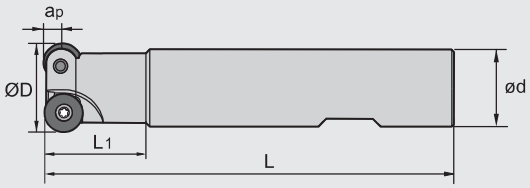
Face milling tools

FMR05

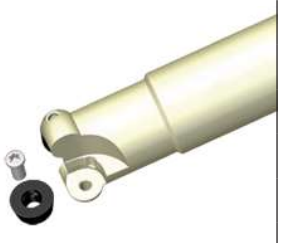


Specification of tools

Type		Dimensions(inch)					
		ØD	ød	L_1	L	$a_p$max	Z (Number of teeth)
FMR05	-0.625"-XP0.75"-RP2-02	0.625	0.75	1.75	4	0.125	2
	-0.750"-XP0.75"-RP2-02	0.750	0.75	1.75	4	0.125	2
	-0.875"-XP0.75"-RP2-03	0.875	0.75	1.75	4	0.125	3
	-0.875"-XP0.75"-RP3-02	0.875	0.75	1.75	4	0.180	2
	-1.000"-XP0.75"-RP3-02	1.000	0.75	1.75	4	0.180	2
	-1.250"-XP1.00"-RP3-03	1.250	1.00	2.75	5	0.180	3
	-1.250"-XP1.00"-RP4-02	1.250	1.00	2.75	5	0.250	2
	-1.500"-XP1.25"-RP4-03	1.500	1.25	2.75	5	0.250	3
	-1.750"-XP1.50"-RP4-04	1.750	1.50	2.75	5	0.250	4

D

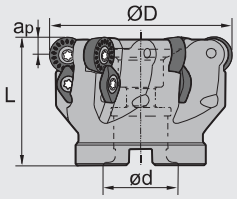
Spare parts

Diameter ØD	Insert specification	Insert screw	Wrench	Sketch of installation
				
Ø0.625"~Ø0.875"	RPMW06T200	I60M2.2×5.5	WT07IP	
	RPMW2T200			
Ø0.875"~Ø1.250"	RPMW09T300	I60M3×7	WT09IP	
	RPMW3(2.5)			
Ø1.250"~Ø1.750"	RPMW12T400	I60M4×8.4	WT15IP	
	RPMW43			

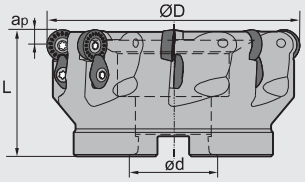
Face milling tools

FMR05

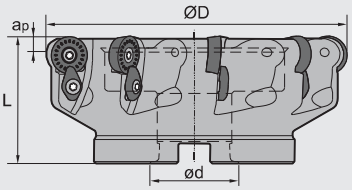
A type of mounting



B type of mounting



C type of mounting



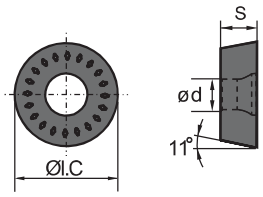
Specification of tools

Type		Dimensions(inch)					
		ØD	ød	L	$a_p$max	Z (Number of teeth)	Interface form
FMR05	-2.00"-A0.75"-RP4-05	2.00	0.75	1.75	0.250	5	A
	-2.50"-A0.75"-RP4-06	2.50	0.75	1.75	0.250	6	A
	-3.00"-A1.00"-RP4-07	3.00	1.00	2.00	0.250	7	A
	-3.00"-A1.00"-RP5-05	3.00	1.00	2.00	0.315	5	A
	-4.00"-B1.50"-RP5-07	4.00	1.50	2.50	0.315	7	B
	-5.00"-B1.50"-RP5-08	5.00	1.50	2.50	0.315	8	B
	-5.00"-B1.50"-RP6-07	5.00	1.50	2.50	0.375	7	B
	-6.00"-B2.00"-RP6-08	6.00	2.00	2.50	0.375	8	B
	-8.00"-C2.50"-RP6-09	8.00	2.50	2.50	0.375	9	C

Spare parts

Diameter ØD	Insert specification	Insert screw	Wedge	Wedge Screw	Wrench	Sketch of installation
						
Ø2.00"~Ø3.00"	RPMW120400	I60M4×8.4	WD-204	I60M4×10	WT15IP	
	RPMW43					
Ø3.00"~Ø5.00"	RPMW160500	I60M5×13	WD-208	I60M5×13	WT20IP	
	RPMW50500					
Ø5.00"~Ø8.00"	RPMW190600					
	RPMW64					

Selection of inserts



Insert shape	Type	Dimensions(inch)			Coated grade														Cermet		Cemented carbide			
		ØI.C	S	ød	YBC302	YBM251	YBM253	YBM351	YBD152	YBD252	YBG102	YBG202	YBG205	YB9320	YBG302	YBG152	YBG252	YBS203	YBS303	YNG151	YNG151C	YC30S	YD051	YD101	YD201
	RPMW2T200	0.250	0.101	0.098								○	●		○										
	RPMW3(2.5)	0.375	0.156	0.134								○	●		○										
	RPMW43	0.500	0.187	0.173								○	●		○										
	RPMW50500	0.625	0.219	0.217								○	●		○										
	RPMW64	0.750	0.250	0.256								○	●		○										

● Always stock available ○ Produce according to order

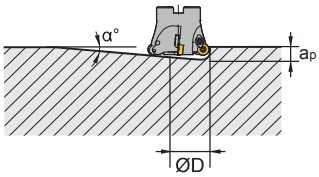
Recommended cutting parameters

Workpiece material		Hardness HB	Insert grade	Cutting parameters	
				V(SFPM)	f(IPT)
P	Low-carbon steel、Soft steel	≤180	YBG202	900(650-1200)	0.008(0.004-0.018)
			YBG302	700(600-1000)	0.010(0.006-0.018)
	High-carbon steel、Alloy steel	180-280	YBG202	800(600-1200)	0.008(0.004-0.018)
			YBG302	650(500-1000)	0.010(0.006-0.018)
	Alloy tool steel	280-350	YBG202	700(550-1100)	0.008(0.004-0.018)
			YBG302	600(500-800)	0.010(0.006-0.018)
M	Stainless steel	≤270	YBG302	500(300-700)	0.010(0.004-0.018)
			YBG202	500(350-900)	0.008(0.004-0.018)
			YBG205		
K	Cast iron	180-250	YBG302	700(400-1000)	0.008(0.004-0.018)

D

Ramp milling, helical interpolation milling

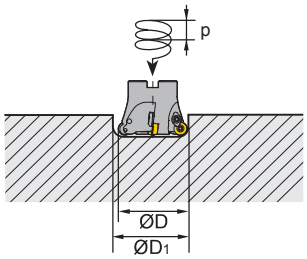
● Ramp milling



$$L_m = \frac{a_p}{\tan\alpha}$$

α:Plunge angle

● Helical interpolation milling



$$P = \tan\alpha \times \pi \times D_1$$

α:Helix angle

Insert	Diameter ØD(in)	Max.cutting depth ap(in)	Max.cutting depth α°	Min.length L_m(in)	Min.diameter $ØD_1$(in)	Max.diameter (in)
RPMW2**	0.625"	0.118	13.0	0.512	1.012	0.118
	0.750"	0.118	9.0	0.748	1.26	0.118
	0.875"	0.118	6.5	1.035	1.516	0.118
RPMW3**	0.875"	0.185	15.0	0.689	1.380	0.185
	1.000"	0.185	13.0	0.803	1.630	0.185
	1.250"	0.185	9.5	1.106	2.130	0.185
RPMW4**	1.250"	0.248	13.0	1.142	2.004	0.248
	1.500"	0.248	9.0	1.567	2.504	0.248
	1.750"	0.248	6.5	2.177	3.004	0.248
	2.000"	0.248	7.0	2.020	3.504	0.248
	2.500"	0.248	5.3	2.670	4.504	0.248
	3.000"	0.248	4.0	3.547	5.504	0.248
RPMW5**	3.000"	0.299	5.0	3.421	5.402	0.299
	4.000"	0.299	3.7	4.626	7.402	0.299
	5.000"	0.299	2.7	6.346	9.402	0.299
RPMW6**	5.000"	0.374	3.5	6.114	9.252	0.374
	6.000"	0.374	2.7	7.929	11.252	0.374
	8.000"	0.374	2.0	10.709	15.252	0.374

Reduce the feed rate when plunging and circular milling.
"Attention"—drilling can form long chips.