

Speed & Feed Recommendations

Series MK2 Fractional	Hardness BRINELL			Vc (SFM)		Diameter (D ₁) (inch)				
		Ae x D ₁	Ap x D ₁			0.008	0.016	0.031	0.04	0.06
P	CARBON STEELS 1018, 1040, 1080, 1090, 10L50, 1140, 1212, 12L15, 1525, 1536	Profile ≤ 0.5 ≤ 1.5		320	RPM	152800	76400	39432	30560	20373
				(256-384)	Fz	0.000018	0.000040	0.000070	0.000110	0.000140
					Feed (IPM)	5.5	6.1	5.5	6.7	5.7
		Slot 1 ≤ 1		255	RPM	121763	60881	31423	24353	16235
				(204-306)	Fz	0.000016	0.000030	0.000060	0.000090	0.000130
					Feed (IPM)	3.9	3.7	3.8	4.4	4.2
P	ALLOY STEELS 4140, 4150, 4320, 5120, 5150, 8630, 86L20, 50100	Profile ≤ 0.5 ≤ 1.5		235	RPM	112213	56106	28958	22443	14962
				(188-282)	Fz	0.000014	0.000030	0.000050	0.000080	0.000110
					Feed (IPM)	3.1	3.4	2.9	3.6	3.3
		Slot 1 ≤ 1		190	RPM	90725	45363	23413	18145	12097
				(152-228)	Fz	0.000012	0.000020	0.000050	0.000070	0.000090
					Feed (IPM)	2.2	1.8	2.3	2.5	2.2
P	TOOL STEELS A2, D2, H13, L2, M2, P20, S7, T15, W2	Profile ≤ 0.5 ≤ 1.5		220	RPM	105050	52525	27110	21010	14007
				(176-264)	Fz	0.000014	0.000030	0.000050	0.000080	0.000110
					Feed (IPM)	2.9	3.2	2.7	3.4	3.1
		Slot 1 ≤ 1		175	RPM	83563	41781	21565	16713	11142
				(140-210)	Fz	0.000012	0.000020	0.000050	0.000070	0.000090
					Feed (IPM)	2.0	1.7	2.2	2.3	2.0
K	CAST IRONS Gray, Malleable, Ductile	Profile ≤ 0.5 ≤ 1.5		235	RPM	112213	56106	28958	22443	14962
				(188-282)	Fz	0.000018	0.000040	0.000070	0.000110	0.000140
					Feed (IPM)	4.0	4.5	4.1	4.9	4.2
		Slot 1 ≤ 1		190	RPM	90725	45363	23413	18145	12097
				(152-228)	Fz	0.000016	0.000030	0.000060	0.000090	0.000130
					Feed (IPM)	2.9	2.7	2.8	3.3	3.1
M	STAINLESS STEELS (FREE MACHINING) 303, 416, 420F, 430F 440F	Profile ≤ 0.5 ≤ 1.5		260	RPM	124150	62075	32039	24830	16553
				(208-312)	Fz	0.000014	0.000030	0.000050	0.000080	0.000110
					Feed (IPM)	3.5	3.7	3.2	4.0	3.6
		Slot 1 ≤ 1		210	RPM	100275	50138	25877	20055	13370
				(168-252)	Fz	0.000012	0.000020	0.000050	0.000070	0.000090
					Feed (IPM)	2.4	2.0	2.6	2.8	2.4
M	STAINLESS STEELS (DIFFICULT) 304, 304L, 316, 316L	Profile ≤ 0.5 ≤ 1.5		180	RPM	85950	42975	22181	17190	11460
				(144-216)	Fz	0.000011	0.000020	0.000040	0.000060	0.000090
					Feed (IPM)	1.9	1.7	1.8	2.1	2.1
		Slot 1 ≤ 1		145	RPM	69238	34619	17868	13848	9232
				(116-174)	Fz	0.000010	0.000020	0.000040	0.000060	0.000080
					Feed (IPM)	1.4	1.4	1.4	1.7	1.5

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