

Speed & Feed Recommendations

Series 106 Fractional	Hardness BRINELL	Vc (SFM)	Diameter (D ₁) (inch)							
			1/16	1/8	3/16	1/4	3/8	1/2		
P	ALLOY STEELS 4140, 4150, 4320, 5120, 5150, 8630, 86L20, 50100	> 420 ≤ 500	33	RPM	2017	1008	672	504	336	252
			(26-40)	Fz	0.0003	0.0006	0.0008	0.0012	0.0018	0.0024
				Feed (IPM)	0.6	0.6	0.5	0.6	0.6	0.6
		> 500 ≤ 615	33	RPM	2017	1008	672	504	336	252
			(26-40)	Fr	0.0002	0.0004	0.0005	0.0007	0.0010	0.0014
				Feed (IPM)	0.4	0.4	0.3	0.4	0.3	0.4
P	TOOL STEELS A2, D2, H13, L2, M2, P20, S7, T15, W2	> 420 ≤ 500	34	RPM	2078	1039	693	520	346	260
			(27-41)	Fr	0.0003	0.0006	0.0008	0.0012	0.0018	0.0023
				Feed (IPM)	0.6	0.6	0.6	0.6	0.6	0.6
		> 500 ≤ 615	33	RPM	2017	1008	672	504	336	252
			(26-40)	Fr	0.0002	0.0003	0.0004	0.0006	0.0008	0.0014
				Feed (IPM)	0.4	0.3	0.3	0.3	0.3	0.4
K	CAST IRONS Gray, Malleable, Ductile	≤ 200	252	RPM	15402	7701	5134	3851	2567	1925
			(202-302)	Fr	0.001	0.0020	0.0030	0.0040	0.0060	0.0081
				Feed (IPM)	15.4	15.4	15.4	15.4	15.4	15.6
		> 200 ≤ 330	185	RPM	11307	5654	3769	2827	1885	1413
			(148-222)	Fr	0.001	0.0020	0.0030	0.0040	0.0060	0.0081
				Feed (IPM)	11.3	11.3	11.3	11.3	11.3	11.4

rpm = sfm x 3.82 / D₁

ipm = (inch / revolution) x rpm

reduce speed and feed rates shown by 30 percent when using uncoated drills refer to the SGS Tool Wizard for complete technical information ()

Series 106M Metric	Hardness BRINELL	Vc (m/min)	Diameter (D ₁) (mm)							
			1	3	6	8	10	12		
P	ALLOY STEELS 4140, 4150, 4320, 5120, 5150, 8630, 86L20, 50100	10	RPM	3199	1066	533	400	320	267	
		> 420 ≤ 500	(8-12)	Fz	0.006	0.017	0.034	0.045	0.057	0.068
			Feed (mm/min)	19	18	18	18	18	18	
		> 500 ≤ 615	10	RPM	3199	1066	533	400	320	267
			(8-12)	Fr	0.003	0.009	0.018	0.024	0.030	0.036
				Feed (mm/min)	10	10	10	10	10	10
P	TOOL STEELS A2, D2, H13, L2, M2, P20, S7, T15, W2	10	RPM	3296	1099	549	412	330	275	
		> 420 ≤ 500	(8-12)	Fr	0.003	0.009	0.018	0.024	0.030	0.036
			Feed (mm/min)	10	10	10	10	10	10	
		> 500 ≤ 615	10	RPM	3199	1066	533	400	320	267
			(8-12)	Fr	0.002	0.007	0.014	0.019	0.023	0.028
				Feed (mm/min)	6	7	7	8	7	7
K	CAST IRONS Gray, Malleable, Ductile	77	RPM	24429	8143	4072	3054	2443	2036	
		≤ 200	(61-92)	Fr	0.016	0.048	0.096	0.128	0.160	0.192
			Feed (mm/min)	391	391	391	391	391	391	
		> 200 ≤ 330	56	RPM	17934	5978	2989	2242	1793	1495
			(45-68)	Fr	0.016	0.048	0.096	0.128	0.160	0.192
				Feed (mm/min)	287	287	287	287	287	287

rpm = sfm x 3.82 / D₁

ipm = (inch / revolution) x rpm

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