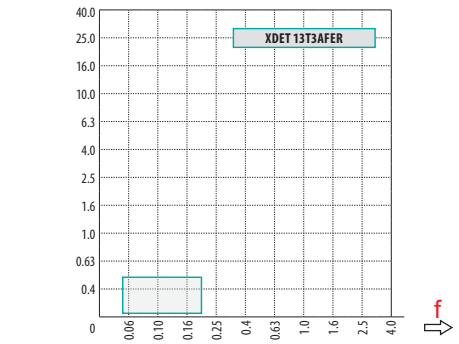
	SDET 13-F	SDMT 13-M	SDMT 13-R	SDET 13-FA	XDET 13
RE	–	–	–	–	–
BS	1.75	1.75	1.75	1.75	8.19











DC	X.V	f_{max}
32	1.22	0.15
40	1.26	0.16
50	1.30	0.18
63	1.34	0.20
80	1.39	0.22
100	1.43	0.24
125	1.48	0.26
160	1.53	0.29
200	1.58	0.33
250	1.63	0.36

DC	RPMX	APMX/I
32	14.1°	6.4/27
40	11.8°	6.4/32
50	9.8°	6.4/39
63	7.7°	6.4/49
80	5.2°	6.4/72
100	4.1°	6.4/91
125	3.2°	5.45/100
160	1.0°	1.6/100
200	0.4°	0.55/100
250	0.3°	0.4/100

DC	DMIN	DMAX	SMAX DMIN	SMAX DMAX
32	60.0	89.8	1.7	1.7
40	75.0	107.0	1.7	1.7
50	94.0	127.0	1.7	1.7
63	120.0	152.8	1.7	1.7
80	155.0	186.8	1.7	1.7
100	193.0	225.8	1.7	1.7
125	245.0	275.6	1.7	1.7
160	322.0	345.6	1.7	1.7
200	405.0	425.6	1.7	1.7
250	505.0	525.6	1.7	1.7

a_p
1.5

SSE09

P M K S

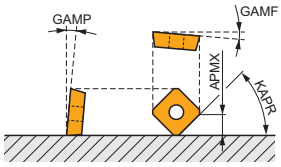
PRAMET

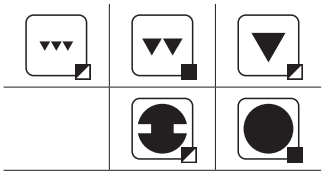
S

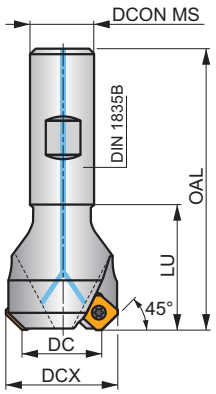
Fresa de Planeado a 45° con Diseño Positivo y Refrigeración Interna

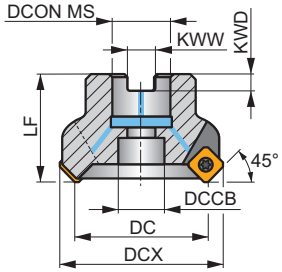
Fresa de planear a 45° de alta productividad que utiliza plaquitas de una sola cara SE.. 09 y APMX de 4.5 mm. Adecuada para planeado y achaflanado. Paso diferencial. Disponible con mango Weldon y para portafresas. Cuerpo tratado para alargar la vida de herramienta.

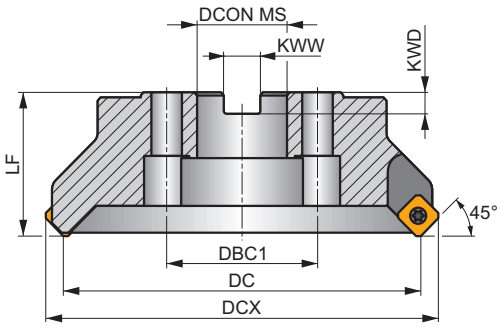
KAPR	45°
APMX	4.5 mm











h_m	0.06 - 0.18
h_m	0.06 - 0.2

	Producto	DC (mm)	DCX (mm)	OAL (mm)	DCON MS (mm)	DCCB (mm)	DBC1 (mm)	LU (mm)	LF (mm)	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		kg			
DIN 1835B	20N2R032B20-SSE09-C	20	29.8	82	20	–	–	32	–	–	–	-5	20	2	–	24600	✓	0.26	GI147	FA010	–
DIN 1835B	25N3R042B25-SSE09-C	25	34.8	98	25	–	–	42	–	–	–	-5	20	3	–	22000	✓	0.44	GI147	FA010	–
DIN 1835B	32N4R042B32-SSE09-C	32	42	102	32	–	–	42	–	–	–	-5	20	4	–	19400	✓	0.68	GI147	FA010	–
	32A04R-S45SE09F-C	32	42	–	16	14	–	–	40	8.4	6.4	-5	20	4	✓	19400	✓	0.24	GI147	FA012	–
	40A04R-S45SE09F-C	40	53.2	–	16	14	–	–	40	8.4	6.4	-5	20	4	✓	17400	✓	0.30	GI147	FA012	–
	50A05R-S45SE09F-C	50	59.6	–	22	18	–	–	40	10.4	6.4	-5	20	5	✓	15600	✓	0.55	GI147	FA013	–
	63A05R-S45SE09F-C	63	75.8	–	22	18	–	–	40	10.4	6.4	-5	20	5	✓	13900	✓	0.66	GI147	FA013	–
	63A06R-S45SE09F-C	63	75.8	–	22	18	–	–	40	10.4	6.4	-5	20	6	✓	13900	✓	0.58	GI147	FA013	–
ISO 6462 DIN 8030	80A06R-S45SE09F-C	80	89.6	–	27	38	–	–	50	12.4	7	-5	20	6	✓	12300	✓	1.14	GI147	FA011	AC001
ISO 6462 DIN 8030	80A08R-S45SE09F-C	80	89.6	–	27	38	–	–	50	12.4	7	-5	20	8	✓	12300	✓	1.13	GI147	FA011	AC001
	100A08R-S45SE09F-C	100	110	–	32	45	–	–	50	14.4	8	-5	20	8	✓	11000	✓	1.83	GI147	FA011	AC002
	100A10R-S45SE09F-C	100	110	–	32	45	–	–	50	14.4	8	-5	20	10	✓	10900	✓	1.82	GI147	FA011	AC002
	125A09R-S45SE09F-C	125	134.5	–	40	60	–	–	63	16.4	9	-5	20	9	✓	9800	✓	3.87	GI147	FA011	AC003
	125A12R-S45SE09F-C	125	134.5	–	40	60	–	–	63	16.4	9	-5	20	12	✓	9800	✓	3.87	GI147	FA011	AC003
	160C10R-S45SE09F	160	169.6	–	40	–	66.7	–	63	16.4	9	-5	20	10	✓	8700	–	6.21	GI147	FA014	–

GI147	SEET 09T3AF..	SEMT 09T3AF..

		Nm						
FA010	US 3007-T09P	2.0	M 3	7.3	–	–	Flag T09P	–
FA011	US 3007-T09P	2.0	M 3	7.3	D-T07P/T09P	FG-15	–	–
FA012	US 3007-T09P	2.0	M 3	7.3	D-T07P/T09P	FG-15	–	HS 0830C
FA013	US 3007-T09P	2.0	M 3	7.3	D-T07P/T09P	FG-15	–	HS 1030C

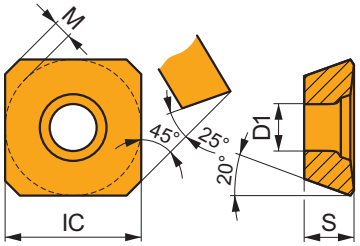
FA014	US 3007-T09P	2.0	M 3	7.3	D-T07P/T09P	FG-15	–	HS 1240C

AC001	KS 1230	K.FMH27
AC002	KS 1635	K.FMH32
AC003	KS 2040	K.FMH40

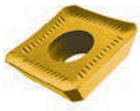
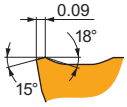
SEMT 09

PRAMET

	IC (mm)	D1 (mm)	M (mm)	S (mm)
09T3	9.525	3.50	1.2	3.97

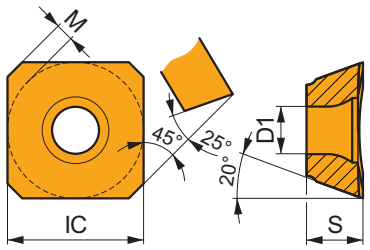


Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
					**AFSN** diseño positivo para mecanizado ligero a medio.														
SEMT 09T3AFSN:8215	–	295	0.18	1.8	175	0.16	1.8	280	0.18	1.8	–	–	–	–	–	–	–	–	–
SEMT 09T3AFSN:M8330	–	290	0.18	1.8	170	0.16	1.8	275	0.18	1.8	–	–	–	–	–	–	–	–	–
SEMT 09T3AFSN:M8340	–	265	0.18	1.8	155	0.16	1.8	250	0.18	1.8	–	–	–	–	–	–	–	–	–
SEMT 09T3AFSN:M9325	–	365	0.18	1.8	–	–	–	345	0.18	1.8	–	–	–	–	–	–	–	–	–

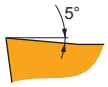
SEET 09

	IC	D1	M	S
	(mm)	(mm)	(mm)	(mm)
09T3	9.525	3.50	1.2	3.97



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)

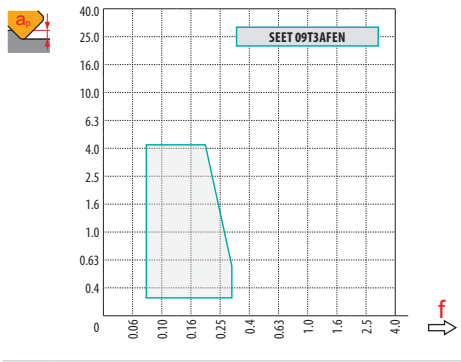


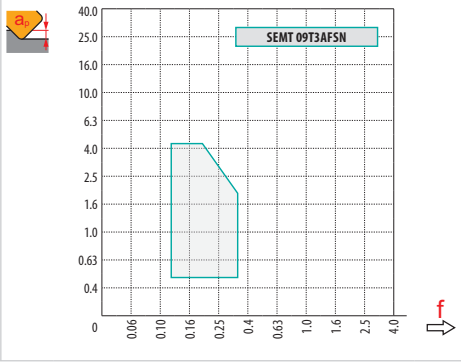
AFEN diseño positivo para mecanizado ligero a medio.

SEET 09T3AFEN:M6330		–	■	255	0.14	2.5	◪	180	0.13	2.5	–	–	–	–	–	–	◪	75	0.10	2.0	–	–	–
SEET 09T3AFEN:M8330		–	■	295	0.14	2.5	◪	175	0.13	2.5	–	–	–	–	–	–	◪	70	0.10	2.0	–	–	–
SEET 09T3AFEN:M8340		–	■	270	0.14	2.5	◪	160	0.13	2.5	–	–	–	–	–	–	◪	65	0.10	2.0	–	–	–
SEET 09T3AFEN:M9340		–	■	345	0.14	2.5	◪	205	0.13	2.5	–	–	–	–	–	–	◪	85	0.10	2.0	–	–	–

a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	SEET 09	SEMT 09
RE	–	–
BS	1.28	1.25





DC	X.V	f_{max}
20	1.20	0.18
25	1.24	0.20
32	1.29	0.23
40	1.33	0.25
50	1.37	0.28
63	1.41	0.32
80	1.46	0.36
100	1.50	0.40
125	1.55	0.45
160	1.60	0.51

SSN12Z

P M K S

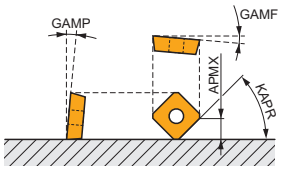
PRAMET

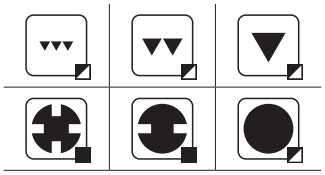
S

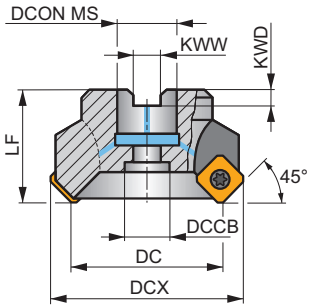
Fresa de Planeado a 45° con Diseño Positivo y Refrigeración Interna

Fresa de planear a 45° de alta productividad que utiliza plaquitas de una sola cara SN.. 12 y APMX de 6.5 mm. Adecuada para planeado y achaflanado. Disponible únicamente para portafresas. Cuerpo tratado para alargar la vida de herramienta.

KAPR	45°
APMX	6.5 mm







h_m 0.12 - 0.35

	Producto	DC (mm)	DCX (mm)	LF (mm)	DCON MS (mm)	DCCB (mm)	DBC1 (mm)	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		kg			
ISO 6462 DIN 8030	**63A05R-S45SN12Z-C**	63	78	40	22	18	–	10.4	6.3	-5.5	7.5	5	–	8600	✓	0.62	GI156	FA071	–
	80A06R-S45SN12Z-C	80	95	50	27	38	–	12.4	7	-5.5	7.5	6	–	7700	✓	1.36	GI156	FA071	AC001
	100A07R-S45SN12Z-C	100	115	50	32	45	–	14.4	8	-5.5	7.5	7	–	6900	✓	1.70	GI156	FA071	AC002
	125A08R-S45SN12Z-C	125	140	63	40	56	–	16.4	9	-5.5	7.5	8	–	6100	✓	3.42	GI156	FA071	AC003

GI156	SNKT 1205AZ..	SNMT 1205AZ..

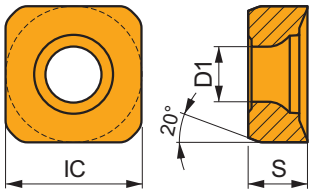
FA071	US 4511-T20	5.0 Nm	M 4.5	11	SDR T20-T

AC001	KS 1230	K.FMH27
AC002	KS 1635	K.FMH32
AC003	KS 2040	K.FMH40

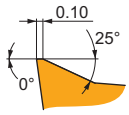
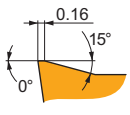
SNMT 12

PRAMET

	IC (mm)	D1 (mm)	S (mm)
1205	12.700	5.20	5.56



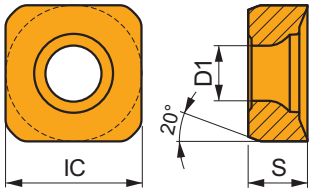
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
																			
M geometría muy positiva para mecanizado medio.																			
SNMT 1205AZSR-M:8215	–	300	0.25	3.2	180	0.23	3.2	285	0.25	3.2	–	–	–	75	0.18	2.6	–	–	–
SNMT 1205AZSR-M:M8330	–	300	0.25	3.2	180	0.23	3.2	285	0.25	3.2	–	–	–	75	0.18	2.6	–	–	–
SNMT 1205AZSR-M:M8340	–	275	0.25	3.2	165	0.23	3.2	260	0.25	3.2	–	–	–	65	0.18	2.6	–	–	–
SNMT 1205AZSR-M:M9325	–	365	0.25	3.2	–	–	–	345	0.25	3.2	–	–	–	–	–	–	–	–	–
																			
R geometría con diseño positivo para mecanizado medio a pesado.																			
SNMT 1205AZSR-R:8215	–	290	0.27	3.5	170	0.24	3.5	275	0.27	3.5	–	–	–	70	0.22	2.8	–	–	–
SNMT 1205AZSR-R:M5315	–	365	0.27	3.5	–	–	–	345	0.27	3.5	–	–	–	–	–	–	–	–	–
SNMT 1205AZSR-R:M8330	–	290	0.27	3.5	170	0.24	3.5	275	0.27	3.5	–	–	–	70	0.22	2.8	–	–	–
SNMT 1205AZSR-R:M8340	–	270	0.27	3.5	160	0.24	3.5	255	0.27	3.5	–	–	–	65	0.22	2.8	–	–	–
SNMT 1205AZSR-R:M9325	–	355	0.27	3.5	–	–	–	335	0.27	3.5	–	–	–	–	–	–	–	–	–

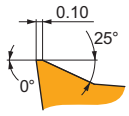
SNKT 12

PRAMET

	IC (mm)	D1 (mm)	S (mm)
1205	12.700	5.20	5.56

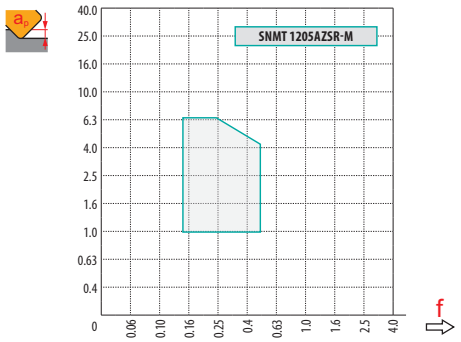


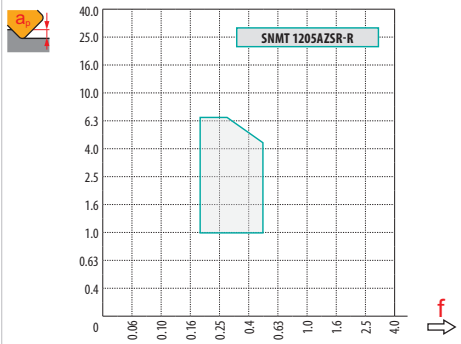
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

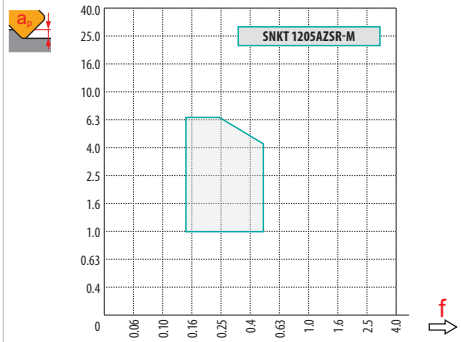
Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
																			
M geometría muy positiva para mecanizado medio.																			
SNKT 1205AZSR-M:M8330	–	305	0.24	3.2	180	0.22	3.2	285	0.24	3.2	–	–	–	75	0.17	2.6	–	–	–
SNKT 1205AZSR-M:M8340	–	275	0.24	3.2	165	0.22	3.2	260	0.24	3.2	–	–	–	65	0.17	2.6	–	–	–

a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	SNMT 12-M	SNMT 12-R	SNKT 12-M
RE	–	–	–
BS	0.95	1.03	1.59







DC	X.V	f_{max}
63	1.34	0.53
80	1.39	0.60
100	1.43	0.67
125	1.47	0.74

FSB22X

P M K

PRAMET

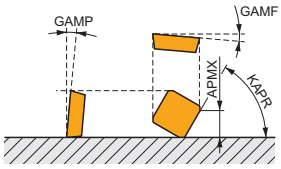
F

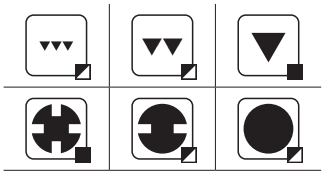
ROUGH SB Fresa de Planeado a 60° con Diseño Positivo para Fresado Pesado

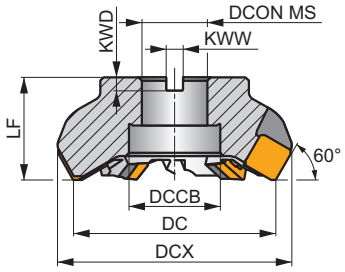
Fresa de planear a 60° de alta productividad que utiliza plaquitas de una sola cara SB.. 22 con APMX de 15 mm. Optimizada para planeado pesado con una acción de corte suave. Paso diferencial. Disponible únicamente para portafresas. Cuerpo tratado para alargar la vida de herramienta.

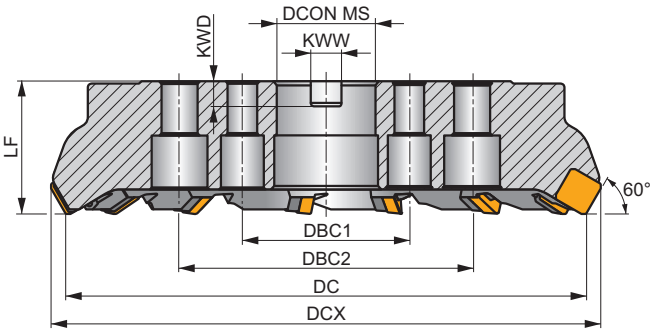
ROUGH SB

KAPR	60°
APMX	15.0 mm









h_m 0.15 - 0.5

	Producto	DC (mm)	DCX (mm)	LF (mm)	DCON MS (mm)	DCCB (mm)	DBC1 (mm)	DBC2 (mm)	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		kg			
ISO 6462 DIN 8030	**125B07R-F60SB22X**	125	144.4	63	40	56	–	–	16.4	9	-9	9	7	✓	–	–	3.73	GI144	FA111	AC003
	160C08R-F60SB22X	160	178.7	63	40	–	66.7	–	16.4	9	-9	9	8	✓	–	–	6.46	GI144	FA114	–
	200C08R-F60SB22X	200	217.9	63	60	–	101.6	–	25.7	14	-9	9	8	✓	–	–	10.59	GI144	FA115	–
	250C09R-F60SB22X	250	267.4	63	60	–	101.6	–	25.7	14	-9	9	9	✓	–	–	17.54	GI144	FA115	–

GI144	SBKX 2207DZ..	SBMR 2207DZ..

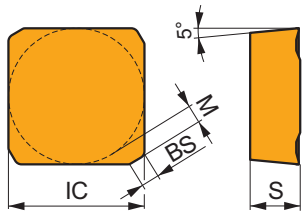
FA111	LNX 220616	US 6013-T20P	SDR T20P-T	KU SBMR 2207	DS 01Z	KL 04	–
FA114	LNX 220616	US 6013-T20P	SDR T20P-T	KU SBMR 2207	DS 01Z	KL 04	HS 1240
FA115	LNX 220616	US 6013-T20P	SDR T20P-T	KU SBMR 2207	DS 01Z	KL 04	HS 1655

AC003	KS 2040	K.FMH40

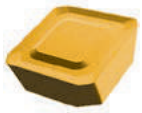
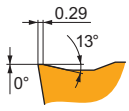
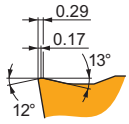
SBMR 22

PRAMET

	IC (mm)	M (mm)	S (mm)	BS (mm)
2207	22.000	2.8	8.00	1.99



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
																			
SBMR 2207DZSR:M8326	–	140	0.38	8.5	–	–	–	130	0.38	8.5	–	–	–	–	–	–	–	–	–
SBMR 2207DZSR:M8346	–	120	0.38	8.5	70	0.38	8.5	–	–	–	–	–	–	–	–	–	–	–	–
																			
SBMR 2207DZSR-R:M5326	–	160	0.44	9.8	–	–	–	150	0.44	9.8	–	–	–	–	–	–	–	–	–
SBMR 2207DZSR-R:M8326	–	135	0.44	9.8	–	–	–	125	0.44	9.8	–	–	–	–	–	–	–	–	–
SBMR 2207DZSR-R:M8346	–	115	0.44	9.8	65	0.40	9.8	–	–	–	–	–	–	–	–	–	–	–	–

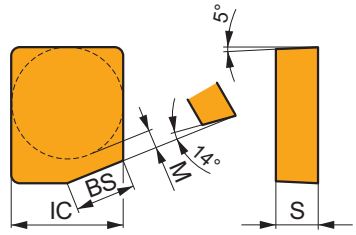
DZSR diseño estable para desbaste pesado.

R geometría con diseño estable para mecanizado pesado.

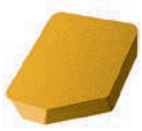
SBKX 22

PRAMET

	IC (mm)	M (mm)	S (mm)	BS (mm)
2207	22.000	3.2	8.00	11.84



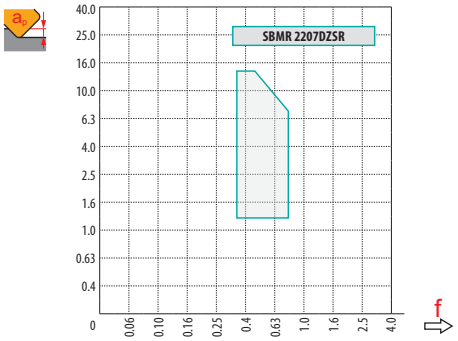
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

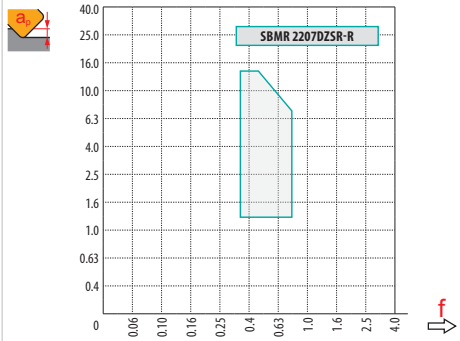
Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
																			
SBKX 2207DZER:M8326	–	100	0.60	8.5	–	–	–	95	0.60	8.5	–	–	–	–	–	–	–	–	–

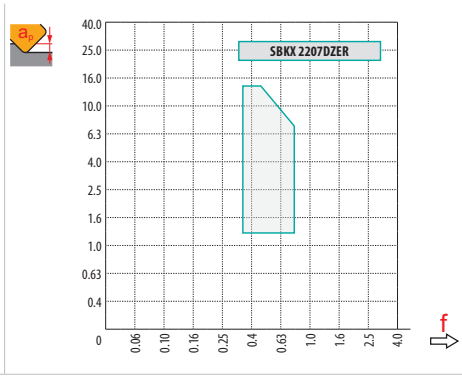
DZER plaquita rascadora (Wiper) con ángulo de desprendimiento de 0° para un acabado superficial mejorado.

a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ X.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
⇨ X.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

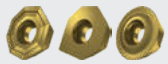
	SBMR 22	SBMR 22-R	SBKX 22
RE	–	–	–
BS	1.99	1.99	11.84







PLANEADO

	SOD05	SOD06D	SOE06Z			
	45°	45°	43°			
	APMX (mm) 2.7 (10.0)	APMX (mm) 3.1 (8.6)	APMX (mm) 3.3 (9.9)			
	DCX (mm) 32 – 125	DC (mm) 63 – 160	DC (mm) 50 – 200			
Mango cilíndrico	DC = 32, 40 (mm)					
Weldon						
Modular						
Portafresas	DC = 40 – 125 (mm)					
Página	42	51	55			
ISO	P M K N	P M K S H	P M N S			
Forma de la plaquita						
Plaquitas de corte	OD.. 0505 RD.. 1205 SD.. 1205	OD.. 0605 RPE. 1505	OEHT 0604 REHT 1604 XEHT 0604			
N.º de filos de corte	8 / 8 / 4	8 / 8	8 / 8 / 1			
Planeado	■	■	■			
Fresado de chaflanes	■	■	■			
Interpolación helicoidal	■		◪			
Fresado axial progresivo	■		◪			
Mecanizado en rampa	■		◪			
Fresado de superficies conformadas (fresado en copia)	■		◪			
Escuadrado poco profundo	■					
Ranurado poco profundo	■					
Fresado axial (plunge)	■					

■ Primera Opción ◪ Opción Alternativa

SOD05

P M K N

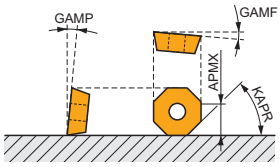
PRAMET

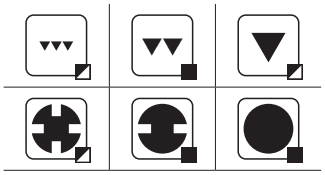
S

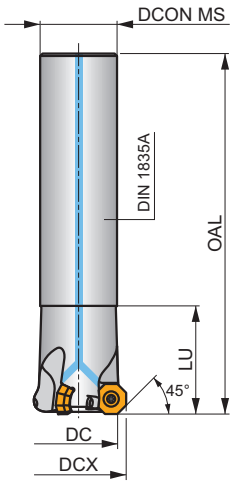
Fresa Universal de Planeado con Diseño Positivo y Refrigeración Interna

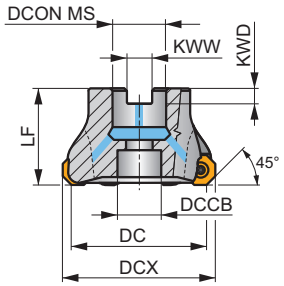
Highly productive universal face mill utilising single-sided positive inserts with APMX up to 2.7 (10) mm. Unique insert seat fits OD.. 05, RD.. 12 and SD.. 12 style inserts, suited for wide range of applications. Differential tooth pitch. Arbor and cylindrical style. Body treated for longer tool life.

KAPR	45°
APMX	2.7 (10.0) mm









h_m	0.03 - 0.15
h_m	0.03 - 0.12

	Producto	DCX (mm)	DC (mm)	OAL (mm)	DCON MS (mm)	DCCB (mm)	LU (mm)	LF (mm)	KAPR (°)	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		kg			
DIN 1835A	32N3R045A25-SOD05-C	32	24.7	130	25	–	45	–	45	–	–	-10	8	3	–	17700	✓	0.41	GI326	FA049	–
DIN 1835A	40N3R045A32-SOD05-C	40	32.6	150	32	–	45	–	45	–	–	-7	8	3	–	15800	✓	0.86	GI326	FA040	–
	40A03R-S450D05-C	40	32.7	–	16	14	–	40	45	8.4	5.6	-10	8	3	–	15800	✓	0.18	GI326	FA042	–
	50A04R-S450D05-C	50	42.6	–	22	18	–	40	45	10.4	6.3	-7	8	4	–	14100	✓	0.28	GI326	FA043	–
	50A05R-S450D05-C	50	42.6	–	22	18	–	40	45	10.4	6.3	-7	8	5	–	14100	✓	0.28	GI326	FA043	–
ISO 6462 DIN 8030	63A05R-S450D05-C	63	55.6	–	22	18	–	40	45	10.4	6.3	-7	8	5	✓	12600	✓	0.39	GI326	FA043	–
ISO 6462 DIN 8030	63A06R-S450D05-C	63	55.6	–	22	18	–	40	45	10.4	6.3	-7	8	6	✓	12600	✓	0.50	GI326	FA043	–
	80A06R-S450D05-C	80	72.6	–	27	38	–	50	45	12.4	7	-7	8	6	✓	11100	✓	0.73	GI326	FA041	AC001
	80A08R-S450D05-C	80	72.6	–	27	38	–	50	45	12.4	7	-7	8	8	✓	11100	✓	0.66	GI326	FA041	AC001
	100A07R-S450D05-C	100	92.6	–	32	45	–	50	45	14.4	8	-7	8	7	✓	10000	✓	1.09	GI326	FA041	AC002
	125A08R-S450D05-C	125	117.6	–	40	56	–	63	45	16.4	9	-7	8	8	✓	8900	✓	2.20	GI326	FA041	AC003

GI326	OD.. 0505..	RD.. 1205..	SDKT 1205..	SDMT 1205..SN

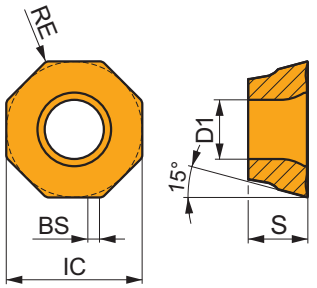
		Nm					
FA040	US 45014-T20P	5.0	M 5	13	Flag T20P	–	–
FA041	US 45014-T20P	5.0	M 5	13	–	SDR T20P-T	–
FA042	US 45014-T20P	5.0	M 5	13	–	SDR T20P-T	HS 90835
FA043	US 45014-T20P	5.0	M 5	13	–	SDR T20P-T	HS 1030C
FA049	US 45011-T20P	5.0	M 5	11	Flag T20P	–	–

AC001	KS 1230	K.FMH27
AC002	KS 1635	K.FMH32
AC003	KS 2040	K.FMH40

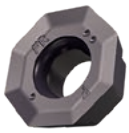
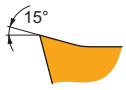
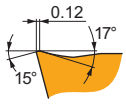
ODKT 05IM

PRAMET

	IC (mm)	D1 (mm)	S (mm)	BS (mm)
0505	12.700	5.50	5.56	1.00



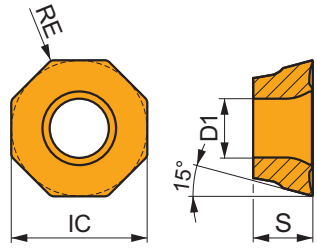
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
  **F** plaquita de planeado a 45° con geometría muy positiva para mecanizado ligero.																			
ODKT 0505ADFR-F:M8310	0.8	275	0.15	2.5	140	0.14	2.5	–	–	–	–	–	–	–	–	–	–	–	–
 **FM** plaquita de planeado a 45° con geometría y diseño positivo para mecanizado ligero a medio.																			
ODKT 0505ADSR-FM:M6330	0.8	190	0.25	2.5	135	0.23	2.5	–	–	–	–	–	–	–	–	–	–	–	–
ODKT 0505ADSR-FM:M8310	0.8	240	0.25	2.5	120	0.23	2.5	225	0.25	2.5	–	–	–	–	–	–	–	–	–
ODKT 0505ADSR-FM:M8330	0.8	225	0.25	2.5	135	0.23	2.5	210	0.25	2.5	–	–	–	–	–	–	–	–	–
ODKT 0505ADSR-FM:M8345	0.8	160	0.25	2.5	95	0.23	2.5	–	–	–	–	–	–	–	–	–	–	–	–
ODKT 0505ADSR-FM:M9340	0.8	245	0.25	2.5	145	0.23	2.5	–	–	–	–	–	–	–	–	–	–	–	–

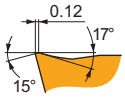
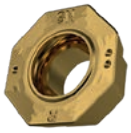
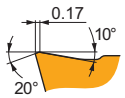
ODMT 05IM

PRAMET

	IC (mm)	D1 (mm)	S (mm)
0505	12.700	5.50	5.56



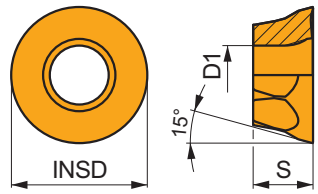
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
																			
FM plaquita de planeado a 45° con geometría y diseño positivo para mecanizado ligero a medio.																			
ODMT 0505ADSR-FM:M8340	0.8	200	0.25	2.5	120	0.23	2.5	190	0.25	2.5	–	–	–	–	–	–	–	–	–
ODMT 0505ADSR-FM:M9340	0.8	245	0.25	2.5	145	0.23	2.5	–	–	–	–	–	–	–	–	–	–	–	–
 																			
R plaquita de planeado a 45° con geometría diseño positivo para mecanizado en condiciones inestables.																			
ODMT 050508SN-R:M8330	0.8	190	0.25	2.5	–	–	–	180	0.25	2.5	–	–	–	–	–	–	–	–	–
ODMT 050508SN-R:M9340	0.8	210	0.25	2.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

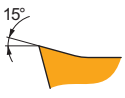
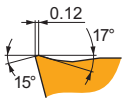
RDGT 12IM

PRAMET

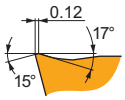
	INSD (mm)	D1 (mm)	S (mm)
1205	12.700	5.50	5.56



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
																			
F geometría muy positiva para mecanizado ligero.																			
RDGT 120500FN-F:M8310	–	210	0.20	1.5	105	0.18	1.5	–	–	–	–	–	–	–	–	–	–	–	–
																			
FM geometría con diseño positivo para mecanizado ligero a medio.																			
RDGT 120500SN-FM:M8330	–	190	0.20	1.5	110	0.18	1.5	180	0.20	1.5	–	–	–	–	–	–	–	–	–

Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

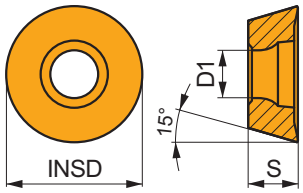
Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
																			
RDGT 120500SN-FM:M8345	●	–	■	140	0.20	1.5	◪	80	0.18	1.5	–	–	–	–	–	–	–	–	–	–	–	–

FM geometría con diseño positivo para mecanizado ligero a medio.

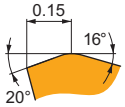
RDMT 12IM

PRAMET

	INSD (mm)	D1 (mm)	S (mm)
1205	12.700	5.50	5.56



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

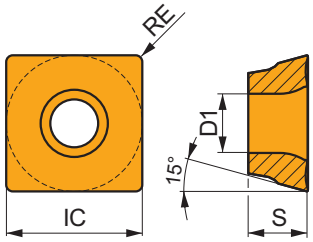
Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
																			
RDMT 120500SN-R:M8330	●	–	■	175	0.30	1.5	–	–	–	■	165	0.30	1.5	–	–	–	–	–	–	–	–	–
RDMT 120500SN-R:M8340	●	–	■	160	0.30	1.5	–	–	–	◪	150	0.30	1.5	–	–	–	–	–	–	–	–	–

R plaquita para copiado y perfilado con geometría diseño ligeramente positivo para mecanizado en condiciones inestables.

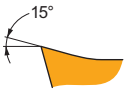
SDKT 12IM

PRAMET

	IC (mm)	D1 (mm)	S (mm)
1205	12.700	5.50	5.56

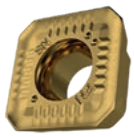
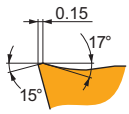


Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
																			
SDKT 1205PDFR-F:8215	●	0.8	■	285	0.10	4.0	◪	170	0.09	4.0	–	–	–	◪	855	0.12	4.0	–	–	–	–	–

F plaquita de escuadrado a 90° con geometría muy positiva para mecanizado ligero.

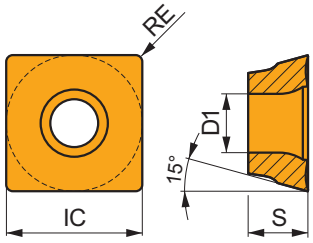
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)
																				
FM plaquita de escuadrado a 90° con geometría y diseño positivo para mecanizado ligero a medio.																				
SDKT 1205AESN-FM:M8330		–	280	0.15	4.0	165	0.15	4.0	265	0.15	4.0	–	–	–	–	–	–	–	–	–
SDKT 1205AESN-FM:M8345		–	205	0.15	4.0	120	0.15	4.0	–	–	–	–	–	–	–	–	–	–	–	–
SDKT 1205PDSR-FM:M8330		0.8	255	0.15	4.0	150	0.15	4.0	240	0.15	4.0	–	–	–	–	–	–	–	–	–
SDKT 1205PDSR-FM:M8345		0.8	185	0.15	4.0	110	0.15	4.0	–	–	–	–	–	–	–	–	–	–	–	–

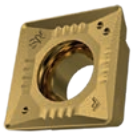
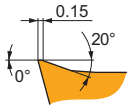
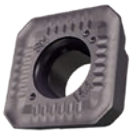
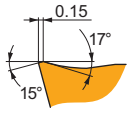
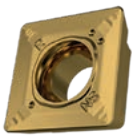
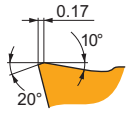
SDMT 12IM

PRAMET

	IC (mm)	D1 (mm)	S (mm)
1205	12.700	5.50	5.56



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

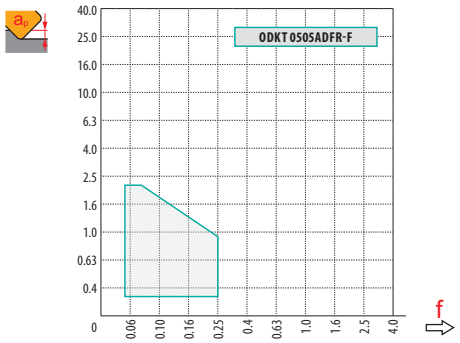
Producto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)
																				
F plaquita de escuadrado a 90° con geometría muy positiva para mecanizado ligero a medio.																				
SDMT 120508SN-F:M8310		0.8	265	0.15	4.0	135	0.15	4.0	–	–	–	–	–	–	–	–	–	–	–	–
SDMT 120508SN-F:M8330		0.8	245	0.15	4.0	145	0.15	4.0	–	–	–	735	0.18	4.0	–	–	–	–	–	–
																				
FM plaquita de escuadrado a 90° con geometría y diseño positivo para mecanizado medio.																				
SDMT 120508SN-FM:M8345		0.8	175	0.15	4.0	105	0.15	4.0	–	–	–	–	–	–	–	–	–	–	–	–
																				
R plaquita de escuadrado a 90° con geometría diseño positivo para mecanizado en condiciones inestables.																				
SDMT 120508SN-R:M8330		0.8	225	0.20	4.0	–	–	–	210	0.20	4.0	–	–	–	–	–	–	–	–	–
SDMT 120508SN-R:M8345		0.8	165	0.20	4.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
SDMT 1205AESN-R:M8330		–	265	0.20	4.0	–	–	–	250	0.20	4.0	–	–	–	–	–	–	–	–	–
SDMT 1205AESN-R:M8340		–	240	0.20	4.0	–	–	–	225	0.20	4.0	–	–	–	–	–	–	–	–	–

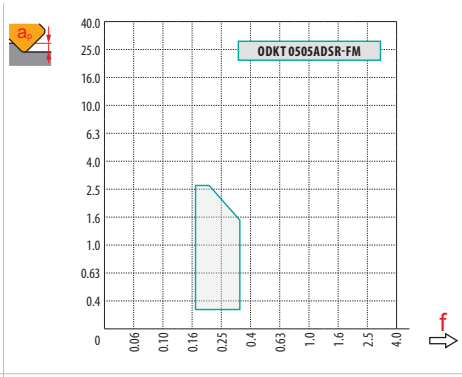
a_e / DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ X.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
⇨ X.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

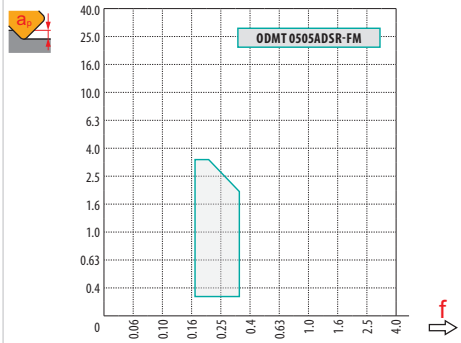
	ODKT 05-F	ODKT 05-FM	ODMT 05-FM	ODMT 05-R
RE	0.4	0.8	0.8	0.8
BS	1.00	1.00	–	–

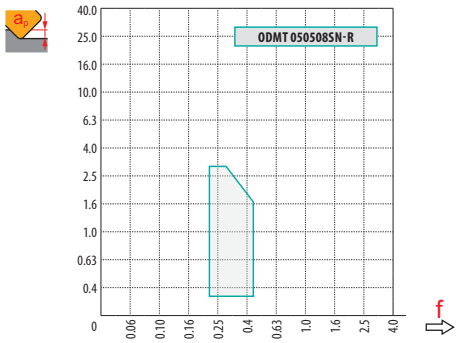
	RDGT 12-F	RDGT 12-FM	RDGT 12-R
RE	6.35	6.35	6.35
BS	–	–	–

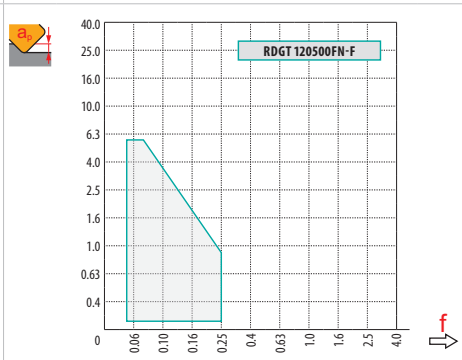
	SDKT 12-F	SDKT 12-FM	SDMT 12-F	SDMT 12-R
RE	0.8	0.8	0.8	0.8
BS	2.30	2.30	–	–

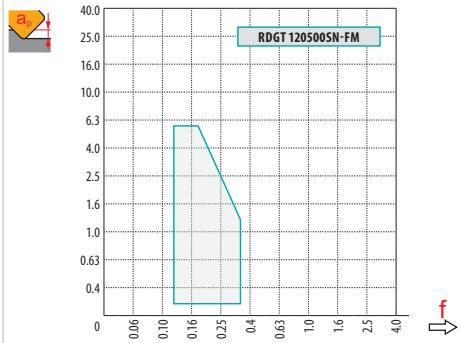


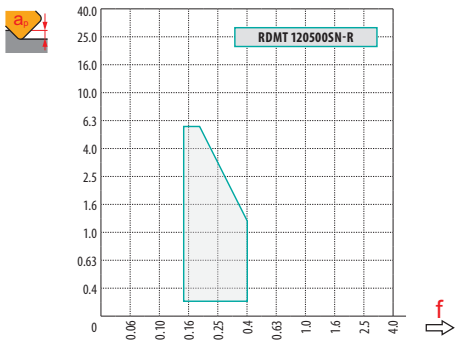


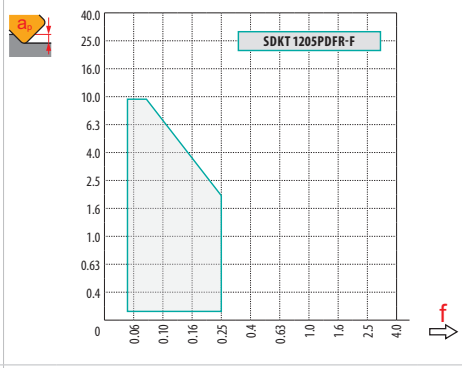


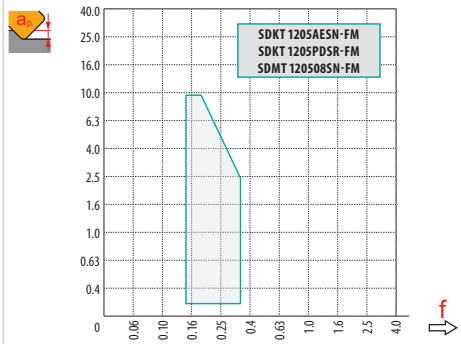


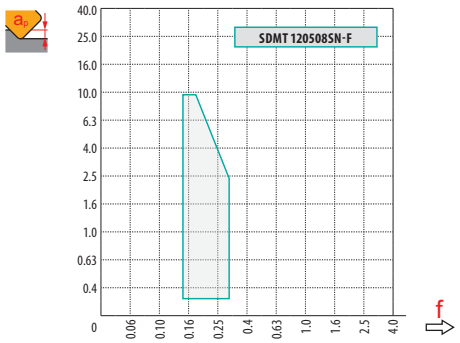


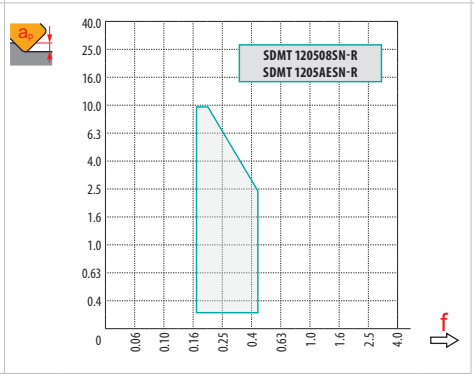












DCX	R												
	a_p	0.25	0.50	0.60	0.70	0.80	1.00	1.25	1.50	2.00	3.00	4.00	5.00	6.00
32		23.43	24.80	25.23	25.62	25.99	26.63	27.33	27.94	28.94	30.39	31.31	31.83	32.00
40		31.43	32.80	33.23	33.62	33.99	34.63	35.33	35.94	36.94	38.39	39.31	39.83	40.00
50	DEF	41.43	42.80	43.23	43.62	43.99	44.63	45.33	45.94	46.94	48.39	49.31	49.83	50.00
63		54.43	55.80	56.23	56.62	56.99	57.63	58.33	58.94	59.94	61.39	62.31	62.83	63.00
80		71.43	72.80	73.23	73.62	73.99	74.63	75.33	75.94	76.94	78.39	79.31	79.83	80.00
100		91.43	92.80	93.23	93.62	93.99	94.63	95.33	95.94	96.94	98.39	99.31	99.83	100.00
125		116.43	117.80	118.23	118.62	118.99	119.63	120.33	120.94	121.94	123.39	124.31	124.83	125.00

DCX	X.V	f_{max}
32	1.36	0.28
40	1.40	0.31
50	1.43	0.33
63	1.47	0.37
80	1.52	0.42
100	1.57	0.47
125	1.62	0.52

S

a_{emax}
10.0

S

a_p	1.0	5.0	10.0
f	0.35	0.21	0.15

O

DCX	RPMX	APMX/I
50	4.1°	7.05/100
63	2.7°	4.6/100
80	1.8°	3/100
100	1.7°	2.85/100
125	0.7°	1.1/100

R

DCX	RPMX	APMX/I
50	3.8°	6.2/95
63	2.5°	4.25/100
80	1.7°	2.85/100
100	1.6°	2.65/100
125	0.3°	0.4/100

O

DCX	DMIN	DMAX	SMAX DMIN	SMAX DMAX
50	78.0	100.0	4.5	4.5
63	105.0	126.0	4.5	4.5
80	138.0	160.0	4.5	4.5
100	178.0	200.0	4.5	4.5
125	229.0	250.0	4.0	4.5

R

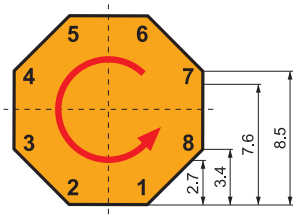
DCX	DMIN	DMAX	SMAX DMIN	SMAX DMAX
50	78.0	100.0	4.5	4.5
63	105.0	126.0	4.5	4.5
80	138.0	160.0	4.5	4.5
100	178.0	200.0	4.5	4.5
125	230.0	250.0	4.0	4.5

	O	R
a_p	2.4	2.3

DCX	µm	R 3	5	10	15	20	30	40	50	60	80	100
32	FE	0.620	0.800	1.131	1.386	1.600	1.960	2.263	2.530	2.771	3.200	3.578
40		0.693	0.894	1.265	1.549	1.789	2.191	2.530	2.828	3.098	3.578	4.000
50		0.775	1.000	1.414	1.732	2.000	2.449	2.828	3.162	3.464	4.000	4.472
63		0.869	1.122	1.587	1.944	2.245	2.750	3.175	3.550	3.888	4.490	5.020
80		0.980	1.265	1.789	2.191	2.530	3.098	3.578	4.000	4.382	5.060	5.657
100		1.095	1.414	2.000	2.449	2.828	3.464	4.000	4.472	4.899	5.657	6.325
125		1.225	1.581	2.236	2.739	3.162	3.873	4.472	5.000	5.477	6.325	7.071

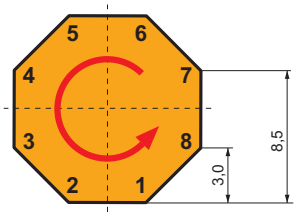
RE	µm	3	5	10	15	20	30	40	50	60	80	100
6.0	FE	0.379	0.490	0.693	0.849	0.980	1.200	1.386	1.549	1.697	1.960	2.191

ODKT 05



a_p	
–> 2.7	8
–> 3.4	7
–> 7.6	4
–> 8.5	2

ODMT 05



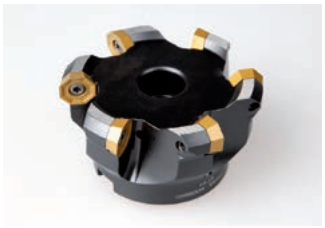
a_p	
–> 3.0	8
–> 8.5	4

SOD06D

P M K S H

PRAMET

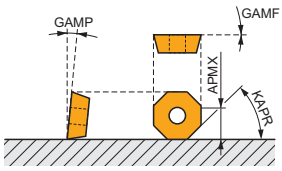
S

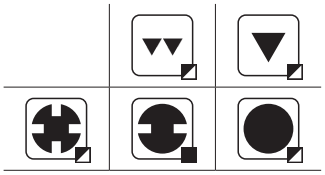


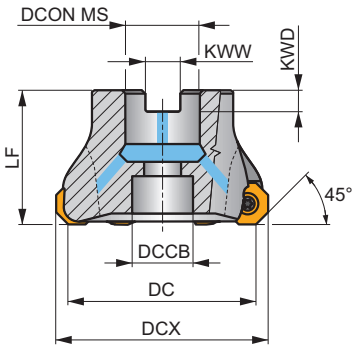
Fresa Universal de Planeado con Diseño Positivo y Refrigeración Interna

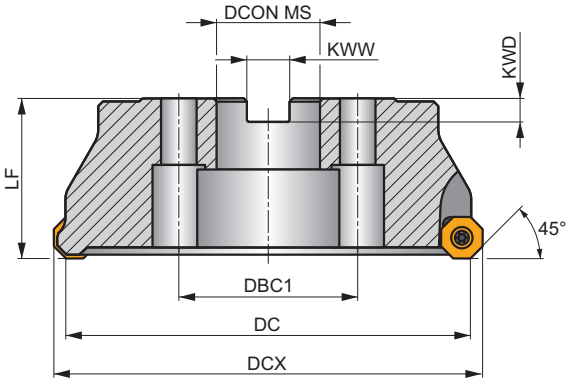
Highly productive universal face mill utilising single sided positive inserts with APMX of up to 3.1 (8.6) mm. Unique insert seat fits OD.. 06 and RP.. 15 style inserts, suited for face milling and chamfering. Arbor style only with differential tooth pitch. Body treated for longer tool life.

KAPR	45°
APMX	3.1 (8.6) mm









h_m 0.12 - 0.22

	Producto	DC (mm)	DCX (mm)	LF (mm)	DCON MS (mm)	DCCB (mm)	DBC1 (mm)	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		kg		
ISO 6462 DIN 8030	**63A05R-S450D06D**	63	72.5	40	22	18	–	10.4	6.3	0	5	5	✓	8800	✓	0.55	GI059	FA071
	80A06R-S450D06D	80	89.5	50	27	20	–	12.4	7	0	5	6	✓	7800	✓	1.19	GI059	FA071
	100A07R-S450D06D	100	109.5	50	32	27	–	14.4	8	0	5	7	✓	7000	✓	2.07	GI059	FA071
	125A08R-S450D06D	125	134.5	63	40	33	–	16.4	9	0	5	8	✓	6300	✓	4.05	GI059	FA071
	160C09R-S450D06D	160	169.5	63	40	56	66.7	16.4	9	0	5	9	✓	5500	–	6.49	GI059	FA071

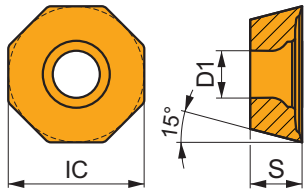
GI059	OD.. 0605ZZ..	RP.. 1505M0..

FA071	US 4511-T20	5.0 Nm	M 4.5	11	SDR T20-T

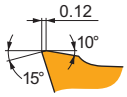
ODMT 06

PRAMET

	IC (mm)	D1 (mm)	S (mm)
0605	15.875	5.50	5.56



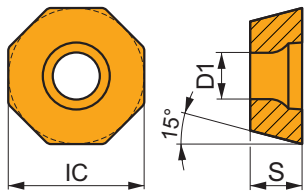
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
																			
ZZN plaquita de planeado a 45° con diseño ligeramente positivo para mecanizado medio.																			
ODMT 0605ZZN:M5315	–	255	0.24	3.0	–	–	–	240	0.24	3.0	–	–	–	–	–	–	–	–	–
ODMT 0605ZZN:M8330	–	200	0.24	3.0	–	–	–	190	0.24	3.0	–	–	–	–	–	–	–	–	–
ODMT 0605ZZN:M8340	–	185	0.24	3.0	–	–	–	175	0.24	3.0	–	–	–	–	–	–	–	–	–
ODMT 0605ZZN:M9325	–	245	0.24	3.0	–	–	–	230	0.24	3.0	–	–	–	–	–	–	–	–	–

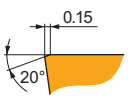
ODEW 06

PRAMET

	IC (mm)	D1 (mm)	S (mm)
0605	15.875	5.50	5.56

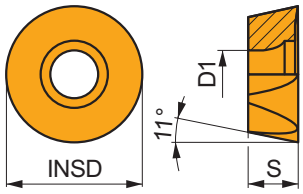


Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

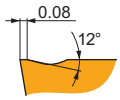
Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
																			
ZZN plaquita para planeado a 45° con ángulo de desprendimiento de 0°, para mecanizado medio.																			
ODEW 0605ZZN:M8330	–	210	0.26	2.5	–	–	–	195	0.26	2.5	–	–	–	–	–	–	40	0.13	1.0

RPET 15

	INSD	D1	S
	(mm)	(mm)	(mm)
1505	15.785	5.50	5.56



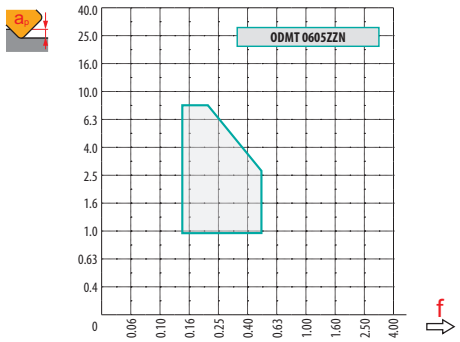
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

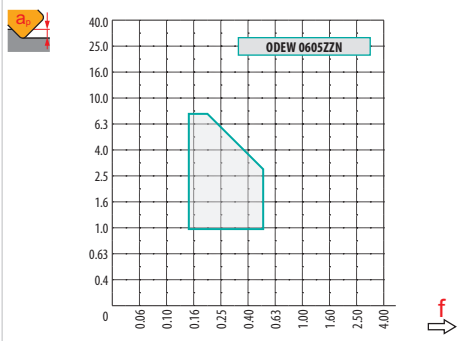
Producto		RE	**P**			**M**			**K**			**N**			**S**			**H**		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
																				
RPET 1505MOS-M:M8330		–	■ 230	0.40	1.0	◪ 135	0.36	1.0	◪ 215	0.40	1.0	–	–	–	◪ 55	0.28	0.8	–	–	–

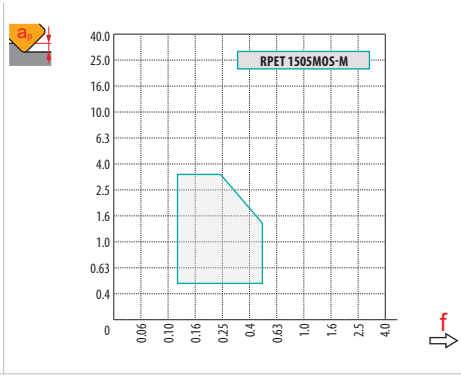
M plaquita para copiado y perfilado con geometría diseño positivo para mecanizado ligero a desbaste.

a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	ODMT 06	ODEW 06	RPET 15-M
RE	–	–	7.89
BS	1.73	5.92	–

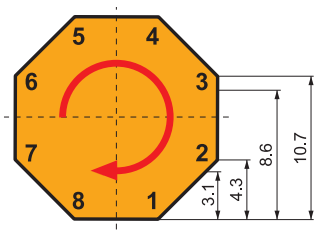






DC	a_p	0.00	0.50	0.75	1.25	1.50	2.00	2.50	3.00	4.00
63	DEF	56.63	62.17	63.36	65.18	65.91	67.16	68.19	69.05	70.41
80		73.63	79.17	80.36	82.18	82.91	84.16	85.19	86.05	87.41
100		93.63	99.17	100.36	102.18	102.91	104.16	105.19	106.05	107.41
125		118.63	124.17	125.36	127.18	127.91	129.16	130.19	131.05	132.41
160		153.63	159.17	160.36	162.18	162.91	164.16	165.19	166.05	167.41

DC	X.V	f_{max}
63	1.49	0.78
80	1.54	0.88
100	1.59	0.98
125	1.64	1.10
160	1.70	1.24



a_p	
–> 3.1	8
–> 4.3	7
–> 8.6	4
–> 10.7	2

SOE06Z

P M N S

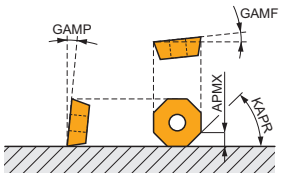
PRAMET

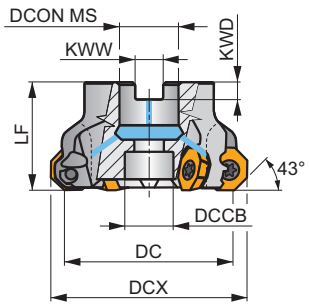
S

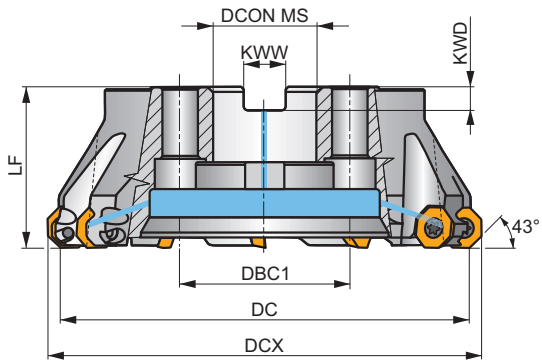
Fresa Universal de Planeado con Diseño Positivo y Refrigeración Interna

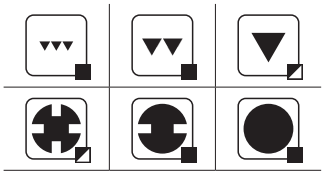
Fresa de planeado universal de alta productividad que utiliza plaquitas positivas de una sola cara con APMX de 4 mm para plaquitas RE.. 16. Asientos de diseño único que pueden montar plaquitas OE.. 06, RE.. 16 y XE.. 06. Adecuada para una amplia gama de aplicaciones. Disponible únicamente para portafresas con paso diferencial. Cuerpo tratado para alargar la vida de herramienta.

KAPR	43°
APMX	3.3 (9.9) mm

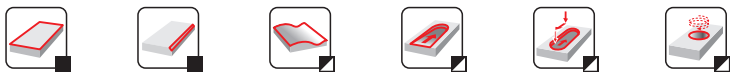








h_m 0.06 - 0.20



	Producto	DC (mm)	DCX (mm)	LF (mm)	DCON MS (mm)	DCCB (mm)	DBC1 (mm)	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		kg			
	50A04R-S45OE06Z-C	50	60.2	40	22	18	–	10.4	6.3	6	10	4	✓	10700	✓	0.47	GI283	FA053	–
	50A05R-S45OE06Z-C	50	60	40	22	18	–	10.4	6.3	1	10	5	✓	10700	✓	0.47	GI283	FA053	–
	56A05R-S45OE06Z-C	56	66	40	22	18	–	10.4	6.3	6	10	5	✓	10100	✓	0.52	GI283	FA053	–
	63A04R-S45OE06Z-C	63	73.2	40	22	18	–	10.4	6.3	6	10	4	✓	9600	✓	0.58	GI283	FA053	–
	63A06R-S45OE06Z-C	63	73	40	22	18	–	10.4	6.3	1	10	6	✓	9600	✓	0.60	GI283	FA053	–
	70A06R-S45OE06Z-C	70	80	40	22	18	–	10.4	6.3	6	10	6	✓	9100	✓	0.69	GI283	FA053	–
	80A05R-S45OE06Z-C	80	90.2	50	27	38	–	12.4	7	6	10	5	✓	8500	✓	1.02	GI283	FA051	AC001
	80A06R-S45OE06Z-C	80	90.2	50	27	38	–	12.4	7	6	10	6	✓	8500	✓	1.03	GI283	FA051	AC001
ISO 6462 DIN 8030	**90A07R-S45OE06Z-C**	90	100	50	32	45	–	14.4	8	6	10	7	✓	8000	✓	1.59	GI283	FA051	AC002
	100A06R-S45OE06Z-C	100	110.2	50	32	45	–	14.4	8	6	10	6	✓	7600	✓	1.85	GI283	FA051	AC002
	100A08R-S45OE06Z-C	100	109.9	50	32	45	–	14.4	8	1	10	8	✓	7600	✓	1.87	GI283	FA051	AC002
	125A07R-S45OE06Z-C	125	135.2	63	40	56	–	16.4	9	6	10	7	✓	6800	✓	3.31	GI283	FA051	AC003
	125A09R-S45OE06Z-C	125	134.9	63	40	56	–	16.4	9	1	10	9	✓	6800	✓	3.35	GI283	FA051	AC003
	160C09R-S45OE06Z-C	160	170.2	63	40	–	66.7	16.4	9	6	10	9	✓	6000	✓	6.08	GI283	FA056	–
	160C12R-S45OE06Z-C	160	169.9	63	40	–	66.7	16.4	9	1	10	12	✓	6000	✓	7.06	GI283	FA056	–
	200C11R-S45OE06Z-C	200	210.2	63	60	–	101.6	25.7	14	6	10	11	✓	5300	✓	10.80	GI283	FA057	–
	200C14R-S45OE06Z-C	200	209.9	63	60	–	101.6	25.7	14	1	10	14	✓	5300	✓	11.15	GI283	FA057	–

GI283	OEHT 0604AE..	REHT 1604M0..	XEHT 0604AE..

		Nm							
FA051	US 5011-T20P	5.0	M 5	11	SDR T20P-T	–	–	–	–
FA053	US 5011-T20P	5.0	M 5	11	SDR T20P-T	HS 1030C	–	–	–

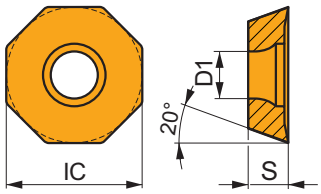
		Nm							
FA056	US 5011-T20P	5.0	M 5	11	SDR T20P-T	HS 1240C	CAC 160C	HSD 0825C	HXK 5
FA057	US 5011-T20P	5.0	M 5	11	SDR T20P-T	HS 1655C	CAC 200C	HSD 1025C	HXK 7

AC001	KS 1230	K.FMH27
AC002	KS 1635	K.FMH32
AC003	KS 2040	K.FMH40

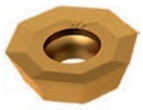
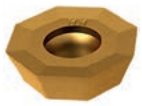
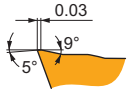
OEHT 06

PRAMET

	IC (mm)	D1 (mm)	S (mm)
0604	16.050	5.50	4.76



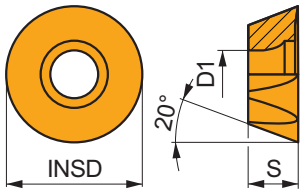
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
																			
MF plaquita de planeado a 45° con geometría diseño positivo y afilado para mecanizado ligero a medio y potencialmente desbaste.																			
OEHT 0604AEER-MF:M6330	–	255	0.12	2.2	180	0.11	2.2	–	–	–	–	–	–	75	0.10	1.8	–	–	–
OEHT 0604AEER-MF:M8330	–	295	0.12	2.2	175	0.11	2.2	–	–	–	885	0.14	2.2	70	0.10	1.8	–	–	–
OEHT 0604AEER-MF:M8340	–	275	0.12	2.2	165	0.11	2.2	–	–	–	–	–	–	65	0.10	1.8	–	–	–
																			
MM plaquita de planeado a 45° con geometría diseño positivo y afilado para mecanizado ligero a medio.																			
OEHT 0604AEER-MM:M6330	–	245	0.16	2.2	170	0.14	2.2	–	–	–	–	–	–	70	0.11	1.8	–	–	–
OEHT 0604AEER-MM:M8330	–	280	0.16	2.2	165	0.14	2.2	–	–	–	840	0.19	2.2	70	0.11	1.8	–	–	–
OEHT 0604AEER-MM:M8340	–	255	0.16	2.2	150	0.14	2.2	–	–	–	–	–	–	60	0.11	1.8	–	–	–
OEHT 0604AEER-MM:M8345	–	205	0.16	2.2	120	0.14	2.2	–	–	–	–	–	–	50	0.11	1.8	–	–	–
OEHT 0604AEER-MM:M9340	–	320	0.16	2.2	190	0.14	2.2	–	–	–	–	–	–	80	0.11	1.8	–	–	–
																			
M plaquita de planeado a 45° con geometría diseño positivo para mecanizado ligero a medio.																			
OEHT 0604AESR-M:M6330	–	210	0.24	3.2	150	0.22	3.2	–	–	–	–	–	–	60	0.17	2.6	–	–	–
OEHT 0604AESR-M:M8310	–	265	0.24	3.2	135	0.22	3.2	–	–	–	–	–	–	–	–	–	–	–	–
OEHT 0604AESR-M:M8330	–	245	0.24	3.2	145	0.22	3.2	–	–	–	–	–	–	60	0.17	2.6	–	–	–
OEHT 0604AESR-M:M8340	–	220	0.24	3.2	130	0.22	3.2	–	–	–	–	–	–	55	0.17	2.6	–	–	–
OEHT 0604AESR-M:M9325	–	295	0.24	3.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

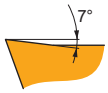
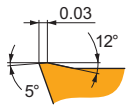
REHT 16

PRAMET

	INSD (mm)	D1 (mm)	S (mm)
1604	16.000	5.50	4.76



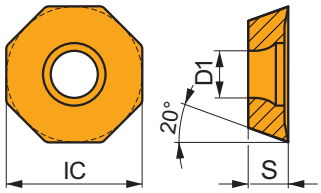
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
 E **MM** geometría para copiado y perfilado, con diseño ligeramente positivo para mecanizado ligero a medio.																			
REHT 1604M0EN-MM:M6330	–	255	0.20	2.0	180	0.18	2.0	–	–	–	–	–	–	75	0.14	1.6	–	–	–
REHT 1604M0EN-MM:M8340	–	270	0.20	2.0	160	0.18	2.0	–	–	–	–	–	–	65	0.14	1.6	–	–	–
REHT 1604M0EN-MM:M9340	–	330	0.20	2.0	195	0.18	2.0	–	–	–	–	–	–	80	0.14	1.6	–	–	–
 S **M** plaquita para copiado y perfilado con geometría diseño positivo para mecanizado ligero a medio.																			
REHT 1604M0SN-M:M8310	–	285	0.30	2.0	145	0.27	2.0	–	–	–	–	–	–	–	–	–	–	–	–
REHT 1604M0SN-M:M8330	–	270	0.30	2.0	160	0.27	2.0	–	–	–	–	–	–	65	0.21	1.6	–	–	–
REHT 1604M0SN-M:M8340	–	245	0.30	2.0	145	0.27	2.0	–	–	–	–	–	–	60	0.21	1.6	–	–	–

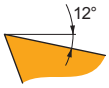
OEHT 06-FA

PRAMET

	IC (mm)	D1 (mm)	S (mm)
0604	16.050	5.50	4.76

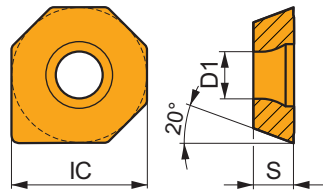


Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
 1 F **FA** plaquita de planeado a 45° con geometría muy positiva para fresado en acabado a mecanizado medio.																			
OEHT 0604AEFR-FA:HF7	–	–	–	–	–	–	–	–	–	–	330	0.18	2.0	–	–	–	–	–	–
OEHT 0604AEFR-FA:M0315	–	–	–	–	–	–	–	–	–	–	765	0.18	2.0	–	–	–	–	–	–

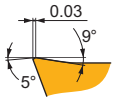
XEHT 06

	IC	D1	S
	(mm)	(mm)	(mm)
0604	16.050	5.50	4.76



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto	RE	P			M			K			N			S			H		
		vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)

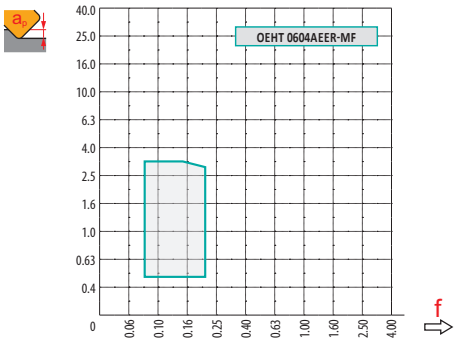


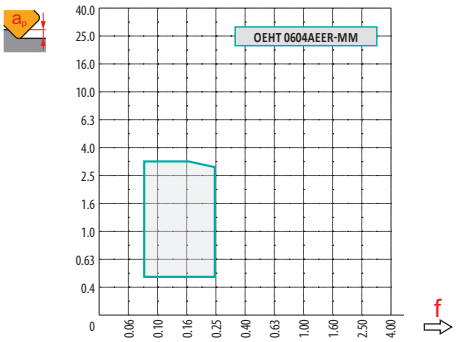
W plaquita rascadora (Wiper) con diseño ligeramente positivo para un acabado superficial mejorado.

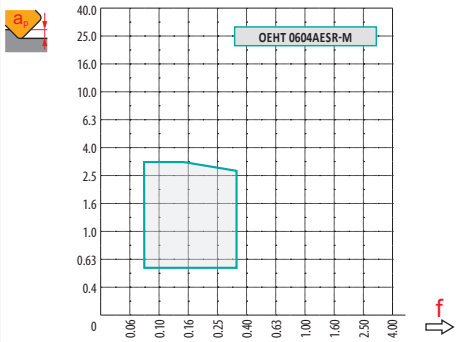
XEHT 0604AESR:M8310	–	265	0.24	3.2	135	0.22	3.2	–	–	–	–	–	–	–	–	–	–	–	–
XEHT 0604AESR:M8330	–	245	0.24	3.2	145	0.22	3.2	–	–	–	–	–	–	–	–	–	–	–	–

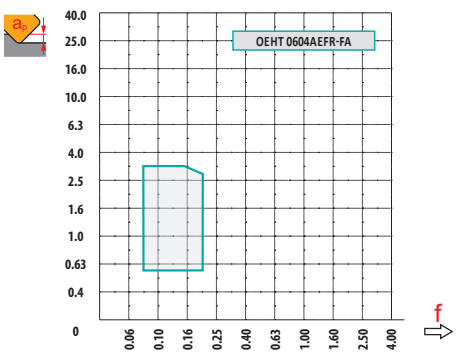
a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
⇨ x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

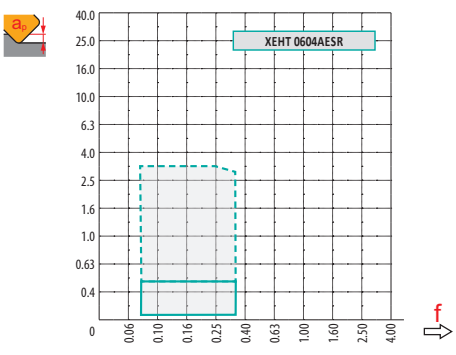
	OEHT 06-MF	OEHT 06-MM	OEHT 06-M	OEHT 06-FA	XEHT 06	REHT 16-MM	REHT 16-M
RE	–	–	–	–	–	8.00	8.00
BS	1.36	1.36	1.36	1.36	9.91	–	–

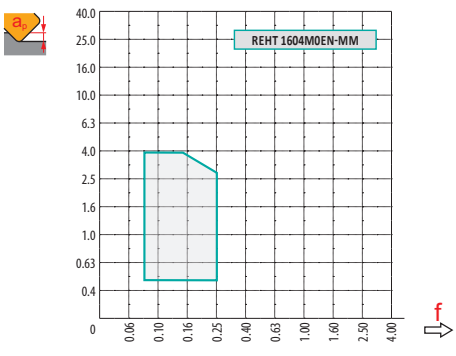


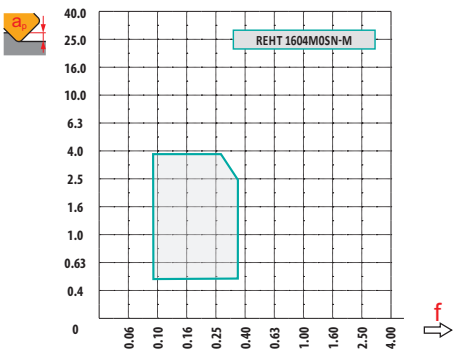












R

DC	a_p	0.00	0.50	0.75	1.25	1.50	2.00	2.50	3.00	4.00
50	DEF	43.90	49.47	50.66	52.49	53.23	54.48	55.52	56.39	57.76
56		49.80	55.37	56.56	58.39	59.13	60.38	61.42	62.29	63.66
63		56.90	62.47	63.66	65.49	66.23	67.48	68.52	69.39	70.76
70		63.80	69.37	70.56	72.39	73.13	74.38	75.42	76.29	77.66
80		73.90	79.47	80.66	82.49	83.23	84.48	85.52	86.39	87.76
90		83.80	89.37	90.56	92.39	93.13	94.38	95.42	96.29	97.66
100		93.90	99.47	100.66	102.49	103.23	104.48	105.52	106.39	107.76
125		118.90	124.47	125.66	127.49	128.23	129.48	130.52	131.39	132.76
160		153.90	159.47	160.66	162.49	163.23	164.48	165.52	166.39	167.76
200		193.90	199.47	200.66	202.49	203.23	204.48	205.52	206.39	207.76

DC	X.V	f_{max}
50	1.43	0.33
56	1.45	0.35
63	1.47	0.37
70	1.49	0.39
80	1.52	0.42
90	1.55	0.44
100	1.57	0.47
125	1.62	0.52
160	1.68	0.59
200	1.73	0.66

O

DC	RPMX	APMX/I
50	4.9°	8.4/100
56	4.2°	7.2/100
63	3.6°	6.1/100
70	3.1°	5.3/100
80	2.6°	4.4/100
90	2.3°	3.9/100
100	2.0°	3.3/100
125	1.5°	2.5/100

R

DCX	RPMX	APMX/I
59.9	4.6°	7.9/100
65.8	4.0°	6.8/100
72.9	3.0°	5.1/100
79.8	2.7°	4.6/100
89.9	2.2°	3.7/100
99.8	2.0°	3.3/100
109.9	1.8°	3.0/100
134.9	1.3°	2.1/100

O

DC	DMIN	DMAX	SMAX DMIN	SMAX DMAX
50	91.5	120.0	5.9	5.9
56	103.2	131.5	5.9	5.9
63	117.4	146.0	5.9	5.9
70	131.2	159.5	5.9	5.9
80	151.4	180.0	5.9	5.9
90	171.2	199.5	5.9	5.9
100	191.4	220.0	5.9	5.9
125	241.3	270.0	5.9	5.9

R

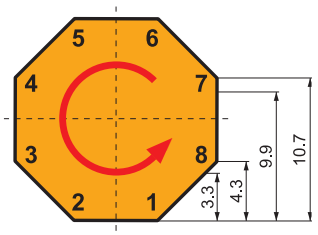
DCX	DMIN	DMAX	SMAX DMIN	SMAX DMAX
59.9	91.5	119.5	5.9	5.9
65.8	103.5	131.0	5.9	5.9
72.9	118.0	145.5	5.9	5.9
79.8	131.5	159.0	5.9	5.9
89.9	151.5	179.5	5.9	5.9
99.8	171.5	199.0	5.9	5.9
109.9	191.5	219.5	5.9	5.9
134.9	241.5	269.5	5.9	5.9

	O	R
a_p	3.1	3.0

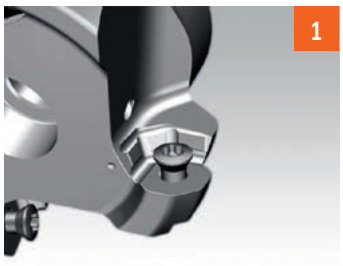
R

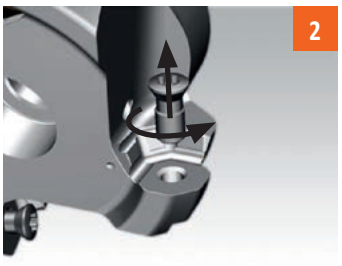
DCX	µm	3	5	10	15	20	30	40	50	60	80	100
59.9	FE	0.848	1.095	1.548	1.896	2.189	2.681	3.096	3.461	3.792	4.378	4.895
65.8		0.889	1.147	1.622	1.987	2.294	2.810	3.245	3.628	3.974	4.589	5.130
72.9		0.935	1.207	1.708	2.091	2.415	2.958	3.415	3.818	4.183	4.830	5.400
79.8		0.979	1.263	1.787	2.188	2.527	3.095	3.573	3.995	4.376	5.053	5.650
89.9		1.039	1.341	1.896	2.322	2.682	3.285	3.793	4.240	4.645	5.364	5.997
99.8		1.094	1.413	1.998	2.447	2.826	3.461	3.996	4.468	4.894	5.651	6.318

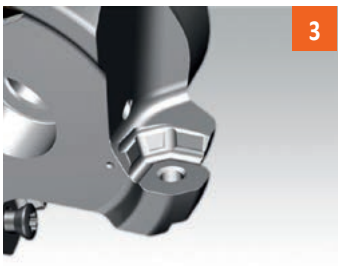
RE	µm	3	5	10	15	20	30	40	50	60	80	100
8.0	FE	0.438	0.566	0.800	0.980	1.131	1.386	1.600	1.789	1.960	2.263	2.530

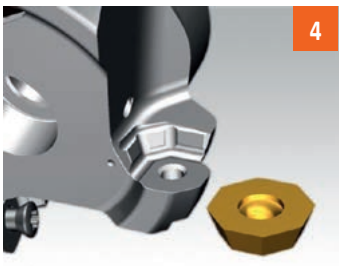


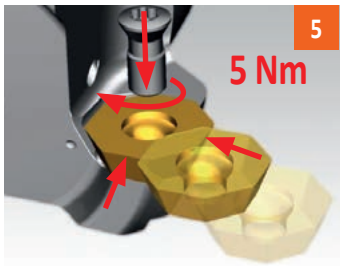
a_p	
–> 3.3	8
–> 4.3	7
–> 9.9	4
–> 10.7	2

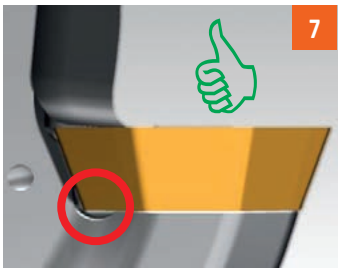


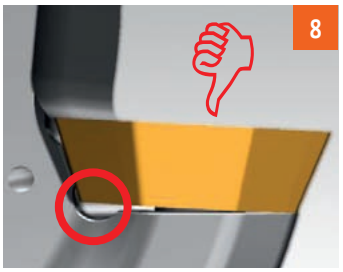












ESCUADRADO

PLANEADO

	STN10	STN16	SLN12	SLN16	SLN12X
	90°	90°	90°	90°	90°
	APMX (mm) 5.0	APMX (mm) 10.0	APMX (mm) 9.0	APMX (mm) 13.0	APMX (mm) 10.0
	DC (mm) 18 – 80	DC (mm) 25 – 175	DC (mm) 25 – 125	DC (mm) 63 – 175	DC (mm) 25 – 125
Mango cilíndrico	DC = 18 – 35 (mm)	DC = 25 – 35 (mm)	DC = 25, 32 (mm)		DC = 25 – 40 (mm)
Weldon	DC = 20 – 32 (mm)	DC = 25 – 40 (mm)	DC = 25 – 40 (mm)		DC = 25 – 40 (mm)
Modular	DC = 20 – 32 (mm)	DC = 25 – 40 (mm)	DC = 25 – 40 (mm)		
Portafresas	DC = 40 – 80 (mm)	DC = 40 – 175 (mm)	DC = 40 – 125 (mm)		DC = 40 – 125 (mm)
Página	66	70	75	81	85
ISO	P M K N	P M K N	P M K N	P K N H	P M K H
Forma de la plaquita					
Plaquitas de corte	TNGX 1004	TNGX 1606	LNG. 1205	LN.U 1607	LNEX 1210
N.º de filos de corte	6	6	4	4	4
Planeado	■	■	■	■	■
Fresado de chaflanes	◪	◪	◪		◪
Interpolación helicoidal	■	■	■	■	■
Fresado axial progresivo	◪		■	■	■
Mecanizado en rampa	◪		◪		
Fresado de superficies conformadas (fresado en copia)	◪		◪		◪
Escuadrado poco profundo	■	■	◪		■
Ranurado poco profundo			◪	◪	

■ Primera Opción ◪ Opción Alternativa

STN10

P M K N S

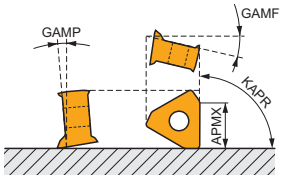
PRAMET

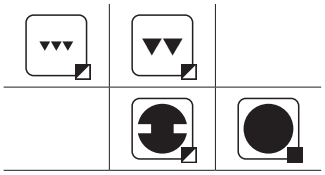
S

ECON TN10 Fresa de Escuadrado con Refrigeración Interna

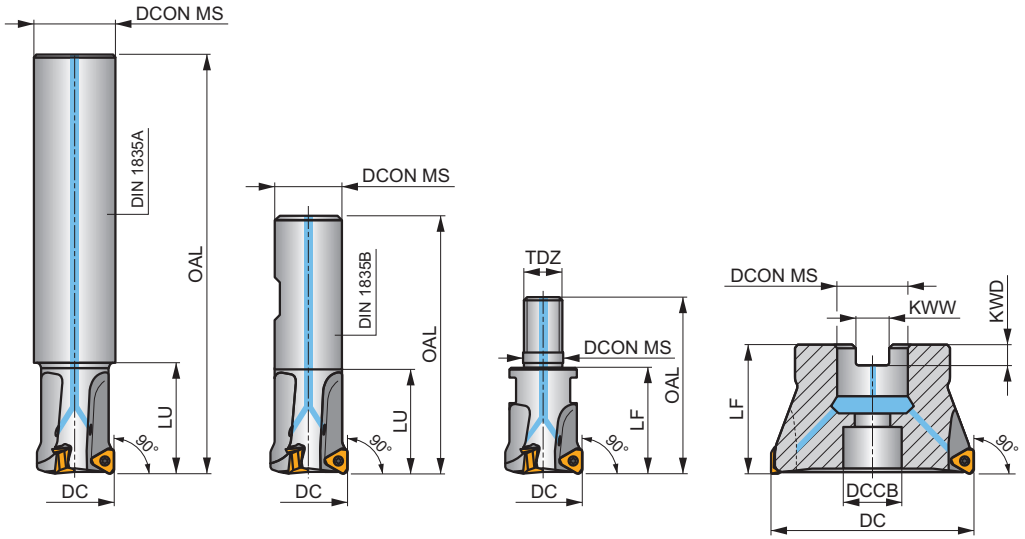
Fresa a 90° com plaquitas de doble cara TNGX 10 con 6 filos de corte y APMX de 5 mm. Adecuada para una amplia gama de aplicaciones. Disponible con mango cilíndrico, Weldon, modular y para portafresas con o sin paso diferencial. Cuerpo tratado para alargar la vida de herramienta.

KAPR	90°
APMX	5.0 mm





ECON TN



h_m	0.03 - 0.06
h_m	0.03 - 0.08

	Producto	DC (mm)	OAL (mm)	DCON MS (mm)	DCCB (mm)	LU (mm)	LF (mm)	TDZ	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		kg			
	18A2R050A20-STN10-C	18	180	20	–	50	–	–	–	–	-17.1	-11	2	–	29100	✓	0.39	GI292	SQ300	–
	20A2R029A20-STN10-C	20	150	20	–	29	–	–	–	–	-16.5	-11	2	–	27600	✓	0.35	GI292	SQ300	–
	20A3R029A20-STN10-C	20	150	20	–	29	–	–	–	–	-16.5	-11	3	–	27600	✓	0.34	GI292	SQ300	–
	22A3R050A25-STN10-C	22	180	25	–	50	–	–	–	–	-16.5	-11	3	–	26300	✓	0.58	GI292	SQ300	–
DIN 1835A	25A3R034A25-STN10-C	25	170	25	–	34	–	–	–	–	-16	-11	3	–	24700	✓	0.58	GI292	SQ300	–
	25A4R034A25-STN10-C	25	170	25	–	34	–	–	–	–	-16	-11	4	✓	24700	✓	0.58	GI292	SQ300	–
	30A4R050A32-STN10-C	30	200	32	–	50	–	–	–	–	-16	-11	4	✓	22500	✓	1.06	GI292	SQ300	–
	32A4R037A32-STN10-C	32	195	32	–	37	–	–	–	–	-16	-11	4	✓	21800	✓	1.08	GI292	SQ300	–
	32A5R037A32-STN10-C	32	195	32	–	37	–	–	–	–	-16	-11	5	✓	21800	✓	1.08	GI292	SQ300	–
	35A5R080A32-STN10-C	35	200	32	–	80	–	–	–	–	-16	-11	5	✓	20800	✓	1.07	GI292	SQ300	–
	20A2R032B20-STN10-C	20	90	20	–	32	–	–	–	–	-16.5	-11	2	–	27600	✓	0.20	GI292	SQ300	–
	20A3R032B20-STN10-C	20	90	20	–	32	–	–	–	–	-16.5	-11	3	–	27600	✓	0.19	GI292	SQ300	–
DIN 1835B	25A3R042B25-STN10-C	25	100	25	–	42	–	–	–	–	-16	-11	3	–	24700	✓	0.31	GI292	SQ300	–
	25A4R042B25-STN10-C	25	100	25	–	42	–	–	–	–	-16	-11	4	✓	24700	✓	0.31	GI292	SQ300	–
	32A4R042B32-STN10-C	32	110	32	–	42	–	–	–	–	-16	-11	4	✓	21800	✓	0.57	GI292	SQ300	–
	32A5R042B32-STN10-C	32	110	32	–	42	–	–	–	–	-16	-11	5	✓	21800	✓	0.56	GI292	SQ300	–
	20A2R026M10-STN10-C	20	45	10.5	–	–	26	M10	–	–	-16.5	-11	2	–	–	✓	0.06	GI292	SQ300	–
	20A3R026M10-STN10-C	20	45	10.5	–	–	26	M10	–	–	-16.5	-11	3	–	–	✓	0.06	GI292	SQ300	–
MODULAR	25A3R033M12-STN10-C	25	55	12.5	–	–	33	M12	–	–	-16	-11	3	–	–	✓	0.10	GI292	SQ300	–
	25A4R033M12-STN10-C	25	55	12.5	–	–	33	M12	–	–	-16	-11	4	✓	–	✓	0.10	GI292	SQ300	–
	32A4R043M16-STN10-C	32	66	17	–	–	43	M16	–	–	-16	-11	4	✓	–	✓	0.21	GI292	SQ300	–
	32A5R043M16-STN10-C	32	66	17	–	–	43	M16	–	–	-16	-11	5	✓	–	✓	0.21	GI292	SQ300	–
	40A04R-S90TN10-C	40	–	16	14	–	40	–	8.4	5.6	-15	-11	4	✓	19500	✓	0.34	GI292	SQ302	–
	40A06R-S90TN10-C	40	–	16	14	–	40	–	8.4	5.6	-15	-11	6	✓	19500	✓	0.34	GI292	SQ302	–
ISO 6462 DIN 8030	50A05R-S90TN10-C	50	–	22	18	–	40	–	10.4	6.3	-15	-11	5	✓	17400	✓	0.48	GI292	SQ303	–
	50A07R-S90TN10-C	50	–	22	18	–	40	–	10.4	6.3	-15	-11	7	✓	17400	✓	0.49	GI292	SQ303	–
	63A06R-S90TN10-C	63	–	22	18	–	40	–	10.4	6.3	-15	-11	6	✓	15500	✓	0.63	GI292	SQ303	–

	Producto	DC (mm)	OAL (mm)	DCON MS (mm)	DCCB (mm)	LU (mm)	LF (mm)	TDZ	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		kg			
ISO 6462 DIN 8030	**63A09R-S90TN10-C**	63	–	22	18	–	40	–	10.4	6.3	-15	-11	9	✓	15500	✓	0.63	GI292	SQ303	–
	80A10R-S90TN10-C	80	–	27	38	–	50	–	12.4	7	-15	-11	10	✓	13800	✓	1.03	GI292	SQ301	AC001

GI292	TNGX 1004..

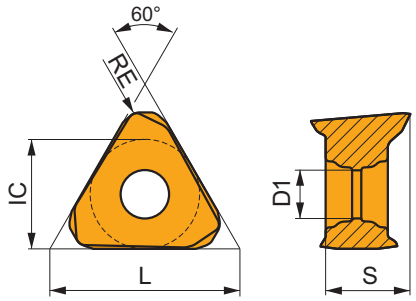
		Nm						
SQ300	US 52506-T07P	0.8	M 2.5	6	–	–	Flag T07P	–
SQ301	US 52506-T07P	0.8	M 2.5	6	D-T07P/T09P	FG-15	–	–
SQ302	US 52506-T07P	0.8	M 2.5	6	D-T07P/T09P	FG-15	–	HS 0830C
SQ303	US 52506-T07P	0.8	M 2.5	6	D-T07P/T09P	FG-15	–	HS 1030C

AC001	KS 1230	K.FMH27

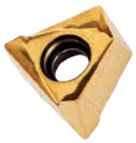
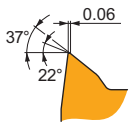
TNGX 10

PRAMET

	IC (mm)	D1 (mm)	L (mm)	S (mm)
1004	6.000	2.80	10.39	4.69



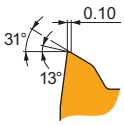
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
																				
TNGX 100402SR-F:M8330	●	0.2	■ 205	0.09	2.0	◪ 120	0.08	2.0	◪ 190	0.09	2.0	–	–	–	–	–	–	–	–	–
TNGX 100402SR-F:M8340	●	0.2	■ 190	0.09	2.0	◪ 110	0.08	2.0	◪ 180	0.09	2.0	–	–	–	–	–	–	–	–	–
TNGX 100404SR-F:8215	●	0.4	■ 225	0.09	2.0	◪ 135	0.08	2.0	◪ 210	0.09	2.0	–	–	–	–	–	–	–	–	–
TNGX 100404SR-F:M6330	●	0.4	■ 190	0.09	2.0	◪ 135	0.08	2.0	–	–	–	–	–	–	–	–	–	–	–	–
TNGX 100404SR-F:M8330	●	0.4	■ 220	0.09	2.0	◪ 130	0.08	2.0	◪ 205	0.09	2.0	–	–	–	–	–	–	–	–	–
TNGX 100404SR-F:M8340	●	0.4	■ 200	0.09	2.0	◪ 120	0.08	2.0	◪ 190	0.09	2.0	–	–	–	–	–	–	–	–	–
TNGX 100404SR-F:M9340	●	0.4	■ 270	0.09	2.0	◪ 160	0.08	2.0	–	–	–	–	–	–	–	–	–	–	–	–
TNGX 100408SR-F:8215	●	0.8	■ 270	0.09	2.0	◪ 160	0.08	2.0	◪ 255	0.09	2.0	–	–	–	–	–	–	–	–	–
TNGX 100408SR-F:M6330	●	0.8	■ 225	0.09	2.0	◪ 160	0.08	2.0	–	–	–	–	–	–	–	–	–	–	–	–
TNGX 100408SR-F:M8330	●	0.8	■ 260	0.09	2.0	◪ 155	0.08	2.0	◪ 245	0.09	2.0	–	–	–	–	–	–	–	–	–
TNGX 100408SR-F:M8340	●	0.8	■ 240	0.09	2.0	◪ 140	0.08	2.0	◪ 225	0.09	2.0	–	–	–	–	–	–	–	–	–
TNGX 100408SR-F:M9340	●	0.8	■ 320	0.09	2.0	◪ 190	0.08	2.0	–	–	–	–	–	–	–	–	–	–	–	–

F geometría muy positiva para mecanizado ligero.

Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
TNGX 100404SR-M:8215	●	0.4	205	0.13	2.0	120	0.12	2.0	190	0.13	2.0	–	–	–	50	0.09	1.6	–	–	–
TNGX 100404SR-M:M6330	●	0.4	175	0.13	2.0	125	0.12	2.0	–	–	–	–	–	–	50	0.09	1.6	–	–	–
TNGX 100404SR-M:M8330	●	0.4	205	0.13	2.0	120	0.12	2.0	190	0.13	2.0	–	–	–	50	0.09	1.6	–	–	–
TNGX 100404SR-M:M8340	●	0.4	185	0.13	2.0	110	0.12	2.0	175	0.13	2.0	–	–	–	45	0.09	1.6	–	–	–
TNGX 100404SR-M:M9340	●	0.4	240	0.13	2.0	140	0.12	2.0	–	–	–	–	–	–	60	0.09	1.6	–	–	–
TNGX 100408SR-M:8215	●	0.8	245	0.13	2.0	145	0.12	2.0	230	0.13	2.0	–	–	–	60	0.09	1.6	–	–	–
TNGX 100408SR-M:M6330	⧓	0.8	210	0.13	2.0	150	0.12	2.0	–	–	–	–	–	–	60	0.09	1.6	–	–	–
TNGX 100408SR-M:M8310	●	0.8	270	0.13	2.0	135	0.12	2.0	255	0.13	2.0	–	–	–	–	–	–	–	–	–
TNGX 100408SR-M:M8330	⧓	0.8	245	0.13	2.0	145	0.12	2.0	230	0.13	2.0	–	–	–	60	0.09	1.6	–	–	–
TNGX 100408SR-M:M8340	⧓	0.8	220	0.13	2.0	130	0.12	2.0	205	0.13	2.0	–	–	–	55	0.09	1.6	–	–	–
TNGX 100408SR-M:M8345	⧓	0.8	180	0.13	2.0	105	0.12	2.0	–	–	–	–	–	–	45	0.09	1.6	–	–	–
TNGX 100408SR-M:M9340	●	0.8	285	0.13	2.0	170	0.12	2.0	–	–	–	–	–	–	70	0.09	1.6	–	–	–
TNGX 100412SR-M:M8330	⧓	1.2	255	0.13	2.0	150	0.12	2.0	240	0.13	2.0	–	–	–	60	0.09	1.6	–	–	–
TNGX 100412SR-M:M8340	⧓	1.2	230	0.13	2.0	135	0.12	2.0	215	0.13	2.0	–	–	–	55	0.09	1.6	–	–	–
TNGX 100416SR-M:M8310	⧓	1.6	300	0.13	2.0	150	0.12	2.0	285	0.13	2.0	–	–	–	–	–	–	–	–	–
TNGX 100416SR-M:M8330	⧓	1.6	270	0.13	2.0	160	0.12	2.0	255	0.13	2.0	–	–	–	65	0.09	1.6	–	–	–
TNGX 100416SR-M:M8340	⧓	1.6	245	0.13	2.0	145	0.12	2.0	230	0.13	2.0	–	–	–	60	0.09	1.6	–	–	–

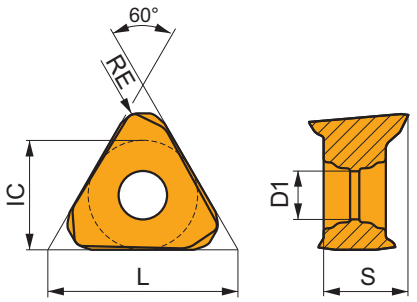


M geometría con diseño positivo para mecanizado ligero a medio.

TNGX 10-FA

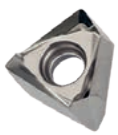
PRAMET

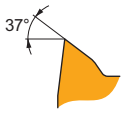
	IC	D1	L	S
	(mm)	(mm)	(mm)	(mm)
1004	6.000	2.80	10.39	4.69



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
TNGX 100404FR-FA:HF7	●	0.4	–	–	–	–	–	–	–	–	–	345	0.10	1.5	–	–	–	–	–	–
TNGX 100404FR-FA:M0315	●	0.4	–	–	–	–	–	–	–	–	–	780	0.10	1.5	–	–	–	–	–	–
TNGX 100408FR-FA:HF7	●	0.8	–	–	–	–	–	–	–	–	–	345	0.10	1.5	–	–	–	–	–	–
TNGX 100408FR-FA:M0315	●	0.8	–	–	–	–	–	–	–	–	–	780	0.10	1.5	–	–	–	–	–	–

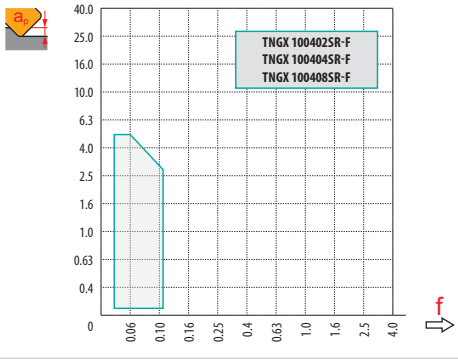


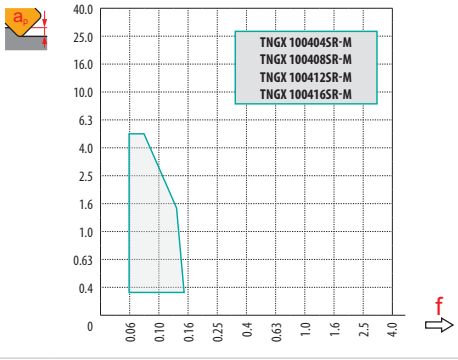


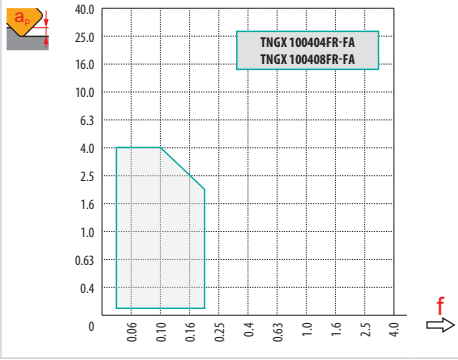
FA geometría muy positiva para fresado en acabado a mecanizado medio.

a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	TNGX 10-F			TNGX 10-M				TNGX 10-FA	
RE	0.2	0.4	0.8	0.4	0.8	1.2	1.6	0.4	0.8
BS	1.53	1.34	0.92	1.34	0.92			1.33	0.93







max
1.5

a_p	1.0	3.0	5.0
f	0.10	0.08	0.04

a_p
0.2

DC	RPMX	APMX/I
18	1.80°	3.05/100
20	1.60°	2.70/100
22	1.20°	2.00/100
25	1.00°	1.70/100
30	0.90°	1.45/100
32	0.80°	1.30/100
35	0.65°	1.00/100
40	0.60°	0.90/100
50	0.50°	0.70/100
63	0.40°	0.50/100
80	0.25°	0.30/100

DC	DMIN	DMAX	SMAX DMIN	SMAX DMAX
18	33	36	1.2	1.2
20	37	40	1.2	1.2
22	41	44	1.0	1.0
25	47	50	1.0	1.0
30	57	60	1.0	1.0
32	61	64	1.0	1.0
35	67	70	0.9	0.9
40	77	80	0.9	0.9
50	97	100	0.9	0.9
63	123	126	0.9	0.9
80	157	160	0.9	0.9

STN16

P M K N S

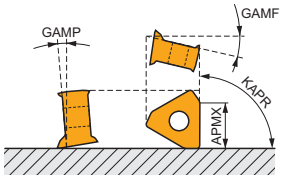
PRAMET

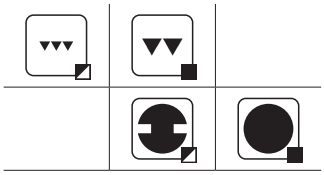
S

ECON TN16 Fresa de Escuadrado con Refrigeración Interna

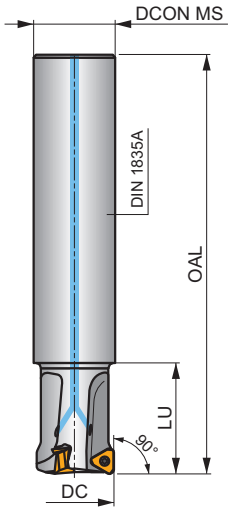
Fresa a 90° que utiliza plaquitas de doble cara TNGX 16 con 6 filos de corte y APMX de 10 mm. Adecuada para una amplia gama de aplicaciones. Disponible con mango cilíndrico, Weldon, modular y para portafresas (con paso diferencial). Cuerpo tratado para alargar la vida de herramienta.

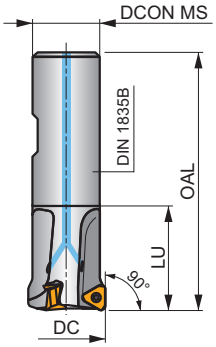
KAPR	90°
APMX	10.0 mm

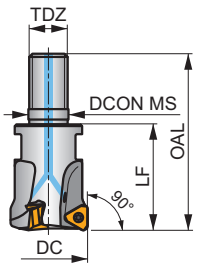


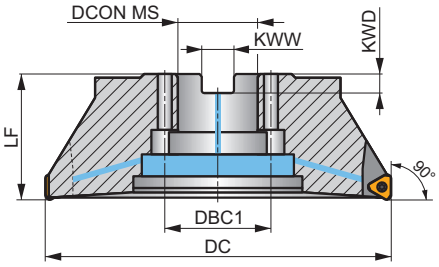


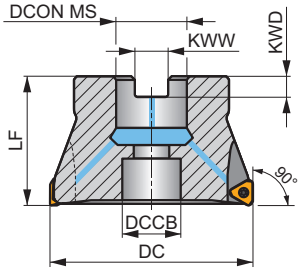
ECON TN











h_m	0.03 - 0.13
h_m	0.03 - 0.15

	Producto	DC (mm)	OAL (mm)	DCON MS (mm)	DCCB (mm)	DBC1 (mm)	LU (mm)	LF (mm)	TDZ	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		kg		
	25A2R034A25-STN16-C	25	170	25	–	–	34	–	–	–	–	-18.5	-9.5	2	–	20000	✓	0.54	GI340	C0382
	32A2R034A32-STN16-C	32	195	32	–	–	34	–	–	–	–	-16	-9.5	2	–	17500	✓	1.05	GI340	C0382
DIN 1835A	25A2R080A25-STN16-C	25	170	25	–	–	80	–	–	–	–	-18.5	-9.5	2	–	20000	✓	0.48	GI340	C0382
DIN 1835A	32A2R080A32-STN16-C	32	195	32	–	–	80	–	–	–	–	-16	-9.5	2	–	17500	✓	0.96	GI340	C0382
	32A3R034A32-STN16-C	32	195	32	–	–	34	–	–	–	–	-16	-9.5	3	–	17500	✓	1.04	GI340	C0382
	35A3R034A32-STN16-C	35	195	32	–	–	34	–	–	–	–	-16	-9.5	3	–	17000	✓	1.07	GI340	C0382
	25A2R042B25-STN16-C	25	110	25	–	–	42	–	–	–	–	-18.5	-9.5	2	–	20000	✓	0.29	GI340	C0382
DIN 1835B	32A3R042B32-STN16-C	32	110	32	–	–	42	–	–	–	–	-16	-9.5	3	–	17500	✓	0.52	GI340	C0382
DIN 1835B	40A4R050B32-STN16-C	40	120	32	–	–	50	–	–	–	–	-16	-9.5	4	–	16000	✓	0.68	GI340	C0382
	25A2R033M12-STN16-C	25	55	12.5	–	–	–	33	M12	–	–	-18.5	-9.5	2	–	20000	✓	0.10	GI340	C0382
	32A2R043M16-STN16-C	32	66	17	–	–	–	43	M16	–	–	-16	-9.5	2	–	17500	✓	0.18	GI340	C0382
MODULAR	32A3R043M16-STN16-C	32	66	17	–	–	–	43	M16	–	–	-16	-9.5	3	–	17500	✓	0.17	GI340	C0382
MODULAR	40A3R043M16-STN16-C	40	66	17	–	–	–	43	M16	–	–	-16	-9.5	3	–	16000	✓	0.20	GI340	C0382
MODULAR	40A4R043M16-STN16-C	40	66	17	–	–	–	43	M16	–	–	-16	-9.5	4	–	16000	✓	0.21	GI340	C0382
	40A03R-S90TN16-C	40	40	16	12.4	–	–	40	–	8.4	5.6	-16	-9.5	3	–	16000	✓	0.32	GI340	C0384
	40A04R-S90TN16-C	40	40	16	12.4	–	–	40	–	8.4	5.6	-16	-9.5	4	–	16000	✓	0.31	GI340	C0384
	50A04R-S90TN16-C	50	40	22	18.1	–	–	40	–	10.4	6.3	-16	-9.5	4	✓	14000	✓	0.34	GI340	C0386
	50A05R-S90TN16-C	50	40	22	18.1	–	–	40	–	10.4	6.3	-16	-9.5	5	✓	14000	✓	0.32	GI340	C0386
	63A04R-S90TN16-C	63	40	22	18.1	–	–	40	–	10.4	6.3	-16	-9.5	4	✓	12500	✓	0.47	GI340	C0386
	63A06R-S90TN16-C	63	40	22	18.1	–	–	40	–	10.4	6.3	-16	-9.5	6	✓	12500	✓	0.48	GI340	C0386
ISO 6462 DIN 8030	80A05R-S90TN16-C	80	50	27	22.1	–	–	50	–	12.4	7	-16	-9.5	5	✓	11000	✓	1.15	GI340	C0388
ISO 6462 DIN 8030	80A07R-S90TN16-C	80	50	27	22.1	–	–	50	–	12.4	7	-16	-9.5	7	✓	11000	✓	1.17	GI340	C0388
	100A06R-S90TN16-C	100	50	32	45.1	–	–	50	–	14.4	8	-16	-9.5	6	✓	10000	✓	1.79	GI340	C0390
	100A08R-S90TN16-C	100	50	32	45.1	–	–	50	–	14.4	8	-16	-9.5	8	✓	10000	✓	1.66	GI340	C0390
	115A06R-S90TN16-C	115	50	32	45.1	–	–	50	–	14.4	8	-16	-9.5	6	✓	9500	✓	2.21	GI340	C0390
	125A07R-S90TN16-C	125	63	40	56.1	–	–	63	–	16.4	9	-16	-9.5	7	✓	9000	✓	3.05	GI340	C0390
	125A09R-S90TN16-C	125	63	40	56.1	–	–	63	–	16.4	9	-16	-9.5	9	✓	9000	✓	3.14	GI340	C0390

	Producto	DC (mm)	OAL (mm)	DCON MS (mm)	DCCB (mm)	DBC1 (mm)	LU (mm)	LF (mm)	TDZ	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		kg		
ISO 6462 DIN 8030	**140A08R-S90TN16-C**	140	63	40	56.1	–	–	63	–	16.4	9	-16	-9.5	8	✓	8500	✓	3.69	GI340	C0390
	160C10R-S90TN16-C	160	63	40	–	66.7	–	63	–	16.4	9.2	-16	-9.5	10	✓	8000	✓	5.16	GI340	C0394
	175C10R-S90TN16-C	175	63	40	–	66.7	–	63	–	16.4	9.2	-16	-9.5	10	✓	7500	✓	6.89	GI340	C0394

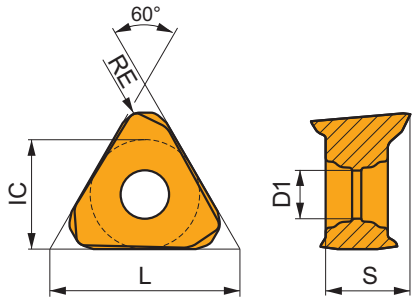
GI340	TNGX 1606..

		Nm									
C0382	US 44010-T15P	3.5	M 4	10	–	–	Flag T15P	–	–	–
C0384	US 44010-T15P	3.5	M 4	10	D-T08P/T15P	FG-15	–	HS 90835	–	–
C0386	US 44010-T15P	3.5	M 4	10	D-T08P/T15P	FG-15	–	HS 1030C	–	–
C0388	US 44010-T15P	3.5	M 4	10	D-T08P/T15P	FG-15	–	HS 1230C	–	–
C0390	US 44010-T15P	3.5	M 4	10	D-T08P/T15P	FG-15	–	–	–	–
C0394	US 44010-T15P	3.5	M 4	10	D-T08P/T15P	FG-15	–	HS 1240C	HSD 0825C	CAC 160C

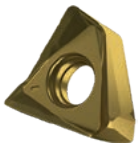
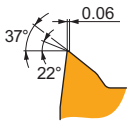
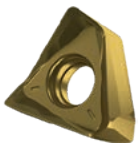
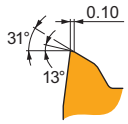
TNGX 16

PRAMET

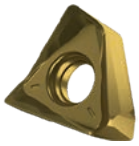
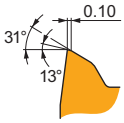
	IC (mm)	D1 (mm)	L (mm)	S (mm)
1606	9.525	4.40	16.50	6.58



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
																				
F geometría muy positiva para mecanizado ligero.																				
TNGX 160604SR-F:M8330	●	0.4	205	0.10	3.0	120	0.09	3.0	190	0.10	3.0	–	–	–	–	–	–	–	–	–
TNGX 160604SR-F:M8340	●	0.4	190	0.10	3.0	110	0.09	3.0	180	0.10	3.0	–	–	–	–	–	–	–	–	–
TNGX 160608SR-F:8215	●	0.8	250	0.10	3.0	150	0.09	3.0	235	0.10	3.0	–	–	–	–	–	–	–	–	–
TNGX 160608SR-F:M6330	●	0.8	215	0.10	3.0	150	0.09	3.0	–	–	–	–	–	–	–	–	–	–	–	–
TNGX 160608SR-F:M8310	●	0.8	280	0.10	3.0	140	0.09	3.0	265	0.10	3.0	–	–	–	–	–	–	–	–	–
TNGX 160608SR-F:M8330	●	0.8	245	0.10	3.0	145	0.09	3.0	230	0.10	3.0	–	–	–	–	–	–	–	–	–
TNGX 160608SR-F:M8340	●	0.8	225	0.10	3.0	135	0.09	3.0	210	0.10	3.0	–	–	–	–	–	–	–	–	–
																				
M geometría con diseño positivo para mecanizado ligero a medio.																				
TNGX 160604SR-M:8215	●	0.4	180	0.18	3.0	105	0.16	3.0	170	0.18	3.0	–	–	–	45	0.13	2.4	–	–	–
TNGX 160604SR-M:M6330	●	0.4	155	0.18	3.0	110	0.16	3.0	–	–	–	–	–	–	45	0.13	2.4	–	–	–
TNGX 160604SR-M:M8310	●	0.4	205	0.15	3.0	100	0.14	3.0	190	0.15	3.0	–	–	–	–	–	–	–	–	–
TNGX 160604SR-M:M8330	●	0.4	180	0.18	3.0	105	0.16	3.0	170	0.18	3.0	–	–	–	45	0.13	2.4	–	–	–

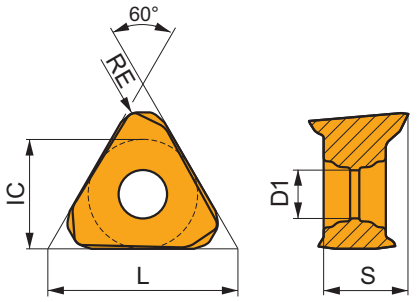
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
  **M** geometría con diseño positivo para mecanizado ligero a medio.																			
TNGX 160604SR-M:M8340	0.4	165	0.18	3.0	95	0.16	3.0	155	0.18	3.0	–	–	–	40	0.13	2.4	–	–	–
TNGX 160608SR-M:8215	0.8	215	0.18	3.0	125	0.16	3.0	200	0.18	3.0	–	–	–	50	0.13	2.4	–	–	–
TNGX 160608SR-M:M6330	0.8	185	0.18	3.0	130	0.16	3.0	–	–	–	–	–	–	55	0.13	2.4	–	–	–
TNGX 160608SR-M:M8310	0.8	245	0.15	3.0	120	0.14	3.0	230	0.15	3.0	–	–	–	–	–	–	–	–	–
TNGX 160608SR-M:M8330	0.8	215	0.18	3.0	125	0.16	3.0	200	0.18	3.0	–	–	–	50	0.13	2.4	–	–	–
TNGX 160608SR-M:M8340	0.8	195	0.18	3.0	115	0.16	3.0	185	0.18	3.0	–	–	–	45	0.13	2.4	–	–	–
TNGX 160608SR-M:M8345	0.8	155	0.18	3.0	90	0.16	3.0	–	–	–	–	–	–	35	0.13	2.4	–	–	–
TNGX 160608SR-M:M9325	0.8	285	0.15	3.0	–	–	–	270	0.15	3.0	–	–	–	–	–	–	–	–	–
TNGX 160608SR-M:M9340	0.8	245	0.18	3.0	145	0.16	3.0	–	–	–	–	–	–	60	0.13	2.4	–	–	–
TNGX 160612SR-M:M8330	1.2	230	0.18	3.0	135	0.16	3.0	215	0.18	3.0	–	–	–	55	0.13	2.4	–	–	–
TNGX 160612SR-M:M8340	1.2	205	0.18	3.0	120	0.16	3.0	190	0.18	3.0	–	–	–	50	0.13	2.4	–	–	–
TNGX 160616SR-M:M8310	1.6	275	0.15	3.0	140	0.14	3.0	260	0.15	3.0	–	–	–	–	–	–	–	–	–
TNGX 160616SR-M:M8330	1.6	240	0.18	3.0	140	0.16	3.0	225	0.18	3.0	–	–	–	60	0.13	2.4	–	–	–
TNGX 160616SR-M:M8340	1.6	220	0.18	3.0	130	0.16	3.0	205	0.18	3.0	–	–	–	55	0.13	2.4	–	–	–

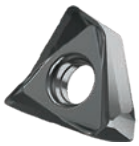
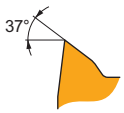
TNGX 16-FA

PRAMET

	IC (mm)	D1 (mm)	L (mm)	S (mm)
1606	9.525	4.40	16.50	6.58

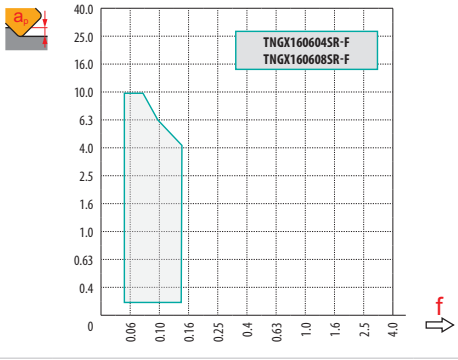


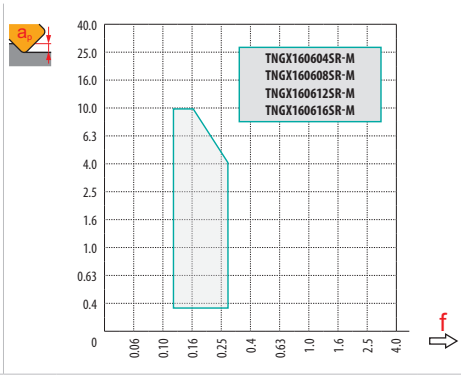
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

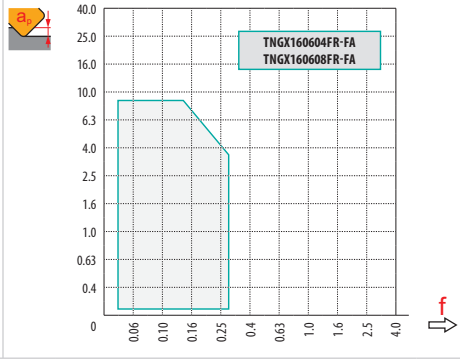
Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
  **FA** geometría muy positiva para fresado en acabado a mecanizado medio.																			
TNGX 160604FR-FA:HF7	0.4	–	–	–	–	–	–	–	–	–	255	0.14	2.0	–	–	–	–	–	–
TNGX 160604FR-FA:M0315	0.4	–	–	–	–	–	–	–	–	–	585	0.14	2.0	–	–	–	–	–	–
TNGX 160608FR-FA:HF7	0.8	–	–	–	–	–	–	–	–	–	300	0.14	2.0	–	–	–	–	–	–
TNGX 160608FR-FA:M0315	0.8	–	–	–	–	–	–	–	–	–	690	0.14	2.0	–	–	–	–	–	–

a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	TNGX 16-F		TNGX 16-M				TNGX 16-FA	
RE	0.4	0.8	0.4	0.8	1.2	1.6	0.4	0.8
BS	2.10	1.9	2.10	1.90	1.73	1.14	2.10	1.90



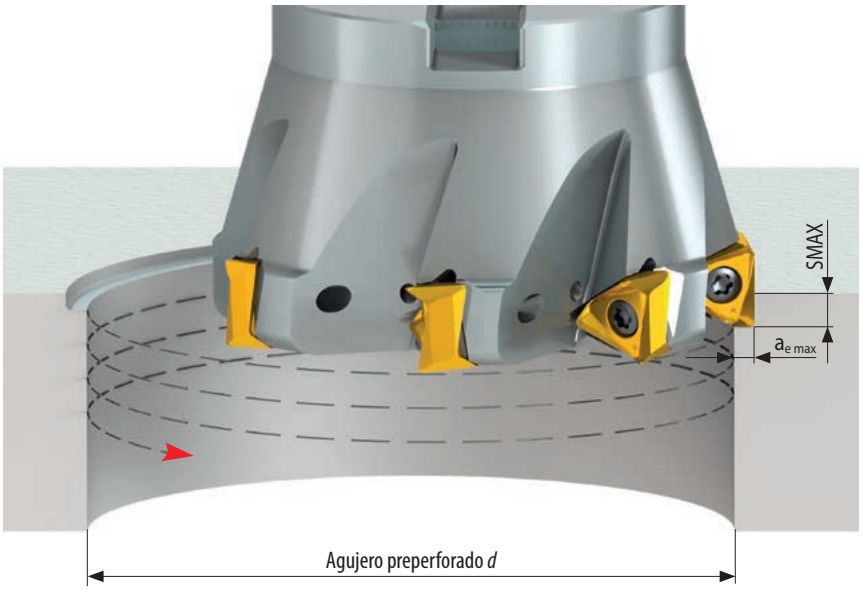




a_p	3.0	4.5	6.0
1 f	0.18	0.14	0.10

DC	min	d_{min} = DC *		d = 1.25 DC		d = 1.5 DC		d = 1.75 DC		d ≥ 2 DC	
		SMAX	$a_{e\,max}$	SMAX	$a_{e\,max}$	SMAX	$a_{e\,max}$	SMAX	$a_{e\,max}$	SMAX	$a_{e\,max}$
25	25	0.14	1.3	0.22	2.2	0.33	3.0	0.60	4.0	0.70	5.0
32	32	0.16	1.5	0.33	2.8	0.44	4.0	0.70	5.0	0.90	6.5
40	40	0.22	2.0	0.38	3.5	0.55	5.0	0.90	6.5	1.15	8.0
50	50	0.27	2.5	0.50	4.5	0.70	6.5	1.00	8.0	1.40	10.0
63	63	0.33	3.2	0.60	5.5	0.90	8.0	1.45	10.0	1.80	12.5
80	80	0.55	4.0	1.00	7.0	1.45	10.0	2.15	13.0	2.60	16.0
100	100	0.70	5.0	1.20	9.0	1.80	12.5	2.70	16.5	3.30	20.0
115	115	0.85	6.0	1.50	10.0	1.90	14.5	2.80	19.0	3.80	23.0
125	125	0.90	6.5	1.60	11.0	2.30	15.5	3.10	20.0	4.10	25.0
140	140	1.00	7.0	1.80	12.5	2.60	17.5	3.70	23.0	4.60	28.0
160	160	1.20	8.0	2.00	14.0	2.90	20.0	4.30	26.0	5.30	32.0
175	175	1.30	8.8	2.20	15.5	3.20	22.0	4.70	29.0	5.80	35.0

* Check feed rate reduction when hole diameter is between d_{min} – 1.5 *DC*.



SLN12

P M K N

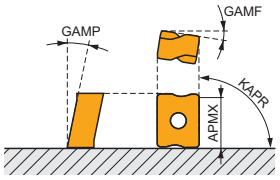
PRAMET

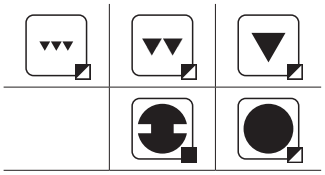
S

ECON LN12 Fresa de Escuadrado con Refrigeración Interna

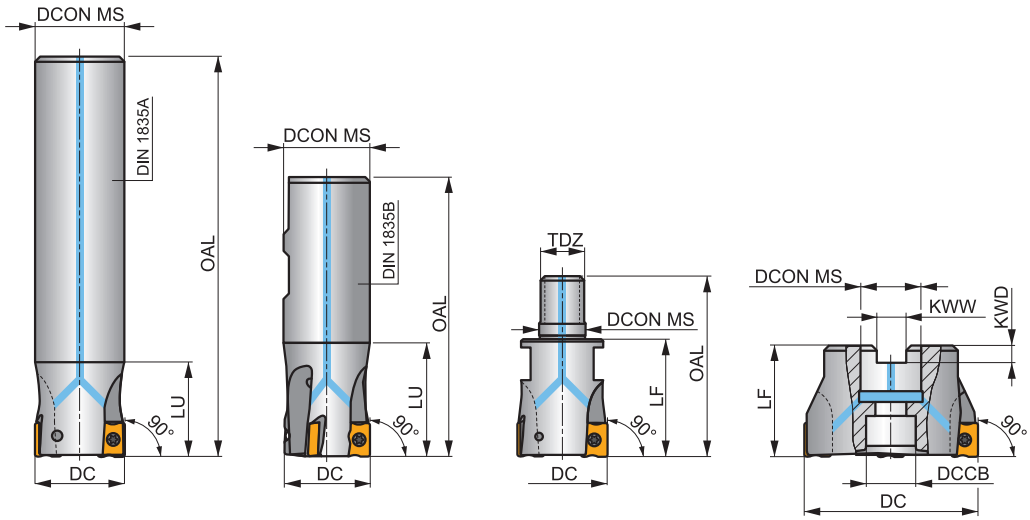
Fresa a 90° con plaquitas de doble cara LN.. 12 con APMX de 9 mm. Adecuada para una amplia gama de aplicaciones. Disponible con mango cilíndrico, Weldon, modular y para portafresas (con paso diferencial). Cuerpo tratado para alargar la vida de herramienta.

KAPR	90°
APMX	9.0 mm

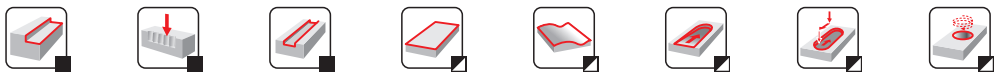




ECON LN



h_m	0.06 - 0.15
h_m	0.06 - 0.13



	Producto	DC (mm)	OAL (mm)	DCON MS (mm)	DCCB (mm)	LU (mm)	LF (mm)	TDZ	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		kg			
DIN 1835A	25A2R034A25-SLN12-C	25	170	25	–	34	–	–	–	–	-23	-8	2	–	19500	✓	0.58	GI205	SQ340	–
	25A2R080A25-SLN12-C	25	170	25	–	80	–	–	–	–	-23	-8	2	–	19500	✓	0.54	GI205	SQ340	–
	32A2R034A32-SLN12-C	32	195	32	–	34	–	–	–	–	-15	-6	2	–	17300	✓	1.05	GI205	SQ340	–
	32A2R090A32-SLN12-C	32	195	32	–	90	–	–	–	–	-15	-6	2	–	17300	✓	0.98	GI205	SQ340	–
DIN 1835B	25A2R042B25-SLN12-C	25	99	25	–	42	–	–	–	–	-23	-8	2	–	19500	✓	0.30	GI205	SQ340	–
	32A3R042B32-SLN12-C	32	103	32	–	42	–	–	–	–	-15	-6	3	–	17300	✓	0.50	GI205	SQ340	–
	40A4R050B32-SLN12-C	40	111	32	–	50	–	–	–	–	-15	-6	4	✓	15500	✓	0.62	GI205	SQ340	–
MODULAR	25A2R033M12-SLN12-C	25	55	12.5	–	–	33	–	–	–	-22	-6	2	–	–	✓	0.11	GI205	SQ340	–
	32A2R043M16-SLN12-C	32	66	17	–	–	43	–	–	–	-15	-6	2	–	–	✓	0.22	GI205	SQ340	–
	32A3R043M16-SLN12-C	32	66	17	–	–	43	–	–	–	-15	-6	3	–	–	✓	0.22	GI205	SQ340	–
	40A3R043M16-SLN12-C	40	66	17	–	–	43	–	–	–	-15	-6	3	–	–	✓	0.28	GI205	SQ340	–
ISO 6462 DIN 8030	40A04R-S90LN12-C	40	–	16	14	–	40	–	8.4	5.6	-15	-6	4	✓	15500	✓	0.33	GI205	SQ342	–
	50A04R-S90LN12-C	50	–	22	18	–	40	–	10.4	6.3	-14.5	-6	4	✓	13800	✓	0.47	GI205	SQ343	–
	50A05R-S90LN12-C	50	–	22	18	–	40	–	10.4	6.3	-14.5	-6	5	✓	13800	✓	0.40	GI205	SQ343	–
	63A04R-S90LN12-C	63	–	22	18	–	40	–	10.4	6.3	-14	-6	4	✓	12300	✓	0.55	GI205	SQ343	–
	63A06R-S90LN12-C	63	–	22	18	–	40	–	10.4	6.3	-14	-6	6	✓	12300	✓	0.50	GI205	SQ343	–
	80A05R-S90LN12-C	80	–	27	38	–	50	–	12.4	7	-14	-6	5	✓	10900	✓	1.16	GI205	SQ341	AC001
	80A07R-S90LN12-C	80	–	27	38	–	50	–	12.4	7	-14	-6	7	✓	10900	✓	1.11	GI205	SQ341	AC001
	100A06R-S90LN12-C	100	–	32	45	–	50	–	14.4	8	-14	-6	6	✓	9800	✓	1.78	GI205	SQ341	AC002
	100A08R-S90LN12-C	100	–	32	45	–	50	–	14.4	8	-14	-6	8	✓	9800	✓	1.93	GI205	SQ341	AC002
	110A06R-S90LN12-C	110	–	32	45	–	50	–	14.4	8	-14	-6	6	✓	9300	✓	2.09	GI205	SQ341	AC002
	125A07R-S90LN12-C	125	–	40	56	–	63	–	16.4	9	-14	-6	7	✓	8700	✓	3.40	GI205	SQ341	AC003
	125A09R-S90LN12-C	125	–	40	56	–	63	–	16.4	9	-14	-6	9	✓	8700	✓	3.35	GI205	SQ341	AC003

GI205	LNGX 1205..	LNGU 1205..

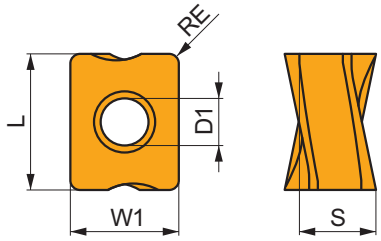
		Nm						
SQ340	US 44012-T15P	3.5	M 4	12	–	–	Flag T15P	–
SQ341	US 44012-T15P	3.5	M 4	12	D-T08P/T15P	FG-15	–	–
SQ342	US 44012-T15P	3.5	M 4	12	D-T08P/T15P	FG-15	–	HS 0830C
SQ343	US 44012-T15P	3.5	M 4	12	D-T08P/T15P	FG-15	–	HS 1030C

AC001	KS 1230	K.FMH27
AC002	KS 1635	K.FMH32
AC003	KS 2040	K.FMH40

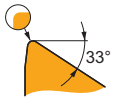
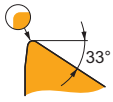
LNGX 12

PRAMET

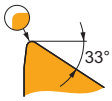
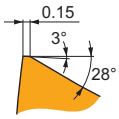
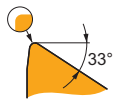
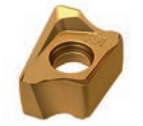
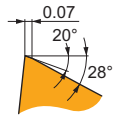
	W1 (mm)	D1 (mm)	L (mm)	S (mm)
1205	9.500	4.50	12.00	5.96



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)
																				
F geometría muy positiva para mecanizado ligero.																				
LNGX 120504ER-F:8215	●	0.4	200	0.15	1.5	–	–	–	190	0.15	1.5	–	–	–	–	–	–	–	–	–
LNGX 120504ER-F:M8330	●	0.4	200	0.15	1.5	–	–	–	190	0.15	1.5	–	–	–	–	–	–	–	–	–
LNGX 120504ER-F:M8340	●	0.4	180	0.15	1.5	–	–	–	170	0.15	1.5	–	–	–	–	–	–	–	–	–
LNGX 120508ER-F:8215	⬢	0.8	240	0.15	1.5	–	–	–	225	0.15	1.5	–	–	–	–	–	–	–	–	–
LNGX 120508ER-F:M8310	⬢	0.8	260	0.15	1.5	–	–	–	245	0.15	1.5	–	–	–	–	–	–	–	–	–
LNGX 120508ER-F:M8330	⬢	0.8	235	0.15	1.5	–	–	–	220	0.15	1.5	–	–	–	–	–	–	–	–	–
LNGX 120508ER-F:M8340	⬢	0.8	215	0.15	1.5	–	–	–	200	0.15	1.5	–	–	–	–	–	–	–	–	–
																				
M geometría con diseño positivo para mecanizado ligero a medio.																				
LNGX 120504ER-M:M8330	●	0.4	185	0.15	3.0	–	–	–	175	0.15	3.0	–	–	–	–	–	–	–	–	–
LNGX 120504ER-M:M8340	⬢	0.4	170	0.15	3.0	–	–	–	160	0.15	3.0	–	–	–	–	–	–	–	–	–
LNGX 120508ER-M:8215	⬢	0.8	220	0.15	3.0	–	–	–	205	0.15	3.0	–	–	–	–	–	–	–	–	–
LNGX 120508ER-M:M8310	⬢	0.8	240	0.15	3.0	–	–	–	225	0.15	3.0	–	–	–	–	–	–	–	–	–
LNGX 120508ER-M:M8330	⬢	0.8	220	0.15	3.0	–	–	–	205	0.15	3.0	–	–	–	–	–	–	–	–	–
LNGX 120508ER-M:M8340	⬢	0.8	200	0.15	3.0	–	–	–	190	0.15	3.0	–	–	–	–	–	–	–	–	–
LNGX 120508ER-M:M9315	⬢	0.8	300	0.15	3.0	–	–	–	285	0.15	3.0	–	–	–	–	–	–	–	–	–
LNGX 120508ER-M:M9325	⬢	0.8	280	0.15	3.0	–	–	–	265	0.15	3.0	–	–	–	–	–	–	–	–	–
LNGX 120508ER-M:M9340	⬢	0.8	250	0.15	3.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
LNGX 120510ER-M:M8330	⬢	1.0	230	0.15	3.0	–	–	–	215	0.15	3.0	–	–	–	–	–	–	–	–	–
LNGX 120512ER-M:M8330	⬢	1.2	230	0.15	3.0	–	–	–	215	0.15	3.0	–	–	–	–	–	–	–	–	–

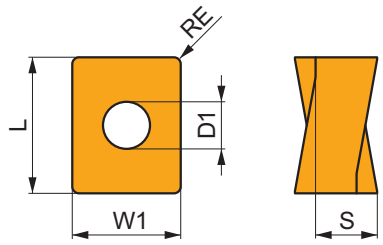
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)
			**M** geometría con diseño positivo para mecanizado ligero a medio.																	
LNGX 120512ER-M:M8340		1.2	■ 210	0.15	3.0	–	–	–	◪ 195	0.15	3.0	–	–	–	–	–	–	–	–	–
LNGX 120516ER-M:M8330		1.6	■ 240	0.15	3.0	–	–	–	■ 225	0.15	3.0	–	–	–	–	–	–	–	–	–
LNGX 120516ER-M:M8340		1.6	■ 220	0.15	3.0	–	–	–	◪ 205	0.15	3.0	–	–	–	–	–	–	–	–	–
LNGX 120520ER-M:M8310		2.0	■ 280	0.15	3.0	–	–	–	■ 265	0.15	3.0	–	–	–	–	–	–	–	–	–
LNGX 120520ER-M:M8330		2.0	■ 255	0.15	3.0	–	–	–	■ 240	0.15	3.0	–	–	–	–	–	–	–	–	–
LNGX 120520ER-M:M8340		2.0	■ 230	0.15	3.0	–	–	–	◪ 215	0.15	3.0	–	–	–	–	–	–	–	–	–
			**R** geometría con diseño positivo para mecanizado en condiciones inestables.																	
LNGX 120508SR-R:8215		0.8	■ 205	0.20	3.5	–	–	–	■ 190	0.20	3.5	–	–	–	–	–	–	–	–	–
LNGX 120508SR-R:M5315		0.8	◪ 265	0.20	3.5	–	–	–	■ 250	0.20	3.5	–	–	–	–	–	–	–	–	–
LNGX 120508SR-R:M8310		0.8	■ 220	0.20	3.5	–	–	–	■ 205	0.20	3.5	–	–	–	–	–	–	–	–	–
LNGX 120508SR-R:M8330		0.8	■ 205	0.20	3.5	–	–	–	■ 190	0.20	3.5	–	–	–	–	–	–	–	–	–
LNGX 120508SR-R:M8340		0.8	■ 185	0.20	3.5	–	–	–	◪ 175	0.20	3.5	–	–	–	–	–	–	–	–	–
LNGX 120508SR-R:M9315		0.8	■ 265	0.20	3.5	–	–	–	■ 250	0.20	3.5	–	–	–	–	–	–	–	–	–
LNGX 120508SR-R:M9325		0.8	■ 250	0.20	3.5	–	–	–	■ 235	0.20	3.5	–	–	–	–	–	–	–	–	–
LNGX 120508SR-R:M9340		0.8	■ 225	0.20	3.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
LNGX 120516SR-R:8215		1.6	■ 225	0.20	3.5	–	–	–	■ 210	0.20	3.5	–	–	–	–	–	–	–	–	–
LNGX 120516SR-R:M8330		1.6	■ 225	0.20	3.5	–	–	–	■ 210	0.20	3.5	–	–	–	–	–	–	–	–	–
LNGX 120516SR-R:M8340		1.6	■ 205	0.20	3.5	–	–	–	◪ 190	0.20	3.5	–	–	–	–	–	–	–	–	–
LNGX 120516SR-R:M9325		1.6	■ 275	0.20	3.5	–	–	–	■ 260	0.20	3.5	–	–	–	–	–	–	–	–	–
			**MF** geometría muy positiva para mecanizado ligero.																	
LNGX 120504ER-MF:M6330		0.4	◪ 175	0.15	1.0	■ 125	0.14	1.0	–	–	–	–	–	–	–	–	–	–	–	–
LNGX 120504ER-MF:M9340		0.4	◪ 240	0.15	1.0	■ 140	0.14	1.0	–	–	–	–	–	–	–	–	–	–	–	–
LNGX 120508ER-MF:M6330		0.8	◪ 210	0.15	1.0	■ 150	0.14	1.0	–	–	–	–	–	–	–	–	–	–	–	–
LNGX 120508ER-MF:M8340		0.8	◪ 225	0.15	1.0	■ 135	0.14	1.0	–	–	–	–	–	–	–	–	–	–	–	–
LNGX 120508ER-MF:M9340		0.8	◪ 285	0.15	1.0	■ 170	0.14	1.0	–	–	–	–	–	–	–	–	–	–	–	–
			**MM** geometría con diseño positivo para mecanizado ligero a medio.																	
LNGX 120508SR-MM:M6330		0.8	■ 190	0.15	2.8	■ 135	0.14	2.8	–	–	–	–	–	–	–	–	–	–	–	–
LNGX 120508SR-MM:M8340		0.8	■ 200	0.15	2.8	■ 120	0.14	2.8	–	–	–	–	–	–	–	–	–	–	–	–
LNGX 120508SR-MM:M8345		0.8	■ 160	0.15	2.8	■ 95	0.14	2.8	–	–	–	–	–	–	–	–	–	–	–	–
LNGX 120508SR-MM:M9340		0.8	■ 255	0.15	2.8	■ 150	0.14	2.8	–	–	–	–	–	–	–	–	–	–	–	–

LNGU 12

PRAMET

	W1	D1	L	S
	(mm)	(mm)	(mm)	(mm)
1205	9.500	4.50	12.00	5.96



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

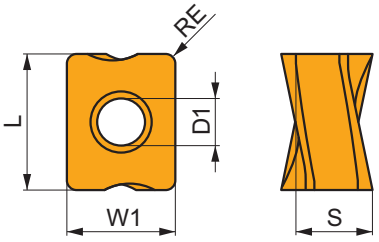
Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
LNGU 120525ER-M:M8330		2.5	■	255	0.15	3.0	–	–	–	■	240	0.15	3.0	–	–	–	–	–	–	–	–	–
LNGU 120525ER-M:M8340		2.5	■	230	0.15	3.0	–	–	–	◪	215	0.15	3.0	–	–	–	–	–	–	–	–	–
LNGU 120530ER-M:M8330		3.0	■	255	0.15	3.0	–	–	–	■	240	0.15	3.0	–	–	–	–	–	–	–	–	–
LNGU 120530ER-M:M8340		3.0	■	230	0.15	3.0	–	–	–	◪	215	0.15	3.0	–	–	–	–	–	–	–	–	–

M geometría con diseño positivo para mecanizado medio.

LNGX 12-FA

PRAMET

	W1	D1	L	S
	(mm)	(mm)	(mm)	(mm)
1205	9.500	4.50	12.00	5.96



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

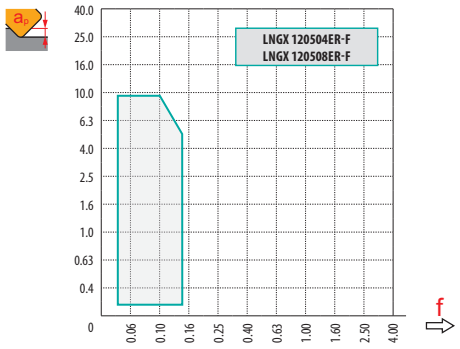
Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
LNGX 120504FR-FA:HF7	●	0.4	–	–	–	–	–	–	–	–	–	■	270	0.30	2.0	–	–	–	–	–	–
LNGX 120508FR-FA:HF7	●	0.8	–	–	–	–	–	–	–	–	–	■	315	0.30	2.0	–	–	–	–	–	–
LNGX 120508FR-FA:M0315	●	0.8	–	–	–	–	–	–	–	–	–	■	720	0.30	2.0	–	–	–	–	–	–

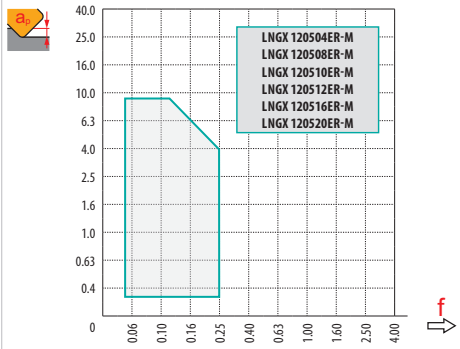
FA geometría muy positiva para fresado en acabado a mecanizado medio.

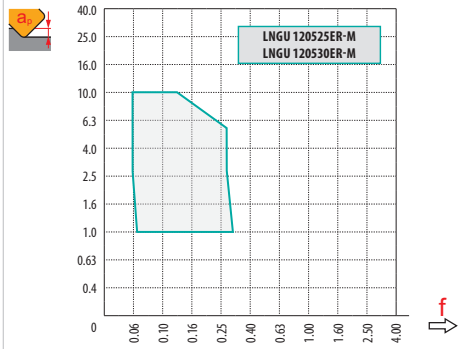
a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

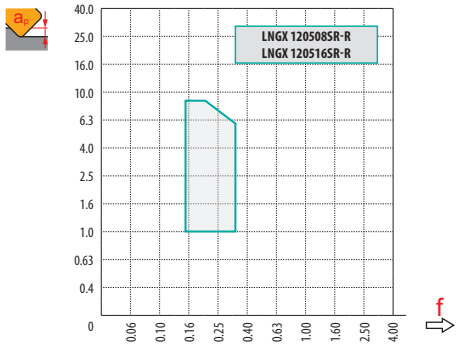
	LNGX 12-F		LNGX 12-M						LNGU 12-M	
RE	0.4	0.8	0.4	0.8	1.0	1.2	1.6	2.0	2.5	3.0
BS	2.29	1.89	2.29	1.89	1.69	1.49	1.09	0.68	0.87	0.36

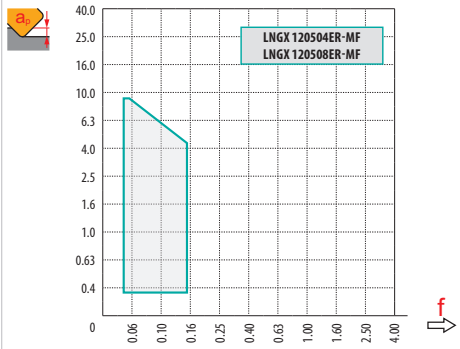
	LNGX 12-R		LNGX 12-MF		LNGX 12-MM	LNGX 12-FA	
RE	0.8	1.6	0.4	0.8	0.8	0.4	0.8
BS	1.88	1.08	2.28	1.88	1.88	2.30	1.89

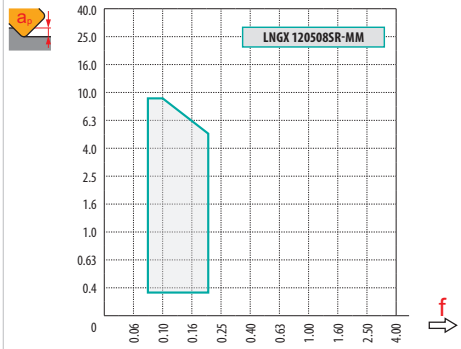


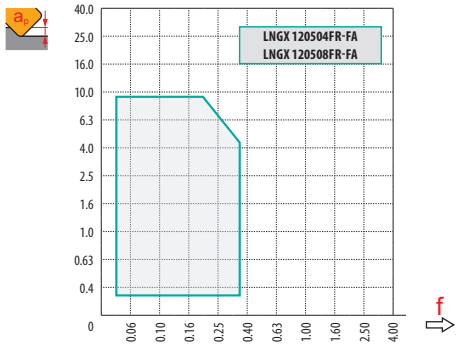












3.5

a_p	1.0	5.0	9.0
f	0.19	0.13	0.08

LNGX 12

DC	RPMX	APMX/I
25	1.3°	2.1/100
32	0.7°	1.1/100
40	0.5°	0.7/100
50	0.4°	0.5/100
63	0.2°	0.3/100
80	0.2°	0.2/100

LNGX 12

DC	DMIN	DMAX	SMAX DMIN	SMAX DMAX
25	35.0	50.0	0.7	1.7
32	49.0	64.0	0.6	1.2
40	65.0	80.0	0.6	1.0
50	85.0	100.0	0.7	1.0
63	111.0	126.0	0.6	0.8
80	145.0	160.0	0.7	0.8

0.2

DC	µm	3	5	10	15	20	30	40	50	60	80	100
25	FE	0.548	0.707	1.000	1.225	1.414	1.732	2.000	2.236	2.449	2.828	3.162
32		0.620	0.800	1.131	1.386	1.600	1.960	2.263	2.530	2.771	3.200	3.578
40		0.693	0.894	1.265	1.549	1.789	2.191	2.530	2.828	3.098	3.578	4.000
50		0.775	1.000	1.414	1.732	2.000	2.449	2.828	3.162	3.464	4.000	4.472
63		0.869	1.122	1.587	1.944	2.245	2.750	3.175	3.550	3.888	4.490	5.020
80		0.980	1.265	1.789	2.191	2.530	3.098	3.578	4.000	4.382	5.060	5.657

RE	µm	3	5	10	15	20	30	40	50	60	80	100
1.6	FE	0.196	0.253	0.358	0.438	0.506	0.620	0.716	0.800	0.876	1.012	1.131
2.0		0.219	0.283	0.400	0.490	0.566	0.693	0.800	0.894	0.980	1.131	1.265
2.5		0.245	0.316	0.447	0.548	0.632	0.775	0.894	1.000	1.095	1.265	1.414
3.0		0.268	0.346	0.490	0.600	0.693	0.849	0.980	1.095	1.200	1.386	1.549

SLN16

P K N H

PRAMET

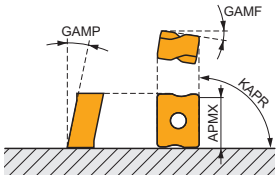
S

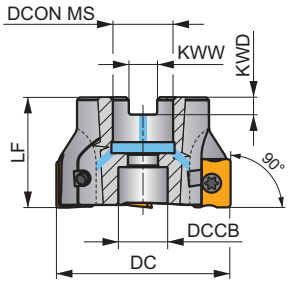
ECON LN16 Fresa de Escuadrado con Refrigeración Interna

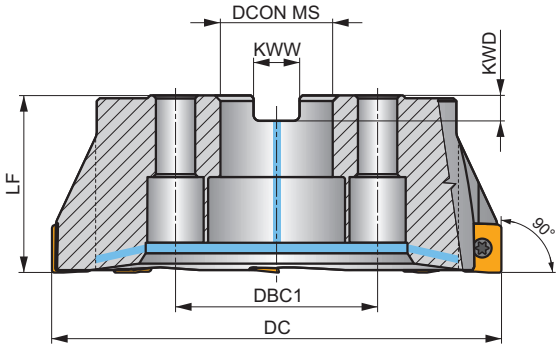
Fresa para portafresas a 90° con plaquitas de doble cara LN.. 16 con APMX de 13 mm. Adecuada para una amplia gama de aplicaciones. Disponible para portafresas con paso diferencial. Cuerpo tratado para alargar la vida de herramienta.

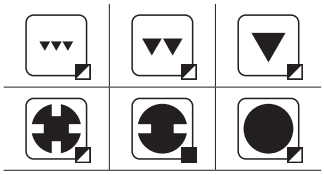
ECON LN

KAPR	90°
APMX	13.0 mm









h_m 0.08 - 0.2

	Producto	DC (mm)	LF (mm)	DCON MS (mm)	DCCB (mm)	DBC1 (mm)	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		kg			
ISO 6462 DIN 8030	**63A04R-S90LN16-C**	63	40	22	18	–	10.4	6.3	-10.5	-6	4	✓	7600	✓	0.46	GI207	SQ353	–
	63A05R-S90LN16-C	63	40	22	18	–	10.4	6.3	-10.5	-6	5	✓	7600	✓	0.46	GI207	SQ353	–
	80A04R-S90LN16-C	80	50	27	38	–	12.4	7	-10.5	-6	4	✓	6800	✓	0.98	GI207	SQ351	AC001
	80A06R-S90LN16-C	80	50	27	38	–	12.4	7	-10.5	-6	6	✓	6800	✓	0.89	GI207	SQ351	AC001
	100A05R-S90LN16-C	100	50	32	45	–	14.4	8	-10.5	-6	5	✓	6100	✓	0.98	GI207	SQ351	AC002
	100A07R-S90LN16-C	100	50	32	45	–	14.4	8	-10.5	-6	7	✓	6100	✓	1.78	GI207	SQ351	AC002
	125A06R-S90LN16-C	125	63	40	56	–	16.4	9	-10.5	-6	6	✓	5400	✓	3.39	GI207	SQ351	AC003
	125A08R-S90LN16-C	125	63	40	56	–	16.4	9	-10.5	-6	8	✓	5400	✓	3.28	GI207	SQ351	AC003
	140A06R-S90LN16-C	140	63	40	56	–	16.4	9	-10.5	-6	6	✓	5100	✓	3.91	GI207	SQ351	AC003
	160C08R-S90LN16-C	160	63	40	–	66.7	16.4	9	-10.5	-6	8	✓	4700	✓	6.19	GI207	SQ356	–
	175C08R-S90LN16-C	175	63	40	–	66.7	16.4	9	-10.5	-6	8	✓	4500	✓	7.11	GI207	SQ356	–

GI207	LNMU 1607..	LNGU 1607..

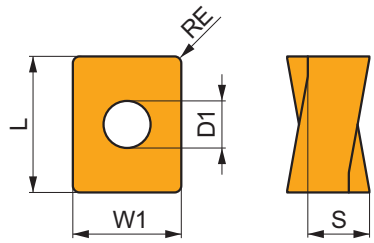
		Nm							
SQ351	US 45012-T20P	5.0	M 5	12	SDR T20P-T	–	–	–	–
SQ353	US 45012-T20P	5.0	M 5	12	SDR T20P-T	HS 1030C	–	–	–
SQ356	US 45012-T20P	5.0	M 5	12	SDR T20P-T	HS 1240C	CAC 160C	HSD 0825C	HXK 5

AC001	KS 1230	K.FMH27
AC002	KS 1635	K.FMH32
AC003	KS 2040	K.FMH40

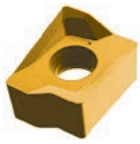
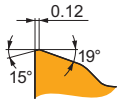
LNGU 16

PRAMET

	W1 (mm)	D1 (mm)	L (mm)	S (mm)
1607	13.200	5.70	16.60	7.50



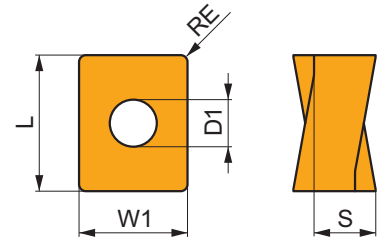
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
																			
M geometría muy positiva para mecanizado medio.																			
LNGU 160708SR-M:8215	0.8	200	0.18	5.0	–	–	–	190	0.18	5.0	–	–	–	–	–	–	40	0.12	1.0
LNGU 160708SR-M:M8340	0.8	180	0.18	5.0	–	–	–	170	0.18	5.0	–	–	–	–	–	–	–	–	–
LNGU 160708SR-M:M9315	0.8	265	0.18	5.0	–	–	–	250	0.18	5.0	–	–	–	–	–	–	50	0.12	1.0
LNGU 160708SR-M:M9325	0.8	250	0.18	5.0	–	–	–	235	0.18	5.0	–	–	–	–	–	–	50	0.12	1.0

LNMU 16

PRAMET

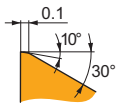
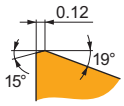
	W1 (mm)	D1 (mm)	L (mm)	S (mm)
1607	13.200	5.70	16.60	7.50



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
F geometría muy positiva para mecanizado ligero.																			
LNMU 160708ER-F:M8330	0.8	230	0.16	1.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
LNMU 160708ER-F:M8340	0.8	210	0.16	1.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

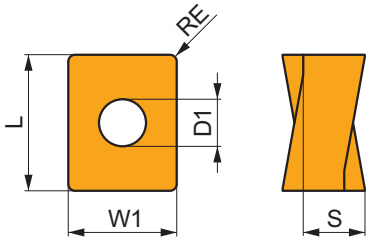
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
																			
M geometría con diseño positivo para mecanizado medio.																			
LNMU 160708SR-M:8215	0.8	200	0.18	5.0	–	–	–	190	0.18	5.0	–	–	–	–	–	–	–	–	–
LNMU 160708SR-M:M6330	0.8	170	0.18	5.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
LNMU 160708SR-M:M8330	0.8	200	0.18	5.0	–	–	–	190	0.18	5.0	–	–	–	–	–	–	–	–	–
LNMU 160708SR-M:M8340	0.8	180	0.18	5.0	–	–	–	170	0.18	5.0	–	–	–	–	–	–	–	–	–
LNMU 160708SR-M:M9325	0.8	250	0.18	5.0	–	–	–	235	0.18	5.0	–	–	–	–	–	–	–	–	–
LNMU 160720SR-M:M8330	2.0	230	0.18	5.0	–	–	–	215	0.18	5.0	–	–	–	–	–	–	–	–	–
LNMU 160720SR-M:M8340	2.0	210	0.18	5.0	–	–	–	195	0.18	5.0	–	–	–	–	–	–	–	–	–
LNMU 160730SR-M:M8330	3.0	230	0.18	5.0	–	–	–	215	0.18	5.0	–	–	–	–	–	–	–	–	–
LNMU 160730SR-M:M8340	3.0	210	0.18	5.0	–	–	–	195	0.18	5.0	–	–	–	–	–	–	–	–	–
LNMU 160740SR-M:M8340	4.0	210	0.18	5.0	–	–	–	195	0.18	5.0	–	–	–	–	–	–	–	–	–
																			
R geometría con diseño positivo estable para mecanizado medio.																			
LNMU 160708SR-R:M5315	0.8	265	0.18	6.3	–	–	–	250	0.18	6.3	–	–	–	–	–	–	50	0.12	1.0
LNMU 160708SR-R:M8330	0.8	195	0.18	6.3	–	–	–	185	0.18	6.3	–	–	–	–	–	–	35	0.12	1.0
LNMU 160708SR-R:M8340	0.8	175	0.18	6.3	–	–	–	165	0.18	6.3	–	–	–	–	–	–	–	–	–
LNMU 160708SR-R:M9315	0.8	260	0.18	6.3	–	–	–	245	0.18	6.3	–	–	–	–	–	–	50	0.12	1.0
LNMU 160708SR-R:M9325	0.8	240	0.18	6.3	–	–	–	225	0.18	6.3	–	–	–	–	–	–	45	0.12	1.0
LNMU 160716SR-R:M8330	1.6	215	0.18	6.3	–	–	–	200	0.18	6.3	–	–	–	–	–	–	40	0.12	1.1
LNMU 160716SR-R:M8340	1.6	195	0.18	6.3	–	–	–	185	0.18	6.3	–	–	–	–	–	–	–	–	–
LNMU 160716SR-R:M9315	1.6	285	0.18	6.3	–	–	–	270	0.18	6.3	–	–	–	–	–	–	55	0.12	1.1
LNMU 160716SR-R:M9325	1.6	265	0.18	6.3	–	–	–	250	0.18	6.3	–	–	–	–	–	–	50	0.12	1.1

LNGU 16-FA

PRAMET

	W1 (mm)	D1 (mm)	L (mm)	S (mm)
1607	13.200	5.70	16.60	7.50

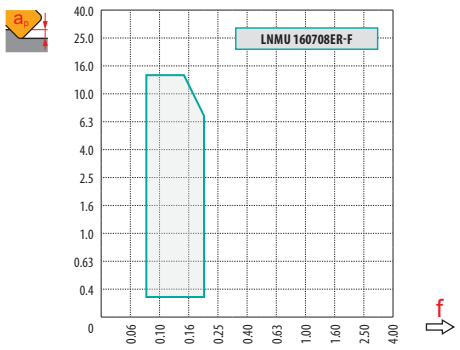


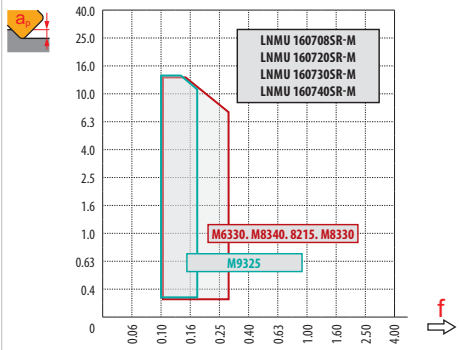
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

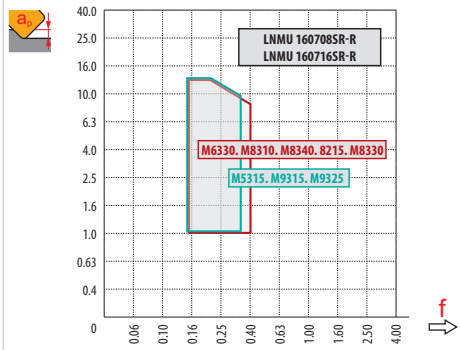
Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
FA geometría muy positiva para fresado en acabado a mecanizado medio.																			
LNGU 160708FR-FA:HF7	0.8	–	–	–	–	–	–	–	–	–	300	0.30	3.0	–	–	–	–	–	–

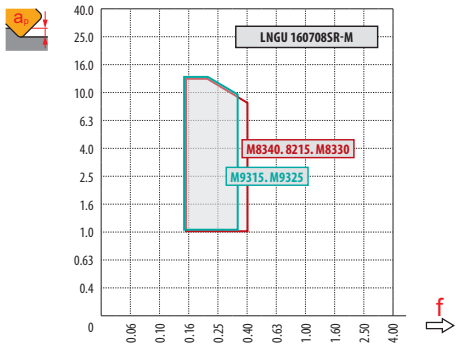
a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

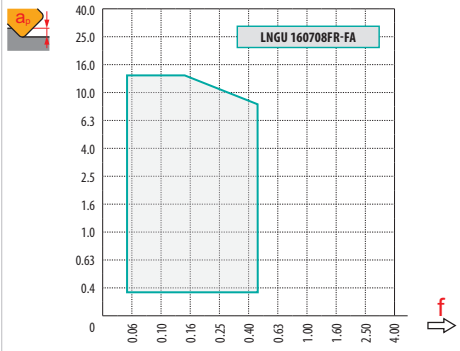
	LNMU 16-F	LNMU 16-M				LNMU 16-R		LNGU 16-M	LNGU 16-FA
RE	0.8	0.8	2.0	3.0	4.0	0.8	1.6	0.8	0.8
BS	3.30	3.30	2.11	1.12	0.10	3.30	2.50	3.24	3.30











max
7.0

a_p	1.0	6.0	13.0
1 f	0.31	0.24	0.13

SLN12X

P K H

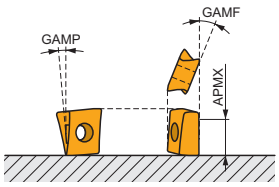
PRAMET

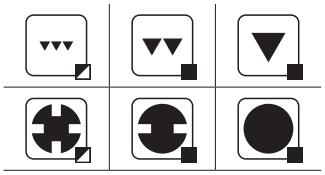
S

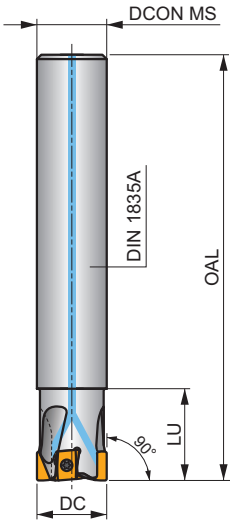
Fresa de escuadrado tangencial de 90° PROD LN12 con refrigeración interna

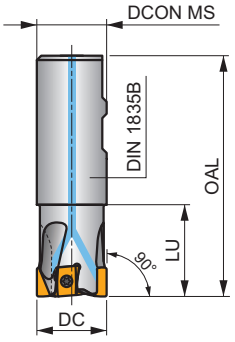
Fresas de escuadrado a 90° con plaquita tangencial LNEX 12 con 4 filos de corte y APMX de 10 mm. Adecuada para una amplia gama de aplicaciones. Disponibles en mango cilíndrico, Weldon y para portafresas. El cuerpo robusto de la fresa permite una larga vida útil y una excelente resistencia a la rotura.

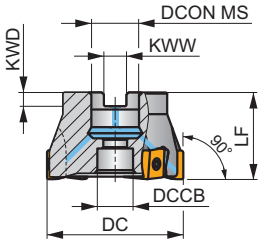
KAPR	90°
APMX	10.0 mm











h_m 0.06 - 0.18

h_m 0.06 - 0.20

	Producto	DC (mm)	OAL (mm)	DCON MS (mm)	DCCB (mm)	LU (mm)	LF (mm)	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		kg		
DIN 1835A	25A2R042A25-SLN12X-C	25	170	25	–	42	–	–	–	-30	-5	2	–	17300	✓	0.55	GI206	C0382
	25A2R080A25-SLN12X-C	25	170	25	–	80	–	–	–	-30	-5	2	–	17300	✓	0.50	GI206	C0382
	32A3R042A32-SLN12X-C	32	195	32	–	42	–	–	–	-22.5	-5	3	–	15300	✓	1.08	GI206	SQ340
	32A3R090A32-SLN12X-C	32	195	32	–	90	–	–	–	-22.5	-5	3	–	15300	✓	1.02	GI206	SQ340
	40A4R050A32-SLN12X-C	40	195	32	–	50	–	–	–	-22.5	-5	4	–	13700	✓	1.17	GI206	SQ340
DIN 1835B	25A2R042B25-SLN12X-C	25	100	25	–	42	–	–	–	-30	-5	2	–	17300	✓	0.29	GI206	C0382
	32A3R042B32-SLN12X-C	32	110	32	–	42	–	–	–	-22.5	-5	3	–	15300	✓	0.58	GI206	SQ340
	40A4R050B32-SLN12X-C	40	120	32	–	50	–	–	–	-22.5	-5	4	–	13700	✓	0.73	GI206	SQ340
ISO 6462 DIN 8030	40A03R-S90LN12X-C	40	–	16	12.4	–	40	8.4	5.6	-22.5	-5	3	–	13700	✓	0.15	GI206	SQ345
	40A04R-S90LN12X-C	40	–	16	12.4	–	40	8.4	5.6	-22.5	-5	4	✓	13700	✓	0.23	GI206	SQ345
	50A05R-S90LN12X-C	50	–	22	16.5	–	40	10.4	6.3	-19.5	-5	5	–	12300	✓	0.34	GI206	SQ343
	50A06R-S90LN12X-C	50	–	22	16.5	–	40	10.4	6.3	-19.5	-5	6	–	12300	✓	0.34	GI206	SQ343
	52A05R-S90LN12X-C	52	–	22	16.5	–	40	10.4	6.3	-19.5	-5	5	–	12300	✓	0.37	GI206	SQ343
	63A06R-S90LN12X-C	63	–	22	16.5	–	40	10.4	6.3	-19.5	-5	6	✓	10900	✓	0.61	GI206	SQ343
	63A08R-S90LN12X-C	63	–	22	16.5	–	40	10.4	6.3	-19.5	-5	8	–	10900	✓	0.50	GI206	SQ343
	66A06R-S90LN12X-C	66	–	22	16.5	–	40	10.4	6.3	-19.5	-5	6	✓	10900	✓	0.54	GI206	SQ343
	80A07R-S90LN12X-C	80	–	27	38.1	–	50	12.4	7	-19.5	-5	7	✓	9700	✓	1.00	GI206	SQ341
	80A10R-S90LN12X-C	80	–	27	38.1	–	50	12.4	7	-19.5	-5	10	–	9700	✓	0.98	GI206	SQ341
	100A08R-S90LN12X-C	100	–	32	45.1	–	50	14.4	8	-17.5	-5	8	✓	8700	✓	1.90	GI206	SQ341
	100A11R-S90LN12X-C	100	–	32	45.1	–	50	14.4	8	-17.5	-5	11	–	8700	✓	1.88	GI206	SQ341
	125A12R-S90LN12X-C	125	–	40	56.1	–	63	16.4	9	-17.5	-5	12	✓	7800	✓	3.39	GI206	SQ341

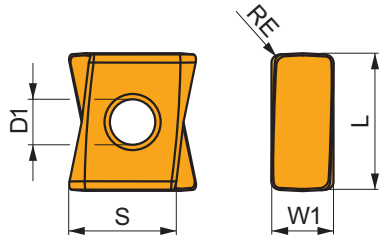
GI206	LNEX 1210..

		Nm						
C0382	US 44010-T15P	3.5	M 4	10	–	–	Flag T15P	–
SQ340	US 44012-T15P	3.5	M 4	12	–	–	Flag T15P	–
SQ341	US 44012-T15P	3.5	M 4	12	D-T08P/T15P	FG-15	–	–
SQ343	US 44012-T15P	3.5	M 4	12	D-T08P/T15P	FG-15	–	HS 1030C
SQ345	US 44012-T15P	3.5	M 4	12	D-T08P/T15P	FG-15	–	HS 90835

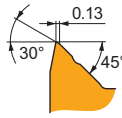
LNEX 12

PRAMET

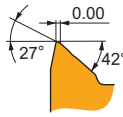
	W1 (mm)	D1 (mm)	L (mm)	S (mm)
1210	6.000	4.40	13.30	10.26



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)
		(mm)																		
																				
LNEX 121008SR-F:M6330		0.8	220	0.17	3.0	155	0.15	3.0	–	–	–	–	–	–	–	–	–	–	–	–
LNEX 121008SR-F:M8310		0.8	280	0.17	3.0	140	0.15	3.0	265	0.17	3.0	–	–	–	–	–	–	55	0.11	1.0
LNEX 121008SR-F:M8330		0.8	260	0.17	3.0	155	0.15	3.0	245	0.17	3.0	–	–	–	–	–	–	50	0.11	1.0
LNEX 121008SR-F:M8340		0.8	235	0.17	3.0	140	0.15	3.0	220	0.17	3.0	–	–	–	–	–	–	–	–	–
LNEX 121012SR-F:M6330		1.2	230	0.17	3.0	165	0.15	3.0	–	–	–	–	–	–	–	–	–	–	–	–
LNEX 121012SR-F:M8310		1.2	295	0.17	3.0	150	0.15	3.0	280	0.17	3.0	–	–	–	–	–	–	55	0.11	1.0
LNEX 121012SR-F:M8330		1.2	270	0.17	3.0	160	0.15	3.0	255	0.17	3.0	–	–	–	–	–	–	50	0.11	1.0

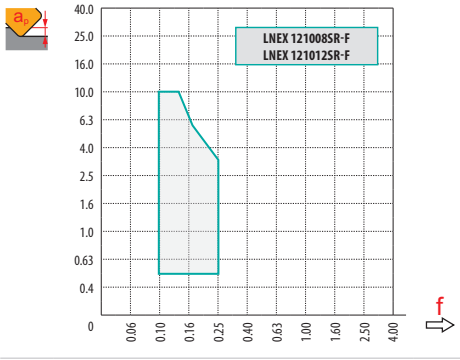
F la geometría es afilada y se utiliza para el mecanizado ligero y medio, adecuada para aplicaciones de gran voladizo. Diseñada con un ángulo de desprendimiento muy positivo, una faceta T estrecha y un redondeado de filo para mecanizado ligero a medio.

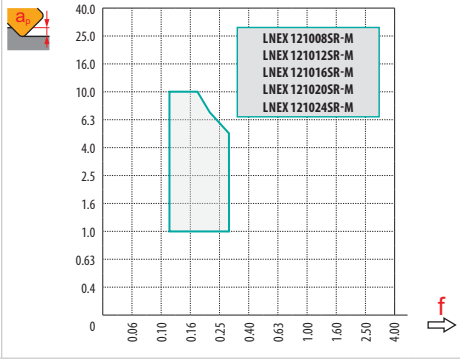
																				
LNEX 121008SR-M:M6330		0.8	210	0.20	3.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
LNEX 121008SR-M:M8310		0.8	265	0.20	3.5	–	–	–	250	0.20	3.5	–	–	–	–	–	–	50	0.16	1.0
LNEX 121008SR-M:M8330		0.8	245	0.20	3.5	–	–	–	230	0.20	3.5	–	–	–	–	–	–	45	0.16	1.0
LNEX 121008SR-M:M8340		0.8	220	0.20	3.5	–	–	–	205	0.20	3.5	–	–	–	–	–	–	–	–	–
LNEX 121008SR-M:M9315		0.8	320	0.20	3.5	–	–	–	300	0.20	3.5	–	–	–	–	–	–	60	0.16	1.0
LNEX 121008SR-M:M9325		0.8	300	0.20	3.5	–	–	–	285	0.20	3.5	–	–	–	–	–	–	60	0.16	1.0
LNEX 121008SR-M:M9340		0.8	270	0.20	3.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
LNEX 121012SR-M:M8310		1.2	280	0.20	3.5	–	–	–	265	0.20	3.5	–	–	–	–	–	–	55	0.16	1.0
LNEX 121012SR-M:M8330		1.2	255	0.20	3.5	–	–	–	240	0.20	3.5	–	–	–	–	–	–	50	0.16	1.0
LNEX 121012SR-M:M8340		1.2	235	0.20	3.5	–	–	–	220	0.20	3.5	–	–	–	–	–	–	–	–	–
LNEX 121016SR-M:M8310		1.6	295	0.20	3.5	–	–	–	280	0.20	3.5	–	–	–	–	–	–	55	0.16	1.0
LNEX 121016SR-M:M8330		1.6	270	0.20	3.5	–	–	–	255	0.20	3.5	–	–	–	–	–	–	50	0.16	1.0
LNEX 121016SR-M:M8340		1.6	245	0.20	3.5	–	–	–	230	0.20	3.5	–	–	–	–	–	–	–	–	–
LNEX 121020SR-M:M8330		2.0	285	0.20	3.5	–	–	–	270	0.20	3.5	–	–	–	–	–	–	55	0.16	1.0
LNEX 121020SR-M:M8340		2.0	255	0.20	3.5	–	–	–	240	0.20	3.5	–	–	–	–	–	–	–	–	–
LNEX 121024SR-M:M8330		2.4	285	0.20	3.5	–	–	–	270	0.20	3.5	–	–	–	–	–	–	55	0.16	1.0
LNEX 121024SR-M:M8340		2.4	255	0.20	3.5	–	–	–	240	0.20	3.5	–	–	–	–	–	–	–	–	–

M la geometría es versátil y es la primera opción para una amplia variedad de condiciones de trabajo. Diseñada con un ángulo de desprendimiento positivo, una faceta T media y un redondeado de filo para mecanizado medio a semidesbaste.

a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	LNEX 12-F		LNEX 12-M				
RE	0.8	1.2	0.8	1.2	1.6	2.0	2.4
BS	2.25	1.73	2.25	1.73	1.33	1.15	0.79





max
2.5

a_p	2.0	3.0	4.0	5.0
f	0.30	0.20	0.20	0.15

DC	RPMX	APMX/I
25	0.80°	1.40/100
32	0.60°	1.00/100
40	0.35°	0.60/100
50	0.30°	0.50/100
52	0.30°	0.50/100
63	0.20°	0.35/100

DC	DMIN	DMAX	SMAX DMIN	SMAX DMAX
25	44.0	48.0	0.6	0.7
32	58.0	62.0	0.8	1.0
40	74.0	78.0	0.7	0.8
50	94.0	98.0	0.7	0.8
52	98.0	102.0	0.7	0.8
63	120.0	124.0	0.3	0.4

DC	µm	3	5	10	15	20	30	40	50	60	80	100
25		0.548	0.707	1.000	1.225	1.414	1.732	2.000	2.236	2.449	2.828	3.162
32		0.620	0.800	1.131	1.386	1.600	1.960	2.263	2.530	2.771	3.200	3.578
40		0.693	0.894	1.265	1.549	1.789	2.191	2.530	2.828	3.098	3.578	4.000
50		0.775	1.000	1.414	1.732	2.000	2.449	2.828	3.162	3.464	4.000	4.472
52		0.869	1.122	1.587	1.944	2.245	2.750	3.175	3.550	3.888	4.490	5.020
63		0.980	1.265	1.789	2.191	2.530	3.098	3.578	4.000	4.382	5.060	5.657

RE	µm	3	5	10	15	20	30	40	50	60	80	100
0.8		0.155	0.200	0.283	0.346	0.400	0.490	0.566	0.632	0.693	0.800	0.894
1.2		0.170	0.219	0.310	0.379	0.438	0.537	0.620	0.693	0.759	0.876	0.980
1.6		0.196	0.253	0.358	0.438	0.506	0.620	0.716	0.800	0.876	1.012	1.131
2.0		0.219	0.283	0.400	0.490	0.566	0.693	0.800	0.894	0.980	1.131	1.265
2.4		0.245	0.316	0.447	0.548	0.632	0.775	0.894	1.000	1.095	1.265	1.414

PLANEADO

	SAD07D	SAD11E	SAD16E	SAP10D	SAP16D
	90°	90°	90°	90°	90°
	APMX (mm) 5.0	APMX (mm) 9.0	APMX (mm) 13.0	APMX (mm) 9.0	APMX (mm) 13.0
	DC (mm) 10 – 32	DC (mm) 16 – 125	DC (mm) 25 – 175	DC (mm) 10 – 25	DC (mm) 25 – 125
Mango cilíndrico	DC = 10 – 25 (mm)	DC = 16 – 35 (mm)	DC = 25, 32 (mm)		
Weldon		DC = 16 – 32 (mm)	DC = 25 – 40 (mm)	DC = 10 – 25 (mm)	DC = 25 – 40 (mm)
Modular	DC = 12 – 32 (mm)	DC = 16 – 40 (mm)	DC = 32, 40 (mm)		
Portafresas		DC = 40 – 125 (mm)	DC = 40 – 175 (mm)		DC = 40 – 125 (mm)
Página	90	97	106	114	117
ISO	P M K N S	P M K N S H	P M K N S H	P M K N S	P M K N S
Forma de la plaquita					
Plaquitas de corte	AD.X 0702	AD.X 11T3	AD.X 1606	APKT 1003	AP.T 1604
N.º de filos de corte	2	2	2	2	2
Planeado	■	■	■	■	■
Fresado de chaflanes	■	■	■	■	■
Interpolación helicoidal	■	■	■	■	■
Fresado axial progresivo	■	■	■	■	■
Mecanizado en rampa	■	■	■	■	■
Fresado de superficies conformadas (fresado en copia)	■	■	■	■	■
Escuadrado poco profundo	◪	◪	◪	◪	◪
Ranurado poco profundo	◪	■	■		

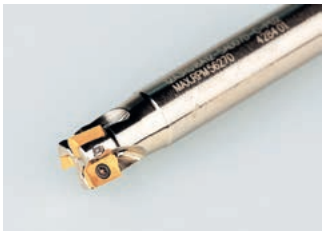
■ Primera Opción ◪ Opción Alternativa

SAD07D

P M K N S

PRAMET

S

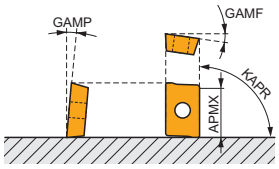


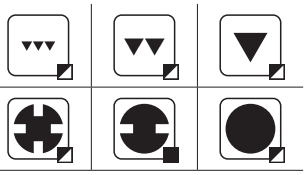
FORCE AD07 Fresa de Escuadrado con Refrigeración Interna

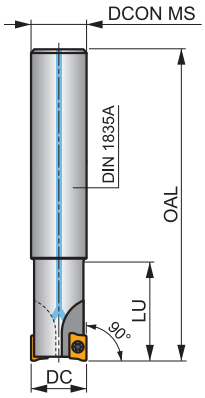
Fresa a 90° con plaquitas positivas AD.. 07 con APMX de 5 mm. Adecuada para planeado, escuadrado, ranurado, interpolación helicoidal, fresado trocoidal , en rampa y axial (plunge). Disponible con mango cilíndrico y modular, con paso diferencial. Cuerpo tratado para alargar la vida de herramienta.

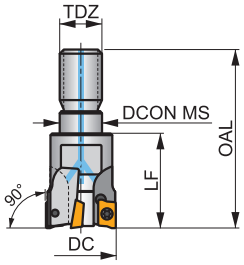
FORCE AD

KAPR	90°
APMX	5.0 mm









h_m 0.03 - 0.08

	Producto	DC (mm)	OAL (mm)	DCON MS (mm)	LU (mm)	LF (mm)	TDZ	GAMF (°)	GAMP (°)			max.		kg		
	10A2R016A08-SAD07D-C	10	100	8	16	–	–	-12	8	2	–	61600	✓	0.05	GI276	SQ010
	10A2R016A10-SAD07D-C	10	80	10	16	–	–	-12	8	2	–	61600	✓	0.05	GI276	SQ010
	10A2R018A08-SAD07D-CF	10	100	8	18	–	–	-12	8	2	–	61600	✓	0.06	GI276	SQ010
	10A2R018A10-SAD07D-CF	10	80	10	18	–	–	-12	8	2	–	61600	✓	0.05	GI276	SQ010
	12A2R018A10-SAD07D-C	12	120	10	18	–	–	-10	8	2	–	56300	✓	0.09	GI276	SQ010
	12A2R018A12-SAD07D-C	12	90	12	18	–	–	-10	8	2	–	56300	✓	0.09	GI276	SQ010
	12A3R018A12-SAD07D-C	12	90	12	18	–	–	-10	8	3	–	56200	✓	0.09	GI276	SQ010
	12A3R020A12-SAD07D-CF	12	90	12	20	–	–	-10	8	3	–	56200	✓	0.09	GI276	SQ010
	14A3R018A12-SAD07D-C	14	140	12	18	–	–	-9	8	3	–	52100	✓	0.13	GI276	SQ010
	14A3R018A14-SAD07D-C	14	90	14	18	–	–	-9	8	3	–	52100	✓	0.11	GI276	SQ010
DIN 1835A	14A3R020A12-SAD07D-CF	14	140	12	20	–	–	-9	8	3	–	52100	✓	0.14	GI276	SQ010
DIN 1835A	14A3R020A14-SAD07D-CF	14	90	14	20	–	–	-9	8	3	–	52100	✓	0.11	GI276	SQ010
	16A3R019A14-SAD07D-C	16	160	14	19	–	–	-8	8	3	–	48700	✓	0.21	GI276	SQ011
	16A3R019A16-SAD07D-C	16	110	16	19	–	–	-8	8	3	–	48700	✓	0.18	GI276	SQ011
	16A4R019A16-SAD07D-C	16	110	16	19	–	–	-8	8	4	–	48700	✓	0.18	GI276	SQ011
	18A4R019A16-SAD07D-C	18	180	16	19	–	–	-7.5	8	4	✓	45900	✓	0.28	GI276	SQ011
	18A4R019A18-SAD07D-C	18	110	18	19	–	–	-7.5	8	4	✓	45900	✓	0.22	GI276	SQ011
	20A4R020A18-SAD07D-C	20	200	18	20	–	–	-7	8	4	✓	43600	✓	0.37	GI276	SQ011
	20A4R020A20-SAD07D-C	20	125	20	20	–	–	-7	8	4	✓	43600	✓	0.29	GI276	SQ011
	20A5R020A20-SAD07D-C	20	125	20	20	–	–	-7	8	5	✓	43600	✓	0.30	GI276	SQ011
	25A5R024A25-SAD07D-C	25	140	25	24	–	–	-6.5	8	5	✓	39000	✓	0.51	GI276	SQ011
	25A6R024A25-SAD07D-C	25	140	25	24	–	–	-6.5	8	6	✓	39000	✓	0.51	GI276	SQ011
	12A2R020M06-SAD07D-C	12	35	6.5	–	20	M6	-10	8	2	–	–	✓	0.04	GI276	SQ010
	14A3R020M08-SAD07D-C	14	38	8.5	–	20	M8	-9	8	3	–	–	✓	0.04	GI276	SQ010
MODULAR	14A3R023M08-SAD07D-CF	14	41	8.5	–	23	M8	-9	8	3	–	–	✓	0.05	GI276	SQ010
MODULAR	16A4R023M08-SAD07D-C	16	41	8.5	–	23	M8	-8	8	4	✓	–	✓	0.05	GI276	SQ011
	20A5R030M10-SAD07D-C	20	49	10.5	–	30	M10	-7	8	5	✓	–	✓	0.08	GI276	SQ011

	Producto	DC (mm)	OAL (mm)	DCON MS (mm)	LU (mm)	LF (mm)	TDZ	GAMF (°)	GAMP (°)			max.		kg		
MODULAR	**25A6R035M12-SAD07D-C**	25	57	12.5	–	35	M12	-6.5	8	6	✓	–	✓	0.13	GI276	SQ011
MODULAR	**32A8R043M16-SAD07D-C**	32	66	17	–	43	M16	-6	8	8	✓	–	✓	0.24	GI276	SQ011

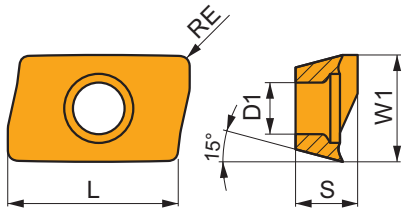
GI276	ADMX 0702..	ADEX 0702..

		Nm			
SQ010	US 62003A-T06P	0.6	M 2	3	Flag T06P
SQ011	US 62004A-T06P	0.6	M 2	4	Flag T06P

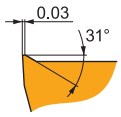
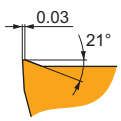
ADMX 07

PRAMET

	W1 (mm)	D1 (mm)	L (mm)	S (mm)
0702	4.482	2.20	6.95	2.48

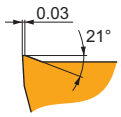


Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
			**F** geometría con diseño positivo muy afilado para mecanizado ligero.																	
ADMX 070202SR-F:M8330	●	0.2	220	0.07	2.0	130	0.06	2.0	–	–	–	660	0.08	2.0	55	0.05	1.6	–	–	–
ADMX 070204SR-F:M6330	●	0.4	200	0.07	2.0	140	0.06	2.0	–	–	–	–	–	–	60	0.05	1.6	–	–	–
ADMX 070204SR-F:M8330	●	0.4	235	0.07	2.0	140	0.06	2.0	–	–	–	705	0.08	2.0	55	0.05	1.6	–	–	–
ADMX 070204SR-F:M8340	●	0.4	215	0.07	2.0	125	0.06	2.0	–	–	–	–	–	–	50	0.05	1.6	–	–	–
ADMX 070208SR-F:M8310	⧓	0.8	320	0.07	2.0	160	0.06	2.0	–	–	–	–	–	–	–	–	–	–	–	–
ADMX 070208SR-F:M8330	⧓	0.8	280	0.07	2.0	165	0.06	2.0	–	–	–	840	0.08	2.0	70	0.05	1.6	–	–	–
ADMX 070208SR-F:M8340	⧓	0.8	255	0.07	2.0	150	0.06	2.0	–	–	–	–	–	–	60	0.05	1.6	–	–	–
			**M** geometría con diseño positivo para mecanizado ligero a medio.																	
ADMX 070202SR-M:M8330	●	0.2	205	0.09	2.2	120	0.08	2.2	190	0.09	2.2	615	0.11	2.2	50	0.06	1.8	–	–	–
ADMX 070202SR-M:M8340	●	0.2	185	0.09	2.2	110	0.08	2.2	175	0.09	2.2	–	–	–	45	0.06	1.8	–	–	–
ADMX 070204SR-M:8215	●	0.4	225	0.09	2.2	135	0.08	2.2	210	0.09	2.2	675	0.11	2.2	55	0.06	1.8	–	–	–
ADMX 070204SR-M:M6330	●	0.4	190	0.09	2.2	135	0.08	2.2	–	–	–	–	–	–	55	0.06	1.8	–	–	–
ADMX 070204SR-M:M8310	●	0.4	245	0.09	2.2	120	0.08	2.2	230	0.09	2.2	–	–	–	–	–	–	–	–	–
ADMX 070204SR-M:M8330	●	0.4	220	0.09	2.2	130	0.08	2.2	205	0.09	2.2	660	0.11	2.2	55	0.06	1.8	–	–	–
ADMX 070204SR-M:M8340	●	0.4	200	0.09	2.2	120	0.08	2.2	190	0.09	2.2	–	–	–	50	0.06	1.8	–	–	–
ADMX 070204SR-M:M9340	●	0.4	265	0.09	2.2	155	0.08	2.2	–	–	–	–	–	–	65	0.06	1.8	–	–	–
ADMX 070208SR-M:8215	⧓	0.8	270	0.09	2.2	160	0.08	2.2	255	0.09	2.2	810	0.11	2.2	65	0.06	1.8	–	–	–

Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
ADMX 070208SR-M:M6330	●	0.8	225	0.09	2.2	160	0.08	2.2	–	–	–	–	–	–	65	0.06	1.8	–	–	–
ADMX 070208SR-M:M8310	●	0.8	290	0.09	2.2	145	0.08	2.2	275	0.09	2.2	–	–	–	–	–	–	–	–	–
ADMX 070208SR-M:M8330	●	0.8	260	0.09	2.2	155	0.08	2.2	245	0.09	2.2	780	0.11	2.2	65	0.06	1.8	–	–	–
ADMX 070208SR-M:M8340	●	0.8	240	0.09	2.2	140	0.08	2.2	225	0.09	2.2	–	–	–	60	0.06	1.8	–	–	–
ADMX 070208SR-M:M9340	●	0.8	315	0.09	2.2	185	0.08	2.2	–	–	–	–	–	–	75	0.06	1.8	–	–	–
ADMX 070216SR-M:M8330	●	1.6	290	0.09	2.2	170	0.08	2.2	275	0.09	2.2	870	0.11	2.2	70	0.06	1.8	–	–	–
ADMX 070220SR-M:M8310	●	2.0	340	0.09	2.2	170	0.08	2.2	320	0.09	2.2	–	–	–	–	–	–	–	–	–
ADMX 070220SR-M:M8330	●	2.0	300	0.09	2.2	180	0.08	2.2	285	0.09	2.2	900	0.11	2.2	75	0.06	1.8	–	–	–
ADMX 070220SR-M:M8340	●	2.0	275	0.09	2.2	165	0.08	2.2	260	0.09	2.2	–	–	–	65	0.06	1.8	–	–	–

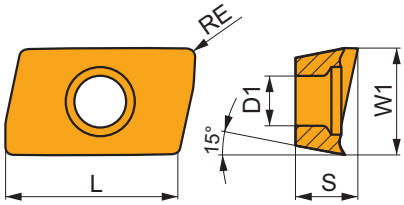


M geometría con diseño positivo para mecanizado ligero a medio.

ADEX 07-FA

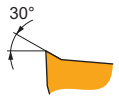
PRAMET

	W1	D1	L	S
	(mm)	(mm)	(mm)	(mm)
0702	4.497	2.20	6.95	2.48



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

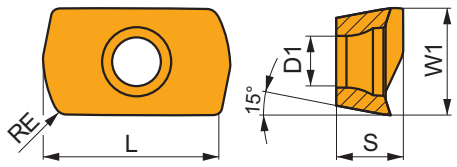
Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
ADEX 070204FR-FA:HF7	●	0.4	–	–	–	–	–	–	–	–	–	240	0.18	3.0	–	–	–	–	–	–
ADEX 070204FR-FA:M0315	●	0.4	–	–	–	–	–	–	–	–	–	555	0.18	3.0	–	–	–	–	–	–
ADEX 070208FR-FA:HF7	●	0.8	–	–	–	–	–	–	–	–	–	285	0.18	3.0	–	–	–	–	–	–



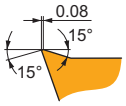
FA geometría muy positiva para fresado en acabado a mecanizado medio.

ADEX 07-HF

	W1	D1	L	S
	(mm)	(mm)	(mm)	(mm)
0702	4.439	2.20	6.45	2.48

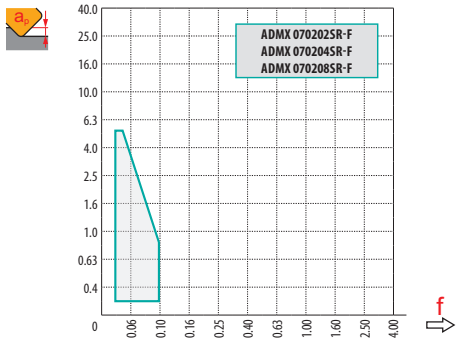


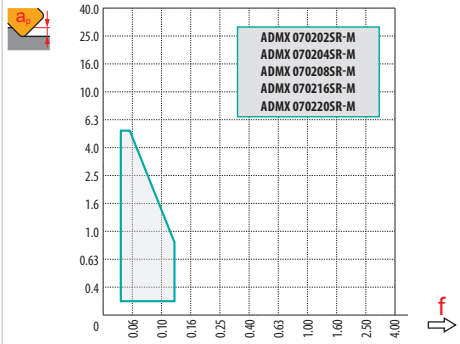
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

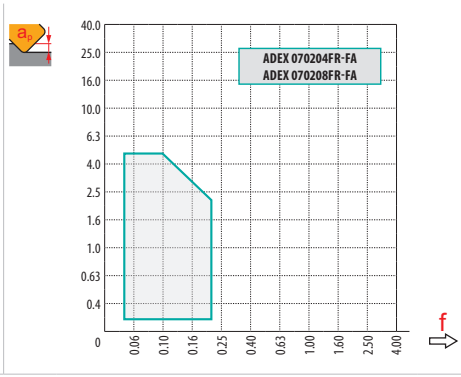
Producto	RE	P			M			K			N			S			H		
		vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
		HFC S			**HF** geometría muy positiva para mecanizado de alto avance.														
ADEX 070206SR-HF:M6330	0.6	200	0.60	0.3	140	0.54	0.3	–	–	–	–	–	–	–	–	–	–	–	–
ADEX 070206SR-HF:M8330	0.6	225	0.60	0.3	135	0.54	0.3	–	–	–	–	–	–	–	–	–	–	–	–
ADEX 070206SR-HF:M8340	0.6	215	0.60	0.3	125	0.54	0.3	–	–	–	–	–	–	–	–	–	–	–	–

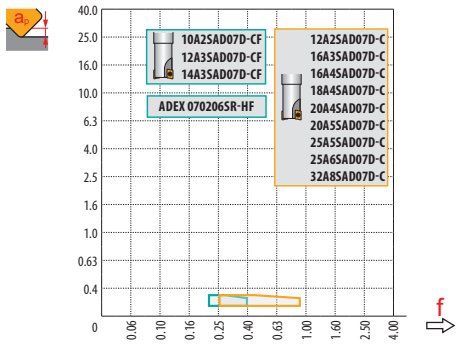
a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	ADMX 07-F			ADMX 07-M					ADEX 07-HF	ADEX 07-FA	
RE	0.2	0.4	0.8	0.2	0.4	0.8	1.6	2.0	0.6	0.4	0.8
BS	1.38	0.89	0.54	1.38	0.89	0.54	0.7	0.33	–	0.94	0.55









ADEX 07-HF				
DC	a_p	0	0.1	0.2	0.3
10		5.6	7.8	8.7	9.4
12		7.6	9.8	10.7	11.4
14		9.6	11.8	12.7	13.4
16	DEF	11.6	13.8	14.7	15.4
18		13.6	15.8	16.7	17.4
20		15.6	17.8	18.7	19.4
25		20.6	22.8	23.7	24.4
32		27.6	29.8	30.7	31.4

HFC			
a_p	0.1	0.2	0.3
1 f	0.9	0.8	0.6

max

3.0

	1.0	3.0	5.0
a_p			
1 f	0.13	0.08	0.05

	HFC		
	0.1	0.2	0.3
a_p			
1 f	0.7	0.6	0.4

DC	RPMX	APMX/I
10	5.2°	5.0/56
12	3.4°	5.0/86
14	2.5°	4.2/100
16	1.9°	3.2/100
18	1.7°	2.8/100
20	1.5°	2.5/100
25	1.1°	1.8/100
32	0.8°	1.2/100

HFC

DC	RPMX	APMX/I
10	3.5°	0.3/6
12	2.2°	0.3/9
14	1.6°	0.3/12
16	1.3°	0.3/15
18	1.1°	0.3/17
20	0.9°	0.3/21
25	0.7°	0.3/26
32	0.5°	0.3/36

DC	DMIN	DMAX	SMAX DMIN	SMAX DMAX
10	12.0	20.0	0.5	2.8
12	16.0	24.0	0.7	2.2
14	20.0	28.0	0.8	1.9
16	24.0	32.0	0.8	1.6
18	28.0	36.0	0.9	1.6
20	32.0	40.0	0.9	1.6
25	42.0	50.0	1.0	1.5
32	56.0	64.0	1.0	1.4

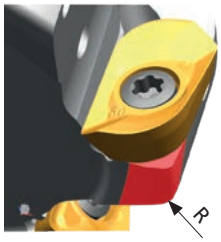
HFC

DC	DMIN	DMAX	SMAX DMIN	SMAX DMAX
10	12	20	0.30	0.30
12	16	24	0.30	0.30
14	20	28	0.30	0.30
16	24	32	0.30	0.30
18	28	36	0.30	0.30
20	32	40	0.30	0.30
25	42	50	0.30	0.30
32	56	64	0.30	0.30

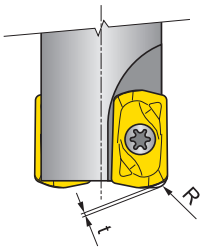
0.5

	HFC
a_p	
	0.3

DC	µm	3	5	10	15	20	30	40	50	60	80	100
10		0.346	0.447	0.632	0.775	0.894	1.095	1.265	1.414	1.549	1.789	2.000
12		0.379	0.490	0.693	0.849	0.980	1.200	1.386	1.549	1.697	1.960	2.191
14		0.410	0.529	0.748	0.917	1.058	1.296	1.497	1.673	1.833	2.117	2.366
16	FE	0.438	0.566	0.800	0.980	1.131	1.386	1.600	1.789	1.960	2.263	2.530
18		0.465	0.600	0.849	1.039	1.200	1.470	1.697	1.897	2.078	2.400	2.683
20		0.490	0.632	0.894	1.095	1.265	1.549	1.789	2.000	2.191	2.530	2.828
25		0.548	0.707	1.000	1.225	1.414	1.732	2.000	2.236	2.449	2.828	3.162
32		0.620	0.800	1.131	1.386	1.600	1.960	2.263	2.530	2.771	3.200	3.578



ADMX 07	R
ADMX 070216SR-M	1
ADMX 070220SR-M	1.5
ADEX 070206SR-HF	1



ADEX 07	R	t
ADEX 070206SR-HF	0.8	0.18

SAD11E

P M K N S H

PRAMET

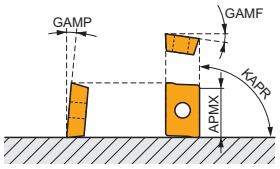
S

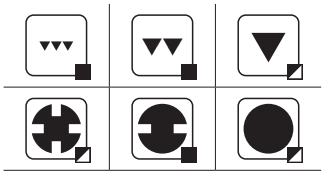
FORCE AD11 Fresa de Escuadrado con Refrigeración Interna

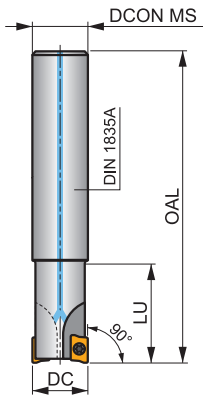
Fresas a 90° con plaquitas positivas AD.. 11 con APMX de 9 mm. Adecuada para planeado, escuadrado, ranurado, interpolación helicoidal, fresado trocoidal , en rampa y axial (plunge). Disponible con mango cilíndrico, Weldon, cono Morse, modular y para portafresas (con paso diferencial). Cuerpo tratado para alargar la vida de herramienta.

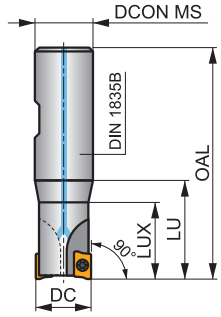
FORCE AD

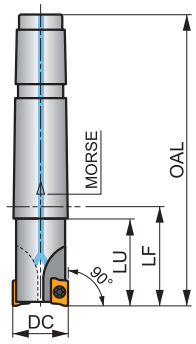
KAPR	90°
APMX	9.0 mm

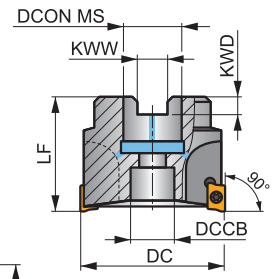


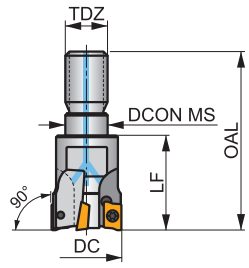












h_m	0.06 – 0.13
h_m	0.08 – 0.16

	Producto	DC (mm)	OAL (mm)	DCON MS (mm)	DCCB (mm)	LU (mm)	LUX (mm)	LF (mm)	TDZ	CZC MS	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		kg			
	16A2R024A14-SAD11E-C	16	160	14	–	24	–	–	–	–	–	–	-12.8	4	2	–	30100	✓	0.19	GI169	SQ025	–
	16A2R024A16-SAD11E-C	16	135	16	–	24	–	–	–	–	–	–	-12.8	4	2	–	30100	✓	0.19	GI169	SQ025	–
	16A2R050A16-SAD11E-C	16	135	16	–	50	–	–	–	–	–	–	-12.8	4	2	–	30100	✓	0.20	GI169	SQ025	–
	18A2R029A20-SAD11E-C	18	150	20	–	29	–	–	–	–	–	–	-12	4.5	2	–	28400	✓	0.35	GI169	SQ025	–
	20A2R029A20-SAD11E-C	20	150	20	–	29	–	–	–	–	–	–	-11.5	5	2	–	27000	✓	0.33	GI169	SQ020	–
	20A2R070A20-SAD11E-C	20	150	20	–	70	–	–	–	–	–	–	-11.5	5	2	–	27000	✓	0.32	GI169	SQ020	–
	20A3R029A18-SAD11E-C	20	200	18	–	29	–	–	–	–	–	–	-11.5	5	3	–	27000	✓	0.36	GI169	SQ025	–
	20A3R029A20-SAD11E-C	20	150	20	–	29	–	–	–	–	–	–	-11.5	5	3	–	27000	✓	0.31	GI169	SQ025	–
DIN 1835A	22A3R029A20-SAD11E-C	22	200	20	–	29	–	–	–	–	–	–	-11.5	5	3	–	25600	✓	0.45	GI169	SQ025	–
	25A3R034A25-SAD11E-C	25	170	25	–	34	–	–	–	–	–	–	-10.2	5	3	–	24100	✓	0.42	GI169	SQ020	–
	25A3R080A25-SAD11E-C	25	170	25	–	80	–	–	–	–	–	–	-10.2	5	3	–	24100	✓	0.52	GI169	SQ020	–
	25A4R034A25-SAD11E-C	25	170	25	–	34	–	–	–	–	–	–	-10.2	5	4	–	24100	✓	0.56	GI169	SQ025	–
	25A4R040A25-SAD11E-C	25	250	25	–	40	–	–	–	–	–	–	-10.2	5	4	–	24100	✓	0.85	GI169	SQ025	–
	30A3R080A32-SAD11E-C	30	200	32	–	80	–	–	–	–	–	–	-9.3	7	3	–	22000	✓	0.98	GI169	SQ020	–
	32A3R090A32-SAD11E-C	32	195	32	–	90	–	–	–	–	–	–	-9	5	3	–	21300	✓	0.99	GI169	SQ020	–
	32A5R034A32-SAD11E-C	32	195	32	–	34	–	–	–	–	–	–	-9	8	5	–	21300	✓	1.03	GI169	SQ025	–
	35A5R025A32-SAD11E-C	35	200	32	–	25	–	–	–	–	–	–	-9	8	5	–	20300	✓	1.11	GI169	SQ020	–
	16A2R027B16-SAD11E-C	16	75	16	–	–	27	–	–	–	–	–	-12.8	4	2	–	30100	✓	0.11	GI169	SQ025	–
	20A2R032B20-SAD11E-C	20	82	20	–	–	32	–	–	–	–	–	-11.5	5	2	–	27000	✓	0.13	GI169	SQ020	–
	20A3R032B20-SAD11E-C	20	82	20	–	–	32	–	–	–	–	–	-11.5	5	3	–	27000	✓	0.13	GI169	SQ025	–
DIN 1835B	25A3R042B25-SAD11E-C	25	98	25	–	–	42	–	–	–	–	–	-10.2	5	3	–	24100	✓	0.29	GI169	SQ020	–
	25A4R042B25-SAD11E-C	25	98	25	–	–	42	–	–	–	–	–	-10.2	5	4	–	24100	✓	0.31	GI169	SQ025	–
	32A4R042B32-SAD11E-C	32	102	32	–	–	42	–	–	–	–	–	-9	8	4	–	21300	✓	0.27	GI169	SQ020	–
	32A5R042B32-SAD11E-C	32	102	32	–	–	42	–	–	–	–	–	-9	8	5	–	21300	✓	0.32	GI169	SQ025	–
	16A2R030E02-SAD11E-C	16	94	–	–	25	–	30	–	2	–	–	-12.8	4	2	–	30100	✓	0.13	GI169	SQ025	–
DIN 228A	20A3R035E03-SAD11E-C	20	116	–	–	30	–	35	–	3	–	–	-11.5	5	3	–	27000	✓	0.27	GI169	SQ025	–
	25A4R043E03-SAD11E-C	25	124	–	–	38	–	43	–	3	–	–	-10.2	5	4	–	24100	✓	0.31	GI169	SQ025	–

	Producto	DC (mm)	OAL (mm)	DCON MS (mm)	DCCB (mm)	LU (mm)	LUX (mm)	LF (mm)	TDZ	CZC MS	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)								
MODULAR	**16A2R024M08-SAD11E-C**	16	38	8.5	–	–	–	24	M8	–	–	–	-12.8	4	2	–	–	✓	0.04	GI169	SQ025	–
	20A2R026M10-SAD11E-C	20	45	11	–	–	–	26	M10	–	–	–	-11.5	5	2	–	–	✓	0.06	GI169	SQ020	–
	20A3R026M10-SAD11E-C	20	45	10.5	–	–	–	26	M10	–	–	–	-11.5	5	3	–	–	✓	0.06	GI169	SQ025	–
	25A3R033M12-SAD11E-C	25	55	12.5	–	–	–	33	M12	–	–	–	-10.2	5	3	–	–	✓	0.10	GI169	SQ020	–
	25A4R033M12-SAD11E-C	25	55	12.5	–	–	–	33	M12	–	–	–	-10.2	5	4	–	–	✓	0.09	GI169	SQ025	–
	32A4R043M16-SAD11E-C	32	66	17	–	–	–	43	M16	–	–	–	-9	8	4	–	–	✓	0.20	GI169	SQ020	–
	32A5R043M16-SAD11E-C	32	66	17	–	–	–	43	M16	–	–	–	-9	8	5	–	–	✓	0.20	GI169	SQ025	–
	40A4R043M16-SAD11E-C	40	66	17	–	–	–	43	M16	–	–	–	-8.1	11	4	–	–	✓	0.27	GI169	SQ020	–
	40A6R043M16-SAD11E-C	40	66	17	–	–	–	43	M16	–	–	–	-8.1	11	6	–	–	✓	0.21	GI169	SQ020	–
	40A04R-S90AD11E-C	40	–	16	14	–	–	40	–	–	8.4	5.6	-8.1	11	4	✓	19100	✓	0.16	GI169	SQ022	–
	40A05R-S90AD11E-C	40	–	16	14	–	–	40	–	–	8.4	5.6	-8.1	11	5	✓	19000	✓	0.31	GI169	SQ022	–
	40A06R-S90AD11E-C	40	–	16	14	–	–	40	–	–	8.4	5.6	-8.1	11	6	✓	19100	✓	0.20	GI169	SQ022	–
	50A05R-S90AD11E-C	50	–	22	18	–	–	40	–	–	10.4	6.3	-7.2	12	5	✓	17000	✓	0.31	GI169	SQ023	–
ISO 6462 DIN 8030	**50A07R-S90AD11E-C**	50	–	22	18	–	–	40	–	–	10.4	6.3	-7.2	12	7	✓	17000	✓	0.44	GI169	SQ023	–
	63A06R-S90AD11E-C	63	–	22	18	–	–	40	–	–	10.4	6.3	-6.5	12	6	✓	15200	✓	0.54	GI169	SQ023	–
	63A09R-S90AD11E-C	63	–	22	18	–	–	40	–	–	10.4	6.3	-6.5	12	9	✓	15200	✓	0.61	GI169	SQ023	–
	80A10R-S90AD11E-C	80	–	27	38	–	–	50	–	–	12.4	7	-6	12	10	✓	13500	✓	1.04	GI169	SQ021	AC001
	100A11R-S90AD11E-C	100	–	32	45	–	–	50	–	–	14.4	8	-5.5	12	11	✓	12100	✓	1.89	GI169	SQ021	AC002
	125A12R-S90AD11E-C	125	–	40	56	–	–	63	–	–	16.4	9	-5.2	12	12	✓	10800	✓	2.97	GI169	SQ021	AC003

GI169	ADMX 11T3..	ADEX 11T3..

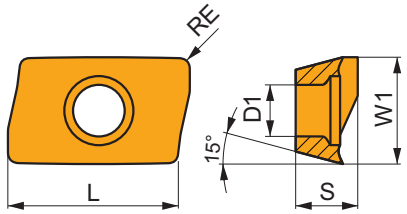
SQ020	US 62506-T07P	1.2	M 2.5	6	–	–	Flag T07P	–
SQ021	US 62506-T07P	1.2	M 2.5	6	D-T07P/T09P	FG-15	–	–
SQ022	US 62506-T07P	1.2	M 2.5	6	D-T07P/T09P	FG-15	–	HS 0830C
SQ023	US 62506-T07P	1.2	M 2.5	6	D-T07P/T09P	FG-15	–	HS 1030C
SQ025	US 62505-T07P	1.2	M 2.5	5	–	–	Flag T07P	–

AC001	KS 1230	K.FMH27
AC002	KS 1635	K.FMH32
AC003	KS 2040	K.FMH40

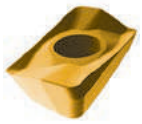
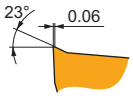
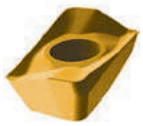
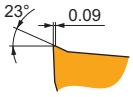
ADMX 11

PRAMET

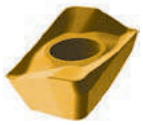
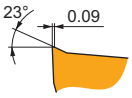
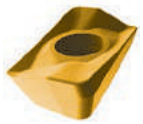
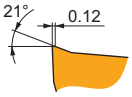
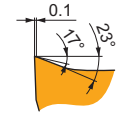
	W1	D1	L	S
	(mm)	(mm)	(mm)	(mm)
11T3	6.530	2.90	11.00	3.97



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
			**F** geometría con diseño positivo muy afilado para mecanizado ligero.																	
ADMX 11T304SR-F:8215	●	0.4	245	0.10	2.0	145	0.09	2.0	230	0.10	2.0	735	0.12	2.0	60	0.08	1.6	–	–	–
ADMX 11T304SR-F:M8330	●	0.4	240	0.10	2.0	140	0.09	2.0	225	0.10	2.0	720	0.12	2.0	60	0.08	1.6	–	–	–
ADMX 11T304SR-F:M8340	●	0.4	220	0.10	2.0	130	0.09	2.0	205	0.10	2.0	–	–	–	55	0.08	1.6	–	–	–
ADMX 11T304SR-F:M9340	●	0.4	285	0.10	2.0	170	0.09	2.0	–	–	–	–	–	–	70	0.08	1.6	–	–	–
ADMX 11T308SR-F:8215	⬢	0.8	290	0.10	2.0	170	0.09	2.0	275	0.10	2.0	870	0.12	2.0	70	0.08	1.6	–	–	–
ADMX 11T308SR-F:M8330	⬢	0.8	285	0.10	2.0	170	0.09	2.0	270	0.10	2.0	855	0.12	2.0	70	0.08	1.6	–	–	–
ADMX 11T308SR-F:M8340	⬢	0.8	260	0.10	2.0	155	0.09	2.0	245	0.10	2.0	–	–	–	65	0.08	1.6	–	–	–
ADMX 11T308SR-F:M9340	⬢	0.8	340	0.10	2.0	200	0.09	2.0	–	–	–	–	–	–	85	0.08	1.6	–	–	–
			**M** geometría con diseño positivo para mecanizado ligero a medio.																	
ADMX 11T302SR-M:M8330	●	0.2	190	0.15	4.0	110	0.14	4.0	180	0.15	4.0	–	–	–	45	0.12	3.2	–	–	–
ADMX 11T302SR-M:M8340	⬢	0.2	170	0.15	4.0	100	0.14	4.0	160	0.15	4.0	–	–	–	40	0.12	3.2	–	–	–
ADMX 11T304SR-M:8215	●	0.4	205	0.15	4.0	120	0.14	4.0	190	0.15	4.0	–	–	–	50	0.12	3.2	–	–	–
ADMX 11T304SR-M:M8310	●	0.4	220	0.15	4.0	110	0.14	4.0	205	0.15	4.0	–	–	–	–	–	–	–	–	–
ADMX 11T304SR-M:M8330	⬢	0.4	205	0.15	4.0	120	0.14	4.0	190	0.15	4.0	–	–	–	50	0.12	3.2	–	–	–
ADMX 11T304SR-M:M8340	⬢	0.4	185	0.15	4.0	110	0.14	4.0	175	0.15	4.0	–	–	–	45	0.12	3.2	–	–	–
ADMX 11T304SR-M:M9325	●	0.4	255	0.15	4.0	–	–	–	240	0.15	4.0	–	–	–	–	–	–	–	–	–
ADMX 11T304SR-M:M9340	●	0.4	235	0.15	4.0	140	0.14	4.0	–	–	–	–	–	–	55	0.12	3.2	–	–	–
ADMX 11T308SR-M:8215	⬢	0.8	245	0.15	4.0	145	0.14	4.0	230	0.15	4.0	–	–	–	60	0.12	3.2	–	–	–
ADMX 11T308SR-M:M5315	⬢	0.8	335	0.15	4.0	–	–	–	315	0.15	4.0	–	–	–	–	–	–	–	–	–
ADMX 11T308SR-M:M8310	⬢	0.8	265	0.15	4.0	135	0.14	4.0	250	0.15	4.0	–	–	–	–	–	–	–	–	–
ADMX 11T308SR-M:M8330	⬢	0.8	245	0.15	4.0	145	0.14	4.0	230	0.15	4.0	–	–	–	60	0.12	3.2	–	–	–
ADMX 11T308SR-M:M8340	⬢	0.8	220	0.15	4.0	130	0.14	4.0	205	0.15	4.0	–	–	–	55	0.12	3.2	–	–	–
ADMX 11T308SR-M:M9315	⬢	0.8	330	0.15	4.0	–	–	–	310	0.15	4.0	–	–	–	–	–	–	–	–	–
ADMX 11T308SR-M:M9325	⬢	0.8	305	0.15	4.0	–	–	–	285	0.15	4.0	–	–	–	–	–	–	–	–	–
ADMX 11T308SR-M:M9340	⬢	0.8	275	0.15	4.0	165	0.14	4.0	–	–	–	–	–	–	65	0.12	3.2	–	–	–
ADMX 11T310SR-M:M8330	⬢	1.0	255	0.15	4.0	150	0.14	4.0	240	0.15	4.0	–	–	–	60	0.12	3.2	–	–	–
ADMX 11T310SR-M:M8340	✱	1.0	230	0.15	4.0	135	0.14	4.0	215	0.15	4.0	–	–	–	55	0.12	3.2	–	–	–
ADMX 11T312SR-M:8215	⬢	1.2	255	0.15	4.0	150	0.14	4.0	240	0.15	4.0	–	–	–	60	0.12	3.2	–	–	–
ADMX 11T312SR-M:M8330	✱	1.2	255	0.15	4.0	150	0.14	4.0	240	0.15	4.0	–	–	–	60	0.12	3.2	–	–	–
ADMX 11T312SR-M:M8340	✱	1.2	230	0.15	4.0	135	0.14	4.0	215	0.15	4.0	–	–	–	55	0.12	3.2	–	–	–
ADMX 11T316SR-M:8215	⬢	1.6	270	0.15	4.0	160	0.14	4.0	255	0.15	4.0	–	–	–	65	0.12	3.2	–	–	–
ADMX 11T316SR-M:M6330	✱	1.6	230	0.15	4.0	165	0.14	4.0	–	–	–	–	–	–	65	0.12	3.2	–	–	–
ADMX 11T316SR-M:M8310	⬢	1.6	295	0.15	4.0	150	0.14	4.0	280	0.15	4.0	–	–	–	–	–	–	–	–	–
ADMX 11T316SR-M:M8330	✱	1.6	270	0.15	4.0	160	0.14	4.0	255	0.15	4.0	–	–	–	65	0.12	3.2	–	–	–
ADMX 11T316SR-M:M8340	✱	1.6	240	0.15	4.0	140	0.14	4.0	225	0.15	4.0	–	–	–	60	0.12	3.2	–	–	–
ADMX 11T320SR-M:M6330	✱	2.0	240	0.15	4.0	170	0.14	4.0	–	–	–	–	–	–	70	0.12	3.2	–	–	–
ADMX 11T320SR-M:M8330	✱	2.0	280	0.15	4.0	165	0.14	4.0	265	0.15	4.0	–	–	–	70	0.12	3.2	–	–	–
ADMX 11T320SR-M:M8340	✱	2.0	255	0.15	4.0	150	0.14	4.0	240	0.15	4.0	–	–	–	60	0.12	3.2	–	–	–

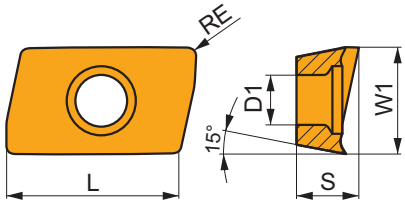
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)
																				
M geometría con diseño positivo para mecanizado ligero a medio.																				
ADMX 11T325SR-M:M6330	✱	2.5	■ 240	0.15	4.0	■ 170	0.14	4.0		–	–	–	–	–	–	◪ 70	0.12	3.2	–	–	–
ADMX 11T325SR-M:M8340	✱	2.5	■ 255	0.15	4.0	■ 150	0.14	4.0	◪ 240	0.15	4.0	–	–	–	◪ 60	0.12	3.2	–	–	–
ADMX 11T330SR-M:M6330	✱	3.0	■ 240	0.15	4.0	■ 170	0.14	4.0		–	–	–	–	–	–	◪ 70	0.12	3.2	–	–	–
ADMX 11T330SR-M:M8330	✱	3.0	■ 280	0.15	4.0	■ 165	0.14	4.0	■ 265	0.15	4.0	–	–	–	◪ 70	0.12	3.2	–	–	–
ADMX 11T330SR-M:M8340	✱	3.0	■ 255	0.15	4.0	■ 150	0.14	4.0	◪ 240	0.15	4.0	–	–	–	◪ 60	0.12	3.2	–	–	–
																				
R geometría con diseño positivo para mecanizado en condiciones de poca estabilidad.																				
ADMX 11T308PR-R:8215	✱	0.8	■ 230	0.18	4.0	◪ 135	0.16	4.0	■ 215	0.18	4.0	–	–	–	◪ 55	0.16	3.2	◪ 45	0.12	0.7
ADMX 11T308PR-R:M5315	✱	0.8	◪ 310	0.18	4.0	–	–	–	■ 290	0.18	4.0	–	–	–	–	–	–	◪ 60	0.13	0.7
ADMX 11T308PR-R:M8310	✱	0.8	■ 250	0.18	4.0	◪ 125	0.16	4.0	■ 235	0.18	4.0	–	–	–	–	–	–	◪ 50	0.12	0.7
ADMX 11T308PR-R:M8330	✱	0.8	■ 230	0.18	4.0	◪ 135	0.16	4.0	■ 215	0.18	4.0	–	–	–	◪ 55	0.16	3.2	◪ 45	0.12	0.7
ADMX 11T308PR-R:M8340	✱	0.8	■ 210	0.18	4.0	◪ 125	0.16	4.0	◪ 195	0.18	4.0	–	–	–	◪ 50	0.16	3.2	–	–	–
ADMX 11T308PR-R:M9315	✱	0.8	■ 310	0.18	4.0	–	–	–	■ 290	0.18	4.0	–	–	–	–	–	–	◪ 60	0.13	0.7
ADMX 11T308PR-R:M9325	✱	0.8	■ 290	0.18	4.0	–	–	–	■ 275	0.18	4.0	–	–	–	–	–	–	◪ 55	0.13	0.7
ADMX 11T316PR-R:8215	✱	1.6	■ 255	0.18	4.0	◪ 150	0.16	4.0	■ 240	0.18	4.0	–	–	–	◪ 60	0.16	3.2	◪ 50	0.12	0.7
ADMX 11T316PR-R:M8330	✱	1.6	■ 255	0.18	4.0	◪ 150	0.16	4.0	■ 240	0.18	4.0	–	–	–	◪ 60	0.16	3.2	◪ 50	0.12	0.7
ADMX 11T316PR-R:M9325	✱	1.6	■ 320	0.18	4.0	–	–	–	■ 300	0.18	4.0	–	–	–	–	–	–	◪ 60	0.12	0.7
																				
MF geometría muy positiva para mecanizado ligero y acabado.																				
ADMX 11T304SR-MF:M6330	●	0.4	■ 215	0.08	2.5	■ 150	0.07	2.5		–	–	–	–	–	–	■ 60	0.06	2.0	–	–	–
ADMX 11T304SR-MF:M8340	●	0.4	■ 220	0.08	2.5	■ 130	0.07	2.5		–	–	–	–	–	–	■ 55	0.06	2.0	–	–	–
ADMX 11T308SR-MF:M6330	✱	0.8	■ 255	0.08	2.5	■ 180	0.07	2.5		–	–	–	–	–	–	■ 75	0.06	2.0	–	–	–
ADMX 11T308SR-MF:M8340	✱	0.8	■ 265	0.08	2.5	■ 155	0.07	2.5		–	–	–	–	–	–	■ 65	0.06	2.0	–	–	–
MM geometría muy positiva para mecanizado ligero a fresado medio.																				
ADMX 11T304SR-MM:M6330	✱	0.4	■ 185	0.14	2.5	■ 130	0.13	2.5		–	–	–	–	–	–	■ 55	0.11	2.0	–	–	–
ADMX 11T304SR-MM:M8340	✱	0.4	■ 195	0.14	2.5	■ 115	0.13	2.5		–	–	–	–	–	–	■ 45	0.11	2.0	–	–	–
ADMX 11T308SR-MM:M6330	✱	0.8	■ 225	0.14	2.5	■ 155	0.13	2.5		–	–	–	–	–	–	■ 65	0.11	2.0	–	–	–
ADMX 11T308SR-MM:M8340	✱	0.8	■ 235	0.14	2.5	■ 140	0.13	2.5		–	–	–	–	–	–	■ 55	0.11	2.0	–	–	–
ADMX 11T308SR-MM:M8345	✱	0.8	■ 190	0.14	2.5	■ 110	0.13	2.5		–	–	–	–	–	–	■ 45	0.11	2.0	–	–	–
ADMX 11T308SR-MM:M9340	✱	0.8	■ 300	0.14	2.5	■ 180	0.13	2.5		–	–	–	–	–	–	■ 75	0.11	2.0	–	–	–
ADMX 11T312SR-MM:M6330	✱	1.2	■ 235	0.14	2.5	■ 165	0.13	2.5		–	–	–	–	–	–	■ 70	0.11	2.0	–	–	–
ADMX 11T312SR-MM:M8340	✱	1.2	■ 245	0.14	2.5	■ 145	0.13	2.5		–	–	–	–	–	–	■ 60	0.11	2.0	–	–	–

ADEX 11-FA

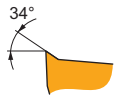
PRAMET

	W1	D1	L	S
	(mm)	(mm)	(mm)	(mm)
11T3	6.450	2.90	9.70	3.91



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
ADEX 11T304FR-FA:HF7	●	0.4	–	–	–	–	–	–	–	–	–	210	0.30	5.0	–	–	–	–	–	–
ADEX 11T304FR-FA:M0315	●	0.4	–	–	–	–	–	–	–	–	–	480	0.30	5.0	–	–	–	–	–	–
ADEX 11T308FR-FA:HF7	●	0.8	–	–	–	–	–	–	–	–	–	240	0.30	5.0	–	–	–	–	–	–
ADEX 11T308FR-FA:M0315	●	0.8	–	–	–	–	–	–	–	–	–	570	0.30	5.0	–	–	–	–	–	–
ADEX 11T312FR-FA:HF7	●	1.2	–	–	–	–	–	–	–	–	–	255	0.30	5.0	–	–	–	–	–	–
ADEX 11T316FR-FA:HF7	●	1.6	–	–	–	–	–	–	–	–	–	270	0.18	5.0	–	–	–	–	–	–

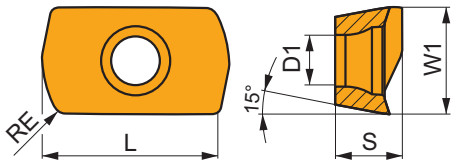


FA geometría muy positiva para fresado en acabado a mecanizado medio.

ADEX 11-HF

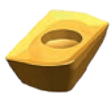
PRAMET

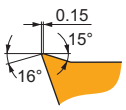
	W1	D1	L	S
	(mm)	(mm)	(mm)	(mm)
11T3	6.450	2.90	10.67	3.82



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

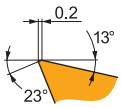
Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
ADEX 11T308SR-HF:8215	⧓	0.8	215	0.68	0.4	125	0.61	0.4	–	–	–	–	–	–	–	–	–	–	–	–
ADEX 11T308SR-HF:M6330	⧓	0.8	185	0.68	0.4	130	0.61	0.4	–	–	–	–	–	–	–	–	–	–	–	–
ADEX 11T308SR-HF:M8310	⧓	0.8	220	0.68	0.4	110	0.52	0.4	–	–	–	–	–	–	–	–	–	–	–	–
ADEX 11T308SR-HF:M8330	⧓	0.8	215	0.68	0.4	125	0.61	0.4	–	–	–	–	–	–	–	–	–	–	–	–
ADEX 11T308SR-HF:M8340	⧓	0.8	200	0.68	0.4	120	0.61	0.4	–	–	–	–	–	–	–	–	–	–	–	–
ADEX 11T308SR-HF:M9340	⧓	0.8	220	0.68	0.4	130	0.61	0.4	–	–	–	–	–	–	–	–	–	–	–	–





HF geometría muy positiva para mecanizado de alto avance.

Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

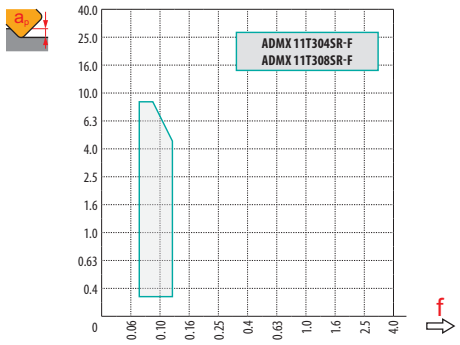
Producto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)
																				
ADEX 11T308SR-HF2:M8310		0.8	■ 220	0.68	0.4	◪ 110	0.61	0.4	◪ 205	0.68	0.4	–	–	–	–	–	–	◪ 40	0.48	0.3
ADEX 11T308SR-HF2:M8330		0.8	■ 215	0.68	0.4	◪ 125	0.61	0.4	◪ 200	0.68	0.4	–	–	–	◪ 50	0.48	0.3	◪ 40	0.48	0.3
ADEX 11T308SR-HF2:M8340		0.8	■ 200	0.68	0.4	◪ 120	0.61	0.4	◪ 190	0.68	0.4	–	–	–	◪ 50	0.48	0.3	–	–	–
ADEX 11T308SR-HF2:M9325		0.8	■ 250	0.68	0.4	–	–	–	◪ 235	0.68	0.4	–	–	–	–	–	–	◪ 50	0.48	0.3

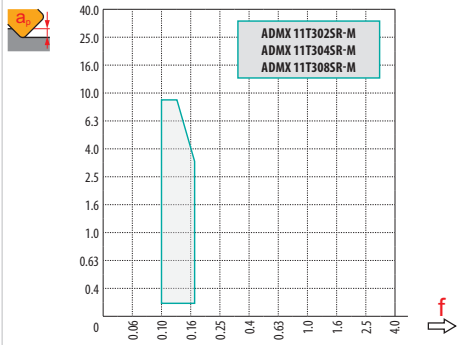
HF2 geometría con diseño positivo para fresado de alto avance.

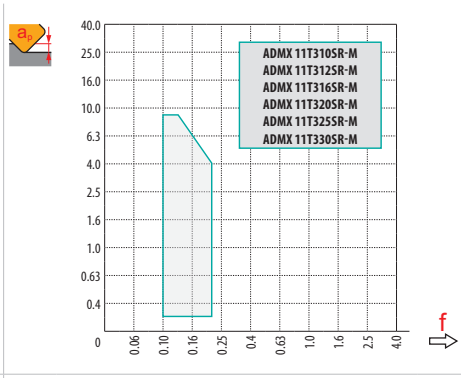
a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ X.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
⇨ X.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

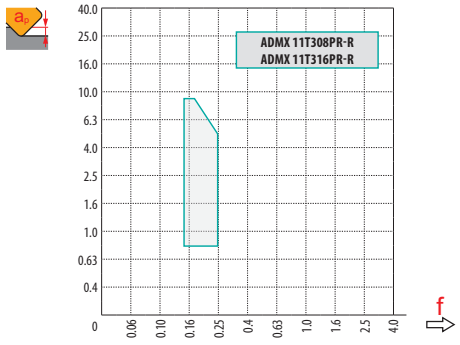
	ADMX 11-F		ADMX 11-M									ADMX 11-R		ADMX 11-MF	
RE	0.4	0.8	0.2	0.4	0.8	1.0	1.2	1.6	2.0	2.5	3.0	0.8	1.6	0.4	0.8
BS	1.89	1.48	2.09	1.89	1.48	1.27	1.08	0.68	1.61	1.13	0.66	1.48	0.68	1.89	1.48

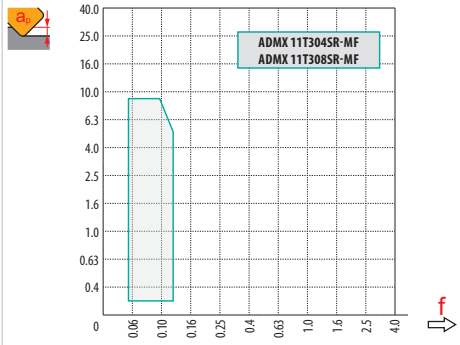
	ADMX 11-MM			ADEX 11-HF	ADEX 11-HF2	ADEX 11-FA			
RE	0.4	0.8	1.2	0.8	0.8	0.4	0.8	1.2	1.6
BS	1.89	1.48	1.08	0.17	0.17	1.77	1.39	1.0	0.62

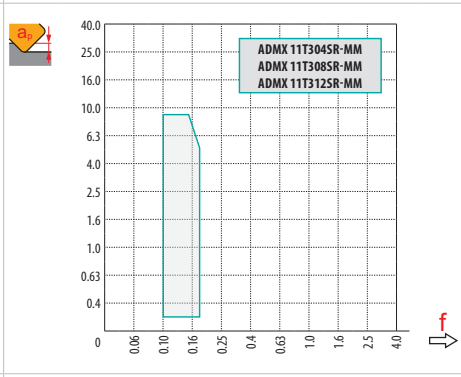


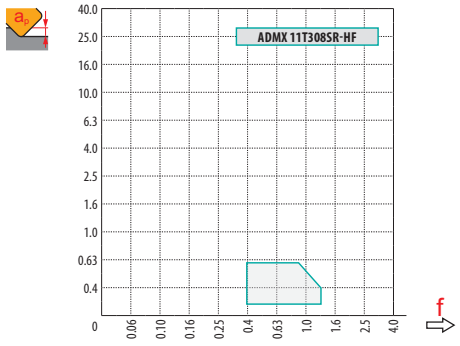


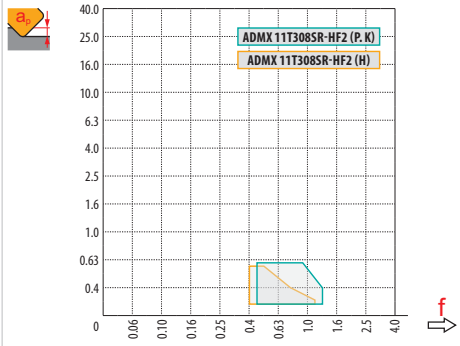


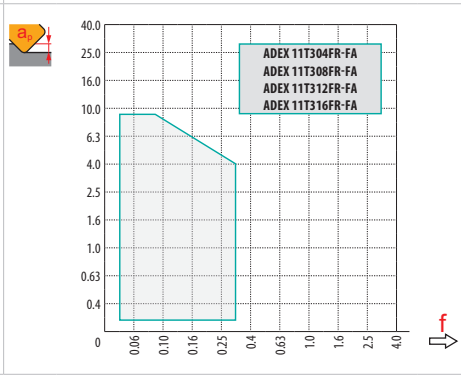












max 4.5

a_p	1.0	5.0	9.0
f	0.20	0.13	0.10

DC	RPMX	APMX/l
16	13.5°	9.0/40
18	10.0°	9.0/53
20	9.0°	9.0/59
25	6.0°	9.0/87
32	5.3°	9.0/99
40	3.8°	6.5/100
50	2.8°	4.7/100
63	1.8°	3.0/100
80	1.6°	2.6/100

HFC

DC	RPMX *	RPMX **	APMX/l
16	4.1°	5.7°	0.6/8
18	2.8°	4.5°	0.6/12
20	2.3°	4.3°	0.6/15
25	1.3°	6.7°	0.6/26
32	0.7°	4.3°	0.6/49
40	0.3°	2.9°	0.6/100
50	0.1°	2.1°	0.6/100
63	–	–	–
80	–	–	–

* Fresado HFC

** Fresado convencional

DC	DMIN	DMAX	SMAX DMIN	SMAX DMAX
16	27.0	32.0	8.3	9.0
18	32.0	36.0	7.5	9.0
20	35.0	40.0	7.5	9.0
25	45.0	50.0	6.5	7.5
32	59.0	64.0	4.0	4.5
40	75.0	80.0	1.5	2.0
50	–	–	–	–

HFC

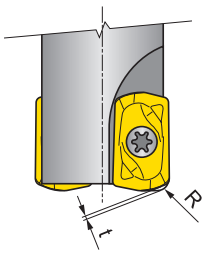
DC	DMIN	DMAX	SMAX DMIN	SMAX DMAX
16	21.0	32.0	0.6	0.6
18	29.0	36.0	0.6	0.6
20	29.0	40.0	0.6	0.6
25	39.0	50.0	0.6	0.6
32	53.0	64.0	0.6	0.6
40	68.5	80.0	0.6	0.6
50	88.5	100.0	0.6	0.6

a_p
1.7

DC	µm	3	5	10	15	20	30	40	50	60	80	100
16	FE	0.438	0.566	0.800	0.980	1.131	1.386	1.600	1.789	1.960	2.263	2.530
18		0.465	0.600	0.849	1.039	1.200	1.470	1.697	1.897	2.078	2.400	2.683
20		0.490	0.632	0.894	1.095	1.265	1.549	1.789	2.000	2.191	2.530	2.828
25		0.548	0.707	1.000	1.225	1.414	1.732	2.000	2.236	2.449	2.828	3.162
32		0.620	0.800	1.131	1.386	1.600	1.960	2.263	2.530	2.771	3.200	3.578
40		0.693	0.894	1.265	1.549	1.789	2.191	2.530	2.828	3.098	3.578	4.000
50		0.775	1.000	1.414	1.732	2.000	2.449	2.828	3.162	3.464	4.000	4.472
63		0.869	1.122	1.587	1.944	2.245	2.750	3.175	3.550	3.888	4.490	5.020
80		0.980	1.265	1.789	2.191	2.530	3.098	3.578	4.000	4.382	5.060	5.657

RE	µm	3	5	10	15	20	30	40	50	60	80	100
1.0	FE	0.155	0.200	0.283	0.346	0.400	0.490	0.566	0.632	0.693	0.800	0.894
1.2		0.170	0.219	0.310	0.379	0.438	0.537	0.620	0.693	0.759	0.876	0.980
1.6		0.196	0.253	0.358	0.438	0.506	0.620	0.716	0.800	0.876	1.012	1.131
2.0		0.219	0.283	0.400	0.490	0.566	0.693	0.800	0.894	0.980	1.131	1.265
2.5		0.245	0.316	0.447	0.548	0.632	0.775	0.894	1.000	1.095	1.265	1.414
3.0		0.268	0.346	0.490	0.600	0.693	0.849	0.980	1.095	1.200	1.386	1.549

ADMX/ADEX 11	R
ADMX 11T320SR-M	1.0
ADMX 11T325SR-M	1.8
ADMX 11T330SR-M	1.8
ADEX 11T308SR-HF	1.4
ADEX 11T308SR-HF2	1.4



ADEX 11	R	t
ADEX 11T308SR-HF	1.42	0.35
ADEX 11T308SR-HF2	1.34	0.38

SAD16E

P M K N S H

PRAMET

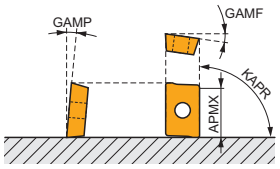
S

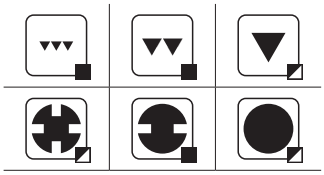
FORCE AD16 Fresa de Escuadrado con Refrigeración Interna

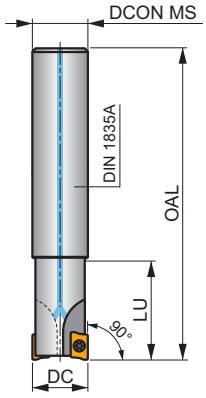
Fresa a 90° con plaquitas positivas AD.. 16 con APMX de 13 mm. Adecuada para planeado, escuadrado, ranurado, interpolación helicoidal, fresado trocoidal , en rampa y axial (plunge). Disponible con mango cilíndrico, Weldon, cono Morse, modular y para portafresas (con paso diferencial). Cuerpo tratado para alargar la vida de herramienta.

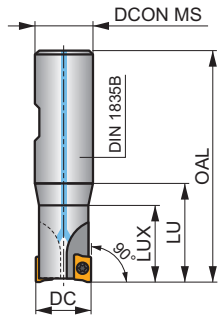
FORCE AD

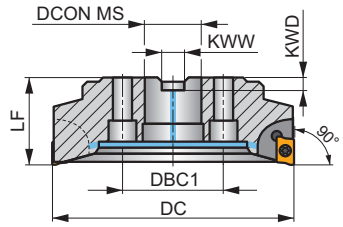
KAPR	90°
APMX	13.0 mm

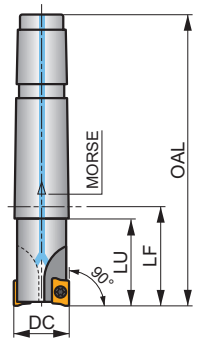


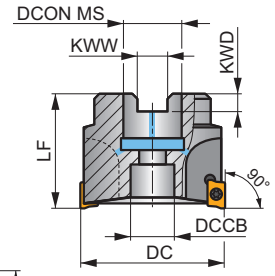


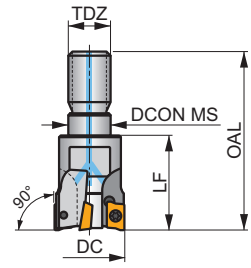












h_m	0.06 - 0.18
h_m	0.08 - 0.22

	Producto	DC (mm)	OAL (mm)	DCON MS (mm)	DCCB (mm)	DBC1 (mm)	LU (mm)	LUX (mm)	LF (mm)	TDZ	CZC MS	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		kg			
DIN 1835A	25A2R033A25-SAD16E-C	25	165	25	–	–	33	–	–	–	–	–	–	-13	5	2	–	18700	✓	0.52	GI165	SQ030	–
	25A2R038A25-SAD16E-C	25	200	25	–	–	38	–	–	–	–	–	–	-13	5	2	–	18700	✓	0.66	GI165	SQ030	–
	32A3R033A32-SAD16E-C	32	195	32	–	–	33	–	–	–	–	–	–	-12	7	3	–	16500	✓	1.03	GI165	SQ030	–
	32A3R048A32-SAD16E-C	32	250	32	–	–	48	–	–	–	–	–	–	-12	7	3	–	16500	✓	1.35	GI165	SQ030	–
DIN 1835B	25A2R042B25-SAD16E-C	25	98	25	–	–	–	42	–	–	–	–	–	-13	5	2	–	18700	✓	0.29	GI165	SQ030	–
	32A3R040B32-SAD16E-C	32	100	32	–	–	–	40	–	–	–	–	–	-12	7	3	–	16500	✓	0.51	GI165	SQ030	–
	40A3R050B32-SAD16E-C	40	110	32	–	–	–	50	–	–	–	–	–	-8.2	10.5	3	–	14800	✓	0.51	GI165	SQ030	–
	40A4R050B32-SAD16E-C	40	110	32	–	–	–	50	–	–	–	–	–	-8.2	10.5	4	–	14800	✓	0.64	GI165	SQ030	–
DIN 228A	25A2R043E03-SAD16E-C	25	98	–	–	–	38	–	43	–	3	–	–	-13	5	2	–	18600	✓	0.31	GI165	SQ030	–
	32A3R043E03-SAD16E-C	32	100	–	–	–	38	–	43	–	3	–	–	-12	7	3	–	16500	✓	0.33	GI165	SQ030	–
	40A3R054E04-SAD16E-C	40	110	–	–	–	48	–	54	–	4	–	–	-8.2	10.5	3	–	14700	✓	0.74	GI165	SQ030	–
	40A4R054E04-SAD16E-C	40	110	–	–	–	48	–	54	–	4	–	–	-8.2	10.5	4	–	14700	✓	0.70	GI165	SQ030	–
MODULAR	32A3R043M16-SAD16E-C	32	66	17	–	–	–	–	43	M16	–	–	–	-12	7	3	–	–	✓	0.20	GI165	SQ030	–
	40A4R043M16-SAD16E-C	40	66	17	–	–	–	–	43	M16	–	–	–	-8.2	10.5	4	–	–	✓	0.26	GI165	SQ030	–
ISO 6462 DIN 8030	40A04R-S90AD16E-C	40	–	16	14	–	–	–	40	–	–	8.4	5.6	-8.2	10.5	4	–	14700	✓	0.21	GI165	SQ032	–
	50A03R-S90AD16E-C	50	–	22	18	–	–	–	40	–	–	10.4	6.3	-7	11	3	–	13200	✓	0.43	GI165	SQ033	–
	50A05R-S90AD16E-C	50	–	22	18	–	–	–	40	–	–	10.4	6.3	-7	11	5	✓	13200	✓	0.40	GI165	SQ033	–
	63A04R-S90AD16E-C	63	–	22	18	–	–	–	40	–	–	10.4	6.3	-6	12	4	✓	11800	✓	0.60	GI165	SQ033	–
	63A06R-S90AD16E-C	63	–	22	18	–	–	–	40	–	–	10.4	6.3	-6	12	6	✓	11800	✓	0.59	GI165	SQ033	–
	80A05R-S90AD16E-C	80	–	27	38	–	–	–	50	–	–	12.4	7	-5	12	5	✓	10400	✓	1.09	GI165	SQ031	AC001
	80A07R-S90AD16E-C	80	–	27	38	–	–	–	50	–	–	12.4	7	-5	13	7	✓	10400	✓	0.97	GI165	SQ031	AC001
	100A06R-S90AD16E-C	100	–	32	45	–	–	–	50	–	–	14.4	8	-4	12	6	✓	9300	✓	1.85	GI165	SQ031	AC002
	100A08R-S90AD16E-C	100	–	32	45	–	–	–	50	–	–	14.4	8	-4	12	8	✓	9300	✓	1.89	GI165	SQ031	AC002
	125A09R-S90AD16E-C	125	–	40	56	–	–	–	63	–	–	16.4	9	-3.8	12	9	✓	8400	✓	3.65	GI165	SQ031	AC003
	140A08R-S90AD16E-C	140	–	40	56	–	–	–	63	–	–	16.4	9	-3.8	12	8	✓	7900	✓	4.06	GI165	SQ031	–
	160C10R-S90AD16E-C	160	–	40	–	66.7	–	–	63	–	–	16.4	9.2	-3.8	10	10	✓	7300	✓	6.04	GI165	SQ036	–
	175C10R-S90AD16E-C	175	–	40	–	66.7	–	–	63	–	–	16.4	9.2	-3.8	12	10	✓	7000	✓	6.86	GI165	SQ036	–

GI165	ADMX 1606..	ADEX 1606..

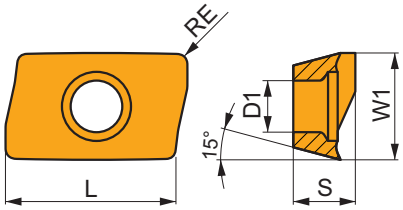
		Nm									
SQ030	US 4008-T15P	3.5	M 4	8	–	–	Flag T15P	–	–	–	–
SQ031	US 4011-T15P	3.5	M 4	10.6	D-T08P/T15P	FG-15	–	–	–	–	–
SQ032	US 4008-T15P	3.5	M 4	8	D-T08P/T15P	FG-15	–	HS 0830C	–	–	–
SQ033	US 4011-T15P	3.5	M 4	10.6	D-T08P/T15P	FG-15	–	HS 1030C	–	–	–
SQ036	US 4011-T15P	3.5	M 4	10.6	D-T08P/T15P	FG-15	–	HS 1240C	CAC 160C	HSD 0825C	HXK 5

AC001	KS 1230	K.FMH27
AC002	KS 1635	K.FMH32
AC003	KS 2040	K.FMH40

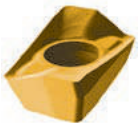
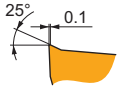
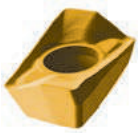
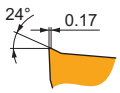
ADMX 16

PRAMET

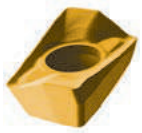
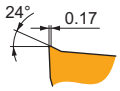
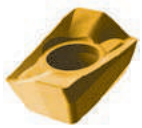
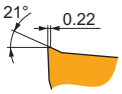
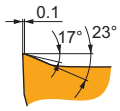
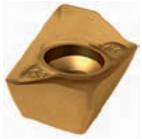
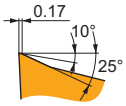
	W1 (mm)	D1 (mm)	L (mm)	S (mm)
1606	9.950	4.50	16.00	6.25



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
	 **F** geometría muy positiva para mecanizado ligero a medio.																		
ADMX 160608SR-F:8215	0.8	290	0.10	2.0	170	0.09	2.0	275	0.10	2.0	870	0.12	2.0	70	0.07	1.6	–	–	–
ADMX 160608SR-F:M8310	0.8	320	0.10	2.0	160	0.09	2.0	300	0.10	2.0	–	–	–	–	–	–	–	–	–
ADMX 160608SR-F:M8330	0.8	285	0.10	2.0	170	0.09	2.0	270	0.10	2.0	855	0.12	2.0	70	0.07	1.6	–	–	–
ADMX 160608SR-F:M8340	0.8	260	0.10	2.0	155	0.09	2.0	245	0.10	2.0	–	–	–	65	0.07	1.6	–	–	–
ADMX 160608SR-F:M9340	0.8	340	0.10	2.0	200	0.09	2.0	–	–	–	–	–	–	85	0.07	1.6	–	–	–
	 **M** geometría con diseño positivo para mecanizado ligero a medio.																		
ADMX 160604SR-M:8215	0.4	190	0.18	5.0	110	0.16	5.0	180	0.18	5.0	–	–	–	45	0.13	4.0	–	–	–
ADMX 160604SR-M:M8330	0.4	190	0.18	5.0	110	0.16	5.0	180	0.18	5.0	–	–	–	45	0.13	4.0	–	–	–
ADMX 160604SR-M:M8340	0.4	170	0.18	5.0	100	0.16	5.0	160	0.18	5.0	–	–	–	40	0.13	4.0	–	–	–
ADMX 160608SR-M:8215	0.8	225	0.18	5.0	135	0.16	5.0	210	0.18	5.0	–	–	–	55	0.13	4.0	–	–	–
ADMX 160608SR-M:M5315	0.8	305	0.18	5.0	–	–	–	285	0.18	5.0	–	–	–	–	–	–	–	–	–
ADMX 160608SR-M:M8310	0.8	250	0.18	5.0	125	0.16	5.0	235	0.18	5.0	–	–	–	–	–	–	–	–	–
ADMX 160608SR-M:M8330	0.8	225	0.18	5.0	135	0.16	5.0	210	0.18	5.0	–	–	–	55	0.13	4.0	–	–	–
ADMX 160608SR-M:M8340	0.8	205	0.18	5.0	120	0.16	5.0	190	0.18	5.0	–	–	–	50	0.13	4.0	–	–	–
ADMX 160608SR-M:M9315	0.8	305	0.18	5.0	–	–	–	285	0.18	5.0	–	–	–	–	–	–	–	–	–
ADMX 160608SR-M:M9325	0.8	280	0.18	5.0	–	–	–	265	0.18	5.0	–	–	–	–	–	–	–	–	–
ADMX 160608SR-M:M9340	0.8	255	0.18	5.0	150	0.16	5.0	–	–	–	–	–	–	60	0.13	4.0	–	–	–

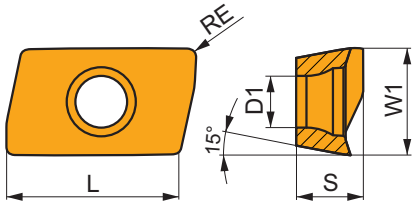
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
  **M** geometría con diseño positivo para mecanizado ligero a medio.																			
ADMX 160616SR-M:8215	1.6	250	0.18	5.0	150	0.16	5.0	235	0.18	5.0	–	–	–	60	0.13	4.0	–	–	–
ADMX 160616SR-M:M8310	1.6	275	0.18	5.0	140	0.16	5.0	260	0.18	5.0	–	–	–	–	–	–	–	–	–
ADMX 160616SR-M:M8330	1.6	250	0.18	5.0	150	0.16	5.0	235	0.18	5.0	–	–	–	60	0.13	4.0	–	–	–
ADMX 160616SR-M:M8340	1.6	225	0.18	5.0	135	0.16	5.0	210	0.18	5.0	–	–	–	55	0.13	4.0	–	–	–
ADMX 160616SR-M:M9325	1.6	310	0.18	5.0	–	–	–	290	0.18	5.0	–	–	–	–	–	–	–	–	–
ADMX 160620SR-M:M8330	2.0	265	0.18	5.0	155	0.16	5.0	250	0.18	5.0	–	–	–	65	0.13	4.0	–	–	–
ADMX 160620SR-M:M8340	2.0	240	0.18	5.0	140	0.16	5.0	225	0.18	5.0	–	–	–	60	0.13	4.0	–	–	–
ADMX 160630SR-M:M8330	3.0	265	0.18	5.0	155	0.16	5.0	250	0.18	5.0	–	–	–	65	0.13	4.0	–	–	–
ADMX 160630SR-M:M8340	3.0	240	0.18	5.0	140	0.16	5.0	225	0.18	5.0	–	–	–	60	0.13	4.0	–	–	–
ADMX 160632SR-M:M6330	3.2	225	0.18	5.0	155	0.16	5.0	–	–	–	–	–	–	65	0.13	4.0	–	–	–
ADMX 160632SR-M:M8330	3.2	265	0.18	5.0	155	0.16	5.0	250	0.18	5.0	–	–	–	65	0.13	4.0	–	–	–
ADMX 160632SR-M:M8340	3.2	240	0.18	5.0	140	0.16	5.0	225	0.18	5.0	–	–	–	60	0.13	4.0	–	–	–
ADMX 160632SR-M:M9325	3.2	325	0.18	5.0	–	–	–	305	0.18	5.0	–	–	–	–	–	–	–	–	–
ADMX 160640SR-M:M8330	4.0	265	0.18	5.0	155	0.16	5.0	250	0.18	5.0	–	–	–	65	0.13	4.0	–	–	–
ADMX 160640SR-M:M8340	4.0	240	0.18	5.0	140	0.16	5.0	225	0.18	5.0	–	–	–	60	0.13	4.0	–	–	–
ADMX 160650SR-M:M8330	5.0	265	0.18	5.0	155	0.16	5.0	250	0.18	5.0	–	–	–	65	0.13	4.0	–	–	–
ADMX 160650SR-M:M8340	5.0	240	0.18	5.0	140	0.16	5.0	225	0.18	5.0	–	–	–	60	0.13	4.0	–	–	–
  **R** geometría con diseño positivo para mecanizado medio y condiciones de poca estabilidad.																			
ADMX 160608PR-R:8215	0.8	205	0.25	6.0	120	0.23	6.0	190	0.25	6.0	–	–	–	50	0.20	4.8	40	0.16	1.1
ADMX 160608PR-R:M5315	0.8	260	0.25	6.0	–	–	–	245	0.25	6.0	–	–	–	–	–	–	50	0.16	1.1
ADMX 160608PR-R:M8310	0.8	220	0.25	6.0	110	0.23	6.0	205	0.25	6.0	–	–	–	–	–	–	40	0.16	1.1
ADMX 160608PR-R:M8330	0.8	205	0.25	6.0	120	0.23	6.0	190	0.25	6.0	–	–	–	50	0.20	4.8	40	0.16	1.1
ADMX 160608PR-R:M8340	0.8	190	0.25	6.0	110	0.23	6.0	180	0.25	6.0	–	–	–	45	0.20	4.8	–	–	–
ADMX 160608PR-R:M9315	0.8	265	0.25	6.0	–	–	–	250	0.25	6.0	–	–	–	–	–	–	50	0.16	1.1
ADMX 160608PR-R:M9325	0.8	250	0.25	6.0	–	–	–	235	0.25	6.0	–	–	–	–	–	–	50	0.16	1.1
ADMX 160616PR-R:M8330	1.6	225	0.25	6.0	135	0.23	6.0	210	0.25	6.0	–	–	–	55	0.20	4.8	45	0.16	1.1
ADMX 160616PR-R:M8340	1.6	210	0.25	6.0	125	0.23	6.0	195	0.25	6.0	–	–	–	50	0.20	4.8	–	–	–
ADMX 160616PR-R:M9315	1.6	295	0.25	6.0	–	–	–	280	0.25	6.0	–	–	–	–	–	–	55	0.16	1.1
 **MF** geometría muy positiva para mecanizado en acabado.																			
ADMX 160608SR-MF:M6330	0.8	215	0.08	4.0	150	0.07	4.0	–	–	–	–	–	–	60	0.06	3.2	–	–	–
ADMX 160608SR-MF:M8340	0.8	225	0.08	4.0	135	0.07	4.0	–	–	–	–	–	–	55	0.06	3.2	–	–	–
ADMX 160608SR-MF:M9340	0.8	305	0.08	4.0	180	0.07	4.0	–	–	–	–	–	–	75	0.06	3.2	–	–	–
  **MM** geometría muy positiva para mecanizado ligero a fresado medio.																			
ADMX 160604SR-MM:M6330	0.4	145	0.18	4.0	105	0.16	4.0	–	–	–	–	–	–	40	0.14	3.2	–	–	–
ADMX 160604SR-MM:M8340	0.4	160	0.18	4.0	95	0.16	4.0	–	–	–	–	–	–	40	0.14	3.2	–	–	–
ADMX 160608SR-MM:M6330	0.8	175	0.18	4.0	125	0.16	4.0	–	–	–	–	–	–	50	0.14	3.2	–	–	–
ADMX 160608SR-MM:M8340	0.8	190	0.18	4.0	110	0.16	4.0	–	–	–	–	–	–	45	0.14	3.2	–	–	–
ADMX 160608SR-MM:M8345	0.8	150	0.18	4.0	90	0.16	4.0	–	–	–	–	–	–	35	0.14	3.2	–	–	–
ADMX 160608SR-MM:M9340	0.8	235	0.18	4.0	140	0.16	4.0	–	–	–	–	–	–	55	0.14	3.2	–	–	–
ADMX 160616SR-MM:M6330	1.6	195	0.18	4.0	140	0.16	4.0	–	–	–	–	–	–	55	0.14	3.2	–	–	–
ADMX 160616SR-MM:M8340	1.6	210	0.18	4.0	125	0.16	4.0	–	–	–	–	–	–	50	0.14	3.2	–	–	–
ADMX 160616SR-MM:M8345	1.6	165	0.18	4.0	95	0.16	4.0	–	–	–	–	–	–	40	0.14	3.2	–	–	–
ADMX 160616SR-MM:M9340	1.6	260	0.18	4.0	155	0.16	4.0	–	–	–	–	–	–	65	0.14	3.2	–	–	–

ADEX 16

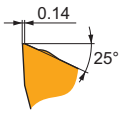
PRAMET

	W1	D1	L	S
	(mm)	(mm)	(mm)	(mm)
1606	9.950	4.50	16.00	6.25



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)



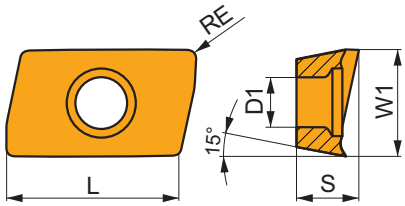
FM geometría muy positiva para mecanizado medio.

ADEX 160608SR-FM:8215	●	0.8	■	260	0.16	2.0	◪	155	0.14	2.0	■	245	0.16	2.0	–	–	–	◪	65	0.11	1.6	–	–	–
ADEX 160608SR-FM:M8330	●	0.8	■	255	0.16	2.0	◪	150	0.14	2.0	■	240	0.16	2.0	–	–	–	◪	60	0.11	1.6	–	–	–
ADEX 160608SR-FM:M8340	●	0.8	■	235	0.16	2.0	◪	140	0.14	2.0	◪	220	0.16	2.0	–	–	–	◪	55	0.11	1.6	–	–	–

ADEX 16-FA

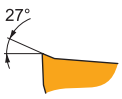
PRAMET

	W1	D1	L	S
	(mm)	(mm)	(mm)	(mm)
1606	9.950	4.50	16.00	6.17



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)



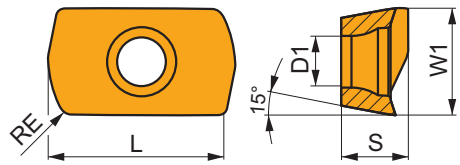
FA geometría muy positiva para fresado en acabado a mecanizado medio.

ADEX 160604FR-FA:HF7	●	0.4	–	–	–	–	–	–	–	–	–	■	195	0.28	6.0	–	–	–	–	–	–
ADEX 160604FR-FA:M0315	●	0.4	–	–	–	–	–	–	–	–	–	■	480	0.28	6.0	–	–	–	–	–	–
ADEX 160608FR-FA:HF7	●	0.8	–	–	–	–	–	–	–	–	–	■	240	0.28	6.0	–	–	–	–	–	–
ADEX 160608FR-FA:M0315	●	0.8	–	–	–	–	–	–	–	–	–	■	570	0.28	6.0	–	–	–	–	–	–
ADEX 160616FR-FA:HF7	●	1.6	–	–	–	–	–	–	–	–	–	■	255	0.28	6.0	–	–	–	–	–	–
ADEX 160616FR-FA:M0315	●	1.6	–	–	–	–	–	–	–	–	–	■	630	0.28	6.0	–	–	–	–	–	–
ADEX 160630FR-FA:HF7	●	3.0	–	–	–	–	–	–	–	–	–	■	270	0.28	6.0	–	–	–	–	–	–

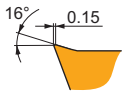
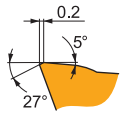
ADEX 16-HF

PRAMET

	W1	D1	L	S
	(mm)	(mm)	(mm)	(mm)
1606	9.950	4.50	16.00	5.88



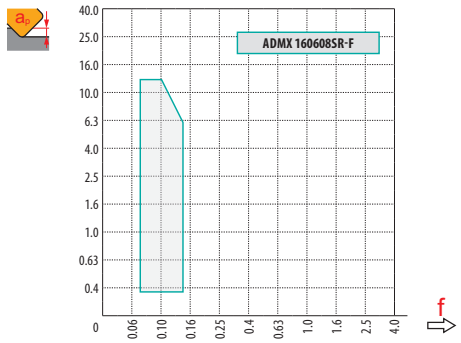
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

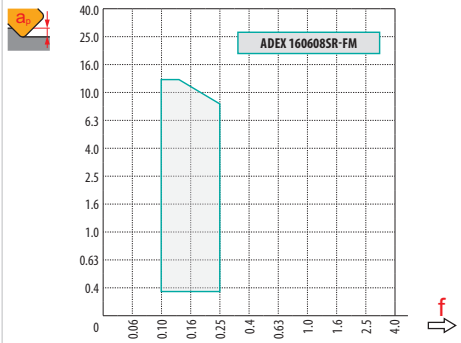
Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
																				
HF geometría muy positiva para mecanizado de alto avance.																				
ADEX 160612SR-HF:8215		1.2	195	1.00	0.6	115	0.90	0.6	–	–	–	–	–	–	–	–	–	–	–	–
ADEX 160612SR-HF:M8310		1.2	205	1.00	0.6	100	0.77	0.6	–	–	–	–	–	–	–	–	–	–	–	–
ADEX 160612SR-HF:M8330		1.2	200	1.00	0.6	120	0.90	0.6	–	–	–	–	–	–	–	–	–	–	–	–
ADEX 160612SR-HF:M8340		1.2	185	1.00	0.6	110	0.90	0.6	–	–	–	–	–	–	–	–	–	–	–	–
ADEX 160612SR-HF:M9340		1.2	195	1.00	0.6	115	0.90	0.6	–	–	–	–	–	–	–	–	–	–	–	–
																				
HF2 geometría con diseño positivo para fresado de alto avance.																				
ADEX 160612SR-HF2:M8310		1.2	205	0.90	0.6	100	0.81	0.6	190	0.90	0.6	–	–	–	–	–	–	40	0.63	0.5
ADEX 160612SR-HF2:M8330		1.2	205	0.90	0.6	120	0.81	0.6	190	0.90	0.6	–	–	–	50	0.81	0.5	40	0.63	0.5
ADEX 160612SR-HF2:M8340		1.2	190	0.90	0.6	110	0.81	0.6	180	0.90	0.6	–	–	–	45	0.81	0.5	–	–	–
ADEX 160612SR-HF2:M9325		1.2	230	0.90	0.6	–	–	–	215	0.90	0.6	–	–	–	–	–	–	45	0.63	0.5

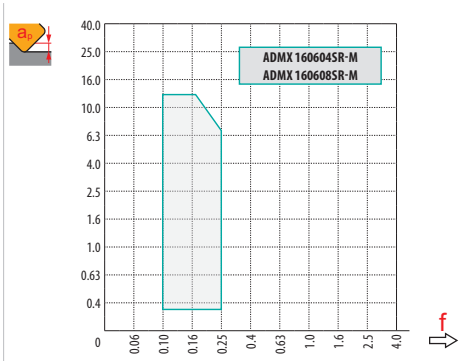
a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ X.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
⇨ X.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

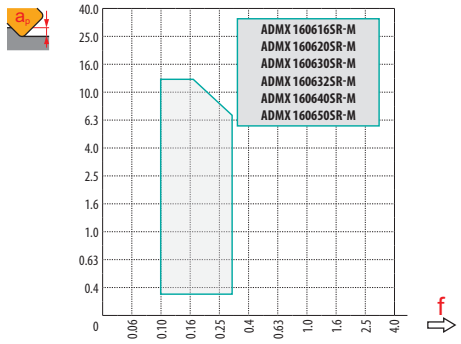
	ADMX 16-F	ADEX 16-FM	ADMX 16-M								ADMX 16-R	
RE	0.8	0.8	0.4	0.8	1.6	2.0	3.0	3.2	4.0	5.0	0.8	1.6
BS	2.99	2.18	3.39	2.99	1.62	1.23	0.28	0.09	2.69	1.52	2.99	1.62

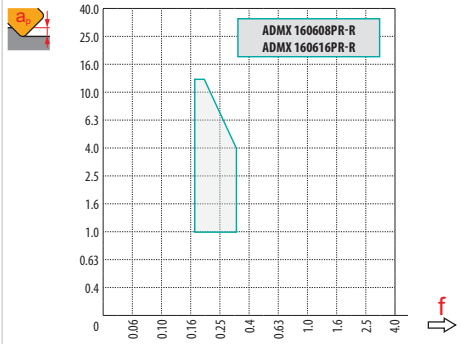
	ADMX 16-MF	ADMX 16-MM			ADEX 16-HF	ADEX 16-HF2	ADEX 16-FA			
RE	0.8	0.4	0.8	1.6	1.2	1.2	0.4	0.8	1.6	3.0
BS	2.99	3.39	2.99	1.62	0.52	0.52	2.84	2.44	1.65	0.69

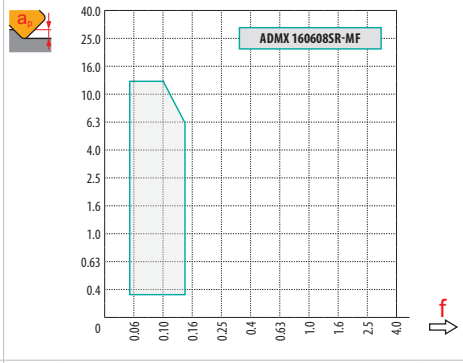


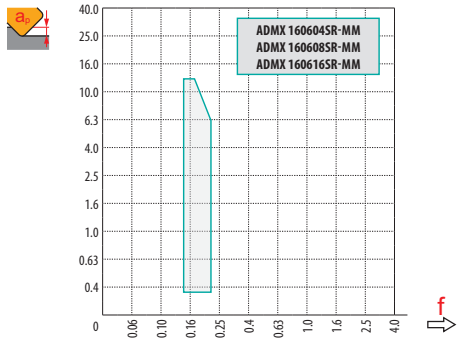


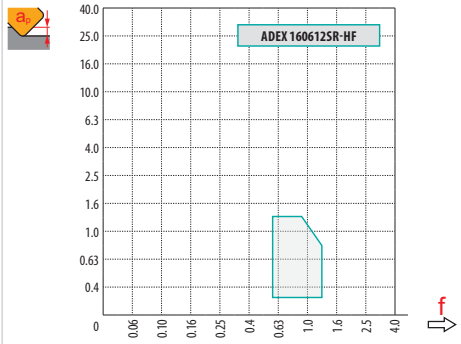


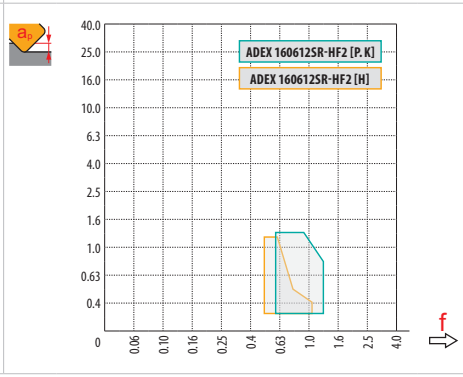


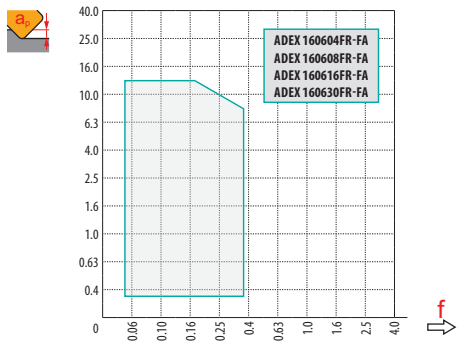












max

7.5

a_p	1.0	6.0	13.0
f	0.28	0.19	0.10

DC	RPMX	APMX/I
25	12.5°	13.0/60
32	7.5°	13.0/100
40	5.0°	8.6/100
50	3.5°	6.0/100
63	2.5°	4.2/100
80	2.0°	3.3/100

HFC

DC	RPMX *	RPMX **	APMX/I
25	4.0°	8.0°	1.3/19
32	2.0°	7.5°	1.3/38
40	1.2°	4.5°	1.3/65
50	0.8°	3.0°	1.3/100
63	0.5°	2.0°	0.8/100
80	0.4°	1.5°	0.6/100

* Fresado HFC
** Fresado convencional

DC	DMIN	DMAX	SMAX DMIN	SMAX DMAX
25	42.0	50.0	10.0	12.5
32	55.0	64.0	6.5	9.0
40	72.0	80.0	5.0	8.0
50	92.0	100.0	4.5	6.0
63	118.0	126.0	4.0	5.0
80	136.0	160.0	1.5	2.0

HFC

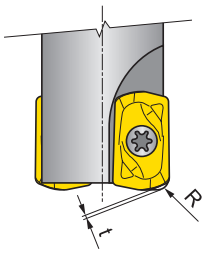
DC	DMIN	DMAX	SMAX DMIN	SMAX DMAX
25	42.0	50.0	1.3	1.3
32	55.0	64.0	1.3	1.3
40	72.0	80.0	1.3	1.3
50	92.0	100.0	1.3	1.3
63	118.0	126.0	1.3	1.3
80	136.0	160.0	1.3	1.3

a_p
2.5

DC	µm	3	5	10	15	20	30	40	50	60	80	100
25	FE	0.548	0.707	1.000	1.225	1.414	1.732	2.000	2.236	2.449	2.828	3.162
32		0.620	0.800	1.131	1.386	1.600	1.960	2.263	2.530	2.771	3.200	3.578
40		0.693	0.894	1.265	1.549	1.789	2.191	2.530	2.828	3.098	3.578	4.000
50		0.775	1.000	1.414	1.732	2.000	2.449	2.828	3.162	3.464	4.000	4.472
63		0.869	1.122	1.587	1.944	2.245	2.750	3.175	3.550	3.888	4.490	5.020
80		0.980	1.265	1.789	2.191	2.530	3.098	3.578	4.000	4.382	5.060	5.657

RE	µm	3	5	10	15	20	30	40	50	60	80	100
1.6	FE	0.196	0.253	0.358	0.438	0.506	0.620	0.716	0.800	0.876	1.012	1.131
2.0		0.219	0.283	0.400	0.490	0.566	0.693	0.800	0.894	0.980	1.131	1.265
3.0		0.268	0.346	0.490	0.600	0.693	0.849	0.980	1.095	1.200	1.386	1.549
3.2		0.277	0.358	0.506	0.620	0.716	0.876	1.012	1.131	1.239	1.431	1.600
4.0		0.310	0.400	0.566	0.693	0.800	0.980	1.131	1.265	1.386	1.600	1.789
5.0		0.346	0.447	0.632	0.775	0.894	1.095	1.265	1.414	1.549	1.789	2.000

ADMX/ADEX 16	R
ADMX 160630SR-M	2.5
ADMX 160632SR-M	2.5
ADMX 160640SR-M	4.0
ADMX 160650SR-M	4.5
ADEX 160612SR-HF	3.0
ADEX 160612SR-HF2	3.0



ADEX 16	R	t
ADEX 160612SR-HF	2.59	0.56
ADEX 160612SR-HF2	2.48	0.57

SAP10D

P M K N S

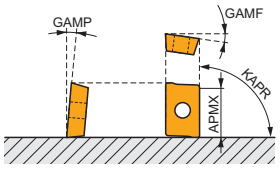
PRAMET

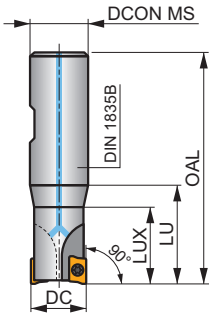
S

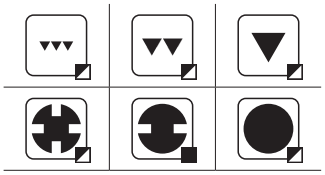
Fresa de Escuadrado para Plaquitas APKT 10 con Refrigeración Interna

Fresa a 90° con plaquitas positivas APKT 10 con APMX de 9 mm. Adecuada para planeado, escuadrado, ranurado, interpolación helicoidal, fresado trocoidal , en rampa y axial (plunge). Disponible con mango Weldon y para portafresas (con paso diferencial). Cuerpo tratado para alargar la vida de herramienta.

KAPR	90°
APMX	9.0 mm







h_m	0.06 - 0.13
h_m	0.08 - 0.16

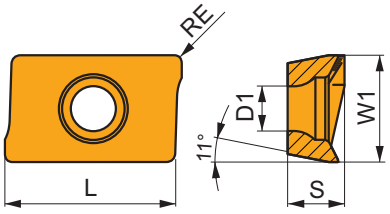
	Producto	DC (mm)	OAL (mm)	DCON MS (mm)	DCCB (mm)	LU (mm)	LUX (mm)	LF (mm)	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		kg		
DIN 1835B	**10A1R020B16-SAP10D-C**	10	78	16	–	30	20	–	–	–	12	2	1	–	39000	✓	0.09	GI081	SQ215
	12A1R027B16-SAP10D-C	12	75	16	–	27	–	–	–	–	12	2	1	–	35600	✓	0.10	GI081	SQ210
	16A2R032B16-SAP10D-C	16	80	16	–	32	–	–	–	–	12	4	2	–	30800	✓	0.12	GI081	SQ210
	20A3R032B20-SAP10D-C	20	82	20	–	32	–	–	–	–	12	4	3	–	27600	✓	0.13	GI081	SQ210
	25A3R042B25-SAP10D-C	25	98	25	–	42	–	–	–	–	12	4	3	–	24700	✓	0.36	GI081	SQ210

GI081	APKT 1003..

		Nm			
SQ210	US 2506-T07P	1.2	M 2.5	6.3	Flag T07P
SQ215	US 2505-T07P	1.2	M 2.5	5.2	Flag T07P

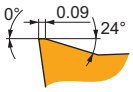
APKT 10

	W1	D1	L	S
	(mm)	(mm)	(mm)	(mm)
1003	6.700	2.88	11.00	3.50



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)

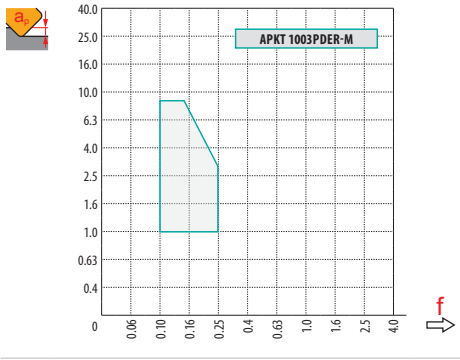


M geometría muy positiva para mecanizado ligero a medio.

APKT 1003PDER-M:8215	●	0.5	■	285	0.12	4.0	◪	170	0.11	4.0	■	270	0.12	4.0	–	–	–	◪	70	0.11	3.2	–	–	–
APKT 1003PDER-M:M8330	●	0.5	■	285	0.12	4.0	◪	170	0.11	4.0	■	270	0.12	4.0	–	–	–	◪	70	0.11	3.2	–	–	–
APKT 1003PDER-M:M8340	●	0.5	■	255	0.12	4.0	◪	150	0.11	4.0	◪	240	0.12	4.0	–	–	–	◪	60	0.11	3.2	–	–	–
APKT 1003PDER-M:M9325	●	0.5	■	360	0.12	4.0		–	–	–	■	340	0.12	4.0	–	–	–		–	–	–	–	–	–
APKT 1003PDER-M:M9340	●	0.5	■	335	0.12	4.0	◪	200	0.11	4.0		–	–	–	–	–	–	◪	80	0.11	3.2	–	–	–

a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	APKT 10-M
RE	0.5
BS	0.84



max.
4.5

a_p	1.0	3.0	5.0
1 f	0.20	0.13	0.10

DC	RPMX	APMX/I
10	7.3°	9.0/72
12	6.2°	9.0/84
16	2.4°	4.0/100
20	2.2°	3.7/100
25	2.2°	3.7/100

DC	DMIN	DMAX	SMAX DMIN	SMAX DMAX
10	11.0	20.0	0.4	3.8
12	13.0	24.0	0.3	3.9
16	20.5	32.0	0.6	2.0
20	27.2	40.0	0.9	2.4
25	37.9	50.0	1.6	3.0

a_p
0.3

SAP16D

P M K N S

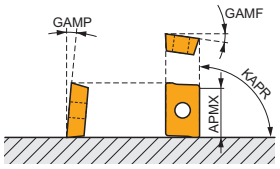
PRAMET

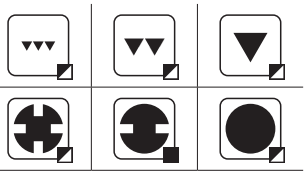
S

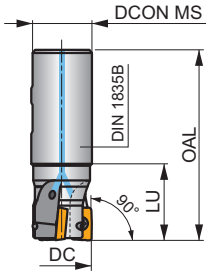
Fresa de Escuadrado para Plaquitas APKT 16 con Refrigeración Interna

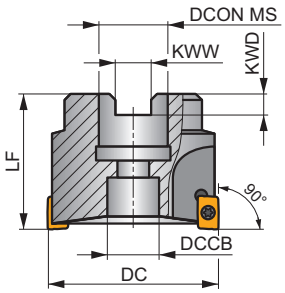
Fresa a 90° con plaquitas positivas APKT 16 con APMX de 13 mm. Adecuada para planeado, escuadrado, ranurado, interpolación helicoidal, fresado trocoidal , en rampa y axial (plunge). Disponible con mango Weldon y para portafresas (con paso diferencial). Cuerpo tratado para alargar la vida de herramienta.

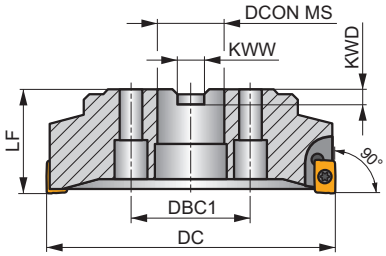
KAPR	90°
APMX	13.0 mm











h_m	0.06 - 0.18
h_m	0.10 - 0.22

	Producto	DC (mm)	OAL (mm)	DCON MS (mm)	DCCB (mm)	DBC1 (mm)	LU (mm)	LF (mm)	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		kg			
DIN 1835B	25A2R042B25-SAP16D-C	25	98	25	–	–	42	–	–	–	0	6	2	–	16800	✓	0.31	GI080	SQ030	–
DIN 1835B	32A3R040B32-SAP16D-C	32	100	32	–	–	50	–	–	–	0	8	3	–	14800	✓	0.51	GI080	SQ220	–
DIN 1835B	40A4R050B32-SAP16D-C	40	110	32	–	–	50	–	–	–	0	8	4	–	13200	✓	0.67	GI080	SQ220	–
	40A4R-S90AP16D	40	40	16	11	–	–	40	8.4	5.6	0	6	4	✓	13200	–	0.23	GI080	SQ031	–
	50A5R-S90AP16D	50	40	22	18	–	–	40	10.4	6.3	0	6	5	✓	11800	–	0.35	GI080	SQ031	–
	63A6R-S90AP16D	63	40	22	18	–	–	40	10.4	6.3	0	6	6	✓	10600	–	0.50	GI080	SQ031	–
ISO 6462 DIN 8030	80B5R-S90AP16D	80	50	27	38	–	–	50	12.4	7	0	6	5	✓	9400	–	0.97	GI080	SQ031	AC001
ISO 6462 DIN 8030	80B7R-S90AP16D	80	50	27	38	–	–	50	12.4	7	0	6	7	✓	9400	–	0.99	GI080	SQ031	AC001
ISO 6462 DIN 8030	100B8R-S90AP16D	100	50	32	45	–	–	50	14.4	8	0	6	8	✓	8400	–	1.50	GI080	SQ031	AC002
ISO 6462 DIN 8030	125B9R-S90AP16D	125	63	40	56	–	–	63	16.4	9	0	6	9	✓	7500	–	2.80	GI080	SQ031	AC003

GI080	APKT 1604..	APET 1604..

		Nm					
SQ030	US 4008-T15P	3.5	M 4	8	–	–	Flag T15P
SQ031	US 4011-T15P	3.5	M 4	10.6	D-T08P/T15P	FG-15	–
SQ220	US 4011-T15P	3.5	M 4	10.6	–	–	Flag T15P

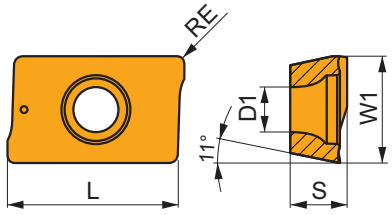
AC001	KS 1230	K.FMH27

AC002	KS 1635	K.FMH32
AC003	KS 2040	K.FMH40

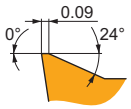
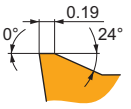
APKT 16

PRAMET

	W1	D1	L	S
	(mm)	(mm)	(mm)	(mm)
1604	9.440	4.60	17.00	5.67

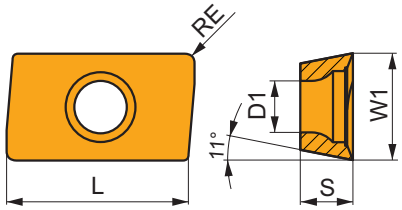


Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

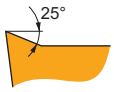
Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
			**GM** geometría muy positiva para mecanizado ligero a fresado medio.																	
APKT 1604PDR-GM:M8330		0.8	235	0.20	8.0	140	0.18	8.0	220	0.20	8.0	–	–	–	55	0.16	6.4	–	–	–
APKT 1604PDR-GM:M8340		0.8	210	0.20	8.0	125	0.18	8.0	195	0.20	8.0	–	–	–	50	0.16	6.4	–	–	–
APKT 1604PDR-GM:M9315		0.8	310	0.20	8.0	–	–	–	290	0.20	8.0	–	–	–	–	–	–	–	–	–
APKT 1604PDR-GM:M9325		0.8	285	0.20	8.0	–	–	–	270	0.20	8.0	–	–	–	–	–	–	–	–	–
APKT 1604PDR-GM:M9340		0.8	260	0.20	8.0	155	0.18	8.0	–	–	–	–	–	–	65	0.16	6.4	–	–	–
			**HM** geometría muy positiva para fresado medio y condiciones de mecanizado poco estables.																	
APKT 160404-HM:M8340		0.4	160	0.30	6.0	95	0.27	6.0	150	0.30	6.0	–	–	–	40	0.24	4.8	–	–	–
APKT 160416-HM:M8340		1.6	210	0.30	6.0	125	0.27	6.0	195	0.30	6.0	–	–	–	50	0.24	4.8	–	–	–
APKT 160431-HM:M8340		3.1	220	0.30	6.0	130	0.27	6.0	205	0.30	6.0	–	–	–	55	0.24	4.8	–	–	–
APKT 1604PDR-HM:8215		0.8	220	0.30	6.0	130	0.27	6.0	205	0.30	6.0	–	–	–	55	0.24	4.8	–	–	–
APKT 1604PDR-HM:M5315		0.8	270	0.30	6.0	–	–	–	255	0.30	6.0	–	–	–	–	–	–	–	–	–
APKT 1604PDR-HM:M8330		0.8	220	0.30	6.0	130	0.27	6.0	205	0.30	6.0	–	–	–	55	0.24	4.8	–	–	–
APKT 1604PDR-HM:M8340		0.8	200	0.30	6.0	120	0.27	6.0	190	0.30	6.0	–	–	–	50	0.24	4.8	–	–	–
APKT 1604PDR-HM:M9325		0.8	260	0.30	6.0	–	–	–	245	0.30	6.0	–	–	–	–	–	–	–	–	–

APET 16-FA

	W1	D1	L	S
	(mm)	(mm)	(mm)	(mm)
1604	9.600	4.50	17.00	4.76

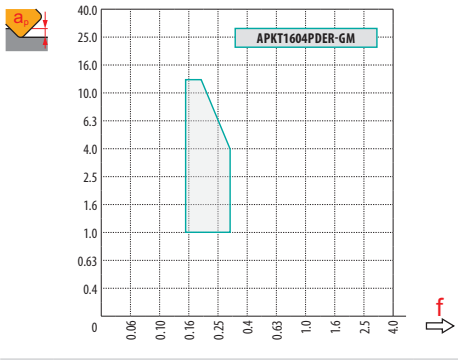


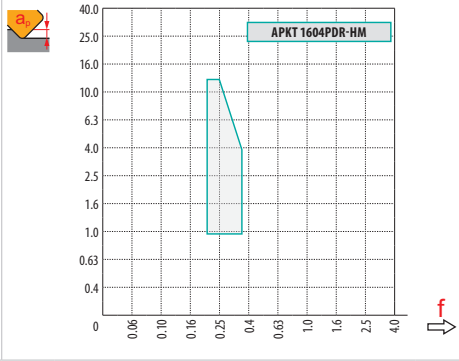
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

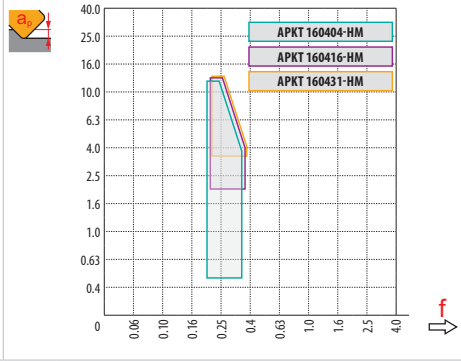
Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
			**FA** geometría muy positiva para fresado en acabado a mecanizado medio.																		
APET 160408FR-FA:HF7	●	0.8	–	–	–	–	–	–	–	–	–	■ 255	0.24	8.0	–	–	–	–	–	–

a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	APKT 16-GM	APKT 16-HM			
RE	0.8	0.4	0.8	1.6	3.1
BS	1.39	1.87	1.48	0.64	1.30







max
7.4

a_p	1.0	6.0	13.0
f	0.28	0.19	0.13

DC	DMIN	DMAX	SMAX DMIN	SMAX DMAX
25	34.7	50.0	1.2	3.1
32	48.5	64.0	0.9	1.7
40	63.5	80.0	1.3	2.2
50	83.5	100.0	0.9	1.4
63	110.0	126.0	1.0	1.4
80	144.0	160.0	1.1	1.3

DC	RPMX	APMX/I
25	2.3	3.9/100
32	1.0	1.6/100
40	1.0	1.6/100
50	0.5	0.7/100
63	0.4	0.5/100
80	0.3	0.4/100

a_p
0.2

PLANEADO

	SSO09	SSD12	FTB27X			
	90°	90°	90°			
	APMX (mm) 8.0	APMX (mm) 10.0	APMX (mm) 18.0			
	DC (mm) 20 – 80	DC (mm) 50 – 160	DC (mm) 175, 260			
Mango cilíndrico						
Weldon	DC = 20 – 32 (mm)					
Modular						
Portafresas	DC = 40 – 80 (mm)					
Página	122	125	128			
ISO	P M K S	P M K N S	P M K			
Forma de la plaquita						
Plaquitas de corte	SOMT 09T3	SDMT 1205	TBMR 2707			
N.º de filos de corte	4	4	3			
Escuadrado poco profundo	■	■	■			
Ranurado poco profundo	■	■	◪			
Fresado por inmersión	■	■				
Planeado	◪	◪	◪			

■ Primera Opción ◪ Opción Alternativa

SSO09

P M K S

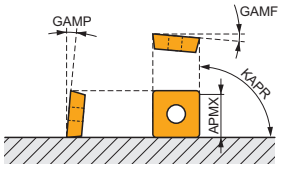
PRAMET

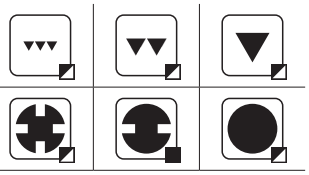
S

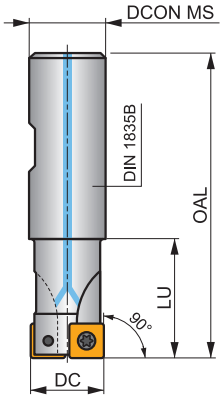
Fresa de Escuadrado a 90° para Plaquitas SOMT 09 con Refrigeración Interna

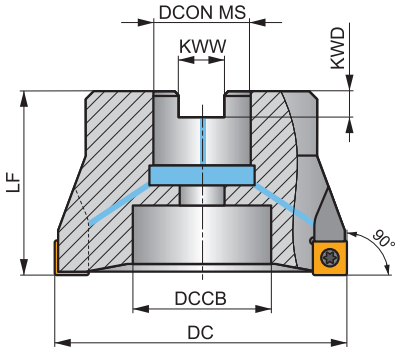
Fresa a 90° con plaquitas positivas SOMT 09 con APMX de 8 mm. Adecuada para planeado, escuadrado, ranurado y fresado axial (plunge). Disponible con mango Weldon y para portafresas. Disponibles con paso diferencial. Cuerpo tratado para alargar la vida de herramienta.

KAPR	90°
APMX	8.0 mm









h_m	0.07 - 0.18
h_m	0.07 - 0.22

	Producto	DC (mm)	OAL (mm)	DCON MS (mm)	DCCB (mm)	LU (mm)	LF (mm)	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		kg			
DIN 1835B	20A2R032B20-SSO09-C	20	82	20	–	32	–	–	–	-12	6	2	–	23800	✓	0.21	GI146	SQ400	–
DIN 1835B	25A3R042B25-SSO09-C	25	98	25	–	42	–	–	–	-12	6	3	–	21300	✓	0.31	GI146	SQ400	–
DIN 1835B	32A4R042B32-SSO09-C	32	102	32	–	42	–	–	–	-10	10	4	✓	18800	✓	0.55	GI146	SQ400	–
ISO 6462 DIN 8030	40A05R-S90SO09-C	40	–	16	14	–	40	8.4	5.6	-9.1	10	5	–	16800	✓	0.29	GI146	SQ402	–
ISO 6462 DIN 8030	50A06R-S90SO09-C	50	–	22	18	–	40	10.4	6.4	-8.8	10	6	–	15100	✓	0.33	GI146	SQ403	–
ISO 6462 DIN 8030	63A07R-S90SO09-C	63	–	22	18	–	40	10.4	6.4	-8.6	10	7	–	13400	✓	0.62	GI146	SQ403	–
ISO 6462 DIN 8030	80A09R-S90SO09-C	80	–	27	38	–	50	12.4	7	-8.1	10	9	–	11900	✓	1.03	GI146	SQ401	AC001

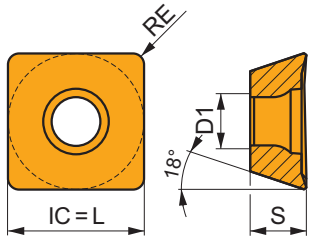
GI146	SOMT 09T3..

		Nm						
SQ400	US 3006-T09P	2.0	M 3	6	–	–	Flag T09P	–
SQ401	US 3006-T09P	2.0	M 3	6	D-T07P/T09P	FG-15	–	–
SQ402	US 3006-T09P	2.0	M 3	6	D-T07P/T09P	FG-15	–	HS 0830C
SQ403	US 3006-T09P	2.0	M 3	6	D-T07P/T09P	FG-15	–	HS 1030C

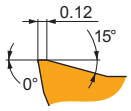
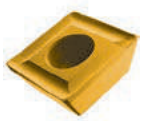
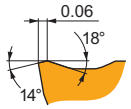
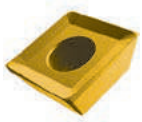
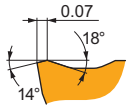
AC001	KS 1230	K.FMH27

SOMT 09

	IC	D1	L	S
	(mm)	(mm)	(mm)	(mm)
09T3	9.550	3.50	9.55	3.97

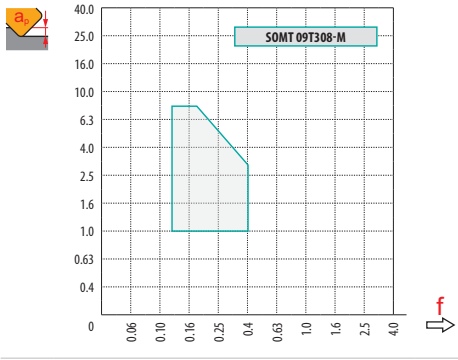


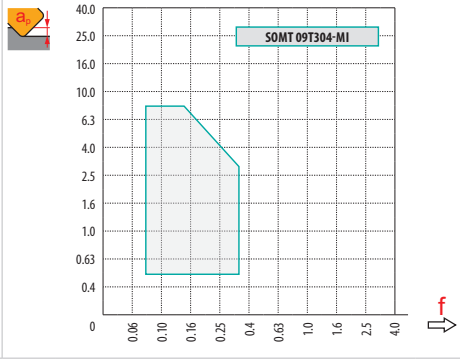
Valores de inicio adecuados para velocidad de corte (vc), avance (f) y profundidad de corte (ap). Condiciones válidas para ángulo de 90º Consulte nuestra APP Calculadora para más cálculos.

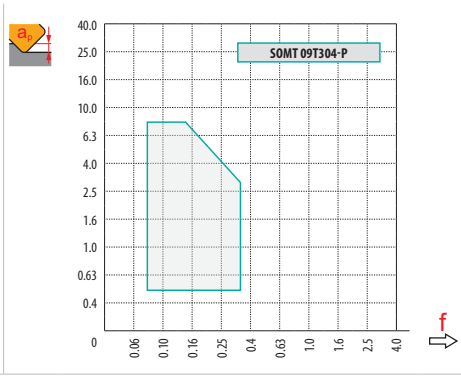
Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
																				
M geometría con diseño positivo para mecanizado medio.																				
SOMT 09T308-M:8215	●	0.8	275	0.14	2.5	165	0.13	2.5	260	0.14	2.5	–	–	–	65	0.13	2.0	–	–	–
SOMT 09T308-M:M5315	●	0.8	390	0.14	2.5	–	–	–	370	0.14	2.5	–	–	–	–	–	–	–	–	–
SOMT 09T308-M:M8330	●	0.8	270	0.14	2.5	160	0.13	2.5	255	0.14	2.5	–	–	–	65	0.13	2.0	–	–	–
SOMT 09T308-M:M8340	●	0.8	250	0.14	2.5	150	0.13	2.5	235	0.14	2.5	–	–	–	60	0.13	2.0	–	–	–
SOMT 09T308-M:M9315	●	0.8	380	0.14	2.5	–	–	–	360	0.14	2.5	–	–	–	–	–	–	–	–	–
																				
MI geometría con diseño positivo y estable para mecanizado medio.																				
SOMT 09T304-MI:8215	●	0.4	230	0.14	2.5	135	0.13	2.5	215	0.14	2.5	–	–	–	55	0.10	2.0	–	–	–
SOMT 09T304-MI:M8310	●	0.4	255	0.14	2.5	130	0.13	2.5	240	0.14	2.5	–	–	–	–	–	–	–	–	–
SOMT 09T304-MI:M8330	●	0.4	230	0.14	2.5	135	0.13	2.5	215	0.14	2.5	–	–	–	55	0.10	2.0	–	–	–
SOMT 09T304-MI:M8340	●	0.4	210	0.14	2.5	125	0.13	2.5	195	0.14	2.5	–	–	–	50	0.10	2.0	–	–	–
SOMT 09T304-MI:M9315	●	0.4	320	0.14	2.5	–	–	–	300	0.14	2.5	–	–	–	–	–	–	–	–	–
SOMT 09T304-MI:M9340	●	0.4	265	0.14	2.5	155	0.13	2.5	–	–	–	–	–	–	65	0.10	2.0	–	–	–
																				
P geometría muy positiva para mecanizado medio.																				
SOMT 09T304-P:M8330	●	0.4	250	0.14	2.5	150	0.13	2.5	235	0.14	2.5	–	–	–	60	0.10	2.0	–	–	–
SOMT 09T304-P:M8340	●	0.4	230	0.14	2.5	135	0.13	2.5	215	0.14	2.5	–	–	–	55	0.10	2.0	–	–	–
SOMT 09T304-P:M9325	●	0.4	320	0.14	2.5	–	–	–	300	0.14	2.5	–	–	–	–	–	–	–	–	–

a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	SOMT 09-M	SOMT 09-MI	SOMT 09-P
RE	0.8	0.4	0.4
BS	0.90	1.30	1.30







max

6.0

a_p	1.0	4.0	8.0
f	0.28	0.19	0.09

SSD12

P M K N S

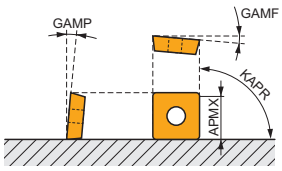
PRAMET

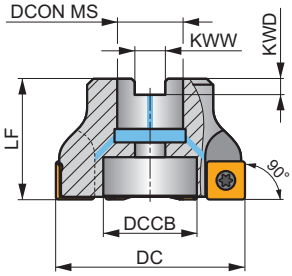
S

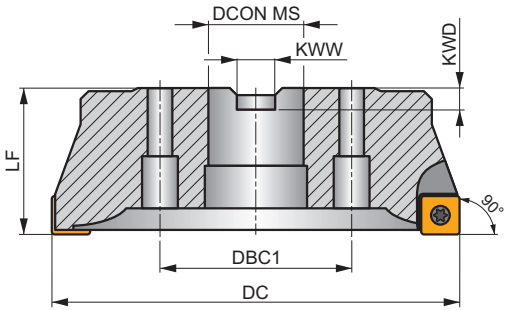
Fresa de Escuadrado a 90° para plaquitas SDMT 12 con Refrigeración Interna

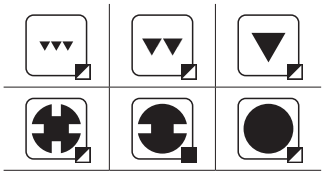
Fresa para portafresas a 90° con plaquitas positivas SDMT 12 con APMX de 10 mm. Adecuada para planeado, escuadrado, ranurado y fresado axial (plunge). Disponible únicamente para portafresas. Cuerpo tratado para alargar la vida de herramienta.

KAPR	90°
APMX	10.0 mm









h_m 0.09 - 0.25

	Producto	DC (mm)	LF (mm)	DCON MS (mm)	DCCB (mm)	DBC1 (mm)	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		kg			
ISO 6462 DIN 8030	**50A05R-S90SD12-C**	50	40	22	18	–	10.4	6.3	-5	8	5	–	13000	✓	0.34	GI057	SQ413	–
	63A06R-S90SD12-C	63	40	22	18	–	10.4	6.3	-5	8	6	–	11600	✓	0.53	GI057	SQ413	–
	80A06R-S90SD12-C	80	50	27	38	–	12.4	7	-5	8	6	–	10300	✓	1.16	GI057	SQ411	AC001
	100A08R-S90SD12-C	100	50	32	45	–	14.4	8	-5	8	8	–	9200	✓	1.69	GI057	SQ411	AC002
	125A09R-S90SD12-C	125	63	40	56	–	16.4	9	-5	8	9	–	8300	✓	3.19	GI057	SQ411	AC003
	160C12R-S90SD12	160	63	40	–	66.7	16.4	9	-5	8	12	–	7300	–	5.70	GI057	SQ411	–

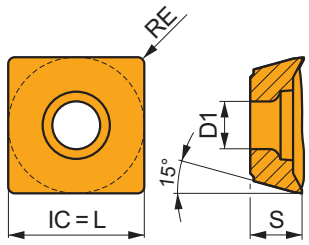
GI057	SDMT 1205..

					Nm					
SQ411	SSN 100312	MS 3510	HXK 3.5	US 3511-T15	3.0	M 3.5	11	D-T07/T15	FG-15	–
SQ413	–	–	–	US 3511-T15	3.0	M 3.5	11	D-T07/T15	FG-15	HS 1030C

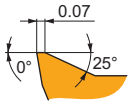
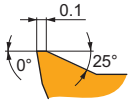
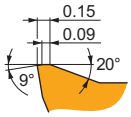
AC001	KS 1230	K.FMH27
AC002	KS 1635	K.FMH32
AC003	KS 2040	K.FMH40

SDMT 12

	IC	D1	L	S
	(mm)	(mm)	(mm)	(mm)
1205	12.700	4.40	12.70	5.00

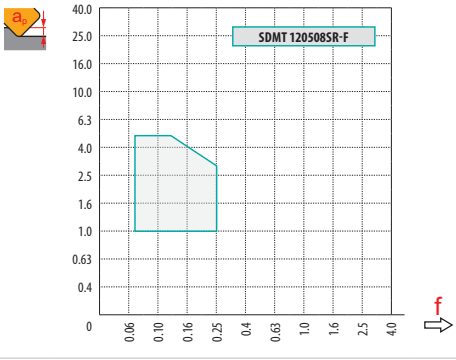


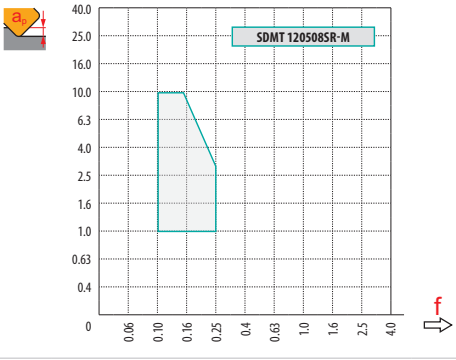
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

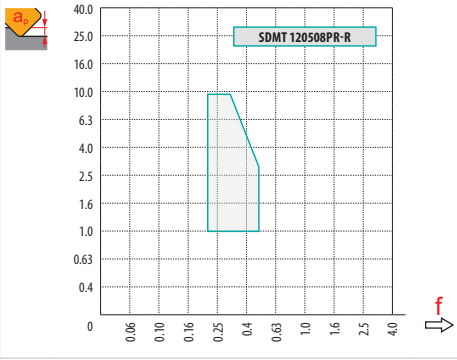
Producto	RE	P			M			K			N			S			H		
		vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
																			
F geometría con diseño positivo para mecanizado ligero a medio.																			
SDMT 120508SR-F:M8330	0.8	275	0.10	3.0	165	0.09	3.0	260	0.10	3.0	825	0.12	3.0	65	0.08	2.4	–	–	–
SDMT 120508SR-F:M8340	0.8	250	0.10	3.0	150	0.09	3.0	235	0.10	3.0	–	–	–	60	0.08	2.4	–	–	–
																			
M geometría con diseño positivo para mecanizado ligero a medio.																			
SDMT 120508SR-M:8215	0.8	245	0.16	3.5	145	0.14	3.5	230	0.16	3.5	–	–	–	60	0.11	2.8	–	–	–
SDMT 120508SR-M:M8330	0.8	240	0.16	3.5	140	0.14	3.5	225	0.16	3.5	–	–	–	60	0.11	2.8	–	–	–
SDMT 120508SR-M:M8340	0.8	220	0.16	3.5	130	0.14	3.5	205	0.16	3.5	–	–	–	55	0.11	2.8	–	–	–
SDMT 120508SR-M:M9325	0.8	305	0.16	3.5	–	–	–	285	0.16	3.5	–	–	–	–	–	–	–	–	–
																			
R geometría con diseño positivo estable para mecanizado medio.																			
SDMT 120508PR-R:M8330	0.8	220	0.25	3.5	130	0.23	3.5	205	0.25	3.5	–	–	–	55	0.23	2.8	–	–	–
SDMT 120508PR-R:M8340	0.8	195	0.25	3.5	115	0.23	3.5	185	0.25	3.5	–	–	–	45	0.23	2.8	–	–	–
SDMT 120508PR-R:M9315	0.8	280	0.25	3.5	–	–	–	265	0.25	3.5	–	–	–	–	–	–	–	–	–
SDMT 120508PR-R:M9325	0.8	265	0.25	3.5	–	–	–	250	0.25	3.5	–	–	–	–	–	–	–	–	–

a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	SDMT 12-F	SDMT 12-M	SDMT 12-R
RE	0.8	0.8	0.8
BS	–	–	–







max.
8.0

a_p	1.0	5.0	10.0
f	0.39	0.25	0.14

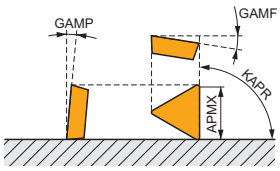
FTB27X

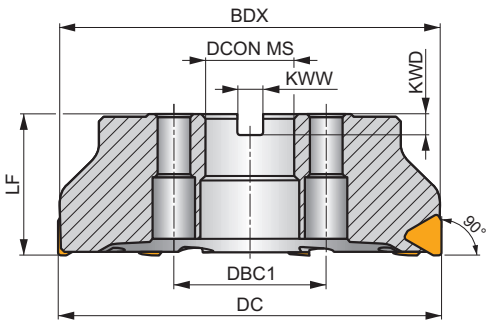
ROUGH TB Fresa de Escuadrar y Planear para Plaquitas TBMR 27 para Fresado Pesado

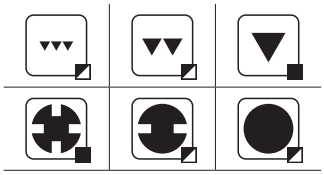
Fresa para portafresas a 90° con plaquitas positivas TBMR 27 con APMX de 18 mm. Adecuada para planeado, escuadrado y ranurado en condiciones de mecanizado pesado. Disponible únicamente para portafresas y con paso diferencial. Cuerpo tratado para alargar la vida de herramienta.

ROUGH TB

KAPR	90°
APMX	18.0 mm







h_m 0.15 - 0.38

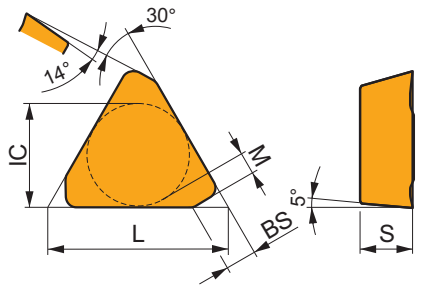
	Producto	DC (mm)	BDX (mm)	LF (mm)	DCON MS (mm)	DCCB (mm)	DBC1 (mm)	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		kg			
ISO 6462 DIN 8030	**175C08R-F90TB27X**	175	169.6	63	40	–	66.7	16.4	16.4	-9	9	8	✓	–	–	7.59	GI163	SQ424	–
	260C12R-F90TB27X	260	253.4	63	60	–	101.6	25.7	25.7	-9	9	12	✓	–	–	18.21	GI163	SQ425	–

GI163	TBMR 2707PZ..

SQ424	LNK 220616	US 6013-T20P	SDR T20P-T	KU TBMR 2707	DS 01Z	KL 04	HS 1240
SQ425	LNK 220616	US 6013-T20P	SDR T20P-T	KU TBMR 2707	DS 01Z	KL 04	HS 1655

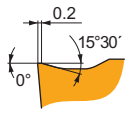
TBMR 27

	BS	IC	L	M	S
	(mm)	(mm)	(mm)	(mm)	(mm)
2707	4.61	15.875	27.50	3.2	7.94



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

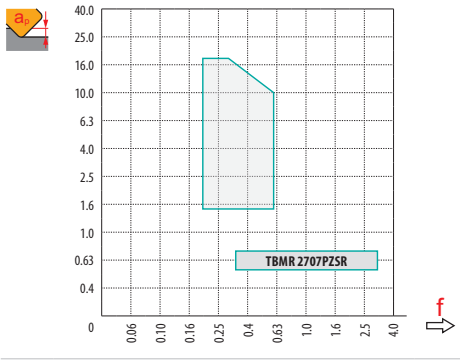
Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
TBMR 2707PZSR:M8326		–	130	0.20	11.0	–	–	–	120	0.20	11.0	–	–	–	–	–	–	–	–	–
TBMR 2707PZSR:M8346		–	110	0.20	11.0	65	0.20	11.0	–	–	–	–	–	–	–	–	–	–	–	–



PZSR diseño robusto para mecanizado pesado.

a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	TBMR 27
RE	–
BS	2.70



a_e	1.5	8.0	18.0
f	0.60	0.39	0.24

ESCUADRADO PROFUNDO

PLANEADO

	J(T)-SAD11E	J(T)-SAD16E	J(T)-SSAP	J(T)-CSD12X	J(T)-SLSN
	90°	90°	90°	90°	90°
	APMX (mm) 37.0 – 56.0	APMX (mm) 40.0 – 108.0	APMX (mm) 58.0 – 95.0	APMX (mm) 44.1 – 87.3	APMX (mm) 104.0 – 134.0
	DC (mm) 25 – 50	DC (mm) 50 – 100	DC (mm) 50 – 80	DC (mm) 40 – 80	DC (mm) 63, 80
Mango cilíndrico	DC = 25 – 40 (mm)				
Weldon	DC = 25 – 40 (mm)			DC = 50 (mm)	
Modular		DC = 50 – 80 (mm)		DC = 40 – 63 (mm)	
Portafresas	DC = 50 (mm)	DC = 50 – 100 (mm)		DC = 50 – 80 (mm)	
Página	134	139	145	150	153
ISO	P M K N S H	P M K N S H	P M K N S H	P M S	P K
Forma de la plaquita					
Plaquitas de corte	AD 11T3	AD.. 1606	APE. 150412 SPE. 1204	SD.X 1205	LNET 1606 SN.. 1305
N.º de filos de corte	2	2	2 / 4	4	2 / 8
Escuadrado profundo	■	■	■	■	■
Ranurado profundo	■	■	■	■	■
Planeado	◪	◪	◪	◪	◪
Fresado axial (plunge)	◪	◪	◪		◪

■ Primera Opción ◪ Opción Alternativa

J(T)-SAD11E

P M K N S

PRAMET

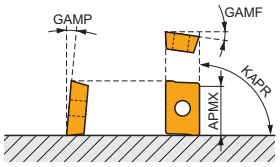
S

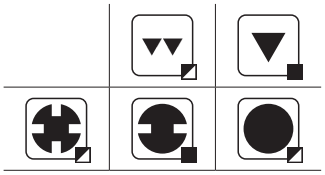
HELICAL AD11 Fresa de Filo Largo con Refrigeración Interna

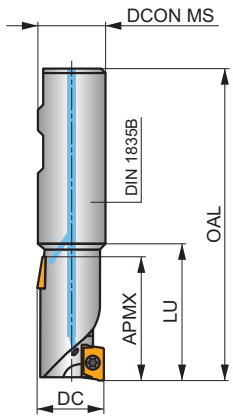
Fresa a 90° de filo largo con plaquitas positivas ADMX 11 con APMX de 36 hasta 56 mm con refrigeración interna. Adecuada para planeado, escuadrado, ranurado y fresado axial (plunge). Disponible con mango Weldon, cono Morse y para portafresas. Cuerpo tratado para alargar la vida de herramienta.

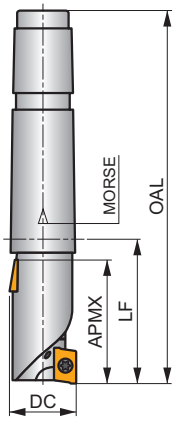
FORCE AD

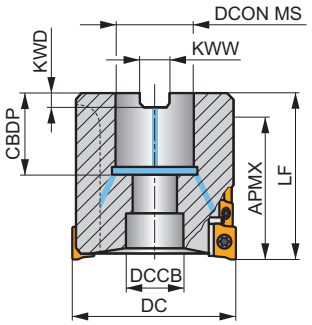
KAPR	90°
APMX	37.0 - 56.0 mm











h_m	0.05 - 0.08
h_m	0.05 - 0.08

	Producto	DC (mm)	OAL (mm)	DCON MS (mm)	DCCB (mm)	LU (mm)	LF (mm)	APMX (mm)	CBDP (mm)	CZC MS	GAMF (°)	GAMP (°)	NOF			max.		kg		
DIN 1835B	**25J2R50B25-SAD11E38-C**	25	106	25	–	50	–	38.00	–	–	-10.5	5	2	8	–	24100	✓	0.32	GI184	SQ210
	32J2R60B32-SAD11E47-C	32	120	32	–	60	–	47.00	–	–	-9	8	2	10	–	21300	✓	0.60	GI184	SQ210
	40J2R60B40-SAD11E47-C	40	130	40	–	60	–	47.00	–	–	-8.1	11	2	10	–	19100	✓	1.07	GI184	SQ210
	40J3R70B32-SAD11E56-C	40	130	32	–	70	–	56.00	–	–	-8.1	11	3	18	–	19100	✓	0.76	GI184	SQ210
	40J3R70B40-SAD11E56-C	40	140	40	–	70	–	56.00	–	–	-8.1	11	3	18	–	19100	✓	1.07	GI184	SQ210
DIN 228A	**25J2R55E03-SAD11E38-C**	25	136	–	–	–	55	38.00	–	3	-10.5	5	2	8	–	24100	✓	0.32	GI184	SQ210
	32J2R65E04-SAD11E47-C	32	167.5	–	–	–	65	47.00	–	4	-9	8	2	10	–	21300	✓	0.71	GI184	SQ210
	40J3R75E04-SAD11E56-C	40	177.5	–	–	–	75	56.00	–	4	-8.1	11	3	18	–	19100	✓	0.85	GI184	SQ210
ISO 6462 DIN 8030	**50T03R-S90AD11E37-C**	50	–	22	18	–	58	37.00	21	–	-7.2	12	3	12	–	17000	✓	0.66	GI184	SQ903

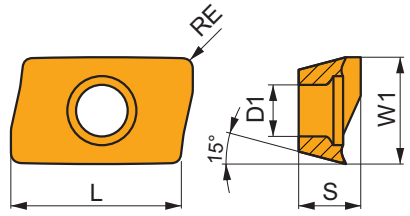
GI184	ADMX 11T3..	ADEX 11T3..-FA

		Nm						
SQ210	US 2506-T07P	1.2	M 2.5	6.3	–	–	Flag T07P	–
SQ903	US 2506-T07P	1.2	M 2.5	6.3	D-T07P/T09P	FG-15	–	HS 1030C

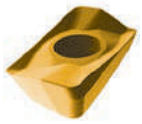
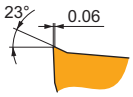
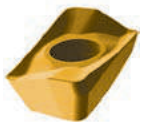
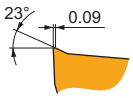
ADMX 11

PRAMET

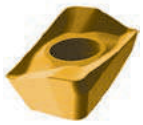
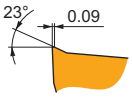
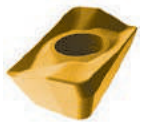
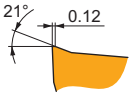
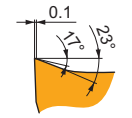
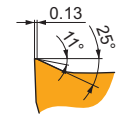
	W1	D1	L	S
	(mm)	(mm)	(mm)	(mm)
11T3	6.530	2.90	11.00	3.97



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

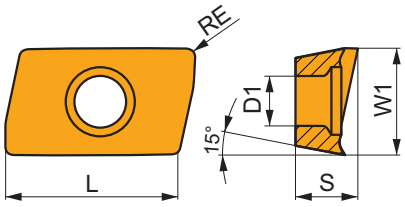
Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
			**F** geometría con diseño positivo muy afilado para mecanizado ligero.																	
ADMX 11T304SR-F:8215	●	0.4	245	0.10	2.0	145	0.09	2.0	230	0.10	2.0	735	0.12	2.0	60	0.08	1.6	–	–	–
ADMX 11T304SR-F:M8330	●	0.4	240	0.10	2.0	140	0.09	2.0	225	0.10	2.0	720	0.12	2.0	60	0.08	1.6	–	–	–
ADMX 11T304SR-F:M8340	●	0.4	220	0.10	2.0	130	0.09	2.0	205	0.10	2.0	–	–	–	55	0.08	1.6	–	–	–
ADMX 11T304SR-F:M9340	●	0.4	285	0.10	2.0	170	0.09	2.0	–	–	–	–	–	–	70	0.08	1.6	–	–	–
ADMX 11T308SR-F:8215	⬢	0.8	290	0.10	2.0	170	0.09	2.0	275	0.10	2.0	870	0.12	2.0	70	0.08	1.6	–	–	–
ADMX 11T308SR-F:M8330	⬢	0.8	285	0.10	2.0	170	0.09	2.0	270	0.10	2.0	855	0.12	2.0	70	0.08	1.6	–	–	–
ADMX 11T308SR-F:M8340	⬢	0.8	260	0.10	2.0	155	0.09	2.0	245	0.10	2.0	–	–	–	65	0.08	1.6	–	–	–
ADMX 11T308SR-F:M9340	⬢	0.8	340	0.10	2.0	200	0.09	2.0	–	–	–	–	–	–	85	0.08	1.6	–	–	–
			**M** geometría con diseño positivo para mecanizado ligero a medio.																	
ADMX 11T302SR-M:M8330	●	0.2	190	0.15	4.0	110	0.14	4.0	180	0.15	4.0	–	–	–	45	0.12	3.2	–	–	–
ADMX 11T302SR-M:M8340	⬢	0.2	170	0.15	4.0	100	0.14	4.0	160	0.15	4.0	–	–	–	40	0.12	3.2	–	–	–
ADMX 11T304SR-M:8215	●	0.4	205	0.15	4.0	120	0.14	4.0	190	0.15	4.0	–	–	–	50	0.12	3.2	–	–	–
ADMX 11T304SR-M:M8310	●	0.4	220	0.15	4.0	110	0.14	4.0	205	0.15	4.0	–	–	–	–	–	–	–	–	–
ADMX 11T304SR-M:M8330	⬢	0.4	205	0.15	4.0	120	0.14	4.0	190	0.15	4.0	–	–	–	50	0.12	3.2	–	–	–
ADMX 11T304SR-M:M8340	⬢	0.4	185	0.15	4.0	110	0.14	4.0	175	0.15	4.0	–	–	–	45	0.12	3.2	–	–	–
ADMX 11T304SR-M:M9325	●	0.4	255	0.15	4.0	–	–	–	240	0.15	4.0	–	–	–	–	–	–	–	–	–
ADMX 11T304SR-M:M9340	●	0.4	235	0.15	4.0	140	0.14	4.0	–	–	–	–	–	–	55	0.12	3.2	–	–	–
ADMX 11T308SR-M:8215	⬢	0.8	245	0.15	4.0	145	0.14	4.0	230	0.15	4.0	–	–	–	60	0.12	3.2	–	–	–
ADMX 11T308SR-M:M5315	⬢	0.8	335	0.15	4.0	–	–	–	315	0.15	4.0	–	–	–	–	–	–	–	–	–
ADMX 11T308SR-M:M8310	⬢	0.8	265	0.15	4.0	135	0.14	4.0	250	0.15	4.0	–	–	–	–	–	–	–	–	–
ADMX 11T308SR-M:M8330	⬢	0.8	245	0.15	4.0	145	0.14	4.0	230	0.15	4.0	–	–	–	60	0.12	3.2	–	–	–
ADMX 11T308SR-M:M8340	⬢	0.8	220	0.15	4.0	130	0.14	4.0	205	0.15	4.0	–	–	–	55	0.12	3.2	–	–	–
ADMX 11T308SR-M:M9315	⬢	0.8	330	0.15	4.0	–	–	–	310	0.15	4.0	–	–	–	–	–	–	–	–	–
ADMX 11T308SR-M:M9325	⬢	0.8	305	0.15	4.0	–	–	–	285	0.15	4.0	–	–	–	–	–	–	–	–	–
ADMX 11T308SR-M:M9340	⬢	0.8	275	0.15	4.0	165	0.14	4.0	–	–	–	–	–	–	65	0.12	3.2	–	–	–
ADMX 11T310SR-M:M8330	⬢	1.0	255	0.15	4.0	150	0.14	4.0	240	0.15	4.0	–	–	–	60	0.12	3.2	–	–	–
ADMX 11T310SR-M:M8340	✱	1.0	230	0.15	4.0	135	0.14	4.0	215	0.15	4.0	–	–	–	55	0.12	3.2	–	–	–
ADMX 11T312SR-M:8215	⬢	1.2	255	0.15	4.0	150	0.14	4.0	240	0.15	4.0	–	–	–	60	0.12	3.2	–	–	–
ADMX 11T312SR-M:M8330	✱	1.2	255	0.15	4.0	150	0.14	4.0	240	0.15	4.0	–	–	–	60	0.12	3.2	–	–	–
ADMX 11T312SR-M:M8340	✱	1.2	230	0.15	4.0	135	0.14	4.0	215	0.15	4.0	–	–	–	55	0.12	3.2	–	–	–
ADMX 11T316SR-M:8215	⬢	1.6	270	0.15	4.0	160	0.14	4.0	255	0.15	4.0	–	–	–	65	0.12	3.2	–	–	–
ADMX 11T316SR-M:M6330	✱	1.6	230	0.15	4.0	165	0.14	4.0	–	–	–	–	–	–	65	0.12	3.2	–	–	–
ADMX 11T316SR-M:M8310	⬢	1.6	295	0.15	4.0	150	0.14	4.0	280	0.15	4.0	–	–	–	–	–	–	–	–	–
ADMX 11T316SR-M:M8330	✱	1.6	270	0.15	4.0	160	0.14	4.0	255	0.15	4.0	–	–	–	65	0.12	3.2	–	–	–
ADMX 11T316SR-M:M8340	✱	1.6	240	0.15	4.0	140	0.14	4.0	225	0.15	4.0	–	–	–	60	0.12	3.2	–	–	–
ADMX 11T320SR-M:M6330	✱	2.0	240	0.15	4.0	170	0.14	4.0	–	–	–	–	–	–	70	0.12	3.2	–	–	–
ADMX 11T320SR-M:M8330	✱	2.0	280	0.15	4.0	165	0.14	4.0	265	0.15	4.0	–	–	–	70	0.12	3.2	–	–	–
ADMX 11T320SR-M:M8340	✱	2.0	255	0.15	4.0	150	0.14	4.0	240	0.15	4.0	–	–	–	60	0.12	3.2	–	–	–

Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)
																				
M geometría con diseño positivo para mecanizado ligero a medio.																				
ADMX 11T325SR-M:M6330	✱	2.5	■	240	0.15	4.0	■	170	0.14	4.0		–	–	–		–	–	–	◪	70	0.12	3.2		–	–	–
ADMX 11T325SR-M:M8340	✱	2.5	■	255	0.15	4.0	■	150	0.14	4.0	◪	240	0.15	4.0		–	–	–	◪	60	0.12	3.2		–	–	–
ADMX 11T330SR-M:M6330	✱	3.0	■	240	0.15	4.0	■	170	0.14	4.0		–	–	–		–	–	–	◪	70	0.12	3.2		–	–	–
ADMX 11T330SR-M:M8330	✱	3.0	■	280	0.15	4.0	■	165	0.14	4.0	■	265	0.15	4.0		–	–	–	◪	70	0.12	3.2		–	–	–
ADMX 11T330SR-M:M8340	✱	3.0	■	255	0.15	4.0	■	150	0.14	4.0	◪	240	0.15	4.0		–	–	–	◪	60	0.12	3.2		–	–	–
																				
R geometría con diseño positivo para mecanizado en condiciones de poca estabilidad.																				
ADMX 11T308PR-R:8215	✱	0.8	■	230	0.18	4.0	◪	135	0.16	4.0	■	215	0.18	4.0		–	–	–	◪	55	0.16	3.2	◪	45	0.12	0.7
ADMX 11T308PR-R:M5315	●	0.8	◪	310	0.18	4.0		–	–	–	■	290	0.18	4.0		–	–	–		–	–	–	◪	60	0.13	0.7
ADMX 11T308PR-R:M8310	✱	0.8	■	250	0.18	4.0	◪	125	0.16	4.0	■	235	0.18	4.0		–	–	–		–	–	–	◪	50	0.12	0.7
ADMX 11T308PR-R:M8330	✱	0.8	■	230	0.18	4.0	◪	135	0.16	4.0	■	215	0.18	4.0		–	–	–	◪	55	0.16	3.2	◪	45	0.12	0.7
ADMX 11T308PR-R:M8340	✱	0.8	■	210	0.18	4.0	◪	125	0.16	4.0	◪	195	0.18	4.0		–	–	–	◪	50	0.16	3.2		–	–	–
ADMX 11T308PR-R:M9315	●	0.8	■	310	0.18	4.0		–	–	–	■	290	0.18	4.0		–	–	–		–	–	–	◪	60	0.13	0.7
ADMX 11T308PR-R:M9325	✱	0.8	■	290	0.18	4.0		–	–	–	■	275	0.18	4.0		–	–	–		–	–	–	◪	55	0.13	0.7
ADMX 11T316PR-R:8215	✱	1.6	■	255	0.18	4.0	◪	150	0.16	4.0	■	240	0.18	4.0		–	–	–	◪	60	0.16	3.2	◪	50	0.12	0.7
ADMX 11T316PR-R:M8330	✱	1.6	■	255	0.18	4.0	◪	150	0.16	4.0	■	240	0.18	4.0		–	–	–	◪	60	0.16	3.2	◪	50	0.12	0.7
ADMX 11T316PR-R:M9325	✱	1.6	■	320	0.18	4.0		–	–	–	■	300	0.18	4.0		–	–	–		–	–	–	◪	60	0.12	0.7
																				
MF geometría muy positiva para mecanizado ligero y acabado.																				
ADMX 11T304SR-MF:M6330	●	0.4	■	215	0.08	2.5	■	150	0.07	2.5		–	–	–		–	–	–	■	60	0.06	2.0		–	–	–
ADMX 11T304SR-MF:M8340	●	0.4	■	220	0.08	2.5	■	130	0.07	2.5		–	–	–		–	–	–	■	55	0.06	2.0		–	–	–
ADMX 11T308SR-MF:M6330	●	0.8	■	255	0.08	2.5	■	180	0.07	2.5		–	–	–		–	–	–	■	75	0.06	2.0		–	–	–
ADMX 11T308SR-MF:M8340	●	0.8	■	265	0.08	2.5	■	155	0.07	2.5		–	–	–		–	–	–	■	65	0.06	2.0		–	–	–
																				
MM geometría muy positiva para mecanizado ligero a fresado medio.																				
ADMX 11T304SR-MM:M6330	●	0.4	■	185	0.14	2.5	■	130	0.13	2.5		–	–	–		–	–	–	■	55	0.11	2.0		–	–	–
ADMX 11T304SR-MM:M8340	●	0.4	■	195	0.14	2.5	■	115	0.13	2.5		–	–	–		–	–	–	■	45	0.11	2.0		–	–	–
ADMX 11T308SR-MM:M6330	●	0.8	■	225	0.14	2.5	■	155	0.13	2.5		–	–	–		–	–	–	■	65	0.11	2.0		–	–	–
ADMX 11T308SR-MM:M8340	●	0.8	■	235	0.14	2.5	■	140	0.13	2.5		–	–	–		–	–	–	■	55	0.11	2.0		–	–	–
ADMX 11T308SR-MM:M8345	●	0.8	■	190	0.14	2.5	■	110	0.13	2.5		–	–	–		–	–	–	■	45	0.11	2.0		–	–	–
ADMX 11T308SR-MM:M9340	●	0.8	■	300	0.14	2.5	■	180	0.13	2.5		–	–	–		–	–	–	■	75	0.11	2.0		–	–	–
ADMX 11T312SR-MM:M6330	✱	1.2	■	235	0.14	2.5	■	165	0.13	2.5		–	–	–		–	–	–	■	70	0.11	2.0		–	–	–
ADMX 11T312SR-MM:M8340	✱	1.2	■	245	0.14	2.5	■	145	0.13	2.5		–	–	–		–	–	–	■	60	0.11	2.0		–	–	–

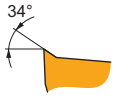
ADEX 11-FA

	W1	D1	L	S
	(mm)	(mm)	(mm)	(mm)
11T3	6.450	2.90	9.70	3.91



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)



FA geometría muy positiva para fresado en acabado a mecanizado medio.

ADEX 11T304FR-FA:HF7	●	0.4	–	–	–	–	–	–	–	–	–	■ 210	0.30	5.0	–	–	–	–	–	–
ADEX 11T304FR-FA:M0315	●	0.4	–	–	–	–	–	–	–	–	–	■ 480	0.30	5.0	–	–	–	–	–	–
ADEX 11T308FR-FA:HF7	●	0.8	–	–	–	–	–	–	–	–	–	■ 240	0.30	5.0	–	–	–	–	–	–
ADEX 11T308FR-FA:M0315	●	0.8	–	–	–	–	–	–	–	–	–	■ 570	0.30	5.0	–	–	–	–	–	–
ADEX 11T312FR-FA:HF7	●	1.2	–	–	–	–	–	–	–	–	–	■ 255	0.30	5.0	–	–	–	–	–	–
ADEX 11T316FR-FA:HF7	●	1.6	–	–	–	–	–	–	–	–	–	■ 270	0.18	5.0	–	–	–	–	–	–

a_e/DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	0.89	0.81	0.76	0.73	0.71	0.70	0.67	0.65	0.63	0.62	0.60	0.60	0.60	0.45

$a_{e\,max}$ / DC	1		2.5		5		7.5		10		15		20	
	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨
25	0.25	0.40	0.16	0.26	0.12	0.19	0.10	0.15	0.09	0.14	0.07	0.12	0.07	0.11
32	0.28	0.45	0.18	0.29	0.13	0.21	0.11	0.17	0.09	0.15	0.08	0.13	0.07	0.12
40	0.32	0.51	0.20	0.32	0.14	0.23	0.12	0.19	0.10	0.17	0.09	0.14	0.08	0.13
50	0.35	0.57	0.23	0.36	0.16	0.26	0.13	0.21	0.12	0.19	0.10	0.15	0.09	0.14

$a_{e\,max}$ / DC	25		32		40		50	
	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨
25	0.08	0.13	–	–	–	–	–	–
32	0.07	0.11	0.08	0.13	–	–	–	–
40	0.07	0.12	0.07	0.11	0.08	0.13	–	–
50	0.08	0.13	0.07	0.12	0.07	0.11	0.08	0.13

	ADMX 11-F		ADMX 11-M									ADMX 11-R		ADMX 11-MF		ADMX 11-MM			ADEX 11-FA			
RE	0.4	0.8	0.2	0.4	0.8	1.0	1.2	1.6	2.0	2.5	3.0	0.8	1.6	0.4	0.8	0.4	0.8	1.2	0.4	0.8	1.2	1.6
BS	1.89	1.48	2.09	1.89	1.48	1.27	1.08	0.68	1.61	1.13	0.66	1.48	0.68	1.89	1.48	1.89	1.48	1.08	1.77	1.39	1.0	0.62

ISO	DC		APMX	a_p
25J2R50B25-SAD11E38-C	25	2	38	34.5
32J2R60B32-SAD11E47-C	32	2	47	43.5
40J2R60B40-SAD11E47-C	40	2	47	43.5
40J3R70B32-SAD11E56-C	40	3	56	52.5
40J3R70B40-SAD11E56-C	40	3	56	52.5
25J2R55E03-SAD11E38-C	25	2	38	34.5
32J2R65E04-SAD11E47-C	32	2	47	43.5
40J3R75E04-SAD11E56-C	40	3	56	52.5
50T03R-S90AD11E37-C	50	3	37	33.5

ADMX/ADEX 11	R
ADMX 11T320SR-M	1.0
ADMX 11T325SR-M	1.8
ADMX 11T330SR-M	1.8

max

4.5

J(T)-SAD16E

PRAMET

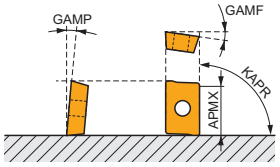
S

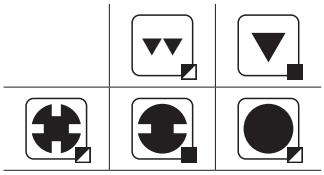
HELICAL AD16 Fresa de Filo Largo con Refrigeración Interna

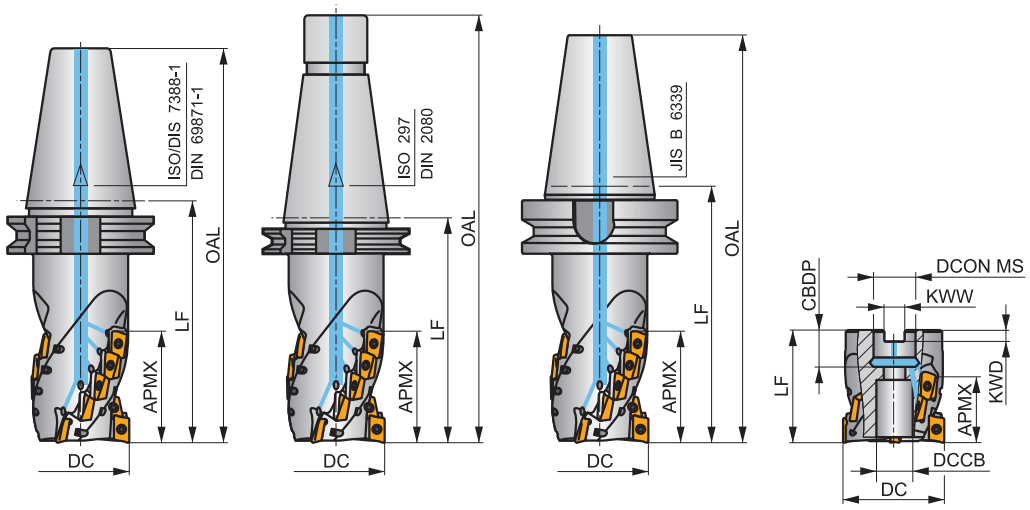
Fresa a 90° de filo largo que utiliza plaquitas positivas AD.. 16 con APMX de 40 hasta 108 mm con refrigeración interna. Adecuada para planeado, escuadrado, ranurado y fresado axial (plunge). Disponible para portafresas, con cono DIN 69871, BT y DIN 2080, con o sin paso diferencial. Cuerpo tratado para alargar la vida de herramienta.

FORCE AD

KAPR	90°
APMX	40.0 - 108.0 mm







h_m	0.08 - 0.1
h_m	0.08 - 0.1

	Producto	DC (mm)	OAL (mm)	DCON MS (mm)	DCCB (mm)	LF (mm)	APMX (mm)	CBDP (mm)	CZC MS	GAMF (°)	GAMP (°)	NOF			max.		kg		
	50J3R100H50-SAD16E54-C	50	202	–	–	100	54.00	–	50	-6	12	3	12	–	13200	✓	4.08	GI282	SQ031
	50J3R140H50-SAD16E80-C	50	242	–	–	140	80.00	–	50	-6	12	3	18	–	13200	✓	4.38	GI282	SQ031
ISO/DIS 7388-1	63J3R140H50-SAD16E68-C	63	242	–	–	140	68.00	–	50	-6	12	3	15	–	11700	✓	5.34	GI282	SQ031
	63J3R155H50-SAD16E95-C	63	257	–	–	155	95.00	–	50	-6	12	3	21	–	11700	✓	5.43	GI282	SQ031
	80J4R165H50-SAD16E108-C	80	257	–	–	165	108.00	–	50	-6	12	4	32	✓	10400	✓	7.37	GI282	SQ031
	50J3R140G50-SAD16E80-C	50	267	–	–	140	80.00	–	50	-6	12	3	18	–	13200	✓	4.48	GI282	SQ031
ISO 297	63J3R155G50-SAD16E95-C	63	282	–	–	155	95.00	–	50	-6	12	3	21	–	11700	✓	5.52	GI282	SQ031
	80J4R165G50-SAD16E108-C	80	292	–	–	165	108.00	–	50	-6	12	4	32	✓	10400	✓	7.51	GI282	SQ031
	50J3R140X50-SAD16E68-C	50	242	–	–	140	68.00	–	50	-6	12	3	15	–	13200	✓	5.28	GI282	SQ031
JIS B 6339	63J3R155X50-SAD16E80-C	63	257	–	–	155	80.00	–	50	-6	12	3	18	–	11700	✓	6.19	GI282	SQ031
	80J4R165X50-SAD16E95-C	80	267	–	–	165	95.00	–	50	-6	12	4	28	✓	10400	✓	7.84	GI282	SQ031
	50T03R-S90AD16E40-C	50	–	22	18	70	40.00	21	–	-6	12	3	9	–	13200	✓	0.63	GI282	SQ913
	63T04R-S90AD16E40-C	63	–	27	22	70	40.00	22	–	-6	12	4	12	✓	11700	✓	1.14	GI282	SQ914
ISO 6462 DIN 8030	63T04R-S90AD16E68-C	63	–	27	22	100	68.00	22	–	-6	12	4	20	✓	11700	✓	1.86	GI282	SQ914
	80T04R-S90AD16E55-C	80	–	32	30	85	55.00	25	–	-6	12	4	16	✓	10400	✓	2.56	GI282	SQ915
	80T04R-S90AD16E80-C	80	–	32	30	115	80.00	25	–	-6	12	4	24	✓	10400	✓	3.17	GI282	SQ915
	100T05R-S90AD16E80-C	100	–	40	36	120	80.00	30	–	-6	12	5	30	✓	9300	✓	5.31	GI282	SQ916

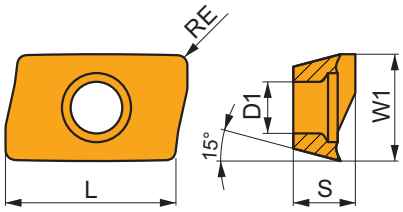
GI282	ADMX 1606..	ADEX 1606..-FA	ADEX 1606..-FM

		Nm					
SQ031	US 4011-T15P	3.5	M 4	10.6	D-T08P/T15P	FG-15	–
SQ913	US 4011-T15P	3.5	M 4	10.6	D-T08P/T15P	FG-15	HS 1030C
SQ914	US 4011-T15P	3.5	M 4	10.6	D-T08P/T15P	FG-15	HS 1230C
SQ915	US 4011-T15P	3.5	M 4	10.6	D-T08P/T15P	FG-15	HS 1630C
SQ916	US 4011-T15P	3.5	M 4	10.6	D-T08P/T15P	FG-15	HS 2040C

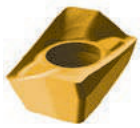
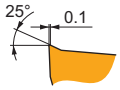
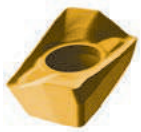
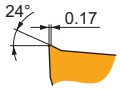
ADMX 16

PRAMET

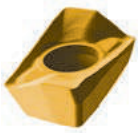
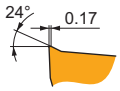
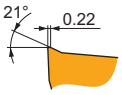
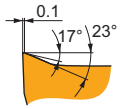
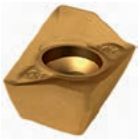
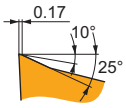
	W1 (mm)	D1 (mm)	L (mm)	S (mm)
1606	9.950	4.50	16.00	6.25



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
			**F** geometría muy positiva para mecanizado ligero a medio.																	
ADMX 160608SR-F:8215	●	0.8	290	0.10	2.0	170	0.09	2.0	275	0.10	2.0	870	0.12	2.0	70	0.07	1.6	–	–	–
ADMX 160608SR-F:M8310	●	0.8	320	0.10	2.0	160	0.09	2.0	300	0.10	2.0	–	–	–	–	–	–	–	–	–
ADMX 160608SR-F:M8330	●	0.8	285	0.10	2.0	170	0.09	2.0	270	0.10	2.0	855	0.12	2.0	70	0.07	1.6	–	–	–
ADMX 160608SR-F:M8340	●	0.8	260	0.10	2.0	155	0.09	2.0	245	0.10	2.0	–	–	–	65	0.07	1.6	–	–	–
ADMX 160608SR-F:M9340	●	0.8	340	0.10	2.0	200	0.09	2.0	–	–	–	–	–	–	85	0.07	1.6	–	–	–
			**M** geometría con diseño positivo para mecanizado ligero a medio.																	
ADMX 160604SR-M:8215	●	0.4	190	0.18	5.0	110	0.16	5.0	180	0.18	5.0	–	–	–	45	0.13	4.0	–	–	–
ADMX 160604SR-M:M8330	●	0.4	190	0.18	5.0	110	0.16	5.0	180	0.18	5.0	–	–	–	45	0.13	4.0	–	–	–
ADMX 160604SR-M:M8340	●	0.4	170	0.18	5.0	100	0.16	5.0	160	0.18	5.0	–	–	–	40	0.13	4.0	–	–	–
ADMX 160608SR-M:8215	●	0.8	225	0.18	5.0	135	0.16	5.0	210	0.18	5.0	–	–	–	55	0.13	4.0	–	–	–
ADMX 160608SR-M:M5315	●	0.8	305	0.18	5.0	–	–	–	285	0.18	5.0	–	–	–	–	–	–	–	–	–
ADMX 160608SR-M:M8310	●	0.8	250	0.18	5.0	125	0.16	5.0	235	0.18	5.0	–	–	–	–	–	–	–	–	–
ADMX 160608SR-M:M8330	●	0.8	225	0.18	5.0	135	0.16	5.0	210	0.18	5.0	–	–	–	55	0.13	4.0	–	–	–
ADMX 160608SR-M:M8340	●	0.8	205	0.18	5.0	120	0.16	5.0	190	0.18	5.0	–	–	–	50	0.13	4.0	–	–	–
ADMX 160608SR-M:M9315	●	0.8	305	0.18	5.0	–	–	–	285	0.18	5.0	–	–	–	–	–	–	–	–	–
ADMX 160608SR-M:M9325	●	0.8	280	0.18	5.0	–	–	–	265	0.18	5.0	–	–	–	–	–	–	–	–	–
ADMX 160608SR-M:M9340	●	0.8	255	0.18	5.0	150	0.16	5.0	–	–	–	–	–	–	60	0.13	4.0	–	–	–
ADMX 160616SR-M:8215	●	1.6	250	0.18	5.0	150	0.16	5.0	235	0.18	5.0	–	–	–	60	0.13	4.0	–	–	–
ADMX 160616SR-M:M8310	●	1.6	275	0.18	5.0	140	0.16	5.0	260	0.18	5.0	–	–	–	–	–	–	–	–	–
ADMX 160616SR-M:M8330	✱	1.6	250	0.18	5.0	150	0.16	5.0	235	0.18	5.0	–	–	–	60	0.13	4.0	–	–	–
ADMX 160616SR-M:M8340	✱	1.6	225	0.18	5.0	135	0.16	5.0	210	0.18	5.0	–	–	–	55	0.13	4.0	–	–	–
ADMX 160616SR-M:M9325	●	1.6	310	0.18	5.0	–	–	–	290	0.18	5.0	–	–	–	–	–	–	–	–	–
ADMX 160620SR-M:M8330	✱	2.0	265	0.18	5.0	155	0.16	5.0	250	0.18	5.0	–	–	–	65	0.13	4.0	–	–	–
ADMX 160620SR-M:M8340	✱	2.0	240	0.18	5.0	140	0.16	5.0	225	0.18	5.0	–	–	–	60	0.13	4.0	–	–	–
ADMX 160630SR-M:M8330	✱	3.0	265	0.18	5.0	155	0.16	5.0	250	0.18	5.0	–	–	–	65	0.13	4.0	–	–	–
ADMX 160630SR-M:M8340	✱	3.0	240	0.18	5.0	140	0.16	5.0	225	0.18	5.0	–	–	–	60	0.13	4.0	–	–	–
ADMX 160632SR-M:M6330	✱	3.2	225	0.18	5.0	155	0.16	5.0	–	–	–	–	–	–	65	0.13	4.0	–	–	–
ADMX 160632SR-M:M8330	✱	3.2	265	0.18	5.0	155	0.16	5.0	250	0.18	5.0	–	–	–	65	0.13	4.0	–	–	–

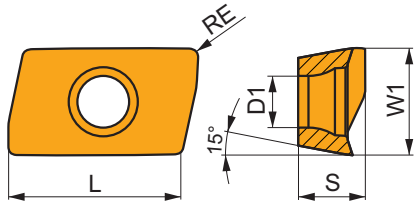
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)
																				
M geometría con diseño positivo para mecanizado ligero a medio.																				
ADMX 160632SR-M:M8340	✱	3.2	■	240	0.18	5.0	■	140	0.16	5.0	◪	225	0.18	5.0	–	–	–	◪	60	0.13	4.0	–	–	–
ADMX 160632SR-M:M9325	✱	3.2	■	325	0.18	5.0		–	–	–	■	305	0.18	5.0	–	–	–		–	–	–	–	–	–
ADMX 160640SR-M:M8330	✱	4.0	■	265	0.18	5.0	■	155	0.16	5.0	■	250	0.18	5.0	–	–	–	◪	65	0.13	4.0	–	–	–
ADMX 160640SR-M:M8340	✱	4.0	■	240	0.18	5.0	■	140	0.16	5.0	◪	225	0.18	5.0	–	–	–	◪	60	0.13	4.0	–	–	–
ADMX 160650SR-M:M8330	✱	5.0	■	265	0.18	5.0	■	155	0.16	5.0	■	250	0.18	5.0	–	–	–	◪	65	0.13	4.0	–	–	–
ADMX 160650SR-M:M8340	✱	5.0	■	240	0.18	5.0	■	140	0.16	5.0	◪	225	0.18	5.0	–	–	–	◪	60	0.13	4.0	–	–	–
																				
R geometría con diseño positivo para mecanizado medio y condiciones de poca estabilidad.																				
ADMX 160608PR-R:8215	✱	0.8	■	205	0.25	6.0	◪	120	0.23	6.0	■	190	0.25	6.0	–	–	–	◪	50	0.20	4.8	◪	40	0.16	1.1
ADMX 160608PR-R:M5315	✱	0.8	◪	260	0.25	6.0		–	–	–	■	245	0.25	6.0	–	–	–		–	–	–	◪	50	0.16	1.1
ADMX 160608PR-R:M8310	✱	0.8	■	220	0.25	6.0	◪	110	0.23	6.0	■	205	0.25	6.0	–	–	–		–	–	–	◪	40	0.16	1.1
ADMX 160608PR-R:M8330	✱	0.8	■	205	0.25	6.0	◪	120	0.23	6.0	■	190	0.25	6.0	–	–	–	◪	50	0.20	4.8	◪	40	0.16	1.1
ADMX 160608PR-R:M8340	✱	0.8	■	190	0.25	6.0	◪	110	0.23	6.0	◪	180	0.25	6.0	–	–	–	◪	45	0.20	4.8		–	–	–
ADMX 160608PR-R:M9315	✱	0.8	■	265	0.25	6.0		–	–	–	■	250	0.25	6.0	–	–	–		–	–	–	◪	50	0.16	1.1
ADMX 160608PR-R:M9325	✱	0.8	■	250	0.25	6.0		–	–	–	■	235	0.25	6.0	–	–	–		–	–	–	◪	50	0.16	1.1
ADMX 160616PR-R:M8330	✱	1.6	■	225	0.25	6.0	◪	135	0.23	6.0	■	210	0.25	6.0	–	–	–	◪	55	0.20	4.8	◪	45	0.16	1.1
ADMX 160616PR-R:M8340	✱	1.6	■	210	0.25	6.0	◪	125	0.23	6.0	◪	195	0.25	6.0	–	–	–	◪	50	0.20	4.8		–	–	–
ADMX 160616PR-R:M9315	✱	1.6	■	295	0.25	6.0		–	–	–	■	280	0.25	6.0	–	–	–		–	–	–	◪	55	0.16	1.1
																				
MF geometría muy positiva para mecanizado en acabado.																				
ADMX 160608SR-MF:M6330	✱	0.8	■	215	0.08	4.0	■	150	0.07	4.0		–	–	–	–	–	–	■	60	0.06	3.2	–	–	–
ADMX 160608SR-MF:M8340	✱	0.8	■	225	0.08	4.0	■	135	0.07	4.0		–	–	–	–	–	–	■	55	0.06	3.2	–	–	–
ADMX 160608SR-MF:M9340	✱	0.8	■	305	0.08	4.0	■	180	0.07	4.0		–	–	–	–	–	–	■	75	0.06	3.2	–	–	–
																				
MM geometría muy positiva para mecanizado ligero a fresado medio.																				
ADMX 160604SR-MM:M6330	✱	0.4	■	145	0.18	4.0	■	105	0.16	4.0		–	–	–	–	–	–	■	40	0.14	3.2	–	–	–
ADMX 160604SR-MM:M8340	✱	0.4	■	160	0.18	4.0	■	95	0.16	4.0		–	–	–	–	–	–	■	40	0.14	3.2	–	–	–
ADMX 160608SR-MM:M6330	✱	0.8	■	175	0.18	4.0	■	125	0.16	4.0		–	–	–	–	–	–	■	50	0.14	3.2	–	–	–
ADMX 160608SR-MM:M8340	✱	0.8	■	190	0.18	4.0	■	110	0.16	4.0		–	–	–	–	–	–	■	45	0.14	3.2	–	–	–
ADMX 160608SR-MM:M8345	✱	0.8	■	150	0.18	4.0	■	90	0.16	4.0		–	–	–	–	–	–	■	35	0.14	3.2	–	–	–
ADMX 160608SR-MM:M9340	✱	0.8	■	235	0.18	4.0	■	140	0.16	4.0		–	–	–	–	–	–	■	55	0.14	3.2	–	–	–
ADMX 160616SR-MM:M6330	✱	1.6	■	195	0.18	4.0	■	140	0.16	4.0		–	–	–	–	–	–	■	55	0.14	3.2	–	–	–
ADMX 160616SR-MM:M8340	✱	1.6	■	210	0.18	4.0	■	125	0.16	4.0		–	–	–	–	–	–	■	50	0.14	3.2	–	–	–
ADMX 160616SR-MM:M8345	✱	1.6	■	165	0.18	4.0	■	95	0.16	4.0		–	–	–	–	–	–	■	40	0.14	3.2	–	–	–
ADMX 160616SR-MM:M9340	✱	1.6	■	260	0.18	4.0	■	155	0.16	4.0		–	–	–	–	–	–	■	65	0.14	3.2	–	–	–

ADEX 16

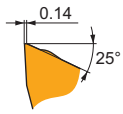
PRAMET

	W1	D1	L	S
	(mm)	(mm)	(mm)	(mm)
1606	9.950	4.50	16.00	6.25



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)



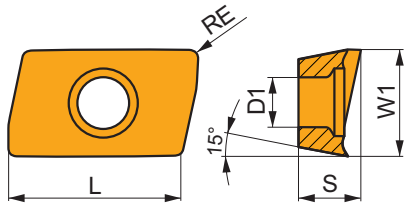
FM geometría muy positiva para mecanizado medio.

ADEX 160608SR-FM:8215	●	0.8	■	260	0.16	2.0	◪	155	0.14	2.0	■	245	0.16	2.0	–	–	–	◪	65	0.11	1.6	–	–	–
ADEX 160608SR-FM:M8330	●	0.8	■	255	0.16	2.0	◪	150	0.14	2.0	■	240	0.16	2.0	–	–	–	◪	60	0.11	1.6	–	–	–
ADEX 160608SR-FM:M8340	●	0.8	■	235	0.16	2.0	◪	140	0.14	2.0	◪	220	0.16	2.0	–	–	–	◪	55	0.11	1.6	–	–	–

ADEX 16-FA

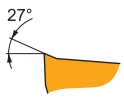
PRAMET

	W1	D1	L	S
	(mm)	(mm)	(mm)	(mm)
1606	9.950	4.50	16.00	6.17



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)



FA geometría muy positiva para fresado en acabado a mecanizado medio.

ADEX 160604FR-FA:HF7	●	0.4	–	–	–	–	–	–	–	–	–	■	195	0.28	6.0	–	–	–	–	–	–
ADEX 160604FR-FA:M0315	●	0.4	–	–	–	–	–	–	–	–	–	■	480	0.28	6.0	–	–	–	–	–	–
ADEX 160608FR-FA:HF7	●	0.8	–	–	–	–	–	–	–	–	–	■	240	0.28	6.0	–	–	–	–	–	–
ADEX 160608FR-FA:M0315	●	0.8	–	–	–	–	–	–	–	–	–	■	570	0.28	6.0	–	–	–	–	–	–
ADEX 160616FR-FA:HF7	●	1.6	–	–	–	–	–	–	–	–	–	■	255	0.28	6.0	–	–	–	–	–	–
ADEX 160616FR-FA:M0315	●	1.6	–	–	–	–	–	–	–	–	–	■	630	0.28	6.0	–	–	–	–	–	–
ADEX 160630FR-FA:HF7	●	3.0	–	–	–	–	–	–	–	–	–	■	270	0.28	6.0	–	–	–	–	–	–

a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	0.89	0.81	0.76	0.73	0.71	0.70	0.66	0.65	0.63	0.62	0.60	0.60	0.60	0.45

$a_{e\,max}$	1		2.5		5		7.5		10		15		20	
DC	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹
50	0.57	0.71	0.36	0.45	0.26	0.32	0.21	0.27	0.19	0.23	0.15	0.19	0.14	0.17
63	0.64	0.80	0.40	0.51	0.29	0.36	0.24	0.30	0.21	0.26	0.17	0.21	0.15	0.19
80	0.72	0.90	0.45	0.57	0.32	0.40	0.27	0.33	0.23	0.29	0.19	0.24	0.17	0.21
100	0.80	1.00	0.51	0.64	0.36	0.45	0.30	0.37	0.26	0.32	0.21	0.27	0.19	0.23

$a_{e\,max}$	25		32		40		50		63		80		100	
DC	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹
50	0.13	0.16	0.12	0.14	0.11	0.14	0.13	0.16	–	–	–	–	–	–
63	0.14	0.17	0.12	0.16	0.12	0.15	0.11	0.14	0.13	0.16	–	–	–	–
80	0.15	0.19	0.14	0.17	0.13	0.16	0.12	0.15	0.11	0.14	0.13	0.16	–	–
100	0.17	0.21	0.15	0.19	0.14	0.17	0.13	0.16	0.12	0.15	0.11	0.14	0.13	0.16

	ADMX 16-F	ADEX 16-FM	ADMX 16-M								ADMX 16-R	
RE	0.8	0.8	0.4	0.8	1.6	2.0	3.0	3.2	4.0	5.0	0.8	1.6
BS	2.99	2.18	3.39	2.99	1.62	1.23	0.28	0.09	2.69	1.52	2.99	1.62

	ADMX 16-MF	ADMX 16-MM			ADEX 16-FA			
RE	0.8	0.4	0.8	1.6	0.4	0.8	1.6	3.0
BS	2.99	3.39	2.99	1.62	2.84	2.44	1.65	0.69

ISO	DC		APMX	a_p
50J3R100H50-SAD16E54-C	50	3	54	50.5
50J3R140H50-SAD16E80-C	50	3	80	76.5
63J3R140H50-SAD16E68-C	63	3	68	64.5
63J3R155H50-SAD16E95-C	63	3	95	91.5
80J4R165H50-SAD16E108-C	80	4	108	104.5
50J3R140G50-SAD16E80-C	50	3	80	76.5
63J3R155G50-SAD16E95-C	63	3	95	91.5
80J4R165G50-SAD16E108-C	80	4	108	104.5
50J3R140X50-SAD16E68-C	50	3	68	64.5
63J3R155X50-SAD16E80-C	63	3	80	76.5
80J4R165X50-SAD16E95-C	80	4	95	91.5
50T03R-S90AD16E40-C	50	3	40	36.5
63T04R-S90AD16E40-C	63	4	40	36.5
63T04R-S90AD16E68-C	63	4	68	64.5
80T04R-S90AD16E55-C	80	4	55	51.5
80T04R-S90AD16E80-C	80	4	80	76.5
100T05R-S90AD16E80-C	100	5	80	76.5

max
7.5

ADMX/ADEX 16	R
ADMX 160630SR-M	2.5
ADMX 160632SR-M	2.5
ADMX 160640SR-M	4.0
ADMX 160650SR-M	4.5

J(T)-SSAP

P M K S

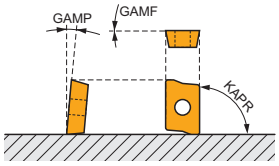
PRAMET

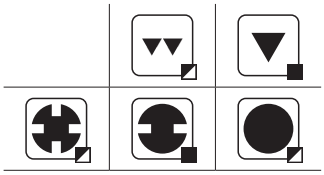
S

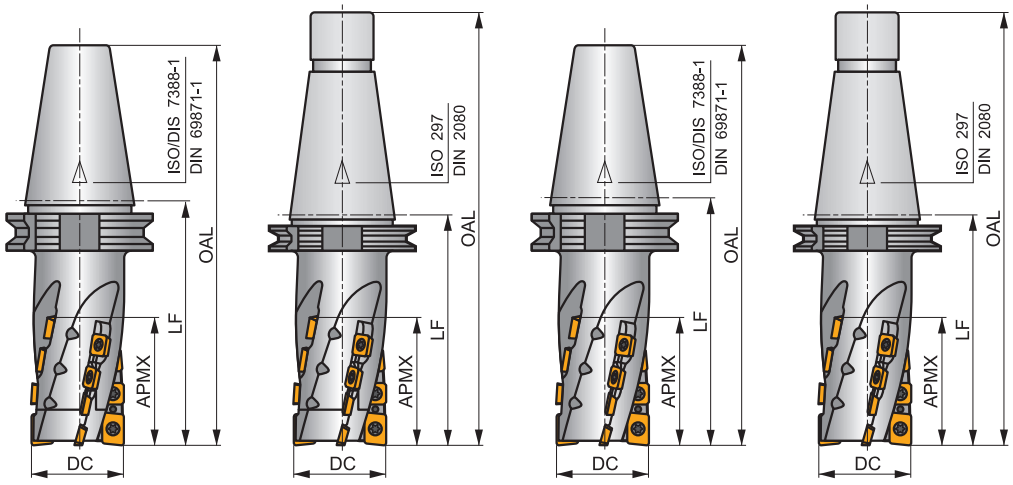
Fresa de Filo Largo para Fresado Medio para Plaquitas AP.. 15 y SP.. 12

Fresa a 90° de filo largo con plaquitas AP.. 15 y SP.. 12 con APMX de 58 hasta 95 mm. El cuerpo tiene la pieza final intercambiable. Adecuada para planeado, escuadrado, ranurado y fresado axial (plunge). Disponible con cono ISO 50, en DIN 69871 y DIN 2080. Cuerpo tratado para alargar la vida de herramienta.

KAPR	90°
APMX	58.0 - 95.0 mm







h_m 0.07 - 0.1

	Producto	DC (mm)	OAL (mm)	APMX (mm)	LF (mm)	GAMF (°)	GAMP (°)	CZCMS	NOF	AP	SP		max.		kg		
ISO/DIS 7388-1	**50J4R128H50-SSAP55+21**	50	230	76.00	128	0	7	50	4	2	16	–	9500	–	3.80	GI128	SQ942
	63J4R150H50-SSAP74+21	63	252	95.00	150	0	7	50	4	2	20	–	8500	–	4.50	GI128	SQ943
ISO 297	**50J4R124X50-SSAP55+21**	50	251	76.00	124	0	7	50	4	2	16	–	9500	–	4.43	GI128	SQ942
	63J4R146X50-SSAP74+21	63	273	95.00	146	0	7	50	4	2	20	–	8500	–	4.75	GI128	SQ943
ISO/DIS 7388-1	**63J4R150H50-SSAP95-A**	63	252	95.00	150	0	7	50	4	2	20	–	8500	–	5.32	GI128	SQ941
	80J6R155H50-SSAP95-A	80	257	95.00	155	0	7	50	6	3	30	–	7500	–	6.30	GI128	SQ941
ISO 297	**50J4R124X50-SSAP76-A**	50	251	76.00	124	0	7	50	4	2	16	–	9500	–	3.80	GI128	SQ941
	63J4R146X50-SSAP95-A	63	273	95.00	146	0	7	50	4	2	20	–	8500	–	4.50	GI128	SQ941
	80J6R151X50-SSAP95-A	80	275	95.00	151	0	7	50	6	3	30	–	7500	–	6.20	GI128	SQ941

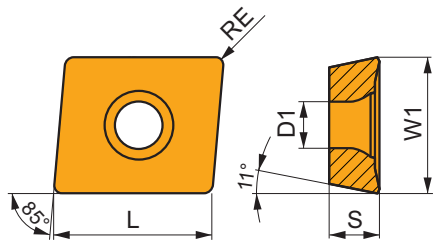
GI128	APE. 1504..	SPE. 1204..

					Nm			
SQ941	–	–	–	US 4511-T20	5.0	M 4.5	11	SDR T20-T
SQ942	P50X21	SR 25	HXK 6	US 4511-T20	5.0	M 4.5	11	SDR T20-T
SQ943	P63X21	SR 26	HXK 8	US 4511-T20	5.0	M 4.5	11	SDR T20-T

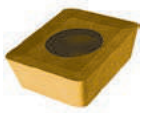
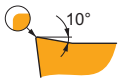
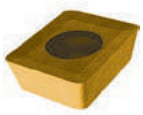
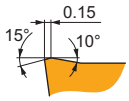
APET 15

PRAMET

	W1	D1	L	S
	(mm)	(mm)	(mm)	(mm)
1504	12.700	5.50	15.90	4.76



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
																				
APET 150412EN:M8330		1.2	225	0.20	12.0	135	0.18	12.0	210	0.20	12.0	–	–	–	55	0.14	9.6	–	–	–
																				
APET 150412SN:M8330		1.2	215	0.25	12.0	125	0.23	12.0	200	0.25	12.0	–	–	–	50	0.25	9.6	–	–	–
APET 150412SN:M8340		1.2	190	0.25	12.0	110	0.23	12.0	180	0.25	12.0	–	–	–	45	0.25	9.6	–	–	–

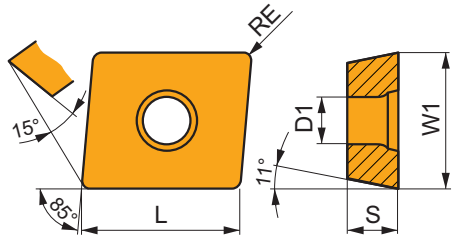
EN preparación del filo geometría positiva para mecanizado ligero a medio.

SN preparación del filo geometría positiva para mecanizado medio a pesado.

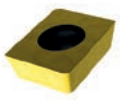
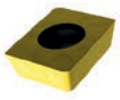
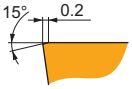
APEW 15

PRAMET

	W1	D1	L	M	S
	(mm)	(mm)	(mm)	(mm)	(mm)
1504	12.700	5.50	15.90	3.7	4.76



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
																				
APEW 150412ER:M8330		1.2	200	0.20	12.0	–	–	–	190	0.20	12.0	–	–	–	–	–	–	40	0.13	1.0
																				
APEW 150412SR:M8330		1.2	200	0.20	12.0	–	–	–	190	0.20	12.0	–	–	–	–	–	–	40	0.13	1.0

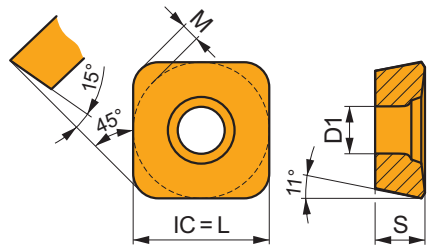
ER preparación del filo con ángulo de desprendimiento de 0° para mecanizado ligero a medio.

SR preparación del filo con ángulo de desprendimiento de 0° para mecanizado medio a pesado.

SPET 12

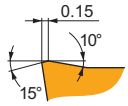
PRAMET

	IC	D1	L	M	S
	(mm)	(mm)	(mm)	(mm)	(mm)
1204	12.700	5.50	12.70	1.9	4.76



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)



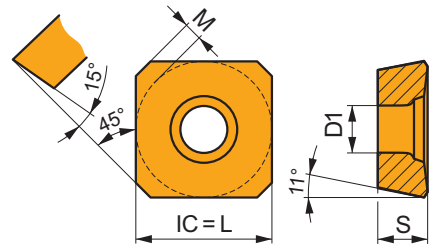
S preparación del filo geometría positiva de uso general.

SPET 120408S:M8330		0.8	215	0.20	12.0	125	0.18	12.0	200	0.20	12.0	–	–	–	50	0.18	9.6	–	–	–
SPET 120408S:M8340		0.8	190	0.20	12.0	110	0.18	12.0	180	0.20	12.0	–	–	–	45	0.18	9.6	–	–	–

SPET 12 AD

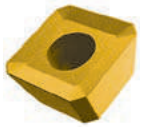
PRAMET

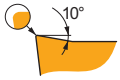
	IC	D1	L	M	S
	(mm)	(mm)	(mm)	(mm)	(mm)
1204	12.700	5.50	12.70	1.9	4.76



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

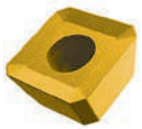
Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)

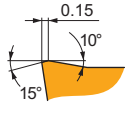




ADEN preparación del filo geometría positiva para mecanizado ligero a medio.

SPET 1204ADEN:M8330		–	245	0.20	12.0	145	0.18	12.0	230	0.20	12.0	–	–	–	60	0.14	9.6	–	–	–
SPET 1204ADEN:M8340		–	220	0.20	12.0	130	0.18	12.0	205	0.20	12.0	–	–	–	55	0.14	9.6	–	–	–



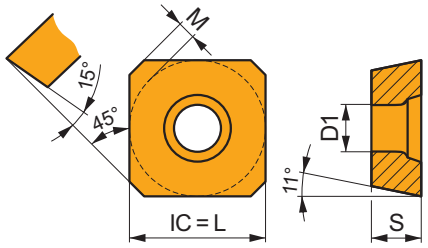


ADSN preparación del filo geometría positiva para mecanizado medio.

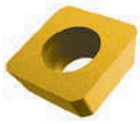
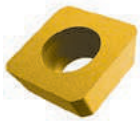
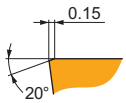
SPET 1204ADSN:M8330		–	245	0.20	12.0	145	0.18	12.0	230	0.20	12.0	–	–	–	60	0.14	9.6	–	–	–
SPET 1204ADSN:M8340		–	220	0.20	12.0	130	0.18	12.0	205	0.20	12.0	–	–	–	55	0.14	9.6	–	–	–

SPEW 12 AD

	IC	D1	L	M	S
	(mm)	(mm)	(mm)	(mm)	(mm)
1204	12.700	5.50	12.70	1.9	4.76



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
			**ADEN** preparación del filo con ángulo de desprendimiento de 0° para mecanizado ligero a medio.																	
SPEW 1204ADEN:M8330		–	220	0.20	12.0	–	–	–	205	0.20	12.0	–	–	–	–	–	–	40	0.10	1.0
			**ADSN** preparación del filo con ángulo de desprendimiento de 0° para mecanizado medio.																	
SPEW 1204ADSN:M8330		–	220	0.20	12.0	–	–	–	205	0.20	12.0	–	–	–	–	–	–	40	0.13	1.0

a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	0.89	0.81	0.76	0.73	0.71	0.70	0.67	0.65	0.63	0.62	0.60	0.60	0.60	0.45

$a_{e\,max}$	1		2.5		5		7.5		10		15		20	
DC	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨
50	0.50	0.71	0.32	0.45	0.23	0.32	0.19	0.27	0.16	0.23	0.14	0.19	0.12	0.17
63	0.56	0.80	0.35	0.51	0.25	0.36	0.21	0.30	0.18	0.26	0.15	0.21	0.13	0.19
80	0.63	0.90	0.40	0.57	0.28	0.40	0.23	0.33	0.20	0.29	0.17	0.24	0.15	0.21

$a_{e\,max}$	25		32		40		50		63		80	
DC	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨
50	0.11	0.16	0.10	0.14	0.10	0.14	0.11	0.16	–	–	–	–
63	0.12	0.17	0.11	0.16	0.10	0.15	0.10	0.14	0.11	0.16	–	–
80	0.13	0.19	0.12	0.17	0.11	0.16	0.10	0.15	0.10	0.14	0.11	0.16

	APET 15	APEW 15	SPET 12	SPET 12AD	SPEW 12AD
RE	1.2	1.2	0.8	–	–
BS	–	–	–	–	–

ISO	DC		APMX	a_p
50J4R128H50-SSAP55+21	50	2+2	76	73.6
63J4R150H50-SSAP74+21	63	2+2	95	92.6
50J4R124X50-SSAP55+21	50	2+2	76	73.6
63J4R146X50-SSAP74+21	63	2+2	95	92.6
63J4R150H50-SSAP95-A	63	2+2	95	92.6
80J6R155H50-SSAP95-A	80	3+3	95	92.6
50J4R124X50-SSAP76-A	50	2+2	76	73.6
63J4R146X50-SSAP95-A	63	2+2	95	92.6
80J6R151X50-SSAP95-A	80	3+3	95	92.6

J(T)-CSD12X

P M S

PRAMET

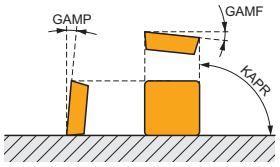
C

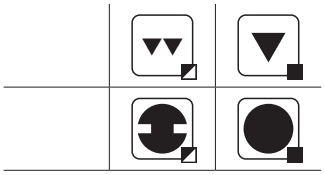
MULTISIDE SD Fresa de Filo Largo

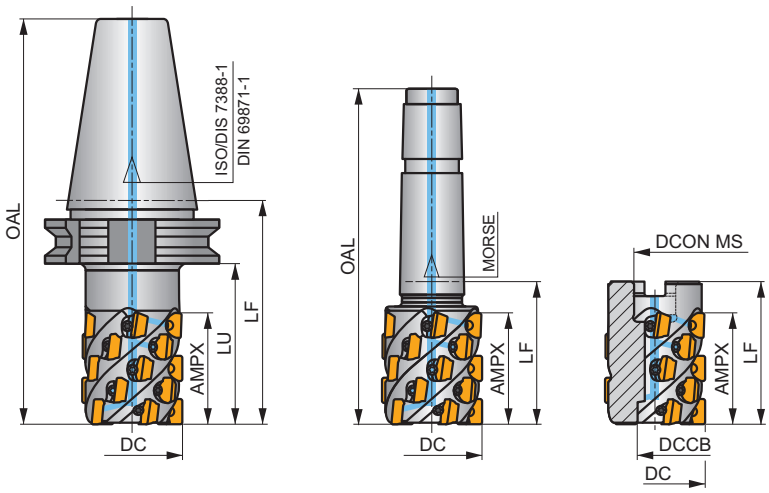
Fresa a 90° de filo largo con plaquitas positivas SD.. 12 con APMX de 44.1 hasta 87.3 mm. Adecuada para planeado, escuadrado y ranurado. Disponible para portafresas, PSC, cono Morse y cono DIN69871. Cuerpo tratado para alargar la vida de herramienta.

MULTISIDE SD

KAPR	90°
APMX	44.1 - 87.3 mm







h_m	0.025 - 0.05
h_m	0.025 - 0.05

	Producto	DC (mm)	OAL (mm)	DCON MS (mm)	DCCB (mm)	LU (mm)	LF (mm)	APMX (mm)	GAMF (°)	GAMP (°)	CZC MS	NOF			max.		kg		
ISO/DIS 7388-1	40J4R090H40-CSD12X44	40	158.4	–	–	70	90	44.10	-5	8	40	4	16	–	4000	✓	1.16	GI271	SQ091
	50J5R100H50-CSD12X55	50	201.7	–	–	80	100	54.90	-5	8	50	5	25	–	3200	✓	4.20	GI271	SQ091
	63J6R110H50-CSD12X66	63	211.7	–	–	90	110	65.70	-5	8	50	6	36	–	2500	✓	4.90	GI271	SQ091
DIN 228A	50J5R065E04-CSD12X55	50	167.5	–	–	–	65	54.90	-5	8	4	5	25	–	3200	✓	1.34	GI271	SQ091
ISO 6462 DIN 8030	50T05R-C90SD12X55	50	–	22	18	–	78	54.90	-5	8	–	5	25	–	3200	✓	1.21	GI271	SQ923
	63T06R-C90SD12X66	63	–	27	22	–	90	65.70	-5	8	–	6	36	–	2500	✓	1.72	GI271	SQ924
	80T08R-C90SD12X88	80	–	40	36	–	115	87.30	-5	8	–	8	64	–	2000	✓	3.20	GI271	SQ925

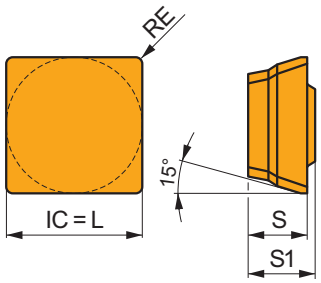
GI271	SDGX 1205..	SDMX 1205..

		Nm					
SQ091	US 63511D-T15P	3.0	M 3.5	11	D-T08P/T15P	FG-15	–
SQ923	US 63511D-T15P	3.0	M 3.5	11	D-T08P/T15P	FG-15	HSD 1070
SQ924	US 63511D-T15P	3.0	M 3.5	11	D-T08P/T15P	FG-15	HS 1280
SQ925	US 63511D-T15P	3.0	M 3.5	11	D-T08P/T15P	FG-15	HS 20100

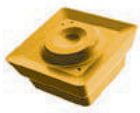
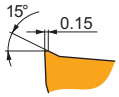
SDGX 12

PRAMET

	IC (mm)	L (mm)	S (mm)	S1 (mm)
1205	12.700	12.70	5.56	6.35



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

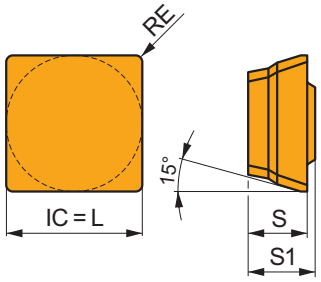
Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
																			
SDGX 120508EN-FM:M8330	0.8	220	0.15	12.0	130	0.14	12.0	–	–	–	–	–	–	55	0.11	9.6	–	–	–
SDGX 120508EN-FM:M8345	0.8	155	0.15	12.0	90	0.14	12.0	–	–	–	–	–	–	35	0.11	9.6	–	–	–

FM geometría con diseño positivo para mecanizado ligero a desbaste medio.

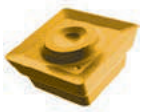
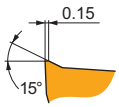
SDMX 12

PRAMET

	IC (mm)	L (mm)	S (mm)	S1 (mm)
1205	12.700	12.70	5.56	6.35



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
																			
SDMX 120508EN-M:M8330	0.8	220	0.15	12.0	130	0.14	12.0	–	–	–	–	–	–	55	0.11	9.6	–	–	–
SDMX 120508EN-M:M8345	0.8	155	0.15	12.0	90	0.14	12.0	–	–	–	–	–	–	35	0.11	9.6	–	–	–

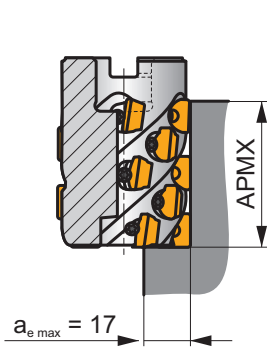
M geometría con diseño positivo para mecanizado ligero a desbaste.

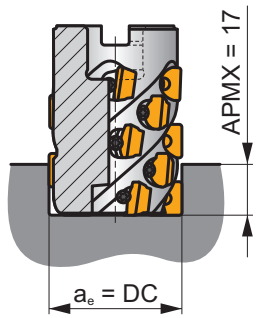
a_e/DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	0.89	0.81	0.76	0.73	0.71	0.70	0.66	0.65	0.63	0.62	0.60	0.60	0.60	0.45

$a_{e\,max}$	1		2.5		5		7.5		10		15		20	
DC	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨
40	0.16	0.32	0.10	0.20	0.07	0.14	0.06	0.12	0.05	0.10	0.04	0.09	0.04	0.08
50	0.18	0.35	0.11	0.23	0.08	0.16	0.07	0.13	0.06	0.12	0.05	0.10	0.04	0.09
63	0.20	0.40	0.13	0.25	0.09	0.18	0.07	0.15	0.06	0.13	0.05	0.11	0.05	0.09
80	0.22	0.45	0.14	0.28	0.10	0.20	0.08	0.17	0.07	0.14	0.06	0.12	0.05	0.10

$a_{e\,max}$	25		32		40		50		63		80	
DC	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨
40	0.04	0.07	0.03	0.07	0.04	0.08	–	–	–	–	–	–
50	0.04	0.08	0.04	0.07	0.03	0.07	0.04	0.08	–	–	–	–
63	0.04	0.09	0.04	0.08	0.04	0.07	0.03	0.07	0.04	0.08	–	–
80	0.05	0.09	0.04	0.09	0.04	0.08	0.04	0.07	0.03	0.07	0.04	0.08

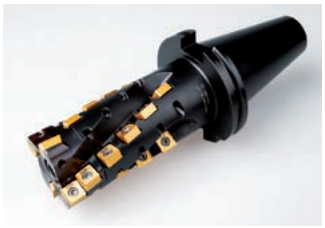
	SDGX 12-FM	SDMX 12-M
RE	0.8	0.8
BS	2.99	2.99



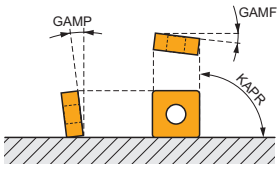


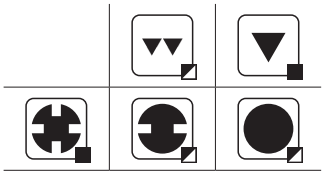
ISO	DC		APMX	a_p
40J4R090H40-CSD12X44	40	4	44.1	42.5
50J5R100H50-CSD12X55	50	5	54.9	53.3
63J6R110H50-CSD12X66	63	6	65.7	64.1
80J8R130H50-CSD12X88	80	8	87.3	85.7
40J4R080XC5-CSD12X44	40	4	44.1	42.5
50J5R080XC5-CSD12X55	50	5	54.9	53.3
63J6R095XC6-CSD12X66	63	6	65.7	64.1
50J5R065E04-CSD12X55	50	5	54.9	53.3
50T05R-C90SD12X55	50	5	54.9	53.3
63T06R-C90SD12X66	63	6	65.7	64.1
80T08R-C90SD12X88	80	8	87.3	85.7

J(T)-SLSN



KAPR	90°
APMX	104.0 - 134.0 mm

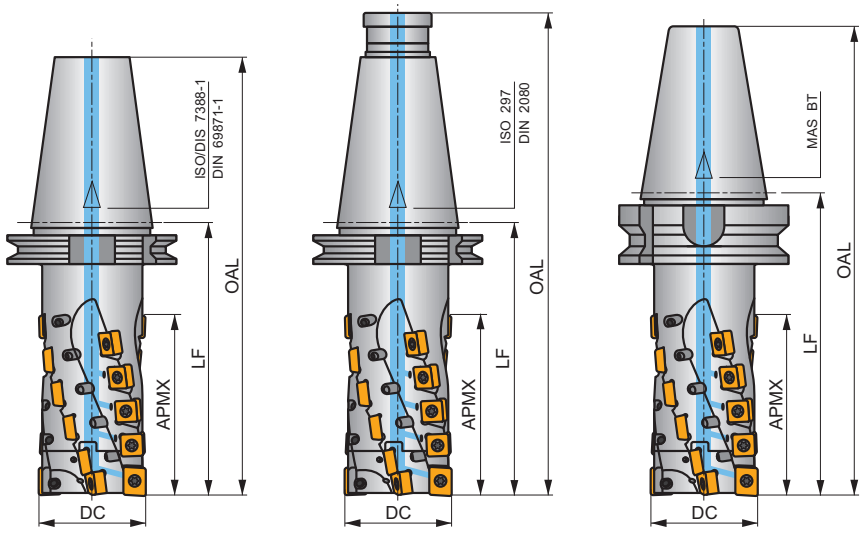




ROUGH SN Fresa de Filo Largo para Fresado Pesado con Refrigeración Interna

Fresa a 90° de filo largo con plaquitas LNET 16 y SN.. 13 con APMX de 104 hasta 134 mm. El cuerpo tiene la pieza final intercambiable. Adecuada para planeado, escuadrado, ranurado y fresado axial (plunge). Disponible con cono ISO 50, en DIN 69871, BT y DIN 2080. Cuerpo tratado para alargar la vida de herramienta.

ROUGH SN



h_m 0.08 - 0.22

	Producto	DC (mm)	OAL (mm)	APMX (mm)	LF (mm)	GAMF (°)	GAMP (°)	CZCMS	NOF	LN	SN		max.		kg		
ISO/DIS 7388-1	**63J2R155H50-SLSN104-C**	63	257	104.00	155	-9	-10	50	4	2	20	–	8500	✓	5.03	GI209	SQ934
	80J2R190H50-SLSN134-C	80	292	134.00	190	-9	-10	50	4	2	26	–	7500	✓	7.45	GI209	SQ935
ISO 297	**63J2R155G50-SLSN104-C**	63	282	104.00	155	-9	-10	50	4	2	20	–	8500	✓	5.20	GI209	SQ934
	80J2R190G50-SLSN134-C	80	317	134.00	190	-9	-10	50	4	2	26	–	7500	✓	7.40	GI209	SQ935
JIS B 6339	**63J2R175X50-SLSN104-C**	63	277	104.00	175	-9	-10	50	4	2	20	–	8500	✓	6.10	GI209	SQ934
	80J2R210X50-SLSN134-C	80	312	134.00	210	-9	-10	50	4	2	26	–	7500	✓	8.50	GI209	SQ935

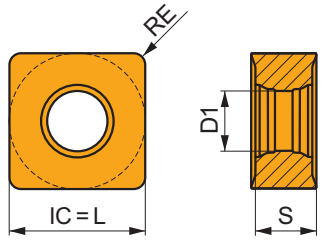
GI209	LNET 1606..	SN.. 1305..

					Nm			
SQ934	EH6326-SL-C	HS 1230	HXK 10	US 45012-T20P	5.0	M 5	12	SDR T20P-T
SQ935	EH8036-SL-C	HS 1640	HXK 14	US 45012-T20P	5.0	M 5	12	SDR T20P-T

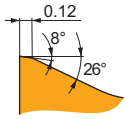
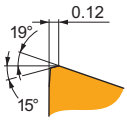
SNGX 13

PRAMET

	IC (mm)	D1 (mm)	S (mm)
1305	13.200	5.90	5.96



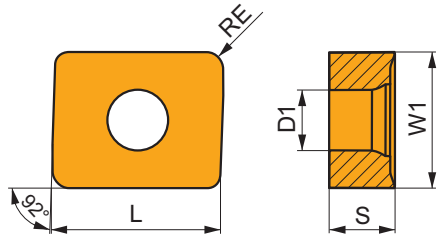
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
																			
M geometría con diseño positivo para mecanizado ligero.																			
SNGX 130512SN-M:M8330	1.2	105	0.15	12.0	–	–	–	95	0.15	12.0	–	–	–	–	–	–	–	–	–
SNGX 130512SN-M:M8340	1.2	105	0.15	12.0	–	–	–	95	0.15	12.0	–	–	–	–	–	–	–	–	–
																			
R geometría con diseño positivo para mecanizado en desbaste y condiciones inestables.																			
SNGX 130512PN-R:M8330	1.2	95	0.15	12.0	–	–	–	90	0.15	12.0	–	–	–	–	–	–	–	–	–
SNGX 130512PN-R:M8340	1.2	95	0.15	12.0	–	–	–	90	0.15	12.0	–	–	–	–	–	–	–	–	–

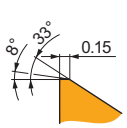
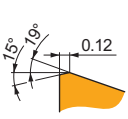
LNET 16

PRAMET

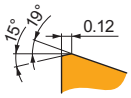
	W1 (mm)	D1 (mm)	L (mm)	S (mm)
1606	13.200	5.90	16.40	6.38



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
																			
M geometría muy positiva para mecanizado medio.																			
LNET 160616SR-M:M8340	1.6	105	0.15	15.0	–	–	–	95	0.15	15.0	–	–	–	–	–	–	–	–	–
																			
R geometría muy positiva para mecanizado medio.																			
LNET 160616SR-R:M8330	1.6	100	0.15	15.0	–	–	–	95	0.15	15.0	–	–	–	–	–	–	–	–	–

Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)
			**R** geometría muy positiva para mecanizado medio.																	
LNET 160616SR-R:M8340		1.6	95	0.15	15.0	–	–	–	90	0.15	15.0	–	–	–	–	–	–	–	–	–

a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00

$a_{e\,max}$	1		2.5		5		7.5		10		15		20	
DC	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨
63	0.64	1.75	0.40	1.11	0.29	0.79	0.24	0.65	0.21	0.57	0.17	0.47	0.15	0.41
80	0.72	1.97	0.45	1.25	0.32	0.89	0.27	0.73	0.23	0.64	0.19	0.53	0.17	0.46

$a_{e\,max}$	25		32		40		50		63		80	
DC	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨
63	0.14	0.38	0.12	0.34	0.12	0.32	0.11	0.30	0.13	0.35	–	–
80	0.15	0.42	0.14	0.38	0.13	0.35	0.12	0.32	0.11	0.30	0.13	0.35

	LNET 16-M	LNET 16-R	SNGX 13-M	SNGX 13-R
RE	1.6	1.6	1.2	1.2
BS	–	–	–	–

ISO	DC		APMX	a_p
63J2R155H50-SLSN104-C	63	2+2	104	101.2
80J2R190H50-SLSN134-C	80	2+2	134	131.2
63J2R155G50-SLSN104-C	63	2+2	104	101.2
80J2R190G50-SLSN134-C	80	2+2	134	131.2
63J2R175X50-SLSN104-C	63	2+2	104	101.2
80J2R210X50-SLSN134-C	80	2+2	134	131.2

COPIADO

PLANEADO

	SRD05	SRD07	SRD10	SRD12	SRD16
	–	–	–	–	–
	APMX (mm) 1.5	APMX (mm) 2.0	APMX (mm) 2.5	APMX (mm) 3.0	APMX (mm) 4.0
	DCX (mm) 10 – 15	DCX (mm) 15 – 25	DCX (mm) 20 – 52	DCX (mm) 24 – 80	DCX (mm) 32 – 100
Mango cilíndrico					
Weldon		DCX = 15 (mm)	DCX = 20 (mm)		
Modular		DCX = 15 – 25 (mm)	DCX = 20 – 42 (mm)	DCX = 24 – 42 (mm)	DCX = 32 (mm)
Portafresas			DCX = 42, 52 (mm)	DCX = 50 – 80 (mm)	DCX = 52 – 100 (mm)
Página	160	163	168	174	180
ISO	P K H	P M K N S H	P M K N S H	P M K N S H	P M K N S H
Forma de la plaquita					
Plaquitas de corte	RD 0501	RD 0702	RD 1003	RD 12T3	RD 1604
N.º de filos de corte	–	–	–	–	–
Superficies contorneadas (fresado en copia)	■	■	■	■	■
Planeado	■	■	■	■	■
Interpolación helicoidal	■	■	■	■	■
Fresado axial progresivo	■	■	■	■	■
Mecanizado en rampa	■	■	■	■	■

■ Primera Opción ◪ Opción Alternativa

SRD05

P K H

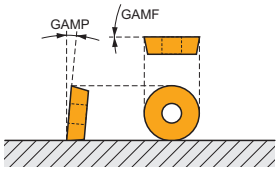
PRAMET

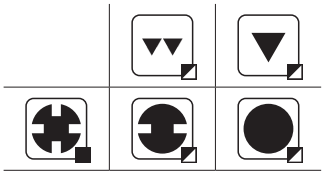
S

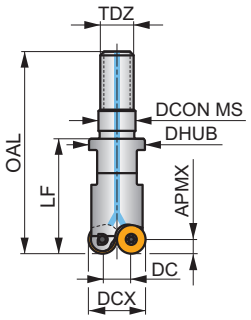
Fresa de Copiado para Plaquitas Redondas RDHX 05 con Refrigeración Interna

Fresa para copiado que utiliza plaquitas positivas RDHX 05, con APMX de 1.5 mm. Refrigeración interna. Adecuada para planeado, fresado axial progresivo (plunge), fresado en rampa, interpolación helicoidal y copiado. Disponible con mango modular. Cuerpo tratado para alargar la vida de herramienta.

APMX	1.5 mm







h_m 0.03 - 0.1

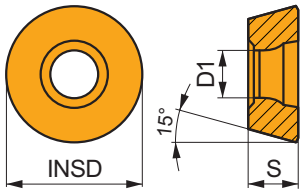
	Producto	DCX (mm)	DC (mm)	DHUB (mm)	OAL (mm)	LF (mm)	DCON MS (mm)	TDZ	GAMF (°)	GAMP (°)			max.		kg		
MODULAR	**10E2R020M06-SRD05-CF**	10	5	9.8	35	20	6.5	M6	5	3	2	–	89300	✓	0.01	GI117	CO352
MODULAR	**12E3R020M06-SRD05-CF**	12	7	10	35	20	6.5	M6	0	3	3	–	81500	✓	0.01	GI117	CO352
MODULAR	**15E4R020M08-SRD05-CF**	15	10	13.5	38	20	8.5	M8	0	3	4	–	72900	✓	0.02	GI117	CO352

GI117	RD.. 0501M0..

		Nm			
CO352	US 62003B-T06P	0.9	M 2	3	Flag T06P

RDHX 05

	INSD	D1	S
	(mm)	(mm)	(mm)
0501	5.000	2.20	1.51

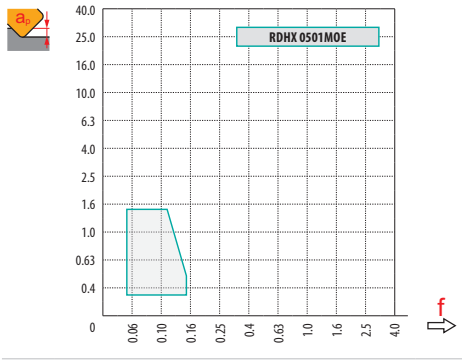


Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
			HFC E																	
MOE ángulo de desprendimiento de 0° para fresado en acabado.																				
RDHX 0501MOE:M8310		–	400	0.10	0.5	–	–	–	380	0.10	0.5	–	–	–	–	–	–	80	0.10	0.3

a_e / DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	RDHX 05
RE	2.5
BS	–



DCX	a_p	0.00	0.30	0.50	0.75	1.00	1.25	1.50	2.00	2.50
10	DEF	5.0	7.4	8.0	8.6	9.0	9.3	9.6	9.9	10.0
12		7.0	9.4	10.0	10.6	11.0	11.3	11.6	11.9	12.0
15		10.0	12.4	13.0	13.6	14.0	14.3	14.6	14.9	15.0
	a_p	–	0.30	0.50	0.75	1.00	1.25	1.50	2.00	2.50
	f	–	0.25	0.19	0.16	0.14	0.13	0.12	0.10	0.09

DCX	RPMX	APMX/I
10	15.0	1.3/11
12	11.0	1.3/14
15	7.0	1.3/22

DCX	DMIN	DMAX	SMAX DMIN	SMAX DMAX
10	12.0	20.0	1.2	1.2
12	16.0	24.0	1.2	1.2
15	22.0	30.0	1.2	1.2

a_p
1.0

DCX	µm	3	5	10	15	20	30	40	50	60	80	100
10	FE	0.346	0.447	0.632	0.775	0.894	1.095	1.265	1.414	1.549	1.789	2.000
12		0.379	0.490	0.693	0.849	0.980	1.200	1.386	1.549	1.697	1.960	2.191
15		0.424	0.548	0.775	0.949	1.095	1.342	1.549	1.732	1.897	2.191	2.449
RE	µm	3	5	10	15	20	30	40	50	60	80	100
2.5	FE	0.245	0.316	0.447	0.548	0.632	0.775	0.894	1.000	1.095	1.265	1.414

SRD07

P M K N S H

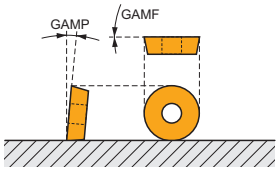
PRAMET

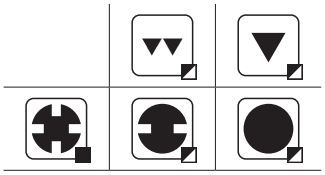
S

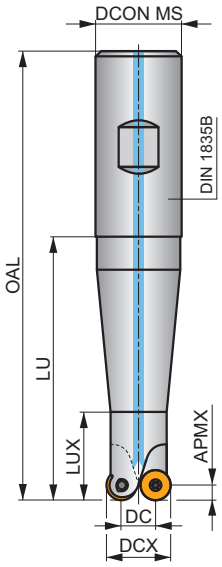
Fresa de Copiado para Plaquitas Redondas RD.. 07 con Refrigeración Interna

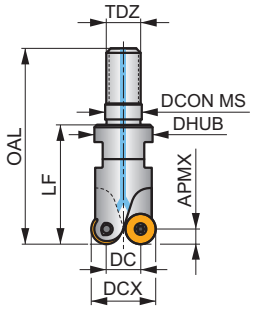
Fresa para copiado que utiliza plaquitas positivas RD.. 07, con APMX de 2 mm. Refrigeración interna. Adecuada para planeado, fresado axial progresivo (plunge), fresado en rampa, interpolación helicoidal y fresado de alto avance. Disponible con mango Weldon y modular. Cuerpo tratado para alargar la vida de herramienta.

APMX	2.0 mm









h_m 0.065 - 0.13

	Producto	DCX (mm)	DC (mm)	OAL (mm)	DCON MS (mm)	DHUB (mm)	LU (mm)	LUX (mm)	LF (mm)	TDZ	GAMF (°)	GAMP (°)			max.		kg		
DIN 1835B	**15E2R040B16-SRD07-CF**	15	8	88	16	–	40	20	–	–	1	0	2	–	44200	✓	0.12	GI118	C0354
	15E2R060B16-SRD07-CF	15	8	108	16	–	60	20	–	–	1	0	2	–	44200	✓	0.15	GI118	C0354
	15E2R080B20-SRD07-CF	15	8	130	20	–	80	22	–	–	1	0	2	–	44200	✓	0.22	GI118	C0354
	15E2R100B20-SRD07-CF	15	8	150	20	–	100	22	–	–	1	0	2	–	44200	✓	0.25	GI118	C0354
	15E2R120B25-SRD07-CF	15	8	176	25	–	120	22	–	–	1	0	2	–	44200	✓	0.45	GI118	C0354
MODULAR	**15E2R028M08-SRD07-CF**	15	8	46	8.5	13.5	–	–	28	M8	1	0	2	–	44200	✓	0.03	GI118	C0354
	15E3R028M08-SRD07-CF	15	8	46	10.5	13.5	–	–	28	M8	2	0	3	–	44200	✓	0.05	GI118	C0354
	20E4R028M10-SRD07-CF	20	13	47	12.5	18	–	–	28	M10	-8	0	4	–	38200	✓	0.07	GI118	C0354
	25E5R028M12-SRD07-CF	25	18	50	12.5	21	–	–	28	M12	-2	0	5	–	34200	✓	0.09	GI118	C0354

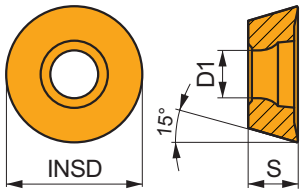
GI118	RD.. 07..MO..

C0354	US 42505-T07P	1.2	M 2.5	5	Flag T07P

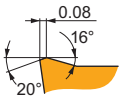
RDGT 07

PRAMET

	INSD	D1	S
	(mm)	(mm)	(mm)
0702	7.000	2.80	2.38



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
																				

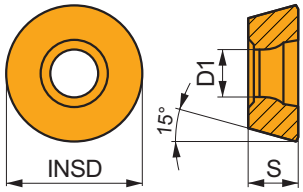
MOT diseño positivo para mecanizado de acabado.

RDGT 0702MOT:M8325		–	■	305	0.15	0.5	◪	145	0.14	0.5		–	–	–		–	–	–		–	–	–		–	–	–
RDGT 0702MOT:M8345		–	■	270	0.15	0.5	◪	160	0.14	0.5		–	–	–		–	–	–	◪	65	0.12	0.4		–	–	–

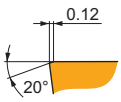
RDHX 07

PRAMET

	INSD	D1	S
	(mm)	(mm)	(mm)
0702	7.000	2.80	2.38
07T1	7.000	2.80	1.98



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

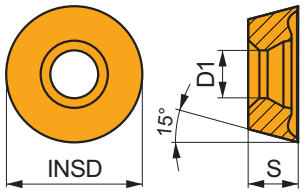
Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
																				

MOT ángulo de desprendimiento de 0° para fresado en acabado.

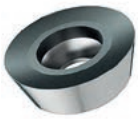
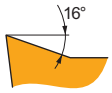
RDHX 0702MOT:M4303		–	◪	370	0.15	0.5		–	–	–	■	350	0.15	0.5		–	–	–		–	–	–	■	70	0.11	0.5
RDHX 0702MOT:M8310		–	◪	360	0.15	0.5		–	–	–	■	340	0.15	0.5		–	–	–		–	–	–	■	70	0.11	0.5
RDHX 0702MOT:M8325		–	◪	275	0.15	0.5		–	–	–		–	–	–		–	–	–		–	–	–		–	–	–
RDHX 07T1MOT:M8310		–	◪	360	0.15	0.5		–	–	–	■	340	0.15	0.5		–	–	–		–	–	–	■	70	0.11	0.5

RDHT 07-FA

	INSD (mm)	D1 (mm)	S (mm)
0702	7.000	2.80	2.38



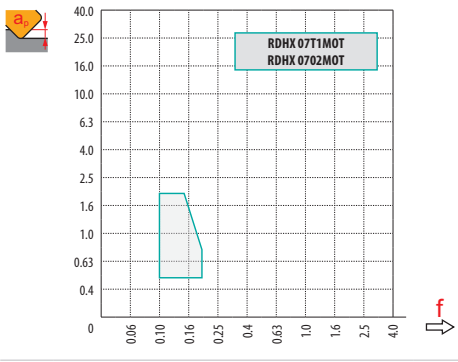
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

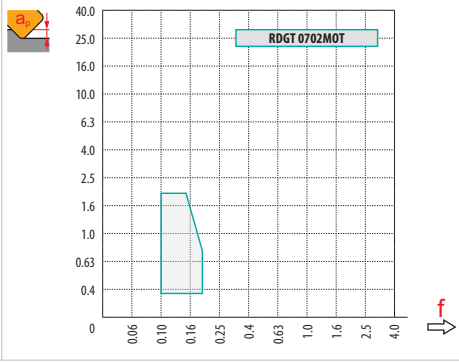
Producto		RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
																				
RDHT 0702MO-FA:HF7	●	–	–	–	–	–	–	–	–	–	–	■ 420	0.18	0.5	–	–	–	–	–	–

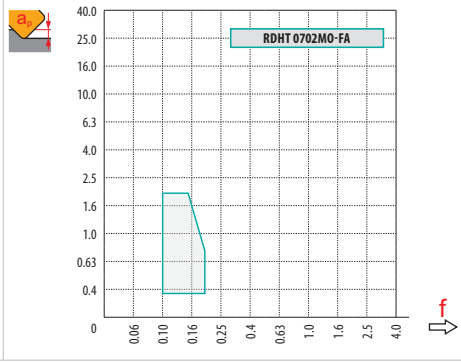
FA geometría muy positiva para fresado en acabado a mecanizado medio.

a_e / DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	RDHX 07	RDGT 07	RDHT 07-FA
RE	3.5	3.5	3.5
BS	–	–	–







DCX	a_p	0.00	0.30	0.50	0.75	1.00	1.25	1.50	2.00	2.50	3.00	3.50
15	DEF	8.0	10.8	11.6	12.3	12.9	13.4	13.7	14.3	14.7	14.9	15.0
20		13.0	15.8	16.6	17.3	17.9	18.4	18.7	19.3	19.7	19.9	20.0
25		18.0	20.8	21.6	22.3	22.9	23.4	23.7	24.3	24.7	24.9	25.0
	a_p	**0.00**	**0.30**	**0.50**	**0.75**	**1.00**	**1.25**	**1.50**	**2.00**	**2.50**	**3.00**	**3.50**
	f	–	0.29	0.23	0.19	0.16	0.15	0.13	0.12	0.11	0.10	0.09

DCX	RPMX	APMX/I
15	11.0	1.7/20
20	7.0	1.7/30
25	6.0	1.7/35

DCX	DMIN	DMAX	SMAX DMIN	SMAX DMAX
15	17.0	30.0	0.4	1.7
20	28.0	40.0	1.7	1.7
25	38.0	50.0	1.7	1.7

a_p
1.2

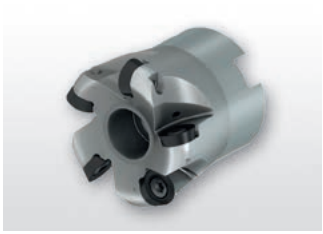
DCX	µm	3	5	10	15	20	30	40	50	60	80	100
15		0.424	0.548	0.775	0.949	1.095	1.342	1.549	1.732	1.897	2.191	2.449
20		0.490	0.632	0.894	1.095	1.265	1.549	1.789	2.000	2.191	2.530	2.828
25		0.548	0.707	1.000	1.225	1.414	1.732	2.000	2.236	2.449	2.828	3.162
RE	µm	3	5	10	15	20	30	40	50	60	80	100
3.5		0.290	0.374	0.529	0.648	0.748	0.917	1.058	1.183	1.296	1.497	1.673

SRD10

P M K N S H

PRAMET

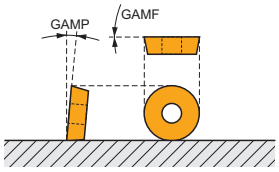
S

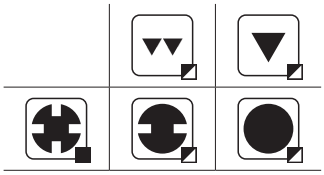


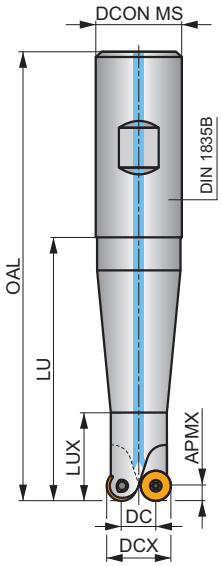
Fresa de Copiado para Plaquitas Redondas RD.. 10 con Refrigeración Interna

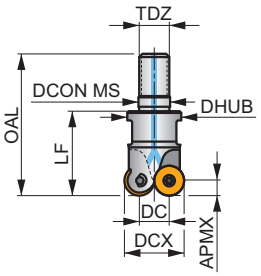
Fresa para copiado que utiliza plaquitas positivas RD.. 10, con APMX de 2.5 mm. Refrigeración interna. Adecuada para planeado, fresado axial progresivo (plunge), fresado en rampa, interpolación helicoidal y fresado de alto avance. Disponible con mango Weldon, modular y para portafresas. Cuerpo tratado para alargar la vida de herramienta.

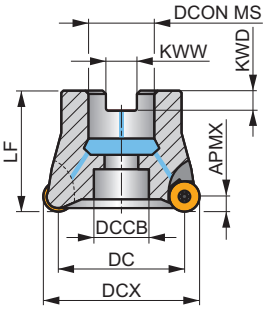
APMX	2.5 mm











h_m 0.065 - 0.19

	Producto	DCX (mm)	DC (mm)	OAL (mm)	DCON MS (mm)	DHUB (mm)	DCCB (mm)	LU (mm)	LUX (mm)	LF (mm)	TDZ	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		kg		
DIN 1835B	20E2R040B20-SRD10-CF	20	10	90	20	–	–	40	20	–	–	–	–	-2	0	2	–	30800	✓	0.20	GI119	C0356
	20E2R060B20-SRD10-CF	20	10	110	20	–	–	60	22	–	–	–	–	-2	0	2	–	30800	✓	0.20	GI119	C0356
	20E2R080B25-SRD10-CF	20	10	136	25	–	–	80	25	–	–	–	–	-2	0	2	–	30800	✓	0.40	GI119	C0356
	20E2R100B25-SRD10-CF	20	10	156	25	–	–	100	25	–	–	–	–	-2	0	2	–	30800	✓	0.45	GI119	C0356
	20E2R120B25-SRD10-CF	20	10	176	25	–	–	120	25	–	–	–	–	-2	0	2	–	30800	✓	0.46	GI119	C0356
MODULAR	20E2R028M10-SRD10-CF	20	10	47	10.5	18	–	–	–	28	M10	–	–	-2	0	2	–	30800	✓	0.07	GI119	C0356
	25E2R032M12-SRD10-CF	25	15	54	12.5	21	–	–	–	32	M12	–	–	0.5	0.5	2	–	27500	✓	0.08	GI119	C0356
	25E3R032M12-SRD10-CF	25	15	54	12.5	21	–	–	–	32	M12	–	–	0.5	0.5	3	–	27500	✓	0.10	GI119	C0356
	30E4R042M16-SRD10-CF	30	20	65	17	29	–	–	–	42	M16	–	–	0	0	4	–	25100	✓	0.20	GI119	C0356
	32E4R042M16-SRD10-CF	32	22	65	17	29	–	–	–	42	M16	–	–	0	0	4	–	24300	✓	0.19	GI119	C0356
	35E5R042M16-SRD10-CF	35	25	65	17	29	–	–	–	42	M16	–	–	0	0	5	–	23200	✓	0.22	GI119	C0356
	42E4R042M16-SRD10-CF	42	32	65	17	29	–	–	–	42	M16	–	–	0	0	4	–	21200	✓	0.24	GI119	C0356
	42E5R042M16-SRD10-CF	42	32	65	17	29	–	–	–	42	M16	–	–	0	0	5	–	21200	✓	0.24	GI119	C0356
ISO 6462 DIN 8030	42A05R-SMORD10-CF	42	32	–	16	–	14	–	–	40	–	8.4	8.4	0	0	5	–	21200	✓	0.20	GI119	C0358
	52A07R-SMORD10-CF	52	42	–	22	–	18	–	–	40	–	10.4	10.4	0	0	7	–	19100	✓	0.41	GI119	C0360

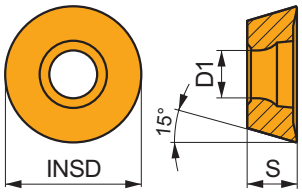
GI119	RD.. 1003MOT	RDHT 1003MO-FA

		Nm					
C0356	US 63507-T15P	3.0	M 3.5	7	Flag T15P	–	–
C0358	US 63507-T15P	3.0	M 3.5	7	D-T08P/T15P	FG-15	HS 0830C
C0360	US 63507-T15P	3.0	M 3.5	7	D-T08P/T15P	FG-15	HS 1030C

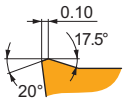
RDGT 10

PRAMET

	INSD (mm)	D1 (mm)	S (mm)
1003	10.000	3.90	3.18



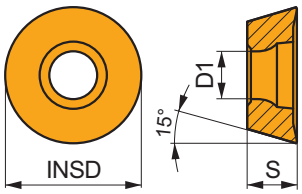
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
 **MOT** diseño positivo para mecanizado de acabado.																			
RDGT 1003MOT:M6330	–	290	0.15	1.0	205	0.14	1.0	–	–	–	–	–	–	85	0.12	0.8	–	–	–
RDGT 1003MOT:M8310	–	375	0.15	1.0	190	0.14	1.0	355	0.15	1.0	–	–	–	–	–	–	–	–	–
RDGT 1003MOT:M8325	–	280	0.15	1.0	130	0.14	1.0	–	–	–	–	–	–	–	–	–	–	–	–
RDGT 1003MOT:M8345	–	250	0.15	1.0	150	0.14	1.0	–	–	–	–	–	–	60	0.12	0.8	–	–	–
RDGT 1003MOT:M9340	–	395	0.15	1.0	235	0.14	1.0	–	–	–	–	–	–	95	0.12	0.8	–	–	–

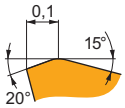
RDMT 10

PRAMET

	INSD (mm)	D1 (mm)	S (mm)
1003	10.000	3.90	3.18



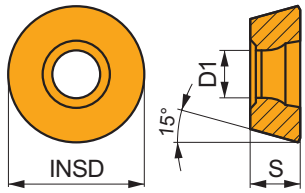
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
 **MOT** diseño positivo para mecanizado de acabado.																			
RDMT 1003MOT:M8325	–	280	0.15	1.0	130	0.14	1.0	–	–	–	–	–	–	–	–	–	–	–	–
RDMT 1003MOT:M8345	–	250	0.15	1.0	150	0.14	1.0	–	–	–	–	–	–	–	–	–	–	–	–

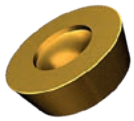
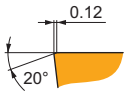
RDMX 10

PRAMET

	INSD (mm)	D1 (mm)	S (mm)
1003	10.000	3.90	3.18



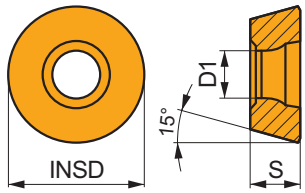
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
  **MOT** ángulo de desprendimiento de 0° para fresado en acabado.																			
RDMX 1003MOT:M8310	–	335	0.15	1.0	–	–	–	315	0.15	1.0	–	–	–	–	–	–	65	0.11	0.7
RDMX 1003MOT:M8325	–	250	0.15	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
RDMX 1003MOT:M8345	–	225	0.15	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

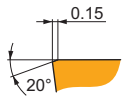
RDHX 10

PRAMET

	INSD (mm)	D1 (mm)	S (mm)
1003	10.000	3.90	3.18

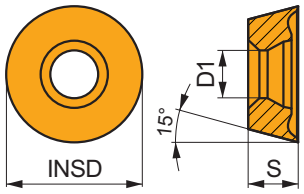


Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

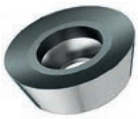
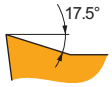
Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
 **MOT** ángulo de desprendimiento de 0° para fresado en acabado.																			
RDHX 1003MOT:M4303	–	340	0.15	1.0	–	–	–	320	0.15	1.0	–	–	–	–	–	–	65	0.12	0.7
RDHX 1003MOT:M8310	–	335	0.15	1.0	–	–	–	315	0.15	1.0	–	–	–	–	–	–	65	0.12	0.7
RDHX 1003MOT:M8325	–	250	0.15	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
RDHX 1003MOT:M8345	–	225	0.15	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

RDHT 10-FA

	INSD	D1	S
	(mm)	(mm)	(mm)
1003	10.000	3.90	3.18



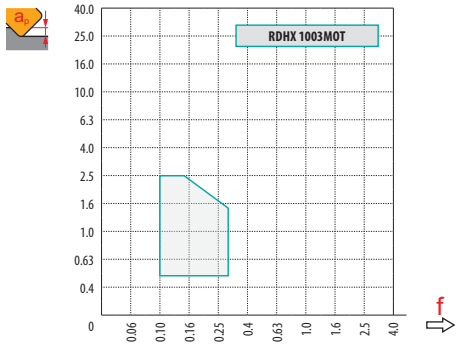
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

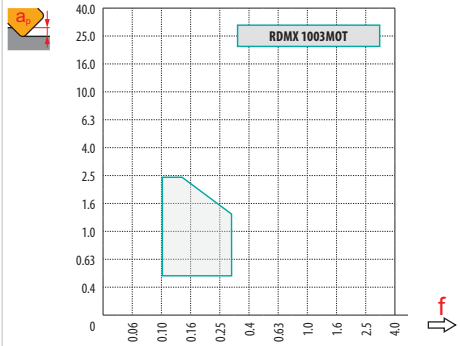
Producto		RE	**P**			**M**			**K**			**N**			**S**			**H**		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
																				
RDHT 1003MO-FA:HF7	●	–	–	–	–	–	–	–	–	–	–	■	390	0.18	1.0	–	–	–	–	–	–

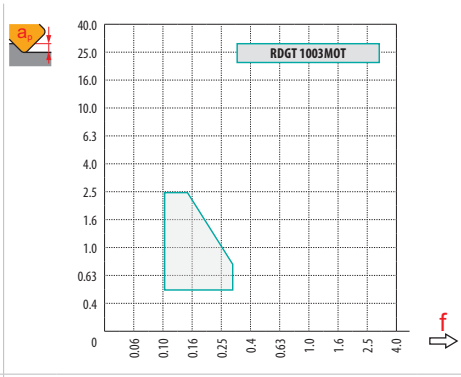
FA geometría muy positiva para fresado en acabado a mecanizado medio.

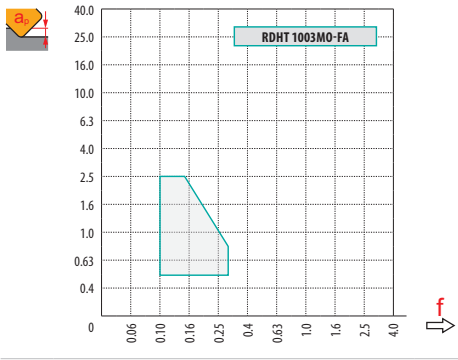
a_e / DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

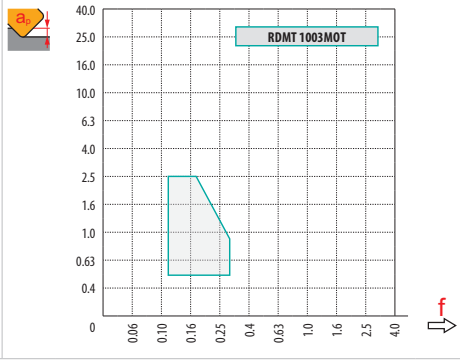
	RDHX 10	RDMX 10	RDGT 10	RDHT 10-FA	RDMT 10
RE	5.0	5.0	5.0	5.0	5.0
BS	–	–	–	–	–











DCX	a_p	0.00	0.50	0.75	1.00	1.25	1.50	2.00	2.50	3.00	3.50	4.00	5.00
20	DEF	10.0	14.4	15.3	16.0	16.6	17.1	18.0	18.7	19.2	19.5	19.8	20.0
25		15.0	19.4	20.3	21.0	21.6	22.1	23.0	23.7	24.2	24.5	24.8	25.0
30		20.0	24.4	25.3	26.0	26.6	27.1	28.0	28.7	29.2	29.5	29.8	30.0
32		22.0	26.4	27.3	28.0	28.6	29.1	30.0	30.7	31.2	31.5	31.8	32.0
35		25.0	29.4	30.3	31.0	31.6	32.1	33.0	33.7	34.2	34.5	34.8	35.0
42		32.0	36.4	37.3	38.0	38.6	39.1	40.0	40.7	41.2	41.5	41.8	42.0
52		42.0	46.4	47.3	48.0	48.6	49.1	50.0	50.7	51.2	51.5	51.8	52.0
	a_p	0.00	0.50	0.75	1.00	1.25	1.50	2.00	2.50	3.00	3.50	4.00	5.00
	f	–	0.54	0.44	0.39	0.35	0.32	0.28	0.25	0.23	0.22	0.21	0.19

DCX	RPMX	APMX/l
20	20	2.5/15
25	12	2.5/25
30	8	2.5/37
32	7.5	2.5/20
35	7	2.5/42
42	4	2.5/37
52	3	2.5/49

DCX	DMIN	DMAX	SMAX DMIN	SMAX DMAX
20	22.0	40.0	2.5	2.5
25	32.0	50.0	2.5	2.5
30	42.0	60.0	2.5	2.5
32	46.0	64.0	2.5	2.5
35	52.0	70.0	2.5	2.5
42	66.0	84.0	2.5	2.5
52	86.0	104.0	2.5	2.5

a_p
2.5

DCX	µm	3	5	10	15	20	30	40	50	60	80	100
20	FE	0.490	0.632	0.894	1.095	1.265	1.549	1.789	2.000	2.191	2.530	2.828
25		0.548	0.707	1.000	1.225	1.414	1.732	2.000	2.236	2.449	2.828	3.162
30		0.600	0.775	1.095	1.342	1.549	1.897	2.191	2.449	2.683	3.098	3.464
32		0.620	0.800	1.131	1.386	1.600	1.960	2.263	2.530	2.771	3.200	3.578
35		0.648	0.837	1.183	1.449	1.673	2.049	2.366	2.646	2.898	3.347	3.742
42		0.710	0.917	1.296	1.587	1.833	2.245	2.592	2.898	3.175	3.666	4.099
52		0.790	1.020	1.442	1.766	2.040	2.498	2.884	3.225	3.533	4.079	4.561
RE	µm	**3**	**5**	**10**	**15**	**20**	**30**	**40**	**50**	**60**	**80**	**100**
5.0	FE	0.346	0.447	0.632	0.775	0.894	1.095	1.265	1.414	1.549	1.789	2.000

SRD12

P M K N S H

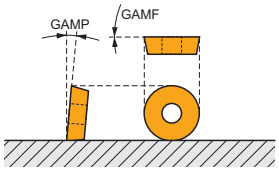
PRAMET

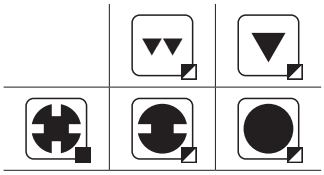
S(C)

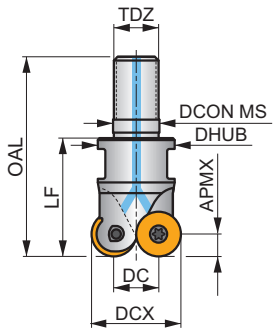
Fresa de Copiado para Plaquitas Redondas RD.. 12 con Refrigeración Interna

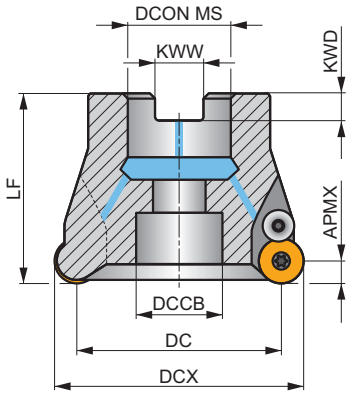
Fresa para copiado que utiliza plaquitas positivas RD.. 12, con APMX de 3 mm. Refrigeración interna. Adecuada para planeado, fresado axial progresivo (plunge), fresado en rampa, interpolación helicoidal y fresado de alto avance. Disponible con mango modular y para portafresas. Cuerpo tratado para alargar la vida de herramienta.

APMX	3.0 mm









h_m	0.065 - 0.25
h_m	0.065 - 0.22

	Producto	DCX (mm)	DC (mm)	OAL (mm)	DCON MS (mm)	DHUB (mm)	DCCB (mm)	LF (mm)	TDZ	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)	max.	kg			
MODULAR	**24E2R032M12-SRD12-CF**	24	12	54	12.5	21	–	32	M12	–	–	-3	0	21900	0.10	GI120	C0362	
MODULAR	**35E3R042M16-SCRD12-CF**	35	23	65	17	29	–	42	M16	–	–	0	0	18100	0.22	GI120	C0364	
MODULAR	**35E4R042M16-SRD12-CF**	35	23	65	17	29	–	42	M16	–	–	0	0	18100	0.20	GI120	C0362	
MODULAR	**42E4R042M16-SCRD12-CF**	42	30	65	17	29	–	42	M16	–	–	0	0	16600	0.21	GI120	C0364	
MODULAR	**42E5R042M16-SRD12-CF**	42	30	65	17	29	–	42	M16	–	–	0	0	16600	0.22	GI120	C0366	
ISO 6462 DIN 8030	**50A05R-SCMORD12-CF**	50	38	–	22	–	18	50	–	10.4	10.4	2	7	15200	0.29	GI120	C0366	
ISO 6462 DIN 8030	**52A05R-SCMORD12-CF**	52	40	–	22	–	18	50	–	10.4	10.4	2	7	14900	0.44	GI120	C0366	
ISO 6462 DIN 8030	**66A06R-SCMORD12-CF**	66	54	–	27	–	22	50	–	12.4	12.4	2	7	13200	0.54	GI120	C0370	
ISO 6462 DIN 8030	**80A07R-SCMORD12-CF**	80	68	–	27	–	38	52	–	12.4	12.4	2	7	12000	0.89	GI120	C0372	

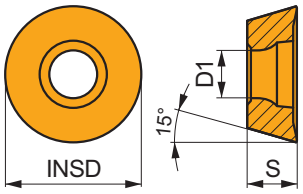
GI120	RD.. 12T3M0T	RDHT 12T3M0-FA

		Nm							
C0362	US 3508-T15P	3.5	M 3.5	8	–	–	Flag T15P	–	–
C0364	US 3006-T09P	2.0	M 3	6	D-T07P/T09P	FG-15	–	CS12P	–
C0366	US 3508-T15P	3.5	M 3.5	8	D-T08P/T15P	FG-15	–	CS12P	HS 1030C
C0370	US 3508-T15P	3.5	M 3.5	8	D-T08P/T15P	FG-15	–	CS12P	HS 1230C
C0372	US 3508-T15P	3.5	M 3.5	8	D-T08P/T15P	FG-15	–	CS12P	–

RDGT 12

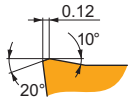
PRAMET

	INSD	D1	S
	(mm)	(mm)	(mm)
12T3	12.000	3.90	3.97



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto	RE	P			M			K			N			S			H		
	(mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)
RDGT 12T3MOT:M6330	–	260	0.20	1.5	185	0.18	1.5	–	–	–	–	–	–	75	0.14	1.2	–	–	–
RDGT 12T3MOT:M8310	–	330	0.20	1.5	165	0.18	1.5	310	0.20	1.5	–	–	–	–	–	–	–	–	–
RDGT 12T3MOT:M8325	–	250	0.20	1.5	120	0.18	1.5	–	–	–	–	–	–	–	–	–	–	–	–
RDGT 12T3MOT:M8345	–	225	0.20	1.5	135	0.18	1.5	–	–	–	–	–	–	55	0.14	1.2	–	–	–
RDGT 12T3MOT:M9340	–	340	0.20	1.5	200	0.18	1.5	–	–	–	–	–	–	85	0.14	1.2	–	–	–

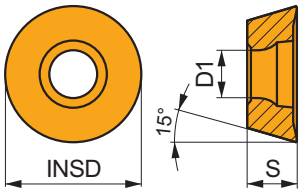


MOT diseño positivo para mecanizado de acabado.

RDMT 12

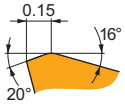
PRAMET

	INSD	D1	S
	(mm)	(mm)	(mm)
12T3	12.000	3.90	3.97



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto	RE	P			M			K			N			S			H		
	(mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)
RDMT 12T3MOT:M8345	–	225	0.20	1.5	135	0.18	1.5	–	–	–	–	–	–	–	–	–	–	–	–

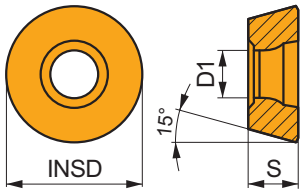


MOT diseño positivo para mecanizado de acabado.

RDMX 12

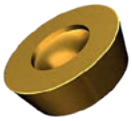
PRAMET

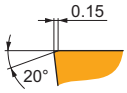
	INSD	D1	S
	(mm)	(mm)	(mm)
12T3	12.000	3.90	3.97



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)





HFC T

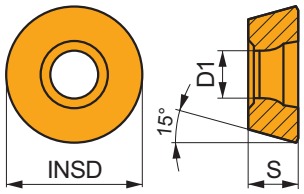
MOT ángulo de desprendimiento de 0° para fresado en acabado.

RDMX 12T3M0T:M8310	✱	–	300	0.20	1.5	–	–	–	285	0.20	1.5	–	–	–	–	–	–	60	0.10	0.8
RDMX 12T3M0T:M8325	✱	–	225	0.20	1.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
RDMX 12T3M0T:M8345	✱	–	200	0.20	1.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

RDHX 12

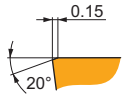
PRAMET

	INSD	D1	S
	(mm)	(mm)	(mm)
12T3	12.000	3.90	3.97



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)



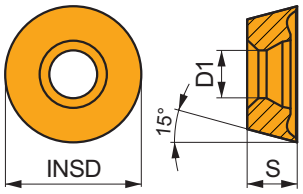
HFC T

MOT ángulo de desprendimiento de 0° para fresado en acabado.

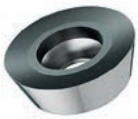
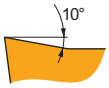
RDHX 12T3M0T:M4303	✱	–	300	0.20	1.5	–	–	–	285	0.20	1.5	–	–	–	–	–	–	60	0.14	0.8
RDHX 12T3M0T:M8310	✱	–	300	0.20	1.5	–	–	–	285	0.20	1.5	–	–	–	–	–	–	60	0.14	0.8
RDHX 12T3M0T:M8325	✱	–	225	0.20	1.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
RDHX 12T3M0T:M8345	✱	–	200	0.20	1.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

RDHT 12-FA

	INSD (mm)	D1 (mm)	S (mm)
12T3	12.000	3.90	3.97



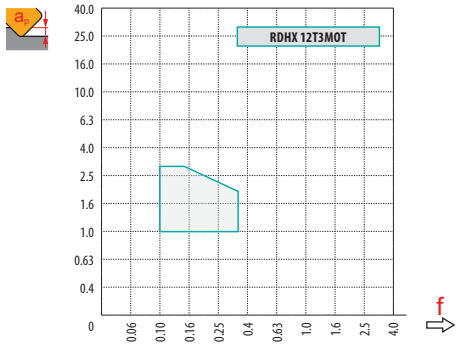
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

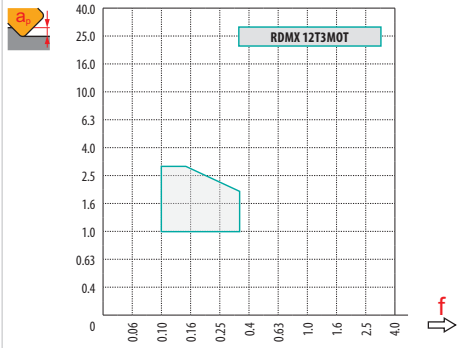
Producto		RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
																				
RDHT 12T3M0-FA:HF7	●	–	–	–	–	–	–	–	–	–	–	■ 360	0.24	1.5	–	–	–	–	–	–

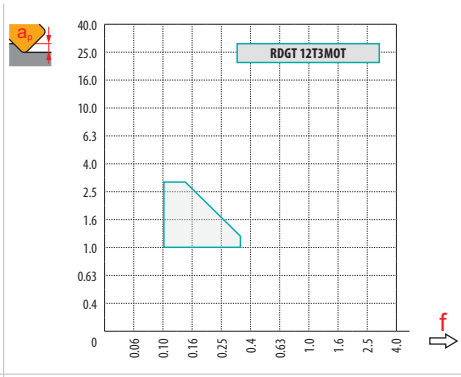
FA geometría muy positiva para fresado en acabado a mecanizado medio.

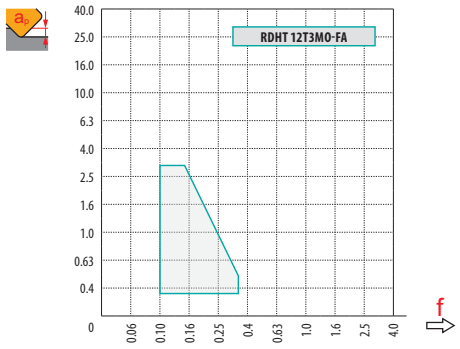
a_e / DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

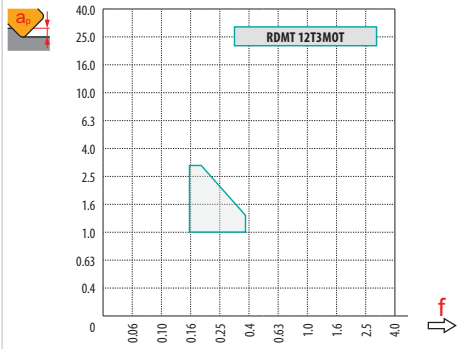
	RDHX 12	RDMX 12	RDGT 12	RDHT 12-FA	RDMT 12
RE	6.0	6.0	6.0	6.0	6.0
a_p	–	–	–	–	–











DCX	a_p	0.00	0.50	0.75	1.00	1.25	1.50	2.00	2.50	3.00	3.50	4.00	5.00	6.00
24		12.0	16.8	17.8	18.6	19.3	19.9	20.9	21.7	22.4	22.9	23.3	23.8	24.0
35		23.0	27.8	28.8	29.6	30.3	30.9	31.9	32.7	33.4	33.9	34.3	34.8	35.0
42		30.0	34.8	35.8	36.6	37.3	37.9	38.9	39.7	40.4	40.9	41.3	41.8	42.0
50	DEF	38.0	42.8	43.8	44.6	45.3	45.9	46.9	47.7	48.4	48.9	49.3	49.8	50.0
52		40.0	44.8	45.8	46.6	47.3	47.9	48.9	49.7	50.4	50.9	51.3	51.8	52.0
66		54.0	58.8	59.8	60.6	61.3	61.9	62.9	63.7	64.4	64.9	65.3	65.8	66.0
80		68.0	72.8	73.8	74.6	75.3	75.9	76.9	77.7	78.4	78.9	79.3	79.8	80.0
	a_p	0.00	0.50	0.75	1.00	1.25	1.50	2.00	2.50	3.00	3.50	4.00	5.00	6.00
	1 f	–	0.49	0.40	0.35	0.32	0.29	0.25	0.23	0.21	0.20	0.18	0.17	0.16

DCX	RPMX	APMX/I
24	25.0	3.0/14
35	9.0	3.0/39
42	8.0	3.0/44
50	4.0	3.0/87
52	4.0	3.0/87
66	3.0	3.0/100
80	2.2	3.0/100

DCX	DMIN	DMAX	SMAX DMIN	SMAX DMAX
24	26.0	48.0	3.0	3.0
35	46.0	70.0	3.0	3.0
42	62.0	84.0	3.0	3.0
50	78.0	100.0	2.8	2.8
52	82.0	104.0	2.8	2.8
66	110.0	132.0	2.8	2.8
80	136.0	160.0	2.8	2.8

a_p
2.8

DCX	µm	3	5	10	15	20	30	40	50	60	80	100
24	FE	0.537	0.693	0.980	1.200	1.386	1.697	1.960	2.191	2.400	2.771	3.098
35		0.648	0.837	1.183	1.449	1.673	2.049	2.366	2.646	2.898	3.347	3.742
42		0.710	0.917	1.296	1.587	1.833	2.245	2.592	2.898	3.175	3.666	4.099
50		0.775	1.000	1.414	1.732	2.000	2.449	2.828	3.162	3.464	4.000	4.472
52		0.790	1.020	1.442	1.766	2.040	2.498	2.884	3.225	3.533	4.079	4.561
66		0.890	1.149	1.625	1.990	2.298	2.814	3.250	3.633	3.980	4.596	5.138
80		0.980	1.265	1.789	2.191	2.530	3.098	3.578	4.000	4.382	5.060	5.657
RE	µm	3	5	10	15	20	30	40	50	60	80	100
6.0	FE	0.379	0.490	0.693	0.849	0.980	1.200	1.386	1.549	1.697	1.960	2.191

SRD16

P M K N S H

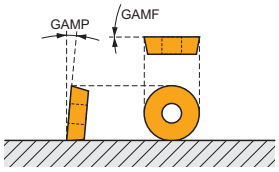
PRAMET

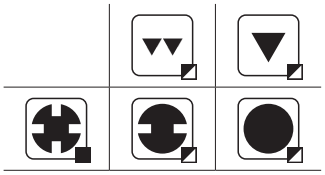
S(C)

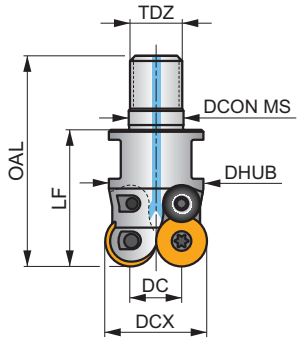
Fresa de Copiado para Plaquitas Redondas RD.. 16 con Refrigeración Interna

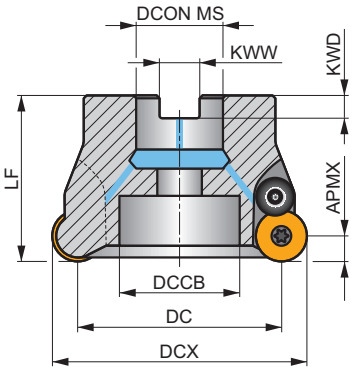
Fresa para copiado que utiliza plaquitas positivas RD.. 16, con APMX de 4 mm. Refrigeración interna. Adecuada para planeado, fresado axial progresivo (plunge), fresado en rampa, interpolación helicoidal y fresado de alto avance. Disponible con mango modular y para portafresas. Cuerpo tratado para alargar la vida de herramienta.

APMX	4.0 mm









h_m	0.11 - 0.25
h_m	0.1 - 0.2

	Producto	DCX (mm)	DC (mm)	OAL (mm)	DCON MS (mm)	DHUB (mm)	DCCB (mm)	LF (mm)	TDZ	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		kg		
MODULAR	**32E2R042M16-SCRD16-CF**	32	16	65	17	29	–	42	M16	–	–	-2	0	2	–	12600	✓	0.18	GI121	C0374
	52A04R-SCMORD16-CF	52	36	–	22	–	16.5	50	–	10.4	10.4	0	7	4	–	9900	✓	0.41	GI121	C0376
ISO 6462 DIN 8030	**66A05R-SCMORD16-CF**	66	50	–	27	–	22	50	–	12.4	12.4	0	7	5	–	8800	✓	0.60	GI121	C0378
	80A06R-SCMORD16-CF	80	64	–	27	–	38	52	–	12.4	12.4	0	7	6	–	8000	✓	0.87	GI121	C0380
	100A07R-SCMORD16-CF	100	84	–	32	–	45	52	–	14.4	14.4	0	7	7	–	7100	✓	1.41	GI121	C0380

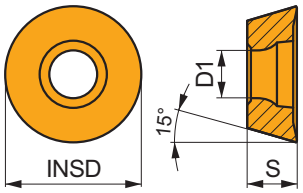
GI121	RD.. 1604MOT	RDHT 1604MO-FA

		Nm						
C0374	US 64510-T20P	4.5	M 4.5	10	–	Flag T20P	CS16P	–
C0376	US 64510-T20P	4.5	M 4.5	10	SDR T20P-T	–	CS16P	HS 1030C
C0378	US 64510-T20P	4.5	M 4.5	10	SDR T20P-T	–	CS16P	HS 1230C
C0380	US 64510-T20P	4.5	M 4.5	10	SDR T20P-T	–	CS16P	–

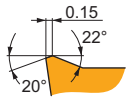
RDGT 16

PRAMET

	INSD (mm)	D1 (mm)	S (mm)
1604	16.000	5.20	4.76



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

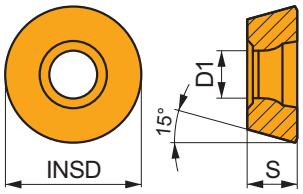
Producto		RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
																				
RDGT 1604MOT:M8310		–	■	285	0.30	2.0	◪	145	0.27	2.0	■	270	0.30	2.0	–	–	–	–	–	–	–	–	–
RDGT 1604MOT:M8325		–	■	220	0.30	2.0	◪	105	0.27	2.0		–	–	–	–	–	–	–	–	–	–	–	–
RDGT 1604MOT:M8345		–	■	200	0.30	2.0	■	120	0.27	2.0		–	–	–	–	–	–	◪	50	0.21	1.6	–	–	–

MOT diseño positivo para mecanizado de acabado.

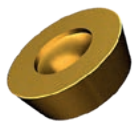
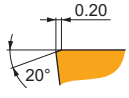
RDMX 16

PRAMET

	INSD (mm)	D1 (mm)	S (mm)
1604	16.000	5.20	4.76



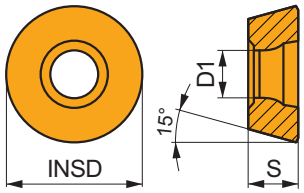
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
																				
RDMX 1604MOT:M8310		–	◪	255	0.30	2.0		–	–	–	■	240	0.30	2.0	–	–	–	–	–	–	■	50	0.15	1.1

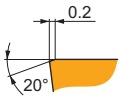
MOT ángulo de desprendimiento de 0° para fresado en acabado.

RDHX 16

	INSD (mm)	D1 (mm)	S (mm)
1604	16.000	5.20	4.76

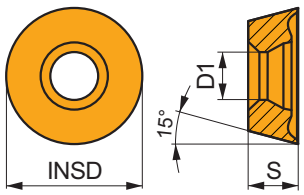


Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

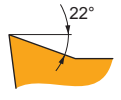
Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
 **MOT** ángulo de desprendimiento de 0° para fresado en acabado.																			
RDHX 1604MOT:M8310	–	255	0.30	2.0	–	–	–	240	0.30	2.0	–	–	–	–	–	–	50	0.15	1.1
RDHX 1604MOT:M8325	–	195	0.30	2.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
RDHX 1604MOT:M8345	–	180	0.30	2.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
RDHX 1604MOT:M9325	–	290	0.30	2.0	–	–	–	275	0.30	2.0	–	–	–	–	–	–	55	0.15	1.1

RDHT 16-FA

	INSD (mm)	D1 (mm)	S (mm)
1604	16.000	5.20	4.76

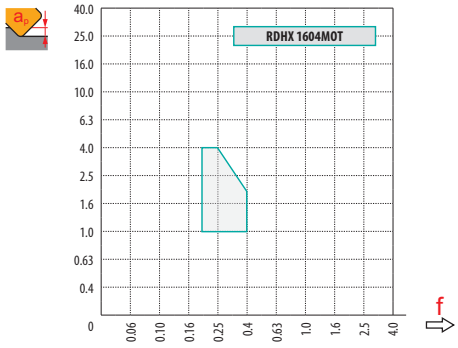


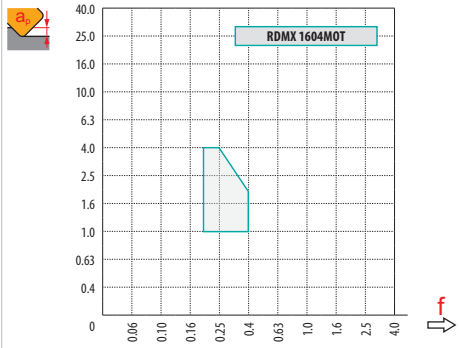
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

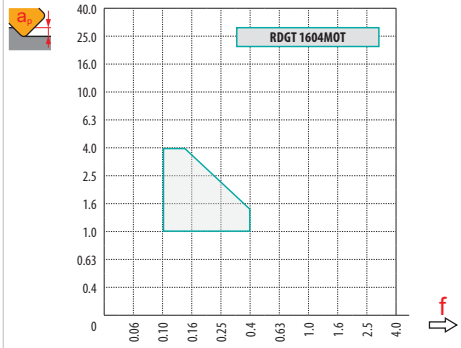
Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
 **FA** geometría muy positiva para fresado en acabado a mecanizado medio.																			
RDHT 1604MO-FA:HF7	–	–	–	–	–	–	–	–	–	–	315	0.36	2.0	–	–	–	–	–	–

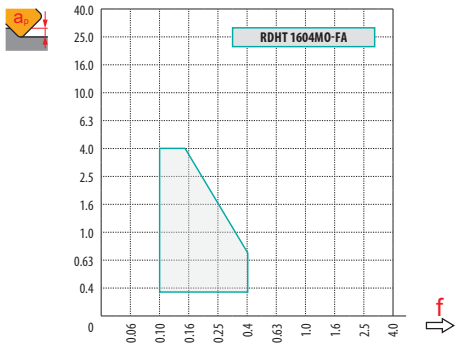
a_e / DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	RDHX 16	RDMX 16	RDGT 16	RDHT 16-FA
RE	8.0	8.0	8.0	8.0
BS	–	–	–	–









DCX	a_p	0.00	0.50	0.75	1.00	1.25	1.50	2.00	2.50	3.00	3.50	4.00	5.00	6.00	7.00	8.00
32	DEF	16.0	21.6	22.8	23.7	24.6	25.3	26.6	27.6	28.5	29.2	29.9	30.8	31.5	31.9	32.0
52		36.0	41.6	42.8	43.7	44.6	45.3	46.6	47.6	48.5	49.2	49.9	50.8	51.5	51.9	52.0
66		50.0	55.6	56.8	57.7	58.6	59.3	60.6	61.6	62.5	63.2	63.9	64.8	65.5	65.9	66.0
80		64.0	69.6	70.8	71.7	72.6	73.3	74.6	75.6	76.5	77.2	77.9	78.8	79.5	79.9	80.0
100		84.0	89.6	90.8	91.7	92.6	93.3	94.6	95.6	96.5	97.2	97.9	98.8	99.5	99.9	100.0
	a_p	0.00	0.50	0.75	1.00	1.25	1.50	2.00	2.50	3.00	3.50	4.00	5.00	6.00	7.00	8.00
	f	–	0.91	0.74	0.65	0.58	0.53	0.46	0.42	0.38	0.36	0.34	0.30	0.28	0.26	0.25

DCX	RPMX	APMX/I
32	25.0	4.0/19
52	8.0	4.0/58
66	6.0	4.0/78
80	4.0	4.0/100
100	3.0	4.0/100

DCX	DMIN	DMAX	SMAX DMIN	SMAX DMAX
32	34.0	64.0	4.0	4.0
52	74.0	104.0	4.0	4.0
66	102.0	132.0	4.0	4.0
80	130.0	160.0	4.0	4.0
100	170.0	200.0	4.0	4.0

a_p
4.0

DCX	µm	3	5	10	15	20	30	40	50	60	80	100
32	FE	0.620	0.800	1.131	1.386	1.600	1.960	2.263	2.530	2.771	3.200	3.578
52		0.790	1.020	1.442	1.766	2.040	2.498	2.884	3.225	3.533	4.079	4.561
66		0.890	1.149	1.625	1.990	2.298	2.814	3.250	3.633	3.980	4.596	5.138
80		0.980	1.265	1.789	2.191	2.530	3.098	3.578	4.000	4.382	5.060	5.657
100		1.095	1.414	2.000	2.449	2.828	3.464	4.000	4.472	4.899	5.657	6.325
RE	µm	3	5	10	15	20	30	40	50	60	80	100
8.0	FE	0.438	0.566	0.800	0.980	1.131	1.386	1.600	1.789	1.960	2.263	2.530

PLANEADO

	SRC10	SRC12	SRC16	SRC20		
	–	–	–	–		
	APMX (mm) 5.0	APMX (mm) 6.0	APMX (mm) 8.0	APMX (mm) 10.0		
	DCX (mm) 25 – 66	DCX (mm) 40 – 100	DCX (mm) 63 – 160	DCX (mm) 80 – 160		
Mango cilíndrico	DCX = 25, 32 (mm)					
Weldon						
Modular	DCX = 25– 35 (mm)					
Portafresas	DCX = 40 – 66 (mm)					
Página	186	190	194	198		
ISO	P M K S H	P M K S H	P M K S H	P M K S H		
Forma de la plaquita						
Plaquitas de corte	RC 10T3	RC 1204	RC 1606	RC 2006		
N.º de filos de corte	8	12	8	8		
Superficies contorneadas (fresado en copia)	■	■	■	■		
Planeado	■	■	■	■		
Interpolación helicoidal	■	■	■	■		
Fresado axial progresivo	■	■	■	■		
Mecanizado en rampa	■	■	■	■		

■ Primera Opción ◪ Opción Alternativa

SRC10

P M K S H

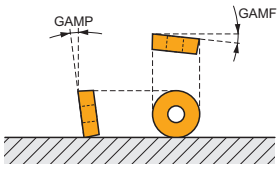
PRAMET

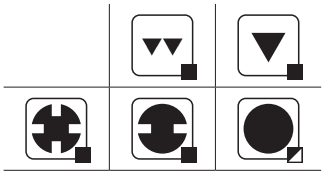
S

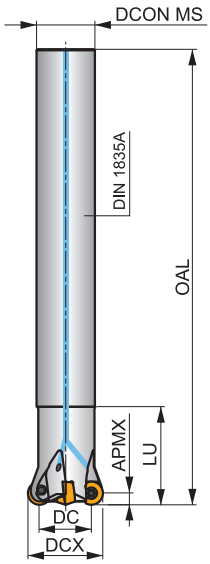
Fresa de Copiado para Plaquitas Redondas RCMT 10 con Refrigeración Interna

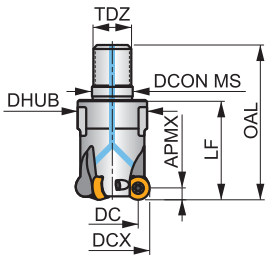
Fresa para copiado que utiliza plaquitas positivas RCMT 10, con APMX de 5 mm. Refrigeración interna. Adecuada para planeado, fresado axial progresivo (plunge), fresado en rampa, interpolación helicoidal y fresado de alto avance. Disponible con mango cilíndrico, modular y para portafresas. Cuerpo tratado para alargar la vida de herramienta.

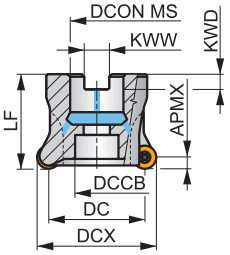
APMX	5.0 mm











h_m	0.05 - 0.12
h_m	0.08 - 0.15

	Producto	DCX (mm)	DC (mm)	OAL (mm)	DCON MS (mm)	DHUB (mm)	DCCB (mm)	LU (mm)	LF (mm)	TDZ	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)	max.	kg			
DIN 1835A	25E2R034A20-SRC10-C	25	15	170	20	–	–	34	–	–	–	–	-3	-7	2	–	20900	✓	0.40	GI328	C0010
	25E3R034A20-SRC10-C	25	15	170	20	–	–	34	–	–	–	–	-3	-7	3	–	20900	✓	0.36	GI328	C0010
	32E3R042A25-SRC10-C	32	22	200	25	–	–	42	–	–	–	–	-2.6	-7	4	–	18500	✓	0.67	GI328	C0010
	32E4R042A25-SRC10-C	32	22	200	25	–	–	42	–	–	–	–	-2.6	-7	3	–	18500	✓	0.70	GI328	C0010
MODULAR	25E2R032M12-SRC10-C	25	15	54	12.5	21	–	–	32	M12	–	–	-3	-7	2	–	20900	✓	0.11	GI328	C0010
	25E3R032M12-SRC10-C	25	15	54	12.5	21	–	–	32	M12	–	–	-3	-7	3	–	20900	✓	0.08	GI328	C0010
	32E4R042M16-SRC10-C	32	22	65	17	29	–	–	42	M16	–	–	-2.6	-7	4	–	18500	✓	0.20	GI328	C0010
	35E4R042M16-SRC10-C	35	25	65	17	29	–	–	42	M16	–	–	-2.4	-7	4	–	17700	✓	0.20	GI328	C0010
ISO 6462 DIN 8030	40A05R-SMORC10-C	40	30	–	16	–	14	–	40	–	8.4	5.6	-2.2	-7	5	–	16500	✓	0.21	GI328	C0012
	50A05R-SMORC10-C	50	40	–	22	–	18	–	40	–	10.4	6.3	-2	-7	5	–	14800	✓	0.34	GI328	C0013
	50A06R-SMORC10-C	50	40	–	22	–	18	–	40	–	10.4	6.3	-2	-7	6	–	14800	✓	0.33	GI328	C0013
	52A05R-SMORC10-C	52	42	–	22	–	18	–	40	–	10.4	6.3	-2	-7	5	–	14500	✓	0.35	GI328	C0013
	52A06R-SMORC10-C	52	42	–	22	–	18	–	40	–	10.4	6.3	-2	-7	6	–	14500	✓	0.28	GI328	C0013
	63A06R-SMORC10-C	63	53	–	22	–	18	–	40	–	10.4	6.3	-1.8	-7	6	–	13200	✓	0.52	GI328	C0013
	63A07R-SMORC10-C	63	53	–	22	–	18	–	40	–	10.4	6.3	-1.8	-7	7	–	13200	✓	0.52	GI328	C0013
	66A06R-SMORC10-C	66	56	–	27	–	22	–	50	–	12.4	7	-1.4	-7	6	–	12800	✓	0.58	GI328	C0014
	66A07R-SMORC10-C	66	56	–	27	–	22	–	50	–	12.4	7	-1.4	-7	7	–	12800	✓	0.60	GI328	C0014

GI328	RCMT 10T3M0..

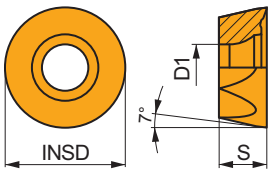
		Nm				
C0010	US 63509-T10P	3.0	M 3.5	9	Flag T10P	–
C0012	US 63509-T10P	3.0	M 3.5	9	Flag T10P	HS 0830C

		Nm				
C0013	US 63509-T10P	3.0	M 3.5	9	Flag T10P	HS 1030C
C0014	US 63509-T10P	3.0	M 3.5	9	Flag T10P	HS 1230C

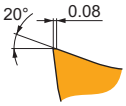
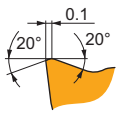
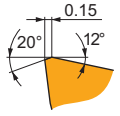
RCMT 10

PRAMET

	INSD (mm)	D1 (mm)	S (mm)
10T3	10.000	3.90	3.97



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
																			
RCMT 10T3MOSN-F:M6330	–	340	0.10	1.0	240	0.09	1.0	–	–	–	–	–	–	100	0.08	0.8	–	–	–
RCMT 10T3MOSN-F:M8330	–	395	0.10	1.0	235	0.09	1.0	–	–	–	–	–	–	95	0.08	0.8	–	–	–
																			
RCMT 10T3MOSN-M:M6330	–	310	0.12	1.0	220	0.11	1.0	–	–	–	–	–	–	90	0.11	0.8	–	–	–
RCMT 10T3MOSN-M:M8310	–	400	0.12	1.0	200	0.11	1.0	380	0.12	1.0	–	–	–	–	–	–	–	–	–
RCMT 10T3MOSN-M:M8330	–	360	0.12	1.0	215	0.11	1.0	340	0.12	1.0	–	–	–	90	0.11	0.8	–	–	–
RCMT 10T3MOSN-M:M8340	–	330	0.12	1.0	195	0.11	1.0	310	0.12	1.0	–	–	–	80	0.11	0.8	–	–	–
																			
RCMT 10T3MOSN-R:M8310	–	345	0.17	1.0	–	–	–	325	0.17	1.0	–	–	–	–	–	–	65	0.12	0.7
RCMT 10T3MOSN-R:M8330	–	310	0.17	1.0	–	–	–	290	0.17	1.0	–	–	–	75	0.17	0.8	60	0.12	0.7

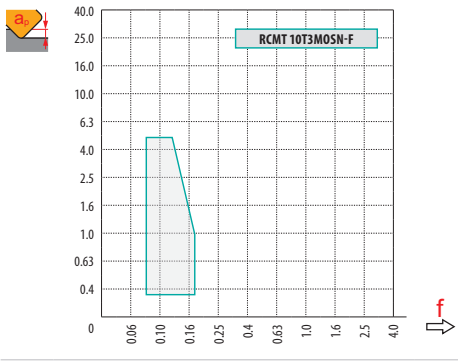
F geometría muy positiva para mecanizado ligero.

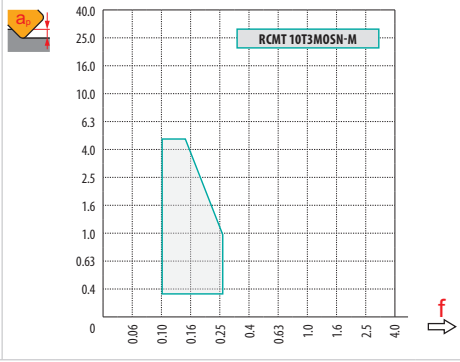
M geometría muy positiva para mecanizado medio.

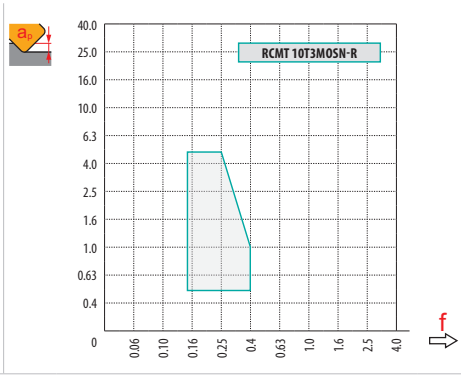
R geometría con diseño positivo para copiado en desbaste.

a_e / DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
⇨ x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	RCMT 10-F	RCMT 10-M	RCMT 10-R
RE	5.0	5.0	5.0
BS	–	–	–







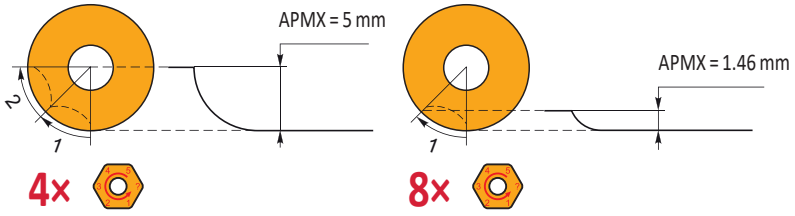
DCX	a_p	0.00	0.15	0.30	0.50	0.75	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00
25		15.00	17.43	18.41	19.36	20.27	21.00	21.61	22.14	23.00	23.66	24.17	24.80	25.00
32		22.00	24.43	25.41	26.36	27.27	28.00	28.61	29.14	30.00	30.66	31.17	31.80	32.00
35		25.00	27.43	28.41	29.36	30.27	31.00	31.61	32.14	33.00	33.66	34.17	34.80	35.00
40	DEF	30.00	32.43	33.41	34.36	35.27	36.00	36.61	37.14	38.00	38.66	39.17	39.80	40.00
50		40.00	42.43	43.41	44.36	45.27	46.00	46.61	47.14	48.00	48.66	49.17	49.80	50.00
52		42.00	44.43	45.41	46.36	47.27	48.00	48.61	49.14	50.00	50.66	51.17	51.80	52.00
63		53.00	55.43	56.41	57.36	58.27	59.00	59.61	60.14	61.00	61.66	62.17	62.80	63.00
66		56.00	58.43	59.41	60.36	61.27	62.00	62.61	63.14	64.00	64.66	65.17	65.80	66.00
	a_p	–	0.15	0.30	0.50	0.75	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00
	f	–	0.90	0.64	0.50	0.41	0.35	0.32	0.29	0.25	0.23	0.21	0.19	0.17

DCX	RPMX	APMX/I
25	13.2	5/23
32	12.6	5/24
35	12.3	5/24
40	9.5	5/31
50	6.4	5/46
52	6.1	5/48
63	4.7	5/62
66	4.4	5/66

DCX	DMIN	DMAX	SMAX DMIN	SMAX DMAX
25	32.0	50.0	3.0	3.0
32	45.0	64.0	3.0	3.0
35	51.0	70.0	3.0	3.0
40	61.0	80.0	3.0	3.0
50	81.0	100.0	3.0	3.0
52	85.0	104.0	3.0	3.0
63	107.0	126.0	3.0	3.0
66	113.0	132.0	3.0	3.0

a_p
2.24

DCX	µm	3	5	10	15	20	30	40	50	60	80	100
25	FE	0.548	0.707	1.000	1.225	1.414	1.732	2.000	2.236	2.449	2.828	3.162
32		0.620	0.800	1.131	1.386	1.600	1.960	2.263	2.530	2.771	3.200	3.578
35		0.648	0.837	1.183	1.449	1.673	2.049	2.366	2.646	2.898	3.347	3.742
40		0.693	0.894	1.265	1.549	1.789	2.191	2.530	2.828	3.098	3.578	4.000
50		0.775	1.000	1.414	1.732	2.000	2.449	2.828	3.162	3.464	4.000	4.472
52		0.790	1.020	1.442	1.766	2.040	2.498	2.884	3.225	3.533	4.079	4.561
63		0.869	1.122	1.587	1.944	2.245	2.750	3.175	3.550	3.888	4.490	5.020
66		0.890	1.149	1.625	1.990	2.298	2.814	3.250	3.633	3.980	4.596	5.138
RE	µm	3	5	10	15	20	30	40	50	60	80	100
5.0	FE	0.346	0.447	0.632	0.775	0.894	1.095	1.265	1.414	1.549	1.789	2.000



SRC12

P M K S H

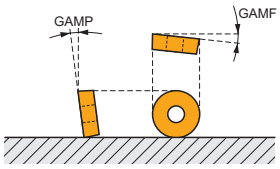
PRAMET

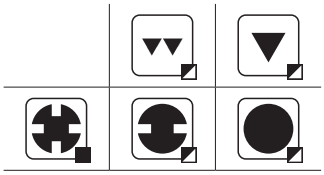
S

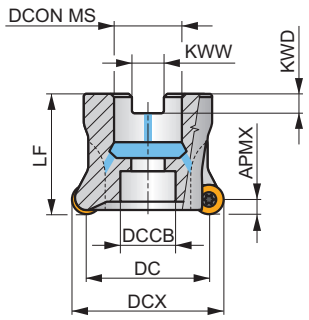
Fresa de Copiado para Plaquitas Redondas RCMT 12 con Refrigeración Interna

Fresa para copiado medio utilzando plaquitas positivas RCMT 12 con APMX de 6 mm. Refrigeración interna. Adecuada para planeado, fresado axial progresivo (plunge), fresado en rampa, interpolación helicoidal y fresado de alto avance. Disponible únicamente para portafresas. Cuerpo tratado para alargar la vida de herramienta.

APMX	6.0 mm







h_m 0.1 - 0.2

	Producto	DCX (mm)	DC (mm)	DCON MS (mm)	DCCB (mm)	LF (mm)	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		kg			
ISO 6462 DIN 8030	**40A03R-SMORC12-C**	40	28	16	12	40	8.4	5.6	-2.1	-7	3	–	14800	✓	0.27	GI279	C0022	–
	50A04R-SMORC12-C	50	38	22	18	40	10.4	6.3	-2	-7	4	–	13200	✓	0.36	GI279	C0023	–
	52A05R-SMORC12-C	52	40	22	18	40	10.4	6.3	-2	-7	5	–	12900	✓	0.15	GI279	C0023	–
	63A05R-SMORC12-C	63	51	22	30	40	10.4	6.3	-2	-7	5	–	11800	✓	0.45	GI279	C0023	–
	66A06R-SMORC12-C	66	54	27	22	50	12.4	7	-1.5	-7	6	–	11400	✓	0.65	GI279	C0024	–
	80A05R-SMORC12-C	80	68	27	37	50	12.4	7	-1.7	-7	5	–	10400	✓	1.08	GI279	C0024	–
	100A06R-SMORC12-C	100	88	32	45	50	14.4	8	-1.8	-7	6	–	9300	✓	1.78	GI279	C0021	AC002

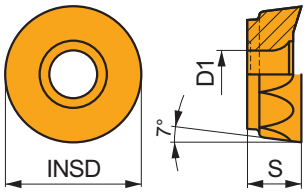
GI279	RCMT 1204M0..

		Nm					
C0021	US 63509-T15P	3.0	M 3.5	10	D-T08P/T15P	FG-15	–
C0022	US 63509-T15P	3.0	M 3.5	10	D-T08P/T15P	FG-15	HS 90835
C0023	US 63509-T15P	3.0	M 3.5	10	D-T08P/T15P	FG-15	HS 1030C
C0024	US 63509-T15P	3.0	M 3.5	10	D-T08P/T15P	FG-15	HS 1230C

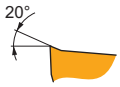
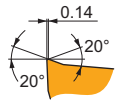
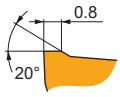
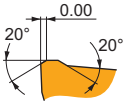
AC002	KS 1635	K.FMH32

RCMT 12

	INSD	D1	S
	(mm)	(mm)	(mm)
1204	12.000	4.40	4.76

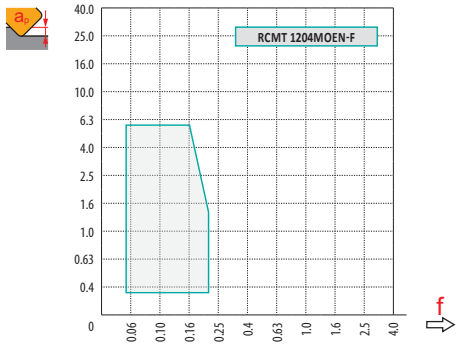


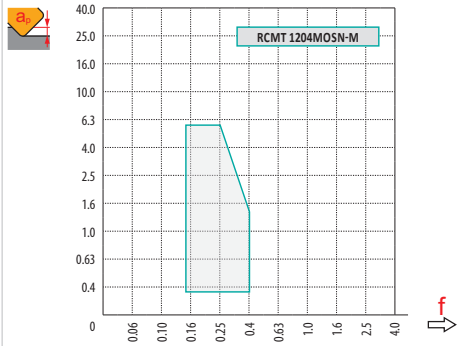
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

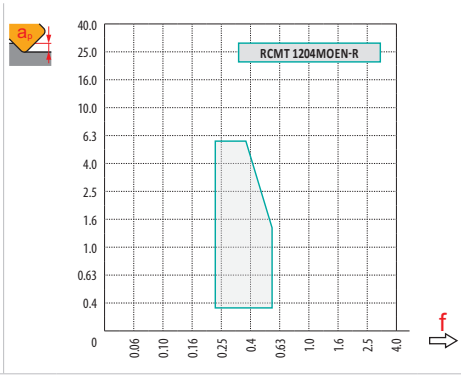
Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
																				
F geometría muy positiva para mecanizado ligero.																				
RCMT 1204MOEN-F:M8310		–	■	420	0.10	1.5	◪	210	0.09	1.5	–	–	–	–	–	–	–	–	–	–	–	–
RCMT 1204MOEN-F:M8330		–	■	380	0.10	1.5	■	225	0.09	1.5	–	–	–	–	–	–	–	◪	95	0.07	1.2	–	–	–
																				
M geometría muy positiva para mecanizado medio.																				
RCMT 1204MOSN-M:M6330		–	■	265	0.20	1.5	◪	185	0.18	1.5	–	–	–	–	–	–	–	■	75	0.16	1.2	–	–	–
RCMT 1204MOSN-M:M8310		–	■	335	0.20	1.5	◪	170	0.18	1.5	■	315	0.20	1.5	–	–	–	–	–	–	–	–	–
RCMT 1204MOSN-M:M8330		–	■	305	0.20	1.5	◪	180	0.18	1.5	■	285	0.20	1.5	–	–	–	◪	75	0.16	1.2	–	–	–
RCMT 1204MOSN-M:M8345		–	■	225	0.20	1.5	◪	135	0.18	1.5	–	–	–	–	–	–	–	■	55	0.16	1.2	–	–	–
RCMT 1204MOSN-M:M9325		–	■	380	0.20	1.5		–	–	–	■	360	0.20	1.5	–	–	–	–	–	–	–	–	–	–
RCMT 1204MOSN-M:M9340		–	■	345	0.20	1.5	◪	205	0.18	1.5	–	–	–	–	–	–	–	■	85	0.16	1.2	–	–	–
																				
EN-R geometría con diseño positivo para copiado en desbaste.																				
RCMT 1204MOEN-R:M8310		–	■	280	0.30	1.5	◪	140	0.27	1.5	■	265	0.30	1.5	–	–	–	–	–	–	–	■	55	0.15	0.8
RCMT 1204MOEN-R:M8330		–	■	260	0.30	1.5	◪	155	0.27	1.5	■	245	0.30	1.5	–	–	–	◪	65	0.24	1.2	◪	50	0.15	0.8
																				
SN-R geometría con diseño positivo para copiado en desbaste.																				
RCMT 1204MOSN-R:M8345		–	■	190	0.35	1.5		–	–	–	–	–	–	–	–	–	–	◪	45	0.25	1.2	–	–	–
RCMT 1204MOSN-R:M9315		–	■	315	0.35	1.5		–	–	–	■	295	0.35	1.5	–	–	–	–	–	–	–	◪	60	0.18	0.8

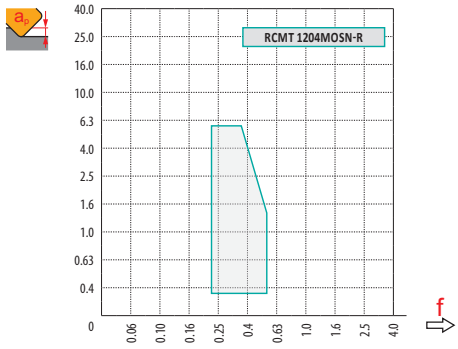
a_e / DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	RCMT 12-F	RCMT 12-M	RCMT 12 EN-R	RCMT 12 SN-R
RE	6.0	6.0	6.0	6.0
BS	–	–	–	–









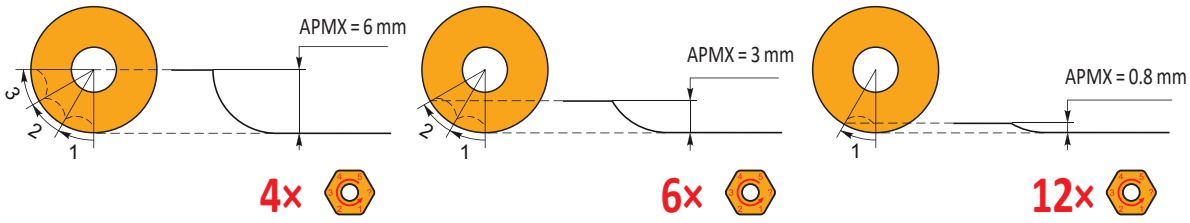
DCX	a_p	0.00	0.30	0.50	0.75	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00	6.00
40		28.0	31.7	32.8	33.8	34.6	35.3	35.9	36.9	37.7	38.4	39.3	39.8	40.0
50		38.0	41.7	42.8	43.8	44.6	45.3	45.9	46.9	47.7	48.4	49.3	49.8	50.0
52		40.0	43.7	44.8	45.8	46.6	47.3	47.9	48.9	49.7	50.4	51.3	51.8	52.0
63	DEF	51.0	54.7	55.8	56.8	57.6	58.3	58.9	59.9	60.7	61.4	62.3	62.8	63.0
66		54.0	57.7	58.8	59.8	60.6	61.3	61.9	62.9	63.7	64.4	65.3	65.8	66.0
80		68.0	71.7	72.8	73.8	74.6	75.3	75.9	76.9	77.7	78.4	79.3	79.8	80.0
100		88.0	91.7	92.8	93.8	94.6	95.3	95.9	96.9	97.7	98.4	99.3	99.8	100.0
	a_p	–	0.30	0.50	0.75	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00	6.00
	f	–	0.95	0.74	0.61	0.53	0.47	0.43	0.38	0.34	0.31	0.28	0.25	0.24

DC	RPMX	APMX/I
40	9.0	6.0/39
50	7.0	6.0/50
52	6.5	6.0/53
63	5.0	6.0/70
66	4.5	6.0/76
80	3.0	5.1/100
100	2.0	3.3/100

DC	DMIN	DMAX	SMAX DMIN	SMAX DMAX
40	56.0	80.0	6.0	6.0
50	76.0	100.0	6.0	6.0
52	80.0	104.0	6.0	6.0
63	102.0	126.0	6.0	6.0
66	108.0	132.0	6.0	6.0
80	136.0	160.0	6.0	6.0
100	176.0	200.0	6.0	6.0

a_p
3.5

DC	µm	3	5	10	15	20	30	40	50	60	80	100
40	FE	0.693	0.894	1.265	1.549	1.789	2.191	2.530	2.828	3.098	3.578	4.000
50		0.775	1.000	1.414	1.732	2.000	2.449	2.828	3.162	3.464	4.000	4.472
52		0.790	1.020	1.442	1.766	2.040	2.498	2.884	3.225	3.533	4.079	4.561
63		0.869	1.122	1.587	1.944	2.245	2.750	3.175	3.550	3.888	4.490	5.020
66		0.890	1.149	1.625	1.990	2.298	2.814	3.250	3.633	3.980	4.596	5.138
80		0.980	1.265	1.789	2.191	2.530	3.098	3.578	4.000	4.382	5.060	5.657
100		1.095	1.414	2.000	2.449	2.828	3.464	4.000	4.472	4.899	5.657	6.325
RE	µm	3	5	10	15	20	30	40	50	60	80	100
6.0	FE	0.379	0.490	0.693	0.849	0.980	1.200	1.386	1.549	1.697	1.960	2.191



SRC16

P M K S H

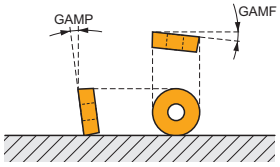
PRAMET

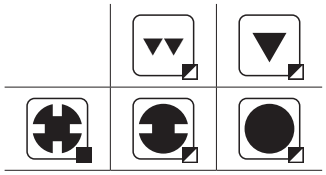
S

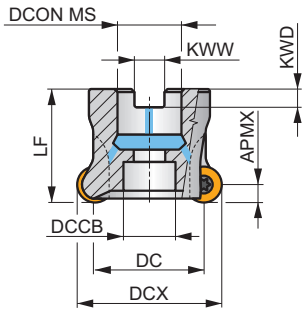
Fresa de Copiado para Plaquitas Redondas RCMT 16 con Refrigeración Interna

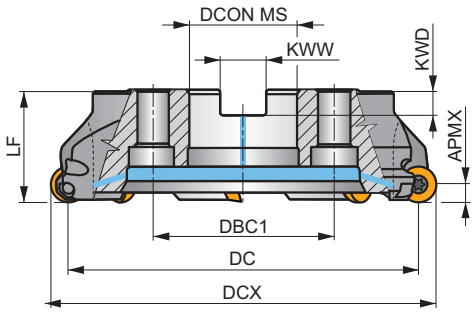
Fresa para copiado medio a pesado que utiliza plaquitas positivas RCMT 16, con APMX de 8 mm. Refrigeración interna. Adecuada para planeado, fresado axial progresivo (plunge), fresado en rampa, interpolación helicoidal y fresado de alto avance. Disponible para portafresas. Cuerpo tratado para alargar la vida de herramienta.

APMX	8.0 mm









h_m 0.1 - 0.25

	Producto	DCX (mm)	DC (mm)	DCON MS (mm)	DCCB (mm)	DBC1 (mm)	LF (mm)	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		kg			
ISO 6462 DIN 8030	**63A04R-SMORC16-C**	63	47	22	18	–	50	10.4	6.3	-2.6	-7	4	–	9700	✓	0.60	GI280	C0033	–
	66A05R-SMORC16-C	66	50	27	22	–	50	12.4	7	-2.5	-7	5	–	9200	✓	0.59	GI280	C0030	–
	80A05R-SMORC16-C	80	64	27	37	–	50	12.4	7	-1.7	-7	5	–	8600	✓	0.87	GI280	C0030	–
	100A06R-SMORC16-C	100	84	32	45	–	50	14.4	8	-1.7	-7	6	–	7700	✓	1.27	GI280	C0031	AC002
	125A07R-SMORC16-C	125	109	40	36	–	63	16.4	9	-1.2	-7	7	–	6500	✓	3.03	GI280	C0032	–
	160C08R-SMORC16-C	160	144	40	–	66.7	63	16.4	9	-0.9	-7	8	–	5400	✓	5.63	GI280	C0034	–

GI280	RCMT 1606M0..

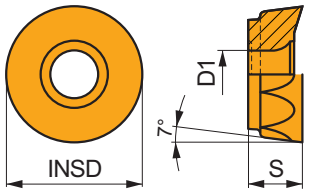
		Nm							
C0030	US 65014-T20P	5.0	M 5	14	SDR T20P-T	HS 1230C	–	–	–
C0031	US 65014-T20P	5.0	M 5	14	SDR T20P-T	–	–	–	–
C0032	US 65014-T20P	5.0	M 5	14	SDR T20P-T	HSD 2040	–	–	–
C0033	US 65014-T20P	5.0	M 5	14	SDR T20P-T	HS 1030C	–	–	–
C0034	US 65014-T20P	5.0	M 5	14	SDR T20P-T	HS 1240C	CAC 160C	HSD 0825C	HXK 5

AC002	KS 1635	K.FMH32

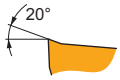
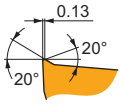
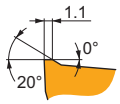
RCMT 16

PRAMET

	INSD (mm)	D1 (mm)	S (mm)
1606	16.000	5.50	6.35



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
																				
RCMT 1606MOEN-F:M8310		–	410	0.10	2.0	205	0.09	2.0	–	–	–	–	–	–	–	–	–	–	–	–
RCMT 1606MOEN-F:M8330		–	370	0.10	2.0	220	0.09	2.0	–	–	–	–	–	–	90	0.07	1.6	–	–	–
																				
RCMT 1606MOSN-M:M6330		–	255	0.20	2.0	180	0.18	2.0	–	–	–	–	–	–	75	0.16	1.6	–	–	–
RCMT 1606MOSN-M:M8330		–	300	0.20	2.0	180	0.18	2.0	285	0.20	2.0	–	–	–	75	0.16	1.6	–	–	–
RCMT 1606MOSN-M:M8345		–	215	0.20	2.0	125	0.18	2.0	–	–	–	–	–	–	50	0.16	1.6	–	–	–
RCMT 1606MOSN-M:M9325		–	370	0.20	2.0	–	–	–	350	0.20	2.0	–	–	–	–	–	–	–	–	–
RCMT 1606MOSN-M:M9340		–	335	0.20	2.0	200	0.18	2.0	–	–	–	–	–	–	80	0.16	1.6	–	–	–
																				
RCMT 1606MOSN-R:M8310		–	250	0.40	2.0	–	–	–	235	0.40	2.0	–	–	–	–	–	–	50	0.20	1.1
RCMT 1606MOSN-R:M8330		–	240	0.40	2.0	–	–	–	225	0.40	2.0	–	–	–	60	0.28	1.6	45	0.20	1.1
RCMT 1606MOSN-R:M8345		–	175	0.40	2.0	–	–	–	–	–	–	–	–	–	40	0.28	1.6	–	–	–

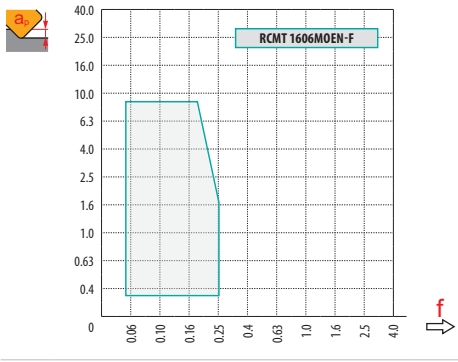
F geometría muy positiva para mecanizado ligero.

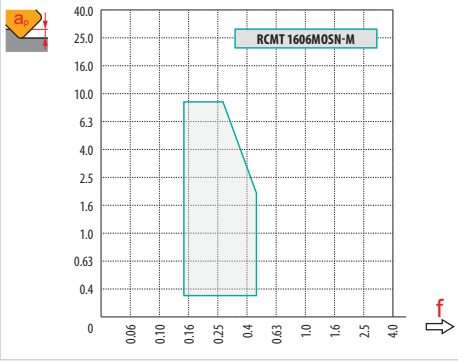
M geometría muy positiva para mecanizado medio.

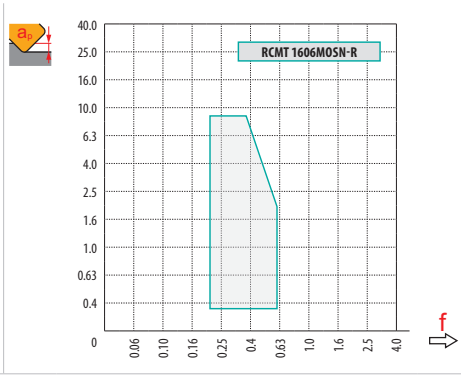
R geometría con diseño positivo para copiado en desbaste.

a_e / DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	RCMT 16-F	RCMT 16-M	RCMT 16-R
RE	8.0	8.0	8.0
BS	–	–	–







DCX	a_p	0.00	0.30	0.50	0.75	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00	6.00	7.00	8.00
63		47.0	51.3	52.6	53.8	54.7	55.6	56.3	57.6	58.6	59.5	60.9	61.8	62.5	62.9	63.0
66		50.0	54.3	55.6	56.8	57.8	58.6	59.3	60.6	61.6	62.5	63.9	64.8	65.5	65.9	66.0
80	DEF	64.0	68.3	69.6	70.8	71.7	72.6	73.3	74.6	75.6	76.5	77.9	78.8	79.5	79.9	80.0
100		84.0	88.3	89.6	90.8	91.7	92.6	93.3	94.6	95.6	96.5	97.9	98.8	99.5	99.9	100.0
125		109.0	113.3	114.6	115.8	116.7	117.6	118.3	119.6	120.6	121.5	122.9	123.8	124.5	124.9	125.0
160		144.0	148.3	149.6	150.8	151.7	152.6	153.3	154.6	155.6	156.5	157.9	158.8	159.5	159.9	160.0
	a_p	–	0.30	0.50	0.75	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00	6.00	7.00	8.00
	f	–	1.10	0.85	0.70	0.61	0.54	0.50	0.43	0.39	0.36	0.31	0.28	0.26	0.25	0.24

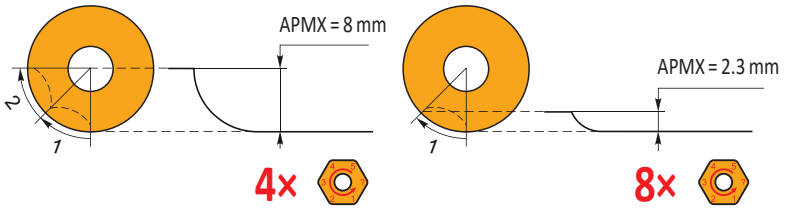
DC	RPMX	APMX/I
63	7.0	8.0/67
66	6.5	8.0/71
80	5.0	8.0/93
100	4.0	6.8/100

DC	DMIN	DMAX	SMAX DMIN	SMAX DMAX
63	94.0	126.0	8.0	8.0
66	100.0	132.0	8.0	8.0
80	128.0	160.0	8.0	8.0
100	168.0	200.0	8.0	8.0

a_p
5.0

DC	µm	3	5	10	15	20	30	40	50	60	80	100
63	FE	0.869	1.122	1.587	1.944	2.245	2.750	3.175	3.550	3.888	4.490	5.020
66		0.890	1.149	1.625	1.990	2.298	2.814	3.250	3.633	3.980	4.596	5.138
80		0.980	1.265	1.789	2.191	2.530	3.098	3.578	4.000	4.382	5.060	5.657
100		1.095	1.414	2.000	2.449	2.828	3.464	4.000	4.472	4.899	5.657	6.325
125		1.225	1.581	2.236	2.739	3.162	3.873	4.472	5.000	5.477	6.325	7.071
160		1.386	1.789	2.530	3.098	3.578	4.382	5.060	5.657	6.197	7.155	8.000

RE	µm	3	5	10	15	20	30	40	50	60	80	100
8.0	FE	0.438	0.566	0.800	0.980	1.131	1.386	1.600	1.789	1.960	2.263	2.530



SRC20

P M K S H

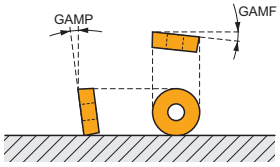
PRAMET

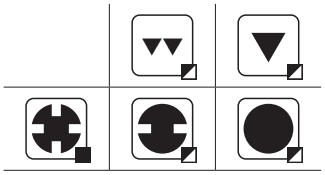
S

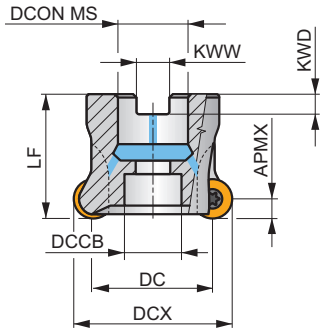
Fresa de Copiado para Plaquitas Redondas RCMT 20 con Refrigeración Interna

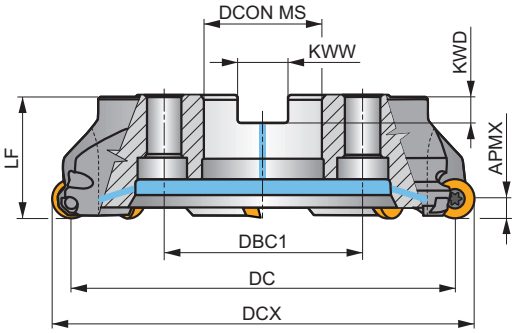
Fresa para copiado pesado que utiliza plaquitas positivas RCMT 20 con APMX de 10 mm. Refrigeración interna. Adecuada para planeado, fresado axial progresivo (plunge), fresado en rampa, interpolación helicoidal y fresado de alto avance. Disponible para portafresas. Cuerpo tratado para alargar la vida de herramienta.

APMX	10.0 mm









h_m 0.11 - 0.32

	Producto	DCX (mm)	DC (mm)	DCON MS (mm)	DCCB (mm)	DBC1 (mm)	LF (mm)	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		kg			
ISO 6462 DIN 8030	**80A04R-SMORC20-C**	80	60	27	28	–	50	12.4	7	-2.7	-7	4	–	8500	✓	0.91	GI281	C0040	–
	100A05R-SMORC20-C	100	80	32	45	–	50	14.4	8	-1.7	-7	5	–	7600	✓	1.20	GI281	C0041	AC002
	125A06R-SMORC20-C	125	105	40	36	–	63	16.4	9	-1	-7	6	–	6500	✓	2.92	GI281	C0042	–
	160C07R-SMORC20-C	160	140	40	–	66.7	63	16.4	9	-0.9	-7	7	–	5400	✓	5.37	GI281	C0046	–

GI281	RCMT 2006M0..

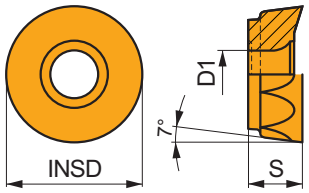
		Nm							
C0040	US 66015-T25P	7.5	M 6	15	SDR T25P-T	HS 1230C	–	–	–
C0041	US 66015-T25P	7.5	M 6	15	SDR T25P-T	–	–	–	–
C0042	US 66015-T25P	7.5	M 6	15	SDR T25P-T	HSD 2040	–	–	–
C0046	US 66015-T25P	7.5	M 6	15	SDR T25P-T	HS 1240C	CAC 160C	HSD 0825C	HXK 5

AC002	KS 1635	K.FMH32

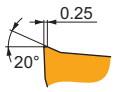
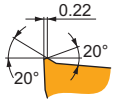
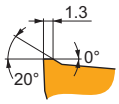
RCMT 20

PRAMET

	INSD	D1	S
	(mm)	(mm)	(mm)
2006	20.000	6.50	6.35

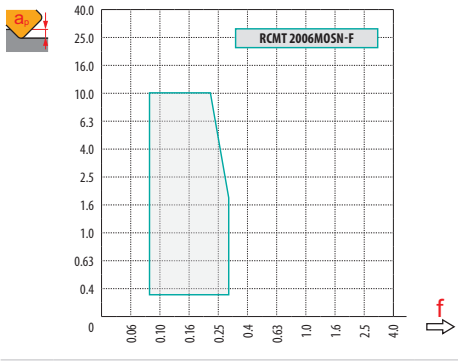


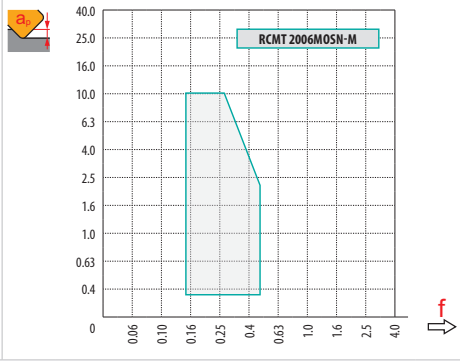
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

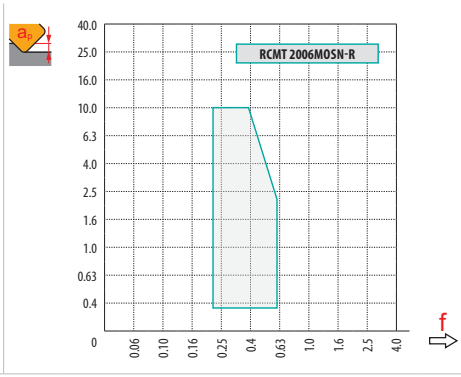
Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
																				
F geometría muy positiva para mecanizado ligero.																				
RCMT 2006M0SN-F:M8330	●	–	■	320	0.15	3.0	◪	190	0.14	3.0		–	–	–		–	–	–	◪	80	0.11	2.4		–	–	–
																				
M geometría muy positiva para mecanizado medio.																				
RCMT 2006M0SN-M:M6330	✱	–	■	225	0.30	3.0	◪	155	0.27	3.0		–	–	–		–	–	–	■	65	0.21	2.4		–	–	–
RCMT 2006M0SN-M:M8330	✱	–	■	255	0.30	3.0	◪	150	0.27	3.0	■	240	0.30	3.0		–	–	–	◪	60	0.21	2.4		–	–	–
RCMT 2006M0SN-M:M8345	✱	–	■	190	0.30	3.0	◪	110	0.27	3.0		–	–	–		–	–	–	■	45	0.21	2.4		–	–	–
RCMT 2006M0SN-M:M9315	●	–	■	330	0.30	3.0		–	–	–	■	310	0.30	3.0		–	–	–		–	–	–		–	–	–
RCMT 2006M0SN-M:M9325	✱	–	■	315	0.30	3.0		–	–	–	■	295	0.30	3.0		–	–	–		–	–	–		–	–	–
RCMT 2006M0SN-M:M9340	✱	–	■	275	0.30	3.0	◪	165	0.27	3.0		–	–	–		–	–	–	■	65	0.21	2.4		–	–	–
																				
R geometría con diseño positivo para copiado en desbaste.																				
RCMT 2006M0SN-R:M8330	✱	–	■	225	0.45	3.0		–	–	–	■	210	0.45	3.0		–	–	–	◪	55	0.32	2.4	◪	45	0.23	1.3
RCMT 2006M0SN-R:M8345	✱	–	■	165	0.45	3.0		–	–	–		–	–	–		–	–	–	◪	40	0.32	2.4		–	–	–
RCMT 2006M0SN-R:M9325	✱	–	■	260	0.45	3.0		–	–	–	■	245	0.45	3.0		–	–	–		–	–	–	◪	50	0.23	1.3

a_e / DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	RCMT 20-F	RCMT 20-M	RCMT 20-R
RE	10.0	10.0	10.0
BS	–	–	–







DCX	a_p	0.00	0.30	0.50	0.75	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00
80	DEF	60.0	64.9	66.2	67.6	68.7	69.7	70.5	72.0	73.2	74.3	76.0	77.3	78.3	79.1	79.6	79.9	80.0
100		80.0	84.9	86.2	87.6	88.7	89.7	90.5	92.0	93.2	94.3	96.0	97.3	98.3	99.1	99.6	99.9	100.0
125		105.0	109.9	111.2	112.6	113.7	114.7	115.5	117.0	118.2	119.3	121.0	122.3	123.3	124.1	124.6	124.9	125.0
160		140.0	144.9	146.2	147.6	148.7	149.7	150.5	152.0	153.2	154.3	156.0	157.3	158.3	159.1	159.6	159.9	160.0
	a_p	–	0.30	0.50	0.75	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00
	f	–	1.23	0.95	0.78	0.68	0.61	0.55	0.48	0.43	0.40	0.35	0.31	0.29	0.27	0.26	0.25	0.24

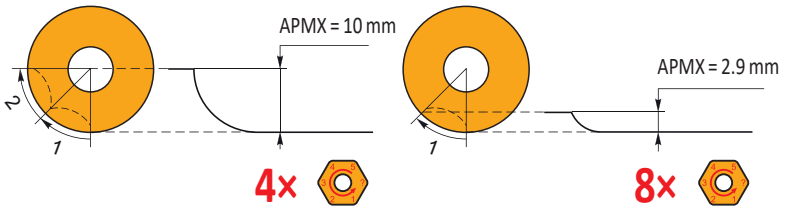
DCX	RPMX	APMX/I
80	7.0	10.0/83
100	5.0	8.6/100

DCX	DMIN	DMAX	SMAX DMIN	SMAX DMAX
80	120.0	160.0	10.0	10.0
100	160.0	200.0	10.0	10.0

a_p
6.0

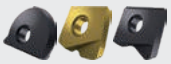
DCX	µm	3	5	10	15	20	30	40	50	60	80	100
80	FE	0.980	1.265	1.789	2.191	2.530	3.098	3.578	4.000	4.382	5.060	5.657
100		1.095	1.414	2.000	2.449	2.828	3.464	4.000	4.472	4.899	5.657	6.325
125		1.225	1.581	2.236	2.739	3.162	3.873	4.472	5.000	5.477	6.325	7.071
160		1.386	1.789	2.530	3.098	3.578	4.382	5.060	5.657	6.197	7.155	8.000

RE	µm	3	5	10	15	20	30	40	50	60	80	100
10.0	FE	0.490	0.632	0.894	1.095	1.265	1.549	1.789	2.000	2.191	2.530	2.828



PERFILADO

PLANEADO

	L2-SZP	K2-SRC	K2-SLC	K2-PPH	K3-CXP
	–	–	90°	–	–
	APMX (mm) 8.9 – 44.7	APMX (mm) 0.6 – 3.2	APMX (mm) 1.0 – 3.0	APMX (mm) 0.3 – 4.0	APMX (mm) 8.0 – 16.0
	DCX (mm) 10 – 50	DCX (mm) 8 – 32	DCX (mm) 12 – 20	DCX (mm) 8 – 32	DCX (mm) 16 – 32
Mango cilíndrico	DCX = 10 – 32 (mm)	DCX = 8 – 32 (mm)		DCX = 8 – 32 (mm)	DCX = 16 – 32 (mm)
Weldon	DCX = 12 – 50 (mm)				DCX = 16 – 25 (mm)
Modular	DCX = 10 – 32 (mm)	DCX = 8 – 20 (mm)		DCX = 16, 20 (mm)	DCX = 16 – 25 (mm)
Morse	DCX = 12 – 32 (mm)				
Página	206	211	218	222	234
ISO	P M K S H	P M K H	P M K H	P M K S H	P M K S H
Forma de la plaquita					
Plaquitas de corte	ZP	RC LC	LC	PPH PPHF PPHT	XP
N.º de filos de corte	2	2	2	2	1
Superficies contorneadas (fresado en copia)	■	■	■	■	■
Interpolación helicoidal			◪	◪	
Fresado axial progresivo			◪	◪	
Mecanizado en rampa			◪	◪	
Fresado de chaflanes			◪	◪	

■ Primera Opción ◪ Opción Alternativa

L2-SZP

P M K S H

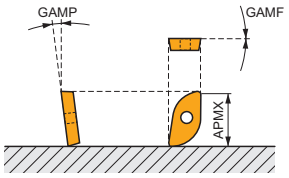
PRAMET

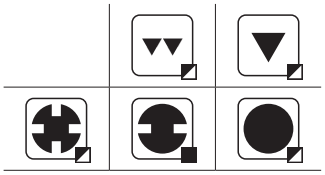
S

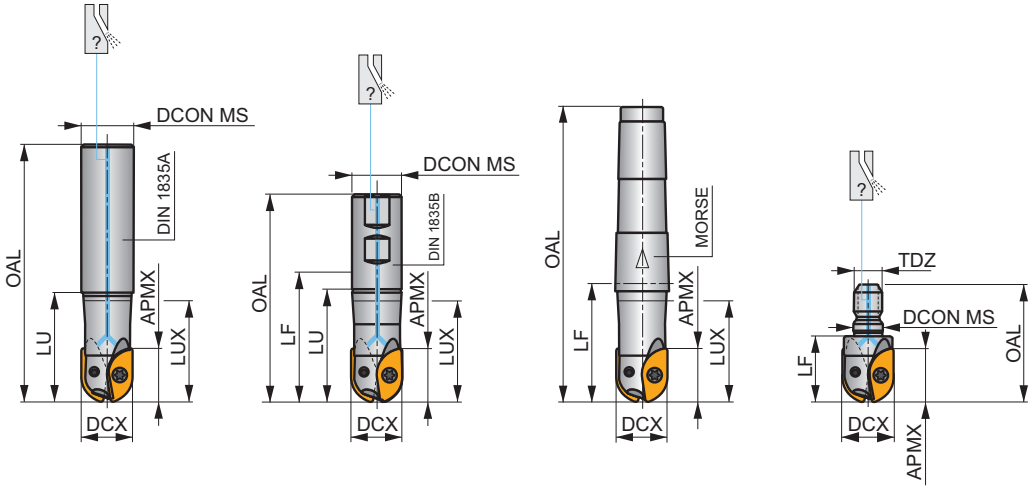
Fresa con Perfil Esférico para Plaquitas ZP..

Fresa de punta esférica que utiliza plaquitas tipo ZP.. con APMX de 8.9 hasta 44.7 mm. Adecuada para perfilado. Disponible con mango cilíndrico, Weldon, Cono Morse y modular. Cuerpo tratado para alargar la vida de herramienta.

APMX	8.9 - 44.7 mm







h_m	0.05 - 0.19

	Producto	DCX (mm)	OAL (mm)	DCON MS (mm)	LU (mm)	LUX (mm)	LF (mm)	TDZ	CZC MS	APMX (mm)	GAMF (°)	GAMP (°)			max.		kg		
	10L2R030A10-SZP10	10	130	10	30	30	–	–	–	8.90	0	-10	2	–	35800	–	0.11	GI255	C0510
	10L2R050A16-SZP10	10	160	16	50	22.3	–	–	–	8.90	0	-10	2	–	35800	–	0.24	GI255	C0510
	12L2R035A12-SZP12	12	140	12	35	35	–	–	–	10.70	0	-10	2	–	21000	–	0.15	GI253	C0510
	12L2R045A20-SZP12	12	200	20	–	22	–	–	–	10.70	0	-10	2	–	21000	–	0.48	GI253	C0511
	16L2R040A16-SZP16-C	16	160	16	40	40	–	–	–	14.40	0	-10	2	–	20000	✓	0.24	GI256	C0510
DIN 1835A	**16L2R045A20-SZP16-C**	16	200	20	–	29.4	–	–	–	14.40	0	-10	2	–	20000	✓	0.43	GI256	C0512
	20L2R050A20-SZP20-C	20	250	20	50	–	–	–	–	17.90	0	-10	2	–	24000	✓	0.54	GI254	C0513
	20L2R055A25-SZP20-C	20	200	25	–	36.1	–	–	–	17.90	0	-10	2	–	24000	✓	0.68	GI254	C0513
	25L2R060A25-SZP25-C	25	250	25	60	–	–	–	–	22.30	0	-10	2	–	24000	✓	0.85	GI257	C0514
	25L2R065A32-SZP25-C	25	250	32	–	43	–	–	–	22.30	0	-10	2	–	24000	✓	1.34	GI257	C0514
	32L2R070A32-SZP32-C	32	250	32	–	–	–	–	–	28.60	0	-10	2	–	18500	✓	1.43	GI258	C0515
	12L2R040B20-SZP12	12	91	20	40	21.5	66.5	–	–	10.70	0	-10	2	–	21000	–	0.19	GI253	C0511
	12L2R060B20-SZP12	12	111	20	60	23.8	86.5	–	–	10.70	0	-10	2	–	21000	–	0.22	GI253	C0511
	16L2R040B20-SZP16-C	16	91	20	40	28.3	66.5	–	–	14.40	0	-10	2	–	20000	✓	0.15	GI256	C0512
	16L2R060B20-SZP16-C	16	111	20	60	32.9	86.5	–	–	14.40	0	-10	2	–	20000	✓	0.21	GI256	C0512
	20L2R050B25-SZP20-C	20	107	25	50	35.1	75.5	–	–	17.90	0	-10	2	–	24000	✓	0.30	GI254	C0513
	20L2R070B25-SZP20-C	20	127	25	70	39.5	95.5	–	–	17.90	0	-10	2	–	24000	✓	0.36	GI254	C0513
DIN 1835B	**25L2R060B25-SZP25-C**	25	117	25	60	–	85.5	–	–	22.30	0	-10	2	–	24000	✓	0.36	GI257	C0514
	25L2R080B25-SZP25-C	25	137	25	80	–	105	–	–	22.30	0	-10	2	–	24000	✓	0.42	GI257	C0514
	32L2R070B32-SZP32-C	32	131	32	70	–	95.5	–	–	28.60	0	-10	2	–	18500	✓	0.72	GI258	C0515
	32L2R100B32-SZP32-C	32	161	32	100	–	125.5	–	–	28.60	0	-10	2	–	18500	✓	0.81	GI258	C0515
	40L2R070B32-SZP40-C	40	131	32	70	–	95.5	–	–	35.70	0	-10	2	–	8000	✓	0.81	GI259	C0516
	40L2R100B40-SZP40-C	40	171	40	100	–	131	–	–	35.70	0	-10	2	–	8000	✓	1.40	GI259	C0516
	50L2R100B50-SZP50-C	50	181	50	100	–	136.5	–	–	44.70	0	-10	2	–	7000	✓	2.25	GI260	C0517
	12L2R060E02-SZP12	12	124	–	–	25.8	60	–	2	10.70	0	-10	2	–	21000	–	0.17	GI253	C0511
DIN 228A	**12L2R090E02-SZP12**	12	154	–	–	25.8	90	–	2	10.70	0	-10	2	–	21000	–	0.23	GI253	C0511
	16L2R060E02-SZP16	16	124	–	–	42.2	60	–	2	14.40	0	-10	2	–	20000	–	0.19	GI256	C0512

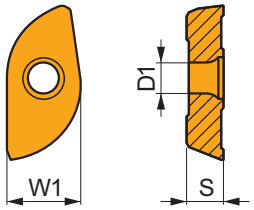
	Producto	DCX (mm)	OAL (mm)	DCON MS (mm)	LU (mm)	LUX (mm)	LF (mm)	TDZ	CZC MS	APMX (mm)	GAMF (°)	GAMP (°)			max.		kg		
DIN 228A	**16L2R090E02-SZP16**	16	154	–	–	75.9	90	–	2	14.40	0	-10	2	–	20000	–	0.23	GI256	C0512
	20L2R070E03-SZP20	20	151	–	–	–	70	–	3	17.90	0	-10	2	–	24000	–	0.37	GI254	C0513
	20L2R100E03-SZP20	20	181	–	–	77.4	100	–	3	17.90	0	-10	2	–	24000	–	0.42	GI254	C0513
	25L2R080E03-SZP25	25	161	–	–	–	80	–	3	22.30	0	-10	2	–	24000	–	0.44	GI257	C0514
	25L2R110E04-SZP25	25	213	–	–	92.7	110	–	4	22.30	0	-10	2	–	24000	–	0.83	GI257	C0514
	32L2R100E04-SZP32	32	203	–	–	–	100	–	4	28.60	0	-10	2	–	18500	–	0.90	GI258	C0515
	32L2R150E04-SZP32	32	253	–	–	–	150	–	4	28.60	0	-10	2	–	18500	–	1.10	GI258	C0515
MODULAR	**10L2R025M08-SZP10**	10	–	8.5	–	–	25	M8	–	8.90	0	-10	2	–	–	–	0.03	GI255	C0510
	12L2R025M06-SZP12	12	–	6.5	–	–	25	M6	–	10.70	0	-10	2	–	–	–	0.05	GI253	C0510
	12L2R025M08-SZP12	12	–	8.5	–	–	25	M8	–	10.70	0	-10	2	–	–	–	0.04	GI253	C0511
	16L2R025M08-SZP16	16	–	8.5	–	–	25	M8	–	14.40	0	-10	2	–	–	–	0.05	GI256	C0512
	20L2R030M10-SZP20-C	20	–	10.5	–	–	30	M10	–	17.90	0	-10	2	–	–	✓	0.07	GI254	C0513
	25L2R035M12-SZP25-C	25	–	12.5	–	–	35	M12	–	22.30	0	-10	2	–	–	✓	0.09	GI257	C0514
	32L2R045M16-SZP32-C	32	–	17	–	–	45	M16	–	27.90	0	-10	2	–	–	✓	0.15	GI258	C0515

GI253	ZP 12..
GI254	ZP 20..
GI255	ZP 10..
GI256	ZP 16..
GI257	ZP 25..
GI258	ZP 32..
GI259	ZP 40..
GI260	ZP 50..

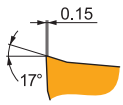
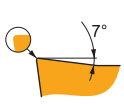
					Nm			
C0510	–	–	Flag T06P	US 62004-T06P	0.6	M 2	4	–
C0511	–	–	Flag T08P	US 62506-T08P	1.2	M 2.5	6	–
C0512	–	–	Flag T08P	US 62508-T08P	1.2	M 2.5	7	–
C0513	–	–	Flag T10P	US 63510-T10P	2.0	M 3.5	9	–
C0514	–	–	Flag T15P	US 4011A-T15P	3.5	M 4	11	–
C0515	–	–	–	US 65013-T20	5.0	M 5	13	SDR T20
C0516	–	–	–	US 66015-T25P	7.5	M 6	15	SDR T25P
C0517	SZN 400322	US 3508-T15P	Flag T15P	US 68020-T30P	15.0	M 8	20	SDR T30P

ZP

	W1 (mm)	D1 (mm)	S (mm)
10	10.000	2.20	1.70
12	12.000	2.90	2.38
16	16.000	2.90	3.18
20	20.000	4.00	3.97
25	25.000	4.70	4.76
32	32.000	5.90	6.35
40	40.000	7.00	7.94
50	50.000	9.60	7.94



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

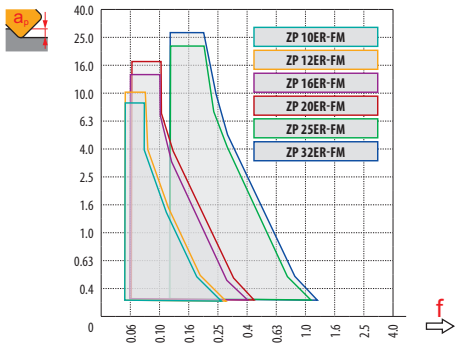
Producto		RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
			FM geometría con diseño neutro afilado para mecanizado ligero a medio.																	
ZP 10ER-FM:M8310	●	–	305	0.36	0.5	–	–	–	285	0.36	0.5	–	–	–	–	–	–	60	0.25	0.5
ZP 10ER-FM:M8345	⬢	–	210	0.36	0.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
ZP 12ER-FM:M8310	●	–	300	0.36	0.6	–	–	–	285	0.36	0.6	–	–	–	–	–	–	60	0.25	0.6
ZP 12ER-FM:M8345	⬢	–	205	0.36	0.6	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
ZP 16ER-FM:M8310	●	–	290	0.36	0.8	–	–	–	275	0.36	0.8	–	–	–	–	–	–	55	0.25	0.8
ZP 20ER-FM:M8310	●	–	285	0.36	1.0	–	–	–	270	0.36	1.0	–	–	–	–	–	–	55	0.25	1.0
ZP 25ER-FM:M8310	●	–	275	0.36	1.3	–	–	–	260	0.36	1.3	–	–	–	–	–	–	55	0.25	1.3
ZP 32ER-FM:M8310	●	–	270	0.36	1.6	–	–	–	255	0.36	1.6	–	–	–	–	–	–	50	0.25	1.6
			**M** geometría con diseño muy positivo para mecanizado medio.																	
ZP 12ER-M:M8330	⬢	–	280	0.36	0.6	165	0.32	0.6	265	0.36	0.6	–	–	–	70	0.25	0.5	–	–	–
ZP 12ER-M:M8345	⬢	–	205	0.36	0.6	120	0.32	0.6	–	–	–	–	–	–	50	0.25	0.5	–	–	–
ZP 16ER-M:M8330	⬢	–	270	0.36	0.8	160	0.32	0.8	255	0.36	0.8	–	–	–	65	0.25	0.6	–	–	–
ZP 16ER-M:M8340	⬢	–	250	0.36	0.8	150	0.32	0.8	235	0.36	0.8	–	–	–	60	0.25	0.6	–	–	–
ZP 16ER-M:M8345	⬢	–	200	0.36	0.8	120	0.32	0.8	–	–	–	–	–	–	50	0.25	0.6	–	–	–
ZP 20ER-M:M8330	⬢	–	265	0.36	1.0	155	0.32	1.0	250	0.36	1.0	–	–	–	65	0.25	0.8	–	–	–
ZP 20ER-M:M8345	⬢	–	195	0.36	1.0	115	0.32	1.0	–	–	–	–	–	–	45	0.25	0.8	–	–	–
ZP 25ER-M:M8330	⬢	–	260	0.36	1.3	155	0.32	1.3	245	0.36	1.3	–	–	–	65	0.25	1.0	–	–	–
ZP 25ER-M:M8345	⬢	–	190	0.36	1.3	110	0.32	1.3	–	–	–	–	–	–	45	0.25	1.0	–	–	–
ZP 32ER-M:M8330	⬢	–	255	0.36	1.6	150	0.32	1.6	240	0.36	1.6	–	–	–	60	0.25	1.3	–	–	–
			**R** geometría con diseño ligeramente positivo y afilado para mecanizado ligero a medio.																	
ZP 16ER-R:M8345	⬢	–	190	0.45	0.8	110	0.41	0.8	–	–	–	–	–	–	45	0.32	0.8	–	–	–
ZP 20ER-R:M8345	⬢	–	185	0.45	1.0	110	0.41	1.0	–	–	–	–	–	–	45	0.32	1.0	–	–	–
ZP 25ER-R:M8345	⬢	–	180	0.45	1.3	105	0.41	1.3	–	–	–	–	–	–	45	0.32	1.3	–	–	–
ZP 32ER-R:M8330	⬢	–	240	0.45	1.6	140	0.41	1.6	225	0.45	1.6	–	–	–	60	0.32	1.6	45	0.32	1.6
ZP 32ER-R:M8345	⬢	–	175	0.45	1.6	105	0.41	1.6	–	–	–	–	–	–	40	0.32	1.6	–	–	–
ZP 40ER-R:M8345	⬢	–	170	0.45	2.0	100	0.41	2.0	–	–	–	–	–	–	40	0.32	2.0	–	–	–
ZP 50ER-R:M8345	⬢	–	165	0.45	2.5	95	0.41	2.5	–	–	–	–	–	–	40	0.32	2.5	–	–	–

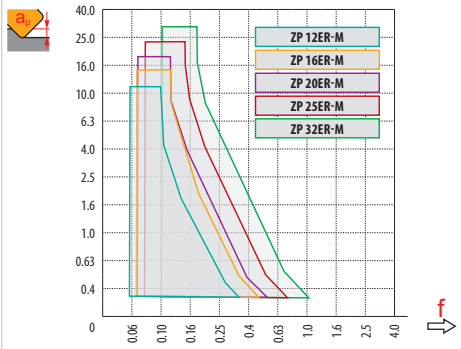
a_e / DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
⇨ x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

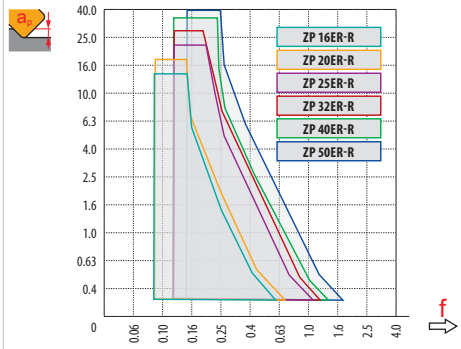
	ZP 10-FM	ZP 12-FM	ZP 16-FM	ZP 20-FM	ZP 25-FM	ZP 32-FM
RE	5.0	6.0	8.0	10.0	12.5	16.0
BS	–	–	–	–	–	–

	ZP 12-M	ZP 16-M	ZP 20-M	ZP 25-M	ZP 32-M
RE	6.0	8.0	10.0	12.5	16.0
BS	–	–	–	–	–

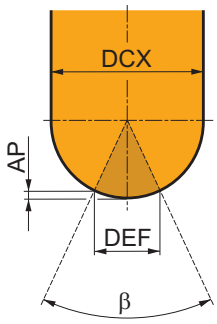
	ZP 16-R	ZP 20-R	ZP 25-R	ZP 32-R	ZP 40-R	ZP 50-R
RE	8.0	10.0	12.5	16.0	20.0	25.0
BS	–	–	–	–	–	–







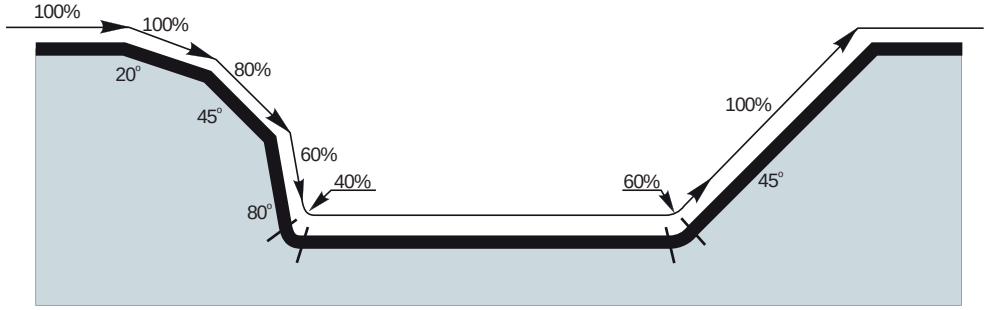
DCX	a_p	0.30	0.40	0.50	0.70	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00	6.00	8.00	10.00	12.00	15.00	16.00	20.00	22.50	25.00
10		3.4	3.9	4.4	5.1	6.0	6.6	7.1	8.0	8.7	9.2	9.8	10.0	–	–	–	–	–	–	–	–	–
12		3.7	4.3	4.8	5.6	6.6	7.3	7.9	8.9	9.7	10.4	11.3	11.8	12.0	–	–	–	–	–	–	–	–
16		4.3	5.0	5.6	6.5	7.7	8.6	9.3	10.6	11.6	12.5	13.9	14.8	15.5	16.0	–	–	–	–	–	–	–
20	DEF	4.9	5.6	6.2	7.4	8.7	9.7	10.5	12.0	13.2	14.3	16.0	17.3	18.3	19.6	20.0	–	–	–	–	–	–
25		5.4	6.3	7.0	8.2	9.8	10.9	11.9	13.6	15.0	16.2	18.3	20.0	21.4	23.3	24.5	25.0	–	–	–	–	–
32		6.2	7.1	7.9	9.4	11.1	12.4	13.5	15.5	17.2	18.7	21.2	23.2	25.0	27.7	29.7	31.2	31.9	32.0	–	–	–
40		6.9	8.0	8.9	10.5	12.5	13.9	15.2	17.4	19.4	21.1	24.0	26.5	28.6	32.0	34.6	37.1	38.7	39.2	40.0	–	–
50		7.7	8.9	9.9	11.7	14.0	15.6	17.1	19.6	21.8	23.7	27.1	30.0	32.5	36.7	40.0	43.3	45.8	46.6	49.0	49.7	50.0



DCX		β	DEF	AP
10	FM	41°	3.496	0.322
12	FM	41°	4.194	0.381
16	FM	42°	5.660	0.520
20	FM	42°	7.100	0.650
25	FM	41°	8.756	0.794
35	FM	41°	11.113	0.998
40	R	41°	14.108	1.298
50	R	45°	19.176	1.915

DCX	µm	3	5	10	15	20	30	40	50	60	80	100
10		0.346	0.447	0.632	0.775	0.894	1.095	1.265	1.414	1.549	1.789	2.000
12		0.379	0.490	0.693	0.849	0.980	1.200	1.386	1.549	1.697	1.960	2.191
16	FE	0.438	0.566	0.800	0.980	1.131	1.386	1.600	1.789	1.960	2.263	2.530
20		0.490	0.632	0.894	1.095	1.265	1.549	1.789	2.000	2.191	2.530	2.828
25	FE	0.548	0.707	1.000	1.225	1.414	1.732	2.000	2.236	2.449	2.828	3.162
32		0.620	0.800	1.131	1.386	1.600	1.960	2.263	2.530	2.771	3.200	3.578
40		0.693	0.894	1.265	1.549	1.789	2.191	2.530	2.828	3.098	3.578	4.000
50		0.775	1.000	1.414	1.732	2.000	2.449	2.828	3.162	3.464	4.000	4.472

DEF	a_e	1 %	2.5 %	5 %	7.5 %	10 %	15 %	20 %	25 %	30 %	35 %	40 %	45 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
	a_p										⇨ x.f									
19.9 %	1.0 %	2.86	1.84	1.33	1.12	1.00	0.89	–	–	–	–	–	–	–	–	–	–	–	–	–
31.2 %	2.5 %	3.58	2.28	1.64	1.36	1.20	1.01	0.92	0.88	0.91	–	–	–	–	–	–	–	–	–	–
43.6 %	5.0 %	4.22	2.68	1.92	1.58	1.39	1.16	1.03	0.95	0.90	0.88	0.89	–	–	–	–	–	–	–	–
52.7 %	7.5 %	4.63	2.95	2.10	1.73	1.51	1.26	1.11	1.02	0.96	0.91	0.89	0.88	0.90	–	–	–	–	–	–
60.0 %	10.0 %	4.94	3.14	2.24	1.84	1.61	1.33	1.18	1.07	1.00	0.95	0.91	0.89	0.88	1.00	–	–	–	–	–
71.4 %	15.0 %	5.39	3.42	2.43	2.00	1.74	1.44	1.27	1.15	1.07	1.01	0.96	0.93	0.90	0.88	0.93	–	–	–	–
80.0 %	20.0 %	5.70	3.62	2.57	2.11	1.84	1.52	1.33	1.21	1.12	1.05	1.00	0.96	0.93	0.89	0.88	0.89	1.00	–	–
86.6 %	25.0 %	5.93	3.76	2.67	2.20	1.91	1.58	1.38	1.25	1.16	1.08	1.03	0.99	0.95	0.90	0.88	0.88	0.89	–	–
91.7 %	30.0 %	6.10	3.87	2.75	2.26	1.96	1.62	1.42	1.28	1.18	1.11	1.05	1.01	0.97	0.92	0.89	0.88	0.88	0.93	–
95.4 %	35.0 %	6.23	3.95	2.80	2.30	2.00	1.65	1.44	1.31	1.20	1.13	1.07	1.02	0.98	0.93	0.89	0.88	0.88	0.90	–
98.0 %	40.0 %	6.31	4.00	2.84	2.33	2.03	1.67	1.46	1.32	1.22	1.14	1.08	1.03	0.99	0.93	0.90	0.89	0.88	0.89	–
99.5%	45.0 %	6.36	4.03	2.86	2.35	2.04	1.68	1.47	1.33	1.23	1.15	1.09	1.04	1.00	0.94	0.90	0.89	0.88	0.88	–
100.0 %	50.0 %	6.38	4.04	2.87	2.35	2.05	1.69	1.48	1.33	1.23	1.15	1.09	1.04	1.00	0.94	0.90	0.89	0.88	0.88	1.00



Voladizo (múltiplo del diámetro *DCX*)	< 3.0	3.0 – 3.5	3.6 – 4.0	4.1 – 4.5	> 4.6
Factor de multiplicación para la velocidad de corte	1.0	0.9	0.8	0.7	0.5

K2-SRC

P M K H

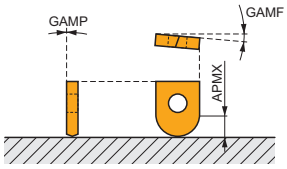
PRAMET

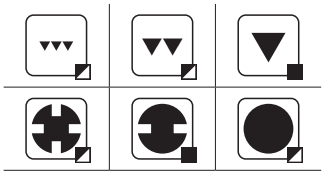
S

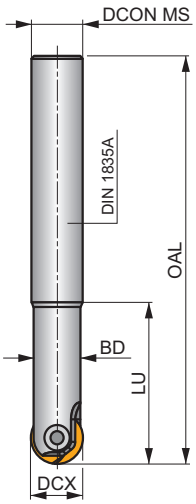
Fresas para Copiado y Perfilado

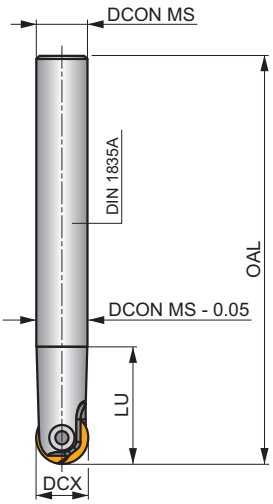
Fresa que ofrece gran flexibilidad para una amplia gama de aplicaciones en Moldes y Matrices. Una sola herramienta para plaquitas de punta esférica y toroidales. Disponibles con mango cilíndrico y modular. Cuerpo tratado para alargar la vida de herramienta.

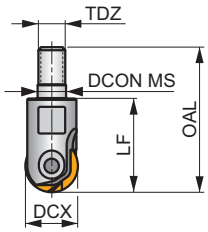
APMX	0.6 - 3.2 mm











h_m	0.07 - 0.14

	Producto	DCX (mm)	OAL (mm)	DCON MS (mm)	BD (mm)	LU (mm)	LF (mm)	TDZ			max.		kg		
	08K2R025A10-SRC08-A	8	110	10	7.5	25	–	–	2	–	56000	–	0.08	GI030	C0530
	08K2R050A12-SRC08-A	8	140	12	–	13.5	–	–	2	–	56000	–	0.14	GI030	C0530
	10K2R030A12-SRC10-A	10	130	12	9	30	–	–	2	–	42000	–	0.16	GI031	C0531
	10K2R060A16-SRC10-A	10	150	16	–	19.5	–	–	2	–	42000	–	0.18	GI031	C0531
	12K2R030A12-SRC12-A	12	130	12	10.5	30	–	–	2	–	35000	–	0.11	GI032	C0532
DIN 1835A	**12K2R060A16-SRC12-A**	12	160	16	–	24.5	–	–	2	–	35000	–	0.14	GI032	C0532
DIN 1835A	**16K2R035A16-SRC16-A**	16	140	16	14	35	–	–	2	–	22000	–	0.23	GI033	C0533
DIN 1835A	**16K2R065A20-SRC16-A**	16	175	20	–	31.5	–	–	2	–	22000	–	0.30	GI033	C0533
DIN 1835A	**20K2R045A20-SRC20-A**	20	160	20	18	45	–	–	2	–	16000	–	0.40	GI034	C0534
DIN 1835A	**20K2R080A25-SRC20-A**	20	190	25	–	33.5	–	–	2	–	16000	–	0.66	GI034	C0534
DIN 1835A	**25K2R045A25-SRC25-A**	25	160	25	22.4	45	–	–	2	–	10000	–	0.59	GI035	C0535
DIN 1835A	**32K2R060A32-SRC32-A**	32	180	32	28.6	60	–	–	2	–	6000	–	1.10	GI036	C0536
	08K2R30M06-SRC08-A	8	45	6.5	–	–	30	M6	2	–	–	–	0.02	GI123	C0530
	10K2R30M06-SRC10-A	10	45	6.5	–	–	30	M6	2	–	–	–	0.03	GI124	C0531
MODULAR	**12K2R30M06-SRC12-A**	12	45	6.5	–	–	30	M6	2	–	–	–	0.15	GI125	C0530
MODULAR	**12K2R30M08-SRC12-A**	12	48	8.5	–	–	30	M8	2	–	–	–	0.04	GI125	C0532
MODULAR	**16K2R35M08-SRC16-A**	16	53	8.5	–	–	35	M8	2	–	–	–	0.16	GI033	C0533
MODULAR	**20K2R35M10-SRC20-A**	20	54	10.5	–	–	35	M10	2	–	–	–	0.08	GI034	C0534

GI030	RC 08	–	LC 08-KP	LC 08-KPF
GI031	RC 10	RC 10-F	LC 10-KP	LC 10-KPF
GI032	RC 12	RC 12-F	–	–
GI033	RC 16	RC 16-F	–	–
GI034	RC 20	–	–	–
GI035	RC 25	–	–	–

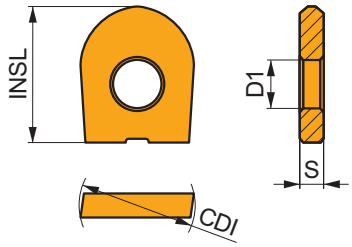
GI036	RC 32	–	–	–
GI123	RC 08	–	–	–
GI124	RC 10	RC 10-F	–	–
GI125	RC 12	RC 12-F	–	–

		Nm						
C0530	CS 3007-T08P	1.2	M 3	7	–	–	–	Flag T08P
C0531	CS 4008-T15P	3.0	M 4	8	–	D-T08P/T15P	FG-15	–
C0532	CS 5009-T20P	5.0	M 5	9	SDR T20P	–	–	–
C0533	CS 5013-T20P	5.0	M 5	13	SDR T20P	–	–	–
C0534	CS 5015-T20P	5.0	M 5	15	SDR T20P	–	–	–
C0535	CS 6020-T20P	7.5	M 6	20	SDR T20P	–	–	–
C0536	CS 8025-T30P	15.0	M 8	25	SDR T30P	–	–	–

RC

PRAMET

	CDI (mm)	D1 (mm)	INSL (mm)	S (mm)
08	8.0	3.00	9.5	2.00
10	10.0	4.00	11.5	2.50
12	12.0	5.00	12.0	2.50
16	16.0	5.00	14.0	3.00
20	20.0	5.00	16.0	3.00
25	25.0	6.00	21.5	4.00
32	32.0	8.00	25.8	5.00



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
		U E																	
		N cara neutra con diseño del filo positivo.																	
RC 08:M4310	–	255	0.36	0.4	–	–	–	240	0.36	0.4	–	–	–	–	–	–	50	0.18	0.8
RC 08:M8310	–	295	0.36	0.4	–	–	–	280	0.36	0.4	–	–	–	–	–	–	55	0.18	0.8
RC 10:M4310	–	250	0.36	0.5	–	–	–	235	0.36	0.5	–	–	–	–	–	–	50	0.18	1.0
RC 10:M8310	–	290	0.36	0.5	–	–	–	275	0.36	0.5	–	–	–	–	–	–	55	0.18	1.0
RC 10:M8330	–	270	0.36	0.5	–	–	–	255	0.36	0.5	–	–	–	–	–	–	50	0.18	1.0
RC 12:M4310	–	245	0.36	0.6	–	–	–	230	0.36	0.6	–	–	–	–	–	–	45	0.18	1.2
RC 12:M8310	–	285	0.36	0.6	–	–	–	270	0.36	0.6	–	–	–	–	–	–	55	0.18	1.2
RC 12:M8330	–	265	0.36	0.6	–	–	–	250	0.36	0.6	–	–	–	–	–	–	50	0.18	1.2
RC 16:M4310	–	235	0.36	0.8	–	–	–	220	0.36	0.8	–	–	–	–	–	–	45	0.18	1.1
RC 16:M8310	–	275	0.36	0.8	–	–	–	260	0.36	0.8	–	–	–	–	–	–	55	0.18	1.1
RC 16:M8330	–	255	0.36	0.8	–	–	–	240	0.36	0.8	–	–	–	–	–	–	50	0.18	1.1
RC 20:M4310	–	235	0.36	1.0	–	–	–	220	0.36	1.0	–	–	–	–	–	–	45	0.18	1.3
RC 20:M8310	–	270	0.36	1.0	–	–	–	255	0.36	1.0	–	–	–	–	–	–	50	0.18	1.3
RC 20:M8330	–	250	0.36	1.0	–	–	–	235	0.36	1.0	–	–	–	–	–	–	50	0.18	1.3
RC 25:M8310	–	260	0.36	1.3	–	–	–	245	0.36	1.3	–	–	–	–	–	–	50	0.18	1.7
RC 25:M8330	–	245	0.36	1.3	–	–	–	230	0.36	1.3	–	–	–	–	–	–	45	0.18	1.7
RC 32:M4310	–	220	0.36	1.6	–	–	–	205	0.36	1.6	–	–	–	–	–	–	40	0.18	2.1
RC 32:M8330	–	240	0.36	1.6	–	–	–	225	0.36	1.6	–	–	–	–	–	–	45	0.18	2.1

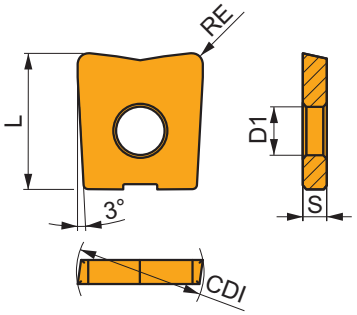
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

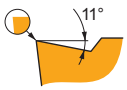
Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
F																			
F geometría muy afilada para mecanizado en acabado.																			
RC 10-F:M4310	–	250	0.36	0.5	125	0.32	0.5	235	0.36	0.5	–	–	–	–	–	–	50	0.18	1.0
RC 12-F:M4310	–	245	0.36	0.6	120	0.32	0.6	230	0.36	0.6	–	–	–	–	–	–	45	0.18	1.2
RC 16-F:M4310	–	235	0.36	0.8	115	0.32	0.8	220	0.36	0.8	–	–	–	–	–	–	45	0.18	1.1
RC 16-F:M8330	–	255	0.36	0.8	150	0.32	0.8	240	0.36	0.8	–	–	–	–	–	–	50	0.18	1.1

LC

PRAMET

	CDI (mm)	D1 (mm)	L (mm)	S (mm)
08	8.0	3.00	9.50	2.00
10	10.0	4.00	11.50	2.50

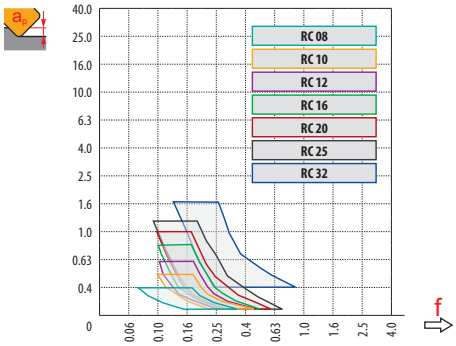


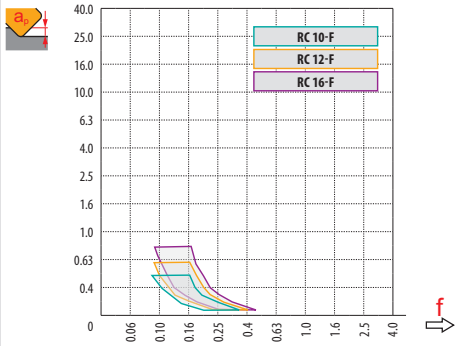
Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
U E																			
KP geometría con ángulo de desprendimiento de 0° para mecanizado ligero a medio.																			
LC 0806-KP:M4310	0.6	280	0.16	0.3	–	–	–	265	0.16	0.3	–	–	–	–	–	–	55	0.11	0.6
LC 0806-KP:M8310	0.6	325	0.16	0.3	–	–	–	305	0.16	0.3	–	–	–	–	–	–	65	0.11	0.6
LC 0810-KP:M4310	1.0	280	0.16	0.5	–	–	–	265	0.16	0.5	–	–	–	–	–	–	55	0.11	1.0
LC 1008-KP:M4310	0.8	270	0.16	0.4	–	–	–	255	0.16	0.4	–	–	–	–	–	–	50	0.08	0.8
LC 1008-KP:M8310	0.8	315	0.16	0.4	–	–	–	295	0.16	0.4	–	–	–	–	–	–	60	0.08	0.8
LC 1010-KP:M4310	1.0	280	0.16	0.5	–	–	–	265	0.16	0.5	–	–	–	–	–	–	55	0.08	1.0
LC 1010-KP:M8310	1.0	325	0.16	0.5	–	–	–	305	0.16	0.5	–	–	–	–	–	–	65	0.08	1.0
 F																			
KPF geometría con diseño positivo para mecanizado ligero a medio.																			
LC 0806-KPF:M4310	0.6	280	0.16	0.3	140	0.14	0.3	265	0.16	0.3	–	–	–	–	–	–	55	0.08	0.6
LC 1008-KPF:M4310	0.8	270	0.16	0.4	135	0.14	0.4	255	0.16	0.4	–	–	–	–	–	–	50	0.08	0.8

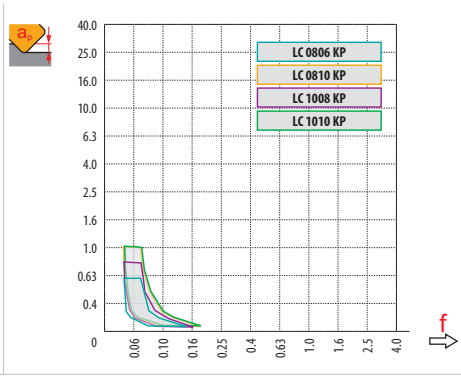
	RC 08	RC 10	RC 12	RC 16	RC 20	RC 25	RC 32
RE	4.0	5.0	6.0	8.0	10.0	12.5	16.0
BS	–	–	–	–	–	–	–

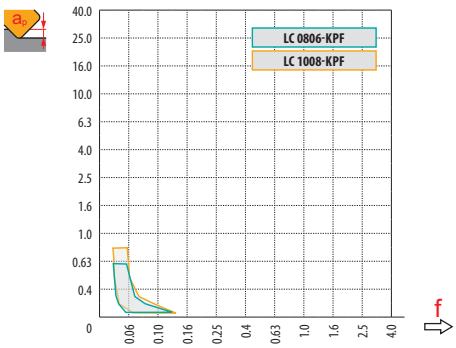
	RC 10-F	RC 12-F	RC 16-F
RE	5.0	6.0	8.0
BS	–	–	–

	LC 08-KP	LC 08-KP	LC 10-KP	LC 10-KP	LC 08-KPF	LC 10-KPF
RE	0.6	1.0	0.8	1.0	0.6	0.8
BS	–	–	–	–	–	–









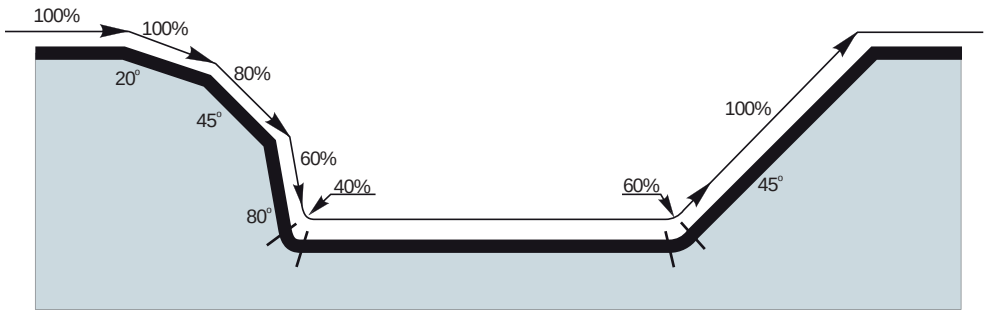
	DCX
RC 08	8
RC 10 / RC 10-F	10
RC 12 / RC 12-F	12
RC 16 / RC 16-F	16
RC 20	20
RC 25	25
RC 32	32

a_p	0.3	0.4	0.5	0.7	1.0	1.25	1.5	2.0	2.5	3.0	4.0	5.0	6.0	8.0	10.0	12.0	15.0	16.0
DEF	3.0	3.5	3.9	4.5	5.3	5.8	6.2	6.9	7.4	7.7	8.0	–	–	–	–	–	–	–
	3.4	3.9	4.4	5.1	6.0	6.6	7.1	8.0	8.7	9.2	9.8	10.0	–	–	–	–	–	–
	3.7	4.3	4.8	5.6	6.6	7.3	7.9	8.9	9.7	10.4	11.3	11.8	12.0	–	–	–	–	–
	4.3	5.0	5.6	6.5	7.7	8.6	9.3	10.6	11.6	12.5	13.9	14.8	15.5	16.0	–	–	–	–
	4.9	5.6	6.2	7.4	8.7	9.7	10.5	12.0	13.2	14.3	16.0	17.3	18.3	19.6	20.0	–	–	–
	5.4	6.3	7.0	8.2	9.8	10.9	11.9	13.6	15.0	16.2	18.3	20.0	21.4	23.3	24.5	25.0	–	–
	6.17	7.11	7.94	9.36	11.14	12.40	13.53	15.49	17.18	18.65	21.17	23.24	24.98	27.71	29.66	30.98	31.94	32.00

	DCX
RC 08	8
RC 10 / RC 10-F	10
RC 12 / RC 12-F	12
RC 16 / RC 16-F	16
RC 20	20
RC 25	25
RC 32	32

µm	3	5	10	15	20	30	40	50	60	80	100
FE	0.310	0.400	0.566	0.693	0.800	0.980	1.131	1.265	1.386	1.600	1.789
FE	0.346	0.447	0.632	0.775	0.894	1.095	1.265	1.414	1.549	1.789	2.000
	0.379	0.490	0.693	0.849	0.980	1.200	1.386	1.549	1.697	1.960	2.191
	0.438	0.566	0.800	0.980	1.131	1.386	1.600	1.789	1.960	2.263	2.530
	0.490	0.632	0.894	1.095	1.265	1.549	1.789	2.000	2.191	2.530	2.828
	0.548	0.707	1.000	1.225	1.414	1.732	2.000	2.236	2.449	2.828	3.162
	0.620	0.800	1.131	1.386	1.600	1.960	2.263	2.530	2.771	3.200	3.578

DEF	a_e	1.0 %	2.5 %	5.0 %	7.5 %	10 %	15 %	20 %	25 %	30 %	35 %	40 %	45 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
	a_p										⇨ x.f									
19.9%	1.0%	2.86	1.84	1.33	1.12	1.00	0.89	–	–	–	–	–	–	–	–	–	–	–	–	–
31.2%	2.5%	3.58	2.28	1.64	1.36	1.20	1.01	0.92	0.88	0.91	–	–	–	–	–	–	–	–	–	–
43.6%	5.0%	4.22	2.68	1.92	1.58	1.39	1.16	1.03	0.95	0.90	0.88	0.89	–	–	–	–	–	–	–	–
52.7%	7.5%	4.63	2.95	2.10	1.73	1.51	1.26	1.11	1.02	0.96	0.91	0.89	0.88	0.90	–	–	–	–	–	–
60.0%	10.0%	4.94	3.14	2.24	1.84	1.61	1.33	1.18	1.07	1.00	0.95	0.91	0.89	0.88	1.00	–	–	–	–	–
71.4%	15.0%	5.39	3.42	2.43	2.00	1.74	1.44	1.27	1.15	1.07	1.01	0.96	0.93	0.90	0.88	0.93	–	–	–	–
80.0%	20.0%	5.70	3.62	2.57	2.11	1.84	1.52	1.33	1.21	1.12	1.05	1.00	0.96	0.93	0.89	0.88	0.89	1.00	–	–
86.6%	25.0%	5.93	3.76	2.67	2.20	1.91	1.58	1.38	1.25	1.16	1.08	1.03	0.99	0.95	0.90	0.88	0.88	0.89	–	–
91.7%	30.0%	6.10	3.87	2.75	2.26	1.96	1.62	1.42	1.28	1.18	1.11	1.05	1.01	0.97	0.92	0.89	0.88	0.88	0.93	–
95.4%	35.0%	6.23	3.95	2.80	2.30	2.00	1.65	1.44	1.31	1.20	1.13	1.07	1.02	0.98	0.93	0.89	0.88	0.88	0.90	–
98.0%	40.0%	6.31	4.00	2.84	2.33	2.03	1.67	1.46	1.32	1.22	1.14	1.08	1.03	0.99	0.93	0.90	0.89	0.88	0.89	–
99.5%	45.0%	6.36	4.03	2.86	2.35	2.04	1.68	1.47	1.33	1.23	1.15	1.09	1.04	1.00	0.94	0.90	0.89	0.88	0.88	–
100.0%	50.0%	6.38	4.04	2.87	2.35	2.05	1.69	1.48	1.33	1.23	1.15	1.09	1.04	1.00	0.94	0.90	0.89	0.88	0.88	1.00



	DCX	RE	a_p 0.00	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.25	1.50	2.00	2.50	3.00	4.00
LC 0806-KP	8	0.6	6.8	7.8	7.9	8.0	8.0	–	–	–	–	–	–	–	–	–	–
LC 0806-KPF		0.6	6.8	7.8	7.9	8.0	8.0	–	–	–	–	–	–	–	–	–	–
LC 0810-KP		1.0	6.0	7.4	7.6	7.7	7.8	7.9	8.0	8.0	8.0	–	–	–	–	–	–
LC 1008-KP	10	0.8	8.4	9.6	9.8	9.9	9.9	10.0	10.0	–	–	–	–	–	–	–	–
LC 1008-KPF		0.8	8.4	9.6	9.8	9.9	9.9	10.0	10.0	–	–	–	–	–	–	–	–
LC 1010-KP		1.0	8.0	9.4	9.6	9.7	9.8	9.9	10.0	10.0	10.0	–	–	–	–	–	–

DCX	µm	3	5	10	15	20	30	40	50	60	80	100
8	FE	0.310	0.400	0.566	0.693	0.800	0.980	1.131	1.265	1.386	1.600	1.789
10		0.346	0.447	0.632	0.775	0.894	1.095	1.265	1.414	1.549	1.789	2.000
RE	**µm**	**3**	**5**	**10**	**15**	**20**	**30**	**40**	**50**	**60**	**80**	**100**
0.6	FE	0.120	0.155	0.219	0.268	0.310	0.379	0.438	0.490	0.537	0.620	0.693
0.8		0.139	0.179	0.253	0.310	0.358	0.438	0.506	0.566	0.620	0.716	0.800
1.0		0.155	0.200	0.283	0.346	0.400	0.490	0.566	0.632	0.693	0.800	0.89

	DCX	RE	max
LC 0806-KP	8	0.6	3.0
LC 0806-KPF		0.6	2.8
LC 0810-KP		1.0	3.0
LC 1008-KP	10	0.8	3.8
LC 1008-KPF		0.8	3.6
LC 1010-KP		1.0	3.8

	DCX	RE	RPMX	APMX/l
LC 0806-KP	8	0.6	2.5	1.5/35
LC 0806-KPF		0.6	2.2	1.5/39
LC 0810-KP		1.0	2.4	1.5/36
LC 1008-KP	10	0.8	2.6	1.5/33
LC 1008-KPF		0.8	2.3	1.5/38
LC 1010-KP		1.0	2.6	1.5/33

	DCX	RE	DMIN	DMAX	SMAX DMIN	SMAX DMAX
LC 0806-KP	8	0.6	9.8	15.9	0.8	1.0
LC 0806-KPF		0.6	10.2	15.9	0.1	0.1
LC 0810-KP		1.0	9.9	15.9	0.1	0.1
LC 1008-KP	10	0.8	12.2	19.9	0.9	1.1
LC 1008-KPF		0.8	12.6	19.9	0.2	0.2
LC 1010-KP		1.0	12.2	19.9	0.2	0.2

	DCX	RE	a_p
LC 0806-KP	8	0.6	0.15
LC 0806-KPF		0.6	0.13
LC 0810-KP		1.0	0.13
LC 1008-KP	10	0.8	0.2
LC 1008-KPF		0.8	0.18
LC 1010-KP		1.0	0.19

Voladizo (múltiplo del diámetro *DCX*)	< 3.0	3.0 – 3.5	3.6 – 4.0	4.1 – 4.5	> 4.6
Factor de multiplicación para la velocidad de corte	1.0	0.9	0.8	0.7	0.5

K2-SLC

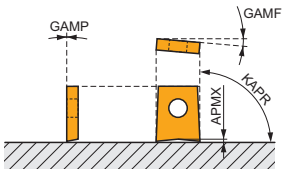
PRAMET

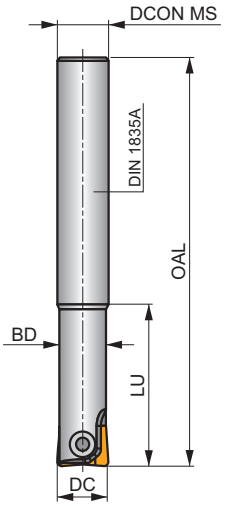
S

Fresas para Copiado y Perfilado en Acabado

Fresa para operaciones de acabado en una amplia gama de aplicaciones, que utiliza plaquitas tipo LC. Plaquitas rectificadas que proporcionan alta precisión. Para perfilado, achaflanado, interpolación helicoidal, fresado axial (plunge) y en rampa. Cuerpo tratado para alargar la vida de herramienta.

APMX	1.0 - 3.0 mm





h_m 0.03 - 0.10

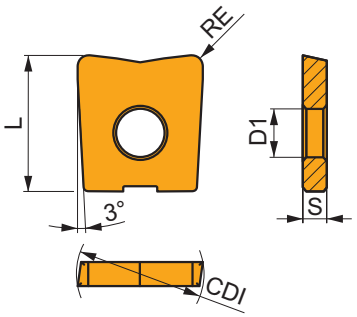
	Producto	DC (mm)	OAL (mm)	DCON MS (mm)	LU (mm)	BD (mm)			max.		kg		
DIN 1835A	**12K2R030A12-SLC12-A**	12	130	12	30	10.5	2	–	35000	–	0.11	GI037	CO532
	16K2R035A16-SLC16-A	16	140	16	35	14	2	–	22000	–	0.20	GI038	CO533
	20K2R045A20-SLC20-A	20	160	20	45	18	2	–	16000	–	0.38	GI039	CO534

GI037	LC 12-KP	LC 12-KPF
GI038	LC 16-KP	–
GI039	LC 20-KP	–

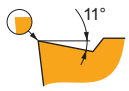
		Nm			
CO532	CS 5009-T20P	5.0	M 5	9	SDR T20P
CO533	CS 5013-T20P	5.0	M 5	13	SDR T20P
CO534	CS 5015-T20P	5.0	M 5	15	SDR T20P

LC

	CDI (mm)	D1 (mm)	L (mm)	S (mm)
12	12.0	5.00	14.00	2.50
16	16.0	5.00	16.00	3.00
20	20.0	5.00	18.00	3.00

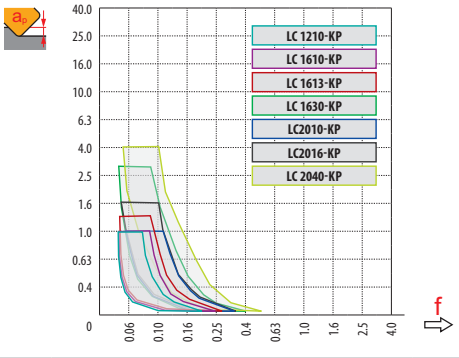


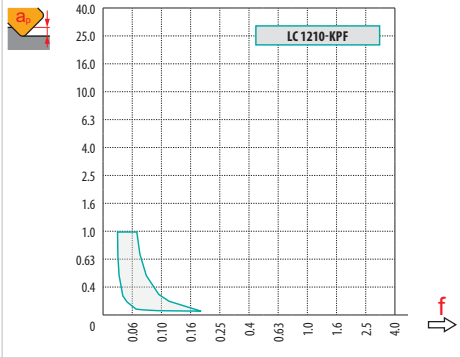
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
KP geometría con ángulo de desprendimiento de 0° para mecanizado ligero a medio.																			
LC 1210-KP:M4310	1.0	280	0.16	0.5	–	–	–	265	0.16	0.5	–	–	–	–	–	–	55	0.08	1.0
LC 1210-KP:M8310	1.0	325	0.16	0.5	–	–	–	305	0.16	0.5	–	–	–	–	–	–	65	0.08	1.0
LC 1210-KP:M8330	1.0	295	0.16	0.5	–	–	–	280	0.16	0.5	–	–	–	–	–	–	55	0.08	1.0
LC 1610-KP:M4310	1.0	280	0.16	0.5	–	–	–	265	0.16	0.5	–	–	–	–	–	–	55	0.08	1.0
LC 1610-KP:M8310	1.0	325	0.16	0.5	–	–	–	305	0.16	0.5	–	–	–	–	–	–	65	0.08	1.0
LC 1610-KP:M8330	1.0	295	0.16	0.5	–	–	–	280	0.16	0.5	–	–	–	–	–	–	55	0.08	1.0
LC 1613-KP:M4310	1.3	270	0.16	0.7	–	–	–	255	0.16	0.7	–	–	–	–	–	–	50	0.08	1.3
LC 1613-KP:M8310	1.3	315	0.16	0.7	–	–	–	295	0.16	0.7	–	–	–	–	–	–	60	0.08	1.3
LC 2010-KP:M4310	1.0	280	0.16	0.5	–	–	–	265	0.16	0.5	–	–	–	–	–	–	55	0.08	1.0
LC 2010-KP:M8310	1.0	325	0.16	0.5	–	–	–	305	0.16	0.5	–	–	–	–	–	–	65	0.08	1.0
LC 2016-KP:M4310	1.6	280	0.16	0.8	–	–	–	265	0.16	0.8	–	–	–	–	–	–	55	0.08	1.1
LC 2016-KP:M8310	1.6	325	0.16	0.8	–	–	–	305	0.16	0.8	–	–	–	–	–	–	65	0.08	1.1
LC 2040-KP:M8330	4.0	285	0.16	2.0	–	–	–	270	0.16	2.0	–	–	–	–	–	–	55	0.08	2.7
																			
KPF geometría con diseño positivo para mecanizado ligero a medio.																			
LC 1210-KPF:M4310	1.0	280	0.16	0.5	140	0.14	0.5	265	0.16	0.5	–	–	–	–	–	–	55	0.08	1.0
LC 1210-KPF:M8330	1.0	295	0.16	0.5	175	0.14	0.5	280	0.16	0.5	–	–	–	–	–	–	55	0.08	1.0

a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
⇨ x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	LC 1210-KP	LC 1610-KP	LC 1613-KP	LC 2010-KP	LC 2016-KP	LC 2040-KP	LC 1210-KPF
RE	1.0	1.3	3.0	1.0	1.6	4.0	1.0
BS	–	–	–	–	–	–	–





	DC	RE	a_p 0.0	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.25	1.5	2.0	2.5	3.0	4.0
LC 1210-KP	12	1.0	10.0	11.4	11.6	11.7	11.8	11.9	12.0	12.0	12.0	–	–	–	–	–	–
LC 1210-KPF		1.0	10.0	11.4	11.6	11.7	11.8	11.9	12.0	12.0	12.0	–	–	–	–	–	–
LC 1610-KP	16	1.0	14.0	15.4	15.6	15.7	15.8	15.9	16.0	16.0	16.0	–	–	–	–	–	–
LC 1613-KP		1.3	13.4	15.1	15.3	15.4	15.6	15.7	15.8	15.9	15.9	16.0	–	–	–	–	–
LC 2010-KP	20	1.0	18.0	19.4	19.6	19.7	19.8	19.9	20.0	20.0	20.0	–	–	–	–	–	–
LC 2016-KP		1.6	16.8	18.7	18.9	19.1	19.3	19.4	19.6	19.7	19.8	19.9	20.0	–	–	–	–
LC 2040-KP		4.0	12.0	15.0	15.5	15.9	16.2	16.5	16.8	17.1	17.3	17.8	18.2	18.9	19.4	–	–

DC	µm	3	5	10	15	20	30	40	50	60	80	100
12		0.379	0.490	0.693	0.849	0.980	1.200	1.386	1.549	1.697	1.960	2.191
16		0.438	0.566	0.800	0.980	1.131	1.386	1.600	1.789	1.960	2.263	2.530
20		0.490	0.632	0.894	1.095	1.265	1.549	1.789	2.000	2.191	2.530	2.828
RE	**µm**	**3**	**5**	**10**	**15**	**20**	**30**	**40**	**50**	**60**	**80**	**100**
1.3		0.177	0.228	0.322	0.395	0.456	0.559	0.645	0.721	0.790	0.912	1.020
1.6	FE	0.196	0.253	0.358	0.438	0.506	0.620	0.716	0.800	0.876	1.012	1.131
2.0		0.219	0.283	0.400	0.490	0.566	0.693	0.800	0.894	0.980	1.131	1.265
4.0		0.310	0.400	0.566	0.693	0.800	0.980	1.131	1.265	1.386	1.600	1.789

	DC	RE	max
LC 1210-KP	12	1.0	4.8
LC 1210-KPF		1.0	4.4
LC 1610-KP	16	1.0	6.6
LC 1613-KP		1.3	6.6
LC 2010-KP	20	1.0	8.5
LC 2016-KP		1.6	8.5
LC 2040-KP		4.0	8.5

	DC	RE	RPMX	APMX/I
LC 1210-KP	12	1.0	4.7	1.5/19
LC 1210-KPF		1.0	3.8	1.5/23
LC 1610-KP	16	1.0	4.8	1.5/18
LC 1613-KP		1.3	4.8	1.5/18
LC 2010-KP	20	1.0	5.0	1.5/18
LC 2016-KP		1.6	4.9	1.6/19
LC 2040-KP		4.0	4.5	4.0/51

	DC	RE	DMIN	DMAX	SMAX DMIN	SMAX DMAX
LC 1210-KP	12	1.0	14.1	23.9	1.0	1.2
LC 1210-KPF		1.0	15.0	23.9	0.4	0.4
LC 1610-KP	16	1.0	18.6	31.9	1.1	1.4
LC 1613-KP		1.3	18.6	31.9	0.6	0.6
LC 2010-KP	20	1.0	22.8	39.9	1.3	1.5
LC 2016-KP		1.6	22.8	39.9	0.8	0.8
LC 2040-KP		4.0	22.8	39.9	0.5	0.5

	DC	RE	a_p
LC 1210-KP	12	1.0	0.44
LC 1210-KPF		1.0	0.9
LC 1610-KP	16	1.0	0.65
LC 1613-KP		1.3	0.62
LC 2010-KP	20	1.0	0.85
LC 2016-KP		1.6	0.79
LC 2040-KP		4.0	0.54

Voladizo (múltiplo del diámetro *DCX*)	< 3.0	3 – 3.5	3.6 – 4.0	4.1 – 4.5	> 4.6
Factor de multiplicación para la velocidad de corte	1.0	0.9	0.8	0.7	0.5

K2-PPH

P M K S H

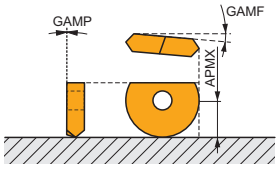
PRAMET

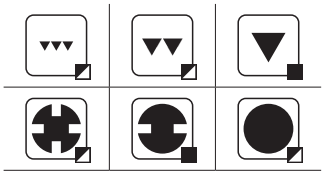
S

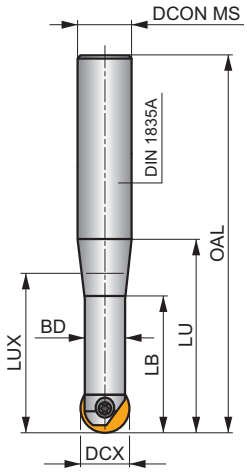
Fresas para Copiado y Perfilado

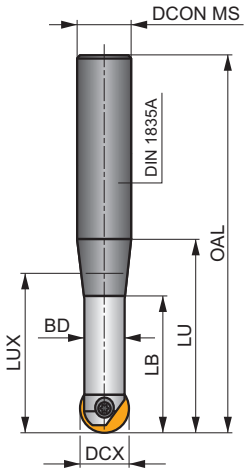
Fresa que ofrece gran flexibilidad para una amplia gama de aplicaciones en Moldes y Matrices. Una sola herramienta para plaquitas de punta esférica, toroidales y de alto avance. Las plaquitas rectificadas proporcionan alta precisión. Disponibles con mango cilíndrico y modular. Cuerpo tratado para alargar la vida de herramienta.

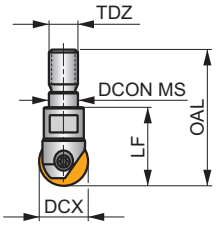
APMX	0.3 - 4.0 mm











h_m 0.07 - 0.14

	Producto	DCX (mm)	OAL (mm)	DCON MS (mm)	BD (mm)	LB (mm)	LU (mm)	LUX (mm)	LF (mm)	TDZ	Carbide	max.		kg		
	PPH-08/02-QC12-092	8	92	12	6.5	19	35	23.1	–	–	–	40000	–	0.14	GI284	C0540
	PPH-08/02-QC12-110	8	110	12	6.5	33.5	53	41.5	–	–	–	33600	–	0.14	GI284	C0540
	PPH-08/02-QC12-132	8	132	12	6.5	19	75	41.8	–	–	–	16800	–	0.15	GI284	C0540
	PPH-10/02-QC12-092	10	92	12	8	22.4	38	30	–	–	–	40000	–	0.12	GI285	C0541
	PPH-10/02-QC12-110	10	110	12	8	38.7	53	51.9	–	–	–	40000	–	0.15	GI285	C0541
	PPH-10/02-QC12-132	10	132	12	8	21.8	75	73.6	–	–	–	20300	–	0.16	GI285	C0541
	PPH-12/02-QC16-145	12	145	16	10	22.5	85	63.3	–	–	–	19800	–	0.23	GI286	C0542
	PPH-16/02-QC20-166	16	166	20	14	29.5	100	75.5	–	–	–	20000	–	0.37	GI287	C0543
	PPH-20/02-QC25-191	20	191	25	17	35	115	82.2	–	–	–	18400	–	0.64	GI288	C0544
	PPH-25/02-QC32-215	25	215	32	21	42.5	135	97	–	–	–	16500	–	1.07	GI289	C0545
	PPH-12/02-QC12-083	12	83	12	10	–	26	–	–	–	–	40000	–	0.15	GI286	C0542
	PPH-12/02-QC12-110	12	110	12	10	–	53	–	–	–	–	40000	–	0.15	GI286	C0542
	PPH-16/02-QC16-092	16	92	16	14	–	92	–	–	–	–	36000	–	0.20	GI287	C0543
DIN 1835A	**PPH-16/02-QC16-123**	16	123	16	14	–	63	–	–	–	–	36000	–	0.24	GI287	C0543
	PPH-20/02-QC20-104	20	104	20	17	–	38	–	–	–	–	40000	–	0.34	GI288	C0544
	PPH-20/02-QC20-141	20	141	20	17	–	75	–	–	–	–	40000	–	0.41	GI288	C0544
	PPH-25/02-QC25-121	25	121	25	21	–	45	–	–	–	–	40000	–	0.53	GI289	C0545
	PPH-25/02-QC25-166	25	166	25	21	–	90	–	–	–	–	37100	–	0.57	GI289	C0545
	PPH-32/02-QC32-186	32	186	32	26	–	107	–	–	–	–	32500	–	1.09	GI290	C0546
	PPH-32/02-QC32-240	32	240	32	26	–	160	–	–	–	–	14500	–	1.37	GI290	C0546
	PPH-08/02-QC12-110HSCW	8	110	12	6.5	19	53	30.1	–	–	✓	40000	–	0.21	GI284	C0540
	PPH-08/02-QC12-132HSCW	8	132	12	6.5	19	75	37.1	–	–	✓	23400	–	0.22	GI284	C0540
	PPH-10/02-QC12-092HSCW	10	92	12	8	21.9	38.1	90.9	–	–	✓	40000	–	0.20	GI285	C0541
	PPH-10/02-QC12-132HSCW	10	132	12	8	21.8	75.1	51.1	–	–	✓	23400	–	0.24	GI285	C0541
	PPH-12/02-QC16-145HSCW	12	145	16	10	21.5	85	65.6	–	–	✓	21000	–	0.28	GI286	C0542
	PPH-16/02-QC20-166HSCW	16	166	20	14	28.5	100	87.2	–	–	✓	25500	–	0.66	GI287	C0543
	PPH-20/02-QC25-191HSCW	20	191	25	17	35	115	75.6	–	–	✓	18500	–	1.07	GI288	C0544
	PPH-08/02-QC08-130HSCW	8	130	8	6.5	–	20	–	–	–	✓	40000	–	0.17	GI284	C0540

	Producto	DCX (mm)	OAL (mm)	DCON MS (mm)	BD (mm)	LB (mm)	LU (mm)	LUX (mm)	LF (mm)	TDZ	Carbide	max.		kg		
DIN 1835A	**PPH-10/02-QC10-140HSCW**	10	140	10	8	–	25	–	–	–	✓	40000	–	0.22	GI285	C0541
	PPH-12/02-QC12-083HSCW	12	83	12	10	–	26	–	–	–	✓	40000	–	0.19	GI286	C0542
	PPH-12/02-QC12-110HSCW	12	110	12	10	–	53	–	–	–	✓	40000	–	0.22	GI286	C0542
	PPH-16/02-QC16-092HSCW	16	92	16	14	–	32	–	–	–	✓	43000	–	0.29	GI287	C0543
	PPH-16/02-QC16-123HSCW	16	123	16	14	–	63	–	–	–	✓	43000	–	0.36	GI287	C0543
	PPH-20/02-QC20-104HSCW	20	104	20	17	–	38	–	–	–	✓	40000	–	0.50	GI288	C0544
	PPH-20/02-QC20-141HSCW	20	141	20	17	–	75	–	–	–	✓	40000	–	0.62	GI288	C0544
MODULAR	**PPH-16/02-025-P08**	16	–	8.5	–	–	–	–	25	M8	–	–	–	0.10	GI287	C0543
	PPH-20/02-030-P10	20	–	10.5	–	–	–	–	30	M10	–	–	–	0.16	GI288	C0544

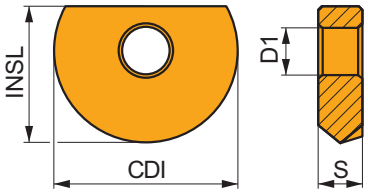
GI284	PPH 08..	–	PPHT 08..	PPHF 08..
GI285	PPH 10..	PPHE 10..	PPHT 10..	PPHF 10..
GI286	PPH 12..	PPHE 12..	PPHT 12..	PPHF 12..
GI287	PPH 16..	PPHE 16..	PPHT 16..	PPHF 16..
GI288	PPH 20..	PPHE 20..	PPHT 20..	PPHF 20..
GI289	PPH 25..	–	PPHT 25..	–
GI290	PPH 32..	–	–	–

		Nm						
C0540	CS 42506-T07P	1.0	M 2.5	6	D-T07P/T09P	FG-15	–	–
C0541	CS 43008-T08P	1.2	M 3	8	D-T08P/T15P	FG-15	–	–
C0542	CS 43509-T10P	2.0	M 3.5	9	–	–	SDR T10P	–
C0543	CS 44013-T15P	3.0	M 4	13	D-T08P/T15P	FG-15	–	–
C0544	CS 45016-T20P	5.0	M 5	16	–	–	SDR T20P	–
C0545	CS 46020-T25P	7.5	M 6	20	–	–	–	SDR T25P-T
C0546	CS 48025-T40P	15.0	M 8	25	–	–	–	SDR T40P-T

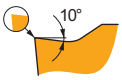
PPH

PRAMET

	CDI (mm)	D1 (mm)	INSL (mm)	S (mm)
0800	8.0	2.50	7.0	2.40
1000	10.0	3.00	8.5	2.60
1200	12.0	3.50	10.0	3.00
1600	16.0	4.00	12.0	4.00
2000	20.0	5.00	15.0	5.00
2500	25.0	6.00	18.5	6.00
3000	30.0	8.00	22.5	7.00
3200	32.0	8.00	23.5	7.00



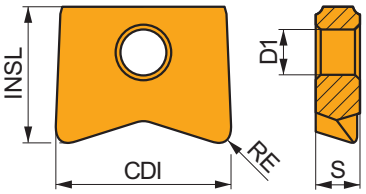
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
CL1 geometría con diseño de filo agudo.																			
PPH 0800-CL1:2003	–	285	0.36	0.4	145	0.32	0.4	270	0.36	0.4	–	–	–	–	–	–	55	0.18	0.8
PPH 1000-CL1:2003	–	280	0.36	0.5	140	0.32	0.5	265	0.36	0.5	–	–	–	–	–	–	55	0.18	1.0
PPH 1200-CL1:2003	–	275	0.36	0.6	140	0.32	0.6	260	0.36	0.6	–	–	–	–	–	–	55	0.18	1.2
PPH 1600-CL1:2003	–	265	0.36	0.8	135	0.32	0.8	250	0.36	0.8	–	–	–	–	–	–	50	0.18	1.1
PPH 2000-CL1:2003	–	260	0.36	1.0	130	0.32	1.0	245	0.36	1.0	–	–	–	–	–	–	50	0.18	1.3
PPH 2500-CL1:2003	–	250	0.36	1.3	125	0.32	1.3	235	0.36	1.3	–	–	–	–	–	–	50	0.18	1.7
PPH 3000-CL1:2003	–	245	0.36	1.5	120	0.32	1.5	230	0.36	1.5	–	–	–	–	–	–	45	0.18	2.0
PPH 3200-CL1:2003	–	245	0.36	1.6	120	0.32	1.6	230	0.36	1.6	–	–	–	–	–	–	45	0.18	2.1
CL4 geometría con diseño de filo agudo para corte interrumpido.																			
PPH 0800-CL4:8215	–	270	0.36	0.4	–	–	–	255	0.36	0.4	–	–	–	–	–	–	50	0.18	0.8
PPH 1000-CL4:8215	–	265	0.36	0.5	–	–	–	250	0.36	0.5	–	–	–	–	–	–	50	0.18	1.0
PPH 1200-CL4:8215	–	255	0.36	0.6	–	–	–	240	0.36	0.6	–	–	–	–	–	–	50	0.18	1.2
PPH 1600-CL4:8215	–	250	0.36	0.8	–	–	–	235	0.36	0.8	–	–	–	–	–	–	50	0.18	1.1
PPH 2000-CL4:8215	–	245	0.36	1.0	–	–	–	230	0.36	1.0	–	–	–	–	–	–	45	0.18	1.3
																			
SM1 geometría con diseño de filo muy vivo.																			
PPHE 1000-SM1:8215	–	275	0.31	0.5	165	0.28	0.5	260	0.31	0.5	–	–	–	–	–	–	55	0.16	1.0
PPHE 1200-SM1:8215	–	255	0.36	0.6	150	0.32	0.6	240	0.36	0.6	–	–	–	–	–	–	50	0.18	1.2
PPHE 1600-SM1:8215	–	260	0.31	0.8	155	0.28	0.8	245	0.31	0.8	–	–	–	–	–	–	50	0.16	1.1
PPHE 2000-SM1:8215	–	250	0.31	1.0	150	0.28	1.0	235	0.31	1.0	–	–	–	–	–	–	50	0.16	1.3

PPHT

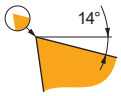
PRAMET

	CDI (mm)	D1 (mm)	INSL (mm)	S (mm)
0800	8.0	2.50	7.0	2.40
1000	10.0	3.00	8.5	2.60
1200	12.0	3.50	10.0	3.00
1600	16.0	4.00	12.0	4.00
2000	20.0	5.00	15.0	5.00
2500	25.0	6.00	18.5	6.00



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

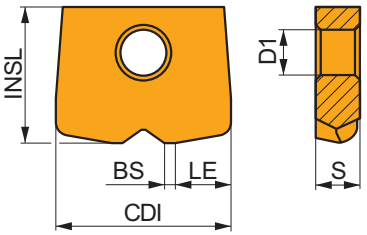
Producto		RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
PPHT 080003-A2:2003	●	0.3	275	0.10	0.3	140	0.09	0.3	260	0.10	0.3	–	–	–	–	–	–	55	0.07	0.3
PPHT 080005-A2:2003	●	0.5	270	0.13	0.3	135	0.12	0.3	255	0.13	0.3	–	–	–	–	–	–	50	0.09	0.5
PPHT 080010-A2:2003	⧓	1.0	315	0.14	0.5	160	0.13	0.5	295	0.14	0.5	–	–	–	–	–	–	60	0.10	1.0
PPHT 100005-A2:2003	●	0.5	270	0.13	0.3	135	0.12	0.3	255	0.13	0.3	–	–	–	–	–	–	50	0.09	0.5
PPHT 100008-A2:2003	⧓	0.8	305	0.14	0.4	155	0.13	0.4	285	0.14	0.4	–	–	–	–	–	–	60	0.10	0.8
PPHT 100010-A2:2003	⧓	1.0	315	0.14	0.5	160	0.13	0.5	295	0.14	0.5	–	–	–	–	–	–	60	0.10	1.0
PPHT 120005-A2:2003	●	0.5	270	0.13	0.3	135	0.12	0.3	255	0.13	0.3	–	–	–	–	–	–	50	0.09	0.5
PPHT 120010-A2:2003	⧓	1.0	315	0.14	0.5	160	0.13	0.5	295	0.14	0.5	–	–	–	–	–	–	60	0.10	1.0
PPHT 120020-A2:2003	⧓	2.0	320	0.14	1.0	160	0.13	1.0	300	0.14	1.0	–	–	–	–	–	–	60	0.10	1.3
PPHT 160010-A2:2003	⧓	1.0	315	0.14	0.5	160	0.13	0.5	295	0.14	0.5	–	–	–	–	–	–	60	0.10	1.0
PPHT 160013-A2:2003	⧓	1.3	300	0.15	0.6	150	0.13	0.6	285	0.15	0.6	–	–	–	–	–	–	60	0.10	1.3
PPHT 160020-A2:2003	⧓	2.0	320	0.14	1.0	160	0.13	1.0	300	0.14	1.0	–	–	–	–	–	–	60	0.10	1.3
PPHT 200010-A2:2003	⧓	1.0	315	0.14	0.5	160	0.13	0.5	295	0.14	0.5	–	–	–	–	–	–	60	0.10	1.0
PPHT 200016-A2:2003	⧓	1.6	310	0.14	0.8	155	0.13	0.8	290	0.14	0.8	–	–	–	–	–	–	60	0.10	1.1
PPHT 200030-A2:2003	⧓	3.0	305	0.14	1.5	155	0.13	1.5	285	0.14	1.5	–	–	–	–	–	–	60	0.10	2.0
PPHT 200040-A2:2003	⧓	4.0	295	0.14	2.0	150	0.13	2.0	280	0.14	2.0	–	–	–	–	–	–	55	0.10	2.7
PPHT 250020-A2:2003	⧓	2.0	320	0.14	1.0	160	0.13	1.0	300	0.14	1.0	–	–	–	–	–	–	60	0.10	1.3



A2 geometría positiva para mecanizado ligero a medio.

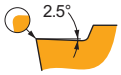
PPHF

	BS	LE	CDI	D1	INSL	S
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
0800	0.40	2.60	8.0	2.50	7.0	2.40
1000	0.50	3.20	10.0	3.00	8.5	2.60
1200	0.60	3.90	12.0	3.50	10.0	3.00
1600	0.80	5.20	16.0	4.00	12.0	4.00
2000	1.00	6.40	20.0	5.00	15.0	5.00



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)



CE1 geometría con diseño robusto para mecanizado de alto avance.

PPHF 080004-CE1:M8330	●	–	■	200	0.30	0.3	◪	120	0.27	0.3	■	190	0.30	0.3	–	–	–	◪	50	0.27	0.2	◪	40	0.21	0.2
PPHF 100005-CE1:M8330	●●	–	■	190	0.35	0.3	◪	110	0.32	0.3	■	180	0.35	0.3	–	–	–	◪	45	0.32	0.2	◪	35	0.25	0.2
PPHF 120006-CE1:M8330	●●	–	■	205	0.45	0.4	◪	120	0.41	0.4	■	190	0.45	0.4	–	–	–	◪	50	0.41	0.3	◪	40	0.32	0.3
PPHF 160008-CE1:M8330	●●	–	■	190	0.60	0.5	◪	110	0.54	0.5	■	180	0.60	0.5	–	–	–	◪	45	0.54	0.4	◪	35	0.42	0.4
PPHF 200010-CE1:M8330	●●	–	■	185	0.75	0.6	◪	110	0.68	0.6	■	175	0.75	0.6	–	–	–	◪	45	0.68	0.5	◪	35	0.53	0.4

a_e / DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ X.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
⇨ X.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	PPH 08-CL1	PPH 10-CL1	PPH 12-CL1	PPH 16-CL1	PPH 20-CL1	PPH 25-CL1	PPH 30-CL1	PPH 32-CL1
RE	4.0	5.0	6.0	8.0	10.0	12.5	15.0	16.0
BS	–	–	–	–	–	–	–	–

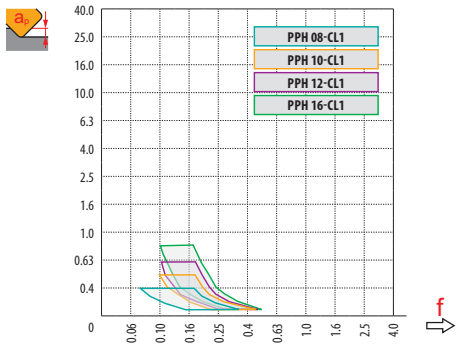
	PPH 08-CL4	PPH 10-CL4	PPH 12-CL4	PPH 16-CL4	PPH 20-CL4
RE	4.0	5.0	6.0	8.0	10.0
BS	–	–	–	–	–

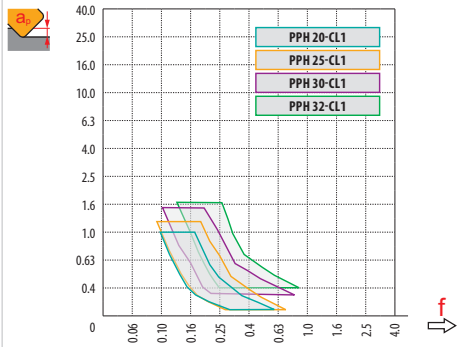
	PPHE 10-SM1	PPHE 12-SM1	PPHE 16-SM1	PPHE 20-SM1
RE	5.0	6.0	8.0	10.0
BS	–	–	–	–

	PPHF 08-CE1	PPHF 10-CE1	PPHF 12-CE1	PPHF 16-CE1	PPHF 20-CE1
RE	0.6	0.8	1.0	1.3	1.6
BS	0.40	0.50	0.60	0.80	1.00

	PPHT 08-A2	PPHT 08-A2	PPHT 08-A2	PPHT 10-A2	PPHT 10-A2	PPHT 10-A2	PPHT 12-A2	PPHT 12-A2	PPHT 12-A2
RE	0.3	0.5	1.0	0.5	0.8	1.0	0.5	1.0	2.0
BS	–	–	–	–	–	–	–	–	–

	PPHT 16-A2	PPHT 16-A2	PPHT 16-A2	PPHT 20-A2	PPHT 20-A2	PPHT 20-A2	PPHT 20-A2	PPHT 25-A2
RE	1.0	1.3	2.0	1.0	1.6	3.0	4.0	2.0
BS	–	–	–	–	–	–	–	–


a_p
PPH 08-CL1
PPH 10-CL1
PPH 12-CL1
PPH 16-CL1
f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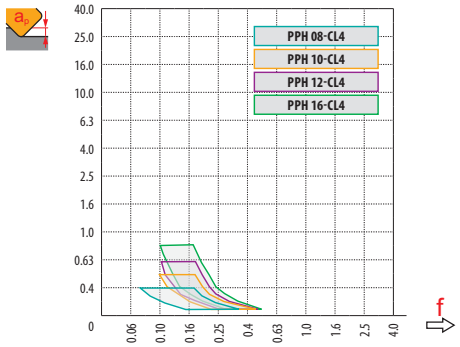
PPH 25-CL1
PPH 30-CL1
PPH 32-CL1
f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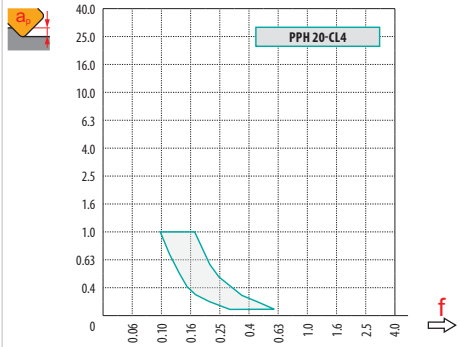
PPH 10-CL4
PPH 12-CL4
PPH 16-CL4
f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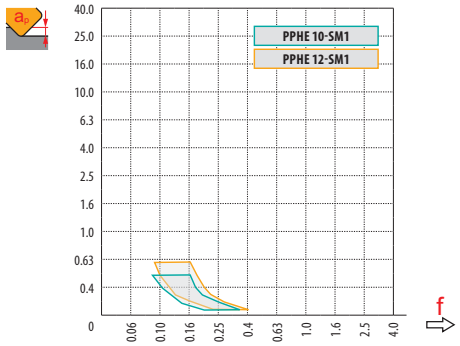
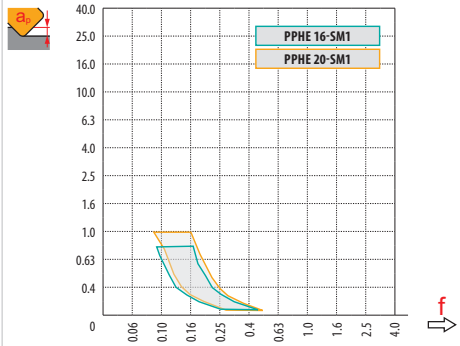
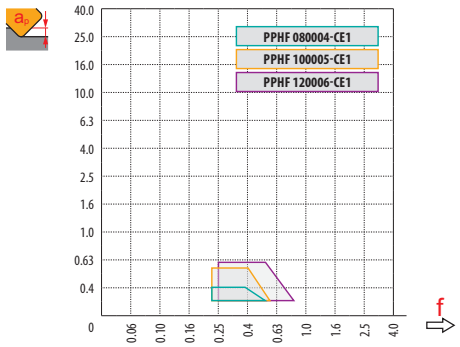
PPH 20-CL4
f


a_p
PPHE 10-SM1
PPHE 12-SM1
f


a_p
PPHE 16-SM1
PPHE 20-SM1
f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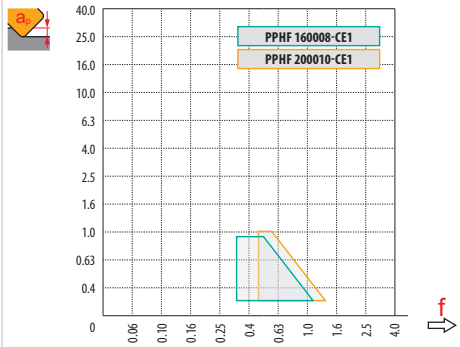
PPHF 100005-CE1
PPHF 120006-CE1
f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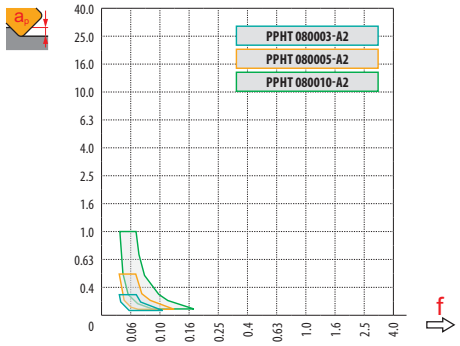
f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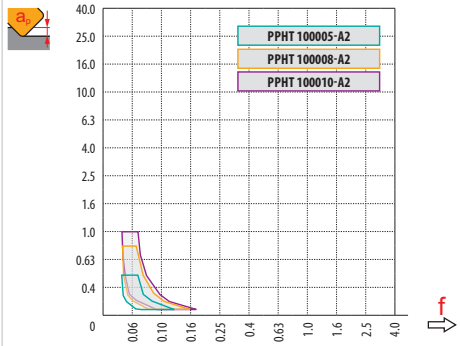
PPHT 080005-A2
PPHT 080010-A2
f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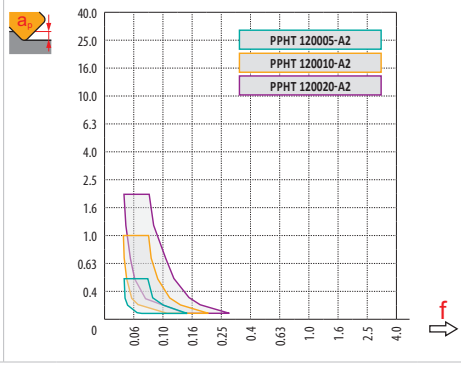
PPHT 100008-A2
PPHT 100010-A2
f


a_p
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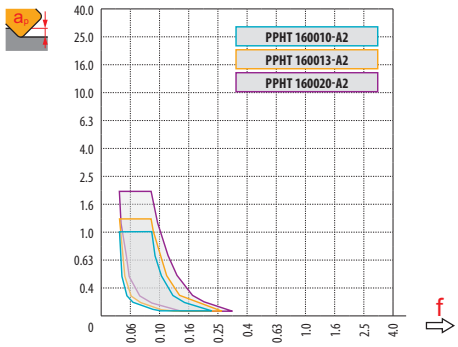
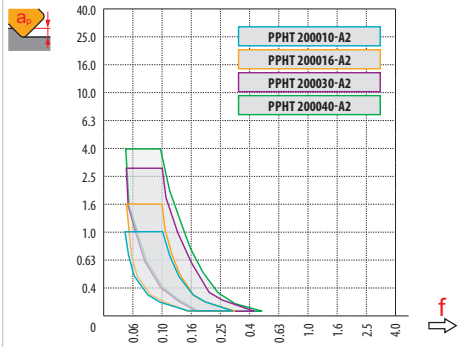
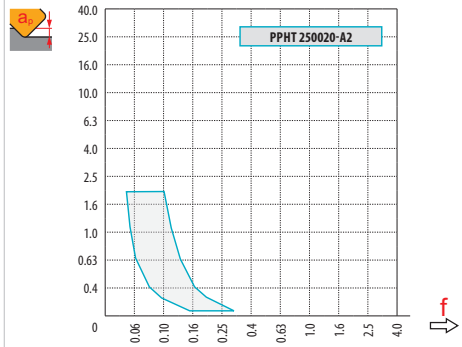
PPHT 120020-A2
f







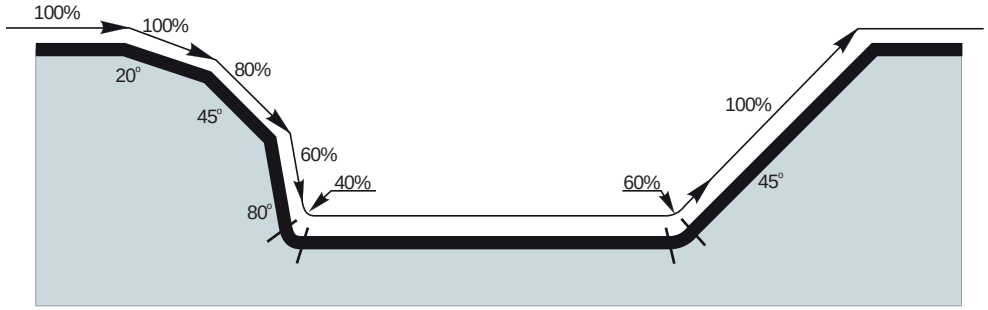
	DCX	a_p	0.3	0.4	0.5	0.7	1.0	1.25	1.5	2.0	2.5	3.0	4.0	5.0	6.0	8.0	10.0	12.0	15.0	16.0
PPH 08	**8**	DEF	3.0	3.5	3.9	4.5	5.3	5.8	6.2	6.9	7.4	7.7	8.0	–	–	–	–	–	–	–
PPH 10	**10**		3.4	3.9	4.4	5.1	6.0	6.6	7.1	8.0	8.7	9.2	9.8	10.0	–	–	–	–	–	–
PPH 12	**12**		3.7	4.3	4.8	5.6	6.6	7.3	7.9	8.9	9.7	10.4	11.3	11.8	12.0	–	–	–	–	–
PPH 16	**16**		4.3	5.0	5.6	6.5	7.7	8.6	9.3	10.6	11.6	12.5	13.9	14.8	15.5	16.0	–	–	–	–
PPH 20	**20**		4.9	5.6	6.2	7.4	8.7	9.7	10.5	12.0	13.2	14.3	16.0	17.3	18.3	19.6	20.0	–	–	–
PPH 25	**25**		5.4	6.3	7.0	8.2	9.8	10.9	11.9	13.6	15.0	16.2	18.3	20.0	21.4	23.3	24.5	25.0	–	–
PPH 32	**32**		6.17	7.11	7.94	9.36	11.14	12.40	13.53	15.49	17.18	18.65	21.17	23.24	24.98	27.71	29.66	30.98	31.94	32.00

	DCX	µm	3	5	10	15	20	30	40	50	60	80	100
PPH 08	**8**		0.310	0.400	0.566	0.693	0.800	0.980	1.131	1.265	1.386	1.600	1.789
PPH 10	**10**	FE	0.346	0.447	0.632	0.775	0.894	1.095	1.265	1.414	1.549	1.789	2.000
PPH 12	**12**		0.379	0.490	0.693	0.849	0.980	1.200	1.386	1.549	1.697	1.960	2.191
PPH 16	**16**	FE	0.438	0.566	0.800	0.980	1.131	1.386	1.600	1.789	1.960	2.263	2.530
PPH 20	**20**		0.490	0.632	0.894	1.095	1.265	1.549	1.789	2.000	2.191	2.530	2.828
PPH 25	**25**		0.548	0.707	1.000	1.225	1.414	1.732	2.000	2.236	2.449	2.828	3.162
PPH 32	**32**		0.620	0.800	1.131	1.386	1.600	1.960	2.263	2.530	2.771	3.200	3.578

DEF	a_e	1 %	2.5 %	5 %	7.5 %	10 %	15 %	20 %	25 %	30 %	35 %	40 %	45 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
	a_p										⇨ x.f									
19.9 %	1.0 %	2.86	1.84	1.33	1.12	1.00	0.89	–	–	–	–	–	–	–	–	–	–	–	–	–
31.2 %	2.5 %	3.58	2.28	1.64	1.36	1.20	1.01	0.92	0.88	0.91	–	–	–	–	–	–	–	–	–	–
43.6 %	5.0 %	4.22	2.68	1.92	1.58	1.39	1.16	1.03	0.95	0.90	0.88	0.89	–	–	–	–	–	–	–	–
52.7 %	7.5 %	4.63	2.95	2.10	1.73	1.51	1.26	1.11	1.02	0.96	0.91	0.89	0.88	0.90	–	–	–	–	–	–
60.0 %	10.0 %	4.94	3.14	2.24	1.84	1.61	1.33	1.18	1.07	1.00	0.95	0.91	0.89	0.88	1.00	–	–	–	–	–
71.4 %	15.0 %	5.39	3.42	2.43	2.00	1.74	1.44	1.27	1.15	1.07	1.01	0.96	0.93	0.90	0.88	0.93	–	–	–	–
80.0 %	20.0 %	5.70	3.62	2.57	2.11	1.84	1.52	1.33	1.21	1.12	1.05	1.00	0.96	0.93	0.89	0.88	0.89	1.00	–	–
86.6 %	25.0 %	5.93	3.76	2.67	2.20	1.91	1.58	1.38	1.25	1.16	1.08	1.03	0.99	0.95	0.90	0.88	0.88	0.89	–	–
91.7 %	30.0 %	6.10	3.87	2.75	2.26	1.96	1.62	1.42	1.28	1.18	1.11	1.05	1.01	0.97	0.92	0.89	0.88	0.88	0.93	–
95.4 %	35.0 %	6.23	3.95	2.80	2.30	2.00	1.65	1.44	1.31	1.20	1.13	1.07	1.02	0.98	0.93	0.89	0.88	0.88	0.90	–
98.0 %	40.0 %	6.31	4.00	2.84	2.33	2.03	1.67	1.46	1.32	1.22	1.14	1.08	1.03	0.99	0.93	0.90	0.89	0.88	0.89	–
99.5 %	45.0 %	6.36	4.03	2.86	2.35	2.04	1.68	1.47	1.33	1.23	1.15	1.09	1.04	1.00	0.94	0.90	0.89	0.88	0.88	–
100.0 %	50.0 %	6.38	4.04	2.87	2.35	2.05	1.69	1.48	1.33	1.23	1.15	1.09	1.04	1.00	0.94	0.90	0.89	0.88	0.88	1.00

	DCX	RE	a_p 0.0	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.25	1.5	2.0	2.5	3.0	4.0
PPHT 08-A2		0.3	7.4	8.0	–	–	–	–	–	–	–	–	–	–	–	–	–
PPHT 08-A2	**8**	0.5	7.0	7.9	8.0	8.0	–	–	–	–	–	–	–	–	–	–	–
PPHT 08-A2		0.8	6.4	7.6	7.8	7.9	7.9	8.0	8.0	–	–	–	–	–	–	–	–
PPHT 08-A2		1.0	6.0	7.4	7.6	7.7	7.8	7.9	8.0	8.0	8.0	–	–	–	–	–	–
PPHT 10-A2		0.5	9.0	9.9	10.0	10.0	–	–	–	–	–	–	–	–	–	–	–
PPHT 10-A2	**10**	0.8	8.4	9.6	9.8	9.9	9.9	10.0	10.0	–	–	–	–	–	–	–	–
PPHT 10-A2		1.0	8.0	9.4	9.6	9.7	9.8	9.9	10.0	10.0	10.0	–	–	–	–	–	–
PPHT 12-A2		0.5	11.0	11.9	12.0	12.0	–	–	–	–	–	–	–	–	–	–	–
PPHT 12-A2	**12**	1.0	10.0	11.4	11.6	11.7	11.8	11.9	12.0	12.0	12.0	–	–	–	–	–	–
PPHT 12-A2		2.0	8.0	10.1	10.4	10.6	10.9	11.0	11.2	11.3	11.5	11.7	11.9	12.0	–	–	–
PPHT 16-A2		1.0	14.0	15.4	15.6	15.7	15.8	15.9	16.0	16.0	16.0	–	–	–	–	–	–
PPHT 16-A2	**16**	1.3	13.4	15.1	15.3	15.4	15.6	15.7	15.8	15.9	15.9	16.0	–	–	–	–	–
PPHT 16-A2		2.0	12.0	14.1	14.4	14.6	14.9	15.0	15.2	15.3	15.5	15.7	15.9	16.0	–	–	–
PPHT 16-A2		3.0	10.0	12.6	13.0	13.3	13.6	13.9	14.1	14.3	14.5	14.9	15.2	15.7	15.9	16.0	–
PPHT 20-A2		1.0	18.0	19.4	19.6	19.7	19.8	19.9	20.0	20.0	20.0	–	–	–	–	–	–
PPHT 20-A2	**20**	1.6	16.8	18.7	18.9	19.1	19.3	19.4	19.6	19.7	19.8	19.9	20.0	–	–	–	–
PPHT 20-A2		3.0	14.0	16.6	17.0	17.3	17.6	17.9	18.1	18.3	18.5	18.9	19.2	19.7	19.9	20.0	–
PPHT 20-A2		4.0	12.0	15.0	15.5	15.9	16.2	16.5	16.8	17.1	17.3	17.8	18.2	18.9	19.4	19.7	20.0
PPHT 25-A2	**25**	2.0	21.0	23.1	23.4	23.6	23.9	24.0	24.2	24.3	24.5	24.7	24.9	25.0	–	–	–
PPHF 08-CE1	**8**	0.6	2.8	6.0	7.1	–	–	–	–	–	–	–	–	–	–	–	–
PPHF 10-CE1	**10**	0.8	3.6	6.8	7.9	9.0	–	–	–	–	–	–	–	–	–	–	–
PPHF 12-CE1	**12**	1.0	4.2	7.4	8.5	9.6	10.7	11.8	–	–	–	–	–	–	–	–	–
PPHF 16-CE1	**16**	1.3	5.6	8.8	9.9	11.0	12.1	13.2	14.2	15.3	–	–	–	–	–	–	–
PPHF 20-CE1	**20**	1.6	7.2	10.4	11.5	12.6	13.7	14.8	15.8	16.9	18.0	–	–	–	–	–	–
PPHF 25-CE1	**25**	1.9	9.2	12.4	13.5	14.6	15.7	16.8	17.8	18.9	20.0	22.7	–	–	–	–	–

DCX	µm	3	5	10	15	20	30	40	50	60	80	100
8	FE	0.310	0.400	0.566	0.693	0.800	0.980	1.131	1.265	1.386	1.600	1.789
10		0.346	0.447	0.632	0.775	0.894	1.095	1.265	1.414	1.549	1.789	2.000
12		0.379	0.490	0.693	0.849	0.980	1.200	1.386	1.549	1.697	1.960	2.191
16		0.438	0.566	0.800	0.980	1.131	1.386	1.600	1.789	1.960	2.263	2.530
20		0.490	0.632	0.894	1.095	1.265	1.549	1.789	2.000	2.191	2.530	2.828
25		0.548	0.707	1.000	1.225	1.414	1.732	2.000	2.236	2.449	2.828	3.162
RE	**µm**	**3**	**5**	**10**	**15**	**20**	**30**	**40**	**50**	**60**	**80**	**100**
1.3	FE	0.177	0.228	0.322	0.395	0.456	0.559	0.645	0.721	0.790	0.912	1.020
1.6		0.196	0.253	0.358	0.438	0.506	0.620	0.716	0.800	0.876	1.012	1.131
1.9		0.214	0.276	0.390	0.477	0.551	0.675	0.780	0.872	0.955	1.103	1.233
2.0		0.219	0.283	0.400	0.490	0.566	0.693	0.800	0.894	0.980	1.131	1.265
3.0		0.268	0.346	0.490	0.600	0.693	0.849	0.980	1.095	1.200	1.386	1.549
4.0		0.310	0.400	0.566	0.693	0.800	0.980	1.131	1.265	1.386	1.600	1.789



	DCX	RE	max
PPHT 08-A2	8	0.3	2.4
PPHT 08-A2		0.5	2.4
PPHT 08-A2		0.8	2.5
PPHT 08-A2		1.0	2.7
PPHT 10-A2	10	0.5	3.2
PPHT 10-A2		0.8	3.3
PPHT 10-A2		1.0	3.4
PPHT 12-A2	12	0.5	4.0
PPHT 12-A2		1.0	4.2
PPHT 12-A2		2.0	4.6
PPHT 16-A2	16	1.0	5.7
PPHT 16-A2		1.3	5.8
PPHT 16-A2		2.0	6.0
PPHT 16-A2		3.0	6.4
PPHT 20-A2	20	1.0	7.2
PPHT 20-A2		1.6	7.4
PPHT 20-A2		3.0	7.8
PPHT 20-A2		4.0	8.2
PPHT 25-A2	25	2.0	9.3

	DCX	RE	max
PPHF 08-CE1	8	0.6	2.0
PPHF 10-CE1	10	0.8	2.5
PPHF 12-CE1	12	1.0	3.0
PPHF 16-CE1	16	1.3	4.0
PPHF 20-CE1	20	1.6	5.0
PPHF 25-CE1	25	1.9	6.0

	DCX	RE	RPMX	APMX/l
PPHT 08-A2	8	0.3	6.3	1.2/11
PPHT 08-A2		0.5	6.1	1.2/12
PPHT 08-A2		0.8	5.7	1.2/12
PPHT 08-A2		1.0	6.8	1.2/11
PPHT 10-A2	10	0.5	6.9	1.5/13
PPHT 10-A2		0.8	6.6	1.5/13
PPHT 10-A2		1.0	7.5	1.5/12
PPHT 12-A2	12	0.5	7.9	1.8/13
PPHT 12-A2		1.0	7.5	1.8/14
PPHT 12-A2		2.0	9.0	1.8/12
PPHT 16-A2	16	1.0	8.9	2.4/16
PPHT 16-A2		1.3	8.9	2.4/16
PPHT 16-A2		2.0	8.5	2.4/17
PPHT 16-A2		3.0	12.3	2.4/11
PPHT 20-A2	20	1.0	9.3	3/19
PPHT 20-A2		1.6	9.1	3/19
PPHT 20-A2		3.0	8.8	3/20
PPHT 20-A2		4.0	11.4	3/15
PPHT 25-A2	25	2.0	8.3	3.7/26

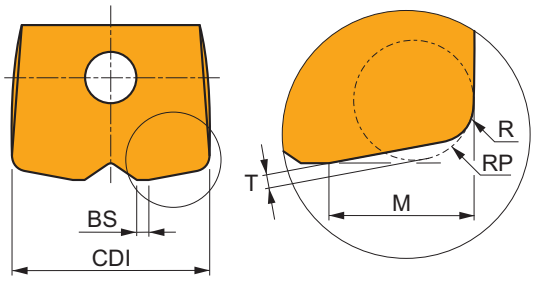
	DCX	RE	RPMX	APMX/l
PPHF 08-CE1	8	0.6	8.0	0.4/3
PPHF 10-CE1	10	0.8	8.0	0.5/4
PPHF 12-CE1	12	1.0	8.0	0.6/5
PPHF 16-CE1	16	1.3	8.0	0.8/6
PPHF 20-CE1	20	1.6	8.0	1.0/8
PPHF 25-CE1	25	1.9	8.0	1.2/9

	DCX	RE	DMIN	DMAX	SMAX DMIN	SMAX DMAX
PPHT 08-A2	8	0.3	11.0	15.9	0.5	0.5
PPHT 08-A2		0.5	10.9	15.9	0.5	0.5
PPHT 08-A2		0.8	10.7	15.9	0.4	0.4
PPHT 08-A2		1.0	10.3	15.9	0.4	0.4
PPHT 10-A2	10	0.5	13.4	19.9	0.7	0.7
PPHT 10-A2		0.8	13.2	19.9	0.6	0.6
PPHT 10-A2		1.0	12.9	19.9	0.6	0.6
PPHT 12-A2	12	0.5	15.8	23.9	1.0	1.0
PPHT 12-A2		1.0	15.4	23.9	0.8	0.8
PPHT 12-A2		2.0	14.6	23.9	0.7	0.7
PPHT 16-A2	16	1.0	20.4	31.9	1.3	1.3
PPHT 16-A2		1.3	20.2	31.9	1.3	1.3
PPHT 16-A2		2.0	19.7	31.9	1.0	1.0
PPHT 16-A2		3.0	18.9	31.9	1.2	1.2
PPHT 20-A2	20	1.0	25.4	39.9	1.8	1.8
PPHT 20-A2		1.6	24.9	39.9	1.6	1.6
PPHT 20-A2		3.0	24.1	39.9	1.2	1.2
PPHT 20-A2		4.0	23.3	39.9	1.3	1.3
PPHT 25-A2	25	2.0	31.1	49.9	1.8	1.8

	DCX	RE	DMIN	DMAX	SMAX DMIN	SMAX DMAX
PPHF 08-CE1	8	0.6	10.0	14.7	0.40	0.40
PPHF 10-CE1	10	0.8	13.0	18.4	0.50	0.50
PPHF 12-CE1	12	1.0	15.7	22.0	0.60	0.60
PPHF 16-CE1	16	1.3	20.9	29.4	0.80	0.80
PPHF 20-CE1	20	1.6	26.2	36.7	1.00	1.00
PPHF 25-CE1	25	1.9	33.0	46.1	1.20	1.20

	DCX	RE	a_p
PPHT 08-A2	**8**	0.3	0.52
PPHT 08-A2		0.5	0.47
PPHT 08-A2		0.8	0.39
PPHT 08-A2		1.0	0.40
PPHT 10-A2	**10**	0.5	0.69
PPHT 10-A2		0.8	0.61
PPHT 10-A2		1.0	0.62
PPHT 12-A2	**12**	0.5	0.97
PPHT 12-A2		1.0	0.79
PPHT 12-A2		2.0	0.68
PPHT 16-A2	**16**	1.0	1.33
PPHT 16-A2		1.3	1.26
PPHT 16-A2		2.0	1.03
PPHT 16-A2		3.0	1.15
PPHT 20-A2	**20**	1.0	1.80
PPHT 20-A2		1.6	1.59
PPHT 20-A2		3.0	1.21
PPHT 20-A2		4.0	1.27
PPHT 25-A2	**25**	2.0	1.83

	DCX	RE	a_p
PPHF 08-CE1	**8**	0.6	0.40
PPHF 10-CE1	**10**	0.8	0.50
PPHF 12-CE1	**12**	1.0	0.60
PPHF 16-CE1	**16**	1.3	0.80
PPHF 20-CE1	**20**	1.6	1.00
PPHF 25-CE1	25	1.9	1.20



DCX	R	RP	M	T
08	0.6	1.0	2.6	0.3
10	0.8	1.2	3.2	0.4
12	1.0	1.5	3.9	0.4
16	1.3	2.0	5.2	0.6
20	1.6	2.5	6.4	0.7
25	1.9	3.0	7.9	0.9

Voladizo (múltiplo del diámetro *DCX*)	**< 3.0**	**3.0 – 3.5**	**3.6 – 4.0**	**4.1 – 4.5**	**> 4.6**
Factor de multiplicación para la velocidad de corte	1.0	0.9	0.8	0.7	0.5

K3-CXP

P M K S H

PRAMET

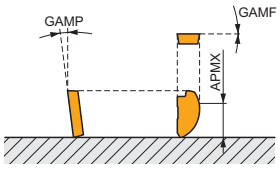
C

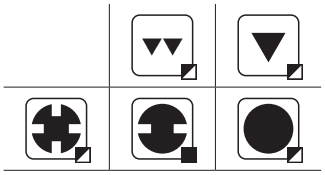
MULTISIDE XP Fresa de Perfilado

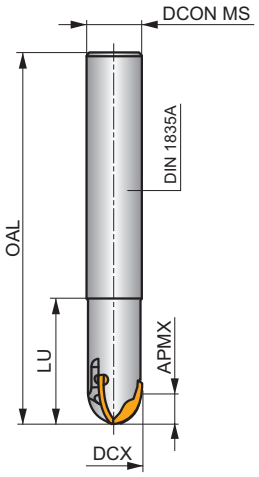
Fresa de punta esférica que utiliza plaquitas tipo XP.. con APMX de 8 hasta 16 mm. Fijación exclusiva que permite el montaje de 3 plaquitas. Disponible con mango cilíndrico y modular. Cuerpo tratado para alargar la vida de herramienta.

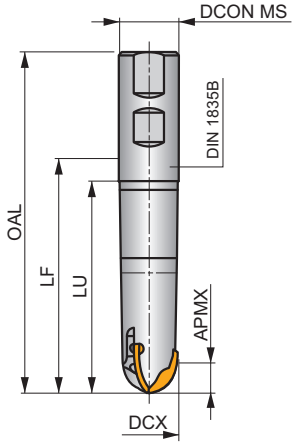
MULTISIDE XP

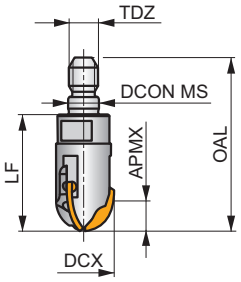
APMX	8.0 - 16.0 mm











h_m 0.05 - 0.19

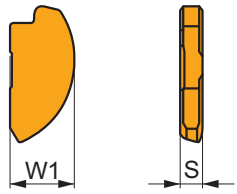
	Producto	DCX (mm)	OAL (mm)	DCON MS (mm)	LU (mm)	LUX (mm)	LF (mm)	TDZ	APMX (mm)	GAMF (°)	GAMP (°)			max.		kg		
	16K3R050A16-CXP16	16	200	16	50	–	–	–	8.00	0	-5	3	–	22600	–	0.35	GI267	C0520
	16K3R050A20-CXP16	16	200	20	50	–	–	–	8.00	0	-5	3	–	22600	–	0.50	GI267	C0520
DIN 1835A	**20K3R050A20-CXP20**	20	200	20	50	–	–	–	10.00	0	-5	3	–	20000	–	0.52	GI268	C0521
	20K3R060A25-CXP20	20	250	25	60	–	–	–	10.00	0	-5	3	–	20000	–	0.92	GI268	C0521
	25K3R060A25-CXP25	25	250	25	60	–	–	–	12.50	0	-5	3	–	20000	–	0.96	GI269	C0522
	32K3R080A32-CXP32	32	250	32	80	–	–	–	16.00	0	-5	3	–	15000	–	1.50	GI270	C0523
	16K3R060B20-CXP16	16	111	20	60	–	86.5	–	8.00	0	-5	3	–	22600	–	0.23	GI267	C0520
DIN 1835B	**20K3R070B25-CXP20**	20	127	25	70	–	95.5	–	10.00	0	-5	3	–	20000	–	0.41	GI268	C0521
	25K3R080B25-CXP25	25	137	25	80	–	105	–	12.50	0	-5	3	–	20000	–	0.49	GI269	C0522
	16K3R035M10-CXP16	16	–	10.5	–	–	35	M10	8.00	0	-5	3	–	–	–	0.07	GI267	C0520
MODULAR	**20K3R040M10-CXP20**	20	–	10.5	–	–	40	M10	10.00	0	-5	3	–	–	–	0.07	GI268	C0521
	25K3R045M12-CXP25	25	–	12.5	–	–	45	M12	12.50	0	-5	3	–	–	–	0.16	GI269	C0522

GI267	XP 16..
GI268	XP 20..
GI269	XP 25..
GI270	XP 32..

		Nm			
C0520	US 63009-T09P	1.2	M 3	9	Flag T09P
C0521	US 63513-T15P	3.0	M 3.5	13	Flag T15P
C0522	US 64014-T15P	3.5	M 4	14	Flag T15P
C0523	US 65017-T20P	5.0	M 5	17	Flag T20P

XP

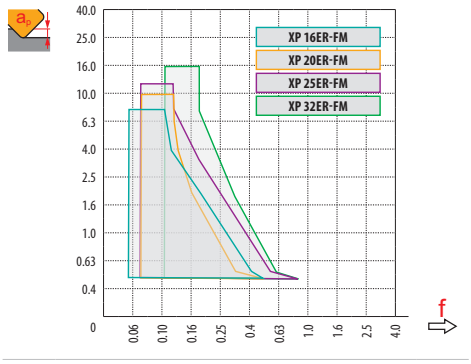
	W1 (mm)	S (mm)
16	16.000	2.00
20	20.000	2.50
25	25.000	3.17
32	32.000	4.00



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

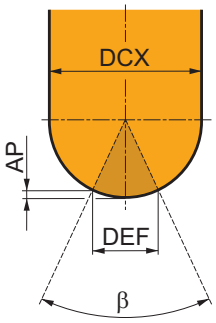
Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
		U **E**																	
FM geometría con diseño neutro para mecanizado ligero.																			
XP 16ER-FM:M8310	–	■ 285	0.27	0.8	◪ 145	0.24	0.8	■ 270	0.27	0.8	–	–	–	–	–	–	■ 55	0.19	0.8
XP 20ER-FM:M8330	–	■ 260	0.27	1.0	◪ 155	0.24	1.0	■ 245	0.27	1.0	–	–	–	◪ 65	0.19	1.0	◪ 50	0.19	1.0
XP 20ER-FM:M8345	–	■ 190	0.27	1.0	◪ 110	0.24	1.0	–	–	–	–	–	–	◪ 45	0.19	1.0	–	–	–
XP 25ER-FM:M8310	–	■ 270	0.27	1.3	◪ 135	0.24	1.3	■ 255	0.27	1.3	–	–	–	–	–	–	■ 50	0.19	1.3
XP 32ER-FM:M8345	–	■ 180	0.27	1.6	◪ 105	0.24	1.6	–	–	–	–	–	–	◪ 45	0.19	1.6	–	–	–

	XP 16-FM	XP 20-FM	XP 25-FM	XP 32-FM
RE	8.0	10.0	12.5	16.0
BS	–	–	–	–



DCX	a_p	0.3	0.4	0.5	0.7	1.0	1.25	1.5	2.0	2.5	3.0	4.0	5.0	6.0	8.0	10.0	12.0	15.0
16	DEF	4.3	5.0	5.6	6.5	7.7	8.6	9.3	10.6	11.6	12.5	13.9	14.8	15.5	16.0	–	–	–
20		4.9	5.6	6.2	7.4	8.7	9.7	10.5	12.0	13.2	14.3	16.0	17.3	18.3	19.6	20.0	–	–
25		5.4	6.3	7.0	8.2	9.8	10.9	11.9	13.6	15.0	16.2	18.3	20.0	21.4	23.3	24.5	25.0	–
32		6.2	7.1	7.9	9.4	11.1	12.4	13.5	15.5	17.2	18.7	21.2	23.2	25.0	27.7	29.7	31.2	31.9

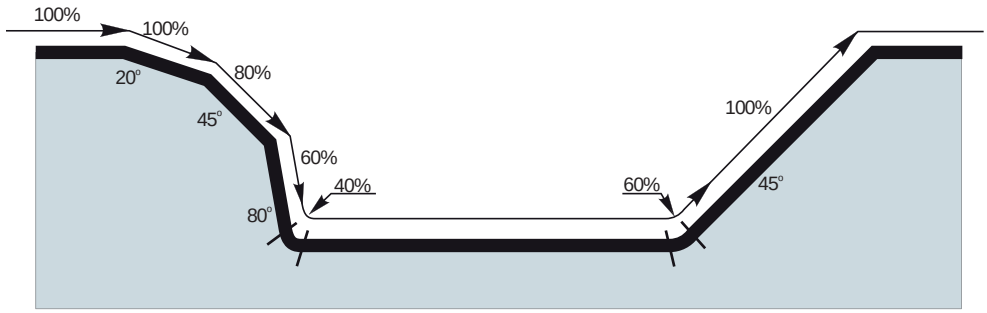
Área efectiva para 1 filo de corte.



DCX	β	DEF	AP
16	41°	5.568	0.51
20	37°	6.314	0.52
25	37°	7.901	0.65
32	37°	10.122	0.83

DCX	µm	3	5	10	15	20	30	40	50	60	80	100
16	FE	0.438	0.566	0.800	0.980	1.131	1.386	1.600	1.789	1.960	2.263	2.530
20		0.490	0.632	0.894	1.095	1.265	1.549	1.789	2.000	2.191	2.530	2.828
25	FE	0.548	0.707	1.000	1.225	1.414	1.732	2.000	2.236	2.449	2.828	3.162
32		0.620	0.800	1.131	1.386	1.600	1.960	2.263	2.530	2.771	3.200	3.578

DEF	a_e	1.0 %	2.5 %	5.0 %	7.5 %	10 %	15 %	20 %	25 %	30 %	35 %	40 %	45 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
	a_p										⇨x.f									
19.9 %	1.0 %	2.86	1.84	1.33	1.12	1.00	0.89	–	–	–	–	–	–	–	–	–	–	–	–	–
31.2 %	2.5 %	3.58	2.28	1.64	1.36	1.20	1.01	0.92	0.88	0.91	–	–	–	–	–	–	–	–	–	–
43.6 %	5.0 %	4.22	2.68	1.92	1.58	1.39	1.16	1.03	0.95	0.90	0.88	0.89	–	–	–	–	–	–	–	–
52.7 %	7.5 %	4.63	2.95	2.10	1.73	1.51	1.26	1.11	1.02	0.96	0.91	0.89	0.88	0.90	–	–	–	–	–	–
60.0 %	10.0 %	4.94	3.14	2.24	1.84	1.61	1.33	1.18	1.07	1.00	0.95	0.91	0.89	0.88	1.00	–	–	–	–	–
71.4 %	15.0 %	5.39	3.42	2.43	2.00	1.74	1.44	1.27	1.15	1.07	1.01	0.96	0.93	0.90	0.88	0.93	–	–	–	–
80.0 %	20.0 %	5.70	3.62	2.57	2.11	1.84	1.52	1.33	1.21	1.12	1.05	1.00	0.96	0.93	0.89	0.88	0.89	1.00	–	–
86.6 %	25.0 %	5.93	3.76	2.67	2.20	1.91	1.58	1.38	1.25	1.16	1.08	1.03	0.99	0.95	0.90	0.88	0.88	0.89	–	–
91.7 %	30.0 %	6.10	3.87	2.75	2.26	1.96	1.62	1.42	1.28	1.18	1.11	1.05	1.01	0.97	0.92	0.89	0.88	0.88	0.93	–
95.4 %	35.0 %	6.23	3.95	2.80	2.30	2.00	1.65	1.44	1.31	1.20	1.13	1.07	1.02	0.98	0.93	0.89	0.88	0.88	0.90	–
98.0 %	40.0 %	6.31	4.00	2.84	2.33	2.03	1.67	1.46	1.32	1.22	1.14	1.08	1.03	0.99	0.93	0.90	0.89	0.88	0.89	–
99.5 %	45.0 %	6.36	4.03	2.86	2.35	2.04	1.68	1.47	1.33	1.23	1.15	1.09	1.04	1.00	0.94	0.90	0.89	0.88	0.88	–
100.0 %	50.0 %	6.38	4.04	2.87	2.35	2.05	1.69	1.48	1.33	1.23	1.15	1.09	1.04	1.00	0.94	0.90	0.89	0.88	0.88	1.00



Voladizo (múltiplo del diámetro *DCX*)	< 3.0	3.1 – 4.0	4.1 – 6.0	> 6.1
Factor de multiplicación para la velocidad de corte	1.0	0.9	0.7	0.5

PLANEADO

	SVC22C	SCN05C	SWN04C			
	90°	90° (93°)	90° (93°)			
	APMX (mm) 3.0 (16.0)	APMX (mm) 0.5 (1.0)	APMX (mm) 0.5 (2.0)			
	DC (mm) 32 – 80	DC (mm) 12 – 20	DC (mm) 16 – 35			
Mango cilíndrico	DC = 32, 40 (mm)	DC = 12 – 20 (mm)	DC = 16 – 32 (mm)			
Weldon						
Modular	DC = 32, 40 (mm)	DC = 12 – 20 (mm)	DC = 16 – 35 (mm)			
Portafresas	DC = 50 – 80 (mm)					
Página	240	243	246			
ISO	N	P K H	P K H			
Forma de la plaquita						
Plaquitas de corte	VCGT 220530	CN.. 0502	WN.. 0403			
N.º de filos de corte	2	4	6			
Superficies contorneadas (fresado en copia)		■	■			
Planeado		■	■			
Interpolación helicoidal	■					
Fresado axial progresivo	■					
Mecanizado en rampa	◪	■	■			
Ranurado poco profundo	◪					
Escuadrado profundo	◪	■	■			
Fresado axial (plunge)		■	■			

■ Primera Opción ◪ Opción Alternativa

SVC22C

N

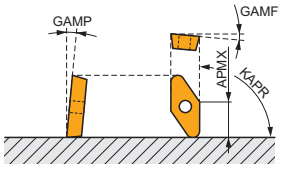
PRAMET

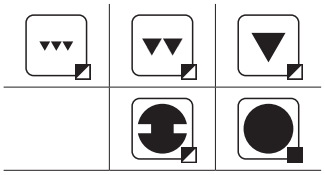
S

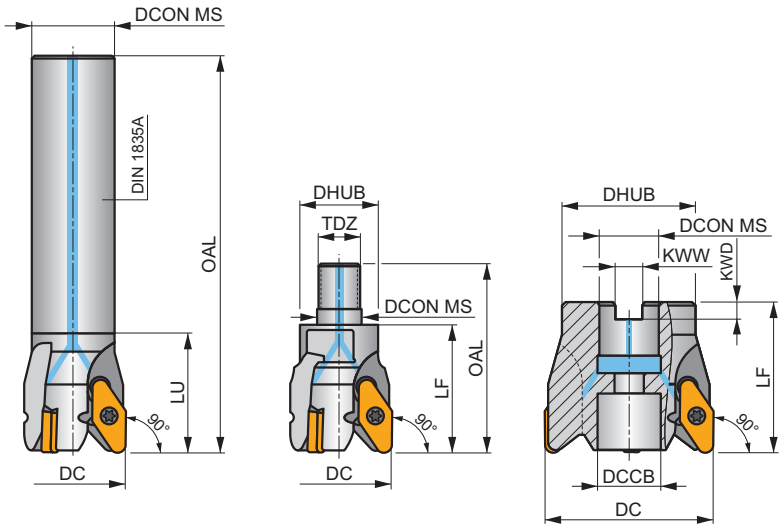
Fresas para Mecanizado de Materiales No Férreos con Refrigeración Interna

Fresa de alta productividad para aluminio y materiales no férreos que utiliza plaquitas VCGT 22 con APMX de 16 mm. Refrigeración interna. Adecuada para planeado, fresado axial progresivo (plunge), escuadrado, ranurado y fresado en rampa. Disponible con mango cilíndrico, modular y para portafresas. Cuerpo tratado para alargar la vida de herramienta.

KAPR	90°
APMX	3.0 (16.0) mm







h_m	0.03 - 0.5
h_m	0.03 - 0.55

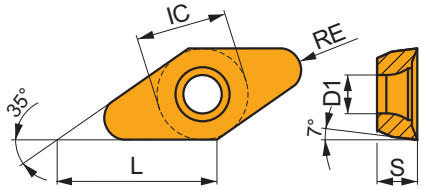
	Producto	DC (mm)	OAL (mm)	DCON MS (mm)	DCCB (mm)	LU (mm)	LF (mm)	DHUB (mm)	TDZ	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		kg		
DIN 1835A	**32A2R045A25-SVC22C**	32	120	25	–	45	–	–	–	–	–	4	3	2	–	10400	✓	0.46	GI141	C0560
	40A3R045A32-SVC22C	40	150	32	–	45	–	–	–	–	–	8	3	3	–	9300	✓	0.91	GI141	C0560
MODULAR	**32A2R048M16-SVC22C**	32	71	17	–	–	48	29	M16	–	–	11	3	2	–	–	✓	0.17	GI141	C0560
	40A3R048M16-SVC22C	40	71	17	–	–	48	29	M16	–	–	13	3	3	–	–	✓	0.24	GI141	C0560
ISO 6462 DIN 8030	**50A03R-S90VC22C**	50	–	22	18	–	56	40	–	10	6.3	4	3	3	–	8400	✓	0.42	GI141	C0563
	63A04R-S90VC22C	63	–	22	18	–	56	50	–	10	6.3	6	3	4	–	7400	✓	0.68	GI141	C0563
	80A05R-S90VC22C	80	–	27	20	–	56	63	–	12	7	8	3	5	–	6600	✓	1.12	GI141	C0562

GI141	VCGT 220530F-FA

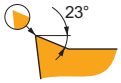
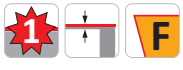
		Nm					
C0560	US 4511-T20	5.0	M 4.5	11	–	–	Flag T20
C0562	US 4511-T20	5.0	M 4.5	11	SDR T20-T	–	–
C0563	US 4511-T20	5.0	M 4.5	11	SDR T20-T	HS 1030C	–

VCGT 22-FA

	IC	D1	L	S
	(mm)	(mm)	(mm)	(mm)
2205	12.700	5.20	22.00	5.50

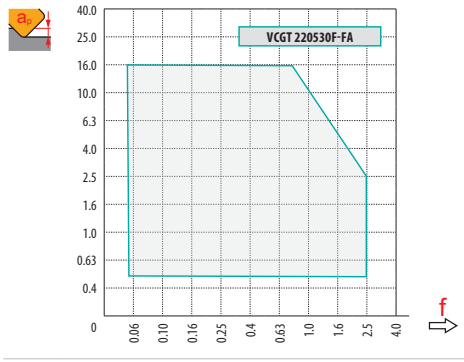


Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
																				
FA geometría muy positiva para mecanizado medio a desbaste.																				
VCGT 220515F-FA:HF7	●	1.5	–	–	–	–	–	–	–	–	–	■ 255	0.24	0.4	–	–	–	–	–	–
VCGT 220520F-FA:HF7	●	2.0	–	–	–	–	–	–	–	–	–	■ 255	0.30	0.5	–	–	–	–	–	–
VCGT 220530F-FA:HF7	●	3.0	–	–	–	–	–	–	–	–	–	■ 210	0.48	1.0	–	–	–	–	–	–

a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	VCGT 22-FA		
RE	1.5	2.0	3.0
BS	–	–	–



a_p	0.5	3.0	12.0
f	0.86	0.31	0.05

DC	RPMX	APMX/I
32	8.0	12.0/87
40	8.0	12.0/87
50	6.0	10.4/100
63	4.2	7.2/100
80	3.1	5.3/100

DC	DMIN	DMAX	SMAX DMIN	SMAX DMAX
32	42.0	64.0	4.2	12.0
40	58.0	80.0	7.7	12.0
50	78.0	100.0	9.0	12.0
63	104.0	126.0	9.3	12.0
80	138.0	160.0	9.7	12.0

a_p
9

DC	µm	3	5	10	15	20	30	40	50	60	80	100
32	FE	0.620	0.800	1.131	1.386	1.600	1.960	2.263	2.530	2.771	3.200	3.578
40		0.693	0.894	1.265	1.549	1.789	2.191	2.530	2.828	3.098	3.578	4.000
50		0.775	1.000	1.414	1.732	2.000	2.449	2.828	3.162	3.464	4.000	4.472
63		0.869	1.122	1.587	1.944	2.245	2.750	3.175	3.550	3.888	4.490	5.020
80		0.980	1.265	1.789	2.191	2.530	3.098	3.578	4.000	4.382	5.060	5.657
RE	µm	3	5	10	15	20	30	40	50	60	80	100
3.0	FE	0.268	0.346	0.490	0.600	0.693	0.849	0.980	1.095	1.200	1.386	1.549

SCN05C

P K H

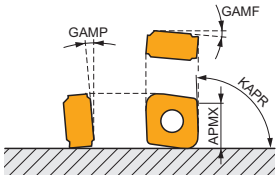
PRAMET

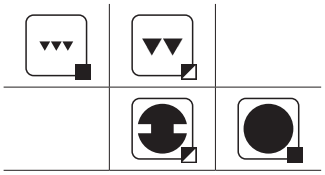
S

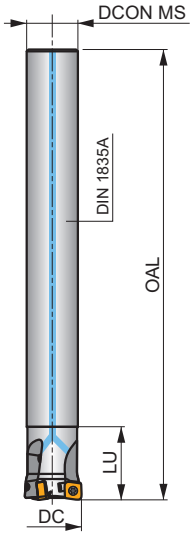
Fresas para Aplicaciones de Moldes y Matrices con Refrigeración Interna

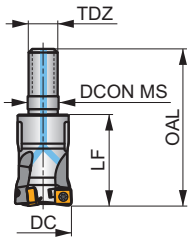
Fresa para una amplia gama de aplicaciones en el área de acabado de Moldes y Matrices, con APMX de 0.5 mm. Plaquitas rectificadas CNHX 05 de doble cara con 4 filos de corte, que proporcionan alta precisión y economía. Disponible con mango cilíndrico y modular. Cuerpo tratado para alargar la vida de herramienta.

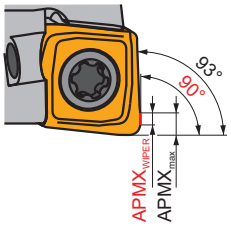
KAPR	90° (93°)
APMX	0.5 (1.0 mm)











h_m 0.02 - 0.07

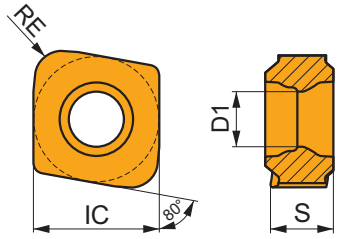
	Producto	DC (mm)	OAL (mm)	DCON MS (mm)	LU (mm)	LF (mm)	TDZ	GAMF (°)	GAMP (°)			max.		kg		
DIN 1835A	12A2R020A10-SCN05C-C	12	100	10	20	–	–	-15	-8	2	–	48700	✓	0.08	GI330	C0601
	16A3R020A14-SCN05C-C	16	130	14	20	–	–	-13.5	-7.8	3	–	42200	✓	0.16	GI330	C0601
	20A5R020A18-SCN05C-C	20	160	18	20	–	–	-12.7	-7.5	5	✓	37700	✓	0.31	GI330	C0601
MODULAR	12A2R020M06-SCN05C-C	12	35	6.5	–	20	M6	-15	-8	2	–	–	✓	0.04	GI330	C0601
	16A3R025M08-SCN05C-C	16	43	8.5	–	25	M8	-13.5	-7.8	3	–	–	✓	0.05	GI330	C0601
	20A5R030M10-SCN05C-C	20	49	10.5	–	30	M10	-12.7	-7.5	5	✓	–	✓	0.08	GI330	C0601

GI330	CNHX0502..

C0601	US 62005-T06P	0.9 Nm	M 2	4.9	Flag T06P

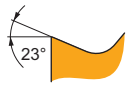
CNHX 05

	IC	D1	S
	(mm)	(mm)	(mm)
0502	4.800	2.10	2.40



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)



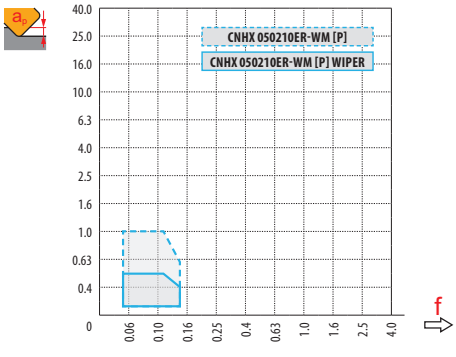
WM geometría rascadora (Wiper) para semiacabado y acabado.

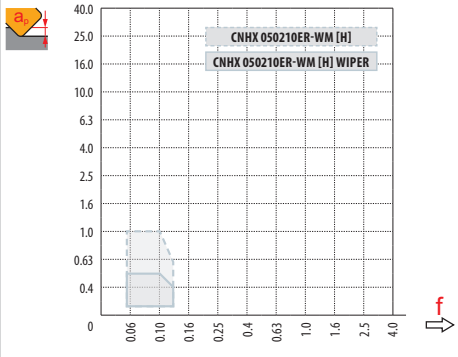
CNHX 050205ER-WM:M4310	●	0.5	◪	350	0.10	0.5	–	–	–	■	335	0.10	0.5	–	–	–	–	–	–	■	70	0.10	0.5
CNHX 050205ER-WM:M8330	⬌	0.5	■	310	0.10	0.5	–	–	–	■	290	0.10	0.5	–	–	–	–	–	–	◪	60	0.10	0.5
CNHX 050210ER-WM:M4310	⬌	1.0	◪	440	0.10	0.5	–	–	–	■	420	0.10	0.5	–	–	–	–	–	–	■	85	0.10	0.5
CNHX 050210ER-WM:M8330	⬌	1.0	■	390	0.10	0.5	–	–	–	■	370	0.10	0.5	–	–	–	–	–	–	◪	75	0.10	0.5

a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00

a_e / DC	0.5 %	1.0 %	2.0 %	3.0 %	4.0 %	5.0 %
X.V	2.04	1.85	1.68	1.59	1.53	1.48

	CNHX 05-WM	
RE	0.5	1.0
BS	0.50	0.50





DC	max
12	0.4
16	0.4
20	0.5

DC	RPMX	APMX/I
12	2.4	1/25
16	1.5	1/40
20	1.1	1/54

SWN04C

P K H

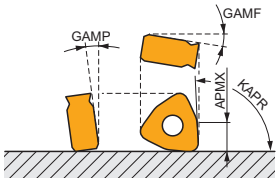
PRAMET

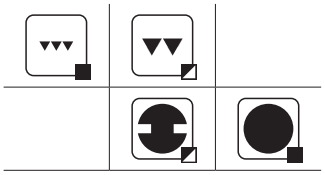
S

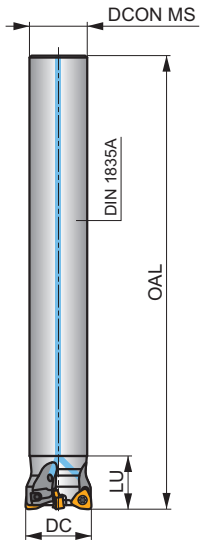
Fresas para Aplicaciones de Moldes y Matrices con Refrigeración Interna

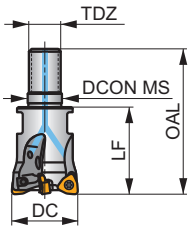
Fresa para una amplia gama de aplicaciones en el área de acabado de Moldes y Matrices, con APMX de 0.5 mm. Plaquitas rectificadas WNHX 04 con 6 filos de corte, que proporcionan alta precisión y economía. Disponible con mango cilíndrico y modular. Cuerpo tratado para alargar la vida de herramienta.

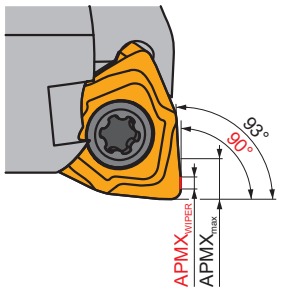
KAPR	90° (93°)
APMX	0.5 (2.0 mm)











h_m 0.02 - 0.07

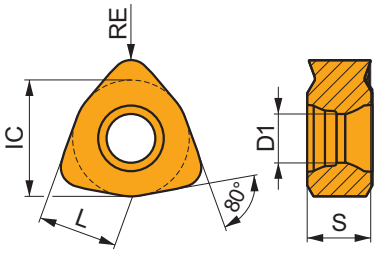
	Producto	DC (mm)	OAL (mm)	DCON MS (mm)	LU (mm)	LF (mm)	TDZ	GAMF (°)	GAMP (°)			max.		kg		
DIN 1835A	**16A2R020A14-SWN04C-C**	16	140	14	20	–	–	-13.5	-8	2	–	33200	✓	0.14	GI331	C0602
	20A3R020A18-SWN04C-C	20	160	18	20	–	–	-12	-8	3	–	19700	✓	0.27	GI331	C0602
	25A4R020A22-SWN04C-C	25	180	22	20	–	–	-11.5	-8	4	✓	26600	✓	0.45	GI331	C0602
	32A6R020A25-SWN04C-C	32	200	25	20	–	–	-11.2	-8	6	✓	23500	✓	0.69	GI331	C0602
MODULAR	**16A2R025M08-SWN04C-C**	16	43	8.5	–	25	M08	-13.5	-8	2	–	33200	✓	0.05	GI331	C0602
	20A3R030M10-SWN04C-C	20	49	10.5	–	30	M10	-12	-8	3	–	–	✓	0.07	GI331	C0602
	25A4R033M12-SWN04C-C	25	55	12.5	–	33	M12	-11.5	-8	4	✓	–	✓	0.10	GI331	C0602
	32A6R040M16-SWN04C-C	32	63	17	–	40	M16	-11.2	-8	6	✓	–	✓	0.21	GI331	C0602
	35A6R043M16-SWN04C-C	35	66	17	–	43	M16	-11.1	-8	6	✓	–	✓	0.22	GI331	C0602

GI331	WNHX0403..

C0602	US 42507-T07P	1.2	M 2.5	7	Flag T07P

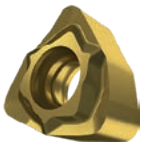
WNHX 04

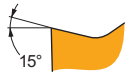
	IC	D1	S
	(mm)	(mm)	(mm)
0403	6.200	2.60	3.38



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)





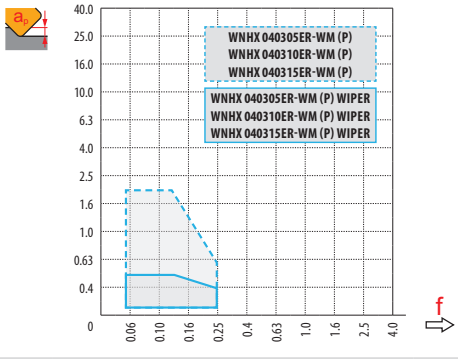
WM geometría rascadora (Wiper) para semiacabado y acabado.

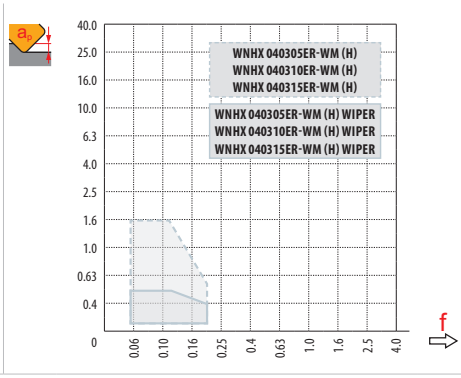
WNHX 040305ER-WM:M4310	●	0.5	◪	290	0.15	1.0	–	–	–	■	275	0.15	1.0	–	–	–	–	–	–	■	55	0.10	0.7
WNHX 040305ER-WM:M8330	⬌	0.5	■	260	0.15	1.0	–	–	–	■	245	0.15	1.0	–	–	–	–	–	–	◪	50	0.10	0.7
WNHX 040310ER-WM:M4310	⬌	1.0	◪	370	0.15	1.0	–	–	–	■	350	0.15	1.0	–	–	–	–	–	–	■	70	0.10	0.7
WNHX 040310ER-WM:M8330	⬌	1.0	■	330	0.15	1.0	–	–	–	■	310	0.15	1.0	–	–	–	–	–	–	◪	65	0.10	0.7
WNHX 040315ER-WM:M4310	⬌	1.5	◪	390	0.15	1.0	–	–	–	■	370	0.15	1.0	–	–	–	–	–	–	■	75	0.10	0.7
WNHX 040315ER-WM:M8330	⬌	1.5	■	345	0.15	1.0	–	–	–	■	325	0.15	1.0	–	–	–	–	–	–	◪	65	0.10	0.7

a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00

a_e / DC	0.5 %	1.0 %	2.0 %	3.0 %	4.0 %	5.0 %
X.V	2.04	1.85	1.68	1.59	1.53	1.48

	WNHX 04-WM		
RE	0.5	1.0	1.5
BS	0.50	0.50	0.50



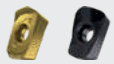


DC	max
16	
20	0.4
25	0.5
32	0.5
35	0.5

DC	RPMX	APMX/I
16		
20	0.7	1.1/100
25	0.5	0.75/100
32	0.3	0.4/100
35	0.3	0.4/100

FRESADO DE ALTO AVANCE

PLANEADO

	SBN10	SSN11				
	20°	18°				
	APMX (mm) 1.0	APMX (mm) 1.7				
	DCX (mm) 16 – 66	DCX (mm) 32 – 125				
Mango cilíndrico	DCX = 16 – 35 (mm)	DCX = 32, 35 (mm)				
Weldon						
Modular	DCX = 16 – 40 (mm)	DCX = 32 – 40 (mm)				
Portafresas	DCX = 40 – 66 (mm)	DCX = 40 – 125 (mm)				
Página	252	258				
ISO	P M K S H	P M K S H				
Forma de la plaquita						
Plaquitas de corte	BNGX 10T3 ANHX 10T3	SNGX 1104				
N.º de filos de corte	4 / 2	8				
Planeado	■	■				
Interpolación helicoidal	■	◪				
Escuadrado poco profundo	■	■				
Fresado axial (plunge)	■	■				
Fresado axial progresivo	■	◪				
Mecanizado en rampa	■	◪				
Fresado de superficies conformadas (fresado en copia)	■	■				
Ranurado poco profundo	◪	◪				

■ Primera Opción ◪ Opción Alternativa

SBN10

P M K S H

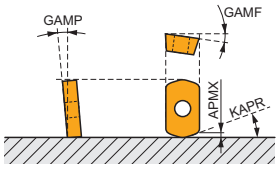
PRAMET

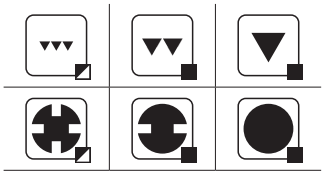
S

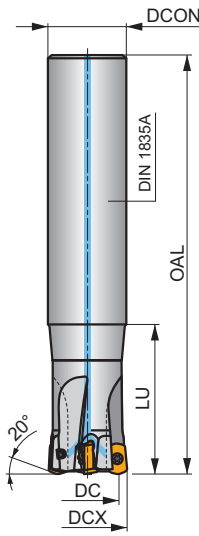
Fresa de Alto Avance para Plaquitas BN.. 10 con refrigeración Interna

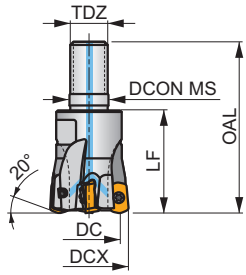
Fresa de alto avance en diámetros pequeños que utiliza plaquitas de doble cara BNGX 10 con 4 filos de corte y APMX de 1 mm. Refrigeración interna. Adecuada para una amplia gama de operaciones. Disponible con mango cilíndrico, modular y para portafresas. Cuerpo tratado para alargar la vida de herramienta.

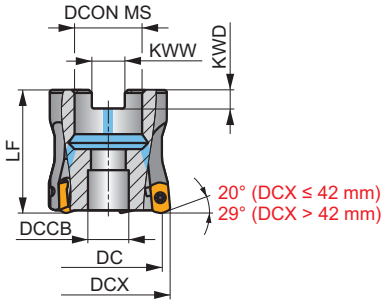
KAPR	20° (29°)
APMX	1.0 mm











h_m	0.17 - 0.41
h_m	0.17 - 0.41

	Producto	DCX (mm)	DC (mm)	OAL (mm)	DCON MS (mm)	DCCB (mm)	LU (mm)	LF (mm)	TDZ	KWW (mm)	KWD (mm)	KAPR (°)	GAMF (°)	GAMP (°)			max.		kg		
	16E2R030A16-SBN10-C	16	9.4	100	16	–	30	–	–	–	–	20	-12	-10	2	✓	31100	✓	0.13	GI329	C0310
	16E2R050A16-SBN10-C	16	9.4	150	16	–	50	–	–	–	–	20	-12	-10	2	–	31100	✓	0.18	GI329	C0310
	16E2R030A14-SBN10-C	16	9.4	150	14	–	30	–	–	–	–	20	-12	-10	2	–	31100	✓	0.18	GI329	C0310
	18E2R030A16-SBN10-C	18	11.4	150	16	–	30	–	–	–	–	20	-11	-10	2	–	29200	✓	0.23	GI329	C0310
	20E3R040A20-SBN10-C	20	13.4	130	20	–	40	–	–	–	–	20	-10	-10	3	–	27700	✓	0.25	GI329	C0310
	20E3R080A20-SBN10-C	20	13.4	160	20	–	80	–	–	–	–	20	-10	-10	3	–	27700	✓	0.29	GI329	C0310
	20E3R040A18-SBN10-C	20	13.4	180	18	–	40	–	–	–	–	20	-10	-10	3	–	27700	✓	0.29	GI329	C0310
	20E4R040A20-SBN10-C	20	13.4	130	20	–	40	–	–	–	–	20	-10	-10	4	–	27700	✓	0.28	GI329	C0310
DIN 1835A	**25E4R050A25-SBN10-C**	25	18.4	140	25	–	50	–	–	–	–	20	-9	-10	4	✓	24800	✓	0.42	GI329	C0310
	25E4R100A25-SBN10-C	25	18.4	180	25	–	100	–	–	–	–	20	-9	-10	4	✓	24800	✓	0.51	GI329	C0310
	25E4R050A22-SBN10-C	25	18.4	220	22	–	50	–	–	–	–	20	-9	-10	4	✓	24800	✓	0.58	GI329	C0310
	25E5R050A25-SBN10-C	25	18.4	140	25	–	50	–	–	–	–	20	-9	-10	5	–	24800	✓	0.42	GI329	C0310
	32E5R070A32-SBN10-C	32	25.4	150	32	–	70	–	–	–	–	20	-8	-10	5	✓	21900	✓	0.73	GI329	C0310
	32E6R070A32-SBN10-C	32	25.4	150	32	–	70	–	–	–	–	20	-8	-10	6	✓	21900	✓	0.76	GI329	C0310
	32E5R120A32-SBN10-C	32	25.4	200	32	–	120	–	–	–	–	20	-8	-10	5	✓	21900	✓	0.96	GI329	C0310
	35E5R050A32-SBN10-C	35	28.4	200	32	–	50	–	–	–	–	20	-7.5	-10	5	✓	21000	✓	1.08	GI329	C0310
	35E6R050A32-SBN10-C	35	28.4	200	32	–	50	–	–	–	–	20	-7.5	-10	6	✓	21000	✓	1.08	GI329	C0310
	16E2R025M08-SBN10-C	16	9.4	43	8.5	–	–	25	M8	–	–	20	-12	-10	2	–	31100	✓	0.05	GI329	C0310
	18E2R025M08-SBN10-C	18	11.4	43	8.5	–	–	25	M8	–	–	20	-11	-10	2	–	29200	✓	0.05	GI329	C0310
	20E3R030M10-SBN10-C	20	13.4	49	10.5	–	–	30	M10	–	–	20	-10	-10	3	–	27700	✓	0.07	GI329	C0310
	20E4R030M10-SBN10-C	20	13.4	49	10.5	–	–	30	M10	–	–	20	-10	-10	4	–	27700	✓	0.06	GI329	C0310
MODULAR	**25E4R033M12-SBN10-C**	25	18.4	55	12.5	–	–	33	M12	–	–	20	-9	-10	4	✓	24800	✓	0.08	GI329	C0310
	25E5R033M12-SBN10-C	25	18.4	55	12.5	–	–	33	M12	–	–	20	-9	-10	5	–	24800	✓	0.10	GI329	C0310
	28E5R035M12-SBN10-C	28	21.4	57	12.5	–	–	35	M12	–	–	20	-8.5	-10	5	✓	23400	✓	0.12	GI329	C0310
	32E5R040M16-SBN10-C	32	25.4	63	17	–	–	40	M16	–	–	20	-8	-10	5	✓	21900	✓	0.21	GI329	C0310
	32E6R040M16-SBN10-C	32	25.4	63	17	–	–	40	M16	–	–	20	-8	-10	6	✓	21900	✓	0.21	GI329	C0310
	35E6R043M16-SBN10-C	35	28.4	66	17	–	–	43	M16	–	–	20	-7.5	-10	6	✓	21000	✓	0.23	GI329	C0310

	Producto	DCX (mm)	DC (mm)	OAL (mm)	DCON MS (mm)	DCCB (mm)	LU (mm)	LF (mm)	TDZ	KWW (mm)	KWD (mm)	KAPR (°)	GAMF (°)	GAMP (°)			max.		kg		
MODULAR	**40E6R043M16-SBN10-C**	40	33.4	66	17	–	–	43	M16	–	–	20	-7	-10	6	✓	19600	✓	0.27	GI329	C0310
MODULAR	**40E7R043M16-SBN10-C**	40	33.4	66	17	–	–	43	M16	–	–	20	-7	-10	7	✓	19600	✓	0.26	GI329	C0310
	40A05R-SMOBN10-C	40	33.4	–	16	14.1	–	40	–	8.4	5.6	20	-7	-10	5	✓	19600	✓	0.23	GI329	C0312
	40A07R-SMOBN10-C	40	33.4	–	16	14.1	–	40	–	8.4	5.6	20	-7	-10	7	✓	19600	✓	0.27	GI329	C0312
	42A05R-SMOBN10-C	42	35.4	–	16	14.1	–	40	–	8.4	5.6	20	-7	-10	5	✓	19100	✓	0.23	GI329	C0312
	42A07R-SMOBN10-C	42	35.4	–	16	14.1	–	40	–	8.4	5.6	20	-7	-10	7	✓	19100	✓	0.36	GI329	C0312
ISO 6462 DIN 8030	**50A07R-SMOBN10-C**	50	45	–	22	18.1	–	40	–	10.4	6.3	29	-6	-7	7	✓	17500	✓	0.46	GI343	C0311
ISO 6462 DIN 8030	**50A08R-SMOBN10-C**	50	45	–	22	18.1	–	40	–	10.4	6.3	29	-6	-7	8	✓	17500	✓	0.34	GI343	C0311
ISO 6462 DIN 8030	**52A07R-SMOBN10-C**	52	47	–	22	18.1	–	40	–	10.4	6.3	29	-6	-7	7	✓	17200	✓	0.49	GI343	C0311
ISO 6462 DIN 8030	**52A08R-SMOBN10-C**	52	47	–	22	18.1	–	40	–	10.4	6.3	29	-6	-7	8	✓	17200	✓	0.37	GI343	C0311
ISO 6462 DIN 8030	**66A08R-SMOBN10-C**	66	61	–	27	22.1	–	50	–	12.4	7	29	-6	-7	8	✓	15200	✓	0.89	GI343	C0313

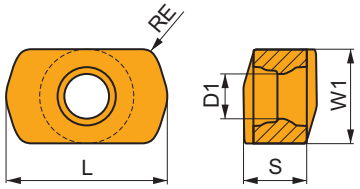
GI329	BNGX 10T3…	ANHX 10T3..
GI343	BNGX 10T3…	–

		Nm						
C0310	US 42507-T07P	1.2	M 2.5	7	Flag T07P	–	–	–
C0313	US 42507-T07P	1.2	M 2.5	7	–	D-T07P/T09P	FG-15	HS 1230C
C0312	US 42507-T07P	1.2	M 2.5	7	–	D-T07P/T09P	FG-15	HS 0830C
C0311	US 42507-T07P	1.2	M 2.5	7	–	D-T07P/T09P	FG-15	HS 1030C

BNGX 10

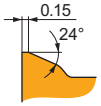
PRAMET

	W1 (mm)	D1 (mm)	L (mm)	S (mm)
10T3	5.800	2.76	9.92	3.90



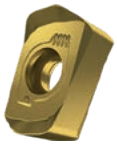
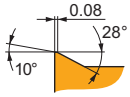
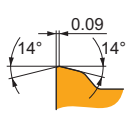
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
BNGX 10T308SR-M:8215	0.8	240	0.65	0.7	–	–	–	225	0.65	0.7	–	–	–	–	–	–	45	0.36	0.5
BNGX 10T308SR-M:M6330	0.8	210	0.65	0.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
BNGX 10T308SR-M:M8310	0.8	250	0.65	0.7	–	–	–	235	0.65	0.7	–	–	–	–	–	–	50	0.36	0.5
BNGX 10T308SR-M:M8330	0.8	240	0.65	0.7	–	–	–	225	0.65	0.7	–	–	–	–	–	–	45	0.36	0.5
BNGX 10T308SR-M:M8340	0.8	225	0.65	0.7	–	–	–	210	0.65	0.7	–	–	–	–	–	–	–	–	–
BNGX 10T308SR-M:M8345	0.8	180	0.65	0.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
BNGX 10T308SR-M:M9325	0.8	275	0.65	0.7	–	–	–	260	0.65	0.7	–	–	–	–	–	–	55	0.36	0.5



M geometría con diseño positivo para mecanizado de alto avance.

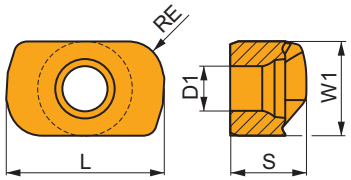
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
  **MM** geometría muy positiva para fresado de alto avance.																			
BNGX 10T308SR-MM:M6330	0.8	215	0.65	0.6	150	0.59	0.6	–	–	–	–	–	–	60	0.46	0.5	–	–	–
BNGX 10T308SR-MM:M8310	0.8	255	0.65	0.6	130	0.59	0.6	–	–	–	–	–	–	–	–	–	–	–	–
BNGX 10T308SR-MM:M8330	0.8	245	0.65	0.6	145	0.59	0.6	–	–	–	–	–	–	60	0.46	0.5	–	–	–
BNGX 10T308SR-MM:M8340	0.8	230	0.65	0.6	135	0.59	0.6	–	–	–	–	–	–	55	0.46	0.5	–	–	–
BNGX 10T308SR-MM:M8345	0.8	180	0.65	0.6	105	0.59	0.6	–	–	–	–	–	–	45	0.46	0.5	–	–	–
BNGX 10T308SR-MM:M9325	0.8	280	0.65	0.6	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
BNGX 10T308SR-MM:M9340	0.8	250	0.65	0.6	150	0.59	0.6	–	–	–	–	–	–	60	0.46	0.5	–	–	–
 **HM** geometría con diseño robusto para fresado de alto avance.																			
BNGX 10T308SR-HM:8215	0.8	–	–	–	–	–	–	240	0.65	0.4	–	–	–	–	–	–	50	0.65	0.4
BNGX 10T308SR-HM:M8310	0.8	–	–	–	–	–	–	250	0.65	0.4	–	–	–	–	–	–	50	0.65	0.4
BNGX 10T308SR-HM:M8330	0.8	–	–	–	–	–	–	240	0.65	0.4	–	–	–	–	–	–	50	0.65	0.4

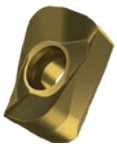
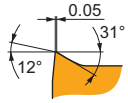
ANHX 10

PRAMET

	W1 (mm)	D1 (mm)	L (mm)	S (mm)
10T3	5.800	2.76	9.72	4.70



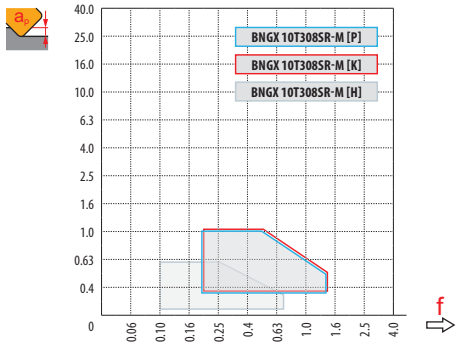
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

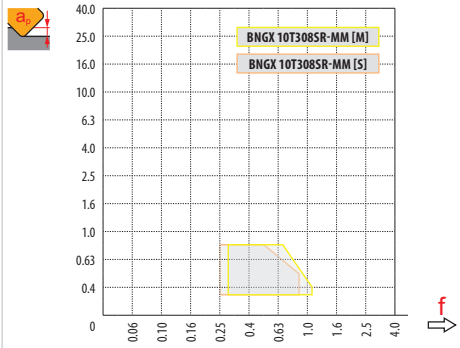
Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
  **F** geometría con diseño positivo para acabado y semi acabado.																			
ANHX 10T320SR-F:M8310	2.0	380	0.10	2.5	190	0.09	2.5	–	–	–	–	–	–	–	–	–	–	–	–
ANHX 10T320SR-F:M8330	2.0	340	0.10	2.5	200	0.09	2.5	–	–	–	–	–	–	–	–	–	–	–	–

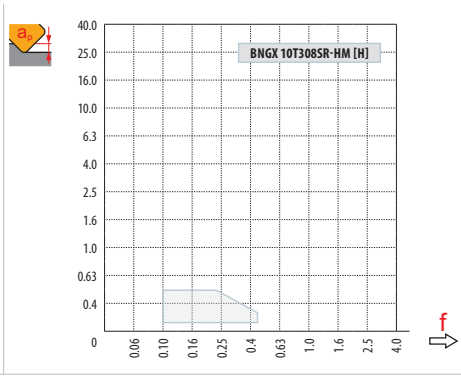
a_e / DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

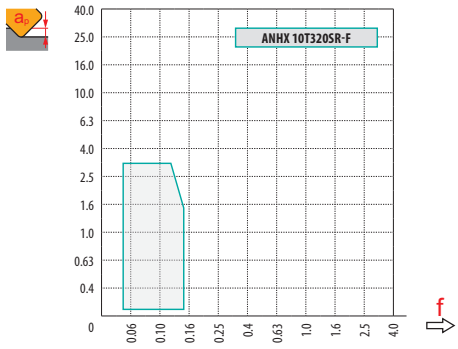
	BNGX 10-M	BNGX 10-MM	BNGX 10-HM
RE	0.8	0.8	0.8
BS	–	–	–

	ANHX 10 - F
RE	2.0
BS	0.92









BNGX 10 (HFC)

DCX	a_p	0.00	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00
16		9.40	12.85	13.36	13.80	14.20	14.56	14.88	15.19	15.47
18		11.40	14.85	15.36	15.80	16.20	16.56	16.88	17.19	17.47
20		13.40	16.85	17.36	17.80	18.20	18.56	18.88	19.19	19.47
25		18.40	21.85	22.36	22.80	23.20	23.56	23.88	24.19	24.47
32	DEF	25.40	28.85	29.36	29.80	30.20	30.56	30.88	31.19	31.47
35		28.40	31.85	32.36	32.80	33.20	33.56	33.88	34.19	34.47
40		33.40	36.85	37.36	37.80	38.20	38.56	38.88	39.19	39.47
42		35.40	38.85	39.36	39.80	40.20	40.56	40.88	41.19	41.47
50		43.98	46.09	46.45	46.82	47.18	47.54	47.90	48.26	48.56
52		45.98	48.09	48.45	48.82	49.18	49.54	49.90	50.26	50.56
66		59.98	62.09	62.45	62.82	63.18	63.54	63.90	64.26	64.56
	a_p	**0.00**	**0.30**	**0.40**	**0.50**	**0.60**	**0.70**	**0.80**	**0.90**	**1.00**
	f	–	1.30	1.10	0.90	0.80	0.72	0.68	0.65	0.50

BNGX 10

DCX	a_{emax}	f_{max}
16	3.5	0.12
18	3.5	0.12
20	4.0	0.15
25	4.0	0.15
32	4.0	0.17
35	4.0	0.17
40	4.0	0.17
42	4.0	0.17
50	4.5	0.30
52	4.5	0.30
66	4.5	0.30

BNGX 10 (HFC)

a_p	0.3	0.6	1.0
f	1.10	0.60	0.30

BNGX 10 (HFC) / ANHX 10

DCX	BNGX 10 (HFC) RPMX	BNGX 10 (HFC) APMX/I	ANHX 10 RPMX	ANHX 10 APMX/I
16	3.8	1/17	1.6°	2.65/100
18	3.8	1/17	1.3°	2.15/100
20	3.8	1/17	1.1°	1.80/100
25	2.6	1/24	0.8°	1.25/100
32	1.8	1/33	0.5°	0.75/100
35	1.6	1/37	0.5°	0.75/100
40	1.3	1/46	0.4°	0.55/100
42	1.3	1/46	0.4°	0.55/100
50	0.4	0.55/100	–	–
52	0.4	0.55/100	–	–
66	0.3	0.4/100	–	–

BNGX 10 (HFC)

DCX	a_p	f_{max}
16	0.4	0.15
18	0.7	0.15
20	0.7	0.15
25	0.7	0.15
32	0.7	0.2
35	0.7	0.2
40	0.7	0.2
42	0.7	0.2
50	0.3	0.2
52	0.3	0.2
66	0.3	0.2

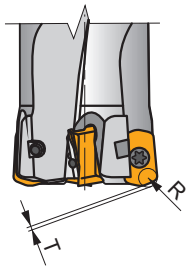
BNGX 10 (HFC)

DCX	DMIN	DMAX	SMAX / DMIN	SMAX / DMAX
16	22.4	31.8	0.5	0.5
18	25.4	35.8	0.5	0.5
20	29.4	39.8	0.5	0.5
25	39.4	49.8	0.5	0.5
32	53.4	63.8	0.5	0.5
35	59.4	69.8	0.5	0.5
40	69.4	79.8	0.5	0.5
42	73.4	83.8	0.5	0.5
50	89.6	99.6	0.5	0.5
52	93.6	103.6	0.5	0.5
66	121.6	131.6	0.5	0.5

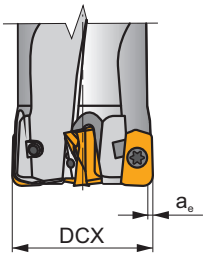
DCX	µm	3	5	10	15	20	30	40	50	60	80	100
16	FE	0.438	0.566	0.800	0.980	1.131	1.386	1.600	1.789	1.960	2.263	2.530
18		0.465	0.600	0.849	1.039	1.200	1.470	1.697	1.897	2.078	2.400	2.683
20		0.490	0.632	0.894	1.095	1.265	1.549	1.789	2.000	2.191	2.530	2.828
25		0.548	0.707	1.000	1.225	1.414	1.732	2.000	2.236	2.449	2.828	3.162
32		0.620	0.800	1.131	1.386	1.600	1.960	2.263	2.530	2.771	3.200	3.578
35		0.648	0.837	1.183	1.449	1.673	2.049	2.366	2.646	2.898	3.347	3.742
40		0.693	0.894	1.265	1.549	1.789	2.191	2.530	2.828	3.098	3.578	4.000
42		0.710	0.917	1.296	1.587	1.833	2.245	2.592	2.898	3.175	3.666	4.099

ANHX 10

RE	µm	3	5	10	15	20	30	40	50	60	80	100
2.0	FE	0.219	0.283	0.400	0.490	0.566	0.693	0.800	0.894	0.980	1.131	1.265



	R	T
BNGX 10T308	1.60	0.44



	max a_e/DCX
ANHX 10T320	0.05

SSN11

P M K S H

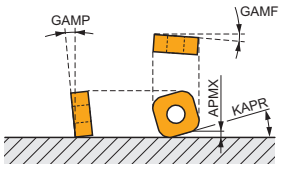
PRAMET

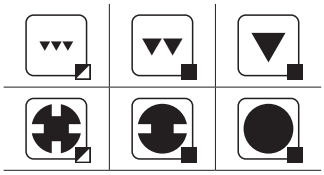
S

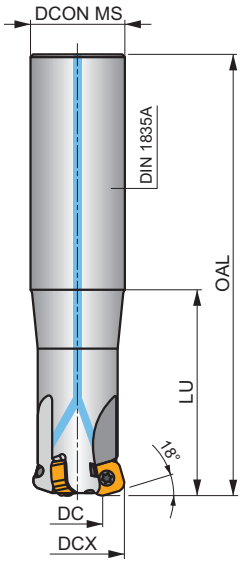
Fresa de alto avance para plaquitas SN.. 11 con refrigeración interna.

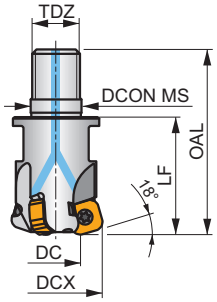
Fresa de alto avance en diámetros grandes que utiliza plaquitas de doble cara SNGX 11 con 8 filos y APMX de 1.7 mm. Refrigeración interna. Adecuada para una amplia gama de aplicaciones. Disponible con mango cilíndrico, modular y para portafresas. Cuerpo tratado para una vida útil más larga.

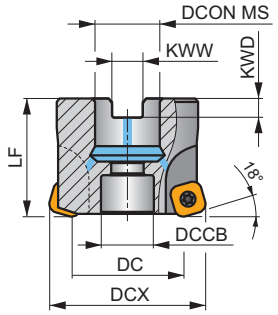
KAPR	18°
APMX	1.7 mm











h_m	0.20 - 0.46
h_m	0.20 - 0.46

	Producto	DCX (mm)	DC (mm)	OAL (mm)	DCON MS (mm)	DCCB (mm)	LU (mm)	LF (mm)	TDZ	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		kg			
DIN 1835A	32E3R070A32-SSN11-C	32	18.3	150	32	–	70	–	–	–	–	-11.5	-10	3	–	17500	✓	0.69	GI339	C0314	–
	32E3R120A32-SSN11-C	32	18.3	200	32	–	120	–	–	–	–	-11.5	-10	3	–	17500	✓	0.89	GI339	C0314	–
	35E3R050A32-SSN11-C	35	21.2	200	32	–	50	–	–	–	–	-11	-10	3	–	16800	✓	1.08	GI339	C0314	–
MODULAR	32E3R040M16-SSN11-C	32	18.3	63	17	–	–	40	M16	–	–	-11.5	-10	3	–	17500	✓	0.19	GI339	C0314	–
	35E3R040M16-SSN11-C	35	21.2	63	17	–	–	40	M16	–	–	-11	-10	3	–	16800	✓	0.19	GI339	C0314	–
	40E4R043M16-SSN11-C	40	26.2	66	17	–	–	43	M16	–	–	-10.5	-10	4	✓	15700	✓	0.26	GI339	C0314	–
ISO 6462 DIN 8030	40A04R-SMOSN11-C	40	26.2	–	16	12.4	–	40	–	8.4	5.6	-10.5	-10	4	✓	15700	✓	0.19	GI339	C0316	–
	42A04R-SMOSN11-C	42	28.2	–	16	14.1	–	40	–	8.4	5.6	-10.5	-10	4	✓	15300	✓	0.21	GI339	C0318	–
	50A05R-SMOSN11-C	50	36.1	–	22	18.1	–	40	–	10.4	6.3	-10	-10	5	✓	14000	✓	0.31	GI339	C0320	–
	50A06R-SMOSN11-C	50	36.1	–	22	18.1	–	40	–	10.4	6.3	-10	-10	6	✓	14000	✓	0.43	GI339	C0320	–
	52A05R-SMOSN11-C	52	38.1	–	22	18.1	–	40	–	10.4	6.3	-10	-10	5	✓	13800	✓	0.47	GI339	C0320	–
	52A06R-SMOSN11-C	52	38.1	–	22	18.1	–	40	–	10.4	6.3	-10	-10	6	✓	13800	✓	0.46	GI339	C0320	–
	63A06R-SMOSN11-C	63	49.1	–	22	18.1	–	40	–	10.4	6.3	-10	-10	6	✓	12500	✓	0.46	GI339	C0320	–
	63A08R-SMOSN11-C	63	49.1	–	22	18.1	–	40	–	10.4	6.3	-10	-10	8	✓	12500	✓	0.60	GI339	C0320	–
	66A06R-SMOSN11-C	66	52.1	–	27	18.1	–	50	–	12.4	7	-10	-10	6	✓	12200	✓	0.88	GI339	C0322	–
	66A08R-SMOSN11-C	66	52.1	–	27	18.1	–	50	–	12.4	7	-10	-10	8	✓	12200	✓	0.88	GI339	C0322	–
	80A07R-SMOSN11-C	80	66.1	–	27	38.1	–	50	–	12.4	7	-10	-10	7	✓	11100	✓	0.95	GI339	C0324	AC001
	80A09R-SMOSN11-C	80	66.1	–	27	38.1	–	50	–	12.4	7	-10	-10	9	✓	11100	✓	1.03	GI339	C0324	AC001
	100A08R-SMOSN11-C	100	86.1	–	32	45.1	–	50	–	14.4	8	-10	-10	8	✓	9900	✓	1.83	GI339	C0324	AC002
	115A08R-SMOSN11-C	115	101.1	–	32	45.1	–	50	–	14.4	8	-10	-10	8	✓	9200	✓	2.30	GI339	C0324	AC002
	125A08R-SMOSN11-C	125	111.1	–	40	56.1	–	63	–	16.4	9	-10	-10	8	✓	8900	✓	3.34	GI339	C0324	AC003

GI339	SNGX 1104..

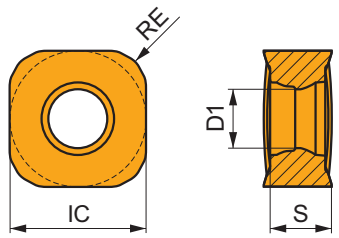
		Nm						
C0314	US 44012-T15P	3.5	M 4	12	–	–	Flag T15P	–
C0316	US 44012-T15P	3.5	M 4	12	D-T08P/T15P	FG-15	–	HCS 0840C
C0318	US 44012-T15P	3.5	M 4	12	D-T08P/T15P	FG-15	–	HS 90835
C0320	US 44012-T15P	3.5	M 4	12	D-T08P/T15P	FG-15	–	HS 1030C
C0322	US 44012-T15P	3.5	M 4	12	D-T08P/T15P	FG-15	–	HS 1230C
C0324	US 44012-T15P	3.5	M 4	12	D-T08P/T15P	FG-15	–	–

AC001	KS 1230	K.FMH27
AC002	KS 1635	K.FMH32
AC003	KS 2040	K.FMH40

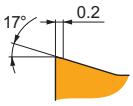
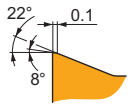
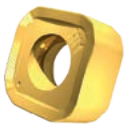
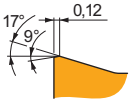
SNGX 11

PRAMET

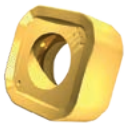
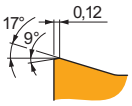
	IC (mm)	D1 (mm)	S (mm)
1104	10.600	4.56	4.76



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

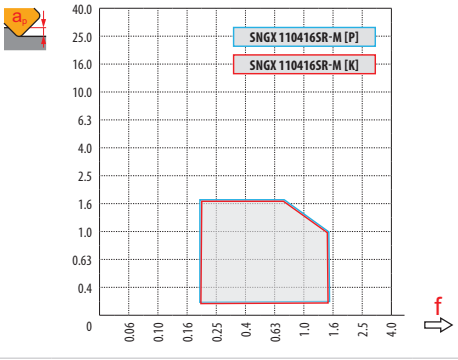
Producto		RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
			**M** geometría con diseño positivo para mecanizado de alto avance.																	
SNGX 110416SR-M:8215		1.6	260	0.60	1.0	–	–	–	245	0.60	1.0	–	–	–	–	–	–	–	–	–
SNGX 110416SR-M:M8310		1.6	275	0.60	1.0	–	–	–	260	0.60	1.0	–	–	–	–	–	–	–	–	–
SNGX 110416SR-M:M8330		1.6	260	0.60	1.0	–	–	–	245	0.60	1.0	–	–	–	–	–	–	–	–	–
SNGX 110416SR-M:M8340		1.6	245	0.60	1.0	–	–	–	230	0.60	1.0	–	–	–	–	–	–	–	–	–
SNGX 110416SR-M:M9325		1.6	305	0.60	1.0	–	–	–	285	0.60	1.0	–	–	–	–	–	–	–	–	–
SNGX 110416SR-M:M9340		1.6	270	0.60	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			**MM** geometría muy positiva para fresado de alto avance.																	
SNGX 110416SR-MM:M6330		1.6	175	0.60	1.0	125	0.54	1.0	–	–	–	–	–	–	50	0.42	0.8	–	–	–
SNGX 110416SR-MM:M8340		1.6	190	0.60	1.0	110	0.54	1.0	–	–	–	–	–	–	45	0.42	0.8	–	–	–
SNGX 110416SR-MM:M8345		1.6	150	0.60	1.0	90	0.54	1.0	–	–	–	–	–	–	35	0.42	0.8	–	–	–
SNGX 110416SR-MM:M9340		1.6	210	0.60	1.0	125	0.54	1.0	–	–	–	–	–	–	50	0.42	0.8	–	–	–
			**HM** geometría con diseño robusto para fresado de alto avance.																	
SNGX 110416SR-HM:8215		1.6	230	1.00	1.0	–	–	–	215	1.00	1.0	–	–	–	–	–	–	45	0.70	0.7
SNGX 110416SR-HM:M8310		1.6	240	1.00	1.0	–	–	–	225	1.00	1.0	–	–	–	–	–	–	45	0.70	0.7

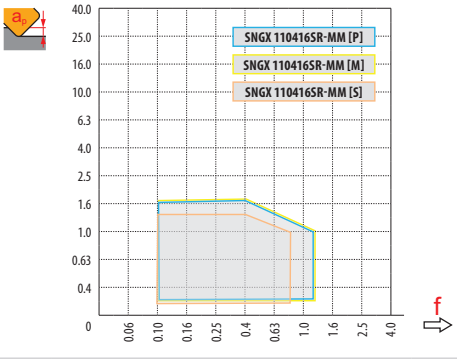
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

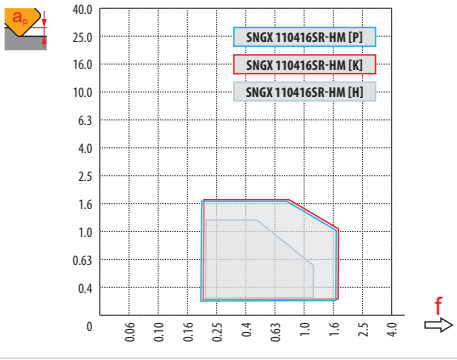
Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
																				
HM geometría con diseño robusto para fresado de alto avance.																				
SNGX 110416SR-HM:M8330		1.6	■ 235	1.00	1.0	–	–	–	■ 220	1.00	1.0	–	–	–	–	–	–	◪ 45	0.70	0.7
SNGX 110416SR-HM:M9325		1.6	■ 260	1.00	1.0	–	–	–	■ 245	1.00	1.0	–	–	–	–	–	–	◪ 50	0.70	0.7

a_e / DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	SNGX 11 - M	SNGX 11 - MM	SNGX 11 - HM
RE	1.6	1.6	1.6
BS	–	–	–







		HFC												
DCX	a_p	0.00	0.20	0.40	0.60	0.80	1.00	1.10	1.20	1.30	1.40	1.50	1.60	1.70
32		18.30	19.53	20.76	21.99	23.22	24.46	25.07	25.69	26.30	26.92	27.53	28.15	28.76
35		21.20	22.43	23.66	24.89	26.12	27.36	27.97	28.59	29.20	29.82	30.43	31.05	31.66
40		26.20	27.43	28.66	29.89	31.12	32.36	32.97	33.59	34.20	34.82	35.43	36.05	36.66
42		28.20	29.43	30.66	31.89	33.12	34.36	34.97	35.59	36.20	36.82	37.43	38.05	38.66
50		36.10	37.33	38.56	39.79	41.02	42.26	42.87	43.49	44.10	44.72	45.33	45.95	46.56
52	DEF	38.10	39.33	40.56	41.79	43.02	44.26	44.87	45.49	46.10	46.72	47.33	47.95	48.56
63		49.10	50.33	51.56	52.79	54.02	55.26	55.87	56.49	57.10	57.72	58.33	58.95	59.56
66		52.10	53.33	54.56	55.79	57.02	58.26	58.87	59.49	60.10	60.72	61.33	61.95	62.56
80		66.10	67.33	68.56	69.79	71.02	72.26	72.87	73.49	74.10	74.72	75.33	75.95	76.56
100		86.10	87.33	88.56	89.79	91.02	92.26	92.87	93.49	94.10	94.72	95.33	95.95	96.56
115		101.10	102.33	103.56	104.79	106.02	107.26	107.87	108.49	109.10	109.72	110.33	110.95	111.56
125		111.10	112.33	113.56	114.79	116.02	117.26	117.87	118.49	119.10	119.72	120.33	120.95	121.56
	a_p	–	0.20	0.40	0.60	0.80	1.00	1.10	1.20	1.30	1.40	1.50	1.60	1.70
	f	–	1.37	0.98	0.81	0.71	0.64	0.62	0.59	0.58	0.56	0.54	0.53	0.52

SNGX		
DCX	a_{emax}	f_{max}
32	5.0	0.25
35	5.0	0.25
40	5.2	0.30
42	5.2	0.30
50	5.3	0.30
52	5.3	0.30
63	5.4	0.30
66	5.4	0.30
80	5.5	0.35
100	5.5	0.35
115	5.5	0.35
125	5.5	0.35

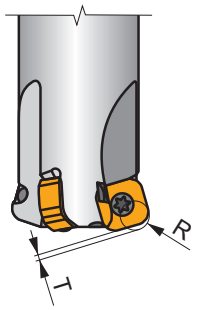
SNGX (HFC)		
DCX	RPMX	APMX/I
32	0.8	1.4/100
35	0.8	1.4/100
40	0.7	1.2/100
42	0.7	1.2/100
50	0.5	0.9/100
52	0.5	0.9/100
63	0.4	0.7/100
66	0.4	0.7/100
80	0.3	0.5/100
100	0.2	0.3/100
115	0.2	0.3/100
125	0.2	0.3/100

SNGX (HFC)		
DCX	a_p	f_{max}
32	0.2	0.3
35	0.2	0.3
40	0.2	0.3
42	0.2	0.3
50	0.3	0.4
52	0.3	0.4
63	0.3	0.4
66	0.3	0.4
80	0.3	0.4
100	0.3	0.4
115	0.3	0.4
125	0.3	0.4

DCX	µm	3	5	10	15	20	30	40	50	60	80	100
32	FE	0.620	0.800	1.131	1.386	1.600	1.960	2.263	2.530	2.771	3.200	3.578
35		0.648	0.837	1.183	1.449	1.673	2.049	2.366	2.646	2.898	3.347	3.742
40		0.693	0.894	1.265	1.549	1.789	2.191	2.530	2.828	3.098	3.578	4.000
42		0.710	0.917	1.296	1.587	1.833	2.245	2.592	2.898	3.175	3.666	4.099
50		0.775	1.000	1.414	1.732	2.000	2.449	2.828	3.162	3.464	4.000	4.472
52		0.790	1.020	1.442	1.766	2.040	2.498	2.884	3.225	3.533	4.079	4.561
63		0.869	1.122	1.587	1.944	2.245	2.750	3.175	3.550	3.888	4.490	5.020
66		0.890	1.149	1.625	1.990	2.298	2.814	3.250	3.633	3.980	4.596	5.138
80		0.980	1.265	1.789	2.191	2.530	3.098	3.578	4.000	4.382	5.060	5.657
100		1.095	1.414	2.000	2.449	2.828	3.464	4.000	4.472	4.899	5.657	6.325
115		1.175	1.517	2.145	2.627	3.033	3.715	4.290	4.796	5.254	6.066	6.782
125		1.225	1.581	2.236	2.739	3.162	3.873	4.472	5.000	5.477	6.325	7.071

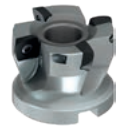
	SNGX			
a_p	0.2	0.5	1.0	1.7
1 f	1.20	1.00	0.50	0.25

SNGX (HFC)				
DCX	DMIN	DMAX	SMAX / DMIN	SMAX / DMAX
32	48.0	63.8	0.7	1.4
35	54.0	69.8	0.8	1.5
40	64.0	79.8	0.9	1.5
42	68.0	83.8	1.0	1.6
50	84.0	99.8	0.9	1.4
52	88.0	103.8	1.0	1.4
63	109.0	125.8	1.0	1.4
66	115.0	131.8	1.1	1.4
80	143.0	159.8	1.0	1.3
100	183.0	199.8	0.9	1.1
115	213.0	229.8	1.1	1.3
125	233.0	249.8	1.2	1.4



SNGX	R	T
SNGX 110416	4.6	0.92

PLANEADO

	SSO12	SPD09	SZD07	SZD09	SZD12
	12°	19°	–	–	–
	APMX (mm) 1.9	APMX (mm) 2.0	APMX (mm) 1.0	APMX (mm) 1.0	APMX (mm) 1.6
	DCX (mm) 35 – 125	DCX (mm) 32 – 140	DCX (mm) 16 – 25	DCX (mm) 25 – 63	DCX (mm) 32 – 80
Mango cilíndrico	DC = 35, 40 (mm)	DCX = 32, 40 (mm)	DCX = 16 – 25 (mm)		
Weldon	DC = 35, 40 (mm)			DCX = 25, 32 (mm)	
Modular				DCX = 25, 32 (mm)	DCX = 32, 40 (mm)
Portafresas	DC = 42 – 125 (mm)	DCX = 42 – 140 (mm)		DCX = 40 – 63 (mm)	 DCX = 50 – 80 (mm)
Página	266	270	276	280	284
ISO	P M K N S H	P M K S H	P K H	P K H	P K H
Forma de la plaquita					
Plaquitas de corte	SOHT 1205	PD.. 0905	ZDCW 0703	ZDCW 09T3	ZDEW 1204
N.º de filos de corte	4	5	4	4	4
Planeado	■	■	■	■	■
Interpolación helicoidal	■	■	◪	◪	◪
Escuadrado poco profundo	■	■	◪	◪	◪
Fresado axial (plunge)	■	■	◪	◪	◪
Fresado axial progresivo	■	■	◪	◪	◪
Mecanizado en rampa	■	■			
Fresado de superficies conformadas (fresado en copia)		◪	◪	◪	◪
Ranurado poco profundo	■	◪	◪	◪	◪

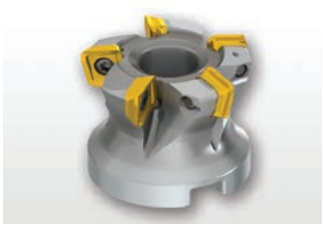
■ Primera Opción ◪ Opción Alternativa

SSO12

P M K S H

PRAMET

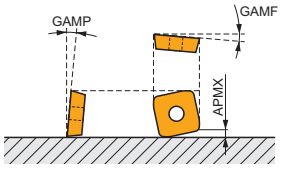
S

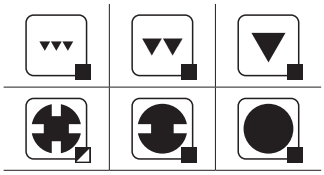


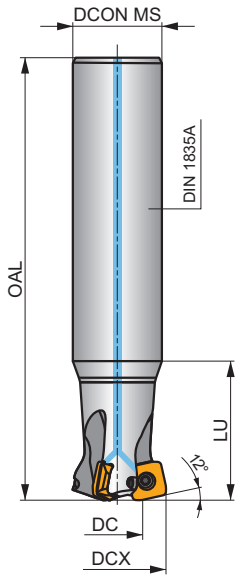
VER SO12 12° Fresado de alto avance con refrigeración interna

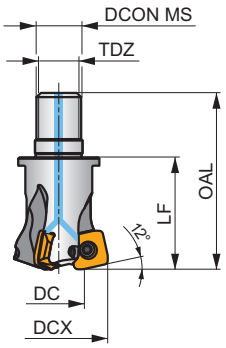
Fresa de alto avance de 12° "SO.. 12" muy versátil que utiliza plaquitas de una sola cara, con APMX de 1.9 mm. Adecuada para una amplia gama de aplicaciones en la mayoría de materiales. Disponibles con mango cilíndrico, modular y para porta fresas, con paso diferencial. Refrigerante a través de canales y cuerpo tratado para una mayor duración de la herramienta.

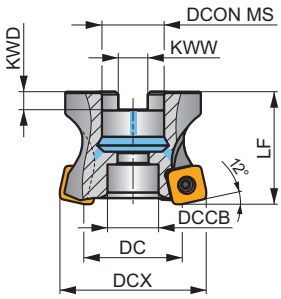
KAPR	12°
APMX	1.9 mm











h_m	0.09-0.93
h_m	0.09-0.93

	Producto	DCX (mm)	DC (mm)	OAL (mm)	DCON MS (mm)	DCCB (mm)	LU (mm)	LF (mm)	TDZ	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		kg			
DIN 1835A	35E3R050A32-SSO12-C	35	17.3	200	32	–	50	–	–	–	–	-5	5	3	–	15700	✓	1.07	GI350	SQ501	–
DIN 1835A	35E3R120A32-SSO12-C	35	17.3	200	32	–	120	–	–	–	–	-5	5	3	–	15700	✓	0.95	GI350	SQ501	–
DIN 1835A	40E4R120A32-SSO12-C	40	22.3	200	32	–	120	–	–	–	–	-5	5	4	–	14700	✓	1.00	GI350	SQ501	–
MODULAR	35E3R040M16-SSO12-C	35	17.3	63	17	–	–	40	M16	–	–	-5	5	3	–	15700	✓	0.15	GI350	SQ501	–
MODULAR	40E4R043M16-SSO12-C	40	22.3	66	17	–	–	43	M16	–	–	-5	5	4	–	14700	✓	0.18	GI350	SQ501	–
	42A04R-SMOSO12-C	42	24.3	–	16	12.4	–	40	–	8.4	5.6	-5	5	4	–	14300	✓	0.16	GI350	SQ502	–
	50A05R-SMOSO12-C	50	32.3	–	22	18.1	–	40	–	10.4	6.3	-5	5	5	✓	13100	✓	0.23	GI350	SQ503	–
	52A05R-SMOSO12-C	52	34.3	–	22	18.1	–	40	–	10.4	6.3	-5	5	5	✓	12800	✓	0.35	GI350	SQ503	–
ISO 6462 DIN 8030	63A06R-SMOSO12-C	63	45.3	–	27	22.1	–	50	–	12.4	7	-5	5	6	✓	11700	✓	0.48	GI350	SQ504	–
ISO 6462 DIN 8030	66A06R-SMOSO12-C	66	48.3	–	27	22.1	–	50	–	12.4	7	-5	5	6	✓	11400	✓	0.51	GI350	SQ504	–
ISO 6462 DIN 8030	80A07R-SMOSO12-C	80	62.3	–	27	22.1	–	50	–	12.4	7	-5	5	7	✓	10400	✓	0.76	GI350	SQ504	–
	100A08R-SMOSO12-C	100	82.3	–	32	45.1	–	50	–	14.4	8	-5	5	8	✓	9300	✓	1.32	GI350	SQ505	AC002
	125A10R-SMOSO12-C	125	107.3	–	40	56.1	–	63	–	16.4	9	-5	5	10	✓	8300	✓	2.46	GI350	SQ505	AC003

GI350	SOHT 1205..

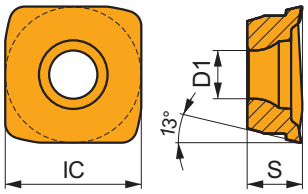
		Nm					
SQ501	US 4011-T15P	3.5	M 4	10.6	FLAG T15P	–	–
SQ502	US 4011-T15P	3.5	M 4	10.6	–	SDR T15P-T	HCS 0840C
SQ503	US 4011-T15P	3.5	M 4	10.6	–	SDR T15P-T	HS 1030C
SQ504	US 4011-T15P	3.5	M 4	10.6	–	SDR T15P-T	HS 1230C
SQ505	US 4011-T15P	3.5	M 4	10.6	–	SDR T15P-T	–

AC002	KS 1635	K.FMH32
AC003	KS 2040	K.FMH40

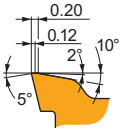
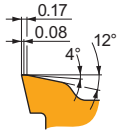
SOHT 12

PRAMET

	IC (mm)	D1 (mm)	S (mm)
1205	12.700	4.50	5.15

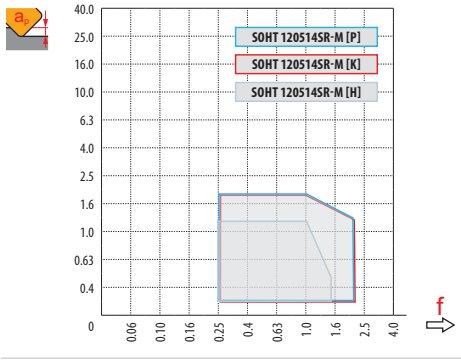


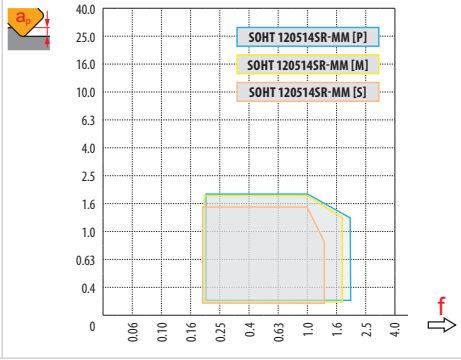
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
																			
M geometría es adecuada para una amplia gama de condiciones de trabajo. Diseñada con desprendimiento positivo, faceta T media y redondeo del filo de corte para un fresado HFC suave. Primera elección para aceros, fundiciones y aceros endurecidos.																			
SOHT 120514SR-M:8215	1.4	215	1.00	1.0	125	0.90	1.0	200	1.00	1.0	–	–	–	50	0.70	0.8	40	0.68	0.8
SOHT 120514SR-M:M8310	1.4	225	1.00	1.0	110	0.90	1.0	210	1.00	1.0	–	–	–	–	–	–	45	0.68	0.8
SOHT 120514SR-M:M8330	1.4	220	1.00	1.0	130	0.90	1.0	205	1.00	1.0	–	–	–	55	0.70	0.8	40	0.68	0.8
SOHT 120514SR-M:M8340	1.4	205	1.00	1.0	120	0.90	1.0	190	1.00	1.0	–	–	–	50	0.70	0.8	–	–	–
SOHT 120514SR-M:M9325	1.4	245	1.00	1.0	–	–	–	230	1.00	1.0	–	–	–	–	–	–	45	0.68	0.8
SOHT 120514SR-M:M9340	1.4	215	1.00	1.0	125	0.90	1.0	–	–	–	–	–	–	50	0.70	0.8	–	–	–
																			
MM geometría afilada, adecuada para aplicaciones con grandes voladizos o piezas de paredes finas y delgadas. Diseñada con desprendimiento positivo, faceta T estrecha y un redondeo del filo de corte para un fresado HFC suave. Primera elección para aceros inoxidables y superaleaciones.																			
SOHT 120514SR-MM:M6330	1.4	190	1.00	1.0	135	0.90	1.0	–	–	–	–	–	–	55	0.70	0.8	–	–	–
SOHT 120514SR-MM:M8340	1.4	205	1.00	1.0	120	0.90	1.0	–	–	–	–	–	–	50	0.70	0.8	–	–	–
SOHT 120514SR-MM:M8345	1.4	165	1.00	1.0	95	0.90	1.0	–	–	–	–	–	–	40	0.70	0.8	–	–	–
SOHT 120514SR-MM:M9325	1.4	245	1.00	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
SOHT 120514SR-MM:M9340	1.4	215	1.00	1.0	125	0.90	1.0	–	–	–	–	–	–	50	0.70	0.8	–	–	–

a_e / DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	SOHT 12-M	SOHT 12-MM
RE	1.4	1.4
BS	2.00	2.00





		HFC												
DCX	a_p	0.00	0.20	0.40	0.60	0.80	1.00	1.20	1.40	1.50	1.60	1.70	1.80	1.90
35		17.3	19.2	21.1	22.9	24.8	26.7	28.6	30.5	31.4	32.4	33.1	33.5	33.9
40		22.3	24.2	26.1	27.9	29.8	31.7	33.6	35.5	36.4	37.4	38.1	38.5	38.9
42		24.3	26.2	28.1	29.9	31.8	33.7	35.6	37.5	38.4	39.4	40.1	40.5	40.9
50		32.3	34.2	36.1	37.9	39.8	41.7	43.6	45.5	46.4	47.4	48.1	48.5	48.9
52	DEF	34.3	36.2	38.1	39.9	41.8	43.7	45.6	47.5	48.4	49.4	50.1	50.5	50.9
63		45.3	47.2	49.1	50.9	52.8	54.7	56.6	58.5	59.4	60.4	61.1	61.5	61.9
66		48.3	50.2	52.1	53.9	55.8	57.7	59.6	61.5	62.4	63.4	64.1	64.5	64.9
80		62.3	64.2	66.1	67.9	69.8	71.7	73.6	75.5	76.4	77.4	78.1	78.5	78.9
100		82.3	84.2	86.1	87.9	89.8	91.7	93.6	95.5	96.4	97.4	98.1	98.5	98.9
125		107.3	109.2	111.1	112.9	114.8	116.7	118.6	120.5	121.4	122.4	123.1	123.5	123.9
	a_p	0.00	0.20	0.40	0.60	0.80	1.00	1.20	1.40	1.50	1.60	1.70	1.80	1.90
	f	-	2.20	2.00	1.80	1.60	1.40	1.20	1.10	1.00	0.90	0.80	0.70	0.60

DCX	a_{emax}	f_{max}
35	10.0	0.10
40	10.0	0.10
42	10.0	0.12
50	10.0	0.12
52	10.0	0.12
63	10.0	0.15
66	10.0	0.15
80	10.0	0.20
100	10.0	0.20
125	10.0	0.20

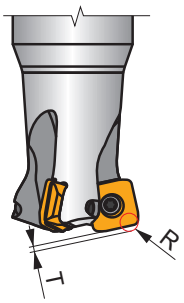
DCX	RPMX	APMX/I
35	9.6	1.9/11
40	6.9	1.9/16
42	6.1	1.9/18
50	4.3	1.9/25
52	4.0	1.9/27
63	2.6	1.9/41
66	2.5	1.9/44
80	1.9	1.9/59
100	1.4	1.9/79
125	1.0	1.9/105

DCX	a_p	f_{max}
35	1.6	0.17
40	1.6	0.17
42	1.6	0.15
50	1.6	0.10
52	1.6	0.10
63	1.6	0.05
66	1.6	0.05
80	1.6	0.05
100	1.6	0.05
125	1.6	0.05

DCX	µm	3	5	10	15	20	30	40	50	60	80	100
35		0.648	0.837	1.183	1.449	1.673	2.049	2.366	2.646	2.898	3.347	3.742
40		0.693	0.894	1.265	1.549	1.789	2.191	2.530	2.828	3.098	3.578	4.000
42		0.710	0.917	1.296	1.587	1.833	2.245	2.592	2.898	3.175	3.666	4.099
50		0.775	1.000	1.414	1.732	2.000	2.449	2.828	3.162	3.464	4.000	4.472
52	FE	0.790	1.020	1.442	1.766	2.040	2.498	2.884	3.225	3.533	4.079	4.561
63		0.869	1.122	1.587	1.944	2.245	2.750	3.175	3.550	3.888	4.490	5.020
66		0.890	1.149	1.625	1.990	2.298	2.814	3.250	3.633	3.980	4.596	5.138
80		0.980	1.265	1.789	2.191	2.530	3.098	3.578	4.000	4.382	5.060	5.657
100		1.095	1.414	2.000	2.449	2.828	3.464	4.000	4.472	4.899	5.657	6.325
125		1.225	1.581	2.236	2.739	3.162	3.873	4.472	5.000	5.477	6.325	7.071

a_p	0.2	0.6	1.0	1.5	1.9
1 f	2.0	1.6	1.2	0.8	0.5

DCX	DMIN	DMAX	SMAX DMIN	SMAX DMAX
35	46.0	69.8	1.9	1.9
40	56.0	79.8	1.9	1.9
42	60.0	83.8	1.9	1.9
50	76.0	99.8	1.9	1.9
52	80.0	103.8	1.9	1.9
63	102.0	125.8	1.9	1.9
66	108.0	131.8	1.9	1.9
80	136.0	159.8	1.9	1.9
100	176.0	199.8	1.9	1.9
125	226.0	249.8	1.9	1.9



SOHT	R	T
SOHT 120514	3.37	1.21

SPD09

P M K S H

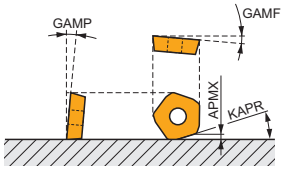
PRAMET

S

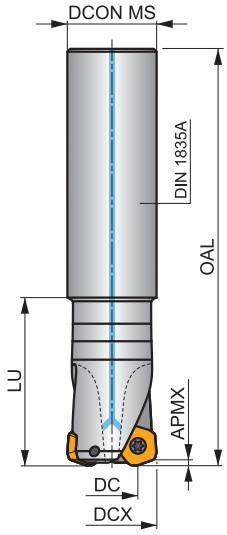
PENTA HF Fresa de Alto Avance con Refrigeración Interna

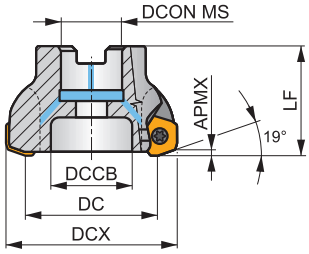
Fresa de alto avance de alta productividad que utiliza plaquitas positivas de una sola cara PD.. 09 con 5 filos de corte y APMX de 2 mm. Refrigeración interna. Adecuada para una amplia gama de aplicaciones. Disponible con mango cilíndrico y para portafresas. Cuerpo tratado para alargar la vida de herramienta.

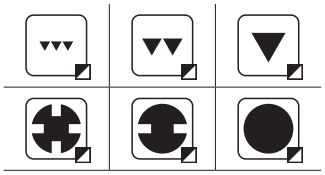
KAPR	19°
APMX	2.0 mm



PENTA HF







h_m	0.065 - 0.975
h_m	0.065 - 0.975

	Producto	DCX (mm)	DC (mm)	OAL (mm)	DCON MS (mm)	DCCB (mm)	LU (mm)	LF (mm)	GAMF (°)	GAMP (°)			max.		kg			
DIN 1835A	32E2R060A32-SPD09-C	32	18.4	250	32	–	60	–	-24	10	2	–	13100	✓	1.34	GI245	C0340	–
DIN 1835A	40E3R060A32-SPD09-C	40	25.5	250	32	–	60	–	-11	10	3	–	11700	✓	1.43	GI245	C0340	–
	42A03R-S19PD09-C	42	27.5	–	16	12	–	40	-8	10	3	–	11500	✓	0.18	GI245	C0342	–
	50A04R-S19PD09-C	50	35.3	–	22	18	–	40	-3	10	4	–	10500	✓	0.23	GI245	C0343	–
	50A05R-S19PD09-C	50	35.3	–	22	18	–	40	-3	10	5	–	10500	✓	0.33	GI245	C0343	–
	52A04R-S19PD09-C	52	37.3	–	22	18	–	40	-3	10	4	–	10300	✓	0.25	GI245	C0343	–
	63A05R-S19PD09-C	63	48.2	–	22	18	–	40	-1	10	5	–	9400	✓	0.44	GI245	C0343	–
	63A06R-S19PD09-C	63	48.2	–	22	18	–	40	-1	10	6	–	9300	✓	0.45	GI245	C0343	–
	66A06R-S19PD09-C	66	51.2	–	22	18	–	40	-1	10	6	–	9200	✓	0.35	GI245	C0343	–
ISO 6462 DIN 8030	66A06R-S19PD09-CF	66	51.2	–	27	22	–	50	-1	10	6	–	9100	✓	0.67	GI245	C0344	–
	80A05R-S19PD09-C	80	65.3	–	27	37	–	50	-1	10	5	–	8300	✓	0.84	GI245	C0341	AC001
	80A06R-S19PD09-C	80	65.3	–	27	37	–	50	-1	10	6	–	8300	✓	0.86	GI245	C0341	AC001
	100A06R-S19PD09-C	100	58.3	–	32	45	–	50	-1	10	6	–	7400	✓	1.46	GI245	C0341	AC002
	100A08R-S19PD09-C	100	85.3	–	32	45	–	50	-1	10	8	–	7400	✓	1.40	GI245	C0341	AC002
	125A08R-S19PD09-C	125	110.3	–	40	36	–	63	-1	10	8	–	6600	✓	3.10	GI245	C0349	–
	125A10R-S19PD09-C	125	110.3	–	40	36	–	63	-1	10	10	–	6600	✓	3.11	GI245	C0349	–
	140A08R-S19PD09-C	140	125.3	–	40	36	–	63	-1	10	8	–	6200	✓	3.57	GI245	C0349	–

GI245	PD.X 0905ZE..	PDKT 0905..	PDMW 0905..

		Nm					
C0340	US 45011-T20P	5.0	M 5	11	–	–	Flag T20P
C0341	US 45011-T20P	5.0	M 5	11	SDR T20P-T	–	–

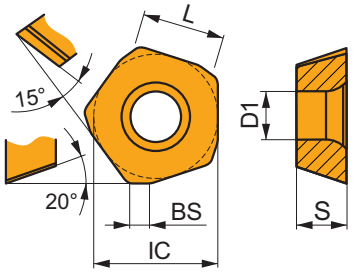
		Nm					
C0342	US 45011-T20P	5.0	M 5	11	SDR T20P-T	HS 90835	–
C0343	US 45011-T20P	5.0	M 5	11	SDR T20P-T	HS 1030C	–
C0344	US 45011-T20P	5.0	M 5	11	SDR T20P-T	HS 1230C	–
C0349	US 45011-T20P	5.0	M 5	11	SDR T20P-T	HSD 2040	–

AC001	KS 1230	K.FMH27
AC002	KS 1635	K.FMH32

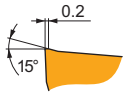
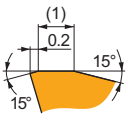
PDMX 09

PRAMET

	BS (mm)	IC (mm)	D1 (mm)	L (mm)	S (mm)
0905	2.00	13.500	5.50	9.00	5.47



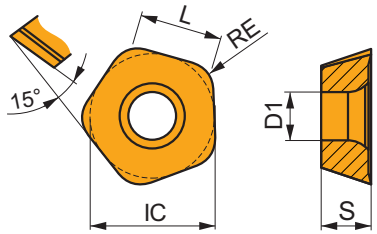
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
																			
M geometría con diseño positivo para mecanizado medio con alto avance.																			
PDMX 0905ZEER-M:8215	–	215	1.00	1.2	125	0.90	1.2	200	1.00	1.2	–	–	–	–	–	–	–	–	–
PDMX 0905ZEER-M:M8330	–	220	1.00	1.2	130	0.90	1.2	205	1.00	1.2	–	–	–	–	–	–	–	–	–
PDMX 0905ZEER-M:M8345	–	165	1.00	1.2	95	0.90	1.2	–	–	–	–	–	–	–	–	–	–	–	–
PDMX 0905ZEER-M:M9340	–	215	1.00	1.2	125	0.90	1.2	–	–	–	–	–	–	–	–	–	–	–	–
																			
R geometría con diseño robusto para mecanizado de alto avance.																			
PDMX 0905ZESR-R:8215	–	215	1.00	1.3	–	–	–	200	1.00	1.3	–	–	–	–	–	–	40	0.70	0.9
PDMX 0905ZESR-R:M8330	–	215	1.00	1.3	–	–	–	200	1.00	1.3	–	–	–	–	–	–	40	0.70	0.9
PDMX 0905ZESR-R:M8345	–	165	1.00	1.3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
PDMX 0905ZESR-R:M9325	–	245	1.00	1.3	–	–	–	230	1.00	1.3	–	–	–	–	–	–	45	0.70	0.9

PDKT 09

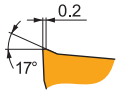
PRAMET

	IC	D1	L	S
	(mm)	(mm)	(mm)	(mm)
0905	13.500	5.50	9.00	5.47



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
PDKT 090530ER-FM:8215		3.0	240	1.00	1.2	140	0.90	1.2	225	1.00	1.2	–	–	–	60	0.70	1.0	–	–	–
PDKT 090530ER-FM:M6330		3.0	210	1.00	1.2	150	0.90	1.2	–	–	–	–	–	–	60	0.70	1.0	–	–	–
PDKT 090530ER-FM:M8310		3.0	250	1.00	1.2	125	0.90	1.2	235	1.00	1.2	–	–	–	–	–	–	–	–	–
PDKT 090530ER-FM:M8330		3.0	245	1.00	1.2	145	0.90	1.2	230	1.00	1.2	–	–	–	60	0.70	1.0	–	–	–
PDKT 090530ER-FM:M8345		3.0	180	1.00	1.2	105	0.90	1.2	–	–	–	–	–	–	45	0.70	1.0	–	–	–
PDKT 090530ER-FM:M9325		3.0	275	1.00	1.2	–	–	–	260	1.00	1.2	–	–	–	–	–	–	–	–	–

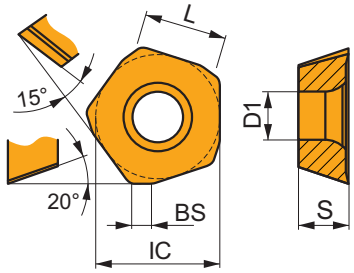


FM geometría muy positiva para mecanizado ligero a fresado medio con alto avance.

PDKX 09

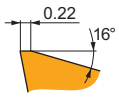
PRAMET

	BS	IC	D1	L	S
	(mm)	(mm)	(mm)	(mm)	(mm)
0905	2.00	13.500	5.50	9.00	5.47



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

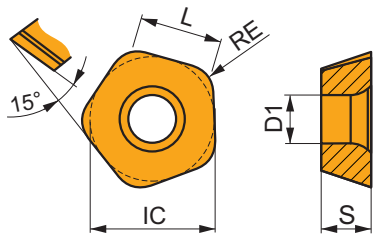
Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
PDKX 0905ZEER-FM:M6330		–	195	1.00	1.2	135	0.90	1.2	–	–	–	–	–	–	55	0.70	1.0	–	–	–
PDKX 0905ZEER-FM:M8345		–	165	1.00	1.2	95	0.90	1.2	–	–	–	–	–	–	40	0.70	1.0	–	–	–
PDKX 0905ZEER-FM:M9340		–	215	1.00	1.2	125	0.90	1.2	–	–	–	–	–	–	50	0.70	1.0	–	–	–



FM geometría muy positiva para fresado medio con alto avance.

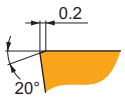
PDMW 09

	IC	D1	L	S
	(mm)	(mm)	(mm)	(mm)
0905	13.500	5.50	9.00	5.47



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
PDMW 090530SR:M8310	✱	3.0	245	1.00	1.4	–	–	–	230	1.00	1.4	–	–	–	–	–	–	45	0.70	1.0
PDMW 090530SR:M8345	✱	3.0	180	1.00	1.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
PDMW 090530SR:M9325	✱	3.0	270	1.00	1.4	–	–	–	255	1.00	1.4	–	–	–	–	–	–	50	0.70	1.0

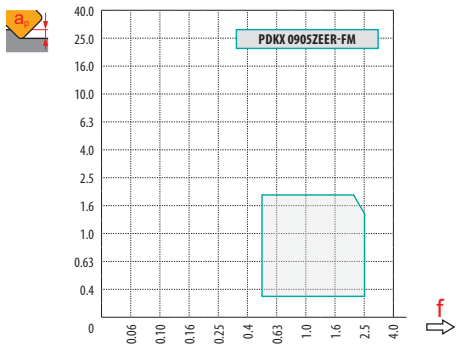


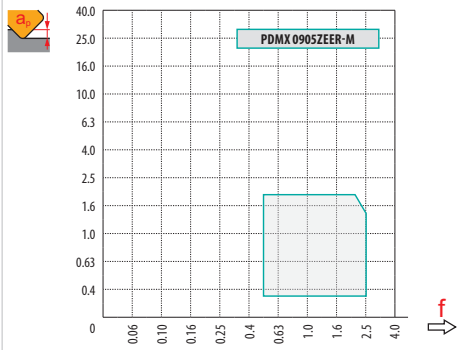
HFC S

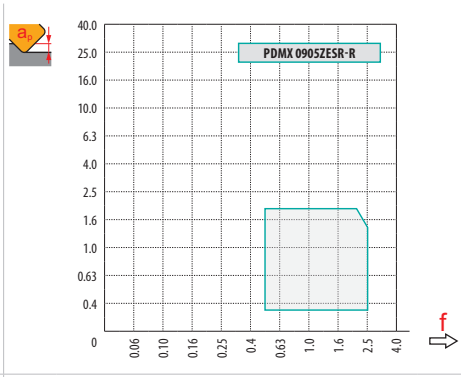
SR ángulo de desprendimiento de 0° para fresado de alto avance.

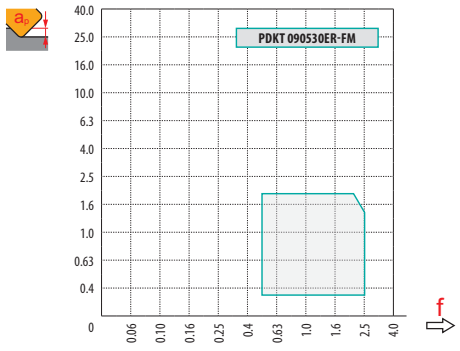
a_e / DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

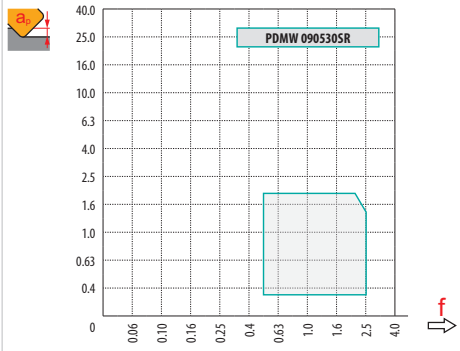
	PDKX 09-FM	PDMX 09-M	PDMX 09-R	PDKT 09-FM	PDMW 09
RE	–	–	–	3.0	3.0
BS	2.00	2.00	2.00	–	–











DCX	a_p	0.00	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.25	1.50	2.00
32		18.4	20.1	20.7	21.3	21.9	22.5	23.0	23.6	24.2	25.7	27.1	30.0
40		25.5	27.2	27.8	28.4	29.0	29.6	30.1	30.7	31.3	32.8	34.2	37.1
42		27.5	29.2	29.8	30.4	31.0	31.6	32.1	32.7	33.3	34.8	36.2	39.1
50		35.3	37.0	37.6	38.2	38.8	39.4	39.9	40.5	41.1	42.6	44.0	46.9
52		37.3	39.0	39.6	40.2	40.8	41.4	41.9	42.5	43.1	44.6	46.0	48.9
63	DEF	48.2	49.9	50.5	51.1	51.7	52.3	52.8	53.4	54.0	55.5	56.9	59.8
66		51.2	52.9	53.5	54.1	54.7	55.3	55.8	56.4	57.0	58.5	59.9	62.8
80		65.3	67.0	67.6	68.2	68.8	69.4	69.9	70.5	71.1	72.6	74.0	76.9
100		85.3	87.0	87.6	88.2	88.8	89.4	89.9	90.5	91.1	92.6	94.0	96.9
125		110.3	112.3	112.9	113.5	114.1	114.6	115.2	115.8	116.4	117.9	119.3	122.2
140		125.3	127.3	127.9	128.5	129.1	129.7	130.2	130.8	131.4	132.9	134.3	137.2
	a_p	0.00	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.25	1.50	2.00
	f	–	3.00	3.00	2.90	2.80	2.70	2.60	2.50	2.40	2.25	1.50	1.50

Seguir las instrucciones para fresado de superficies planas (planeado). En caso de mecanizar cerca de una superficie vertical, reducir el avance por diente (f_z) al 50% para evitar vibraciones y daños en el filo de corte.

DCX	max	f_{max}
32	5.0	0.20
40	5.0	0.20
42	5.0	0.20
50	6.0	0.20
52	6.0	0.20
63	7.0	0.25
66	7.0	0.25
80	8.0	0.30
100	8.0	0.30

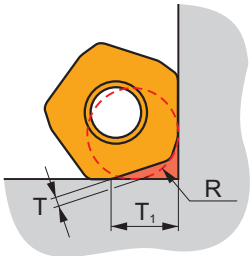
DCX	RPMX	APMX/I
40	8.0	1.80/16
42	8.0	2.00/16
50	8.0	2.00/16
52	8.0	2.00/16
63	7.0	2.00/18
66	6.0	2.00/21
80	5.0	2.00/24
100	3.0	2.00/40

	HFC		
a_p	**0.5**	**1.0**	**2.0**
1 f	3.0	2.3	1.5

DCX	DMIN	DMAX	SMAX DMIN	SMAX DMAX
40	63.7	80.0	2.00	2.00
42	67.5	84.0	2.00	2.00
50	83.3	100.0	2.00	2.00
52	87.3	104.0	2.00	2.00
63	109.2	126.0	2.00	2.00
66	115.2	132.0	2.00	2.00
80	143.3	160.0	2.00	2.00
100	183.3	200.0	2.00	2.00

DCX	a_p	f_{max}
32	1.8	0.20
40	1.8	0.20
42	2.0	0.20
50	2.0	0.20
52	2.0	0.20
63	2.0	0.25
66	2.0	0.25
80	2.0	0.30
100	2.0	0.30

DCX	µm	3	5	10	15	20	30	40	50	60	80	100
32		0.620	0.800	1.131	1.386	1.600	1.960	2.263	2.530	2.771	3.200	3.578
40		0.693	0.894	1.265	1.549	1.789	2.191	2.530	2.828	3.098	3.578	4.000
42		0.710	0.917	1.296	1.587	1.833	2.245	2.592	2.898	3.175	3.666	4.099
50	FE	0.775	1.000	1.414	1.732	2.000	2.449	2.828	3.162	3.464	4.000	4.472
52		0.790	1.020	1.442	1.766	2.040	2.498	2.884	3.225	3.533	4.079	4.561
63		0.869	1.122	1.587	1.944	2.245	2.750	3.175	3.550	3.888	4.490	5.020
66		0.890	1.149	1.625	1.990	2.298	2.814	3.250	3.633	3.980	4.596	5.138
80		0.980	1.265	1.789	2.191	2.530	3.098	3.578	4.000	4.382	5.060	5.657



DCX	R	T	T_1
32	4.5	1.1	6.8
40 – 140	4.5	1.1	7.3

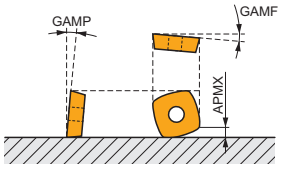
SZD07

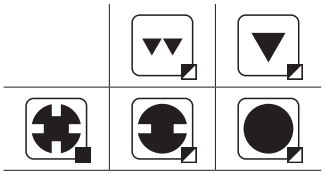
FEED ZD07 Fresa de Alto Avance con Refrigeración Interna

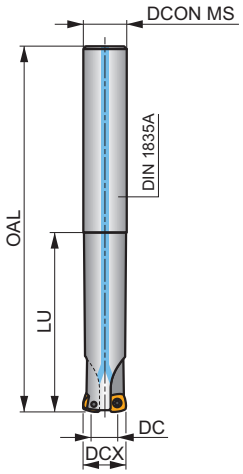
Fresa de alto avance de alta productividad que utiliza plaquitas de una sola cara ZD.. 07 con 4 filos de corte y APMX de 1 mm. Refrigeración interna. Adecuada para una amplia gama de aplicaciones. Disponible con mango cilíndrico y modular. Cuerpo tratado para alargar la vida de herramienta.

FEED ZD

APMX	1.0 mm







h_m 0.175 - 0.44

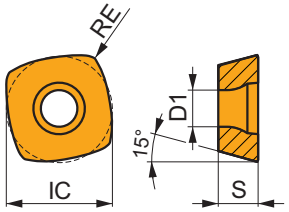
	Producto	DCX (mm)	DC (mm)	OAL (mm)	DCON MS (mm)	LU (mm)	LF (mm)	GAMF (°)	GAMP (°)			max.		kg		
DIN 1835A	**16E2R030A16-SZD07**	16	6	100	16	30	–	-5	8	2	–	47400	✓	0.13	GI201	C0350
	16E2R065A16-SZD07	16	6	145	16	65	–	-5	8	2	–	47400	✓	0.22	GI201	C0350
	20E3R040A20-SZD07	20	10	120	20	40	–	-5	8	3	–	42400	✓	0.25	GI201	C0350
	20E3R080A20-SZD07	20	10	165	20	80	–	-5	8	3	–	42400	✓	0.33	GI201	C0350
	25E3R050A25-SZD07	25	15	140	25	50	–	-5	8	3	–	37900	✓	0.47	GI201	C0350
	25E3R100A25-SZD07	25	15	190	25	100	–	-5	8	3	–	37900	✓	0.60	GI201	C0350

GI201	ZDCW 0703..

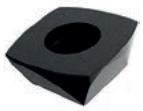
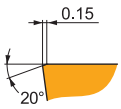
		Nm			
C0350	US 2205-T07P	0.9	M 2.2	5	Flag T07P

ZDCW 07

	IC	D1	S
	(mm)	(mm)	(mm)
0703	6.800	2.60	3.18



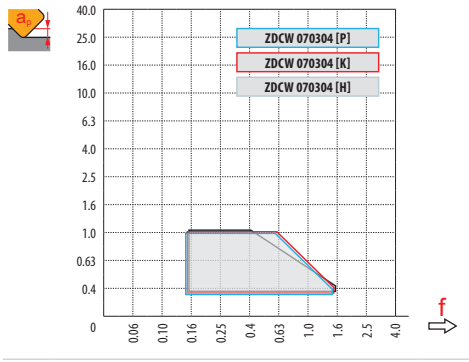
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto	RE	P			M			K			N			S			H		
		vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
																			
ZDCW 070304:M8310	0.4	420	0.60	0.4	–	–	–	395	0.60	0.4	–	–	–	–	–	–	80	0.42	0.3
ZDCW 070304:M8325	0.4	325	0.60	0.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
ZDCW 070304:M8345	0.4	305	0.60	0.4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

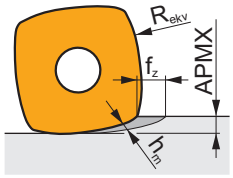
ZDCW geometría especial para fresado de alto avance.

a_e / DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	ZDCW 07
RE	0.4
BS	–



DCX	a_p	0.00	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00
16	DEF	6.0	12.0	12.9	13.7	14.4	15.1	15.7	16.2	16.8
20		10.0	16.0	16.9	17.7	18.4	19.1	19.7	20.2	20.8
25		15.0	21.0	21.9	22.7	23.4	24.1	24.7	25.2	25.8
	a_p	0.00	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00
	f	–	1.50	1.50	1.13	1.00	0.88	0.75	0.61	0.60



$$f_z = h_m \times \sqrt{\frac{2R_{ekv.}}{APMX}} \quad \text{(mm/diente)}$$

Seguir las instrucciones para fresado de superficies planas (planeado). En caso de mecanizar cerca de una superficie vertical, reducir el avance por diente (f_z) al 50% para evitar vibraciones y daños en el filo de corte.

DCX	max	f_{max}
16	5.6	0.12
20	5.6	0.15
25	5.6	0.17

HFC			
a_p	0.3	0.6	1.0
f	1.50	0.80	0.40

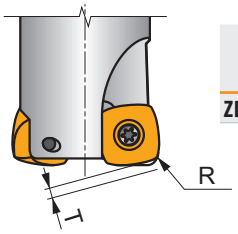
DCX	RPMX	APMX/I
16	7.8	1.0/9
20	9.7	1.0/7
25	4.9	1.0/13

HFC		
DCX	RPMX	APMX/I
16	0.5	0.75/100
20	0.3	0.40/100
25	0.2	0.20/100

DCX	DMIN	DMAX	SMAX / DMIN	SMAX / DMAX
16	21.0	32.0	0.10	0.40
20	29.0	40.0	0.10	0.30
25	39.0	50.0	0.15	0.25

DCX	a_p	f_{max}
16	0.05	0.12
20	0.05	0.15
25	0.05	0.17

DCX	µm	3	5	10	15	20	30	40	50	60	80	100
16	FE	0.438	0.566	0.800	0.980	1.131	1.386	1.600	1.789	1.960	2.263	2.530
20		0.490	0.632	0.894	1.095	1.265	1.549	1.789	2.000	2.191	2.530	2.828
25		0.548	0.707	1.000	1.225	1.414	1.732	2.000	2.236	2.449	2.828	3.162



	R	T
ZDCW 070304	1.70	0.60

SZD09

P K H

PRAMET

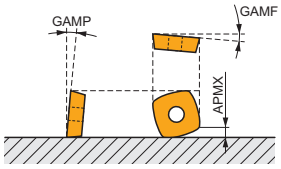
S

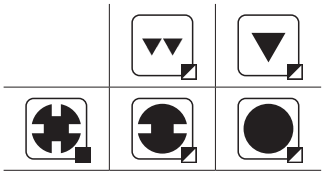
FEED ZD09 Fresa de Alto Avance con Refrigeración Interna

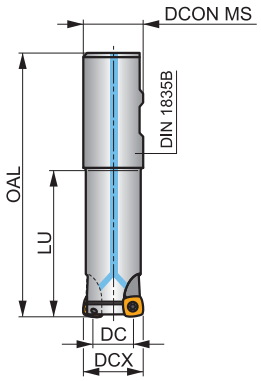
Fresa de alto avance de alta productividad que utiliza plaquitas de una sola cara ZD.. 09 con 4 filos de corte y APMX de 1 mm. Refrigeración interna. Adecuada para una amplia gama de aplicaciones. Disponible con mango cilíndrico, modular y para portafresas. Cuerpo tratado para alargar la vida de herramienta.

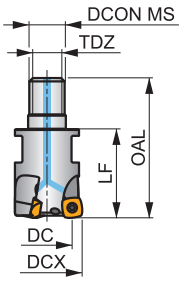
FEED ZD

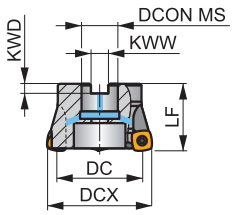
APMX	1.0 mm











h_m	0.31 - 0.618
h_m	0.31 - 0.618

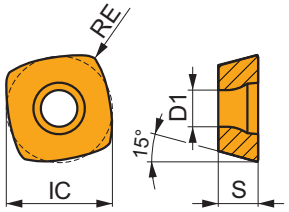
	Producto	DCX (mm)	DC (mm)	OAL (mm)	DCON MS (mm)	LU (mm)	LF (mm)	TDZ	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		kg		
DIN 1835B	**25E2R080B25-SZD09-C**	25	11.6	140	25	80	–	–	–	–	-6	10	2	–	22800	✓	0.46	GI191	SQ400
	25E2R140B25-SZD09-C	25	11.6	200	25	140	–	–	–	–	-6	10	2	–	22800	✓	0.63	GI191	SQ400
	32E2R080B32-SZD09-C	32	18.7	140	32	80	–	–	–	–	-6	10	2	–	20100	✓	0.76	GI191	SQ400
MODULAR	**25E3R032M12-SZD09-C**	25	11.6	54	12.5	–	32	M12	–	–	-6	10	3	–	–	✓	0.11	GI191	SQ400
	32E3R040M16-SZD09-C	32	18.7	63	17	–	40	M16	–	–	-6	10	3	–	–	✓	0.21	GI191	SQ400
ISO 6462 DIN 8030	**40A04R-SMOZD09-C**	40	26.7	–	16	–	40	–	8.4	5.6	-6	10	4	✓	18000	✓	0.34	GI191	SQ402
	50A05R-SMOZD09-C	50	36.7	–	22	–	40	–	10.4	6.4	-6	10	5	✓	16000	✓	0.41	GI191	SQ403
	63A06R-SMOZD09-C	63	49.7	–	22	–	40	–	10.4	6.4	-6	10	6	✓	14300	✓	0.60	GI191	SQ403

GI191	ZDCW 09T3..

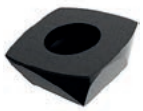
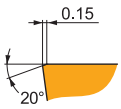
		Nm						
SQ400	US 3006-T09P	2.0	M 3	6	–	–	Flag T09P	–
SQ402	US 3006-T09P	2.0	M 3	6	D-T07P/T09P	FG-15	–	HS 0830C
SQ403	US 3006-T09P	2.0	M 3	6	D-T07P/T09P	FG-15	–	HS 1030C

ZDCW 09

	IC	D1	S
	(mm)	(mm)	(mm)
09T3	9.525	3.40	3.97



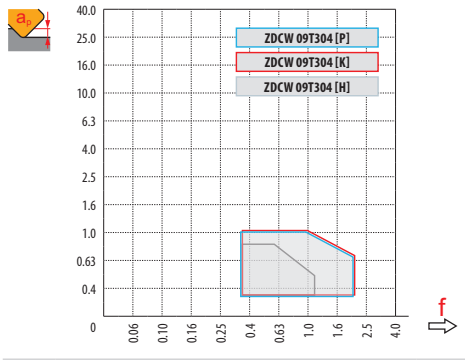
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto	RE	P			M			K			N			S			H		
		vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
																			
ZDCW 09T304:M8310	0.4	320	1.00	0.6	–	–	–	300	1.00	0.6	–	–	–	–	–	–	60	0.70	0.4
ZDCW 09T304:M8325	0.4	250	1.00	0.6	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
ZDCW 09T304:M8345	0.4	235	1.00	0.6	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

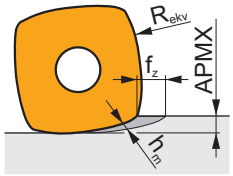
ZDCW geometría especial para fresado de alto avance.

a_e / DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ X.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
⇨ X.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	ZDCW 09
RE	0.4
BS	–



DCX	a_p	0.00	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00
25	DEF	11.6	17.4	18.2	19.0	19.7	20.3	20.9	21.5	22.0
32		18.7	24.5	25.3	26.1	26.8	27.4	28.0	28.6	29.1
40		27.7	33.5	34.3	35.1	35.8	36.4	37.0	37.6	38.1
50		36.7	42.3	43.1	43.8	44.5	45.1	45.7	46.2	46.7
63		49.7	55.3	56.1	56.8	57.5	58.1	58.7	59.2	59.7
	a_p	**0.00**	**0.30**	**0.40**	**0.50**	**0.60**	**0.70**	**0.80**	**0.90**	**1.00**
	1 f	–	2.00	2.00	2.00	1.75	1.50	1.25	1.13	1.00



$$f_z = h_m \times \sqrt{\frac{2R_{ekv.}}{APMX}} \quad \text{(mm/diente)}$$

Seguir las instrucciones para fresado de superficies planas (planeado). En caso de mecanizar cerca de una superficie vertical, reducir el avance por diente (f_z) al 50% para evitar vibraciones y daños en el filo de corte.

DCX	max	f_{max}
25	7.7	0.15
32	7.7	0.17
40	7.7	0.20

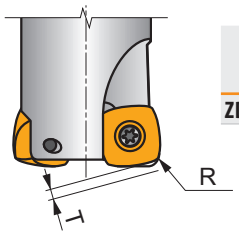
HFC			
a_p	0.3	0.6	1.0
1 f	2.00	1.50	1.00

			HFC	
DCX	RPMX	APMX/l	RPMX	APMX/l
25	12.0	1.0/6	0.9	1.00/65
32	7.5	1.0/11	0.5	0.75/100
40	3.6	1.0/17	0.4	0.55/100

DCX	DMIN	DMAX	SMAX DMIN	SMAX DMAX
25	35.0	50.0	0.45	1.00
32	49.0	64.0	0.45	0.85
40	65.0	80.0	0.50	0.85

DCX	a_p	f_{max}
25	0.15	0.15
32	0.15	0.17
40	0.15	0.20

DCX	µm	3	5	10	15	20	30	40	50	60	80	100
25	FE	0.548	0.707	1.000	1.225	1.414	1.732	2.000	2.236	2.449	2.828	3.162
32		0.620	0.800	1.131	1.386	1.600	1.960	2.263	2.530	2.771	3.200	3.578
40		0.693	0.894	1.265	1.549	1.789	2.191	2.530	2.828	3.098	3.578	4.000
50												
63		0.869	1.122	1.587	1.944	2.245	2.750	3.175	3.550	3.888	4.490	5.020



	R	T
ZDCW 09T304	2.27	0.52

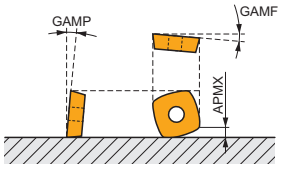
SZD12

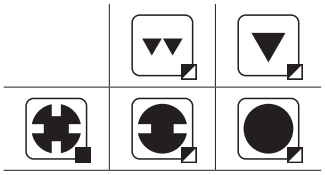
FEED ZD12 Fresa de Alto Avance con Refrigeración Interna

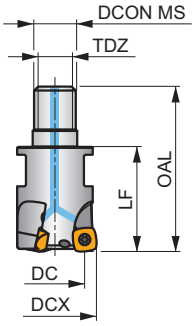
Fresa de alto avance de alta productividad que utiliza plaquitas de una sola cara ZD.. 12 con 4 filosde corte y APMX de 1.6 mm. Refrigeración interna. Adecuada para una amplia gama de aplicaciones. Disponible con mango cilíndrico, modular y para portafresas. Cuerpo tratado para alargar la vida de herramienta.

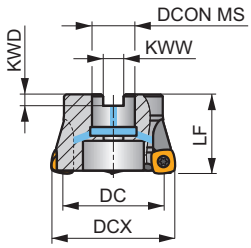
FEED ZD

APMX	1.6 mm









h_m	0.46 - 0.925
h_m	0.46 - 0.925

	Producto	DCX (mm)	DC (mm)	OAL (mm)	DCON MS (mm)	LU (mm)	LF (mm)	TDZ	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		kg			
MODULAR	**32E3R040M16-SZD12-C**	32	14.5	63	17	–	40	M16	–	–	-6	10	3	–	–	✓	0.19	GI192	SQ220	–
MODULAR	**40E4R040M16-SZD12-C**	40	22.5	63	17	–	40	M16	–	–	-6	10	4	–	–	✓	0.22	GI192	SQ220	–
ISO 6462 DIN 8030	**50A04R-SM0ZD12-C**	50	32.5	–	22	–	40	–	10.4	6.4	-6	10	4	✓	14000	✓	0.38	GI192	SQ033	–
ISO 6462 DIN 8030	**63A05R-SM0ZD12-C**	63	45.5	–	22	–	40	–	10.4	6.4	-6	10	5	✓	12500	✓	0.57	GI192	SQ033	–
ISO 6462 DIN 8030	**80A05R-SM0ZD12-C**	80	62.5	–	27	–	50	–	12	7	-6	10	5	✓	11100	✓	1.07	GI192	C0371	AC001

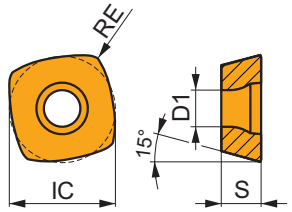
GI192	ZDEW 1204..

		Nm						
C0371	US 4011-T15P	3.5	M 4	10.6	D-T08P/T15P	FG-15	–	–
SQ033	US 4011-T15P	3.5	M 4	10.6	D-T08P/T15P	FG-15	–	HS 1030C
SQ220	US 4011-T15P	3.5	M 4	10.6	–	–	Flag T15P	–

AC001	KS 1230	K.FMH27

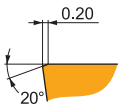
ZDEW 12

	IC	D1	S
	(mm)	(mm)	(mm)
1204	12.700	4.40	4.76



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)

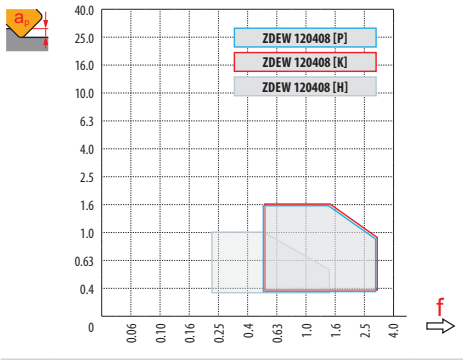


ZDEW geometría especial para fresado de alto avance.

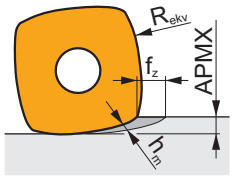
ZDEW 120408:M8310		0.8	270	1.00	1.0	–	–	–	255	1.00	1.0	–	–	–	–	–	–	50	0.70	0.7
ZDEW 120408:M8325		0.8	205	1.00	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
ZDEW 120408:M8345		0.8	195	1.00	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

a_e / DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
⇨ x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	ZDEW 12
RE	0.8
BS	–



DCX	a_p	0.00	0.50	0.60	0.70	0.80	0.90	1.00	1.10	1.20	1.30	1.40	1.50	1.60
32	DEF	14.5	22.7	23.5	24.2	24.8	25.4	26.0	26.5	27.0	27.5	28.0	28.5	28.9
40		22.5	30.7	31.5	32.2	32.8	33.4	34.0	34.5	35.0	35.5	36.0	36.5	36.9
50		32.5	40.7	41.5	42.2	42.8	43.4	44.0	44.5	45.0	45.5	46.0	46.5	46.9
63		45.5	53.7	54.5	55.2	55.8	56.4	57.0	57.5	58.0	58.5	59.0	59.5	59.9
80		62.5	70.7	71.5	72.2	72.8	73.4	74.0	74.5	75.0	75.5	76.0	76.5	76.9
	a_p	0.00	0.50	0.60	0.70	0.80	0.90	1.00	1.10	1.20	1.30	1.40	1.50	1.60
	1 ⇨ f	–	3.00	3.00	3.00	3.00	3.00	3.00	2.50	2.25	2.00	1.80	1.65	1.50



$$f_z = h_m \times \sqrt{\frac{2R_{ekv.}}{APMX}} \quad \text{(mm/diente)}$$

Seguir las instrucciones para fresado de superficies planas (planeado). En caso de mecanizar cerca de una superficie vertical, reducir el avance por diente (f_z) al 50% para evitar vibraciones y daños en el filo de corte.

DCX	max	f_{max}
32	10.0	0.15
40	10.0	0.17
50	10.0	0.20
63	10.0	0.20
80	10.0	0.25

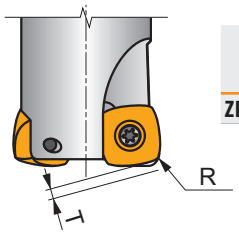
	HFC		
a_p	0.5	1.0	1.6
1 ⇨ f	3.00	2.00	1.50

DCX	RPMX	APMX/I	HFC RPMX	HFC APMX/I
32	10	1.6/11	1.2	1.60/78
40	5.5	1.6/18	0.7	1.10/100
50	3.3	1.6/29	0.5	0.75/100
63	2.2	1.6/43	0.3	0.40/100
80	1.5	1.6/63	0.2	0.20/100

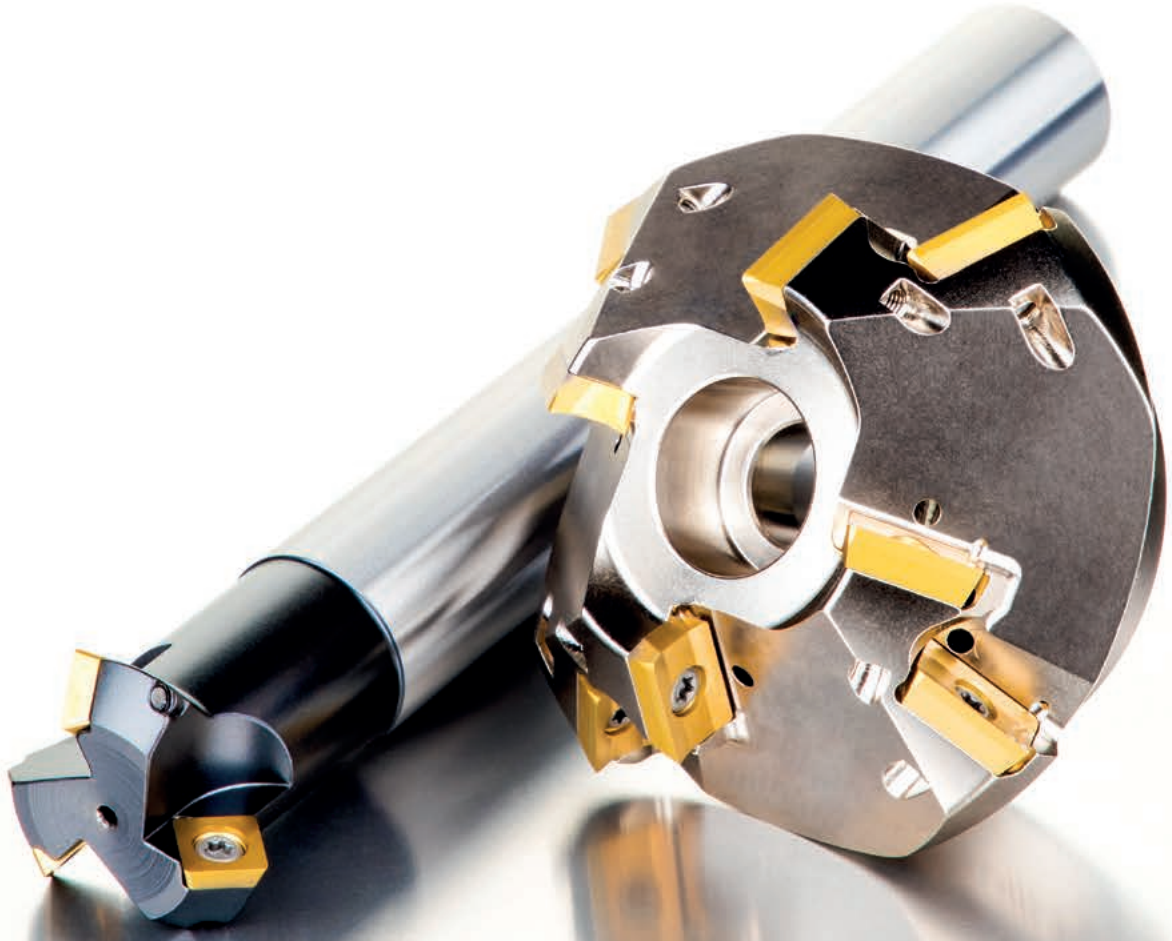
DCX	DMIN	DMAX	SMAX / DMIN	SMAX / DMAX
32	44.0	64.0	0.75	1.60
40	60.0	80.0	0.75	1.50
50	80.0	100.0	0.80	1.35
63	106.0	126.0	0.70	1.00
80	140.0	160.0	0.65	0.85

DCX	a_p	f_{max}
32	0.25	0.15
40	0.25	0.17
50	0.25	0.20
63	0.25	0.20
80	0.25	0.25

DCX	µm	3	5	10	15	20	30	40	50	60	80	100
32	FE	0.620	0.800	1.131	1.386	1.600	1.960	2.263	2.530	2.771	3.200	3.578
40		0.693	0.894	1.265	1.549	1.789	2.191	2.530	2.828	3.098	3.578	4.000
50		0.775	1.000	1.414	1.732	2.000	2.449	2.828	3.162	3.464	4.000	4.472
63		0.869	1.122	1.587	1.944	2.245	2.750	3.175	3.550	3.888	4.490	5.020
80		0.980	1.265	1.789	2.191	2.530	3.098	3.578	4.000	4.382	5.060	5.657



	R	T
ZDEW 120408	3.52	0.64



BISELADO

PLANEADO

	SSD09	N-SSO09	STC	2516	2636	J(T)-SXP16
	45°	45°	45°	45°	10°– 80°	15°– 75°
	APMX (mm) 4.5	APMX (mm) 4.5	APMX (mm) 8.0	APMX (mm) 8.5	APMX (mm) 8.5	APMX (mm) 7.0– 28.0
	DC (mm) 10 – 25	DC (mm) 8 – 25	DC (mm) 20	DC (mm) 11 – 19	DC (mm) 5 – 23	DC (mm) 35 – 45
Mango cilíndrico	DC = 16, 25 (mm)					
Weldon	DC = 10 – 25 (mm)					
Modular	DC = 16, 25 (mm)					
Portafresas						
Página	292	295	298	301	304	307
ISO	P M K S H	P M K S	P M K N	P M K N	P M K N	P M K N
Forma de la plaquita						
Plaquitas de corte	SDE. 0903	SOMT 09T3	TCTX 16 STC	TCMT 16T3	TCMT 16T3	XPHT 1604
N.º de filos de corte	4	4	3	3	3	2
Fresado de chaflanes	■	■	■	■	■	■

■ Primera Opción ◪ Opción Alternativa

SSD09

P M K S H

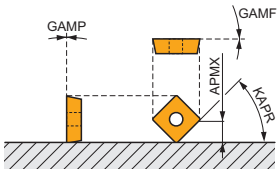
PRAMET

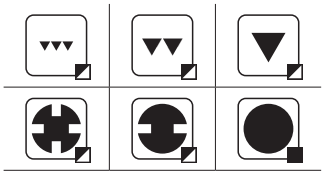
S

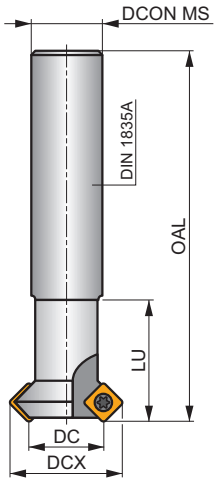
Fresa de Achaflanar a 45° para Plaquitas Cuadradas SD.. 09

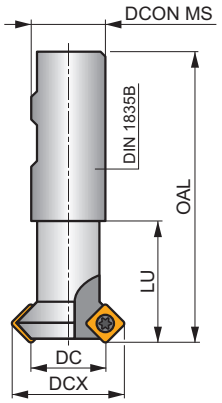
Fresa para achaflanado a 45° con plaquitas SD.. 09, con APMX 4.5 mm. Adecuada para achaflanado frontal y trasero. Disponible con mango cilíndrico, Weldon y cono Morse. Cuerpo tratado para alargar la vida de herramienta.

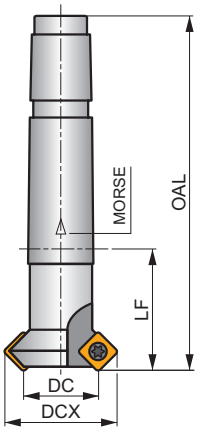
KAPR	45°
APMX	4.5 mm











h_m 0.095 - 0.15

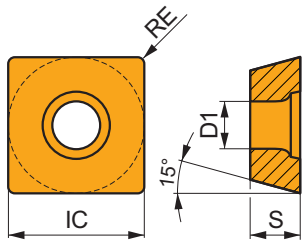
	Producto	DC (mm)	DCX (mm)	OAL (mm)	DCON MS (mm)	LU (mm)	LF (mm)	CZCMS	GAMF (°)	GAMP (°)			max.		kg		
DIN 1835A	**16N2R027A16-SSD09**	16	28	200	16	27	–	–	0	0	2	–	32200	–	0.34	GI129	C0070
	25N3R042A25-SSD09	25	37	200	25	42	–	–	0	0	3	–	25800	–	0.77	GI129	CH011
DIN 1835B	**10N1R027B16-SSD09-A**	10	22	75	16	27	–	–	0	0	1	–	40700	–	0.13	GI129	C0070
	16N2R027B16-SSD09-A	16	28	75	16	27	–	–	0	0	2	–	32200	–	0.14	GI129	C0070
	25N3R042B25-SSD09-A	25	37	98	25	42	–	–	0	0	3	–	25800	–	0.37	GI129	CH011
DIN 228A	**16N2R030E02-SSD09-A**	16	28	94	–	–	30	2	0	0	2	–	32200	–	0.14	GI129	C0070
	25N3R043E03-SSD09-A	25	37	124	–	–	43	3	0	0	3	–	25800	–	0.38	GI129	CH011

GI129	SDEW 0903..	SDEX 0903..

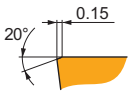
		Nm			
C0070	US 3507-T15	3.0	M 3.5	7	Flag T15
CH011	US 3509-T15	3.0	M 3.5	9	Flag T15

SDEW 09

	IC (mm)	D1 (mm)	S (mm)
0903	9.525	4.40	3.18

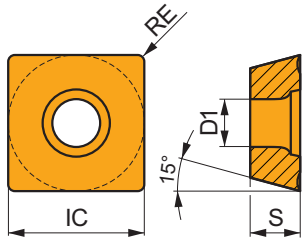


Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

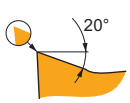
Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
EN geometría con ángulo de desprendimiento de 0° para fresado de chaflanes a 45°.																			
SDEW 090308EN:M8330	0.8	235	0.10	4.5	–	–	–	220	0.10	4.5	–	–	–	–	–	–	45	0.09	0.7
SDEW 090308EN:M8340	0.8	210	0.10	4.5	–	–	–	195	0.10	4.5	–	–	–	–	–	–	–	–	–
																			
SN geometría con ángulo de desprendimiento de 0° para fresado de chaflanes a 45°.																			
SDEW 090308SN:M8330	0.8	215	0.15	4.5	–	–	–	200	0.15	4.5	–	–	–	–	–	–	40	0.11	0.7
SDEW 090308SN:M8340	0.8	195	0.15	4.5	–	–	–	185	0.15	4.5	–	–	–	–	–	–	–	–	–

SDEX 09

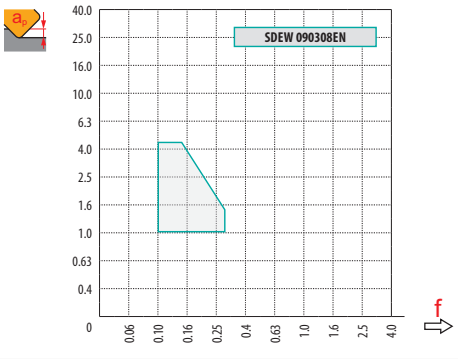
	IC (mm)	D1 (mm)	S (mm)
0903	9.525	4.40	3.18

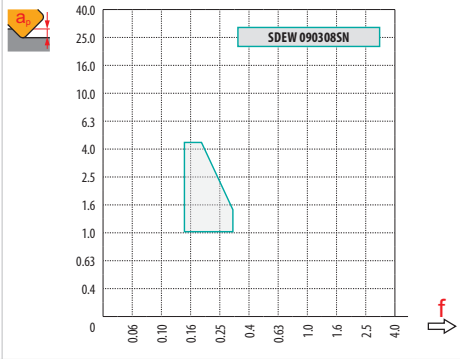


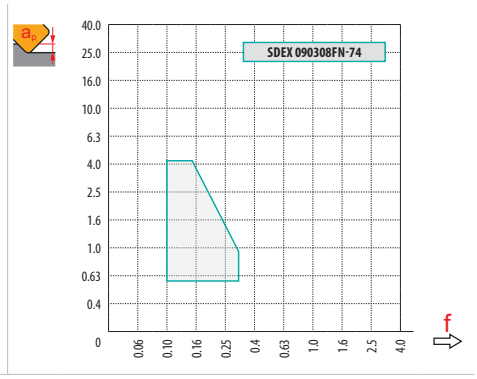
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
																			
74 geometría con ángulo de desprendimiento de 0° para fresado de chaflanes a 45°.																			
SDEX 090308FN-74:M8330	0.8	305	0.12	4.5	180	0.11	4.5	285	0.12	4.5	–	–	–	75	0.11	3.6	–	–	–

	SDEW 09 EN	SDEW 09 SN	SDEX 09-74
RE	0.8	0.8	0.8
BS	–	–	–







DC	DCX	X.V	f_{min}	f_{max}
10	22	1.09	0.20	0.30
16	28	1.17	0.25	0.34
25	37	1.24	0.32	0.39

a_e / DC	**0.10**			**0.15**			**0.20**			**0.25**			**0.30**			**0.35**			**0.40**			**0.50 – 1.00**		
	f																							
45°	0.42	0.54	0.67	0.35	0.44	0.55	0.30	0.38	0.47	0.27	0.34	0.42	0.25	0.31	0.39	0.23	0.29	0.36	0.21	0.27	0.34	0.19	0.24	0.30
X.V	1.35			1.27			1.22			1.19			1.16			1.13			1.11			1.00		

N-SSO09

P M K S

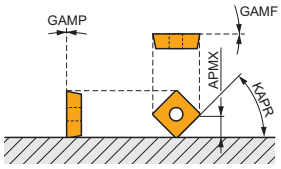
PRAMET

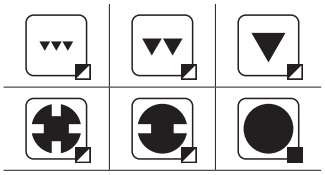
S

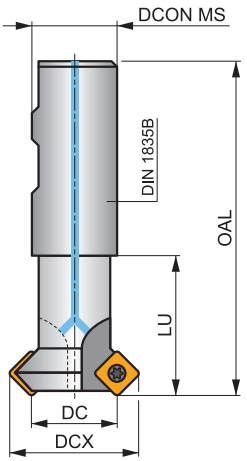
Fresa de Achaflanar a 45° para Plaquitas Cuadradas SOMT 09 con Refrigeración Interna

Fresa para achaflanado a 45° con plaquitas SOMT 09, con APMX 4.5 mm y refrigeración interna. Adecuada para achaflanado frontal y trasero. Disponible con mango Weldon. Cuerpo tratado para alargar la vida de herramienta.

KAPR	45°
APMX	4.5 mm







h_m 0.095 - 0.18

	Producto	DC (mm)	DCX (mm)	OAL (mm)	DCON MS (mm)	LU (mm)	GAMF (°)	GAMP (°)			max.		kg		
DIN 1835B	**16N2R027B16-SSO09-C**	16	28.8	110	16	27	0	0	2	–	26600	✓	0.23	GI146	SQ500
	25N3R042B25-SSO09-C	25	37.8	125	25	42	0	0	3	–	21300	✓	0.49	GI146	SQ500
	8N1R027B16-SSO09-C	8	20.5	90	16	27	0	0	1	–	37700	✓	0.16	GI146	SQ500

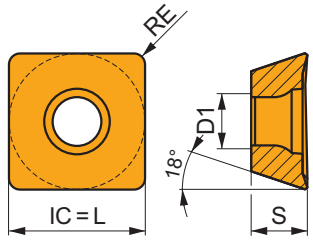
GI146	SOMT 09T3..

		Nm			
SQ500	US 3006-T09P	2.0	M 3	6	Flag T09P

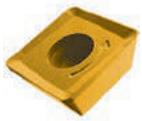
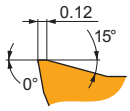
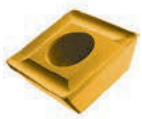
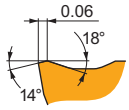
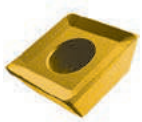
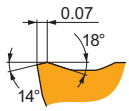
SOMT 09

PRAMET

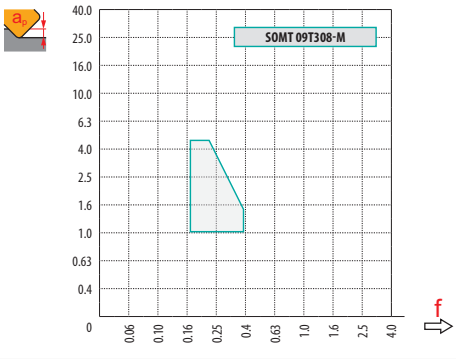
	IC	D1	L	S
	(mm)	(mm)	(mm)	(mm)
09T3	9.550	3.50	9.55	3.97

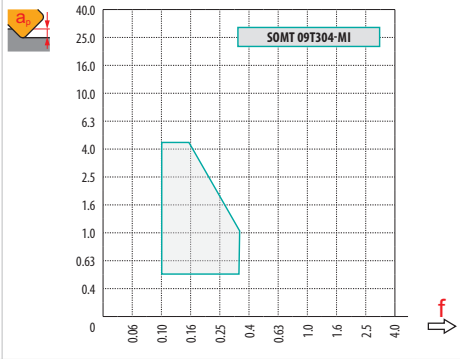


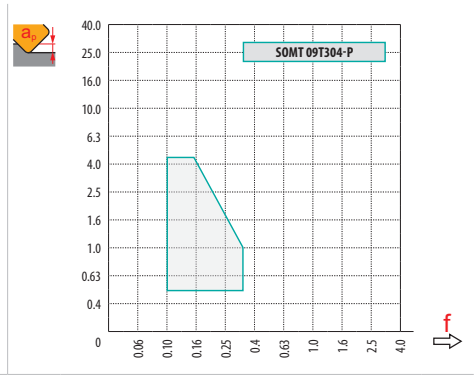
Valores de inicio adecuados para velocidad de corte (vc), avance (f) y profundidad de corte (ap). Condiciones válidas para ángulo de 90º Consulte nuestra APP Calculadora para más cálculos.

Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
																				
M geometría con diseño positivo para mecanizado medio.																				
SOMT 09T308-M:8215	●	0.8	■ 275	0.14	2.5	◪ 165	0.13	2.5	◪ 260	0.14	2.5	–	–	–	◪ 65	0.13	2.0	–	–	–
SOMT 09T308-M:M5315	●	0.8	◪ 390	0.14	2.5	–	–	–	◪ 370	0.14	2.5	–	–	–	–	–	–	–	–	–
SOMT 09T308-M:M8330	●	0.8	■ 270	0.14	2.5	■ 160	0.13	2.5	◪ 255	0.14	2.5	–	–	–	◪ 65	0.13	2.0	–	–	–
SOMT 09T308-M:M8340	●	0.8	■ 250	0.14	2.5	■ 150	0.13	2.5	◪ 235	0.14	2.5	–	–	–	◪ 60	0.13	2.0	–	–	–
SOMT 09T308-M:M9315	●	0.8	■ 380	0.14	2.5	–	–	–	◪ 360	0.14	2.5	–	–	–	–	–	–	–	–	–
																				
MI geometría con diseño positivo y estable para mecanizado medio.																				
SOMT 09T304-MI:8215	●	0.4	■ 230	0.14	2.5	◪ 135	0.13	2.5	◪ 215	0.14	2.5	–	–	–	◪ 55	0.10	2.0	–	–	–
SOMT 09T304-MI:M8310	●	0.4	■ 255	0.14	2.5	◪ 130	0.13	2.5	◪ 240	0.14	2.5	–	–	–	–	–	–	–	–	–
SOMT 09T304-MI:M8330	●	0.4	■ 230	0.14	2.5	■ 135	0.13	2.5	◪ 215	0.14	2.5	–	–	–	◪ 55	0.10	2.0	–	–	–
SOMT 09T304-MI:M8340	●	0.4	■ 210	0.14	2.5	■ 125	0.13	2.5	◪ 195	0.14	2.5	–	–	–	◪ 50	0.10	2.0	–	–	–
SOMT 09T304-MI:M9315	●	0.4	■ 320	0.14	2.5	–	–	–	◪ 300	0.14	2.5	–	–	–	–	–	–	–	–	–
SOMT 09T304-MI:M9340	●	0.4	■ 265	0.14	2.5	■ 155	0.13	2.5	–	–	–	–	–	–	◪ 65	0.10	2.0	–	–	–
																				
P geometría muy positiva para mecanizado medio.																				
SOMT 09T304-P:M8330	●	0.4	■ 250	0.14	2.5	◪ 150	0.13	2.5	◪ 235	0.14	2.5	–	–	–	◪ 60	0.10	2.0	–	–	–
SOMT 09T304-P:M8340	●	0.4	■ 230	0.14	2.5	◪ 135	0.13	2.5	◪ 215	0.14	2.5	–	–	–	◪ 55	0.10	2.0	–	–	–
SOMT 09T304-P:M9325	●	0.4	■ 320	0.14	2.5	–	–	–	◪ 300	0.14	2.5	–	–	–	–	–	–	–	–	–

	SOMT 09-M	SOMT 09-MI	SOMT 09-P
RE	0.8	0.4	0.4
BS	–	–	–







DC	DCX	X.V	f_{min}	f_{max}
8	20.5	1.06	0.18	0.29
16	28.8	1.17	0.25	0.34
25	37.8	1.24	0.32	0.39

a_e / DC	**0.10**			**0.15**			**0.20**			**0.25**			**0.30**			**0.35**			**0.40**			**0.50 – 1.00**		
	f																							
45°	0.42	0.63	0.80	0.35	0.51	0.66	0.30	0.44	0.57	0.27	0.40	0.51	0.25	0.36	0.46	0.23	0.33	0.43	0.21	0.31	0.40	0.19	0.28	0.36
X.V	1.35			1.27			1.22			1.19			1.16			1.13			1.11			1.00		

STC

P M K N

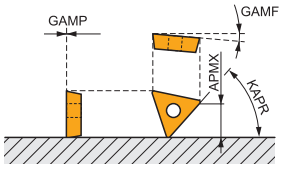
PRAMET

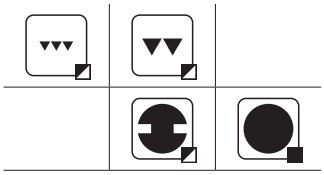
S

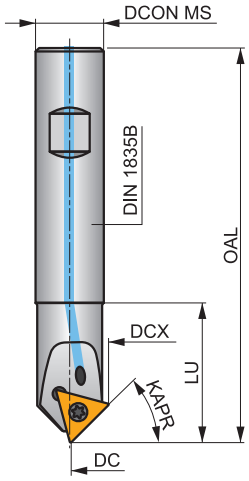
Fresa para achaflanado y grabar a 45° para plaquitas TC.T 16 y refrigeración interna

Fresa para achaflanado y grabar a 45° con plaquitas TC.T 16, con APMX 8.5 mm y refrigeración interna. Adecuada para achaflanado frontal. Disponible únicamente con mango Weldon. Cuerpo tratado para alargar la vida de herramienta.

KAPR	45°







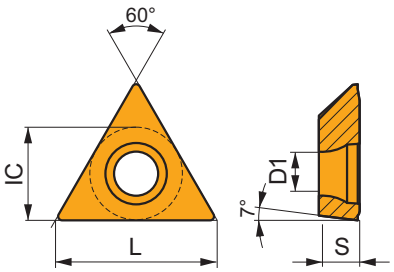
	Producto	DCX (mm)	DC (mm)	OAL (mm)	DCON MS (mm)	LU (mm)			kg		
DIN 1835B	20N1R040B20-STC-000887	22.8	1.1	114	20	40	1	✓	0.26	GI223	SQ222

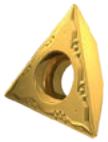
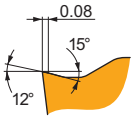
GI223	TC.T 16 STC

		Nm			
SQ222	US 2002-T15P	3.0	4	8.5	Flag T15P

TCXT 16 STC

	IC (mm)	D1 (mm)	L (mm)	S (mm)
16	9.525	4.60	16.50	3.97

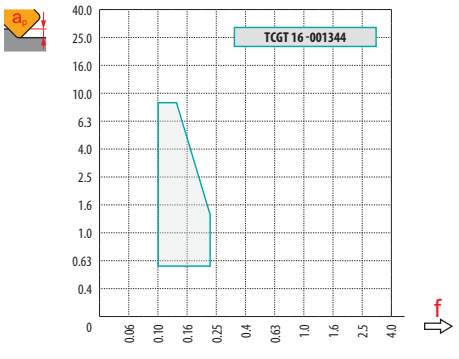


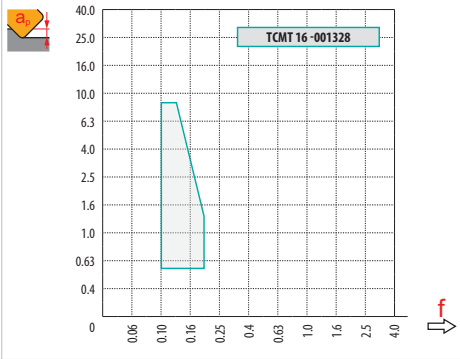
Producto	Interrupted/ Continuous cut	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
																				
TCMT 16-001328:M8330	–	0.4	■ 150	0.13	8.5	◪ 90	0.12	8.5	◪ 140	0.13	8.5	–	–	–	–	–	–	–	–	–
TCGT 16-001344:HF7	–	0.4	–	–	–	–	–	–	–	–	–	■ 225	0.10	8.5	–	–	–	–	–	–

328 es un rompevirutas afilado y la primera elección para el acabado fino de aceros. Presenta un ángulo de desprendimiento ligeramente positivo sin faceta T. También es adecuado para fundición.

344 El rompevirutas 344 es afilado y la primera elección para el mecanizado completo de aleaciones no férreas. Presenta un ángulo de desprendimiento muy positivo sin faceta T. También es condicionalmente adecuado para superaleaciones.

	TCGT 16 -001344	TCMT 16 -001328
RE	0.4	0.4
BS	–	–





DC	DCX	X.V	f_{min}	f_{max}
1.1	22.8	1.1	0.1	.018

2516

P M K N

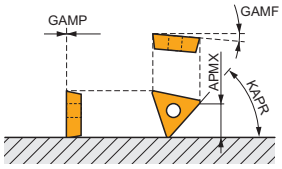
PRAMET

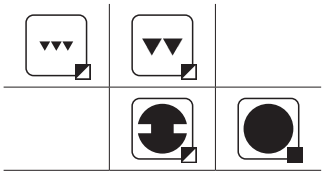
S

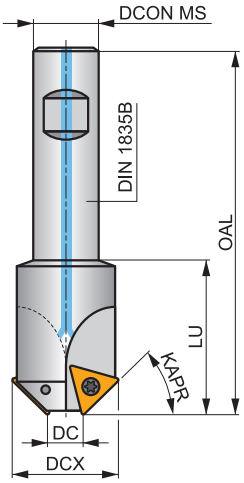
Fresa de Achaflanar a 45° para Plaquitas TCMT 16 con Refrigeración Interna

Fresa para achaflanado a 45° con plaquitas TCMT 16, con APMX 8.5 mm y refrigeración interna. Adecuada para achaflanado frontal. Disponible únicamente con mango Weldon. Cuerpo tratado para alargar la vida de herramienta.

KAPR	45°
APMX	8.5 mm







h_m 0.065 - 0.095

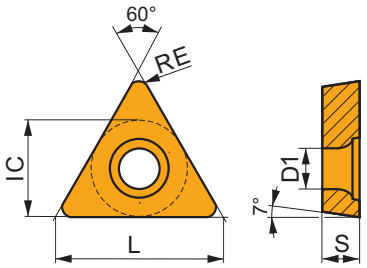
	Producto	DCX (mm)	DC (mm)	OAL (mm)	DCON MS (mm)	LU (mm)			max.		kg		
DIN 1835B	**2516-45-11**	31	11	100	16	30	2	–	18100	✓	0.20	GI155	SQ220
DIN 1835B	**2516-45-19**	39	19	100	20	30	2	–	16200	✓	0.31	GI155	SQ220

GI155	TCMT 16T308E-FM:T8..

		Nm			
SQ220	US 4011-T15P	3.5	M 4	10.6	Flag T15P

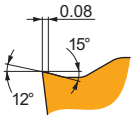
TCMT

	IC	D1	L	S
	(mm)	(mm)	(mm)	(mm)
16T3	9.525	4.40	16.50	3.97



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

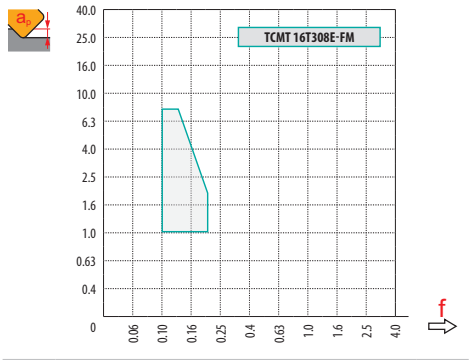
Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)



FM es un rompevirutas versátil y la primera elección para el acabado de aceros. Se caracteriza por un ángulo de desprendimiento positivo y una faceta T positiva y estrecha. También es adecuado para aceros inoxidables y, condicionalmente, para fundiciones y aleaciones no férreas.

TCMT 16T308E-FM:T8315	●	0.8	170	0.17	1.7	100	0.15	1.7	160	0.17	1.7	510	0.20	1.7	–	–	–	–	–	–
TCMT 16T308E-FM:T8415	●	0.8	210	0.17	1.7	110	0.15	1.7	190	0.17	1.7	525	0.20	1.7	–	–	–	–	–	–
TCMT 16T308E-FM:T8430	●	0.8	185	0.17	1.7	100	0.15	1.7	150	0.17	1.7	510	0.20	1.7	–	–	–	–	–	–

	TCMT 16-FM
RE	0.8
BS	–



DC	DCX	X.V	f_{min}	f_{max}
11.0	31.0	1.02	0.10	0.18
19.0	39.0	1.10	0.14	0.20

2636

P M K N

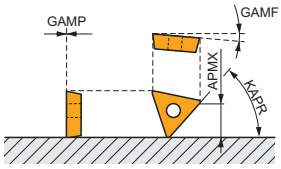
PRAMET

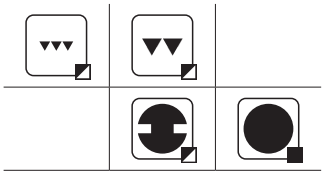
S

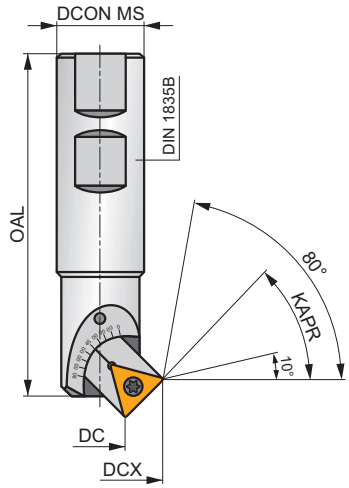
Fresa Ajustable para Plaquitas TCMT 16

Fresa para achaflanado ajustable que utiliza plaquitas TCMT 16, con APMX 8.5 mm. Ángulo ajustable entre 10° y 80°. Disponible únicamente con mango Weldon. Cuerpo tratado para alargar la vida de herramienta.

KAPR	10° – 80°
APMX	8.5 mm







h_m 0.03 – 0.08

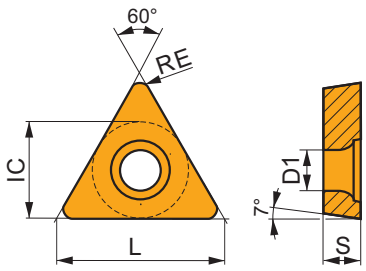
	Producto	DCN (mm)	DCX (mm)	OAL (mm)	DCON MS (mm)	KAPR (°)	GAMF (°)	GAMP (°)			max.		kg		
DIN 1835B	**2636-05-25**	5.0	31.0	100	25	10	-8	0	1	–	18100	–	0.35	GI294	CH040
		5.5	31.0			15									
		7.0	29.5			30									
		11.0	29.5			45									
		16.0	28.5			60									
		21.0	26.5			75									
		23.0	26.0			80									

GI294	TCMT 16T304E-FM:T8...	TCMT 16T308E-FM:T8...

CH040	USI 0614	CA 2669	US 4011-T15P	3.5 Nm	M 4	10.6	Flag T15

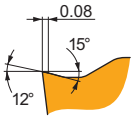
TCMT

	IC	D1	L	S
	(mm)	(mm)	(mm)	(mm)
16T3	9.525	4.40	16.50	3.97



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

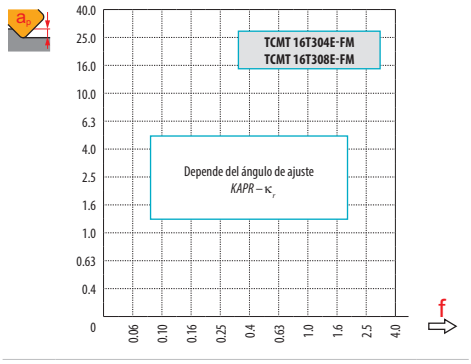
Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)



FM es un rompevirutas versátil y la primera elección para el acabado de aceros. Se caracteriza por un ángulo de desprendimiento positivo y una faceta T positiva y estrecha. También es adecuado para aceros inoxidables y, condicionalmente, para fundiciones y aleaciones no férreas.

TCMT 16T304E-FM:T8315	●	0.4	◪	155	0.12	1.7	■	90	0.11	1.7	◪	145	0.12	1.7	◪	465	0.14	1.7	–	–	–	–	–	–
TCMT 16T304E-FM:T8415	●	0.4	■	190	0.12	1.7	■	100	0.11	1.7	◪	170	0.12	1.7	◪	480	0.14	1.7	–	–	–	–	–	–
TCMT 16T304E-FM:T8430	●	0.4	■	180	0.12	1.7	■	95	0.11	1.7	◪	145	0.12	1.7	◪	495	0.14	1.7	–	–	–	–	–	–
TCMT 16T308E-FM:T8315	●	0.8	◪	170	0.17	1.7	■	100	0.15	1.7	◪	160	0.17	1.7	◪	510	0.20	1.7	–	–	–	–	–	–
TCMT 16T308E-FM:T8415	●	0.8	■	210	0.17	1.7	■	110	0.15	1.7	◪	190	0.17	1.7	◪	525	0.20	1.7	–	–	–	–	–	–
TCMT 16T308E-FM:T8430	●	0.8	■	185	0.17	1.7	■	100	0.15	1.7	◪	150	0.17	1.7	◪	510	0.20	1.7	–	–	–	–	–	–

	TCMT 16-FM	
RE	0.8	0.4
BS	–	–



	a_p	DC	DCX	X.V	f_{min}	f_{max}
10°	2.6	5.0	31.0	1.38	0.24	0.59
15°	3.9	5.5	31.0	1.30	0.17	0.40
30°	7.6	7.0	29.5	1.18	0.10	0.20
45°	10.7	11.0	29.5	1.13	0.09	0.14
60°	13.2	16.0	28.5	1.09	0.09	0.11
75°	14.7	21.0	26.5	1.06	0.09	0.10
80°	15.0	23.0	26.0	1.06	0.09	0.10

a_e / DC	0.10			0.15			0.20			0.25			0.30			0.35			0.40			0.50 – 1.00		
	f																							
10°	0.55	0.91	1.46	0.45	0.74	1.19	0.39	0.64	1.03	0.35	0.58	0.92	0.32	0.53	0.84	0.29	0.49	0.78	0.27	0.46	0.73	0.24	0.41	0.65
15°	0.37	0.61	0.98	0.30	0.50	0.80	0.26	0.43	0.69	0.23	0.39	0.62	0.21	0.35	0.56	0.20	0.33	0.52	0.18	0.31	0.49	0.16	0.27	0.44
30°	0.19	0.32	0.51	0.15	0.26	0.41	0.13	0.22	0.36	0.12	0.20	0.32	0.11	0.18	0.29	0.10	0.17	0.27	0.09	0.16	0.25	0.08	0.14	0.23
45°	0.13	0.22	0.36	0.11	0.18	0.29	0.09	0.16	0.25	0.08	0.14	0.23	0.08	0.13	0.21	0.07	0.12	0.19	0.07	0.11	0.18	0.06	0.10	0.16
60°	0.11	0.18	0.29	0.09	0.15	0.24	0.08	0.13	0.21	0.07	0.12	0.18	0.06	0.11	0.17	0.06	0.10	0.16	0.05	0.09	0.15	0.05	0.08	0.13
75°	0.10	0.16	0.26	0.08	0.13	0.21	0.07	0.12	0.19	0.06	0.10	0.17	0.06	0.09	0.15	0.05	0.09	0.14	0.05	0.08	0.13	0.04	0.07	0.12
80°	0.10	0.16	0.26	0.08	0.13	0.21	0.07	0.11	0.18	0.06	0.10	0.16	0.06	0.09	0.15	0.05	0.09	0.14	0.05	0.08	0.13	0.04	0.07	0.11
X.V	1.35			1.27			1.22			1.19			1.16			1.13			1.11			1.00		

J(T)-SXP16

P M K N

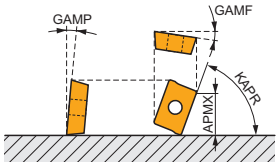
PRAMET

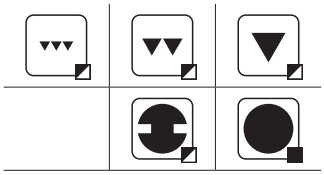
S

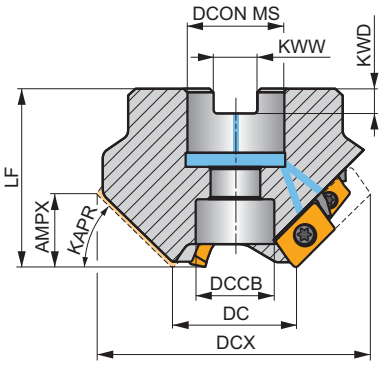
Fresa de Filo Largo para Achaflanado, para Plaquitas XPHT 16, Refrigeración Interna

Fresa de achaflanado que utiliza plaquitas de una sola cara XPHT 16 con APMX de 7 a 8 mm. Refrigeración interna. Adecuado para achaflanado frontal. Disponible para solo para portafresas en ángulos de chaflan de 15°, 25°, 30°, 35°, 40°, 45°, 50°, 55°, 60° y 75°. Cuerpo tratado para alargar la vida de herramienta.

KAPR	15° - 75°
APMX	7.0 - 28.0 mm







h_m 0.05 - 0.11

	Producto	DC (mm)	DCX (mm)	LF (mm)	DCON MS (mm)	DCCB (mm)	KAPR (°)	KWW (mm)	KWD (mm)	APMX (mm)	GAMF (°)	GAMP (°)	NOF			max.		kg		
	35T03R-S15XP1607-C	35	90.6	50	27	22	15	12.4	7	7.00	-6	-1	3	6	–	15200	✓	1.32	GI208	CH050
	35T03R-S25XP1612-C	35	87.3	50	27	22	25	12.4	7	12.00	-6	0	3	6	–	15200	✓	1.15	GI208	CH050
	35T03R-S30XP1614-C	35	85.1	50	27	22	30	12.4	7	14.00	-6	0	3	6	–	15200	✓	1.11	GI208	CH050
	35T03R-S35XP1616-C	35	82.4	50	27	22	35	12.4	7	16.00	-6	0	3	6	–	15200	✓	1.04	GI208	CH050
	35T03R-S40XP1618-C	35	79.4	50	27	22	40	12.4	7	18.00	-6	1	3	6	–	15200	✓	0.96	GI208	CH050
	35T03R-S45XP1620-C	35	76.1	50	27	22	45	12.4	7	20.00	-6	2	3	6	–	15200	✓	0.90	GI208	CH050
	35T03R-S50XP1622-C	35	72.4	50	27	22	50	12.4	7	22.00	-6	2	3	6	–	15200	✓	0.83	GI208	CH050
	35T03R-S55XP1623-C	35	68.4	50	27	22	55	12.4	7	23.00	-6	2	3	6	–	15200	✓	0.72	GI208	CH050
ISO 6462 DIN 8030	35T03R-S60XP1625-C	35	64.2	50	27	22	60	12.4	7	25.00	-5	4	3	6	–	15200	✓	0.63	GI208	CH050
	45T03R-S75XP1628-C	45	60.1	50	27	22	75	12.4	7	28.00	-5	5	3	6	–	13400	✓	0.64	GI208	CH050
	45T04R-S25XP1612-C	45	97.3	50	27	22	25	12.4	7	12.00	-6	0	4	8	✓	13400	✓	1.24	GI208	CH050
	45T04R-S30XP1614-C	45	95.1	50	27	22	30	12.4	7	14.00	-6	0	4	8	✓	13400	✓	1.21	GI208	CH050
	45T04R-S35XP1616-C	45	92.4	50	27	22	35	12.4	7	16.00	-6	2	4	8	✓	13400	✓	1.30	GI208	CH050
	45T04R-S40XP1618-C	45	89.5	50	27	22	40	12.4	7	18.00	-6	2	4	8	✓	13400	✓	1.08	GI208	CH050
	45T04R-S45XP1620-C	45	86.1	50	27	22	45	12.4	7	20.00	-6	2	4	8	✓	13400	✓	1.03	GI208	CH050
	45T04R-S50XP1622-C	45	82.4	50	27	22	50	12.4	7	22.00	-6	2	4	8	✓	13400	✓	0.96	GI208	CH050
	45T04R-S55XP1623-C	45	78.4	50	27	22	55	12.4	7	23.00	-6	2	4	8	✓	13400	✓	0.88	GI208	CH050
	45T04R-S60XP1625-C	45	74.2	50	27	22	60	12.4	7	25.00	-5	4	4	8	✓	13400	✓	0.78	GI208	CH050

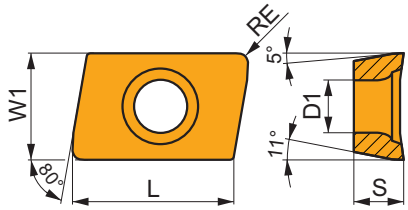
GI208	XPHT 1604..

CH050	US 3509-T15	3.0 Nm	M 3.5	9	D-T07/T15	FG-15	HS 1230C

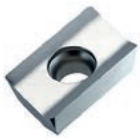
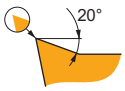
XPHT 16-FA

PRAMET

	W1	D1	L	S
	(mm)	(mm)	(mm)	(mm)
1604	9.525	4.40	15.88	4.76



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

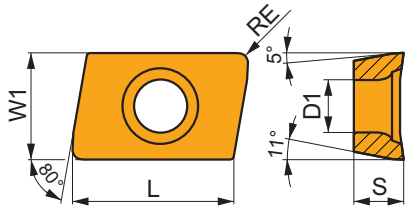
Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
																				
XPHT 160408F-FA:HF7	●	0.8	–	–	–	–	–	–	–	–	–	■ 255	0.12	15.0	–	–	–	–	–	–

FA geometría con diseño de filo muy positivo para fresado de chaflanes.

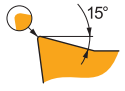
XPHT 16

PRAMET

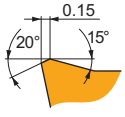
	W1	D1	L	S
	(mm)	(mm)	(mm)	(mm)
1604	9.525	4.40	15.88	4.76



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
																				
XPHT 160412E:8215	⬢	1.2	■ 225	0.10	15.0	◪ 135	0.09	15.0	◪ 210	0.10	15.0	–	–	–	–	–	–	–	–	–
XPHT 160412E:M6330	⬢	1.2	■ 190	0.10	15.0	■ 135	0.09	15.0	–	–	–	–	–	–	–	–	–	–	–	–
XPHT 160412E:M8330	⬢	1.2	■ 220	0.10	15.0	■ 130	0.09	15.0	◪ 205	0.10	15.0	–	–	–	–	–	–	–	–	–
XPHT 160412E:M8340	⬢	1.2	■ 195	0.10	15.0	■ 115	0.09	15.0	◪ 185	0.10	15.0	–	–	–	–	–	–	–	–	–

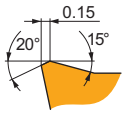
E geometría con diseño de filo muy positivo para fresado de chaflanes.



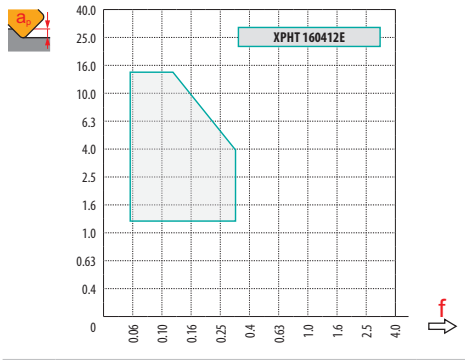
S geometría con diseño de filo muy positivo para fresado de chaflanes.

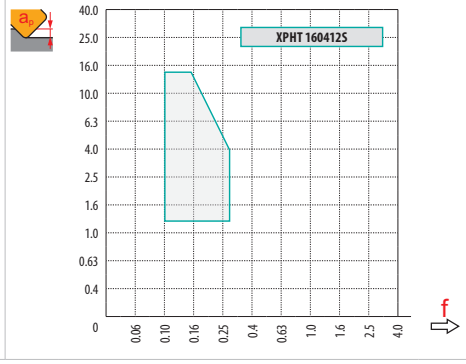
XPHT 160412S:8215	⬢	1.2	■ 210	0.12	15.0	◪ 125	0.11	15.0	◪ 195	0.12	15.0	–	–	–	–	–	–	–	–	–
XPHT 160412S:M8330	⬢	1.2	■ 210	0.12	15.0	■ 125	0.11	15.0	◪ 195	0.12	15.0	–	–	–	–	–	–	–	–	–
XPHT 160412S:M8340	✱	1.2	■ 190	0.12	15.0	■ 110	0.11	15.0	◪ 180	0.12	15.0	–	–	–	–	–	–	–	–	–

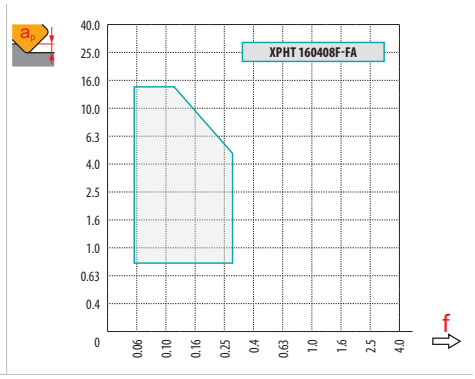
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
 **S** geometría con diseño de filo muy positivo para fresado de chaflanes.																			
XPHT 160412S:M9325	1.2	270	0.12	15.0	–	–	–	255	0.12	15.0	–	–	–	–	–	–	–	–	–
XPHT 160412S:M9340	1.2	245	0.12	15.0	145	0.11	15.0	–	–	–	–	–	–	–	–	–	–	–	–

	XPHT 16 E	XPHT 16 S	XPHT 16-FA
RE	1.2	1.2	0.8
BS	–	–	–







a_e / DC	0.10			0.15			0.20			0.25			0.30			0.35			0.40			0.50 – 1.00		
	f ⇨																							
15°	0.61	0.98	1.34	0.50	0.80	1.10	0.43	0.69	0.95	0.39	0.62	0.85	0.35	0.56	0.78	0.33	0.52	0.72	0.31	0.49	0.67	0.27	0.44	0.60
25°	0.37	0.60	0.82	0.31	0.49	0.67	0.26	0.42	0.58	0.24	0.38	0.52	0.22	0.35	0.48	0.20	0.32	0.44	0.19	0.30	0.41	0.17	0.27	0.37
30°	0.32	0.51	0.70	0.26	0.41	0.57	0.22	0.36	0.49	0.20	0.32	0.44	0.18	0.29	0.40	0.17	0.27	0.37	0.16	0.25	0.35	0.14	0.23	0.31
35°	0.28	0.44	0.61	0.23	0.36	0.50	0.19	0.31	0.43	0.17	0.28	0.38	0.16	0.25	0.35	0.15	0.24	0.32	0.14	0.22	0.30	0.12	0.20	0.27
40°	0.25	0.39	0.54	0.20	0.32	0.44	0.17	0.28	0.38	0.16	0.25	0.34	0.14	0.23	0.31	0.13	0.21	0.29	0.12	0.20	0.27	0.11	0.18	0.24
45°	0.22	0.36	0.49	0.18	0.29	0.40	0.16	0.25	0.35	0.14	0.23	0.31	0.13	0.21	0.28	0.12	0.19	0.26	0.11	0.18	0.25	0.10	0.16	0.22
50°	0.21	0.33	0.45	0.17	0.27	0.37	0.15	0.23	0.32	0.13	0.21	0.29	0.12	0.19	0.26	0.11	0.18	0.24	0.10	0.17	0.23	0.09	0.15	0.20
55°	0.19	0.31	0.42	0.16	0.25	0.35	0.14	0.22	0.30	0.12	0.20	0.27	0.11	0.18	0.25	0.10	0.17	0.23	0.10	0.15	0.21	0.09	0.14	0.19
60°	0.18	0.29	0.40	0.15	0.24	0.33	0.13	0.21	0.28	0.12	0.18	0.25	0.11	0.17	0.23	0.10	0.16	0.21	0.09	0.15	0.20	0.08	0.13	0.18
75°	0.16	0.26	0.36	0.13	0.21	0.29	0.12	0.19	0.25	0.10	0.17	0.23	0.09	0.15	0.21	0.09	0.14	0.19	0.08	0.13	0.18	0.07	0.12	0.16
X.V	1.35			1.27			1.22			1.19			1.16			1.13			1.11			1.00		

	a_p	DC	DCX	X.V	f_{min} ⇨	f_{max} ⇨
15°	7	35.0	90.6	1.16	0.43	0.70
25°	12	35.0	87.3	1.16	0.20	0.32
30°	14	35.0	85.1	1.17	0.16	0.25
35°	16	35.0	82.4	1.17	0.13	0.20
40°	18	35.0	79.4	1.17	0.11	0.16
45°	20	35.0	76.0	1.18	0.09	0.14
50°	22	35.0	72.4	1.18	0.08	0.12
55°	23	35.0	68.4	1.20	0.08	0.11
60°	25	35.0	64.1	1.20	0.07	0.09
25°	12	45.0	97.3	1.18	0.23	0.34
30°	14	45.0	95.0	1.18	0.18	0.26
35°	16	45.0	92.4	1.19	0.15	0.21
40°	18	45.0	89.5	1.19	0.12	0.17
45°	20	45.0	86.0	1.20	0.11	0.15
50°	22	45.0	82.4	1.21	0.09	0.13

	a_p	DC	DCX	X.V	f_{min} ⇨	f_{max} ⇨
55°	23	45.0	78.4	1.22	0.09	0.11
60°	25	45.0	74.1	1.23	0.08	0.10
75°	28	45.0	60.1	1.31	0.07	0.08

Las fresas con ángulo de ajuste de 15° pueden utilizarse como HFC. Utilizar los avances de la tabla de chaflanes.

RANURADO

PLANEADO

	S90SN	S90CN(XN)	F-SCC			
	90°	90°	90°			
	APMX (mm) 4.0 – 14.0	APMX (mm) 14.0 – 30.5	APMX (mm) 11.0 – 18.0			
	DC (mm) 63 – 200	DC (mm) 125 – 315	DC (mm) 25 – 40			
Mango cilíndrico	DC = 80 – 200 (mm)	DC = 125 – 315 (mm)				
Weldon	DC = 63 – 160 (mm)	DC = 125 – 200 (mm)				
Modular						
Portafresas						
Página	314	320	325			
ISO	P M K	P M K	P M K			
Forma de la plaquita						
Plaquitas de corte	SNHQ 11 SNHQ 12	CNHQ 1005 XNHQ 1205 XNHQ 1606	CCMX			
N.º de filos de corte	4	2	2			
Ranurado profundo	■	■				
Fresado de escuadra profunda	◪	◪				
Planeado	◪	◪				
Planeado trasero	◪	◪	■			
Fresado de ranuras en «T»			■			
Escuadrado poco profundo			◪			
Ranurado poco profundo			◪			

■ Primera Opción ◪ Opción Alternativa

S90SN

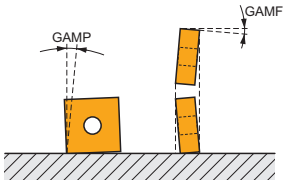
PRAMET

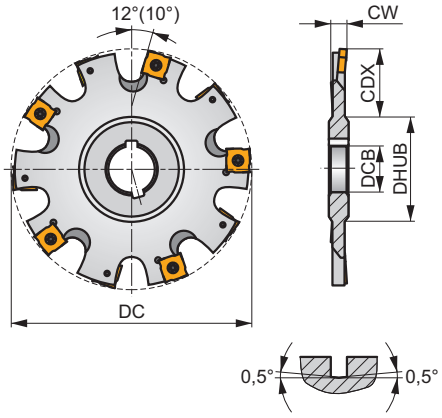
S

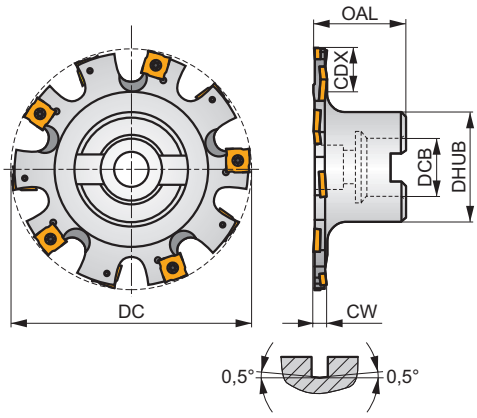
Fresa de Disco con Corte Lateral y Frontal

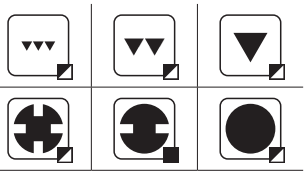
90° disc mill utilising SNHQ inserts. Suitable for slot, shoulder, rear side and face milling. Available in arbor or stub arbor style. Body treated for longer tool life.

KAPR	90°
CW	4.0 – 14.0 mm

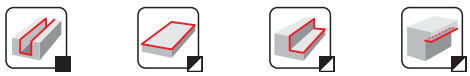








h_m	0.07 – 0.09
h_m	0.07 – 0.09



	Producto	DC (mm)	OAL (mm)	DCB (mm)	DHUB (mm)	CDX (mm)	CW (mm)	x/1	GAMF (°)	GAMP (°)			max.		kg			
	80F8N-S90SN11N4	80	–	27	42	16	4.00	–	2.5	-0.5	8	–	12300	–	0.21	GI151	DI011	–
	80F8N-S90SN11N5	80	–	27	42	16	5.00	–	2.5	-0.5	8	–	12300	–	0.22	GI152	DI019	–
	80F8N-S90SN12N6	80	–	27	42	16	6.00	–	2.5	-0.5	8	–	8400	–	0.25	GI153	DI012	–
	80F8N-S90SN12N8	80	–	27	42	16	8.00	–	2.5	-0.5	8	–	8400	–	0.25	GI157	DI013	–
	100G10N-S90SN12N6	100	–	32	48	24	6.00	–	2.5	-0.5	10	–	7500	–	0.43	GI153	DI012	–
	100G10N-S90SN12N8	100	–	32	48	24	8.00	–	2.5	-0.5	10	–	7500	–	0.42	GI157	DI013	–
	100G10N-S90SN12N10	100	–	32	48	24	10.00	–	2.5	-0.5	10	–	7500	–	0.46	GI154	DI014	–
	100G10N-S90SN12N12	100	–	32	48	24	12.00	–	2.5	-0.5	10	–	7500	–	0.66	GI158	DI015	–
	125H12N-S90SN12N6	125	–	40	58	31	6.00	–	2.5	-0.5	12	–	6700	–	0.62	GI153	DI012	–
	125H12N-S90SN12N8	125	–	40	58	31	8.00	–	2.5	-0.5	12	–	6700	–	0.73	GI157	DI013	–
ISO 6462 DIN 8030	**125H12N-S90SN12N10**	125	–	40	58	31	10.00	–	2.5	-0.5	12	–	6700	–	0.66	GI154	DI014	–
	125H12N-S90SN12N12	125	–	40	58	31	12.00	–	2.5	-0.5	12	–	6700	–	0.76	GI158	DI015	–
	160H16N-S90SN12N6	160	–	40	58	43	6.00	–	2.5	-0.5	16	–	5900	–	0.86	GI153	DI012	–
	160H16N-S90SN12N8	160	–	40	58	43	8.00	–	2.5	-0.5	16	–	5900	–	1.10	GI157	DI013	–
	160H16N-S90SN12N10	160	–	40	58	43	10.00	–	2.5	-0.5	16	–	5900	–	1.14	GI154	DI014	–
	160H16N-S90SN12N12	160	–	40	58	43	12.00	–	2.5	-0.5	16	–	5900	–	1.30	GI158	DI015	–
	160H15N-S90SN12N14	160	–	40	58	43	14.00	–	2.5	-0.5	15	–	5900	–	1.40	GI158	DI015	–
	200J18N-S90SN12N6	200	–	50	72	62	6.00	–	2.5	-0.5	18	–	5300	–	1.40	GI153	DI012	–
	200J18N-S90SN12N8	200	–	50	72	62	8.00	–	2.5	-0.5	18	–	5300	–	1.78	GI157	DI013	–
	200J18N-S90SN12N10	200	–	50	72	62	10.00	–	2.5	-0.5	18	–	5300	–	1.89	GI154	DI014	–
	200J18N-S90SN12N12	200	–	50	72	62	12.00	–	2.5	-0.5	18	–	5300	–	2.23	GI158	DI015	–
	200J18N-S90SN12N14	200	–	50	72	62	14.00	–	2.5	-0.5	18	–	5300	–	2.67	GI158	DI015	–
	63A03R-S90SN11N4	63	40	16	34	10.5	4.00	3	2.5	-0.5	6	–	13900	–	0.37	GI151	DI021	–
	63A03R-S90SN11N5	63	40	16	34	10.5	5.00	3	2.5	-0.5	6	–	13900	–	0.36	GI152	DI021	–
ISO 6462 DIN 8030	**63A03R-S90SN12N6**	63	40	16	34	10.5	6.00	3	2.5	-0.5	6	–	9500	–	0.37	GI153	DI022	–
	80A04R-S90SN11N5	80	40	22	40	17.5	5.00	4	2.5	-0.5	8	–	12300	–	0.48	GI152	DI023	–
	80A04R-S90SN12N6	80	40	22	40	17.5	6.00	4	2.5	-0.5	8	–	8400	–	0.50	GI153	DI024	–

	Producto	DC (mm)	OAL (mm)	DCB (mm)	DHUB (mm)	CDX (mm)	CW (mm)		GAMF (°)	GAMP (°)			max.		kg			
ISO 6462 DIN 8030	**100A05R-S90SN12N6**	100	50	27	48	23.5	6.00	5	2.5	-0.5	10	–	7500	–	0.86	GI153	DI025	–
	125B06R-S90SN12N6	125	50	40	56	24	6.00	6	2.5	-0.5	12	–	6700	–	1.20	GI153	DI012	AC003
	160B08R-S90SN12N10	160	50	40	70	41	10.00	8	2.5	-0.5	16	–	5900	–	1.83	GI154	DI014	–

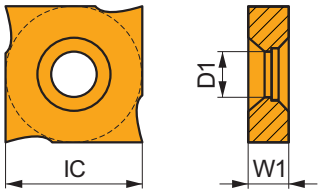
GI151	SNHQ 1102..
GI152	SNHQ 1103..
GI153	SNHQ 1203..
GI154	SNHQ 1205..
GI157	SNHQ 1204..
GI158	SNHQ 1207

		Nm					
DI011	US 3504-T09P	3.0	M 3.5	4	D-T07P/T09P	FG-15	–
DI012	US 70	5.0	M 4	5	D-T07/T15	FG-15	–
DI013	US 71	5.0	M 4	7	D-T07/T15	FG-15	–
DI014	US 72	5.0	M 4	9	D-T07/T15	FG-15	–
DI015	US 73	5.0	M 4	11	D-T07/T15	FG-15	–
DI019	US 3505-T09P	3.0	M 3.5	5	D-T07P/T09P	FG-15	HS 0830
DI021	US 3504-T09P	3.0	M 3.5	4	D-T07P/T09P	FG-15	HS 0830
DI022	US 70	5.0	M 4	5	D-T07/T15	FG-15	HS 0830
DI023	US 3505-T09P	3.0	M 3.5	5	D-T07P/T09P	FG-15	HS 1030
DI024	US 70	5.0	M 4	5	D-T07/T15	FG-15	HS 1030
DI025	US 70	5.0	M 4	5	D-T07/T15	FG-15	HS 1230

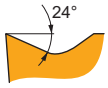
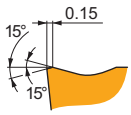
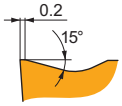
AC003	KS 2040	K.FMH40

SNHQ AZ

	IC (mm)	D1 (mm)	W1 (mm)
1102	11.000	4.30	2.300
1103	11.000	4.30	2.700
1203	12.700	5.00	3.200
1204	12.700	5.00	4.500
1205	12.700	5.00	5.400
1207	12.700	5.00	7.000
12T3	12.700	5.00	3.400

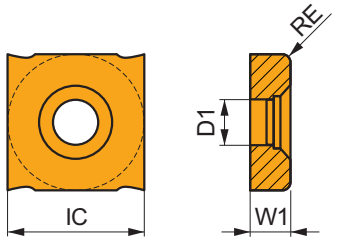


Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
																			
EN geometría con diseño especial para fresado de ranuras.																			
SNHQ 1203AZEN:8215	–	415	0.10	–	245	0.10	–	390	0.10	–	–	–	–	–	–	–	–	–	–
SNHQ 1203AZEN:M8340	–	370	0.10	–	220	0.10	–	350	0.10	–	–	–	–	–	–	–	–	–	–
SNHQ 1204AZEN:8215	–	405	0.10	–	240	0.10	–	380	0.10	–	–	–	–	–	–	–	–	–	–
SNHQ 1204AZEN:M8340	–	355	0.10	–	210	0.10	–	335	0.10	–	–	–	–	–	–	–	–	–	–
SNHQ 1205AZEN:8215	–	390	0.10	–	230	0.10	–	370	0.10	–	–	–	–	–	–	–	–	–	–
SNHQ 1205AZEN:M8340	–	345	0.10	–	205	0.10	–	325	0.10	–	–	–	–	–	–	–	–	–	–
SNHQ 1207AZEN:8215	–	380	0.10	–	225	0.10	–	360	0.10	–	–	–	–	–	–	–	–	–	–
SNHQ 1207AZEN:M8340	–	335	0.10	–	200	0.10	–	315	0.10	–	–	–	–	–	–	–	–	–	–
																			
TN geometría con diseño especial para fresado de ranuras.																			
SNHQ 1102AZTN:M8330	–	365	0.20	–	215	0.18	–	345	0.20	–	–	–	–	–	–	–	–	–	–
SNHQ 1102AZTN:M8340	–	335	0.20	–	200	0.18	–	315	0.20	–	–	–	–	–	–	–	–	–	–
SNHQ 1103AZTN:M8330	–	345	0.20	–	205	0.18	–	325	0.20	–	–	–	–	–	–	–	–	–	–
SNHQ 1103AZTN:M8340	–	315	0.20	–	185	0.18	–	295	0.20	–	–	–	–	–	–	–	–	–	–
																			
TN geometría con diseño especial para fresado de ranuras.																			
SNHQ 1203AZTN:M8330	–	345	0.20	–	205	0.18	–	325	0.20	–	–	–	–	–	–	–	–	–	–
SNHQ 1203AZTN:M8340	–	315	0.20	–	185	0.18	–	295	0.20	–	–	–	–	–	–	–	–	–	–
SNHQ 1204AZTN:M8330	–	335	0.20	–	200	0.20	–	315	0.20	–	–	–	–	–	–	–	–	–	–
SNHQ 1204AZTN:M8340	–	300	0.20	–	180	0.20	–	285	0.20	–	–	–	–	–	–	–	–	–	–
SNHQ 1205AZTN:M8330	–	330	0.20	–	195	0.20	–	310	0.20	–	–	–	–	–	–	–	–	–	–
SNHQ 1205AZTN:M8340	–	295	0.20	–	175	0.20	–	280	0.20	–	–	–	–	–	–	–	–	–	–
SNHQ 1207AZTN:M8330	–	320	0.20	–	190	0.20	–	300	0.20	–	–	–	–	–	–	–	–	–	–
SNHQ 1207AZTN:M8340	–	290	0.20	–	170	0.20	–	275	0.20	–	–	–	–	–	–	–	–	–	–
SNHQ 12T3AZTN:M8340	–	300	0.20	–	180	0.18	–	285	0.20	–	–	–	–	–	–	–	–	–	–

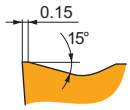
SNHQ TRL

	IC	D1	L	W1
	(mm)	(mm)	(mm)	(mm)
1203	12.700	5.00	12.70	3.200
1204	12.700	5.00	12.70	4.500
1205	12.700	5.00	12.70	5.400
1207	12.700	5.00	12.70	7.000



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

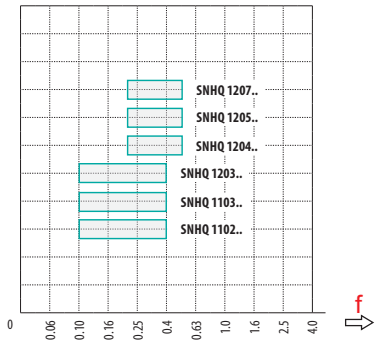
Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
SNHQ 120305TRL:M8340		0.5	230	0.20	–	135	0.18	–	215	0.20	–	–	–	–	–	–	–	–	–	–
SNHQ 120310TRL:M8340		1.0	285	0.20	–	170	0.18	–	270	0.20	–	–	–	–	–	–	–	–	–	–
SNHQ 120315TRL:M8340		1.5	300	0.20	–	180	0.18	–	285	0.20	–	–	–	–	–	–	–	–	–	–
SNHQ 120405TRL:M8340		0.5	220	0.20	–	130	0.20	–	205	0.20	–	–	–	–	–	–	–	–	–	–
SNHQ 120415TRL:M8340		1.5	290	0.20	–	170	0.20	–	275	0.20	–	–	–	–	–	–	–	–	–	–
SNHQ 120505TRL:M8340		0.5	215	0.20	–	125	0.20	–	200	0.20	–	–	–	–	–	–	–	–	–	–
SNHQ 120515TRL:M8340		1.5	280	0.20	–	165	0.20	–	265	0.20	–	–	–	–	–	–	–	–	–	–
SNHQ 120705TRL:M8340		0.5	210	0.20	–	125	0.20	–	195	0.20	–	–	–	–	–	–	–	–	–	–
SNHQ 120710TRL:M8340		1.0	265	0.20	–	155	0.20	–	250	0.20	–	–	–	–	–	–	–	–	–	–

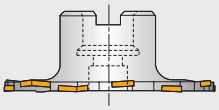


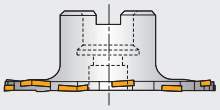
TRL geometría con diseño especial para fresado de ranuras.

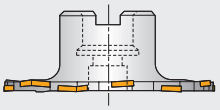
a_e / DC	0.05	0.10	0.15	0.20	0.25	0.30	0.40	0.50	0.60	0.70	0.75	0.80	0.90	1.00
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00

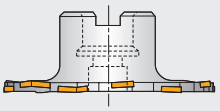
	SNHQ AZEN	SNHQ AZTN	SNHQ 12TRL
RE	–	–	0.5 – 1.5
BS	–	–	–



	DC		CDX	$a_{e\,max}$
	80	4	16	16
	100	5	24	24
	125	6	31	31
	160	5	43	43
	200	9	62	62
	63	3	10.5	63
	80	4	17.5	80
	100	5	23.5	100
	125	6	24	125
	160	8	41	160

	a_e	5		10		15		20		25	
	DC	f_{min}	f_{max}	f_{min}	f_{max}	f_{min}	f_{max}	f_{min}	f_{max}	f_{min}	f_{max}
	80	0.28	0.36	0.20	0.26	0.17	0.21	–	–	–	–
	100	0.32	0.41	0.23	0.29	0.19	0.24	0.16	0.21	–	–
	125	0.35	0.45	0.25	0.32	0.21	0.27	0.18	0.23	0.16	0.21
	160	0.40	0.51	0.28	0.36	0.23	0.30	0.20	0.26	0.18	0.23
	200	0.44	0.57	0.32	0.41	0.26	0.33	0.23	0.29	0.20	0.26
	63	0.25	0.32	0.18	0.23	0.15	0.19	0.13	0.17	0.12	0.15
	80	0.28	0.36	0.20	0.26	0.17	0.21	0.15	0.19	0.13	0.17
	100	0.32	0.41	0.23	0.29	0.19	0.24	0.16	0.21	0.15	0.19
	125	0.35	0.45	0.25	0.32	0.21	0.27	0.18	0.23	0.16	0.21
	160	0.40	0.51	0.28	0.36	0.23	0.30	0.20	0.26	0.18	0.23

	a_e	32		40		50		63		80	
	DC	f_{min}	f_{max}	f_{min}	f_{max}	f_{min}	f_{max}	f_{min}	f_{max}	f_{min}	f_{max}
	80	–	–	–	–	–	–	–	–	–	–
	100	–	–	–	–	–	–	–	–	–	–
	125	–	–	–	–	–	–	–	–	–	–
	160	0.16	0.21	0.15	0.19	–	–	–	–	–	–
	200	0.18	0.23	0.16	0.21	0.15	0.19	–	–	–	–
	63	0.11	0.14	0.10	0.13	0.10	0.12	0.10	0.11	–	–
	80	0.12	0.15	0.11	0.14	0.10	0.13	0.10	0.12	0.10	0.11
	100	0.13	0.17	0.12	0.15	0.11	0.14	0.10	0.13	0.10	0.12
	125	0.15	0.19	0.13	0.17	0.12	0.15	0.11	0.14	0.10	0.13
	160	0.16	0.21	0.15	0.19	0.13	0.17	0.12	0.16	0.11	0.14

	a_e	100		125		160	
	DC	f_{min}	f_{max}	f_{min}	f_{max}	f_{min}	f_{max}
	80	–	–	–	–	–	–
	100	–	–	–	–	–	–
	125	–	–	–	–	–	–
	160	–	–	–	–	–	–
	200	–	–	–	–	–	–
	63	–	–	–	–	–	–
	80	–	–	–	–	–	–
	100	0.10	0.11	–	–	–	–
	125	0.10	0.12	0.10	0.11	–	–
	160	0.10	0.13	0.10	0.12	0.10	0.11

S90CN(XN)

P M K

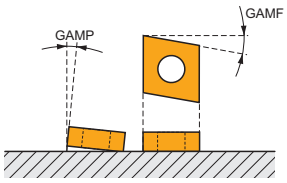
PRAMET

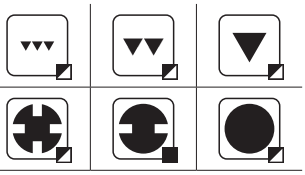
S

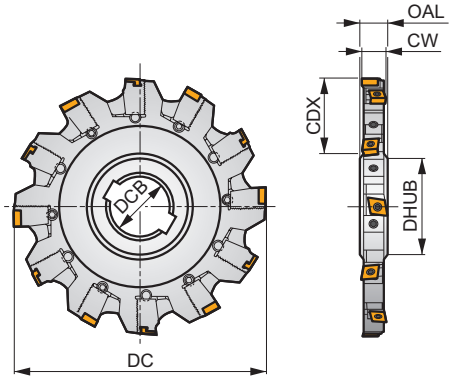
Fresa de Disco con Corte Lateral y Frontal con Anchura Regulable

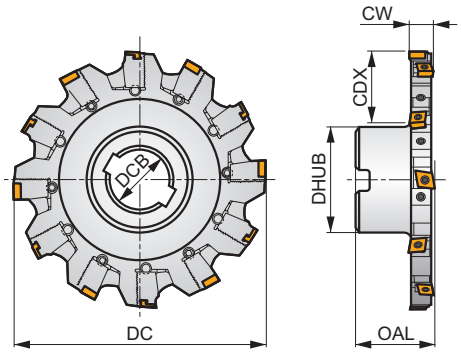
90° disc mill utilising CNHQ and XNHQ inserts. Suitable for slot, shoulder, rear side and face milling. Available in arbor or stub arbor style. Body treated for longer tool life.

KAPR	90°
CW	14.0 – 30.5 mm

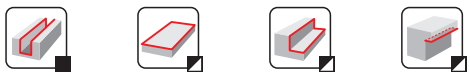








h_m	0.07 – 0.09
h_m	0.07 – 0.09



	Producto	DC (mm)	OAL (mm)	DCB (mm)	DHUB (mm)	CDX (mm)	CW (mm)	GAMF (°)	GAMP (°)	x/1			max.		kg			
	125H04N-S90CN10N18	125	18	40	56	34	14.0 – 18.5	-10	4	4	8	–	7800	–	1.19	GI195	DI051	–
	160H06N-S90CN10N18	160	18	40	56	50	14.0 – 18.5	-8	4	6	12	–	6900	–	1.80	GI195	DI052	–
	160H05N-S90XN12N24	160	24	40	56	50	19.0 – 24.3	-8	5	5	10	–	5200	–	2.50	GI196	DI056	–
	200J07N-S90CN10N18	200	18	50	71	60	14.0 – 18.5	-8	4	7	14	–	6100	–	2.85	GI195	DI053	–
	200J06N-S90XN12N24	200	24	50	71	60	19.0 – 24.3	-8	5	6	12	–	4700	–	3.60	GI196	DI057	–
ISO 6462 DIN 8030	**200J06N-S90XN16N30**	200	30	50	71	60	24.5 – 30.5	-9	5	6	12	–	4000	–	6.00	GI197	DI060	–
	250J09N-S90CN10N18	250	18	50	71	85	14.0 – 18.5	-8	4	9	18	–	5500	–	5.30	GI195	DI054	–
	250J08N-S90XN12N24	250	24	50	71	85	19.0 – 24.3	-8	5	8	16	–	4200	–	7.50	GI196	DI058	–
	250J08N-S90XN16N30	250	30	50	71	85	24.5 – 30.5	-8	5	8	16	–	3600	–	8.00	GI197	DI061	–
	315J12N-S90CN10N18	315	18	50	71	110	14.0 – 18.5	-8	4	12	24	–	4900	–	7.80	GI195	DI055	–
	315J10N-S90XN12N24	315	24	50	71	110	19.0 – 24.3	-8	5	10	20	–	3700	–	10.70	GI196	DI059	–
	315K10N-S90XN16N30	315	30	60	85	110	24.5 – 30.5	-8	5	10	20	–	3200	–	13.00	GI197	DI062	–
	125B04R-S90CN10N18	125	50	40	70	25	14.0 – 18.5	-10	4	4	8	–	7800	–	1.65	GI195	DI071	AC003
ISO 6462 DIN 8030	**160B06R-S90CN10N18**	160	50	40	70	44	14.0 – 18.5	-8	5	6	12	–	6900	–	2.55	GI195	DI072	–
	160B05R-S90XN12N24	160	50	40	70	44	19.0 – 24.3	-8	5	5	10	–	5200	–	2.50	GI196	DI074	–
	200C06R-S90XN12N24	200	50	40	90	52	19.0 – 24.3	-8	5	6	12	–	6100	–	4.70	GI196	DI075	–
ISO 6462 DIN 8030	**200C07R-S90CN10N18**	200	50	40	90	52	14.0 – 18.5	-8	4	7	14	–	6100	–	4.05	GI195	DI073	–

GI195	CNHQ 1005..
GI196	XNHQ 1205..
GI197	XNHQ 1606..

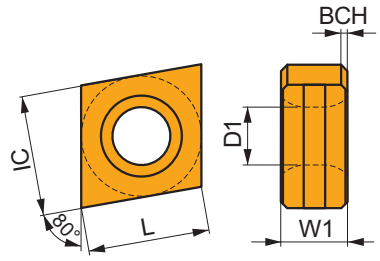
DI051	125H04N-S-14-08	KL-1418-CN10	KR-1418-CN10	KS 613F	DS 6018F	SDR T20	SS 6005-T09P	SDR T09	US 4011-T15P	3.5	M 4	10.6	SDR T15P	–
DI052	160H06N-S-14-12	KL-1418-CN10	KR-1418-CN10	KS 613F	DS 6018F	SDR T20	SS 6005-T09P	SDR T09	US 4011-T15P	3.5	M 4	10.6	SDR T15P	–
DI053	200J07N-S-14-14	KL-1418-CN10	KR-1418-CN10	KS 613F	DS 6018F	SDR T20	SS 6005-T09P	SDR T09	US 4011-T15P	3.5	M 4	10.6	SDR T15P	–
DI054	250J09N-S-14-18	KL-1418-CN10	KR-1418-CN10	KS 613F	DS 6018F	SDR T20	SS 6005-T09P	SDR T09	US 4011-T15P	3.5	M 4	10.6	SDR T15P	–
DI055	315J12N-S-14-24	KL-1418-CN10	KR-1418-CN10	KS 613F	DS 6018F	SDR T20	SS 6005-T09P	SDR T09	US 4011-T15P	3.5	M 4	10.6	SDR T15P	–
DI056	160H05N-S-19-10	KL-1924-XN12	KR-1924-XN12	KS 617M	DS 6500	–	SS 6005-T09P	SDR T09	US 4011-T15P	3.5	M 4	10.6	SDR T15P	HXK 4
DI057	200J06N-S-19-12	KL-1924-XN12	KR-1924-XN12	KS 617M	DS 6500	–	SS 6005-T09P	SDR T09	US 4011-T15P	3.5	M 4	10.6	SDR T15P	HXK 4
DI058	250J08N-S-19-16	KL-1924-XN12	KR-1924-XN12	KS 617M	DS 6500	–	SS 6005-T09P	SDR T09	US 4011-T15P	3.5	M 4	10.6	SDR T15P	HXK 4
DI059	315J10N-S-19-20	KL-1924-XN12	KR-1924-XN12	KS 617M	DS 6500	–	SS 6005-T09P	SDR T09	US 4011-T15P	3.5	M 4	10.6	SDR T15P	HXK 4
DI060	200J06N-S-25-12	KL-2530-XN16	KR-2530-XN16	KS 623M	DS 6500	–	SS 6005-T09P	SDR T09	US 4011-T15P	3.5	M 4	10.6	SDR T15P	HXK 4
DI061	250J08N-S-25-16	KL-2530-XN16	KR-2530-XN16	KS 623M	DS 6500	–	SS 6005-T09P	SDR T09	US 4011-T15P	3.5	M 4	10.6	SDR T15P	HXK 4
DI062	315K10N-S-25-20	KL-2530-XN16	KR-2530-XN16	KS 623M	DS 6500	–	SS 6005-T09P	SDR T09	US 4011-T15P	3.5	M 4	10.6	SDR T15P	HXK 4
DI071	125B04R-S-14-08	KL-1418-CN10	KR-1418-CN10	KS 613F	DS 6018F	SDR T20	SS 6005-T09P	SDR T09	US 4011-T15P	3.5	M 4	10.6	SDR T15P	–
DI072	160B06R-S-14-12	KL-1418-CN10	KR-1418-CN10	KS 613F	DS 6018F	SDR T20	SS 6005-T09P	SDR T09	US 4011-T15P	3.5	M 4	10.6	SDR T15P	–
DI073	200C07R-S-14-14	KL-1418-CN10	KR-1418-CN10	KS 613F	DS 6018F	SDR T20	SS 6005-T09P	SDR T09	US 4011-T15P	3.5	M 4	10.6	SDR T15P	–
DI074	160B05R-S-19-10	KL-1924-XN12	KR-1924-XN12	KS 617M	DS 6500	–	SS 6005-T09P	SDR T09	US 4011-T15P	3.5	M 4	10.6	SDR T15P	HXK 4
DI075	200C06R-S-19-12	KL-1924-XN12	KR-1924-XN12	KS 617M	DS 6500	–	SS 6005-T09P	SDR T09	US 4011-T15P	3.5	M 4	10.6	SDR T15P	HXK 4

AC003	KS 2040	K.FMH40

CNHQ

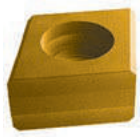
PRAMET

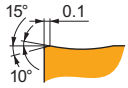
	BCH	IC	D1	L	W1
	(mm)	(mm)	(mm)	(mm)	(mm)
1005	0.50	10.000	4.70	10.00	5.400



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
CNHQ 1005AZTN:M8330		–	■ 310	0.15	–	◪ 185	0.14	–	■ 290	0.15	–	–	–	–	–	–	–	–	–	–
CNHQ 1005AZTN:M8340		–	■ 280	0.15	–	◪ 165	0.14	–	◪ 265	0.15	–	–	–	–	–	–	–	–	–	–



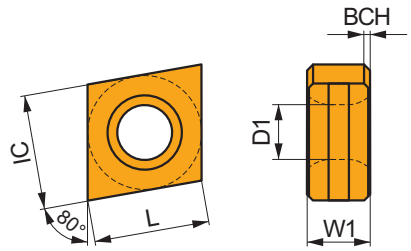


TN diseño especial para fresado de ranuras en condiciones ligeras a pesadas.

XNHQ

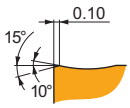
PRAMET

	BCH	IC	D1	L	W1
	(mm)	(mm)	(mm)	(mm)	(mm)
1205	0.50	10.000	4.70	12.70	5.400
1606	0.50	12.000	5.90	16.00	6.400



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

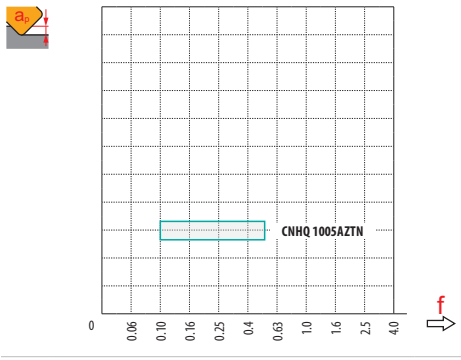
Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
XNHQ 1205AZTN:M8330		–	■ 310	0.15	–	◪ 185	0.14	–	■ 290	0.15	–	–	–	–	–	–	–	–	–	–
XNHQ 1205AZTN:M8340		–	■ 275	0.15	–	◪ 165	0.14	–	◪ 260	0.15	–	–	–	–	–	–	–	–	–	–
XNHQ 1606AZTN:M8330		–	■ 300	0.15	–	◪ 180	0.14	–	■ 285	0.15	–	–	–	–	–	–	–	–	–	–
XNHQ 1606AZTN:M8340		–	■ 270	0.15	–	◪ 160	0.14	–	◪ 255	0.15	–	–	–	–	–	–	–	–	–	–



TN diseño especial para fresado de ranuras.

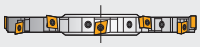
a_e / DC	0.05	0.10	0.15	0.20	0.25	0.30	0.40	0.50	0.60	0.70	0.75	0.80	0.90	1.00
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00

	XNHQ 10
RE	–
BS	–



	DC		CDX	$a_{e\,max}$
	125	4	34	34
	160	6	50	50
	200	7	60	60
	250	9	85	85
	315	12	110	110
	125	4	25	125
	160	6	44	160
	200	7	52	200

	a_e	5		10		15		20		25	
	DC	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨
	125	0.35	0.45	0.25	0.32	0.21	0.27	0.18	0.23	0.16	0.21
	160	0.40	0.51	0.28	0.36	0.23	0.30	0.20	0.26	0.18	0.23
	200	0.44	0.57	0.32	0.41	0.26	0.33	0.23	0.29	0.20	0.26
	250	0.50	0.64	0.35	0.45	0.29	0.37	0.25	0.32	0.23	0.29
	315	0.56	0.72	0.39	0.51	0.32	0.42	0.28	0.36	0.25	0.32
	125	0.35	0.45	0.25	0.32	0.21	0.27	0.18	0.23	0.16	0.21
	160	0.40	0.51	0.28	0.36	0.23	0.30	0.20	0.26	0.18	0.23
	200	0.44	0.57	0.32	0.41	0.26	0.33	0.23	0.29	0.20	0.26

	a_e	32		40		50		63		80	
	DC	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹
	**125**	0.15	0.19	–	–	–	–	–	–	–	–
	160	0.16	0.21	0.15	0.19	–	–	–	–	–	–
	200	0.18	0.23	0.16	0.21	0.15	0.19	–	–	–	–
	250	0.20	0.26	0.18	0.23	0.16	0.21	0.15	0.19	0.13	0.17
	315	0.22	0.29	0.20	0.26	0.18	0.23	0.16	0.21	0.15	0.19
	125	0.15	0.19	0.13	0.17	0.12	0.15	0.11	0.14	0.10	0.13
	160	0.16	0.21	0.15	0.19	0.13	0.17	0.12	0.16	0.11	0.14
	200	0.18	0.23	0.16	0.21	0.15	0.19	0.13	0.17	0.12	0.15

	a_e	100		125		160		200	
	DC	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹	f_{min} ⇨	f_{max} ⟹
	125	–	–	–	–	–	–	–	–
	160	–	–	–	–	–	–	–	–
	200	–	–	–	–	–	–	–	–
	250	–	–	–	–	–	–	–	–
	315	0.13	0.17	–	–	–	–	–	–
	125	0.10	0.12	0.10	0.11	–	–	–	–
	160	0.10	0.13	0.10	0.12	0.10	0.11	–	–
	200	0.11	0.14	0.10	0.13	0.10	0.12	0.10	0.11

F-SCC

P M K

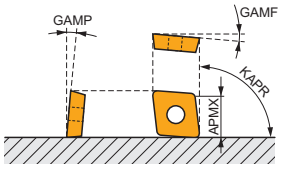
PRAMET

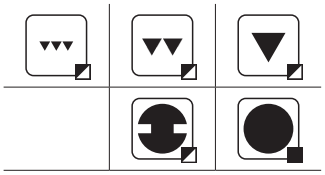
S

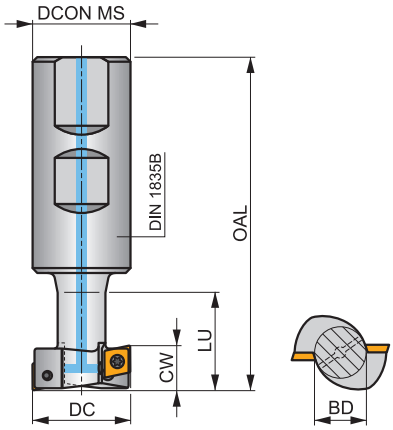
Fresa para Ranuras en T para Plaquitas CCMX, con Refrigeración Interna

Fresa para ranuras en T que utiliza plaquitas CCMX de una sola cara. Refrigeración interna. Adecuada para ranuras en T, refrentado trasero, escuadrado y ranurado poco profundo. Disponible únicamente con mango Weldon. Cuerpo tratado para alargar la vida de herramienta.

KAPR	90°
APMX	11.0 – 18.0 mm







h_m 0.05 – 0.08

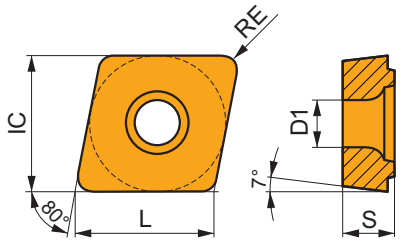
	Producto	DC (mm)	BD (mm)	OAL (mm)	DCON MS (mm)	LU (mm)	CW (mm)				max.		kg		
DIN 1835B	**25F1R030B25-SCC06-C**	25	12	86	25	25	11.00	1	2	–	28100	✓	0.26	GI148	SQ213
	32F1R038B32-SCC08-C	32	16	98	32	33	14.00	1	2	–	19100	✓	0.50	GI149	SQ212
	40F2R046B32-SCC09-C	40	20	105	32	41	18.00	2	4	–	14900	✓	0.56	GI150	SQ212

GI148	CCMX 060304
GI149	CCMX 08T308
GI150	CCMX 09T308

		Nm			
SQ212	US 3007-T09P	2.0	M 3	7.3	Flag T09P
SQ213	US 2506-T07P	1.2	M 2.5	6.3	Flag T07P

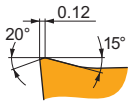
CCMX

	IC	D1	L	S
	(mm)	(mm)	(mm)	(mm)
0603	6.350	2.80	6.40	3.50
08T3	8.030	3.50	8.10	4.40
09T3	9.525	3.50	9.70	3.97



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

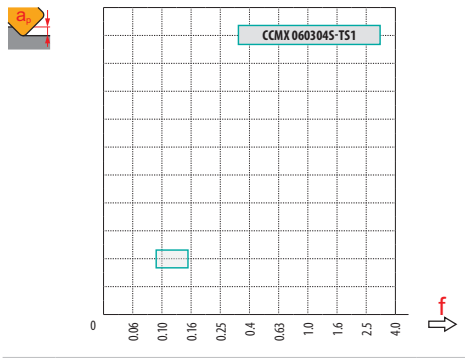
Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)

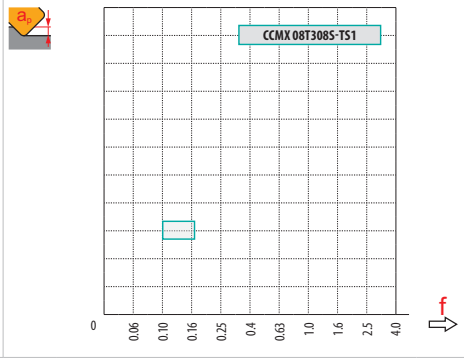


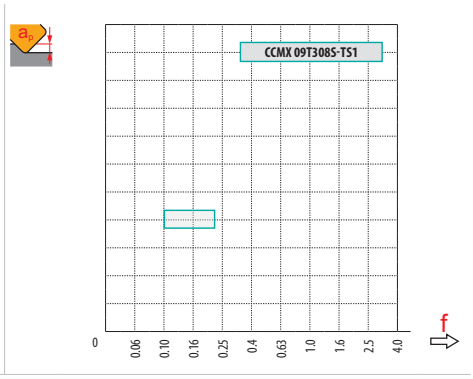
TS1 diseño especial para fresado de ranuras en T en condiciones ligeras a medias.

CCMX 060304S-TS1:M8330	●	0.4	240	0.10	–	140	0.09	–	225	0.10	–	–	–	–	–	–	–	–	–	–
CCMX 060304S-TS1:M8340	●●	0.4	215	0.10	–	125	0.09	–	200	0.10	–	–	–	–	–	–	–	–	–	–
CCMX 08T308S-TS1:M8330	●●	0.8	275	0.10	–	165	0.10	–	260	0.10	–	–	–	–	–	–	–	–	–	–
CCMX 09T308S-TS1:M8330	●●	0.8	270	0.10	–	160	0.10	–	255	0.10	–	–	–	–	–	–	–	–	–	–
CCMX 09T308S-TS1:M8340	●●	0.8	240	0.10	–	140	0.10	–	225	0.10	–	–	–	–	–	–	–	–	–	–

	CCMX 06-TS1	CCMX 08-TS1	CCMX 09-TS1
RE	0.4	0.8	0.8
BS	–	–	–







a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00

DC	a_e = 1		a_e = 2		a_e = 3		a_e = 4		a_e = 5		a_e = 8		a_e = 10	
	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨
25	0.25	0.40	0.18	0.29	0.15	0.24	0.13	0.21	0.12	0.19	0.09	0.15	0.09	0.14
32	0.28	0.45	0.20	0.32	0.17	0.27	0.14	0.23	0.13	0.21	0.10	0.17	0.09	0.15
40	0.32	0.51	0.23	0.36	0.18	0.30	0.16	0.26	0.14	0.23	0.12	0.19	0.10	0.17

DC	a_e = 12		a_e = 16		a_e = 20		a_e = 25		a_e = 32		a_e = 40	
	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨	f_{min} ⇨	f_{max} ⇨
25	0.08	0.13	0.07	0.12	0.07	0.11	0.08	0.13	–	–	–	–
32	0.09	0.14	0.08	0.13	0.07	0.12	0.07	0.11	0.08	0.13	–	–
40	0.10	0.15	0.09	0.14	0.08	0.13	0.07	0.12	0.07	0.11	0.08	0.13

Válido para ranurado en T

Válido para escuadrado y fresado inverso

Válido para fresado en escuadra

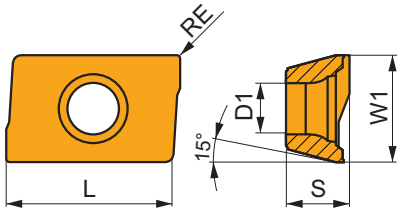
DC		$a_{p\,max}$	
25	1	11	6.4
32	1	14	8.0
40	2	18	9.7

OTRAS PLAQUITAS DE FRESADO

ADKT 15

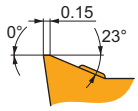
PRAMET

	W1	D1	L	S
	(mm)	(mm)	(mm)	(mm)
1505	9.525	4.40	15.55	5.60



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto	RE	P			M			K			N			S			H		
		vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
ADKT 1505PDER-M:M8330	0.8	235	0.20	5.0	140	0.18	5.0	220	0.20	5.0	–	–	–	55	0.16	4.0	–	–	–
ADKT 1505PDER-M:M8340	0.8	210	0.20	5.0	125	0.18	5.0	195	0.20	5.0	–	–	–	50	0.16	4.0	–	–	–
ADKT 1505PDER-M:M9325	0.8	290	0.20	5.0	–	–	–	275	0.20	5.0	–	–	–	–	–	–	–	–	–

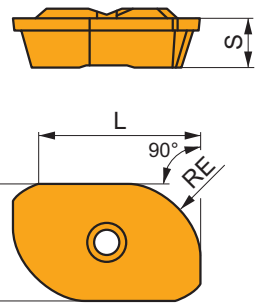


M geometría muy positiva para mecanizado medio.

ADKX 15

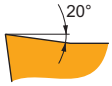
PRAMET

	W1	L	S
	(mm)	(mm)	(mm)
15T3	9.525	12.20	3.97



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

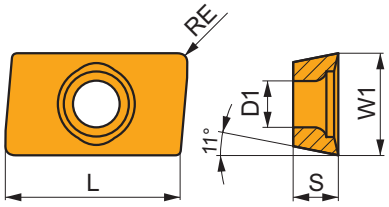
Producto	RE	P			M			K			N			S			H		
		vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
ADKX 15T308ER-F:M8345	0.8	170	0.10	10.0	100	0.09	10.0	–	–	–	–	–	–	40	0.07	8.0	–	–	–



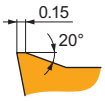
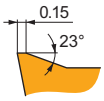
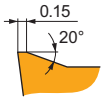
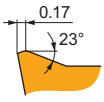
F geometría con diseño positivo muy afilado para mecanizado ligero a medio.

APMT 16

	W1	D1	L	S
	(mm)	(mm)	(mm)	(mm)
1604	9.600	4.50	17.00	4.76



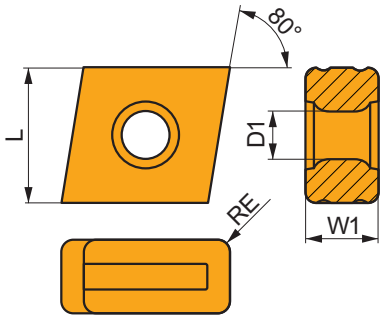
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
																				
			F geometría con diseño positivo para mecanizado ligero.																	
APMT 1604PDER-F:M8330		–	■ 320	0.10	2.0	■ 190	0.09	2.0	◪ 300	0.10	2.0	–	–	–	◪ 80	0.07	1.6	–	–	–
																				
			FM geometría con diseño positivo para mecanizado ligero a medio.																	
APMT 1604PDER-FM:M8330		–	■ 285	0.16	2.0	■ 170	0.14	2.0	◪ 270	0.16	2.0	–	–	–	◪ 70	0.13	1.6	–	–	–
APMT 1604PDER-FM:M8345		–	■ 205	0.16	2.0	■ 120	0.14	2.0	–	–	–	–	–	–	◪ 50	0.13	1.6	–	–	–
																				
			ER-R geometría con diseño positivo para desbaste.																	
APMT 1604PDER-R:M8330		–	■ 255	0.16	5.0	–	–	–	■ 240	0.16	5.0	–	–	–	–	–	–	–	–	–
																				
			SR-R geometría con diseño positivo para mecanizado en desbaste.																	
APMT 1604PDSR-R:M8330		–	■ 255	0.18	5.0	–	–	–	■ 240	0.18	5.0	–	–	–	–	–	–	–	–	–

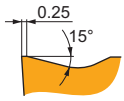
CNM

PRAMET

	D1 (mm)	L (mm)	S (mm)
63	5.50	15.00	8.00



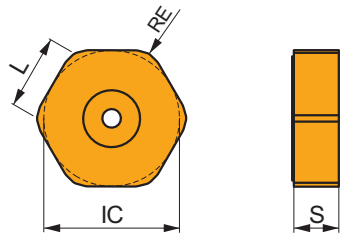
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
																				
563 geometría universal.																				
CNM 563:M8330	●	1.2	185	0.30	10.0	–	–	–	175	0.30	10.0	–	–	–	–	–	–	–	–	–
CNM 563:M8340	❋	1.2	220	0.30	10.0	–	–	–	205	0.30	10.0	–	–	–	–	–	–	–	–	–

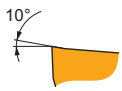
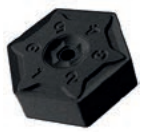
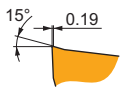
HNEF 09

PRAMET

	IC (mm)	L (mm)	S (mm)
0905	16.200	9.40	5.64



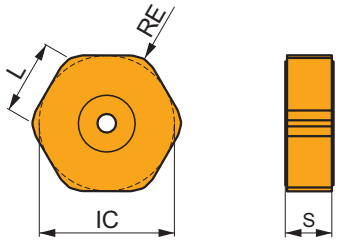
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
																				
R geometría con diseño negativopara mecanizado ligero a pesado.																				
HNMF 090516SN-R:8215	●	1.6	–	–	–	–	–	–	380	0.15	1.5	–	–	–	–	–	–	–	–	–
HNMF 090516SN-R:M5315	❋	1.6	–	–	–	–	–	–	265	0.30	3.0	–	–	–	–	–	–	–	–	–
																				
M geometría con diseño positivo para mecanizado ligero a medio.																				
HNEF 090508EN-M:M5315	❋	0.8	–	–	–	–	–	–	290	0.18	3.0	–	–	–	–	–	–	–	–	–

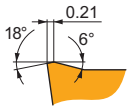
HNMF 09

PRAMET

	IC (mm)	L (mm)	S (mm)
0905	16.200	9.40	5.64



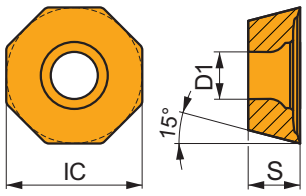
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
																				
R geometría con diseño negativopara mecanizado ligero a pesado.																				
HNMF 090516SN-R:8215		1.6	–	–	–	–	–	–	210	0.30	3.0	–	–	–	–	–	–	–	–	–
HNMF 090516SN-R:M5315		1.6	–	–	–	–	–	–	265	0.30	3.0	–	–	–	–	–	–	–	–	–

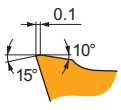
ODMT 05

PRAMET

	IC (mm)	D1 (mm)	S (mm)
0504	12.700	4.40	4.76



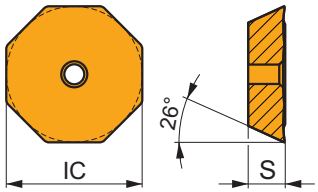
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
																				
ZZN diseño ligeramente positivo para mecanizado medio.																				
ODMT 0504ZZN:M8340		–	195	0.25	1.5	–	–	–	185	0.25	1.5	–	–	–	–	–	–	–	–	–

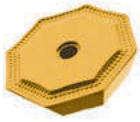
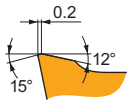
OFKR 07

PRAMET

	IC	D1	S
	(mm)	(mm)	(mm)
0704	17.845	2.65	4.56



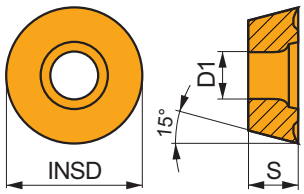
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
																				
M geometría con diseño positivo para mecanizado ligero a medio.																				
OFKR 0704SN-M:M8330		–	■ 235	0.25	1.5	■ 140	0.23	1.5	◪ 220	0.25	1.5	–	–	–	–	–	–	–	–	–
OFKR 0704SN-M:M8340		–	■ 215	0.25	1.5	■ 125	0.23	1.5	◪ 200	0.25	1.5	–	–	–	–	–	–	–	–	–

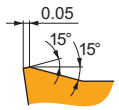
RDET

PRAMET

	INSD	D1	S
	(mm)	(mm)	(mm)
0802	8.000	3.40	2.38
1003	10.000	4.40	3.18
12T3	12.000	4.40	3.97

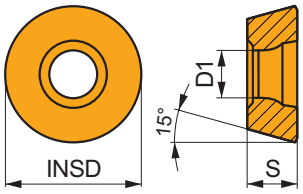


Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

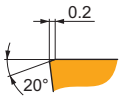
Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
																				
SN diseño positivo para mecanizado de acabado.																				
RDET 0802MOSN:M8340		–	■ 335	0.15	0.5	◪ 200	0.14	0.5	◪ 315	0.15	0.5	–	–	–	◪ 80	0.12	0.4	–	–	–
RDET 1003MOSN:M8340		–	■ 310	0.15	1.0	◪ 185	0.14	1.0	◪ 290	0.15	1.0	–	–	–	◪ 75	0.12	0.8	–	–	–
RDET 12T3MOSN:M8340		–	■ 280	0.20	1.5	◪ 165	0.18	1.5	◪ 265	0.20	1.5	–	–	–	◪ 70	0.14	1.2	–	–	–

RDHX 20

	INSD (mm)	D1 (mm)	S (mm)
2006	20.000	5.20	6.35



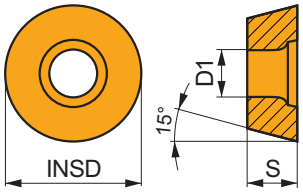
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
																			
RDHX 2006MOT:M8310	–	240	0.35	3.0	–	–	–	225	0.35	3.0	–	–	–	–	–	–	45	0.18	1.3
RDHX 2006MOT:M8325	–	180	0.35	3.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

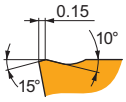
MOT ángulo de desprendimiento de 0° para fresado en acabado.

RPET 12

	INSD (mm)	D1 (mm)	S (mm)
1204	12.000	4.40	4.76



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

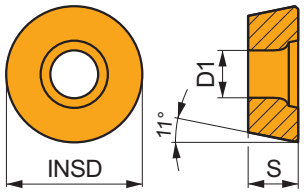
Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
																			
RPET 1204MOSN:8215	–	325	0.20	1.5	195	0.18	1.5	305	0.20	1.5	–	–	–	80	0.14	1.2	–	–	–
RPET 1204MOSN:M8330	–	320	0.20	1.5	190	0.18	1.5	300	0.20	1.5	–	–	–	80	0.14	1.2	–	–	–
RPET 1204MOSN:M8340	–	295	0.20	1.5	175	0.18	1.5	280	0.20	1.5	–	–	–	70	0.14	1.2	–	–	–

MOSN diseño positivo para mecanizado de acabado.

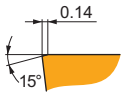
RPEW 12

PRAMET

	INSD (mm)	D1 (mm)	S (mm)
1204	12.000	4.40	4.76



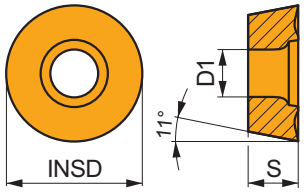
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
 HFC S **MOSN** ángulo de desprendimiento de 0° para fresado en acabado.																			
RPEW 1204MOSN:M8330	–	285	0.20	1.5	–	–	–	270	0.20	1.5	–	–	–	–	–	–	55	0.10	0.8
RPEW 1204MOSN:M8340	–	265	0.20	1.5	–	–	–	250	0.20	1.5	–	–	–	–	–	–	–	–	–

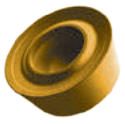
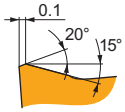
RPEX

PRAMET

	INSD (mm)	D1 (mm)	S (mm)
1204	12.000	4.40	4.76

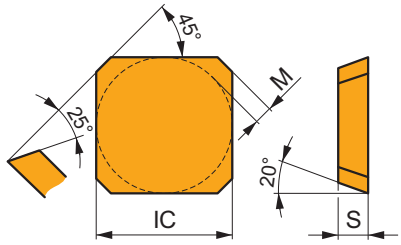


Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

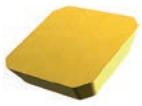
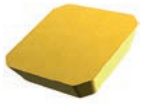
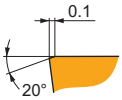
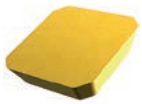
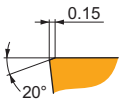
Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
  HFC S **12** diseño positivo para mecanizado de acabado.																			
RPEX 1204MOSN-12:M8340	–	215	0.30	1.5	125	0.27	1.5	200	0.30	1.5	–	–	–	50	0.21	1.2	–	–	–

SEEN

	IC (mm)	M (mm)	S (mm)
1203	12.700	1.6	3.18
1504	15.875	2.0	4.76



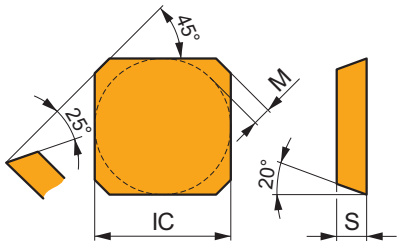
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
		**AFFN** preparación del filo con ángulo de desprendimiento de 0° para mecanizado ligero a medio.																	
SEEN 1203AFFN:M8330	–	270	0.15	2.0	160	0.14	2.0	255	0.15	2.0	–	–	–	–	–	–	–	–	–
SEEN 1203AFFN:M8340	–	245	0.15	2.0	145	0.14	2.0	230	0.15	2.0	–	–	–	–	–	–	–	–	–
 		**AFSN** preparación del filo con ángulo de desprendimiento de 0° para mecanizado medio a pesado.																	
SEEN 1203AFSN:8215	–	255	0.20	2.0	–	–	–	240	0.20	2.0	–	–	–	–	–	–	50	0.13	1.0
SEEN 1203AFSN:M8330	–	255	0.20	2.0	–	–	–	240	0.20	2.0	–	–	–	–	–	–	50	0.13	1.0
SEEN 1203AFSN:M8340	–	230	0.20	2.0	–	–	–	215	0.20	2.0	–	–	–	–	–	–	–	–	–
SEEN 1203AFSN:M9315	–	340	0.20	2.0	–	–	–	320	0.20	2.0	–	–	–	–	–	–	65	0.13	1.0
SEEN 1203AFSN:M9325	–	315	0.20	2.0	–	–	–	295	0.20	2.0	–	–	–	–	–	–	60	0.13	1.0
 		**AFSN** preparación del filo con ángulo de desprendimiento de 0° para mecanizado medio a pesado.																	
SEEN 1504AFSN:M8330	–	240	0.20	3.0	–	–	–	225	0.20	3.0	–	–	–	–	–	–	45	0.13	1.3
SEEN 1504AFSN:M8340	–	225	0.20	3.0	–	–	–	210	0.20	3.0	–	–	–	–	–	–	–	–	–

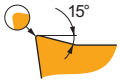
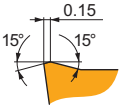
SEER

PRAMET

	IC (mm)	M (mm)	S (mm)
1203	12.700	1.6	3.18
1204	12.700	1.6	4.76
1504	15.875	2.0	4.76



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
																				
SEER 1203AFEN:M8330		–	265	0.24	2.5	155	0.22	2.5	250	0.24	2.5	–	–	–	65	0.22	2.0	–	–	–
SEER 1203AFEN:M8340		–	245	0.24	2.5	145	0.22	2.5	230	0.24	2.5	–	–	–	60	0.22	2.0	–	–	–
																				
SEER 1203AFSN:M8330		–	265	0.25	2.5	155	0.23	2.5	250	0.25	2.5	–	–	–	65	0.20	2.0	–	–	–
SEER 1203AFSN:M8340		–	240	0.25	2.5	140	0.23	2.5	225	0.25	2.5	–	–	–	60	0.20	2.0	–	–	–
SEER 1204AFSN:M8330		–	265	0.25	2.5	155	0.23	2.5	250	0.25	2.5	–	–	–	65	0.20	2.0	–	–	–
SEER 1504AFSN:M8330		–	255	0.25	3.5	150	0.23	3.5	240	0.25	3.5	–	–	–	60	0.20	2.8	–	–	–
SEER 1504AFSN:M8340		–	230	0.25	3.5	135	0.23	3.5	215	0.25	3.5	–	–	–	55	0.20	2.8	–	–	–

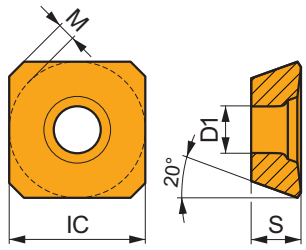
AFEN preparación del filo geometría con rompevirutas para mecanizado medio a pesado.

AFSN preparación del filo geometría con rompevirutas para mecanizado medio a pesado.

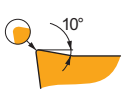
SEET 12

PRAMET

	IC (mm)	D1 (mm)	M (mm)	S (mm)
1204	12.700	5.50	1.6	4.76

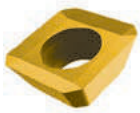
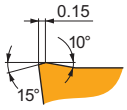


Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
																				
SEET 1204AFEN:M8330		–	265	0.24	2.5	155	0.22	2.5	250	0.24	2.5	–	–	–	65	0.22	2.0	–	–	–

AFEN preparación del filo geometría positiva para todo uso.

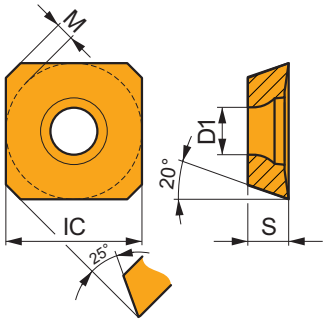
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
 																			
AFSN preparación del filo geometría positiva para todo uso.																			
SEET 1204AFSN:8215	–	265	0.23	2.5	155	0.21	2.5	250	0.23	2.5	–	–	–	65	0.21	2.0	–	–	–
SEET 1204AFSN:M8330	–	265	0.24	2.5	155	0.22	2.5	250	0.24	2.5	–	–	–	65	0.22	2.0	–	–	–
SEET 1204AFSN:M8340	–	240	0.25	2.5	140	0.23	2.5	225	0.25	2.5	–	–	–	60	0.23	2.0	–	–	–
SEET 1204AFSN:M9325	–	340	0.20	2.5	–	–	–	320	0.20	2.5	–	–	–	–	–	–	–	–	–

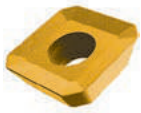
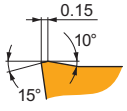
SEET 12-PM

PRAMET

	IC (mm)	D1 (mm)	M (mm)	S (mm)
12T3	13.400	4.20	1.5	3.97



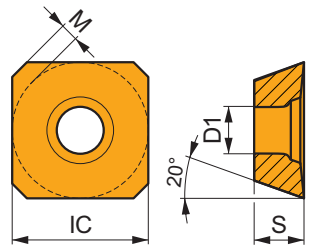
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
 																			
PM geometría con diseño positivo para todo uso.																			
SEET 12T3M-PM:M8330	–	265	0.25	2.0	155	0.23	2.0	250	0.25	2.0	–	–	–	65	0.20	1.6	–	–	–
SEET 12T3M-PM:M8340	–	245	0.25	2.0	145	0.23	2.0	230	0.25	2.0	–	–	–	60	0.20	1.6	–	–	–
SEET 12T3M-PM:M9325	–	325	0.25	2.0	–	–	–	305	0.25	2.0	–	–	–	–	–	–	–	–	–
SEET 12T3M-PM:M9340	–	290	0.25	2.0	170	0.23	2.0	–	–	–	–	–	–	70	0.20	1.6	–	–	–

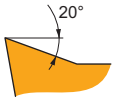
SEET 12-FA

PRAMET

	IC	D1	M	S
	(mm)	(mm)	(mm)	(mm)
1204	12.700	5.50	1.6	4.76



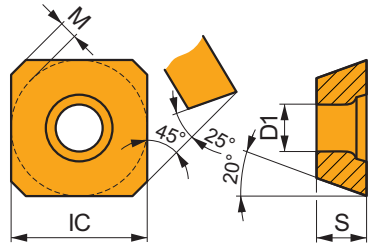
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
 **FA** geometría muy positiva para fresado en acabado a mecanizado medio.																			
SEET 1204AFFN-FA:HF7	● –	–	–	–	–	–	–	–	–	–	■ 330	0.18	3.0	–	–	–	–	–	–

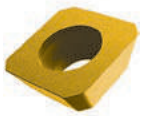
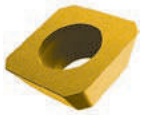
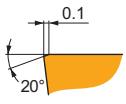
SEEW 12

PRAMET

	IC	D1	M	S
	(mm)	(mm)	(mm)	(mm)
1204	12.700	5.50	1.6	4.76

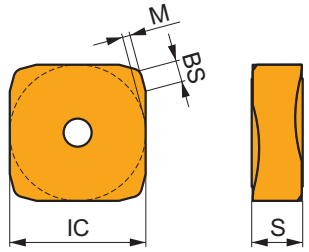


Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

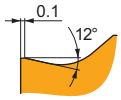
Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
 **AFEN** preparación del filo con ángulo de desprendimiento de 0° para mecanizado ligero a medio.																			
SEEW 1204AFEN:M8330	● –	◪ 265	0.15	2.5	–	–	–	◪ 250	0.15	2.5	–	–	–	–	–	–	–	–	–
SEEW 1204AFEN:M8340	● –	◪ 240	0.15	2.5	–	–	–	◪ 225	0.15	2.5	–	–	–	–	–	–	–	–	–
  **AFSN** preparación del filo con ángulo de desprendimiento de 0° para mecanizado ligero a medio.																			
SEEW 1204AFSN:8215	● –	◪ 250	0.20	2.5	–	–	–	■ 235	0.20	2.5	–	–	–	–	–	–	◪ 50	0.13	1.0
SEEW 1204AFSN:M8330	● –	◪ 245	0.20	2.5	–	–	–	■ 230	0.20	2.5	–	–	–	–	–	–	◪ 45	0.13	1.0
SEEW 1204AFSN:M8340	● –	◪ 225	0.20	2.5	–	–	–	◪ 210	0.20	2.5	–	–	–	–	–	–	–	–	–
SEEW 1204AFSN:M9325	● –	◪ 305	0.20	2.5	–	–	–	■ 285	0.20	2.5	–	–	–	–	–	–	◪ 60	0.13	1.0

SNHF

	BS	IC	M	S
	(mm)	(mm)	(mm)	(mm)
1204	2.00	12.700	0.5	4.76
1504	1.40	15.875	1.1	4.76

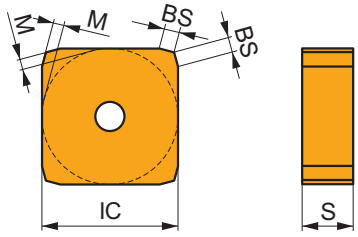


Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
			**1** **S**																	
M geometría con diseño positivo para mecanizado ligero a medio.																				
SNHF 1204ENSR-M:M8330	✱	–	■ 235	0.15	4.0	–	–	–	◪ 220	0.15	4.0	–	–	–	–	–	–	–	–	–
SNHF 1504ENSR-M:M8340	✱	–	■ 220	0.15	6.0	–	–	–	◪ 205	0.15	6.0	–	–	–	–	–	–	–	–	–

SNHN

	BS	IC	M	S
	(mm)	(mm)	(mm)	(mm)
1204	1.40	12.700	0.9	4.76
1504	1.40	15.875	1.3	4.76



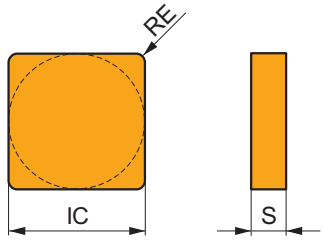
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
			U **E**																	
ENEN geometría negativa estándar para planeado a 75°.																				
SNHN 1204ENEN:8215	✱	–	◪ 275	0.15	6.0	–	–	–	■ 260	0.15	6.0	–	–	–	–	–	–	◪ 55	0.11	1.0
SNHN 1204ENEN:M8330	✱	–	◪ 270	0.15	6.0	–	–	–	■ 255	0.15	6.0	–	–	–	–	–	–	◪ 50	0.11	1.0
SNHN 1204ENEN:M8340	✱	–	◪ 245	0.15	6.0	–	–	–	◪ 230	0.15	6.0	–	–	–	–	–	–	–	–	–
SNHN 1204ENEN:S26	✱	–	◪ 110	0.15	6.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
SNHN 1504ENEN:8215	✱	–	◪ 260	0.15	9.0	–	–	–	■ 245	0.15	9.0	–	–	–	–	–	–	◪ 50	0.11	1.3
SNHN 1504ENEN:M8330	✱	–	◪ 260	0.15	9.0	–	–	–	■ 245	0.15	9.0	–	–	–	–	–	–	◪ 50	0.11	1.3
SNHN 1504ENEN:M8340	✱	–	◪ 235	0.15	9.0	–	–	–	◪ 220	0.15	9.0	–	–	–	–	–	–	–	–	–
SNHN 1504ENEN:S26	✱	–	◪ 105	0.15	9.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

SNUN

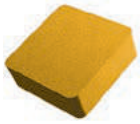
PRAMET

	IC	S
	(mm)	(mm)
1204	12.700	4.76
1504	15.875	4.76



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)



E

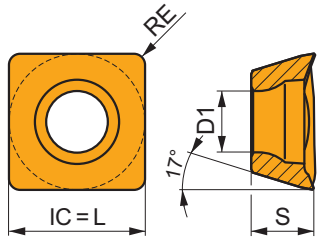
N plaquita de fresado con geometría negativa, se puede usar también para torneado.

SNUN 120408:M8330	●	0.8	260	0.13	4.5	–	–	–	245	0.13	4.5	–	–	–	–	–	–	50	0.10	1.0
SNUN 120412:M8330	✱	1.2	275	0.13	4.5	–	–	–	260	0.13	4.5	–	–	–	–	–	–	55	0.10	1.0
SNUN 150412:M8330	✱	1.2	255	0.15	6.0	–	–	–	240	0.15	6.0	–	–	–	–	–	–	50	0.12	1.3

SOMT 05

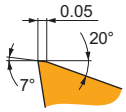
PRAMET

	IC	D1	L	S
	(mm)	(mm)	(mm)	(mm)
0502	5.570	2.50	5.57	2.63



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)



U S

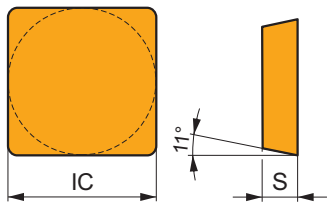
M geometría con diseño positivo para mecanizado ligero a medio.

SOMT 050204SR-M:M6330	●	0.4	255	0.05	2.5	180	0.05	2.5	–	–	–	–	–	–	75	0.04	2.0	–	–	–
SOMT 050204SR-M:M8330	●	0.4	290	0.05	2.5	170	0.05	2.5	275	0.05	2.5	–	–	–	70	0.04	2.0	–	–	–
SOMT 050208SR-M:M8330	●	0.8	350	0.05	2.5	210	0.05	2.5	330	0.05	2.5	–	–	–	85	0.04	2.0	–	–	–

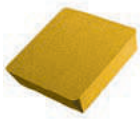
SPGN

PRAMET

	IC (mm)	S (mm)
0903	9.525	3.18
1203	12.700	3.18
1504	15.875	4.76



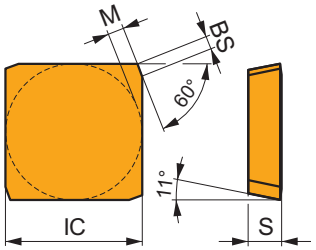
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
 E																			
N plaquita de fresado con ángulo de desprendimiento de 0°, se puede utilizar también en torneado.																			
SPGN 090308:M8340	0.8	225	0.15	2.0	–	–	–	210	0.15	2.0	–	–	–	–	–	–	–	–	–
SPGN 120308:M8330	0.8	230	0.15	4.0	–	–	–	215	0.15	4.0	–	–	–	–	–	–	–	–	–
SPGN 150412:M8330	1.2	225	0.20	5.0	–	–	–	210	0.20	5.0	–	–	–	–	–	–	–	–	–

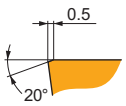
SPGN 25 DZ

PRAMET

	IC (mm)	M (mm)	S (mm)	BS (mm)
2506	25.000	3.5	6.35	2.40

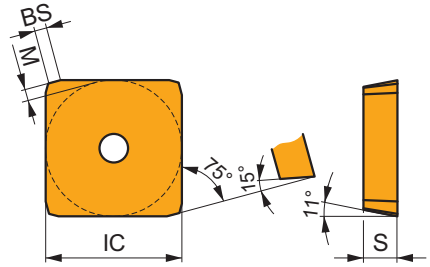


Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

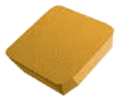
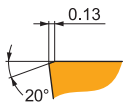
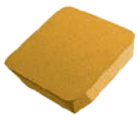
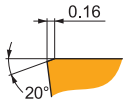
Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
 1 S																			
DZ geometría con ángulo de desprendimiento de 0° para mecanizado pesado.																			
SPGN 2506DZSR:M8326	–	110	0.50	12.0	–	–	–	100	0.50	12.0	–	–	–	–	–	–	–	–	–
SPGN 2506DZSR:M8346	–	90	0.50	12.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

SPKN

	IC (mm)	M (mm)	S (mm)	BS (mm)
1203	12.700	0.9	3.18	1.60
1504	15.875	1.3	4.76	1.70



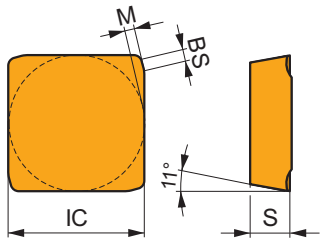
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto	RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
EDER preparación del filo con ángulo de desprendimiento de 0° para mecanizado ligero a medio.																			
SPKN 1203EDER:M8330	–	255	0.15	4.0	–	–	–	240	0.15	4.0	–	–	–	–	–	–	–	–	–
SPKN 1203EDER:M8340	–	230	0.15	4.0	–	–	–	215	0.15	4.0	–	–	–	–	–	–	–	–	–
SPKN 1504EDER:M8330	–	235	0.20	5.0	–	–	–	220	0.20	5.0	–	–	–	–	–	–	–	–	–
SPKN 1504EDER:M8340	–	210	0.20	5.0	–	–	–	195	0.20	5.0	–	–	–	–	–	–	–	–	–
 																			
EDSR preparación del filo con ángulo de desprendimiento de 0° para mecanizado medio.																			
SPKN 1203EDSL:M8330	–	240	0.20	4.0	–	–	–	225	0.20	4.0	–	–	–	–	–	–	45	0.13	1.0
SPKN 1203EDSR:M8330	–	240	0.20	4.0	–	–	–	225	0.20	4.0	–	–	–	–	–	–	45	0.13	1.0
SPKN 1203EDSR:M8340	–	215	0.20	4.0	–	–	–	200	0.20	4.0	–	–	–	–	–	–	–	–	–
SPKN 1203EDSR:M9325	–	290	0.20	4.0	–	–	–	275	0.20	4.0	–	–	–	–	–	–	55	0.13	1.0
SPKN 1203EDSR:S26	–	95	0.20	4.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
 																			
EDS. Preparación del filo EDSR (a derecha) / EDSL (a izquierda) con ángulo de desprendimiento de 0° para mecanizado medio.																			
SPKN 1504EDSR:8215	–	220	0.25	5.0	–	–	–	205	0.25	5.0	–	–	–	–	–	–	40	0.13	1.3
SPKN 1504EDSR:M8330	–	220	0.25	5.0	–	–	–	205	0.25	5.0	–	–	–	–	–	–	40	0.13	1.3
SPKN 1504EDSR:M8340	–	205	0.25	5.0	–	–	–	190	0.25	5.0	–	–	–	–	–	–	–	–	–
SPKN 1504EDSR:M9315	–	285	0.25	5.0	–	–	–	270	0.25	5.0	–	–	–	–	–	–	55	0.13	1.3
SPKN 1504EDSR:M9325	–	270	0.25	5.0	–	–	–	255	0.25	5.0	–	–	–	–	–	–	50	0.13	1.3
SPKN 1504EDSR:S26	–	90	0.25	5.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

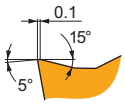
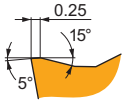
SPKR

PRAMET

	IC (mm)	L (mm)	M (mm)	S (mm)
1203	12.700	12.70	0.9	3.18
1504	15.875	15.88	1.2	4.76



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
			1	S																
SPKR 1203EDSR:M8330		–	265	0.20	4.0	155	0.18	4.0	250	0.20	4.0	–	–	–	–	–	–	–	–	–
SPKR 1203EDSR:M8340		–	240	0.20	4.0	140	0.18	4.0	225	0.20	4.0	–	–	–	–	–	–	–	–	–
			1	S																
SPKR 1504EDSR:M8330		–	245	0.25	5.0	145	0.25	5.0	230	0.25	5.0	–	–	–	–	–	–	–	–	–
SPKR 1504EDSR:M8340		–	225	0.25	5.0	135	0.25	5.0	210	0.25	5.0	–	–	–	–	–	–	–	–	–

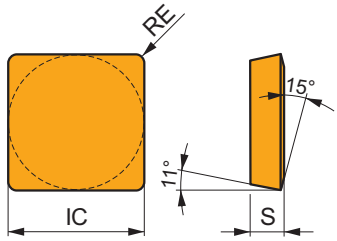
EDSR preparación del filo geometría con rompevirutas para mecanizado medio a pesado.

EDSR preparación del filo geometría con rompevirutas para mecanizado medio a pesado.

SPUN

PRAMET

	IC (mm)	S (mm)
1203	12.700	3.18
1504	15.875	4.76
1904	19.050	4.76
2506	25.400	6.35

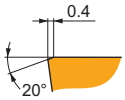


Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
			E																	
SPUN 120304:M8330		0.4	195	0.15	4.0	–	–	–	185	0.15	4.0	–	–	–	–	–	–	–	–	–
SPUN 120308:M8330		0.8	230	0.15	4.0	–	–	–	215	0.15	4.0	–	–	–	–	–	–	–	–	–
SPUN 120308:S26		0.8	95	0.15	4.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
SPUN 120312:M8330		1.2	245	0.15	4.0	–	–	–	230	0.15	4.0	–	–	–	–	–	–	–	–	–

N plaquita de fresado con ángulo de desprendimiento de 0°, se puede utilizar también en torneado.

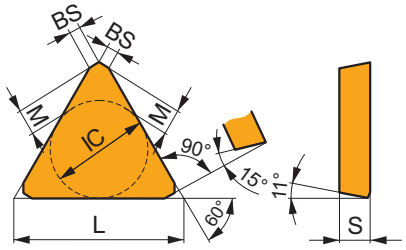
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)
			E																	
N plaquita de fresado con ángulo de desprendimiento de 0°, se puede utilizar también en torneado.																				
SPUN 150412:M8330		1.2	225	0.20	5.0	–	–	–	210	0.20	5.0	–	–	–	–	–	–	–	–	–
SPUN 190408:M8330		0.8	210	0.20	6.0	–	–	–	195	0.20	6.0	–	–	–	–	–	–	–	–	–
SPUN 190412:M8330		1.2	220	0.20	6.0	–	–	–	205	0.20	6.0	–	–	–	–	–	–	–	–	–
			1		S															
N plaquita de fresado con ángulo de desprendimiento de 0°, se puede utilizar también en torneado.																				
SPUN 250616S:M8326		1.6	115	0.40	12.0	–	–	–	105	0.40	12.0	–	–	–	–	–	–	–	–	–
SPUN 250620S:M5326		2.0	145	0.40	12.0	–	–	–	135	0.40	12.0	–	–	–	–	–	–	–	–	–
SPUN 250620S:M8326		2.0	120	0.40	12.0	–	–	–	110	0.40	12.0	–	–	–	–	–	–	–	–	–
SPUN 250620S:M8346		2.0	100	0.40	12.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
SPUN 250620S:S26		2.0	45	0.40	12.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

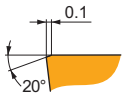
TPCN 16

PRAMET

	BS (mm)	IC (mm)	L (mm)	M (mm)	S (mm)
1603	1.20	9.530	16.10	2.5	3.18

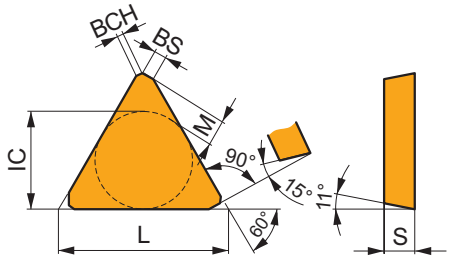


Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

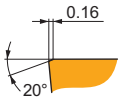
Producto		RE	P			M			K			N			S			H		
			vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)	vc (m/min)	f (mm/tooth)	ap (mm)
			U	S																
XNCB diseño especial para fresas de disco.																				
TPCN 1603PDSN:M8330		–	195	0.20	–	–	–	–	185	0.20	–	–	–	–	–	–	–	–	–	–

TPKN

	IC	L	M	S	BCH	BS
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
1603	9.530	16.50	2.5	3.18	1.20	1.30
2204	12.700	22.00	3.5	4.76	1.20	1.50



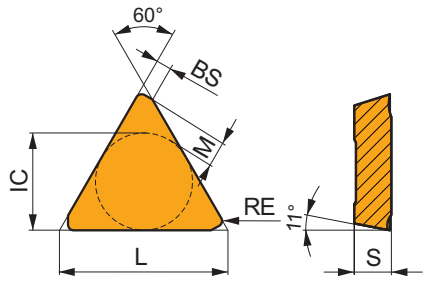
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
			PDER preparación del filo con ángulo de desprendimiento de 0° para mecanizado ligero a medio.																	
TPKN 1603PDER:M8330	●	–	195	0.15	4.0	–	–	–	185	0.15	4.0	–	–	–	–	–	–	–	–	–
TPKN 1603PDER:M8340	●	–	175	0.15	4.0	–	–	–	165	0.15	4.0	–	–	–	–	–	–	–	–	–
TPKN 2204PDER:8215	●	–	190	0.15	5.5	–	–	–	180	0.15	5.5	–	–	–	–	–	–	–	–	–
TPKN 2204PDER:M8330	●	–	190	0.15	5.5	–	–	–	180	0.15	5.5	–	–	–	–	–	–	–	–	–
TPKN 2204PDER:M8340	●	–	170	0.15	5.5	–	–	–	160	0.15	5.5	–	–	–	–	–	–	–	–	–
			**PDSR** preparación del filo con ángulo de desprendimiento de 0° para mecanizado medio.																	
TPKN 1603PDSR:M8330	●	–	185	0.20	4.0	–	–	–	175	0.20	4.0	–	–	–	–	–	–	35	0.13	0.8
TPKN 1603PDSR:M8340	●	–	165	0.20	4.0	–	–	–	155	0.20	4.0	–	–	–	–	–	–	–	–	–
TPKN 1603PDSR:S26	●	–	75	0.20	4.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
TPKN 2204PDSR:M8310	●	–	195	0.20	5.5	–	–	–	185	0.20	5.5	–	–	–	–	–	–	35	0.13	1.0
TPKN 2204PDSR:M8330	●	–	175	0.20	5.5	–	–	–	165	0.20	5.5	–	–	–	–	–	–	35	0.13	1.0
TPKN 2204PDSR:M8340	●	–	160	0.20	5.5	–	–	–	150	0.20	5.5	–	–	–	–	–	–	–	–	–
TPKN 2204PDSR:M9325	●	–	220	0.20	5.5	–	–	–	205	0.20	5.5	–	–	–	–	–	–	40	0.13	1.0
TPKN 2204PDSR:S26	●	–	75	0.20	5.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

TPKR

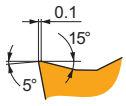
PRAMET

	IC	L	M	S	BS
	(mm)	(mm)	(mm)	(mm)	(mm)
1603	9.530	16.50	2.5	3.18	1.40
2204	12.700	22.00	3.5	4.76	1.40



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
TPKR 1603PDSR:M8330	⬢	–	■ 185	0.20	4.0	◪ 110	0.18	4.0	■ 175	0.20	4.0	–	–	–	–	–	–	–	–	–
TPKR 1603PDSR:M8340	⬢	–	■ 165	0.20	4.0	◪ 95	0.18	4.0	◪ 155	0.20	4.0	–	–	–	–	–	–	–	–	–
TPKR 2204PDSR:M8330	⬢	–	■ 175	0.20	5.5	◪ 105	0.18	5.5	■ 165	0.20	5.5	–	–	–	–	–	–	–	–	–
TPKR 2204PDSR:M8340	⬢	–	■ 160	0.20	5.5	◪ 95	0.18	5.5	◪ 150	0.20	5.5	–	–	–	–	–	–	–	–	–
TPKR 2204PDSR:M9325	●	–	■ 220	0.20	5.5	–	–	–	■ 205	0.20	5.5	–	–	–	–	–	–	–	–	–

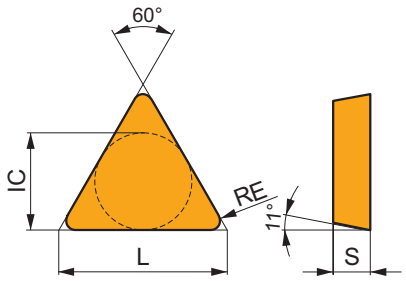


PDSR preparación del filo geometría con rompevirutas para mecanizado medio a pesado.

TPUN

PRAMET

	IC	L	S
	(mm)	(mm)	(mm)
1103	6.350	11.00	3.18
1603	9.525	16.50	3.18
2204	12.700	22.00	4.76



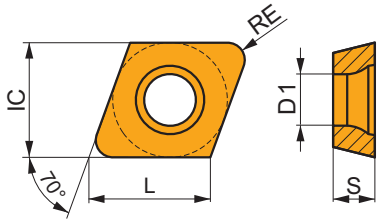
Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)	(m/min)	(mm/tooth)	(mm)
TPUN 110304:M8330	●	0.4	–	–	–	–	–	–	■ 150	0.10	1.2	–	–	–	–	–	–	◪ 30	0.10	0.4
TPUN 160304:8215	●	0.4	◪ 155	0.15	4.0	–	–	–	◪ 145	0.15	4.0	–	–	–	–	–	–	–	–	–
TPUN 160304:H10	●	0.4	–	–	–	–	–	–	◪ 65	0.15	4.0	–	–	–	–	–	–	–	–	–
TPUN 160304:M8330	●	0.4	◪ 155	0.15	4.0	–	–	–	◪ 145	0.15	4.0	–	–	–	–	–	–	–	–	–
TPUN 160304:S26	●	0.4	◪ 65	0.15	4.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
TPUN 160308:8215	●	0.8	◪ 185	0.15	4.0	–	–	–	◪ 175	0.15	4.0	–	–	–	–	–	–	–	–	–
TPUN 160308:M8330	⬢	0.8	–	–	–	–	–	–	■ 155	0.18	1.5	–	–	–	–	–	–	◪ 30	0.11	0.6
TPUN 160312:M8330	⬢	1.2	–	–	–	–	–	–	■ 155	0.20	1.5	–	–	–	–	–	–	◪ 30	0.11	0.8
TPUN 220408:M8330	●	0.8	◪ 170	0.20	5.0	–	–	–	◪ 160	0.20	5.0	–	–	–	–	–	–	–	–	–
TPUN 220412:M8330	⬢	1.2	–	–	–	–	–	–	■ 155	0.20	2.0	–	–	–	–	–	–	◪ 30	0.11	1.0

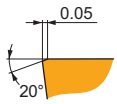
N plaquita de fresado con ángulo de desprendimiento de 0°, se puede utilizar también en torneado.

XDHW

	IC (mm)	D1 (mm)	L (mm)	S (mm)
0702	6.500	2.95	6.90	2.38
10T3	10.000	3.95	10.60	3.97



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
			EN geometría con ángulo de desprendimiento de 0° para fresado de ranuras.																	
XDHW 070210EN:M8310		1.0	310	0.10	1.0	–	–	–	290	0.10	1.0	–	–	–	–	–	–	60	0.05	1.0
			**SN** geometría con ángulo de desprendimiento de 0° para fresado de ranuras.																	
XDHW 070210SN:M8310		1.0	310	0.10	1.0	–	–	–	290	0.10	1.0	–	–	–	–	–	–	60	0.05	1.0
XDHW 070210SN:M8325		1.0	230	0.10	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
XDHW 10T310SN:M8310		1.0	275	0.15	1.0	–	–	–	260	0.15	1.0	–	–	–	–	–	–	55	0.08	1.0
XDHW 10T310SN:M8325		1.0	210	0.15	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

INSTRUCCIONES

1 SAD11E

P M K N S H 2

PRAMET 3 S

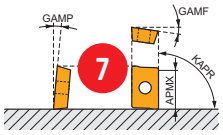
FORCE AD11 Fresa de Escuadrado con Refrigeración Interna

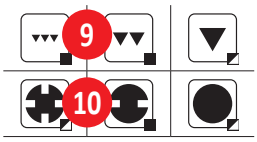
Fresas a 90° con plaquitas positivas AD.. 11 con APMX de 9 mm. Adecuada para planeado, escuadrado, ranurado, interpolación helicoidal, fresado trocoidal , en rampa y axial (plunge). Disponible con mango cilíndrico, Weldon, cono Morse, modular y para portafresas (con paso diferencial). Cuerpo tratado para alargar la vida de herramienta. 5

FORCE AD

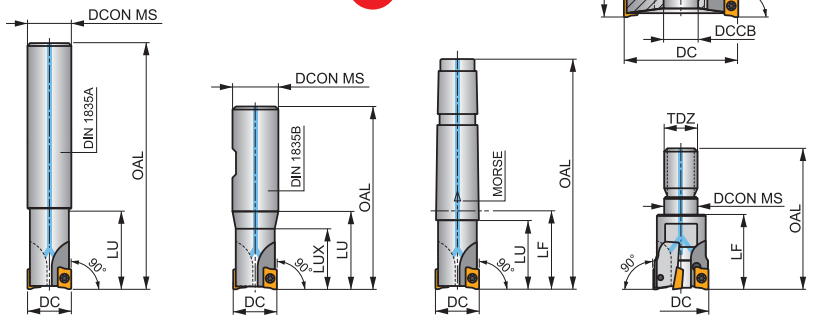
KAPR	90°
APMX	9.0 mm

6





8



	Producto	DC	OAL	DCON MS	DCCB	LU	LUX	LF	TDZ	CZC MS	KWW	KWD	GAMF	GAMP	16	18	20	22
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)			(mm)	(mm)	(°)	(°)		max.	kg	
	16A2R024A14-SAD11E-C	16	160	14	–	24	–	–	–	–	–	–	-12.8	4	2			
	16A2R024A16-SAD11E-C	16	135	16	–	24	–	–	–	–	–	–	-12.8	4	2			
	16A2R050A16-SAD11E-C	16	135	16	–	50	–	–	–	–	–	–	-12.8	4	2	–	30100	✓	0.20	GI169	SQ025	–
	18A2R029A20-SAD11E-C	18	150	20	–	29	–	–	–	–	–	–	-12	4.5	2	–	28400	✓	0.35	GI169	SQ025	–
	20A2R029A20-SAD11E-C	20	150	20	–	29	–	–	–	–	–	–	-11.5	5	2	–	27000	✓	0.33	GI169	SQ020	–
13	20A2R07[illegible]-SAD11E-C	20	150	20	–	70	–	–	–	–	–	–	-11.5	5	2	–	27000	✓	0.32	GI169	SQ020	–
13	20A3R0[illegible]-SAD11E-C	20	200	18	–	29	–	–	–	–	–	–	-11.5	5	3	–	27000	✓	0.36	GI169	SQ025	–
	20A3R029A20-SAD11E-C	20	150	20	–	29	–	–	–	–	–	–	-11.5	5	3	–	27000	✓	0.31	GI169	SQ025	–
	22A3R029A20-SAD11E-C	22	200	20	–	29	–	–	–	–	–	–	-11.5	5	3	–	25600	✓	0.45	GI169	SQ025	–
	25A3R034A25-SAD11E-C	25	170	25	–	34	–	–	–	–	–	–	-10.2	5	3	–	24100	✓	0.42	GI169	SQ020	–
	25A3R080A25-SAD11E-C	25	170	25	–	80	–	–	–	–	–	–	-10.2	5	3	–	24100	✓	0.52	GI169	SQ020	–
	25A4R034A25-SAD11E-C	25	170	25	–	34	–	–	–	–	–	–	-10.2	5	4	–	24100	✓	0.56	GI169	SQ025	–
	25A4R040A25-SAD11E-C	25	250	25	–	40	–	–	–	–	–	–	-10.2	5	4	–	24100	✓	0.85	GI169	SQ025	–
	30A3R080A32-SAD11E-C	30	200	32	–	80	–	–	–	–	–	–	-9.3	7	3	–	22000	✓	0.98	GI169	SQ020	–

15 17 19 21 23

			24	
GI169	ADMX 11T3..			ADEX 11T3..

					25			
SQ020	US 62506-T07P	1.2	M 2.5	6	–	–	Flag T07P	–
SQ021	US 62506-T07P	1.2	M 2.5	6	D-T07P/T09P	FG-15	–	–
SQ022	US 62506-T07P	1.2	M 2.5	6	D-T07P/T09P	FG-15	–	HS 0830C
SQ023	US 62506-T07P	1.2	M 2.5	6	D-T07P/T09P	FG-15	–	HS 1030C
SQ025	US 62505-T07P	1.2	M 2.5	5	–	–	Flag T07P	–

			26	
AC001	KS 1230			K.FMH27
AC002	KS 1635			K.FMH32
AC003	KS 2040			K.FMH40

Página estándar donde se muestran las fresas intercambiables; los detalles de la página específica serán diferentes.

FRESAS INTERCAMBIABLES – PÁGINA RESUMEN

Pos.	Descripción
1	Denominación de la fresa
2	Recomendaciones de grupo de material
3	Sistema de fijación de la plaquita de corte
4	Imagen
5	Descripción de la herramienta
6	Ángulo de posición y profundidad de corte teórica máxima (mm)
7	Geometría de la herramienta
8	Representación esquemática de la herramienta
9	Calidad de superficie posible
10	Tipo de corte/condiciones de trabajo
11	Rango maximo de espesor de viruta medio (mm) para fresas con mango o fresas para portafresas
12	Aplicaciones del producto
13	Tipo de mango

Pos.	Descripción
14	Código ISO de la fresa
15	Dimensiones (mm), ángulos [1] (°) y código de tamaño de conexión
16	Número de dientes
17	Paso de dientes irregular
18	Revoluciones de la fresa máximas
19	Alimentación de refrigerante interna
20	Peso (kg)
21	Grupo de plaquitas de corte compatibles [2]
22	Grupo de piezas de repuesto [2]
23	Grupo de accesorios especiales [2]
24	Plaquitas de corte compatibles
25	Piezas de repuesto
26	Accesorios especiales

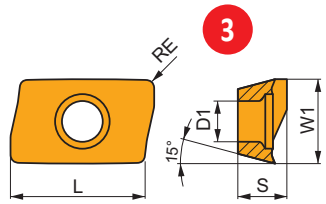
[1] γ_f = ángulo de incidencia radial (GAMF) del asiento de la plaquita; consulte la información técnica sobre las fresas intercambiables.
γ_p = ángulo de incidencia axial (GAMP) del asiento de la plaquita; consulte la información técnica sobre las fresas intercambiables.

[2] Los iconos de las piezas de repuesto y los accesorios especiales están diseñados de forma esquemática para facilitar su comprensión. No se incluyen en la lista de iconos. En algunos casos, los tornillos se completan con información sobre el valor del par en Nm, la longitud del tornillo y el tamaño de la rosca.

1 **ADMX 11**

PRAMET

	W1 (mm)	D1 (mm)	**2** L (mm)	S (mm)
11T3	6.530	2.90	11.00	3.97



Valores de inicio adecuados para la velocidad de corte (vc), avance (f) y profundidad de corte (ap). Consulte nuestra APP Calculadora de mecanizado para obtener más cálculos.

Producto		RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
4			23° 0.06 **5**			**6** S			**F** geometría con diseño positivo muy afilado para mecanizado ligero.									**10**		
ADMX 11T304SR-F:8215	●	0.4	245	0.10	2.0	145	0.09	2.0	230	0.10	2.0	735	0.12	2.0	60	0.08	1.6	–	–	–
ADMX 11T304SR-F:M8330	●	0.4	240	0.10	2.0	140	0.09	2.0	225	0.10	2.0	720	0.12	2.0	60	0.08	1.6	–	–	–
ADMX 11T304SR-F:M8340	●	0.4	220	0.10	2.0	130	0.09	2.0	205	0.10	2.0	–	–	–	55	0.08	1.6	–	–	–
ADMX 11T [7] F:M9340	●	0.4	285	0.10	2.0	170	0.09	2.0	–	–	–	–	–	–	70	0.08	1.6	–	–	–
ADMX 11T [7] F:8215	●	0.4	290	0.10	2.0	170	0.09	2.0	275	0.10	2.0	870	0.12	2.0	70	0.08	1.6	–	–	–
ADMX 11T308SR-F:M8330	●	0.8	285	0.10	2.0	170	0.09	2.0	270	0.10	2.0	855	0.12	2.0	70	0.08	1.6	–	–	–
ADMX 11T308SR-F:M8340	●	0.8	260	0.10	2.0	155	0.09	2.0	245	0.10	2.0	–	–	–	65	0.08	1.6	–	–	–
ADMX 11T308SR-F:M9340	●	0.8	340	0.10	2.0	200	0.09	2.0	–	–	–	–	–	–	85	0.08	1.6	–	–	–

7 **8** **9** **11**

Pos.	Descripción
1	Denominación de la plaquita de corte
2	Tabla de tamaños de plaquita de corte (mm)
3	Representación esquemática de la plaquita de corte
4	Imagen representativa de una plaquita de corte
5	Perfil del filo de corte principal
6	Símbolos: características especiales y tipo de filo de corte

Pos.	Descripción
7	Código ISO para la plaquita de corte:Calidad
8	Adecuado para condiciones
9	Radios de plaquita de corte (mm)
10	Descripción de la geometría
11	Área de aplicación de la plaquita de corte [1]

[1] Las recomendaciones para la corrección de la velocidad de corte se encuentran al final del capítulo de fresado, en la sección técnica.

La información técnica aparece inmediatamente después de las páginas sobre las fresas, sus plaquitas compatibles e información sobre las velocidades de corte iniciales. Esto le ayudará a utilizar las herramientas de forma correcta. Si no está seguro de cómo utilizar o interpretar esta información, consulte la sección técnica al final del capítulo de fresado o póngase en contacto con su representante de Dormer Pramet.

Página estándar donde se muestran plaquitas de fresado; los detalles de la página específica serán diferentes. La mayoría de las plaquitas se pueden encontrar en este catálogo justo después de la fresa correspondiente o, alternativamente, en el capítulo de plaquitas independiente.

RESUMEN DE SÍMBOLOS

■	Uso principal
◪	Uso posible

▼▼▼	Acabado: calidad superficial muy buena
▼▼	Mecanizado medio: calidad superficial buena
▼	Desbaste: rugosidad superficial ilimitada

●	Adecuado para condiciones de trabajo estables
●	Adecuado para condiciones de trabajo inestables
●	Adecuado para condiciones de trabajo muy inestables

	Planeado
	Escuadrado poco profundo
	Escuadrado profundo
	Ranurado poco profundo
	Ranurado profundo

	Fresado axial (plunge)
	Fresado axial progresivo
	Mecanizado en rampa
	Interpolación helicoidal
	Interpolación helicoidal en un orificio previamente perforado

	Fresado de chaflanes
	Fresado de ranuras en «T»
	Planeado trasero
	Superficies contorneadas (fresado en copia)

1	Primera elección
U	Opción universal
W	Plaquita de corte con geometría wiper

	Piezas con paredes finas y delgadas
	Voladizo largo
HFC	Mecanizado de alto avance

	Condiciones de trabajo pesadas

F	Filo vivo
E	Filo redondeado

T	Filo con faceta
S	Filo redondeado con faceta

P	Filo redondeado con doble faceta

S	S – Tornillo de sujeción a través del agujero
C	C – Sujeción superior

F	Sistema F
S(C)	Sistema SC

Nm	Par de apriete del tornillo (Nm)

RESUMEN DE SÍMBOLOS

DIN 1835A	DIN 1835A mango cilíndrico
DIN 1835B	DIN 1835B mango Weldon
DIN 228A	Mango cono Morse DIN 228-1
MODULAR	Mango roscado

ISO/DIS 7388-1	Cono DIN 69871-1
ISO 297	Cono DIN 2080-1
JIS B 6339	Cono MAS BT (JIS-B-6339)
ISO 6462 DIN 8030	Portafresas DIN 8030

ISO 6462 DIN 8030	Portafresas DIN 8030, fresa helicoidal
ISO 6462 DIN 8030	Portafresas DIN 8030, fresa de disco

Piezas técnicas

a_e/DC	Relación (%) entre el ancho radial del corte y el diámetro de corte
a_e/DCX	Relación (%) entre el ancho radial del corte y el diámetro de corte máximo
X.V	Factor de multiplicación para la velocidad de corte
X.f	Factor de multiplicación para el avance (mecanizado en la línea central)
X.f	Factor de multiplicación para el avance (mecanizado excéntrico)
	Rompevirutas
RE	Radio de esquina de la plaquita (mm)
BS	Longitud del filo wiper (mm)
f	Avance (mm/diente)
1 f	Avance inicial (mm/diente)
f_{min}	Avance mínimo (mm/diente)
f_{max}	Avance máximo (mm/diente)

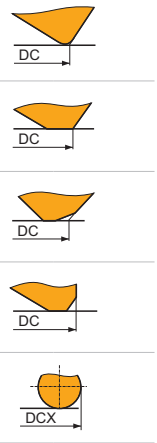
a_p	Profundidad de corte (mm)
DC	Diámetro de la fresa (mm)
DCX	Diámetro máximo de la fresa (mm)
DEF	Diámetro efectivo de la fresa (mm)
a_{emax}	Ancho máximo del área mecanizada (mm)
max	Profundidad de corte para corte de inmersión (mm)
RPMX	Ángulo máximo para mecanizado en rampa (°)
APMX/I	Profundidad de corte máxima sobre la longitud de corte (mm)
SMAX DMAX	Profundidad máxima por revolución para diámetro máximo del agujero (mm)
SMAX DMIN	Profundidad máxima por revolución para diámetro mínimo del agujero (mm)
FE	Paso de contorneado en el fresado convencional (mm)
FE	Paso de contorneado en fresado transversal ascendente/descendente (mm)

	Número de dientes
APMX	Longitud de trabajo efectiva de la herramienta (mm)
	Número de dientes (fresas helicoidales)
CDX	Alcance efectivo de la herramienta (mm)
	Número de dientes efectivo
	Ángulo de la entrada (°)
	Número de filos en uso
	Diámetro del agujero (mm)
µm	Rugosidad de la superficie mecanizada R_a (mm)
	Paso de rosca
1 2 3 / 1"	Hilos por pulgada
	Tiempo (min)

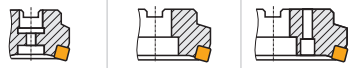
DENOMINACIÓN CÓDIGO ISO – FRESAS PARA PORTAFRESAS

	1	2	3	4		5	6	7	8	9	10	11	12
ISO	63	A	06	R	–		S	90	A	D	16	E	
ANSI	1	2	3	4		5	6	7	8	9	10	11	12
	300	F	04	N	–	I	S	90	S	N	12	N	4

1 Diámetro de corte

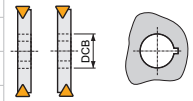


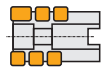
2 Tipo de fresa, designación y/o tamaño de amarre



A ISO 6462/A DIN 8030/A	B ISO 6462/B DIN 8030/B	C ISO 6462/C DIN 8030/C

F	DC = 27 mm	DC = 1.000
G	DC = 32 mm	DC = 1.250
H	DC = 40 mm	–
J	DC = 50 mm	–
K	DC = 60 mm	–
M	DC = 80 mm	–
T		





3 Nº de filos

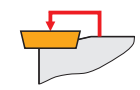
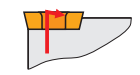
4 Dirección del corte

R	
L	
N	

5 Sist. de medida

I	(")

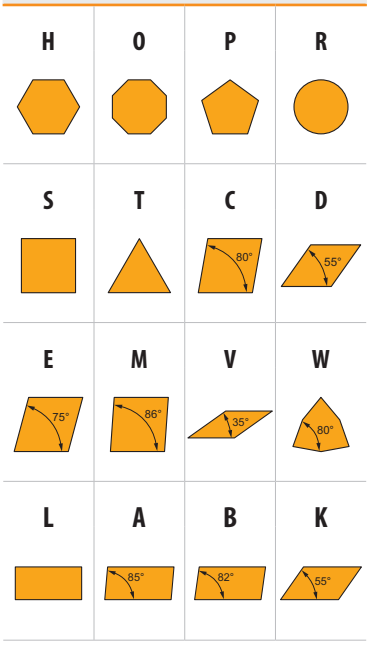
6 Tipo de fijación

C	
S	
W	
F	

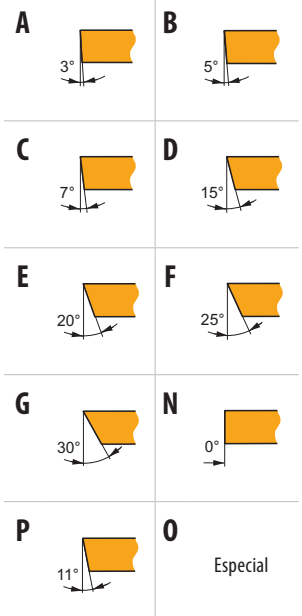
7 Ángulo de posición (KAPR)

90°	
75°	
60°	
45°	
MO	

8 Forma de plaquita



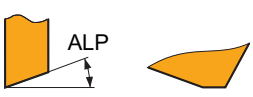
9 Ángulo de incidencia de plaquita



10 Longitud del filo de corte

IC (mm)	(")	H	O	P	S	T	C	D	E	M	V	W	R	K
3.97					03	06		04			06	02		
	5/32"							1.2"						
4.76					04	08	04	05	04	04	08	L3		
	3/16"							1.5"						
5.56					05	09	05	06	05	05	09	03		
	7/32"							1.8"						
6.35		03	02	04	08	11	06	07	08	08	11	04	06	
	1/4"							2"						
7.94		04	03	05	07	13	08	09	06	07	13	05	07	
	5/16"							2.5"						
9.525		05	04	07	09	16	09	11	09	09	16	06	09	19
	3/8"							3"						
12.7		07	05	09	12	22	12	15	13	12	22	08	12	
	1/2"							4"						
15.875		09	06	11	15	27	16	19	16	15	27	10	15	
	5/8"							5"						
19.05		11	07	13	19	33	19	23	19	19	33	13	19	
	3/4"							6"						
25.4		14	10	18	25	44	25	31	26	25	44	17	25	
	5/1"							8"						
31.75		18	13	23	31	54	32	38	32	31	54	21	31	
	1 1/4"							10"						

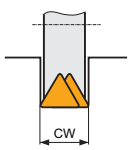
11 Ángulo de incidencia



N	ALP = 0°	C	ALP = 7°	P	ALP = 11°
D	ALP = 15°	E	ALP = 20°	F	ALP = 25°

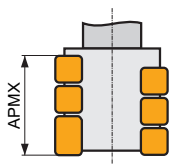
12 Longitud de filo (ancho)

CW (mm) / (")



CW	1/16"
0.156	2.5
0.187	3
0.250	4
0.313	5
0.375	6

APMX



DENOMINACIÓN CÓDIGO ISO – FRESAS DE ESCUADRADO CON MANGO

	1	2	3	4	5	6	7		8	9	10	11	12	13
ISO	32	A	4	R	042	B	32	–		S	A	D	11	E
ANSI	125	A	4	R	150	W	125	–	I	S	A	D	11	E

1 Diámetro de corte

DC, DC, DC, DC, DCX

2 Tipo de fresa y ángulo de posición

A E J N H K

5 Balanço

(mm)

(")

6 Mango

A	C	DIN 1835A	
B	W	ISO 3338-2, DIN 1835B	
E	-	ISO 296, DIN 228-1	
G	-	ISO 297, DIN 208-1	
H	-	ISO/DIS 7388-1, DIN 69871-1	
N	-	ISO 12 164-1, DIN 69893	
-	R8	R8	
X	-	MAS BT	
XC	-	CAPTO	
-	CA	ANSI B5.50	

7 Tamaño de mango

6 – 40 mm	.250" – 1.250"
6 – 50 mm	.375" – 2.000"
1 – 6	–
40 – 50 mm	–
30 – 50 mm	–
25 – 100 mm	–
–	1.250"
30 – 50	–
3 – 10	–
–	40 / 50

3 Nº de filos

4 Dirección del corte

R L N

10 Forma de plaquita

H O P R

S T C (80°) D (55°)

E (75°) M (86°) V (35°) W (80°)

L A (85°) B (82°) K (55°)

11 Ángulo de incidencia de plaquita

A (3°) B (5°)

C (7°) D (15°)

E (20°) F (25°)

G (30°) N (0°)

P (11°) O Especial

12 Longitud del filo de corte

IC (mm)	(")	H	O	P	S	T	C	D	E	M	V	W	R	K
3.97					03	06		04			06	02		
	5/32"							1.2"						
4.76					04	08	04	05	04	04	08	L3		
	3/16"							1.5"						
5.56					05	09	05	06	05	05	09	03		
	7/32"							1.8"						
6.35		03	02	04	08	11	06	07	08	08	11	04	06	
	1/4"							2"						
7.94		04	03	05	07	13	08	09	06	07	13	05	07	
	5/16"							2.5"						
9.525		05	04	07	09	16	09	11	09	09	16	06	09	19
	3/8"							3"						
12.7		07	05	09	12	22	12	15	13	12	22	08	12	
	1/2"							4"						
15.875		09	06	11	15	27	16	19	16	15	27	10	15	
	5/8"							5"						
19.05		11	07	13	19	33	19	23	19	19	33	13	19	
	3/4"							6"						
25.4		14	10	18	25	44	25	31	26	25	44	17	25	
	5/1"							8"						
31.75		18	13	23	31	54	32	38	32	31	54	21	31	
	1 1/4"							10"						

8 Sist. de medida

I	(")

9 Tipo de fijación

C W

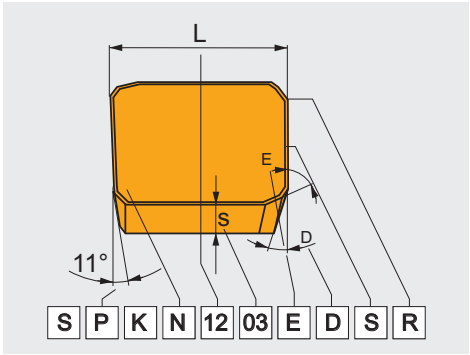
S F

13 Ángulo de incidencia

ALP

N ALP = 0°	C ALP = 7°	P ALP = 11°
D ALP = 15°	E ALP = 20°	F ALP = 25°

DENOMINACIÓN CÓDIGO ISO – PLAQUITAS DE FRESADO



	1	2	3	4
ISO	S	P	G	N
	S	P	K	N
ANSI	1	2	3	4
	S	P	G	
	S	P	K	N

1 – Forma de plaquita

H	O	P	R
S	T	C (80°)	D (55°)
E (75°)	M (86°)	V (35°)	W (80°)
L	A (85°)	B (82°)	K (55°)

2 – Ángulo de incidencia de plaquita

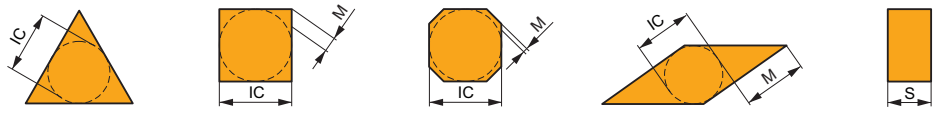
A	3°	B	5°
C	7°	D	15°
E	20°	F	25°
G	30°	N	0°
P	11°	O	Especial

4 – Tipo de plaquita

N		
R		
F		
A		
M		
G		
W	40 – 60°	
T		
Q		
U		
B	70 – 90°	
H		
C		
J		
X	Especial	

3 – Tolerancia

	(mm)			(")		
	M (±)	S (±)	IC (±)	M (±)	S (±)	IC (±)
A	0.005	0.025	0.025	0.0002"	0.001"	0.0010"
F	0.005	0.025	0.013	0.0002"	0.001"	0.0005"
C	0.013	0.025	0.025	0.0005"	0.001"	0.0010"
H	0.013	0.025	0.013	0.0005"	0.001"	0.0005"
E	0.025	0.025	0.025	0.0010"	0.001"	0.0010"
G	0.025	0.130	0.025	0.0010"	0.005"	0.0010"
J	0.005	0.025	0.05 – 0.13	0.0002"	0.001"	0.002" – 0.005"
K	0.013	0.025	0.05 – 0.13	0.0005"	0.001"	0.002" – 0.005"
L	0.025	0.025	0.05 – 0.13	0.0010"	0.001"	0.002" – 0.005"
M	0.08 – 0.18	0.130	0.05 – 0.13	0.003" – 0.007"	0.005"	0.002" – 0.005"
N	0.08 – 0.18	0.025	0.05 – 0.13	0.003" – 0.007"	0.001"	0.002" – 0.005"
U	0.05 – 0.38	0.130	0.05 – 0.13	0.005" – 0.015"	0.005"	0.003" – 0.010"



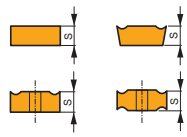
DENOMINACIÓN CÓDIGO ISO – PLAQUITAS DE FRESADO

5	6	7		8	9		10
12	03	08					
12	03	ED		S	R	-	
5a	6a	7a		8	9		
4	2	2					
4	2	ED		S	R	-	

5 – Longitud del filo de corte

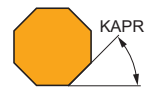
I.C. (mm)	I.C. (″)	H	O	P	S	T	C	D	E	M	V	W	R	K
3.97					03	06		04			06	02		
	5/32″	1.2″												
4.76					04	08	04	05	04	04	08	L3		
	3/16″	1.5″												
5.56					05	09	05	06	05	05	09	03		
	7/32″	1.8″												
6.35		03	02	04	08	11	06	07	08	08	11	04	06	
	1/4″	2″												
7.94		04	03	05	07	13	08	09	06	07	13	05	07	
	5/16″	2.5″												
9.525		05	04	07	09	16	09	11	09	09	16	06	09	19
	3/8″	3″												
12.7		07	05	09	12	22	12	15	13	12	22	08	12	
	1/2″	4″												
15.875		09	06	11	15	27	16	19	16	15	27	10	15	
	5/8″	5″												
19.05		11	07	13	19	33	19	23	19	19	33	13	19	
	3/4″	6″												
25.4		14	10	18	25	44	25	31	26	25	44	17	25	
	5/1″	8″												
31.75		18	13	23	31	54	32	38	32	31	54	21	31	
	1 1/4″	10″												

6 – Espesor



Symbol	S (mm)	S (″)
01	1.59	1/16″
T1	1.98	5/64″
02	2.38	3/32″
03	3.18	1/8″
T3	3.97	5.32″
04	4.76	3/16″
05	5.56	7/32″
06	6.35	1/4″
07	7.94	5/16″
09	9.52	3/8″

7 – Ángulo de corte / Ángulo de incidencia de corte

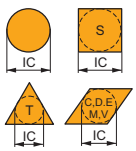


	KAPR		ALP
A	45°	A	3°
D	60°	B	5°
E	75°	C	7°
F	85°	D	15°
P	90°	E	20°
Z	Especial	F	25°
		G	30°
		N	0°
		P	11°
		Z	Especial

ZZ – Especial

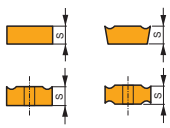
ANSI

5a – Círculo inscrito



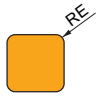
Symbol	I.C. (mm)	I.C. (″)
1	3.175	1/8″
1.2	3.969	5/32″
1.5	4.763	3/16″
1.8	5.556	7/32″
2	6.350	1/4″
2.5	7.938	5/16″
3	9.525	3/8″
4	12.700	1/2″
5	15.875	5/8″
6	19.050	3/4″
7	22.225	7/8″
8	25.400	1″
10	31.750	5/4″
12	38.100	6/4″

6a – Espesor



Symbol	S (mm)	S (″)
1	1.588	1/16″
1.2	1.984	5/64″
1.5	2.381	3/32″
2	3.175	1/8″
2.5	3.969	5/32″
3	4.763	3/16″
3.5	5.556	7/32″
4	6.350	1/4″
5	7.938	5/16″
6	9.525	3/8″
7	11.113	7/16″
8	12.700	1/2″
9	14.288	9/16″
10	15.875	5/8″

7a – Radio de punta

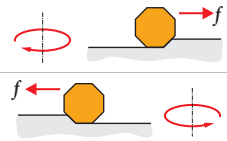
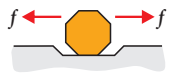


Symbol	RE (mm)	RE (″)
0	0	0″
0.2	0.099	1/256″
0.5	0.198	1/128″
1	0.397	1/64″
2	0.794	1/32″
3	1.191	3/64″
4	1.588	1/16″
5	1.984	5/64″
6	2.381	3/32″
7	2.778	7/64″
8	3.175	1/8″
10	3.969	5/32″
12	4.763	3/16″
14	5.556	7/32″
16	6.350	1/4″

8 – Diseño del filo

F	Filo vivo	E	Filo redondeado
T	Filo vivo con faceta	S	Filo redondeado con faceta
K	Filo con doble faceta	P	Filo redondeado con doble faceta

9 – Dirección del avance

R		N	
L			

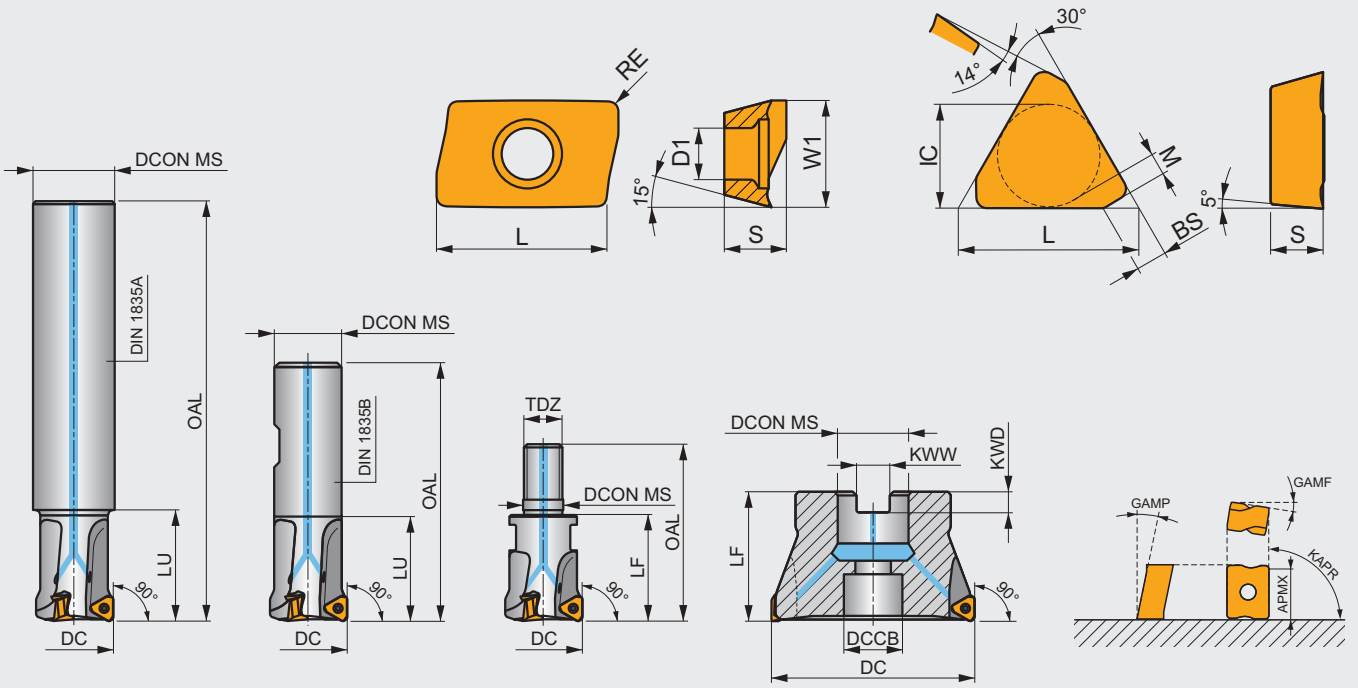
10 – Designación del rompevirutas

PARÁMETROS DE LA HERRAMIENTA DE CORTE DE ACUERDO CON LA NORMA ISO 13399

Todas las herramientas de corte se definen por una serie de parámetros según la norma ISO 13399. Esta lista contiene todos los parámetros utilizados en este catálogo junto con sus definiciones.

La ISO 13399 es una norma internacional relativa a las herramientas de corte. Proporciona dimensiones y parámetros en un formato neutral, que es independiente de cualquier sistema particular o nomenclatura de una empresa. Cuando las herramientas de corte están claramente definidas según una norma global, cualquier tipo de software puede procesar los datos electrónicos con mayor rapidez, lo que mejora la calidad de la comunicación y contribuye a que el intercambio de información sea fluido. La utilización de un lenguaje común en las descripciones de nuestras herramientas de corte facilitará la comunicación entre sistemas. Le ahorrará mucho tiempo, pues le facilitará la recopilación de datos de alta calidad de nuestras 40 000 herramientas de metal duro e intercambiables. Al utilizar un sistema compatible con la norma ISO 13399, no será necesario interpretar los datos e introducirlos en el sistema manualmente.

SOLO SON EJEMPLOS!

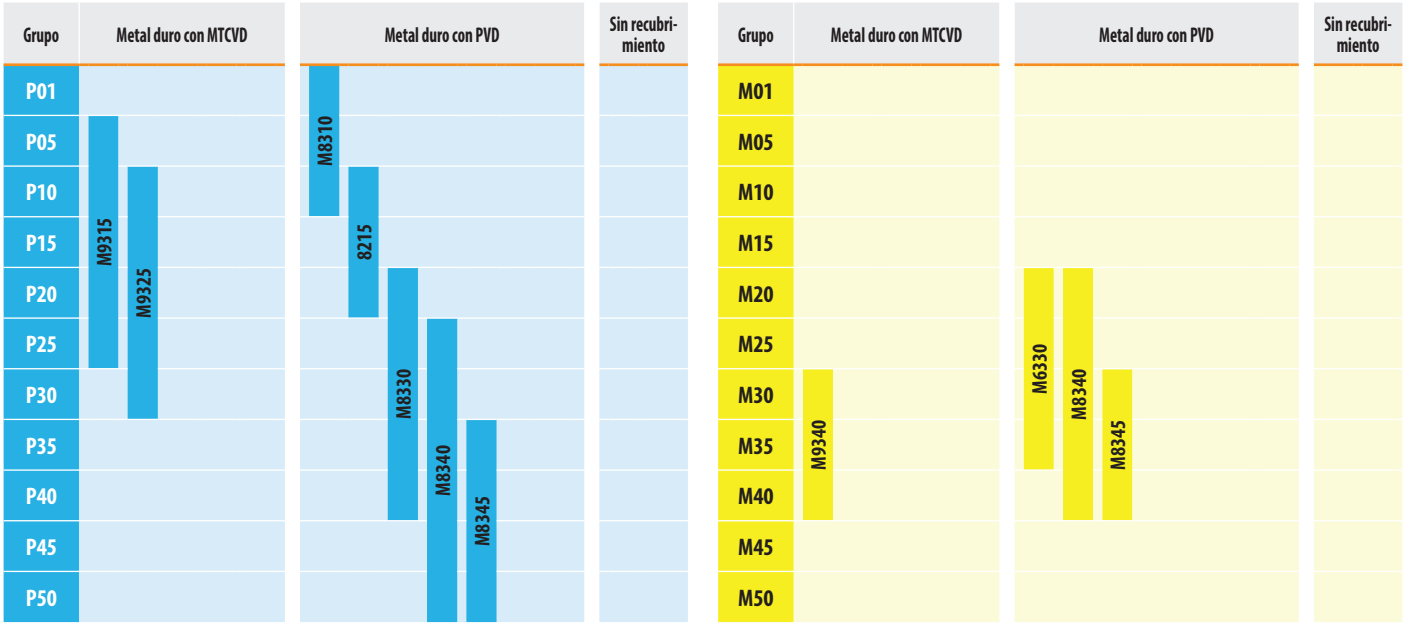


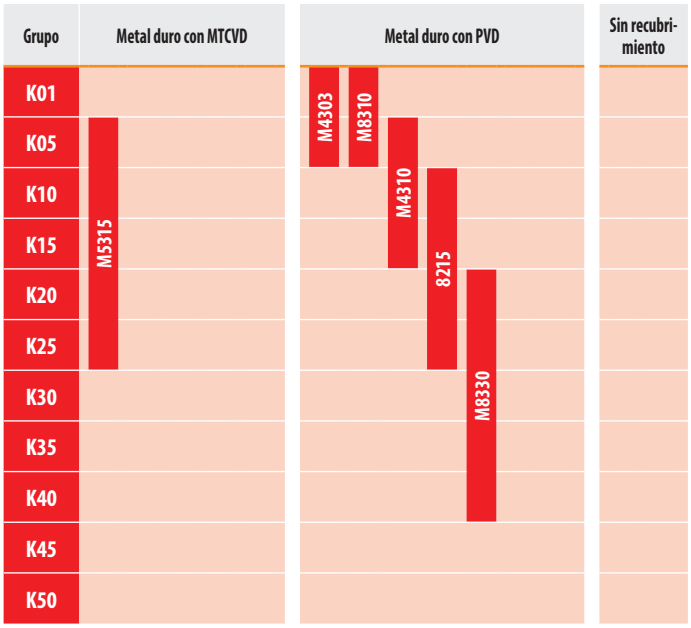
Código ISO 13399	Descripción
APMX	Profundidad de corte máxima
BD	Diámetro del cuerpo
BDX	Diámetro del cuerpo máximo
BCH	Longitud del chaflán de esquina
BS	Longitud del filo wiper
CBDP	Profundidad del agujero de conexión
CDI	Diámetro de corte de la plaquita
CDX	Profundidad de corte máxima
CW	Ancho de corte
CZC MS	Código de tamaño de conexión del lado de la máquina
D1	Diámetro del agujero de fijación
DAH4	Diámetro del agujero de acceso
DAH5	Diámetro del agujero de acceso
DAH6	Diámetro del agujero de acceso
DBC1	Diámetro de la circunferencia de pernos 1
DBC2	Diámetro de la circunferencia de pernos 2
DBC4	Diámetro de la circunferencia de pernos
DBC5	Diámetro de la circunferencia de pernos
DBC6	Diámetro de la circunferencia de pernos

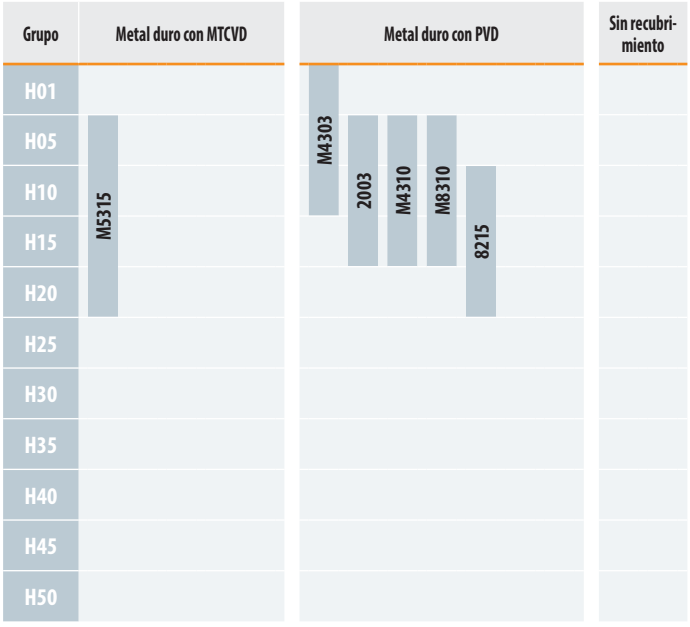
Código ISO 13399	Descripción
DC	Diámetro de corte
DCB	Diámetro del agujero de conexión
DCCB	Diámetro de escariado del agujero de conexión
DCN	Diámetro de corte mínimo
DCON MS	Diámetro de conexión
DCX	Diámetro de corte máximo
DHUB	Diámetro de apoyo
DN	Diámetro del cuello
GAMF	Ángulo de incidencia radial
GAMP	Ángulo de desprendimiento axial
CHW	Ancho del chaflán de esquina
IC	Diámetro de la circunferencia inscrita
INSD	Diámetro de plaquita
INSL	Longitud de plaquita
KAPR	Ángulo del filo de corte de la herramienta
KWD	Profundidad del chavetero
KWW	Ancho del chavetero
L	Longitud del filo de corte
LB	Longitud del cuerpo
LE	Longitud efectiva del filo de corte

Código ISO 13399	Descripción
LF	Longitud funcional
LH	Longitud del cabezal
LU	Longitud útil
LUX	Longitud útil máxima
M	Dimensión M
NOF	Número de canales
OAL	Longitud total
P	Paso de la lama
PRFA	Ángulo de perfil
PRFRAD(2)	Radio de perfil
RE	Radio
S	Espesor de la plaquita de corte
S1	Espesor total de la plaquita de corte
TDZ	Tamaño del diámetro de rosca
TP	Paso de rosca
TPI	Hilos por pulgada
W1	Ancho de plaquita
ZNP	Número de filos periféricos en la herramienta

CALIDADES DE FRESADO – RESUMEN







CALIDADES DE FRESADO – RESUMEN

Calidad	Área de aplicación	Aplicación	Avance	Velocidad de corte	Resistencia a condiciones de corte adversas	Recubrimiento	Color	Sustrato	Refrigerante	Descripción del material de corte
M8345	P30 – P50	■				PVD		H	-	Este material tiene una fiabilidad operativa excepcional y está diseñado para el corte de materiales difíciles y resistentes en condiciones adversas.
	M30 – M40	■								
M6330	P20 – P35	■				PVD		H	+ / -	Material de fresado con una fiabilidad operativa excepcional. Especialmente adecuado para el mecanizado de materiales difíciles de mecanizar. Potente en aplicaciones donde prevalecen las condiciones duras y los cortes difíciles.
	M20 – M35	■								
	S20 – S30	■								
M4303	P01 – P10	◪				PVD		ultra submicron H	-	La calidad mas resistente al desgaste para aplicaciones con moldes y matrices. Ofrece un rendimiento excepcional a altas velocidades de corte y bajos avances en condiciones de corte estables. Adecuada para operaciones de acabado en piezas con materiales complejos.
	K01 – K10	■								
	N01 – N10	◪								
	H01 – H10	■								
M4310	P05 – P15	◪				PVD		ultra submicron H	-	Calidad universal para aplicaciones en moldes y matrices. Adecuada para operaciones de acabado y semidesbaste. Esta calidad combina una elevada resistencia al desgaste con una extraordinaria fiabilidad de funcionamiento.
	M05 – M15	◪								
	K05 – K15	■								
	S05 – S10	■								
	H05 – H15	■								
2003	P01 – P10	◪				PVD		ultra submicron H	-	Material de fresado con excelente resistencia al desgaste. Es la más adecuada para el mecanizado de materiales duros y de alta resistencia en condiciones de corte estables y velocidades de corte medias/altas. Adecuado para el corte de otros materiales del grupo de piezas, excepto metales no ferrosos.
	M01 – M10	◪								
	K01 – K10	■								
	S05 – S10	■								
	H05 – H15	◪								
M0315	N05 – N25	■				PVD		submicron H	-	Calidad submicrón para el fresado de metales no férreos y sus aleaciones, con un buen equilibrio entre resistencia al desgaste y tenacidad. Cuenta con un recubrimiento único con excelentes propiedades de fricción.
M8326	P20 – P40	■				PVD		H	-	Calidad especial para operaciones duras. Esta calidad es apta principalmente para el mecanizado de todo tipo de metales (incluidos los inoxidables) en «estado blando». También se puede emplear para el mecanizado de fundiciones más blandas. Apta para el mecanizado M15-M30 a velocidades medias con condiciones de corte medias.
	M15 – M30	◪								
M8346	P30 – P50	■				PVD		H	-	Calidad especial para operaciones duras. Esta calidad presenta una fiabilidad de funcionamiento excepcional y está diseñada para cortes pesados en condiciones desfavorables en materiales complejos y difíciles de mecanizar.
	M30 – M40	■								
S26	P15 – P30	■				–		S	++	Material de fresado sin recubrimiento con excelente resistencia a la erosión de la superficie de corte. Diseñada exclusivamente para el mecanizado de aceros al carbono y aleados a bajas velocidades de corte.
S45	P30 – P45	■				–		S	++	Material resistente y sin recubrimiento, adecuado para el mecanizado en el que prevalecen las bajas velocidades de corte y las condiciones de corte adversas.
HF7	M10 – M20	◪				–		submicron H	++	Calidad sin recubrimiento diseñada fundamentalmente para el mecanizado de metales no férreos; tambien se puede utilizar para otros materiales (excepto acero). Esta calidad puede utilizarse en torneado, fresado e incluso mandrinado.
	K10 – K25	■								
	N10 – N25	■								

CALIDADES DE FRESADO – RESUMEN

Identificación de la calidad	Área de aplicación	Aplicación	Avance	Velocidad de corte	Resistencia a condiciones de trabajo adversas	Recubrimiento	Color	Sustrato	Ventajas del refrigerante	Descripción de la calidad
M9315	P05 – P25 K10 – K30 H10 – H20	■ ■ ◪				MT-CVD		H	---	Un material de fresado con alta resistencia a la abrasión incluso bajo una alta carga térmica, el principal ámbito de aplicación son las velocidades de corte más altas con una profundidad de corte media o pequeña.
M9325	P10 – P30 K10 – K30 H15 – H20	■ ■ ◪				MT-CVD		H	---	Este material de fresado tiene un equilibrio ideal entre la resistencia al desgaste y la tenacidad, está diseñado principalmente para operaciones de desbaste. La ventaja es una excelente resistencia al desgaste incluso a velocidades de corte relativamente altas con una excelente fiabilidad, este material es más adecuado para aplicaciones que utilizan velocidades más altas y velocidades de avance más bajas.
M9340	P35 – P50 M30 – M40 S15 – S20	■ ■ ■				MT-CVD		H	---	Muy resistente, cuya principal ventaja es la alta resistencia del filo de corte y la resistencia a las condiciones de corte adversas. Aunque este material tiene un recubrimiento MT-CVD M30 – M40, es posible utilizar la refrigeración por emulsión para su aplicación, especialmente en condiciones óptimas de corte.
M5315	P05 – P20 K05 – K25 H05 – H20	◪ ■ ■				MT-CVD		H	---	Una de las calidades de fresado mas resistentes a la abrasión, que debe utilizarse en condiciones estables. Su principal ventaja es la altisima resistencia a la tension termica y al desgaste por abrasión. Se utiliza principalmente para el mecanizado de materiales duros y muy duros, en particular fundición.
M8310	P01 – P10 M01 – M10 K01 – K10 H05 – H15	■ ◪ ■ ◪				PVD		ultra submicron H	-	Material especialmente desarrollado para el fresado en copia, caracterizado por su alta resistencia a la abrasion. Es adecuado para el mecanizado a velocidades de corte mas elevadas en condiciones de corte estables y para el mecanizado de practicamente todos los grupos de materiales (especialmente los materiales mas duros y resistentes).
8215	P10 – P20 M10 – M20 K10 – K25 N10 – N25 S10 – S15 H10 – H15	■ ◪ ■ ■ ◪ ■				PVD		submicron H	+ / -	Es uno de los materiales más versátiles para el fresado, tanto por la gama de piezas como por el abanico de aplicaciones posibles. Se caracteriza por su gran resistencia al desgaste y su fiabilidad operativa. Otras ventajas son su excelente resistencia al agrietamiento por choque de temperatura. Gracias a sus propiedades únicas, este material es sin duda uno de los pilares de la gama de fresas.
M8325	P20 – P40 M15 – M30	■ ◪				PVD		S	-	El principal ámbito de aplicación de esta matriz es el mecanizado de todo tipo de aceros (incluido el acero inoxidable) en “estado blando”. También puede utilizarse para el mecanizado de fundiciones más blandas. Adecuada para el mecanizado de M15 – M30 a velocidades medias en condiciones de corte medias.
M8330	P20 – P40 M20 – M35 K20 – K40 N15 – N30 S15 – S25 H15 – H25	■ ■ ■ ◪ ◪ ◪				PVD		submicron H	+ / -	Esta calidad es universal y se puede utilizar para el mecanizado de varios tipos de materiales. Sin embargo, su principal area de aplicacion es con aceros y fundiciones maleables. Se recomienda para el fresado a velocidades medias con condiciones de corte inestables.
M8340	P25 – P50 M20 – M40 K20 – K40 S20 – S30	■ ■ ◪ ■				PVD		submicron H	+ / -	Un material especialmente desarrollado para el fresado de copias, caracterizado por su alta resistencia a la abrasión. Es adecuado para el mecanizado a velocidades de corte más altas en condiciones de corte estables y para el mecanizado de prácticamente todos los grupos de materiales (especialmente los más duros y resistentes).

CALIDADES DE FRESADO – RESUMEN

Identificación de calidades

M	9	3	2	5
Tipo de operación	Recubrimiento/Sustrato	Generación	Rango ISO	

M	Tipo de operación
D	Taladrado
M	Fresado
T	Torneado
G	Ranurado y tronzado

9	Recubrimiento/Sustrato
0 PVD 1 CVD	Aplicación especial
2 PVD 3 CVD	Libre
4 PVD 5 CVD	Grupo K, H
6 PVD 7 CVD	Grupo M, S
8 PVD 9 CVD	Universal
B	CBN
D	PCD

3	Generación
1 – 9	

2 5	Rango ISO
	01 – 05
	05 – 10
	10 – 20
	20 – 30
	30 – 40
	40 – 50

Sustrato	
H	Sustrato de base WC-Co
submicron H	Sustrato de base WC-Co de grano fino (< 1 µm)
ultra submicron H	Sustrato de base WC-Co de grano muy fino (< 0.5 µm)
S	Sustrato con carburos cúbicos

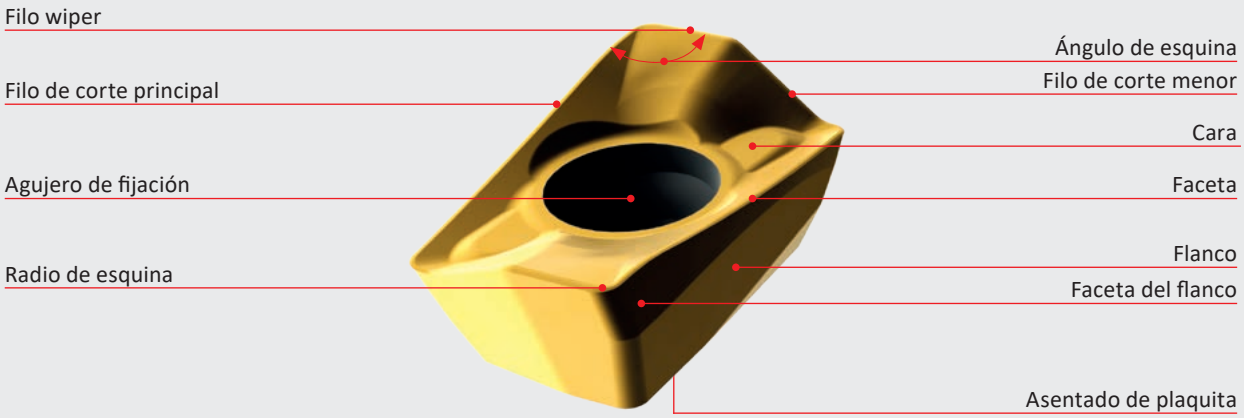
Recubrimiento	
MT-CVD	Metodo de recubrimiento químico a media temperatura
PVD	Metodo de recubrimiento físico
–	Calidad sin recubrimiento

Efecto de la refrigeración	
- - -	Efecto muy negativo en la vida de la herramienta – no se recomienda la refrigeración
-	Efecto ligeramente negativo en la vida de la herramienta
+ / -	El efecto de la refrigeración puede ser tanto positivo como negativo: las condiciones específicas de trabajo son el factor determinante
+ +	Efecto positivo en la vida de la herramienta – se recomienda la refrigeración

Nivel de influencia	
	Nivel 1 – 5

DEFINICIÓN DE TÉRMINOS BÁSICOS

Partes de una plaquita intercambiable



Geometría de la herramienta de fresado

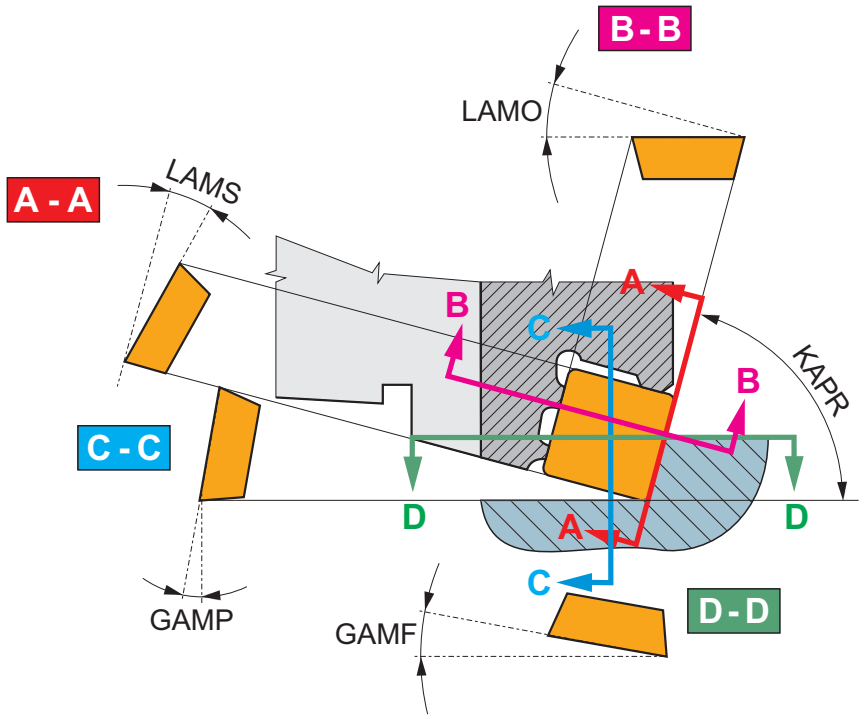
Los ángulos constructivos determinan la orientación básica de la posición de asiento en la que se sujeta la plaquita de corte y, por tanto, son importantes para el diseño del cuerpo de la fresa. Hay dos ángulos: ángulo frontal axial *GAMP* - γ_p (inclinación trasera de la herramienta) y ángulo frontal radial *GAMF* - γ_f (inclinación lateral de la herramienta); vea la imagen más abajo.

Los ángulos de trabajo son el ángulo de posición *KAPR* - κ_r, el ángulo frontal ortogonal *GAMO* γ_o y el ángulo de desprendimiento del filo de corte *LAMS* - λ_s.

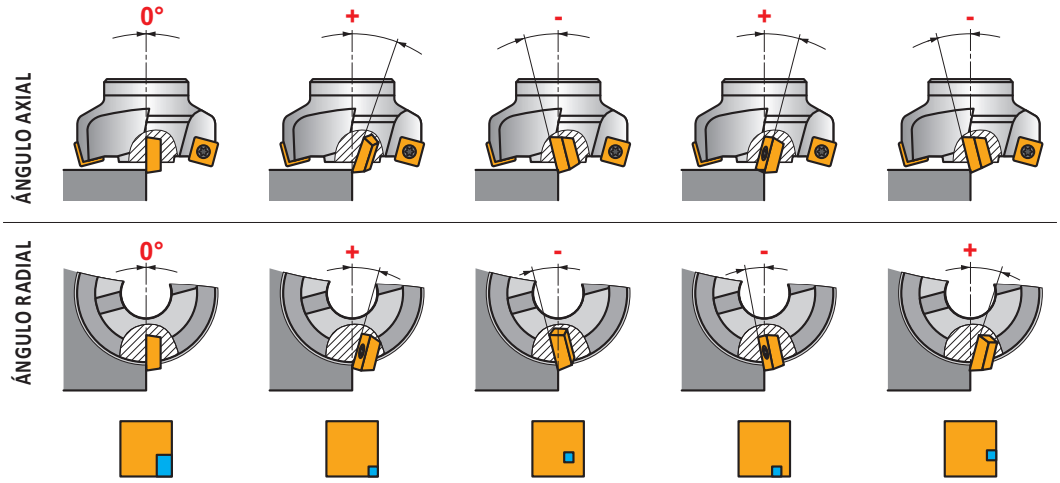
- El **ángulo frontal ortogonal** *GAMO* - γ_o no solo afecta al grado de deformación plástica de la viruta del corte, sino también a la fuerza de corte y la temperatura. Cuanto mayor sea el ángulo de desprendimiento *GAMO* - γ_o, menor será la fuerza de corte y la demanda de potencia del motor del husillo (y viceversa).
- El **ángulo de posición** *KAPR* - κ_r determina el espesor de la viruta con un valor de avance por diente f_z y de profundidad de corte axial a_p determinados. Por tanto, influye sobre las fuerzas de corte, la carga específica, el desgaste y la vida útil de la herramienta. Al reducir el ángulo de posición *KAPR* - κ_r a un avance constante f_z se produce una reducción del espesor de viruta h.
- El **ángulo de desprendimiento del filo de corte** *LAMS* - λ_s, junto con el ángulo de posición *KAPR* - κ_r y el ángulo frontal *GAMO* - γ_o, determinan el punto de primer contacto entre el filo y la pieza de trabajo. Por eso afecta a la resistencia del filo a las virutas durante el corte interrumpido. Asimismo, afecta a la dirección de evacuación de las virutas.

Los ángulos de trabajo de la herramienta pueden determinar la bancada utilizando las fórmulas o los diagramas siguientes.

Ángulos de trabajo y de construcción para herramientas de fresado

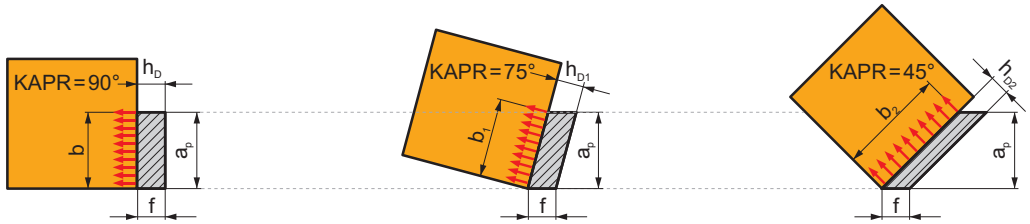


Geometría de la fresa



A la hora de elegir una herramienta, es necesario tener en cuenta muchos criterios. Uno de los principales requisitos es que el lugar de primer contacto entre la cuña de corte y la pieza se encuentre más alejado de la punta y del filo de corte. Sin embargo, esto depende de la geometría básica de la cuña de corte, es decir, los ángulos *GAMO* – γ_o, *LAMS* – λ_s, *KAPR* – κ_r, así como de la posición mutua de la fresa y el borde de entrada de la pieza. La siguiente imagen muestra las diferentes geometrías de fresa (o mejor dicho, las combinaciones de ángulos radiales y axiales) en algunas de las condiciones de acoplamiento más adversas (es decir, cuando el eje de la fresa está en línea con el borde de la pieza). En la parte inferior de la figura hay una representación de la plaquita intercambiable con una indicación de la zona en la que la plaquita hace el primer contacto con la pieza. La figura muestra que en estas condiciones adversas de acoplamiento, las herramientas con geometría negativa-negativa son las que mejor funcionan, mientras que las herramientas con geometría positiva-positiva serán las más problemáticas. Otro criterio es la eliminación de las virutas. Las herramientas con geometría negativa-negativa empujan la viruta hacia la superficie de trabajo (hacia la pieza) mientras que las que tienen geometría positiva-positiva hacen lo contrario, es decir, alejan la viruta de la superficie de trabajo, o lo que es lo mismo, de la pieza. Por lo tanto, la combinación de ángulos negativos y positivos es una solución óptima.

Ángulo de entrada



$h_D = f$ $k_c = 1{,}00\ k_{c1}$ $k_c/b = 1{,}00$	$h_{D1} = 0{,}97f$ $k_c = 1{,}01\ k_{c1}$ $k_c/b_1 = 0{,}98$	$h_{D2} = 0{,}71f$ $k_c = 1{,}09\ k_{c1}$ $k_c/b_2 = 0{,}77$

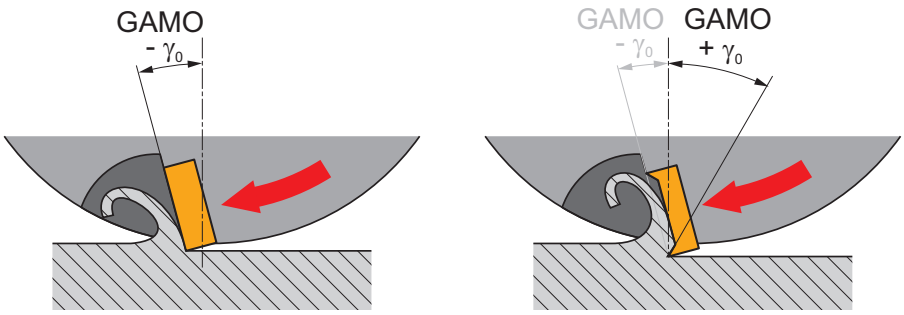
Al seleccionar el ángulo de entrada para planeado, entre otras cosas, debe tener en cuenta la potencia y rigidez de la máquina (tamaño y tipo de portaherramientas), su capacidad dinámica y la profundidad de eliminación de virutas máxima. Por ejemplo, si dispone de una máquina de alto rendimiento (50-100 kW) con un portaherramientas ISO 50 y corta a gran profundidad, su primera opción debería ser una fresa con un ángulo de entrada entre 90°-58°. Por otro lado, si tiene una máquina de baja potencia (hasta 10 kW) con un portaherramientas ISO 40 (HSK 63) y prevé cortar a 2-3 mm de profundidad, debería optar por una herramienta con un ángulo de entrada de 45°-10° (es decir, HFC) o con plaquitas redondas. Por lo tanto, sería un equilibrio ideal elegir una herramienta con un ángulo de entrada de 45°, que también puede admitir mayores profundidades de corte y, en comparación con una herramienta con un ángulo de entrada de 90°, puede cortar a la misma profundidad con hasta un 30 % más de avance y aproximadamente con la misma carga. Por último, es importante destacar que cuanto menor sea el ángulo de entrada, más fina será la viruta y más larga será la sección acoplada de la cuña de corte, lo que es importante de cara a la disipación del calor y a la distribución de la fuerza a lo largo del filo de la plaquita. También es importante mencionar el cambio en la dirección de las fuerzas de corte resultantes, que, en términos simplificados, pueden visualizarse como perpendiculares al filo. (La disminución del ángulo de entrada aumenta el componente pasivo de la fuerza de corte que entra en el husillo y disminuye el componente radial activo de la fuerza de corte).

ELECCIÓN DE LA HERRAMIENTA

La siguiente imagen muestra la gama de fresas Pramet con respecto al ángulo de entrada y la geometría básica del cuerpo de la fresa (es decir, el ángulo axial y radial de la cara). Sin embargo, hay que señalar que la geometría de la plaquita puede modificar la geometría resultante de la herramienta, tal y como se indica en la siguiente figura.

	Negativa – Negativa	← Negativa – Positiva →	Positiva – Positiva
93°	SWN04C SCN05C		
90°	STN10 STN16 SLN12 SLN16 SLN12X J(T)-SLSN	SAD07D SAD11E SAD16E SAP10D SAP16D SS009 SSD12 FTB27X F-SCC S90SN S90CN(XN) J(T)-SAD11E J(T)-SAD16E J(T)-SSAP J(T)-CSD12X	SAP10D SVC22C
57° – 60°	SPN13	FSB22X	
45°	SHN06C SHN09C SSD09 N-SS009 2516	SSF13F SOD05 SOD06D SSE09 SSN12Z	
43°	SON06C		SOE06Z
12° – 20°	SBN10 SSN11	SPD09 SS012	
-	SRC10 SRC12 SRC16 SRC20 SRD10 SRD12 L2-SZP K3-CXP K2-PPH K2-SLC K2-SRC	SRD05 SRD07 SRD10 SRD12 SRD16 SZD07 SZD09 SZD12 2636 J(T)-SXP16	

Geometría resultante (fresa + plaquita intercambiable)

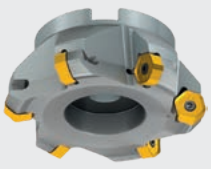


En la siguiente tabla se enumeran las tres geometrías básicas de las fresas y la prioridad aproximada de su uso en función del tipo de material mecanizado. En la sección del catálogo correspondiente encontrará información más detallada sobre las distintas familias de herramientas en función de las geometrías de las plaquitas.

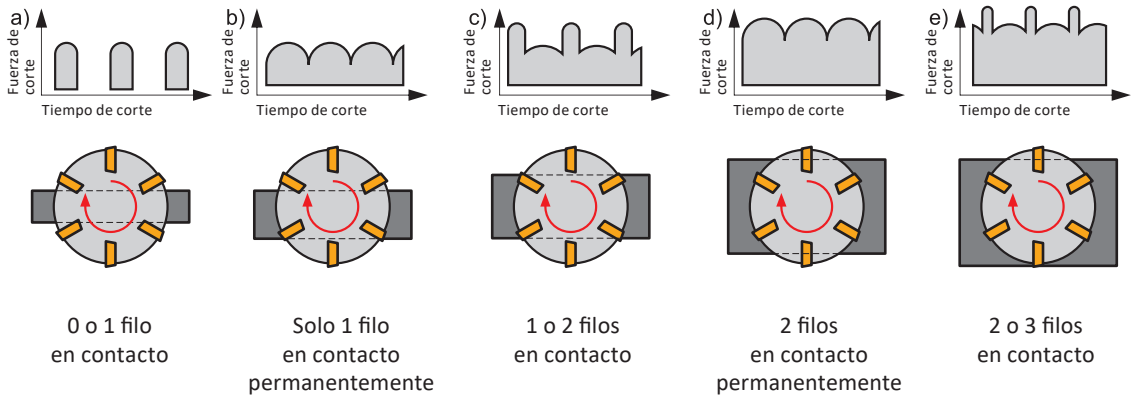
Condiciones		Selección de la geometría de la fresa en función de la aplicación		
		Negativa-Negativa	Negativa-Positiva	Positiva-Positiva
Parámetro estructural del cuerpo	*GAMP* (A.R.)	-	+	+
	GAMF (R.R.)	-	-	+
	GAMO	-	+	+
Material mecanizado	Aceros al carbono, aceros aleados (< 300 HB)	◪	■	■
	Aceros inoxidables (< 300 HB)		■	◪
	Aceros inoxidables (> 300 HB)		■	◪
	Fundición, hierro maleable	■	◪	◪
	Aleaciones de aluminio		◪	■
	Cobre y sus aleaciones		◪	■
	Titanio y sus aleaciones		◪	◪
	Aceros endurecidos (40 – 55 HRC)	◪	◪	

Número de dientes de la fresa

El número de dientes de la fresa también es importante para la anchura de la superficie fresada, ya que determina las características de fuerza (y acústicas) del corte, como se indica en la siguiente imagen.

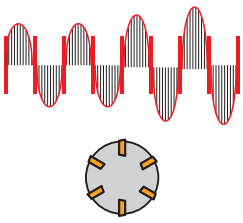
			
Avance por minuto	+	++	+++
Materiales difíciles de mecanizar	+++	++	+
Requisitos de potencia	+	++	+++
Rugosidad resultante	+++	++	+

Paso de dientes



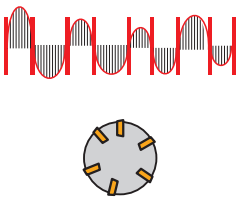
0 o 1 filo en contacto	Solo 1 filo en contacto permanentemente	1 o 2 filos en contacto	2 filos en contacto permanentemente	2 o 3 filos en contacto

Además, algunas familias de herramientas ofrecen la opción de elegir entre un paso de dientes uniforme o desigual. El uso de una herramienta con un paso de dientes desigual interfiere con la oscilación armónica y, como resultado, ayuda a mejorar la estabilidad y a reducir el riesgo de vibración. Esto significa que se debe elegir un paso de diente desigual si se prevé un riesgo de vibración, es decir, principalmente cuando se trabaja con un mayor voladizo o cuando se mecaniza con una profundidad de corte radial elevada y en condiciones que no son del todo estables.



Entrada de diente individual

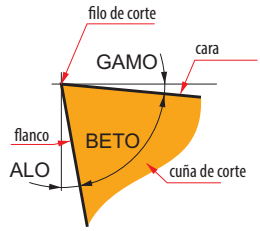
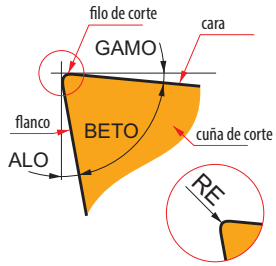
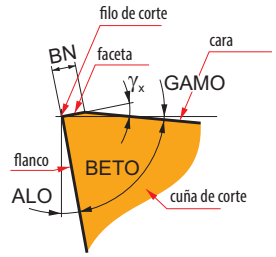
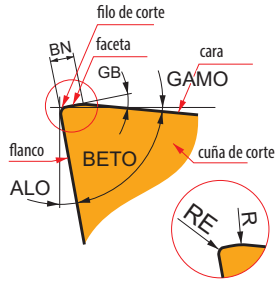
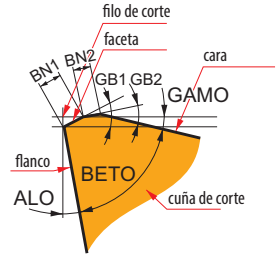
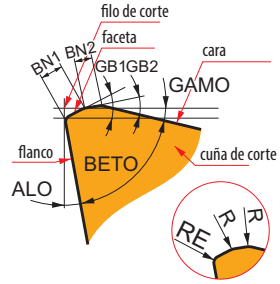
Amplitud de la vibración



ELECCIÓN DE LA PLAQUITA DE CORTE

Al elegir una plaquita intercambiable, preste también atención a su microgeometría, que se indica mediante iconos directamente en la sección correspondiente del catálogo. Abajo se muestra un resumen de los tipos de filos de corte que puede encontrar en nuestras plaquitas.

Resumen de diseños de filo de corte

F		**Filos de corte afilados:** se recomiendan para plaquitas diseñadas para su uso con fresas para aleaciones de aluminio. Los filos de corte afilados dan lugar a una deformación minima de la capa de corte, un menor filo de aportación y una menor necesidad de fuerza de corte. Sin embargo, la fuerza del filo de corte es menor en comparación con otros tipos.
E		**Filos de corte redondos:** filo ligeramente redondeado con el fin de eliminar las microimperfecciones de su superficie. El rectificado del filo con un radio muy bajo (*RE*) mejora su resistencia a los daños mecánicos, es decir, a la fractura frágil o al llamado microdesmenuzamiento. Esta modificación se utiliza actualmente en todas las plaquitas intercambiables sin faceta (modificacion F anterior), que se utilizan para el fresado de casi cualquier tipo de material.
T		**Filos de corte faceteados:** una faceta con una anchura de x y un angulo de γ_x aumenta el angulo γ_n del filo de corte en la proximidad inmediata del borde, lo que aumenta tambien la fuerza y, por tanto, su resistencia a la carga mecánica y a los daños por rotura o fractura. Actualmente se utilizan poco, ya que han sido sustituidos por la modificación S.
S		**Filos redondeados con faceta:** en comparación con la modificación T, la plaquita ha sufrido un rectificado que da lugar a un redondeo del filo de corte y a un engrosamiento por una faceta. Esta modificación aumenta la resistencia del filo contra los daños mecánicos en mayor medida.
K		**Filos con doble faceta:** la doble faceta con una anchura de x_1 x_2 y un ángulo de γ_{x1} γ_{x2} aumenta aún más la resistencia del filo, es decir, su resistencia a la tensión mecánica y a los daños por rotura o fractura. Apenas se utilizan para plaquitas de fresado, solamente para los cortes más complejos.
P		**Filos redondeados con doble faceta:** en comparación con la modificación K, la plaquita ha sufrido un rectificado que da lugar a un redondeo del filo de corte y a un engrosamiento por una doble faceta. Esta modificación proporciona al filo la maxima resistencia frente a los daños mecánicos.

FACTORES DE CORRECCIÓN

Factores de corrección para un tipo específico de fresa y de operación C_{VcO}

X.V	●	◓	◓
Fresas de planear con *KAPR* 45° – 60° y plaquitas negativas (SON06C, SHN06C, SHN09C)	1.15	1.00	0.85
Fresas de planear con *KAPR* 45° y plaquitas positivas (SSD13F, SSE09, SSN12Z, FSB22X, SOD05, SOD06D, SOE06Z)	1.15	1.00	0.85
Fresas de escuadrar con *KAPR* 90° (SAD07/10/16, STN10/16, SLN12/16, SAP10/16, SS009, SSD12)	1.10	1.00	0.90
Fresas de copiado (SRC10-SRC20, SRD05 – SRD16, …)	1.10	1.00	0.90
Fresas de copiado con mango (K2-PPH, K2-SLC, K2-SRC, K3-CXP…)	1.10	1.00	0.90
Fresas de disco (S90CN(XN), S90SN…)	1.10	1.00	0.90
Fresas de escuadrar de filo largo J(T)-CSD12X, J(T)-SAD11E, J(T)-SAD16E…)	1.25	1.00	0.80
Fresas de planear para mecanizado pesado (FSB22X, SPN13..)	1.30	1.00	0.85
Fresas de escuadrar para mecanizado pesado (FTB27X..)	1.25	1.00	0.85

Factores de corrección para durabilidad requerida C_{VcT}

minutos	15	20	30	45	60	90	120
Operaciones de mecanizado general (desde acabado fino hasta desbaste)	1.23	1.13	1.00	0.89	0.81	0.72	–
Operaciones de mecanizado pesadas (desbaste pesado)	–	–	1.23	1.13	1.00	0.89	0.81

Factores de corrección adicionales C_{VcA}

Entorno de mecanizado	C_{VcA}
Condiciones del material de trabajo (capa dura debido a la forja o a la fundición)	0.70
Condiciones de mecanizado inestables	0.85
Condiciones de mecanizado estándar	1.00
Condiciones de mecanizado estables	1.20

Factores de corrección de la velocidad de corte para refrentado y escuadrado con < 100 % de inmersión radial C_{VcRCT}

a_e/DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	**1.48**	**1.35**	**1.27**	**1.22**	**1.19**	**1.16**	1.11	1.08	1.05	1.03	**1.00**	**1.00**	**1.00**	**1.00**

Factores de corrección para compensar el afinamiento de la viruta en el refrentado y escuadrado con < 100 % de inmersión radial Cf_{zRCT}

a_e/DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
⇨ x.f	**2.20**	**1.60**	**1.35**	**1.20**	**1.10**	0.95	0.85	0.75	0.85	0.95	**1.00**	**1.00**	**1.00**	**1.00**
⇨ x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	**0.68**	**0.71**	**0.72**	**0.74**	**0.79**	**1.00**

Velocidad de corte corregida *vcc* resultante

$v_{cc} = v_c \times kvG \times C_{VcO} \times CvcT \times C_{VcA} \times C_{VcRCT} \times Cf_{zRCT}$

k_{vG} – coeficiente de material usado

v_c – velocidad inicial de la página del catálogo

FORMULAS

Valor	Unidades	Formula
Número de revoluciones	(rev/min)	$n = \frac{v_c \times 1000}{DC \times \pi}$
Velocidad de corte	(m/min)	$v_c = \frac{\pi \times DC \times n}{1000}$
Avance por revolución	(mm/rev)	$f_{rev} = \frac{f_{min}}{n} = f_z \times z$
Avance por minuto (velocidad de avance)	(mm/min)	$f_{min} = v_f = f_{rev} \times n = f_z \times z \times n$
Avance por diente	(mm/diente)	$f_z = \frac{f_{rev}}{z} = \frac{f_{min}}{n \times z}$
Sección de viruta	(mm^2)	$A = f_z \times a_p$
Espesor de viruta (para plaquitas con filo recto)	(mm)	$h = f_z \times sin\ KAPR$
Espesor de viruta (para plaquitas redondas)	(mm)	$h = f_z \times \sqrt{\frac{a_p}{INSD}}$
Volumen de viruta	(cm^3/min)	$Q = \frac{a_p \times a_e \times f_{min}}{1000}$
Consumo de potencia	(kW)	$P_c = \frac{a_p \times a_e \times f_{min}}{60 \times 10^6 \times \eta} \times k_c \times k_\gamma$
Consumo de potencia aproximado	(kW)	$P_c = \frac{a_p \times a_e \times f_{min}}{x}$

Nota:

	Cantidad	Unidades
n	Número de revoluciones	(rev/min)
DC	Diámetro (de la herramienta o de la pieza)	(mm)
v_c	Velocidad de corte	(m/min)
f_{rev}	Avance por revolución	(mm/rev)
A	Sección de viruta	(mm^2)
a_p	Profundidad de corte axial (profundidad de corte)	(mm)
a_e	Profundidad de corte radial (ancho de corte)	(mm)
$KAPR$	Ángulo de posición	(°)
f_{min}	Avance por minuto (tambien llamado velocidad de avance)	(mm/min)
f_z	Avance por diente	(mm/diente)
z	Número de dientes	(-)
$INSD$	Diámetro de la plaquitas	(mm)

	Cantidad	Unidades
h	Espesor de viruta	(mm)
Q	Volumen de viruta por minuto	(cm^3/min)
P_c	Consumo de potencia	(kW)
k_c	Fuerza de corte por mm^2	(MPa)
k_γ	Coeficiente de influencia del ángulo γ_0	(°)
η	Eficiencia de máquina normalmente $\eta = 0.75$	(-)
x	Coeficiente de inflluencia del material de la pieza	(-)

Material	Acero	Fundición	Al
Coefficiente x	24 000	30 000	120 000

PAR DE APRIETE RECOMENDADO PARA TORNILLOS

Tornillo	Par	Rosca	Longitud
	(Nm)	–	(mm)
US 20	0.9	M 2	3
US 2205-T07P	0.9	M 2.2	5
US 25	1.2	M 2.5	5
US 2505-T08P	1.2	M 2.5	5
US 2506-T07P	1.2	M 2.5	6
US 3006-T09P	2	M 3	6
US 3007-T09P	2	M 3	7
US 3504-T09P	3	M 3.5	4
US 3507-T15	3	M 3.5	7
US 3509-T15	3	M 3.5	9
US 3511-T15	3	M 3.5	11
US 3512-T15P	3	M 3.5	12
US 4008-T15P	3.5	M 4	8
US 4011-T15P	3.5	M 4	11
US 4511-T20	5	M 4.5	11
US 5012-T15P	5	M 5	12
US 70	5	M 4	5
US 71	5	M 4	7
US 72	5	M 4	9
US 73	5	M 4	11
CS 3007-T08P	1.2	M 3	7
CS 4008-T15P	3	M 4	8
CS 42506-T07P	1	M 2.5	6
CS 43008-T08P	1.2	M 3	8
CS 43509-T10P	2	M 3.5	9
CS 44013-T15P	3	M 4	13
CS 45016-T20P	5	M 5	16
CS 46020-T25P	7.5	M 6	20
CS 48025-T40P	15	M 8	25
CS 5009-T20P	5	M 5	9
CS 5013-T20P	5	M 5	13
CS 5015-T20P	5	M 5	15
CS 6020-T20P	7.5	M 6	20
CS 8025-T30P	15	M 8	25
US 2505-T07P	1.2	M 2.5	5
US 2506-T07P	1.2	M 2.5	6
US 3007-T09P	2	M 3	7
US 3505-T09P	3	M 3.5	5
US 4011A-T15P	3.5	M 4	11
US 4011-T15P	3.5	M 4	11
US 44010-T15P	3.5	M 4	10
US 44012-T15P	3.5	M 4	12
US 45011-T20P	5	M 5	11
US 45012-T20P	5	M 5	12
US 5011-T20P	5	M 5	11
US 5018-T20P	5	M 5	18
US 52506-T07P	0.8	M 2.5	6
US 54511-T15P	5	M 4.5	11
US 62003A-T06P	0.6	M 2	3
US 62004A-T06P	0.6	M 2	4
US 62004-T06P	0.6	M 2	4
US 62505-T07P	1.2	M 2.5	5
US 62506-T07P	1.2	M 2.5	6
US 62506-T08P	1.2	M 2.5	6
US 62508-T08P	1.2	M 2.5	7
US 63009-T09P	1.2	M 3	9
US 63509-T15P	3	M 3.5	10
US 63510-T10P	2	M 3.5	9
US 63511D-T15P	3	M 3.5	11

Tornillo	Par	Rosca	Longitud
	(Nm)	–	(mm)
US 63513-T15P	3	M 3.5	12
US 64014-T15P	3.5	M 4	14
US 65013-T20	5	M 5	13
US 65014-T20P	5	M 5	14
US 65017-T20P	5	M 5	17
US 66015-T25P	7.5	M 6	15
US 68020-T30P	15	M 8	20
US 68026-T30P	15	M 8	26
US 74016-T15P	3.5	M 4	16

Atornilladores dinamométricos

Mango	Par (Nm)	Rosca del tornillo de fijación
MR-0.8-2.0 Vario	0.5 – 2.0	M 2 – M 3
MR-1.0-5.0 Vario	0.8 – 5.0	M 2.5 – M 5
MR-0.9 fix	0.9	M 2
MR-2.0 fix	2.0	M 3
MR-3.0 fix	3.0	M 3.5
MR-3.5 fix	3.5	M 4
MR-5.0 fix	5.0	M 5

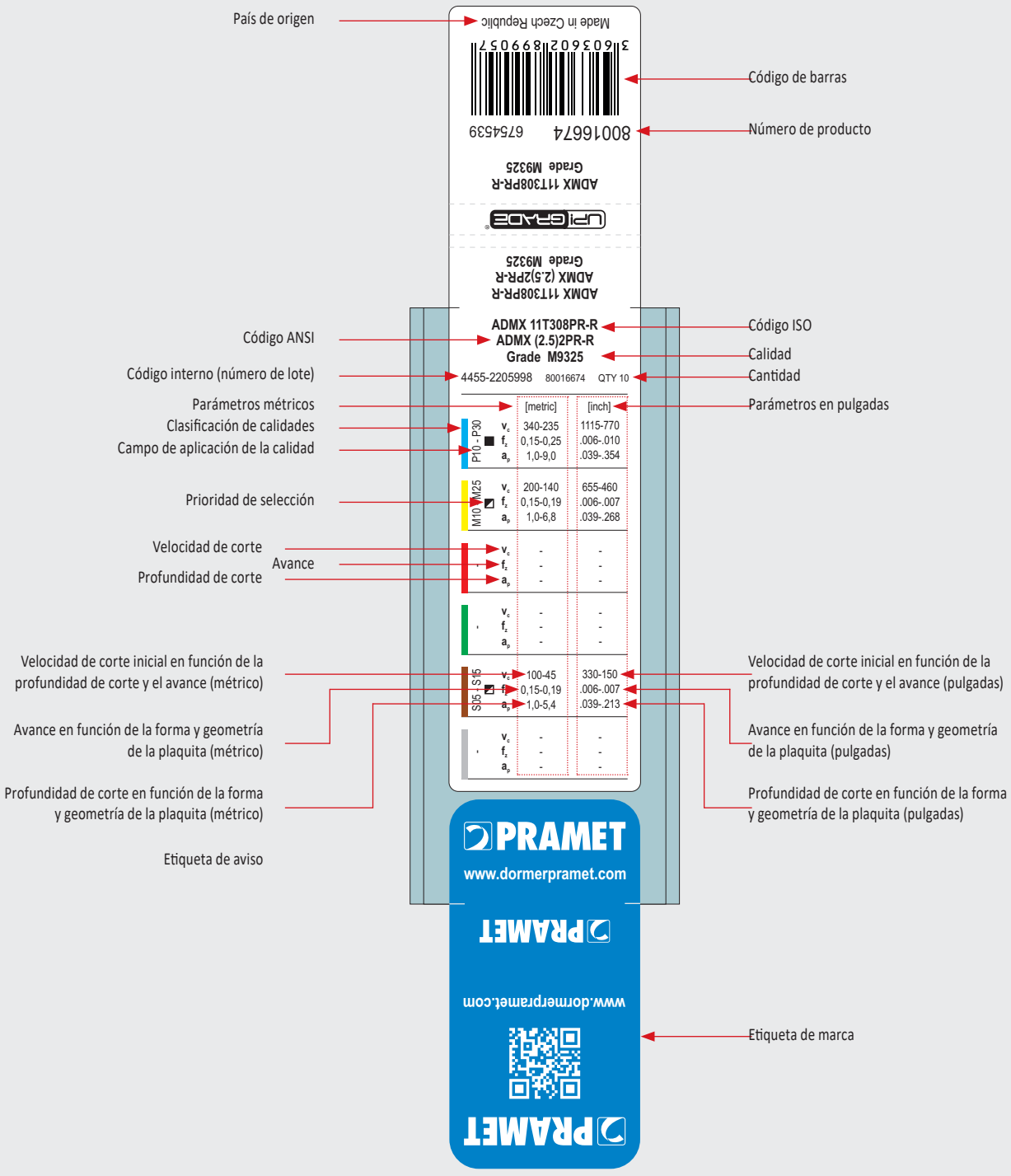
Vástagos sustituibles

Vástagos sustituibles
D-T6
D-T6P
D-T7
D-T7P
D-T8
D-T8P
D-T9
D-T9P
D-T15
D-T15P
D-T20
D-T20P

Lubricación de tornillos

Los tornillos de fijación de plaquita están sometidos a una tensíon térmica muy alta. Se recomienda que durante su montaje, todos los tornillos estén lubricados con pasta de alta calidad como MOLYKOTE 1000.

INFORMACIÓN TÉCNICA IMPRESA EN LA CAJA DE PLAQUITAS



WMG (GRUPO DE MATERIAL)

GRUPO ISO		**WMG** (GRUPO DE MATERIAL)			**Dureza** (HB o HRC)	**Restistencia Traccion** (MPa)	**Factores de corrección** *kvG*
P	P1	P1.1	Acero facil mecanizado (aceros al carbono con mayor maquinabilidad)	Sulfurizados	< 240 HB	≤ 830	1.33
		P1.2		Sulfurizados y fosforizados	< 180 HB	≤ 620	1.49
		P1.3		Sulfurizados/fosforizados y al plomo	< 180 HB	≤ 620	1.53
	P2	P2.1	ACEROS AL CARBONO (aceros compuestos principalmente de hierro y carbono)	Contiene < 0.25 % C	< 180 HB	≤ 620	1.14
		P2.2		Contiene < 0.55 % C	< 240 HB	≤ 830	1.00
		P2.3		Contiene > 0.55 % C	< 300 HB	≤ 1030	0.89
	P3	P3.1	ACEROS ALEADOS (aceros al carbono con un contenido de aleación del 10 %)	Recocido	< 180 HB	≤ 620	0.92
		P3.2		Templado y enderecido	180 – 260 HB	> 620 ≤ 900	0.74
		P3.3			260 – 360 HB	> 900 ≤ 1240	0.63
	P4	P4.1	ACERO DE HERRAMIENTAS (aleaciones especiales para herramientas, moldes y matrices)	Recocido	< 26 HRC	≤ 900	0.55
		P4.2		Templado y enderecido	26 – 39 HRC	> 900 ≤ 1240	0.47
		P4.3			39 – 45 HRC	> 1240 ≤ 1450	0.38
M	M1	M1.1	ACERO INOXIDABLE FERRITICO (aleaciones al cromo no endurecidas)		< 160 HB	≤ 520	1.22
		M1.2			160 – 220 HB	> 520 ≤ 700	1.03
	M2	M2.1	ACERO INOXIDABLE MARTENSITICO (aleaciones al cromo endurecidas)	Recocido	< 200 HB	≤ 670	1.08
		M2.2		Enfriadas y templadas	200 – 280 HB	> 670 ≤ 950	0.89
		M2.3		Templado por precipitacion	280 – 380 HB	> 950 ≤ 1300	0.75
	M3	M3.1	ACERO INOXIDABLE AUSTENITICO (aleaciones cromo - niquel y cromo - niquel - manganeso)		< 200 HB	≤ 750	1.00
		M3.2			200 – 260 HB	> 750 ≤ 870	0.86
		M3.3			260 – 300 HB	> 870 ≤ 1040	0.77
	M4	M4.1	AUTENITICO-FERRITICO (DUPLEX) O ACERO INOXIDABLE SUPER AUSTENITICO		< 300 HB	≤ 990	0.75
		M4.2	ACEROS INOXIDABLE AUSTENITICOS ENDURECIDOS POR PRECIPITACION		300 – 380 HB	≤ 1320	0.64
K	K1	K1.1	FUNDICION GRIS (ASTM A48) O FUNDICION GRIS AUTOMOCION (ASTM A159) (fundicion hierro - carbono con micro estructura de grafito laminar)	Ferritica o ferritica-perlitica	< 180 HB	≤ 190	1.35
		K1.2		Ferritica-perlitica o perlitica	180 – 240 HB	> 190 ≤ 310	1.00
		K1.3		Perlitica	240 – 280 HB	> 310 ≤ 390	0.75
	K2	K2.1	FUNDICION MALEABLE (ASTM A602) (fundición de hierro-carbono con una microestructura libre de grafito)	Ferritica	< 160 HB	≤ 400	1.39
		K2.2		Ferritica o perlitica	160 – 200 HB	> 400 ≤ 550	1.13
		K2.3		Perlitica	200 – 240 HB	> 550 ≤ 660	0.90
	K3	K3.1	FUNDICION DÚCTIL (ASTM A536) (fundición de hierro-carbono con microestructura de grafito nodular)	Ferritica	< 180 HB	≤ 560	1.23
		K3.2		Ferritica o perlitica	180 – 220 HB	> 560 ≤ 680	0.94
		K3.3		Perlitica	220 – 260 HB	> 680 ≤ 800	0.76
	K4	K4.1	FUNDICION GRIS AUSTENÍTICO (ASTM A436) (fundiciones de aleación de hierro-carbono con microestructura de grafito laminar austenítico)		< 180 HB	≤ 190	1.14
		K4.2	FUNDICION DÚCTIL AUSTENÍTICA (ASTM A439 o ASTM A571) (fundiciones de hierro-carbono con microestructura de grafito nodular austenítico)		< 240 HB	≤ 740	0.86
		K4.3	FUNDICION DÚCTIL AUSTEMPERADA (ASTM A897) (fundiciones de hierro y carbono con microestructura de ausferrita)		< 280 HB	> 840 ≤ 980	0.63
		K4.4			280 – 320 HB	> 980 ≤ 1130	0.54
		K4.5			320 – 360 HB	> 1130 ≤ 1280	0.45
	K5	K5.1	FUNDICION DE GRAFITO COMPACTADO CGI (ASTM A842) (fundición de hierro-carbono con estructura vermicular de grafito)	Ferritico	< 180 HB	≤ 400	1.29
		K5.2		Ferritico-perlitico	180 – 220 HB	> 400 ≤ 450	0.97
		K5.3		Perlitico	220 – 260 HB	> 450 ≤ 500	0.75
N	N1	N1.1	Aluminio forjado comercialmente puro		< 60 HB	≤ 240	1.33
		N1.2	Aleaciones de aluminio forjado	Templado medio	60 – 100 HB	> 240 ≤ 400	1.00
		N1.3		Templado completo	100 – 150 HB	> 400 ≤ 590	0.67
	N2	N2.1	Fundicion de aluminio		< 75 HB	≤ 240	0.67
		N2.2			75 – 90 HB	> 240 ≤ 270	0.60
		N2.3			90 – 140 HB	> 270 ≤ 440	0.43
	N3	N3.1	Aleaciones de cobre de facil mecanizacion		–	–	0.70
		N3.2	Aleaciones de cobre de viruta corta con maquinabilidad moderada		–	–	0.41
		N3.3	Cobre electrolitico y aleaciones de cobre de viruta larga con baja maquinabilidad		–	–	0.21
	N4	N4.1	Polimeros termoplasticos		–	–	0.70
		N4.2	Polimeros termoendurecibles		–	–	0.27
		N4.3	Composites o polimeros reforzados		–	–	0.29
	N5	N5.1	Grafito		–	–	1.00
S	S1	S1.1	Titanio o aleaciones de titanio		< 200 HB	≤ 660	1.94
		S1.2			200 – 280 HB	> 660 ≤ 950	1.72
		S1.3			280 – 360 HB	> 950 ≤ 1200	1.44
	S2	S2.1	Aleaciones termorresistentes con base hierro		< 200 HB	≤ 690	1.33
		S2.2			200 – 280 HB	> 690 ≤ 970	1.17
	S3	S3.1	Aleaciones termorresistentes con base niquel		< 280 HB	≤ 940	1.00
		S3.2			280 – 360 HB	> 940 ≤ 1200	0.83
	S4	S4.1	Aleaciones termorresistentes con base cobalto		< 240 HB	≤ 800	0.78
		S4.2			240 – 320 HB	> 800 ≤ 1070	0.67
H	H1	H1.1	Fundicion en frio		< 440 HB	–	1.52
	H2	H2.1	Fundiciones templadas		< 55 HRC	–	0.90
		H2.2			> 55 HRC	–	0.77
	H3	H3.1	Aceros templados < 55 HRC		< 51 HRC	–	1.00
		H3.2			51 – 55 HRC	–	0.82
	H4	H4.1	Acero templados > 55 HRC		55 – 59 HRC	–	0.64
		H4.2			> 59 HRC	–	0.54

TABLA DE CONVERSIÓN DE DUREZA

Resistencia (MPa)	Dureza			
	BRINELL	VICKERS	ROCKWELL	ROCKWELL
R_m	HB	HV	HRB	HRC
285	86	**90**	1190	–
320	95	**100**	56.2	–
350	105	**110**	62.3	–
385	114	**120**	66.7	–
415	124	**130**	71.2	–
450	133	**140**	75.0	–
480	143	**150**	78.7	–
510	152	**160**	81.7	–
545	162	**170**	85.8	–
575	171	**180**	87.1	–
610	181	**190**	89.5	–
640	190	**200**	91.5	–
675	199	**210**	93.5	–
705	209	**220**	95	–
740	219	**230**	96.7	–
770	228	**240**	98.1	–
800	238	**250**	99.5	–
820	242	**255**	–	23.1
850	252	**265**	–	24.8
880	261	**275**	–	26.4
900	266	**280**	–	27.1
930	276	**290**	–	28.5
950	280	**295**	–	29.2
995	295	**310**	–	31.0
1030	304	**320**	–	32.2
1060	314	**330**	–	33.3
1095	323	**340**	–	34.4
1125	333	**350**	–	35.5
1155	342	**360**	–	36.6

Resistencia (MPa)	Dureza			
	BRINELL	VICKERS	ROCKWELL	ROCKWELL
R_m	HB	HV	HRB	HRC
1190	352	**370**	–	37.7
1220	361	**380**	–	38.8
1255	371	**390**	–	39.8
1290	380	**400**	–	40.8
1320	390	**410**	–	41.8
1350	399	**420**	–	42.7
1385	409	**430**	–	43.6
1420	418	**440**	–	44.5
1455	428	**450**	–	45.3
1485	437	**460**	–	46.1
1520	447	**470**	–	46.9
1555	456	**480**	–	47.7
1595	466	**490**	–	48.4
1630	475	**500**	–	49.1
1665	485	**510**	–	49.8
1700	494	**520**	–	50.5
1740	504	**530**	–	51.1
1775	513	**540**	–	51.7
1810	523	**550**	–	52.3
1845	532	**560**	–	53.0
1880	542	**570**	–	53.6
1920	551	**580**	–	54.1
1955	561	**590**	–	54.7
1995	570	**600**	–	55.2
2030	580	**610**	–	55.7
2070	589	**620**	–	56.3
2105	599	**630**	–	56.8
2145	608	**640**	–	57.3
2180	618	**650**	–	57.8

SIMPLY RELIABLE

Como profesional se puede juzgar la calidad del trabajo sólo mirarando la viruta. Nuestra viruta es una forma limpia y sin complicaciones que en sí misma cuenta una historia. Es una señal clara y consistente y es por eso que la usamos como un símbolo por ser **Simplemente Fiables**.

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