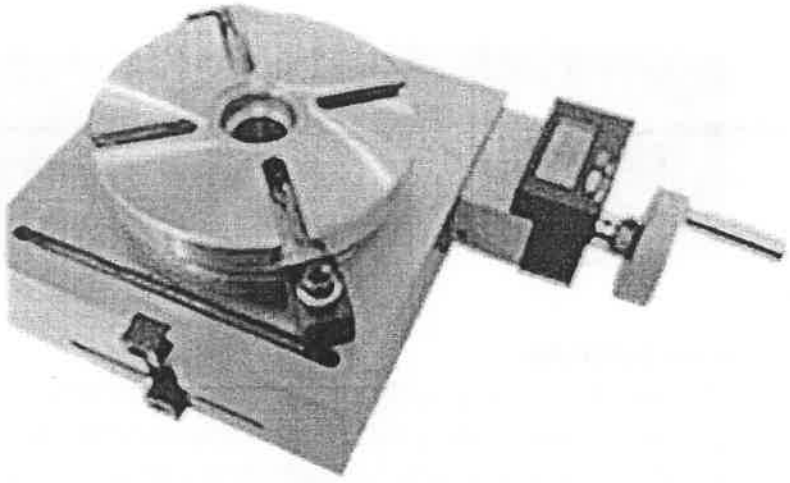
100 mm (4") Rotary Table with DRO

Type: S/N 10094A

Operating Manual



Read this operate manual before using

Ⅰ. Main purpose and features

1. Main feature:

This type called 100mm rotary table with DRO, the DRO means Digital readout, not use normal scale to read the number, we use the LED to show what you see is what you get，namely so easy!

- 4" (100 mm) diameter
- Use in horizontal or vertical position
- Two type showing the number, for example one is "1.66$_6$" another is "1°40'"
- Reading easy zero function
- Worm ratio is 72 to 1
- 10 second rotational accuracy

Show in "1.66$_6$"

Show in "1°40'"

2. Main purpose:

The 100(4″) rotary tables are mainly accessories for milling machine 、boring machine and drilling machine。They can be used for listing things:

1. Circular cutting, the table in graduated with a 360° scale;
2. Angle setting;
3. Boring;
4. Spot facing operations ;
5. Similar work in conjunction with a milling machine;
6. Indexing;
7. In a vertical position to enable to carry out center work with the help of tailstock;
8. The dividing plate accessory allows the operator to accurately divide the 360° rotation of the clamping surface into divisions of all divisible of 30′ .

Ⅱ. Specifications

1. Diameter of rotary table ---------- Φ100mm
2. Height of center for horizontal mounting---------- 73 mm
3. Taper of center bore---------- MT#2
4. Width of T-slot---------- 8 mm
5. Width of locating key---------- 8mm and 10mm
6. Angle of T-slot---------- 90°
7. Height of center for ver. Mounting---------- 68mm
8. Driving ratio of worm gear---------- 1:72
9. Module of worm gear---------- 1
10. Graduation on table circumference---------- 360°
11. Indication of handle wheel---------- 2′ of each
12. Min, readout of vernier collar---------- 10″

Ⅲ. Operating specifications

(I) First use the normal rotary table (type:S/N10094) do some instruction as below:

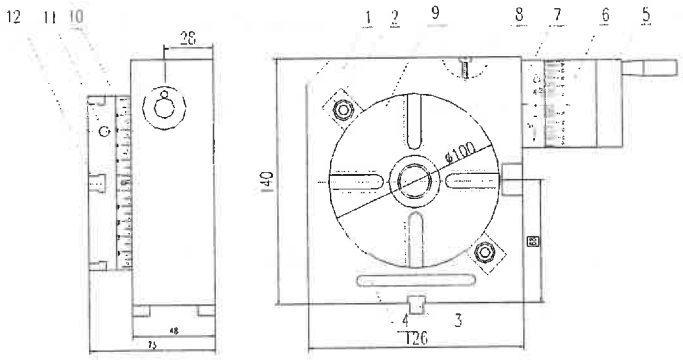


Fig.1

1.ground (body)
2.clamp
3.locating key
4.long slot
5.handle-wheel
6.indicating-collar
7.vernier collar
8.lock screw
9.table facing
10. indicating-collar
11. oil cup
12. T-slot

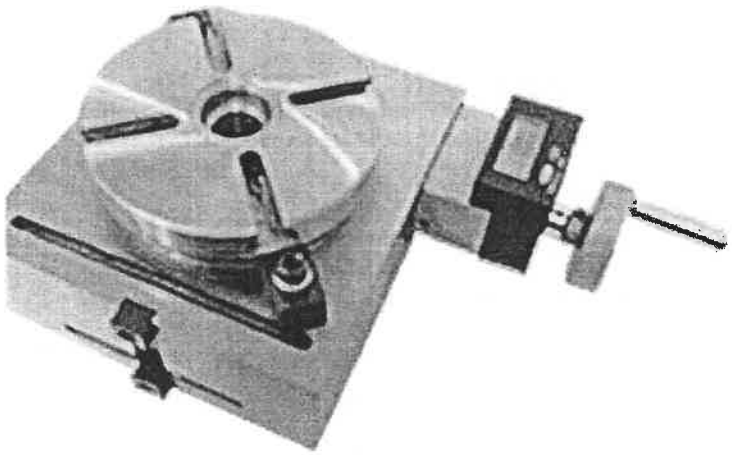
Main parts refer to Fig.1。

1. First, rotary table must to be locked into the unit. There are four long slots in ground can be locked by clamp by turning clamp screw (ref. No.2) clockwise until it is snug. Turn screw counterclockwise to free rotary table.
2. Please rotate handle wheel (ref. No.5) clockwise in order to divide accurately. If handle wheel is rotated past desired position, rotate it one full turn counterclockwise and then softly rotate it clockwise so as not to cause backlash in the worm gear.
3. Loosen the lock screw (ref.No.8), turn the vernier collar (ref. No.7)

clockwise until it is snug. The worm gear has now been disengaged. Then you can make the table rotate quickly. Turn back the vernier collar counterclockwise, engage the worm gear, lock the screw, then you can rotate the handle wheel, dividing and cutting again.

4. The table is provided with a scale to indicate angle of rotation. The indicating collar (ref. No.6) can be used to verify the angle of rotation on scale. The indicating collar can be adjusted by loosening the screw knob and moving the indicator along the slot. Secure knob after completing adjustment.
5. The gear ratio of the rotary table is 1:72, so that 72 rotations of the handle wheel will rotate the table exactly one full rotation. One rotation of the handle wheel is equal to 5° rotation of the table (360° ÷72=5°)
6. The center sleeve has been grounded for a Morse Taper 2# so that jigs and measuring apparatus can be fitted with precision.
7. A veriner scale is provided on the vernier collar(ref.No.7) for measuring of angle rotation to minimum reading of ten seconds, then you can read the degrees and minutes from the micro collar (2′ of each) and use the vernier collar scale to read to then seconds.
8. Center work can also be carried out by using the base in the vertical position in conjunction with a tailstock(see Special Accessory) at the same time, the two center line must collinear.

(II) The secondly you can see on the new type S/N10094A without the scale only have the digital readout assembly, it real easy to see how degree you turned and you need.



Ⅳ. Special Accessory (Extra shopping is required)

1. **Dividing Plate** (ref. to fig .2) the type is S/N10094-1.

A. Loosen the lock screw in vernier collar, disengagement handle wheel with worm shaft.

B. To assembly the dividing plate (Ref.No.2) attachment to the rotary table, remove handle wheel. Bolt the plate (Ref.No.2) to the collar using four screws, secure sector (Ref.No.8) against sector and into slot in eccentric sleeve, slide crank (Ref.No.4) arm over flats at end of worm shaft and secure with spacer and nut.

C. The dividing plate accessory is used to divide one 360° table rotation into divisions of all divisible of 30'. The gear ratio of the rotary table is 1:72, so 72 rotations of the handle wheel rotate table one full rotation. One rotation of the handle wheel is equal to 5° rotation of the table (360° ÷72=5°), ten holes are obtained in the dividing plate, then it is 30'table rotation after the plunger assembly (Ref.No.6) rotate from one hole to the next, two sectors made your index work conveniently.

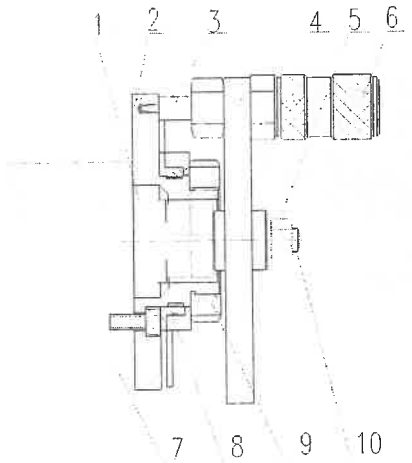
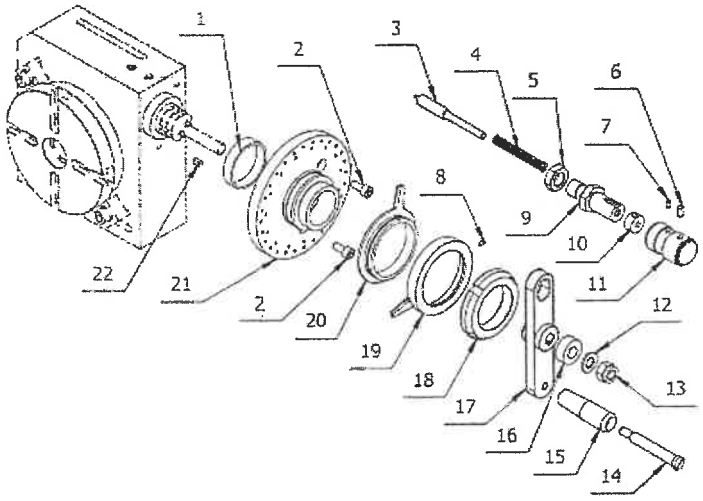


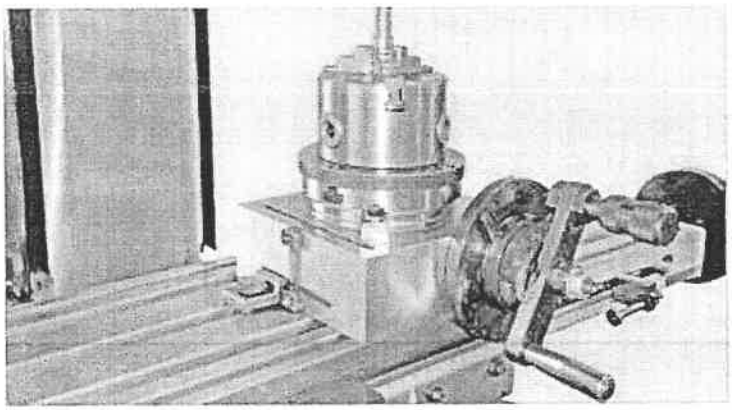
Fig 2

1. eccentric sleeve
2. dividing plate
3. plunger assemble
4. crank
5. nut
6. handle wheel
7. ground
8. sector
9. lock nut
10. worm shaft

D. When fix the dividing plate on the S/N10094A, the first step is remove the DRO assembly, then take out two washer (you can found these attachment with the S/N10094A). The parts No. In below drawing is No. 1 and No.16.



E. Work status display:



Use with dividing plate (S/N 10094-1)

2. Chuck the type is S/N10190

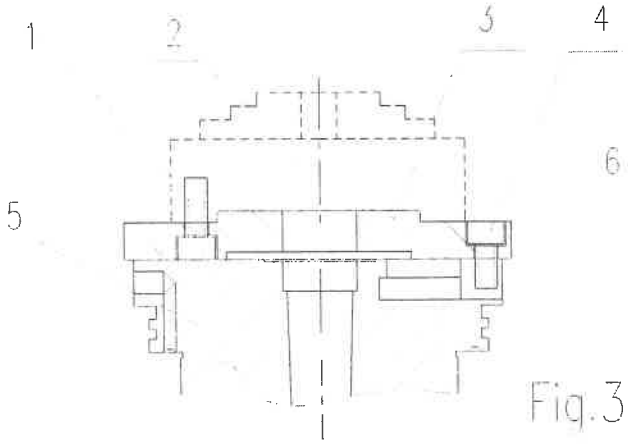


Fig.3

1.M6×16 bolt
2.80mm chuck
3.linked-plank
4.M6×12 bolt
5.rotary table
6.M6 T-nut

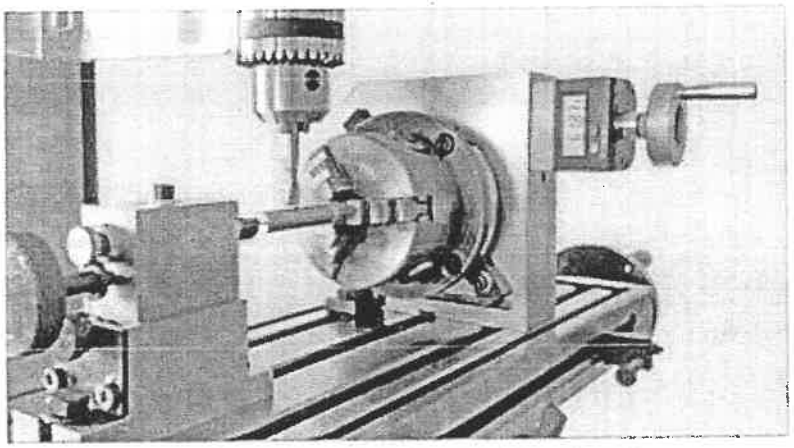
Three jaws or four jaws chuck is special supplied, the special accessory linked-plank(Fig.no.3)can assemble three jaws/four jaws chuck which diameter is Φ 80mm in rotary table. The machining parts cab be fitted with precision and locked quickly.

3.Tailstock the type is S/N10094-2.

In case where the machine proper is set down as a vertical type, correct centering operation can be made in combination with the tailstock.

The center shaft line for tailstock must collinear to close against the direction as in rotary table, so completely eliminating misalignment of center in case of operation.

Work status display:



Vertical using with tailstock (S/N 10094-2)

Ⅴ.Maintenance and Lubrication (Ref to Fig.1)

1. Care has to be taken to protect all sliding and engaging surface during operation or transport.
2. Never hammer table face or work-piece on table face, otherwise precision will be lost.
3. After completion of operating, clean thoroughly, remove all dirt, metal chips cutting collage etc.
4. Apply lubrication oil to table face to prevent rusting.
   Before every shift of operation, fill adequate oil through oil cup on table, at the same time, rotate the oil part slightly. Do not use rotary table without adequate oil.

VI. List 1

Variety of dividing plant for divide rapidly

No	Num. of equal dividing	Value of angle	Num. of rotate circle	Subjoin hole num.		No	Num. of equal dividing	Value of angle	Num. of rotate circle	Subjoin hole num.	
				15	28					15	28
1	2	180°	36			36		25°	5		
2		175°	35			37	15	24°	4	12	
3		170°	34			38	16	22-1/2°	4		14
4		165°	33			39		20°	4		
5		160°	32			40	20	18°	3	9	
6		155°	31			41	21		3		12
7		150°	30			42		16°	3	3	
8		145°	29			43	24	15°	3		
9		140°	28			44	27	13-1/3°	2	10	
10		135°	27			45	28		2		16
11		130°	26			46	30	12°	2	6	
12		125°	25			47	32	11-1/4°	2		7
13	3	120°	24			48	36	10°	2		
14		115°	23			49	40	9°	1	12	
15		110°	22			50	42		1		20
16		105°	21			51	45	8°	1	9	
17		100°	20			52	48	7-1/2°	1		14
18		95°	19			53	54	6-2/3°	1	5	
19	4	90°	18			54	56		1		8
20		85°	17			55	60	6°	1	3	
21		80°	16			56	72	5°	1		
22		75°	15			57	84				24
23	5	72°	14	6		58	90	4°		12	
24		70°	14			59	96	3-3/4°			21
25		65°	13			60	108	3-1/3°		10	
26	6	60°	12			61	120	3°		9	
27		55°	11			62	135	2-2/3°		8	
28	7		10		8	63	144	2-1/2°			14
29		50°	10			64	180	2°		6	
30	8	45°	9			65	216	1-2/3°		5	
31	9	40°	8			66	270	1-1/3°		4	
32	10	36°	7	3		67	288	1-1/4°			7
33		35°	7			68	360	1°		3	
34	12	30°	6			69	540	40°		2	
35	14		5		4	70	1080	20°		1	

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