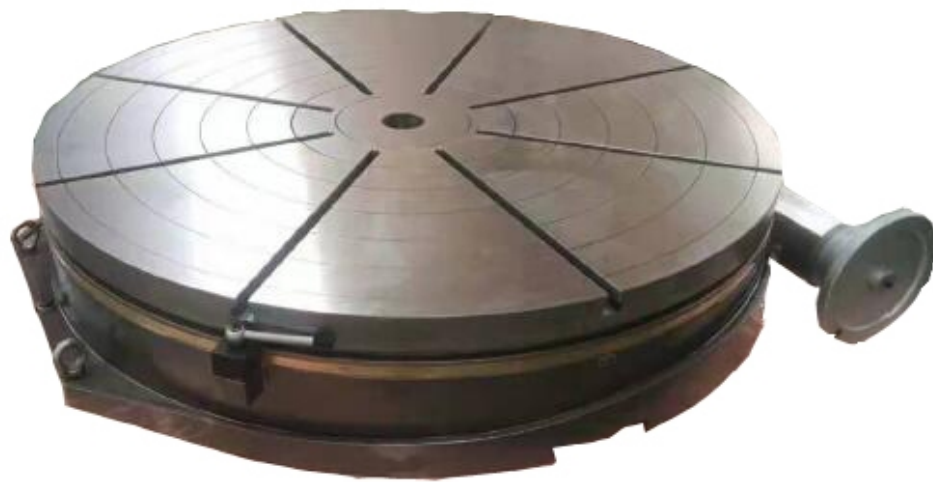


TS1600A Horizontal rotary table

Operation manual



I. Usage

The TS1600A rotary tables is one of main accessories for milling machines. It can be widely used for many works as follows.

1. machining curve-surface and circular cutting;
2. machining planes which were set to be angle to the batum plane;
3. boring and milling table.

The TS1600A rotary tables can also be used for performing many other works as building in drill press or slotting machines. Workpieces can be fixed by the jigs on the worktable, or fixed on the worktable directly.

II. Main Parameters and Dimensions

No	Items	TS1600A
1	Dia. of table mm	1600
2	Locating bore (Dia. x Depth) mm	φ120×35
3	Width of T-slot mm	22
4	Adjacent angle of table T-slot	22.5°
5	Module of worm gear mm	8
6	Dividing ratio of worm gear	1:120
7	Graduations on table circumference	360°(1° per division)
8	Rotating angle of table per one revolution of worm shaft	3°(1' per graduation)
9	Min. readout of vernier	10"

III .Operating instructions (Refer to fig. 1)

1. The TS series rotary table is only used for horizontal operating manually.
2. If you need mobile rotary table, please order specially. Do not change manually rotary table to mobile rotary table personal.
- 3.You need not adjusting the product, for it has been checked strictly before ex-work and each part is at its best. The four locking handle under rotary table surface and the handwheel locking handle should be all locked. Please lift this product with tightwire, which is tied firmly to the four lifting columns, and then lift slowly. Firmly fix the rotary table on a platform with four rotary table fix blocks, or fix it with four holes.
4. Before working, please check the various operating handles, make sure those were in the correct location, and check whether the grooves on the vernier are just above. If the grooves side, at this point should be locking handle of the handwheel, and then turn handwheel slowly, find the correct position.
- 5.Keeping the oil level is at the 2/3 of the oil viewer. If the oil is not enough, unscrew oil plug, add N46 lubricating oil to the worm gear cavity. In normal, make the oil change within one year. While oil changes, drain the oil from the drain port, then clean the cavity ,at last add clean oil in it. (Please make sure that the entrance was clean) Before operation of every shift, fill the circumference side of the rotary table with enough clean N46 lubricating oil, and then turn the table slowly.
6. There are 360 ° graduation around the rotary table, 1°per graduation. The scale ring turn a circle means 3°,180 graduations at all, 1' per graduation. One graduation on the vernier is 10". The cursor on body can show the angle of rotary table, after finding

baseline, if you feel the cursor is not in a position, loosen the screw on the cursor, adjust the position of the cursor, let it align one of the graduations on rotary table, and then lock the cursor. After that, lock the locking handle of handwheel, loosen the screw on the scale ring, turn the scale ring, let its zero position align the vernier's zero position, lock the screw on the scale ring, remember the reading on the rotary table, loosen rotary table, and then you can make degree division now.

When need to rotate the table, loosen four locking handles around the rotary table and the locking handle behind the handwheel, rotate the handwheel and it driven the worm gear to rotate and make degree division, after arriving at the desired location, the worm gear can keep accurate positioning by self-locking, then lock four locking handle around the table and one behind handwheel.

IV. Maintenance & lubrication

Pay attention to the protection of all combined and the sliding surfaces in the course of using and handing.

For protecting the precision of the rotary table ,any impact against the table surface and parts fixed on it absolutely.

After using, you must clean the debris and coolant out , and then cover all exposed surfaces with a light coating of oil to prevent rust.

Every time before using, please inject enough N46 lubricating oil to the oil injection at the circumference side of the rotary table with an oil gun firstly, and then turn the table slowly, to get good lubrication.

Before using the rotary table, please unscrew oil plug and add enough oil, which can make the worm gear work under good lubrication. Check the oil viewer regular.

V. Worm gear clearance adjustment (Refer to Fig. 2)

If the clearance between the worm gear and the worm is too large, it will debase the division accuracy of degree and the quality of processed parts. Otherwise, the rotary table will not turn or destroy the worm gear. The maximum clearance is 0.03mm.

The clearance has been adjusted to optimal size before you received our product, so users needn't loosen any part on the worm shaft. Please contact with us when you find the worm did not turn, or the clearance enlarged which caused by abrasion, and we will adjust it for you by our professional.

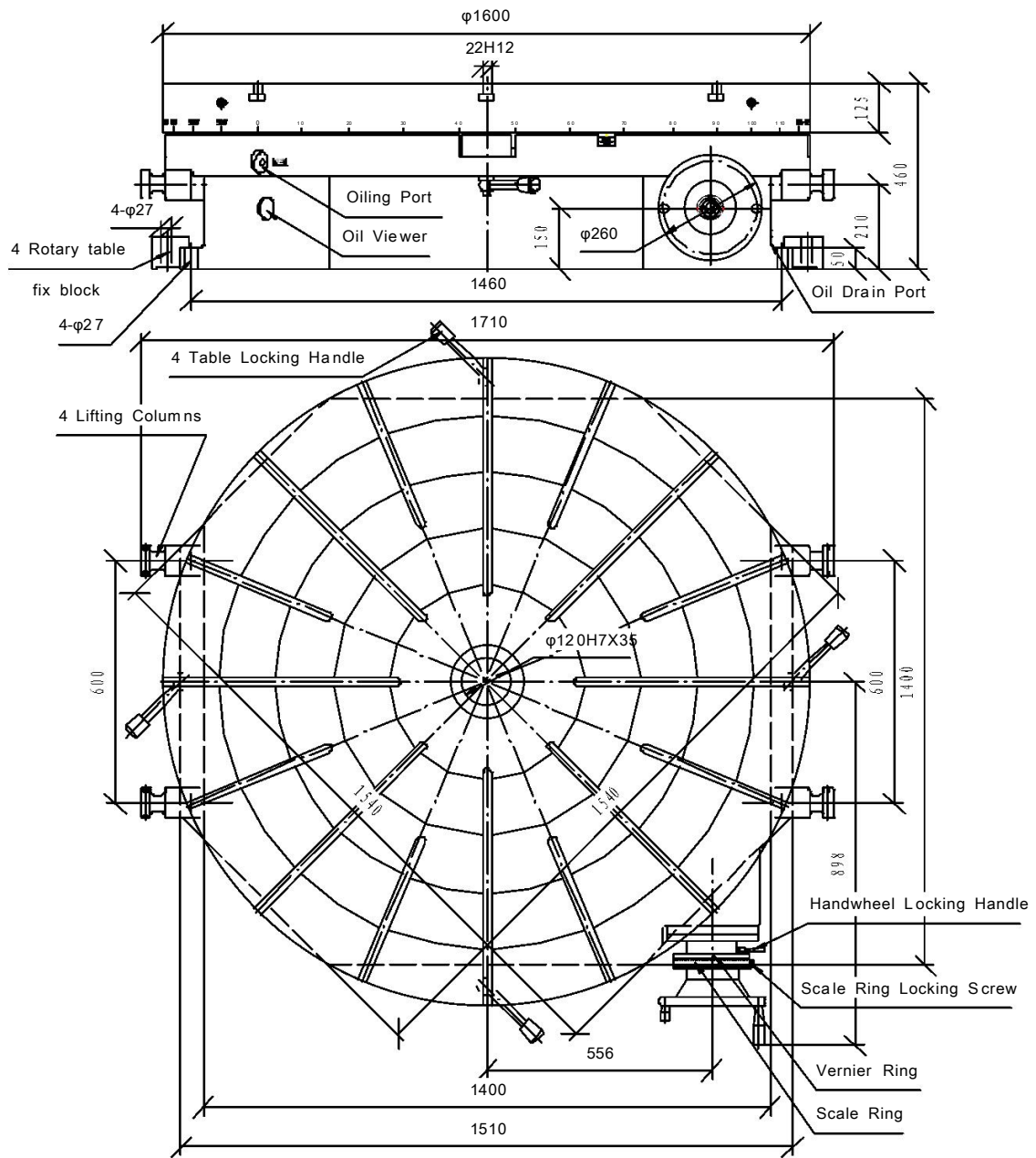


Fig. 1

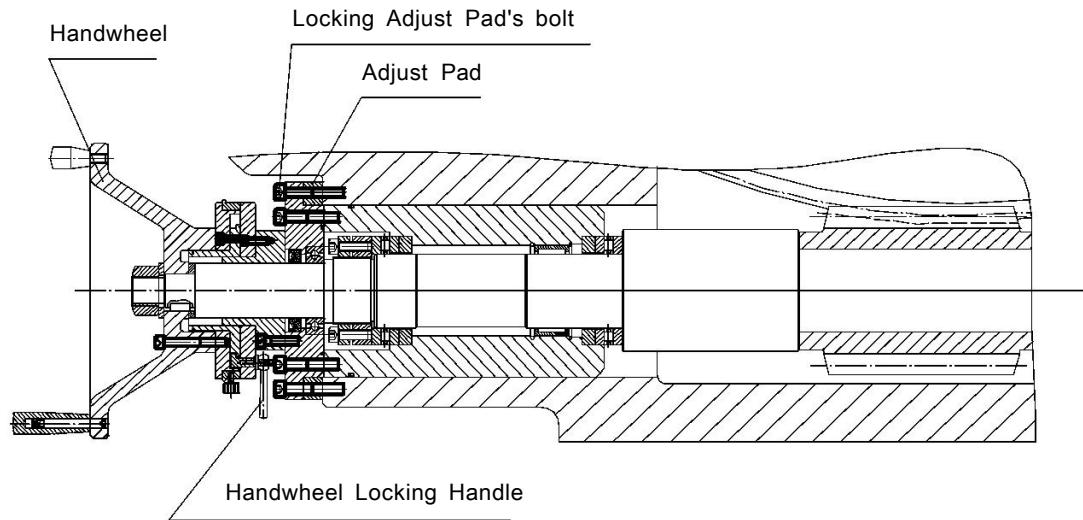
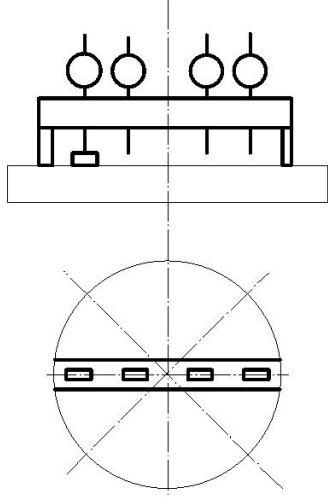
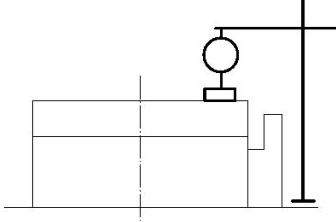
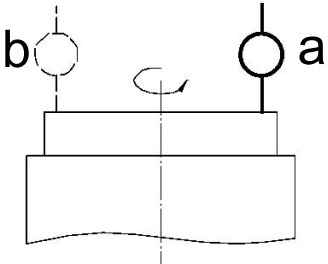
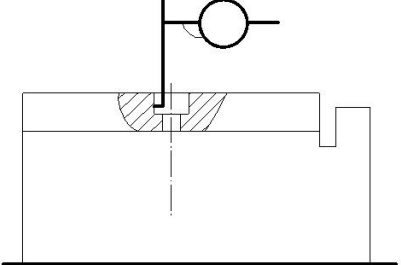
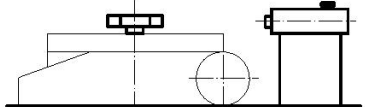


Fig. 2

VI. Troubleshooting Chart

Symptom	Possible Cause	Corrective Action
Handwheel rotates table does not rotate	<ol style="list-style-type: none"> 1. Key is missing 2. Worm shaft disengagd 	<ol style="list-style-type: none"> 1. Insert key 2. Engage worm shaft
Handwheel will not rotate	<ol style="list-style-type: none"> 1. Handwheel locking handle are too tight 2. Locknut are too tight 3. Table needs lubrication 	<ol style="list-style-type: none"> 1. Loosen locking handle 2. Adjust locknut properly 3. Lubricate properly

No.	Test Item	Test Sketch	Error(mm)	Actual(mm)
1	Straightness of table surface (no protrusion on table center)		0.02/300 no larger than 0.06 in all	
2	Parallelism between table base and bottom surface		0.06	
3	Axial run-out of table surface		0.05	
4	Radial run-out of center bore		0.03	
5	Total dividing error of rotary table for one complete revolution		60"	