

Series 106 Fractional	Hardness BRINELL	Vc (SFM)	Diameter (D <sub>1</sub> ) (inch)						
			1/16	1/8	3/16	1/4	3/8	1/2	
<b>P</b> <b>ALLOY STEELS</b> 4140, 4150, 4320, 5120, 5150, 8630, 86L20, 50100	> 420 ≤ 500	33 (26-40)	RPM	2017	1008	672	504	336	252
			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 (26-40)	RPM	2017	1008	672	504	336	252
			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
<b>P</b> <b>TOOL STEELS</b> A2, D2, H13, L2, M2, P20, S7, T15, W2	> 420 ≤ 500	34 (27-41)	RPM	2078	1039	693	520	346	260
			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 (26-40)	RPM	2017	1008	672	504	336	252
			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
<b>K</b> <b>CAST IRONS</b> Gray, Malleable, Ductile	≤ 200	252 (202-302)	RPM	15402	7701	5134	3851	2567	1925
			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 (148-222)	RPM	11307	5654	3769	2827	1885	1413
			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 / D<sub>1</sub>  
 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 (www.sgstool.com)

Series 106M Metric	Hardness BRINELL	Vc (m/min)	Diameter (D <sub>1</sub> ) (mm)						
			1	3	6	8	10	12	
<b>P</b> <b>ALLOY STEELS</b> 4140, 4150, 4320, 5120, 5150, 8630, 86L20, 50100	> 420 ≤ 500	10 (8-12)	RPM	3199	1066	533	400	320	267
			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 (8-12)	RPM	3199	1066	533	400	320	267
			Fr	0.003	0.009	0.018	0.024	0.030	0.036
			Feed (mm/min)	10	10	10	10	10	10
<b>P</b> <b>TOOL STEELS</b> A2, D2, H13, L2, M2, P20, S7, T15, W2	> 420 ≤ 500	10 (8-12)	RPM	3296	1099	549	412	330	275
			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 (8-12)	RPM	3199	1066	533	400	320	267
			Fr	0.002	0.007	0.014	0.019	0.023	0.028
			Feed (mm/min)	6	7	7	8	7	7
<b>K</b> <b>CAST IRONS</b> Gray, Malleable, Ductile	≤ 200	77 (61-92)	RPM	24429	8143	4072	3054	2443	2036
			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 (45-68)	RPM	17934	5978	2989	2242	1793	1495
			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 / D<sub>1</sub>  
 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 (www.sgstool.com)

