

	Series 135 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	360	RPM	11002	7334	5501	3667	2750	2200	1834
			(288-432)	Fr	0.0040	0.0060	0.0080	0.0120	0.0160	0.0200	0.0280
				Feed (IPM)	44.0	44.0	44.0	44.0	44.0	44.0	51.3
		> 200 ≤ 300	310	RPM	9474	6316	4737	3158	2368	1895	1579
			(248-372)	Fr	0.0035	0.0053	0.0070	0.0105	0.0140	0.0175	0.0245
				Feed (IPM)	33.2	33.5	33.2	33.2	33.2	33.2	38.7
		> 300 ≤ 420	150	RPM	4584	3056	2292	1528	1146	917	764
			(120-180)	Fz	0.0030	0.0045	0.0060	0.0090	0.0120	0.0150	0.0210
				Feed (IPM)	13.8	13.8	13.8	13.8	13.8	13.8	16.0
P	ALLOY STEELS 4140, 4150, 4320, 5120, 5150, 8630, 86L20, 50100	≤ 270	270	RPM	8251	5501	4126	2750	2063	1650	1375
			(216-324)	Fz	0.0030	0.0045	0.0060	0.0090	0.0120	0.0150	0.0210
				Feed (IPM)	24.8	24.8	24.8	24.8	24.8	24.8	28.9
		> 270 ≤ 370	200	RPM	6112	4075	3056	2037	1528	1222	1019
			(160-240)	Fr	0.0025	0.0038	0.0050	0.0075	0.0100	0.0125	0.0175
				Feed (IPM)	15.3	15.5	15.3	15.3	15.3	15.3	17.8
		> 375 ≤ 450	110	RPM	3362	2241	1681	1121	840	672	560
			(88-132)	Fr	0.0018	0.0026	0.0035	0.0055	0.0070	0.0090	0.0125
				Feed (IPM)	5.9	5.8	5.9	6.2	5.9	6.1	7.0
P	TOOL STEELS A2, D2, H13, L2, M2, P20, S7, T15, W2	≤ 250	200	RPM	6112	4075	3056	2037	1528	1222	1019
			(160-240)	Fr	0.0025	0.0038	0.0050	0.0075	0.0100	0.0125	0.0175
				Feed (IPM)	15.3	15.5	15.3	15.3	15.3	15.3	17.8
		> 250 ≤ 330	130	RPM	3973	2649	1986	1324	993	795	662
			(104-156)	Fr	0.0018	0.0027	0.0035	0.0055	0.0070	0.0090	0.0125
				Feed (IPM)	7.0	7.2	7.0	7.3	7.0	7.2	8.3
		> 330 ≤ 450	60	RPM	1834	1222	917	611	458	367	306
			(48-72)	Fr	0.0010	0.0015	0.0020	0.0030	0.0040	0.0050	0.0070
				Feed (IPM)	1.8	1.8	1.8	1.8	1.8	1.8	2.1
K	CAST IRONS Gray, Malleable, Ductile	≤ 200	360	RPM	11002	7334	5501	3667	2750	2200	1834
			(288-432)	Fr	0.0050	0.0075	0.0100	0.0150	0.0200	0.0250	0.0350
				Feed (IPM)	55.0	55.0	55.0	55.0	55.0	55.0	64.2
		> 200 ≤ 330	230	RPM	7029	4686	3514	2343	1757	1406	1171
			(184-276)	Fr	0.0045	0.0068	0.0090	0.0135	0.0180	0.0225	0.0315
				Feed (IPM)	31.6	31.9	31.6	31.6	31.6	31.6	36.9
M	STAINLESS STEELS (FREE MACHINING) 303, 416, 420F, 430F 440F	< 250	180	RPM	5501	3667	2750	1834	1375	1100	917
			(144-216)	Fr	0.0025	0.0038	0.0050	0.0075	0.0100	0.0125	0.0175
				Feed (IPM)	13.8	13.9	13.8	13.8	13.8	13.8	16.0
		> 250 ≤ 330	130	RPM	3973	2649	1986	1324	993	795	662
			(104-156)	Fr	0.0020	0.0030	0.0040	0.0060	0.0080	0.0100	0.0140
				Feed (IPM)	7.9	7.9	7.9	7.9	7.9	7.9	9.3

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