

# Helical and Bickford Drill Point

## Feed & Speed Chart

Material	Recommended Surface Feet Per Minute							
	15-20	20-40	40-60	60-80	80-120	120-200	200-300	300-400
Aluminum	→	→	→	→	→	→	→	→
Aluminum alloys	→	→	→	→	→	→	→	→
Bronze (high tensile)	→	→	→	→	→	→	→	→
Die casting (zinc base)	→	→	→	→	→	→	→	→
Cast iron (soft)	→	→	→	→	→	→	→	→
Cast iron (medium hard)	→	→	→	→	→	→	→	→
Cast iron (hard chilled)	→	→	→	→	→	→	→	→
Cast iron (malleable)	→	→	→	→	→	→	→	→
Hastelloy	→	→	→	→	→	→	→	→
Inconel	→	→	→	→	→	→	→	→
Magnesium	→	→	→	→	→	→	→	→
Magnesium alloy	→	→	→	→	→	→	→	→
Monel	→	→	→	→	→	→	→	→
High nickel steel	→	→	→	→	→	→	→	→
Mild steel (.2-.3 carbon)	→	→	→	→	→	→	→	→
Steel (.4-.5 carbon)	→	→	→	→	→	→	→	→
Tool steel	→	→	→	→	→	→	→	→
Forgings	→	→	→	→	→	→	→	→
Steel alloys (300-400 brinell)	→	→	→	→	→	→	→	→
High tensile (heat treat)	→	→	→	→	→	→	→	→
35-40 Rockwell C	→	→	→	→	→	→	→	→
40-45 Rockwell C	→	→	→	→	→	→	→	→
45-50 Rockwell C	→	→	→	→	→	→	→	→
50-55 Rockwell C	→	→	→	→	→	→	→	→
Stainless steel free machining	→	→	→	→	→	→	→	→
Stainless work hardening	→	→	→	→	→	→	→	→
Titanium alloys:	→	→	→	→	→	→	→	→
TI-75A	→	→	→	→	→	→	→	→
RS-120	→	→	→	→	→	→	→	→
TI-150A	→	→	→	→	→	→	→	→
RC-130B	→	→	→	→	→	→	→	→
MST6A1-4 VA	→	→	→	→	→	→	→	→
MST3A1-5 CR	→	→	→	→	→	→	→	→

Recommended Feeds: in./revolution for Form-ground, S-shaped Drills	
Drill Size (in.)	I.P.R.
.0 - .62	.0015
.078 - .125	.003
.140 - .187	.004
.203 - .250	.007
.265 - .313	.009
.328 - .375	.011
.390 - .437	.012
.453 - .500	.013
.514 - .625	.016
.640 - .750	.019
.765 - .875	.022
.890 - 1.000	.024
1.015 - 1.250	.026
1.265 - 1.500	.027

Drilling Formulas	
Surface ft./min.	Multiply rpm times drill dia. (in.) times 0.26
RPM	Surface ft. per minute divided by drill dia. Multiplied by 3.85
In./min	Multiply RPM times in. per revolution
<i>These charts are intended as a guideline. Machine, material, and applications can and will affect drill feeds and speeds.</i>	

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