





REAMERS

COMPOSITE REAMING TOOLS INDEX

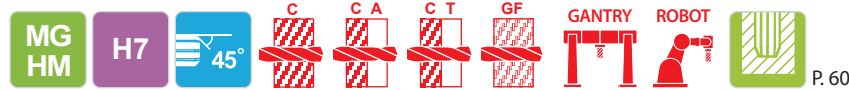
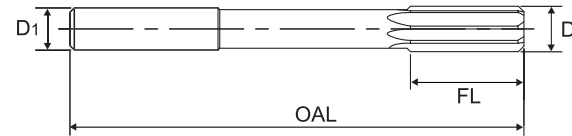
INCH METRIC	MODEL	DESCRIPTION	SIZE		PAGE
			INCH	METRIC	
URM5A1AA URM5A2AA		Solid Carbide, NC Machine Reamers - Straight Flutes	1/4 ~ 1"	6.0 ~ 25.0	46
URM5A1AB URM5A2AB		Solid Carbide, NC Machine Reamers - Helical Flutes	1/4 ~ 1"	6.0 ~ 25.0	47

◎ : Excellent ○ : Good

INCH METRIC	Working Material				Machine Type			
	CFRP	CFRP/AL	CFRP/Ti	GFRP	ADU	Gantry	Robot	Hand-Held
URM5A1AA URM5A2AA	◎	◎	◎	◎		◎	◎	
URM5A1AB URM5A2AB	◎	◎	◎	◎		◎	◎	

CARBIDE, NC MACHINE REAMERS - STRAIGHT FLUTES

- Material – Up to Ø1/2"(12.0mm) : Solid Carbide
– Over Ø1/2"(12.0mm) : carbide head brazed
- Straight Flutes, Right Hand Cut
- Unequal Flute Spacing
- O.D Tolerance DIN 1420 for H7
- Shank DIN 6535-HA



INCH SIZES

(Unit : inch)

EDP	Drill Diameter		Shank Diameter D1	Flute Length FL	Overall Length OAL	No. of Flutes
	D					
	Fractional	Decimal				
URM5A1AA0250	1/4	.2500	1/4	1	3	6
URM5A1AA0313	5/16	.3125	5/16	1-1/8	3-1/4	6
URM5A1AA0375	3/8	.3750	3/8	1-1/4	3-1/2	6
URM5A1AA0438	7/16	.4375	7/16	1-1/2	4	6
URM5A1AA0500	1/2	.5000	1/2	1-1/2	4	8
URM5A1AA0625	5/8	.6250	5/8	1-1/2	5	8
URM5A1AA0750	3/4	.7500	3/4	2	6	8
URM5A1AA0875	7/8	.8750	7/8	2	6	8
URM5A1AA1000	1	1.0000	1	2	6	8

METRIC SIZES

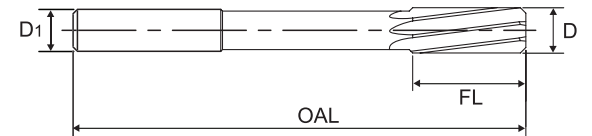
(Unit : mm)

EDP	Drill Diameter	Shank Diameter D1	Flute Length FL	Overall Length OAL	No. of Flutes
	D				
URM5A2AA0600	6	6	26	93	6
URM5A2AA0800	8	8	33	117	6
URM5A2AA1000	10	10	38	133	6
URM5A2AA1200	12	12	44	151	6
URM5A2AA1400	14	16	47	160	8
URM5A2AA1600	16	16	52	170	8
URM5A2AA1800	18	20	56	182	8
URM5A2AA2000	20	20	60	195	8
URM5A2AA2500	25	25	75	200	8

- ▶ CVD Diamond Coating and other coatings are available on Customer Request
- ▶ Available as made to order

CARBIDE, NC MACHINE REAMERS - HELICAL FLUTES

- Material – Up to Ø1/2"(12.0mm) : Solid Carbide
– Over Ø1/2"(12.0mm) : carbide head brazed
- Left Spiral Flutes, Right Hand Cut
- Unequal Flute Spacing
- O.D Tolerance DIN 1420 for H7
- Shank DIN 6535-HA



INCH SIZES

(Unit : inch)

EDP	Drill Diameter		Shank Diameter D1	Flute Length FL	Overall Length OAL	No. of Flutes
	D					
	Fractional	Decimal				
URM5A1AB0250	1/4	.2500	1/4	1	3	6
URM5A1AB0313	5/16	.3125	5/16	1-1/8	3-1/4	6
URM5A1AB0375	3/8	.3750	3/8	1-1/4	3-1/2	6
URM5A1AB0438	7/16	.4375	7/16	1-1/2	4	6
URM5A1AB0500	1/2	.5000	1/2	1-1/2	4	8
URM5A1AB0625	5/8	.6250	5/8	1-1/2	5	8
URM5A1AB0750	3/4	.7500	3/4	2	6	8
URM5A1AB0875	7/8	.8750	7/8	2	6	8
URM5A1AB1000	1	1.0000	1	2	6	8

METRIC SIZES

(Unit : mm)

EDP	Drill Diameter	Shank Diameter D1	Flute Length FL	Overall Length OAL	No. of Flutes
	D				
URM5A2AB0600	6	6	26	93	6
URM5A2AB0800	8	8	33	117	6
URM5A2AB1000	10	10	38	133	6
URM5A2AB1200	12	12	44	151	6
URM5A2AB1400	14	16	47	160	8
URM5A2AB1600	16	16	52	170	8
URM5A2AB1800	18	20	56	182	8
URM5A2AB2000	20	20	60	195	8
URM5A2AB2500	25	25	75	200	8

- ▶ CVD Diamond Coating and other coatings are available on Customer Request
- ▶ Available as made to order

CUTTING CONDITIONS LIST

MILLING

WORK MATERIAL	OPERATION	Tool Diameter in(mm)											
		1/8" (3.175mm)			1/4" (6.35mm)			3/8" (9.53mm)			1/2" (12.7mm)		
		RPM	FEED (IPM)	FEED (mm/min.)	RPM	FEED (IPM)	FEED (mm/min.)	RPM	FEED (IPM)	FEED (mm/min.)	RPM	FEED (IPM)	FEED (mm/min.)
CFRP	SLOTING	12000	30	762	6000	30	762	4500	30	762	4000	30	762
	SIDE MILLING (PROFILING)	15000	50	1270	8000	45	1143	5000	45	1143	4000	40	1016
GFRP	SLOTING	10000	25	635	5000	25	635	4000	25	635	3500	25	635
	SIDE MILLING (PROFILING)	12000	35	889	7000	35	889	5500	35	889	4500	35	889
HONEY COMB	SLOTING	25000	100	2540	20000	100	2540	18000	100	2540	15000	400	10160
	SIDE MILLING (PROFILING)	25000	100	2540	25000	100	2540	25000	100	2540	25000	400	10160

DRILLING

WORK MATERIAL	SPEED (SFM)	Tool Diameter (inch)			SPEED (m/min.)	Tool Diameter (mm)		
		1/4-3/8	3/8-1/2	1/2-1.00		6.35-9.525	9.525-12.7	12.7-25.4
		FEED (IPR)						FEED (mm/rev.)
CFRP, GFRP	300 - 400	.006 - .008	.008 - .015	.015 - .025	91.4 - 121.9	.1524 - .2032	.2032 - .381	.381 - 0.635
CFRP/AL	300 - 400	.006 - .008	.008 - .015	.015 - .025	91.4 - 121.9	.1524 - .2032	.2032 - .381	.381 - 0.635
CFRP/Ti	30 - 70	.006 - .010	.010 - .015	.015 - .020	9.1 - 21.3	.1524 - .254	.1524 - .381	.381 - 0.508

REAMERS

WORK MATERIAL	SPEED (SFM)	Tool Diameter (inch)			SPEED (m/min.)	Tool Diameter (mm)		
		1/4-3/8	3/8-1/2	1/2-1.00		6.35-9.525	9.525-12.7	12.7-25.4
		FEED (IPR)						FEED (mm/rev.)
CFRP, GFRP	300 - 400	.006 - .008	.008 - .015	.015 - .025	91.4 - 121.9	.1524 - .2032	.2032 - .381	.381 - 0.635
CFRP/AL	300 - 400	.006 - .008	.008 - .015	.015 - .025	91.4 - 121.9	.1524 - .2032	.2032 - .381	.381 - 0.635
CFRP/Ti	30 - 70	.006 - .010	.010 - .015	.015 - .020	9.1 - 21.3	.1524 - .254	.1524 - .381	.381 - 0.508

ICON GUIDE LIST

ICON	Contents	ICON	Contents
	Micro Grain Carbide		Cutting Condition
	Polycrystalline Diamond		CFRP (Carbon Fiber Reinforced Plastics)
	Diamond Coating		GFRP (Glass Fiber Reinforced Plastics)
	Point Angle		KFRP (Kevlar Fiber Reinforced Plastics)
	Number of Flutes		CFRP / Aluminum Stacks
	Type of Shank		CFRP / Titanium Stacks
	Helix Angle		Honeycomb
	Chamfer Angle		CNC Gantry Robot End-Effectors
	O.D. Tolerance of Reamer (DIN 1420 for H7)		Power Feed /
	Internal Coolant Holes		Hand Held / Hand Held(Micro-Stop)
			Type of End Teeth