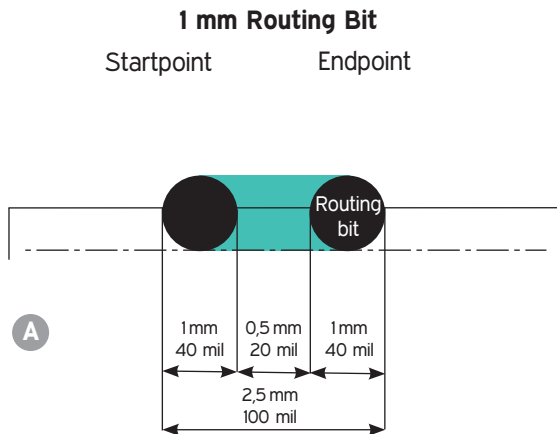
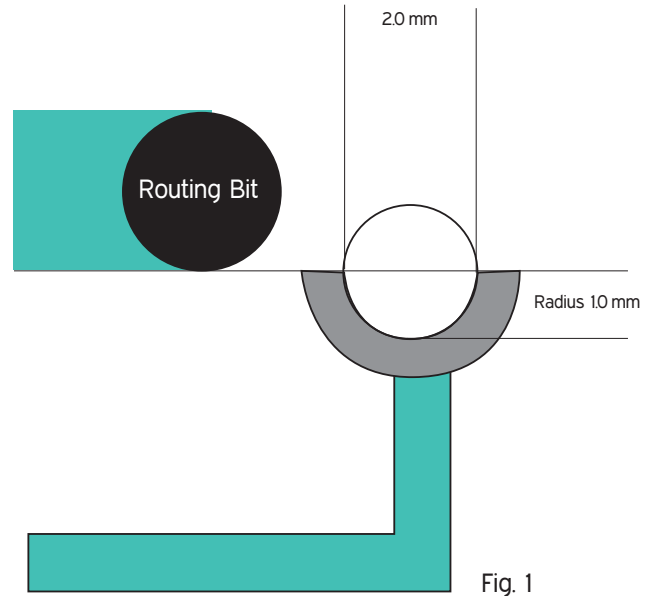


# Route Tolerance

## Design rules:

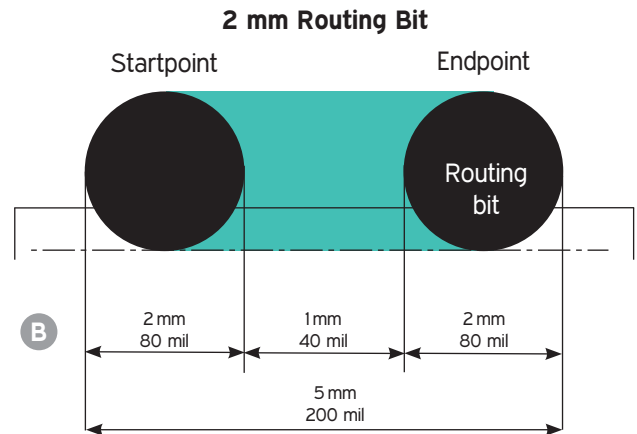
Almost any shape can be created by routing, however a few basic rules must be observed:

- PCB-Pool<sup>®</sup> uses two types of routing bits: 1.0 mm and 2.0 mm.
- All copper structures on the board must be 0.3 mm clear of the routing contour.
- Plated drills on the edge of the PCB, which will be bisected by the contour line, must have a minimum diameter of 2.0 mm and have a remaining radius of 1.0 mm after routing (Fig.1)
- Outer contours can shape any angle while inner contours will produce at least the radius of the routing bit.
- Production tolerance is +/- 0.1 mm



### A: Minimum Slotsize:

The minimum Slotsize is: 1 mm x 2,5 mm  
 (40 mil x 100 mil)  
 The gap between Start- and Endpoint should be  
 0,5 mm (20 mil).



### B: Minimum Slotsize:

The minimum Slotsize is: 2 mm x 5 mm  
 (80 mil x 200 mil)  
 The gap between Start- and Endpoint should be  
 1 mm (40 mil).

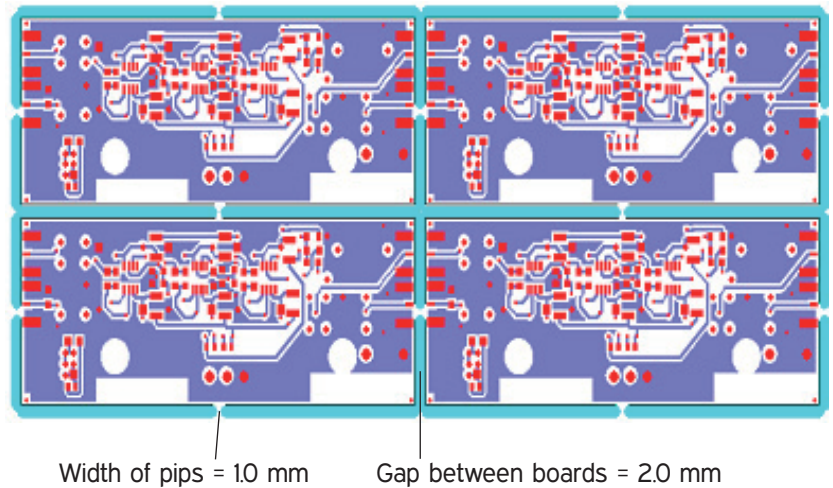
## Route Tolerance

### Routing boards on pips:

PCB-Pool<sup>®</sup> can route your boards on a multi-panel, held together by break-off pips.

The boards are easy to separate manually, e.g. after reflow soldering. The pips are 1.0 mm in width and the minimum gap between each board on the multi-panel is 2.0 mm.

Please note that there is an extra charge of € 30.17 ex VAT for this service. Even if the multi-panel contour is provided with the layout files, the routing program still has to be created and manually customized by our CAM department.



### Routing - outline:

The exact outer margin of the rout contour is defined by the middle of the trace used to designate the board edge; the radius of the routing bit will be adjusted to compensate.

