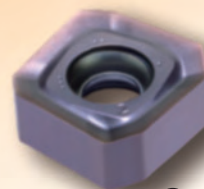


FMA11 Kr:45° Series Face Mills

With outstanding economy and high performance

Cutter body with PVD coating for superior corrosion and heat resistance resulting in longer service life.



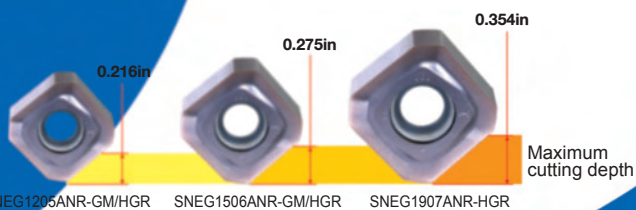
4 × 2 = 8 edge

Comprehensive upgrading of -GM geometry, good chip breaking performance, large rake angle, reduced cutting force.

New -HGR geometry, high edge strength, excellent breakage resistance.

Insert with wiper, smoother surface roughness.

Complete range of insert specifications and geometries, for different cutting depths and different machining demands.



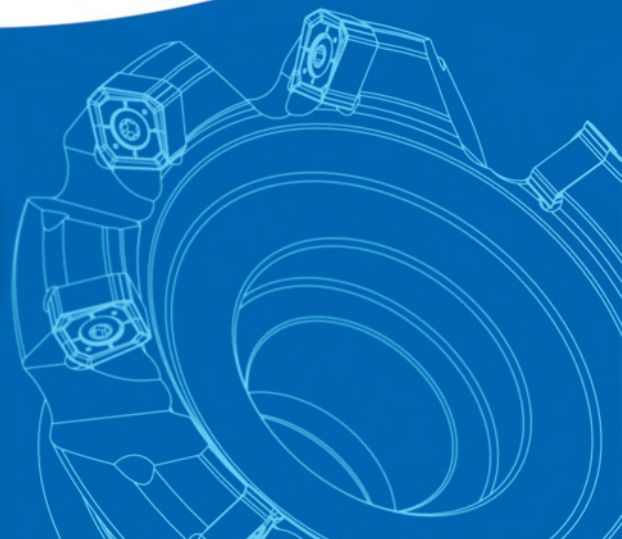
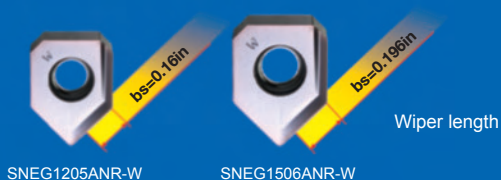
Double negative structure, excellent impact resistance.

Optimized design of pitch and chip pocket, for unobstructed chip flow and higher cutting efficiency.



-W special geometry for wiper inserts, large arc design, improved workpiece quality.

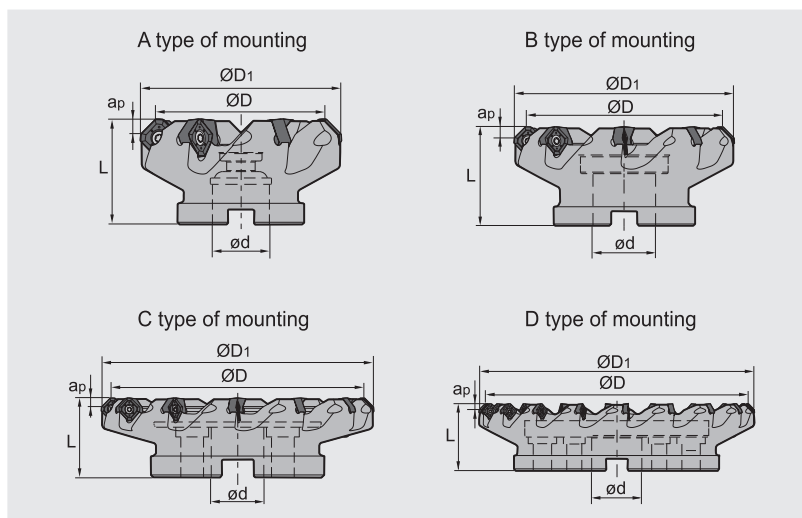
Extra long wiper, more suited to semi-finishing and finishing with large diameter cutters.



Face milling tools **Kr:45°**



FMA11



Specification of tools

Type		Dimensions (inch)						Interface form
		ØD	ØD ₁	ød	L	a _{pmax}	Z (Number of teeth)	
FMA11 Coarse pitch	-2.00"-A0.75"-SN12-04C	2.000	2.453	0.750	1.750	0.216	4	A
	-2.50"-A0.75"-SN12-05C	2.500	2.953	0.750	1.750	0.216	5	A
	-3.00"-A1.00"-SN12-06C	3.000	3.453	1.000	2.000	0.216	6	A
	-4.00"-B1.50"-SN12-07	4.000	4.453	1.500	2.500	0.216	7	B
	-5.00"-B1.50"-SN12-08	5.000	5.453	1.500	2.500	0.216	8	B
	-6.00"-B2.00"-SN12-10	6.000	6.453	2.000	2.500	0.216	10	B
	-2.00"-A0.75"-SN15-04C	2.000	2.602	0.750	1.750	0.275	4	A
	-2.50"-A0.75"-SN15-05C	2.500	3.102	0.750	1.750	0.275	5	A
	-3.00"-A1.00"-SN15-06C	3.000	3.602	1.000	2.000	0.275	6	A
	-4.00"-B1.50"-SN15-07	4.000	4.602	1.500	2.500	0.275	7	B
	-5.00"-B1.50"-SN15-08	5.000	5.602	1.500	2.500	0.275	8	B
	-6.00"-B2.00"-SN15-10	6.000	6.602	2.000	2.500	0.275	10	B
	-8.00"-C2.50"-SN15-12	8.000	8.602	2.500	2.500	0.275	12	C
	-10.00"-C2.50"-SN15-14	10.000	10.602	2.500	2.500	0.275	14	C
	-12.00"-D2.50"-SN15-18	12.000	12.602	2.500	2.500	0.275	18	D
	-5.00"-B1.50"-SN19-07	5.000	5.720	1.500	2.500	0.354	7	B
	-6.00"-B2.00"-SN19-09	6.000	6.720	2.000	2.500	0.354	9	B
	-8.00"-C2.50"-SN19-11	8.000	8.720	2.500	2.500	0.354	11	C
	-10.00"-C2.50"-SN19-13	10.000	10.720	2.500	2.500	0.354	13	C
	-12.00"-D2.50"-SN19-16	12.000	12.720	2.500	2.500	0.354	16	D

Face milling tools

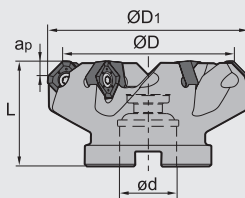
Kr:45°



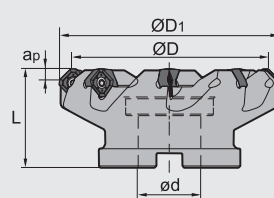
FMA11



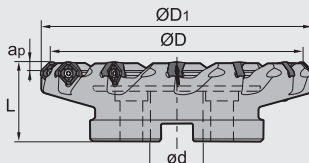
A type of mounting



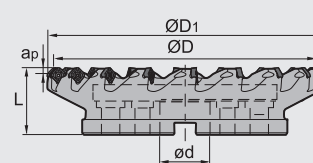
B type of mounting



C type of mounting



D type of mounting



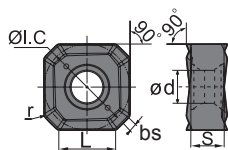
Specification of tools

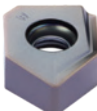
Type		Dimensions (inch)						Interface form
		ØD	ØD1	ød	L	apmax	Z (Number of teeth)	
FMA11 Close pitch	-2.50"-A0.75"-SN12-06C	2.500	2.953	0.750	1.750	0.216	6	A
	-3.00"-A1.00"-SN12-07C	3.000	3.453	1.000	2.000	0.216	7	A
	-4.00"-B1.50"-SN12-09	4.000	4.453	1.500	2.500	0.216	9	B
	-5.00"-B1.50"-SN12-10	5.000	5.453	1.500	2.500	0.216	10	B
	-6.00"-B2.00"-SN12-12	6.000	6.453	2.000	2.500	0.216	12	B
	-2.50"-A0.75"-SN15-06C	2.500	3.102	0.750	1.750	0.275	6	A
	-3.00"-A1.00"-SN15-07C	3.000	3.602	1.000	2.000	0.275	7	A
	-4.00"-B1.50"-SN15-09	4.000	4.602	1.500	2.500	0.275	9	B
	-5.00"-B1.50"-SN15-10	5.000	5.602	1.500	2.500	0.275	10	B
	-6.00"-B2.00"-SN15-12	6.000	6.602	2.000	2.500	0.275	12	B
	-8.00"-C2.50"-SN15-15	8.000	8.602	2.500	2.500	0.275	15	C
	-10.00"-C2.50"-SN15-18	10.000	10.602	2.500	2.500	0.275	18	C
	-12.00"-D2.50"-SN15-22	12.000	12.602	2.500	2.500	0.275	22	D
	-5.00"-B1.50"-SN19-09	5.000	5.720	1.500	2.500	0.354	9	B
	-6.00"-B2.00"-SN19-11	6.000	6.720	2.000	2.500	0.354	11	B
	-8.00"-C2.50"-SN19-14	8.000	8.720	2.500	2.500	0.354	14	C
	-10.00"-C2.50"-SN19-17	10.000	10.720	2.500	2.500	0.354	17	C
	-12.00"-D2.50"-SN19-20	12.000	12.720	2.500	2.500	0.354	20	D

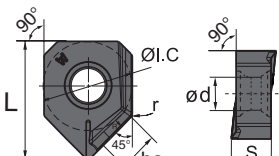
Spare parts

Diameter ØD	Insert specification	Insert screw	Wrench		Sketch of installation
Ø2.00" ~ Ø6.00"	SNEG1205ANR-GM/HGR/W	I60M3.5×10	--	WT15IS	
Ø2.00" ~ Ø12.00"	SNEG1506ANR-GM/HGR/W	I60M5×13	WT20IT	--	
Ø5.00" ~ Ø12.00"	SNEG1907ANR-HGR	I43M6×16	WT25IT	--	

😊 Good working conditions 😐 General working conditions 😞 Adverse working conditions

[illegible]

Insert shape	Type	Dimensions(inch)						Coated grade												Cermet		Cemented carbide						
		L	ØI.C	S	bs	ød	r	YBC302	YBM251	YBM253	YBM351	YBD152	YBD252	YBG102	YBG202	YBG205	YB9320	YBG302	YBG152	YBG252	YBS203	YBS303	YNG151	YNG151C	YC30S	YD051	YD101	YD201
	SNEG1205ANR-GM	0.299	0.472	0.187	0.041	0.181	0.031	●		●		●				●	●					○	○					
	SNEG1506ANR-GM	0.370	0.591	0.218	0.051	0.217	0.035	●		●		●				●	●					○	○					
	SNEG1205ANR-HGR	0.299	0.472	0.187	0.041	0.181	0.031	●		●		●	○			●	●											
	SNEG1506ANR-HGR	0.370	0.591	0.218	0.051	0.217	0.035	●		●		●	○			●	●											
	SNEG1907ANR-HGR	0.476	0.748	0.276	0.066	0.283	0.039	●		●		●	○			●	●											
	SNEG1205ANR-W	0.626	0.472	0.187	0.16	0.181	0.236									●												
	SNEG1506ANR-W	0.783	0.591	0.218	0.196	0.217	0.035									●												



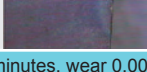
☒ Always stock available ☐ Produce according to order

Recommended cutting parameters

Workpiece material		Hardness HB	Grade	Cutting data		
				V(SFPM)	f(IPT)	a _{pmax} (inch)
P	Low carbon steel Soft steel	≤ 180	YBM253 YBC302 YBG205 YB9320	880 (720-1200)	0.008 (0.004-0.016)	0.216(SN12) 0.275(SN15) 0.354(SN19)
	High carbon steel Alloy steel	180-280	YBM253 YBC302 YBG205 YB9320	850 (650-1050)	0.008 (0.004-0.016)	
	Alloy tool steel	280-350	YBM253 YBC302 YBG205 YB9320	780 (590-1000)	0.008 (0.004-0.016)	
K	Cast iron	180-250	YBD152	880 (490-980)	0.012 (0.004-0.02)	0.354(SN19)
			YBD252	650 (490-820)	0.016 (0.008-0.024)	
S	High-temperature alloy	≤ 400	YBS203 YBS303	300 (200-400)	0.006 (0.003-0.012)	

(Comparison of tool life)

$A_p=0.08\text{in}$, $A_e=2.0\text{in}$

	Products of company A	-HGR/YBG205
Test Group 1		
Life	22 minutes Breakage	35 minutes, wear 0.0008in
Test Group 2		
Life	27 minutes Breakage	35 minutes, wear 0.0004 in