

	Series 140 5D Fractional	Hardness BRINELL	Vc (SFM)	Diameter (D ₁) (inch)							
				1/8	3/16	1/4	3/8	1/2	5/8	3/4	
P	CARBON STEELS 1018, 1040, 1080, 1090, 10L50, 1140, 1212, 12L15, 1525, 1536	≤ 200	440	RPM	13446	8964	6723	4482	3362	2689	2241
			(352-528)	Fr	0.0040	0.0060	0.0080	0.0120	0.0160	0.0200	0.0240
				Feed (IPM)	53.8	53.8	53.8	53.8	53.8	53.8	53.8
		> 200 ≤ 300	380	RPM	11613	7742	5806	3871	2903	2323	1935
			(304-456)	Fr	0.0035	0.0053	0.0070	0.0105	0.0140	0.0175	0.0210
				Feed (IPM)	40.6	41.0	40.6	40.6	40.6	40.6	40.6
		> 300 ≤ 420	180	RPM	5501	3667	2750	1834	1375	1100	917
			(144-216)	Fz	0.0030	0.0045	0.0060	0.0090	0.0120	0.0150	0.0180
				Feed (IPM)	16.5	16.5	16.5	16.5	16.5	16.5	16.5
P	ALLOY STEELS 4140, 4150, 4320, 5120, 5150, 8630, 86L20, 50100	≤ 270	330	RPM	10085	6723	5042	3362	2521	2017	1681
			(264-396)	Fz	0.0030	0.0045	0.0060	0.0090	0.0120	0.0150	0.0180
				Feed (IPM)	30.3	30.3	30.3	30.3	30.3	30.3	30.3
		> 270 ≤ 370	240	RPM	7334	4890	3667	2445	1834	1467	1222
			(192-288)	Fr	0.0025	0.0038	0.0050	0.0075	0.0100	0.0125	0.0150
				Feed (IPM)	18.3	18.6	18.3	18.3	18.3	18.3	18.3
		> 375 ≤ 450	140	RPM	4278	2852	2139	1426	1070	856	713
			(112-168)	Fr	0.0018	0.0027	0.0035	0.0055	0.0070	0.0090	0.0110
				Feed (IPM)	7.7	7.7	7.5	7.8	7.5	7.7	7.8
P	TOOL STEELS A2, D2, H13, L2, M2, P20, S7, T15, W2	≤ 250	240	RPM	7334	4890	3667	2445	1834	1467	1222
			(192-288)	Fr	0.0025	0.0038	0.0050	0.0075	0.0100	0.0125	0.0150
				Feed (IPM)	18.3	18.6	18.3	18.3	18.3	18.3	18.3
		> 250 ≤ 330	180	RPM	5501	3667	2750	1834	1375	1100	917
			(144-216)	Fr	0.0018	0.0027	0.0035	0.0055	0.0070	0.0090	0.0110
				Feed (IPM)	9.9	9.9	9.6	10.1	9.6	9.9	10.1
		> 330 ≤ 450	90	RPM	2750	1834	1375	917	688	550	458
			(72-108)	Fr	0.0010	0.0015	0.0020	0.0030	0.0040	0.0050	0.0060
				Feed (IPM)	2.8	2.8	2.8	2.8	2.8	2.8	2.8
K	CAST IRONS Gray, Malleable, Ductile	≤ 200	440	RPM	13446	8964	6723	4482	3362	2689	2241
			(352-528)	Fr	0.0050	0.0075	0.0100	0.0150	0.0200	0.0250	0.0300
				Feed (IPM)	67.2	67.2	67.2	67.2	67.2	67.2	67.2
		> 200 ≤ 330	280	RPM	8557	5705	4278	2852	2139	1711	1426
			(224-336)	Fr	0.0045	0.0068	0.0090	0.0135	0.0180	0.0225	0.0270
				Feed (IPM)	38.5	38.8	38.5	38.5	38.5	38.5	38.5
M	STAINLESS STEELS (FREE MACHINING) 303, 416, 420F, 430F 440F	< 250	220	RPM	6723	4482	3362	2241	1681	1345	1121
			(176-264)	Fr	0.0025	0.0038	0.0050	0.0075	0.0100	0.0125	0.0150
				Feed (IPM)	16.8	17.0	16.8	16.8	16.8	16.8	16.8
		> 250 ≤ 330	170	RPM	5195	3463	2598	1732	1299	1039	866
			(136-204)	Fr	0.0020	0.0030	0.0040	0.0060	0.0080	0.0100	0.0120
				Feed (IPM)	10.4	10.4	10.4	10.4	10.4	10.4	10.4

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