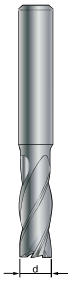
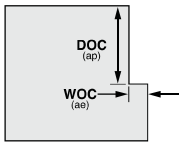
FEEDS & SPEEDS FOR RF100 U, F, VA, A, SF, Ti, H, RF 50

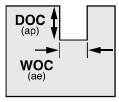
INCH



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

Surface feet per minute - SFM





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

IPM = No. of teeth x IPT x RPM

Material	Hard-ness	TYPE	High Speed Milling DOC 2xd WOC .05xd	High Speed Milling DOC 2xd WOC .1xd	High Speed Milling DOC 2xd WOC .25xd	Rough DOC 1xd WOC .4 to .9xd	Slot DOC 1xd WOC 1xd
			2.5	2.3	1.5	1	1
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
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
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
Hardened Steels Carbon and Alloy Steels, Tool & Die Steels	Up to 54 HRc	U SF	480	460	360	250	225
	54 to 60 HRc	H	250				
Stainless steel 303, 410, 420F, 430, 430F, 416	Up to 28 HRc	VA VA SF	840	760	450	450	400
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
Stainless steel 310, 316, 316B, 316L, 317, Duplex	over 28 HRc	VA/F VA/F SF	420	380	260	260	200
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
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
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
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
Aluminum, Al-wrought alloys, Al-alloys 2024, 6061, 7075, 1050, 6351, 5005, 2017, 7075	up to 3% Si	A	3400	3090	2600	1950	1625
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
Magnesium-alloys MgMn2, G-MgAl8Zn1, G-MgAl6Zn3	—	A F SF	1210	1100	920	725	575
Non-ferrous metals (copper, short- or long-chipping brass or bronze)	up to 28 HRc	A F SF	1680	1520	1280	975	800

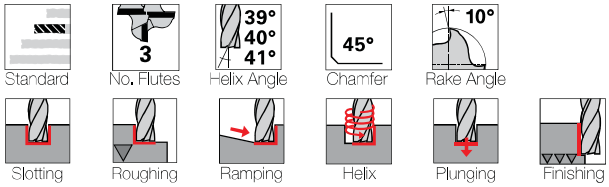
Feed Rate Inch per Tooth - IPT

d1 End Mill Diameter

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
Multiply IPT x this factor based on WOC							
.0007	.0013	.0016	.0023	.0030	.0040	.0045	.0060
.0006	.0012	.0015	.0021	.0028	.0035	.0041	.0056
.0006	.0011	.0014	.0019	.0025	.0031	.0038	.0052
.0005	.0009	.0011	.0015	.0020	.0023	.0030	.0040
Finishing only WOC less than .1xd							
.0003	.0006	.0008	.0010	.0013	.0016	.0019	.0028
.0006	.0011	.0014	.0019	.0025	.0031	.0038	.0052
.0005	.0010	.0013	.0017	.0023	.0027	.0034	.0044
.0005	.0009	.0011	.0015	.0020	.0023	.0030	.0040
.0003	.0007	.0009	.0012	.0016	.0020	.0023	.0032
.0004	.0006	.0008	.0009	.0013	.0016	.0019	.0024
.0007	.0014	.0017	.0024	.0033	.0039	.0049	.0064
.0006	.0013	.0016	.0021	.0028	.0035	.0041	.0056
.0008	.0016	.0020	.0030	.0040	.0051	.0060	.0080
.0007	.0014	.0017	.0023	.0030	.0039	.0045	.0060
.0006	.0013	.0016	.0021	.0028	.0035	.0041	.0056
.0007	.0014	.0017	.0023	.0030	.0039	.0045	.0060

RF 100 A (3-Flute) - Inch - Standard Length

center cutting

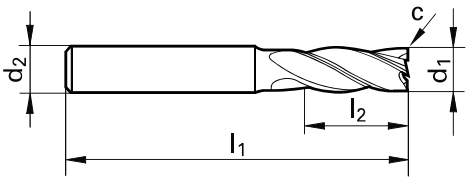


Tool material	**Solid Carbide**
Surface finish	bright
Series	**4265**

Application group	Material examples	Ideal for
P	Steel	—
M	Stainless steel	—
K	Cast iron	—
N	Aluminum	●
S	Ni / Ti alloys	—
H	Hardened steel	—

●=Optimal ○=Secondary

Speed and Feed data found on page 290



d1 h10 inch	d2 h6 inch	l1 inch	l2 inch	c inch x 45°	No. of Flutes	Code no.	EDP Number
1/8	1/8	2	1/2	0.001	3	3.170	**9042650031700**
3/16	3/16	2	5/8	0.002	3	4.760	**9042650047600**
1/4	1/4	2 1/2	3/4	0.002	3	6.350	**9042650063500**
5/16	5/16	2 1/2	13/16	0.003	3	7.940	**9042650079400**
3/8	3/8	2 1/2	1	0.004	3	9.520	**9042650095200**
7/16	7/16	2 3/4	1	0.004	3	11.110	**9042650111100**
1/2	1/2	3 1/2	1 1/4	0.005	3	12.700	**9042650127000**
5/8	5/8	3 1/2	1 1/4	0.006	3	15.870	**9042650158700**
3/4	3/4	4	1 1/2	0.007	3	19.050	**9042650190500**
1	1	4	1 1/2	0.010	3	25.400	**9042650254000**