

CONVERTING THE TOOLMASTER 3" ROTARY TABLE TO USE INDEXING PLATES.

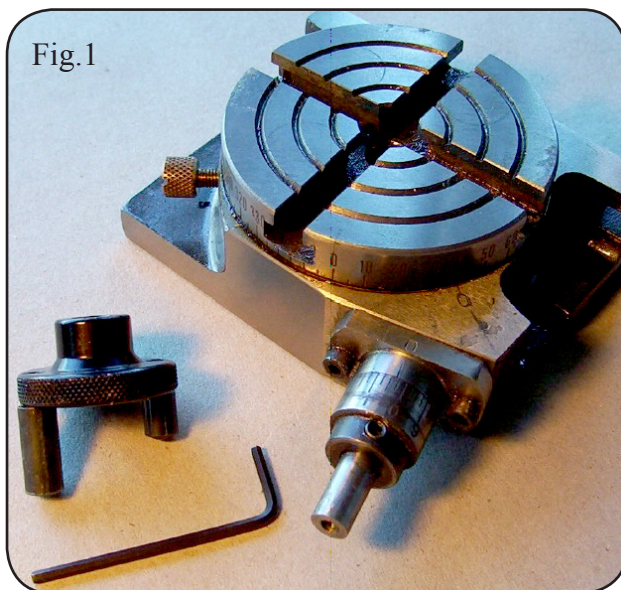
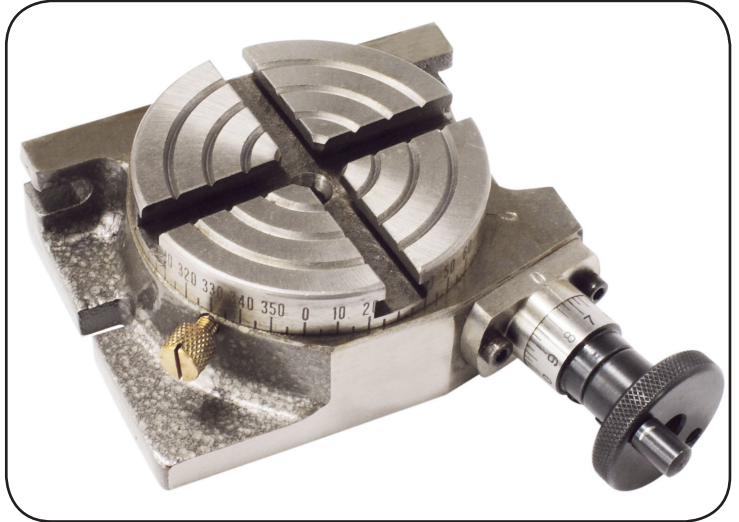
By Gwyn Kemp.

When the **Toolmaster R001** 75mm Rotary Table is purchased, it doesn't have any provision to allow it to be used in conjunction with indexing plates; which would greatly increase its versatility.

However, because of its size, the table is particularly useful for employment with lathes of a smaller centre-height, such as the Myford ML7, and conversion is well worth the effort involved.

I will endeavour therefore to explain how this can be achieved and also include a section at the end of the article, relating to the use of the indexing plates, together with a table of indexing settings.

The first job in the conversion is to remove the hand wheel from off the table. (Fig.1.)



An adaptor plate has to be made next to fit onto the axle and over the minute dial to support the indexing plate. This must fit flush with the main body of the table. It can be made simply from scrap aluminium or brass.

First make a disc 40mm. in diameter and 3.5mm in thickness. Next drill a hole so that the disc is a sliding fit over the minute dial, then 2 holes to allow the disc to fit over the 2 studs holding on the axle housing. When this fits OK, drill and tap the plate to receive the 3 countersink threaded studs, which hold the indexing plate in place on the shaft. These should be at 120deg, to each other to match the holes in the indexing plates. I used 3/16" Whitworth countersunk screws, which I cut off to the thickness of the disc. They must not protrude beyond the back of the disc, because it is essential for the whole assembly to fit flush with the housing at the back. (Fig.2)

One other thing to bear in mind when locating the holes for these is to make sure that when the plate is in place, the numbers on the plates should be in a vertical position at the top. Mount the plate on the adaptor fitted to the table (See Fig.3 & 4)

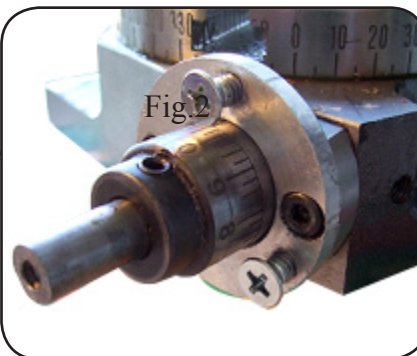


Fig.3



Fig.2

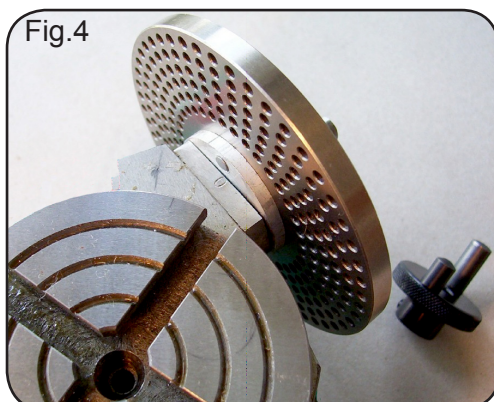


Fig.4

Another collar must now be made to mount the handle on. The dimensions of this part are as follows and can be made from aluminium or similar material.

First turn the collar to 32.5mm x 12.5. Then drill a centre hole through it until it is a nice sliding fit onto the hand wheel axle.

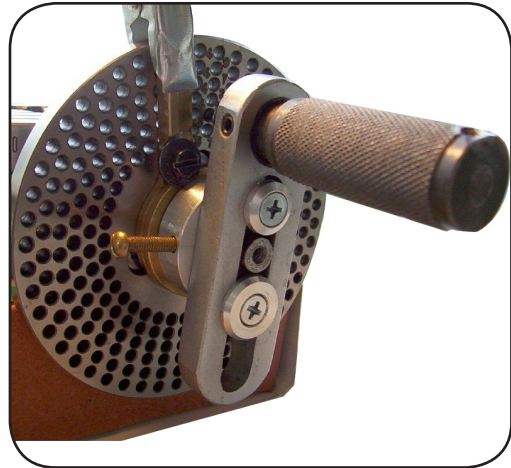
Turn it end for end in the lathe and make a recess out a hole in it, 20mm x 7mm deep. This is to enable this part when fitted, to slide easily over the minute dial which is not already covered by the indexing plate. A hole is then drilled through the edge of the collar to the centre, and is tapped to take a grub screw, so it can be secured onto the axle when in use.

2 more holes are drilled and tapped on the top face to secure the handle in place and 2 sleeves must be made up to act as filler pieces to slide through and hold the handle in place. (See fig 5 & 6.) This shows the completed collar and also how it is fitted on to the handle. In use, the handle must be able to slide on the collar when the studs are loosened, to enable it to engage in all the rows of indexing plate holes.

Fig.5



Fig.6



TOOLMASTER 3" (75mm) ROTARY TABLE Code R001
DIVIDING PLATES Code R016

This process can also be used to convert the R0014 4" Tilting Rotary Table

