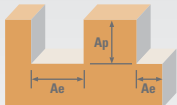


Series 66M, 66MCR Metric	Hardness BRINELL				Vc (m/min)	Diameter (D ₁) (mm)								
		Ae x D ₁	Ap x D ₁	6		8	10	12	16	20	25			
M	STAINLESS STEELS (DIFFICULT) 304, 304L, 316, 316L	≤ 275		≤ 0.05	≤ 1	117	RPM	6220	4665	3732	3110	2333	1866	1493
						(94-141)	Fz	0.017	0.030	0.037	0.043	0.059	0.064	0.065
						Feed (mm/min)	731	975	975	1209	1236	1314	1067	
				≤ 0.02	≤ 2	141	RPM	7465	5598	4479	3732	2799	2239	1791
						(113-169)	Fz	0.013	0.024	0.030	0.035	0.047	0.051	0.052
						Feed (mm/min)	702	17	936	1161	1187	1261	1025	
M	STAINLESS STEELS (PH) 13-8 PH, 15-5PH, 17-4 PH, Custom 450	< 325		≤ 0.05	≤ 1	108	RPM	5736	4302	3441	2868	2151	1721	1377
						(87-130)	Fz	0.017	0.030	0.037	0.043	0.059	0.064	0.065
						Feed (mm/min)	674	899	899	1115	1140	1211	984	
				≤ 0.02	≤ 2	130	RPM	6883	5162	4130	3441	2581	2065	1652
						(104-156)	Fz	0.013	0.024	0.030	0.035	0.047	0.051	0.052
						Feed (mm/min)	647	863	863	1070	1094	1163	945	
S	SUPER ALLOYS (NICKEL, COBALT, IRON BASE) Inconel 601, 617, 625, Incoly 800, Monel 400	≤ 300		≤ 0.05	≤ 1	32	RPM	1696	1272	1018	848	636	509	407
						(26-38)	Fz	0.017	0.030	0.037	0.043	0.059	0.064	0.065
						Feed (mm/min)	199	266	213	330	337	358	291	
				≤ 0.02	≤ 2	38	RPM	2036	1527	1221	1018	763	611	489
						(31-46)	Fz	0.013	0.024	0.030	0.035	0.047	0.051	0.052
						Feed (mm/min)	192	255	255	317	324	344	279	
S	SUPER ALLOYS (NICKEL, COBALT, IRON BASE) Inconel 718, 750X, Incoly 925, Waspaloy, Hastelloy, Rene	> 300		≤ 0.05	≤ 1	26	RPM	1373	1030	824	687	515	412	330
						(21-31)	Fz	0.012	0.019	0.024	0.026	0.036	0.040	0.040
						Feed (mm/min)	115	138	138	163	166	181	145	
				≤ 0.02	≤ 2	31	RPM	1648	1236	989	824	618	494	396
						(25-37)	Fz	0.010	0.015	0.019	0.021	0.029	0.032	0.032
						Feed (mm/min)	111	133	133	157	159	174	139	
S	TITANIUM ALLOYS Pure Titanium, Ti6Al4V, Ti6Al2Sn4Zr2Mo, Ti4Al4Mo2Sn0.5Si	≤ 350		≤ 0.05	≤ 1	119	RPM	6301	4726	3781	3151	2363	1890	1512
						(95-143)	Fz	0.019	0.032	0.040	0.050	0.067	0.072	0.073
						Feed (mm/min)	847	1059	1059	1429	1415	1497	1206	
				≤ 0.02	≤ 2	143	RPM	7561	5671	4537	3781	2836	2268	1815
						(114-171)	Fz	0.015	0.026	0.032	0.040	0.053	0.058	0.058
						Feed (mm/min)	813	1016	1016	1372	1359	1437	1158	
S	TITANIUM ALLOYS (DIFFICULT) Ti10Al2Fe3Al, Ti5Al5V5Mo3Cr, Ti7Al4Mo, Ti3Al8V6Cr4Zr4Mo, Ti6Al6V6Sn, Ti15V3 Cr3Sn3Al	> 350 ≤ 440		≤ 0.05	≤ 1	43	RPM	2262	1696	1357	1131	848	679	543
						(34-51)	Fz	0.019	0.032	0.040	0.050	0.067	0.072	0.073
						Feed (mm/min)	304	380	380	513	508	537	433	
				≤ 0.02	≤ 2	51	RPM	2714	2036	1629	1357	1018	814	651
						(41-61)	Fz	0.015	0.026	0.032	0.040	0.053	0.058	0.058
						Feed (mm/min)	292	365	365	492	488	516	416	

rpm = (1000 x m/min) / (3.14 x D₁)

mm / min = (mm / flute) x number of flutes x rpm

reduce speed and feed for materials harder than listed

refer to the SGS Tool Wizard for complete technical information ()