

**Speeds & Feeds - Boring Tools**

Speeds & Feeds listed are based on a tool that has a reach 3X the min. bore diameter/rotational min. bore diameter. These are considered safe starting parameters and will vary by application. To achieve optimal Speeds & Feeds please contact Micro 100 tech support at 800-421-8065.

Material		SFM	Chip Load (IPR) By Cutter Diameter											Depth of Cut
			.120	.140	.160	.180	.200	.230	.290	.320	.360	.490		
ALUMINUM ALLOY	0% - 5% Silicon (2xx, 3xx, 4xx, 5xx, 7xx, 8xx, A3xx, A4xx, B4xx, C3xx, 1xxx, 2xxx, 3xxx, 5xxx, 6xxx, 7xxx, 8xxx)	1200-2400	Roughing	0.0014	0.0016	0.0018	0.0020	0.0023	0.0026	0.0033	0.0036	0.0041	0.0056	.06 x Head Width
			Finishing	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
	5%-8% Silicon (3xx, A3xx, C3xx, 4xx, A4xx, B4xx, 4xxx)	1200-2400	Roughing	0.0012	0.0014	0.0016	0.0018	0.0020	0.0023	0.0029	0.0033	0.0037	0.0050	.06 x Head Width
			Finishing	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
	8%-12% Silicon (3xx, A3xx, C3xx, 4xx, A4xx, B4xx, 4xxx)	1000-2000	Roughing	0.0010	0.0012	0.0014	0.0015	0.0017	0.0020	0.0025	0.0027	0.0031	0.0042	.06 x Head Width
			Finishing	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
	12%-16% Silicon (3xx, A3xx, C3xx, 4xx, A4xx, B4xx)	700-1400	Roughing	0.0008	0.0009	0.0011	0.0012	0.0013	0.0016	0.0019	0.0022	0.0024	0.0033	.06 x Head Width
			Finishing	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
MAGNESIUM ALLOYS		1200-2400	Roughing	0.0014	0.0016	0.0018	0.0020	0.0023	0.0026	0.0033	0.0036	0.0041	0.0056	.06 x Head Width
ZINC ALLOYS			Finishing	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	.30 x Radius
COPPER ALLOY	High Coppers - 90%+ (C1xxxx) Phosphor Bronzes (Copper Tin alloys, C5xxxx) Copper Nickels, Nickel Silvers (Copper Nickel alloys, C7xxxx)	400-800	Roughing	0.0011	0.0013	0.0014	0.0016	0.0018	0.0021	0.0026	0.0029	0.0032	0.0044	.06 x Head Width
	Brass (Copper Zinc alloys, C2xxxx, C3xxxx, C4xxxx, C66400-C69800) Aluminum Bronzes (Copper Aluminum alloys, C60600-C64200) Silicon Bronzes (Copper Silicon alloys, C64700-C66100) Cast Copper Alloys (C83300-C86200, C86400-C87900, C92200-C95800, C97300-C97800, C99400-C99700)	900-1800	Finishing	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	.30 x Radius
PLASTICS	Unfilled Plastics	600-1200	Roughing	0.0014	0.0017	0.0019	0.0021	0.0024	0.0027	0.0034	0.0038	0.0043	0.0058	.06 x Head Width
			Finishing	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
	5% - 20% Filled or Fiber Reinforced	450-900	Roughing	0.0013	0.0015	0.0017	0.0019	0.0022	0.0025	0.0031	0.0034	0.0039	0.0053	.06 x Head Width
			Finishing	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
	20% - 40% Filled or Fiber Reinforced	300-600	Roughing	0.0012	0.0013	0.0015	0.0017	0.0019	0.0022	0.0028	0.0031	0.0034	0.0047	.06 x Head Width
			Finishing	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
GRAPHITE	POCO 3	500-1000	Roughing	0.0016	0.0018	0.0021	0.0023	0.0026	0.0030	0.0038	0.0042	0.0047	0.0064	.06 x Head Width
			Finishing	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
GREEN CARBIDE & GREEN CERAMICS		100-400	Roughing	0.0014	0.0017	0.0019	0.0021	0.0024	0.0027	0.0034	0.0038	0.0043	0.0058	.06 x Head Width
			Finishing	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001

**Helpful Hints**

- Program in G96 (Constant Surface Footage On) in conjunction with G50 (Maximum Spindle Speed) to achieve best part finish
- Calculate RPM by part diameter being cut