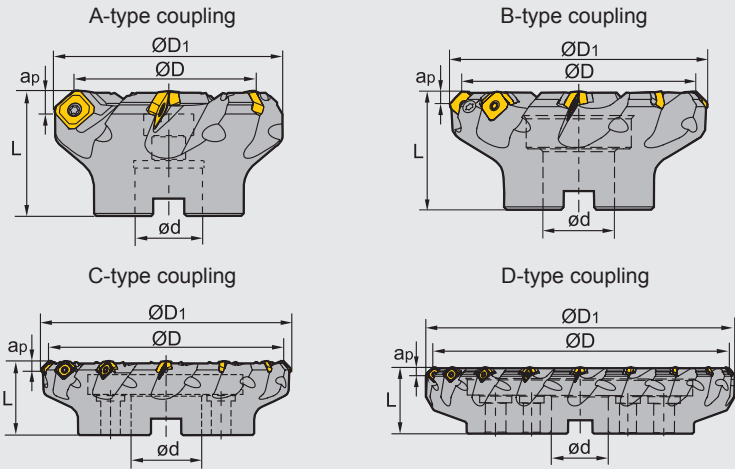


Face milling tools

Kr:45°



FMA01 P M K N S



Specification of tools

Type	Stock		Basic dimensions(mm)					Number of teeth Z	Type of coupling	Weight (kg)
	R	L	ØD	ØD ₁	ød	L	ap _{max}			
FMA01 Coarse pitch	▲	△	50	61	22	40	6	4	A	0.3
	▲	△	63	74	22	40	6	5	A	0.5
	▲	△	80	91	27	50	6	6	A	1.2
	▲	△	100	107	32	50	6	7	B	1.52
	▲	△	125	136	40	63	6	8	B	2.6
	▲	△	160	174	40	63	6	7	B	4.548
	▲	△	160	170	40	63	6	10	B	4.92
	▲	△	200	214	60	63	6	8	C	6.175
	▲	△	200	210	60	63	6	12	C	7.6
	▲	△	250	264	60	63	6	10	C	12.596
	▲	△	250	260	60	63	6	14	C	13.5
	▲	△	315	325	60	70	6	18	D	20.8
	▲	△	100	120	32	63	10.4	4	B	2.22
	▲	△	125	145	40	63	10.4	5	B	3.15
	▲	△	160	180	40	63	10.4	6	B	5.01
	▲	△	200	220	60	63	10.4	8	C	6.9
▲	△	250	270	60	63	10.4	10	C	13.1	
▲	△	315	335	60	80	10.4	12	D	24.5	

▲Stock available △Make-to-order

Spare parts

Diameter ØD	Insert	Insert screw	Shim	Shim screw	Wrench	Wrench
Ø50-Ø100	SEET12□□-□□	I60M3.5×10	--	--	WT15IS	--
Ø50-Ø315	SEET12□□-□□	I60M3.5×12	S13BS	SM5×7XA	WT15IS	WH35L
Ø100-Ø315	SEET18□□-□□	I60M5×17	S18BS	SM8×9XA	WT20IT	WH50L

Tools code key
B24-B25

Grade selection guide
B19-B23

Technical data
B234-B240

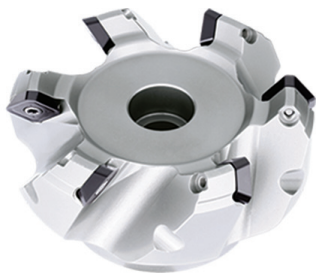
Indexable milling tools
Face milling tools

Face milling tools

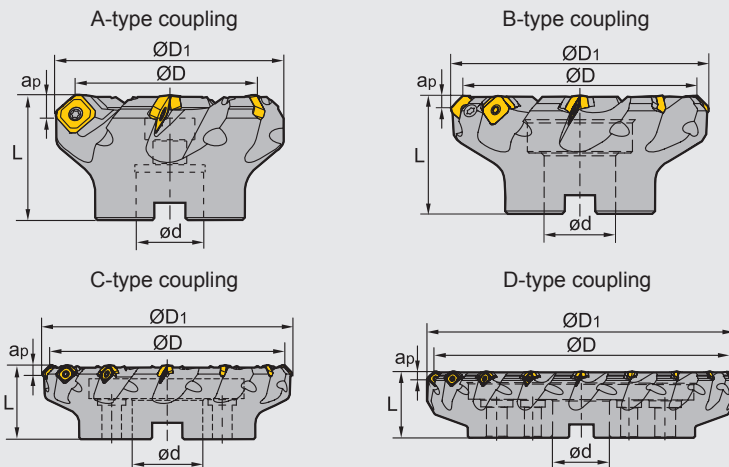
Kr:45°



FMA01 P M K N S



Close and equal pitch



Specification of tools

Type	Stock		Basic dimensions(mm)					Number of teeth Z	Type of coupling	Weight (kg)
	R	L	ØD	ØD1	ød	L	apmax			
FMA01 Close pitch	▲	△	50	63	22	40	6	5	A	0.427
	▲	△	63	74	22	40	6	6	A	0.53
	▲	△	80	93	27	50	6	8	A	1.37
	▲	△	100	114	32	50	6	10	B	1.755
	▲	△	125	136	40	63	6	12	B	3.06
	▲	△	160	174	40	63	6	16	B	5.21
	▲	△	200	214	60	63	6	20	C	9.32
	▲	△	250	264	60	63	6	24	C	15.892
	▲	△	100	114	32	63	10.4	6	B	2.98
	▲	△	125	144	40	63	10.4	7	B	3.803
	▲	△	200	220	60	63	10.4	12	C	7.191
	▲	△	250	265	60	63	10.4	14	C	14.9

▲Stock available △Make-to-order

Spare parts

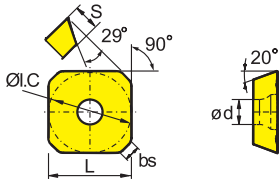
Diameter ØD	Insert	Insert screw	Shim	Shim screw	Wrench	Wrench
Ø50-Ø100	SEET12□□-□□	I60M3.5×10	--	--	WT15IS	--
Ø50-Ø315	SEET12□□-□□	I60M3.5×12	S13BS	SM5×7XA	WT15IS	WH35L
Ø100-Ø315	SEET18□□-□□	I60M5×17	S18BS	SM8×9XA	WT20IT	WH50L

Tools code key
B24-B25

Grade selection guide
B19-B23

Technical data
B234-B240

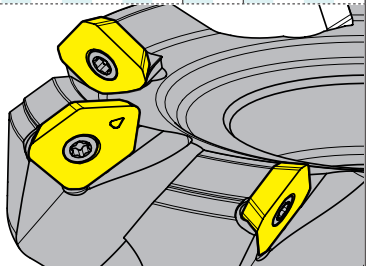
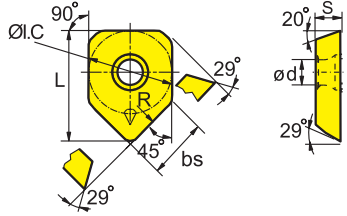
Selection of inserts



😊 Good working condition 😐 Normal working condition 😞 Bad working condition

Workpiece material	P Steel	M Stainless steel	K Cast iron	N Non-ferrous metal	S Heat resistant alloy, Ti alloy
P Steel	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊
M Stainless steel	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊
K Cast iron	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊
N Non-ferrous metal	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊
S Heat resistant alloy, Ti alloy	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊

Insert shape	Type	Basic dimensions(mm)						CVD Coating						PVD Coating						Cermet		Cemented carbide							
		L	ØI.C	S	ød	bs	R	YBC301	YBC302	YBM251	YBM253	YBM351	YBD152	YBD252	YBG102	YBG202	YBG205	YB9320	YBG302	YBG152	YBG252	YBS203	YBS303	YNG151	YNG151C	YC30S	YD051	YD101	YD201
	SEET12T3-DF	13.4	13.4	3.97	4.1	2.55	--	●	★	●						★		○											
	SEET12T3-CF	13.4	13.4	3.97	4.1	2.55	--					○		★	★														
	SEET12T3-EF	13.4	13.4	3.97	4.1	2.55	--									★							●						
	SEET12T3-DM	13.4	13.4	3.97	4.1	2.55	--	●	★	●	○					★		★											
	SEET12T3-CM	13.4	13.4	3.97	4.1	2.55	--					★			★			○											
	SEET12T3-EM	13.4	13.4	3.97	4.1	2.55	--			●	●				★		★					●							
	SEET18T6-DM	18.0	18.0	6.1	5.5	1.5	--		○	○																			
	SEET18T6-EM	18.0	18.0	6.1	5.5	1.5	--			○								○											
	SEET12T3-DR	13.4	13.4	3.97	4.1	2.55	--	●	★		●					★		★											
	SEET12T3-CR	13.4	13.4	3.97	4.1	2.55	--	●				★			★		★												
	SEET12T3-LH	13.4	13.4	3.97	4.1	2.55	--																			○	★		
	SEET12T3-W	17.82	13.4	3.97	4.1	9.46	500	★	●		★				★								★						
	SEET18T6-W	24.78	18.0	6.1	5.5	11.0	500									○													



★ Recommended grade (always stock available) ● Available grade (always stock available) ○ Make-to-order



Indexable milling tools
Face milling tools

Chipbreaker selection for FMA01 milling inserts

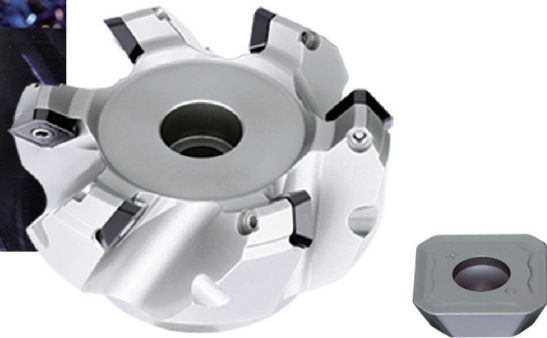
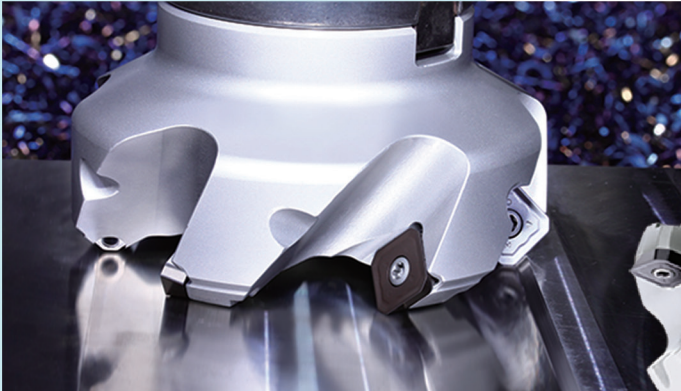
Classification	Function	For finishing	For semi-finishing	For roughing
P		-DF	-DM	-DR
M, S		-EF	-EM	
K		-CF	-CM	-CR
N		-LH		

Recommended cutting parameters

Workpiece material	Hardness HB	Insert grade	Cutting parameters				
			V _c (m/min)	f _z (mm/z)			
				-DF	-DM	-DR	
P	Low-carbon steel, Soft steel	YBM251 YBC301	270(220-350)	0.15(0.1-0.2)	0.2 (0.1-0.3)	0.3(0.2-0.4)	
		YBG205 YB9320	270(200-360)	0.15(0.1-0.2)	0.2 (0.1-0.3)	0.3(0.2-0.4)	
		YBG302 YBM253	230(170-350)	0.15(0.1-0.2)	0.2 (0.1-0.3)	0.3(0.2-0.4)	
	High-carbon steel, Alloy steel	180-280	YBM251 YBC302 YBC301	240 (200-320)	0.15(0.1-0.2)	0.2 (0.1-0.3)	0.3(0.2-0.4)
			YBG205 YB9320	240 (180-350)	0.15(0.1-0.2)	0.2 (0.1-0.3)	0.3(0.2-0.4)
			YBG302 YBM253	220 (150-330)	0.15(0.1-0.2)	0.2 (0.1-0.3)	0.3(0.2-0.4)
	Alloy tool steel	280-350	YBM251 YBM351 YBC301	220 (180-300)	0.15(0.1-0.2)	0.2 (0.1-0.3)	0.3(0.2-0.4)
			YBG205 YB9320	220 (170-340)	0.15(0.1-0.2)	0.2 (0.1-0.3)	0.3(0.2-0.4)
			YBG302 YBM253	190 (130-300)	0.15(0.1-0.2)	0.2 (0.1-0.3)	0.3(0.2-0.4)
M	Stainless steel	YBM251 YBG205 YB9320 YBG302	150 (120-240)	0.15(0.1-0.2)	-EF -EM 0.2 (0.1-0.3)		
			160 (110-270)	0.15(0.1-0.2)	0.2 (0.1-0.3)		
			140 (100-250)	0.15(0.1-0.2)	0.2 (0.1-0.3)		
K	Cast iron	YBG102 YBD152	210 (120-300)	0.15(0.1-0.2)	-CF -CM -CR 0.2 (0.1-0.3)	0.3(0.2-0.4)	
			240 (180-300)	0.15(0.1-0.2)	0.2 (0.1-0.3)	0.3(0.2-0.4)	
N	Al alloy steel	YD101 YD201	300-	-LH 0.25 (0.1-0.4)			
			300-				
S	High-temperature alloy	YBG102 YBS303	50(20-60)	-EF -EM 0.1 (0.1-0.2)	0.15 (0.1-0.3)		
			100(60-120)	0.1 (0.1-0.2)	0.15 (0.1-0.25)		

Indexable milling tools
Face milling tools

Case for FMA01



Workpiece material: 1Cr18Ni9Ti (HB180)
 Cooling system: Dry cutting
 Machine: Vertical machining center
 Cutting parameters:
 $V_c=160\text{m/min}$
 $a_p=1\text{mm}$
 $f_z=0.2\text{mm/z}$
 $a_e=60\text{mm}$

Tool type: FMA01-080-A27-SE12-06

Insert type/grade: SEET12T3-EM/YBG302

Surface roughness of workpiece:

ZCC-CT: Ra1.2

Similar overseas products:

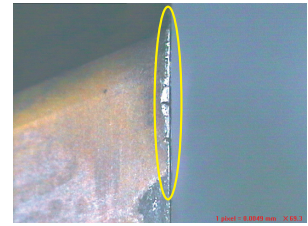
Ra1.6

● Comparison of insert abrasion

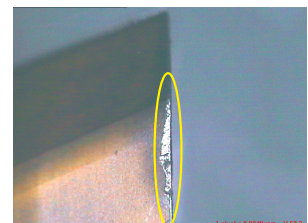
ZCC-CT

Similar overseas products

17'30"



29'30"



33'30"



Indexable
milling tools

Face milling tools