

# variFLUTE® SPEEDS & FEEDS

Workpiece Material	Hardness BHN	Type of Cut	Surface Speed (SFM)	FEED PER TOOTH BY END MILL DIAMETER				
				1/8"	1/4"	1/2"	3/4"	1"
Plain Steels -Low & Medium Carbon 1008, 1010, 1020	175	Profile	500	0.0004	0.0013	0.0030	0.0038	0.0042
		Slot	400	0.0003	0.0010	0.0024	0.0030	0.0034
Plain Steels -Low & Medium Carbon 1008, 1010, 1020	275	Profile	400	0.0004	0.0013	0.0030	0.0038	0.0042
		Slot	320	0.0003	0.0010	0.0024	0.0030	0.0034
Alloy Steels - Medium Carbon 4140, 4150, 4340	275	Profile	400	0.0003	0.0010	0.0025	0.0035	0.0040
		Slot	320	0.0002	0.0008	0.0020	0.0028	0.0032
Alloy Steels - Medium Carbon 4140, 4150, 4340	375	Profile	300	0.0003	0.0010	0.0025	0.0035	0.0040
		Slot	240	0.0002	0.0008	0.0020	0.0028	0.0032
Mold & Die Steels O1, A2, D2, H13, P20	275	Profile	180	0.0002	0.0010	0.0025	0.0035	0.0040
		Slot	145	0.0002	0.0008	0.0020	0.0028	0.0032
Stainless Steels 300 Series 304, 310, 316	275	Profile	300	0.0003	0.0010	0.0025	0.0035	0.0042
		Slot	240	0.0002	0.0008	0.0020	0.0028	0.0034
Stainless Steels 400 Series 409, 430, 436	325	Profile	250	0.0003	0.0010	0.0025	0.0035	0.0042
		Slot	200	0.0002	0.0008	0.0020	0.0028	0.0034
Stainless Steels Precipitation Hardened 15-5PH, 17-4PH	325	Profile	250	0.0002	0.0010	0.0022	0.0030	0.0040
		Slot	200	0.0002	0.0008	0.0018	0.0024	0.0032
High Temperature Alloys Inconel, Hastelloy, Waspaloy	300	Profile	75	0.0002	0.0007	0.0020	0.0025	0.0032
		Slot	60	0.0002	0.0006	0.0016	0.0020	0.0026
Titanium Alloys Ti-6Al-4V, ASTM B367 Grades C-3, C-4	300	Profile	300	0.0003	0.0010	0.0025	0.0027	0.0035
		Slot	240	0.0002	0.0008	0.0020	0.0022	0.0028
Cast Iron Grey	200	Profile	550	0.0004	0.0012	0.0030	0.0038	0.0042
		Slot	440	0.0003	0.0010	0.0024	0.0030	0.0034
Cast Iron Ductile	300	Profile	250	0.0003	0.0010	0.0030	0.0033	0.0042
		Slot	200	0.0002	0.0008	0.0024	0.0026	0.0034

SPEEDS and FEEDS are suggested starting points and may be increased or decreased depending on actual material and machining conditions. In pocketing operations ramping and spiral plunging are the preferred methods of entry. A 5° ramp angle at about 50% feed are suggested.

<b>RECOMMENDED MAXIMUM DEPTHS OF CUT</b>	<b>PROFILING</b> Radial Depth = .5XD Axial Depth = 1.5XD	<b>SLOTING</b> Axial Depth = 1XD
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