		INCH							METRIC						
ISO Code	Type of Cut	Tool Dia.	Axial Depth	Radial Depth	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 or Equal To
≥ Greater Than or Equal To
× Multiply
< Less Than
> Greater Than
= Equals

Common Machining Formulas

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

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

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

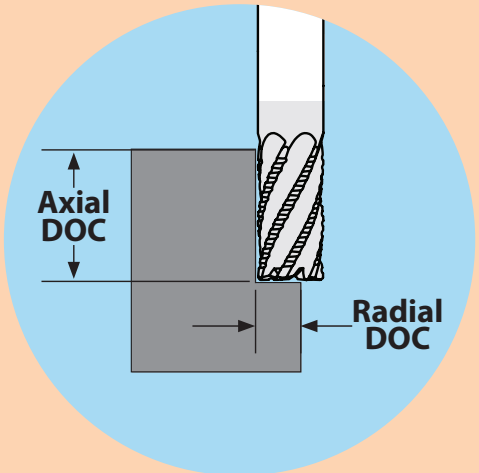
$$MRR = RDOC \times ADOC \times IPM$$

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

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

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

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



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