KOPÍROVACIE FRÉZY

KOPÍROVACIE FRÉZOVANIE >>>

	SRC10	SRC12	SRC16	SRC20	SRD05
	–	–	–	–	–
	APMX (mm) 5.0	APMX (mm) 6.0	APMX (mm) 8.0	APMX (mm) 10.0	APMX (mm) 1.5
	DCX (mm) 25 – 66	DCX (mm) 40 – 100	DCX (mm) 63 – 160	DCX (mm) 80 – 160	DCX (mm) 10 – 15
Valcová stopka	DCX = 25 – 32 (mm)				
Weldon stopka					
Modulárna	DCX = 25 – 42 (mm)				
Nástrčná	DCX = 40 – 66 (mm)				
Strana	526	530	534	538	542
ISO	P M K S H	P M K S H	P M K S H	P M K S H	P K H
Tvar doštičky					
Doštičky	RC 10T3	RC 1204	RC 1606	RC 2006	RD 0501
Počet rezných hrán	–	–	–	–	–
Frézovanie tvarových plôch (kopírovanie)	■	■	■	■	■
Rovinné frézovanie	■	■	■	■	■
Špirálová interpolácia	■	■	■	■	■
Postupné zavŕtavanie	■	■	■	■	■
Zachádzanie pod uhlom	■	■	■	■	■
Frézovanie plytkých drážok					
Hlboké frézovanie do rohu					
Zrážacie frézovanie					
Odvŕtavacie frézovanie					

■ Hlavné použitie ◪ Možné použitie

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KOPÍROVACIE FRÉZOVANIE

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	SRD07	SRD10	SRD12	SRD16	L2-SZP	K3-CXP
	–	–	–	–	–	–
	APMX (mm) 2.0	APMX (mm) 2.5	APMX (mm) 3.0	APMX (mm) 4.0	APMX (mm) 8.9 – 44.7	APMX (mm) 8 ,0– 16.0
	DCX (mm) 15 – 25	DCX (mm) 20 – 52	DCX (mm) 24 – 80	DCX (mm) 32 – 100	DCX (mm) 10 – 50	DCX (mm) 16 – 32
					DCX = 10 – 32 (mm)	DCX = 16 – 32 (mm)
	DCX = 15 (mm)	DCX = 20 (mm)			DCX = 12 – 50 (mm)	DCX = 16 – 25 (mm)
	DCX = 15 – 25 (mm)	DCX = 20 – 42 (mm)	DCX = 24 – 42 (mm)	DCX = 32 (mm)	DCX = 10 – 32 (mm)	DCX = 16 – 32 (mm)
		DCX = 42 – 52 (mm)	DCX = 50 – 80 (mm)	DCX = 52 – 100 (mm)		
	📖 545	📖 550	📖 556	📖 562	📖 568	📖 575
	P M K N S H	P M K N S H	P M K N S H	P M K N S H	P M K S H	P M K S H
	RD 0702	RD 1003	RD 12T3	RD 1604	ZP	XP
	–	–	–	–	2	1
	■	■	■	■	■	■
	■	■	■	■		
	■	■	■	■		
	■	■	■	■		
	■	■	■	■		

■ Hlavné použitie ◪ Možné použitie

KOPÍROVACIE FRÉZOVANIE

	K2-SRC	K2-SLC	K2-PPH	SVC22C	SWN04C
	–	90°	–	90°	90° (93°)
	APMX (mm) 0.6 – 3.2	APMX (mm) 1.0 – 3.0	APMX (mm) 0.3 – 4.0	APMX (mm) 3.0 (16.0)	APMX (mm) 0.5 (2.0)
	DCX (mm) 8 – 20	DCX (mm) 12 – 20	DCX (mm) 8 – 32	DC (mm) 32 – 80	DC (mm) 20 – 35
Valcová stopka	DCX = 8 – 20 (mm)		DCX = 8 – 32 (mm)	DC = 32 – 40 (mm)	DC = 20 – 32 (mm)
Weldon stopka					
Modulárna	DCX = 8 – 20 (mm)		DCX = 16 – 20 (mm)	DC = 32 – 40 (mm)	DC = 20 – 35 (mm)
Nástrčná				DC = 50 – 80 (mm)	
Strana	579	588	592	604	607
ISO	P M K H	P M K H	P M K S H	N	P K H
Tvar doštičky					
Doštičky	RC LC	LC	PPH PPHF PPHT	VCGT 220530	WN.. 0403
Počet rezných hrán	2	2	2	2	6
Frézovanie tvarových plôch (kopírovanie)	■	■	■		■
Rovinné frézovanie					■
Špirálová interpolácia		◪	◪	■	
Postupné zavŕtavanie		◪	◪	■	
Zachádzanie pod uhlom		◪	◪	◪	■
Frézovanie plytkých drážok				◪	
Hlboké frézovanie do rohu				◪	■
Zrážacie frézovanie		◪	◪		
Odvŕtavacie frézovanie					■

■ Hlavné použitie ◪ Možné použitie

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KOPÍROVACIE FRÉZOVANIE

	SCN05C					
	90° (93°)					
	APMX (mm) 0.5 (1.0)					
	DC (mm) 12 – 20					
	DC = 12 – 20 (mm)					
	DC = 12 – 20 (mm)					
	610					
	P K H					
	CN.. 0502					
	4					
	■					
	■					
	■					
	■					
	■					

■ Hlavné použitie ◪ Možné použitie

SRC10

P M K S H

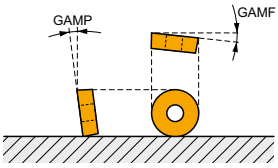
PRAMET

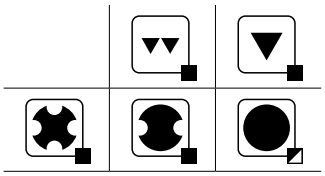
S

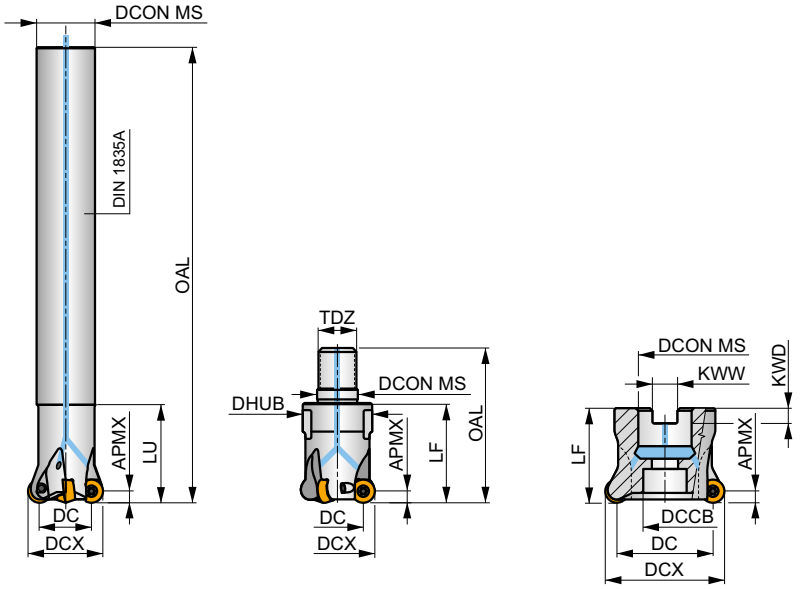
Kopírovacia fréza na kruhové doštičky RCMT 10 s vnútorným chladením

Fréza pre kopírovacie frézovanie na pozitívne doštičky RCMT 10 s APMX 5 mm. Telesá fréz podporujú vnútorné chladenie. Vhodná pre rovinné, špirálové, zanorovacie, progresívne odvŕtavacie a vysokoposuvové frézovanie. Dostupná v prevedení s valcovou stopkou, modulárnou stopkou a nástrčná, s priemermi v rozsahu Ø 25 až Ø 66 mm. Teleso je povrchovo upravené pre predĺženie životnosti nástroja.

APMX	5.0 mm







h_m 0.08 – 0.15

h_m 0.05 – 0.12

	Produkt	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	✓	0.36	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	✓	0.66	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
	32E3R042M16-SRC10-C	32	22	65	17	29	–	–	42	M16	–	–	-2.6	-7	3	–	18500	✓	0.22	GI328	C0010
	32E4R042M16-SRC10-C	32	22	65	17	29	–	–	42	M16	–	–	-2.6	-7	4	–	18500	✓	0.21	GI328	C0010
	35E4R042M16-SRC10-C	35	25	65	17	29	–	–	42	M16	–	–	-2.4	-7	4	–	17700	✓	0.20	GI328	C0010
	42E4R042M16-SRC10-C	42	32	65	17	29	–	–	42	M16	–	–	-2.1	-7	4	–	16100	✓	0.22	GI328	C0010
	42E5R042M16-SRC10-C	42	32	65	17	29	–	–	42	M16	–	–	-2.1	-7	5	–	16100	✓	0.21	GI328	C0010
ISO 6462 DIN 8030	40A05R-SMORC10-C	40	30	–	16	–	14	–	40	–	8.4	5.6	-2.2	-7	5	–	16500	✓	0.16	GI328	C0012
	50A05R-SMORC10-C	50	40	–	22	–	18	–	40	–	10.4	6.3	-2	-7	5	–	14800	✓	0.28	GI328	C0013
	50A06R-SMORC10-C	50	40	–	22	–	18	–	40	–	10.4	6.3	-2	-7	6	–	14800	✓	0.24	GI328	C0013
	52A05R-SMORC10-C	52	42	–	22	–	18	–	40	–	10.4	6.3	-2	-7	5	–	14500	✓	0.29	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	✓	0.46	GI328	C0013
	63A07R-SMORC10-C	63	53	–	22	–	18	–	40	–	10.4	6.3	-1.8	-7	7	–	13200	✓	0.46	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	✓	0.57	GI328	C0014

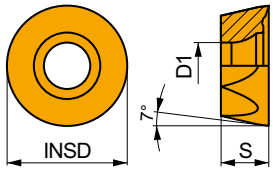
GI328	RCMT 10T3M0..

		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
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

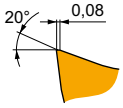
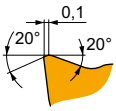
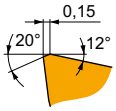
RCMT 10

PRAMET

	INSD (mm)	D1 (mm)	S (mm)
10T3	10.0	3.90	3.97

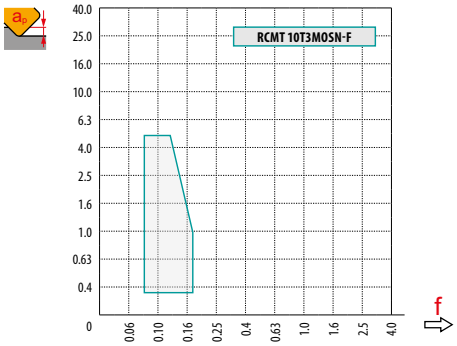


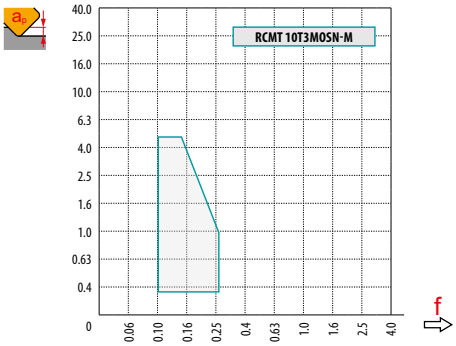
Vhodnosť a štartovacie hodnoty pre reznú rýchlosť (vc), posuv (f) a hĺbku rezu (ap). Ďalšie možnosti výpočtov rezných parametrov nájdete v našej aplikácii Machining Calculator.

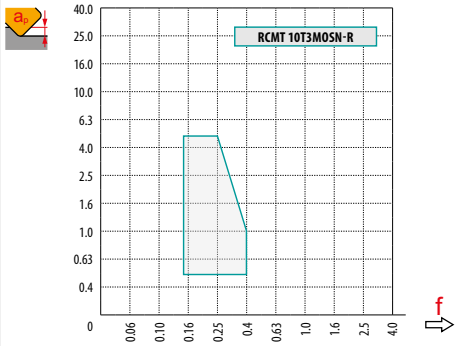
Produkt		RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
																				
F geometria s veľmi pozitívnym prevedením pre ľahké obrábanie.																				
RCMT 10T3MOSN-F	M6330	–	340	0.10	1.0	240	0.09	1.0	–	–	–	–	–	–	100	0.08	0.8	–	–	–
	M8310	–	445	0.10	1.0	225	0.09	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	M8330	–	395	0.10	1.0	235	0.09	1.0	–	–	–	–	–	–	95	0.08	0.8	–	–	–
																				
M geometria s veľmi pozitívnym prevedením pre stredné obrábanie.																				
RCMT 10T3MOSN-M	M6330	–	310	0.12	1.0	220	0.11	1.0	–	–	–	–	–	–	90	0.11	0.8	–	–	–
	M8310	–	400	0.12	1.0	200	0.11	1.0	380	0.12	1.0	–	–	–	–	–	–	–	–	–
	M8330	–	360	0.12	1.0	215	0.11	1.0	340	0.12	1.0	–	–	–	90	0.11	0.8	–	–	–
	M8340	–	330	0.12	1.0	195	0.11	1.0	310	0.12	1.0	–	–	–	80	0.11	0.8	–	–	–
	M8345	–	260	0.12	1.0	155	0.11	1.0	–	–	–	–	–	–	65	0.11	0.8	–	–	–
	M9325	–	465	0.12	1.0	–	–	–	440	0.12	1.0	–	–	–	–	–	–	–	–	–
	M9340	–	425	0.12	1.0	255	0.11	1.0	–	–	–	–	–	–	105	0.11	0.8	–	–	–
																				
R geometria s pozitívnym prevedením pre hrubovacie kopírovacie obrábanie.																				
RCMT 10T3MOSN-R	M5315	–	435	0.17	1.0	–	–	–	410	0.17	1.0	–	–	–	–	–	–	85	0.15	1.0
	M8310	–	345	0.17	1.0	–	–	–	325	0.17	1.0	–	–	–	–	–	–	65	0.15	1.0
	M8330	–	310	0.17	1.0	–	–	–	290	0.17	1.0	–	–	–	75	0.17	0.8	60	0.15	1.0
	M8340	–	285	0.17	1.0	–	–	–	270	0.17	1.0	–	–	–	70	0.17	0.8	–	–	–
	M9325	–	395	0.17	1.0	–	–	–	375	0.17	1.0	–	–	–	–	–	–	75	0.15	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

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







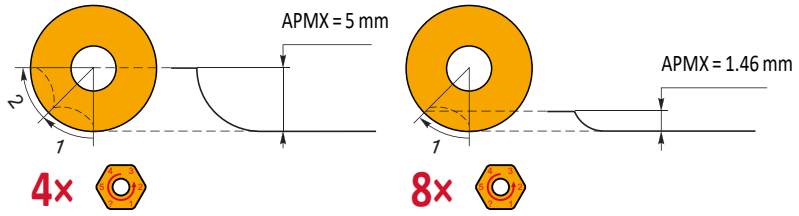
DCX	a_p	0.00	0.15	0.30	0.50	0.75	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00
25	DEF	15.00	17.43	18.41	19.36	20.27	21.00	21.61	22.14	23.00	23.66	24.17	24.80	25.00
32		22.00	24.43	25.41	26.36	27.27	28.00	28.61	29.14	30.00	30.66	31.17	31.80	32.00
35		25.00	27.43	28.41	29.36	30.27	31.00	31.61	32.14	33.00	33.66	34.17	34.80	35.00
40		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
42		32.00	34.43	35.41	36.36	37.27	38.00	38.61	39.14	40.00	40.66	41.17	41.80	42.00
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
	1 ⇨ 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/l
25	13.2	5/23
32	12.6	5/24
35	12.3	5/24
40	9.5	5/31
42	6.5	5/45
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
42	65.0	84.0	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
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
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

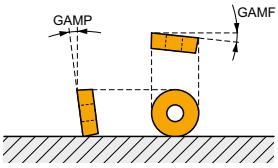
PRAMET

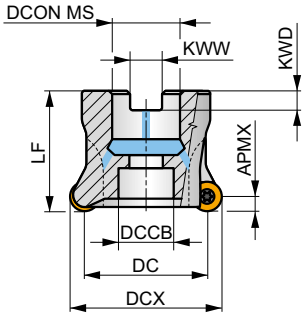
S

Kopírovacia fréza na kruhové doštičky RCMT 12 s vnútorným chladením

Fréza pre stredne ťažkké kopírovacie frézovanie na pozitívne doštičky RCMT 12 s APMX 6 mm. Telesá fréz podporujú vnútorné chladenie. Vhodná pre rovinné, špirálové, zanorovacie, progresívne odvŕtavacie a vysokoposuvové frézovanie. Dostupná iba v nástrčnom prevedení, s priemermi v rozsahu Ø 40 až Ø 100 mm. Teleso je povrchovo upravené pre predĺženie životnosti nástroja.

APMX	6.0 mm





h_m 0.1 – 0.2

	Produkt	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	✓	0.29	GI279	C0022	–
	50A04R-SMORC12-C	50	38	22	18	40	10.4	6.3	-2	-7	4	–	13200	✓	0.39	GI279	C0023	–
	52A05R-SMORC12-C	52	40	22	18	40	10.4	6.3	-2	-7	5	–	12900	✓	0.36	GI279	C0023	–
	63A05R-SMORC12-C	63	51	22	30	40	10.4	6.3	-2	-7	5	–	11800	✓	0.51	GI279	C0023	–
	66A06R-SMORC12-C	66	54	27	22	50	12.4	7	-1.5	-7	6	–	11400	✓	0.67	GI279	C0024	–
	80A05R-SMORC12-C	80	68	27	37	50	12.4	7	-1.7	-7	5	–	10400	✓	1.10	GI279	C0024	–
	100A06R-SMORC12-C	100	88	32	45	50	14.4	8	-1.8	-7	6	–	9300	✓	1.83	GI279	C0021	AC002

GI279	RCMT 1204M0..

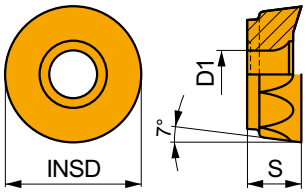
		Nm					
C0021	US 63509-T15P	3.0	M 3.5	10	D-T08P/T15P	FG-15	–
C0022	US 63509-T15P	3.0	M 3.5	10	D-T08P/T15P	FG-15	HS 90835
C0023	US 63509-T15P	3.0	M 3.5	10	D-T08P/T15P	FG-15	HS 1030C
C0024	US 63509-T15P	3.0	M 3.5	10	D-T08P/T15P	FG-15	HS 1230C

AC002	KS 1635	K.FMH32

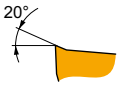
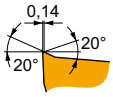
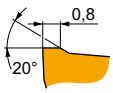
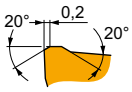
RCMT 12

PRAMET

	INSD (mm)	D1 (mm)	S (mm)
1204	12.0	4.40	4.76

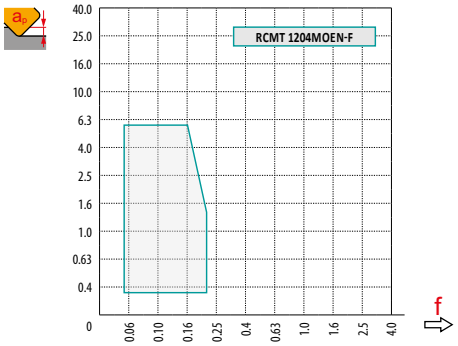


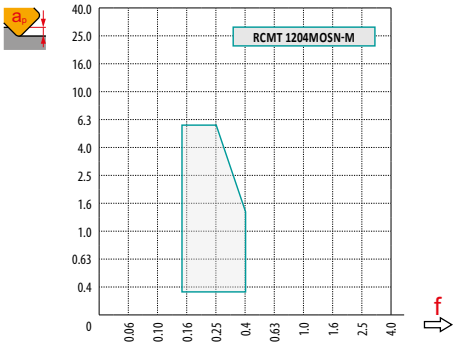
Vhodnosť a štartovacie hodnoty pre reznú rýchlosť (vc), posuv (f) a hĺbku rezu (ap). Ďalšie možnosti výpočtov rezných parametrov nájdete v našej aplikácii Machining Calculator.

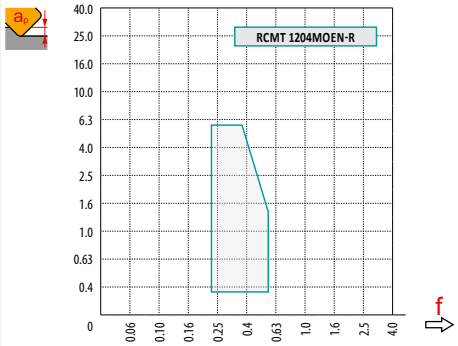
Produkt		RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
																				
F geometria s veľmi pozitívnym prevedením pre ľahké obrábanie.																				
RCMT 1204MOEN-F	8215	–	■ 390	0.10	1.5	◪ 230	0.09	1.5	–	–	–	–	–	–	◪ 95	0.07	1.2	–	–	–
	M8310	–	■ 420	0.10	1.5	◪ 210	0.09	1.5	–	–	–	–	–	–	–	–	–	–	–	–
	M8330	–	■ 380	0.10	1.5	■ 225	0.09	1.5	–	–	–	–	–	–	◪ 95	0.07	1.2	–	–	–
																				
M geometria s veľmi pozitívnym prevedením pre stredné obrábanie.																				
RCMT 1204MOSN-M	M6330	–	■ 265	0.20	1.5	◪ 185	0.18	1.5	–	–	–	–	–	–	■ 75	0.16	1.2	–	–	–
	M8310	–	■ 335	0.20	1.5	◪ 170	0.18	1.5	■ 315	0.20	1.5	–	–	–	–	–	–	–	–	–
	M8330	–	■ 305	0.20	1.5	◪ 180	0.18	1.5	■ 285	0.20	1.5	–	–	–	◪ 75	0.16	1.2	–	–	–
	M8345	–	■ 225	0.20	1.5	◪ 135	0.18	1.5	–	–	–	–	–	–	■ 55	0.16	1.2	–	–	–
	M9325	–	■ 380	0.20	1.5	–	–	–	■ 360	0.20	1.5	–	–	–	–	–	–	–	–	–
	M9340	–	■ 345	0.20	1.5	◪ 205	0.18	1.5	–	–	–	–	–	–	■ 85	0.16	1.2	–	–	–
																				
EN-R geometria s pozitívnym prevedením pre hrubovacie kopírovacie obrábanie.																				
RCMT 1204MOEN-R	M8310	–	■ 280	0.30	1.5	◪ 140	0.27	1.5	■ 265	0.30	1.5	–	–	–	–	–	–	■ 55	0.15	1.0
	M8330	–	■ 260	0.30	1.5	◪ 155	0.27	1.5	■ 245	0.30	1.5	–	–	–	◪ 65	0.24	1.2	◪ 50	0.15	1.0
																				
SN-R geometria s pozitívnym prevedením pre hrubovacie kopírovacie obrábanie.																				
RCMT 1204MOSN-R	M8345	–	■ 190	0.35	1.5	–	–	–	–	–	–	–	–	–	◪ 45	0.25	1.2	–	–	–
	M9315	–	■ 315	0.35	1.5	–	–	–	■ 295	0.35	1.5	–	–	–	–	–	–	◪ 60	0.15	1.0

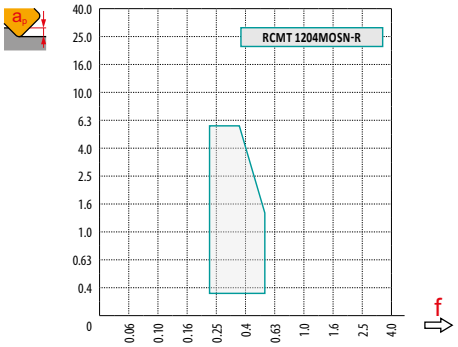
a_e / DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
⇨ x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79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

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









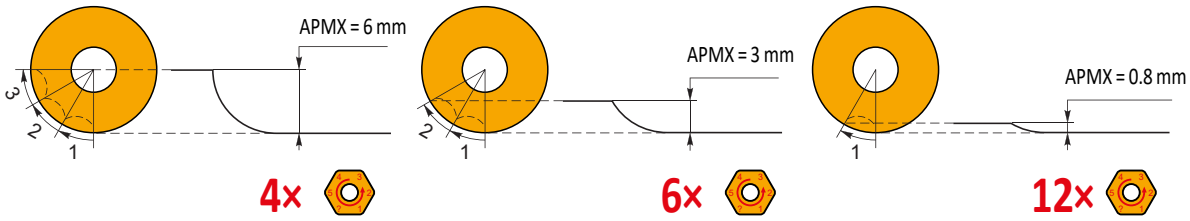
DCX	a_p	0.00	0.30	0.50	0.75	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00	6.00
40	DEF	28.0	31.7	32.8	33.8	34.6	35.3	35.9	36.9	37.7	38.4	39.3	39.8	40.0
50		38.0	41.7	42.8	43.8	44.6	45.3	45.9	46.9	47.7	48.4	49.3	49.8	50.0
52		40.0	43.7	44.8	45.8	46.6	47.3	47.9	48.9	49.7	50.4	51.3	51.8	52.0
63		51.0	54.7	55.8	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
	1 ⇨ 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/l
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

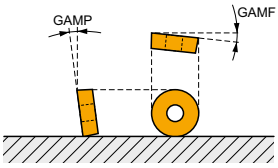
PRAMET

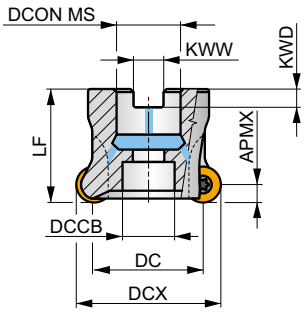
S

Kopírovacia fréza na kruhové doštičky RCMT 16 s vnútorným chladením

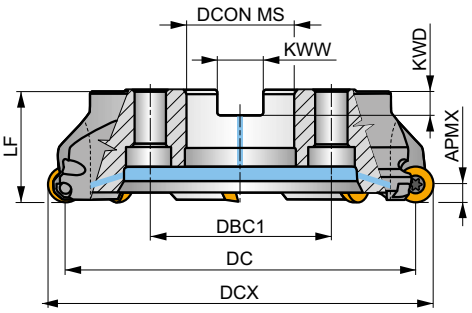
Fréza pre stredné až ťažké kopírovacie frézovanie na pozitívne doštičky RCMT 16 s APMX 8 mm. Telesá fréz podporujú vnútorné chladenie. Vhodná pre rovinné, špirálové, zanorovacie, progresívne odvŕtavacie a vysokoposuvové frézovanie. Dostupná iba v nástrčnom prevedení, s priemermi v rozsahu Ø 63 až Ø 160 mm. Teleso je povrchovo upravené pre predĺženie životnosti nástroja.

APMX	8.0 mm





DC 63 - 125 mm



DC 160 mm

h_m 0.1 – 0.25

	Produkt	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	✓	0.61	GI280	C0033	–
	66A05R-SMORC16-C	66	50	27	22	–	50	12.4	7	-2.5	-7	5	–	9200	✓	0.60	GI280	C0030	–
	80A05R-SMORC16-C	80	64	27	37	–	50	12.4	7	-1.7	-7	5	–	8600	✓	0.88	GI280	C0030	–
	100A06R-SMORC16-C	100	84	32	45	–	50	14.4	8	-1.7	-7	6	–	7700	✓	1.33	GI280	C0031	AC002
	125A07R-SMORC16-C	125	109	40	36	–	63	16.4	9	-1.2	-7	7	–	6500	✓	3.07	GI280	C0032	–
	160C08R-SMORC16-C	160	144	40	–	66.7	63	16.4	9	-0.9	-7	8	–	5400	✓	5.68	GI280	C0034	–

GI280	RCMT 1606M0..

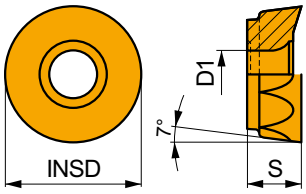
		Nm							
C0030	US 65014-T20P	5.0	M 5	14	SDR T20P-T	HS 1230C	–	–	–
C0031	US 65014-T20P	5.0	M 5	14	SDR T20P-T	–	–	–	–
C0032	US 65014-T20P	5.0	M 5	14	SDR T20P-T	HSD 2040	–	–	–
C0033	US 65014-T20P	5.0	M 5	14	SDR T20P-T	HS 1030C	–	–	–
C0034	US 65014-T20P	5.0	M 5	14	SDR T20P-T	HS 1240C	CAC 160C	HSD 0825C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

AC002	KS 1635	K.FMH32

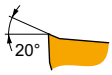
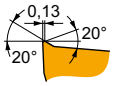
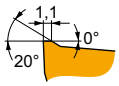
RCMT 16

PRAMET

	INSD (mm)	D1 (mm)	S (mm)
1606	16.0	5.50	6.35

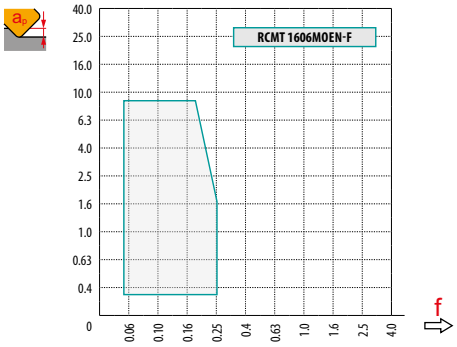


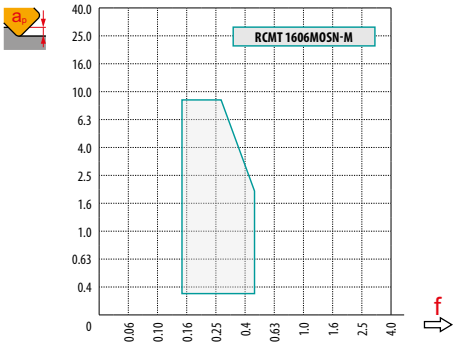
Vhodnosť a štartovacie hodnoty pre reznú rýchlosť (vc), posuv (f) a hĺbku rezu (ap). Ďalšie možnosti výpočtov rezných parametrov nájdete v našej aplikácii Machining Calculator.

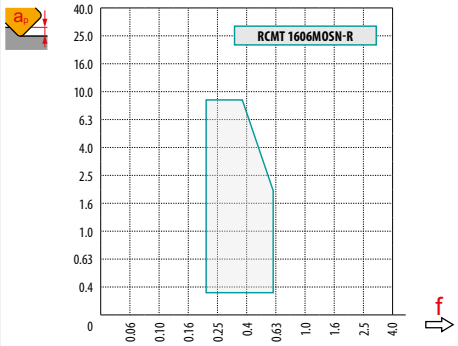
Produkt		RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
			HFC E																	
			F geometria s veľmi pozitívnym prevedením pre ľahké obrábanie.																	
RCMT 1606MOEN-F	M8310	–	■ 410	0.10	2.0	◪ 205	0.09	2.0	–	–	–	–	–	–	–	–	–	–	–	–
	M8330	–	■ 370	0.10	2.0	■ 220	0.09	2.0	–	–	–	–	–	–	◪ 90	0.07	1.6	–	–	–
			U HFC S																	
			M geometria s veľmi pozitívnym prevedením pre stredné obrábanie.																	
RCMT 1606MOSN-M	M6330	–	■ 255	0.20	2.0	◪ 180	0.18	2.0	–	–	–	–	–	–	■ 75	0.16	1.6	–	–	–
	M8330	–	■ 300	0.20	2.0	◪ 180	0.18	2.0	■ 285	0.20	2.0	–	–	–	◪ 75	0.16	1.6	–	–	–
	M8345	–	■ 215	0.20	2.0	◪ 125	0.18	2.0	–	–	–	–	–	–	■ 50	0.16	1.6	–	–	–
	M9325	–	■ 370	0.20	2.0	–	–	–	■ 350	0.20	2.0	–	–	–	–	–	–	–	–	–
	M9340	–	■ 335	0.20	2.0	◪ 200	0.18	2.0	–	–	–	–	–	–	■ 80	0.16	1.6	–	–	–
			HFC P																	
			R geometria s pozitívnym prevedením pre hrubovacie kopírovacie obrábanie.																	
RCMT 1606MOSN-R	M8310	–	■ 250	0.40	2.0	–	–	–	■ 235	0.40	2.0	–	–	–	–	–	–	■ 50	0.15	1.0
	M8330	–	■ 240	0.40	2.0	–	–	–	■ 225	0.40	2.0	–	–	–	◪ 60	0.28	1.6	◪ 45	0.15	1.0
	M8345	–	■ 175	0.40	2.0	–	–	–	–	–	–	–	–	–	◪ 40	0.28	1.6	–	–	–
	M9325	–	■ 280	0.40	2.0	–	–	–	■ 265	0.40	2.0	–	–	–	–	–	–	◪ 55	0.15	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

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







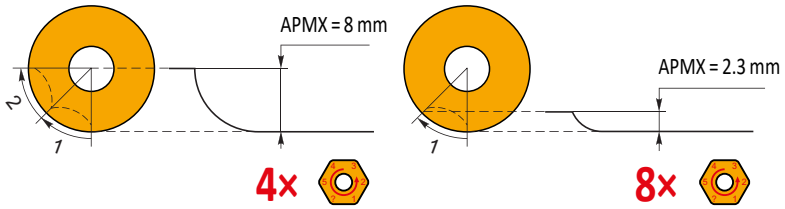
DCX	a_p	0.00	0.30	0.50	0.75	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00	6.00	7.00	8.00
63	DEF	47.0	51.3	52.6	53.8	54.7	55.6	56.3	57.6	58.6	59.5	60.9	61.8	62.5	62.9	63.0
66		50.0	54.3	55.6	56.8	57.8	58.6	59.3	60.6	61.6	62.5	63.9	64.8	65.5	65.9	66.0
80		64.0	68.3	69.6	70.8	71.7	72.6	73.3	74.6	75.6	76.5	77.9	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

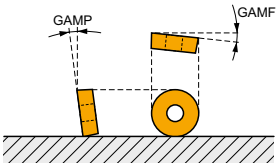
PRAMET

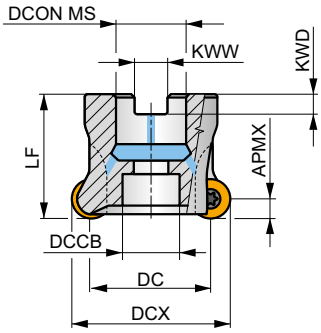
S

Kopírovacia fréza na kruhové doštičky RCMT 20 s vnútorným chladením

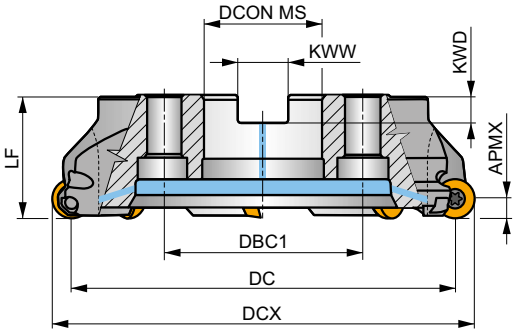
Fréza pre ťažké kopírovacie frézovanie na pozitívne doštičky RCMT 20 s APMX 10 mm. Telesá fréz podporujú vnútorné chladenie. Vhodná pre rovinné, špirálové, zanorovacie, progresívne odvŕtavacie a vysokoposuvové frézovanie. Dostupná iba v nástrčnom prevedení, s priemermi v rozsahu Ø 80 až Ø 160 mm. Teleso je povrchovo upravené pre predĺženie životnosti nástroja.

APMX	10.0 mm





DC 80 - 125 mm



DC 160 mm

h_m 0.11 – 0.32

	Produkt	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-SM0RC20-C**	80	60	27	28	–	50	12.4	7	-2.7	-7	4	–	8500	✓	0.96	GI281	C0040	–
	100A05R-SM0RC20-C	100	80	32	45	–	50	14.4	8	-1.7	-7	5	–	7600	✓	1.26	GI281	C0041	AC002
	125A06R-SM0RC20-C	125	105	40	36	–	63	16.4	9	-1	-7	6	–	6500	✓	2.96	GI281	C0042	–
	160C07R-SM0RC20-C	160	140	40	–	66.7	63	16.4	9	-0.9	-7	7	–	5400	✓	5.44	GI281	C0046	–

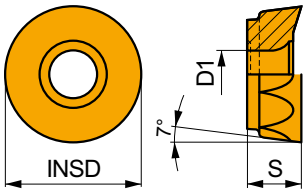
GI281	RCMT 2006M0..

		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

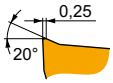
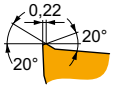
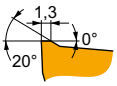
AC002	KS 1635	K.FMH32

RCMT 20

	INSD (mm)	D1 (mm)	S (mm)
2006	20.0	6.50	6.35

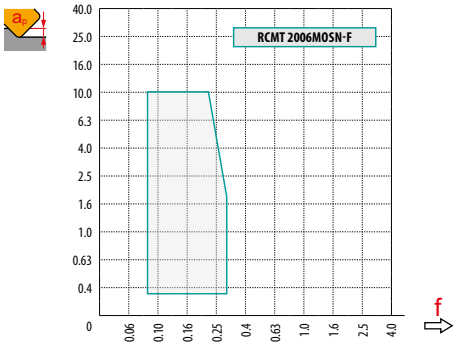


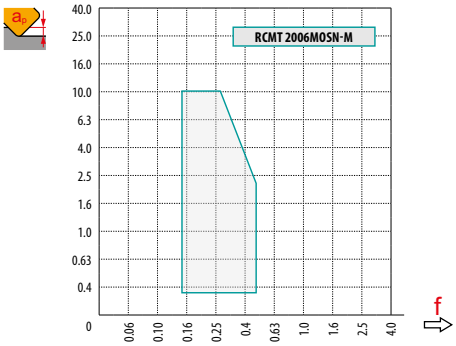
Vhodnosť a štartovacie hodnoty pre reznú rýchlosť (vc), posuv (f) a hĺbku rezu (ap). Ďalšie možnosti výpočtov rezných parametrov nájdete v našej aplikácii Machining Calculator.

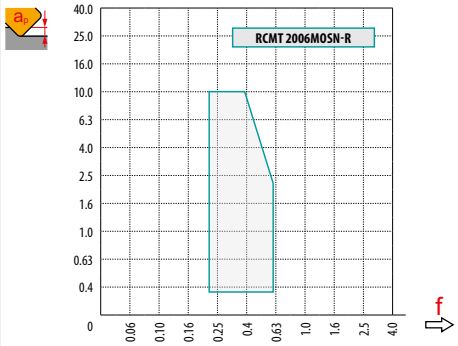
Produkt		RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
			HFC S F geometria s veľmi pozitívnym prevedením pre ľahké obrábanie.																	
RCMT 2006MOSN-F	M8330	–	■ 320	0.15	3.0	◪ 190	0.14	3.0	–	–	–	–	–	–	◪ 80	0.11	2.4	–	–	–
			U HFC S M geometria s veľmi pozitívnym prevedením pre stredné obrábanie.																	
RCMT 2006MOSN-M	M6330	–	■ 225	0.30	3.0	◪ 155	0.27	3.0	–	–	–	–	–	–	■ 65	0.21	2.4	–	–	–
	M8330	–	■ 255	0.30	3.0	◪ 150	0.27	3.0	■ 240	0.30	3.0	–	–	–	◪ 60	0.21	2.4	–	–	–
	M8345	–	■ 190	0.30	3.0	◪ 110	0.27	3.0	–	–	–	–	–	–	■ 45	0.21	2.4	–	–	–
	M9315	–	■ 330	0.30	3.0	–	–	–	■ 310	0.30	3.0	–	–	–	–	–	–	–	–	–
	M9325	–	■ 315	0.30	3.0	–	–	–	■ 295	0.30	3.0	–	–	–	–	–	–	–	–	–
	M9340	–	■ 275	0.30	3.0	◪ 165	0.27	3.0	–	–	–	–	–	–	■ 65	0.21	2.4	–	–	–
			HFC P R geometria s pozitívnym prevedením pre hrubovacie kopírovacie obrábanie.																	
RCMT 2006MOSN-R	M8330	–	■ 225	0.45	3.0	–	–	–	■ 210	0.45	3.0	–	–	–	◪ 55	0.32	2.4	◪ 45	0.15	1.0
	M8345	–	■ 165	0.45	3.0	–	–	–	–	–	–	–	–	–	◪ 40	0.32	2.4	–	–	–
	M9325	–	■ 260	0.45	3.0	–	–	–	■ 245	0.45	3.0	–	–	–	–	–	–	◪ 50	0.15	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

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







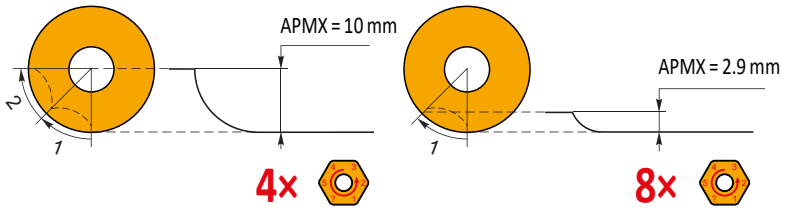
DCX	a_p	0.00	0.30	0.50	0.75	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00
80	DEF	60.0	64.9	66.2	67.6	68.7	69.7	70.5	72.0	73.2	74.3	76.0	77.3	78.3	79.1	79.6	79.9	80.0
100		80.0	84.9	86.2	87.6	88.7	89.7	90.5	92.0	93.2	94.3	96.0	97.3	98.3	99.1	99.6	99.9	100.0
125		105.0	109.9	111.2	112.6	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
	1 ⇨ 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



SRD05

P K H

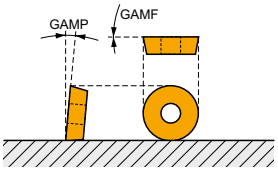
PRAMET

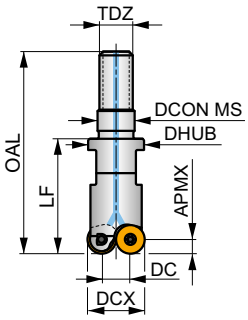
S

Kopírovacia fréza na kruhové doštičky RDHX 05 s vnútorným chladením

Fréza pre kopírovacie frézovanie na pozitívne doštičky RDHX 05 s APMX 1.5 mm. Telesá fréz podporujú vnútorné chladenie. Vhodná pre rovinné, špirálové, zanorovacie, progresívne odvŕtavacie a kopírovacie frézovanie. Dostupná v prevedení s modulárnou stopkou, s priemermi v rozsahu Ø 10 až Ø 15 mm. Teleso je povrchovo upravené pre predĺženie životnosti nástroja.

APMX	1.5 mm





h_m 0.03 – 0.1

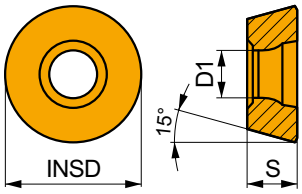
	Produkt	DCX (mm)	DC (mm)	DHUB (mm)	OAL (mm)	LF (mm)	DCON MS (mm)	TDZ	GAMF (°)	GAMP (°)			max.		kg		
MODULAR	**10E2R020M06-SRD05-CF**	10	5	9.8	35	20	6.5	M6	5	3	2	–	89300	✓	0.01	GI117	CO352
MODULAR	**12E3R020M06-SRD05-CF**	12	7	10	35	20	6.5	M6	0	3	3	–	81500	✓	0.01	GI117	CO352
MODULAR	**15E4R020M08-SRD05-CF**	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 (mm)	D1 (mm)	S (mm)
0501	5.0	2.20	1.51

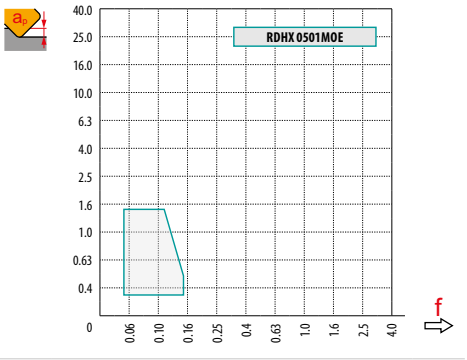


Vhodnosť a štartovacie hodnoty pre reznú rýchlosť (vc), posuv (f) a hĺbku rezu (ap). Ďalšie možnosti výpočtov rezných parametrov nájdete v našej aplikácii Machining Calculator.

Produkt		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 E Geometria s neutrálnym uhlom čela pre dokončovacie obrábanie.																	
RDHX 0501MOE	**M8310**	–	400	0.10	0.5	–	–	–	380	0.10	0.5	–	–	–	–	–	–	80	0.15	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

	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
	1 ⇨ 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

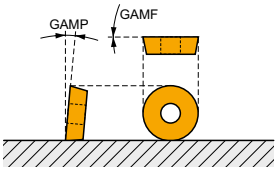
PRAMET

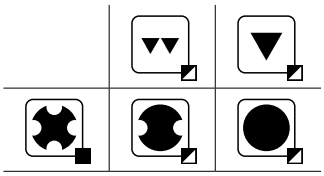
S

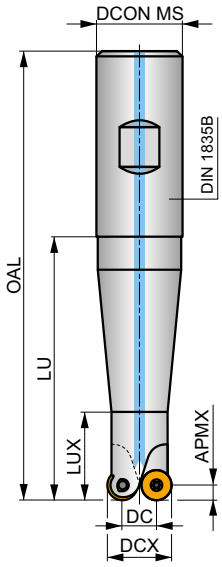
Kopírovacia fréza na kruhové doštičky RD.. 07 s vnútorným chladením

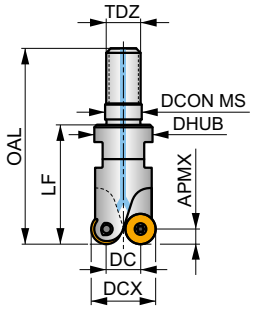
Fréza pre kopírovacie frézovanie na pozitívne doštičky RD.. 07 s APMX 2 mm. Telesá fréz podporujú vnútorné chladenie. Vhodná pre rovinné, špirálové, zanorovacie, progresívne odvŕtavacie a kopírovacie frézovanie. Dostupná v prevedení s Weldon a modulárnou stopkou, s priemermi v rozsahu Ø 15 až Ø 25 mm. Teleso je povrchovo upravené pre predĺženie životnosti nástroja.

APMX	2.0 mm









h_m 0.065 – 0.13

	Produkt	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	✓	0.10	GI118	CO354
	15E2R060B16-SRD07-CF	15	8	108	16	–	60	20	–	–	1	0	2	–	44200	✓	0.13	GI118	CO354
	15E2R080B20-SRD07-CF	15	8	130	20	–	80	22	–	–	1	0	2	–	44200	✓	0.22	GI118	CO354
	15E2R100B20-SRD07-CF	15	8	150	20	–	100	22	–	–	1	0	2	–	44200	✓	0.25	GI118	CO354
	15E2R120B25-SRD07-CF	15	8	176	25	–	120	22	–	–	1	0	2	–	44200	✓	0.43	GI118	CO354
MODULAR	**15E2R028M08-SRD07-CF**	15	8	46	8.5	13.5	–	–	28	M8	1	0	2	–	44200	✓	0.03	GI118	CO354
	15E3R028M08-SRD07-CF	15	8	46	10.5	13.5	–	–	28	M8	2	0	3	–	44200	✓	0.03	GI118	CO354
	20E4R028M10-SRD07-CF	20	13	47	12.5	18	–	–	28	M10	-8	0	4	–	38200	✓	0.05	GI118	CO354
	25E5R028M12-SRD07-CF	25	18	50	12.5	21	–	–	28	M12	-2	0	5	–	34200	✓	0.08	GI118	CO354

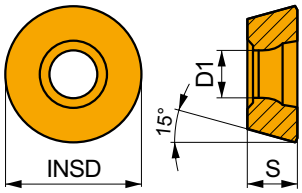
GI118	RD.. 0702MO..

		Nm			
CO354	US 42505-T07P	1.2	M 2.5	5	Flag T07P

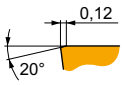
RDHX 07

PRAMET

	INSD (mm)	D1 (mm)	S (mm)
0702	7.0	2.80	2.38
07T1	7.0	2.80	1.98



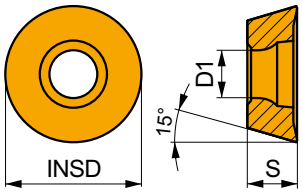
Vhodnosť a štartovacie hodnoty pre reznú rýchlosť (vc), posuv (f) a hĺbku rezu (ap). Ďalšie možnosti výpočtov rezných parametrov nájdete v našej aplikácii Machining Calculator.

Produkt		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 T																	
			Geometria s neutrálnym uhlom čela pre dokončovacie obrábanie.																	
RDHX 0702MOT	M4303	–	◪ 370	0.15	0.5	–	–	–	■ 350	0.15	0.5	–	–	–	–	–	–	■ 70	0.15	1.0
	M8310	–	◪ 360	0.15	0.5	–	–	–	■ 340	0.15	0.5	–	–	–	–	–	–	■ 70	0.15	1.0
	M8325	–	◪ 275	0.15	0.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
RDHX 07T1MOT	M8310	–	◪ 360	0.15	0.5	–	–	–	■ 340	0.15	0.5	–	–	–	–	–	–	■ 70	0.15	1.0
	M8325	–	◪ 275	0.15	0.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

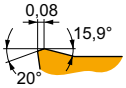
RDGT 07

PRAMET

	INSD (mm)	D1 (mm)	S (mm)
0702	7.0	2.80	2.38



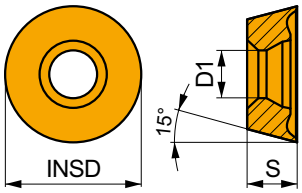
Vhodnosť a štartovacie hodnoty pre reznú rýchlosť (vc), posuv (f) a hĺbku rezu (ap). Ďalšie možnosti výpočtov rezných parametrov nájdete v našej aplikácii Machining Calculator.

Produkt		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 HFC T																	
			Pozitívne prevedenie pre dokončovacie obrábanie.																	
RDGT 0702MOT	M8310	–	■ 400	0.15	0.5	◪ 200	0.14	0.5	■ 380	0.15	0.5	–	–	–	–	–	–	–	–	–
	M8325	–	■ 305	0.15	0.5	◪ 145	0.14	0.5	–	–	–	–	–	–	–	–	–	–	–	–
	M8345	–	■ 270	0.15	0.5	◪ 160	0.14	0.5	–	–	–	–	–	–	◪ 65	0.12	0.4	–	–	–

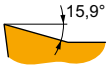
RDHT 07-FA

PRAMET

	INSD (mm)	D1 (mm)	S (mm)
0702	7.0	2.80	2.38



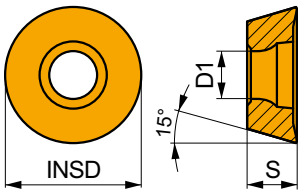
Vhodnosť a štartovacie hodnoty pre reznú rýchlosť (vc), posuv (f) a hĺbku rezu (ap). Ďalšie možnosti výpočtov rezných parametrov nájdete v našej aplikácii Machining Calculator.

Produkt		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 F FA geometria s veľmi pozitívnym prevedením pre jemné dokončovacie až stredné obrábanie.																	
RDHT 0702MO-FA	HF7	–	–	–	–	–	–	–	–	–	–	■ 420	0.18	0.5	–	–	–	–	–	–

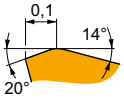
RDMT 07

PRAMET

	INSD (mm)	D1 (mm)	S (mm)
0702	7.0	2.80	2.38

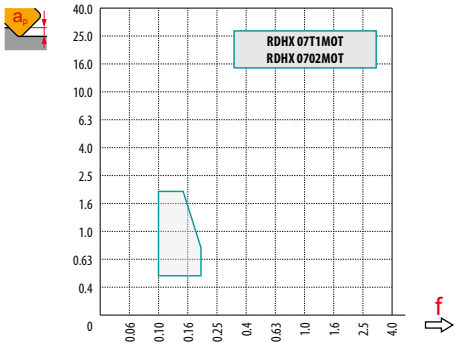


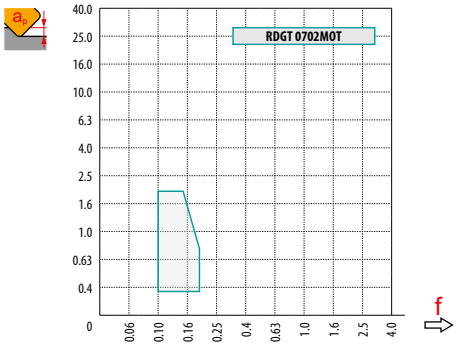
Vhodnosť a štartovacie hodnoty pre reznú rýchlosť (vc), posuv (f) a hĺbku rezu (ap). Ďalšie možnosti výpočtov rezných parametrov nájdete v našej aplikácii Machining Calculator.

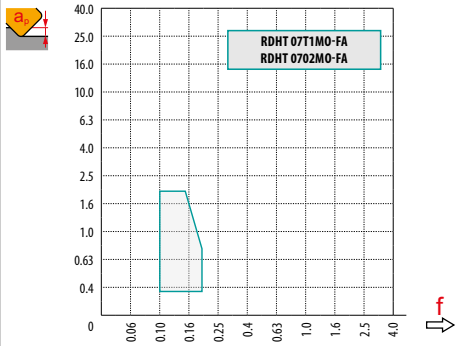
Produkt		RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
			HFC S Pozitívne prevedenie pre dokončovacie obrábanie.																	
RDMT 0702MOT	M8325	–	■ 305	0.15	0.5	◪ 145	0.14	0.5	–	–	–	–	–	–	–	–	–	–	–	–

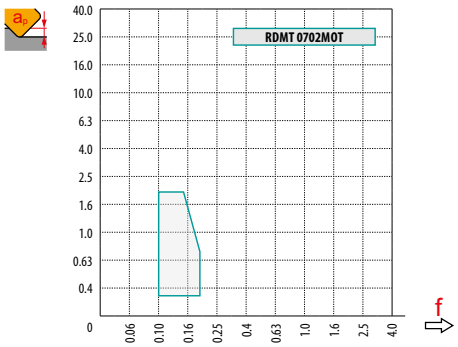
a_e / DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
⇨ x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79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

	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	FE	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	FE	0.290	0.374	0.529	0.648	0.748	0.917	1.058	1.183	1.296	1.497	1.673

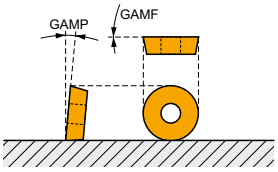
SRD10

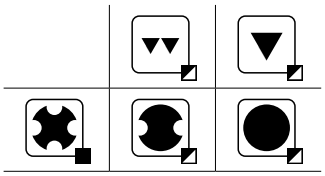
P M K N S H

PRAMET

S

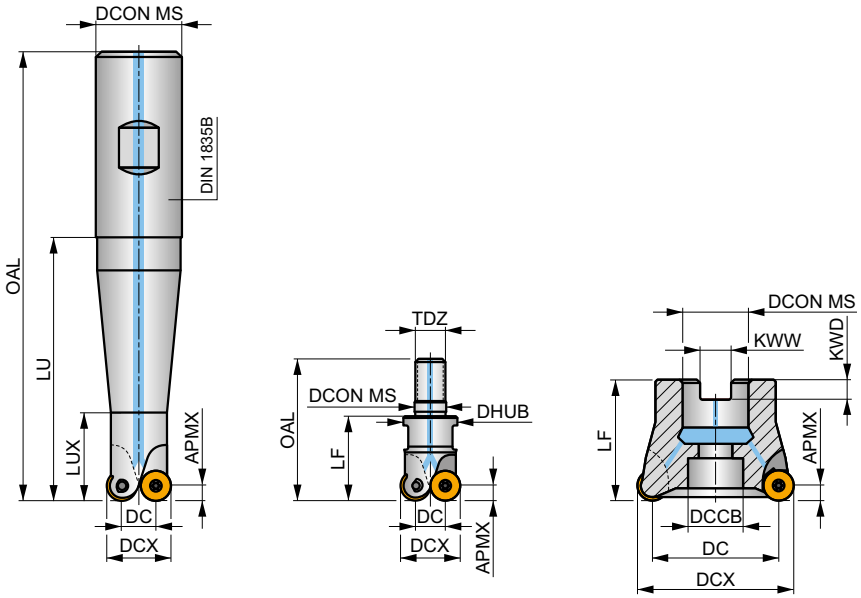
APMX	2.5 mm





Kopírovacia fréza na kruhové doštičky RD.. 10 s vnútorným chladením

Fréza pre kopírovacie frézovanie na pozitívne doštičky RD.. 10 s APMX 2.5 mm. Telesá fréz podporujú vnútorné chladenie. Vhodná pre rovinné, špirálové, zanorovacie, progresívne odvŕtavacie a kopírovacie frézovanie. Dostupná v prevedení s Weldon stopkou, modulárnou stopkou a nástrčná, s priemermi v rozsahu Ø 20 až Ø 52 mm. Teleso je povrchovo upravené pre predĺženie životnosti nástroja.



h_m 0.065 – 0.19

	Produkt	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	✓	0.17	Gl119	C0356
	20E2R060B20-SRD10-CF	20	10	110	20	–	–	60	22	–	–	–	–	-2	0	2	–	30800	✓	0.20	Gl119	C0356
	20E2R080B25-SRD10-CF	20	10	136	25	–	–	80	25	–	–	–	–	-2	0	2	–	30800	✓	0.36	Gl119	C0356
	20E2R100B25-SRD10-CF	20	10	156	25	–	–	100	25	–	–	–	–	-2	0	2	–	30800	✓	0.41	Gl119	C0356
	20E2R120B25-SRD10-CF	20	10	176	25	–	–	120	25	–	–	–	–	-2	0	2	–	30800	✓	0.46	Gl119	C0356
MODULAR	20E2R028M10-SRD10-CF	20	10	47	10.5	18	–	–	–	28	M10	–	–	-2	0	2	–	30800	✓	0.07	Gl119	C0356
	25E2R032M12-SRD10-CF	25	15	54	12.5	21	–	–	–	32	M12	–	–	0.5	0.5	2	–	27500	✓	0.08	Gl119	C0356
	25E3R032M12-SRD10-CF	25	15	54	12.5	21	–	–	–	32	M12	–	–	0.5	0.5	3	–	27500	✓	0.08	Gl119	C0356
	30E4R042M16-SRD10-CF	30	20	65	17	29	–	–	–	42	M16	–	–	0	0	4	–	25100	✓	0.18	Gl119	C0356
	32E4R042M16-SRD10-CF	32	22	65	17	29	–	–	–	42	M16	–	–	0	0	4	–	24300	✓	0.19	Gl119	C0356
	35E5R042M16-SRD10-CF	35	25	65	17	29	–	–	–	42	M16	–	–	0	0	5	–	23200	✓	0.20	Gl119	C0356
	42E4R042M16-SRD10-CF	42	32	65	17	29	–	–	–	42	M16	–	–	0	0	4	–	21200	✓	0.24	Gl119	C0356
	42E5R042M16-SRD10-CF	42	32	65	17	29	–	–	–	42	M16	–	–	0	0	5	–	21200	✓	0.24	Gl119	C0356
ISO 6462 DIN 8030	42A05R-SMORD10-CF	42	32	–	16	–	14	–	–	40	–	8.4	8.4	0	0	5	–	21200	✓	0.20	Gl119	C0358
	52A07R-SMORD10-CF	52	42	–	22	–	18	–	–	40	–	10.4	10.4	0	0	7	–	19100	✓	0.28	Gl119	C0360

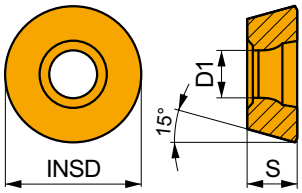
Gl119	RD.. 1003MOT	RDHT 1003MO-FA

		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

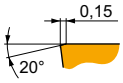
RDHX 10

PRAMET

	INSD (mm)	D1 (mm)	S (mm)
1003	10.0	3.90	3.18



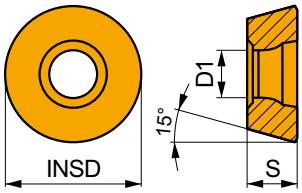
Vhodnosť a štartovacie hodnoty pre reznú rýchlosť (vc), posuv (f) a hĺbku rezu (ap). Ďalšie možnosti výpočtov rezných parametrov nájdete v našej aplikácii Machining Calculator.

Produkt		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 T																	
			Geometria s neutrálnym uhlom čela pre dokončovacie obrábanie.																	
RDHX 1003MOT	M4303	–	340	0.15	1.0	–	–	–	320	0.15	1.0	–	–	–	–	–	–	65	0.15	1.0
	M8310	–	335	0.15	1.0	–	–	–	315	0.15	1.0	–	–	–	–	–	–	65	0.15	1.0
	M8325	–	250	0.15	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	M8330	–	305	0.15	1.0	–	–	–	285	0.15	1.0	–	–	–	–	–	–	60	0.15	1.0
	M8345	–	225	0.15	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

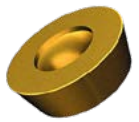
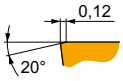
RDMX 10

PRAMET

	INSD (mm)	D1 (mm)	S (mm)
1003	10.0	3.90	3.18



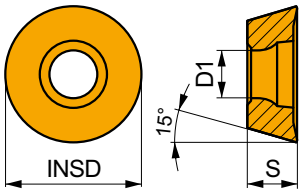
Vhodnosť a štartovacie hodnoty pre reznú rýchlosť (vc), posuv (f) a hĺbku rezu (ap). Ďalšie možnosti výpočtov rezných parametrov nájdete v našej aplikácii Machining Calculator.

Produkt		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 T																	
			Geometria s neutrálnym uhlom čela pre dokončovacie obrábanie.																	
RDMX 1003MOT	M8310	–	335	0.15	1.0	–	–	–	315	0.15	1.0	–	–	–	–	–	–	65	0.15	1.0
	M8325	–	250	0.15	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	M8345	–	225	0.15	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

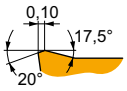
RDGT 10

PRAMET

	INSD (mm)	D1 (mm)	S (mm)
1003	10.0	3.90	3.18



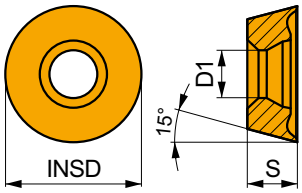
Vhodnosť a štartovacie hodnoty pre reznú rýchlosť (vc), posuv (f) a hĺbku rezu (ap). Ďalšie možnosti výpočtov rezných parametrov nájdete v našej aplikácii Machining Calculator.

Produkt		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 HFC T Pozitívne prevedenie pre dokončovacie obrábanie.																	
RDGT 1003M0T	M6330	–	■ 290	0.15	1.0	■ 205	0.14	1.0	–	–	–	–	–	–	◪ 85	0.12	0.8	–	–	–
	M8310	–	■ 375	0.15	1.0	◪ 190	0.14	1.0	■ 355	0.15	1.0	–	–	–	–	–	–	–	–	–
	M8325	–	■ 280	0.15	1.0	◪ 130	0.14	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	M8345	–	■ 250	0.15	1.0	■ 150	0.14	1.0	–	–	–	–	–	–	◪ 60	0.12	0.8	–	–	–
	M9340	–	■ 395	0.15	1.0	■ 235	0.14	1.0	–	–	–	–	–	–	◪ 95	0.12	0.8	–	–	–

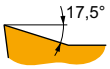
RDHT 10-FA

PRAMET

	INSD (mm)	D1 (mm)	S (mm)
1003	10.0	3.90	3.18

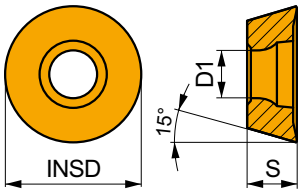


Vhodnosť a štartovacie hodnoty pre reznú rýchlosť (vc), posuv (f) a hĺbku rezu (ap). Ďalšie možnosti výpočtov rezných parametrov nájdete v našej aplikácii Machining Calculator.

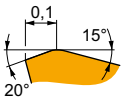
Produkt		RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
			HFC F FA geometria s veľmi pozitívnym prevedením pre jemné dokončovacie až stredné obrábanie.																	
RDHT 1003M0-FA	HF7	–	–	–	–	–	–	–	–	–	–	■ 390	0.18	1.0	–	–	–	–	–	–

RDMT 10

	INSD (mm)	D1 (mm)	S (mm)
1003	10.0	3.90	3.18

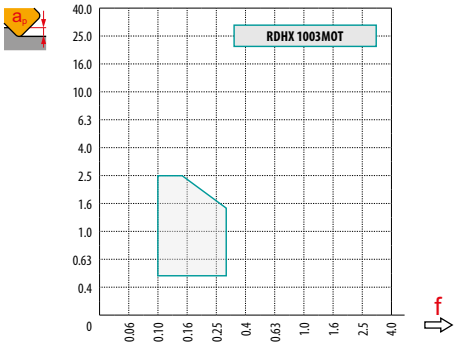


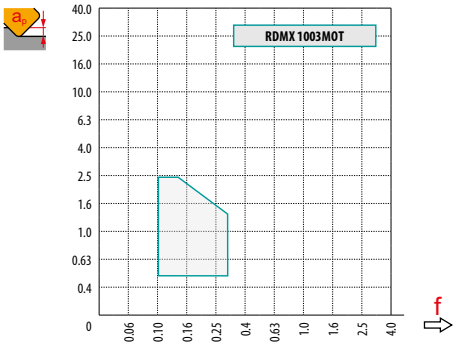
Vhodnosť a štartovacie hodnoty pre reznú rýchlosť (vc), posuv (f) a hĺbku rezu (ap). Ďalšie možnosti výpočtov rezných parametrov nájdete v našej aplikácii Machining Calculator.

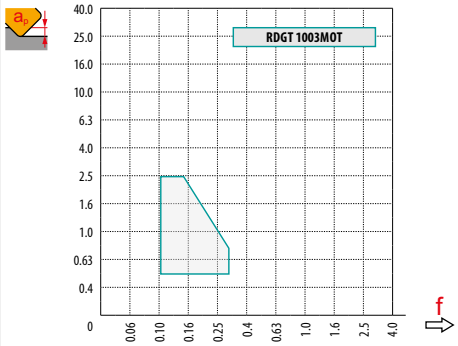
Produkt		RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
			HFC S Pozitívne prevedenie pre dokončovacie obrábanie.																	
RDMT 1003MOT	M8325	–	280	0.15	1.0	130	0.14	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	M8345	–	250	0.15	1.0	150	0.14	1.0	–	–	–	–	–	–	–	–	–	–	–	–

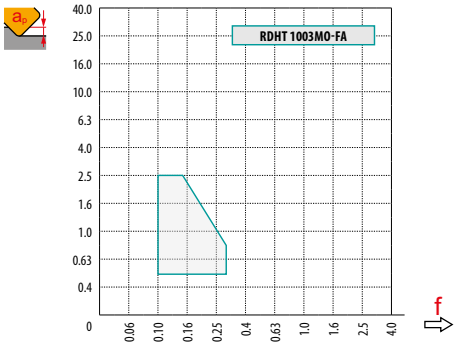
a_e / DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
⇨ x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79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

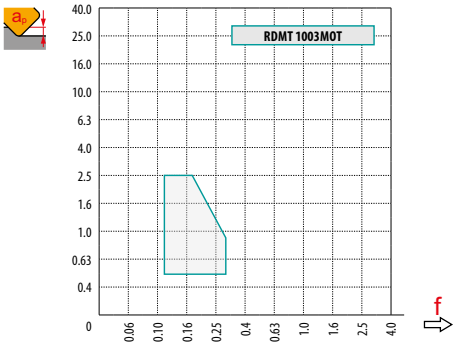
	RDHX 10	RDMX 10	RDGT 10	RDHT 10-FA
RE	5.0	5.0	5.0	5.0
BS	–	–	–	–











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
	1 ⇨ 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

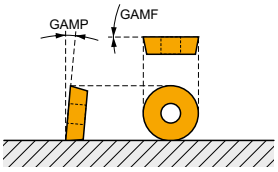
PRAMET

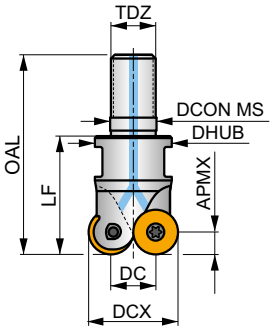
S(C)

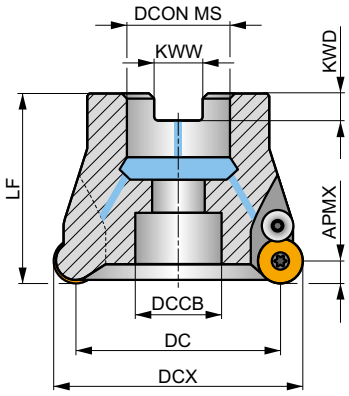
Kopírovacia fréza na kruhové doštičky RD.. 12 s vnútorným chladením

Fréza pre kopírovacie frézovanie na pozitívne doštičky RD.. 12 s APMX 3 mm. Telesá fréz podporujú vnútorné chladenie. Vhodná pre rovinné, špirálové, zanorovacie, progresívne odvŕtavacie a kopírovacie frézovanie. Dostupná v prevedení s modulárnou stopkou a nástrčná, s priemermi v rozsahu Ø 24 až Ø 80 mm. Teleso je povrchovo upravené pre predĺženie životnosti nástroja.

APMX	3.0 mm







h_m 0.065 – 0.25

h_m 0.065 – 0.22

	Produkt	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	2	–	21900	✓	0.07	GI120	C0362
	35E3R042M16-SCRD12-CF	35	23	65	17	29	–	42	M16	–	–	0	0	3	–	18100	✓	0.19	GI120	C0363
	35E4R042M16-SRD12-CF	35	23	65	17	29	–	42	M16	–	–	0	0	4	–	18100	✓	0.20	GI120	C0362
	42E4R042M16-SCRD12-CF	42	30	65	17	29	–	42	M16	–	–	0	0	4	–	16600	✓	0.21	GI120	C0363
	42E5R042M16-SRD12-CF	42	30	65	17	29	–	42	M16	–	–	0	0	5	–	16600	✓	0.22	GI120	C0362
ISO 6462 DIN 8030	50A05R-SCM0RD12-CF	50	38	–	22	–	18	50	–	10.4	10.4	2	7	5	–	15200	✓	0.29	GI120	C0366
	52A05R-SCM0RD12-CF	52	40	–	22	–	18	50	–	10.4	10.4	2	7	5	–	14900	✓	0.32	GI120	C0366
	66A06R-SCM0RD12-CF	66	54	–	27	–	22	50	–	12.4	12.4	2	7	6	–	13200	✓	0.54	GI120	C0370
	80A07R-SCM0RD12-CF	80	68	–	27	–	38	52	–	12.4	12.4	2	7	7	–	12000	✓	0.89	GI120	C0372

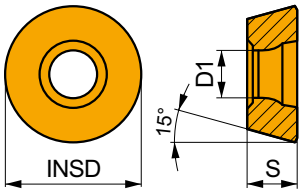
GI120	RD.. 12T3M0T	RDHT 12T3M0-FA

		Nm							
C0362	US 3508-T15P	3.5	M 3.5	8	–	–	Flag T15P	–	–
C0363	US 3508-T15P	3.5	M 3.5	8	–	–	Flag T15P	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	–

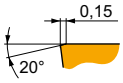
RDHX 12

PRAMET

	INSD (mm)	D1 (mm)	S (mm)
12T3	12.0	3.90	3.97



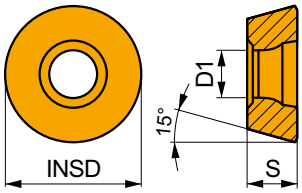
Vhodnosť a štartovacie hodnoty pre reznú rýchlosť (vc), posuv (f) a hĺbku rezu (ap). Ďalšie možnosti výpočtov rezných parametrov nájdete v našej aplikácii Machining Calculator.

Produkt		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 T																	
			Geometria s neutrálnym uhlom čela pre dokončovacie obrábanie.																	
RDHX 12T3M0T	M4303	–	◪ 300	0.20	1.5	–	–	–	■ 285	0.20	1.5	–	–	–	–	–	–	■ 60	0.15	1.0
	M8310	–	◪ 300	0.20	1.5	–	–	–	■ 285	0.20	1.5	–	–	–	–	–	–	■ 60	0.15	1.0
	M8325	–	◪ 225	0.20	1.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	M8330	–	◪ 270	0.20	1.5	–	–	–	■ 255	0.20	1.5	–	–	–	–	–	–	◪ 50	0.15	1.0
	M8345	–	◪ 200	0.20	1.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

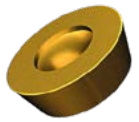
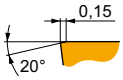
RDMX 12

PRAMET

	INSD (mm)	D1 (mm)	S (mm)
12T3	12.0	3.90	3.97



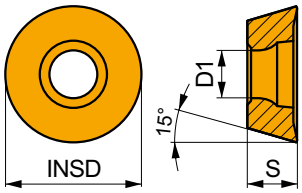
Vhodnosť a štartovacie hodnoty pre reznú rýchlosť (vc), posuv (f) a hĺbku rezu (ap). Ďalšie možnosti výpočtov rezných parametrov nájdete v našej aplikácii Machining Calculator.

Produkt		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 T																	
			Geometria s neutrálnym uhlom čela pre dokončovacie obrábanie.																	
RDMX 12T3M0T	M8310	–	◪ 300	0.20	1.5	–	–	–	■ 285	0.20	1.5	–	–	–	–	–	–	■ 60	0.15	1.0
	M8325	–	◪ 225	0.20	1.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	M8345	–	◪ 200	0.20	1.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

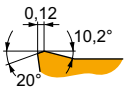
RDGT 12

PRAMET

	INSD (mm)	D1 (mm)	S (mm)
12T3	12.0	3.90	3.97



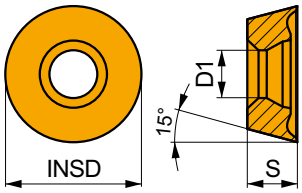
Vhodnosť a štartovacie hodnoty pre reznú rýchlosť (vc), posuv (f) a hĺbku rezu (ap). Ďalšie možnosti výpočtov rezných parametrov nájdete v našej aplikácii Machining Calculator.

Produkt		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 HFC T Pozitívne prevedenie pre dokončovacie obrábanie.																	
RDGT 12T3M0T	**M6330**	–	■ 260	0.20	1.5	■ 185	0.18	1.5	–	–	–	–	–	–	◪ 75	0.14	1.2	–	–	–
	M8310	–	■ 330	0.20	1.5	◪ 165	0.18	1.5	■ 310	0.20	1.5	–	–	–	–	–	–	–	–	–
	M8325	–	■ 250	0.20	1.5	◪ 120	0.18	1.5	–	–	–	–	–	–	–	–	–	–	–	–
	M8345	–	■ 225	0.20	1.5	■ 135	0.18	1.5	–	–	–	–	–	–	◪ 55	0.14	1.2	–	–	–
	M9340	–	■ 340	0.20	1.5	■ 200	0.18	1.5	–	–	–	–	–	–	◪ 85	0.14	1.2	–	–	–

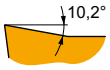
RDHT 12-FA

PRAMET

	INSD (mm)	D1 (mm)	S (mm)
12T3	12.0	3.90	3.97

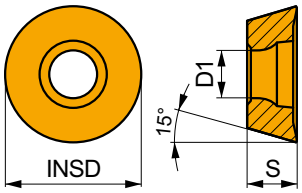


Vhodnosť a štartovacie hodnoty pre reznú rýchlosť (vc), posuv (f) a hĺbku rezu (ap). Ďalšie možnosti výpočtov rezných parametrov nájdete v našej aplikácii Machining Calculator.

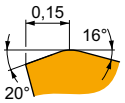
Produkt		RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
			HFC F FA geometria s veľmi pozitívnym prevedením pre jemné dokončovacie až stredné obrábanie.																	
RDHT 12T3M0-FA	**HF7**	–	–	–	–	–	–	–	–	–	–	■ 360	0.24	1.5	–	–	–	–	–	–

RDMT 12

	INSD (mm)	D1 (mm)	S (mm)
12T3	12.0	3.90	3.97

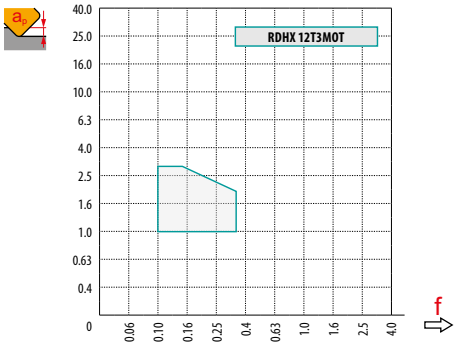


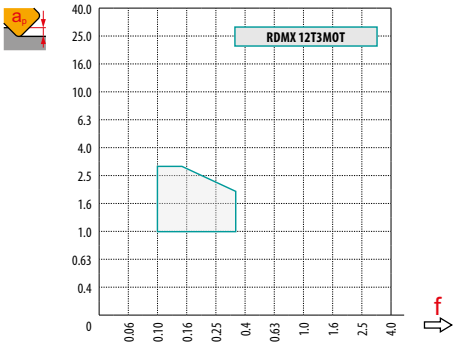
Vhodnosť a štartovacie hodnoty pre reznú rýchlosť (vc), posuv (f) a hĺbku rezu (ap). Ďalšie možnosti výpočtov rezných parametrov nájdete v našej aplikácii Machining Calculator.

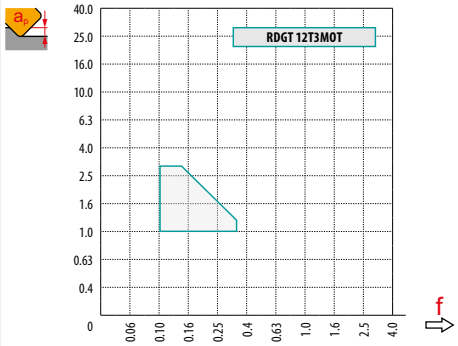
Produkt		RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
			HFC S Pozitívne prevedenie pre dokončovacie obrábanie.																	
RDMT 12T3M0T	**M8325**	–	250	0.20	1.5	120	0.18	1.5	–	–	–	–	–	–	–	–	–	–	–	–
	M8345	–	225	0.20	1.5	135	0.18	1.5	–	–	–	–	–	–	–	–	–	–	–	–

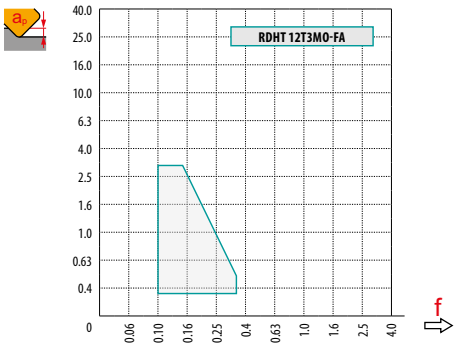
a_e / DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
⇨ x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79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

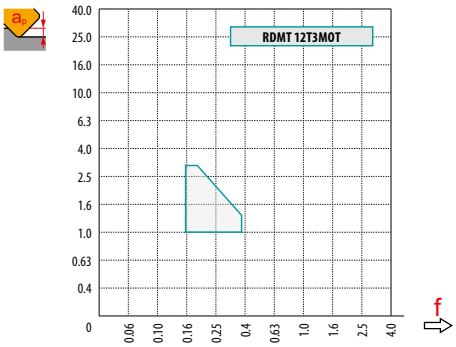
	RDHX 12	RDMX 12	RDGT 12	RDHT 12-FA
RE	6.0	6.0	6.0	6.0
a_p	–	–	–	–











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	DEF	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		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/l
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

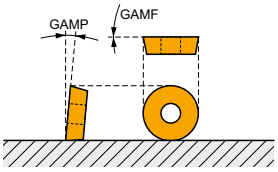
PRAMET

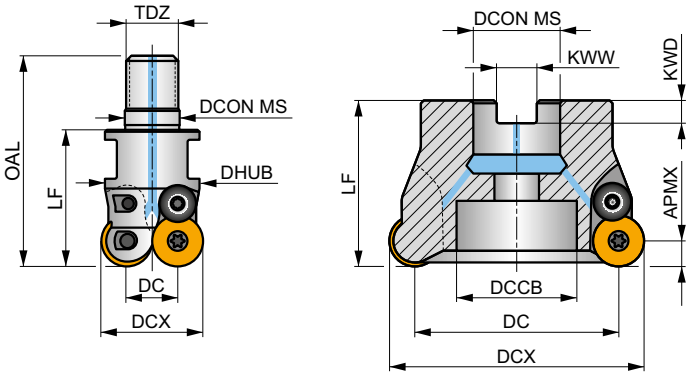
S(C)

Kopírovacia fréza na kruhové doštičky RD.. 16 s vnútorným chladením

Fréza pre kopírovacie frézovanie na pozitívne doštičky RD.. 16 s APMX 4 mm. Telesá fréz podporujú vnútorné chladenie. Vhodná pre rovinné, špirálové, zanorovacie, progresívne odvŕtavacie a kopírovacie frézovanie. Dostupná v prevedení s modulárnou stopkou a nástrčná, s priemermi v rozsahu Ø 32 až Ø 100 mm. Teleso je povrchovo upravené pre predĺženie životnosti nástroja.

APMX	4.0 mm





h_m	0.11 – 0.25
h_m	0.1 – 0.2

	Produkt	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	✓	0.16	GI121	C0374
ISO 6462 DIN 8030	**52A04R-SCMORD16-CF**	52	36	–	22	–	16.5	50	–	10.4	10.4	0	7	4	–	9900	✓	0.28	GI121	C0376
	66A05R-SCMORD16-CF	66	50	–	27	–	22	50	–	12.4	12.4	0	7	5	–	8800	✓	0.61	GI121	C0378
	80A06R-SCMORD16-CF	80	64	–	27	–	38	52	–	12.4	12.4	0	7	6	–	8000	✓	0.75	GI121	C0380
	100A07R-SCMORD16-CF	100	84	–	32	–	45	52	–	14.4	14.4	0	7	7	–	7100	✓	1.41	GI121	C0380

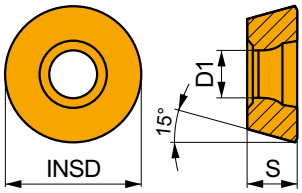
GI121	RD.. 1604MOT	RDHT 1604MO-FA

		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	–

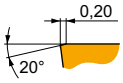
RDHX 16

PRAMET

	INSD (mm)	D1 (mm)	S (mm)
1604	16.0	5.20	4.76



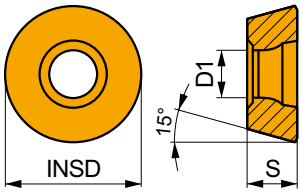
Vhodnosť a štartovacie hodnoty pre reznú rýchlosť (vc), posuv (f) a hĺbku rezu (ap). Ďalšie možnosti výpočtov rezných parametrov nájdete v našej aplikácii Machining Calculator.

Produkt		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 T																	
			Geometria s neutrálnym uhlom čela pre dokončovacie obrábanie.																	
RDHX 1604MOT	M8310	–	255	0.30	2.0	–	–	–	240	0.30	2.0	–	–	–	–	–	–	50	0.15	1.0
	M8325	–	195	0.30	2.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	M8330	–	245	0.30	2.0	–	–	–	230	0.30	2.0	–	–	–	–	–	–	45	0.15	1.0
	M8345	–	180	0.30	2.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	M9325	–	290	0.30	2.0	–	–	–	275	0.30	2.0	–	–	–	–	–	–	55	0.15	1.0

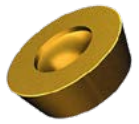
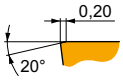
RDMX 16

PRAMET

	INSD (mm)	D1 (mm)	S (mm)
1604	16.0	5.20	4.76



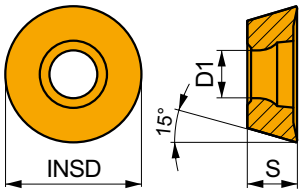
Vhodnosť a štartovacie hodnoty pre reznú rýchlosť (vc), posuv (f) a hĺbku rezu (ap). Ďalšie možnosti výpočtov rezných parametrov nájdete v našej aplikácii Machining Calculator.

Produkt		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 T																	
			Geometria s neutrálnym uhlom čela pre dokončovacie obrábanie.																	
RDMX 1604MOT	M8310	–	255	0.30	2.0	–	–	–	240	0.30	2.0	–	–	–	–	–	–	50	0.15	1.0
	M8325	–	195	0.30	2.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	M8345	–	180	0.30	2.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

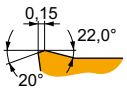
RDGT 16

PRAMET

	INSD (mm)	D1 (mm)	S (mm)
1604	16.0	5.20	4.76



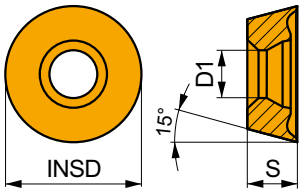
Vhodnosť a štartovacie hodnoty pre reznú rýchlosť (vc), posuv (f) a hĺbku rezu (ap). Ďalšie možnosti výpočtov rezných parametrov nájdete v našej aplikácii Machining Calculator.

Produkt		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 HFC T Pozitívne prevedenie pre dokončovacie obrábanie.																	
RDGT 1604M0T	M6330	–	■ 230	0.30	2.0	■ 165	0.27	2.0	–	–	–	–	–	–	◪ 65	0.21	1.6	–	–	–
	M8310	–	■ 285	0.30	2.0	◪ 145	0.27	2.0	■ 270	0.30	2.0	–	–	–	–	–	–	–	–	–
	M8325	–	■ 220	0.30	2.0	◪ 105	0.27	2.0	–	–	–	–	–	–	–	–	–	–	–	–
	M8345	–	■ 200	0.30	2.0	■ 120	0.27	2.0	–	–	–	–	–	–	◪ 50	0.21	1.6	–	–	–
	M9340	–	■ 290	0.30	2.0	■ 170	0.27	2.0	–	–	–	–	–	–	◪ 70	0.21	1.6	–	–	–

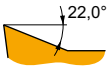
RDHT 16-FA

PRAMET

	INSD (mm)	D1 (mm)	S (mm)
1604	16.0	5.20	4.76

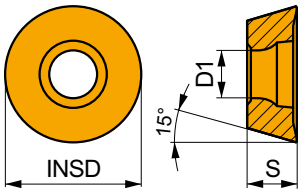


Vhodnosť a štartovacie hodnoty pre reznú rýchlosť (vc), posuv (f) a hĺbku rezu (ap). Ďalšie možnosti výpočtov rezných parametrov nájdete v našej aplikácii Machining Calculator.

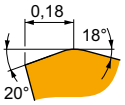
Produkt		RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
			HFC F FA geometria s veľmi pozitívnym prevedením pre jemné dokončovacie až stredné obrábanie.																	
RDHT 1604M0-FA	HF7	–	–	–	–	–	–	–	–	–	–	■ 315	0.36	2.0	–	–	–	–	–	–

RDMT 16

	INSD (mm)	D1 (mm)	S (mm)
1604	16.0	5.20	4.76

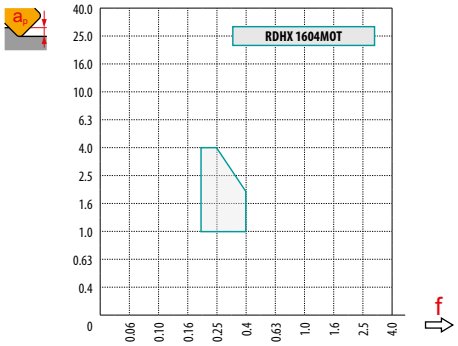


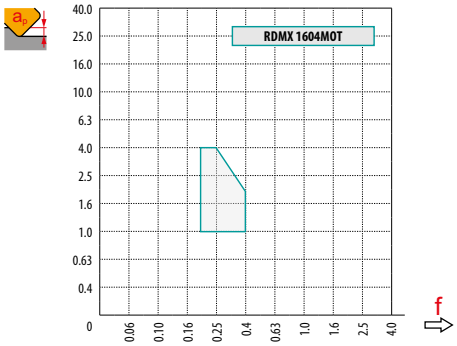
Vhodnosť a štartovacie hodnoty pre reznú rýchlosť (vc), posuv (f) a hĺbku rezu (ap). Ďalšie možnosti výpočtov rezných parametrov nájdete v našej aplikácii Machining Calculator.

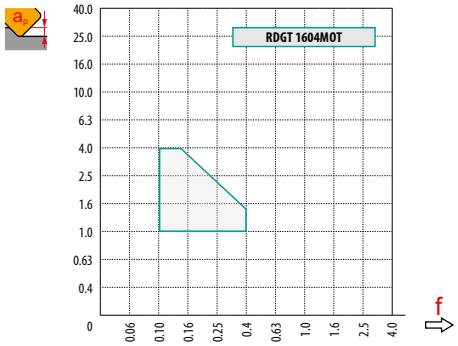
Produkt		RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
			HFC S Pozitívne prevedenie pre dokončovacie obrábanie.																	
RDMT 1604M0T	M8325	–	220	0.30	2.0	105	0.27	2.0	–	–	–	–	–	–	–	–	–	–	–	–
	M8345	–	200	0.30	2.0	120	0.27	2.0	–	–	–	–	–	–	–	–	–	–	–	–

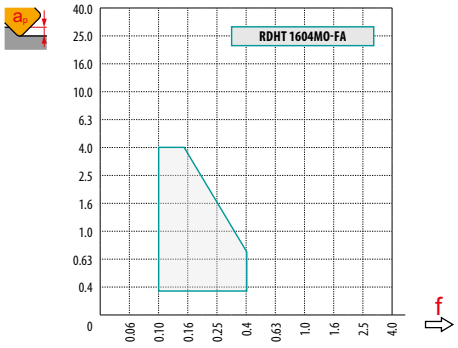
a_e / DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
⇨ x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79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

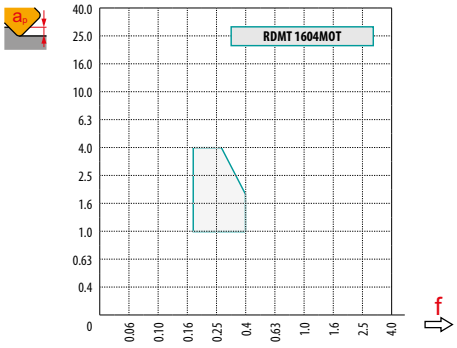
	RDHX 16	RDMX 16	RDGT 16	RDHT 16-FA
RE	8.0	8.0	8.0	8.0
BS	–	–	–	–











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
	1 ⇨ 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

L2-SZP

P M K S H

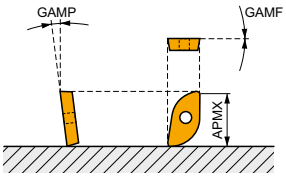
PRAMET

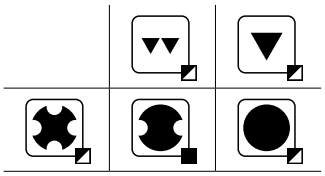
S

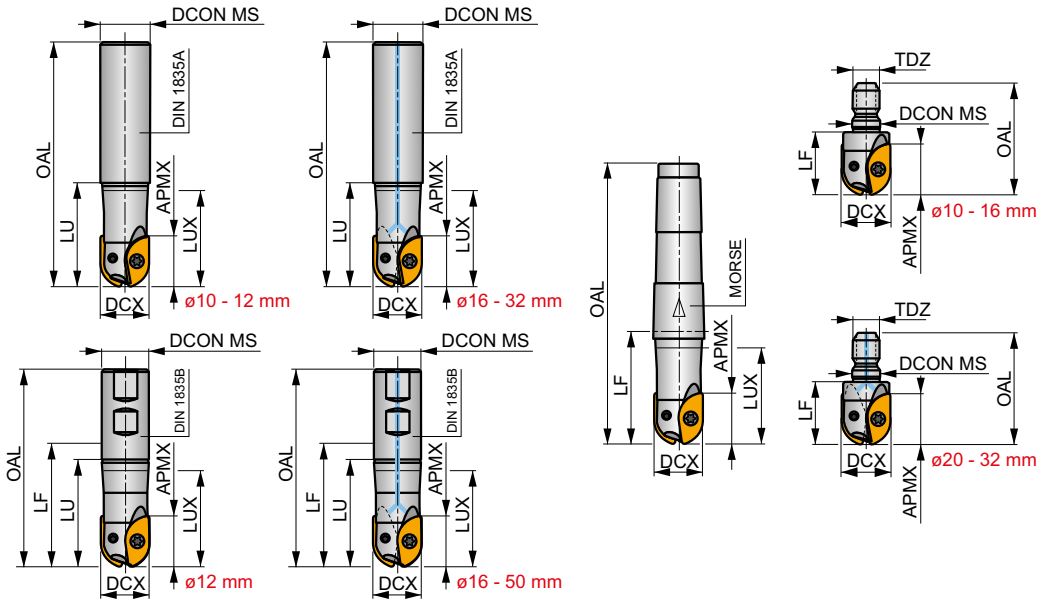
Guľová kopírovacia fréza na doštičky ZP..

Guľová fréza na doštičky ZP.. s APMX 8.9 až 44.7 mm. Vhodná pre kopírovacie frézovanie. Dostupná v prevedení s valcovou, Weldon, Morse a modulárnou stopkou, s priemermi v rozsahu Ø 10 až Ø 50 mm. Teleso je povrchovo upravené pre predĺženie životnosti nástroja.

APMX	8.9 – 44.7 mm







h_m 0.05 – 0.19

	Produkt	DCX (mm)	OAL (mm)	DCON MS (mm)	LU (mm)	LUX (mm)	LF (mm)	TDZ	CZC MS	APMX (mm)	GAMF (°)	GAMP (°)			max.		kg		
DIN 1835A	10L2R030A10-SZP10	10	130	10	30	30	–	–	–	–	0	-10	2	–	35800	–	0.11	GI255	C0510
	10L2R050A16-SZP10	10	160	16	50	22.3	–	–	–	–	0	-10	2	–	35800	–	0.26	GI255	C0510
	12L2R035A12-SZP12	12	140	12	35	35	–	–	–	–	0	-10	2	–	21000	–	0.15	GI253	C0511
	12L2R045A20-SZP12	12	200	20	–	22	–	–	–	–	0	-10	2	–	21000	–	0.51	GI253	C0511
	16L2R040A16-SZP16-C	16	160	16	40	40	–	–	–	–	0	-10	2	–	20000	✓	0.24	GI256	C0512
	16L2R045A20-SZP16-C	16	200	20	–	29.4	–	–	–	–	0	-10	2	–	20000	✓	1.48	GI256	C0512
	20L2R050A20-SZP20-C	20	250	20	50	–	–	–	–	–	0	-10	2	–	24000	✓	0.56	GI254	C0513
	20L2R055A25-SZP20-C	20	200	25	–	36.1	–	–	–	–	0	-10	2	–	24000	✓	0.68	GI254	C0513
	20L2R055A32-SZP20-C	20	250	32	–	34.5	–	–	–	–	0	-10	2	–	24000	✓	1.34	GI254	C0513
	25L2R060A25-SZP25-C	25	250	25	60	–	–	–	–	–	0	-10	2	–	24000	✓	0.86	GI257	C0514
	25L2R065A32-SZP25-C	25	250	32	–	43	–	–	–	–	0	-10	2	–	24000	✓	1.34	GI257	C0514
	32L2R070A32-SZP32-C	32	250	32	–	–	–	–	–	–	0	-10	2	–	18500	✓	1.43	GI258	C0515
DIN 1835B	12L2R040B20-SZP12	12	91	20	40	21.5	66.5	–	–	–	0	-10	2	–	21000	–	0.19	GI253	C0511
	12L2R060B20-SZP12	12	111	20	60	23.8	86.5	–	–	–	0	-10	2	–	21000	–	0.23	GI253	C0511
	16L2R040B20-SZP16-C	16	91	20	40	28.3	66.5	–	–	–	0	-10	2	–	20000	✓	0.15	GI256	C0512
	16L2R060B20-SZP16-C	16	111	20	60	32.9	86.5	–	–	–	0	-10	2	–	20000	✓	0.21	GI256	C0512
	20L2R050B25-SZP20-C	20	107	25	50	35.1	75.5	–	–	–	0	-10	2	–	24000	✓	0.31	GI254	C0513
	20L2R070B25-SZP20-C	20	127	25	70	39.5	95.5	–	–	–	0	-10	2	–	24000	✓	0.36	GI254	C0513
	25L2R060B25-SZP25-C	25	117	25	60	–	85.5	–	–	–	0	-10	2	–	24000	✓	0.36	GI257	C0514
	25L2R080B25-SZP25-C	25	137	25	80	–	105	–	–	–	0	-10	2	–	24000	✓	0.43	GI257	C0514
	32L2R070B32-SZP32-C	32	131	32	70	–	95.5	–	–	–	0	-10	2	–	18500	✓	0.72	GI258	C0515
	32L2R100B32-SZP32-C	32	161	32	100	–	125.5	–	–	–	0	-10	2	–	18500	✓	0.85	GI258	C0515
	40L2R070B32-SZP40-C	40	131	32	70	–	95.5	–	–	–	0	-10	2	–	8000	✓	0.81	GI259	C0516
	40L2R100B40-SZP40-C	40	171	40	100	–	131	–	–	–	0	-10	2	–	8000	✓	1.40	GI259	C0516
	50L2R100B50-SZP50-C	50	181	50	100	–	136.5	–	–	–	0	-10	2	–	7000	✓	2.25	GI260	C0517
DIN 228A	10L2R050E02-SZP10	10	114	–	–	21.9	50	–	2	–	0	-10	2	–	35800	–	0.13	GI255	C0510
	12L2R040E02-SZP12	12	104	–	–	22.5	40	–	2	–	0	-10	2	–	21000	–	0.14	GI253	C0511

	Produkt	DCX (mm)	OAL (mm)	DCON MS (mm)	LU (mm)	LUX (mm)	LF (mm)	TDZ	CZC MS	APMX (mm)	GAMF (°)	GAMP (°)			max.		kg		
DIN 228A	**12L2R060E02-SZP12**	12	124	–	–	25.8	60	–	2	–	0	-10	2	–	21000	–	0.18	GI253	C0511
	12L2R090E02-SZP12	12	154	–	–	25.8	90	–	2	–	0	-10	2	–	21000	–	0.23	GI253	C0511
	16L2R040E02-SZP16	16	104	–	–	31.3	40	–	2	–	0	-10	2	–	20000	–	0.14	GI256	C0512
	16L2R060E02-SZP16	16	124	–	–	42.2	60	–	2	–	0	-10	2	–	20000	–	0.19	GI256	C0512
	16L2R090E02-SZP16	16	154	–	–	75.9	90	–	2	–	0	-10	2	–	20000	–	0.23	GI256	C0512
	20L2R050E03-SZP20	20	131	–	–	36.6	50	–	3	–	0	-10	2	–	24000	–	0.35	GI254	C0513
	20L2R070E03-SZP20	20	151	–	–	–	70	–	3	–	0	-10	2	–	24000	–	0.39	GI254	C0513
	20L2R100E03-SZP20	20	181	–	–	77.4	100	–	3	–	0	-10	2	–	24000	–	0.42	GI254	C0513
	25L2R080E03-SZP25	25	161	–	–	–	80	–	3	–	0	-10	2	–	24000	–	0.46	GI257	C0514
	25L2R110E04-SZP25	25	213	–	–	92.7	110	–	4	–	0	-10	2	–	24000	–	0.84	GI257	C0514
	32L2R100E04-SZP32	32	203	–	–	–	100	–	4	–	0	-10	2	–	18500	–	0.90	GI258	C0515
	32L2R150E04-SZP32	32	253	–	–	–	150	–	4	–	0	-10	2	–	18500	–	1.10	GI258	C0515
	50L2R100E05-SZP50	50	230	–	–	–	100	–	5	–	0	-10	2	–	7000	–	2.20	GI260	C0517
MODULAR	**10L2R025M08-SZP10**	10	–	8.5	–	–	25	M8	–	–	0	-10	2	–	–	–	0.03	GI255	C0510
	12L2R025M06-SZP12	12	–	6.5	–	–	25	M6	–	–	0	-10	2	–	–	–	0.05	GI253	C0511
	12L2R025M08-SZP12	12	–	8.5	–	–	25	M8	–	–	0	-10	2	–	–	–	0.05	GI253	C0511
	16L2R025M08-SZP16	16	–	8.5	–	–	25	M8	–	–	0	-10	2	–	–	–	0.05	GI256	C0512
	20L2R030M10-SZP20-C	20	–	10.5	–	–	30	M10	–	–	0	-10	2	–	–	✓	0.07	GI254	C0513
	25L2R035M12-SZP25-C	25	–	12.5	–	–	35	M12	–	–	0	-10	2	–	–	✓	0.09	GI257	C0514
	32L2R045M16-SZP32-C	32	–	17	–	–	45	M16	–	–	0	-10	2	–	–	✓	0.15	GI258	C0515

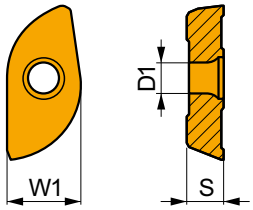
GI253	ZP 12..
GI254	ZP 20..
GI255	ZP 10..
GI256	ZP 16..
GI257	ZP 25..
GI258	ZP 32..
GI259	ZP 40..
GI260	ZP 50..

					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

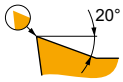
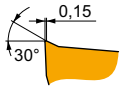
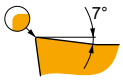
ZP

PRAMET

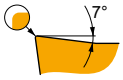
	W1 (mm)	D1 (mm)	S (mm)
10	10.000	2.20	1.70
12	12.000	2.90	2.38
16	16.000	2.90	3.18
20	20.000	4.00	3.97
25	25.000	4.70	4.76
32	32.000	5.90	6.35
40	40.000	7.00	7.94
50	50.000	9.60	7.94



Vhodnosť a štartovacie hodnoty pre reznú rýchlosť (vc), posuv (f) a hĺbku rezu (ap). Ďalšie možnosti výpočtov rezných parametrov nájdete v našej aplikácii Machining Calculator.

Produkt		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 geometria s veľmi pozitívnym prevedením pre ľahké obrábanie.																	
ZP 20ER-F	M8310	–	305	0.27	1.0	155	0.24	1.0	–	–	–	–	–	–	–	–	–	–	–	–
			FM geometria s ostrým neutrálnym prevedením pre ľahké až stredné obrábanie.																	
ZP 10ER-FM	M8310	–	305	0.36	0.5	–	–	–	285	0.36	0.5	–	–	–	–	–	–	60	0.15	1.0
	M8345	–	210	0.36	0.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
ZP 12ER-FM	M8310	–	300	0.36	0.6	–	–	–	285	0.36	0.6	–	–	–	–	–	–	60	0.15	1.0
	M8345	–	205	0.36	0.6	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
ZP 16ER-FM	M8310	–	290	0.36	0.8	–	–	–	275	0.36	0.8	–	–	–	–	–	–	55	0.15	1.0
	M8345	–	200	0.36	0.8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
ZP 20ER-FM	M8310	–	285	0.36	1.0	–	–	–	270	0.36	1.0	–	–	–	–	–	–	55	0.15	1.0
	M8345	–	195	0.36	1.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
ZP 25ER-FM	M8310	–	275	0.36	1.3	–	–	–	260	0.36	1.3	–	–	–	–	–	–	55	0.15	1.0
	M8345	–	190	0.36	1.3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
ZP 32ER-FM	M8310	–	270	0.36	1.6	–	–	–	255	0.36	1.6	–	–	–	–	–	–	50	0.15	1.0
	M8345	–	185	0.36	1.6	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
			M geometria s veľmi pozitívnym prevedením pre stredné obrábanie.																	
ZP 12ER-M	M8330	–	280	0.36	0.6	165	0.32	0.6	265	0.36	0.6	–	–	–	70	0.25	0.5	–	–	–
	M8340	–	260	0.36	0.6	155	0.32	0.6	245	0.36	0.6	–	–	–	65	0.25	0.5	–	–	–
	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	–	–	–
	M8340	–	250	0.36	0.8	150	0.32	0.8	235	0.36	0.8	–	–	–	60	0.25	0.6	–	–	–
	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	–	–	–
	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	–	–	–
	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	–	–	–
	M8345	–	185	0.36	1.6	110	0.32	1.6	–	–	–	–	–	–	45	0.25	1.3	–	–	–
			R geometria s ostrým mierne pozitívnym prevedením pre ľahké až stredné obrábanie.																	
ZP 16ER-R	M8345	–	190	0.45	0.8	110	0.41	0.8	–	–	–	–	–	–	45	0.32	0.6	–	–	–
ZP 20ER-R	M8345	–	185	0.45	1.0	110	0.41	1.0	–	–	–	–	–	–	45	0.32	0.8	–	–	–

Vhodnosť a štartovacie hodnoty pre reznú rýchlosť (vc), posuv (f) a hĺbku rezu (ap). Ďalšie možnosti výpočtov rezných parametrov nájdete v našej aplikácii Machining Calculator.

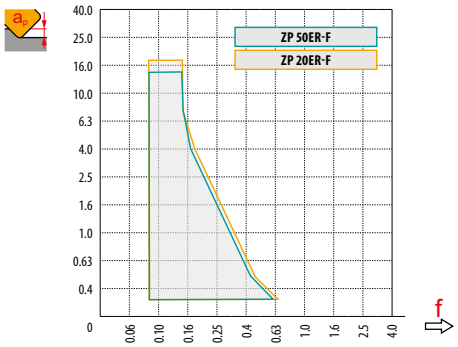
Produkt		RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
			U E																	
			R geometria s ostrým mierne pozitívnym prevedením pre ľahké až stredné obrábanie.																	
ZP 25ER-R	**M8345**	–	■ 180	0.45	1.3	■ 105	0.41	1.3	–	–	–	–	–	–	◩ 45	0.32	1.0	–	–	–
ZP 32ER-R	**M8330**	–	■ 240	0.45	1.6	■ 140	0.41	1.6	◩ 225	0.45	1.6	–	–	–	◩ 60	0.32	1.3	◩ 45	0.15	1.0
	M8345	–	■ 175	0.45	1.6	■ 105	0.41	1.6	–	–	–	–	–	–	◩ 40	0.32	1.3	–	–	–
ZP 40ER-R	**M8345**	–	■ 170	0.45	2.0	■ 100	0.41	2.0	–	–	–	–	–	–	◩ 40	0.32	1.6	–	–	–
ZP 50ER-R	**M8345**	–	■ 165	0.45	2.5	■ 95	0.41	2.5	–	–	–	–	–	–	◩ 40	0.32	2.0	–	–	–

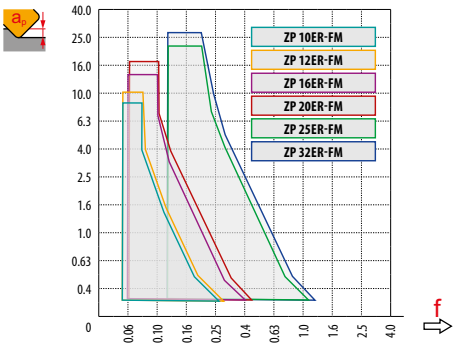
a_e / DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ X.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
⇨ X.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79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

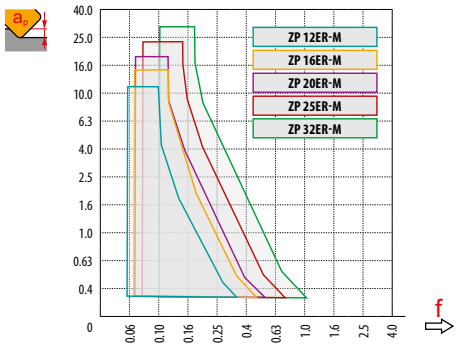
	ZP 20-F	ZP 50-F	ZP 10-FM	ZP 12-FM	ZP 16-FM	ZP 20-FM	ZP 25-FM	ZP 32-FM
RE	10.0	25.0	5.0	6.0	8.0	10.0	12.5	16.0
BS	–	–	–	–	–	–	–	–

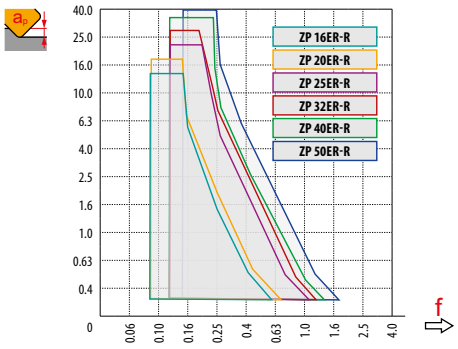
	ZP 12-M	ZP 16-M	ZP 20-M	ZP 25-M	ZP 32-M
RE	6.0	8.0	10.0	12.5	16.0
BS	–	–	–	–	–

	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	–	–	–	–	–	–

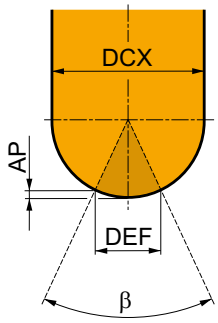








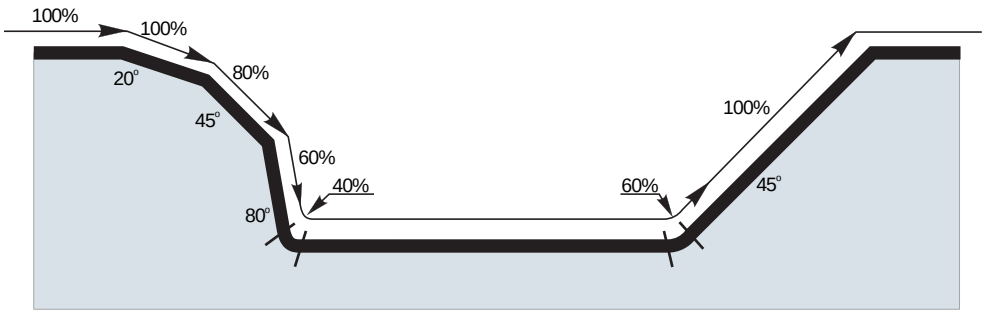
DCX	a_p	0.30	0.40	0.50	0.70	1.00	1.25	1.50	2.00	2.50	3.00	4.00	5.00	6.00	8.00	10.00	12.00	15.00	16.00	20.00	22.50	25.00
10	DEF	3.4	3.9	4.4	5.1	6.0	6.6	7.1	8.0	8.7	9.2	9.8	10.0	–	–	–	–	–	–	–	–	–
12		3.7	4.3	4.8	5.6	6.6	7.3	7.9	8.9	9.7	10.4	11.3	11.8	12.0	–	–	–	–	–	–	–	–
16		4.3	5.0	5.6	6.5	7.7	8.6	9.3	10.6	11.6	12.5	13.9	14.8	15.5	16.0	–	–	–	–	–	–	–
20		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



Vyloženie (násobky priemeru *DCX*)	< 3.0	3.0 – 3.5	3.6 – 4.0	4.1 – 4.5	> 4.6
Násobný koeficient pre rýchlosť	1.0	0.9	0.8	0.7	0.5

K3-CXP

P M K S H

PRAMET

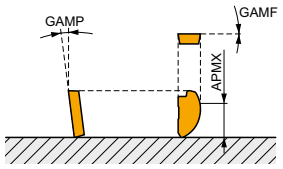
C

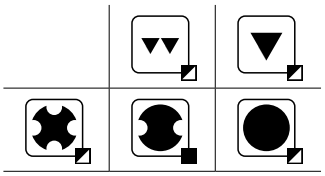
MULTISIDE XP guľová kopírovacia fréza

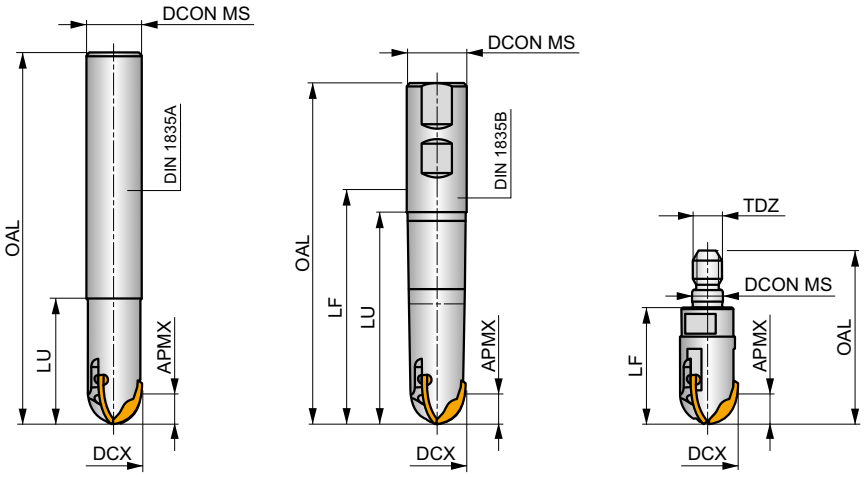
Guľová fréza na doštičky XP.. s APMX 8 až 16 mm. Unikátny spôsob upínania umožňuje použitie až troch doštičiek. Dostupná v prevedení s valcovou a modulárnou stopkou, s priemermi v rozsahu Ø 16 až Ø 32 mm. Teleso je povrchovo upravené pre predĺženie životnosti nástroja.

MULTISIDE XP

APMX	8.0 – 16.0 mm







h_m 0.05 – 0.19

	Produkt	DCX (mm)	OAL (mm)	DCON MS (mm)	LU (mm)	LUX (mm)	LF (mm)	TDZ	APMX (mm)	GAMF (°)	GAMP (°)			max.		kg		
DIN 1835A	**16K3R050A16-CXP16**	16	200	16	50	–	–	–	8.00	0	-5	3	–	22600	–	0.36	GI267	C0520
	16K3R050A20-CXP16	16	200	20	50	–	–	–	8.00	0	-5	3	–	22600	–	0.51	GI267	C0520
	20K3R050A20-CXP20	20	200	20	50	–	–	–	10.00	0	-5	3	–	20000	–	0.53	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
DIN 1835B	**16K3R060B20-CXP16**	16	111	20	60	–	86.5	–	8.00	0	-5	3	–	22600	–	0.24	GI267	C0520
	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
MODULAR	**16K3R035M08-CXP16**	16	–	8.5	–	–	35	M8	8.00	0	-5	3	–	–	–	0.07	GI267	C0520
	16K3R035M10-CXP16	16	–	10.5	–	–	35	M10	8.00	0	-5	3	–	–	–	0.07	GI267	C0520
	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
	32K3R055M16-CXP32	32	–	17	–	–	55	M16	16.00	0	-5	3	–	–	–	0.29	GI270	C0523

GI267	XP 16..
GI268	XP 20..
GI269	XP 25..
GI270	XP 32..

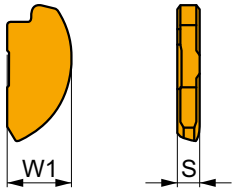
		Nm			
C0520	US 63009-T09P	1.2	M 3	9	Flag T09P
C0521	US 63513-T15P	3.0	M 3.5	12	Flag T15P

		Nm			
C0522	US 64014-T15P	3.5	M 4	14	Flag T15P
C0523	US 65017-T20P	5.0	M 5	17	Flag T20P

XP

PRAMET

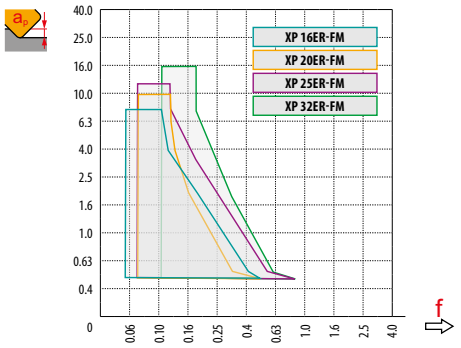
	W1 (mm)	S (mm)
16	16.000	2.00
20	20.000	2.50
25	25.000	3.17
32	32.000	4.00



Vhodnosť a štartovacie hodnoty pre reznú rýchlosť (vc), posuv (f) a hĺbku rezu (ap). Ďalšie možnosti výpočtov rezných parametrov nájdete v našej aplikácii Machining Calculator.

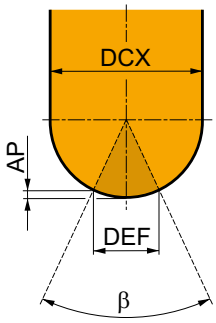
Produkt		RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
			FM geometria s neutrálnym prevedením pre ľahké obrábanie.																	
XP 16ER-FM	**M8310**	–	285	0.27	0.8	145	0.24	0.8	270	0.27	0.8	–	–	–	–	–	–	55	0.15	1.0
	M8330	–	265	0.27	0.8	155	0.24	0.8	250	0.27	0.8	–	–	–	65	0.19	0.6	50	0.15	1.0
	M8345	–	195	0.27	0.8	115	0.24	0.8	–	–	–	–	–	–	45	0.19	0.6	–	–	–
XP 20ER-FM	**M8310**	–	275	0.27	1.0	140	0.24	1.0	260	0.27	1.0	–	–	–	–	–	–	55	0.15	1.0
	M8330	–	260	0.27	1.0	155	0.24	1.0	245	0.27	1.0	–	–	–	65	0.19	0.8	50	0.15	1.0
	M8345	–	190	0.27	1.0	110	0.24	1.0	–	–	–	–	–	–	45	0.19	0.8	–	–	–
XP 25ER-FM	**M8310**	–	270	0.27	1.3	135	0.24	1.3	255	0.27	1.3	–	–	–	–	–	–	50	0.15	1.0
	M8330	–	250	0.27	1.3	150	0.24	1.3	235	0.27	1.3	–	–	–	60	0.19	1.0	50	0.15	1.0
XP 32ER-FM	**M8310**	–	265	0.27	1.6	135	0.24	1.6	250	0.27	1.6	–	–	–	–	–	–	50	0.15	1.0
	M8330	–	245	0.27	1.6	145	0.24	1.6	230	0.27	1.6	–	–	–	60	0.19	1.3	45	0.15	1.0
	M8345	–	180	0.27	1.6	105	0.24	1.6	–	–	–	–	–	–	45	0.19	1.3	–	–	–

	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	16.0	20.0	22.5	25.0
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	–	–	–	–

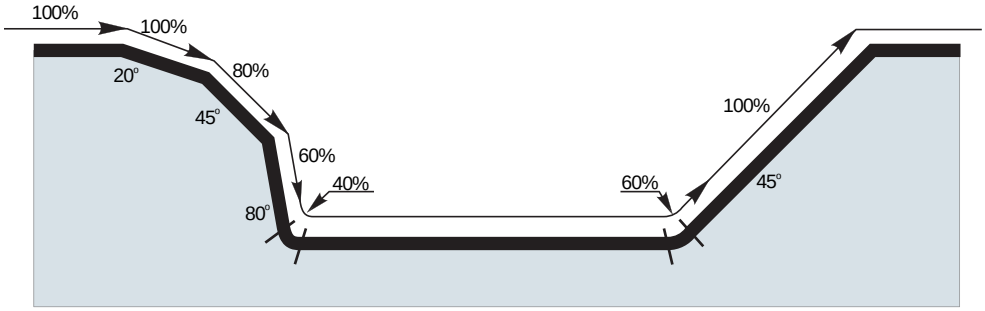
Efektívna oblasť pre 1 reznú hranu nástroja.



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



Vyloženie (násobky priemeru *DCX*)	< 3.0	3.1 – 4.0	4.1 – 6.0	> 6.1
Násobný koeficient pre rýchlosť	1.0	0.9	0.7	0.5

K2-SRC

P M K H

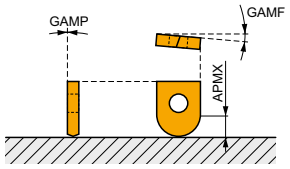
PRAMET

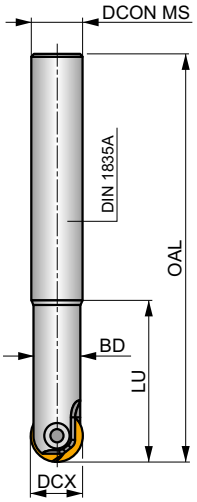
S

Kopírovacie stopkové frézy

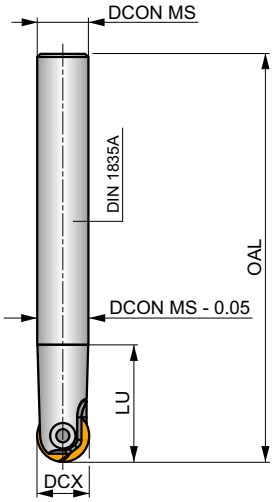
Univerzálna stopková fréza pre rôzne nástrojárske aplikácie a segment výroby foriem. Fréza je použiteľná pre guľové aj toroidné doštičky. Dostupná v prevedení s valcovou a modulárnou stopkou, s priemerom v rozsahu Ø 8 až Ø 20 mm. Teleso je povrchovo upravené pre predĺženie životnosti nástroja.

APMX	0.6 – 3.2 mm

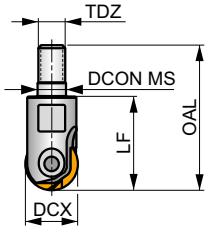




DCX 8 – 32 mm



DCX 8 – 20 mm



h_m 0.07 – 0.14

	Produkt	DCX (mm)	OAL (mm)	DCON MS (mm)	BD (mm)	LU (mm)	LF (mm)	TDZ			max.		kg		
DIN 1835A	08K2R025A10-SRC08-A	8	110	10	7.5	25	–	–	2	–	56000	–	0.09	GI030	C0530
	08K2R050A12-SRC08-A	8	140	12	–	13.5	–	–	2	–	56000	–	0.11	GI030	C0530
	10K2R030A12-SRC10-A	10	130	12	9	30	–	–	2	–	42000	–	0.11	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
	16K2R035A16-SRC16-A	16	140	16	14	35	–	–	2	–	22000	–	0.23	GI033	C0533
	20K2R045A20-SRC20-A	20	160	20	18	45	–	–	2	–	16000	–	0.40	GI034	C0534
	25K2R045A25-SRC25-A	25	160	25	22.4	45	–	–	2	–	10000	–	0.59	GI035	C0535
	32K2R060A32-SRC32-A	32	180	32	28.6	60	–	–	2	–	6000	–	1.10	GI036	C0536
	12K2R060A16-SRC12-A	12	160	16	–	24.5	–	–	2	–	35000	–	0.14	GI032	C0532
	16K2R065A20-SRC16-A	16	175	20	–	31.5	–	–	2	–	22000	–	0.41	GI033	C0533
	20K2R080A25-SRC20-A	20	190	25	–	33.5	–	–	2	–	16000	–	0.66	GI034	C0534
MODULAR	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
	12K2R30M06-SRC12-A	12	45	6.5	–	–	30	M6	2	–	–	–	0.16	GI125	C0530
	12K2R30M08-SRC12-A	12	48	8.5	–	–	30	M8	2	–	–	–	0.04	GI125	C0532
	16K2R35M08-SRC16-A	16	53	8.5	–	–	35	M8	2	–	–	–	0.05	GI033	C0533
	20K2R35M10-SRC20-A	20	54	10.5	–	–	35	M10	2	–	–	–	0.08	GI034	C0534

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

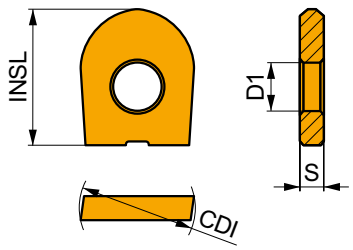
GI036	RC 32	RC 32-F	–	–	–	–
GI123	RC 08	RC 08-F	–	–	–	–
GI124	RC 10	RC 10-F	–	–	–	–
GI125	RC 12	RC 12-F	–	–	–	–

		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



Vhodnosť a štartovacie hodnoty pre reznú rýchlosť (vc), posuv (f) a hĺbku rezu (ap). Ďalšie možnosti výpočtov rezných parametrov nájdete v našej aplikácii Machining Calculator.

Produkt		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)
			Ú E																	
			Prevedenie s neutrálnym čelom a pozitívnou reznou hranou.																	
RC 08	**M4310**	–	◪ 255	0.36	0.4	–	–	–	■ 240	0.36	0.4	–	–	–	–	–	–	■ 50	0.15	1.0
	M8310	–	◪ 295	0.36	0.4	–	–	–	■ 280	0.36	0.4	–	–	–	–	–	–	■ 55	0.15	1.0
	M8330	–	◪ 275	0.36	0.4	–	–	–	■ 260	0.36	0.4	–	–	–	–	–	–	◪ 55	0.15	1.0
RC 10	**M4310**	–	◪ 250	0.36	0.5	–	–	–	■ 235	0.36	0.5	–	–	–	–	–	–	■ 50	0.15	1.0
	M8310	–	◪ 290	0.36	0.5	–	–	–	■ 275	0.36	0.5	–	–	–	–	–	–	■ 55	0.15	1.0
	M8330	–	◪ 270	0.36	0.5	–	–	–	■ 255	0.36	0.5	–	–	–	–	–	–	◪ 50	0.15	1.0
RC 12	**M4310**	–	◪ 245	0.36	0.6	–	–	–	■ 230	0.36	0.6	–	–	–	–	–	–	■ 45	0.15	1.0
	M8310	–	■ 285	0.36	0.6	–	–	–	■ 270	0.36	0.6	–	–	–	–	–	–	■ 55	0.15	1.0
	M8330	–	■ 265	0.36	0.6	–	–	–	■ 250	0.36	0.6	–	–	–	–	–	–	◪ 50	0.15	1.0
RC 16	**M4310**	–	◪ 235	0.36	0.8	–	–	–	■ 220	0.36	0.8	–	–	–	–	–	–	■ 45	0.15	1.0
	M8310	–	■ 275	0.36	0.8	–	–	–	■ 260	0.36	0.8	–	–	–	–	–	–	■ 55	0.15	1.0
	M8330	–	■ 255	0.36	0.8	–	–	–	■ 240	0.36	0.8	–	–	–	–	–	–	◪ 50	0.15	1.0
RC 20	**M4310**	–	◪ 235	0.36	1.0	–	–	–	■ 220	0.36	1.0	–	–	–	–	–	–	■ 45	0.15	1.0
	M8310	–	■ 270	0.36	1.0	–	–	–	■ 255	0.36	1.0	–	–	–	–	–	–	■ 50	0.15	1.0
	M8330	–	■ 250	0.36	1.0	–	–	–	■ 235	0.36	1.0	–	–	–	–	–	–	◪ 50	0.15	1.0
RC 25	**M4310**	–	◪ 225	0.36	1.3	–	–	–	■ 210	0.36	1.3	–	–	–	–	–	–	■ 45	0.15	1.0
	M8310	–	■ 260	0.36	1.3	–	–	–	■ 245	0.36	1.3	–	–	–	–	–	–	■ 50	0.15	1.0
	M8330	–	■ 245	0.36	1.3	–	–	–	■ 230	0.36	1.3	–	–	–	–	–	–	◪ 45	0.15	1.0
RC 32	**M4310**	–	◪ 220	0.36	1.6	–	–	–	■ 205	0.36	1.6	–	–	–	–	–	–	■ 40	0.15	1.0
	M8330	–	■ 240	0.36	1.6	–	–	–	■ 225	0.36	1.6	–	–	–	–	–	–	◪ 45	0.15	1.0

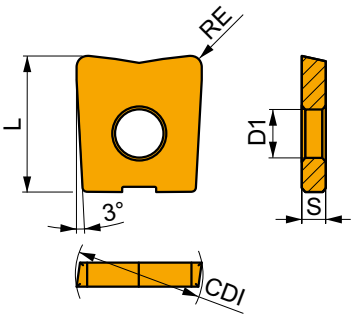
Vhodnosť a štartovacie hodnoty pre reznú rýchlosť (vc), posuv (f) a hĺbku rezu (ap). Ďalšie možnosti výpočtov rezných parametrov nájdete v našej aplikácii Machining Calculator.

Produkt		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 geometria je ostrá a vhodná pre dokončovacie obrábanie.																	
RC 08-F	M4310	–	255	0.36	0.4	130	0.32	0.4	240	0.36	0.4	–	–	–	–	–	–	50	0.15	1.0
RC 10-F	M4310	–	250	0.36	0.5	125	0.32	0.5	235	0.36	0.5	–	–	–	–	–	–	50	0.15	1.0
RC 12-F	M4310	–	245	0.36	0.6	120	0.32	0.6	230	0.36	0.6	–	–	–	–	–	–	45	0.15	1.0
RC 16-F	M4310	–	235	0.36	0.8	115	0.32	0.8	220	0.36	0.8	–	–	–	–	–	–	45	0.15	1.0
	M8330	–	255	0.36	0.8	150	0.32	0.8	240	0.36	0.8	–	–	–	–	–	–	50	0.15	1.0
RC 20-F	M4310	–	235	0.36	1.0	115	0.32	1.0	220	0.36	1.0	–	–	–	–	–	–	45	0.15	1.0
	M8330	–	250	0.36	1.0	150	0.32	1.0	235	0.36	1.0	–	–	–	–	–	–	50	0.15	1.0

LC

PRAMET

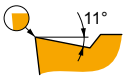
	CDI (mm)	D1 (mm)	L (mm)	S (mm)
08	8.0	3.00	9.50	2.00
10	10.0	4.00	11.50	2.50
12	12.0	5.00	14.00	2.50
16	16.0	5.00	16.00	3.00
20	20.0	5.00	18.00	3.00



Vhodnosť a štartovacie hodnoty pre reznú rýchlosť (vc), posuv (f) a hĺbku rezu (ap). Ďalšie možnosti výpočtov rezných parametrov nájdete v našej aplikácii Machining Calculator.

Produkt		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 geometria s neutrálnym uhlom čela pre ľahké až stredné obrábanie.																	
LC 0806-KP	M4310	0.6	280	0.16	0.3	–	–	–	265	0.16	0.3	–	–	–	–	–	–	55	0.15	1.0
	M8310	0.6	325	0.16	0.3	–	–	–	305	0.16	0.3	–	–	–	–	–	–	65	0.15	1.0
	M8330	0.6	295	0.16	0.3	–	–	–	280	0.16	0.3	–	–	–	–	–	–	55	0.15	1.0
LC 0810-KP	M4310	1.0	280	0.16	0.5	–	–	–	265	0.16	0.5	–	–	–	–	–	–	55	0.15	1.0
	M8310	1.0	325	0.16	0.5	–	–	–	305	0.16	0.5	–	–	–	–	–	–	65	0.15	1.0
LC 1008-KP	M4310	0.8	270	0.16	0.4	–	–	–	255	0.16	0.4	–	–	–	–	–	–	50	0.15	1.0
	M8310	0.8	315	0.16	0.4	–	–	–	295	0.16	0.4	–	–	–	–	–	–	60	0.15	1.0
	M8330	0.8	290	0.16	0.4	–	–	–	275	0.16	0.4	–	–	–	–	–	–	55	0.15	1.0
LC 1010-KP	M4310	1.0	280	0.16	0.5	–	–	–	265	0.16	0.5	–	–	–	–	–	–	55	0.15	1.0
	M8310	1.0	325	0.16	0.5	–	–	–	305	0.16	0.5	–	–	–	–	–	–	65	0.15	1.0
	M8330	1.0	295	0.16	0.5	–	–	–	280	0.16	0.5	–	–	–	–	–	–	55	0.15	1.0
LC 1210-KP	M4310	1.0	280	0.16	0.5	–	–	–	265	0.16	0.5	–	–	–	–	–	–	55	0.15	1.0
	M8310	1.0	325	0.16	0.5	–	–	–	305	0.16	0.5	–	–	–	–	–	–	65	0.15	1.0
	M8330	1.0	295	0.16	0.5	–	–	–	280	0.16	0.5	–	–	–	–	–	–	55	0.15	1.0
LC 1220-KP	M4310	2.0	285	0.16	1.0	–	–	–	270	0.16	1.0	–	–	–	–	–	–	55	0.15	1.0
LC 1610-KP	M4310	1.0	280	0.16	0.5	–	–	–	265	0.16	0.5	–	–	–	–	–	–	55	0.15	1.0
	M8310	1.0	325	0.16	0.5	–	–	–	305	0.16	0.5	–	–	–	–	–	–	65	0.15	1.0
	M8330	1.0	295	0.16	0.5	–	–	–	280	0.16	0.5	–	–	–	–	–	–	55	0.15	1.0
LC 1613-KP	M4310	1.3	270	0.16	0.7	–	–	–	255	0.16	0.7	–	–	–	–	–	–	50	0.15	1.0
	M8310	1.3	315	0.16	0.7	–	–	–	295	0.16	0.7	–	–	–	–	–	–	60	0.15	1.0
LC 1630-KP	M4310	3.0	270	0.16	1.5	–	–	–	255	0.16	1.5	–	–	–	–	–	–	50	0.15	1.0
LC 2010-KP	M4310	1.0	280	0.16	0.5	–	–	–	265	0.16	0.5	–	–	–	–	–	–	55	0.15	1.0
	M8310	1.0	325	0.16	0.5	–	–	–	305	0.16	0.5	–	–	–	–	–	–	65	0.15	1.0
	M8330	1.0	295	0.16	0.5	–	–	–	280	0.16	0.5	–	–	–	–	–	–	55	0.15	1.0

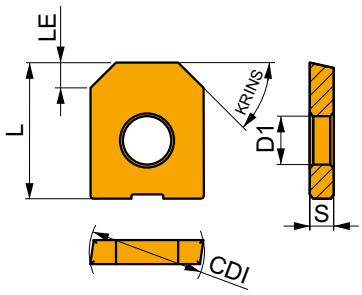
Vhodnosť a štartovacie hodnoty pre reznú rýchlosť (vc), posuv (f) a hĺbku rezu (ap). Ďalšie možnosti výpočtov rezných parametrov nájdete v našej aplikácii Machining Calculator.

Produkt		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 geometria s neutrálnym uhlom čela pre ľahké až stredné obrábanie.																				
LC 2016-KP	M4310	1.6	280	0.16	0.8	–	–	–	265	0.16	0.8	–	–	–	–	–	–	55	0.15	1.0
	M8310	1.6	325	0.16	0.8	–	–	–	305	0.16	0.8	–	–	–	–	–	–	65	0.15	1.0
LC 2040-KP	M8330	4.0	285	0.16	2.0	–	–	–	270	0.16	2.0	–	–	–	–	–	–	55	0.15	1.0
																				
KPF geometria s pozitívnym prevedením pre ľahké až stredné obrábanie.																				
LC 0806-KPF	M4310	0.6	280	0.16	0.3	140	0.14	0.3	265	0.16	0.3	–	–	–	–	–	–	55	0.15	1.0
LC 1008-KPF	M4310	0.8	270	0.16	0.4	135	0.14	0.4	255	0.16	0.4	–	–	–	–	–	–	50	0.15	1.0
LC 1210-KPF	M4310	1.0	280	0.16	0.5	140	0.14	0.5	265	0.16	0.5	–	–	–	–	–	–	55	0.15	1.0
	M8330	1.0	295	0.16	0.5	175	0.14	0.5	280	0.16	0.5	–	–	–	–	–	–	55	0.15	1.0
LC 1613-KPF	M4310	1.3	270	0.16	0.7	135	0.14	0.7	255	0.16	0.7	–	–	–	–	–	–	50	0.15	1.0
LC 2016-KPF	M4310	1.6	280	0.16	0.8	140	0.14	0.8	265	0.16	0.8	–	–	–	–	–	–	55	0.15	1.0

LC 12-CH

PRAMET

	CDI (mm)	D1 (mm)	L (mm)	S (mm)
1245	12.0	5.00	14.00	2.50

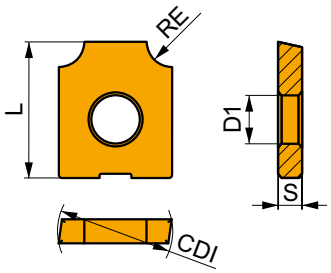


Vhodnosť a štartovacie hodnoty pre reznú rýchlosť (vc), posuv (f) a hĺbku rezu (ap). Ďalšie možnosti výpočtov rezných parametrov nájdete v našej aplikácii Machining Calculator.

Produkt		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)
CH geometria s neutrálnym uhlom čela pre ľahké až stredné obrábanie.																				
LC 1245-CH	M4310	–	225	0.20	2.0	–	–	–	210	0.20	2.0	–	–	–	–	–	–	45	0.15	1.0

LC 12-RE

	CDI (mm)	D1 (mm)	L (mm)	S (mm)
12	12.0	5.00	14.00	2.50



Vhodnosť a štartovacie hodnoty pre reznú rýchlosť (vc), posuv (f) a hĺbku rezu (ap). Ďalšie možnosti výpočtov rezných parametrov nájdete v našej aplikácii Machining Calculator.

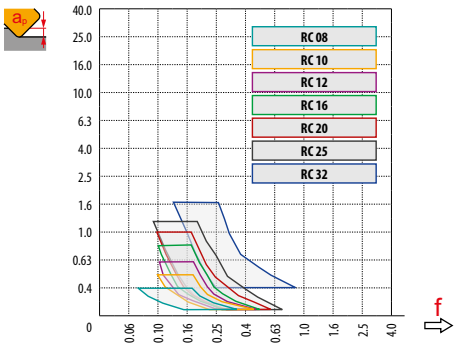
Produkt		RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
			U E RE geometria s neutrálnym uhlom čela pre ľahké až stredné obrábanie.																	
LC 1220-RE	**M4310**	2.0	295	0.10	2.0	–	–	–	280	0.10	2.0	–	–	–	–	–	–	55	0.15	1.0
LC 1230-RE	**M4310**	3.0	285	0.10	3.0	–	–	–	270	0.10	3.0	–	–	–	–	–	–	55	0.15	1.0

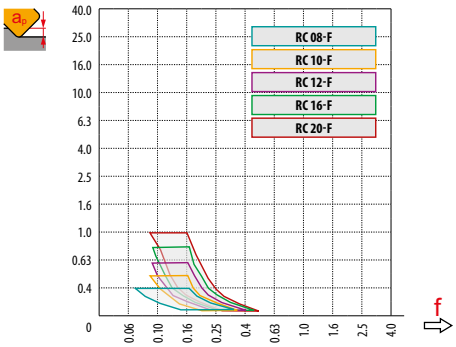
	RC 08	RC 10	RC 12	RC 16	RC 20	RC 25	RC 32
RE	4.0	5.0	6.0	8.0	10.0	12.5	16.0
BS	–	–	–	–	–	–	–

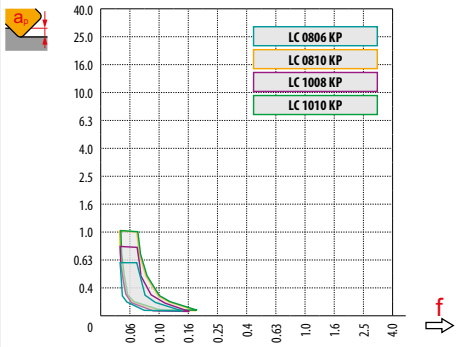
	RC 08-F	RC 10-F	RC 12-F	RC 16-F	RC 20-F
RE	4.0	5.0	6.0	8.0	10.0
BS	–	–	–	–	–

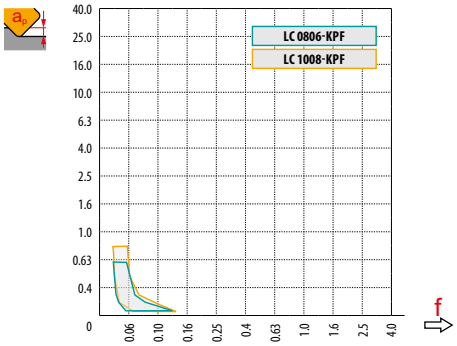
	LC 08-KP	LC 08-KP	LC 10-KP	LC 10-KP	LC 08-KPF	LC 10-KPF
RE	0.6	1.0	0.8	1.0	0.6	0.8
BS	–	–	–	–	–	–

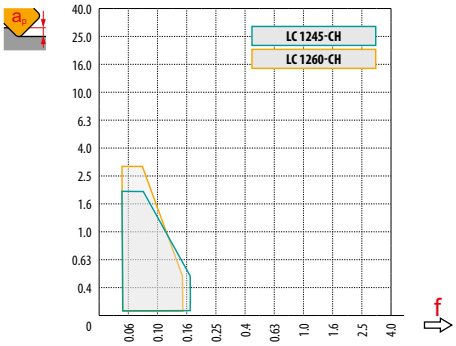
	LC 1245-CH	LC 1260-CH	LC 1210-RE	LC 1220-RE	LC 1230-RE
RE	3×45	5×60	1.0	2.0	3.0
BS	–	–	–	–	–

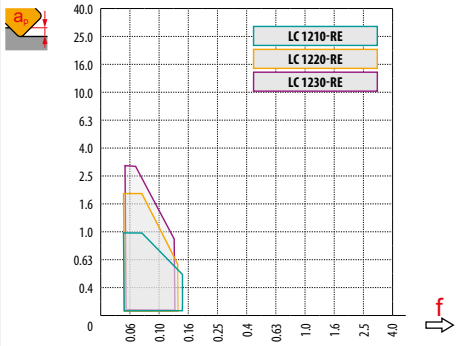








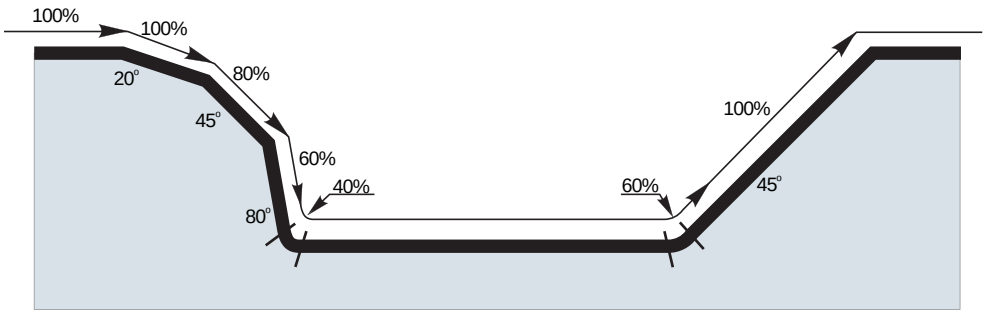




	DCX	a_p	0.3	0.4	0.5	0.7	1.0	1.25	1.5	2.0	2.5	3.0	4.0	5.0	6.0	8.0	10.0	12.0	15.0	16.0
RC 08 / RC 08-F	8	DEF	3.0	3.5	3.9	4.5	5.3	5.8	6.2	6.9	7.4	7.7	8.0	–	–	–	–	–	–	–
RC 10 / RC 10-F	10		3.4	3.9	4.4	5.1	6.0	6.6	7.1	8.0	8.7	9.2	9.8	10.0	–	–	–	–	–	–
RC 12 / RC 12-F	12		3.7	4.3	4.8	5.6	6.6	7.3	7.9	8.9	9.7	10.4	11.3	11.8	12.0	–	–	–	–	–
RC 16 / RC 16-F	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	–	–	–	–
RC 20 / RC 20-F	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	–	–	–
RC 25 / RC 25-F	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	–	–
RC 32 / RC 32-F	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
RC 08 / RC 08-F	8	FE	0.310	0.400	0.566	0.693	0.800	0.980	1.131	1.265	1.386	1.600	1.789
RC 10 / RC 10-F	10		0.346	0.447	0.632	0.775	0.894	1.095	1.265	1.414	1.549	1.789	2.000
RC 12 / RC 12-F	12		0.379	0.490	0.693	0.849	0.980	1.200	1.386	1.549	1.697	1.960	2.191
RC 16 / RC 16-F	16	FE	0.438	0.566	0.800	0.980	1.131	1.386	1.600	1.789	1.960	2.263	2.530
RC 20 / RC 20-F	20		0.490	0.632	0.894	1.095	1.265	1.549	1.789	2.000	2.191	2.530	2.828
RC 25 / RC 25-F	25		0.548	0.707	1.000	1.225	1.414	1.732	2.000	2.236	2.449	2.828	3.162
RC 32 / RC 32-F	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



	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	–	–	–	–	–	–
LC 1245-CH	12	3×45	8.0	8.6	8.8	9.0	9.2	9.4	9.6	9.8	10.0	10.5	11.0	12.0	–	–	–
LC 1260-CH		5×60	9.7	10.0	10.2	10.3	10.4	10.5	10.6	10.7	10.8	11.1	11.4	12.0	–	–	–
LC 1210-RE		1.0	10.0	10.1	10.2	10.3	10.4	10.6	10.8	11.1	12.0	–	–	–	–	–	–
LC 1220-RE		2.0	8.0	8.0	8.1	8.1	8.2	8.3	8.3	8.4	8.5	8.9	9.4	12.0	–	–	–
LC 1230-RE		3.0	6.0	6.0	6.1	6.1	6.1	6.2	6.2	6.3	6.3	6.5	6.8	7.5	8.7	12.0	–

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
LC 1245-CH	12	3×45	–
LC 1260-CH		5×60	–
LC 1210-RE		1.0	–
LC 1220-RE		2.0	–
LC 1230-RE		3.0	–

	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
LC 1245-CH	12	3×45	–	–
LC 1260-CH		5×60	–	–
LC 1210-RE		1.0	–	–
LC 1220-RE		2.0	–	–
LC 1230-RE		3.0	–	–

	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
LC 1245-CH	**12**	3×45	–	–	–	–
LC 1260-CH		5×60	–	–	–	–
LC 1210-RE		1.0	–	–	–	–
LC 1220-RE		2.0	–	–	–	–
LC 1230-RE		3.0	–	–	–	–

	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
LC 1245-CH	**12**	3×45	–
LC 1260-CH		5×60	–
LC 1210-RE		1.0	–
LC 1220-RE		2.0	–
LC 1230-RE		3.0	–

	DCX	Skosenie	Koeficient pre rýchlosť	Posuv pre *APMX*
LC 1245-CH	**12**	3 × 45	1.26	0.21
LC 1260-CH		5 × 60	1.26	0.21

Vyloženie (násobky priemeru *DCX*)	**< 3.0**	**3.0 – 3.5**	**3.6 – 4.0**	**4.1 – 4.5**	**> 4.6**
Násobný koeficient pre rýchlosť	1.0	0.9	0.8	0.7	0.5

K2-SLC

P M K H

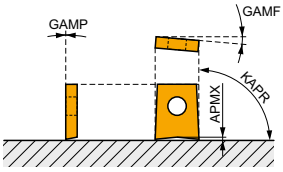
PRAMET

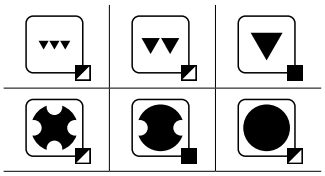
S

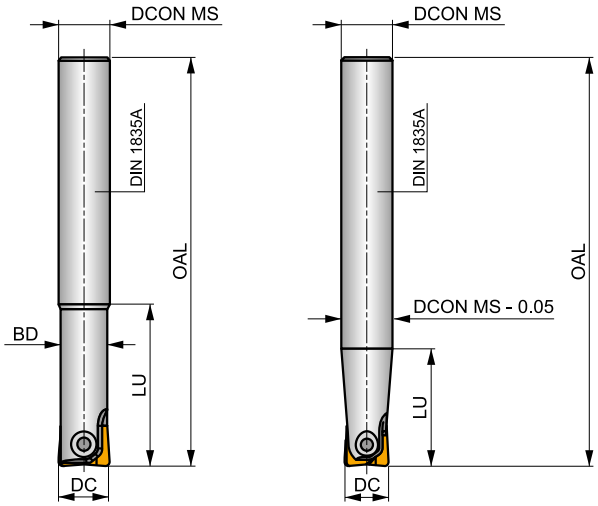
Kopírovacie stopkové frézy pre dokončovanie

Stopková fréza pre dokončovacie operácie v rôznych druhoch aplikácií pre doštičky LC. Precízne brúsené doštičky poskytujú excelentnú presnosť. Vhodná pre kopírovacie, zrážacie, špirálové, odvŕtavacie a zanorovacie frézovanie. Dostupná iba v prevedení s valcovou stopkou, s priemermi v rozsahu Ø 12 až Ø 20 mm. Teleso je povrchovo upravené pre predĺženie životnosti nástroja.

APMX	1.0 – 3.0 mm







DC 12 - 16 mm

DC 20 mm

h_m 0.03 – 0.10

	Produkt	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

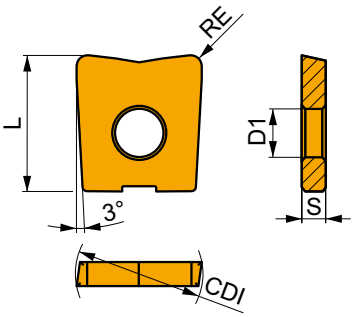
GI037	LC 12-KP	LC 12-KPF
GI038	LC 16-KP	LC 16-KPF
GI039	LC 20-KP	LC 20-KPF

		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

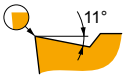
LC

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
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



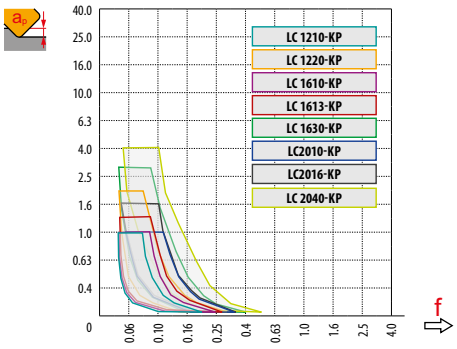
Vhodnosť a štartovacie hodnoty pre reznú rýchlosť (vc), posuv (f) a hĺbku rezu (ap). Ďalšie možnosti výpočtov rezných parametrov nájdete v našej aplikácii Machining Calculator.

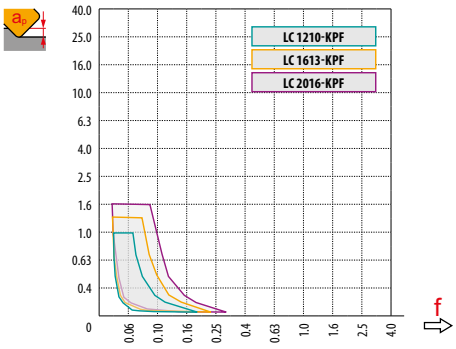
Produkt		RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
			U E																	
			KP geometria s neutrálnym uhlom čela pre ľahké až stredné obrábanie.																	
LC 0806-KP	M4310	0.6	◪ 280	0.16	0.3	–	–	–	■ 265	0.16	0.3	–	–	–	–	–	–	■ 55	0.15	1.0
	M8310	0.6	■ 325	0.16	0.3	–	–	–	■ 305	0.16	0.3	–	–	–	–	–	–	■ 65	0.15	1.0
	M8330	0.6	■ 295	0.16	0.3	–	–	–	■ 280	0.16	0.3	–	–	–	–	–	–	◪ 55	0.15	1.0
LC 0810-KP	M4310	1.0	◪ 280	0.16	0.5	–	–	–	■ 265	0.16	0.5	–	–	–	–	–	–	■ 55	0.15	1.0
	M8310	1.0	■ 325	0.16	0.5	–	–	–	■ 305	0.16	0.5	–	–	–	–	–	–	■ 65	0.15	1.0
LC 1008-KP	M4310	0.8	◪ 270	0.16	0.4	–	–	–	■ 255	0.16	0.4	–	–	–	–	–	–	■ 50	0.15	1.0
	M8310	0.8	■ 315	0.16	0.4	–	–	–	■ 295	0.16	0.4	–	–	–	–	–	–	■ 60	0.15	1.0
	M8330	0.8	■ 290	0.16	0.4	–	–	–	■ 275	0.16	0.4	–	–	–	–	–	–	◪ 55	0.15	1.0
LC 1010-KP	M4310	1.0	◪ 280	0.16	0.5	–	–	–	■ 265	0.16	0.5	–	–	–	–	–	–	■ 55	0.15	1.0
	M8310	1.0	■ 325	0.16	0.5	–	–	–	■ 305	0.16	0.5	–	–	–	–	–	–	■ 65	0.15	1.0
	M8330	1.0	■ 295	0.16	0.5	–	–	–	■ 280	0.16	0.5	–	–	–	–	–	–	◪ 55	0.15	1.0
LC 1210-KP	M4310	1.0	◪ 280	0.16	0.5	–	–	–	■ 265	0.16	0.5	–	–	–	–	–	–	■ 55	0.15	1.0
	M8310	1.0	■ 325	0.16	0.5	–	–	–	■ 305	0.16	0.5	–	–	–	–	–	–	■ 65	0.15	1.0
	M8330	1.0	■ 295	0.16	0.5	–	–	–	■ 280	0.16	0.5	–	–	–	–	–	–	◪ 55	0.15	1.0
LC 1220-KP	M4310	2.0	◪ 285	0.16	1.0	–	–	–	■ 270	0.16	1.0	–	–	–	–	–	–	■ 55	0.15	1.0
LC 1610-KP	M4310	1.0	◪ 280	0.16	0.5	–	–	–	■ 265	0.16	0.5	–	–	–	–	–	–	■ 55	0.15	1.0
	M8310	1.0	■ 325	0.16	0.5	–	–	–	■ 305	0.16	0.5	–	–	–	–	–	–	■ 65	0.15	1.0
	M8330	1.0	■ 295	0.16	0.5	–	–	–	■ 280	0.16	0.5	–	–	–	–	–	–	◪ 55	0.15	1.0
LC 1613-KP	M4310	1.3	◪ 270	0.16	0.7	–	–	–	■ 255	0.16	0.7	–	–	–	–	–	–	■ 50	0.15	1.0
	M8310	1.3	■ 315	0.16	0.7	–	–	–	■ 295	0.16	0.7	–	–	–	–	–	–	■ 60	0.15	1.0
LC 1630-KP	M4310	3.0	◪ 270	0.16	1.5	–	–	–	■ 255	0.16	1.5	–	–	–	–	–	–	■ 50	0.15	1.0
LC 2010-KP	M4310	1.0	◪ 280	0.16	0.5	–	–	–	■ 265	0.16	0.5	–	–	–	–	–	–	■ 55	0.15	1.0
	M8310	1.0	■ 325	0.16	0.5	–	–	–	■ 305	0.16	0.5	–	–	–	–	–	–	■ 65	0.15	1.0
	M8330	1.0	■ 295	0.16	0.5	–	–	–	■ 280	0.16	0.5	–	–	–	–	–	–	◪ 55	0.15	1.0
LC 2016-KP	M4310	1.6	◪ 280	0.16	0.8	–	–	–	■ 265	0.16	0.8	–	–	–	–	–	–	■ 55	0.15	1.0
	M8310	1.6	■ 325	0.16	0.8	–	–	–	■ 305	0.16	0.8	–	–	–	–	–	–	■ 65	0.15	1.0
LC 2040-KP	M8330	4.0	■ 285	0.16	2.0	–	–	–	■ 270	0.16	2.0	–	–	–	–	–	–	◪ 55	0.15	1.0
			F																	
			KPF geometria s pozitívnym prevedením pre ľahké až stredné obrábanie.																	
LC 0806-KPF	M4310	0.6	◪ 280	0.16	0.3	◪ 140	0.14	0.3	■ 265	0.16	0.3	–	–	–	–	–	–	■ 55	0.15	1.0
LC 1008-KPF	M4310	0.8	◪ 270	0.16	0.4	◪ 135	0.14	0.4	■ 255	0.16	0.4	–	–	–	–	–	–	■ 50	0.15	1.0
LC 1210-KPF	M4310	1.0	◪ 280	0.16	0.5	◪ 140	0.14	0.5	■ 265	0.16	0.5	–	–	–	–	–	–	■ 55	0.15	1.0
	M8330	1.0	■ 295	0.16	0.5	◪ 175	0.14	0.5	■ 280	0.16	0.5	–	–	–	–	–	–	◪ 55	0.15	1.0
LC 1613-KPF	M4310	1.3	◪ 270	0.16	0.7	◪ 135	0.14	0.7	■ 255	0.16	0.7	–	–	–	–	–	–	■ 50	0.15	1.0
LC 2016-KPF	M4310	1.6	◪ 280	0.16	0.8	◪ 140	0.14	0.8	■ 265	0.16	0.8	–	–	–	–	–	–	■ 55	0.15	1.0

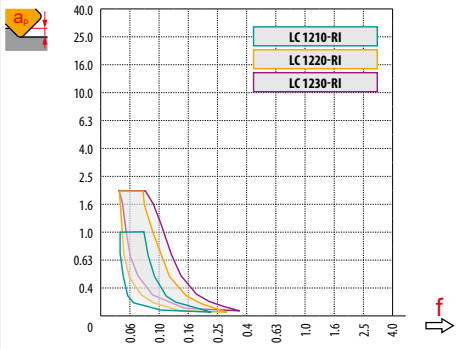
a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
⇨ x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
⇨ x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

	LC 12-KP	LC 12-KP	LC 16-KP	LC 16-KP	LC 16-KP	LC 20-KP	LC 20-KP	LC 20-KP
RE	1.0	2.0	1.0	1.3	3.0	1.0	1.6	4.0
BS	–	–	–	–	–	–	–	–

	LC 12-KPF	LC 16-KPF	LC 20-KP	LC 1215-RI	LC 1220-RI	LC 1230-RI
RE	1.0	1.3	1.6	1.5	2.0	3.0
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 1220-KP		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	–	–	–
LC 1210-RI		1.0	10.0	11.4	11.6	11.7	11.8	11.9	12.0	12.0	12.0	–	–	–	–	–	–
LC 1220-RI		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	–	–	–
LC 1230-RI		3.0	6.0	8.6	9.0	9.3	9.6	9.9	10.1	10.3	10.5	10.9	11.2	11.7	11.9	–	–
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 1613-KPF		1.3	13.4	15.1	15.3	15.4	15.6	15.7	15.8	15.9	15.9	16.0	–	–	–	–	–
LC 1630-KP		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	–	–
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 2016-KPF		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	FE	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	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
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

	DC	RE	max
LC 1210-KP	12	1.0	4.8
LC 1210-KPF		1.0	4.4
LC 1220-KP		2.0	4.8
LC 1210-RI		1.0	–
LC 1220-RI		2.0	–
LC 1230-RI		3.0	–
LC 1610-KP	16	1.0	6.6
LC 1613-KP		1.3	6.6
LC 1613-KPF		1.3	5.9
LC 1630-KP		3.0	6.6
LC 2010-KP	20	1.0	8.5
LC 2016-KP		1.6	8.5
LC 2016-KPF		1.6	7.5
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 1220-KP		2.0	4.4	2.0/26
LC 1210-RI		1.0	–	–
LC 1220-RI		2.0	–	–
LC 1230-RI		3.0	–	–
LC 1610-KP	16	1.0	4.8	1.5/18
LC 1613-KP		1.3	4.8	1.5/18
LC 1613-KPF		1.3	3.8	1.5/23
LC 1630-KP		3.0	4.4	3.0/39
LC 2010-KP	20	1.0	5.0	1.5/18
LC 2016-KP		1.6	4.9	1.6/19
LC 2016-KPF		1.6	3.8	1.6/25
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 1220-KP		2.0	14.1	23.9	0.3	0.3
LC 1210-RI		1.0	–	–	–	–
LC 1220-RI		2.0	–	–	–	–
LC 1230-RI		3.0	–	–	–	–
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 1613-KPF		1.3	19.9	31.9	0.5	0.5
LC 1630-KP		3.0	18.6	31.9	0.4	0.4
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 2016-KPF		1.6	24.8	39.9	0.7	0.7
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 1220-KP		2.0	0.4
LC 1210-RI		1.0	–
LC 1220-RI		2.0	–
LC 1230-RI		3.0	–
LC 1610-KP	16	1.0	0.65
LC 1613-KP		1.3	0.62
LC 1613-KPF		1.3	0.53
LC 1630-KP		3.0	0.44
LC 2010-KP	20	1.0	0.85
LC 2016-KP		1.6	0.79
LC 2016-KPF		1.6	0.67
LC 2040-KP		4.0	0.54

Vyloženie (násobky priemeru *DCX*)	< 3.0	3 – 3.5	3.6 – 4.0	4.1 – 4.5	> 4.6
Násobný koeficient pre rýchlosť	1.0	0.9	0.8	0.7	0.5

K2-PPH

P M K S H

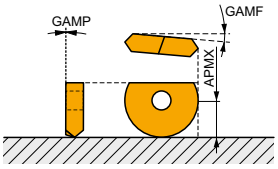
PRAMET

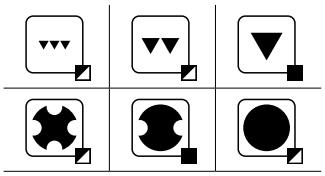
S

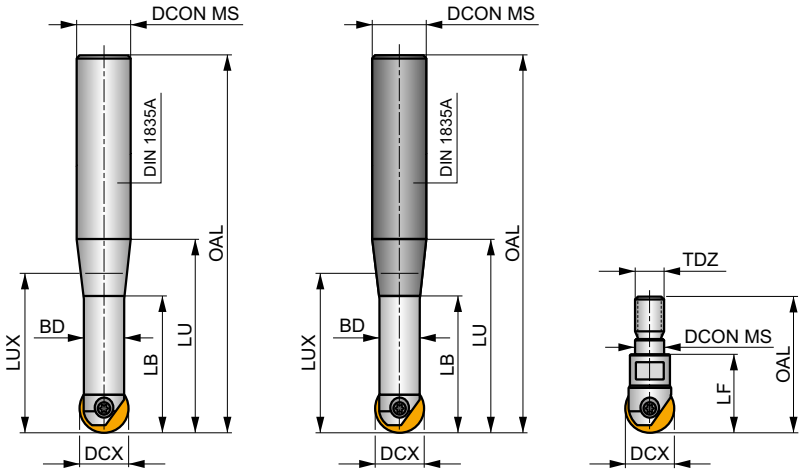
Kopírovacie stopkové frézy

Univerzálna stopková fréza pre rôzne nástrojárske aplikácie a segment výroby foriem. Fréza je použiteľná pre guľové, toroidné a vysokoposuvové doštičky. Precízne brúsené doštičky zabezpečujú vysokú presnosť obrábania. Dostupná v prevedení s valcovou a modulárnou stopkou, s priemerom v rozsahu Ø 8 až Ø 32 mm. Teleso je povrchovo upravené pre predĺženie životnosti nástroja.

APMX	0.3 – 4.0 mm







h_m 0.07 – 0.14

	Produkt	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	–	0.15	GI284	C0540
	PPH-08/02-QC12 – 132	8	132	12	6.5	19	75	41.8	–	–	–	16800	–	0.16	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	–	0.17	GI285	C0541
	PPH-12/02-QC16 – 145	12	145	16	10	22.5	85	63.3	–	–	–	19800	–	0.25	GI286	C0542
	PPH-16/02-QC20 – 166	16	166	20	14	29.5	100	75.5	–	–	–	20000	–	0.38	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	–	0.17	GI286	C0542
DIN 1835A	PPH-12/02-QC12 – 145	12	145	12	10	–	45	–	–	–	–	40000	–	0.20	GI286	C0542
	PPH-16/02-QC16 – 092	16	92	16	14	–	92	–	–	–	–	36000	–	0.21	GI287	C0543
	PPH-16/02-QC16 – 123	16	123	16	14	–	63	–	–	–	–	36000	–	0.24	GI287	C0543
	PPH-16/02-QC16 – 166	16	166	16	14	–	55	–	–	–	–	36000	–	0.31	GI287	C0543
	PPH-20/02-QC20 – 104	20	104	20	17	–	38	–	–	–	–	40000	–	0.35	GI288	C0544
	PPH-20/02-QC20 – 141	20	141	20	17	–	75	–	–	–	–	40000	–	0.41	GI288	C0544
	PPH-20/02-QC20 – 191	20	191	20	17	–	65	–	–	–	–	40000	–	0.54	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	–	0.24	GI284	C0540
	PPH-10/02-QC12 – 092HSCW	10	92	12	8	21.9	38.1	90.9	–	–	✓	40000	–	0.20	GI285	C0541

	Produkt	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-QC12 – 110HSCW**	10	110	12	8	21.8	53.1	41.4	–	–	✓	40000	–	0.22	GI285	C0541
	PPH-10/02-QC12 – 132HSCW	10	132	12	8	21.8	75.1	51.1	–	–	✓	23400	–	0.27	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	–	1.09	GI288	C0544
	PPH-08/02-QC08 – 130HSCW	8	130	8	6.5	–	20	–	–	–	✓	40000	–	0.17	GI284	C0540
	PPH-10/02-QC10 – 140HSCW	10	140	10	8	–	25	–	–	–	✓	40000	–	0.25	GI285	C0541
	PPH-12/02-QC12 – 083HSCW	12	83	12	10	–	26	–	–	–	✓	40000	–	0.23	GI286	C0542
	PPH-12/02-QC12 – 110HSCW	12	110	12	10	–	53	–	–	–	✓	40000	–	0.26	GI286	C0542
	PPH-16/02-QC16 – 092HSCW	16	92	16	14	–	32	–	–	–	✓	43000	–	0.32	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	–	–	–	0.14	GI287	C0543
	PPH-20/02 – 030-P10	20	–	10.5	–	–	–	–	30	M10	–	–	–	0.18	GI288	C0544

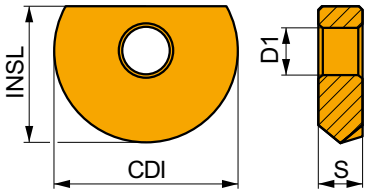
GI284	PPH 08..	–	PPHT 08..	PPHF 08..
GI285	PPH 10..	PPHE 10..	PPHT 10..	PPHF 10..
GI286	PPH 12..	PPHE 12..	PPHT 12..	PPHF 12..
GI287	PPH 16..	PPHE 16..	PPHT 16..	PPHF 16..
GI288	PPH 20..	PPHE 20..	PPHT 20..	PPHF 20..
GI289	PPH 25..	–	PPHT 25..	PPHF 25..
GI290	PPH 32..	–	–	–

		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

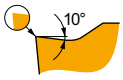
PPH

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



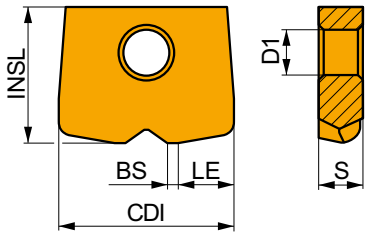
Vhodnosť a štartovacie hodnoty pre reznú rýchlosť (vc), posuv (f) a hĺbku rezu (ap). Ďalšie možnosti výpočtov rezných parametrov nájdete v našej aplikácii Machining Calculator.

Produkt		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 geometria s ostrým prevedením.																	
PPH 0800-CL1	2003	–	285	0.36	0.4	145	0.32	0.4	270	0.36	0.4	–	–	–	–	–	–	55	0.15	1.0
PPH 1000-CL1	2003	–	280	0.36	0.5	140	0.32	0.5	265	0.36	0.5	–	–	–	–	–	–	55	0.15	1.0
PPH 1200-CL1	2003	–	275	0.36	0.6	140	0.32	0.6	260	0.36	0.6	–	–	–	–	–	–	55	0.15	1.0
PPH 1600-CL1	2003	–	265	0.36	0.8	135	0.32	0.8	250	0.36	0.8	–	–	–	–	–	–	50	0.15	1.0
PPH 2000-CL1	2003	–	260	0.36	1.0	130	0.32	1.0	245	0.36	1.0	–	–	–	–	–	–	50	0.15	1.0
PPH 2500-CL1	2003	–	250	0.36	1.3	125	0.32	1.3	235	0.36	1.3	–	–	–	–	–	–	50	0.15	1.0
PPH 3000-CL1	2003	–	245	0.36	1.5	120	0.32	1.5	230	0.36	1.5	–	–	–	–	–	–	45	0.15	1.0
PPH 3200-CL1	2003	–	245	0.36	1.6	120	0.32	1.6	230	0.36	1.6	–	–	–	–	–	–	45	0.15	1.0
			CL4 geometria s ostrým prevedením pre prerušované rezy.																	
PPH 0800-CL4	8215	–	270	0.36	0.4	–	–	–	255	0.36	0.4	–	–	–	–	–	–	50	0.15	1.0
PPH 1000-CL4	8215	–	265	0.36	0.5	–	–	–	250	0.36	0.5	–	–	–	–	–	–	50	0.15	1.0
PPH 1200-CL4	8215	–	255	0.36	0.6	–	–	–	240	0.36	0.6	–	–	–	–	–	–	50	0.15	1.0
PPH 1600-CL4	8215	–	250	0.36	0.8	–	–	–	235	0.36	0.8	–	–	–	–	–	–	50	0.15	1.0
PPH 2000-CL4	8215	–	245	0.36	1.0	–	–	–	230	0.36	1.0	–	–	–	–	–	–	45	0.15	1.0
PPH 2500-CL4	8215	–	240	0.36	1.3	–	–	–	225	0.36	1.3	–	–	–	–	–	–	45	0.15	1.0
PPH 3000-CL4	8215	–	235	0.36	1.5	–	–	–	220	0.36	1.5	–	–	–	–	–	–	45	0.15	1.0
PPH 3200-CL4	8215	–	235	0.36	1.6	–	–	–	220	0.36	1.6	–	–	–	–	–	–	45	0.15	1.0
			SM1 geometria s ostrým prevedením.																	
PPHE 1000-SM1	8215	–	260	0.31	0.5	155	0.28	0.5	245	0.31	0.5	–	–	–	–	–	–	50	0.15	1.0
PPHE 1200-SM1	8215	–	245	0.36	0.6	145	0.32	0.6	230	0.36	0.6	–	–	–	–	–	–	45	0.15	1.0
PPHE 1600-SM1	8215	–	250	0.31	0.8	150	0.28	0.8	235	0.31	0.8	–	–	–	–	–	–	50	0.15	1.0
PPHE 2000-SM1	8215	–	240	0.31	1.0	140	0.28	1.0	225	0.31	1.0	–	–	–	–	–	–	45	0.15	1.0

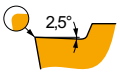
PPHF

PRAMET

	BS (mm)	LE (mm)	CDI (mm)	D1 (mm)	INSL (mm)	S (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
2500	1.20	7.90	25.0	6.00	18.5	6.00



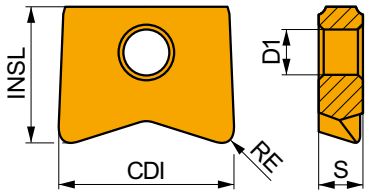
Vhodnosť a štartovacie hodnoty pre reznú rýchlosť (vc), posuv (f) a hĺbku rezu (ap). Ďalšie možnosti výpočtov rezných parametrov nájdete v našej aplikácii Machining Calculator.

Produkt		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 E																	
CE1 geometria so zosilneným prevedením pre vysokoposuvové obrábanie.																				
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	0.15	1.0
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	0.15	1.0
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	0.15	1.0
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	0.15	1.0
PPHF 200010-CE1	**M8330**	–	190	0.70	0.6	110	0.63	0.6	180	0.70	0.6	–	–	–	45	0.63	0.5	35	0.15	1.0
PPHF 250012-CE1	**M8330**	–	175	0.90	0.8	105	0.81	0.8	165	0.90	0.8	–	–	–	40	0.81	0.6	35	0.15	1.0

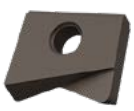
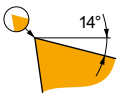
PPHT

PRAMET

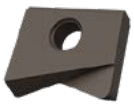
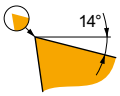
	CDI (mm)	D1 (mm)	INSL (mm)	S (mm)
0800	8.0	2.50	7.0	2.40
1000	10.0	3.00	8.5	2.60
1200	12.0	3.50	10.0	3.00
1600	16.0	4.00	12.0	4.00
2000	20.0	5.00	15.0	5.00
2500	25.0	6.00	18.5	6.00



Vhodnosť a štartovacie hodnoty pre reznú rýchlosť (vc), posuv (f) a hĺbku rezu (ap). Ďalšie možnosti výpočtov rezných parametrov nájdete v našej aplikácii Machining Calculator.

Produkt		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 F																	
A2 geometria s pozitívnym prevedením pre ľahké až stredné obrábanie.																				
PPHT 080003-A2	**2003**	0.3	275	0.10	0.3	140	0.09	0.3	260	0.10	0.3	–	–	–	–	–	–	55	0.15	1.0
PPHT 080005-A2	**2003**	0.5	270	0.13	0.3	135	0.12	0.3	255	0.13	0.3	–	–	–	–	–	–	50	0.15	1.0
PPHT 080008-A2	**2003**	0.8	305	0.14	0.4	155	0.13	0.4	285	0.14	0.4	–	–	–	–	–	–	60	0.15	1.0
PPHT 080010-A2	**2003**	1.0	315	0.14	0.5	160	0.13	0.5	295	0.14	0.5	–	–	–	–	–	–	60	0.15	1.0
PPHT 100005-A2	**2003**	0.5	270	0.13	0.3	135	0.12	0.3	255	0.13	0.3	–	–	–	–	–	–	50	0.15	1.0
PPHT 100008-A2	**2003**	0.8	305	0.14	0.4	155	0.13	0.4	285	0.14	0.4	–	–	–	–	–	–	60	0.15	1.0
PPHT 100010-A2	**2003**	1.0	315	0.14	0.5	160	0.13	0.5	295	0.14	0.5	–	–	–	–	–	–	60	0.15	1.0
PPHT 120005-A2	**2003**	0.5	270	0.13	0.3	135	0.12	0.3	255	0.13	0.3	–	–	–	–	–	–	50	0.15	1.0
PPHT 120010-A2	**2003**	1.0	315	0.14	0.5	160	0.13	0.5	295	0.14	0.5	–	–	–	–	–	–	60	0.15	1.0
PPHT 120020-A2	**2003**	2.0	320	0.14	1.0	160	0.13	1.0	300	0.14	1.0	–	–	–	–	–	–	60	0.15	1.0

Vhodnosť a štartovacie hodnoty pre reznú rýchlosť (vc), posuv (f) a hĺbku rezu (ap). Ďalšie možnosti výpočtov rezných parametrov nájdete v našej aplikácii Machining Calculator.

Produkt		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)
			U F																	
			A2 geometria s pozitívnym prevedením pre ľahké až stredné obrábanie.																	
PPHT 160010-A2	**2003**	1.0	◪ 315	0.14	0.5	◪ 160	0.13	0.5	■ 295	0.14	0.5	–	–	–	–	–	–	◪ 60	0.15	1.0
PPHT 160013-A2	**2003**	1.3	◪ 300	0.15	0.6	◪ 150	0.13	0.6	■ 285	0.15	0.6	–	–	–	–	–	–	◪ 60	0.15	1.0
PPHT 160020-A2	**2003**	2.0	◪ 320	0.14	1.0	◪ 160	0.13	1.0	■ 300	0.14	1.0	–	–	–	–	–	–	◪ 60	0.15	1.0
PPHT 160030-A2	**2003**	3.0	◪ 305	0.14	1.5	◪ 155	0.13	1.5	■ 285	0.14	1.5	–	–	–	–	–	–	◪ 60	0.15	1.0
PPHT 200010-A2	**2003**	1.0	◪ 315	0.14	0.5	◪ 160	0.13	0.5	■ 295	0.14	0.5	–	–	–	–	–	–	◪ 60	0.15	1.0
PPHT 200016-A2	**2003**	1.6	◪ 310	0.14	0.8	◪ 155	0.13	0.8	■ 290	0.14	0.8	–	–	–	–	–	–	◪ 60	0.15	1.0
PPHT 200030-A2	**2003**	3.0	◪ 305	0.14	1.5	◪ 155	0.13	1.5	■ 285	0.14	1.5	–	–	–	–	–	–	◪ 60	0.15	1.0
PPHT 200040-A2	**2003**	4.0	◪ 295	0.14	2.0	◪ 150	0.13	2.0	■ 280	0.14	2.0	–	–	–	–	–	–	◪ 55	0.15	1.0
PPHT 250020-A2	**2003**	2.0	◪ 320	0.14	1.0	◪ 160	0.13	1.0	■ 300	0.14	1.0	–	–	–	–	–	–	◪ 60	0.15	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

	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	–	–	–	–	–	–	–	–

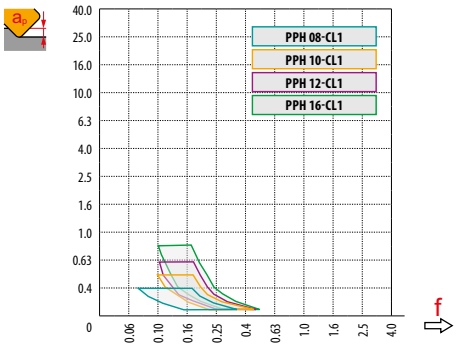
	PPH 08-CL4	PPH 10-CL4	PPH 12-CL4	PPH 16-CL4	PPH 20-CL4	PPH 25-CL4	PPH 30-CL4	PPH 32-CL4
RE	4.0	5.0	6.0	8.0	10.0	12.5	15.0	16.0
BS	–	–	–	–	–	–	–	–

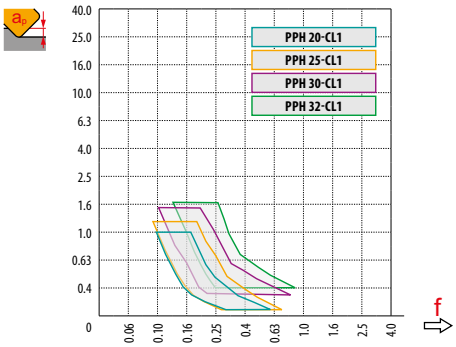
	PPHE 10-SM1	PPHE 12-SM1	PPHE 16-SM1	PPHE 20-SM1
RE	5.0	6.0	8.0	10.0
BS	–	–	–	–

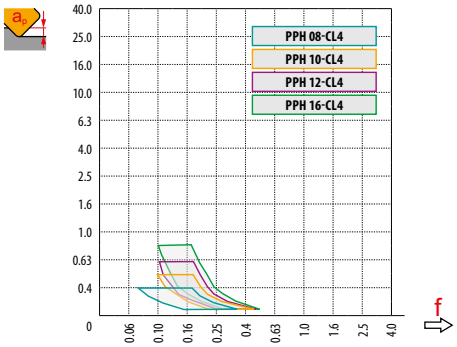
	PPHF 08-CE1	PPHF 10-CE1	PPHF 12-CE1	PPHF 16-CE1	PPHF 20-CE1	PPHF 25-CE1
RE	0.6	0.8	1.0	1.3	1.6	1.9
BS	0.40	0.50	0.60	0.80	1.00	1.20

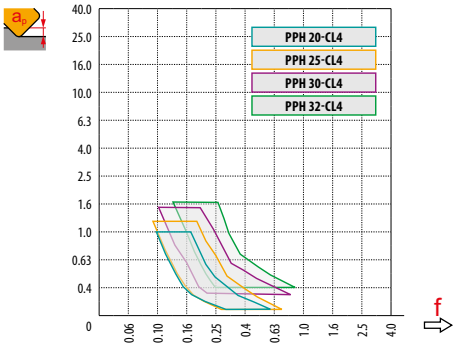
	PPHT 08-A2	PPHT 08-A2	PPHT 08-A2	PPHT 08-A2	PPHT 10-A2	PPHT 10-A2	PPHT 10-A2	PPHT 12-A2	PPHT 12-A2	PPHT 12-A2	PPHT 16-A2
RE	0.3	0.5	0.8	1.0	0.5	0.8	1.0	0.5	1.0	2.0	1.0
BS	–	–	–	–	–	–	–	–	–	–	–

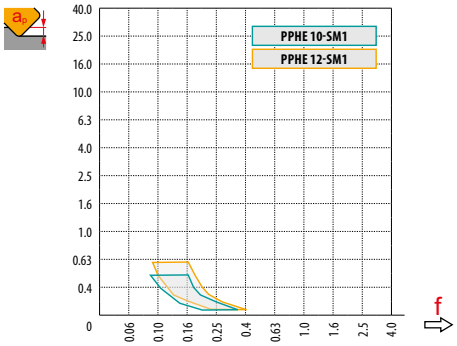
	PPHT 16-A2	PPHT 16-A2	PPHT 16-A2	PPHT 20-A2	PPHT 20-A2	PPHT 20-A2	PPHT 20-A2	PPHT 25-A2
RE	1.3	2.0	3.0	1.0	1.6	3.0	4.0	2.0
BS	–	–	–	–	–	–	–	–

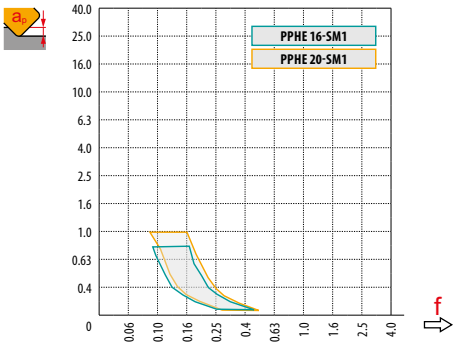

PPH 08-CL1
PPH 10-CL1
PPH 12-CL1
PPH 16-CL1

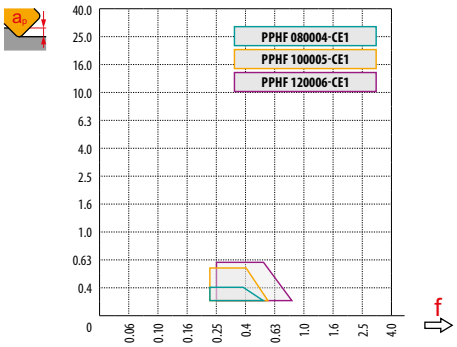

PPH 20-CL1
PPH 25-CL1
PPH 30-CL1
PPH 32-CL1

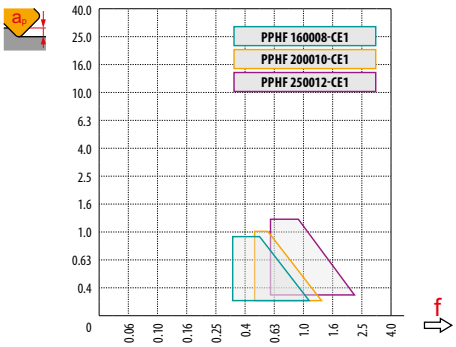

PPH 08-CL4
PPH 10-CL4
PPH 12-CL4
PPH 16-CL4


PPH 20-CL4
PPH 25-CL4
PPH 30-CL4
PPH 32-CL4


PPHE 10-SM1
PPHE 12-SM1


PPHE 16-SM1
PPHE 20-SM1


PPHF 080004-CE1
PPHF 100005-CE1
PPHF 120006-CE1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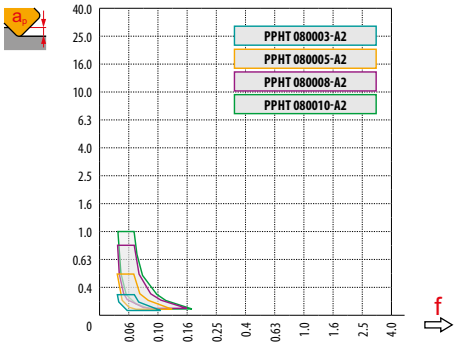
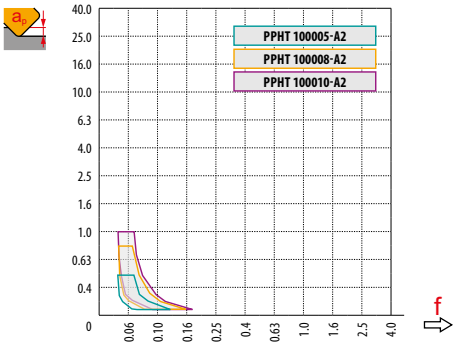
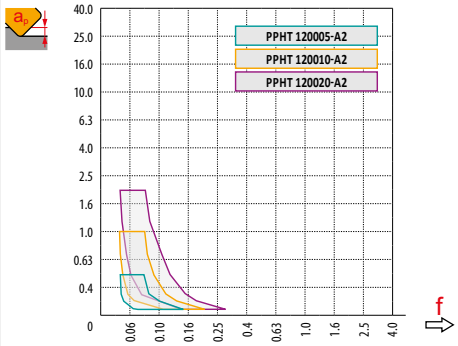
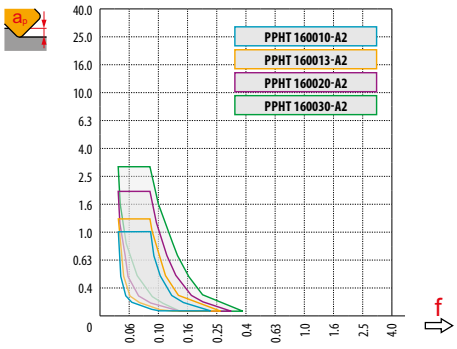
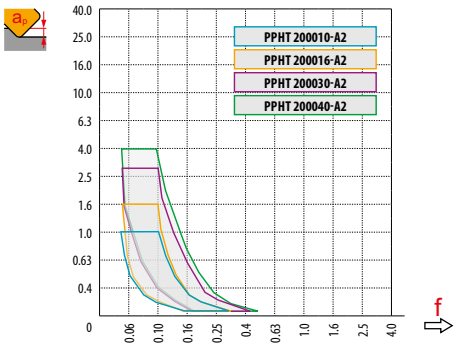
PPHF 200010-CE1
PPHF 250012-CE1

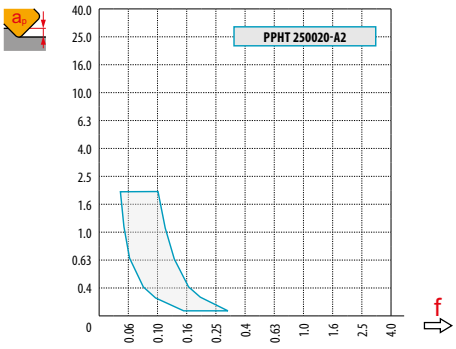

PPHT 080003-A2
PPHT 080005-A2
PPHT 080008-A2
PPHT 080010-A2


PPHT 100005-A2
PPHT 100008-A2
PPHT 100010-A2


PPHT 120005-A2
PPHT 120010-A2
PPHT 120020-A2







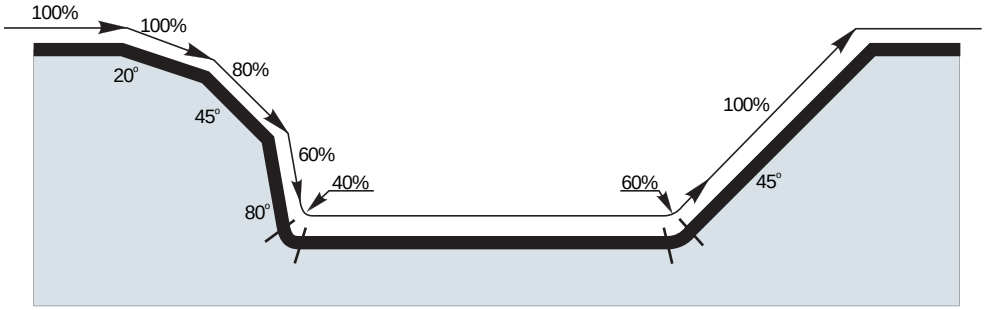
	DCX	ap	0.3	0.4	0.5	0.7	1.0	1.25	1.5	2.0	2.5	3.0	4.0	5.0	6.0	8.0	10.0	12.0	15.0	16.0
PPH 08	**8**	DEF	3.0	3.5	3.9	4.5	5.3	5.8	6.2	6.9	7.4	7.7	8.0	–	–	–	–	–	–	–
PPH 10	**10**		3.4	3.9	4.4	5.1	6.0	6.6	7.1	8.0	8.7	9.2	9.8	10.0	–	–	–	–	–	–
PPH 12	**12**		3.7	4.3	4.8	5.6	6.6	7.3	7.9	8.9	9.7	10.4	11.3	11.8	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 30	**30**		5.97	6.88	7.68	9.06	10.77	11.99	13.08	14.97	16.58	18.00	20.40	22.36	24.00	26.53	28.28	29.39	30.00	–
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**	FE	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**		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**		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 30	**30**		0.600	0.775	1.095	1.342	1.549	1.897	2.191	2.449	2.683	3.098	3.464
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									a_p								
		RE	**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	**8**	0.3	7.4	8.0	–	–	–	–	–	–	–	–	–	–	–	–	–
PPHT 08-A2		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	**10**	0.5	9.0	9.9	10.0	10.0	–	–	–	–	–	–	–	–	–	–	–
PPHT 10-A2		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	**12**	0.5	11.0	11.9	12.0	12.0	–	–	–	–	–	–	–	–	–	–	–
PPHT 12-A2		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	**16**	1.0	14.0	15.4	15.6	15.7	15.8	15.9	16.0	16.0	16.0	–	–	–	–	–	–
PPHT 16-A2		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	**20**	1.0	18.0	19.4	19.6	19.7	19.8	19.9	20.0	20.0	20.0	–	–	–	–	–	–
PPHT 20-A2		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

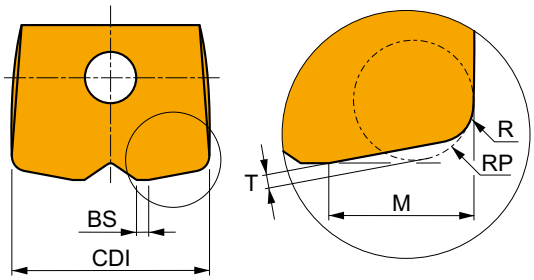
	DCX	RE	RPMX	APMX/l
PPHF 08-CE1	8	0.6	8.0	0.4/3
PPHF 10-CE1	10	0.8	8.0	0.5/4
PPHF 12-CE1	12	1.0	8.0	0.6/5
PPHF 16-CE1	16	1.3	8.0	0.8/6
PPHF 20-CE1	20	1.6	8.0	1.0/8
PPHF 25-CE1	25	1.9	8.0	1.2/9

	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

Vyloženie (násobky priemeru *DCX*)	**< 3.0**	**3.0 – 3.5**	**3.6 – 4.0**	**4.1 – 4.5**	**> 4.6**
Násobný koeficient pre rýchlosť	1.0	0.9	0.8	0.7	0.5

SVC22C

N

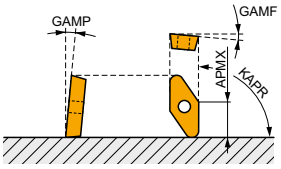
PRAMET

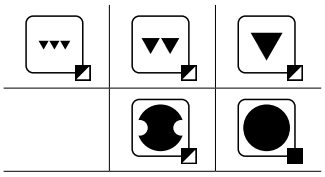
S

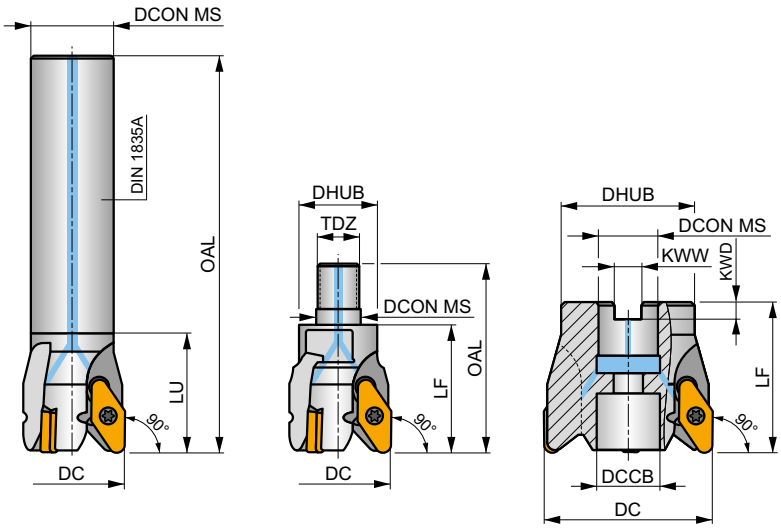
Frézy pre obrábanie neželezných materiálov s vnútorným chladením

Vysoko produktívna fréza pre obrábanie hliníka a neželezných materiálov na doštičky VCGT 22 s APMX 16 mm. Telesá fréz podporujú vnútorné chladenie. Vhodná pre rovinné, rohové, progresívne odvŕtavacie, zanorovacie a drážkovacie frézovanie. Dostupná v prevedení s valcovou stopkou, modulárnou stopkou a nástrčná, s priemermi v rozsahu Ø 32 až Ø 80 mm. Teleso je povrchovo upravené pre predĺženie životnosti nástroja.

KAPR	90°
APMX	3.0 (16.0) mm







h_m	0.03 – 0.55
h_m	0.03 – 0.5

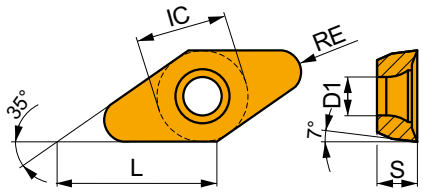
	Produkt	DC (mm)	OAL (mm)	DCON MS (mm)	DCCB (mm)	LU (mm)	LF (mm)	DHUB (mm)	TDZ	KWW (mm)	KWD (mm)	GAMF (°)	GAMP (°)			max.		kg		
DIN 1835A	32A2R045A25-SVC22C	32	120	25	–	45	–	–	–	–	–	4	3	2	–	10400	✓	0.46	GI141	C0560
	40A3R045A32-SVC22C	40	150	32	–	45	–	–	–	–	–	8	3	3	–	9300	✓	0.91	GI141	C0560
MODULAR	32A2R048M16-SVC22C	32	71	17	–	–	48	29	M16	–	–	11	3	2	–	–	✓	0.23	GI141	C0560
	40A3R048M16-SVC22C	40	71	17	–	–	48	29	M16	–	–	13	3	3	–	–	✓	0.26	GI141	C0560
ISO 6462 DIN 8030	50A03R-S90VC22C	50	–	22	18	–	56	40	–	10	6.3	4	3	3	–	8400	✓	0.44	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	✓	1.15	GI141	C0562

GI141	VCGT 220530F-FA

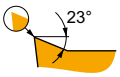
		Nm					
C0560	US 4511-T20	5.0	M 4.5	11	–	–	Flag T20
C0562	US 4511-T20	5.0	M 4.5	11	SDR T20-T	–	–
C0563	US 4511-T20	5.0	M 4.5	11	SDR T20-T	HS 1030C	–

VCGT 22-FA

	IC (mm)	D1 (mm)	L (mm)	S (mm)
2205	12.700	5.20	22.00	5.50

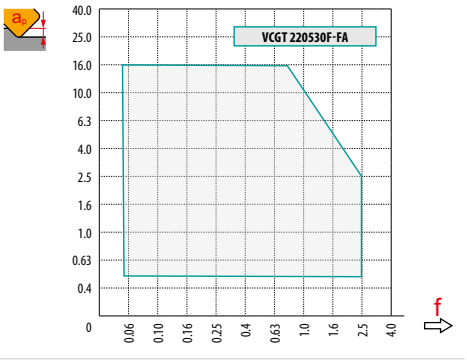


Vhodnosť a štartovacie hodnoty pre reznú rýchlosť (vc), posuv (f) a hĺbku rezu (ap). Ďalšie možnosti výpočtov rezných parametrov nájdete v našej aplikácii Machining Calculator.

Produkt		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 geometria s veľmi pozitívnym prevedením pre stredné až hrubovacie obrábanie.																				
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	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

SWN04C

P K H

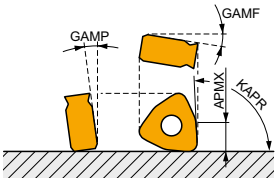
PRAMET

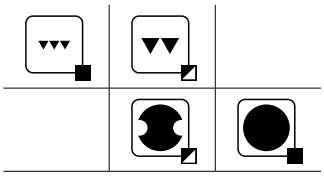
S

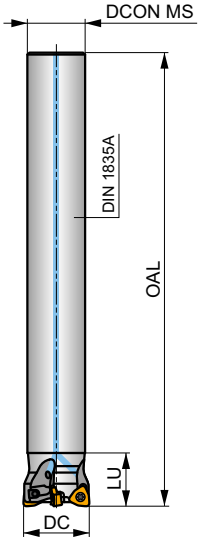
Stopkové frézy pre aplikácie výroby foriem s vnútorným chladením

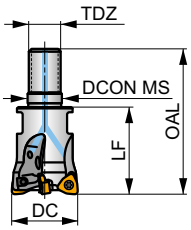
Stopková fréza pre širokú škálu aplikácií v oblasti dokončovania, pre segment výroby foriem a nástrojárske aplikácie s APMX 0.5 mm. Precízne brúsené obojstranné doštičky WNHX 04 so šiestimi reznými hranami zabezpečujú vysokú presnosť a cenovo efektívne riešenie. Frézy sú dostupné v prevedení s valcovou a modulárnou stopkou, s priemermi v rozsahu od Ø 20 do Ø 35 mm. Teleso je povrchovo upravené pre dlhú životnosť.

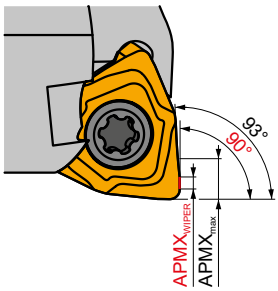
KAPR	90° (93°)
APMX	0.5 (2.0 mm)











h_m 0.02 – 0.07

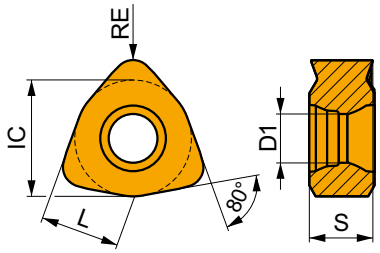
	Produkt	DC (mm)	OAL (mm)	DCON MS (mm)	LU (mm)	LF (mm)	TDZ	GAMF (°)	GAMP (°)			max.		kg		
DIN 1835A	20A3R020A18-SWN04C-C	20	160	18	20	–	–	-12	-8	3	–	19700	✓	0.27	GI331	C0602
	25A4R020A22-SWN04C-C	25	180	22	20	–	–	-11.5	-8	4	✓	26600	✓	0.45	GI331	C0602
	32A6R020A25-SWN04C-C	32	200	25	20	–	–	-11.2	-8	6	✓	23500	✓	0.69	GI331	C0602
MODULAR	20A3R030M10-SWN04C-C	20	49	10.5	–	30	M10	-12	-8	3	–	–	✓	0.08	GI331	C0602
	25A4R033M12-SWN04C-C	25	55	12.5	–	33	M12	-11.5	-8	4	✓	–	✓	0.11	GI331	C0602
	32A6R040M16-SWN04C-C	32	63	17	–	40	M16	-11.2	-8	6	✓	–	✓	0.19	GI331	C0602
	35A6R043M16-SWN04C-C	35	66	17	–	43	M16	-11.1	-8	6	✓	–	✓	0.22	GI331	C0602

GI331	WNHX0403..

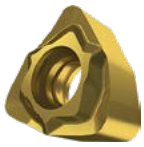
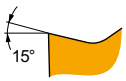
		Nm			
C0602	US 42507-T07P	1.2	M 2.5	7	Flag T07P

WNHX 04

	IC (mm)	D1 (mm)	S (mm)
0403	6.200	2.60	3.38



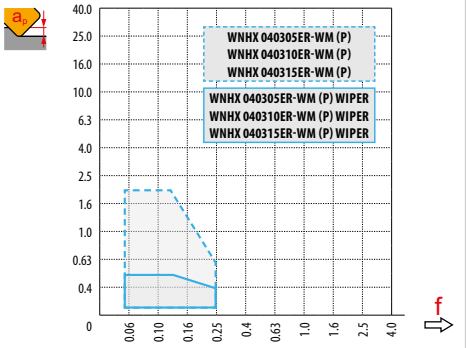
Vhodnosť a štartovacie hodnoty pre reznú rýchlosť (vc), posuv (f) a hĺbku rezu (ap). Ďalšie možnosti výpočtov rezných parametrov nájdete v našej aplikácii Machining Calculator.

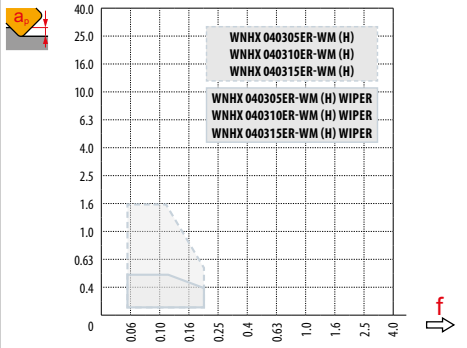
Produkt		RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
																				
			W	1		E														
			WM geometria s wiper úpravou reznej hrany pre polodokončovacie až dokončovacie obrábanie.																	
WNHX 040305ER-WM	**M4310**	0.5	◪ 290	0.15	1.0	–	–	–	■ 275	0.15	1.0	–	–	–	–	–	–	■ 55	0.15	1.0
	M8330	0.5	■ 260	0.15	1.0	–	–	–	■ 245	0.15	1.0	–	–	–	–	–	–	◪ 50	0.15	1.0
WNHX 040310ER-WM	**M4310**	1.0	◪ 370	0.15	1.0	–	–	–	■ 350	0.15	1.0	–	–	–	–	–	–	■ 70	0.15	1.0
	M8330	1.0	■ 330	0.15	1.0	–	–	–	■ 310	0.15	1.0	–	–	–	–	–	–	◪ 65	0.15	1.0
WNHX 040315ER-WM	**M4310**	1.5	◪ 390	0.15	1.0	–	–	–	■ 370	0.15	1.0	–	–	–	–	–	–	■ 75	0.15	1.0
	M8330	1.5	■ 345	0.15	1.0	–	–	–	■ 325	0.15	1.0	–	–	–	–	–	–	◪ 65	0.15	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

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
20	0.4
25	0.5
32	0.5
35	0.5

DC	RPMX	APMX/l
20	0.7	1.1/100
25	0.5	0.75/100
32	0.3	0.4/100
35	0.3	0.4/100

SCN05C

P K H

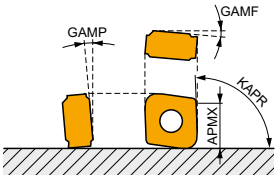
PRAMET

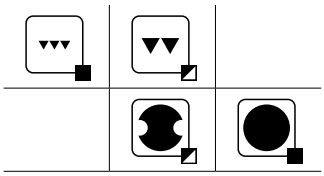
S

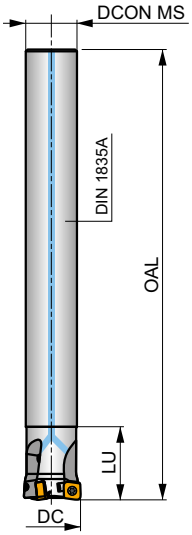
Stopkové frézy pre aplikácie výroby foriem s vnútorným chladením

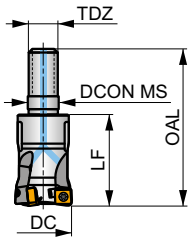
Stopková fréza pre širokú škálu aplikácií v oblasti dokončovania, pre segment výroby foriem a nástrojárske aplikácie s APMX 0.5 mm. Precízne brúsené obojstranné doštičky CNHX 05 so štyrmi reznými hranami zabezpečujú vysokú presnosť a cenovo efektívne riešenie. Frézy sú dostupné v prevedení s valcovou a modulárnou stopkou, s priemermi v rozsahu od Ø 12 do Ø 20 mm. Teleso je povrchovo upravené pre dlhú životnosť.

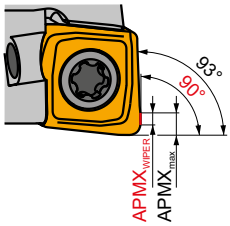
KAPR	90° (93°)
APMX	0.5 (1.0 mm)











h_m 0.02 – 0.07

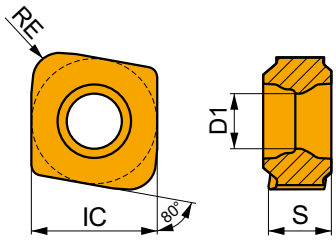
	Produkt	DC (mm)	OAL (mm)	DCON MS (mm)	LU (mm)	LF (mm)	TDZ	GAMF (°)	GAMP (°)			max.		kg		
DIN 1835A	12A2R020A10-SCN05C-C	12	100	10	20	–	–	-15	-8	2	–	48700	✓	0.08	GI330	C0601
	16A3R020A14-SCN05C-C	16	130	14	20	–	–	-13.5	-7.8	3	–	42200	✓	0.13	GI330	C0601
	20A5R020A18-SCN05C-C	20	160	18	20	–	–	-12.7	-7.5	5	✓	37700	✓	0.28	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	–	–	✓	0.06	GI330	C0601
	20A5R030M10-SCN05C-C	20	49	10.5	–	30	M10	-12.7	-7.5	5	✓	–	✓	0.08	GI330	C0601

GI330	CNHX0502..

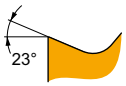
C0601	US 62005-T06P	0.9	M 2	4.9	Flag T06P

CNHX 05

	IC (mm)	D1 (mm)	S (mm)
0502	4.800	2.10	2.40



Vhodnosť a štartovacie hodnoty pre reznú rýchlosť (vc), posuv (f) a hĺbku rezu (ap). Ďalšie možnosti výpočtov rezných parametrov nájdete v našej aplikácii Machining Calculator.

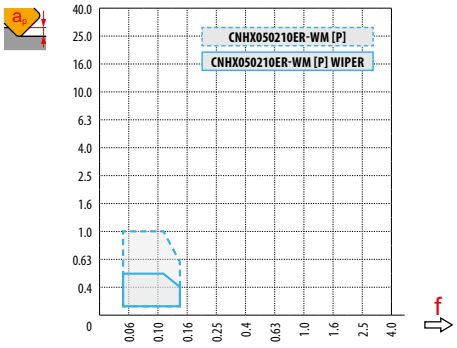
Produkt		RE (mm)	P vc (m/min)	P f (mm/tooth)	P ap (mm)	M vc (m/min)	M f (mm/tooth)	M ap (mm)	K vc (m/min)	K f (mm/tooth)	K ap (mm)	N vc (m/min)	N f (mm/tooth)	N ap (mm)	S vc (m/min)	S f (mm/tooth)	S ap (mm)	H vc (m/min)	H f (mm/tooth)	H ap (mm)
																				
CNHX 050205ER-WM	M4310	0.5	◪	350	0.10	0.5	–	–	–	■	335	0.10	0.5	–	–	–	–	–	–	■	70	0.15	1.0
	M8330	0.5	■	310	0.10	0.5	–	–	–	■	290	0.10	0.5	–	–	–	–	–	–	◪	60	0.15	1.0
CNHX 050210ER-WM	M4310	1.0	◪	440	0.10	0.5	–	–	–	■	420	0.10	0.5	–	–	–	–	–	–	■	85	0.15	1.0
	M8330	1.0	■	390	0.10	0.5	–	–	–	■	370	0.10	0.5	–	–	–	–	–	–	◪	75	0.15	1.0

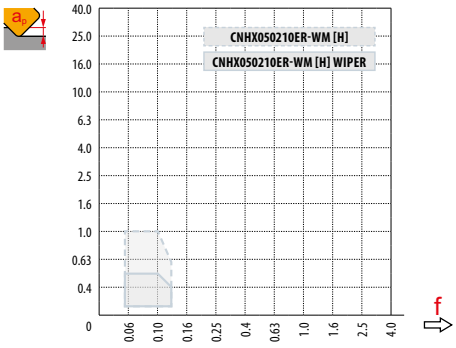
WM geometria s wiper úpravou reznej hrany pre polodokončovacie až dokončovacie obrábanie.

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/l
12	2.4	1/25
16	1.5	1/40
20	1.1	1/54

FRÉZY PRE VYSOKÉ POSUVY