

End Mill Speed & Feed Recommendations

NOTE: The recommendations listed below should be considered only as a starting point. To achieve optimum results, variations may be necessary.

MATERIAL	SPEED [SFM]	END MILL DIAMETER/Feed Per Tooth [inches]				
		1/8"	1/4"	1/2"	3/4"	1"
Aluminum/Aluminum Alloys	900-1500	.0005	.002	.004	.005	.008
Brass/Bronze	400- 750	.001	.002	.003	.004	.005
Copper/Copper Alloys	450- 850	.001	.002	.002	.004	.006
Cast Iron, Soft	300- 750	.001	.002	.003	.006	.008
Cast Iron, Hard	125- 350	.0004	.0008	.002	.003	.004
Ductile Iron	150- 450	.0005	.001	.002	.004	.006
Malleable Iron	300- 550	.0005	.001	.003	.005	.007
Magnesium/Magnesium Alloys	1100-1600	.001	.002	.004	.006	.010
Monel/High Nickel Steel	225- 350	.0005	.001	.002	.003	.004
Nickel Base Hi-Temp. Alloys	50- 125	.0004	.0008	.001	.001	.002
Plastics	900-1800	.0015	.003	.006	.010	.015
Plastics, Glass Filled	400-1000	.0015	.003	.004	.006	.012
Refractory Alloys	125- 350	.0005	.001	.001	.0015	.002
Steel, Low Carbon	300- 600	.0005	.001	.003	.005	.007
Steel, Medium Carbon	150- 450	.0006	.0015	.002	.004	.005
Steel, Hardened	50- 225	.0002	.0005	.001	.002	.003
Stainless Steel, Soft	250- 500	.0005	.001	.002	.004	.006
Stainless Steel, Hard	75- 275	.0002	.0005	.001	.003	.005
Titanium, Soft	175- 400	.0005	.001	.002	.004	.006
Titanium, Hard	75- 250	.0003	.0005	.001	.002	.004

FOR LIGHTER RADIAL DEPTH OF CUT

Higher range of recommended surface speeds should be used.

FOR GREATER RADIAL DEPTH OF CUT

Lower range of recommended surface speeds should be used.

FOR SLOTting APPLICATIONS

Speeds should be reduced to approximately 80% of the heavy cut value for the particular material being machined.

AXIAL DEPTH OF CUT

These recommendations are for axial depths of cuts not to exceed 1-1/2 times the cutter diameter.