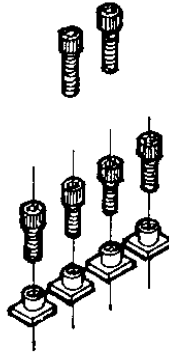


**NOTE:** See the exploded view of the P/N 3700 Rotary Table for the parts included in the right angle attachment.



**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 (see rotary table exploded view, part #16) from the worm housing and loosely bolt the right angle attachment base (part #14) to the housing with the rotary table base. (**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 (part #3) and start the vertical clamp screw (part #20), 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 a P/N 3702 Adjustable Right Angle Tailstock

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 tee 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.

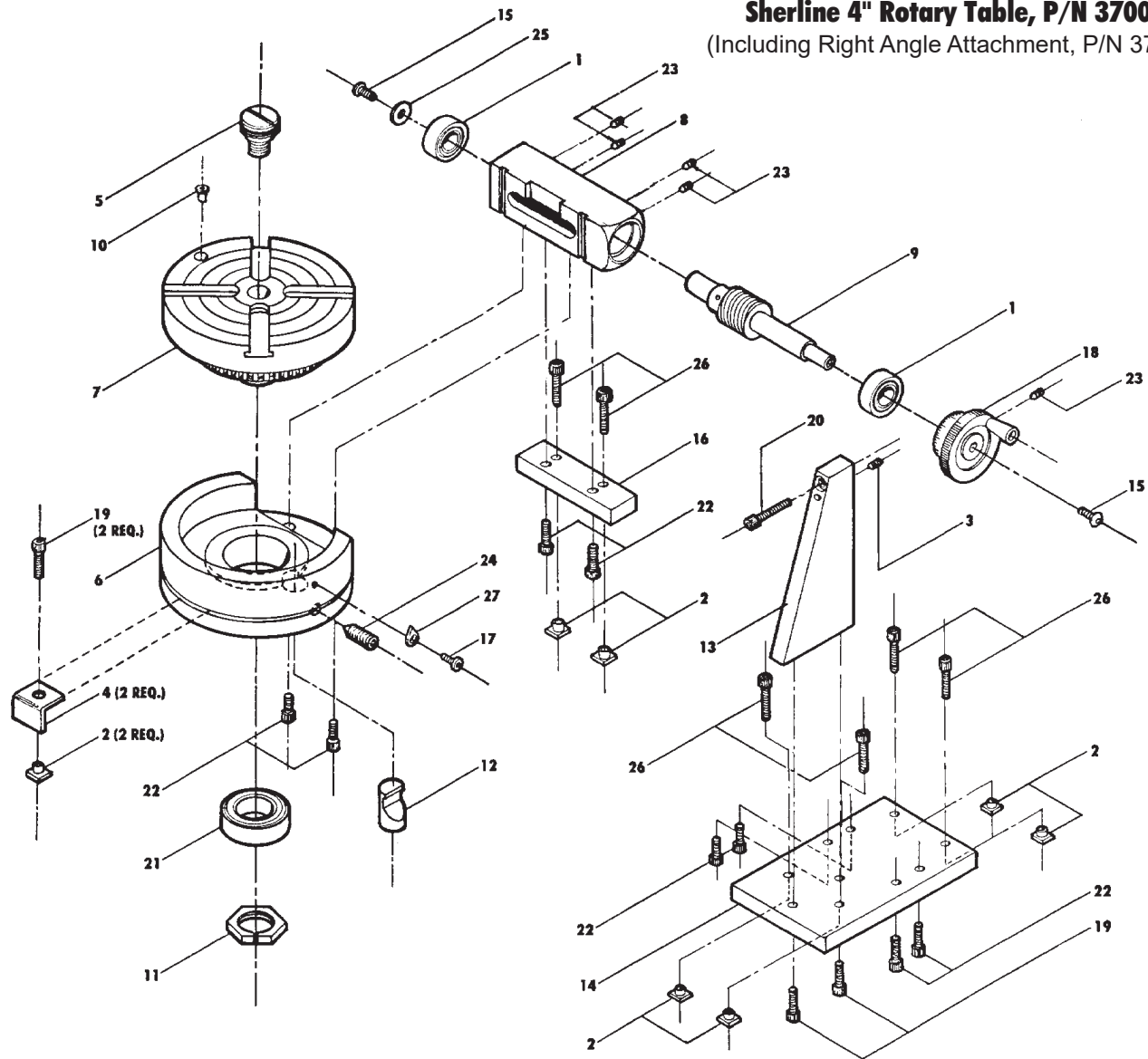
Attach your part to the rotary table and line up the center of the tailstock in the same manner with the tee nuts in place. Indicate the part in place so it is in alignment with the mill. Remember that the tailstock spindle doesn't have to be in perfect alignment with the table because it isn't being 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.

**Exploded View**  
**Sherline 4" Rotary Table, P/N 3700**  
(Including Right Angle Attachment, P/N 3701)



**Parts List**

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
1	10930	3/8" Bearing	15	37200	Button Hd Screw, 10-32 X 3/8"
2	30560	10-32 T-nuts	16	37210	Hold Down Tab
3	31080	Set Screw, 10-32 X 3/8" (P/N 3701 only)	17	37220	Button Hd Screw, 6-32 X 1/4"
4	35580	Hold Down Clamp	18	40050	Handwheel Assembly
5	37090	Chuck Adapter	19	40330	SHC Screw, 10-32 X 5/8"
6	37100	Rotary Table Base	20	40340	SHC Screw, 10-32 X 1" (P/N 3701 only)
7	37110	Table	21	40420	Headstock Bearing
8	37120	Worm Housing	22	40510	SHC Screw, 10-32 X 3/8"
9	37130	Worm Gear	23	40520	Cup Point Set Screw, 10-32 X 3/16"
10	37150	Oiler	24	40540	Cone Pt Set Screw, 5/16-18 X 3/4"
11	37160	Preload Nut	25	40660	Washer, 3/16" I.d.
12	37170	Lock Pin	26	40670	SHC Screw, 10-32 X 1/2"
13	37180	Upright (P/N 3701 only)	27	50120	Pointer
14	37190	Right Angle Base (P/N 3701 only)			