

INTERNAL RECESSING UNIT

TOOL SETTING

There are only two settings required on the Elliott IRU tool:

- **Positional Location** of the groove is referenced from the face of the stop-collar and/or nose piece to a qualified land on the part or fixture. This position is accomplished by fine threading the adjustable stop collar. A height gauge is the best way to measure the linear position of the cutter in relation to the stop collar or nose piece.
- **Groove Diameter** on a manual fed machine is accomplished by adjusting the limiting nut on the shank end of the tool. For CNC or power fed machines, this is accomplished by programming. It should be noted that the radial feed-out of the IRU is 2:1. If .002" increase of cut diameter is needed, add .002" to the linear travel. Tool diameter can be measured with a micrometer by actuating the tool to the cutting position. Measure the diameter of the pilot and add 2x the height of the cutter.

FEEDS AND SPEEDS

- Feed rates of .003 to .005 IPR are typical starting points for most applications. For smaller bore diameters (less than 1/2"), decrease the feed rate below .003 IPR.
- Surface feet per minute are equal to those recommended for multi-fluted reamers (the speeds below can be increased up to 3x):

MATERIAL MACHINED

Cast Iron - Gray

Cast Iron - Nodular

Steel / Forgings

Aluminum and Brass

SFM

100 to 110

30 to 40

35 to 40

150 to 160

INSTALLING IRU PILOTS AND ARMS



Hold the cutter or the carrier arm with cutter attached at 90° to the leaf spring and insert it into the operating head.



Rotate the cutter 90° degrees so that the yoke of the cutter straddles the pull pin. The leaf spring will come to rest on the pad of the arm as shown.



Align the pilot to the cutter and insert the pilot until the cam surface of the cutter engages the pilot.



Lock the pilot in place with the screw, as shown. When the adjustment stop collar is in place, this screw is tightened through a slot in the collar.