

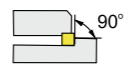
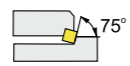
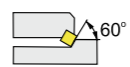
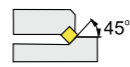
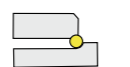
ZZ HARDMETAL is a modern joint-stock company focusing on R & D, production and distribution in the area of CNC cutter. The company is located in Zhuzhou--the biggest manufacturing bases of CNC cutter and carbide in China.

Our company's main products include external turning tools, internal turning tools of M,P,D,S,W,C type and threading tools, parting and grooving tools, indexable milling tools, drilling tools. At the same time, we can also undertake all types of non-standard tools.

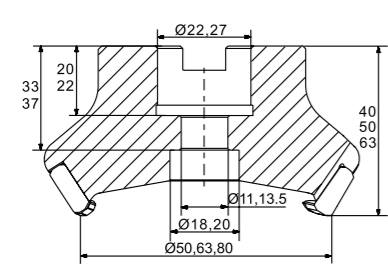
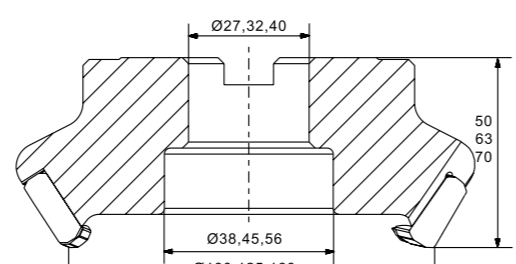
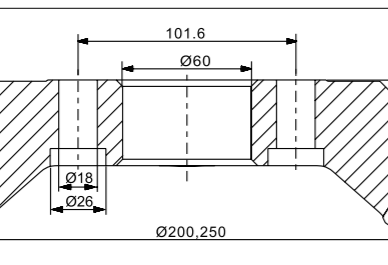
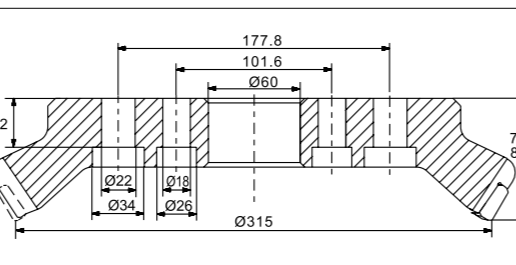
Based on the excellent design, top-class CNC center, accurate testing equipment and perfect management process, Sant series' quality is always in the leading level. Since the establishment of our company we has always insisted: "United and Innovative, Honest and Pragmatic, Pioneering for progress, Pursuing win-win outcomes". We've established good cooperation relationship with many large and medium-size enterprises and dealers all over the world. We'll work hard together persistently to support high-quality products and satisfactory service for all the customers!



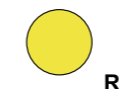
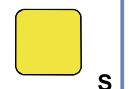
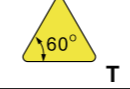

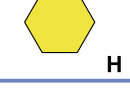
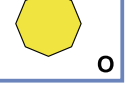


Indexable Milling Tools Code Key

Type of Tools		Lead Angle		Number of Type	
FM	Face milling tool	P	90° 	Diameter $\varnothing D$	
EM	Square-should milling tool	E	75° 	Side and face milling tool: diameter *blade width	
HM	Helical and face milling tool	D	60° 	Tool Installation Position	
SM	Side and face milling tool	A	45° 	A	A type of adapter XP Weldon shank
BM	Profile milling tool	R		B	B type of adapter G straight shank
CM	Chamfer milling tool			C	C type of adapter MW anury morse
XM	T slot milling tool			D	D type of adapter
TM	Special milling tool			Dimension	

FM E 03-100-B 32

A type of adapter		B type of adapter	
C type of adapter		D type of adapter	

Shape of Blade	
 C	 D
 R	 S
 T	 L
 H	 O

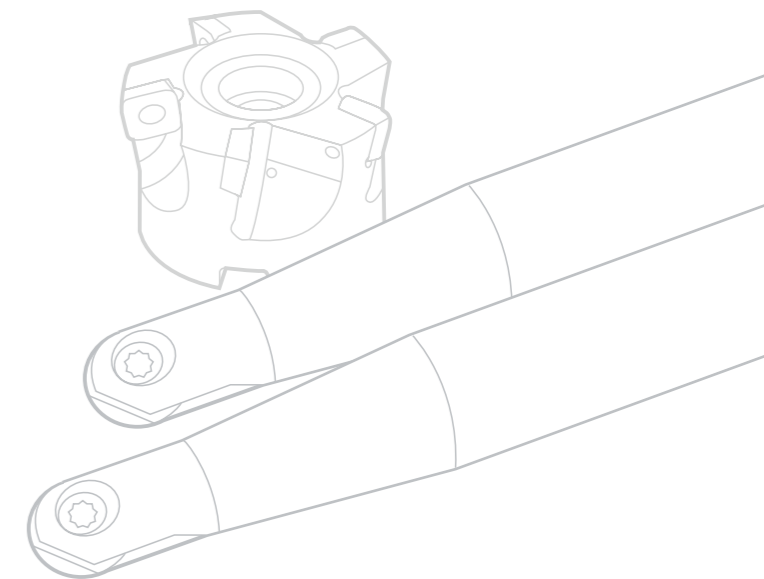
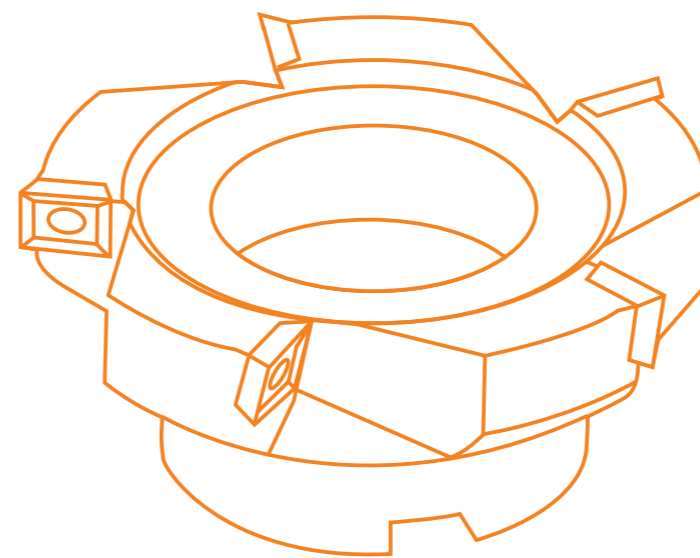
Insert Clearance Angle	
N	0°
B	5°
C	7°
P	11°
D	15°
E	20°
F	25°

Cutting Edge Length (mm)	Shape of Blade					
	C	D	R	S	T	L
5.556	—	—	—	—	09	—
6.350	06	07	—	—	11	—
9.525	09	11	09	09	16	—
12.700	12	15	12	12	22	—
15.875	16	19	15	15	27	—
19.050	19	—	19	19	33	—
25.400	25	—	25	25	44	25

- S P 12 - 06 L

Tooth

Cutting Direction L: Left The omit means right



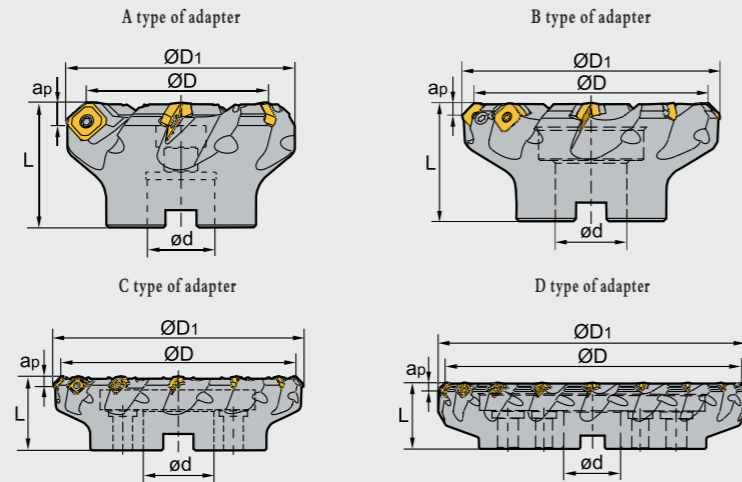
MILLING TOOLS

Face Milling tool

Kr:45°



FMA01 P M K N S



Type of Milling Tools

Type		Stock		Dimension (mm)					Tooth Z	Adapter	Weight (kg)
		R	L	ØD	ØD ₁	ød	L	ap _{max}			
FMA01	-050-A22-SE12-04	▲	△	50	61	22	40	6	4	A	0.3
	-063-A22-SE12-05	▲	△	63	74	22	40	6	5	A	0.5
	-080-A27-SE12-06	▲	△	80	91	27	50	6	6	A	1.2
	-100-B32-SE12-07	▲	△	100	107	32	50	6	7	B	1.2
	-125-B40-SE12-08	▲	△	125	136	40	63	6	8	B	2.6
	-160-B40-SE12-10	▲	△	160	170	40	63	6	10	B	4.3
	-200-C60-SE12-12	▲	△	200	210	60	63	6	12	C	7.6
	-250-C60-SE12-14	▲	△	250	260	60	63	6	14	C	13.5
	-315-D60-SE12-18	△	△	315	325	60	70	6	18	D	20.8

▲ Stock △ Order

Spare Parts

Diameter ØD	Applicable Insert	insert screw	Shim	shim screw	Wrench	Wrench
Ø50-Ø100	SECT12T3	L60M3.5×10	--	—	T15T	—
Ø125-Ø315		L60M3.5×10	S13BS	SM5×7XA		S4

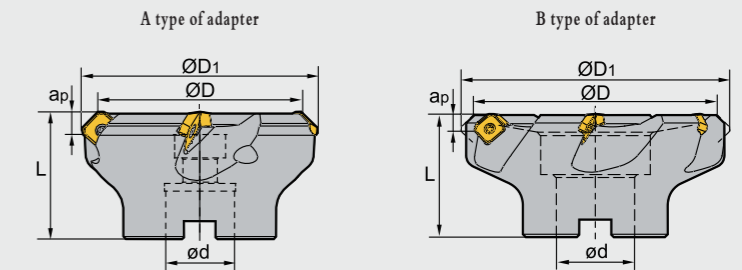
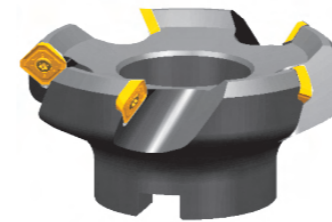
MILLING TOOLS

Face Milling tool

Kr:45°



FMA02 P M K N S



Type of Milling Tools

Type		Stock		Dimension (mm)					Tooth Z	Adapter	Weight (kg)
		R	L	ØD	ØD ₁	ød	L	ap _{max}			
FMA02	-050-A22-SE12-03	▲	△	50	61	22	40	6	3	A	0.4
	-063-A22-SE12-04	▲	△	63	74	22	40	6	4	A	0.6
	-080-A27-SE12-04	▲	△	80	91	27	50	6	4	A	1.3
	-100-B32-SE12-05	▲	△	100	107	32	50	6	5	B	1.3
	-125-B40-SE12-06	▲	△	125	131	40	63	6	6	B	2.6

▲ Stock △ Order

Spare Parts

Diameter ØD	Applicable Insert	insert screw	Wrench
Ø50-Ø125	SECT12T3	L60M3.5×10	T15T

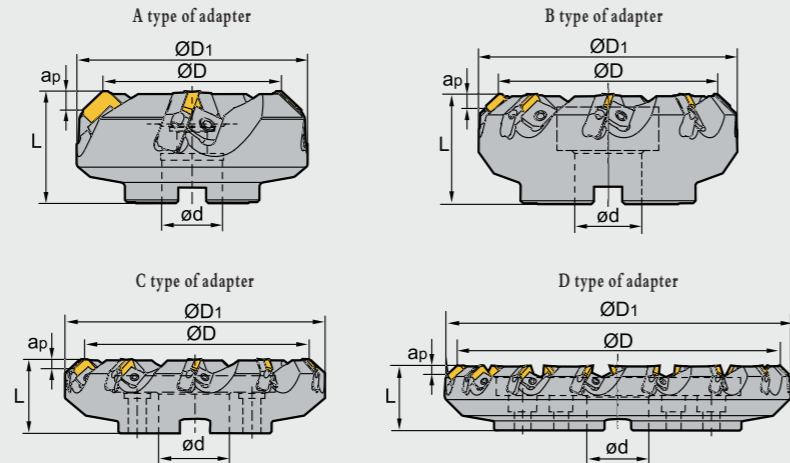
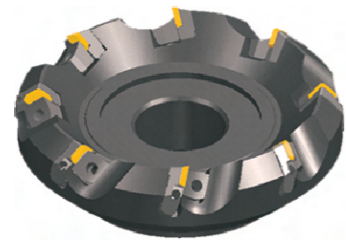
MILLING TOOLS

Face Milling tool

Kr:45°



FMA03 P M K



Type of Milling Tools

Type	Stock	Dimension (mm)							Tooth Z	Adapter	Weight (kg)
		R	L	ØD	ØD ₁	ød	L	ap _{max}			
FMA03	-080-A27-SE12-04	▲	△	80	103	27	50	5.5	4	A	1.8
	-100-B32-SE12-05	▲	△	100	122	32	50	5.5	5	B	2.4
	-125-B40-SE12-06	▲	△	125	147	40	63	5.5	6	B	4.4
	-160-B40-SE12-08	▲	△	160	181	40	63	5.5	8	B	6.4
	-200-C60-SE12-10	▲	△	200	221	60	63	5.5	10	C	8.5
	-250-C60-SE12-12	▲	△	250	270	60	63	5.5	12	C	14.1
	-315-D60-SE12-15	△	△	315	353	60	63	5.5	15	D	22.2
	-080-A27-SE15-04	▲	△	80	103	27	50	7.5	4	A	1.7
	-100-B32-SE15-05	▲	△	100	122	32	50	7.5	5	B	2.3
	-125-B40-SE15-06	▲	△	125	147	40	63	7.5	6	B	4.2
	-160-B40-SE15-08	▲	△	160	181	40	63	7.5	8	B	6.1
	-200-C60-SE15-10	▲	△	200	221	60	63	7.5	10	C	8.3
	-250-C60-SE15-12	▲	△	250	270	60	63	7.5	12	C	13.6
	-315-D60-SE15-15	▲	△	315	353	60	63	7.5	15	D	21.8

▲ Stock △ Order

Spare Parts

Diameter ØD	Insert	Knife-holder	Block	clamping screw	knife-holder screw	Wrench
Ø80-Ø315						
Ø80-Ø315	SE□N1504	LSE12R/L LSE15R/L	W01R/L	DM8×21X	LOM5×15.1	S3 S4

MILLING TOOLS

Face Milling tool

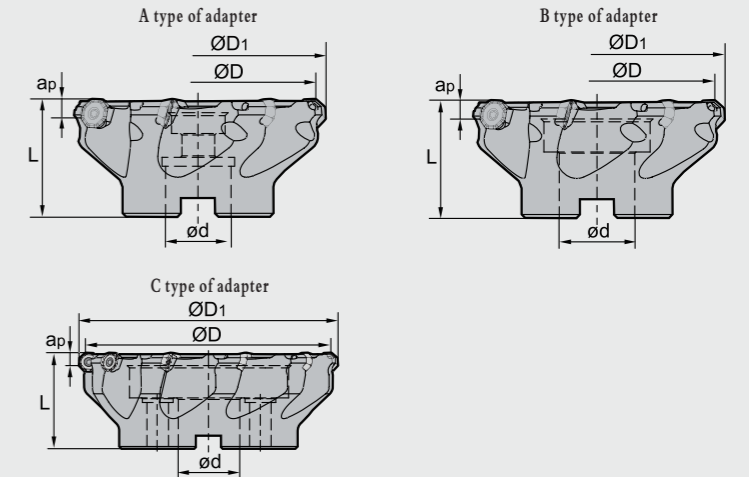
Kr:45°



FMA04 P M K N



screw on



Type of Milling Tools

Type	Stock	Dimension (mm)							Tooth Z	Adapter	Weight (kg)
		R	L	ØD	ØD ₁	ød	L	ap _{max}			
FMA04	-050-A22-OF05-04	▲	△	50	56	22	40	3.5	4	A	0.3
	-050-A22-OF05-05	△	△	50	56	22	40	3.5	5	A	0.4
	-063-A22-OF05-05	▲	△	63	69	22	40	3.5	5	A	0.5
	-080-A27-OF05-06	▲	△	80	86	27	50	3.5	6	A	0.8
	-100-B32-OF05-07	▲	△	100	106	32	50	3.5	7	B	1.2
	-125-B40-OF05-08	▲	△	125	130	40	63	3.5	8	B	2.7
	-160-B40-OF05-10	▲	△	160	165	40	63	3.5	10	B	5.1
	-160-C40-OF05-10	△	△	160	165	40	63	3.5	10	C	4.1

▲ Stock △ Order

Spare Parts

Diameter ØD	Insert	insert screw	Wrench
Ø50- Ø63			
Ø80 -Ø160	OFKT05T3	L60M4×10	T15
	OFKT05T3	L60M4×10	T15T

MILLING TOOLS

Face Milling tool

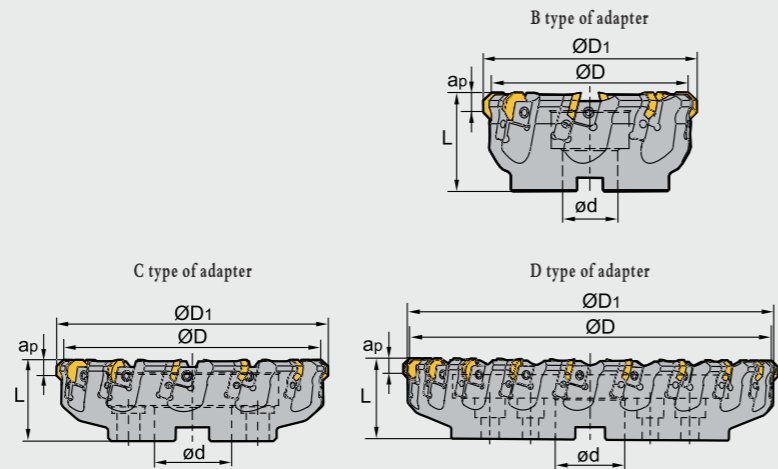
Kr:45°



FMA04 P M K



Block on



Type of Milling Tools

Type	Stock	Dimension (mm)							Tooth Z	Adapter	Weight (kg)
		R	L	ØD	ØD ₁	ød	L	ap _{max}			
FMA04	-125-B40-OF07-08	▲	△	125	136	40	63	5	8	B	3.9
	-160-B40-OF07-10	▲	△	160	171	40	63	5	10	B	5.9
	-200-C60-OF07-12	▲	△	200	211	60	63	5	12	C	7.6
	-250-C60-OF07-16	▲	△	250	261	60	63	5	16	C	13.3
	-315-D60-OF07-20	▲	△	315	321	60	63	5	20	D	20.3

▲ Stock △ Order

Spare Parts

Diameter ØD	Applicable Insert	Knife-holder	Block	clamping screw	knife-holder screw	Wrench
Ø125-Ø315						
	OFKR0704	LOF07R/L	W02R/L	DM8×21X	LOM5×15.1	S3 S4

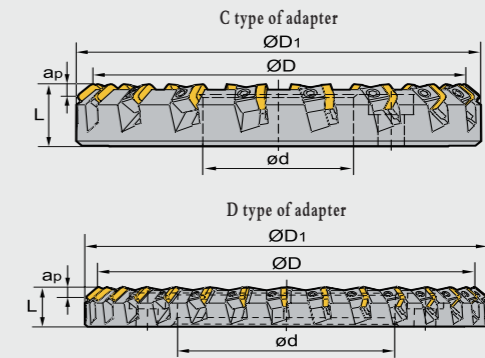
MILLING TOOLS

Face Milling tool

Kr:45°



FMA05 P K



Type of Milling Tools

Type	Stock	Dimension (mm)							Tooth Z	Installation disk Number	Weight (kg)
		R	L	ØD	ØD ₁	ød	L	ap _{max}			
FMA05	-200-C60-SN12-18	△	△	200	215	80	40	5	18	Adapter1	6.9
	-250-C60-SN12-24	△	△	250	265	120	40	5	24	Adapter2	9.4
	-315-D60-SN12-30	△	△	315	330	180	40	5	30	Adapter3	12.5
	-355-D60-SN12-34	△	△	355	370	220	40	5	34	Adapter4	15.1
	-400-D60-SN12-38	△	△	400	415	250	40	5	38	Adapter5	18.4
	-450-D60-SN12-44	△	△	450	465	300	40	5	44	Adapter6	21.7
	-200-C60-SN15-18	△	△	200	220	80	40	5.5	18	Adapter1	6.9
	-250-C60-SN15-24	△	△	250	270	120	40	5.5	24	Adapter2	9.4
	-315-D60-SN15-30	△	△	315	335	180	40	5.5	30	Adapter3	12.6
	-355-D60-SN15-34	△	△	355	375	220	40	5.5	34	Adapter4	15.2
	-400-D60-SN15-38	△	△	400	420	250	40	5.5	38	Adapter5	18.4
	-450-D60-SN15-44	△	△	450	470	300	40	5.5	44	Adapter6	21.8

▲ Stock △ Order

Spare Parts

Diameter ØD	Insert	Block	clamping screw	Wrench
Ø200-Ø450				
	SNKN1204 SNKN1504	W04N W05N	DM8×21X	S4

The Installation disk Specification of FMA 05

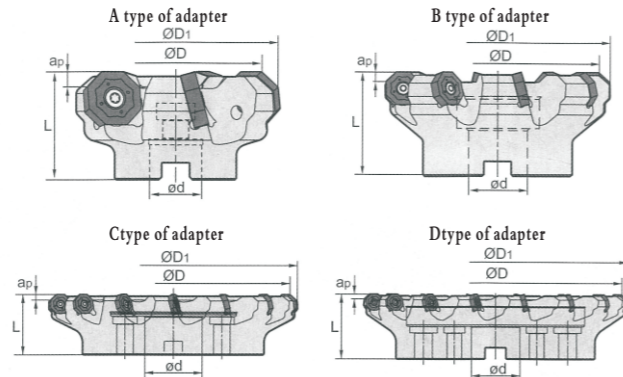
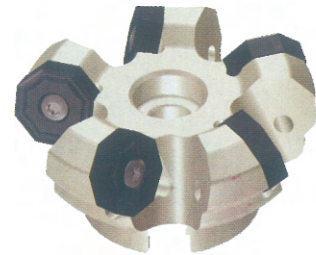
Installation	Type	Dimension (mm)											
		ØD	Ød	Ød ₁	Ød ₂	Ød ₃	Ød ₄	Ød ₅	ØC	ØC ₁	ØC ₂	N	刀具ØD
	Adapter1	180	60	26	18	-	-	80	120	101.6	-	4	Ø200
	Adapter2	230	60	26	18	-	-	120	170	101.6	-	4	Ø250
	Adapter3	290	60	26	18	32	22	180	230	101.6	177.8	6	Ø315
	Adapter4	330	60	26	18	32	22	220	270	101.6	177.8	6	Ø355
	Adapter5	370	60	26	18	32	22	250	300	101.6	177.8	6	Ø400
	Adapter6	420	60	26	18	32	22	300	350	101.6	177.8	6	Ø450

MILLING TOOLS

Face Milling tool **Kr:45°**



FMA07 P K



■ Type of Milling Tools

Type	Stock		Dimension (mm)					Tooth Z	Adapter	Weight (kg)
	R	L	ØD	ØD ₁	ød	L	apmax			
FMA07 -050-A22-ON06-05	▲	△	50	62	22	40	4	5	A	0.3
-063-A22-ON06-06	▲	△	63	75	22	40	4	6	A	0.5
-080-B27-ON06-07	▲	△	80	92	27	50	4	7	B	1.0
-100-B32-ON06-08	▲	△	100	112	32	63	4	8	B	1.9
-125-B40-ON06-09	▲	△	125	137	40	63	4	9	B	3.5
-160-C40-ON06-11	▲	△	160	172	40	63	4	11	C	4.3
-200-C60-ON06-13	▲	△	200	212	60	63	4	13	C	6.4
-250-C60-ON06-15	▲	△	250	262	60	63	4	15	C	13.4
-315-D60-ON06-17	▲	△	315	327	60	80	4	17	D	21.9
-063-A22-ON08-05	▲	△	63	78	22	40	5	5	A	0.5
-080-B27-ON08-06	▲	△	80	95	27	50	5	6	B	0.9
-100-B32-ON08-07	▲	△	100	115	32	63	5	7	B	1.8
-125-B40-ON08-08	▲	△	125	140	40	63	5	8	B	3.1
-160-C40-ON08-10	▲	△	160	175	40	63	5	10	C	4.1
-200-C60-ON08-12	▲	△	200	215	60	63	5	12	C	6.1
-250-C60-ON08-12	▲	△	250	265	60	63	5	14	C	12
-315-D60-ON08-16	▲	△	315	330	60	80	5	16	D	21

▲ Stock △ Order

■ Spare Parts

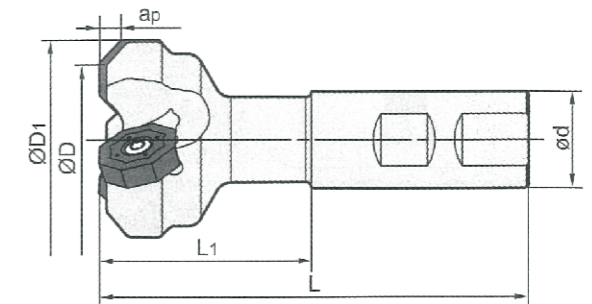
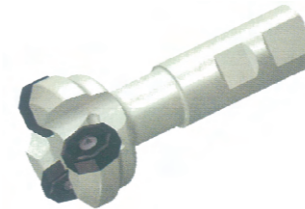
Diameter ØD	Insert	insert screw	Wrench
Ø50-Ø315	ONHU06□□□□-PF/PM/W	L60M4×10	T15T
Ø63-Ø315	ONHU08□□□□-PF/PM/W	L60M 5×13	T20T

MILLING TOOLS

Face Milling tool **Kr:45°**



FMA07 P K



■ Type of Milling Tools

Type	Stock		Dimension (mm)					Tooth Z	Weight (kg)	
	R	L	ØD	ØD ₁	ød	L	L ₁			apmax
FMA07 -025-XP20-ON06-02	▲	△	25	37	20	95	45	4	2	0.2
-040-XP25-ON06-03	▲	△	40	52	25	106	50	4	3	0.4
-032-XP25-ON08-02	▲	△	32	47	25	111	55	5	2	0.4
-040-XP25-ON08-03	▲	△	40	55	25	111	55	5	3	0.5
-050-XP25-ON08-04	▲	△	50	65	25	111	55	5	4	0.6

▲ Stock △ Order

■ Spare Parts

Diameter ØD	Insert	insert screw	Wrench
Ø25-Ø40	ONHU06□□□□-PF/PM/W	L60M4×10	T15T
Ø32-Ø50	ONHU08□□□□-PF/PM/W	L60M 5×13	T20T

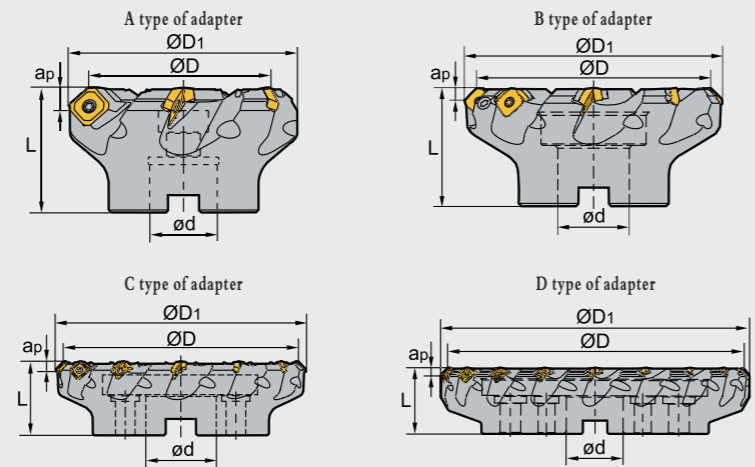
MILLING TOOLS

Face Milling tool

Kr:45°



FMA08 P M K N S



■ Type of Milling Tools

Type	Stock	Dimension (mm)						Tooth Z	Adapter	Weight (kg)	
		R	L	ØD	ØD1	ød	L				apmax
FMA08	-050-A22-SE13-03	▲	△	50	61	22	40	6	3	A	0.3
	-063-A22-SE13-04	▲	△	63	74	22	40	6	4	A	0.5
	-080-A27-SE13-04	▲	△	80	91	27	50	6	4	A	1.2
	-100-B32-SE13-05	▲	△	100	107	32	50	6	5	B	1.2
	-125-B40-SE13-06	▲	△	125	136	40	63	6	6	B	2.6
	-050-A22-SE13-04	▲	△	50	61	22	40	6	4	A	0.3
	-063-A22-SE13-05	▲	△	63	74	22	40	6	5	A	0.5
	-080-A27-SE13-06	▲	△	80	91	27	50	6	6	A	1.2
	-100-B32-SE13-07	▲	△	100	107	32	50	6	7	B	1.2
	-125-B40-SE13-08	▲	△	125	136	40	63	6	8	B	2.6
	-160-B40-SE13-10	▲	△	160	170	40	63	6	10	B	4.3
	-200-C60-SE13-12	▲	△	200	210	60	63	6	12	C	7.6
	-250-C60-SE13-14	▲	△	250	260	60	63	6	14	C	13.5
	-315-D60-SE13-18	△	△	315	325	60	70	6	18	D	20.8

▲ Stock △ Order

■ Spare Parts

Diameter ØD	Applicable Insert	insert screw	Shim	shim screw	Wrench	Wrench
Ø50-Ø100						
Ø125-Ø315	SEET13T3AGEN-JL SEMT13T3AGSN-JM/JH/FT SEGT13T3AGFN-JP	L60M3.5×10	S13BS	SM5×7XA	T15T	S4

Note: The insert is Mitsubishi brand

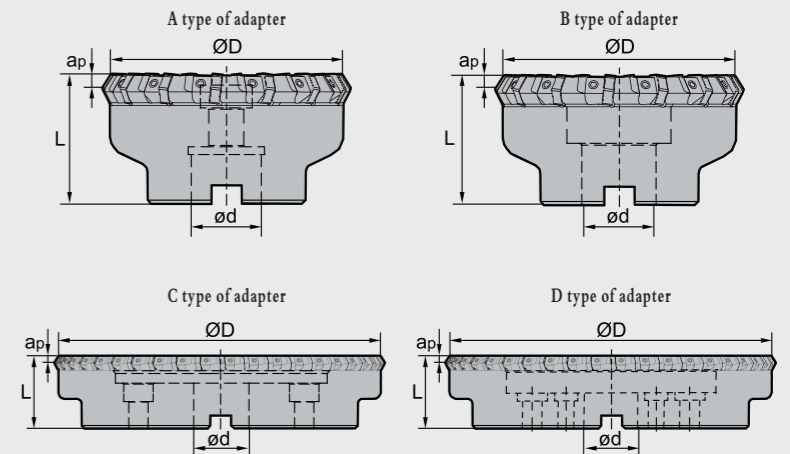
MILLING TOOLS

Face Milling tool

Kr:55°



FMD02 K



■ Type of Milling Tools

Type	Stock	Dimension (mm)						Tooth Z	Adapter	Weight (kg)
		R	L	ØD	ød	L	apmax			
FMD02	-080-A27-HN09-08	▲	△	80	27	50	6	8	A	1.1
	-100-B32-HN09-10	▲	△	100	32	63	6	10	B	2.6
	-125-B40-HN09-14	▲	△	125	40	70	6	14	B	3.7
	-160-B40-HN09-18	▲	△	160	40	63	6	18	B	5.6
	-200-C60-HN09-22	▲	△	200	60	63	6	22	C	6.3
	-250-C60-HN09-28	▲	△	250	60	63	6	28	C	10.3
	-315-D60-HN09-32	▲	△	315	60	63	6	32	D	21.7

▲ Stock △ Order

■ Spare Parts

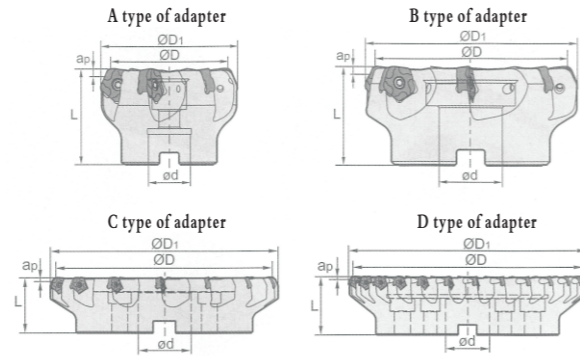
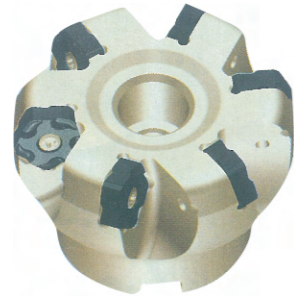
Diameter ØD	Applicable Insert	Block	clamping screw	Wrench
Ø80-Ø315				
	HNEX0905	W06T	DM6×25	S3

MILLING TOOLS

Face Milling tool **Kr: 67°**



FMD02



■ Type of Milling Tools

Type	Stock		Dimension (mm)					Tooth Z	Adapter	Weight (kg)	
	R	L	ØD	ØD ₁	ød	L	ap _{max}				
FMD02 sparsely unequally teeth space	-050-A22-PN11-04	▲	△	50	60.1	22	50	5	4	A	0.6
	-063-A22-PN11-05	▲	△	63	73.1	22	50	5	5	A	0.8
	-080-B27-PN11-06	▲	△	80	90.1	27	50	5	6	A	1.1
	-100-B32-PN11-07	▲	△	100	110.1	32	50	5	7	B	1.8
	-125-B40-PN11-08	▲	△	125	135.1	40	63	5	8	B	2.9
densely Toothed	-160-B40-PN11-10	▲	△	160	170.1	40	63	5	10	B	5.6
	-200-C60-PN11-12	▲	△	200	210.1	60	63	5	12	C	7.9
	-250-C60-PN11-14	▲	△	250	260.1	60	63	5	14	C	13.4
	-050-A22-PN11-05	▲	△	50	60.1	22	50	5	5	A	0.6
	-063-A22-PN11-06	▲	△	63	73.1	22	50	5	6	A	0.9
	-080-B27-PN11-08	▲	△	80	90.1	27	50	5	8	A	1.2
	-100-B32-PN11-10	▲	△	100	110.1	32	50	5	10	B	1.9
	-125-B40-PN11-12	▲	△	125	135.1	40	63	5	12	B	3.2
	-160-B40-PN11-14	▲	△	160	170.1	40	63	5	14	B	6.4
	-200-C60-PN11-16	▲	△	200	210.1	60	63	5	16	C	8.5
-250-C60-PN11-18	▲	△	250	260.1	60	63	5	18	C	18.0	
-315-D60-PN11-26	▲	△	315	325.1	60	80	5	26	D	24.5	

▲ Stock △ Order

■ Spare Parts

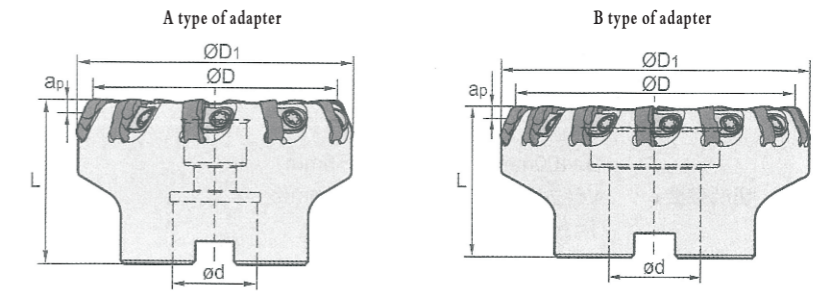
Diameter ØD	Insert	insert screw	Wrench
Ø50-Ø315	PNEG110512R-CR		
	PNEG110512R-CM		

MILLING TOOLS

Face Milling tool **Kr: 67°**



FMD02



■ Type of Milling Tools

Type	Stock		Dimension (mm)					Tooth Z	Adapter	Weight (kg)	
	R	L	ØD	ØD ₁	ød	L	ap _{max}				
FMD02 Super dense tooth	-080-A27-PN11-10	▲	△	80	90.1	27	50	5	10	A	1.3
	-100-B32-PN11-14	▲	△	100	110.1	32	50	5	14	B	1.6
	-125-B40-PN11-18	▲	△	125	135.1	40	63	5	18	B	3.2
	-160-B40-PN11-22	▲	△	160	170.1	40	63	5	22	B	5.8

▲ Stock △ Order

■ Spare Parts

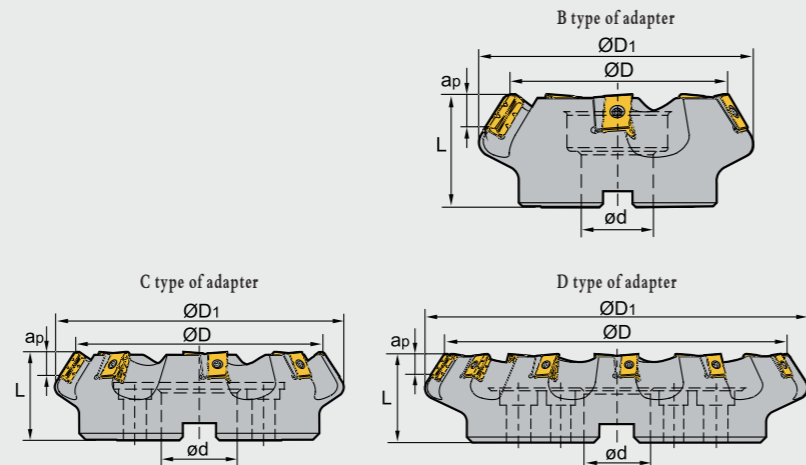
Diameter ØD	Insert	Block	clamping screw	Wrench
Ø80-Ø160	PNEG110512R-CR PNEG110512R-CM	W18N	DM6×20A	S3

MILLING TOOLS

Face Milling tool **Kr:60°**



FMD03 P M



■ Type of Milling Tools

Type	Stock	Dimension (mm)					Tooth Z	Adapter	Weight (kg)	
		ØD	ØD ₁	ød	L	ap _{max}				
FMD03	-125-B40-LN25-05	△	125	154	40	63	17	5	B	4.5
	-160-C40-LN25-06	△	160	189	40	63	17	6	C	6.9
	-200-C60-LN25-08	▲	200	229	60	70	17	8	C	10.5
	-250-C60-LN25-10	▲	250	278	60	70	17	10	C	16.7
	-315-D60-LN25-12	▲	315	346	60	80	17	12	D	27.3
	-400-D60-LN25-16	▲	400	427	60	80	17	16	D	47.1

▲ Stock △ Order

■ Spare Parts

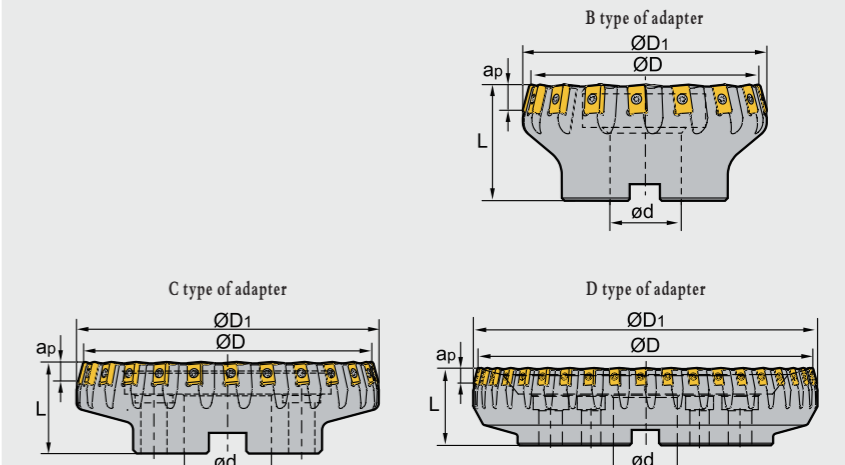
Diameter ØD	Applicable Insert	shim screw	Shim	insert screw	Wrench	
Ø125-Ø315						
Ø125-Ø400	LNKT2007	L60M3×8	LLN20R-ZR	L60M4×15	T15T	T08
	LNKT2510	L60M3.5×10	LLN25R-ZR	L60M5×17	T20T	T15

MILLING TOOLS

Face Milling tool **Kr:75°**



FME01 K



■ Type of Milling Tools

Type	Stock	Dimension (mm)						Tooth Z	Adapter	Weight (kg)	
		R	L	ØD	ØD ₁	ød	L				ap _{max}
FME01	-125-B40-LN15-16	△	△	125	132	40	63	8	16	B	3.5
	-160-B40-LN15-20	△	△	160	168	40	63	8	20	B	6.1
	-200-C60-LN15-25	△	△	200	208	60	63	8	25	C	7.4
	-250-C60-LN15-32	△	△	250	257	60	63	8	32	C	13.1
	-315-D60-LN15-40	△	△	315	323	60	70	8	40	D	25.5

▲ Stock △ Order

■ Spare Parts

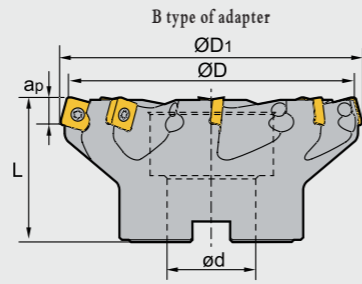
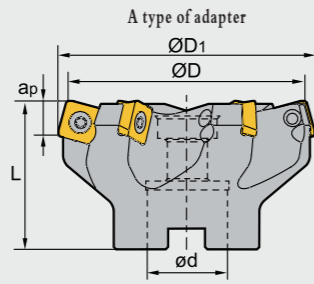
Diameter ØD	Insert	insert screw	Wrench
Ø125-Ø315			
	LINE32.534	L90M4×11	T15T

MILLING TOOLS

Face Milling tool **Kr:75°**



FME02 P M K



■ Type of Milling Tools

Type	Stock	Dimension (mm)					Tooth Z	Adapter	Weight (kg)
		$\varnothing D$	$\varnothing D_1$	$\varnothing d$	L	a_{pmax}			
FME02 -050-A22-SP12-04	△	50	54	22	40	6	4	A	0.3
-063-A22-SP12-05	△	63	66	22	50	6	5	A	0.6
-080-A27-SP12-06	△	80	83	27	50	6	6	A	0.9
-100-B32-SP12-07	△	100	103	32	50	6	7	B	1.4
-125-B40-SP12-08	△	125	128	40	63	6	8	B	2.5

▲ Stock △ Order

■ Spare Parts

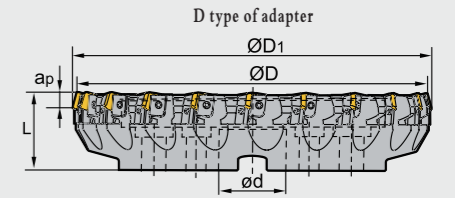
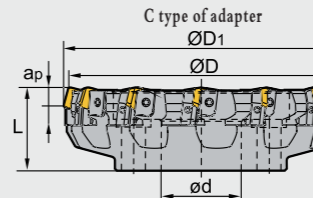
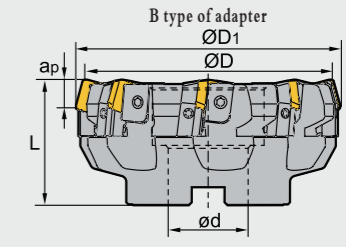
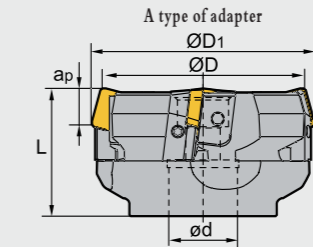
Diameter $\varnothing D$	Applicable Insert	insert screw	Wrench
Ø50-Ø125			
	SPKW1204	L60M5x14	T20T
	SPKT1204		

MILLING TOOLS

Face Milling tool **Kr:75°**



FME03 P M K



■ Type of Milling Tools

Type	Stock	Dimension (mm)						Tooth Z	Adapter	Weight (kg)
		R	L	$\varnothing D$	$\varnothing D_1$	$\varnothing d$	L			
FME03 -080-A27-SP12-04	▲	△	80	84	27	50	6	4	A	1.1
-100-B32-SP12-06	▲	△	100	104	32	50	6	6	B	1.9
-125-B40-SP12-08	▲	△	125	129	40	63	6	8	B	3.5
-160-B40-SP12-10	▲	△	160	164	40	63	6	10	B	5.7
-200-C60-SP12-12	▲	△	200	203	60	63	6	12	C	8.2
-250-C60-SP12-16	▲	△	250	253	60	63	6	16	C	13.8
-315-D60-SP12-20	▲	△	315	318	60	70	6	20	D	23.5
-080-A27-SP15-04	▲	△	80	84	27	50	8	4	A	1.0
-100-B27-SP15-06	▲	△	100	104	27	50	8	6	B	1.8
-125-B40-SP15-08	▲	▲	125	129	40	63	8	8	B	3.3
-160-B40-SP15-10	▲	▲	160	164	40	63	8	10	B	5.4
-200-C60-SP15-12	▲	▲	200	204	60	63	8	12	C	7.9
-250-C60-SP15-16	▲	▲	250	253	60	63	8	16	C	13.6
-315-D60-SP15-20	▲	▲	315	318	60	70	8	20	D	23.1

▲ Stock △ Order

■ Spare Parts

Diameter $\varnothing D$	Insert	Knife-holder	Block	Clamping	knife-holder screw	Wrench
Ø80-Ø100						
Ø125-Ø315	SPKN1203	LSP12R/L	W04R/L	WM8x22		
Ø80-Ø315	SPKN1504	LSP15R/L	W04R/L	WM8x22		

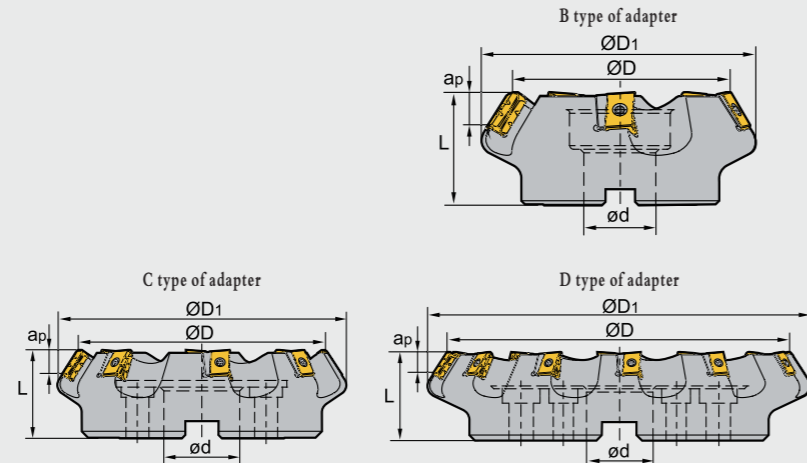
MILLING TOOLS

Face Milling tool

Kr:75°



FME04 P M K



Type	Stock	R	L	ØD	ØD ₁	ød	L	a _{pmax}	Tooth Z	Applicable Insert	Adapter	Weight (kg)
-125-B40-LN15-06	▲	△		125	137	40	63	8	6	LNKT1506EN-ZR	B	3.8
-160-B40-LN15-08	▲	△		160	170	40	63	8	8		C	6.6
-200-C60-LN15-10	▲	△		200	208	60	70	8	10		C	9.6
-250-C60-LN15-12	▲	△		250	257	60	70	8	12		C	13.4
-315-D60-LN15-16	▲	△		315	328	60	80	8	16		D	25.2

▲ Stock △ Order

■ Spare Parts

Diameter ØD	Insert	Shim	shim screw	insert screw	Wrench	
Ø125-Ø315	LNKT1506	LLN15-ZR	L60M3×8	L60M4×15	T15T	T08

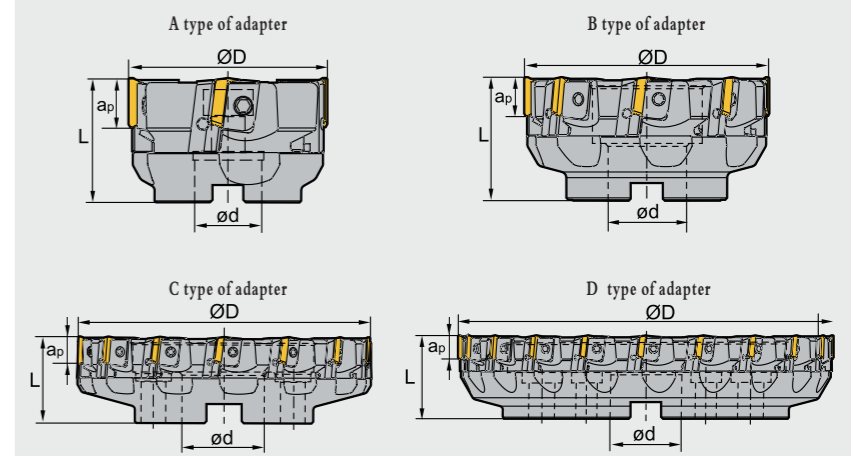
MILLING TOOLS

Face Milling tool

Kr:90°



FMP01 P M K



■ Type of Milling Tools

Type	Stock	R	L	Dimension (mm)				Tooth Z	Adapter	Weight (kg)
				ØD	ød	L	a _{pmax}			
FMP01										
-080-A27-TP22-04	▲	△		80	27	50	18	4	A	1.2
-100-B32-TP22-06	▲	△		100	32	50	18	6	B	1.7
-125-B40-TP22-08	▲	△		125	40	63	18	8	B	3.2
-160-B40-TP22-10	▲	△		160	40	63	18	10	B	5.1
-200-C60-TP22-12	▲	△		200	60	63	18	12	C	7.4
-250-C60-TP22-16	▲	△		250	60	63	18	16	C	12.3
-315-D60-TP22-20	▲	△		315	60	70	18	20	D	21.9

▲ Stock △ Order

■ Spare Parts

Diameter ØD	Applicable Insert	Knife-holder	Block	Clamping	knife-holder screw	Wrench
Ø80 Ø100	TPKN2204	LTP4R1/L1	W04R/L	WM8×17	LOM5×15.1	S3 S4
Ø125 ~ Ø315		LTP4R/L		WM8×22		

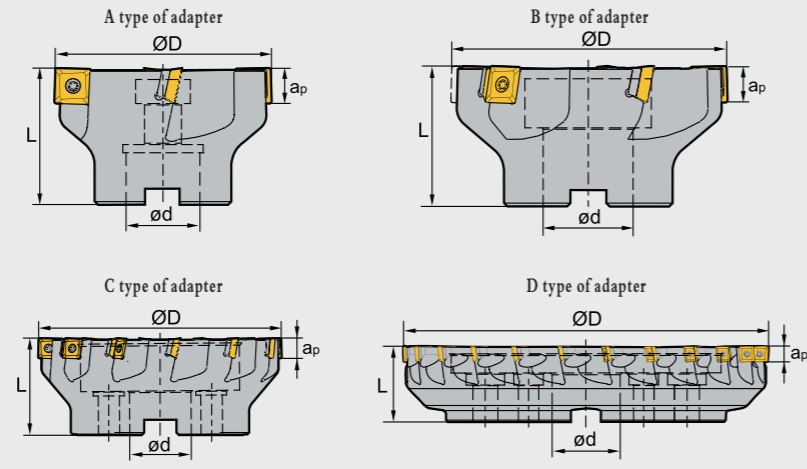
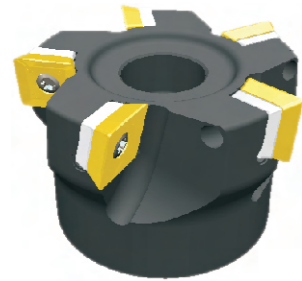
MILLING TOOLS

Face Milling tool

Kr:90°



FMP02 P M K



Type of Milling Tools

Type	Stock	Dimension (mm)				Tooth Z	Adapter	Weight (kg)
		ØD	ød	L	apmax			
FMP02 -050-A22-SE09-05	▲	50	22	40	6.7	5	A	0.3
-063-A22-SE09-06	▲	63	22	40	6.7	6	A	0.5
-080-A27-SE09-08	▲	80	27	50	6.7	8	A	0.9
-100-B32-SE09-08	▲	100	32	50	6.7	8	B	1.7
-100-B32-SE09-10	△	100	32	50	6.7	10	B	1.7
-125-B40-SE09-12	△	125	40	63	6.7	12	B	2.6

▲ Stock △ Order

MILLING TOOLS

Type of Milling Tools

Type	Stock	Dimension (mm)				Tooth Z	Adapter	Weight (kg)
		ØD	ød	L	apmax			
FMP02 -050-A22-SE12-03	▲	50	22	40	10.8	3	A	0.3
-063-A22-SE12-04	▲	63	22	40	10.8	4	A	0.4
-080-A27-SE12-04	▲	80	27	50	10.8	4	A	0.9
-100-B32-SE12-05	▲	100	32	50	10.8	5	B	1.2
-125-B40-SE12-06	▲	125	40	63	10.8	6	B	3.1
-160-C40-SE12-08	▲	160	40	63	10.8	8	C	4.1
-250-C60-SE12-12	▲	250	60	63	10.8	12	C	11.1
-050-A22-SE12-04	▲	50	22	40	10.8	4	A	0.3
-063-A22-SE12-05	▲	63	22	40	10.8	5	A	0.4
-080-A27-SE12-06	▲	80	27	50	10.8	6	A	0.8
-100-B32-SE12-07	▲	100	32	50	10.8	7	B	1.2
-125-B40-SE12-08	▲	125	40	63	10.8	8	B	3.0
-160-C40-SE12-12	▲	160	40	63	10.8	12	C	3.9
-050-A22-SE12-05	▲	50	22	40	10.8	5	A	0.2
-063-A22-SE12-06	▲	63	22	40	10.8	6	A	0.4
-080-A27-SE12-08	▲	80	27	50	10.8	8	A	0.8
-100-B32-SE12-10	▲	100	32	50	10.8	10	B	1.2
-125-B40-SE12-12	▲	125	40	63	10.8	12	B	2.9
-200-C60-SE12-16	▲	200	60	63	10.8	16	C	6.1
-250-C60-SE12-18	▲	250	60	63	10.8	18	C	10.9
-315-D60-SE12-24	▲	315	60	63	10.8	24	D	21.6

▲ Stock △ Order

Spare Parts

Diameter ØD	Insert	Shim	insert screw	shim screw	Wrench	Wrench
Ø50 ~ Ø125	SEET09T3	--	L60M3×8	--	T10T	--
Ø50	SEET1203	--	L60M3.5×10	--	T15T	--
Ø63 ~ Ø315		S12BSX	L60M3.5×10	SM5×7XA		S4

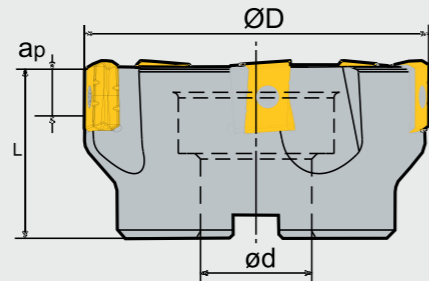
MILLING TOOLS

Face Milling tool

Kr:90°



FMP03 P M K



Type	Stock		ØD	ød	L	apmax	Tooth Z	Applicable Insert	Adapter	Weight (kg)	
	R	L									
FMP03	-125-B40-LN15-06	▲	△	125	40	63	8	6	LNKT1506EN-ZR	B	3.2
	-160-C40-LN15-08	▲	△	160	40	63	8	8		C	5.1
	-200-C60-LN15-10	▲	△	200	60	70	8	10		C	7.5
	-250-C60-LN15-12	▲	△	250	60	70	8	12		C	12.2
	-315-D60-LN15-16	▲	△	315	60	80	8	16		D	23.7
	-125-B40-LN20-06	▲	△	125	40	63	12	6	LNKT2007DN-ZR	B	3.3
	-160-C40-LN20-08	▲	△	160	40	63	12	8		C	5.3
	-200-C60-LN20-10	▲	△	200	60	70	12	10		C	8.8
	-250-C60-LN20-12	▲	△	250	60	70	12	12		C	14.0
	-315-D60-LN20-15	▲	△	315	60	80	12	15	D	23.9	
FMP03	-125-B40-LN25-05	▲	△	125	40	63	15	5	LNKT2510-ZR	B	3.3
	-160-C40-LN25-06	▲	△	160	40	63	15	6		C	5.1
	-200-C60-LN25-8	▲	△	200	60	70	15	8		C	8.9
	-250-C60-LN25-10	▲	△	250	60	70	15	10		C	12.0
	-315-D60-LN25-12	▲	△	315	60	80	15	12		D	21.9

▲ Stock △ Order

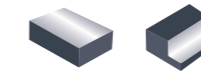
Spare Parts

Diameter ØD	Insert	Shim	shim screw	insert screw	Wrench	
Ø125~Ø315						
	LNKT1506	LLN15-ZR	L60M3×8	L60M4×15	T15T	T08
	LNKT2007	LLN20R-ZR	L60M3×8	L60M4×15	T15T	T08
	LNKT2510	LLN25R-ZR	L60M3.5×10	L60M5×17	T20T	T15

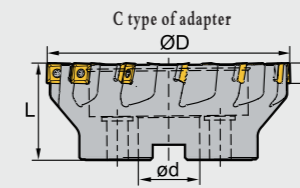
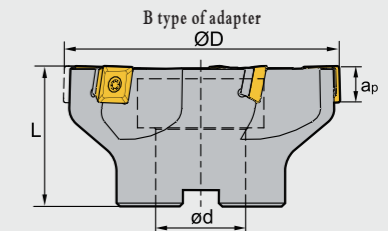
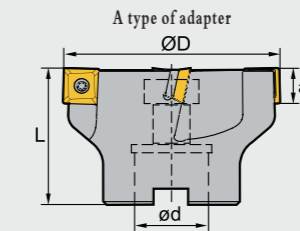
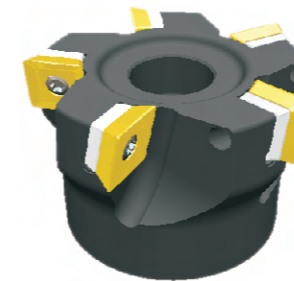
MILLING TOOLS

Face Milling tool

Kr:90°



FMP04 P M K



Type of Milling Tools

Type	Stock	Dimension (mm)				Tooth Z	Adapter	Weight (kg)	
		ØD	ød	L	apmax				
FMP04	-050-A22-S012-03	▲	50	22	40	10	3	A	0.3
	-063-A22-S012-04	▲	63	22	40	10	4	A	0.4
	-080-A27-S012-04	▲	80	27	50	10	4	A	0.9
	-100-B32-S012-05	▲	100	32	50	10	5	B	1.2
	-125-B40-S012-06	▲	125	40	63	10	6	B	3.1
	-160-C40-S012-08	▲	160	40	63	10	8	C	4.1
	-200-C60-S012-10	▲	200	60	63	10	10	C	6.1
	-250-C60-S012-12	▲	250	60	63	10	12	C	10.9
	-050-A22-S012-04	▲	50	22	40	10	4	A	0.3
	-063-A22-S012-05	▲	63	22	40	10	5	A	0.4
	-080-A27-S012-06	▲	80	27	50	10	6	A	0.9
	-100-B32-S012-07	▲	100	32	50	10	7	B	1.2
	-125-B40-S012-08	▲	125	40	63	10	8	B	3.1
	-160-C40-S012-12	▲	160	40	63	10	12	C	4.1
	-200-C60-S012-16	▲	200	60	63	10	16	C	6.1
	-250-C60-S012-18	▲	250	60	63	10	18	C	10.9

▲ Stock △ Order

Spare Parts

Diameter ØD	Insert	Shim	insert screw	shim screw	Wrench	Wrench
Ø50						
Ø63 ~ Ø250	SOET12T308PEER-JL SOMT12T308PEER-JM/JH/FT SOGT12T308PEFR-JP	S12BSX	L60M3.5×10	SM5×7XA	T15T	S4

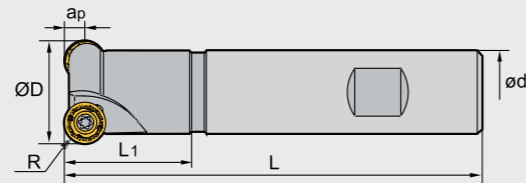
Note: The insert is Mitsubishi brand

MILLING TOOLS

Face Milling tool



FMR01 P M K



■ Type of Milling Tools

Type	Stock	Dimension (mm)						Tooth Z	Weight (kg)
		ØD	ød	L	L1	R	apmax		
FMR01 -025-XP20-RC10-02	▲	25	20	100	30	5	5	2	0.2
-032-XP25-RC10-02	▲	32	25	120	35	5	5	2	0.5
-040-XP32-RC12-03	▲	40	32	120	40	6	6	3	0.7
-050-XP32-RC12-03	▲	50	32	120	40	6	6	3	0.8

▲ Stock △ Order

■ Spare Parts

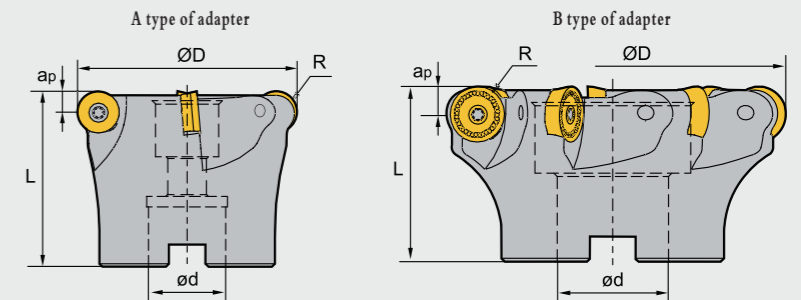
Diameter ØD	Applicable Insert	insert screw	Wrench
Ø25 -Ø32	RCKT1073	L60M3.5×10	T15
Ø40 -Ø50	RCKT1204	L60M4×10	

MILLING TOOLS

Face Milling tool



FMR02 P M K



■ Type of Milling Tools

Type	Stock	Dimension (mm)					Tooth Z	Adapter	Weight (kg)
		ØD	ød	L	R	apmax			
FMR02 063-A22-RC12-04	▲	63	22	50	6	6	4	A	0.7
080-B27-RC16-05	▲	80	27	50	8	8	5	B	0.7
100-B32-RC16-06	▲	100	32	63	8	8	6	B	1.2
125-B40-RC20-07	△	125	40	63	10	10	7	B	2.2
160-B40-RC20-08	△	160	40	63	10	10	8	B	4.2

▲ Stock △ Order

■ Spare Parts

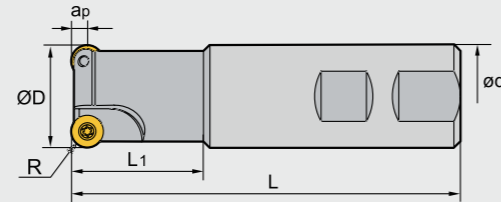
Diameter ØD	Applicable Insert	insert screw	Wrench	
Ø63	RCKT1204	L60M3.5×10	T15	--
Ø80 -Ø100	RCKT1606	L60M5×13	-	T20T
Ø125 -Ø160	RCKT2006	L43M6×16	-	T20T

MILLING TOOLS

Face Milling tool



FMR03 P M K












■ Type of Milling Tools

Type	Stock	Dimension (mm)							Tooth Z	Weight (kg)
		ØD	ød	L	L1	R	apmax			
FMR03 -016-XP16-RD08-02	▲	16	16	100	25	4	4	2	0.1	
-025-XP25-RD08-02	▲	25	25	100	30	4	4	2	0.3	
-032-XP32-RD10-02	▲	32	32	120	40	5	5	2	0.7	
-040-XP32-RD12-03	▲	40	32	120	40	6	6	3	0.7	
-050-XP32-RD12-04	▲	50	32	120	40	6	6	4	0.8	

▲ Stock △ Order

■ Spare Parts

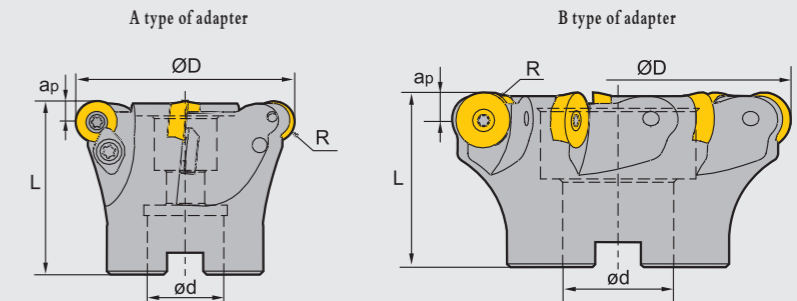
Diameter ØD	Applicable Insert	insert screw	Wrench
Ø16-Ø25	 RDKW0803	 L60M3×8	 T10
Ø32	 RDKW10T3	 L60M3.5×10	 T15
Ø40-Ø50	 RDKW1204	 L60M4×10	 T15

MILLING TOOLS

Face Milling tool



FMR04 P M K














■ Type of Milling Tools

Type	Stock	Dimension (mm)					Tooth Z	Adapter	Weight (kg)
		ØD	ød	L	R	apmax			
FMR04 050-A22-RD12-03	▲	50	22	40	6	6	3	A	0.3
063-A22-RD12-04	▲	63	22	50	6	6	4	A	0.5
080-B27-RD16-05	▲	80	27	50	8	8	5	B	1.2
100-B32-RD16-06	▲	100	32	50	8	8	6	B	1.0
125-B40-RD20-06	▲	125	40	63	10	10	6	B	1.9
160-B40-RD20-07	▲	160	40	63	10	10	7	B	3.7

▲ Stock △ Order

■ Spare Parts

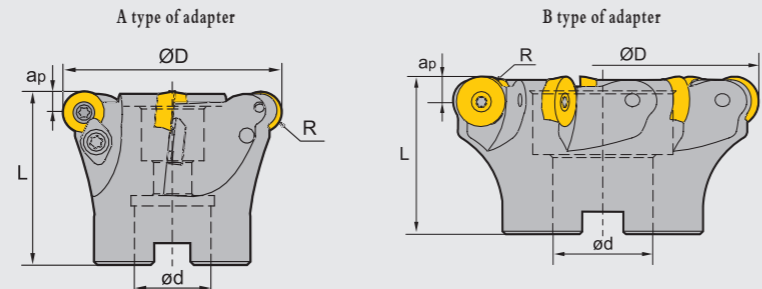
Diameter ØD	Applicable Insert	insert screw	Clamp	Block screw	Wrench	
Ø50-Ø63	 RDKW1204	 L60M3.5×10	 WD-204	 L60M4×10	 T15	-
Ø80-Ø100	 RDKW1605	 L60M5×13	-	-	-	 T20T
Ø125-Ø160	 RDKW2006	 L43M6×16	-	-	-	 T25T

MILLING TOOLS

Face Milling tool



FMR04 P M K



Type of Milling Tools

Type	Stock	Dimension (mm)					Tooth Z	Adapter	Weight (kg)	
		ØD	ød	L	R	apmax				
FMR04	-050-A22-RP10-04	▲	50	22	40	5	5	4	A	
	-063-A22-RP10-04	▲	63	22	50	5	5	4	A	
	-063-A22-RP10-05	▲	63	22	50	5	5	5	A	
	-080-A27-RP10-06	▲	80	27	50	5	5	6	A	
	-100-B32-RP10-06	▲	100	32	50	5	5	6	B	
	-050-A25.4-RP10-04	▲	50	25.4	40	5	5	4	A	
	-063-A25.4-RP10-04	▲	63	25.4	50	5	5	4	A	
	-063-A25.4-RP10-05	▲	63	25.4	50	5	5	5	A	
	-050-A22-RP12-04	▲	50	22	40	6	6	4	A	
	-063-A22-RP12-04	▲	63	22	50	6	6	4	A	
	-063-A22-RP12-05	▲	63	22	50	6	6	5	A	
	-080-A27-RP12-06	▲	80	27	50	6	6	6	A	
	-100-B32-RP12-06	▲	100	32	50	6	6	6	B	
	-125-B32-RP12-06	▲	125	32	63	6	6	6	B	
	-160-B40-RP12-09	▲	160	40	63	6	6	9	B	
	-200-C60-RP12-09	▲	200	60	63	6	6	9	C	
-050-A25.4-RP12-04	▲	50	25.4	40	6	6	4	A		
-063-A25.4-RP12-04	▲	63	25.4	50	6	6	4	A		
-063-A25.4-RP12-05	▲	63	25.4	50	6	6	5	A		
-080-A25.4-RP12-05	▲	80	25.4	50	6	6	5	A		

▲ Stock △ Order

Spare Parts

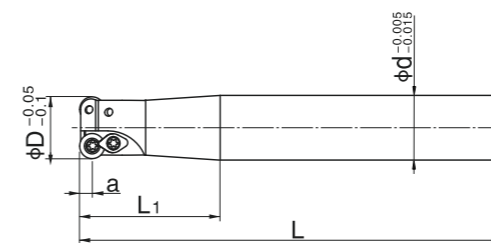
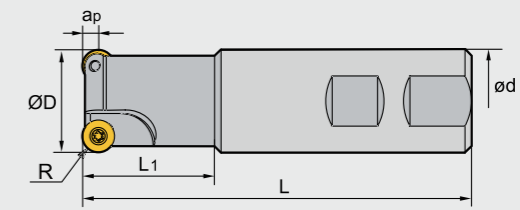
Diameter ØD	Applicable Insert	insert screw	Block	Block screw	Wrench
Ø50-Ø100	RPMW1003MO	L60M3.5 × 10	WD-202	L60M4 × 10	T15
	RPMT10T3MOE				
Ø50-Ø200	RPMW/T1204MO	L60M4 × 10	WD-204	L60M4 × 10	T15

MILLING TOOLS

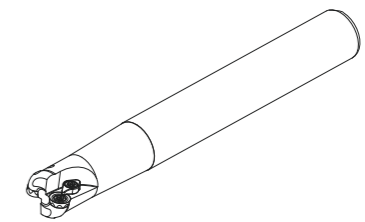
Face Milling tool



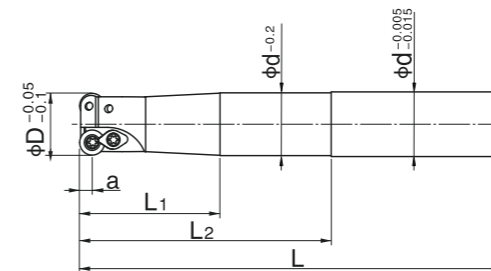
FMR05 P M K N



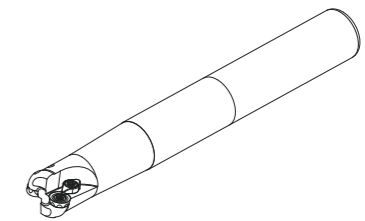
A type



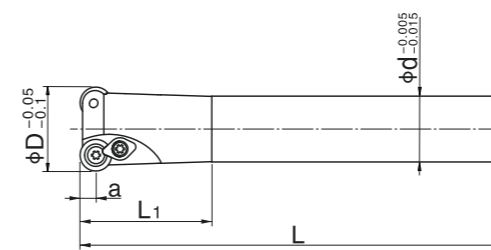
A type



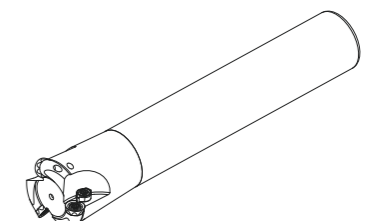
B type



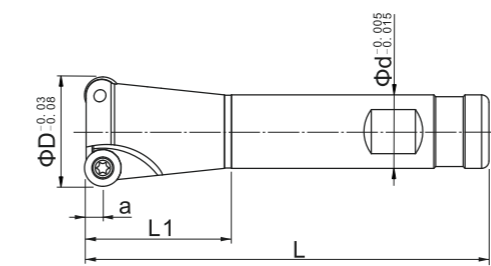
B type



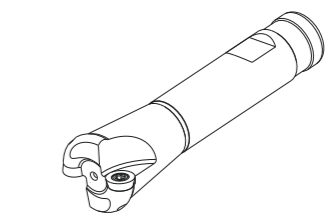
C type



C type



D type



D type

MILLING TOOLS

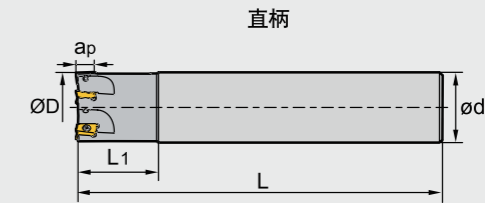
Type	Stock	Dimension (mm)						Applicable Insert	Tooth Z	Tyre	Insert Screw	Screw for clamp	Clamp	Wrench				
		ØD	ød	L	L1	L2	ap											
FMR05																		
-012-G12-RP08-01-120	▲	12	12	120	40		4	RPMT08T2MOE	1	A	L60M3×8	L60M3×8	WD-202	T08				
-013-G12-RP08-01-120	▲	13	12	120	40		4	RPMT08T2MOE	1	A								
-016-G16-RP08-02-120	▲	16	16	120	40		4	RPMT08T2MOE	2	A								
-016-G16-RP08-02-150	▲	16	16	150	40		4		2	A								
-016-G15-RP08-02-150	▲	16	15	150	40		4		2	A								
-016-G16-RP08-02-200	▲	16	16	200	40	100	4		2	B								
-017-G16-RP08-02-150	▲	17	16	150	40		4		2	A								
-020-G20-RP08-02-150	▲	20	20	150	50		4		2	A								
-020-G20-RP08-02-200	▲	20	20	200	50	100	4		2	B								
-021-G20-RP08-02-150	▲	21	20	150	50		4		2	A								
-020-G20-RP10-02-150	▲	20	20	150	50		5	RPMT10T3MOE	2	A	L60M4×10	WD-202	T15					
-020-G20-RP10-02-200	▲	20	20	200	50	100	5		2	B								
-021-G20-RP10-02-150	▲	21	20	150	50		5		2	A								
-025-G25-RP10-02-150	▲	25	25	150	50		5		2	A								
-025-G20-RP10-02-150	▲	25	20	150	50		5		2	C								
-025-G24-RP10-02-150	▲	25	24	150	50		5		2	A								
-025-G25-RP10-02-200	▲	25	25	200	75		5		2	A								
-025-G25-RP10-02-250	▲	25	25	250	60	115	5		2	B								
-025-G20-RP10-02-200	▲	25	20	200	50		5		2	C								
-025-G24-RP10-02-200	▲	25	24	200	50		5		2	A								
-030-XP20-RP10-02-110	▲	30	20	110	40		5		RPMW1003MO	2				D	L60M3.5×10		T15	
-030-XP19.05-RP10-02-110	▲	30	19.05	110	40		5			RPMT10T3MOE				2				D
-030-G25-RP10-02-150	▲	30	25	150	50		5			2				C				
-030-G25-RP10-02-200	▲	30	25	200	60		5			2				C				
-030-G25-RP10-02-250	▲	30	25	250	60		5			2				C				
-035-G32-RP10-02-160	▲	35	32	160	50		5			2				C				
-035-G32-RP10-02-200	▲	35	32	200	50		5			2				C				
-035-G32-RP10-02-250	▲	35	32	250	60		5			2				C				
-035-G32-RP10-03-300	▲	35	32	300	60		5			3				C				
-035-G32-RP10-03-350	▲	35	32	350	60		5			3				C				
-040-G32-RP10-03-160	▲	40	32	160	50		5	3	C									
-040-G32-RP10-04-200	▲	40	32	200	50		5	4	C									
-032-G25-RP12-02-160	▲	32	25	160	50		6	RPMW/T1204MO	2	C	L60M4×10	L60M4×10	WD-204	T15				
-032-G32-RP12-02-160	▲	32	32	160	50		6		2	A								
-032-G25-RP12-02-200	▲	32	25	200	60		6		2	C								
-032-G32-RP12-02-200	▲	32	32	200	80		6		2	A								
-035-G32-RP12-03-160	▲	35	32	160	50		6		3	C								
-035-G32-RP12-03-200	▲	35	32	200	60		6		3	C								
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-035-G32-RP12-03-300	▲	35	32	300	60		6		3	C								
-035-G32-RP12-03-350	▲	35	32	350	60		6		3	C								
-040-G32-RP12-03-160	▲	40	32	160	50		6		3	C								
-040-G32-RP12-03-200	▲	40	32	200	50		6		3	C								
-040-G32-RP12-03-250	▲	40	32	250	60		6		3	C								
-050-G32-RP12-03-200	▲	50	32	200	60		6		3	C								

MILLING TOOLS

Square-Should Milling Tools **Kr:90°**



EMP01 P M K N



Type of Milling Tools

Type	Stock	Dimension (mm)					Tooth Z	Weight (kg)	
		ØD	ød	L	L1	apmax			
EMP01 straight shank	012-G16-AP11-01	▲	12	16	85	25	10.5	1	0.1
	016-G16-AP11-02	▲	16	16	90	25	10.5	2	0.1
	020-G20-AP11-02	▲	20	20	100	30	10.5	2	0.2
	025-G25-AP11-03	▲	25	25	115	35	10.5	3	0.4
	032-G32-AP11-04	▲	32	32	125	40	10.5	4	0.7
	025-G25-AP16-02	▲	25	25	115	35	15.5	2	0.4
	032-G32-AP16-03	▲	32	32	125	40	15.5	3	0.7
	040-G32-AP16-04	▲	40	32	130	42	15.5	4	0.8
	050-G32-AP16-05	▲	50	32	135	45	15.5	5	1.0
	063-G32-AP16-06	▲	63	32	135	45	15.5	6	1.4

▲ Stock △ Order

Spare Parts

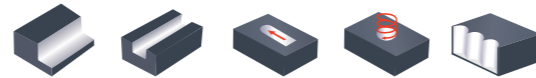
Diameter ØD	Insert	Screw	Wrench
Ø12-Ø32	AP K T11T3	L60M2.5×6.5	T08
Ø25-Ø63	AP K T1604	L60M4×10	T15

Note: The insert is ZCCCT brand

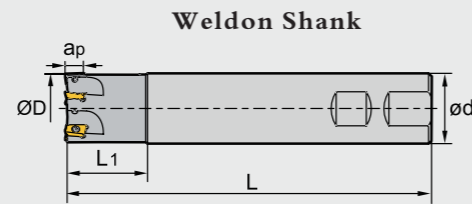
MILLING TOOLS

Square-Should Milling Tools

Kr:90°



EMP01 P M K N









Type of Milling Tools

Type	Stock	Dimension (mm)					Tooth Z	Weight (kg)	
		ØD	ød	L	L1	apmax			
EMP01 Weldon Shank	012-XP16-AP11-01	▲	12	16	85	25	10.5	1	0.1
	016-XP16-AP11-02	▲	16	16	90	25	10.5	2	0.1
	020-XP20-AP11-02	▲	20	20	100	30	10.5	2	0.2
	025-XP25-AP11-03	▲	25	25	115	35	10.5	3	0.4
	032-XP32-AP11-04	▲	32	32	125	40	10.5	4	0.7
	025-XP25-AP16-02	▲	25	25	115	35	15.5	2	0.4
	032-XP32-AP16-03	▲	32	32	125	40	15.5	3	0.7
	040-XP32-AP16-04	▲	40	32	130	42	15.5	4	0.8
	050-XP32-AP16-05	▲	50	32	135	45	15.5	5	1.0
	063-XP32-AP16-06	▲	63	32	135	45	15.5	6	1.4

▲ Stock △ Order

Spare Parts

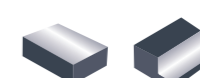
Diameter ØD	Insert	Screw	Wrench
Ø12-Ø32	 AP K T11T3	 L60M2.5x6.5	 T08
Ø25-Ø63	 AP K T1604	 L60M4x10	 T15

Note: The insert is ZCCCT brand

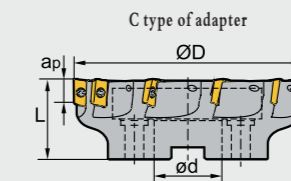
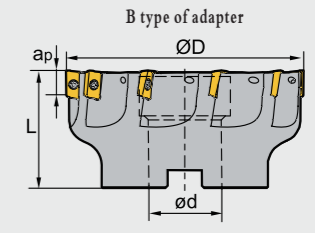
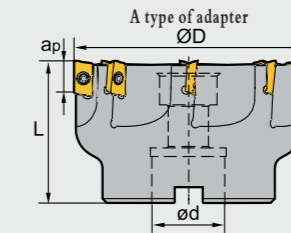
MILLING TOOLS

Square-Should Milling Tools

Kr:90°



EMP02 P M K N









Type of Milling Tools

Type	Stock	Dimension (mm)				Tooth Z	Adapter	Weight (kg)	
		ØD	ød	L	apmax				
EMP02	050-A22-AP11-06	▲	50	22	40	11	6	A	0.3
	063-A22-AP11-08	▲	63	22	40	11	8	A	0.6
	080-A27-AP11-08	▲	80	27	50	11	8	A	1.2
	100-B32-AP11-10	▲	100	32	50	11	10	B	1.7
	050-A22-AP16-05	▲	50	22	40	15.5	5	A	0.3
	063-A22-AP16-06	▲	63	22	40	15.5	6	A	0.5
	080-A27-AP16-07	▲	80	27	50	15.5	7	A	1.1
	100-B32-AP16-08	▲	100	32	50	15.5	8	B	1.6
	125-B40-AP16-10	▲	125	40	63	15.5	10	B	3.2
	160-B40-AP16-10	▲	160	40	63	15.5	10	B	6.3
	200-C60-AP16-12	▲	200	60	63	15.5	12	C	8.1
	250-C60-AP16-12	▲	250	60	63	15.5	12	C	11.2

▲ Stock △ Order

Spare Parts

Diameter ØD	Insert	Screw	Wrench
Ø50-Ø100	 APK T11T3	 L60M2.5x6.5	 T08T
Ø50-Ø250	 APKT1604	 L60M4x10	 T15T

Note: The insert is ZCCCT brand

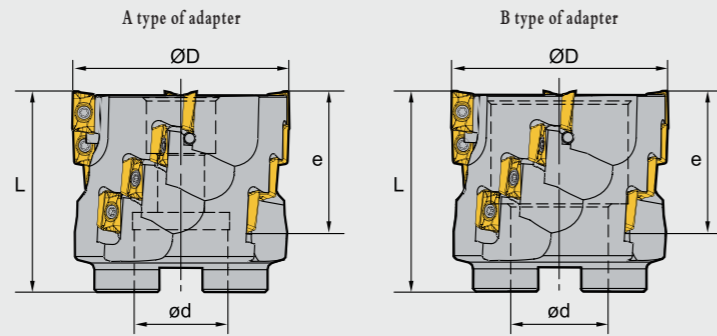
MILLING TOOLS

Square-Should Milling Tools

Kr:90°



EMP03 P M K N



Type of Milling Tools

Type	Stock	Dimension (mm)				Slot Z	Insert Quantity	Adapter	Weight (kg)
		ØD	ød	L	e				
EMP03	▲	50	22	58	39	4	16	A	0.5
	▲	63	27	58	39	4	16	A	0.9
	▲	80	32	63	39	5	20	B	1.3
	▲	100	40	63	39	6	24	B	2.0

▲ Stock △ Order

Spare Parts

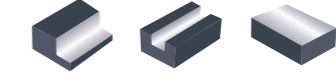
Diameter ØD	Applicable Insert	Screw	Wrench
Ø50-Ø100			
	APKT11T3	L60M2.5×6.5	T08T

Note: The insert is ZCCCT brand

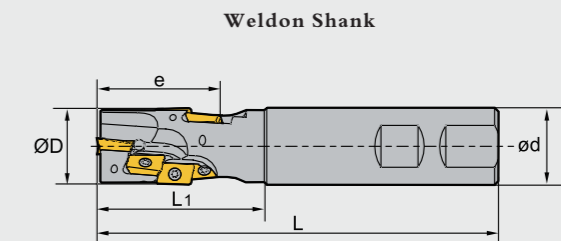
MILLING TOOLS

Square-Should Milling Tools

Kr:90°



EMP04 P M K N



Type of Milling Tools

Type	Stock	Dimension (mm)					Slot Z	Insert Quantity	Weight (kg)
		ØD	ød	L	L1	e			
EMP04	▲	20	20	120	45	29.4	1	3	0.3
	▲	25	25	130	55	38.9	2	8	0.4
	▲	32	32	140	65	48.5	2	10	0.7
	▲	40	40	150	75	58.0	2	14	1.3

▲ Stock △ Order

Spare Parts

Diameter ØD	Applicable Insert	Screw	Wrench
Ø20-Ø40			
	APKT11T3	L60M2.5×6.5	T08T

Note: The insert is ZCCCT brand

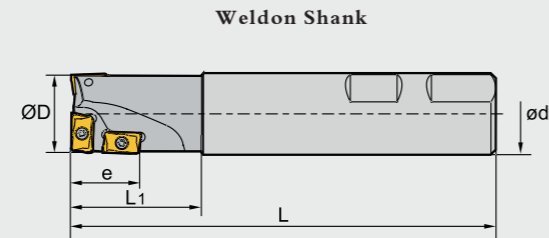
MILLING TOOLS

Square-Should Milling Tools

Kr:90°



EMP05 P M K









Type of Milling Tools

Type	Stock	Dimension (mm)					Insert Quantity		Weight (kg)	
		R	ØD	ød	L	L ₁	e	APMT11		APMT16
EMP05	▲	-025-XP25	25	25	130	40	20	3	—	0.5
	▲	-032-XP32	32	32	140	50	30	—	3	0.8
	▲	-040-XP32	40	32	150	60	40	—	4	1.0

▲ Stock △ Order

Spare Parts

Diameter ØD	Insert	Screw	Wrench
Ø25-Ø40	 APMT1135	 L60M2.5×6.5	 T08
	 APMT1604	 L60M4×10	 T15

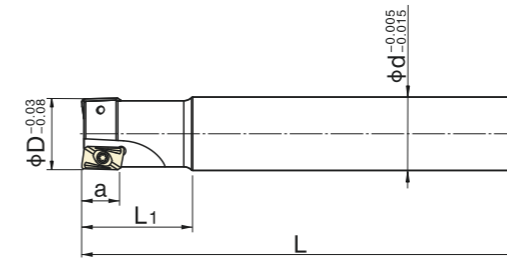
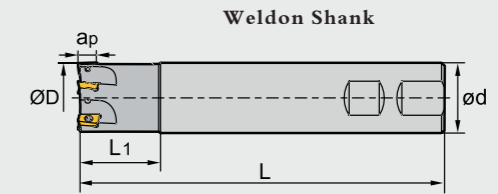
MILLING TOOLS

Square-Should Milling Tools

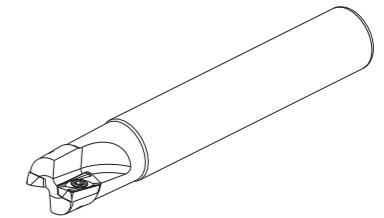
Kr:90°



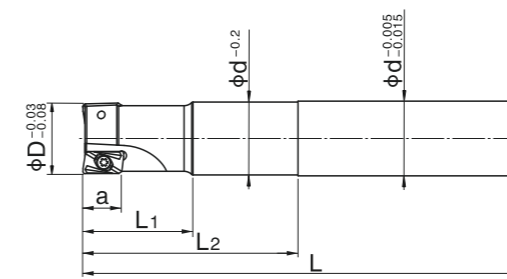
EMP06 P M K N



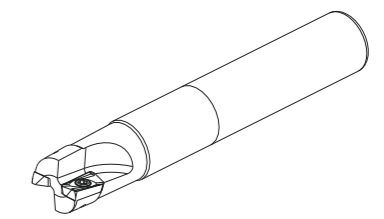
A type



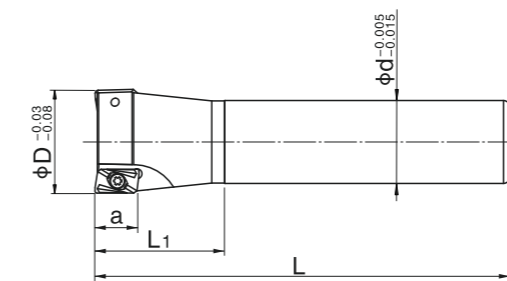
A type



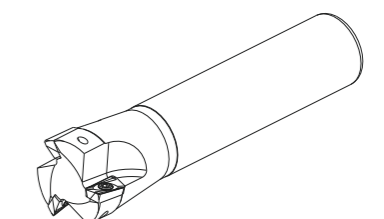
B type



B type



C type



C type

MILLING TOOLS

Type of Milling Tools

Type	Stock	Dimension (mm)						Applicable Insert	Tooth Z	Type	Screw for clamp	Wrench		
		ØD	ød	L	L1	L2	ap							
EMP06	▲	12	12	100	30		10	APMT1135PDER	1	A	L60M2.5x5	T08		
	▲	12	12	120	30		10		1	A				
	▲	12	12	130	36		10		1	A				
	▲	12	12	150	36		10		1	A				
	▲	13	12	120	40		10		1	A				
	▲	16	16	120	40		10	APMT1135PDER	2	A	L60M2.5x6	T08		
	▲	16	16	160	40		10		2	A				
	▲	16	16	180	40	90	10		2	B				
	▲	16	16	200	40	100	10		2	B				
	▲	17	16	160	40		10		2	A				
▲	17	16	200	40		10	2		A					
▲	20	20	120	40		10	2		A					
▲	20	20	150	50		10	2		A					
▲	20	20	180	50	90	10	2		B					
▲	20	20	200	50	100	10	2		B					
▲	21	20	160	40		10	APMT1135PDER	2	A	L60M2.5x6	T08			
▲	21	20	200	50		10		2	A					
▲	25	25	150	50		10		2	A					
▲	25	25	200	75		10		2	A					
▲	30	25	150	50		10		2	C					
▲	25	25	150	50		15		APMT1604 PDER	2			A	L60M4x10	T15
▲	25	24	150	50		15			2			A		
▲	25	25	200	75		15			2			A		
▲	25	24	250	50		15			2			A		
▲	25	25	250	50	115	15			2			B		
▲	25	24	250	50		15	2		A					
▲	26	25	150	50		15	2		A					
▲	26	25	200	50		15	2		A					
▲	32	25	150	50		15	2		C					
▲	32	25	200	50		15	2		C					
▲	32	32	200	80		15	2	A						
▲	35	32	160	50		15	3	C						
▲	35	32	200	50		15	3	C						
▲	35	32	250	60		15	3	C						
▲	35	32	300	60		15	3	C						
▲	35	32	350	60		15	3	C						
▲	40	32	160	50		15	3	C						
▲	40	32	200	50		15	3	C						
▲	40	32	250	60		15	3	C						

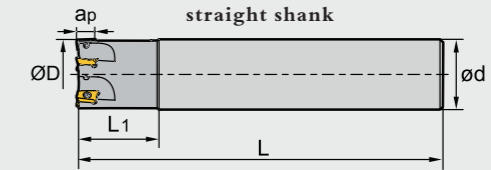
MILLING TOOLS

Square-Should Milling Tools

Kr:90°



EMP07 P M K N



Type of Milling Tools

Type	Stock	Dimension (mm)					Tooth Z	Weight (kg)
		ØD	ød	L	L1	apmax		
EMP07 straight shank	▲	25	25	120	40	15	2	0.4
	▲	25	25	165	40	15	2	0.55
	▲	25	25	200	40	15	2	0.67
	▲	32	25	200	40	15	2	1.14
	▲	32	25	250	40	15	2	1.43
	▲	32	32	140	40	15	2	0.81
	▲	32	32	200	40	15	2	1.16
	▲	32	32	250	40	15	2	1.45
	▲	32	32	300	40	15	2	1.74
	▲	35	32	200	40	15	3	1.4
	▲	35	32	250	40	15	3	1.67
	▲	35	32	300	40	15	3	2.0
	▲	40	32	140	40	15	3	0.88
	▲	40	32	200	40	15	3	1.42
	▲	40	32	250	40	15	3	1.78
	▲	40	32	300	40	15	3	2.1
▲	50	32	140	40	15	3	1.0	

▲ Stock △ Order

Spare Parts

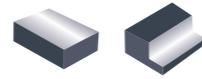
Diameter ØD	Insert	Screw	Wrench
Ø25-Ø50	LDEF150408FR-27P	L60M4x10	T15
	LDMT1504PDSR-29	L60M4x10	T15
	LDFW1504PDSR	L60M4x10	T15
	LDFT1504PDSR-33	L60M4x10	T15

Note: The insert is ZCCCT brand

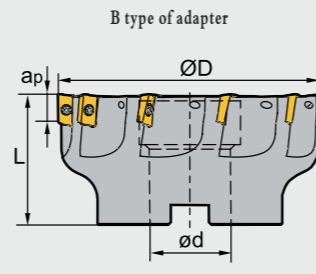
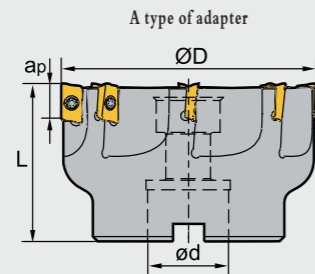
MILLING TOOLS

Square-Should Milling Tools

Kr:90°



EMP08 P M K N





Type of Milling Tools

Type	Stock	Dimension (mm)				Tooth Z	Adapter	Weight (kg)
		ØD	ød	L	apmax			
EMP08 -050-A22-LD15-4	▲	50	22	40	15	4	A	0.4
-063-A22-LD15-5	▲	63	22	40	15	5	A	0.6
-080-A27-LD15-6	▲	80	27	50	15	6	A	0.85
-100-B32-LD15-7	▲	100	32	50	15	7	B	1.2
-125-B40-LD15-8	▲	125	40	63	15	8	B	2.9
-160-B40-LD15-9	▲	160	40	63	15	9	B	4.9

▲ Stock △ Order

Spare Parts

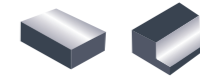
Diameter ØD	Insert	Screw	Wrench
			
Ø50-Ø160	LDEF150408FR-27P	L60M4×10	T15T
	LDMT1504PDSR-29	L60M4×10	T15T
	LDFW1504PDSR	L60M4×10	T15T
	LDFT1504PDSR-33	L60M4×10	T15T

Note: The insert is Ceratizit brand

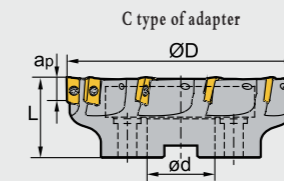
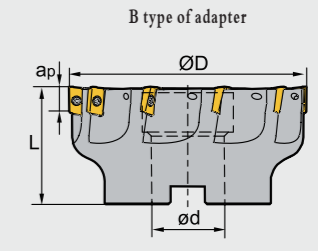
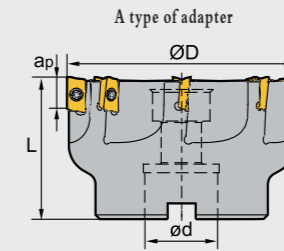
MILLING TOOLS

Square-Should Milling Tools

Kr:90°



EMP09 P M K N





Type of Milling Tools

Type	Stock	Dimension (mm)				Tooth Z	Adapter	Weight (kg)
		ØD	ød	L	apmax			
EMP09 -050-A22-AP17-5	▲	50	22	40	15	5	A	0.4
-063-A22-AP17-6	▲	63	22	40	15	6	A	0.6
-080-A27-AP17-7	▲	80	27	50	15	7	A	1.2
-100-B32-AP17-8	▲	100	32	50	15	8	B	1.6
-125-B40-AP17-9	▲	125	40	63	15	9	B	3.2
-160-B40-AP17-10	▲	160	40	63	15	10	B	6.3
-200-C60-AP17-12	▲	200	60	63	15	12	C	8.1

▲ Stock △ Order

Spare Parts

Diameter ØD	Insert	Screw	Wrench
			
Ø50-Ø200	APKT1705PER-M/EM/AL/EL APKT1705□□R-EM/GM	L60M4×10	T15T

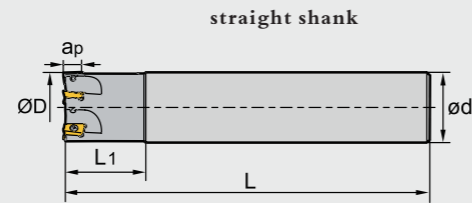
Note: The insert is Taegutec brand

MILLING TOOLS

Square-Should Milling Tools **Kr:90°**



EMP11 P M K N



■ Type of Milling Tools

Type	Stock	Dimension (mm)					Tooth Z	Weight (kg)	
		$\varnothing D$	$\varnothing d$	L	L_1	a_{pmax}			
EMP11 straight shank	012-G16-AZ11-01	▲	12	16	85	25	10.5	1	0.1
	016-G16-AZ11-02	▲	16	16	90	25	10.5	2	0.1
	020-G20-AZ11-02	▲	20	20	100	30	10.5	2	0.2
	025-G25-AZ11-03	▲	25	25	115	35	10.5	3	0.4
	032-G32-AZ11-04	▲	32	32	125	40	10.5	4	0.7
	025-G25-AZ16-02	▲	25	25	115	35	15.5	2	0.4
	032-G32-AZ16-03	▲	32	32	125	40	15.5	3	0.7
	040-G32-AZ16-04	▲	40	32	130	42	15.5	4	0.8
	050-G32-AZ16-05	▲	50	32	135	45	15.5	5	1.0
	063-G32-AZ16-06	▲	63	32	135	45	15.5	6	1.4
	012-G16-AZ11-01-L	▲	12	16	135	25	10.5	1	0.2
	016-G16-AZ11-02-L	▲	16	16	160	25	10.5	2	0.2
	020-G20-AZ11-02-L	▲	20	20	160	30	10.5	2	0.3
	025-G25-AZ11-03-L	▲	25	25	180	35	10.5	3	0.6
	032-G32-AZ11-04-L	▲	32	32	200	40	10.5	4	1.2
	025-G25-AZ16-02-L	▲	25	25	180	35	15.5	2	0.6
032-G32-AZ16-03-L	▲	32	32	200	40	15.5	3	1.2	
040-G32-AZ16-04-L	▲	40	32	200	42	15.5	4	1.2	

▲ Stock △ Order

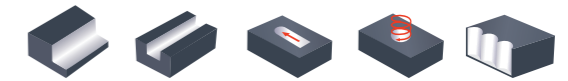
■ Spare Parts

Diameter $\varnothing D$	Insert	Screw	Wrench
$\varnothing 12\text{-}\varnothing 32$	AZ11	L60M2.5×6.5	T08
$\varnothing 25\text{-}\varnothing 63$	AZ16	L60M4×10	T15

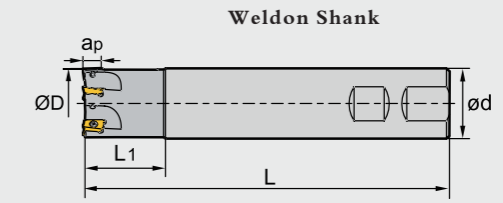
Note: The insert is ZCCCT brand

MILLING TOOLS

Square-Should Milling Tools **Kr:90°**



EMP11 P M K N



■ Type of Milling Tools

Type	Stock	Dimension (mm)					Tooth Z	Weight (kg)	
		$\varnothing D$	$\varnothing d$	L	L_1	a_{pmax}			
EMP11 Weldon Shank	012-XP16-AZ11-01	▲	12	16	85	25	10.5	1	0.1
	016-XP16-AZ11-02	▲	16	16	90	25	10.5	2	0.1
	020-XP20-AZ11-02	▲	20	20	100	30	10.5	2	0.2
	025-XP25-AZ11-03	▲	25	25	115	35	10.5	3	0.4
	032-XP32-AZ11-04	▲	32	32	125	40	10.5	4	0.7
	025-XP25-AZ16-02	▲	25	25	115	35	15.5	2	0.4
	032-XP32-AZ16-03	▲	32	32	125	40	15.5	3	0.7
	040-XP32-AZ16-04	▲	40	32	130	42	15.5	4	0.8
	050-XP32-AZ16-05	▲	50	32	135	45	15.5	5	1.0
	063-XP32-AZ16-06	▲	63	32	135	45	15.5	6	1.4

▲ Stock △ Order

■ Spare Parts

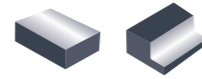
Diameter $\varnothing D$	Insert	Screw	Wrench
$\varnothing 12\text{-}\varnothing 32$	AZ11	L60M2.5×6.5	T08
$\varnothing 25\text{-}\varnothing 63$	AZ16	L60M4×10	T15

Note: The insert is ZCCCT brand

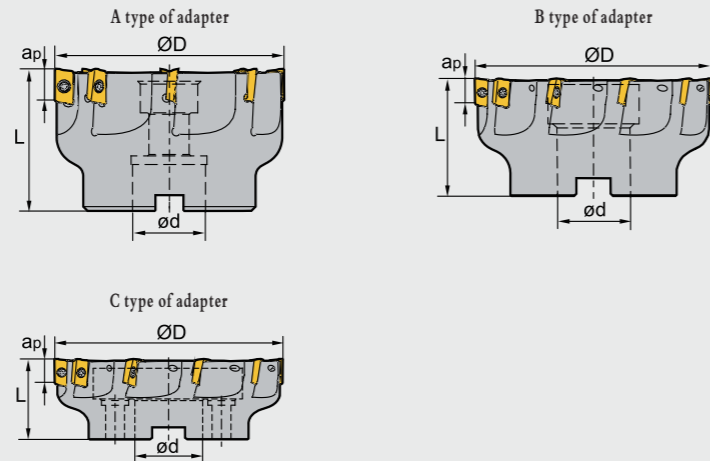
MILLING TOOLS

Square-Should Milling Tools

Kr:90°



EMP12 P M K N



Type of Milling Tools

Type	Stock	Dimension (mm)				Tooth Z	Adapter	Weight (kg)
		ØD	ød	L	apmax			
EMP12 050-A22-AZ11-07	▲	50	22	40	10.5	7	A	0.3
063-A22-AZ11-08	▲	63	22	40	10.5	8	A	0.6
080-A27-AZ11-09	▲	80	27	50	10.5	9	A	1.2
050-A22-AZ16-05	▲	50	22	40	15.5	5	A	0.3
063-A22-AZ16-06	▲	63	22	40	15.5	6	A	0.5
080-A27-AZ16-07	▲	80	27	50	15.5	7	A	1.1
100-B32-AZ16-08	▲	100	32	50	15.5	8	B	1.6
125-B40-AZ16-10	▲	125	40	63	15.5	8	B	3.2
160-B40-AZ16-10	▲	160	40	63	15.5	10	B	6.3
200-C60-AZ16-12	▲	200	60	63	15.5	12	C	8.1

▲ Stock △ Order

Spare Parts

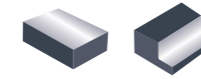
Diameter ØD	Insert	Screw	Wrench
Ø50-Ø80	AZ11	L60M2.5×6.5	T08T
Ø50-Ø200	AZ16	L60M4×10	T15T

Note: The insert is ZCCCT brand

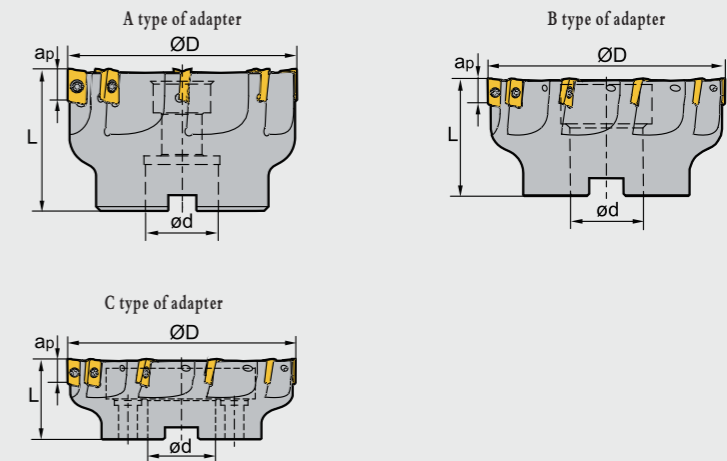
MILLING TOOLS

Square-Should Milling Tools

Kr:90°



EMP12 P M K N



Type of Milling Tools

Type	Stock	Dimension (mm)				Tooth Z	Adapter	Weight (kg)
		ØD	ød	L	apmax			
EMP12 050-A22-AZ11-05	▲	50	22	40	10.5	5	A	0.3
063-A22-AZ11-06	▲	63	22	40	10.5	6	A	0.6
080-A27-AZ11-07	▲	80	27	50	10.5	7	A	1.2
050-A22-AZ16-03	▲	50	22	40	15.5	3	A	0.3
063-A22-AZ16-04	▲	63	22	40	15.5	4	A	0.5
080-A27-AZ16-05	▲	80	27	50	15.5	5	A	1.1
100-B32-AZ16-06	▲	100	32	50	15.5	6	B	1.6
125-B40-AZ16-07	▲	125	40	63	15.5	7	B	3.2
160-B40-AZ16-08	▲	160	40	63	15.5	8	B	6.3
200-C60-AZ16-10	▲	200	60	63	15.5	10	C	8.1

▲ Stock △ Order

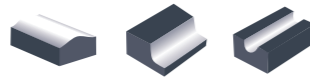
Spare Parts

Diameter ØD	Insert	Screw	Wrench
Ø50-Ø80	AZ11	L60M2.5×6.5	T08T
Ø50-Ø200	AZ16	L60M4×10	T15T

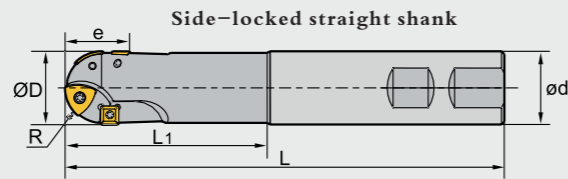
Note: The insert is ZCCCT brand

MILLING TOOLS

Profile Milling tool



BMR01 P M K



■ Type of Milling Tools

Type	Stock	Dimension (mm)						Applicable Insert				Weight (kg)	
		R	ØD	e	ød	L	L1	Type	Quantity	Type	Quantity		
BMR01													
-020-XP20-S	▲	10	20	20	20	125	50	ZDET08T2CYR10	2	SPMT060304	2	0.3	
-020-XP20-M	▲	10	20	20	20	150	75	ZDET08T2CYR10	2	SPMT060304	2	0.3	
-020-XP20-L	▲	10	20	20	20	200	100	ZDET08T2CYR10	2	SPMT060304	2	0.4	
-025-XP25-S	▲	12.5	25	23	25	150	70	ZDET1103CYR12.5	2	SPMT060304	2	0.5	
-025-XP25-M	▲	12.5	25	23	25	175	95	ZDET1103CYR12.5	2	SPMT060304	2	0.6	
-025-XP25-L	▲	12.5	25	23	25	200	100	ZDET1103CYR12.5	2	SPMT060304	2	0.7	
-032-XP32-S	▲	16	32	31	32	175	85	ZDET13T3CYR16	2	SDMT090308	2	0.9	
-032-XP32-M	▲	16	32	31	32	200	100	ZDET13T3CYR16	2	SDMT090308	2	1.1	
-032-XP32-L	▲	16	32	31	32	250	150	ZDET13T3CYR16	2	SDMT090308	2	1.4	
-040-XP40-S	▲	20	40	41	40	175	85	ZPNT2204CY(R20)	3	SPMT120408	2	1.4	
-040-XP40-M	▲	20	40	41	40	200	100	ZPNT2204CY(R20)	3	SPMT120408	2	1.7	
-040-XP40-L	▲	20	40	41	40	250	150	ZPNT2204CY(R20)	3	SPMT120408	2	2.1	
-050-XP40-S	▲	25	50	45	40	200	100	ZPNT2204CY(R25)	3	SPMT120408	2	1.8	
-050-XP40-M	▲	25	50	45	40	300	100	ZPNT2204CY(R25)	3	SPMT120408	2	2.8	
-063-XP40-S	▲	31.5	63	52	40	200	100	ZPNT2204CY(R31)	4	SPMT120408	2	3.0	
-063-XP40-M	▲	31.5	63	52	40	300	100	ZPNT2204CY(R31)	4	SPMT120408	2	3.5	

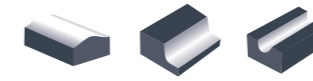
▲ Stock △ Order

■ Spare Parts

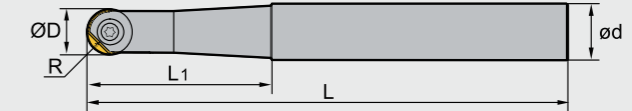
Diameter ØD	Screw	Wrench	
Ø20-Ø25	L43M2.5×5	T08	-
Ø32	L43M4×8	-	T15T
Ø40-Ø63	L43M5×11	-	T20T

MILLING TOOLS

Profile Milling tool



BMR02 P M K



■ Type of Milling Tools

Type	Stock	Dimension (mm)					Weight (kg)
		R	ØD	ød	L	L1	
BMR02							
-012-G16-S	▲	6	12	16	110	40	0.1
-012-G16-M	▲	6	12	16	130	50	0.2
-012-G16-L	▲	6	12	16	160	50	0.2
-016-G20-S	▲	8	16	20	140	45	0.3
-016-G20-M	▲	8	16	20	170	65	0.3
-016-G20-L	▲	8	16	20	200	65	0.4
-020-G25-S	▲	10	20	25	160	60	0.5
-020-G25-M	▲	10	20	25	200	80	0.6
-020-G25-L	▲	10	20	25	240	80	0.8

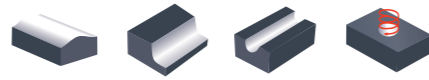
▲ Stock △ Order

■ Spare Parts

Diameter ØD	Applicable Insert	Screw	Wrench
Ø12	ROHX1203	L90M4×09TT	T10T
Ø16	ROHX1604	L90M5×11TT	T15T
Ø20	ROHX2005	L90M5×13.5TT	T15T

MILLING TOOLS

Profile Milling tool

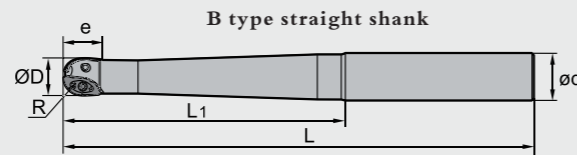
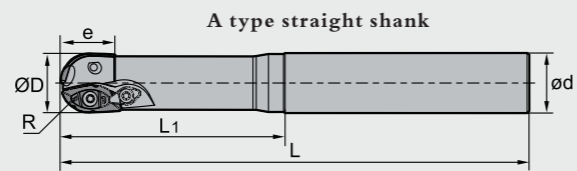


BMR03 P M K

A type (Ø30-Ø40)



B type (Ø16-Ø25)



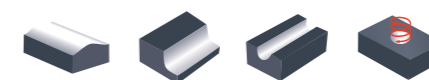
■ Type of Milling Tools

Type	Stock	Dimension (mm)						Tooth Z	Weight (kg)	Type	Block
		R	ØD	ød	L	L ₁	e				
BMR03 -016-G20-S	▲	8	16	20	150	70	16	2	0.3	B	WD-208
-016-G20-M	▲	8	16	20	180	80	16	2	0.4	B	
-020-G25-S	▲	10	20	25	180	80	20	2	0.5	B	
-020-G25-M	▲	10	20	25	200	100	20	2	0.6	B	
-020-G25-L	▲	10	20	25	250	150	20	2	0.7	B	
-020-G25-XL	▲	10	20	25	300	110	20	2	1.0	B	
-025-G25-S	▲	12.5	25	25	180	80	25	2	0.6	B	
-025-G25-M	▲	12.5	25	25	200	100	25	2	0.7	B	
-025-G25-L	▲	12.5	25	25	250	110	25	2	0.8	B	
-025-G25-XL	▲	12.5	25	25	300	120	25	2	1.0	B	
-030-G32-S	△	15	30	32	200	120	30	2	1.0	A	
-030-G32-M	▲	15	30	32	250	150	30	2	1.3	A	
-030-G32-L	▲	15	30	32	300	200	30	2	1.6	A	
-030-G32-XL	△	15	30	32	350	200	30	2	1.9	A	
-032-G32-S	▲	16	32	32	200	120	32	2	1.1	A	
-032-G32-M	▲	16	32	32	250	150	32	2	1.4	A	
-032-G32-L	▲	16	32	32	300	200	32	2	1.6	A	
-032-G32-XL	△	16	32	32	350	200	32	2	2.0	A	
-040-G40-S	△	20	40	40	200	120	40	2	1.6	A	
-040-G40-M	▲	20	40	40	250	150	40	2	2.0	A	
-040-G40-L	▲	20	40	40	300	200	40	2	2.5	A	
-040-G40-XL	△	20	40	40	350	200	40	2	3.0	A	

▲ Stock △ Order

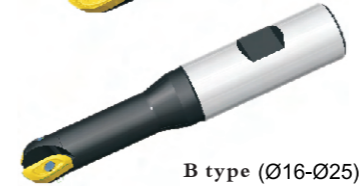
MILLING TOOLS

Profile Milling tool

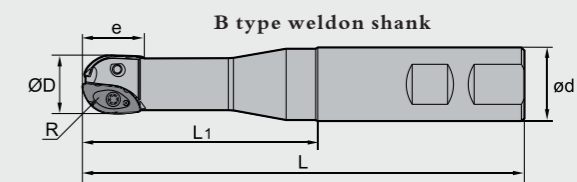
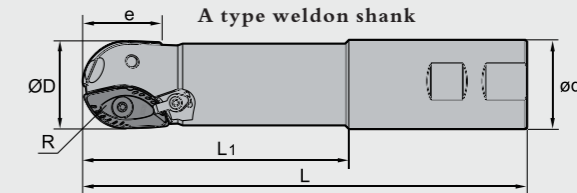


BMR03 P M K

A type Ø30-Ø40



B type (Ø16-Ø25)



■ Type of Milling Tools

Type	Stock	Dimension (mm)						Tooth Z	Weight (kg)	Type	Block
		R	ØD	ød	L	L ₁	e				
BMR03 -016-XP20-M	▲	8	16	20	111	60	16	2	0.2	B	WD-208
-020-XP25-M	▲	10	20	25	127	70	20	2	0.3	B	
-020-XP25-L	▲	10	20	25	150	80	20	2	0.4	B	
-025-XP25-M	▲	12.5	25	25	137	80	25	2	0.4	B	
-025-XP25-L	▲	12.5	25	25	200	100	25	2	0.6	B	
-030-XP32-M	▲	15	30	32	161	100	30	2	0.8	A	
-030-XP32-L	▲	15	30	32	250	150	30	2	1.3	A	
-032-XP32-M	▲	16	32	32	161	100	32	2	0.8	A	
-032-XP32-L	▲	16	32	32	250	120	32	2	1.3	A	
-040-XP40-M	▲	20	40	40	175	100	40	2	1.3	A	
-040-XP40-L	▲	20	40	40	250	120	40	2	2.0	A	
-050-XP50-M	▲	25	50	50	200	100	50	2	2.5	A	
-050-XP50-L	▲	25	50	50	250	150	50	2	3.1	A	

▲ Stock △ Order

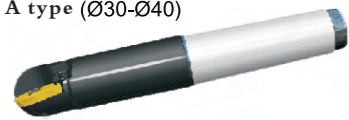
MILLING TOOLS

Profile Milling tool

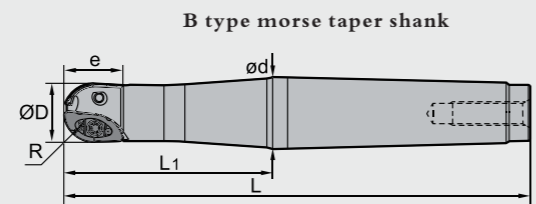
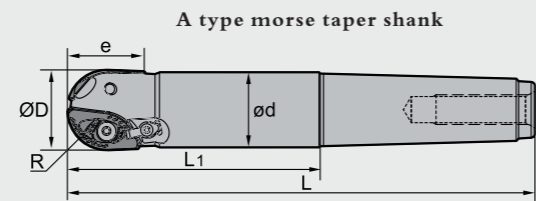


BMR03 P M K

A type (Ø30-Ø40)



B type (Ø16-Ø25)



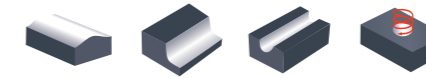
■ Type of Milling Tools

Type	Stock	Dimension (mm)						Tooth Z	Weight (kg)	Type	Block
		R	ØD	ød	L	L1	e				
BMR03 -020-MT3-M	▲	10	20	18.7	156	70	20	2	0.4	B	WD-208
-020-MT3-L	△	10	20	18.7	186	100	20	2	0.4	B	
-025-MT3-M	▲	12.5	25	23.5	156	70	25	2	0.4	B	
-025-MT3-L	△	12.5	25	23.5	186	100	25	2	0.4	B	
-030-MT4-M	▲	15	30	28.2	189	70	30	2	0.8	A	
-030-MT4-L	△	15	30	28.2	229	120	30	2	1.0	A	
-032-MT4-M	▲	16	32	29.2	179	70	32	2	0.9	A	
-032-MT4-L	△	16	32	29.2	209	100	32	2	0.9	A	
-040-MT4-M	▲	20	40	36.9	199	100	40	2	1.0	A	CBH5R1
-040-MT5-L	▲	20	40	36.9	226	90	40	2	1.8	A	
-40-MT5-XL	▲	20	40	36.9	256	120	40	2	2.0	A	
-050-MT5-M	▲	25	50	46.8	236	100	50	2	2.2	A	
-050-MT5-L	▲	25	50	46.8	286	150	50	2	2.9	A	

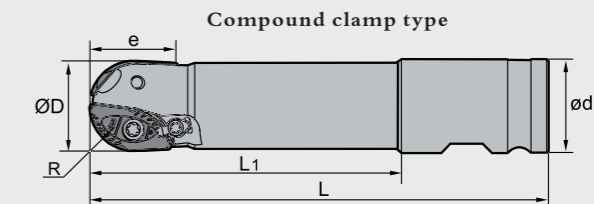
▲ Stock △ Order

MILLING TOOLS

Profile Milling tool



BMR03 P M K



■ Type of Milling Tools

Type	Stock	Dimension (mm)						Tooth Z	Weight (kg)	Block
		R	ØD	ød	L	L1	e			
BMR03 -040-XPX-M	▲	20	40	50.8	250	170	40	2	1.3	CBH5R1
-040-XPX-L	▲	20	40	50.8	300	220	40	2	3.1	
-040-XPX-XL	▲	20	40	50.8	350	270	40	2	3.5	
-050-XPX-M	▲	25	50	50.8	250	170	50	2	3.1	
-050-XPX-L	▲	25	50	50.8	300	200	50	2	3.8	
-050-XPX-XL	▲	25	50	50.8	350	270	50	2	4.4	

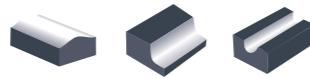
▲ Stock △ Order

■ Spare Parts

Diameter ØD	Applicable Insert	Inserts	Screw	Wrench
Φ16	XPHT16R803	—	L60M2.5×6.5	T08
Φ20	XPHT20R10T3	—	L60M3.5×08	T15
Φ25	XPHT25R1204	—	L60M4×10	T15
Φ30	XPHT30R1506	WD-208	L60M5×13	T20
Φ32	XPHT32R1606	WD-208	L60M5×13	T20
Φ40	XPHT40R2007	CBH5R1	L43M6×16	T20
Φ50	XPHT50R2507	CBH5R1	L43M8×21 L43M6×16	T30

MILLING TOOLS

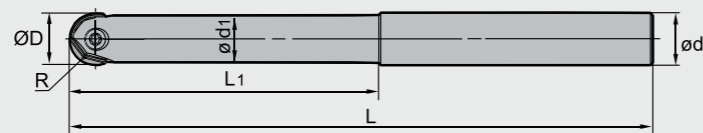
Profile Milling tool



BMR04 P M K



Straight shank and cone neck type



■ Type of Milling Tools

Type	Stock	Dimension (mm)						Weight (kg)
		R	ØD	ød	ød1	L1	L	
BMR04 -012-G12-M	▲	6	12	12	11	35	125	0.1
-012-G12-L	△	6	12	12	11	45	150	0.1
-016-G16-M	▲	8	16	16	14	40	150	0.2
-016-G16-L	△	8	16	16	14	55	180	0.3
-020-G20-M	▲	10	20	20	18	65	180	0.4
-020-G20-L	△	10	20	20	18	100	250	0.6
-025-G25-M	▲	12.5	25	25	23	70	200	0.7
-025-G25-L	△	12.5	25	25	23	100	250	0.9
-030-G32-M	▲	15	30	32	27	80	250	1.2
-030-G32-L	△	15	30	32	27	110	300	1.5
-032-G32-M	▲	16	32	32	29	80	250	1.4
-032-G32-L	△	16	32	32	29	110	300	1.7

▲ Stock △ Order

MILLING TOOLS

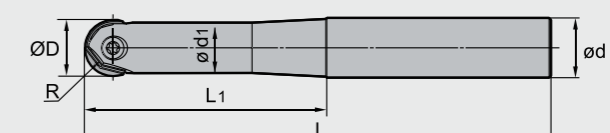
Profile Milling tool



BMR04 P M K



Straight shank and cone neck type



■ Type of Milling Tools

Type	Stock	Dimension (mm)						Weight (kg)
		R	ØD	ød	ød1	L1	L	
BMR04 -012-G16-M	▲	6	12	16	11	50	125	0.2
-012-G16-L	△	6	12	16	11	70	150	0.2
-016-G20-M	▲	8	16	20	14	60	150	0.3
-016-G20-L	△	8	16	20	14	80	180	0.3
-020-G25-M	▲	10	20	25	18	75	180	0.6
-020-G25-L	△	10	20	25	18	95	200	0.6
-025-G32-M	▲	12.5	25	32	23	90	200	1.0
-025-G32-L	△	12.5	25	32	23	110	250	1.3
-030-G40-M	▲	15	30	40	27	110	250	2.0
-030-G40-L	△	15	30	40	27	125	300	2.4
-032-G40-M	▲	16	32	40	29	110	250	2.0
-032-G40-L	△	16	32	40	29	125	300	2.4

▲ Stock △ Order

MILLING TOOLS

Spare Parts

Diameter	Applicable Insert	Screw	Wrench	
Ø12	ZOHX1203	L90M4×10TT	T15	-
Ø16	ZOHX1604	L90M5×11TT	T20	-
Ø20	ZOHX2005	L90M5×13.5TT	T20	-
Ø25	ZOHX2506	L70M6×20TT	T20	-
Ø30	ZOHX3007	L70M8×25TT	-	T30S
Ø32	ZOHX3207	L70M8×25TT	-	T30S

Insert selection

工件材料	工况														
	良好工况			一般工况			恶劣工况								
P 钢	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊			
M 不锈钢	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊			
K 铸铁	😞	😞	😞	😞	😞	😞	😞	😞	😞	😞	😞	😞			
N 有色金属	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊			
S 耐热合金、钛合金	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊			

Insert shape	Type	Dimension (mm)					CVD coating		PVD coating		Cermet		hard alloy										
		R	I.C	S	d	适用刀具 ØD	YBC301	YBM251	YBM351	YBD152	YBD252	YBG102	YBG202	YBG302	YBG152	YBG252	YNG151	YNG151C	YC30S	YD051	YD101	YD201	
	ZOHX1203-GF	6	12	3	4	Φ12									★								
	ZOHX1604-GF	8	16	4	5	Φ16									★								
	ZOHX2005-GF	10	20	5	5	Φ20									★								
	ZOHX2506-GF	12.5	25	6	6	Φ25									☆								
	ZOHX3007-GF	15	30	7	8	Φ30									☆								
	ZOHX3207-GF	16	32	7	8	Φ32									☆								
	ZOHX1203-GM	6	12	3	4	Φ12									★								
	ZOHX1604-GM	8	16	4	5	Φ16									★								
	ZOHX2005-GM	10	20	5	5	Φ20									★								
	ZOHX2506-GM	12.5	25	6	6	Φ25									★								
	ZOHX3007-GM	15	30	7	8	Φ30									★								
	ZOHX3207-GM	16	32	7	8	Φ32									★								

MILLING TOOLS

type of tools		Lead angle		Number of Type
FM	Face milling tool	P	90°	toolholders diameter ØD(mm)
EM	Square-should milling tool	E	75°	
HM	Helical and face milling tool	D	60°	Cutter width
SM	Side and face milling tool	A	45°	
BM	Profile milling tool	R		tools installation position and size
CM	Chamfer milling tool	B		
XM	Special milling tool	C		

A	D
A type of adapter	D type of adapter
B type of adapter	k type adapter
C type of adapter	

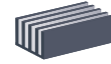
SM P 03 - 160 × 16 - K40

- M P 12 - 12 L

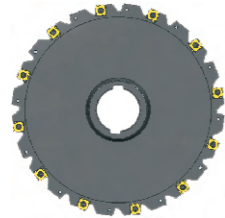
Shape of Blade	Insert Clearance Angle	Cutting Edge Length (mm)						Cutting Direction	
		Insert incircle diameter	Shape of Blade						
C 80 degrees diamond	N 0°	5.556	C	D	R	S	T	V	R: Right L: Left
D 55 degrees diamond	B 5°		-	-	-	-	09	-	
R Circle	C 7°	6.350	06	07	-	-	11	-	Tooth
S Square	P 11°	9.525	09	11	09	09	16	16	
T regular triangle square	D 15°	12.700	12	15	12	12	22	22	
V 35 degrees diamond	E 20°	15.875	16	19	15	15	27	-	
M 86 degrees diamond		19.050	19	-	19	19	33	-	
		25.400	25	-	25	25	44	-	

MILLING TOOLS

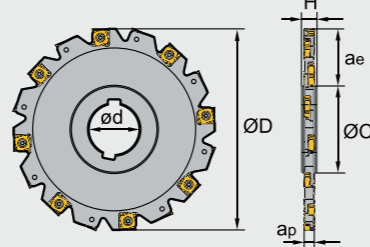
Side and face milling tool



SMP01 P M K



k type adapter



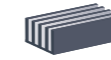
Type of Milling Tools

Type	Stock		Dimension (mm)							Applicable Insert	Tooth Z	Adapter	Weight (kg)	
	R	L	ØD	ød	øc	H	ap	aemax						
SMP01	-100×4-K27-SN12-10	△	△	100	27	40.7	12	4	25	XSEQ1202	10	K	0.2	
	-125×4-K40-SN12-12	△	△	125	40	50.5	12	4	32		12	K	0.3	
	-160×4-K40-SN12-16	△	△	160	40	66.7	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	58	12	5	31			12	K	0.3
	-160×5-K40-SN12-16	△	△	160	40	68	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	58	12	6	31			12	K	0.4
	-160×6-K40-SN12-16	△	△	160	40	68	12	6	44			16	K	0.7
	-200×6-K50-SN12-18	△	△	200	50	67.7	12	6	62		XSEQ1204	18	K	1.1
	-250×6-K50-SN12-24	△	△	250	50	72	12	6	87			24	K	1.7
	-100×7-K27-SN12-10	△	△	100	27	45	12	7	25			XSEQ1204	10	K
	-125×7-K40-SN12-12	△	△	125	40	58	12	7	31	12			K	0.4
	-160×7-K40-SN12-16	△	△	160	40	68	12	7	44	16			K	0.8
	-200×7-K50-SN12-18	△	△	200	50	72	12	7	62	XSEQ12T4			18	K
	-250×7-K50-SN12-24	△	△	250	50	72	12	7	87		24		K	1.9
	-100×8-K27-SN12-10	△	△	100	27	45	12	8	25		XSEQ12T4		10	K
	-125×8-K40-SN12-12	△	△	125	40	58	12	8	31			12	K	0.5
	-160×8-K40-SN12-16	△	△	160	40	68	12	8	44			16	K	0.9
	-200×8-K50-SN12-18	△	△	200	50	72	12	8	62			18	K	1.4
	-250×8-K50-SN12-24	△	△	250	50	72	12	8	87	24				

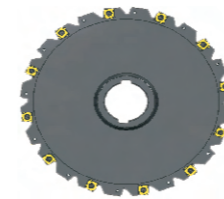
▲ Stock △ Order

MILLING TOOLS

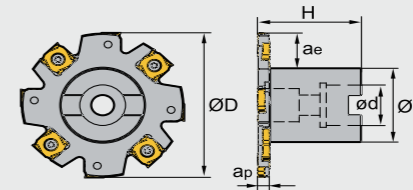
Side and face milling tool



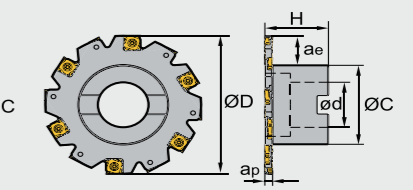
SMP01 P M K



A type of adapter



B type of adapter



Type of Milling Tools

Type	Stock		Dimension (mm)							Applicable Insert	Tooth Z	Adapter	Weight (kg)	
	R	L	ØD	ød	øc	H	ap	aemax						
SMP01	-063×4-A22-SN12-06	△	△	63	22	40	50	4	10	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		XSEQ1203	10	A	0.6
	-063×5-A22-SN12-06	△	△	63	22	40	50	5	10			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			XSEQ12T3	10	A
	-063×6-A22-SN12-06	△	△	63	22	40	50	6	10	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	XSEQ1204	10		A	0.7
	-125×6-B40-SN12-12	△	△	125	40	70	50	6	24		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	40	50	7	10		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			XSEQ12T4	10	A
	-125×7-B40-SN12-12	△	△	125	40	70	50	7	24	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	40	50	8	10	XSEQ12T4			6	A
	-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		XSEQ12T4		10	A
	-125×8-B40-SN12-12	△	△	125	40	70	50	8	24			12	B	1.1
	-160×8-B40-SN12-16	△	△	160	40	70	50	8	41			16	B	1.5

▲ Stock △ Order

Spare Parts

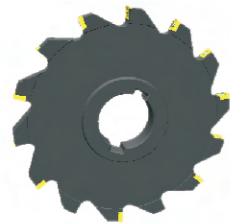
Diameter ØD	Blade width ap	Screw	Wrench
Ø63-Ø160	4	L91M4×3.3X	T10T
Ø63-Ø160	5	L91M4×4.3X	
Ø63-Ø250	6	L91M4×5.3X	
Ø63-Ø250	7	L91M4×6.3X	
Ø63-Ø250	8	L91M4×7.3X	

MILLING TOOLS

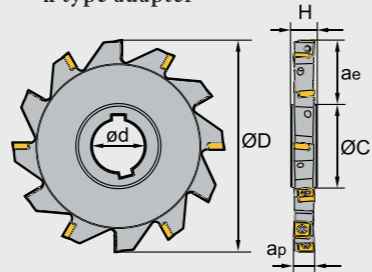
Side and face milling tool



SMP03 P M K



k type adapter



Type of Milling Tools

Type	Stock		Dimension (mm)						Applicable Insert	Tooth Z	Adapter	Weight (kg)	
	R	L	ØD	øc	ød	ae _{max}	ap	H					
SMP03	-080×8-K27-MP06-10	△	△	80	41	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
SMP03	-125×10-K40-MP06-16	△	△	125	55	40	34	10	14	MPHT080305-DM	16	K	0.6
	-125×12-K40-MP08-12	△	△	125	55	40	34	12	16		12	K	0.7
	-160×12-K40-MP08-14	△	△	160	62	40	47	12	16		14	K	1.3
SMP03	-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	18	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	63	20	26		14	K	3.3

▲ Stock △ Order

Spare Parts

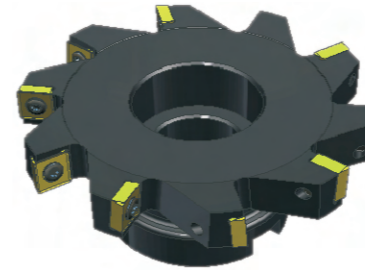
Diameter ØD	Insert	Screw	Wrench
Ø80-Ø125	MPHT0603	L60M2.5x6.5	T08T
Ø125-Ø160	MPHT0803	L60M3x7	T10T
Ø160-Ø200	MPHT1204	L60M5x13	T20T

MILLING TOOLS

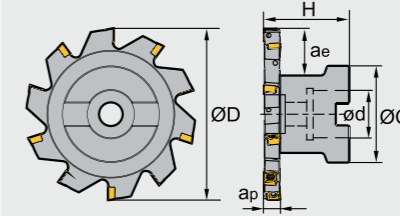
Side and face milling tool



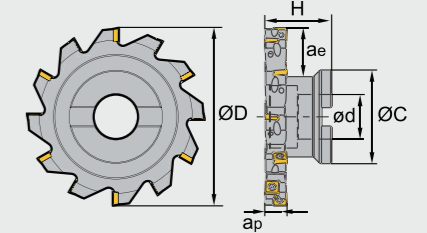
SMP03 P M K



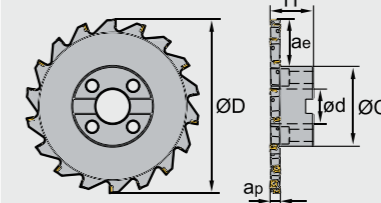
A type of adapter



B type of adapter



C type of adapter



Type of Milling Tools

Type	Stock		Dimension (mm)						Applicable Insert	Tooth Z	Adapter	Weight (kg)		
	R	L	ØD	øc	ød	ae _{max}	ap	H						
SMP03	-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	
SMP03	-125×10-B32-MP06-16	△	△	125	65	32	33	10	45	MPHT080305-DM	16	B	1.1	
	-125×12-B32-MP08-12	△	△	125	65	32	33	12	45		12	B	1.4	
	-160×12-B40-MP08-14	△	△	160	80	40	45	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	30	16	50		MPHT120408-DM	10	B	2.3
	-160×16-B40-MP12-12	△	△	160	80	40	45	16	60			12	B	2.3
-160×18-B40-MP12-12	△	△	160	80	40	45	18	60	12	B		2.4		
SMP03	-200×16-C40-MP12-14	△	△	200	92	40	53	16	50	MPHT120408-DM	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 △ Order

Spare Parts

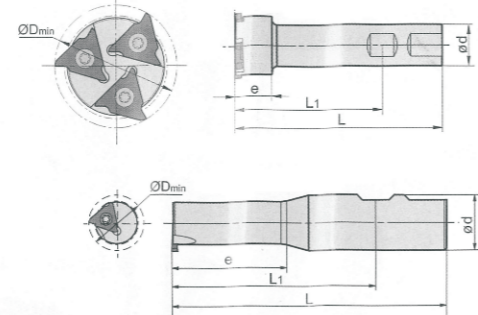
Diameter ØD	Insert	Screw	Wrench
Ø80-Ø125	MPHT0603	L60M2.5x6.5	T08T
Ø125-Ø200	MPHT0803	L60M3x7	T10T
Ø125-Ø200	MPHT1204	L60M5x13	T20T

MILLING TOOLS

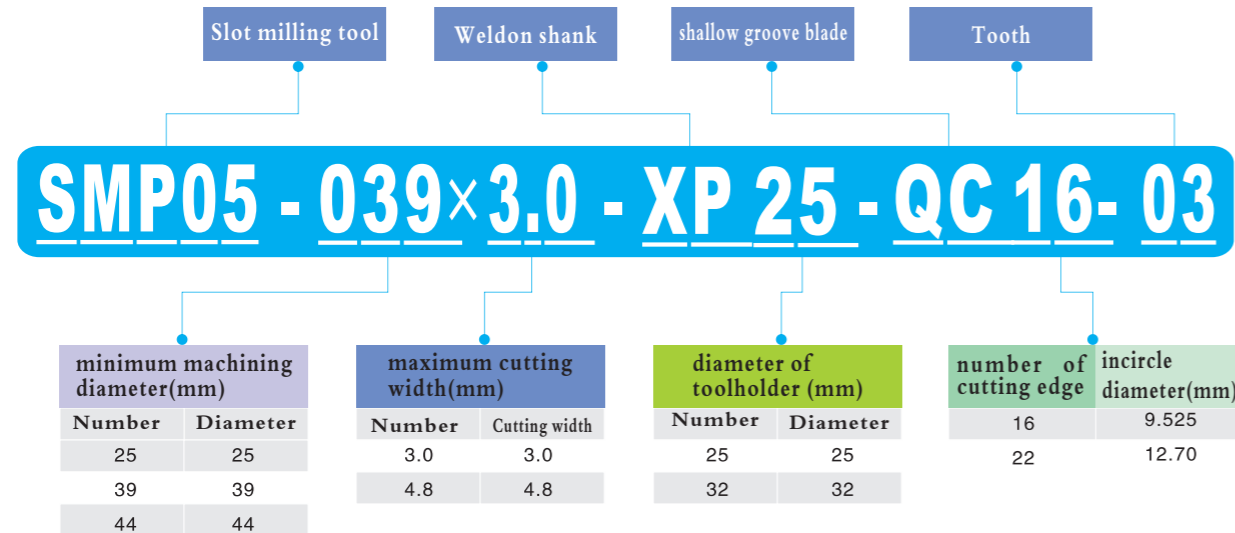
Slot milling tool



SMP05 P M K



Slot milling tool Code Key



Type of Milling Tools

Type	Stock	Dimension (mm)					Applicable Insert	Tooth Z	Width
		ØD _{min}	ød	e	L ₁	L			
SMP05 -025 x 3.0-XP25-QC16-01	△	25	25	40	89	125	QC16L 050-300	1	0.50-3.0
-039 x 3.0-XP25-QC16-03	△	39	25	23	89	125	QC16L 050-300	3	0.50-3.00
-044 x 4.8-XP25-QC22-03	△	44	25	23	89	125	QC22L 100-480	3	1.0-4.8

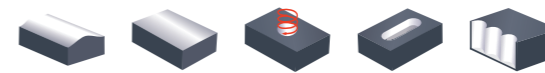
▲ Stock △ Order

Spare Parts

Diameter ØD	Screw	Wrench
Ø25	L60M3.5x10	T15
Ø39	L60M3.5x10	T15
Ø44	L60M5x13	T20

MILLING TOOLS

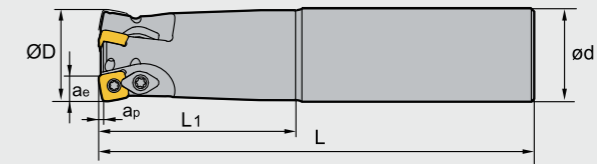
大进给刀具



XMR01 P M K



SDMT insert straight shank type



Type of Milling Tools

Type	Stock	Dimension (mm)						Tooth Z	Weight (kg)
		ØD	ap	ae	L ₁	L	ød		
XMR01 -025-G25-SD09-02	▲	25	1.4	8.8	60	140	25	2	0.5
-032-G32-SD09-03	▲	32	1.4	8.8	70	150	32	3	0.8
-035-G32-SD09-03	▲	35	1.4	8.8	70	150	32	3	0.8
-032-G32-SD12-02	▲	32	1.8	11.7	70	150	32	2	0.8
-040-G40-SD12-03	▲	40	1.8	11.7	70	150	40	3	1.3

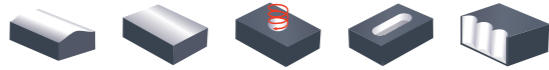
▲ Stock △ Order

Spare Parts

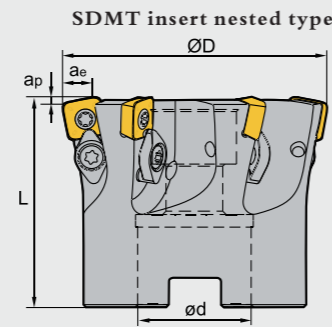
Type	Applicable Insert	Insert Screw	Clamp screw	Clamp	Insert wrench	Clamp wrench
XMR01□□-SD09□□	SDMT09T3	L60M3.5x8	L60M4x8	WD-204	T10	T15
XMR01□□-SD12□□	SDMT1204	L60M4x8			T15	

MILLING TOOLS

大进给刀具



XMR01 P M K



■ Type of Milling Tools

Type	Stock	Dimension (mm)					Tooth Z	Adapter	Weight (kg)
		ØD	ap	ae	L	ød			
XMR01 -050-A22-SD09-04	▲	50	1.4	8.8	40	22	4	A	0.3
-063-A22-SD09-06	▲	63	1.4	8.8	40	22	6	A	0.5
-063-A27-SD09-06	▲	63	1.4	8.8	50	27	6	A	0.6
-063-A22-SD12-05	▲	63	1.8	11.7	40	22	5	A	0.5
-063-A27-SD12-05	▲	63	1.8	11.7	50	27	5	A	0.6
-080-A27-SD12-05	▲	80	1.8	11.7	63	27	5	A	0.9
-100-B32-SD12-06	▲	100	1.8	11.7	50	32	6	B	1.8

▲ Stock △ Order

■ Spare Parts

Type	Applicable Insert	Insert Screw	Clamp screw	Clamp	Insert wrench	Clamp wrench
XMR01□□-SD09□□	SDMT09T3	L60M3.5×8	L60M4×8	WD-204	T10	T15
XMR01□□-SD12□□	SDMT1204	L60M4×8		WD-204	T15	

MILLING TOOLS

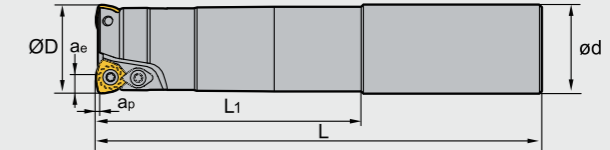
大进给刀具



XMR01 P M K



WPGT insert straight shank type



■ Type of Milling Tools

Type	Stock	Dimension (mm)						Tooth Z	Weight (kg)
		ØD	ap	ae	L1	L	ød		
XMR01 -020-G20-WP05-02-M	△	20	1.5	3.8	50	130	20	2	0.2
-020-G20-WP05-02-L	△	20	1.5	3.8	100	180	20	2	0.3
-020-G20-WP05-02-XL	△	20	1.5	3.8	130	250	20	2	0.8
-025-G25-WP06-02-M	△	25	1.5	4.35	60	140	25	2	0.4
-025-G25-WP06-02-L	△	25	1.5	4.35	120	200	25	2	0.6
-025-G25-WP06-02-XL	△	25	1.5	4.35	180	300	25	2	1.0
-032-G32-WP06-03-M	△	32	1.5	4.35	70	150	32	3	0.8
-032-G32-WP06-03-L	△	32	1.5	4.35	120	200	32	3	1.0
-032-G32-WP06-03-XL	△	32	1.5	4.35	180	300	32	3	1.6
-040-G32-WP06-03-M	△	40	1.5	4.35	50	150	32	3	0.9
-040-G32-WP06-03-L	△	40	1.5	4.35	50	250	32	3	1.5
-040-G32-WP06-03-XL	△	40	1.5	4.35	50	300	32	3	1.8
-040-G32-WP08-02-M	△	40	1.5	5.66	50	150	32	2	0.9
-040-G32-WP08-02-L	△	40	1.5	5.66	50	250	32	2	1.5
-040-G32-WP08-02-XL	△	40	1.5	5.66	50	300	32	2	1.9
-050-G32-WP09-02-M	△	50	3.0	6.8	50	150	32	2	1.9
-050-G32-WP09-02-L	△	50	3.0	6.8	50	250	32	2	2.5

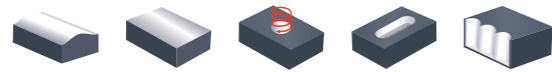
▲ Stock △ Order

■ Spare Parts

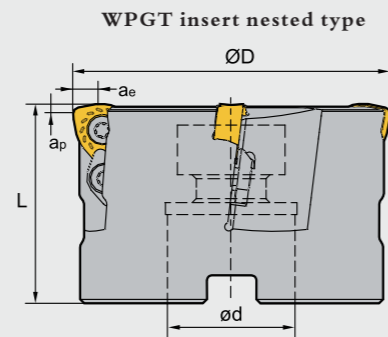
Type	Applicable Insert	Clamp/insert screw	Clamp	Wrench
XMR01□□-WP05□□	WPGT0503	L60M3.5×8	--	T10
XMR01□□-WP06□□	WPGT0604	L60M4×8	--	T15
XMR01□□-WP08□□	WPGT0806	L60M5×13	WD-208	T20
XMR01□□-WP09□□	WPGT0907			

MILLING TOOLS

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XMR01 P M K



■ Type of Milling Tools

Type	Stock	Dimension (mm)					Tooth Z	Adapter	Weight (kg)
		ØD	ap	ae	L	ød			
XMR01 -050-A22-WP06-04	△	50	1.5	4.35	50	22	4	A	0.4
-050-A22-WP08-03	△	50	1.5	5.66	50	22	3	A	0.4
-063-A22-WP08-04	△	63	1.5	5.66	50	22	4	A	0.7
-063-A27-WP08-04	△	63	1.5	5.66	50	27	4	A	0.7
-080-A27-WP08-05	△	80	1.5	5.66	63	27	5	A	1.5
-100-B32-WP08-06	△	100	1.5	5.66	63	32	6	B	2.2
-125-B40-WP08-07	△	125	1.5	5.66	63	40	7	B	3.5
-160-B40-WP08-08	△	160	1.5	5.66	63	40	8	B	6.0
-063-A22-WP09-03	△	63	3.0	6.8	50	22	3	A	0.7
-080-A27-WP09-04	△	80	3.0	6.8	63	27	4	A	1.4
-100-B32-WP09-05	△	100	3.0	6.8	63	32	5	B	2.1
-125-B40-WP09-06	△	125	3.0	6.8	63	40	6	B	3.7
-160-B40-WP09-07	△	160	3.0	6.8	63	40	7	B	6.3

▲ Stock △ Order

■ Spare Parts

Type	Applicable Insert	Clamp/insert screw	Clamp	Wrench
XMR01□□-WP06□□	WPGT0604	L60M4×8	—	T15T
XMR01□□-WP08□□	WPGT0806	L60M5×13	WD-208	T20T
XMR01□□-WP09□□	WPGT0907	L60M5×13	WD-208	T20T

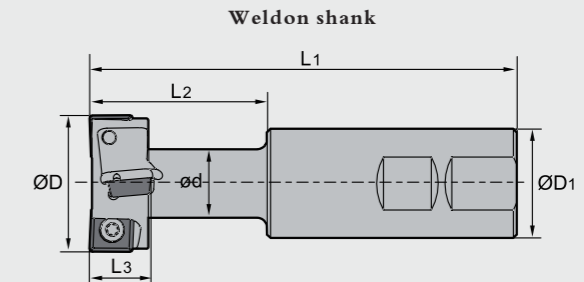
MILLING TOOLS

T slot milling tool

Kr:90°



TMP01 K



■ Type of Milling Tools

Type	Stock	Dimension (mm)						Tooth Z	Insert Quantity	T-slot size
		ØD	ØD1	ød	L1	L2	L3			
TMP01 -021-XP25-MP06-01	▲	21	25	10	100	32	9	1	2	12
-025-XP25-MP06-01	▲	25	25	12	100	35	11	1	2	14
-032-XP32-MP08-02	▲	32	32	15	110	45	14	2	4	18
-040-XP32-MP12-02	▲	40	32	19	125	55	18	2	4	22
-050-XP40-MP12-02	▲	50	40	25	140	65	22	2	4	28
-060-XP50-MP12-02	▲	60	50	32	160	80	28	2	6	36

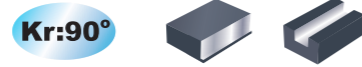
▲ Stock △ Order

■ Spare Parts

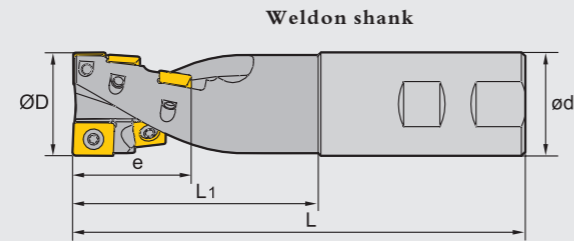
Type	Applicable Insert	Screw	Wrench
TMP01-021-XP25-MP06-01	MPHT060304	L60M2.5×5.5	T08
TMP01-025-XP25-MP06-01		L60M2.5×5.5	
TMP01-032-XP32-MP08-02	MPHT080305	L60M3×8	T10
TMP01-040-XP32-MP12-02		L60M5×10	
TMP01-050-XP40-MP12-02	MPHT120408	L60M5×10	T20
TMP01-060-XP50-MP12-02		L60M5×10	

MILLING TOOLS

Helical and face milling tool



HMP01 P K



Type of Milling Tools

Type	Stock		Dimension (mm)					Slot	Insert Quantity		Type of shank
	R	L	ØD	ød	e	L ₁	L		APKT 150412	SPMT 120408	
HMP01 -040×55-XP40-SP12-02	△	△	40	40	55	95	175	2	1	5	Weldon shank
HMP01 -050×55-XP40-SP12-04	△	△	50	40	55	95	175	4	2	10	Weldon shank

▲ Stock △ Order

Spare Parts

Diameter ØD	Screw	Wrench
Ø40	L60M5×10	T20T
Ø50	L60M5×13	T20T

MILLING TOOLS

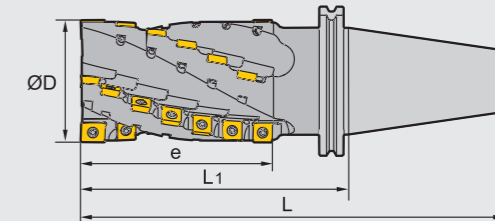
Helical and face milling tool



HMP01 P K



JT holder / BT holder (eg. JT holder)



Type of Milling Tools

Type	Stock		Dimension (mm)				Slot Z	Insert Quantity		Type of shank
	R	L	ØD	e	L ₁	L		APKT 150412	SPMT 120408	
HMP01 -050×84-JT50-SP12-04	△	△	50	84	145	246.75	4	2	16	JT
HMP01 -063×74-JT50-SP12-04	△	△	63	74	135	236.75	4	2	14	JT
HMP01 -063×104-JT50-SP12-04	△	△	63	104	165	266.75	4	2	20	JT
HMP01 -063×134-JT50-SP12-04	△	△	63	134	195	296.75	4	2	26	JT
HMP01 -080×104-JT50-SP12-04	△	△	80	104	165	266.75	4	2	20	JT
HMP01 -080×144-JT50-SP12-04	△	△	80	144	205	306.75	4	2	28	JT
HMP01 -050×84-BT50-SP12-04	△	△	50	84	145	246.8	4	2	16	BT
HMP01 -063×74-BT50-SP12-04	△	△	63	74	135	236.8	4	2	14	BT
HMP01 -063×104-BT50-SP12-04	△	△	63	104	165	266.8	4	2	20	BT
HMP01 -063×134-BT50-SP12-04	△	△	63	134	195	296.8	4	2	26	BT
HMP01 -080×104-BT50-SP12-04	△	△	80	104	165	266.8	4	2	20	BT
HMP01 -080×144-BT50-SP12-04	△	△	80	144	205	306.8	4	2	28	BT

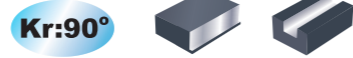
▲ Stock △ Order

Spare Parts

Diameter ØD	Screw	Wrench
Ø50	L60M5×13	T20T
Ø63	L60M5×13	T20T
Ø80	L60M5×13	T20T

MILLING TOOLS

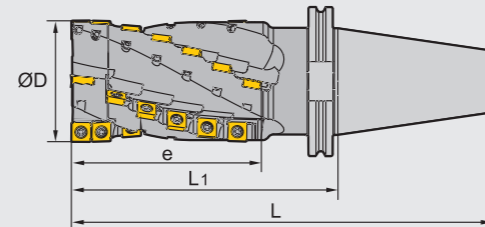
conversion head Helical and face milling tool



HMP01 EC P K



JT holder / BT holder (eg. JT holder)



Type of Milling Tools

Type	Stock		Dimension (mm)				Slot Z	Insert Quantity		Type of shank	
	R	L	ØD	e	L1	L		APKT 150412	SPMT 120408		
HMP01	-050×84EC-JT50-SP12-04	△	△	50	84	145	246.75	4	2	16	JT
	-063×74EC-JT50-SP12-04	△	△	63	74	135	236.75	4	2	14	JT
	-063×104EC-JT50-SP12-04	△	△	63	104	165	266.75	4	2	20	JT
	-063×134EC-JT50-SP12-04	△	△	63	134	195	296.75	4	2	26	JT
	-080×104EC-JT50-SP12-04	△	△	80	104	165	266.75	4	2	20	JT
	-080×144EC-JT50-SP12-04	△	△	80	144	205	306.75	4	2	28	JT
	-050×84EC-BT50-SP12-04	△	△	50	84	145	246.8	4	2	16	BT
	-063×74EC-BT50-SP12-04	△	△	63	74	135	236.8	4	2	14	BT
	-063×104EC-BT50-SP12-04	△	△	63	104	165	266.8	4	2	20	BT
	-063×134EC-BT50-SP12-04	△	△	63	134	195	296.8	4	2	26	BT
-080×104EC-BT50-SP12-04	△	△	80	104	165	266.8	4	2	20	BT	
-080×144EC-BT50-SP12-04	△	△	80	144	205	306.8	4	2	28	BT	

▲ Stock △ Order

Spare Parts

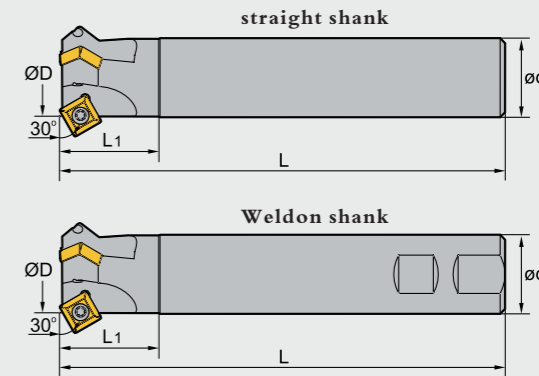
Diameter ØD	Insert screw	conversion head screw	Wrench	Wrench	conversion head
Ø50	L60M5×13	M10×50	T20T	S8	050EC
Ø63	L60M5×13	M10×50	T20T	S8	063EC
Ø80	L60M5×13	M12×55	T20T	S10	080EC

MILLING TOOLS

Chamfer milling tool



CMZ01 P M K



Type of Milling Tools

Type	Stock	Dimension (mm)				Tooth Z	Weight (kg)	
		ØD	ød	L	L1			
CMZ01 直柄	-012-G20-SP12-01	△	12	20	100	40	1	0.2
	-025-G25-SP12-02	△	25	25	120	40	2	0.8
	-032-G32-SP12-03	△	32	32	180	40	3	1.1
削平柄	-012-XP20-SP12-01	△	12	20	100	40	1	0.2
	-025-XP25-SP12-02	△	25	25	120	40	2	0.6
	-032-XP32-SP12-03	△	32	32	180	40	3	1.0

▲ Stock △ Order

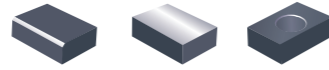
Spare Parts

Diameter ØD	Applicable Insert	Screw	Wrench
Ø12-Ø32			
	SPMT120408	L43M5×11	T20T

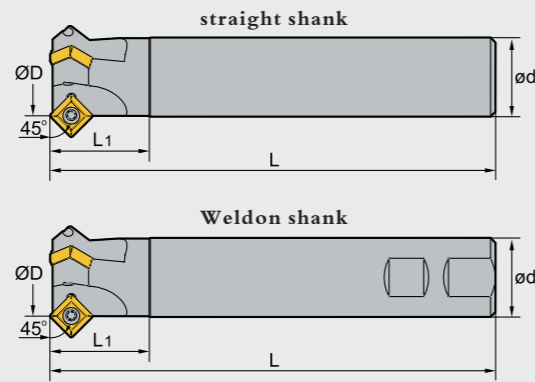
MILLING TOOLS

Chamfer milling tool

Kr:45°



CMA01 P M K



■ Type of Milling Tools

Type	Stock	Dimension (mm)				Tooth Z	Weight (kg)	
		ØD	ød	L	L1			
直柄 CMA01	-012-G20-SP12-01	▲	12	20	100	40	1	0.2
	-025-G25-SP12-02	▲	25	25	120	40	2	0.8
	-032-G32-SP12-03	▲	32	32	180	40	3	1.1
削平柄	-012-XP20-SP12-01	▲	12	20	100	40	1	0.2
	-025-XP25-SP12-02	▲	25	25	120	40	2	0.6
	-032-XP32-SP12-03	▲	32	32	180	40	3	1.0

▲ Stock △ Order

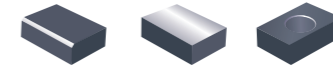
■ Spare Parts

Diameter ØD	Applicable Insert	Screw	Wrench
Ø12-Ø32	SPMT120408	L43M5×11	T20T

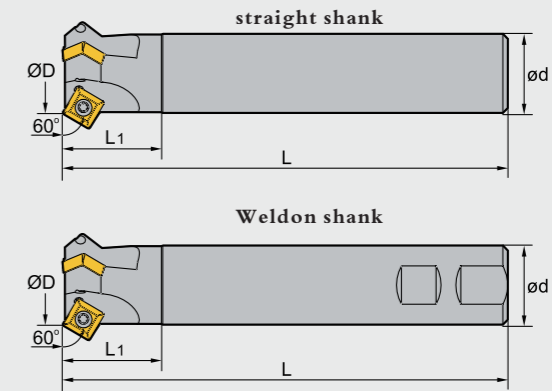
MILLING TOOLS

Chamfer milling tool

Kr:60°



CMD01 P M K



■ Type of Milling Tools

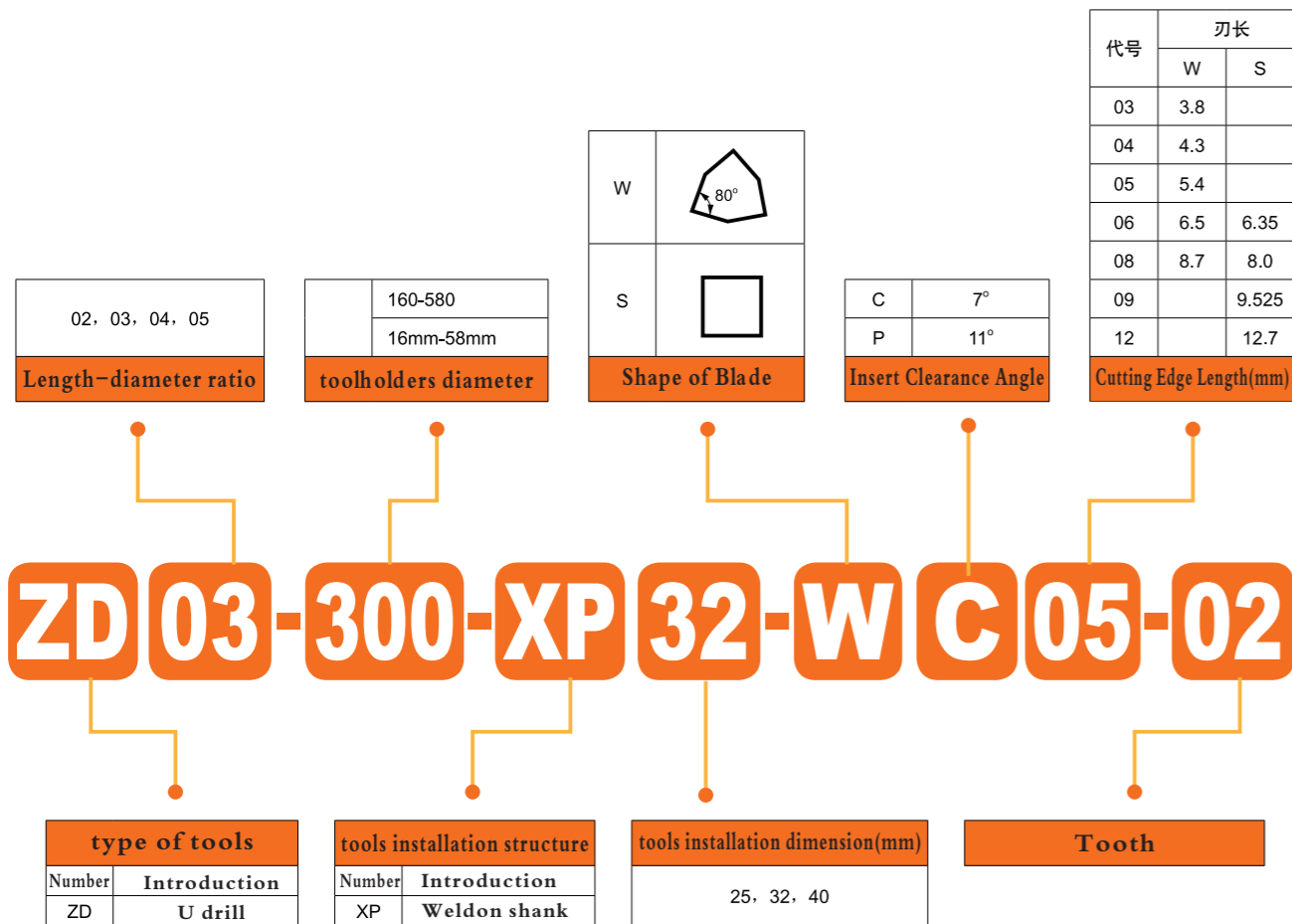
Type	Stock	Dimension (mm)				Tooth Z	Weight (kg)	
		ØD	ød	L	L1			
直柄 CMD01	-012-G20-SP12-01	▲	12	20	100	40	1	0.2
	-025-G25-SP12-02	▲	25	25	120	40	2	0.8
	-036-G32-SP12-03	▲	36	32	180	40	3	1.0
削平柄	-012-XP20-SP12-01	▲	12	20	100	40	1	0.2
	-025-XP25-SP12-02	▲	25	25	120	40	2	0.6
	-036-XP32-SP12-03	▲	36	32	180	40	3	1.0

▲ Stock △ Order

■ Spare Parts

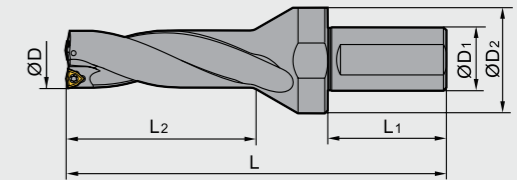
Diameter ØD	Applicable Insert	Screw	Wrench
Ø12-Ø32	SPMT120408	L43M5×11	T20T

Indexable U drill Code Key



Indexable u drill

ZD03

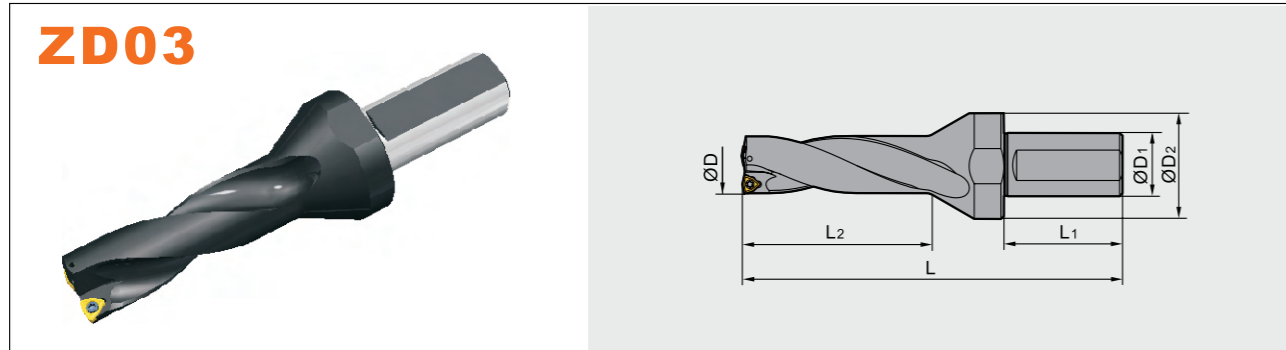


Type	Stock	Dimension (mm)						Applicable Insert	Screw	Wrench
		D	D ₁	D ₂	L ₁	L ₂	L			
ZD03-160-XP25-WC03-02	▲	16	25	32	56	52	129	WCMX030208	L60M2.5×6	T08
ZD03-170-XP25-WC03-02	▲	17	25	32	56	55	133	WCMX030208	L60M2.5×6	T08
ZD03-180-XP25-WC03-02	▲	18	25	32	56	58	137	WCMX030208	L60M2.5×6	T08
ZD03-190-XP25-WC03-02	▲	19	25	32	56	61	140	WCMX030208	L60M2.5×6	T08
ZD03-200-XP25-WC03-02	▲	20	25	32	56	64	143	WCMX030208	L60M2.5×6	T08
ZD03-210-XP25-WC04-02	▲	21	25	45	56	67	153	WCMX040208	L60M2.5×6	T08
ZD03-220-XP25-WC04-02	▲	22	25	45	56	70	156	WCMX040208	L60M2.5×6	T08
ZD03-230-XP25-WC04-02	▲	23	25	45	56	73	159	WCMX040208	L60M2.5×6	T08
ZD03-240-XP25-WC04-02	▲	24	25	45	56	76	162	WCMX040208	L60M2.5×6	T08
ZD03-250-XP25-WC04-02	▲	25	25	45	56	79	165	WCMX040208	L60M2.5×6	T08
ZD03-260-XP32-WC05-02	▲	26	32	55	60	83	176	WCMX050308	L60M3×8	T10
ZD03-270-XP32-WC05-02	▲	27	32	55	60	86	180	WCMX050308	L60M3×8	T10
ZD03-280-XP32-WC05-02	▲	28	32	55	60	89	184	WCMX050308	L60M3×8	T10
ZD03-290-XP32-WC05-02	▲	29	32	55	60	92	188	WCMX050308	L60M3×8	T10
ZD03-300-XP32-WC05-02	▲	30	32	55	60	95	192	WCMX050308	L60M3×8	T10
ZD03-310-XP40-WC06-02	▲	31	40	60	70	98	203	WCMX06T308	L60M3×8	T10
ZD03-320-XP40-WC06-02	▲	32	40	60	70	101	206	WCMX06T308	L60M3×8	T10
ZD03-330-XP40-WC06-02	▲	33	40	60	70	104	209	WCMX06T308	L60M3×8	T10
ZD03-340-XP40-WC06-02	▲	34	40	60	70	107	212	WCMX06T308	L60M3×8	T10
ZD03-350-XP40-WC06-02	▲	35	40	60	70	110	215	WCMX06T308	L60M3×8	T10
ZD03-360-XP40-WC06-02	▲	36	40	60	70	113	218	WCMX06T308	L60M3×8	T10
ZD03-370-XP40-WC06-02	▲	37	40	60	70	116	221	WCMX06T308	L60M3×8	T10
ZD03-380-XP40-WC06-02	▲	38	40	60	70	119	225	WCMX06T308	L60M3×8	T10
ZD03-390-XP40-WC06-02	▲	39	40	60	70	122	228	WCMX06T308	L60M3×8	T10

▲ Stock △ Order

MILLING TOOLS

Indexable u drill

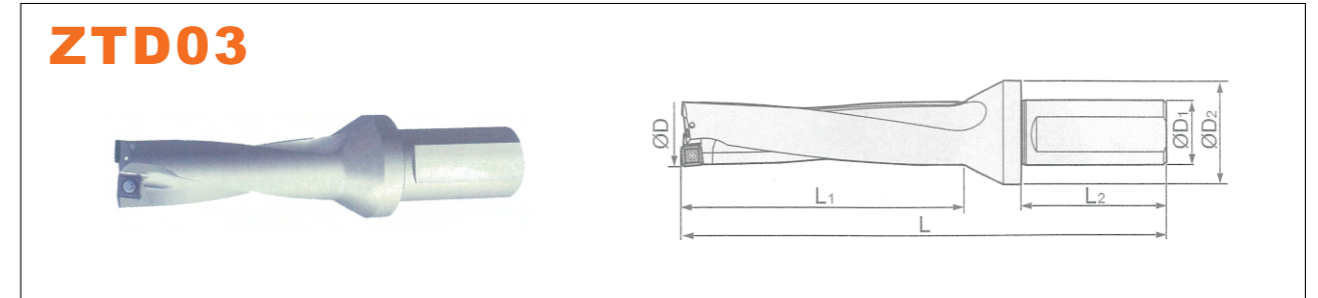


Type	Stock	Dimension (mm)						Applicable Insert	Screw	Wrench
		D	D1	D2	L1	L2	L			
ZD03-400-XP40-WC06-02	▲	40	40	60	70	125	231	WCMX06T308	L60M3×8	T10
ZD03-410-XP40-WC06-02	▲	41	40	60	70	128	234	WCMX06T308	L60M3×8	T10
ZD03-420-XP40-WC08-02	▲	42	40	60	70	131	239	WCMX080412	L60M3.5×10	T15
ZD03-430-XP40-WC08-02	▲	43	40	60	70	134	242	WCMX080412	L60M3.5×10	T15
ZD03-440-XP40-WC08-02	▲	44	40	60	70	137	245	WCMX080412	L60M3.5×10	T15
ZD03-450-XP40-WC08-02	▲	45	40	60	70	140	248	WCMX080412	L60M3.5×10	T15
ZD03-460-XP40-WC08-02	▲	46	40	60	70	143	251	WCMX080412	L60M3.5×10	T15
ZD03-470-XP40-WC08-02	▲	47	40	60	70	146	253	WCMX080412	L60M3.5×10	T15
ZD03-480-XP40-WC08-02	▲	48	40	70	70	149	255	WCMX080412	L60M3.5×10	T15
ZD03-490-XP40-WC08-02	▲	49	40	70	70	152	257	WCMX080412	L60M3.5×10	T15
ZD03-500-XP40-WC08-02	▲	50	40	70	70	155	259	WCMX080412	L60M3.5×10	T15
ZD03-510-XP40-WC08-02	▲	51	40	70	70	158	261	WCMX080412	L60M3.5×10	T15
ZD03-520-XP40-WC08-02	▲	52	40	70	70	161	263	WCMX080412	L60M3.5×10	T15
ZD03-530-XP40-WC08-02	▲	53	40	70	70	164	265	WCMX080412	L60M3.5×10	T15
ZD03-540-XP40-WC08-02	▲	54	40	70	70	167	267	WCMX080412	L60M3.5×10	T15
ZD03-550-XP40-WC08-02	▲	55	40	70	70	170	269	WCMX080412	L60M3.5×10	T15
ZD03-560-XP40-WC08-02	▲	56	40	70	70	173	271	WCMX080412	L60M3.5×10	T15
ZD03-570-XP40-WC08-02	▲	57	40	70	70	176	273	WCMX080412	L60M3.5×10	T15
ZD03-580-XP40-WC08-02	▲	58	40	70	70	179	275	WCMX080412	L60M3.5×10	T15

▲ Stock △ Order

MILLING TOOLS

Indexable u drill



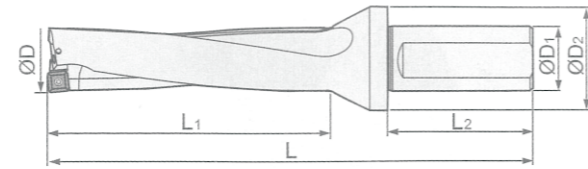
Type	Stock	Dimension (mm)						Applicable Insert	Screw	Wrench
		D	D1	D2	L1	L2	L			
ZTD03-170-XP25-SP06-02	▲	17	25	32	56	56	135	SPGT060204-PM	160M2.2×5	T08
ZTD03-180-XP25-SP06-02	▲	18	25	32	59	56	138	SPGT060204-PM	160M2.2×5	T08
ZTD03-190-XP25-SP06-02	▲	19	25	32	62	56	140	SPGT060204-PM	160M2.2×5	T08
ZTD03-200-XP25-SP06-02	▲	20	25	32	65	56	143	SPGT060204-PM	160M2.2×5	T08
ZTD03-210-XP25-SP06-02	▲	21	25	32	68	56	146	SPGT060204-PM	160M2.2×5	T08
ZTD03-220-XP25-SP06-02	▲	22	25	32	71	56	149	SPGT060204-PM	160M2.2×5	T08
ZTD03-230-XP25-SP07-02	▲	23	25	40	74	56	153	SPGT07T308-PM	160M2.5×6	T08
ZTD03-240-XP25-SP07-02	▲	24	25	40	77	56	159	SPGT07T308-PM	160M2.5×6	T08
ZTD03-250-XP25-SP07-02	▲	25	25	40	80	56	159	SPGT07T308-PM	160M2.5×6	T08
ZTD03-260-XP25-SP07-02	▲	26	25	40	83	56	162	SPGT07T308-PM	160M2.5×6	T08
ZTD03-270-XP25-SP07-02	▲	27	25	40	86	56	165	SPGT07T308-PM	160M2.5×6	T08
ZTD03-280-XP25-SP07-02	▲	28	25	40	89	56	168	SPGT07T308-PM	160M2.5×6	T08
ZTD03-290-XP25-SP07-02	▲	29	32	45	92	60	178	SPGT07T308-PM	160M2.5×6	T08
ZTD03-300-XP32-SP09-02	▲	30	32	45	95	60	181	SPGT090408-PM	160M3.5×8	T15
ZTD03-310-XP32-SP09-02	▲	31	32	45	98	60	184	SPGT090408-PM	160M3.5×8	T15
ZTD03-320-XP32-SP09-02	▲	32	32	45	101	60	187	SPGT090408-PM	160M3.5×8	T15
ZTD03-330-XP32-SP09-02	▲	33	32	45	104	60	190	SPGT090408-PM	160M3.5×8	T15
ZTD03-340-XP32-SP09-02	▲	34	32	45	107	60	193	SPGT090408-PM	160M3.5×8	T15
ZTD03-350-XP32-SP09-02	▲	35	32	45	110	60	196	SPGT090408-PM	160M3.5×8	T15
ZTD03-360-XP32-SP09-02	▲	36	32	45	113	60	199	SPGT090408-PM	160M3.5×8	T15
ZTD03-370-XP40-SP11-02	▲	37	40	55	117	70	217	SPGT110408-PM	160M4×10	T15
ZTD03-380-XP40-SP11-02	▲	38	40	55	119	70	220	SPGT110408-PM	160M4×10	T15
ZTD03-390-XP40-SP11-02	▲	39	40	55	122	70	223	SPGT110408-PM	160M4×11	T15
ZTD03-400-XP40-SP11-02	▲	40	40	55	125	70	231	SPGT110408-PM	160M4×10	T15
ZTD03-410-XP40-SP11-02	▲	41	40	55	128	70	229	SPGT110408-PM	160M4×10	T15
ZTD03-420-XP40-SP11-02	▲	42	40	55	131	70	232	SPGT110408-PM	160M4×10	T15
ZTD03-430-XP40-SP11-02	△	43	40	55	134	70	240	SPGT110408-PM	160M4×10	T15
ZTD03-440-XP40-SP14-02	△	44	40	60	138	70	248	SPGT140512-PM	160M5×13	T20
ZTD03-450-XP40-SP14-02	△	45	40	60	141	70	251	SPGT140512-PM	160M5×13	T20
ZTD03-460-XP40-SP14-02	△	46	40	60	144	70	254	SPGT140512-PM	160M5×13	T20
ZTD03-470-XP40-SP14-02	△	47	40	60	147	70	257	SPGT140512-PM	160M5×13	T20
ZTD03-480-XP40-SP14-02	△	48	40	60	149	70	260	SPGT140512-PM	160M5×13	T20
ZTD03-490-XP40-SP14-02	△	49	40	60	152	70	263	SPGT140512-PM	160M5×13	T20
ZTD03-500-XP40-SP14-02	△	50	40	60	155	70	266	SPGT140512-PM	160M5×13	T20

MILLING TOOLS

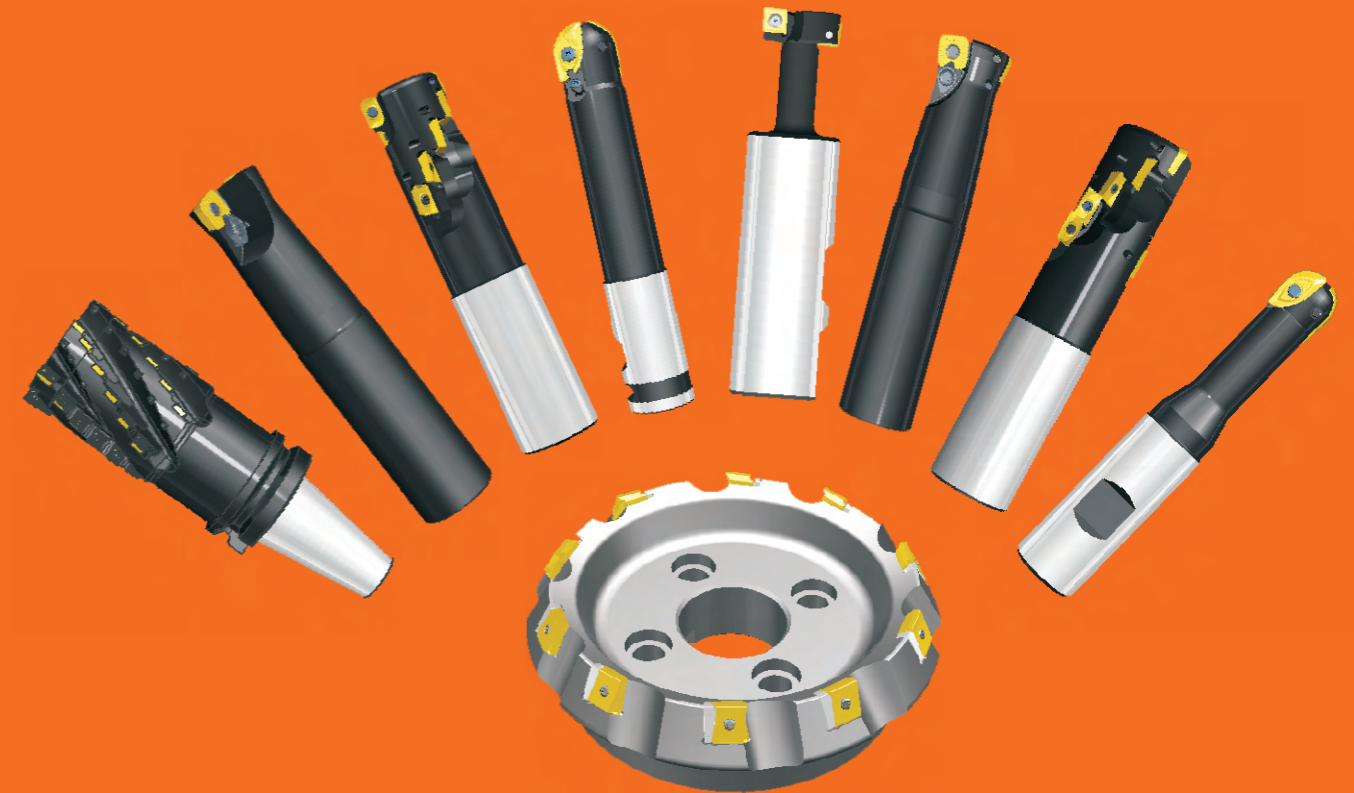
Indexable u drill



ZTD04



Type	Stock	Dimension (mm)						Applicable Insert	Screw	Wrench
		D	D1	D2	L1	L2	L			
ZTD04-170-XP25-SP06-02	▲	17	25	32	73	56	152	SPGT060204-PM	160M2.2×5	T08
ZTD04-180-XP25-SP06-02	▲	18	25	32	77	56	156	SPGT060204-PM	160M2.2×5	T08
ZTD04-190-XP25-SP06-02	▲	19	25	32	81	56	160	SPGT060204-PM	160M2.2×5	T08
ZTD04-200-XP25-SP06-02	▲	20	25	32	85	56	163	SPGT060204-PM	160M2.2×5	T08
ZTD04-210-XP25-SP06-02	▲	21	25	32	89	56	167	SPGT060204-PM	160M2.2×5	T08
ZTD04-220-XP25-SP06-02	▲	22	25	32	93	56	171	SPGT060204-PM	160M2.2×5	T08
ZTD04-230-XP25-SP07-02	▲	23	25	40	97	56	176	SPGT07T308-PM	160M2.5×6	T08
ZTD04-240-XP25-SP07-02	▲	24	25	40	101	56	180	SPGT07T308-PM	160M2.5×6	T08
ZTD04-250-XP25-SP07-02	▲	25	25	40	105	56	184	SPGT07T308-PM	160M2.5×6	T08
ZTD04-260-XP25-SP07-02	▲	26	25	40	109	56	188	SPGT07T308-PM	160M2.5×6	T08
ZTD04-270-XP25-SP07-02	▲	27	25	40	113	56	192	SPGT07T308-PM	160M2.5×6	T08
ZTD04-280-XP25-SP07-02	▲	28	25	40	117	56	196	SPGT07T308-PM	160M2.5×6	T08
ZTD04-290-XP32-SP07-02	▲	29	32	45	121	60	207	SPGT07T308-PM	160M2.5×6	T08
ZTD04-300-XP32-SP09-02	▲	30	32	45	125	60	211	SPGT090408-PM	160M3.5×8	T15
ZTD04-310-XP32-SP09-02	▲	31	32	45	129	60	215	SPGT090408-PM	160M3.5×8	T15
ZTD04-320-XP32-SP09-02	▲	32	32	45	133	60	219	SPGT090408-PM	160M3.5×8	T15
ZTD04-330-XP32-SP09-02	▲	33	32	45	137	60	223	SPGT090408-PM	160M3.5×8	T15
ZTD04-340-XP32-SP09-02	▲	34	32	45	141	60	227	SPGT090408-PM	160M3.5×8	T15
ZTD04-350-XP32-SP09-02	▲	35	32	45	145	60	231	SPGT090408-PM	160M3.5×8	T15
ZTD04-360-XP32-SP09-02	▲	36	32	45	149	60	235	SPGT090408-PM	160M3.5×8	T15
ZTD04-370-XP40-SP11-02	▲	37	40	55	154	70	254	SPGT110408-PM	160M4×10	T15
ZTD04-380-XP40-SP11-02	▲	38	40	55	158	70	258	SPGT110408-PM	160M4×10	T15
ZTD04-390-XP40-SP11-02	▲	39	40	55	161	70	267	SPGT110408-PM	160M4×11	T15
ZTD04-400-XP40-SP11-02	▲	40	40	55	165	70	271	SPGT110408-PM	160M4×10	T15
ZTD04-410-XP40-SP11-02	▲	41	40	55	169	70	270	SPGT110408-PM	160M4×10	T15
ZTD04-420-XP40-SP11-02	▲	42	40	55	173	70	279	SPGT110408-PM	160M4×10	T15
ZTD04-430-XP40-SP11-02	△	43	40	55	177	70	283	SPGT110408-PM	160M4×10	T15
ZTD04-440-XP40-SP14-02	△	44	40	60	182	70	292	SPGT140512-PM	160M5×13	T20
ZTD04-450-XP40-SP14-02	△	45	40	60	186	70	296	SPGT140512-PM	160M5×13	T20
ZTD04-460-XP40-SP14-02	△	46	40	60	190	70	300	SPGT140512-PM	160M5×13	T20
ZTD04-470-XP40-SP14-02	△	47	40	60	194	70	304	SPGT140512-PM	160M5×13	T20
ZTD04-480-XP40-SP14-02	△	48	40	60	198	70	308	SPGT140512-PM	160M5×13	T20
ZTD04-490-XP40-SP14-02	△	49	40	60	202	70	312	SPGT140512-PM	160M5×13	T20
ZTD04-500-XP40-SP14-02	△	50	40	60	206	70	316	SPGT140512-PM	160M5×13	T20



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