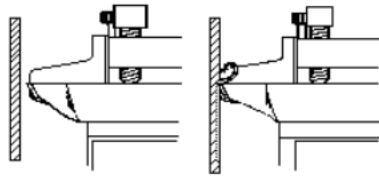


Technical Reference

The Tool and Guide - how the guide controls depth of cut

Side and Top Views of the Tool and Guide



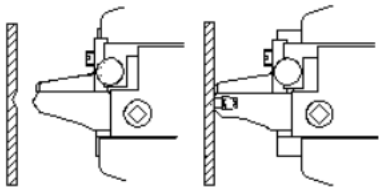
Tool and guide viewed from the left side of the sliderest

The guide controls the depth of cut by following the surface of the work as closely as possible to the point of the tool. Both are held on a toolpost set on the free moving tool slide.

The depth of cut is set by adjusting the guide's position so that almost all of the right hand side of the (vee) tool is able to cut. It is usual to cut lines close enough together that the edges of the cuts just overlap, thus removing all of the original surface.

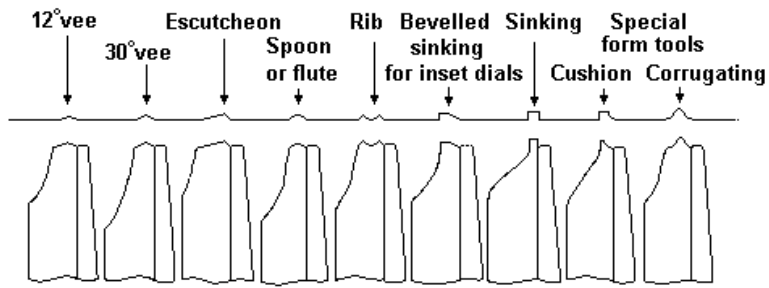
The cutting tool is finely ground and polished, usually from ¼" (6.5mm) square HSS or Stellite lathe tool blanks.

As the work is moved downwards or rotated, the tool removes a line, the chip curling upwards. Lubricant is painted on the surface before cutting with a brush. For deep cutting or where the material demands it, it may be necessary to repeat each pass of the tool. In certain cases it can take many passes of the tool to complete a single cut, for example when scoring for folding



The tool and guide viewed from the top

On a low relief machine the tool is able to move in a perpendicular direction to the surface being cut, relative to the guide, while it is cutting, to vary the depth of cut. In this way the surface is carved into an image rather like a lofted surface which gives shimmering reflections from the image and is much more alive than any stamped or hand cut relief image.



Some examples of tool profiles in common use by us

Diverse shapes are used though for the vast majority of work where reflecting light on a large surface is required the most common shape is the shallow 12° vee tool. Trimming lines around the edges of patterned panels are usually cut with a 30° tool. Escutcheon tools right or left handed are used for edging engraving panels or cartouches to give a bevelled look. For taking out recesses for enamel a square ended recessing tool is used. Scoring tools are usually about 42° for a 90° fold.