enDURO M50 END MILLS

For aerospace alloys and finishing stainless steels

Application Guide • Speed & Feed

Work Material	Type of Cut	Axial DOC	Radial DOC	No. of Flutes	Speed (SFM)	Feed (Inches per Tooth) 1/8	1/4	3/8	1/2	5/8	3/4	1	Speed (m /min)	Feed (mm per Tooth) 3,0	6,0	9,0	12,0	16,0	19,0	25,0
Easy to Machine Stainless Steels 416, 410, 302, 303	Finish	1.5 x D	.01 x D	5	375	.0007	.0014	.0021	.0028	.0035	.0042	.0056	114	.0178	.0356	.0533	.0711	.0889	.1067	.1422
Medium Difficulty Stainless Steels 304, 316, Invar, Kovar	Finish	1.5 x D	.01 x D	5	350	.0006	.0012	.0018	.0025	.0031	.0037	.0050	107	.0152	.0305	.0457	.0635	.0787	.0940	.1270
Difficult to Machine Stainless Steels 316L, 17-4 PH, 15-5 PH, 13-8 PH	Rough	1 x D	.5 x D	5	275	.0003	.0007	.0011	.0015	.0019	.0023	.0030	84	.0076	.0178	.0279	.0381	.0483	.0584	.0762
	Finish	1.5 x D	.01 x D	5	325	.0005	.0011	.0017	.0022	.0028	.0033	.0044	99	.0127	.0279	.0432	.0559	.0711	.0838	.1118
Low Carbon Steels ≤ 32 HRc, 1018, 12L14, 8620	Finish	1.5 x D	.01 x D	5	450	.0008	.0015	.0023	.0030	.0037	.0045	.0060	137	.0203	.0381	.0584	.0762	.0940	.1143	.1524
Carbon & Tool Steels 33 HRc to 38 HRc	Finish	1.5 x D	.01 x D	5	400	.0006	.0012	.0018	.0025	.0031	.0037	.0050	122	.0152	.0305	.0457	.0635	.0787	.0940	.1270
Carbon & Tool Steels 39 HRc to 48 HRc	Slot	.5 x D	1 x D	5	225	.0002	.0005	.0007	.0010	.0013	.0016	.0020	69	.0051	.0127	.0178	.0254	.0330	.0406	.0508
	Rough	1 x D	.5 x D	5	275	.0004	.0007	.0011	.0015	.0019	.0024	.0030	84	.0102	.0178	.0279	.0381	.0483	.0610	.0762
	Finish	1.5 x D	.01 x D	5	325	.0004	.0009	.0013	.0018	.0022	.0027	.0036	99	.0102	.0229	.0330	.0457	.0559	.0686	.0914
Copper, Brass & Bronze	Finish	1.5 x D	.01 x D	5	600	.0008	.0018	.0026	.0035	.0044	.0053	.0070	183	.0203	.0457	.0660	.0889	.1118	.1346	.1778
Aluminum, Bronze & Beryllium Copper	Finish	1.5 x D	.01 x D	5	375	.0006	.0013	.0020	.0025	.0032	.0039	.0050	114	.0152	.0330	.0508	.0635	.0813	.0991	.1270
Titanium Alloys	Slot	.5 x D	1 x D	5	225	.0003	.0007	.0011	.0015	.0018	.0022	.0030	69	.0076	.0178	.0279	.0381	.0457	.0559	.0762
	Rough	1 x D	.5 x D	5	250	.0005	.0010	.0015	.0020	.0025	.0030	.0040	76	.0127	.0254	.0381	.0508	.0635	.0762	.1016
	Finish	1.5 x D	.01 x D	5	350	.0006	.0012	.0017	.0023	.0029	.0034	.0046	107	.0152	.0305	.0432	.0584	.0737	.0864	.1168
High Temperature Alloys, Inconel®, Haynes, Stellite, Hastalloy, Waspaloy®	Slot	.25 x D	1 x D	5	70	.0003	.0007	.0011	.0014	.0017	.0022	.0028	21	.0076	.0178	.0279	.0356	.0432	.0559	.0711
	Rough	1 x D	.25 x D	5	95	.0004	.0009	.0013	.0017	.0022	.0026	.0034	29	.0102	.0229	.0330	.0432	.0559	.0660	.0864
	Finish	1.5 x D	.01 x D	5	110	.0005	.0009	.0014	.0019	.0023	.0028	.0038	34	.0127	.0229	.0356	.0483	.0584	.0711	.0965

D = tool diameter Reduce feed rates by 20% when using long length tools Starting parameters shown