

Recommended Parameters:

Drilling, IMS, Alumium, Copper, and Brass

Tool Recommendations: 1638, 1640, 1835, 1534

Cutting Speed: 650-825 Feet/Minute

110,000 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	200,000	8	.0003	1.6	63	4.0	150
.35	.0138	200000	10	.0004	2.0	79	5.0	150
.40	.0157	200000	12	.0005	2.4	95	6.0	250
.45	.0177	177000	14	.0006	2.5	98	7.0	300
.50	.0197	159000	16	.0006	2.6	102	8.0	300
.55	.0217	145000	19	.0008	2.7	106	9.0	350
.60	.0236	125000	22	.0009	2.8	110	10.0	400
.65	.0256	122000	24	.0009	2.9	114	10.0	400
.70	.0276	114000	16	.0010	3.0	118	10.0	400
.75	.0295	108000	28	.0011	3.0	118	10.0	400
.80	.0315	100000	30	.0012	3.0	118	10.0	400
.85	.0335	95000	32	.0013	3.0	118	10.0	400
.90	.0354	90000	34	.0013	3.1	122	10.0	400
.95	.0374	85000	37	.0015	3.1	122	10.0	400
1.00	.0394	80000	40	.0015	3.2	126	10.0	400
1.05	.0413	76000	40	.0016	3.0	118	10.0	400
1.10	.0433	72000	40	.0016	2.9	114	10.0	400
1.15	.0453	69000	40	.0016	2.8	110	10.0	400
1.20	.0472	66000	40	.0016	2.6	102	10.0	400
1.25	.0492	63000	40	.0016	2.6	102	10.0	400
1.30	.0512	61000	46	.0018	2.8	110	10.0	400
1.35	.0531	59000	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	79	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	.0020	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	.0016	.80	31	10.0	400
6.00 - 6.40	.2362 - .2520	20,000	40	.0016	.80	31	10.0	400

General recommendations:

- Use an entry material
- If ceramic dielectric, reduce speed and 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 as needed



we are diamond

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