



Drill Speed Guide

Material	Surface Ft/Min	Size of Hole to be Drilled							
		1/16 in 1.5 mm	1/8 in 3.0 mm	3/16 in 5.0	1/4 in 6.0 mm	5/16 in 8.0 mm	3/8 in 9.5 mm	7/16 in 11.0 mm	1/2 in 13.0 mm
Recommended Cutting Speed Range (rpm)									
Steel Alloy, 300-400 Brinell	20-30	1250-1800	600-900	400-600	300-450	250-350	200-300	175-250	150-225
Stainless Steel, Cast Iron, Hard	30-40	1800-2500	900-1200	600-800	450-600	350-500	300-400	250-350	225-300
Steel Forgings	40-50	2500-3100	1200-1500	800-1000	600-750	500-600	400-500	350-425	300-400
Steel, Tool Annealed, .90-1.20 Carbon	50-60	3100-3700	1500-1800	100-1200	750-900	600-700	500-600	425-525	400-450
Steel, .40-.50 Carbon	70-80	4300-5000	2100-2500	1400-1600	1000-1200	850-1000	700-800	600-700	500-600
Cast Iron, Medium Hard	70-100	4300-6000	2100-3000	1400-2000	1000-1500	850-1200	700-1000	600-900	500-800
Bronze, High Tensile Strength	70-150	4300-9000	2100-4500	1400-3000	1000-2300	850-1200	700-1530	600-1300	500-1200
Malleable Iron	80-90	5000-5500	2500-2800	1600-1800	1200-1400	950-1100	800-900	700-800	600-700
Steel, Mild .20-.30 Carbon	80-110	5000-6700	2500-3400	1600-2300	1200-1700	950-1350	800-1150	700-1000	600-850
Cast Iron, Soft Plastic	100-150	6000-9000	3000-4500	2000-3000	1500-2300	1200-1800	1000-1530	900-1300	800-1200
Aluminum, Brass, Bronze	200-300	12,000-18,000	6000-9000	4000-6000	3000-4500	2400-3700	2000-3000	1700-2600	1500-2300
Magnesium	250-400	15,500-25,000	7500-12,000	5000-8200	3800-6100	3000-4900	2500-4000	2200-3500	1900-3000
Fiberglass, Wood	300-400	18,000-25,000	9000-12,000	6000-8200	4600-6100	3700-4900	3000-4000	2600-3500	2300-3000

Actual drilling or cutting RPM will be approximately 70% of rated spindle speed of tool. Surface Feet Per Minute = .26 x RPM x Drill Diameter in Inches.