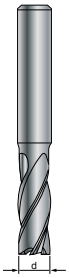
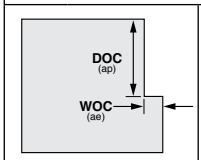
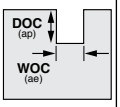
FEEDS & SPEEDS FOR RF100 U, F, VA, A, SF, Ti, H, RF 50

INCH







$$RPM = \frac{SFM}{d_1} \times 3.82$$

IPM = No. of teeth x IPT x RPM

For finishing use WOC (ae) .01 up to .1xd, use SFM from .25xd column, do not increase IPT from table values

Material	Hard-ness	TYPE	Surface feet per minute - SFM					Feed Rate Inch per Tooth - IPT							
			High Speed Milling			Rough	Slot	d1 End Mill Diameter							
			DOC 2xd			DOC 1xd									
			WOC .05xd	WOC .1xd	WOC .25xd	WOC .4 to .9xd	WOC 1xd	1/8 3.17mm	1/4 6.35mm	5/16 7.94mm	3/8 9.52mm	1/2 12.70mm	5/8 15.87mm	3/4 19.05mm	1 25.40mm
			2.5	2.3	1.5	1	1	Multiply IPT x this factor based on WOC							
Structural + free-cutting steels, unalloyed heat-treatable + case hardened steels A283, 1151, 1215, L10, 10Lxx, 11Lxx, 12Lxx, 41Lxx, 51Lxx, 86Lxx, 86Lxx, 10xx	up to 28 HRc	F VA SF	1200	1100	900	650	575	.0007	.0013	.0016	.0023	.0030	.0040	.0045	.0060
Free-cutting steels, unalloyed case hardened steels, nitriding steels 1151, 1215, L10, 10Lxx, 11Lxx, 12Lxx, 41Lxx, 51Lxx, 86Lxx, 86Lxx, 10xx, 11xx	28 to 38 HRc	U F SF	1100	1000	850	650	525	.0006	.0012	.0015	.0021	.0028	.0035	.0041	.0056
Alloyed heat-treatable, tool and high speed steels 13xx, 2340, 31xx, 32xx, 33xx, 34xx, 40xx, 41xx, 43xx, 4640, 50xx, 51xx, 61xx, 71xx, 86xx, 87xx, 92xx, 98xx, 98xx, Ax, Ox, Dx, Hxx, Lx, Wx, Mx, Tx	28 to 44 HRc	U U SF	900	800	680	650	425	.0006	.0011	.0014	.0019	.0025	.0031	.0038	.0052
Hardened Steels Carbon and Alloy Steels, Tool & Die Steels	Up to 54 HRc	U SF	480	460	360	250	225	.0005	.0009	.0011	.0015	.0020	.0023	.0030	.0040
	54 to 60 HRc	H	250					Finishing only WOC less than .1xd							
								.0003	.0006	.0008	.0010	.0013	.0016	.0019	.0028
Stainless steel 303, 410, 420F, 430, 430F, 416	Up to 28 HRc	VA VA SF	840	760	450	450	400	.0006	.0011	.0014	.0019	.0025	.0031	.0038	.0052
Stainless steel 304, 304L, 420, 17-4PH, 17-7PH, 15-5PH, 13-8PH	up tp 28 HRc	VA VA SF	525	475	330	330	250	.0005	.0010	.0013	.0017	.0023	.0027	.0034	.0044
Stainless steel 310, 316, 316B, 316L, 317, Duplex	over 28 HRc	VA/F VA/F SF	420	380	260	260	200	.0005	.0009	.0011	.0015	.0020	.0023	.0030	.0040
Titanium Alloys 6Al-4V, 5Al-2.5 Sn, 6Al-2Sn-4Zr-6Mo, 3Ai-8V-6Cr4Mo-4Zr, 10V-2Fe-3Ai, 13V-11Cr-3Ai	up to 42 HRc	Ti/F VA SF	420	380	260	260	200	.0003	.0007	.0009	.0012	.0016	.0020	.0023	.0032
High-Temperature Alloys Inconel, Nimonic, Monel, Hastelloy, Waspalloy, A286, Rene 41, Udimet, Stellite	up to 42 HRc	Ti/U VA SF	210	190	130	130	100	.0004	.0006	.0008	.0009	.0013	.0016	.0019	.0024
Cast iron, grey cast iron, spheroidal graphite and malleable cast iron 0.6010 EN-GL100 (GG10), 0.6020 EN-GJL-200 (GG20), 0.7050 EN-GJS-500-7 (GGG50), 0.8535 EN-GJMW-350-4 (GTW35)	up to 240 HB 30	F U SF	1100	1000	850	620	525	.0007	.0014	.0017	.0024	.0033	.0039	.0049	.0064
Cast iron, grey cast iron, spheroidal graphite and malleable cast iron 0.6025 EN-GL250 (GG25), 0.6035 EN-GJL-350 (GG35), 0.7070 EN-GJS-700-2 (GGG70), 0.8170 EN-GJMB-700-2 (GTS70)	over 240 HB 30	U VA SF	950	860	720	550	450	.0006	.0013	.0016	.0021	.0028	.0035	.0041	.0056
Aluminum, Al-wrought alloys, Al-alloys 2024, 6061, 7075, 1050, 6351, 5005, 2017, 7075	up to 3% Si	A	3400	3090	2600	1950	1625	.0008	.0016	.0020	.0030	.0040	.0051	.0060	.0080
Aluminium-cast alloys 3.2131 G-AlSi5Cu1, 3.2153 G-AlSi7Cu3, 3.2573 G-AlSi9, 3.2581 G-AlSi12, 3.2583 G-AlSi12Cu, - G-AlSi12CuNiMg	over 3% Si	A	1575	1425	1200	1000	750	.0007	.0014	.0017	.0023	.0030	.0039	.0045	.0060
Magnesium-alloys MgMn2, G-MgAl8Zn1, G-MgAl6Zn3	–	A F SF	1210	1100	920	725	575	.0006	.0013	.0016	.0021	.0028	.0035	.0041	.0056
Non-ferrous metals (copper, short- or long-chipping brass or bronze)	up to 28 HRc	A F SF	1680	1520	1280	975	800	.0007	.0014	.0017	.0023	.0030	.0039	.0045	.0060