MAKE A BOX

Material:
Thickness must be less than length of flutes on cutter
Fasten to table with screws – **NOTE: Use screws only ½" longer than material thickness!!!**

Cutter:
I usually use a ¼" 2-flute spiral upcut bit with a 1 inch cut length:
https://www.amazon.com/EANOSIC-Cutting-Diameter-Carbide-Trimming/dp/B0BX3D71C5/ref=sr_1_7?keywords=upcut%2Brouter%2Bbit&sr=8-7&th=1

Position in collet so that a little of the solid shank is exposed

Feeds and Speeds:
Conservative numbers for a ¼" bit are:
- Feed Rate: 40 in/min
- Spindle Speed: 12,000 RPM
- Depth of Cut: 0.3 inches per pass

The goal is to make chips, not sawdust.
Desired chip thickness is .0015 to .005

Geometry:
Draw a 'box' (closed figure with included angles >= 90 degrees) in Inkscape
Use Path/Object to Path to create nodes
Use Path/Outset to expand the distance between the inside and outside paths
Set the Height and Width to the desired values (if you use millimeters, then be sure to use 'Metric' when bringing into SheetCAM)
Save as a DXF file then import it into SheetCAM (I usually use the center origin and Inch or Metric as appropriate to get the desired size.)(You may need to use 'Custom' scaling to get the desired size in SheetCAM.)

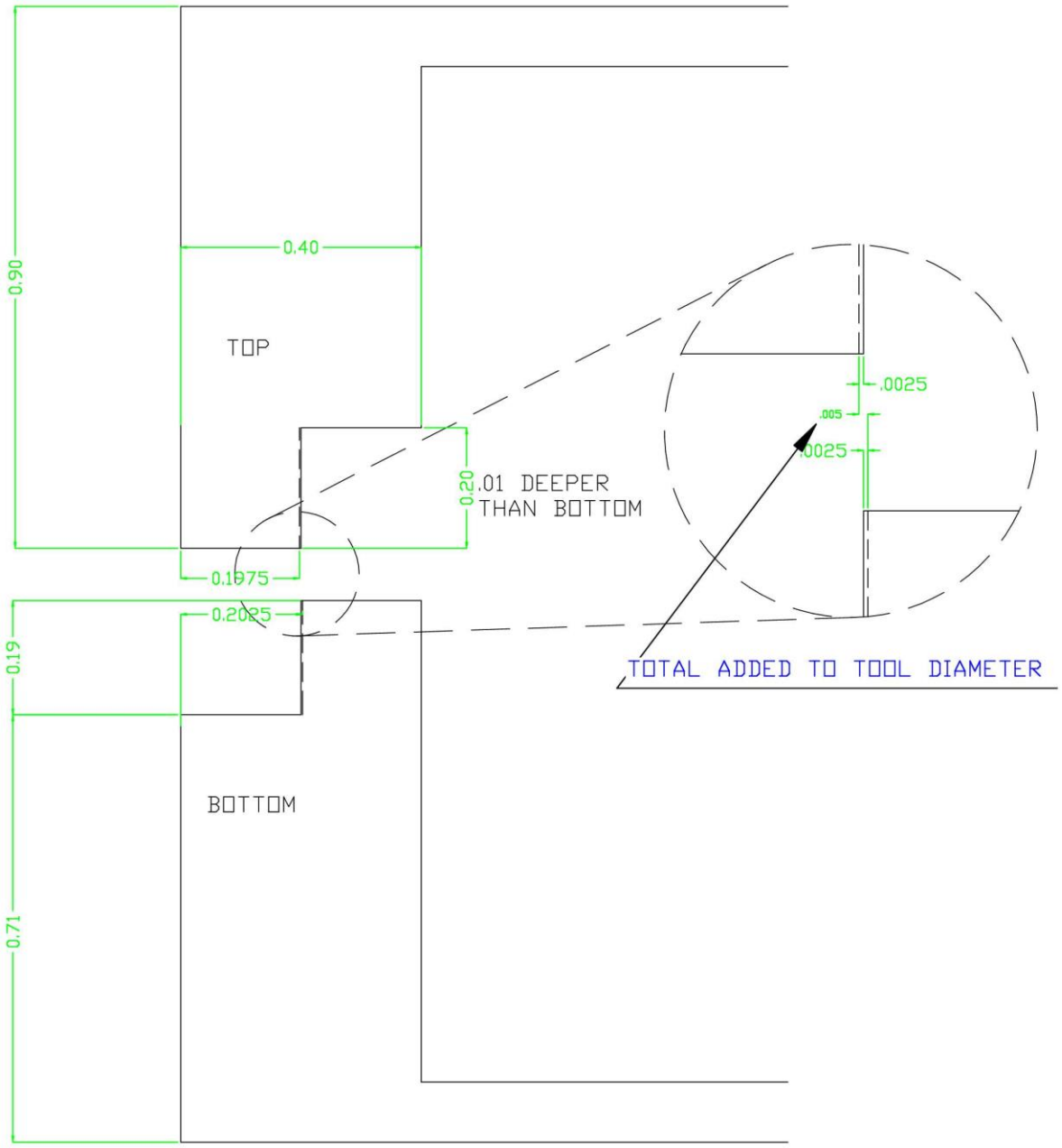
In SheetCAM:
Layers: 'pocket', 'Tlip', 'Blip' and 'outside'
(Note: Copy the inner line to 'Tlip' layer for top and 'Blip' layer for Bottom.)

Tools:
- T1: Mill/Router ¼ flat 1" cut length, 0.3 in per pass, 40 in/min
- T2: Mill/Router .245 dia., 1" cut length, 0.31" per pass/ 40 in/min
- (Note: T2 is a 'virtual' bit. The whole box is cut with the same ¼" bit.)

Operations:
- Pocket – spiral pocket, 'pocket' layer, T1, cut depth .8 in
- Contour – 'Tlip' layer, inside offset, T2, cut depth .2 in
- Contour – 'Blip' layer, outside offset, T2, cut depth .19 in
- Contour – 'outside' layer, T1, cut depth .92 in (Place Tabs .2 wide X .15 high)

Below is a drawing to illustrate the tray geometry.

BOX LID CLEARANCE



USING A VIRTUAL TOOL DIAMETER THAT IS .005 LARGER THAN THE ACTUAL DIAMETER GIVES AN OUTSIDE OFFSET THAT IS .0025 'SNALLER' AND AN INSIDE OFFSET THAT IS .0025 'LARGER', WHICH GIVES A TOTAL CLEARANCE OF .005"