



Speeds & Feeds

Product Table: Miniature High Performance Drills - Flat Bottom Drill
Characteristics: For Aluminum and Non Ferrous Materials, 3x-5x Length of Flute
Series: FBDxxxx-C8, FBFxxxx-C8, FBGxxxx-C8

Product Notes:

Pecking cycles are recommended to avoid chip packing and breakage. Initial peck must fully submerge the drill point into the material. Do not use a pecking cycle for half-hole drilling or any situation where the drill is not fully enclosed in the material during the drilling operation.

For Non-Ferrous materials, the initial peck depth should be 3-5x Diameter with each subsequent peck at 2-3x Diameter.

For entry on curved surfaces adjust feed rate according the angle of engagement in Table 1.

General Notes:

All posted speed and feed parameters are suggested starting values that may be increased given optimal setup conditions.

If you require additional information, Harvey Tool has a team of technical experts available to assist you through even the most challenging applications. Please contact us at **800-645-5609** or **Harveytech@harveyperformance.com**.

WARNING: Cutting tools may shatter under improper use. Government regulations require use of safety glasses and other appropriate safety equipment in the vicinity of use.

MATERIAL	Hardness: ≤ 28 Rc (≤ 271 HBn)									
	SFM	Chip Load (IPR - Inches Per Revolution) By Drill Diameter								
		0.015	0.031	0.047	0.062	0.078	0.093	0.125	0.187	0.250
ALUMINUM ALLOYS										
Casting (2xx, 5xx, 7xx, 8xx)	450	.00079	.00164	.00248	.00327	.00412	.00491	.00660	.00987	.01320
Wrought (1xxx, 2xxx, 3xxx, 5xxx, 6xxx, 7xxx, 8xxx)	600									
Casting - 3%-5% Si (3xx, A3xx, C3xx, 4xx, A4xx, B4xx)	450									
Casting - 5%-8% Si (3xx, A3xx, C3xx, 4xx, A4xx, B4xx)	420	.00071	.00147	.00223	.00295	.00371	.00442	.00594	.00889	.01188
Casting - 8%-12% Si (3xx, A3xx, C3xx, 4xx, A4xx, B4xx)	390									
Casting - 12%-16% Si (3xx, A3xx, C3xx, 4xx, A4xx, B4xx)	350									
Wrought - 5%-8% Si (4xxx)	600									
Wrought - 8%-12% Si (4xxx)	480									
MAGNESIUM ALLOYS	900	.00079	.00164	.00248	.00327	.00412	.00491	.00660	.00987	.01320
ZINC ALLOYS	480									
COPPER ALLOYS										
High Coppers - 90%+ (C1xxxx)	170									
Brass (Copper Zinc alloys, C2xxxx, C3xxxx, C4xxxx, C66400-C69800)	375									
Phosphor Bronzes (Copper Tin alloys, C5xxxx)	170									
Aluminum Bronzes (Copper Aluminum alloys, C60600-C64200)	375	.00063	.00131	.00199	.00262	.00329	.00393	.00528	.00790	.01056
Silicon Bronzes (Copper Silicon alloys, C64700-C66100)	375									
Copper Nickels, Nickel Silvers (Copper Nickel alloys, C7xxxx)	170									
Cast Copper Alloys (C83300-C86200, C86400-C87900, C92200-C95800, C97300-C97800, C99400-C99700)	400									
PLASTICS										
Unfilled Plastics	500	.00079	.00164	.00248	.00327	.00412	.00491	.00660	.00987	.01320
Reinforced Plastics	350	.00063	.00131	.00199	.00329	.00393	.00528	.00790	.01056	.01584