

M8 Series Application Guide – Speed & Feed (inch and metric)

ISO Code	Type of Cut	Tool Dia.	Axial Depth	Radial Depth	INCH				METRIC						
					Speed (SFM)	RPM	IPT	IPM	Tool Dia.	Axial Depth	Radial Depth	Speed (M/Min)	RPM	MMPT	MM/Min
S Inconel, Hastalloy, Waspalloy Not recommended for titanium	Rough	1/4	1.25 x D	.2 x D	80	1222	.0008	5.87	6.0	1.25 x D	.2 x D	24.38	1239	.019	141.2
	Slot		0.165	1 x D	80	1222	.00050	3.67		4.15	1 x D	24.38	1239	.0127	94.4
	Rough	5/16	1.25 x D	.2 x D	80	978	.0010	5.87	8.0	1.25 x D	.2 x D	24.38	970	.025	145.5
	Slot		0.205	1 x D	80	978	.00063	3.67		5.20	1 x D	24.38	970	.0160	93.1
	Rough	3/8	1.25 x D	.2 x D	80	815	.0012	5.87	10.0	1.25 x D	.2 x D	24.38	776	.031	144.3
	Slot		0.250	1 x D	80	815	.00075	3.67		6.35	1 x D	24.38	776	.0190	88.5
	Rough	1/2	1.25 x D	.2 x D	80	611	.0016	5.87	12.0	1.25 x D	.2 x D	24.38	647	.037	143.6
	Slot		0.330	1 x D	80	611	.00100	3.67		8.35	1 x D	24.38	647	.0254	98.5
	Rough	5/8	1.25 x D	.2 x D	80	489	.0020	5.87	16.0	1.25 x D	.2 x D	24.38	485	.050	145.5
	Slot		0.415	1 x D	80	489	.00125	3.67		10.50	1 x D	24.38	485	.0317	92.2
	Rough	3/4	1.25 x D	.2 x D	80	407	.0024	5.87	20.0	1.25 x D	.2 x D	24.38	388	.061	142.1
	Slot		0.500	1 x D	80	407	.00150	3.67		12.70	1 x D	24.38	388	.0380	88.4
	Rough	1	1.25 x D	.2 x D	80	306	.0032	5.87	25.0	1.25 x D	.2 x D	24.38	310	.080	148.8
	Slot		0.665	1 x D	80	306	.00200	3.67		16.90	1 x D	24.38	310	.0508	94.4

For using HEM techniques in hi-temp alloys, please reference the POW•R•PATH line of end mills beginning on page 14.

≈	Approximately Equals	<	Less Than
≤	Less Than or Equal To	>	Greater Than
≥	Greater Than or Equal To	=	Equals
x	Multiply		

Common Machining Formulas

$$RPM = \frac{SFM \times 3.82}{D}$$

$$SFM = RPM \times D \times .262$$

$$IPM = RPM \times IPT \times Z$$

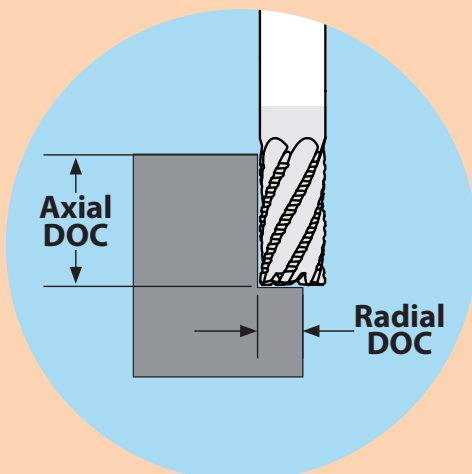
$$MRR = RDOC \times ADOC \times IPM$$

$$RPM = \frac{M/min \times 318.3}{D}$$

$$M/min = RPM \times D \times .00314$$

$$MMPM = RPM \times MMPT \times Z$$

$$MRR = RDOC \times ADOC \times MMPM$$



- D** Tool Diameter
- Z** Number of Flutes
- RPM** Revolutions per Minute
- SFM** Surface Feet per Minute
- M/min** Surface Meters per Minute
- IPM** Inches per Minute
- MMPM** Millimeters per Minute
- IPT** Inch per Tooth
- MMPT** Millimeters per Tooth
- MRR** Metal Removal Rate
- RDOC** Radial Depth of Cut
- ADOC** Axial Depth of Cut

Technical Resources

Information on tips and adjustments for the following milling operations can be found in our Technical Resources section beginning on page 125.

- HEM slotting
- Face milling
- Helical entry ramping
- Straight line ramping
- Long tool projection adjustments
- Ball nose milling adjustments
- Other helpful tips and calculations