

Recommended Parameters:

Drilling laminates with fillers and Halogen-Free material up to Tg 185° C

Tool Recommendations: 1638, 1640, 1835, 1534

IS400 / IS420 / R-1566/R-1755 (Tg 150° - 185°C)

Cutting Speed: 625 Feet/Minute

200,000 RPM Spindles

Router Size		Spindle Speed	Chip Load		Feed Rate		Retract Rate	
mm	Diam.		um	inch	m/min	in/min	m/min	in/min
.30	.0118	200,000	8	.0003	1.6	63	6.0	250
.35	.0138	172,000	10	.0004	1.7	67	7.0	300
.40	.0157	150,000	12	.0005	1.8	71	8.0	300
.45	.0177	135,000	13	.0005	1.8	71	9.0	350
.50	.0197	120,000	15	.0006	1.8	71	10.0	400
.55	.0217	110,000	16	.0007	1.8	71	12.0	500
.60	.0236	100,000	18	.0007	1.8	71	15.0	600
.65	.0256	93,000	20	.0008	1.8	71	15.0	600
.70	.0276	86,000	21	.0008	1.8	71	18.0	700
.75	.0295	80,000	22	.0009	1.8	71	18.0	700
.80	.0315	75,000	24	.0009	1.8	71	20.0	800
.85	.0335	71,000	26	.0010	1.8	71	20.0	800
.90	.0354	67,000	27	.0011	1.8	71	23.0	900
.95	.0374	63,000	29	.0011	1.8	71	23.0	900
1.00	.0394	60,000	30	.0012	1.8	71	25.0	1000
1.05	.0413	57,000	32	.0012	1.8	71	25.0	1000
1.10	.0433	55,000	33	.0013	1.8	71	25.0	1000
1.15	.0453	52,000	35	.0014	1.8	71	25.0	1000
1.20	.0472	50,000	36	.0014	1.8	71	25.0	1000
1.25	.0492	48,000	37	.0015	1.8	71	25.0	1000
1.30	.0512	46,000	39	.0015	1.8	71	25.0	1000
1.35	.0531	44,000	41	.0016	1.8	71	25.0	1000
1.40	.0551	43,000	43	.0017	1.8	71	25.0	1000
1.45 - 1.60	.0571 - .0630	39,000	46	.0018	1.8	71	25.0	1000
1.65 - 1.80	.0650 - .0709	34,000	51	.0020	1.7	67	25.0	1000
1.85 - 2.00	.0728 - .0787	31,000	56	.0022	1.7	67	25.0	1000
2.05 - 2.30	.0807 - .0906	28,000	60	.0024	1.6	63	25.0	1000
2.35 - 2.60	.0925 - .1024	24,000	60	.0024	1.4	55	25.0	1000
2.65 - 2.90	.1043 - .1142	22,000	60	.0024	1.3	51	25.0	1000
2.95 - 3.15	.1161 - .1240	20,000	60	.0024	1.2	47	25.0	1000
3.175 - 3.95	.1250 - .1555	20,000	35	.0014	0.7	28	15.0	600
4.00 - 4.95	.1575 - .1949	20,000	30	.0012	0.6	24	15.0	600
5.00 - 5.95	.1969 - .2343	20,000	25	.0010	0.5	20	15.0	600
6.00 - 6.40	.2362 - .2520	20,000	20	.0008	0.4	16	15.0	600

General Recommendations:

- Use an entry material (e.g. phenolic paper/melamine, approximately .020" thick)
- If ceramic dielectric, reduce speed and feed by approximately 20%.
- 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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