

## Using the ATC Engraving Tool Holder

### Fitting the Engraving Tool

Before fitting the Engraving Tool to the machine spindle you may first need to fit a cutter.

Hold the black knurled adjuster ring in the fingers of your left hand with the silver body resting in your palm and use your right hand to turn the ISO20 taper and hence the inner spindle, (clockwise moves it down into the main tool housing, anti-clockwise moves it up) until the allen key heads of the set screws appear in their access apertures. Note that the set screws are located on the inner spindle in the same diametric position as the dowel pin just above the knurled ring.



With the allen key provided, make sure that both diametrically opposite set screws are loose and then insert the cutter through the nose cone and push upward to its stop.

Tighten both set screws.



To set the depth of cut you need to turn the knurled ring clockwise and anti-clockwise. This alters the length of the cutter protruding from the nose cone and hence the depth of cut. One click of the knurled ring is equivalent to a depth adjusted of 0.016mm.

### **Toolsetting the Engraving Tool**

Holding the knurled adjuster ring, rotate the spindle clockwise or anticlockwise until the tool is flush with the nose cone, ie: zero depth of cut.

Perform a manual toolset by driving the tool down so that it is just touching the surface of the material and then drive it a further 2mm down to apply a preload to the built in spring.

Confirm this as the toolset position.

Now Hold the Knurled adjuster and rotate the spindle anticlockwise in a series of clicks and note the cutter starts to project downwards below the nose cone. A turn of 1 click is equivalent to a projection of 0.016mm.

The depth of engraving into the workpiece material is equal to this projection of the cutter below the nose cone. It will remain constant during an engraving operation as the spring pressure ensures that the nose cone remains on the upper surface of the material even though the material thickness and bed height may vary over the sheet area.

It will be necessary to perform test cuts to accurately set the depth of cut required but a new toolset will not be required each time.

When moving between cut paths during an engraving operation ensure that you leave enough clearance above the material surface to allow for the spring compression.

### **Operation**

Before starting the engraving operation it is important to observe the following:

To ensure the safety of the operator the Spindle Speed for this tool should be set not greater than 20,000rpm. Faster operation will result in damage to the unit and void its warranty as well as being potentially hazardous to the operator.

Always use the AIR RAM facility provided when engraving, to ensure that the fine dust generated by the engraving operation is blown out of the unit. Even though the bearings in the Engraving Tool are sealed,

and thereby protected, good housekeeping will help further protect and preserve long life to the bearings.

Although the nose cone fitted to the Engraving Tool does not rotate during the engraving operation, it is good practice to keep it well polished and scratch-free to prevent “marking” or “ghosting” on the surface of the workpiece. If it becomes damaged replacement nose cones are available.

### Replacing the nose cone

First unscrew the three grub screws that hold the nosecone in place.

Slide the nose cone off. Clean out any dust that may have accumulated inside the unit with a soft brush.

Replace the nose cone ensuring that the two holes on the side of the cone which are required for the AIR RAM system are in line with the holes on the housing.

This process can be done without the need to remove the tool.

