

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
TM	T-slot milling
AM	Aluminum alloy high speed 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		

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°

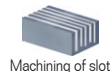
Diameter of IC	Insert shape					
	C	D	R	S	T	V
5.556	—	—	—	—	09	—
6.350	06	07	—	—	11	—
9.525	09	11	09	09	16	16
12.700	12	15	12	12	22	22
15.875	16	19	15	15	27	—
19.050	19	—	19	19	33	—
25.400	25	—	25	25	44	—

Cutting direction

(R: Right L: Left)

Number of teeth

Side and face milling tools

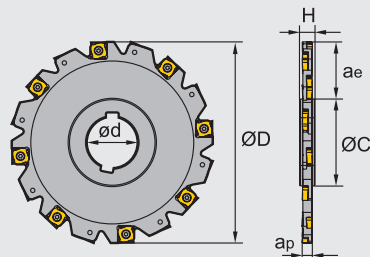


Machining of slot

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	aemax				
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

Tools code key
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Grade selection guide
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Technical data
B210-B216

Side and face milling tools

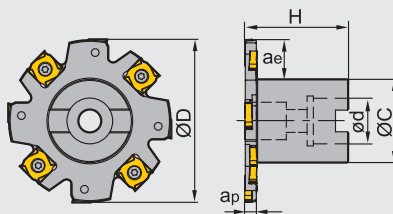


Machining of slot

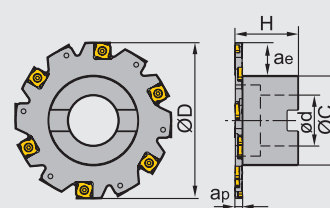
SMP01 P M K



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	a _p	a _{emax}				
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	50	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	50	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	50	6	18		8	A	0.5
	-100×6-A27-SN12-10	△	△	100	27	48	50	6	23		10	A	0.7
	-125×6-B32-SN12-12	△	△	125	32	70	50	6	30		12	B	1.0
	-160×6-B40-SN12-16	△	△	160	40	70	50	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	50	7	18		8	A	0.5
	-100×7-A27-SN12-10	△	△	100	27	48	50	7	23		10	A	0.7
	-125×7-B32-SN12-12	△	△	125	32	70	50	7	30		12	B	1.1
	-160×7-B40-SN12-16	△	△	160	40	70	50	7	41		16	B	1.4
	-063×8-A22-SN12-06	△	△	63	22	32	40	8	14	XSEQ12T4	6	A	0.2
	-080×8-A22-SN12-08	△	△	80	22	40	50	8	18		8	A	0.5
	-100×8-A27-SN12-10	△	△	100	27	48	50	8	23		10	A	0.8
	-125×8-B32-SN12-12	△	△	125	32	70	50	8	30		12	B	1.1
	-160×8-B40-SN12-16	△	△	160	40	70	50	8	41		16	B	1.5

▲Stock available

△Make-to-order

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milling tools

Side and face milling tools

Tools code key

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Technical data

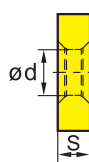
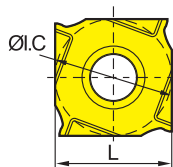
B210-B216

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

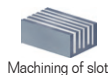
Insert shape	Type	Basic dimensions(mm)				CVD Coating				PVD Coating				Cermet		Cemented carbide									
		ØI.C	L	S	ød	YBC301	YBC302	YBM251	YBM253	YBM351	YBD152	YBD252	YBG102	YBG202	YBG205	YBG320	YBG302	YBG152	YBG252	YNG151	YNG151C	YC30S	YD051	YD101	YD201
	XSEQ1202	12.7	12.7	2.3	5.0												★								
	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	YBG302	150 (100-200)	0.15(0.1-0.3)
	High-carbon steel、 Alloy steel	180-280	YBG302	120 (80-200)	0.15(0.1-0.3)
	Alloy tool steel	280-350	YBG302	100 (80-200)	0.15(0.1-0.3)
M	Stainless steel	≤270	YBG302	100 (80-200)	0.08(0.05-0.15)
K	Cast iron	180-250	YBG302	150 (100-250)	0.08(0.05-0.15)

Side and face milling tools

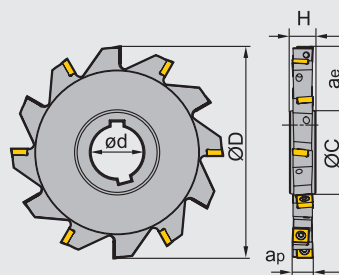


Machining of slot

SMP03 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	øc	ød	aemax	ap	H					
SMP03 Mounting by keyway	-080×8-K27-MP06-10	△	80	43	27	17	8	12	MPHT060304-DM	10	K	0.2
	-100×8-K32-MP06-14	△	100	47	32	25	8	12		14	K	0.3
	-100×10-K32-MP06-14	△	100	47	32	25	10	14		14	K	0.4
	-125×10-K40-MP06-16	△	125	55	40	34	10	14		16	K	0.6
	-125×12-K40-MP08-12	△	125	55	40	34	12	16	MPHT080305-DM	12	K	0.7
	-160×12-K40-MP08-14	△	160	62	40	47	12	16		14	K	1.3
	-160×16-K40-MP12-12	△	160	62	40	49	16	20	MPHT120408-DM	12	K	1.6
	-160×18-K40-MP12-12	△	160	62	40	49	18	24		12	K	1.9
	-160×20-K40-MP12-12	△	160	62	40	49	20	26		12	K	2.1
	-200×16-K50-MP12-14	△	200	72	50	62	16	20		14	K	2.5
	-200×18-K50-MP12-14	△	200	72	50	62	18	24		14	K	2.9
	-200×20-K50-MP12-14	△	200	72	50	62	20	26		14	K	3.3

▲Stock available △Make-to-order

Indexable milling tools

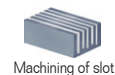
Side and face milling tools

Spare parts

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

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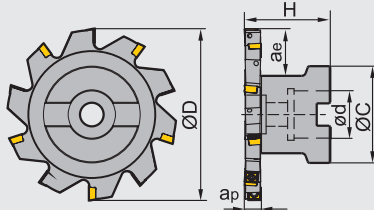
Side and face milling tools



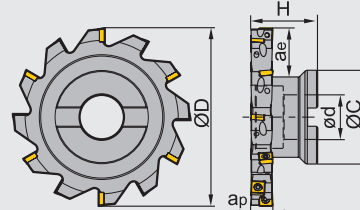
SMP03 P M K



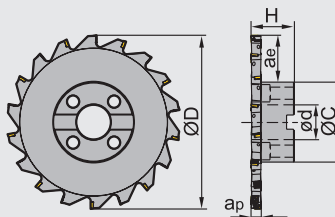
A-type coupling



B-type coupling



C-type coupling



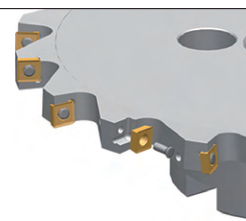
Specification of tools

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



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	Steel	Stainless steel	Cast iron	Non-ferrous metal	Heat resistant alloy, Ti alloy
Workpiece material					

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	YBG320	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												★								

Indexable milling tools

Side and face milling tools

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

