

Parameter recommendation for routing outer profiles in FR4

GCT router type: 1700 / 1704 / 1200 / 1204
 Cutting speed: $v = 220$ m/min for spindles with max 80 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	Routing depth	into the back up
[mm]	[rpm]	[$\mu\text{m}/1$]	[m/min]	[m/min]	[m/min]	[mm]	[mm]
0.8	80000	4	0.3	1.0	-	3.2	0.6
0.9	78000	5	0.4	1.0	-	3.2	0.6
1.0	70000	6	0.4	2.0	0.5	4.8	0.8
1.1	64000	7	0.4	2.0	0.5	4.8	0.8
1.2	58000	8	0.5	2.0	0.6	4.8	1.1
1.3	54000	9	0.5	2.0	0.6	4.8	1.1
1.4	50000	12	0.6	2.0	0.7	4.8	1.1
1.5	47000	13	0.6	2.0	0.8	4.8	1.1
1.6	44000	16	0.7	3.0	0.9	4.8	1.1
1.7	41000	20	0.8	3.0	1.0	4.8	1.1
1.8	39000	23	0.9	3.0	1.0	6.4	1.1
1.9	37000	27	1.0	3.0	1.0	6.4	1.1
2.0	35000	34	1.2	3.0	1.0	6.4	1.5
2.4	29000	44	1.3	4.0	1.0	6.4	1.5
2.5	28000	46	1.3	4.0	1.0	6.4	1.5
3.0	23000	52	1.2	4.0	1.0	6.4	1.5
3.175	22000	54	1.2	4.0	1.0	6.4	1.5

Router specifications:

Edition: October 2017

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

