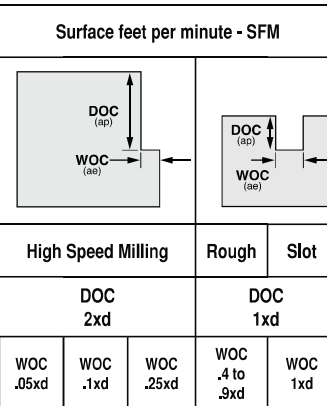


FEEDS & SPEEDS FOR RF100 U, F, VA, A, SF, Ti, H, RF 50

INCH



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

$$IPM = \text{No. of teeth} \times IPT \times RPM$$

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

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

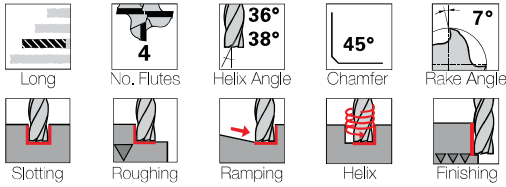
Material	Hardness	TYPE	Multiply IPT x this factor based on WOC				
			2.5	2.3	1.5	1	1

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	.0007	.0013	.0016	.0023	.0030	.0040	.0045	.0060	
			1100	1000	850	650	525	.0006	.0012	.0015	.0021	.0028	.0035	.0041	.0056	
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	900	800	680	650	425	.0006	.0011	.0014	.0019	.0025	.0031	.0038	.0052	
			480	460	360	250	225	.0005	.0009	.0011	.0015	.0020	.0023	.0030	.0040	
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	250						Finishing only WOC less than .1xd							
			250						.0003	.0006	.0008	.0010	.0013	.0016	.0019	.0028
Hardened Steels Carbon and Alloy Steels, Tool & Die Steels	Up to 54 HRc 54 to 60 HRc	U SF H	840	760	450	450	400	.0006	.0011	.0014	.0019	.0025	.0031	.0038	.0052	
			525	475	330	330	250	.0005	.0010	.0013	.0017	.0023	.0027	.0034	.0044	
Stainless steel 303, 410, 420F, 430, 430F, 416	Up to 28 HRc	VA VA SF	420	380	260	260	200	.0005	.0009	.0011	.0015	.0020	.0023	.0030	.0040	
			420	380	260	260	200	.0005	.0009	.0011	.0015	.0020	.0023	.0030	.0040	
Stainless steel 304, 304L, 420, 17-4PH, 17-7PH, 15-5PH, 13-8PH	up to 28 HRc	VA VA SF	420	380	260	260	200	.0003	.0007	.0009	.0012	.0016	.0020	.0023	.0032	
			210	190	130	130	100	.0004	.0006	.0008	.0009	.0013	.0016	.0019	.0024	
Stainless steel 310, 316, 316B, 316L, 317, Duplex	over 28 HRc	VA/F VA/F SF	1100	1000	850	620	525	.0007	.0014	.0017	.0024	.0033	.0039	.0049	.0064	
			950	860	720	550	450	.0006	.0013	.0016	.0021	.0028	.0035	.0041	.0056	
Titanium Alloys 6Al-4V, 5Al-2.5 Sn, 6Al-2Sn-4Zr-6Mo, 3Al-8V-6Cr4Mo-4Zr, 10V-2Fe-3Al, 13V-11Cr-3Al	up to 42 HRc	Ti/F VA SF	3400	3090	2600	1950	1625	.0008	.0016	.0020	.0030	.0040	.0051	.0060	.0080	
			1575	1425	1200	1000	750	.0007	.0014	.0017	.0023	.0030	.0039	.0045	.0060	
High-Temperature Alloys Inconel, Nimonic, Monel, Hastelloy, Waspalloy, A286, Rene 41, Udimet, Stellite	up to 42 HRc	Ti/U VA SF	1210	1100	920	725	575	.0006	.0013	.0016	.0021	.0028	.0035	.0041	.0056	
			1680	1520	1280	975	800	.0007	.0014	.0017	.0023	.0030	.0039	.0045	.0060	
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														
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														
Aluminum, Al-wrought alloys, Al-alloys 2024, 6061, 7075, 1050, 6351, 5005, 2017, 7075	up to 3% Si	A														
Aluminium-cast alloys 3.2131 G-AISI5Cu1, 3.2153 G-AISI7Cu3, 3.2573 G-AISI9, 3.2581 G-AISI12, 3.2583 G-AISI12Cu, - G-AISI12CuNiMg	over 3% Si	A														
Magnesium-alloys MgMn2, G-MgAl8Zn1, G-MgAl6Zn3	-	A F SF														
Non-ferrous metals (copper, short- or long-chipping brass or bronze)	up to 28 HRc	A F SF														

RF 100 VA (4-flute) - Inch - Long Length

a

center cutting



Tool material

Solid Carbide

Surface finish

nano-A™

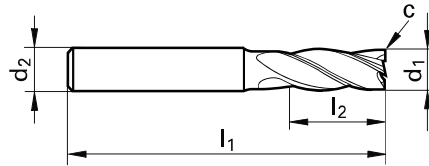
Series

4258

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	d2 h6	l1	l2	c	No. of Flutes	Code no.	EDP Number
inch	inch	inch	inch	inch x 45°			
3/16	3/16	2 1/2	3/4	0.006	4	4.760	9042580047600
1/4	1/4	3 1/4	1 1/4	0.010	4	6.350	9042580063500
5/16	5/16	3 1/4	1 1/2	0.010	4	7.940	9042580079400
3/8	3/8	4	1 3/4	0.012	4	9.520	9042580095200
1/2	1/2	4 1/2	2	0.016	4	12.700	9042580127000
5/8	5/8	5	2 1/4	0.020	4	15.870	9042580158700
3/4	3/4	5	2 1/4	0.024	4	19.050	9042580190500
1	1	5	2 1/4	0.035	4	25.400	9042580254000

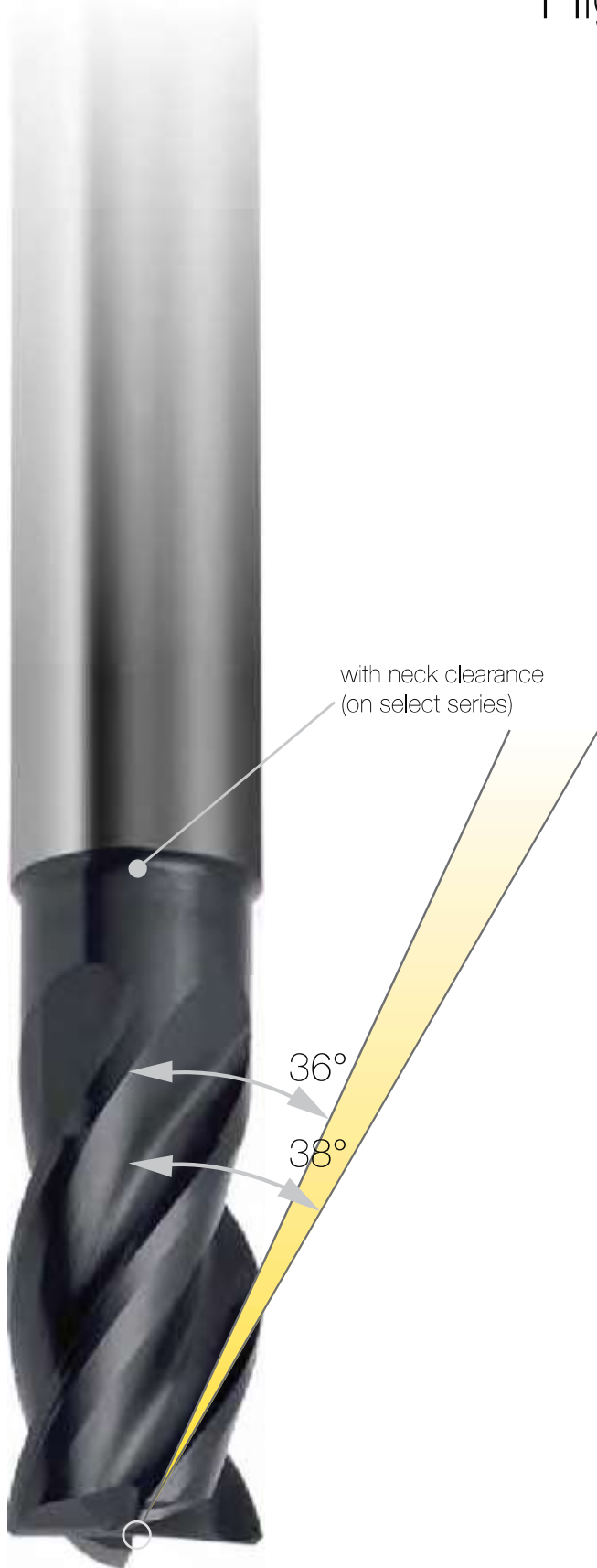
RF 100 VA

High-performance end mills for stainless steel

Summary of advantages

- Roughing and plain version
- Wide range of geometries
- Full size and under size availability
- Different lengths and cutting edge designs including ball-nose and roughing geometry
- For slotting, roughing, copying and finishing operations in VA steels and stainless steels
- Improved chip evacuation and reduced machining temperature thanks to optimized flute geometry
- High contour accuracy and minimum deflection
- Applicable with long projection lengths

RF 100 VA · Guhring series 4257



also available as ball nosed