INDEXABLE FACE MILLS

FACE MILLING

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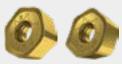
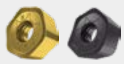
	SHN06C	SHN09C	SOD05	SOD06D	SOE06Z
	45°	45°	45°	45°	43°
	APMX [mm] 3.0	APMX [mm] 5.0	APMX [mm] 2.7 (10.0)	APMX [mm] 3.1 (8, 6)	APMX [mm] 3.3 (9.9)
	DC [mm] 25 – 125	DC [mm] 50 – 315	DCX [mm] 32 – 125	DC [mm] 63 – 160	DC [mm] 50 – 200
Cylindrical shank			 DCX = 32 – 40 [mm]		
Weldon	 DC = 25 – 32 [mm]				
Modular	 DC = 25 – 40 [mm]				
Shell mill	 DC = 40 – 125 [mm]		 DCX = 40 – 125 [mm]		
Page	352	356	360	370	376
ISO	P M K H	P M K H	P M K N	P M K S H	P M N S
Insert shape					
Inserts	HNGX 0604 XNGX 0604	HNGX 0906 XNGX 0906	OD.. 0505 RD.. 1205 SD.. 1205	OD.. 0605 RPE. 1505	OEHT 0604 REHT 1604 XEHT 0604
No. of cutting edges	12 / 1	12 / 1	8 / – / 4	8 / 1 / –	8 / – / 1
Face milling	■	■	■	■	■
Chamfer milling	■	■	■	■	■
Helical interpolation			■		◩
Progressive plunging	■	■	■		◩
Ramping	■	■	■		◩
Shape surfaces milling (copy milling)			■		◩
Shallow shoulder milling			■		
Shallow slot milling			■		
Plunge milling			■		

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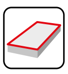
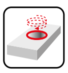
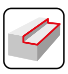
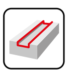
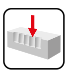
FACE MILLING

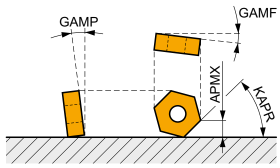
	SOE09Z	SSE09	SSN12Z	SPN13	CHN09	FSB22X
	43°	45°	45°	57°	60°	60°
	APMX [mm] 5.0 (14.1)	APMX [mm] 4.5	APMX [mm] 6.5	APMX [mm] 10.0	APMX [mm] 6.0	APMX [mm] 15.0
	DC [mm] 80 – 315	DC [mm] 20 – 160	DC [mm] 50 – 250	DC [mm] 100 – 315	DC [mm] 80 – 125	DC [mm] 125 – 315
		 DC = 20 – 32 [mm]				
		 DC = 32 – 160 [mm]				
	383	389	393	397	401	405
	P M N S	P M K S	P M K S	P M K S H	K	P M K
						
	OEHT 0906 REHT 2406 XEHT 0906	SE.T 09T3	SN.T 1205	PNM. 1308 XN.. 1308	HN.. 0905	SB.. 2207
	8 / – / 1	4	4	10 / 1	12	4 / 1
	■	■	■	■	■	■
	■	■	■			
	◪					
	◪					
	◪					
	◪					
						
						
						

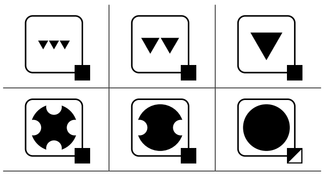
SHN06C

P M K H

PRAMET S

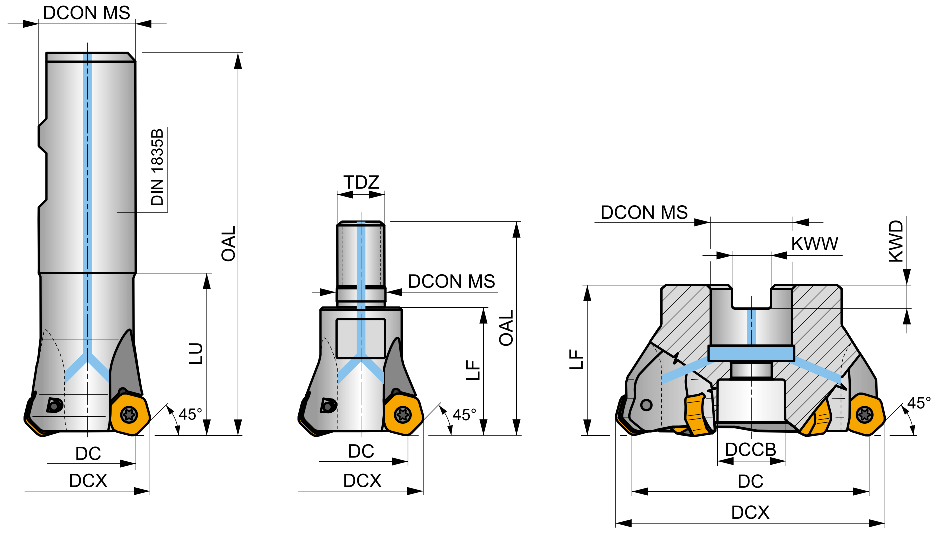
KAPR	45°
APMX	3.0 mm





ECON HN06 45° Face Mill with Double Negative Design and Internal Coolant

Highly productive 45° face mill utilising double sided HN.. 06 style inserts with APMX of 3 mm. Roughing, finishing and chamfering. Economical insert with 12 cutting edges. Differential tooth pitch. Weldon, modular and arbor style available in range from Ø25 up to Ø125 mm. Body treated for longer tool life.



h_m	0.06 - 0.15
h_m	0.06 - 0.15

	Product	DC [mm]	DCX [mm]	OAL [mm]	DCON MS [mm]	DCCB [mm]	LU [mm]	LF [mm]	TDZ	KWW [mm]	KWD [mm]	GAMF [°]	GAMP [°]			max.		kg			
DIN 1835B	25N2R042B25-SHN06C-C	25	32.2	99	25	–	42	–	–	–	–	-7	-7	2	–	17400	✓	0.36	GI204	FA010	–
	32N3R042B32-SHN06C-C	32	39.3	103	32	–	42	–	–	–	–	-7	-7	3	–	15400	✓	0.59	GI204	FA010	–
MODULAR	25N2R033M12-SHN06C-C	25	32.2	56	12.5	–	–	33	M12	–	–	-7	-7	2	–	–	✓	0.11	GI204	FA010	–
	32N3R043M16-SHN06C-C	32	39.3	66	17	–	–	43	M16	–	–	-7	-7	3	–	–	✓	0.26	GI204	FA010	–
	40N4R043M16-SHN06C-C	40	47.3	66	17	–	–	43	M16	–	–	-7	-7	4	✓	–	✓	0.28	GI204	FA010	–
ISO 6462 DIN 8030	40A05R-S45HN06C-C	40	47.3	–	16	14	–	40	–	8.4	5.6	-7	-7	5	✓	13800	✓	0.37	GI204	FA012	–
	50A04R-S45HN06C-C	50	57.3	–	22	18	–	40	–	10.4	6.3	-7	-7	4	✓	12300	✓	0.62	GI204	FA013	–
	50A06R-S45HN06C-C	50	57.3	–	22	18	–	40	–	10.4	6.3	-7	-7	6	✓	12300	✓	0.41	GI204	FA013	–
	63A06R-S45HN06C-C	63	70.3	–	22	18	–	40	–	10.4	6.3	-7	-7	6	✓	11000	✓	0.56	GI204	FA013	–
	63A08R-S45HN06C-C	63	70.3	–	22	18	–	40	–	10.4	6.3	-7	-7	8	✓	11000	✓	0.69	GI204	FA013	–
	80A07R-S45HN06C-C	80	86.8	–	27	38	–	50	–	12.4	7	-7	-7	7	✓	9700	✓	1.10	GI204	FA011	AC001
	80A10R-S45HN06C-C	80	86.8	–	27	38	–	50	–	12.4	7	-7	-7	10	✓	9700	✓	0.19	GI204	FA011	AC001
	100A08R-S45HN06C-C	100	107.1	–	32	45	–	50	–	14.4	8	-7	-7	8	✓	8700	✓	2.07	GI204	FA011	AC002
	100A12R-S45HN06C-C	100	107.1	–	32	45	–	50	–	14.4	8	-7	-7	12	✓	8700	✓	1.82	GI204	FA011	AC002
	125A10R-S45HN06C-C	125	132.2	–	40	56	–	63	–	16.4	9	-7	-7	10	✓	7800	✓	3.62	GI204	FA011	AC003
	125A16R-S45HN06C-C	125	132.2	–	40	56	–	63	–	16.4	9	-7	-7	16	✓	7800	✓	3.93	GI204	FA011	AC003

		
GI204	HNGX 0604AN..	XNGX 0604AN..

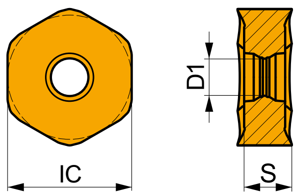
		Nm						
FA010	US 3007-T09P	2.0	M 3	7.3	–	–	Flag T09P	–
FA011	US 3007-T09P	2.0	M 3	7.3	D-T07P/T09P	FG-15	–	–
FA012	US 3007-T09P	2.0	M 3	7.3	D-T07P/T09P	FG-15	–	HS 0830C

FA013	US 3007-T09P	2.0	M 3	7.3	D-T07P/T09P	FG-15	–	HS 1030C

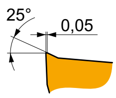
AC001	KS 1230	K.FMH27
AC002	KS 1635	K.FMH32
AC003	KS 2040	K.FMH40

HNGX 06

	IC [mm]	D1 [mm]	S [mm]
0604	10.500	3.70	4.76

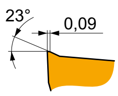


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.



F geometry with highly positive design for light machining.

Product		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]
HNGX 0604ANSN-F	**8215**	–	■ 315	0.11	1.7	◩ 185	0.10	1.7	–	–	–	–	–	–	–	–	–	–	–	–
	M6330	–	■ 265	0.11	1.7	◩ 185	0.10	1.7	–	–	–	–	–	–	–	–	–	–	–	–
	M8310	–	■ 345	0.11	1.7	◩ 175	0.10	1.7	–	–	–	–	–	–	–	–	–	–	–	–
	M8330	–	■ 305	0.11	1.7	◩ 180	0.10	1.7	–	–	–	–	–	–	–	–	–	–	–	–
	M8340	–	■ 285	0.11	1.7	◩ 170	0.10	1.7	–	–	–	–	–	–	–	–	–	–	–	–
	M9340	–	■ 365	0.11	1.7	◩ 215	0.10	1.7	–	–	–	–	–	–	–	–	–	–	–	–

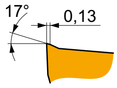


M geometry with highly positive design for medium machining.

Product		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]
HNGX 0604ANSN-M	**8215**	–	■ 300	0.13	2.0	◩ 180	0.13	2.0	■ 285	0.13	2.0	–	–	–	–	–	–	–	–	–
	M5315	–	◩ 425	0.13	2.0	–	–	–	■ 400	0.13	2.0	–	–	–	–	–	–	–	–	–
	M6330	–	■ 255	0.13	2.0	◩ 180	0.13	2.0	–	–	–	–	–	–	–	–	–	–	–	–
	M8310	–	■ 325	0.13	2.0	◩ 165	0.13	2.0	■ 305	0.13	2.0	–	–	–	–	–	–	–	–	–
	M8330	–	■ 295	0.13	2.0	◩ 175	0.13	2.0	■ 280	0.13	2.0	–	–	–	–	–	–	–	–	–
	M8340	–	■ 265	0.13	2.0	◩ 155	0.13	2.0	◩ 250	0.13	2.0	–	–	–	–	–	–	–	–	–
	M9315	–	■ 410	0.13	2.0	–	–	–	■ 385	0.13	2.0	–	–	–	–	–	–	–	–	–
	M9325	–	■ 375	0.13	2.0	–	–	–	■ 355	0.13	2.0	–	–	–	–	–	–	–	–	–
	M9340	–	■ 345	0.13	2.0	◩ 205	0.13	2.0	–	–	–	–	–	–	–	–	–	–	–	–

Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

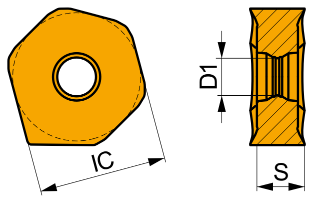
Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
HNGX 0604ANSN-R	**8215**	–	■ 280	0.18	1.8	◩ 165	0.18	1.8	■ 265	0.18	1.8	–	–	–	–	–	–	◩ 55	0.15	1.0
	M5315	–	◩ 370	0.18	1.8	–	–	–	■ 350	0.18	1.8	–	–	–	–	–	–	◩ 70	0.15	1.0
	M8310	–	■ 300	0.18	1.8	◩ 150	0.18	1.8	■ 285	0.18	1.8	–	–	–	–	–	–	◩ 60	0.15	1.0
	M8330	–	■ 275	0.18	1.8	◩ 165	0.18	1.8	■ 260	0.18	1.8	–	–	–	–	–	–	◩ 55	0.15	1.0
	M8340	–	■ 250	0.18	1.8	◩ 150	0.18	1.8	◩ 235	0.18	1.8	–	–	–	–	–	–	–	–	–
	M9325	–	■ 345	0.18	1.8	–	–	–	■ 325	0.18	1.8	–	–	–	–	–	–	◩ 65	0.15	1.0



R geometry with highly positive design for medium to heavy machining.

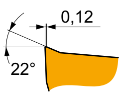
XNGX 06

	IC [mm]	D1 [mm]	S [mm]
0604	10.500	3.70	4.76



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

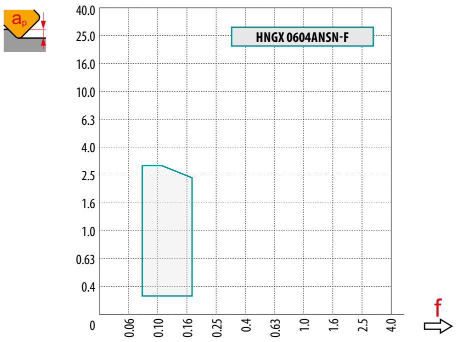
Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
XNGX 0604ANSN	**8215**	–	■ 290	0.13	1.8	◩ 170	0.12	1.8	■ 275	0.13	1.8	–	–	–	–	–	–	–	–	–

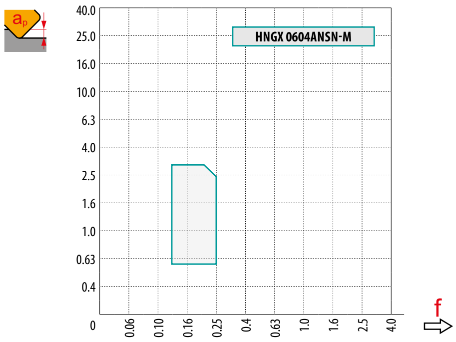


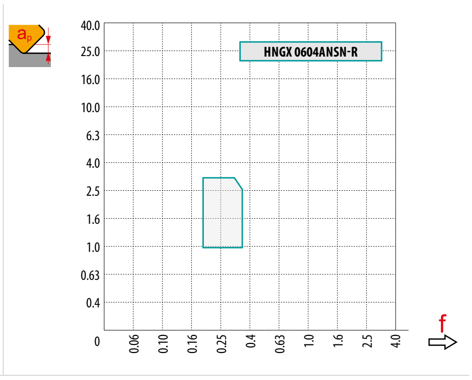
Wiper design for improved surface finish.

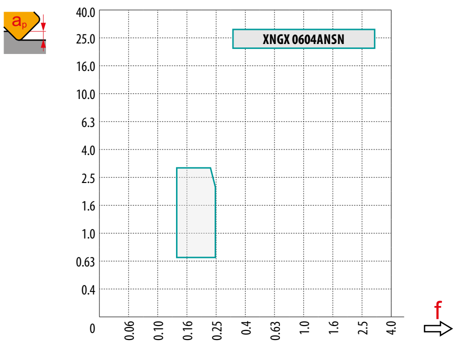
a_e / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

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









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

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

a_p
0.9

SHN09C

P M K H

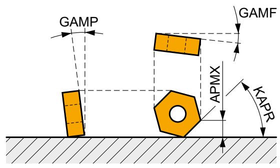
PRAMET

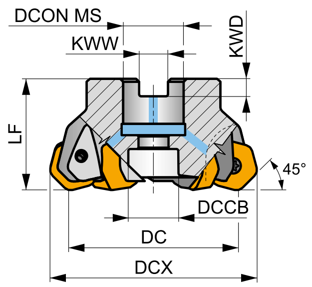
S

ECON HN09 45° Face Mill with Double Negative Design and Internal Coolant

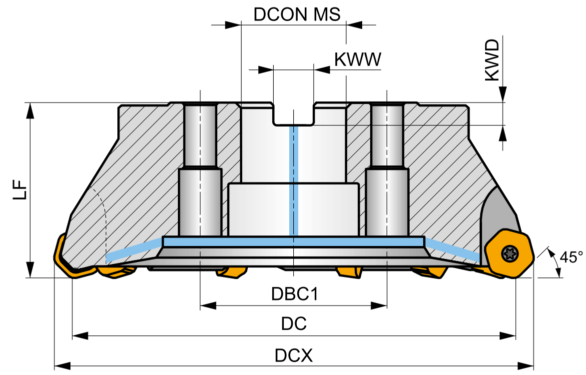
Highly productive 45° face mill utilising double sided HN.. 09 style inserts with APMX of 5 mm. Roughing, finishing and chamfering. Economical insert with 12 cutting edges. Differential tooth pitch. Arbor style only in range from Ø50 up to Ø315 mm. Body treated for longer tool life.

KAPR	45°
APMX	5.0 mm





DC 50 - 125 mm



DC 160 - 315 mm

h_m 0.08 - 0.25

Product	DC [mm]	DCX [mm]	LF [mm]	DCON MS [mm]	DCCB [mm]	DBC1 [mm]	KWW [mm]	KWD [mm]	GAMF [°]	GAMP [°]			max.		kg			
50A04R-S45HN09C-CF	50	61.7	40	22	18	–	10.4	6.3	-7	-7	4	✓	7900	✓	0.38	GI252	FA023	–
63A06R-S45HN09C-CF	63	74.7	40	22	18	–	10.4	6.3	-7	-7	6	✓	7000	✓	0.54	GI252	FA023	–
80A06R-S45HN09C-CF	80	91.7	50	27	38	–	12.4	7	-7	-7	6	✓	6200	✓	1.06	GI252	FA021	AC001
80A08R-S45HN09C-CF	80	91.7	50	27	38	–	12.4	7	-7	-7	8	✓	6200	✓	1.06	GI252	FA021	AC001
100A06R-S45HN09C-CF	100	111.7	50	32	45	–	14.4	8	-7	-7	6	✓	5600	✓	1.76	GI252	FA021	AC002
100A08R-S45HN09C-CF	100	111.7	50	32	45	–	14.4	8	-7	-7	8	✓	5600	✓	1.76	GI252	FA021	AC002
100A10R-S45HN09C-CF	100	111.7	50	32	45	–	14.4	8	-8	-7	10	–	5600	✓	1.76	GI252	FA021	AC002
125A06R-S45HN09C-CF	125	136.7	63	40	56	–	16.4	9	-7	-7	6	✓	5000	✓	3.36	GI252	FA021	AC003
125A08R-S45HN09C-CF	125	136.7	63	40	56	–	16.4	9	-7	-7	8	✓	4900	✓	3.72	GI252	FA021	AC003
125A10R-S45HN09C-CF	125	136.7	63	40	56	–	16.4	9	-7	-7	10	✓	5000	✓	3.36	GI252	FA021	AC003
125A12R-S45HN09C-CF	125	136.7	63	40	56	–	16.4	9	-8	-7	12	–	5000	✓	3.36	GI252	FA021	AC003
160C08R-S45HN09C-CF	160	171.7	63	40	–	66.7	16.4	9	-7	-7	8	✓	4400	✓	6.30	GI252	FA026	–
160C12R-S45HN09C-CF	160	171.7	63	40	–	66.7	16.4	9	-7	-7	12	✓	4400	✓	6.46	GI252	FA026	–
160C14R-S45HN09C-CF	160	171.7	63	40	–	66.7	16.4	9	-7	-7	14	✓	4400	✓	6.45	GI252	FA026	–
200C10R-S45HN09C-CF	200	211.7	63	60	–	101.6	25.7	14	-7	-7	10	✓	3900	✓	11.37	GI252	FA027	–
250C14R-S45HN09C-CF	250	261.7	63	60	–	101.6	25.7	14	-7	-7	14	✓	3500	✓	18.50	GI252	FA028	–
315C16R-S45HN09C-CF	315	326.7	80	60	–	101.6	25.7	14	-7	-7	16	✓	3100	✓	37.00	GI252	FA029	–

ISO 6462 DIN 8030

GI252	HNGX 0906AN..	XNGX 0906AN..

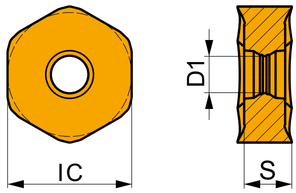
		Nm										
FA021	US 54511-T15P	5.0	M 4.5	11	D-T08P/T15P	FG-15	–	–	–	–	–	–
FA023	US 54511-T15P	5.0	M 4.5	11	D-T08P/T15P	FG-15	HS 1030C	–	–	–	–	–
FA026	US 54511-T15P	5.0	M 4.5	11	D-T08P/T15P	FG-15	HS 1240C	CAC 160C	HSD 0825C	HXK 5	–	–
FA027	US 54511-T15P	5.0	M 4.5	11	D-T08P/T15P	FG-15	HS 1655C	CAC 200C	HSD 1025C	HXK 7	–	–
FA028	US 54511-T15P	5.0	M 4.5	11	D-T08P/T15P	FG-15	HS 1655C	CAC 250C	HSD 1025C	HXK 7	–	–
FA029	US 54511-T15P	5.0	M 4.5	11	D-T08P/T15P	FG-15	HS 1655C	CAC 315C	HSD 1035C	HXK 7	CACP 3150C	RRH 34

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

HNGX 09

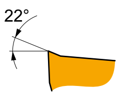
PRAMET

	IC [mm]	D1 [mm]	S [mm]
0906	16.500	4.90	6.35



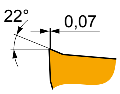
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		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]
HNGX 0906ANEN-FF	**8215**	–	■ 345	0.10	1.0	◩ 205	0.09	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	M8330	–	■ 335	0.10	1.0	■ 200	0.09	1.0	–	–	–	–	–	–	–	–	–	–	–	–
	M9340	–	■ 405	0.10	1.0	■ 240	0.09	1.0	–	–	–	–	–	–	–	–	–	–	–	–
HNGX 0906ANSN-F	**8215**	–	■ 300	0.12	2.1	◩ 180	0.11	2.1	–	–	–	–	–	–	–	–	–	–	–	–
	M6330	–	■ 255	0.12	2.1	■ 180	0.11	2.1	–	–	–	–	–	–	–	–	–	–	–	–
	M8310	–	■ 330	0.12	2.1	◩ 165	0.11	2.1	–	–	–	–	–	–	–	–	–	–	–	–
	M8330	–	■ 300	0.12	2.1	■ 180	0.11	2.1	–	–	–	–	–	–	–	–	–	–	–	–
	M8340	–	■ 270	0.12	2.1	■ 160	0.11	2.1	–	–	–	–	–	–	–	–	–	–	–	–

E

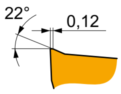
FF geometry with highly positive design for light machining.

S

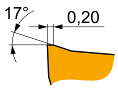
F geometry with highly positive design for light to medium machining.

Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.



M geometry with highly positive design for medium machining.

Product	Grade	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]
HNGX 0906ANSN-M	**8215**	–	■ 255	0.20	2.7	◩ 150	0.18	2.7	■ 240	0.20	2.7	–	–	–	–	–	–	–	–	–
	M5315	–	◩ 340	0.20	2.7	–	–	–	■ 320	0.20	2.7	–	–	–	–	–	–	–	–	–
	M6330	–	■ 205	0.20	2.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	M8310	–	■ 280	0.20	2.7	◩ 140	0.18	2.7	■ 265	0.20	2.7	–	–	–	–	–	–	–	–	–
	M8330	–	■ 255	0.20	2.7	◩ 150	0.18	2.7	■ 240	0.20	2.7	–	–	–	–	–	–	–	–	–
	M8340	–	■ 235	0.20	2.7	◩ 140	0.18	2.7	◩ 220	0.20	2.7	–	–	–	–	–	–	–	–	–
	M9315	–	■ 340	0.20	2.7	–	–	–	■ 320	0.20	2.7	–	–	–	–	–	–	–	–	–
	M9325	–	■ 315	0.20	2.7	–	–	–	■ 295	0.20	2.7	–	–	–	–	–	–	–	–	–
	M9340	–	■ 290	0.20	2.7	◩ 170	0.18	2.7	–	–	–	–	–	–	–	–	–	–	–	–



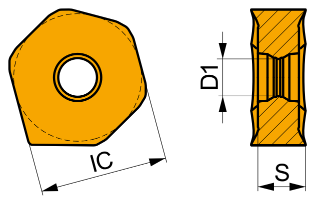
R geometry with positive design for medium to heavy machining.

Product	Grade	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]
HNGX 0906ANSN-R	**8215**	–	■ 240	0.25	3.0	◩ 140	0.25	3.0	■ 225	0.25	3.0	–	–	–	–	–	–	◩ 45	0.15	1.0
	M5315	–	◩ 305	0.25	3.0	–	–	–	■ 285	0.25	3.0	–	–	–	–	–	–	◩ 60	0.15	1.0
	M8310	–	■ 260	0.25	3.0	◩ 130	0.25	3.0	■ 245	0.25	3.0	–	–	–	–	–	–	◩ 50	0.15	1.0
	M8330	–	■ 240	0.25	3.0	◩ 140	0.25	3.0	■ 225	0.25	3.0	–	–	–	–	–	–	◩ 45	0.15	1.0
	M8340	–	■ 220	0.25	3.0	◩ 130	0.25	3.0	◩ 205	0.25	3.0	–	–	–	–	–	–	–	–	–
	M9315	–	■ 310	0.25	3.0	–	–	–	■ 290	0.25	3.0	–	–	–	–	–	–	◩ 60	0.15	1.0
	M9325	–	■ 295	0.25	3.0	–	–	–	■ 280	0.25	3.0	–	–	–	–	–	–	◩ 55	0.15	1.0

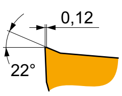
XNGX 09

PRAMET

	IC [mm]	D1 [mm]	S [mm]
0906	16.500	4.90	6.35



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

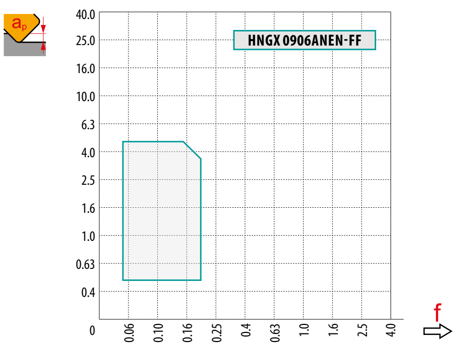


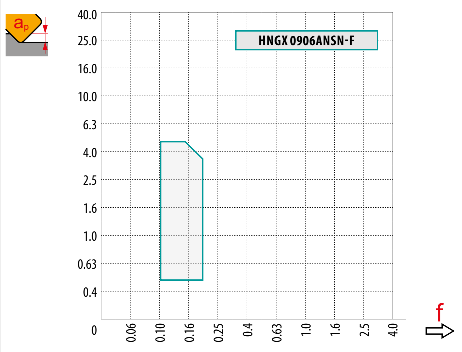
Wiper design for improved surface finish.

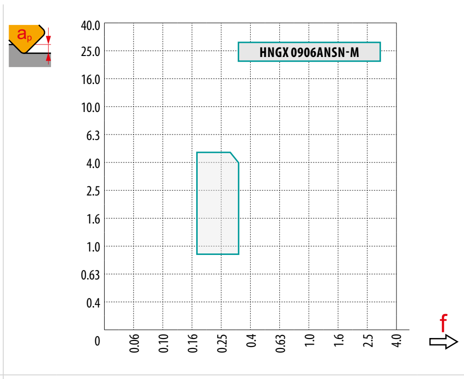
Product	Grade	RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
XNGX 0906ANSN	**8215**	–	■ 245	0.20	2.7	◩ 145	0.18	2.7	■ 230	0.20	2.7	–	–	–	–	–	–	–	–	–
	M8330	–	■ 245	0.20	2.7	◩ 145	0.18	2.7	■ 230	0.20	2.7	–	–	–	–	–	–	–	–	–

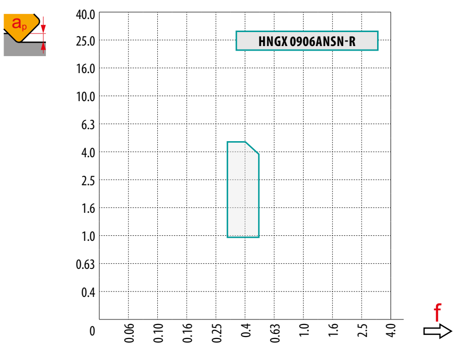
a_e/DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

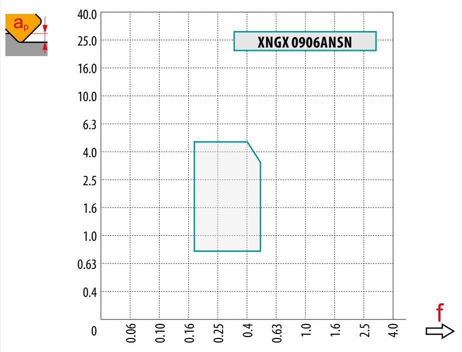
	HNGX 09-FF	HNGX 09-F	HNGX 09-M	HNGX 09-R	XNGX 09
RE	–	–	–	–	–
BS	1.50	1.17	1.17	1.17	7.53











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

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

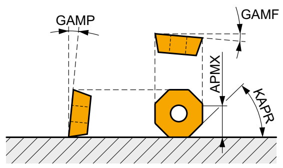
a_p
1.9

SOD05

P M K N

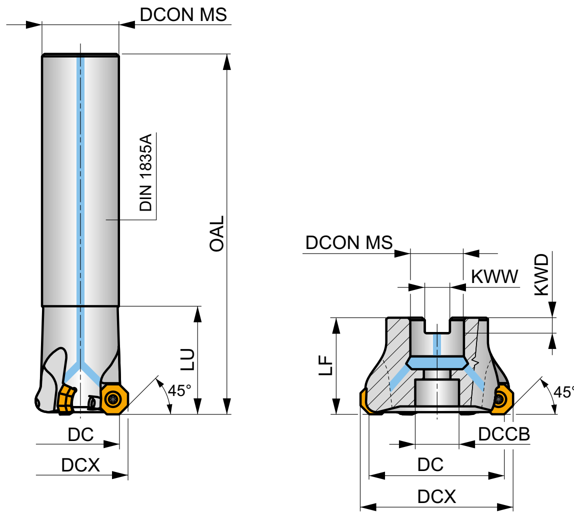
PRAMET S

KAPR	45°
APMX	2.7 (10.0) mm



Universal Face Mill with Positive Design and Internal Coolant

Highly productive universal face mill utilising single-sided positive inserts with APMX up to 10 mm. Unique insert seat fits OD.. 05, RD.. 12 and SD.. 12 style inserts, suited for wide range of applications. Differential tooth pitch. Arbor and cylindrical style in range from Ø32 up to Ø125 mm. Body treated for longer tool life.



h_m 0.03 - 0.15

h_m 0.03 - 0.12

	Product	DCX [mm]	DC [mm]	OAL [mm]	DCON MS [mm]	DCCB [mm]	LU [mm]	LF [mm]	KAPR [°]	KWW [mm]	KWD [mm]	GAMF [°]	GAMP [°]			max.		kg			
DIN 1835A	32N3R045A25-SOD05-C	32	24.7	130	25	–	45	–	45	–	–	-10	8	3	–	17700	✓	0.41	GI326	FA049	–
	40N3R045A32-SOD05-C	40	32.6	150	32	–	45	–	45	–	–	-7	8	3	–	15800	✓	0.86	GI326	FA040	–
ISO 6462 DIN 8030	40A03R-S45OD05-C	40	32.7	–	16	14	–	40	45	8.4	5.6	-10	8	3	–	15800	✓	0.19	GI326	FA042	–
	50A04R-S45OD05-C	50	42.6	–	22	18	–	40	45	10.4	6.3	-7	8	4	–	14100	✓	0.28	GI326	FA043	–
	50A05R-S45OD05-C	50	42.6	–	22	18	–	40	45	10.4	6.3	-7	8	5	–	14100	✓	0.28	GI326	FA043	–
	63A05R-S45OD05-C	63	55.6	–	22	18	–	40	45	10.4	6.3	-7	8	5	✓	12600	✓	0.39	GI326	FA043	–
	63A06R-S45OD05-C	63	55.6	–	22	18	–	40	45	10.4	6.3	-7	8	6	✓	12600	✓	0.40	GI326	FA043	–
	80A06R-S45OD05-C	80	72.6	–	27	38	–	50	45	12.4	7	-7	8	6	✓	11100	✓	0.73	GI326	FA041	AC001
	80A08R-S45OD05-C	80	72.6	–	27	38	–	50	45	12.4	7	-7	8	8	✓	11100	✓	0.66	GI326	FA041	AC001
	100A07R-S45OD05-C	100	92.6	–	32	45	–	50	45	14.4	8	-7	8	7	✓	10000	✓	1.09	GI326	FA041	AC002
	125A08R-S45OD05-C	125	117.6	–	40	56	–	63	45	16.4	9	-7	8	8	✓	8900	✓	2.20	GI326	FA041	AC003

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

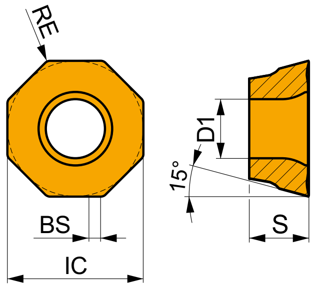
		Nm					
FA040	US 45014-T20P	5.0	M 5	13	Flag T20P	–	–
FA041	US 45014-T20P	5.0	M 5	13	–	SDR T20P-T	–
FA042	US 45014-T20P	5.0	M 5	13	–	SDR T20P-T	HS 90835
FA043	US 45014-T20P	5.0	M 5	13	–	SDR T20P-T	HS 1030C
FA049	US 45011-T20P	5.0	M 5	11	Flag T20P	–	–

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

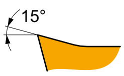
ODKT 05IM

PRAMET

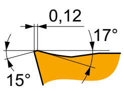
	IC [mm]	D1 [mm]	S [mm]	BS [mm]
0505	12.700	5.50	5.56	1.00



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

F geometry, 45° face milling insert, with highly positive design for light machining.

FM geometry, 45° face milling insert, with positive design for light to medium machining.

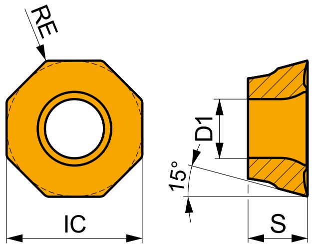
Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
ODKT 0505ADFR-F	**M8310**	0.8	■ 275	0.15	2.5	◪ 140	0.14	2.5	–	–	–	–	–	–	–	–	–	–	–	–
ODKT 0505ADSR-FM	**M6330**	0.8	■ 190	0.25	2.5	■ 135	0.23	2.5	–	–	–	–	–	–	–	–	–	–	–	–
	M8310	0.8	■ 240	0.25	2.5	◪ 120	0.23	2.5	◪ 225	0.25	2.5	–	–	–	–	–	–	–	–	–
	M8330	0.8	■ 225	0.25	2.5	■ 135	0.23	2.5	◪ 210	0.25	2.5	–	–	–	–	–	–	–	–	–
	M8345	0.8	■ 160	0.25	2.5	■ 95	0.23	2.5	–	–	–	–	–	–	–	–	–	–	–	–
	M9340	0.8	■ 245	0.25	2.5	■ 145	0.23	2.5	–	–	–	–	–	–	–	–	–	–	–	–

⏮

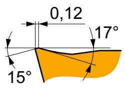
ODMT 05IM

PRAMET

	IC [mm]	D1 [mm]	S [mm]
0505	12.700	5.50	5.56

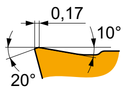


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

FM geometry, 45° face milling insert, with positive design for light to medium machining.

Product		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]
ODMT 0505ADSR-FM	**M8340**	0.8	200	0.25	2.5	120	0.23	2.5	190	0.25	2.5	–	–	–	–	–	–	–	–	–
	M9340	0.8	245	0.25	2.5	145	0.23	2.5	–	–	–	–	–	–	–	–	–	–	–	–

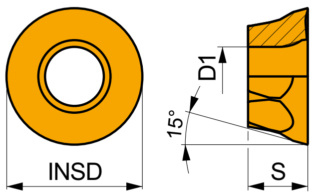
R geometry, 45° face milling insert, with positive design for unstable cutting conditions.

Product		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]
ODMT 050508SN-R	**M8330**	0.8	190	0.25	2.5	–	–	–	180	0.25	2.5	–	–	–	–	–	–	–	–	–
	M9340	0.8	210	0.25	2.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

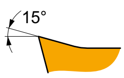
RDGT 12IM

PRAMET

	INSD [mm]	D1 [mm]	S [mm]
1205	12.7	5.50	5.56



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

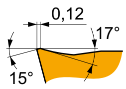
HFC F

F geometry with highly positive design for light machining.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
RDGT 120500FN-F	**M8310**	–	210	0.20	1.5	105	0.18	1.5	–	–	–	–	–	–	–	–	–	–	–	–

Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
		[mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]
RDGT 120500SN-FM	M8330	–	■ 190	0.20	1.5	◩ 110	0.18	1.5	◩ 180	0.20	1.5	–	–	–	–	–	–	–	–	–
	M8345	–	■ 140	0.20	1.5	◩ 80	0.18	1.5	–	–	–	–	–	–	–	–	–	–	–	–

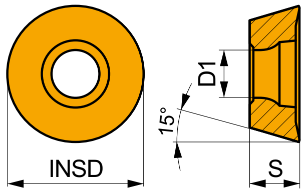


FM geometry with positive design for light to medium machining.

RDMT 12IM

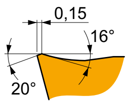
PRAMET

	INSD	D1	S
	[mm]	[mm]	[mm]
1205	12.7	5.50	5.56



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE	P			M			K			N			S			H		
		[mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]
RDMT 120500SN-R	M8330	–	■ 175	0.30	1.5	–	–	–	■ 165	0.30	1.5	–	–	–	–	–	–	–	–	–
	M8340	–	■ 160	0.30	1.5	–	–	–	◩ 150	0.30	1.5	–	–	–	–	–	–	–	–	–
	M9340	–	■ 190	0.30	1.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

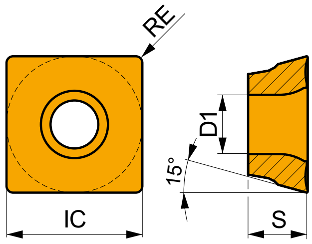


R geometry, copy and profile milling insert, with positive design for unstable cutting conditions.

SDKT 12IM

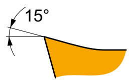
PRAMET

	IC [mm]	D1 [mm]	S [mm]
1205	12.700	5.50	5.56



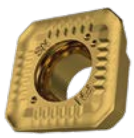
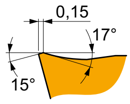
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product	Grade	RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
SDKT 1205PDFR-F	8215	0.8	■	285	0.10	4.0	◩	170	0.09	4.0		–	–	–	◩	855	0.12	4.0		–	–	–		–	–	–
SDKT 1205AESN-FM	M6330	–	■	240	0.15	4.0	◩	170	0.15	4.0		–	–	–		–	–	–		–	–	–		–	–	–
	M8330	–	■	280	0.15	4.0	◩	165	0.15	4.0	◩	265	0.15	4.0		–	–	–		–	–	–		–	–	–
	M8345	–	■	205	0.15	4.0	◩	120	0.15	4.0		–	–	–		–	–	–		–	–	–		–	–	–
SDKT 1205PDSR-FM	M8330	0.8	■	255	0.15	4.0	◩	150	0.15	4.0	◩	240	0.15	4.0		–	–	–		–	–	–		–	–	–
	M8345	0.8	■	185	0.15	4.0	◩	110	0.15	4.0		–	–	–		–	–	–		–	–	–		–	–	–

F

F geometry, 90° shoulder milling insert, with highly positive design for light machining.

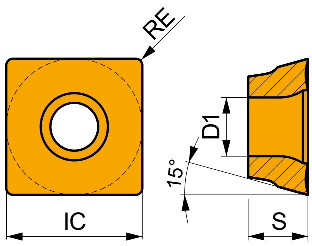
1 U S

FM geometry, 90° shoulder milling insert, with positive design for light to medium machining.

SDMT 12IM

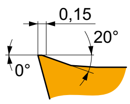
PRAMET

	IC [mm]	D1 [mm]	S [mm]
1205	12.700	5.50	5.56



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

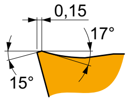
Product	Grade	RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
SDMT 120508SN-F	M8310	0.8	■	265	0.15	4.0	◩	135	0.15	4.0		–	–	–		–	–	–		–	–	–		–	–	–
	M8330	0.8	■	245	0.15	4.0	◩	145	0.15	4.0		–	–	–	◩	735	0.18	4.0		–	–	–		–	–	–

S

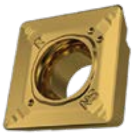
F geometry, 90° shoulder milling insert, with positive design for light to medium machining.

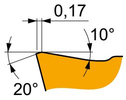
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.



FM geometry, 90° shoulder milling insert, with positive design for medium machining.

Product		RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
SDMT 120508SN-FM	**M8345**	0.8	■	175	0.15	4.0	◩	105	0.15	4.0		–	–	–		–	–	–		–	–	–		–	–	–





R geometry, 90° shoulder milling insert, with positive design for unstable cutting conditions.

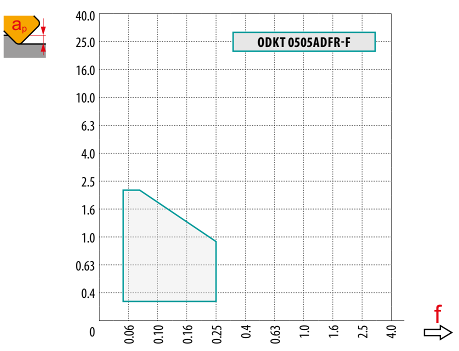
Product		RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
SDMT 120508SN-R	**M8330**	0.8	■	225	0.20	4.0		–	–	–	■	210	0.20	4.0		–	–	–		–	–	–		–	–	–
	M8345	0.8	■	165	0.20	4.0		–	–	–		–	–	–		–	–	–		–	–	–		–	–	–
	M9340	0.8	■	250	0.20	4.0		–	–	–		–	–	–		–	–	–		–	–	–		–	–	–
SDMT 1205AESN-R	**M8330**	–	■	265	0.20	4.0		–	–	–	■	250	0.20	4.0		–	–	–		–	–	–		–	–	–
	M8340	–	■	240	0.20	4.0		–	–	–	◩	225	0.20	4.0		–	–	–		–	–	–		–	–	–

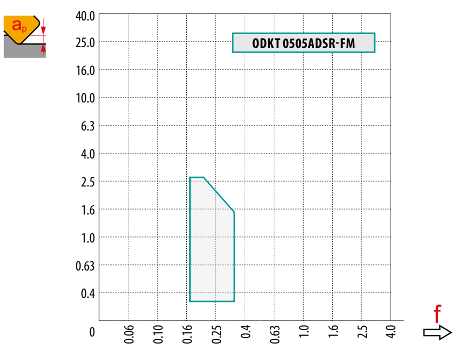
a_e/DCX	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

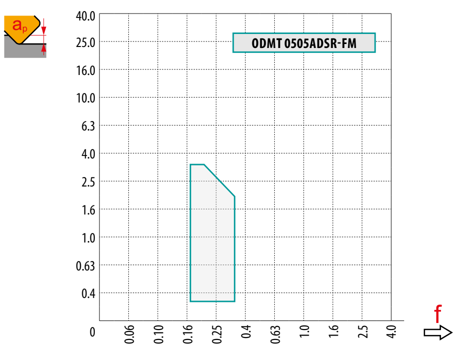
	ODKT 05-F	ODKT 05-FM	ODMT 05-FM	ODMT 05-R
RE	0.4	0.8	0.8	0.8
BS	1.00	1.00	–	–

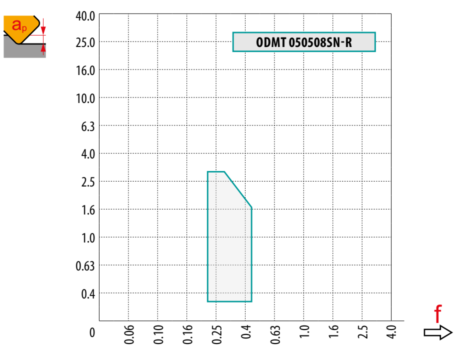
	RDGT 12-F	RDGT 12-FM	RDGT 12-R
RE	6.35	6.35	6.35
BS	–	–	–

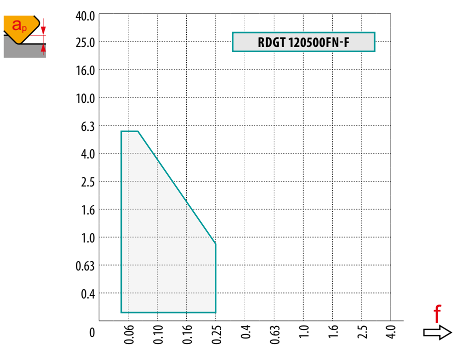
	SDKT 12-F	SDKT 12-FM	SDMT 12-F	SDMT 12-R
RE	0.8	0.8	0.8	0.8
BS	2.30	2.30	–	–

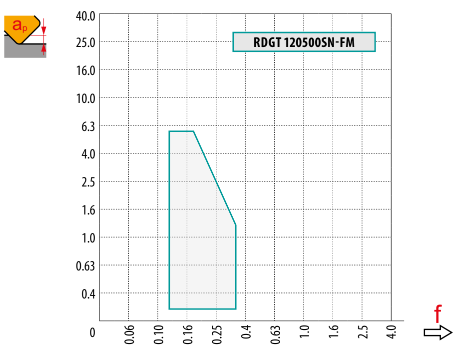


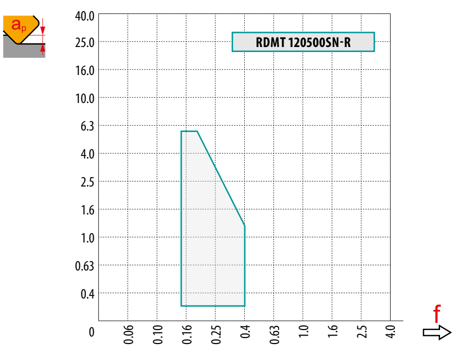


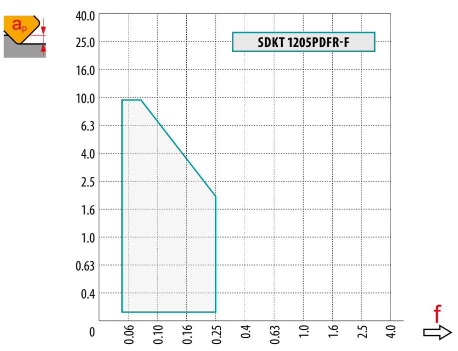


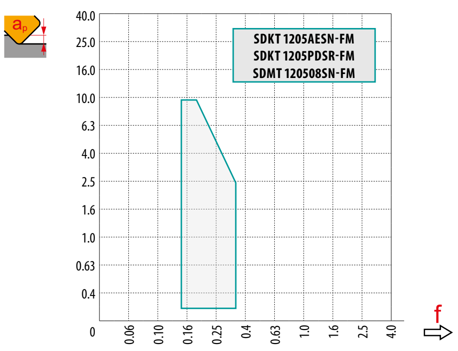


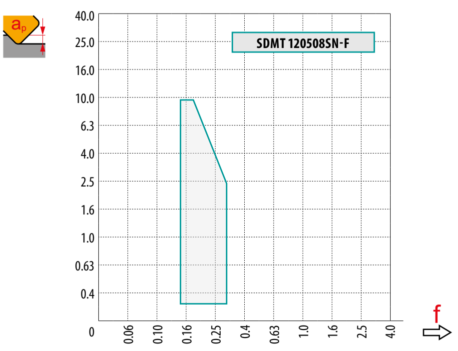


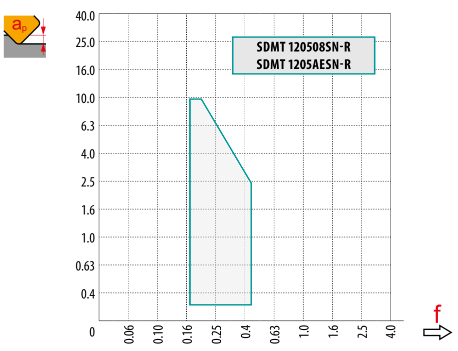












DCX		R												
	a_p	0.25	0.50	0.60	0.70	0.80	1.00	1.25	1.50	2.00	3.00	4.00	5.00	6.00
32	DEF	23.43	24.80	25.23	25.62	25.99	26.63	27.33	27.94	28.94	30.39	31.31	31.83	32.00
40		31.43	32.80	33.23	33.62	33.99	34.63	35.33	35.94	36.94	38.39	39.31	39.83	40.00
50		41.43	42.80	43.23	43.62	43.99	44.63	45.33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

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

S

$a_{e max}$
10.0

S

a_p	1.0	5.0	10.0
f	0.35	0.21	0.15

O

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

R

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

O

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

R

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

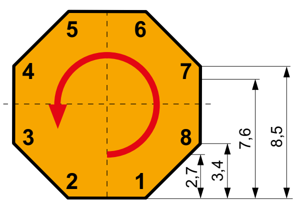
	O	R
a_p	2.4	2.3

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

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

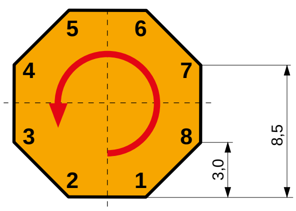
i

ODKT 05



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

ODMT 05



a_p	
-> 3.0	8
-> 8.5	4

⏮

SOD06D

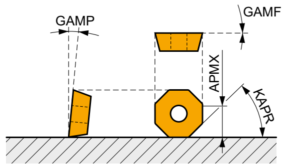
P M K S H

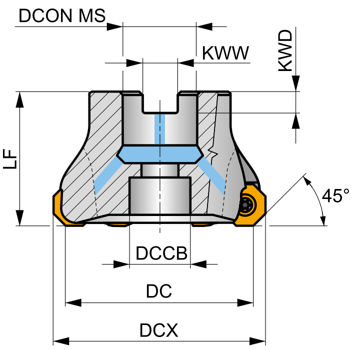
PRAMET S

Universal Face Mill with Positive Design and Internal Coolant

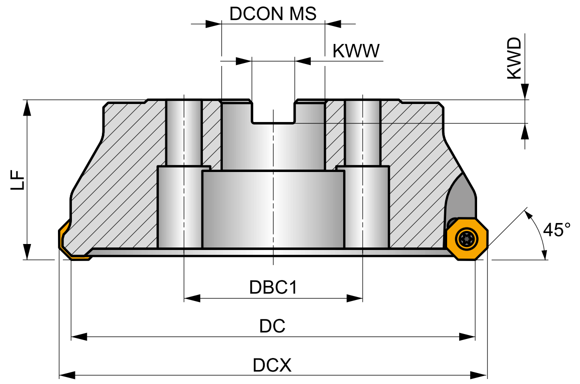
Highly productive universal face mill utilising single sided positive inserts with APMX of up to 3.5 mm. Unique insert seat fits OD.. 06 and RP.. 15 style inserts, suited for face milling and chamfering. Arbor style only in range from Ø63 up to Ø160 mm with differential tooth pitch. Body treated for longer tool life.

KAPR	45°
APMX	3.1 (8.6) mm





DC 63 - 125 mm



DC 160 mm

h_m 0.12 - 0.22

Product	DC [mm]	DCX [mm]	LF [mm]	DCON MS [mm]	DCCB [mm]	DBC1 [mm]	KWW [mm]	KWD [mm]	GAMF [°]	GAMP [°]			max.		kg		
63A05R-S450D06D	63	72.5	40	22	18	–	10.4	6.3	0	5	5	✓	8800	✓	0.60	GI059	FA071
80A06R-S450D06D	80	89.5	50	27	20	–	12.4	7	0	5	6	✓	7800	✓	1.25	GI059	FA071
100A07R-S450D06D	100	109.5	50	32	27	–	14.4	8	0	5	7	✓	7000	✓	2.09	GI059	FA071
125A08R-S450D06D	125	134.5	63	40	33	–	16.4	9	0	5	8	✓	6300	✓	4.18	GI059	FA071
160C09R-S450D06D	160	169.5	63	40	56	66.7	16.4	9	0	5	9	✓	5500	–	6.49	GI059	FA071

ISO 6462 DIN 8030

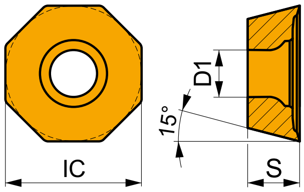
GI059	OD.. 0605ZZ..	RP.. 1505MO..

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

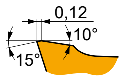
ODMT 06

PRAMET

	IC [mm]	D1 [mm]	S [mm]
0605	15.875	5.50	5.56



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.



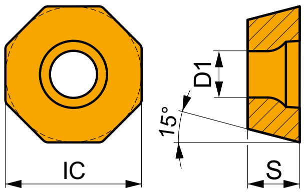
Slightly positive design, 45° face milling insert, for medium machining.

Product		RE [mm]	P				M				K				N			S			H		
				vc [m/min]	f [mm/tooth]	ap [mm]		vc [m/min]	f [mm/tooth]	ap [mm]		vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]
ODMT 0605ZZN	**M5315**	–	◩	255	0.24	3.0		–	–	–	■	240	0.24	3.0	–	–	–	–	–	–	–	–	–
	M8330	–	■	200	0.24	3.0		–	–	–	■	190	0.24	3.0	–	–	–	–	–	–	–	–	–
	M8340	–	■	185	0.24	3.0		–	–	–	◩	175	0.24	3.0	–	–	–	–	–	–	–	–	–
	M9315	–	■	260	0.24	3.0		–	–	–	■	245	0.24	3.0	–	–	–	–	–	–	–	–	–
	M9325	–	■	245	0.24	3.0		–	–	–	■	230	0.24	3.0	–	–	–	–	–	–	–	–	–

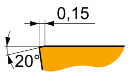
ODEW 06

PRAMET

	IC [mm]	D1 [mm]	S [mm]
0605	15.875	5.50	5.56



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

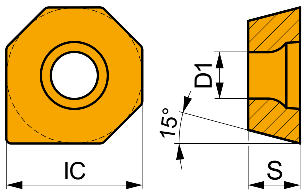


Zero rake angle design, 45° face milling insert, for medium machining.

Product		RE [mm]	P				M				K				N			S			H			
				vc [m/min]	f [mm/tooth]	ap [mm]		vc [m/min]	f [mm/tooth]	ap [mm]		vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]		vc [m/min]	f [mm/tooth]	ap [mm]
ODEW 0605ZZN	**M8330**	–	◩	210	0.26	2.5		–	–	–	■	195	0.26	2.5	–	–	–	–	–	–	◩	40	0.15	1.0

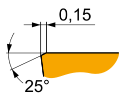
ODMX 06

	IC [mm]	D1 [mm]	S [mm]
0605	15.875	5.50	5.56



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product	Grade	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]
ODMX 0605ZZ	**M8330**	–	◩ 205	0.28	2.5	–	–	–	■ 190	0.28	2.5	–	–	–	–	–	–	◩ 40	0.15	1.0

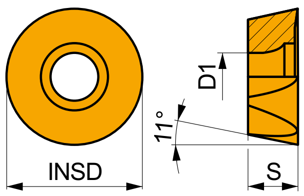


W S

Wiper design for improved surface finish.

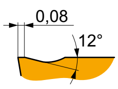
RPET 15

	INSD [mm]	D1 [mm]	S [mm]
1505	15.8	5.50	5.56



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product	Grade	RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
RPET 1505MOS-M	**M8330**	–	■ 230	0.40	1.0	◩ 135	0.36	1.0	◩ 215	0.40	1.0	–	–	–	◩ 55	0.28	0.8	–	–	–
	M8340	–	■ 210	0.40	1.0	◩ 125	0.36	1.0	◩ 195	0.40	1.0	–	–	–	◩ 50	0.28	0.8	–	–	–



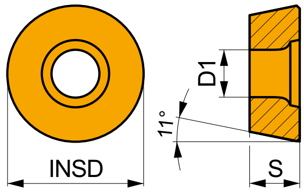
HFC S

M geometry, copy and profile mill insert, with positive design for light to rough machining.

RPEW 15

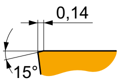
PRAMET

	INSD [mm]	D1 [mm]	S [mm]
1505	15.8	5.50	5.56



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
RPEW 1505MOS	M8330	–	◩	300	0.20	1.0		–	–	–	■	285	0.20	1.0		–	–	–		–	–	–	◩	60	0.15	1.0

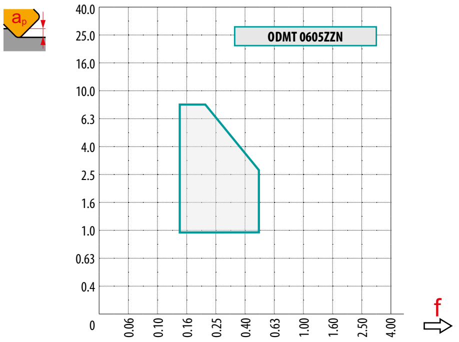


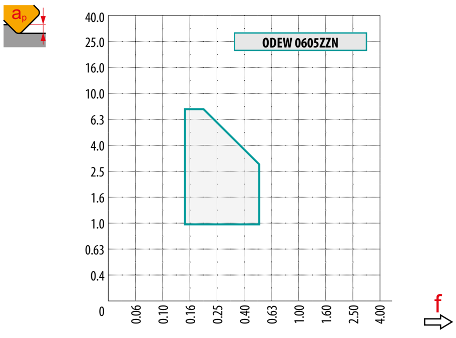
HFC S

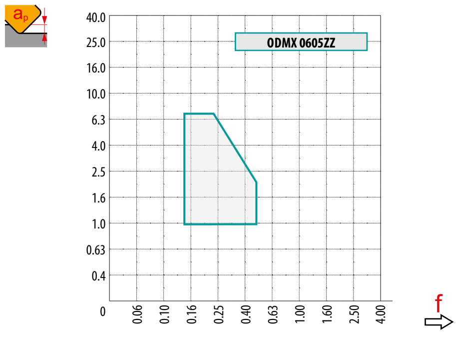
Zero rake angle design, copy and profile mill insert, for medium machining.

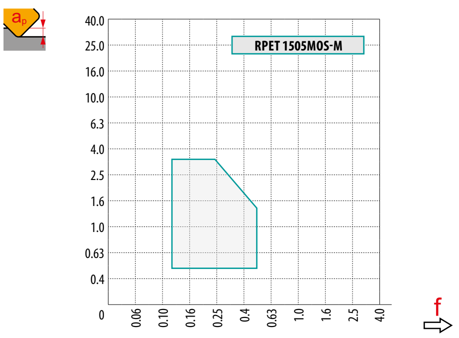
a_e/DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
x.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

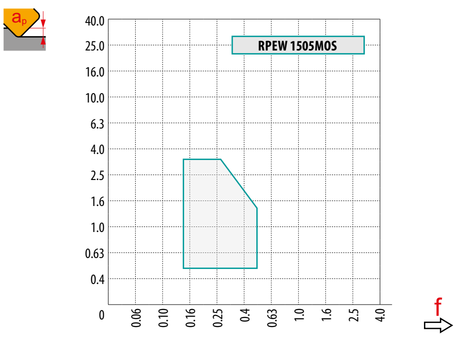
	ODMT 06	ODEW 06	ODMX 06	RPET 15-M	RPEW 15
RE	–	–	–	7.89	7.89
BS	1.73	5.92	9.91	–	–





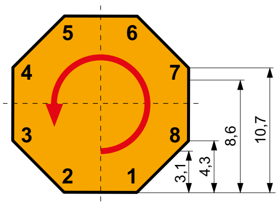






DC	DEF (a_p) R: 0.00	0.50	0.75	1.25	1.50	2.00	2.50	3.00	4.00
63	56.63	62.17	63.36	65.18	65.91	67.16	68.19	69.05	70.41
80	73.63	79.17	80.36	82.18	82.91	84.16	85.19	86.05	87.41
100	93.63	99.17	100.36	102.18	102.91	104.16	105.19	106.05	107.41
125	118.63	124.17	125.36	127.18	127.91	129.16	130.19	131.05	132.41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

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



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

SOE06Z

P M N S

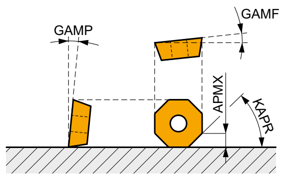
PRAMET

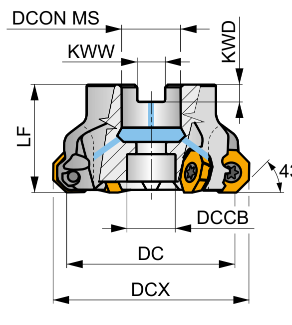
S

Universal Face Mill with Positive Design and Internal Coolant

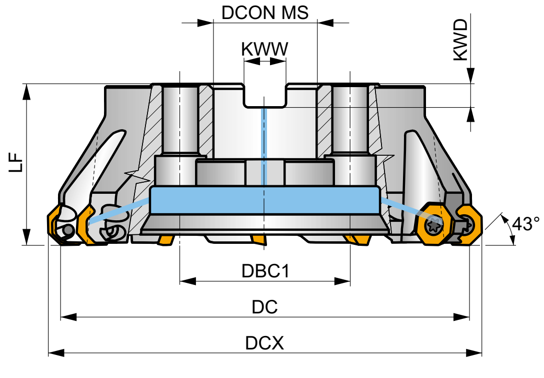
Highly productive universal face mill utilising positive single sided inserts with APMX of 4 mm for RE.. 16. Unique insert seat fits OE.. 06, RE.. 16 and XE.. 06 style inserts, suited for a wide range of applications. Arbor style only in range from Ø50 up to Ø200 mm with differential tooth pitch. Body treated for longer tool life.

KAPR	43°
APMX	3.3 (9.9) mm





DC 50 – 125 mm



DC 160 – 200 mm

h_m 0.06 - 0.20

Product	DC [mm]	DCX [mm]	LF [mm]	DCON MS [mm]	DCCB [mm]	DBC1 [mm]	KWW [mm]	KWD [mm]	GAMF [°]	GAMP [°]			max.		kg			
50A04R-S450E06Z-C	50	60.2	40	22	18	–	10.4	6.3	6	10	4	✓	10700	✓	0.48	GI283	FA053	–
50A05R-S450E06Z-C	50	60	40	22	18	–	10.4	6.3	1	10	5	✓	10700	✓	0.48	GI283	FA053	–
56A05R-S450E06Z-C	56	66	40	22	18	–	10.4	6.3	6	10	5	✓	10100	✓	0.54	GI283	FA053	–
63A04R-S450E06Z-C	63	73.2	40	22	18	–	10.4	6.3	6	10	4	✓	9600	✓	0.59	GI283	FA053	–
63A06R-S450E06Z-C	63	73	40	22	18	–	10.4	6.3	1	10	6	✓	9600	✓	0.61	GI283	FA053	–
70A06R-S450E06Z-C	70	80	40	22	18	–	10.4	6.3	6	10	6	✓	9100	✓	0.69	GI283	FA053	–
80A05R-S450E06Z-C	80	90.2	50	27	38	–	12.4	7	6	10	5	✓	8500	✓	1.03	GI283	FA051	AC001
80A06R-S450E06Z-C	80	90.2	50	27	38	–	12.4	7	6	10	6	✓	8500	✓	1.07	GI283	FA051	AC001
90A07R-S450E06Z-C	90	100	50	32	45	–	14.4	8	6	10	7	✓	8000	✓	1.63	GI283	FA051	AC002
100A06R-S450E06Z-C	100	110.2	50	32	45	–	14.4	8	6	10	6	✓	7600	✓	1.90	GI283	FA051	AC002
100A08R-S450E06Z-C	100	109.9	50	32	45	–	14.4	8	1	10	8	✓	7600	✓	1.92	GI283	FA051	AC002
125A07R-S450E06Z-C	125	135.2	63	40	56	–	16.4	9	6	10	7	✓	6800	✓	3.35	GI283	FA051	AC003
125A09R-S450E06Z-C	125	134.9	63	40	56	–	16.4	9	1	10	9	✓	6800	✓	3.35	GI283	FA051	AC003
160C09R-S450E06Z-C	160	170.2	63	40	–	66.7	16.4	9	6	10	9	✓	6000	✓	7.11	GI283	FA056	–
160C12R-S450E06Z-C	160	169.9	63	40	–	66.7	16.4	9	1	10	12	✓	6000	✓	7.06	GI283	FA056	–
200C11R-S450E06Z-C	200	210.2	63	60	–	101.6	25.7	14	6	10	11	✓	5300	✓	10.80	GI283	FA057	–
200C14R-S450E06Z-C	200	209.9	63	60	–	101.6	25.7	14	1	10	14	✓	5300	✓	11.17	GI283	FA057	–

ISO 6462 DIN 8030

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

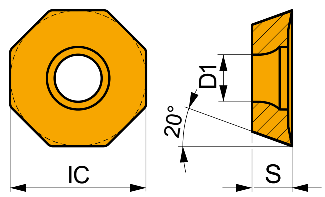
		Nm							
FA051	US 5011-T20P	5.0	M 5	11	SDR T20P-T	–	–	–	–
FA053	US 5011-T20P	5.0	M 5	11	SDR T20P-T	HS 1030C	–	–	–

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

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

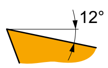
OEHT 06

	IC [mm]	D1 [mm]	S [mm]
0604	16.050	5.50	4.76



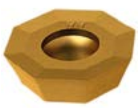
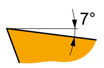
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		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]
OEHT 0604AEER-MF	M6330	–	◩ 255	0.12	2.2	■ 180	0.11	2.2	–	–	–	–	–	–	■ 75	0.10	1.8	–	–	–
	M8330	–	◩ 295	0.12	2.2	■ 175	0.11	2.2	–	–	–	◩ 885	0.14	2.2	◩ 70	0.10	1.8	–	–	–
	M8340	–	◩ 275	0.12	2.2	■ 165	0.11	2.2	–	–	–	–	–	–	■ 65	0.10	1.8	–	–	–
OEHT 0604AEER-MM	M6330	–	◩ 245	0.16	2.2	■ 170	0.14	2.2	–	–	–	–	–	–	■ 70	0.11	1.8	–	–	–
	M8330	–	◩ 280	0.16	2.2	■ 165	0.14	2.2	–	–	–	◩ 840	0.19	2.2	◩ 70	0.11	1.8	–	–	–
	M8340	–	◩ 255	0.16	2.2	■ 150	0.14	2.2	–	–	–	–	–	–	■ 60	0.11	1.8	–	–	–
	M8345	–	◩ 205	0.16	2.2	■ 120	0.14	2.2	–	–	–	–	–	–	■ 50	0.11	1.8	–	–	–
	M9325	–	◩ 355	0.16	2.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	M9340	–	◩ 320	0.16	2.2	■ 190	0.14	2.2	–	–	–	–	–	–	■ 80	0.11	1.8	–	–	–
OEHT 0604AESR-M	M6330	–	■ 210	0.24	3.2	■ 150	0.22	3.2	–	–	–	–	–	–	◩ 60	0.17	2.6	–	–	–
	M8310	–	■ 265	0.24	3.2	◩ 135	0.22	3.2	–	–	–	–	–	–	–	–	–	–	–	–
	M8330	–	■ 245	0.24	3.2	■ 145	0.22	3.2	–	–	–	–	–	–	◩ 60	0.17	2.6	–	–	–
	M8340	–	■ 220	0.24	3.2	■ 130	0.22	3.2	–	–	–	–	–	–	◩ 55	0.17	2.6	–	–	–
	M9325	–	■ 295	0.24	3.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	M9340	–	■ 270	0.24	3.2	■ 160	0.22	3.2	–	–	–	–	–	–	◩ 65	0.17	2.6	–	–	–

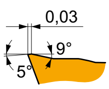
E

MF geometry, 45° face milling insert, with sharp positive design for light to medium and potentially finish machining.

1 E

MM geometry, 45° face milling insert, with sharp positive design for light to medium machining.

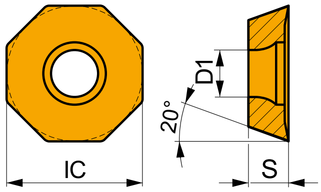
S

M geometry, 45° face milling insert, with slightly positive design for light to medium machining.

OEHT 06-FA

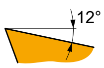
PRAMET

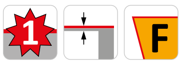
	IC [mm]	D1 [mm]	S [mm]
0604	16.050	5.50	4.76



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		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]
OEHT 0604AEFR-FA	**HF7**	–	–	–	–	–	–	–	–	–	–	■ 330	0.18	2.0	–	–	–	–	–	–
	M0315	–	–	–	–	–	–	–	–	–	–	■ 765	0.18	2.0	–	–	–	–	–	–



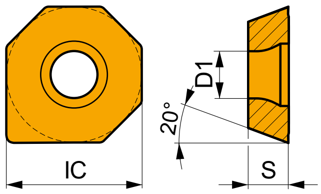


FA geometry, 45° face milling insert, with highly positive design for fine-finish to medium machining.

XEHT 06

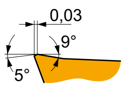
PRAMET

	IC [mm]	D1 [mm]	S [mm]
0604	16.050	5.50	4.76



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		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]
XEHT 0604AESR	**M8310**	–	■ 265	0.24	3.2	◩ 135	0.22	3.2	–	–	–	–	–	–	–	–	–	–	–	–
	M8330	–	■ 245	0.24	3.2	◩ 145	0.22	3.2	–	–	–	–	–	–	–	–	–	–	–	–

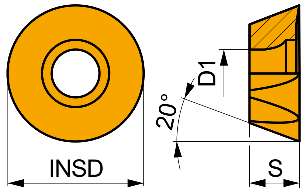


Slightly poisitive wiper design for improved surface finish.

PRAMET

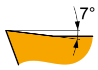
REHT 16

	INSD [mm]	D1 [mm]	S [mm]
1604	16.0	5.50	4.76



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

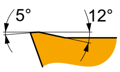
Product	Grade	RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
REHT 1604M0EN-MM	M6330	–	◩ 240	0.25	2.0	■ 170	0.23	2.0	–	–	–	–	–	–	■ 70	0.18	1.6	–	–	–
	M8330	–	◩ 280	0.25	2.0	■ 165	0.23	2.0	–	–	–	◩ 840	0.30	2.0	◩ 70	0.18	1.6	–	–	–
	M8340	–	◩ 255	0.25	2.0	■ 150	0.23	2.0	–	–	–	–	–	–	■ 60	0.18	1.6	–	–	–
	M8345	–	◩ 205	0.25	2.0	■ 120	0.23	2.0	–	–	–	–	–	–	■ 50	0.18	1.6	–	–	–
	M9325	–	◩ 340	0.25	2.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	M9340	–	◩ 305	0.25	2.0	■ 180	0.23	2.0	–	–	–	–	–	–	■ 75	0.18	1.6	–	–	–



E

MM geometry, copy and profile mill insert, with slightly positive design for light to medium machining.

Product	Grade	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]
REHT 1604M0SN-M	M8310	–	■ 275	0.35	2.0	◩ 140	0.32	2.0	–	–	–	–	–	–	–	–	–	–	–	–
	M8330	–	■ 260	0.35	2.0	■ 155	0.32	2.0	–	–	–	–	–	–	◩ 65	0.25	1.6	–	–	–
	M8340	–	■ 240	0.35	2.0	■ 140	0.32	2.0	–	–	–	–	–	–	◩ 60	0.25	1.6	–	–	–
	M9325	–	■ 310	0.35	2.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

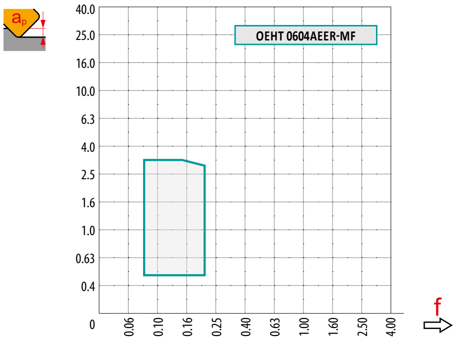


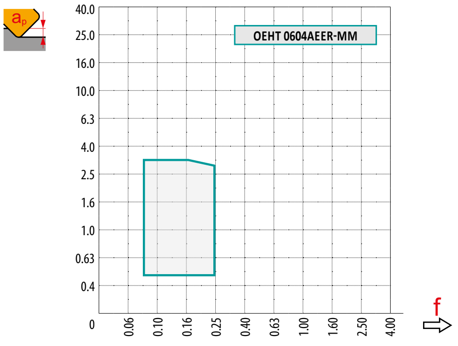
S

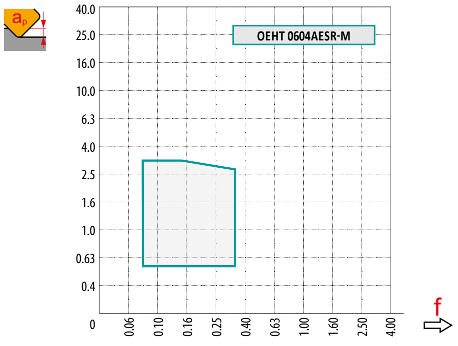
M geometry, copy and profile mill insert, with positive design for light to medium machining.

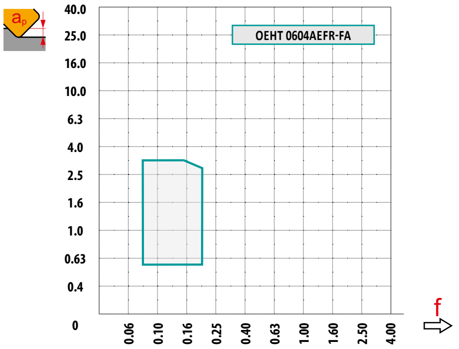
a_e/DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

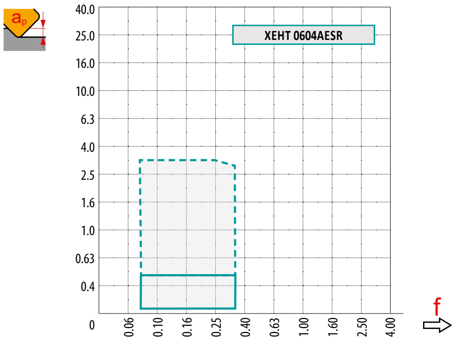
	OEHT 06-MF	OEHT 06-MM	OEHT 06-M	OEHT 06-FA	XEHT 06	REHT 16-MM	REHT 16-M
RE	–	–	–	–	–	8.00	8.00
BS	1.36	1.36	1.36	1.36	9.91	–	–

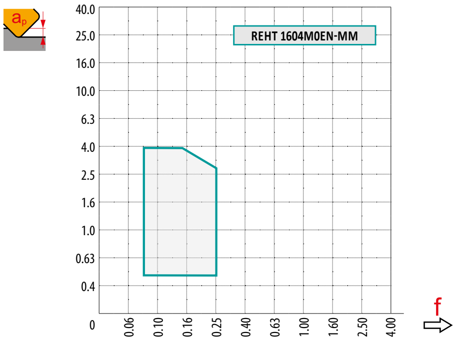


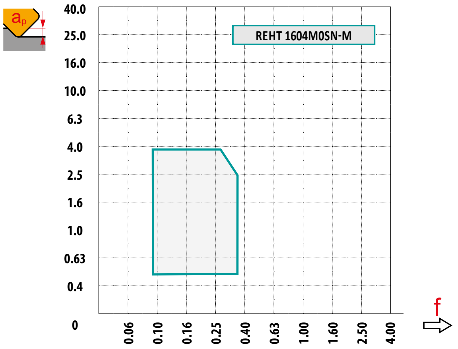












⏮

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

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

DC (O)	DCX (R)	O RPMX	O APMX/l	R RPMX	R APMX/l
50	59.9	4.9	8.4/100	4.6	7.9/100
56	65.8	4.2	7.2/100	4	6.8/100
63	72.9	3.6	6.1/100	3	5.1/100
70	79.8	3.1	5.3/100	2.7	4.6/100
80	89.9	2.6	4.4/100	2.2	3.7/100
90	99.8	2.3	3.9/100	2	3.3/100
100	109.9	2	3.3/100	1.8	3.0/100
125	134.9	1.5	2.5/100	1.3	2.1/100

DC (O)	DCX (R)	O DMIN	O DMAX	O SMAX (DMIN)	O SMAX (DMAX)	R DMIN	R DMAX	R SMAX (DMIN)	R SMAX (DMAX)
50	59.9	91.5	120.0	5.9	5.9	91.5	119.5	5.9	5.9
56	65.8	103.2	131.5	5.9	5.9	103.5	131.0	5.9	5.9
63	72.9	117.4	146.0	5.9	5.9	118.0	145.5	5.9	5.9
70	79.8	131.2	159.5	5.9	5.9	131.5	159.0	5.9	5.9
80	89.9	151.4	180.0	5.9	5.9	151.5	179.5	5.9	5.9
90	99.8	171.2	199.5	5.9	5.9	171.5	199.0	5.9	5.9
100	109.9	191.4	220.0	5.9	5.9	191.5	219.5	5.9	5.9
125	134.9	241.3	270.0	5.9	5.9	241.5	269.5	5.9	5.9

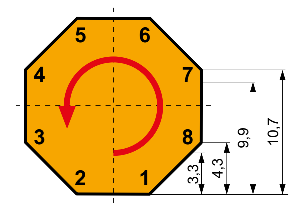
	O	R
a_p	3.1	3.0

R

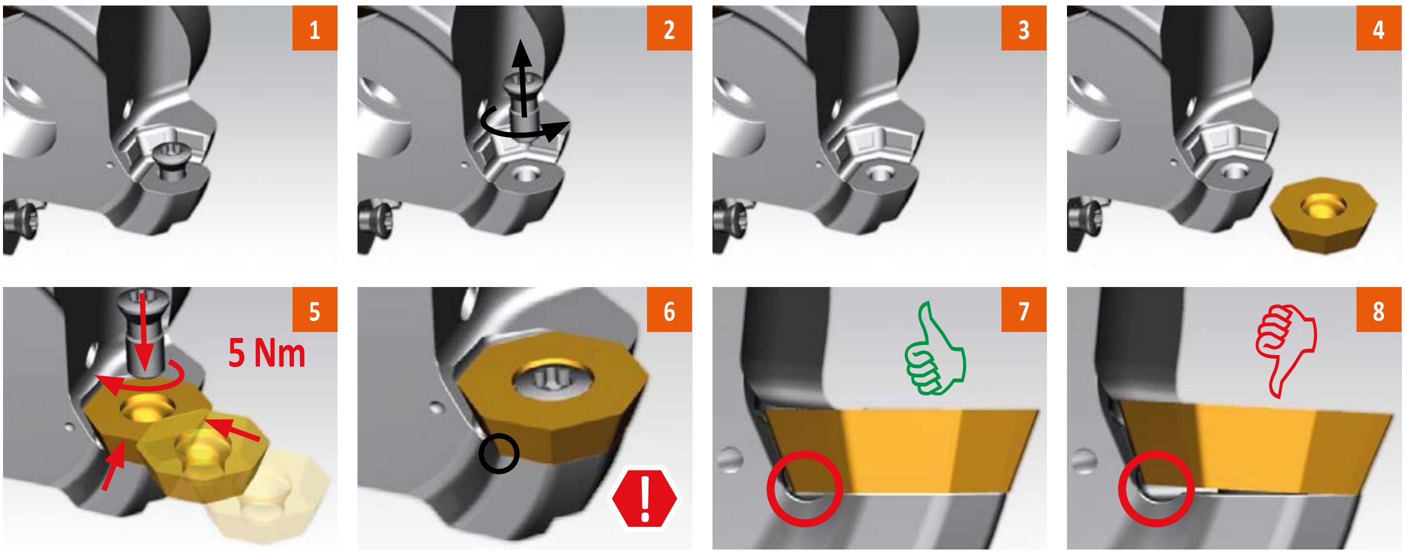
DCX	µm	3	5	10	15	20	30	40	50	60	80	100
59.9	FE	0.848	1.095	1.548	1.896	2.189	2.681	3.096	3.461	3.792	4.378	4.895
65.8		0.889	1.147	1.622	1.987	2.294	2.810	3.245	3.628	3.974	4.589	5.130
72.9		0.935	1.207	1.708	2.091	2.415	2.958	3.415	3.818	4.183	4.830	5.400
79.8		0.979	1.263	1.787	2.188	2.527	3.095	3.573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

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

i



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



SOE09Z

P M N S

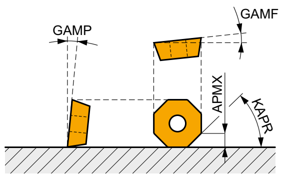
PRAMET

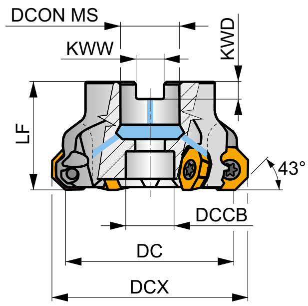
S

Universal Face Mill with Positive Design and Internal Coolant

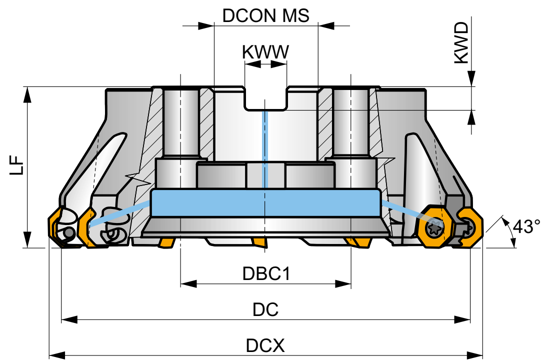
Highly productive universal face mill utilising positive single sided inserts with APMX of 6 mm for RE.. 24. Unique insert seat fits OE.. 09, RE.. 24 and XE.. 09 style inserts. Suited for a wide range of applications. Arbor style only in range from Ø80 up to Ø315 mm with differential tooth pitch. Body treated for longer tool life.

KAPR	43°
APMX	5.0 (14.1) mm





DC 80 – 125 mm



DC 160 – 315 mm

h_m 0.09 - 0.25

Product	DC [mm]	DCX [mm]	LF [mm]	DCON MS [mm]	DCCB [mm]	DBC1 [mm]	KWW [mm]	KWD [mm]	GAMF [°]	GAMP [°]			max.		kg			
80A05R-S450E09Z-C	80	95	50	27	22	–	12.4	7	6	10	5	✓	6100	✓	1.32	GI293	FA064	–
100A06R-S450E09Z-C	100	115	50	32	45	–	14.4	8	6	10	6	✓	5400	✓	1.90	GI293	FA061	AC002
125A07R-S450E09Z-C	125	140	63	40	56	–	16.4	9	6	10	7	✓	4800	✓	3.38	GI293	FA061	AC003
160C08R-S450E09Z-C	160	175	63	40	–	66.7	16.4	9	6	10	8	✓	4300	✓	6.12	GI293	FA066	–
200C10R-S450E09Z-C	200	215	63	60	–	101.6	25.7	14	1	10	10	✓	3800	✓	11.50	GI293	FA067	–
250C12R-S450E09Z-C	250	265	63	60	–	101.6	25.7	14	1	10	12	✓	3400	✓	18.50	GI293	FA068	–
315C14R-S450E09Z-C	315	330	80	60	–	101.6	25.7	14	1	10	14	✓	3000	✓	36.00	GI293	FA069	–

ISO 6462 DIN 8030

GI293	OEHT 0906AE..	REHT 2406M0..	XEHT 0906AE..

		Nm									
FA061	US 68020-T30P	15.0	M 8	20	SDR T30P-T	–	–	–	–	–	–
FA064	US 68020-T30P	15.0	M 8	20	SDR T30P-T	HS 1230C	–	–	–	–	–
FA066	US 68020-T30P	15.0	M 8	20	SDR T30P-T	HS 1240C	CAC 160C	HSD 0825C	HXK 5	–	–
FA067	US 68020-T30P	15.0	M 8	20	SDR T30P-T	HS 1655C	CAC 200C	HSD 1025C	HXK 7	–	–
FA068	US 68020-T30P	15.0	M 8	20	SDR T30P-T	HS 1655C	CAC 250C	HSD 1025C	HXK 7	–	–
FA069	US 68020-T30P	15.0	M 8	20	SDR T30P-T	HS 1655C	CAC 315C	HSD 1035C	HXK 7	CACP 3150C	RRH 34

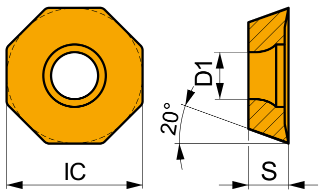
AC002	KS 1635	K.FMH32

AC003	KS 2040	K.FMH40

OEHT 09

PRAMET

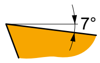
	IC [mm]	D1 [mm]	S [mm]
0906	24.100	8.60	7.15



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
OEHT 0906AEER-MM	**M8330**	–	◩	255	0.25	3.5	■	150	0.23	3.5		–	–	–	◩	765	0.30	3.5	◩	60	0.18	2.8		–	–	–
	M8340	–	◩	230	0.25	3.5	■	135	0.23	3.5		–	–	–		–	–	–	■	55	0.18	2.8		–	–	–
OEHT 0906AESR-M	**M8310**	–	■	250	0.35	3.5	◩	125	0.32	3.5		–	–	–		–	–	–		–	–	–		–	–	–
	M8330	–	■	235	0.35	3.5	■	140	0.32	3.5		–	–	–		–	–	–	◩	55	0.25	2.8		–	–	–
	M8340	–	■	215	0.35	3.5	■	125	0.32	3.5		–	–	–		–	–	–	◩	50	0.25	2.8		–	–	–
	M9325	–	■	275	0.35	3.5		–	–	–		–	–	–		–	–	–		–	–	–		–	–	–

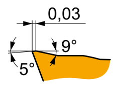
OEHT 0906AEER-MM



1 E

MM geometry, 45° face milling insert, with sharp positive design for light to medium and potentially heavy machining.

OEHT 0906AESR-M



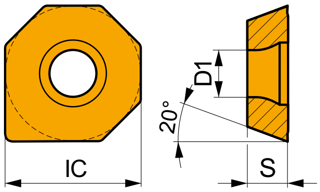
S

M geometry, 45° face milling insert, with positive design for light to medium and potentially heavy machining.

XEHT 09

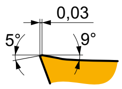
PRAMET

	IC [mm]	D1 [mm]	S [mm]
0906	24.100	8.60	7.15



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		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]
XEHT 0906AESR	M8310	–	■ 235	0.35	3.5	◩ 115	0.32	3.5	–	–	–	–	–	–	–	–	–	–	–	–



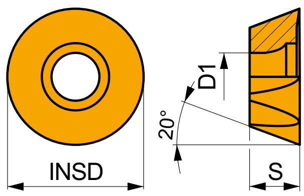
W S

Slightly positive wiper design for improved surface finish.

REHT 24

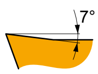
PRAMET

	INSD [mm]	D1 [mm]	S [mm]
2406	24.0	8.60	7.15



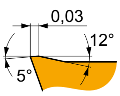
Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		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]
REHT 2406M0EN-MM	M8330	–	◩ 280	0.25	2.0	■ 165	0.23	2.0	–	–	–	◩ 840	0.30	2.0	◩ 70	0.18	1.6	–	–	–
	M8340	–	◩ 255	0.25	2.0	■ 150	0.23	2.0	–	–	–	–	–	–	■ 60	0.18	1.6	–	–	–
REHT 2406M0SN-M	M8330	–	■ 260	0.35	2.0	■ 155	0.32	2.0	–	–	–	–	–	–	◩ 65	0.25	1.6	–	–	–
	M8340	–	■ 240	0.35	2.0	■ 140	0.32	2.0	–	–	–	–	–	–	◩ 60	0.25	1.6	–	–	–



E

MM geometry, copy and profile mill insert, with slightly positive design for light to medium and potentially heavy machining.

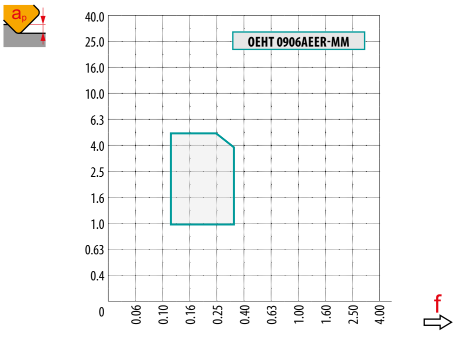


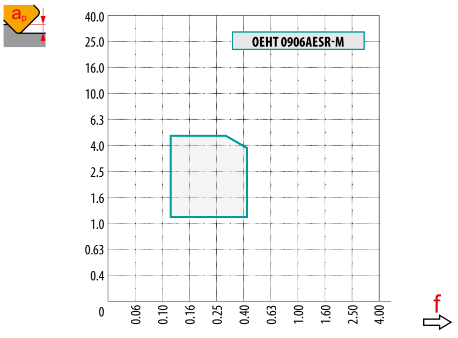
S

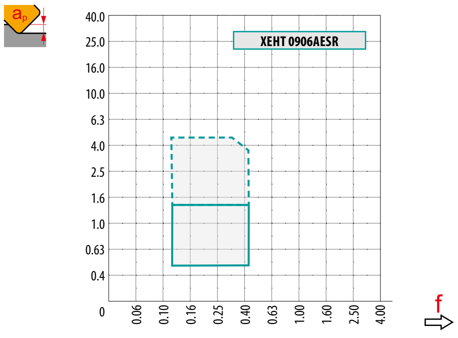
M geometry, copy and profile mill insert, with slightly positive design for light to medium and potentially heavy machining.

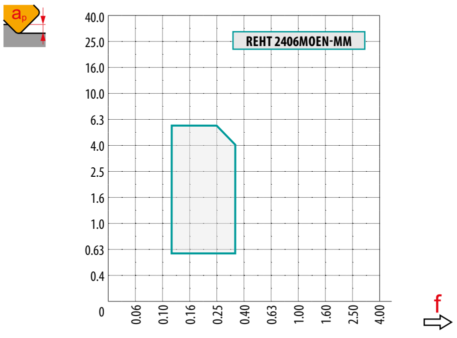
ae / DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

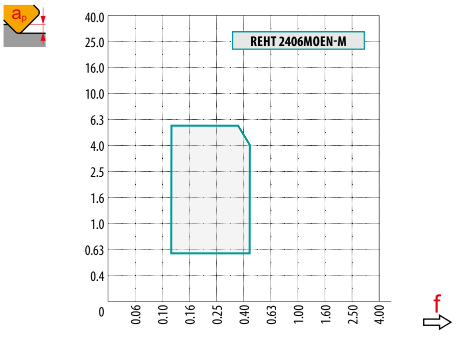
	OEHT 09-MM	OEHT 09-M	XEHT 09	REHT 24-MM	REHT 24-M
RE	–	–	–	12.00	12.00
BS	2.00	2.00	14.80	–	–











DC		R										
	ap	0.00	0.50	0.75	1.25	1.50	2.00	2.50	3.00	4.00	5.00	6.00
80	DEF	70.90	77.76	79.25	81.57	82.52	84.17	85.56	86.77	88.79	90.39	91.68
100		90.90	97.76	99.25	101.57	102.52	104.17	105.56	106.77	108.79	110.39	111.68
125		115.90	122.76	124.25	126.57	127.52	129.17	130.56	131.77	133.79	135.39	136.68
160		150.90	157.76	159.25	161.57	162.52	164.17	165.56	166.77	168.79	170.39	171.68
200		190.90	197.76	199.25	201.57	202.52	204.17	205.56	206.77	208.79	210.39	211.68
250		240.60	247.46	248.95	251.27	252.22	253.87	255.26	256.47	258.49	260.09	261.38
315		305.60	312.46	313.95	316.27	317.22	318.87	320.26	321.47	323.49	325.09	326.38

DC	X.V	f_{max}
80	1.44	0.51
100	1.48	0.57
125	1.53	0.64
160	1.58	0.72
200	1.63	0.80
250	1.68	0.90
315	1.74	1.01

DC	DCX	O		R	
O	R	RPMX	APMX/l	RPMX	APMX/l
80	94.9	4.9	8.4/100	5.0	8.6/100
100	114.9	3.7	6.3/100	3.7	6.3/100
125	139.9	2.8	4.7/100	2.8	4.7/100
160	174.9	2.1	3.5/100	2.1	3.5/100
200	214.9	1.6	2.6/100	1.6	2.6/100

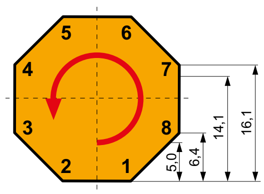
DC	DCX	O				R			
O	R	**DMIN**	**DMAX**	SMAX DMIN	SMAX DMAX	**DMIN**	**DMAX**	SMAX DMIN	SMAX DMAX
80	94.9	146.0	190.0	8.8	8.8	146.0	189.0	11.5	11.5
100	114.9	186.0	230.0	8.8	8.8	186.0	229.0	11.5	11.5
125	139.9	236.0	280.0	8.8	8.8	236.0	279.0	11.5	11.5
160	174.9	306.0	350.0	8.8	8.8	306.0	349.0	11.5	11.5
200	214.9	386.0	430.0	8.8	8.8	386.0	429.0	11.5	11.5

	O	R
a_p	5.5	5.4

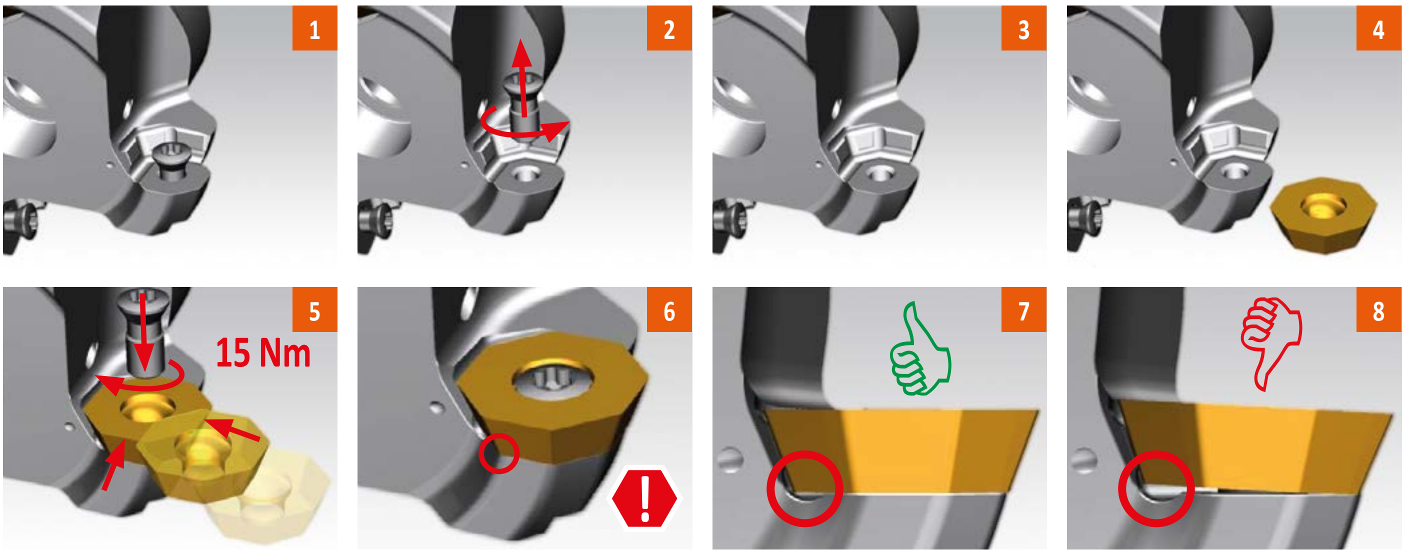
DCX	µm	3	5	10	15	20	30	40	50	60	80	100
94.9	FE	1.067	1.378	1.948	2.386	2.755	3.375	3.897	4.357	4.772	5.511	6.161

RE	µm	3	5	10	15	20	30	40	50	60	80	100
12.0	FE	0.537	0.693	0.980	1.200	1.386	1.697	1.960	2.191	2.400	2.771	3.098

i



a_p	
-> 5.0	8
-> 6.4	7
-> 14.1	4
-> 16.1	2



SSE09

P M K S

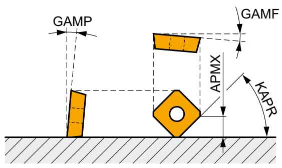
PRAMET

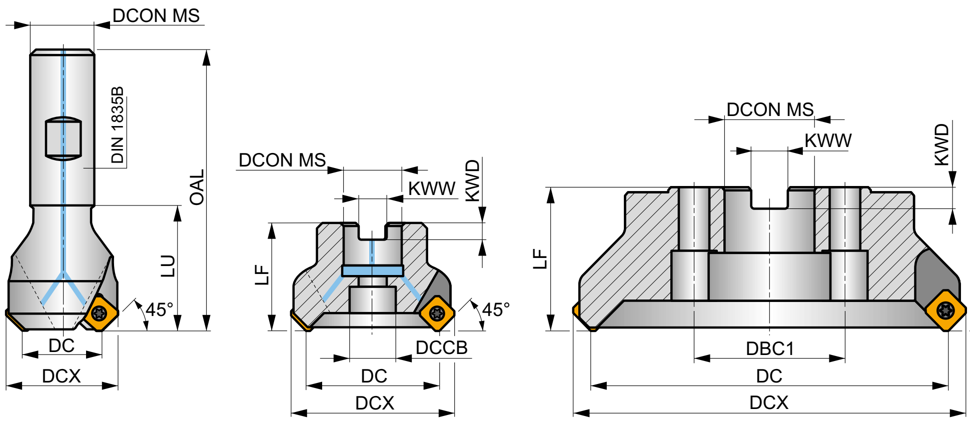
S

45° Face Mill with Positive Design and Internal Coolant

Highly productive 45° face mill utilising single sided SE.. 09 style inserts with APMX of 4.5 mm. Suited for face milling and chamfering. Weldon and arbor style available, in range from Ø20 up to Ø160 mm and with differential tooth pitch. Body treated for longer tool life.

KAPR	45°
APMX	4.5 mm





DC 32 – 125 mm

DC 160 mm

h_m	0.06 - 0.2
h_m	0.06 - 0.18

	Product	DC	DCX	OAL	DCON MS	DCCB	DBC1	LU	LF	KWW	KWD	GAMF	GAMP			max.		kg			
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[°]	[°]								
DIN 1835B	20N2R032B20-SSE09-C	20	29.8	82	20	–	–	32	–	–	–	-5	20	2	–	24600	✓	0.26	GI147	FA010	–
	25N3R042B25-SSE09-C	25	34.8	98	25	–	–	42	–	–	–	-5	20	3	–	22000	✓	0.44	GI147	FA010	–
	32N4R042B32-SSE09-C	32	42	102	32	–	–	42	–	–	–	-5	20	4	–	19400	✓	0.68	GI147	FA010	–
ISO 6462 DIN 8030	32A04R-S45SE09F-C	32	42	–	16	14	–	–	40	8.4	6.4	-5	20	4	✓	19400	✓	0.24	GI147	FA012	–
	40A04R-S45SE09F-C	40	53.2	–	16	14	–	–	40	8.4	6.4	-5	20	4	✓	17400	✓	0.30	GI147	FA012	–
	50A05R-S45SE09F-C	50	59.6	–	22	18	–	–	40	10.4	6.4	-5	20	5	✓	15600	✓	0.56	GI147	FA013	–
	63A05R-S45SE09F-C	63	75.8	–	22	18	–	–	40	10.4	6.4	-5	20	5	✓	13900	✓	0.57	GI147	FA013	–
	63A06R-S45SE09F-C	63	75.8	–	22	18	–	–	40	10.4	6.4	-5	20	6	✓	13900	✓	0.58	GI147	FA013	–
	80A06R-S45SE09F-C	80	89.6	–	27	38	–	–	50	12.4	7	-5	20	6	✓	12300	✓	1.14	GI147	FA011	AC001
	80A08R-S45SE09F-C	80	89.6	–	27	38	–	–	50	12.4	7	-5	20	8	✓	12300	✓	1.13	GI147	FA011	AC001
	100A08R-S45SE09F-C	100	110	–	32	45	–	–	50	14.4	8	-5	20	8	✓	11000	✓	1.83	GI147	FA011	AC002
	100A10R-S45SE09F-C	100	110	–	32	45	–	–	50	14.4	8	-5	20	10	✓	10900	✓	1.82	GI147	FA011	AC002
	125A09R-S45SE09F-C	125	134.5	–	40	60	–	–	63	16.4	9	-5	20	9	✓	9800	✓	3.87	GI147	FA011	AC003
	125A12R-S45SE09F-C	125	134.5	–	40	60	–	–	63	16.4	9	-5	20	12	✓	9800	✓	3.87	GI147	FA011	AC003
	160C10R-S45SE09F	160	169.6	–	40	–	66.7	–	63	16.4	9	-5	20	10	✓	8700	–	6.21	GI147	FA014	–
	160C14R-S45SE09F	160	169.6	–	40	–	66.7	–	63	16.4	9	-5	20	14	✓	8700	–	6.29	GI147	FA014	–

GI147	SEET 09T3AF..	SEMT 09T3AF..

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

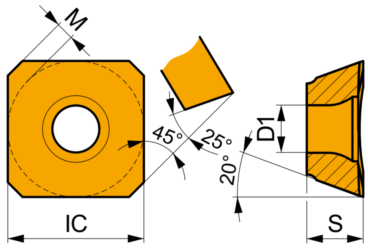
FA013	US 3007-T09P	2.0	M 3	7.3	D-T07P/T09P	FG-15	–	HS 1030C
FA014	US 3007-T09P	2.0	M 3	7.3	D-T07P/T09P	FG-15	–	HS 1240C

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

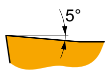
SEET 09

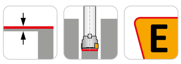
PRAMET

	IC [mm]	D1 [mm]	M [mm]	S [mm]
09T3	9.525	3.50	1	3.97



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.





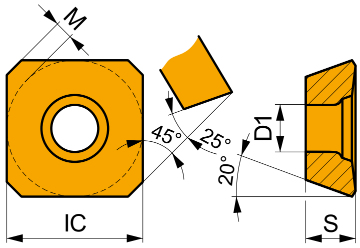
Positive design for light to medium machining.

Product		RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
SEET 09T3AFEN	**8215**	–	■ 300	0.14	2.5	◩ 180	0.13	2.5	–	–	–	–	–	–	◩ 75	0.10	2.0	–	–	–
	M6330	–	■ 255	0.14	2.5	◩ 180	0.13	2.5	–	–	–	–	–	–	◩ 75	0.10	2.0	–	–	–
	M8330	–	■ 295	0.14	2.5	◩ 175	0.13	2.5	–	–	–	–	–	–	◩ 70	0.10	2.0	–	–	–
	M8340	–	■ 270	0.14	2.5	◩ 160	0.13	2.5	–	–	–	–	–	–	◩ 65	0.10	2.0	–	–	–
	M9325	–	■ 380	0.14	2.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	M9340	–	■ 345	0.14	2.5	◩ 205	0.13	2.5	–	–	–	–	–	–	◩ 85	0.10	2.0	–	–	–

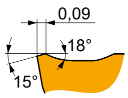
SEMT 09

PRAMET

□	IC [mm]	D1 [mm]	M [mm]	S [mm]
09T3	9.525	3.50	1	3.97



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

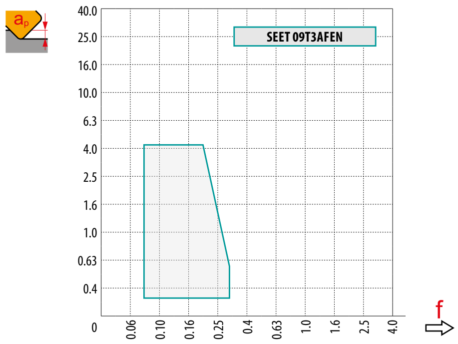


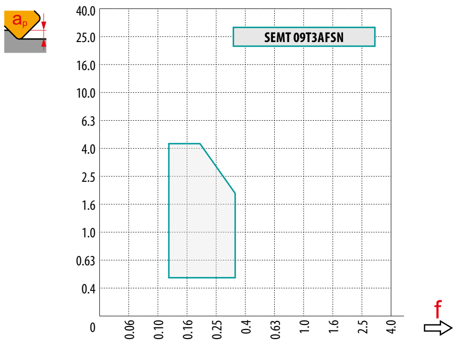
Positive design for light to medium machining.

Product	Grade	RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
SEMT 09T3AFSN	**8215**	–	■	295	0.18	1.8	◪	175	0.16	1.8	■	280	0.18	1.8		–	–	–		–	–	–		–	–	–
	M8330	–	■	290	0.18	1.8	◪	170	0.16	1.8	■	275	0.18	1.8		–	–	–		–	–	–		–	–	–
	M8340	–	■	265	0.18	1.8	◪	155	0.16	1.8	◪	250	0.18	1.8		–	–	–		–	–	–		–	–	–
	M9325	–	■	365	0.18	1.8		–	–	–	■	345	0.18	1.8		–	–	–		–	–	–		–	–	–

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

	SEET 09	SEMT 09
RE	–	–
BS	1.28	1.25





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

SSN12Z

P M K S

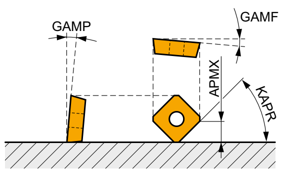
PRAMET

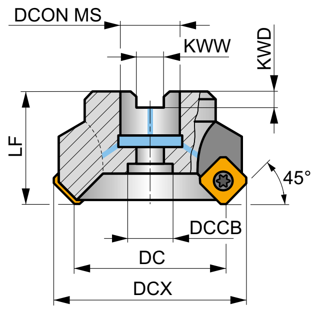
S

45° Face Mill with Positive Design and Internal Coolant

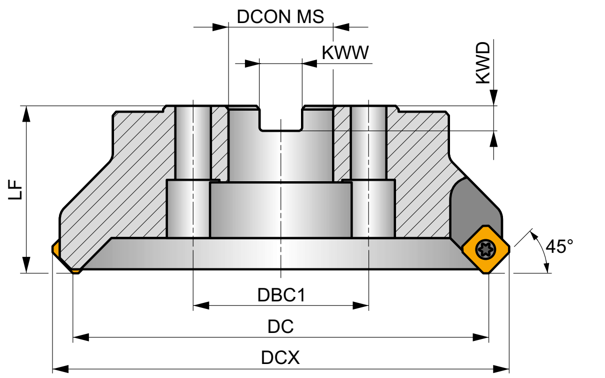
Highly productive 45° face mill utilising single sided SN.. 12 style inserts with APMX of 6.5 mm. Suited for face milling and chamfering. Arbor style only in range from Ø50 up to Ø250 mm. Body treated for longer tool life.

KAPR	45°
APMX	6.5 mm





DC 40 – 125 mm



DC 160 – 250 mm

h_m 0.12 - 0.35

Product	DC [mm]	DCX [mm]	LF [mm]	DCON MS [mm]	DCCB [mm]	DBC1 [mm]	KWW [mm]	KWD [mm]	GAMF [°]	GAMP [°]			max.		kg			
50A04R-S45SN12Z-C	50	65	40	22	18	–	10.4	6.3	-5.5	7.5	4	–	9700	✓	0.48	GI156	FA071	–
63A05R-S45SN12Z-C	63	78	40	22	18	–	10.4	6.3	-5.5	7.5	5	–	8600	✓	0.68	GI156	FA071	–
80A06R-S45SN12Z-C	80	95	50	27	38	–	12.4	7	-5.5	7.5	6	–	7700	✓	1.42	GI156	FA071	AC001
100A07R-S45SN12Z-C	100	115	50	32	45	–	14.4	8	-5.5	7.5	7	–	6900	✓	1.70	GI156	FA071	AC002
125A08R-S45SN12Z-C	125	140	63	40	56	–	16.4	9	-5.5	7.5	8	–	6100	✓	3.59	GI156	FA071	AC003
160C10R-S45SN12Z	160	173	–	40	–	66.7	16.4	9	-5.5	7.5	10	–	5400	–	6.30	GI156	FA071	–
200C12R-S45SN12Z	200	210	–	60	–	101.6	25.7	14	-5.5	7.5	12	–	4900	–	9.10	GI156	FA071	–
250C16R-S45SN12Z	250	260	–	60	–	101.6	25.7	14	-5.5	7.5	16	–	4300	–	11.87	GI156	FA071	–

ISO 6462 DIN 8030

GI156	SNKT 1205AZ..	SNMT 1205AZ..

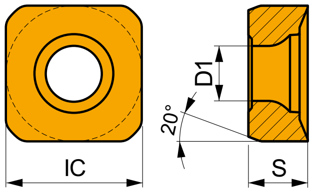
		Nm			
FA071	US 4511-T20	5.0	M 4.5	11	SDR T20-T

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

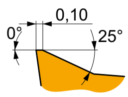
SNMT 12

PRAMET

	IC [mm]	D1 [mm]	S [mm]
1205	12.700	5.20	5.56

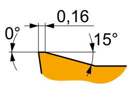


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

M geometry with highly positive design for medium machining.

Product	Grade	RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
SNMT 1205AZSR-M	**8215**	–	■	300	0.25	3.2	◩	180	0.23	3.2	◩	285	0.25	3.2		–	–	–	◩	75	0.18	2.6		–	–	–
	M8330	–	■	300	0.25	3.2	■	180	0.23	3.2	◩	285	0.25	3.2		–	–	–	◩	75	0.18	2.6		–	–	–
	M8340	–	■	275	0.25	3.2	■	165	0.23	3.2	◩	260	0.25	3.2		–	–	–	◩	65	0.18	2.6		–	–	–
	M9315	–	■	385	0.25	3.2		–	–	–	◩	365	0.25	3.2		–	–	–		–	–	–		–	–	–
	M9325	–	■	365	0.25	3.2		–	–	–	◩	345	0.25	3.2		–	–	–		–	–	–		–	–	–

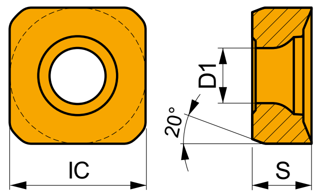



R geometry with positive design for medium to heavy machining.

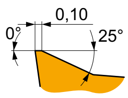
Product	Grade	RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
SNMT 1205AZSR-R	**8215**	–	■	290	0.27	3.5	◩	170	0.24	3.5	◩	275	0.27	3.5		–	–	–	◩	70	0.22	2.8		–	–	–
	M5315	–	◩	365	0.27	3.5		–	–	–	◩	345	0.27	3.5		–	–	–		–	–	–		–	–	–
	M8330	–	■	290	0.27	3.5	◩	170	0.24	3.5	◩	275	0.27	3.5		–	–	–	◩	70	0.22	2.8		–	–	–
	M8340	–	■	270	0.27	3.5	◩	160	0.24	3.5	◩	255	0.27	3.5		–	–	–	◩	65	0.22	2.8		–	–	–
	M9315	–	■	375	0.27	3.5		–	–	–	◩	355	0.27	3.5		–	–	–		–	–	–		–	–	–
	M9325	–	■	355	0.27	3.5		–	–	–	◩	335	0.27	3.5		–	–	–		–	–	–		–	–	–

SNKT 12

	IC [mm]	D1 [mm]	S [mm]
1205	12.700	5.20	5.56



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

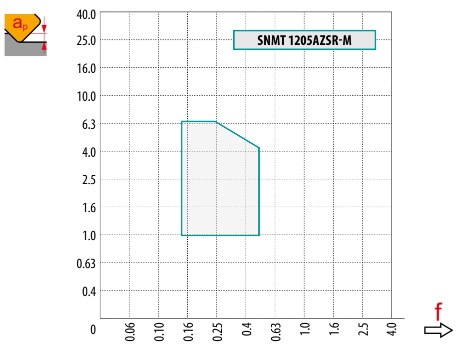


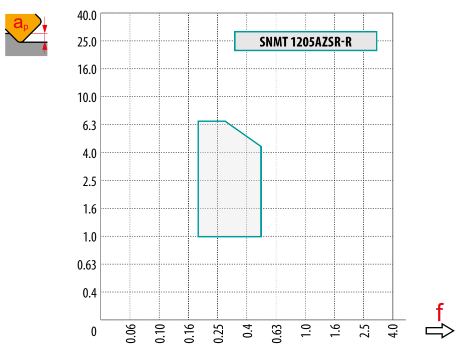
M geometry with highly positive design for medium machining.

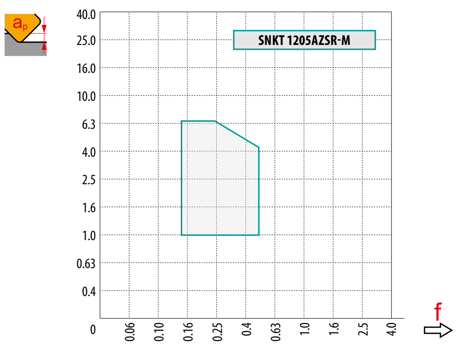
Product	Grade	RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
SNKT 1205AZSR-M	**M8330**	–	■	305	0.24	3.2	■	180	0.22	3.2	◩	285	0.24	3.2		–	–	–	◩	75	0.17	2.6		–	–	–
	M8340	–	■	275	0.24	3.2	■	165	0.22	3.2	◩	260	0.24	3.2		–	–	–	◩	65	0.17	2.6		–	–	–

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

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







DC	X.V	f_{max}
50	1.30	0.47
63	1.34	0.53
80	1.39	0.60
100	1.43	0.67
125	1.47	0.74
160	1.53	0.84
200	1.57	0.94
250	1.62	1.05

SPN13

P M K S H

PRAMET

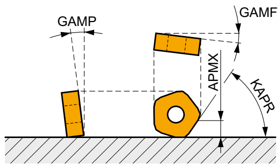
S

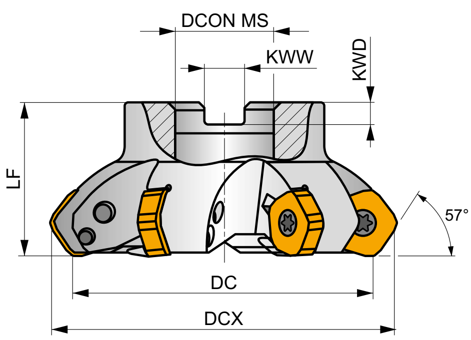
PENTA HD 57° Face Mill with Double Negative Design for Heavy Face Milling

Highly productive 57˚ face mill utilising double sided PN.. 13 and XN.. 13 style inserts with APMX of 10 mm. Suited for face milling. Arbor style only in range from Ø100 up to Ø315 mm. An insert seat protected with a shim. Body treated for longer tool life.

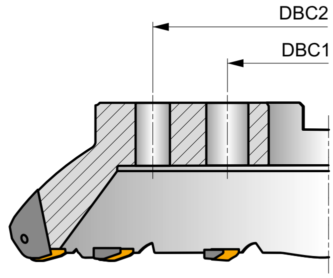
PENTA HD

KAPR	57°
APMX	10.0 mm





DC 100 – 125 mm



DC 160 – 315 mm

h_m 0.20 - 0.50

Product	DC	DCX	LF	DCON MS	DBC1	DBC2	KWW	KWD	GAMF	GAMP			max.		kg			
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[°]	[°]								
100A05R-S57PN13	100	115.8	50	32	–	–	14.4	8	-8.2	-4	5	–	3400	–	1.22	GI261	FA081	AC002
125A06R-S57PN13	125	140.8	63	40	–	–	16.4	9	-7	-4	6	–	3100	–	2.34	GI261	FA081	AC003
160C08R-S57PN13	160	175.8	63	40	66.7	–	16.4	9	-6	-4	8	–	2700	–	3.58	GI261	FA081	–
200C10R-S57PN13	200	215.8	63	60	101.6	–	25.7	14	-5	-4	10	–	2400	–	9.17	GI261	FA081	–
250C12R-S57PN13	250	265.8	63	60	101.6	–	25.7	14	-5	-4	12	–	2200	–	15.39	GI261	FA081	–
315C14R-S57PN13	315	330.8	80	60	101.6	177.8	25.7	14	-5	-4	14	–	1900	–	29.17	GI261	FA081	–

ISO 6462 DIN 8030

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

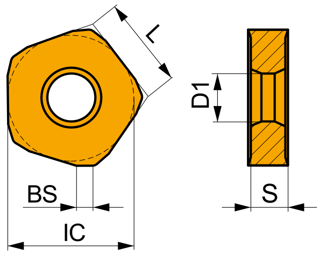
FA081	SPN 13T3DN	US 64010-T15P	SDR T15P	US 68026-T30P	Nm 15.0	M 8	26	SDR T30P-T

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

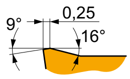
PNMU 13

PRAMET

	BS [mm]	IC [mm]	D1 [mm]	L [mm]	S [mm]
1308	3.00	24.400	10.00	13.00	7.94



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.



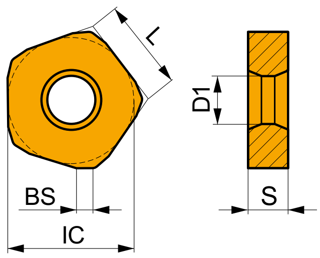
M geometry with positive design for rough machining.

Product		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]
PNMU 1308DNSR-M	**8215**	–	■	165	0.35	6.5	◩	95	0.32	6.5	■	155	0.35	6.5		–	–	–	◩	40	0.28	5.2	◩	30	0.15	1.0
	M8330	–	■	190	0.35	6.5	◩	110	0.32	6.5	■	180	0.35	6.5		–	–	–	◩	45	0.28	5.2	◩	35	0.15	1.0
	M8345	–	■	135	0.35	6.5	◩	80	0.32	6.5		–	–	–		–	–	–	◩	30	0.28	5.2		–	–	–
	M9315	–	■	210	0.35	6.5		–	–	–	■	195	0.35	6.5		–	–	–		–	–	–	◩	40	0.15	1.0
	M9340	–	■	170	0.35	6.5	◩	100	0.32	6.5		–	–	–		–	–	–	◩	40	0.28	5.2		–	–	–

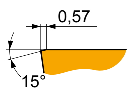
PNMQ 13

PRAMET

	BS [mm]	IC [mm]	D1 [mm]	L [mm]	S [mm]
1308	3.00	24.400	10.00	13.00	7.94



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.



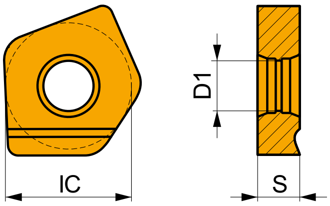
Zero rake angle design particularly suited to rough machining.

Product		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]
PNMQ 1308DNSN	**M8330**	–	◩	165	0.60	6.5		–	–	–	■	155	0.60	6.5		–	–	–		–	–	–	◩	30	0.15	1.0
	M8345	–	◩	120	0.60	6.5		–	–	–		–	–	–		–	–	–		–	–	–		–	–	–

XNGX 13

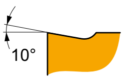
PRAMET

	IC [mm]	D1 [mm]	S [mm]
1308	24.180	10.00	7.94



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

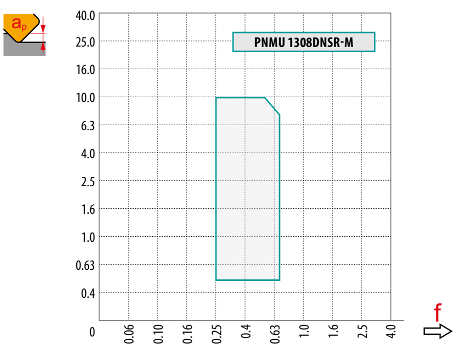
Product		RE [mm]	P			M			K			N			S			H		
			vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]	vc [m/min]	f [mm/tooth]	ap [mm]
XNGX 1308DNSN	M8330	–	■ 245	0.45	2.5	–	–	–	■ 230	0.45	2.5	–	–	–	–	–	–	–	–	–

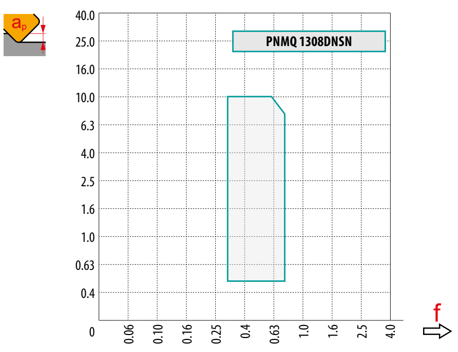


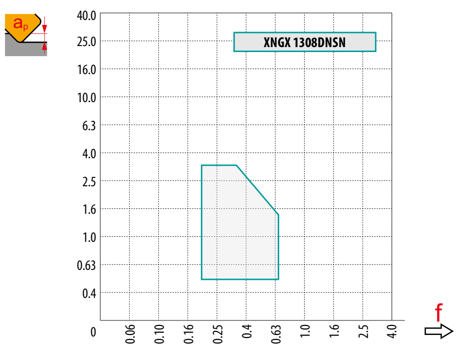
Wiper design for improved surface finish.

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

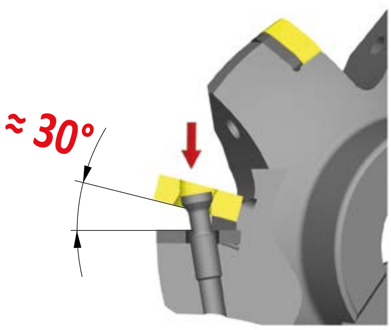
	PNMU 13-M	PNMQ 13	XNGX 13
RE	–	–	–
BS	3.00	3.00	12.71



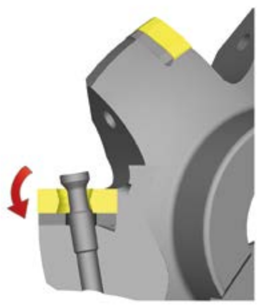




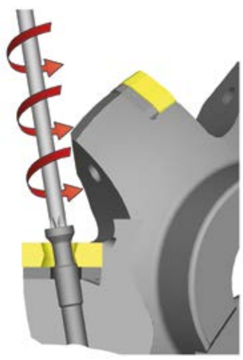
1



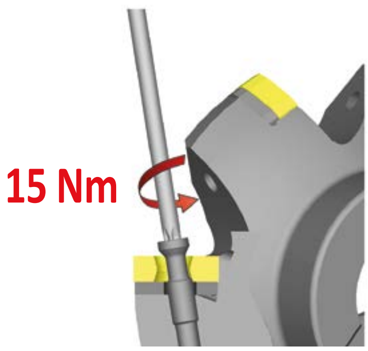
2



3



4



⏮

CHN09

K

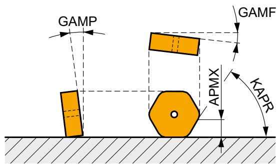
PRAMET

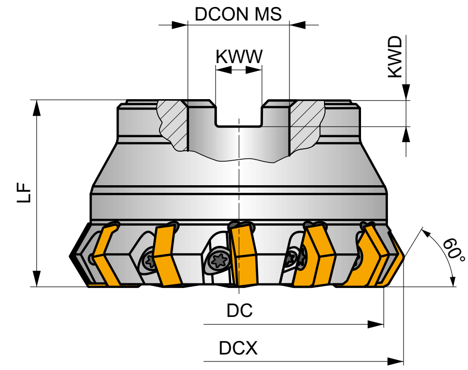
C

ECON HN 60° Face mill with Double Negative Design for Cast Iron

Highly productive 60° face mill utilising double sided HN.. 09 style inserts with APMX of up to 6 mm (depending on insert type). Optimized for face milling in cast iron. Arbor style only in range from Ø80 up to Ø200 mm. Body treated for longer tool life.

KAPR	60°
APMX	6.0 mm





h_m 0.07 - 0.3

Product	DC [mm]	DCX [mm]	LF [mm]	DCON MS [mm]	KWW [mm]	KWD [mm]	GAMF [°]	GAMP [°]			max.		kg		
80A08R-C60HN09	80	89.4	50	27	12.4	7	-5	-7.2	8	–	6200	–	1.45	GI262	FA094
80A12R-C60HN09	80	89.4	50	27	12.4	7	-5	-7.2	12	–	6200	–	1.39	GI262	FA094
100A10R-C60HN09	100	109.4	50	32	14.4	8	-5	-7.2	10	–	5600	–	2.44	GI262	FA095
100A16R-C60HN09	100	109.4	50	32	14.4	8	-5	-7.2	16	–	5600	–	2.32	GI262	FA095
125A12R-C60HN09	125	134.4	63	40	16.4	9	-5	-7.2	12	–	5000	–	4.23	GI262	FA096
125A20R-C60HN09	125	134.4	63	40	16.4	9	-5	-7.2	20	–	5000	–	4.09	GI262	FA096
160C16R-C60HN09	160	169.4	63	40	–	–	-5	-7.2	16	–	4400	–	6.20	GI262	FA091
200C20R-C60HN09	200	209.4	63	60	–	–	-5	-7.2	20	–	3900	–	11.08	GI262	FA091

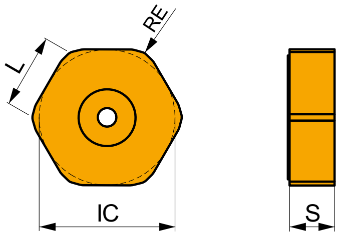
ISO 6462 DIN 8030

GI262	HNEF 0905..	HNMF 0905..

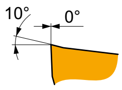
		Nm					
FA091	US 74016-T15P	3.5	M 4	16	D-T08P/T15P	FG-15	–
FA094	US 74016-T15P	3.5	M 4	16	D-T08P/T15P	FG-15	HS 1230C
FA095	US 74016-T15P	3.5	M 4	16	D-T08P/T15P	FG-15	HS 1635C
FA096	US 74016-T15P	3.5	M 4	16	D-T08P/T15P	FG-15	HS 2040C

HNEF 09

	IC [mm]	L [mm]	S [mm]
0905	16.200	9.40	5.64

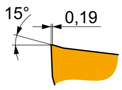


Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

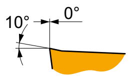
F geometry with positive design for light machining.

Product		RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
HNEF 0905DNFN-F	**M5315**	0.4		–	–	–		–	–	–	■	380	0.15	1.5		–	–	–		–	–	–		–	–	–

M geometry with positive design for light to medium machining.

Product		RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
HNEF 090508EN-M	**M5315**	0.8		–	–	–		–	–	–	■	290	0.18	3.0		–	–	–		–	–	–		–	–	–
	M9325	0.8		–	–	–		–	–	–	■	275	0.18	3.0		–	–	–		–	–	–		–	–	–

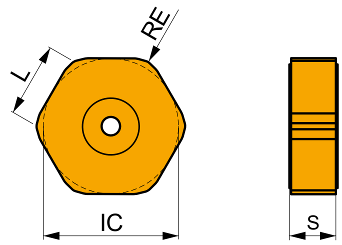
W geometry positive design for finishing.

Product		RE [mm]	P	vc [m/min]	f [mm/tooth]	ap [mm]	M	vc [m/min]	f [mm/tooth]	ap [mm]	K	vc [m/min]	f [mm/tooth]	ap [mm]	N	vc [m/min]	f [mm/tooth]	ap [mm]	S	vc [m/min]	f [mm/tooth]	ap [mm]	H	vc [m/min]	f [mm/tooth]	ap [mm]
HNEF 0905ZZR-W	**8215**	0.8		–	–	–		–	–	–	■	275	0.18	1.0		–	–	–		–	–	–		–	–	–
	M5315	0.8		–	–	–		–	–	–	■	370	0.18	1.0		–	–	–		–	–	–		–	–	–

HNMF 09

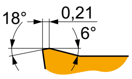
PRAMET

	IC [mm]	L [mm]	S [mm]
0905	16.200	9.40	5.64



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.

Product		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]
HNMF 090516SN-R	**8215**	1.6	–	–	–	–	–	–	■ 210	0.30	3.0	–	–	–	–	–	–	–	–	–
	M5315	1.6	–	–	–	–	–	–	■ 265	0.30	3.0	–	–	–	–	–	–	–	–	–
	M9325	1.6	–	–	–	–	–	–	■ 260	0.30	3.0	–	–	–	–	–	–	–	–	–

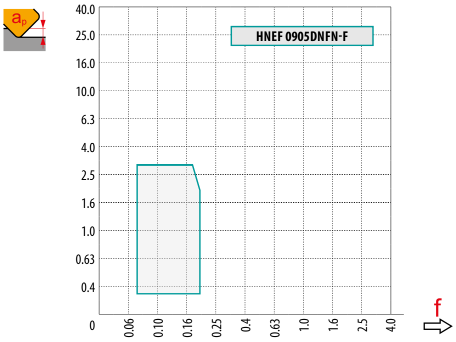


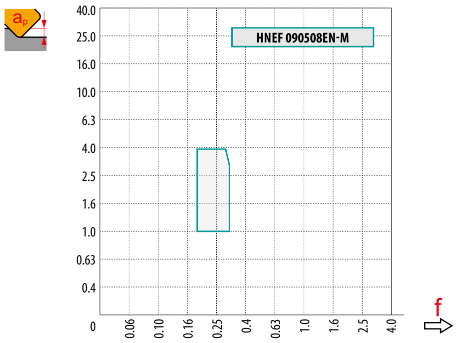
S

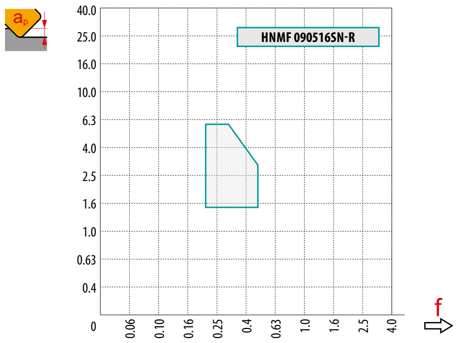
R geometry with negative design for light and heavy machining.

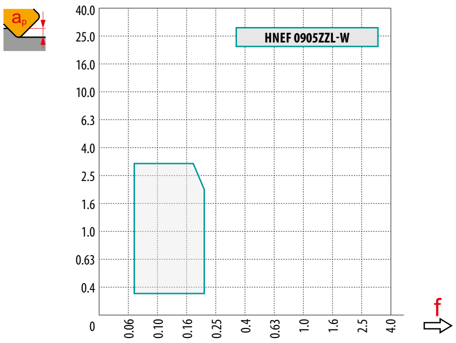
a_e/DC	5 %	10 %	15 %	20 %	25 %	30 %	40 %	50 %	60 %	70 %	75 %	80 %	90 %	100 %
X.V	1.48	1.35	1.27	1.22	1.19	1.16	1.11	1.08	1.05	1.03	1.00	1.00	1.00	1.00
x.f	2.20	1.60	1.35	1.20	1.10	0.95	0.85	0.75	0.85	0.95	1.00	1.00	1.00	1.00
x.f	0.64	0.64	0.64	0.64	0.64	0.65	0.65	0.67	0.68	0.71	0.72	0.74	0.79	1.00

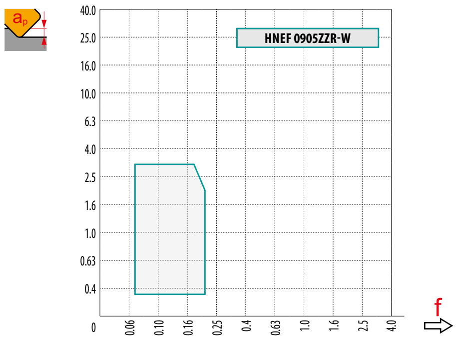
	HNEF 09-F	HNEF 09-M	HNMF 09-R	HNEF 09 ZZL-W	HNEF 09 ZZR-W
RE	–	–	–	–	–
BS	1.20	–	–	1.26	1.26



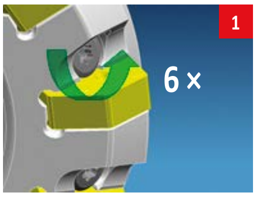


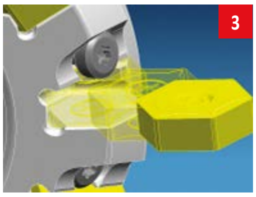


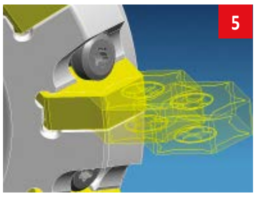




i







FSB22X

P M K

PRAMET

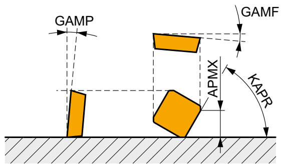
F

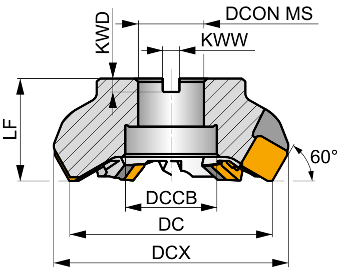
ROUGH SB 60° Face Mill with Positive Design for Heavy Face Milling

Highly productive 60° face mill utilising single sided SB.. 22 style inserts with APMX of 15 mm. Optimized for heavy face milling with smooth cutting action. Differential tooth pitch. Arbor style only in range from Ø125 up to Ø315 mm. Body treated for longer tool life.

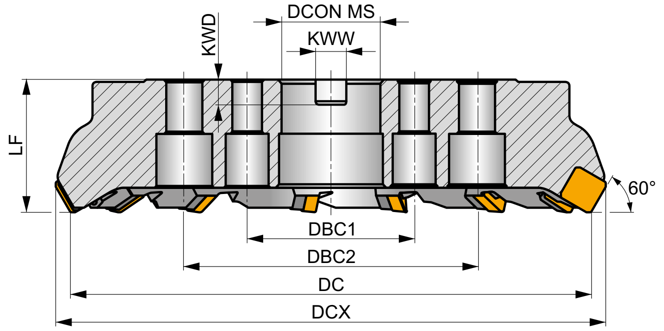
ROUGH SB

KAPR	60°
APMX	15.0 mm





DC 125 mm



DC 160 – 315 mm

h_m 0.15 - 0.5

Product	DC [mm]	DCX [mm]	LF [mm]	DCON MS [mm]	DCCB [mm]	DBC1 [mm]	DBC2 [mm]	KWW [mm]	KWD [mm]	GAMF [°]	GAMP [°]			max.		kg			
125B05R-F60SB22X	125	144.4	63	40	56	–	–	16.4	9	-9	9	5	✓	–	–	3.88	GI144	FA111	AC003
125B07R-F60SB22X	125	144.4	63	40	56	–	–	16.4	9	-9	9	7	✓	–	–	3.64	GI144	FA111	AC003
160C06R-F60SB22X	160	178.7	63	40	–	66.7	–	16.4	9	-9	9	6	✓	–	–	6.51	GI144	FA114	–
160C08R-F60SB22X	160	178.7	63	40	–	66.7	–	16.4	9	-9	9	8	✓	–	–	6.30	GI144	FA114	–
200C08R-F60SB22X	200	217.9	63	60	–	101.6	–	25.7	14	-9	9	8	✓	–	–	10.59	GI144	FA115	–
200C10R-F60SB22X	200	217.9	63	60	–	101.6	–	25.7	14	-9	9	10	✓	–	–	9.81	GI144	FA115	–
250C09R-F60SB22X	250	267.4	63	60	–	101.6	–	25.7	14	-9	9	9	✓	–	–	17.54	GI144	FA115	–
250C12R-F60SB22X	250	267.4	63	60	–	101.6	–	25.7	14	-9	9	12	✓	–	–	16.50	GI144	FA115	–
315C11R-F60SB22X	315	331.8	80	60	–	101.6	177.8	25.7	14	-9	9	11	✓	–	–	36.00	GI144	FA115	–
315C14R-F60SB22X	315	331.8	80	60	–	101.6	177.8	25.7	14	-9	9	14	✓	–	–	36.50	GI144	FA115	–

ISO 6462 DIN 8030

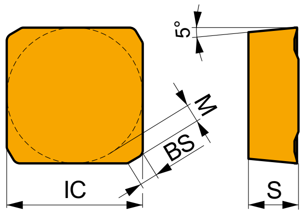
GI144	SBKX 2207DZ..	SBMR 2207DZ..

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

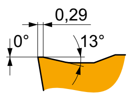
AC003	KS 2040	K.FMH40

SBMR 22

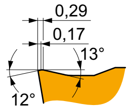
	IC [mm]	M [mm]	S [mm]	BS [mm]
2207	22.000	3	8.00	1.99



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.



Stable design for heavy machining.

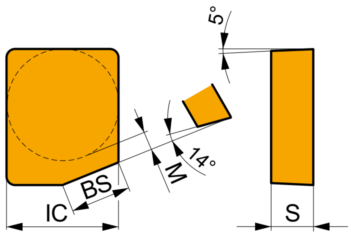


R geometry with stable design for heavy machining.

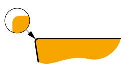
Product	Grade	RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
SBMR 2207DZSR	**M8326**	–	◩ 140	0.38	8.5	–	–	–	◩ 130	0.38	8.5	–	–	–	–	–	–	–	–	–
	M8346	–	■ 120	0.38	8.5	◩ 70	0.38	8.5	–	–	–	–	–	–	–	–	–	–	–	–
	M9325	–	■ 175	0.38	8.5	–	–	–	■ 165	0.38	8.5	–	–	–	–	–	–	–	–	–
SBMR 2207DZSR-R	**M5326**	–	◩ 160	0.44	9.8	–	–	–	■ 150	0.44	9.8	–	–	–	–	–	–	–	–	–
	M8326	–	◩ 135	0.44	9.8	–	–	–	◩ 125	0.44	9.8	–	–	–	–	–	–	–	–	–
	M8346	–	■ 115	0.44	9.8	◩ 65	0.40	9.8	–	–	–	–	–	–	–	–	–	–	–	–

SBKX 22

	IC [mm]	M [mm]	S [mm]	BS [mm]
2207	22.000	3	8.00	11.84



Suitability and starting values for cutting speed (vc), feed (f) and depth of cut (ap). Refer to our Machining Calculator app for further calculations.



Zero rake wiper design for improved surface finish.

Product	Grade	RE [mm]	P vc [m/min]	P f [mm/tooth]	P ap [mm]	M vc [m/min]	M f [mm/tooth]	M ap [mm]	K vc [m/min]	K f [mm/tooth]	K ap [mm]	N vc [m/min]	N f [mm/tooth]	N ap [mm]	S vc [m/min]	S f [mm/tooth]	S ap [mm]	H vc [m/min]	H f [mm/tooth]	H ap [mm]
SBKX 2207DZER	**M8326**	–	◩ 100	0.60	8.5	–	–	–	◩ 95	0.60	8.5	–	–	–	–	–	–	–	–	–

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

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