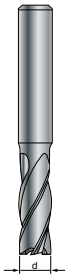


# GH100 U (Aero-Tech & Finish-Tech 50), GH100 H (Finish-Tech 62), GA200 A (Alumi-Tech)

INCH



Surface feet per minute - SFM				
High Speed Milling		Rough	Slot	
DOC 2xd		DOC 1xd		
WOC .05xd	WOC .1xd	WOC .25xd	WOC .4 to .9xd	WOC 1xd

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

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

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	Hard-ness	TYPE	SFM				
			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	U (3-Fit.) U (6-/8-Fit.)	840	760	640	530	400
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 (3-Fit.) U (6-/8-Fit.)	735	665	560	425	350
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 (3-Fit.) U (6-/8-Fit.)	630	570	480	360	300
Hardened Steels Carbon and Alloy Steels, Tool & Die Steels	Up to 54 HRC	U (3-Fit.) U (6-/8-Fit.)	300	275	225	180	165
	54 to 60 HRC	U (6-/8-Fit.)	230				
Stainless steel 303, 410, 420F, 430, 430F, 416	Up to 28 HRC	U (3-Fit.) U (6-/8-Fit.)	564	495	330	330	260
Stainless steel 304, 304L, 420, 17-4PH, 17-7PH, 15-5PH, 13-8PH	up to 28 HRC	U (3-Fit.) U (6-/8-Fit.)	380	340	230	230	180
Stainless steel 310, 316, 316B, 316L, 317, Duplex	over 28 HRC	U (3-Fit.) U (6-/8-Fit.)	275	250	165	165	130
Titanium Alloys 6Al-4V, 5Al-2.5 Sn, 6Al-2Sn-4Zr-6Mo, 3Al-6V-6Cr4Mo-4Zr, 10V-2Fe-3Al, 13V-11Cr-3Al	up to 42 HRC	U (3-Fit.) U (6-/8-Fit.)	275	250	165	165	130
High-Temperature Alloys Inconel, Nimonic, Monel, Hastelloy, Waspalloy, A286, Rene 41, Udimet, Stellite	up to 42 HRC	U (3-Fit.) U (6-/8-Fit.)	135	125	100	100	65
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	U (3-Fit.) U (6-/8-Fit.)	725	655	550	425	345
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 (3-Fit.) U (6-/8-Fit.)	630	570	480	360	300
Aluminum, Al-wrought alloys, Al-alloys 2024, 6061, 7075, 1050, 6351, 5005, 2017, 7075	up to 3% Si	A (2&3-Fit.)	2050	1875	1576	1300	985
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 (2&3-Fit.) U (6-/8-Fit.)	1240	1120	945	985	590
Magnesium-alloys MgMn2, G-MgAl6Zn1, G-MgAl6Zn3	—	A (2&3-Fit.)	1050	950	800	590	500
Non-ferrous metals (copper, short- or long-chipping brass or bronze)	up to 28 HRC	A (2&3-Fit.) U (6-/8-Fit.)	1365	1235	1040	750	650

Multiply IPT x this factor based on WOC							
.0005	.0010	.0016	.0017	.0023	.0027	.0034	.0044
.0005	.0010	.0016	.0017	.0023	.0027	.0034	.0044
.0005	.0010	.0012	.0016	.0021	.0027	.0030	.0044
.0004	.0008	.0010	.0013	.0018	.0023	.0026	.0036
Finishing only WOC less than .1xd							
.0004	.0006	.0010	.0013	.0018	.0020	.0030	.0036
.0005	.0010	.0012	.0016	.0021	.0027	.0019	.0044
.0005	.0009	.0011	.0014	.0019	.0023	.0030	.0040
.0004	.0008	.0010	.0013	.0018	.0020	.0026	.0036
.0004	.0008	.0010	.0014	.0019	.0023	.0030	.0040
.0003	.0006	.0008	.0011	.0015	.0020	.0023	.0032
.0005	.0010	.0013	.0017	.0023	.0027	.0034	.0044
.0005	.0010	.0012	.0016	.0021	.0027	.0030	.0044
.0006	.0013	.0016	.0021	.0028	.0035	.0041	.0056
.0006	.0011	.0014	.0019	.0025	.0031	.0038	.0052
.0005	.0010	.0013	.0017	.0023	.0027	.0034	.0044
.0006	.0011	.0014	.0019	.0025	.0031	.0038	.0052