

GROUP #	MATERIAL CARBON STEEL	MATERIAL EXAMPLES	HARDNESS	LOW SFM	HIGH SFM	RECOMMENDED MAX% STEPOVER 2@ XD IA LOC	IPT Ø 0.250	IPT Ø 0.375	IPT Ø 0.500	IPT Ø 0.625	IPT Ø 0.750	IPT 1.000
P1	Low-Carbon Steels	1018, 1108, 1117, A36 12L14, 1200's, 1500's	<300 Hb	300	460	Slotting	0.0009	0.0018	0.0020	0.0029	0.0033	0.0037
				375	600	Roughing	0.0016	0.0026	0.0028	0.0041	0.0053	0.0064
				350	900	Finishing - HEM	0.0015	0.0021	0.0026	0.0027	0.0028	0.0029
P2	Medium & High Carbon Steels	1000-1200 SERIES	<300 Hb	200	350	Slotting	0.0010	0.0013	0.0016	0.0019	0.0023	0.0026
				300	500	Roughing	0.0012	0.0017	0.0021	0.0029	0.0037	0.0045
				350	850	Finishing - HEM	0.0014	0.0019	0.0023	0.0026	0.0028	0.0030
P3	Alloys Steels	4130, 4140, 5140, 6150, 8620	<300 Hb	250	350	Slotting	0.0013	0.0013	0.0016	0.0023	0.0026	0.0029
				300	450	Roughing	0.0017	0.0017	0.0022	0.0030	0.0039	0.0048
				350	1200	Finishing - HEM	0.0019	0.0019	0.0023	0.0027	0.0030	0.0033
P4	Tool Steel	A2, P20, S7, H13, L6	<300 Hb	150	300	Slotting	0.0009	0.0013	0.0016	0.0020	0.0024	0.0028
				250	400	Roughing	0.0011	0.0016	0.0021	0.0030	0.0039	0.0047
				350	650	Finishing - HEM	0.0013	0.0018	0.0022	0.0025	0.0028	0.0031
M1	Austenitic Stainless Steels	INOX, 200 SERIES, 300 SERIES AND 304L	<300 Hb	180	280	Slotting	0.0008	0.0012	0.0015	0.0019	0.0025	0.0028
				180	375	Roughing	0.0012	0.0017	0.0022	0.0030	0.0040	0.0050
				300	900	Finishing - HEM	0.0018	0.0022	0.0025	0.0026	0.0027	0.0029
K1	Cast Iron - Gray Low Strength	Class 20, 25, 30, 35 Grade G1800	>270	250	450	Slotting	0.0011	0.0016	0.0020	0.0024	0.0027	0.0030
				350	550	Roughing	0.0013	0.0019	0.0024	0.0036	0.0048	0.0060
				350	600	Finishing - HEM	0.0015	0.0021	0.0027	0.0032	0.0037	0.0040
K2	Cast Iron - Malleable Medium Strenght	60-14-18, 65-45-12, M3210, M4504	>320	200	425	Slotting	0.0010	0.0013	0.0016	0.0021	0.0026	0.0030
				300	500	Roughing	0.0012	0.0018	0.0023	0.0032	0.0041	0.0050
				350	600	Finishing - HEM	0.0014	0.0020	0.0025	0.0027	0.0029	0.0032

We recommend using air blast to cool the tool anytime you are running over 500 SFM

MILL PROCESS	ADOC	RDOC
SLOTTING	25%-75% Diameter	100%
ROUGHING	Up to 200% Diameter	16-40%
FINISH OR HEM	Up to 225% Diameter	2-15%

Must use chip thinning calculations when developing feedrates for FINISH OR HEM toolpaths