RHINOROUNDS™ OPERATING GUIDELINES

ISO	Material	Condition	SFM[1]	TYPE OF CUT	AXIAL DOC	RADIAL DOC	IPT Ø 0.250	IPT Ø 0.375	IPT Ø 0.500	IPT Ø 0.625	IPT Ø 0.750	IPT Ø1.000
P	Low-Carbon Steels	1018, 1108, 1117, A36, 12L14, 1200's, 1500's	300 - 460	SLOTTING	0.5xD - 1xD	100%	0.0009	0.0018	0.0020	0.0029	0.0033	0.0037
			375 - 600	ROUGHING	2xD	30-40%	0.0016	0.0026	0.0028	0.0041	0.0053	0.0064
			350 - 900	FINISH OR HIGH EFFICIENCY[2]	2.25 x D	2-15%	0.0015	0.0021	0.0026	0.0027	0.0028	0.0029
	Medium & High-Carbon Steels	1000-1200 Series	200 -350	SLOTTING	0.5xD - 1xD	100%	0.0010	0.0013	0.0016	0.0019	0.0023	0.0026
			300 - 500	ROUGHING	2xD	30-40%	0.0012	0.0017	0.0021	0.0029	0.0037	0.0045
			350 - 850	FINISH OR HIGH EFFICIENCY[2]	2.25 x D	2-15%	0.0014	0.0019	0.0023	0.0026	0.0028	0.0030
	Alloy Steels	4130, 4140, 5140, 6150, 8620	250 - 350	SLOTTING	0.5xD - 1xD	100%	0.0009	0.0013	0.0016	0.0023	0.0026	0.0029
			300 - 450	ROUGHING	2xD	30-40%	0.0012	0.0017	0.0022	0.0030	0.0039	0.0048
			350 - 1200	FINISH OR HIGH EFFICIENCY[2]	2.25 x D	2-15%	0.0014	0.0019	0.0023	0.0027	0.0030	0.0033
	Tool Steel	A2, P20, S7, H13, L6	150 - 300	SLOTTING	0.5xD - 1xD	100%	0.0009	0.0013	0.0016	0.0020	0.0024	0.0028
			250 - 400	ROUGHING	2xD	30-40%	0.0011	0.0016	0.0021	0.0030	0.0039	0.0047
			350 - 650	FINISH OR HIGH EFFICIENCY[2]	2.25 x D	2-15%	0.0013	0.0018	0.0022	0.0025	0.0028	0.0031
M	Austenitic Stainless Steels	INOX, 200 Series, 300 Series and 304L	180 - 280	SLOTTING	0.5xD - 1xD	100%	0.0008	0.0012	0.0015	0.0019	0.0025	0.0028
			180 - 375	ROUGHING	2xD	30-40%	0.0012	0.0017	0.0022	0.0030	0.0040	0.0050
			300 - 900	FINISH OR HIGH EFFICIENCY[2]	2.25xD	2-15%	0.0018	0.0022	0.0025	0.0026	0.0027	0.0029
K	Cast Iron - Gray Low Strength	Class 20, 25, 30, 35 Grade G1800	250 - 450	SLOTTING	0.5xD - 1xD	100%	0.0011	0.0016	0.0020	0.0024	0.0027	0.0030
			350 - 550	ROUGHING	2xD	30-40%	0.0013	0.0019	0.0024	0.0036	0.0048	0.0060
			350 - 600	FINISH OR HIGH EFFICIENCY[2]	2.25xD	2-15%	0.0015	0.0021	0.0027	0.0032	0.0037	0.0040
	Cast Iron - Malleable Medium Strength	60-14-18, 65-45-12, M3210, M4504	200 - 425	SLOTTING	0.5xD - 1xD	100%	0.0010	0.0013	0.0016	0.0021	0.0026	0.0030
			300 - 500	ROUGHING	2xD	30-40%	0.0012	0.0018	0.0023	0.0032	0.0041	0.0050
			350 - 600	FINISH OR HIGH EFFICIENCY[2]	2.25xD	2-15%	0.0014	0.0020	0.0025	0.0027	0.0029	0.0032

[1]When SFM exceeds 500 use air blast to cool the tool.

[2]Must use chip thinning calculations when developing feedrates for FINISH OR HIGH EFFICIENCY toolpaths.