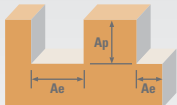


Series 66, 66CR Fractional	Hardness BRINELL				Vc (SFM)	Diameter (D ₁) (inch)								
		Ae x D ₁	Ap x D ₁			3/16	1/4	3/8	1/2	5/8	3/4	1		
M	STAINLESS STEELS (DIFFICULT) 304, 304L, 316, 316L	≤ 275		≤ 0.05	≤ 1	385	RPM	7844	5883	3922	2941	2353	1961	1471
						(308-462)	Fz	0.0005	0.0007	0.0014	0.0018	0.0023	0.0024	0.0026
							Feed (IPM)	27.5	28.8	38.4	47.7	48.7	51.8	42.1
				≤ 0.02	≤ 2	462	RPM	9412	7059	4706	3530	2824	2353	1765
						(370-554)	Fz	0.0004	0.0006	0.0011	0.0014	0.0018	0.0019	0.0021
							Feed (IPM)	26.4	27.7	36.9	45.7	46.8	49.7	40.4
M	STAINLESS STEELS (PH) 13-8 PH, 15-5PH, 17-4 PH, Custom 450	< 325		≤ 0.05	≤ 1	355	RPM	7233	5424	3616	2712	2170	1808	1356
						(284-426)	Fz	0.0005	0.0007	0.0014	0.0018	0.0023	0.0024	0.0026
							Feed (IPM)	25.3	26.6	35.4	43.9	44.9	47.7	38.8
				≤ 0.02	≤ 2	426	RPM	8679	6509	4340	3255	2604	2170	1627
						(341-511)	Fz	0.0004	0.0006	0.0011	0.0014	0.0018	0.0019	0.0021
							Feed (IPM)	24.3	25.5	34.0	42.2	43.1	45.8	37.2
S	SUPER ALLOYS (NICKEL, COBALT, IRON BASE) Inconel 601, 617, 625, Incoly 800, Monel 400	≤ 300		≤ 0.05	≤ 1	105	RPM	2139	1604	1070	802	642	535	401
						(84-126)	Fz	0.0005	0.0007	0.0014	0.0018	0.0023	0.0024	0.0026
							Feed (IPM)	7.5	7.9	10.5	13.0	13.3	14.1	11.5
				≤ 0.02	≤ 2	126	RPM	2567	1925	1284	963	770	642	481
						(101-151)	Fz	0.0004	0.0006	0.0011	0.0014	0.0018	0.0019	0.0021
							Feed (IPM)	7.2	7.5	10.1	12.5	12.8	13.6	11.0
S	SUPER ALLOYS (NICKEL, COBALT, IRON BASE) Inconel 718, 750X, Incoly 925, Waspaloy, Hastelloy, Rene	> 300		≤ 0.05	≤ 1	85	RPM	1732	1299	866	649	520	433	325
						(68-102)	Fz	0.0003	0.0005	0.0009	0.0011	0.0014	0.0015	0.0016
							Feed (IPM)	3.6	4.5	5.5	6.4	6.5	7.1	5.7
				≤ 0.02	≤ 2	102	RPM	2078	1559	1039	779	623	520	390
						(82-122)	Fz	0.0002	0.0004	0.0007	0.0009	0.0011	0.0012	0.0013
							Feed (IPM)	3.5	4.4	5.2	6.2	6.3	6.9	5.5
S	TITANIUM ALLOYS Pure Titanium, Ti6Al4V, Ti6Al2Sn4Zr2Mo, Ti4Al4Mo2Sn0.5Si	≤ 350		≤ 0.05	≤ 1	390	RPM	7946	5959	3973	2980	2384	1986	1490
						(312-468)	Fz	0.0005	0.0008	0.0015	0.0021	0.0026	0.0027	0.0029
							Feed (IPM)	27.8	33.4	41.7	56.3	55.8	59.0	47.5
				≤ 0.02	≤ 2	468	RPM	9535	7151	4767	3576	2860	2384	1788
						(374-562)	Fz	0.0004	0.0006	0.0012	0.0017	0.0021	0.0022	0.0023
							Feed (IPM)	26.7	32.0	40.0	54.1	53.5	56.6	45.6
S	TITANIUM ALLOYS (DIFFICULT) Ti10Al2Fe3Al, Ti5Al5V5Mo3Cr, Ti7Al4Mo, Ti3Al8V6Cr4Zr4Mo, Ti6Al6V6Sn, Ti15V3 Cr3Sn3Al	> 350 ≤ 440		≤ 0.05	≤ 1	140	RPM	2852	2139	1426	1070	856	713	535
						(112-168)	Fz	0.0005	0.0008	0.0015	0.0021	0.0026	0.0027	0.0029
							Feed (IPM)	10.0	12.0	15.0	20.2	20.0	21.2	17.1
				≤ 0.02	≤ 2	168	RPM	3423	2567	1711	1284	1027	856	642
						(134-202)	Fz	0.0004	0.0006	0.0012	0.0017	0.0021	0.0022	0.0023
							Feed (IPM)	9.6	11.5	14.4	19.4	19.2	20.3	16.4

rpm = sfm x 3.82 / D₁

ipm = (inch / 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 ()