

Parameter recommendation for depaneling of assembled PCB

Tool recommendation: right twisted versions (up cut): **1700/1704** (1200/1204)
left twisted version (down cut): 1760/1764

Cutting speed: $v = 200 - (300)$ m/min

D1	n	fxy	Fxy		Fz	Height
Router diameter	Spindle speed	Chip load	Feed rate		Infeed	of router tip
[mm]	[1/min]	[$\mu\text{m}/1$]	[mm/s]	[m/min]	[m/min]	[mm]
0.80	60000	8	8	0.48	0.8	0.15
1.00	60000	12	12	0.72	1.0	0.20
1.20	53000	17	15	0.90	1.2	0.25
1.50	42000	23	17	1.00	1.5	0.30
1.60	40000	30	20	1.20	1.5	0.30
1.80	35000	40	23	1.40	1.5	0.35
2.00	32000	48	25	1.50	2.0	0.40
2.40	27000	60	27	1.60	2.0	0.45
2.50	26000	70	30	1.80	2.0	0.45

General recommendations:

- ⇒ For panel thickness ≤ 1.60 mm; thicker panels ⇒ reduce feed rates.
- ⇒ For $T_g > 200^\circ\text{C}$ or laminates with fillers the parameters must be reduced: spindle speeds min. 10%, feed rates approx. 30%.
- ⇒ GCT router types 1760/1764 in left twisted version (down cut) is preferred when using conical pins as a tool holder (without clamping).
- ⇒ Vertical off-set for "tool level check" function = panel thickness + 0.20 mm.
- ⇒ Clean and maintain collet and extraction system according to manufacturer's specification.

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
 Shank diameter: $D = 3.175 -0.001 / -0.007$ mm

