

## Parameter recommendation for routing outer profiles in FR4

GCT router type: 1700 / 1704 / 1200 / 1204  
 Cutting speed:  $v = 180-200$  m/min for spindles with max 60 krpm

D1	n	fxy	Fxy	Fz	Fz	H	Depth
Router diameter	Spindle speed	Chip load	Feed rate	Infeed with pre drilling	Infeed without pre drilling	max routing depth	into the back up
[mm]	[rpm]	[ $\mu\text{m}/1$ ]	[m/min]	[m/min]	[m/min]	[mm]	[mm]
0.8	60000	5	0.3	1.0	0.3	3.2	0.6
0.9	60000	6	0.3	1.0	0.4	3.2	0.6
1.0	57000	7	0.4	2.0	0.5	4.8	0.8
1.1	55000	8	0.4	2.0	0.5	4.8	0.8
1.2	52000	10	0.5	2.0	0.6	4.8	1.1
1.3	48000	11	0.5	2.0	0.6	4.8	1.1
1.4	44000	13	0.6	2.0	0.7	4.8	1.1
1.5	41000	15	0.6	2.0	0.8	4.8	1.1
1.6	38000	18	0.7	3.0	0.9	4.8	1.1
1.7	35000	20	0.7	3.0	1.0	4.8	1.1
1.8	33000	24	0.8	3.0	1.0	4.8	1.1
1.9	31000	29	0.9	3.0	1.0	4.8	1.1
2.0	29000	35	1.0	3.0	1.0	6.4	1.5
2.4	24000	41	1.0	4.0	1.0	6.4	1.5
2.5	23000	43	1.0	4.0	1.0	6.4	1.5
3.0	19000	44	0.8	4.0	1.0	6.4	1.5
3.175	18000	45	0.8	4.0	1.0	6.4	1.5

### Router specifications:

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Overall length: 38.2 -0.3mm  
 Flute length:  $L \pm 0.2$  mm  
 Working length:  $< 0.85 \times L$   
 Nominal diameter:  $D1 \pm 0.015$  mm (at 3.175mm: -0.04mm)  
 Shank diameter:  $D = 3.175 -0.001 / -0.007$  mm

