

Guide values for 1/8 " spiral cutters

Parameter recommendation for milling outer contours in board material FR4

The values listed serve as a rough guide and may differ from the table depending on the machine and peripherals.

| Cutter diameter | Speed | Feed rate / revolution | Feed | Feed Z | | Milling depth | Depth |
|-----------------|-----------|------------------------------------|------------------------|-------------------|----------------------|---------------|-----------------------------|
| | | | | with pre-drilling | without pre-drilling | | |
| D1 [mm] | n [1/min] | X and Y fxy [$\mu\text{m}/1$] | X and Y Fxy [m/min] | Fz [m/min] | Fz [m/min] | H [mm] | in milling underlay [mm] |
| 0.8 | > 50,000 | 5 | 0.25 | 1 | 0.3 | 3.2 | 0.6 |
| 0.9 | > 50,000 | 6 | 0.30 | 1 | 0.4 | 3.2 | 0.6 |
| 1.0 | > 50,000 | 7 | 0.40 | 2 | 0.5 | 4.8 | 0.8 |
| 1.1 | > 50,000 | 8 | 0.40 | 2 | 0.6 | 4.8 | 0.8 |
| 1.2 | > 50,000 | 10 | 0.50 | 2 | 0.6 | 4.8 | 1.1 |
| 1.3 | 48,000 | 11 | 0.50 | 2 | 0.7 | 4.8 | 1.1 |
| 1.4 | 44,000 | 13 | 0.60 | 2 | 0.8 | 4.8 | 1.1 |
| 1.5 | 41,000 | 15 | 0.60 | 2 | 0.9 | 4.8 | 1.1 |
| 1.6 | 38,000 | 18 | 0.70 | 3 | 1.0 | 4.8 | 1.1 |
| 1.7 | 35,000 | 20 | 0.70 | 3 | 1.0 | 4.8 | 1.1 |
| 1.8 | 33,000 | 24 | 0.80 | 3 | 1.0 | 4.8 | 1.1 |
| 1.9 | 31,000 | 29 | 0.90 | 3 | 1.0 | 4.8 | 1.1 |
| 2.0 | 29,000 | 35 | 1.00 | 3 | 1.0 | 4.8 | 1.5 |
| 2.4 | 24,000 | 41 | 1.00 | 4 | 1.0 | 4.8 | 1.5 |
| 2.5 | 23,000 | 43 | 1.00 | 4 | 1.0 | 4.8 | 1.5 |
| 3.0 | 19,000 | 44 | 0.80 | 4 | 1.0 | 4.8 | 1.5 |
| 3.2 | 18,000 | 45 | 0.80 | 4 | 1.0 | 4.8 | 1.5 |