HARD SPEED AND FEED RECOMMENDATIONS

TTP HARD Drill bits	Speed & Feed Recommendations	METRIC				
			Feed Per	Revolution	by drill bit diameter	
Material being drilled	Brinell Hardness (BHN)	Surface Speed (cm/Minute)	1mm - 3mm	3mm - 6mm	6mm - 9.5mm	9.5mm - 13mm
			all below measurements are in inches			
Aluminium & Aluminium Alloys	40 - 100	9906	0.1524	0.2286	0.2794	0.3429
Aluminium Cast	200	6858	1.2700	0.1905	0.2286	0.2794
Alloyed Steel	200 - 300	1981	0.0635	0.1016	0.1270	0.1651
Brass / Bronze	150 - 200	2743	0.8890	0.1397	0.1905	0.2286
Copper	65 - 100	3810	0.1016	0.1651	0.2032	0.2540
Low Carbon Steel	85 - 125	3353	0.1016	0.1651	0.2032	0.2540
Medium Carbon Steel	125 - 175	1981	0.1245	0.1651	0.2032	0.2540
High Carbon Steel	175 - 225	1829	0.0762	0.1270	0.1651	0.2032
Cast iron (Soft Gray)	120 - 160	3200	0.1016	0.1651	0.2032	0.2540
Cast Iron (Gray)	160 - 260	2743	1.2700	0.1905	0.2286	0.2794
Cast Iron (Ductile)	250	2438	0.0762	0.1270	0.1651	0.2032
Cast Iron (Malleable)	250 - 330	1676	0.0508	0.0762	0.1143	0.1524
Tool and Die Steels	180 - 250	1524	0.0762	0.1270	0.1651	0.2032
Tool and Die Steels	250 - 350	1067	0.0508	0.0762	0.1143	0.1524
Heat Treated Steel	370 - 420	1219	0.0635	0.1016	0.1270	0.1651
Free machining Stainless Steel	120 - 200	1829	0.1016	0.1651	0.2032	0.2540
Moderate machining Stainless Steel	200 - 300	1219	0.0508	0.0762	0.1143	0.1524
Difficult machining Stainless Steel	300 +	610	0.0508	0.0762	0.1143	0.1524
Nickel Alloys	300 - 375	610	0.0635	0.1016	0.1270	0.1651

Note : The Speeds and Feeds listed above are suggested starting points and can be increased or decreased depending on actual material and machining conditions. We suggest you start conservatively and increase speed and feed until optimum settings for application are found.