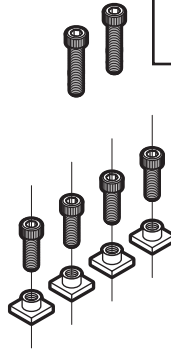


**NOTE:** See the exploded view of the Rotary Table (P/N 3700) for the parts included in the right-angle attachment.



**SHERLINE  
PRODUCTS**

INCORPORATED 1974

## Right-Angle Attachment for 4" Rotary Table

P/N 3701

The Sherline right-angle attachment has been designed to easily put the rotary table on a vertical plane and still maintain rigidity.

### Installation

Remove the hold-down tab (P/N 37210\*) from the worm housing and loosely bolt the right-angle attachment base (P/N 37190) to the housing with the rotary table base.

\*NOTE: See the rotary table exploded view at the end of the [3700 instructions](#).

NOTE: The mounting holes on the side of the worm housing go all the way through. In order to keep dirt and chips from entering the worm housing, set screws have been installed in the holes. Before the rotary table can be mounted to the right-angle attachment base, these set screws must be removed. Be sure to reinstall them when the rotary table is removed from the right-angle attachment.

Back out the vertical adjustment screw (P/N 31080) and start the vertical clamp screw (P/N 40340), but do not tighten. Tighten the four right-angle attachment base to worm housing screws and mount to milling table with the rotary table indicated in with the Y-axis. The vertical plane can be aligned by moving the indicator up and down with the Z-axis while reading the table. The vertical clamp and set screw can now be adjusted for "0" indicator reading. The accuracy that must be attained when indicating the rotary table in is somewhat determined by the size of the part.

In many cases it is wise to align and clamp the part to the table before bringing the rotary table to the vertical position. In this manner you have the milling machine spindle to help align the part. Aligning the milling machine to the work with the rotary table in the vertical position is usually accomplished by measuring in from a side of the part with an edge finder or "touching off" with a cutting tool. Fortunately, you would very seldom have to align the spindle to the rotary table in both axes. If the need arises and you don't have a true (TIR) running surface to work to, try and leave yourself a "machining pad" on your part to do this. Once the rotary table has been aligned to the mill, use an end mill to machine a flat on the "machining pad" with the side of the end mill, moving the Y-axis to determine depth of cut and X-axis for length of cut. Rotate

part 180° and cut to identical handwheel readings. Now measure across these flats and move the Y-axis one-half of this dimension plus one-half the cutter diameter towards the center with the cutter out of the way. Rotate 90° and "touch off" the end of the cutter on a flat that was machined to determine center. The Z-axis can be lowered one-half the diameter to put the tools on center. If these pads are left on the work, other cutting tools could be located in the same manner and the pads then could be machined off when they are no longer needed.

### Aligning an Adjustable Right-Angle Tailstock (P/N 3702)

An adjustable tailstock is available if you need to support the end of a shaft held on center in the rotary table when it is mounted vertically. On a lathe, turn a short bushing that just fits into the center hole of the rotary table. (OD = 0.437 dia.) Center drill the end before removing it from the lathe. After the rotary table is mounted on the right-angle bracket and is square to the mill, insert the bushing into the table's center hole.

Use no screws or T-nuts to locate it yet so the right-angle tailstock can easily move around. Extend the spindle about 0.5". With a dead center installed in the spindle, push the point of the center into hole in the end of the bushing. Lightly tighten the screws to hold the spindle section of the tailstock in place while it is in the center drilled hole. Indicate the top surface level and tighten screws. This should align the tailstock in the vertical plane.

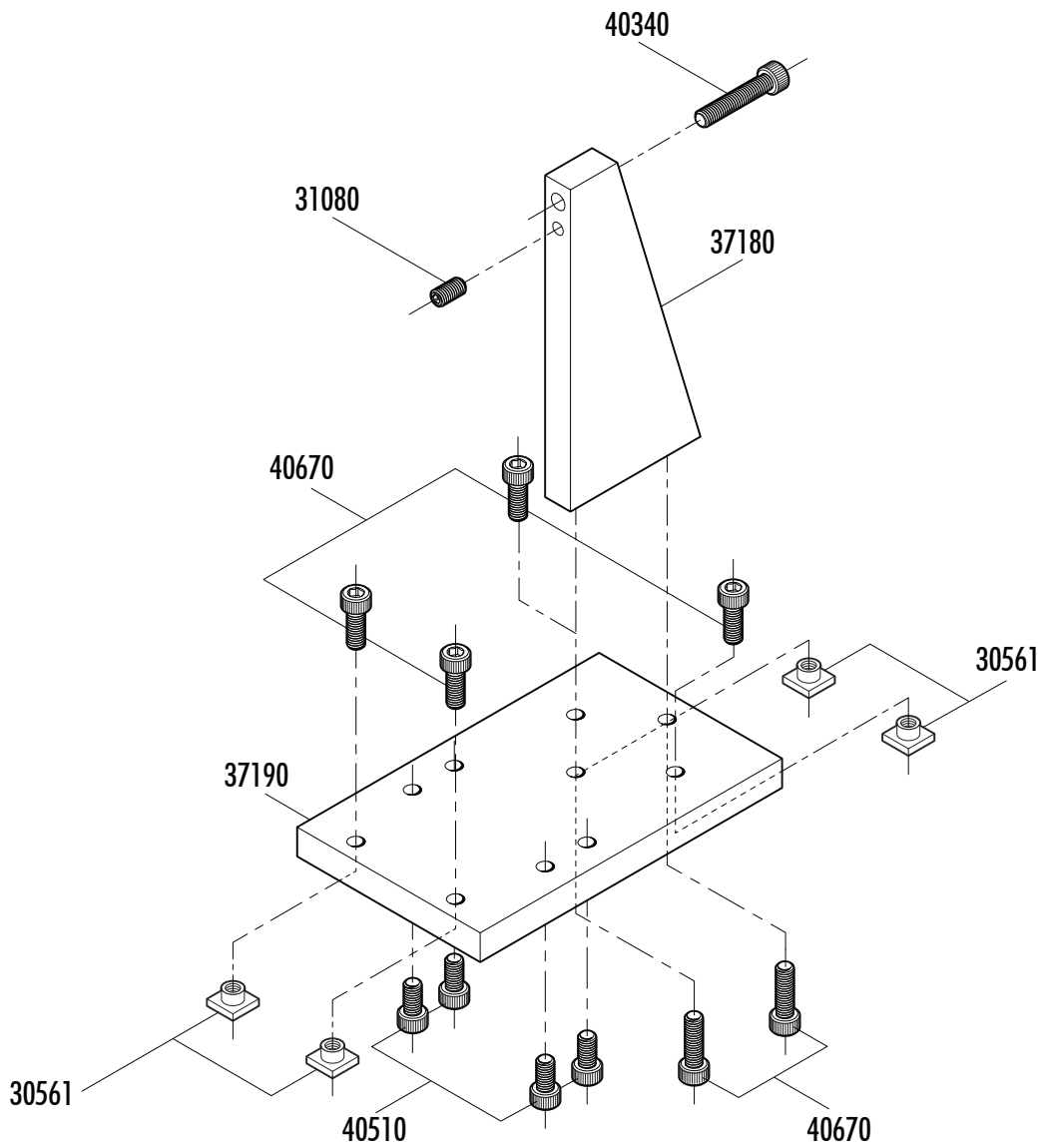
Attach your part to the rotary table and line up the center of the tailstock in the same manner with the T-nuts in place. Indicate the part in place so it is in alignment with the mill. Remember that the tailstock spindle doesn't have to be in perfect alignment with the table because it isn't being used for drilling. It is only being used to support the end of the part mounted on the rotary table.

You will find these accessories interesting, but their use will require a lot of planning.

Good Machining!

Thank you,  
Sherline Products Inc.

## Right-Angle Attachment Exploded View



### Parts List

NO. REQ.	PART NO.	DESCRIPTION
4	30561	10-32 T-nuts
1	31080	10-32 x 3/8" Set screw
1	37180	Upright
1	37190	Right-angle Base
1	40340	SHC Screw, 10-32 X 1"
4	40510	SHC Screw, 10-32 X 3/8"
6	40670	SHC Screw, 10-32 X 1/2"