



Product Table: High Performance Drills - Aluminum & Aluminum Alloys - Coolant-Through
Characteristics: 3x & 5x LOF

Product Notes:

For best results, the following steps are recommended:

- For hole depths of 7x Diameter or greater, drill a pilot hole up to 1.5-2x D in depth using a drill with 3x LOF or shorter.
- Insert primary drill at low speed (~50-500 RPM) and start coolant flow.
- Increase speed and feed to recommended parameters.
- Under optimal conditions, a pecking cycle should not be needed.
 - On through holes, reduce feed rate by 50% just before break through with drill point.
 - Feed at 50% to final depth.
- After reaching desired hole depth, reduce speed (~500 RPM) before retracting the drill.

In order to achieve the best results, cutting fluid is recommended. As an alternative, it is possible to use emulsions with EP additives. Use a fine mesh prefilter (=5µm) on spindle through coolant to prevent a blockage of the coolant hole. A minimum coolant pressure of 600-800 PSI is recommended.

Material Guide		SFM	Chip Load (IPR) by Drill Diameter											
			1/16	5/64	3/32	1/8	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4
Wrought Aluminum Alloy	2014, 5062, 6061, 7050, 7075, 7475	350-1500	.002-.003	.002-.003	.003-.004	.005-.006	.005-.007	.006-.008	.007-.009	.008-.011	.009-.012	.010-.014	.012-.016	.015-.019
Cast Aluminum Alloy	319.0, 328.0, 355.0, 360.0, 380.0, 383.0, 390.0, 520.0, 535.0	300-875	.002-.003	.002-.003	.003-.004	.004-.005	.004-.006	.005-.007	.005-.007	.006-.009	.007-.010	.008-.012	.010-.014	.012-.016
Copper Alloy	Cu-ETP, CuBe2, CuZn30, CuZn36Pb3, CuZn10, CuSn5	300-520	.002-.003	.002-.003	.003-.004	.004-.005	.004-.006	.005-.007	.005-.007	.006-.009	.007-.010	.008-.012	.010-.014	.012-.016

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, Valor Holemaking has a team of technical experts available to assist you through even the most challenging applications. Please contact us at **866-840-1505** or **Valortech@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.