

# Recommended Parameters: Drilling IMS, Aluminum, Copper, and Brass



**Tool Recommendations: 1638, 1640, 1835, 1534**

Cutting Speed: 650-825 Feet/Minute

**80,000 RPM Spindles**

Router Size		Spindle Speed	Chip Load		Feed Rate		Retract Rate	
mm	Diameter		um	inch	m/min	in/min	m/min	inch/min
.30	.0118	-	-	-	-	-	-	-
.35	.0138	-	-	-	-	-	-	-
.40	.0157	-	-	-	-	-	-	-
.45	.0177	-	-	-	-	-	-	-
.50	.0197	-	-	-	-	-	-	-
.55	.0217	-	-	-	-	-	-	-
.60	.0236	-	-	-	-	-	-	-
.65	.0256	-	-	-	-	-	-	-
.70	.0276	-	-	-	-	-	-	-
.75	.0295	-	-	-	-	-	-	-
.80	.0315	-	-	-	-	-	-	-
.85	.0335	-	-	-	-	-	-	-
.90	.0354	-	-	-	-	-	-	-
.95	.0374	-	-	-	-	-	-	-
1.00	.0394	80,000	40	.0015	3.2	126	10.0	400
1.05	.0413	76,000	40	.0015	3.0	118	10.0	400
1.10	.0433	72,000	40	.0015	2.9	114	10.0	400
1.15	.0453	69,000	40	.0015	2.8	110	10.0	400
1.20	.0472	66,000	40	.0015	2.6	102	10.0	400
1.25	.0492	63,000	40	.0015	2.6	102	10.0	400
1.30	.0512	61,000	46	.0018	2.8	110	10.0	400
1.35	.0531	59,000	46	.0018	2.7	106	10.0	400
1.40	.0551	57,000	46	.0018	2.6	102	10.0	400
1.45 - 1.60	.0571 - .0630	52,000	45	.0018	2.3	91	10.0	400
1.65 - 1.80	.0650 - .0709	47,000	45	.0018	2.1	83	10.0	400
1.85 - 2.00	.0728 - .0787	42,000	45	.0018	2.0	78	10.0	400
2.05 - 2.30	.0807 - .0906	36,000	50	.0020	1.8	71	10.0	400
2.35 - 2.60	.0925 - .1024	32,000	55	.0022	1.8	71	10.0	400
2.65 - 2.90	.1043 - .1142	30,000	55	.0022	1.6	63	10.0	400
2.95 - 3.15	.1161 - .1240	26,000	55	.0022	1.4	55	10.0	400
3.175 - 3.95	.1250 - .1555	20,000	50	.0020	1.0	39	10.0	400
4.00 - 4.95	.1575 - .1949	20,000	45	.0018	.90	35	10.0	400
5.00 - 5.95	.1969 - .2343	20,000	40	.0015	.80	31	10.0	400
6.00 - 6.40	.2362 - .2520	20,000	40	.0015	.80	31	10.0	400

## General Recommendations:

- Use an entry material
- If ceramic dielectric, reduce speed and feed by approximately 20%.
- When drilling copper reduce spindle speed and Z-feed by approximately 20%.
- If pecking is used, peck stroke is not to exceed 1X diameter
- For drill diameter >4.50mm, pilot 15% of the final diameter
- Maximum pressure foot pressure recommended.
- Use lubrication when possible



we are diamond

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**Subject to technical changes**



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