

Series 603 Fractional		Hardness BRINELL	Vc (SFM)	Diameter (D ₁) (inch)							
				1/8	3/16	1/4	3/8	1/2	3/4	1	
P	CARBON STEELS 1018, 1040, 1080, 1090, 10L50, 1140, 1212, 12L15, 1525, 1536		125	RPM	3820	2547	1910	1273	955	637	478
		≤ 200	(100-150)	Fr	0.0008	0.0012	0.0016	0.0024	0.0032	0.0047	0.0063
				Feed (IPM)	3.1	3.1	3.1	3.1	3.1	3.0	3.0
		> 200 ≤ 300	60	RPM	1834	1222	917	611	458	306	229
			(48-72)	Fr	0.0007	0.0011	0.0014	0.0021	0.0029	0.0043	0.0057
					Feed (IPM)	1.3	1.3	1.3	1.3	1.3	1.3
		> 300 ≤ 420	45	RPM	1375	917	688	458	344	229	172
			(36-54)	Fz	0.0005	0.0007	0.0009	0.0014	0.0018	0.0027	0.0036
					Feed (IPM)	0.7	0.6	0.6	0.6	0.6	0.6
P	ALLOY STEELS 4140, 4150, 4320, 5120, 5150, 8630, 86L20, 50100		95	RPM	2903	1935	1452	968	726	484	363
		≤ 275	(76-114)	Fz	0.0007	0.0010	0.0014	0.0020	0.0027	0.0041	0.0054
				Feed (IPM)	2.0	1.9	2.0	1.9	2.0	2.0	2.0
		> 275 ≤ 375	60	RPM	1834	1222	917	611	458	306	229
			(48-72)	Fr	0.0007	0.0010	0.0014	0.0020	0.0027	0.0041	0.0054
					Feed (IPM)	1.3	1.2	1.3	1.2	1.2	1.3
		> 375 ≤ 450	35	RPM	1070	713	535	357	267	178	134
			(28-42)	Fr	0.0004	0.0006	0.0008	0.0012	0.0017	0.0025	0.0033
					Feed (IPM)	0.4	0.4	0.4	0.4	0.5	0.4
P	TOOL STEELS A2, D2, H13, L2, M2, P20, S7, T15, W2		35	RPM	1070	713	535	357	267	178	134
		≤ 250	(28-42)	Fr	0.0004	0.0006	0.0008	0.0012	0.0017	0.0025	0.0033
				Feed (IPM)	0.4	0.4	0.4	0.4	0.5	0.4	0.4
		> 250 ≤ 330	25	RPM	764	509	382	255	191	127	96
			(20-30)	Fr	0.0002	0.0003	0.0005	0.0007	0.0009	0.0014	0.0018
					Feed (IPM)	0.2	0.2	0.2	0.2	0.2	0.2
		> 330 ≤ 450	20	RPM	611	407	306	204	153	102	76
			(16-24)	Fr	0.0002	0.0003	0.0005	0.0007	0.0009	0.0014	0.0018
					Feed (IPM)	0.1	0.1	0.2	0.1	0.1	0.1
K	CAST IRONS Gray, Malleable, Ductile		105	RPM	3209	2139	1604	1070	802	535	401
		≤ 200	(84-126)	Fr	0.0009	0.0014	0.0018	0.0027	0.0036	0.0054	0.0072
				Feed (IPM)	2.9	3.0	2.9	2.9	2.9	2.9	2.9
		> 200 ≤ 330	75	RPM	2292	1528	1146	764	573	382	287
			(60-90)	Fr	0.0009	0.0014	0.0018	0.0027	0.0036	0.0054	0.0072
					Feed (IPM)	2.1	2.1	2.1	2.1	2.1	2.1
M	STAINLESS STEELS (FREE MACHINING) 303, 416, 420F, 430F 440F		53	RPM	1620	1080	810	540	405	270	202
		≤ 250	(42-64)	Fr	0.0005	0.0007	0.0009	0.0014	0.0018	0.0027	0.0036
				Feed (IPM)	0.8	0.8	0.7	0.8	0.7	0.7	0.7
		> 250 ≤ 330	46	RPM	1406	937	703	469	351	234	176
			(37-55)	Fr	0.0003	0.0005	0.0007	0.0010	0.0014	0.0020	0.0027
					Feed (IPM)	0.4	0.5	0.5	0.5	0.5	0.5

continued on next page