

SPECIALTY TOOL - CORNER ROUNDING END MILL FEED AND SPEED CHART

MATERIAL	ROCKWELL HARDNESS	SPEED (SFM) UNCOATED	SPEED (SFM) AITiN+	FEED (Inches per tooth)				
				Tool Size				
				CR125	CR187	CR250	CR375	CR500
Cast Iron	85Rb	200	350	0.0004	0.0005	0.0009	0.0015	0.0017
Carbon Steel	18Rc	200	400	0.0004	0.0005	0.0008	0.0013	0.0015
Alloy Steel	20Rc	160	330	0.0003	0.0004	0.0007	0.0012	0.0014
Heat Treated Alloys (38-45Rc)	40Rc	60	100	0.0002	0.0003	0.0004	0.0007	0.0009
Tool Steel	20Rc	125	150	0.0002	0.0003	0.0004	0.0007	0.0009
Stainless Steel	95Rb	120	250	0.0003	0.0004	0.0007	0.0012	0.0014
Titanium	25Rc	110	150	0.0002	0.0003	0.0004	0.0007	0.0009
Aluminum	60Rb	450	750	0.0008	0.0011	0.0017	0.0028	0.0033
Brass, Zinc,	41Rb	300	500	0.0007	0.0010	0.0015	0.0025	0.0030

SPECIALTY TOOL - ENGRAVING TOOL FEED AND SPEED CHART

MATERIAL	RPM	FEED (Inches per tooth)									
		INCLUDED ANGLE									
		30°		40°		60°		90°		120°	
		SHANK DIAMETER									
		.125-.187	.250-.500	.125-.187	.250-.500	.125-.187	.250-.500	.125-.187	.250-.500	.125-.187	.250-.500
Cast Iron	6000+	0.0011	0.0014	0.0012	0.0016	0.0016	0.0020	0.0017	0.0022	0.0019	0.0024
Carbon Steel	6000+	0.0006	0.0008	0.0007	0.0009	0.0009	0.0012	0.0010	0.0013	0.0011	0.0014
Alloy Steel	6000+	0.0005	0.0006	0.0005	0.0007	0.0007	0.0009	0.0007	0.0009	0.0008	0.0010
Heat Treated Alloys	6000+	0.0002	0.0003	0.0003	0.0004	0.0004	0.0005	0.0004	0.0005	0.0004	0.0006
Tool Steel	6000+	0.0004	0.0005	0.0005	0.0006	0.0006	0.0008	0.0007	0.0008	0.0007	0.0009
Stainless Steel	6000+	0.0005	0.0007	0.0006	0.0008	0.0008	0.0010	0.0008	0.0011	0.0009	0.0012
Titanium	6000+	0.0005	0.0007	0.0006	0.0008	0.0008	0.0010	0.0008	0.0011	0.0009	0.0012
Aluminum	6000+	0.0011	0.0014	0.0012	0.0016	0.0016	0.0020	0.0017	0.0022	0.0019	0.0024
Plastics	6000+	0.0016	0.0021	0.0019	0.0024	0.0024	0.0030	0.0026	0.0033	0.0028	0.0036

Suggested chip loads reflect engraving depths up to .010". For depths of cut between .010"-.015", reduce suggested chip loads by 20%. For depths of cut between .015"-.020", reduce suggested chip load by 30%.

Ramping into the part is preferred but if plunge milling into the part, reduce suggested chip load by 50%.