

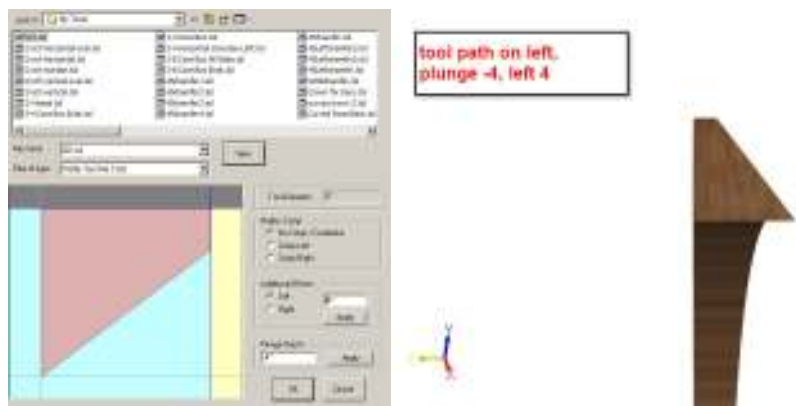
Here are four different passes with the same 4" x 4" tool. The first two passes were performed with the tool path starting at the bottom left of the part and the last two passes had the tool path starting at the bottom right.

Notice in the first two passes, the material is shown by the blue area. In the last two passes, the material is represented by the yellow area. Why? Because the tool path is (a) on the bottom and (b) starts at opposite ends of the part.

In all four operations you will notice that it is the offset rather than the plunge that moves the cut top-to-bottom on the part. Why? Again, because the tool path is on the bottom of the part.

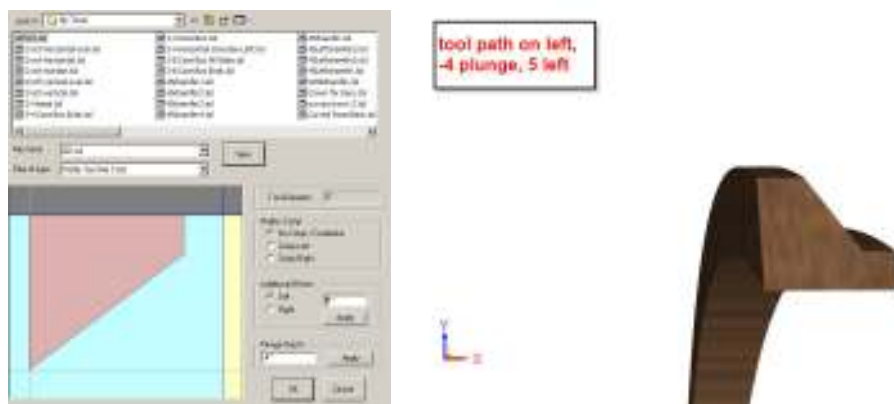
Why are these operations performed from the bottom of the part instead of the top (which seems natural)? Because the top edge of the part is shorter than the bottom edge and machining it from the top would leave uncut "ears" on each end.

In the first pair of images, the tool path starts on the bottom left of the part and has the plunge set at 4" with a 4" left offset.



In the next pair of images, the tool path starts on the bottom left of the part and has the plunge set at 4" with a 5" left offset.

Notice the direction the cut moved on the part by changing the offset. It moves from the bottom of the part toward the top, opposite of what you would expect. You would expect the plunge to move the cut in this direction.



In the third pair of images, the tool path starts at the bottom right and has a -4” plunge with a 1” left offset.



tool path on right,  
-4 plunge, -1 left



The last pair of images shows the tool path still starting at the bottom right with a -4” plunge, but this time a 2” left offset is used. Notice again that the direction the cut moved on the part by changing the offset, this time from the top toward the bottom. Why did it move in the opposite direction? Because the tool path started at the opposite end of the part.



tool path on right,  
-4 plunge, -2 left

