

Side and face milling tools code key

Cutter style	
FM	Face milling
EM	Square shoulder milling
HM	Helical end milling
SM	Side and face milling
BM	Profile milling
CM	Chamfer milling
XM	Special milling

Approach angle		
P	90°	
E	75°	
D	60°	
A	45°	
R		

Sequence number of series

Cutting diameter ØD (mm)

Cutting width of milling tools

Coupling structure and demension

A	A type of coupling	D	D type of coupling
B	B type of coupling	K	Mounting by keyway
C	C type of coupling		

B
Indexable
milling tools

Side and face milling tools

SM P 03 - 160 × 16 - K40

- M P 12 - 12 L

Insert shape	
C	Diamond with 80°
D	Diamond with 55°
R	Round
S	Square
T	Regular triangle
V	Diamond with 35°
M	Diamond with 86°

Insert clearance angle	
N	0°
B	5°
C	7°
P	11°
D	15°
E	20°

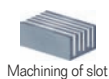
Diameter of IC	Length of cutting edge					
	Insert shape					
	C	D	R	S	T	V
5.556	—	—	—	—	09	—
6.350	06	07	—	—	11	—
9.525	09	11	09	09	16	16
12.700	12	15	12	12	22	22
15.875	16	19	15	15	27	—
19.050	19	—	19	19	33	—
25.400	25	—	25	25	44	—

Cutting direction

(R: Right L: Left)

Number of teeth

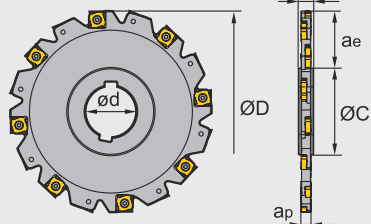
Side and face milling tools



SMP01 **P** **M** **K**



K-type coupling



Specification of tools

Type	Stock	Basic dimensions(mm)						Applicable inserts	Number of teeth Z	Type of coupling	Weight (kg)	
		ØD	ød	øc	H	ap	ae _{max}					
SMP01 Mounting by keyway	-100×4-K27-SN12-10	△	100	27	45	12	4	25	XSEQ1202	10	K	0.2
	-125×4-K40-SN12-12	△	125	40	56	12	4	32		12	K	0.3
	-160×4-K40-SN12-16	△	160	40	67	12	4	44		16	K	0.5
	-100×5-K27-SN12-10	△	100	27	45	12	5	25	XSEQ1203	10	K	0.2
	-125×5-K40-SN12-12	△	125	40	56	12	5	32		12	K	0.3
	-160×5-K40-SN12-16	△	160	40	67	12	5	44		16	K	0.6
	-100×6-K27-SN12-10	△	100	27	45	12	6	25	XSEQ12T3	10	K	0.3
	-125×6-K40-SN12-12	△	125	40	56	12	6	32		12	K	0.4
	-160×6-K40-SN12-16	△	160	40	67	12	6	44		16	K	0.7
	-200×6-K50-SN12-18	△	200	50	71	12	6	62		18	K	1.1
	-250×6-K50-SN12-24	△	250	50	71	12	6	87		24	K	1.7
	-100×7-K27-SN12-10	△	100	27	45	12	7	25	XSEQ1204	10	K	0.3
	-125×7-K40-SN12-12	△	125	40	56	12	7	32		12	K	0.4
	-160×7-K40-SN12-16	△	160	40	67	12	7	44		16	K	0.8
	-200×7-K50-SN12-18	△	200	50	71	12	7	62		18	K	1.2
	-250×7-K50-SN12-24	△	250	50	71	12	7	87		24	K	1.9
	-100×8-K27-SN12-10	△	100	27	45	12	8	25	XSEQ12T4	10	K	0.3
	-125×8-K40-SN12-12	△	125	40	56	12	8	32		12	K	0.5
	-160×8-K40-SN12-16	△	160	40	67	12	8	44		16	K	0.9
	-200×8-K50-SN12-18	△	200	50	71	12	8	62		18	K	1.4
-250×8-K50-SN12-24	△	250	50	71	12	8	87	24		K	2.2	

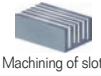
▲ Stock available △ Make-to-order

B

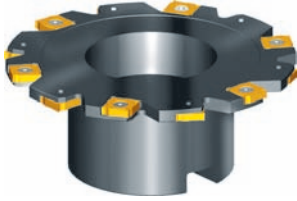
Indexable milling tools

Side and face milling tools

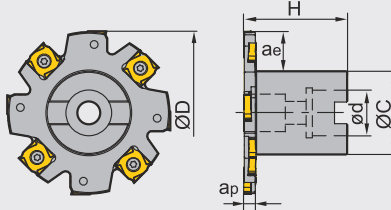
Side and face milling tools



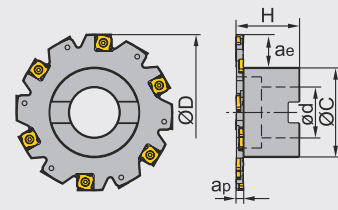
SMP01 P M K



A-type coupling



B-type coupling



Specification of tools

Type	Stock		Basic dimensions(mm)							Applicable inserts	Number of teeth Z	Type of coupling	Weight (kg)
	R	L	ØD	ød	øc	H	ap	aemax					
SMP01 Arbor mounting	-063×4-A22-SN12-06	△	△	63	22	32	40	4	14	XSEQ1202	6	A	0.2
	-080×4-A22-SN12-08	△	△	80	22	40	40	4	18		8	A	0.4
	-100×4-A27-SN12-10	△	△	100	27	48	50	4	23		10	A	0.6
	-063×5-A22-SN12-06	△	△	63	22	32	40	5	14	XSEQ1203	6	A	0.2
	-080×5-A22-SN12-08	△	△	80	22	40	40	5	18		8	A	0.4
	-100×5-A27-SN12-10	△	△	100	27	48	50	5	23		10	A	0.7
	-063×6-A22-SN12-06	△	△	63	22	32	40	6	14	XSEQ12T3	6	A	0.2
	-080×6-A22-SN12-08	△	△	80	22	40	40	6	18		8	A	0.5
	-100×6-A27-SN12-10	△	△	100	27	48	50	6	23		10	A	0.7
	-125×6-B40-SN12-12	△	△	125	40	70	50	6	30		12	B	1.0
	-160×6-B40-SN12-16	△	△	160	40	70	60	6	41		16	B	1.3
	-063×7-A22-SN12-06	△	△	63	22	32	40	7	14	XSEQ1204	6	A	0.2
	-080×7-A22-SN12-08	△	△	80	22	40	40	7	18		8	A	0.5
	-100×7-A27-SN12-10	△	△	100	27	48	50	7	23		10	A	0.7
	-125×7-B40-SN12-12	△	△	125	40	70	50	7	30		12	B	1.1
	-160×7-B40-SN12-16	△	△	160	40	70	60	7	41		16	B	1.4
	-063×8-A22-SN12-06	△	△	63	22	32	40	8	14		XSEQ12T4	6	A
	-080×8-A22-SN12-08	△	△	80	22	40	40	8	18	8		A	0.5
	-100×8-A27-SN12-10	△	△	100	27	48	50	8	23	10		A	0.8
	-125×8-B40-SN12-12	△	△	125	40	70	50	8	30	12		B	1.1
-160×8-B40-SN12-16	△	△	160	40	70	60	8	41		16	B	1.5	

▲Stock available △Make-to-order

B
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milling tools



Side and face milling tools

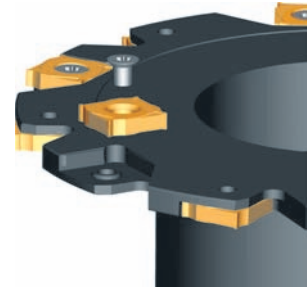
Tools code key [B121](#)

Grade selection guide [B15-B19](#)

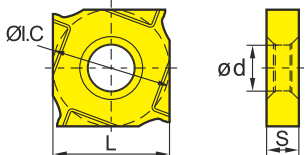
Technical data [B176-B182](#)

Spare parts

Diameter ØD	Edge width a _p	Screw	Wrench
			
Ø63-Ø160	4	I91M4×3.2X	WT09S
Ø63-Ø160	5	I91M4×4.2X	
Ø63-Ø250	6	I91M4×5.1X	
Ø63-Ø250	7	I91M4×6.1X	
Ø63-Ø250	8	I91M4×7.1X	




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	😊😊😊😊😊😊	😊😊😊😊😊😊	😊😊😊😊😊😊	😊😊😊😊😊😊	😊😊😊😊😊😊

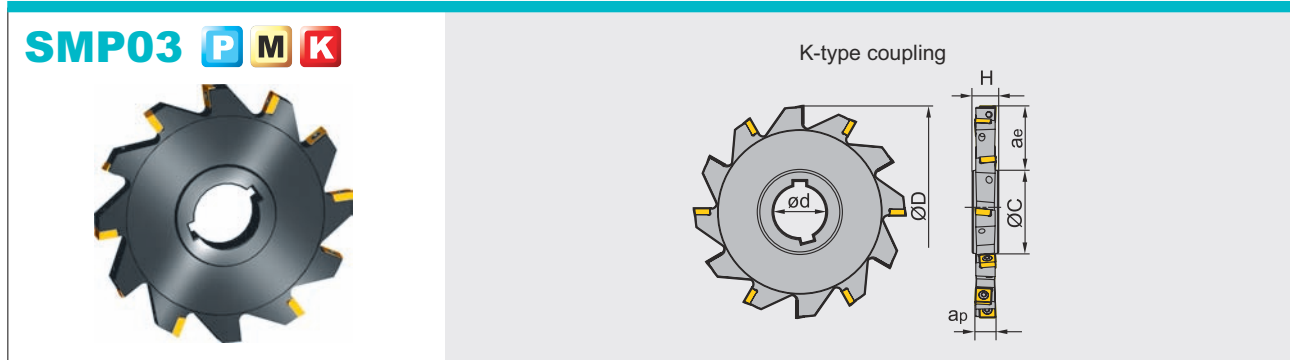
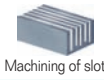
Insert shape	Type	Basic dimensions(mm)				CVD Coating				PVD Coating		Cermet	Cemented carbide												
		ØI.C	L	S	ød	YBC301	YBC302	YBM251	YBM253	YBM351	YBD152	YBD252	YBG102	YBG202	YBG205	YBG302	YBG152	YBG252	YNG151	YNG151C	YCG305	YD051	YD101	YD201	
	XSEQ1202	12.7	12.7	2.3	5.0											★									
	XSEQ1203	12.7	12.7	3.0	5.0											★									
	XSEQ12T3	12.7	12.7	3.5	5.0											★									
	XSEQ1204	12.7	12.7	4.0	5.0											★									
	XSEQ12T4	12.7	12.7	4.5	5.0											★									

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

Recommended cutting parameters

Workpiece material	Hardness HB	Insert grade	Cutting parameters	
			V(m/min)	f(mm/z)
P Low-carbon steel, Soft steel	≤ 180	YBG202	180 (100-250)	0.1(0.08-0.25)
		YBG302	150 (100-200)	0.15(0.1-0.3)
	180-280	YBG202	150 (80-250)	0.1(0.08-0.25)
		YBG302	120 (80-200)	0.15(0.1-0.3)
	280-350	YBG202	120 (80-250)	0.1(0.08-0.25)
		YBG302	100 (80-200)	0.15(0.1-0.3)
M Stainless steel	≤ 270	YBG202	120 (80-250)	0.1(0.05-0.15)
		YBG302	100 (80-200)	0.08(0.05-0.15)
K Cast iron	180-250	YBG152	120 (80-250)	0.1(0.05-0.15)
		YBG302	150 (100-250)	0.08(0.05-0.15)

Side and face milling tools



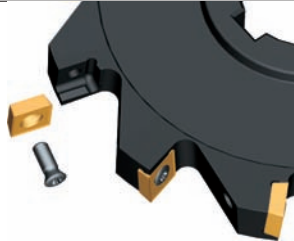
■ Specification of tools

Type	Stock	Basic dimensions(mm)						Applicable inserts	Number of teeth Z	Type of coupling	Weight (kg)
		ØD	øc	ød	ae _{max}	ap	H				
SMP03 Mounting by keyway	-080×8-K27-MP06-10	△	80	43	27	17	8	12	MPHT060304-DM	K	0.2
	-100×8-K32-MP06-14	△	100	47	32	25	8	12		K	0.3
	-100×10-K32-MP06-14	△	100	47	32	25	10	14		K	0.4
	-125×10-K40-MP06-16	△	125	55	40	34	10	14		K	0.6
	-125×12-K40-MP08-12	△	125	55	40	34	12	16	MPHT080305-DM	K	0.7
	-160×12-K40-MP08-14	△	160	62	40	47	12	16		K	1.3
	-160×16-K40-MP12-12	△	160	62	40	49	16	20	MPHT120408-DM	K	1.6
	-160×18-K40-MP12-12	△	160	62	40	49	18	24		K	1.9
	-160×20-K40-MP12-12	△	160	62	40	49	20	26		K	2.1
	-200×16-K50-MP12-14	△	200	72	50	62	16	20		K	2.5
	-200×18-K50-MP12-14	△	200	72	50	62	18	24		K	2.9
	-200×20-K50-MP12-14	△	200	72	50	62	20	26		K	3.3

▲Stock available △Make-to-order

■ Spare parts

Diameter Ød	Inserts	Screw	Wrench	
Ø80-Ø125	MP06	I60M2.5x6.5	WT07IP	--
Ø125-Ø160	MP08	I60M3x7	WT09IP	--
Ø160-Ø200	MP12	I60M5x13	--	WT20IS

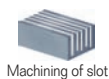


Tools code key [B121](#)

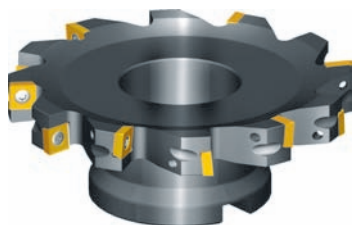
Grade selection guide [B15-B19](#)

Technical data [B176-B182](#)

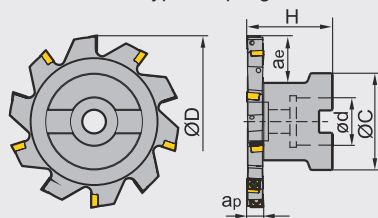
Side and face milling tools



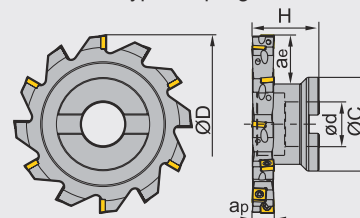
SMP03 **P** **M** **K**



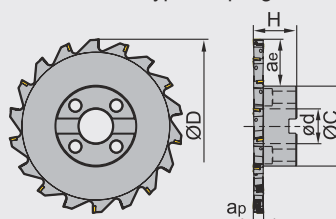
A-type coupling



B-type coupling



C-type coupling






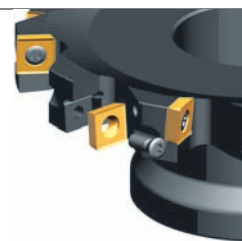
Specification of tools

Type	Stock		Basic dimensions(mm)						Applicable inserts	Number of teeth Z	Type of coupling	Weight (kg)	
	R	L	ØD	øc	ød	a _e max	a _p	H					
SMP03 Arbor mounting	-080×8-A22-MP06-10	△	△	80	45	22	21	8	40	MPHT060304-DM	10	A	0.4
	-100×8-B27-MP06-14	△	△	100	55	27	24	8	40		14	B	0.6
	-100×10-B27-MP06-14	△	△	100	55	27	24	10	40		14	B	0.7
	-125×10-B32-MP06-16	△	△	125	65	32	33	10	45		16	B	1.1
	-125×12-B32-MP08-12	△	△	125	65	32	33	12	45	MPHT080305-DM	12	B	1.4
	-160×12-B40-MP08-14	△	△	160	80	40	33	12	50		14	B	1.9
	-200×12-C40-MP08-18	△	△	200	92	40	53	12	50		18	C	3.2
	-125×16-B32-MP12-10	△	△	125	65	32	45	16	50		10	B	2.3
	-160×16-B40-MP12-12	△	△	160	80	40	45	16	60	MPHT120408-DM	12	B	2.3
	-160×18-B40-MP12-12	△	△	160	80	40	45	18	60		12	B	2.4
	-200×16-C40-MP12-14	△	△	200	92	40	53	16	50		14	C	3.6
	-200×18-C40-MP12-14	△	△	200	92	40	53	18	50		14	C	3.9
-200×20-C40-MP12-14	△	△	200	92	40	53	20	50	14	C	4.2		

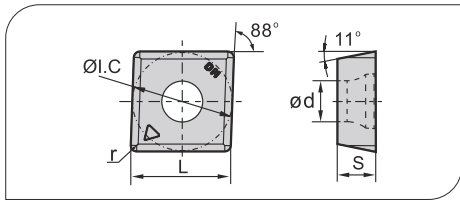
▲Stock available △Make-to-order

Spare parts

Diameter ØD	Inserts	Screw	Wrench	
				
Ø80-Ø125	MP06	I60M2.5×6.5	WT07IP	--
Ø125-Ø200	MP08	I60M3×7	WT09IP	--
Ø125-Ø200	MP12	I60M5×13	--	WT20IS



Selection of inserts



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

Workpiece material	Material	Working Condition																		
		YBC301	YBC302	YBM251	YBM253	YBM351	YBD152	YBD252	YBG102	YBG202	YBG205	YBG302	YBG152	YBG252	YNG151	YNG151C	YC30S	YD051	YD101	YD201
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									
		ØI.C	L	S	ød	r	YBC301	YBC302	YBM251	YBM253	YBM351	YBD152	YBD252	YBG102	YBG202	YBG205	YBG302	YBG152	YBG252	YNG151	YNG151C	YC30S	YD051	YD101	YD201	
	MPHT060304-DM	6.35	6.35	3.18	2.8	0.4											★									
	MPHT080305-DM	8.3	8.3	3.18	3.4	0.5											★									
	MPHT120408-DM	12.7	12.7	4.76	5.56	0.8											★									

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

Recommended cutting parameters

Workpiece material	Hardness HB	Insert grade	Cutting parameters	
			V(m/min)	f(mm/z)
P Low-carbon steel, Soft steel	≤ 180	YBG202	180 (100-250)	0.1(0.08-0.25)
		YBG302	150 (100-200)	0.15(0.1-0.3)
	180-280	YBG202	150 (80-250)	0.1(0.08-0.25)
		YBG302	120 (80-200)	0.15(0.1-0.3)
	280-350	YBG202	120 (80-250)	0.1(0.08-0.25)
		YBG302	100 (80-200)	0.15(0.1-0.3)
M Stainless steel	≤ 270	YBG202	120 (80-250)	0.1(0.05-0.15)
		YBG302	100 (80-200)	0.08(0.05-0.15)
K Cast iron	180-250	YBG152	120 (80-250)	0.1(0.05-0.15)
		YBG302	150 (100-250)	0.08(0.05-0.15)

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Side and face milling tools