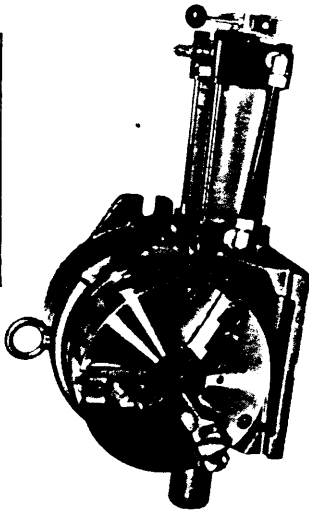


550-015

AIR ACCU-DEX



This device is the most optimum in use for milling machines, drilling machines and other metalcutting machine tools as a single-purpose indexing attachment.

Revolution, indexing and clamping are pneumatically made with a valve handle alone.

Dividual numbers 2,3,4,6,8,12,16 and 24 are available in this device and indexing positions 6,8,12,16,24 and 48 can be readily obtained in one operation of the valve handle by changing the stopper position, so that there is no operational error at all.

Handling and Maintenance

This device is very rigid in structure capable of resisting over long periods of time for its useful life, and the internal fabrication is so constructed as to fully prevent debris, such as chips, cast iron dust from admitting. Also, it has been fully adjusted and has undergone a rigorous inspection before it leaves our factory. Remove the protective oil prior to use. Usually, do not disassemble the internal mechanism.

Standard Accessories:

- 1. Scroll chuck 1
 - 2. Air cylinder (hand operating valve handle) 1
- Inner diameter 80mm, Stroke 100mm
Rated pressure 7kg/cm², Resisting pressure 14kg/cm²

Specifications

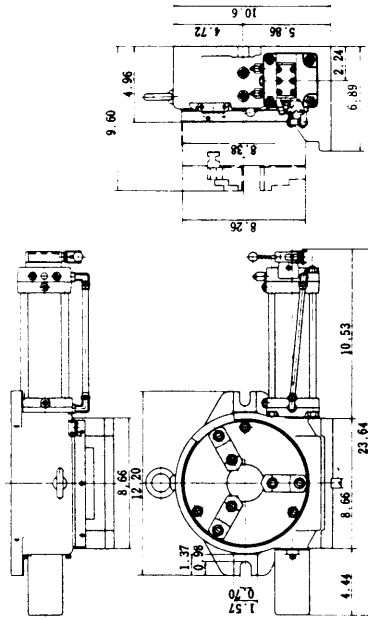
Master plate: The master plate is divided into 48 equal parts, with minimum indexing angle of 7.5°.

Scroll chuck: This special 8" scroll chuck is provided with a 2-piece interchangeable jaw mechanism and an adjusting screw, making centering work easier. Setting of unhardened jaws is also possible.

Face plate: Remove the chuck and set a 10" (254mm) face plate (special accessory), and this device can be used as a vertical-horizontal rotary table.

Cylinder: The special cylinder (inner dia. 80mm, stroke 100mm rated pressure 5 to 7kg/cm²) is provided as a standard accessory, whose rod has eight stoppers. Set the stopper to a desired dividual number, and the unit is automatically revolved by handle operation.

Dimensional Drawing

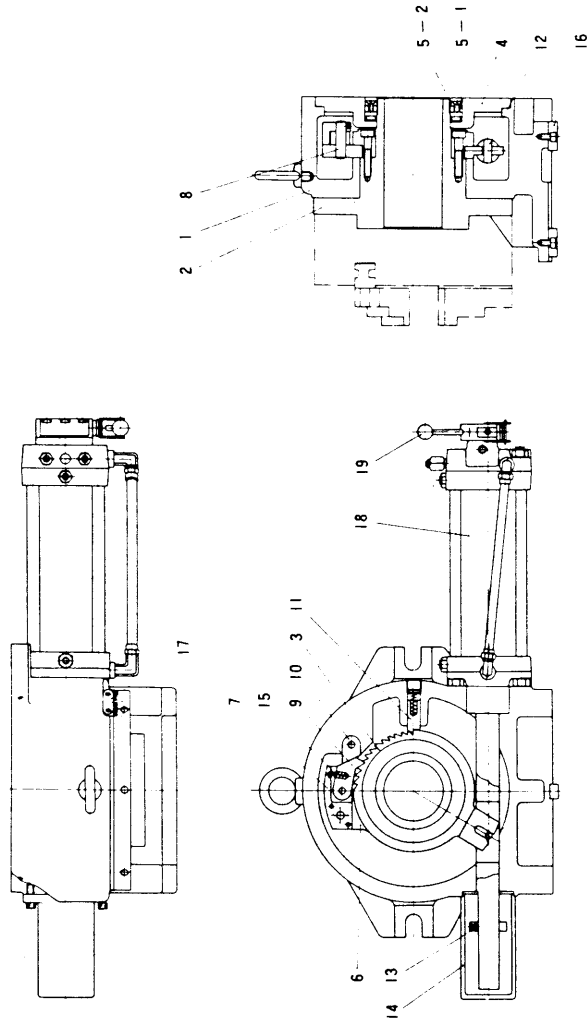


Printed in Japan

Stock No. and Dimensions

Stock No.	Dividual number	Chuck		Height of center	Mounting surface	Weight
		Outer dia.	Inner jaw dia.			
550-015	2-3-4-6-8	210	4~62	149	220x175(V)	60 kg
	12-16-24-48	8.72	0.16~2.44	5.87	8.66x6.89	
					310x269(H)	
					12.2x10.6	

Sectional Drawing



Parts No. and Parts Names

- 01 Base
- 02 Turret
- 03 Index plate
- 04 Thrust plate
- 05-1 Thrust nut (A)
- 05-2 Thrust nut (B)
- 06 Jaw mounting plate
- 07 Jaw cover,
- 08 Pin (A)
- 09 Jaw
- 10 Stopper
- 11 Rotation stopper pin
- 12 Pin (B)
- 13 Stopper
- 14 Cover
- 15 Spring C
- 16 Guide block
- 17 Indicator
- 18 Cylinder
- 19 Hand valve

Operating Instructions and Functions of Each Unit

Hints on operation

- * If the cylinder is directly connected with a compressor, dust or moisture enters the cylinder, causing troubles.
- So, be sure to use a three-piece air fitting (air filter, regulator and lubricator) between the cylinder and compressor.
- * The compressor should be operated at a pressure of 5kg/cm², and should not be operated at a pressure of more than 7kg/cm², otherwise the cylinder may be damaged.

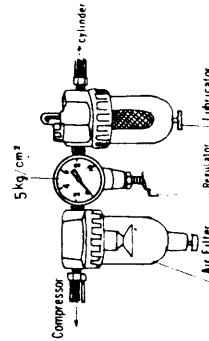


Fig. 1

Suggestions for ordering

The parts No. and parts names expressed in the operation and service manual are abbreviated for description. Therefore, when ordering parts for replacement, be sure to specify stock Nos. and component Nos., which are shown in the table of Stock No. & Dimensions.

N.B.) When ordering parts in accordance with the exploded view No. given in an individual product catalog or general catalog, be sure to write in addition the page and the year of publication.

Stock No. [550-015]

[ASS-02]

[7522-Y]

Operation & service manual No.

Component No.

Operation & service manual No.

Indexing Method

(Example) In case of dividing into 6 equal parts

- (1) Remove the cover **14** on the other side of the cylinder.
- (2) The cylinder rod is provided with **13** stoppers.

Since the index plate is divided into 48 equal parts, it revolves 7.5° per tooth. To divide into 6 equal parts,
 $360^\circ \div 6 = 60^\circ$ $60^\circ \div 7.5 = 8$
 Therefore the index plate should be rotated by 8 teeth.

Set the stopper **13** at the position 8 and fix it there.

For relationship between dividual number and stopper position, refer to "Index Table".

- (3) After the stopper position is determined, fit the cover **14**.
- (4) Mount a workpiece onto the chuck and perform centering.

Insufficient centering will adversely affect the dividing accuracy. Especially in case of resetting the chuck once removed, be sure to perform centering.

To center the chuck, clamp the workpiece or test bar with the chuck and hold a dial gauge against the outside surface of it. Then, loosen the three chuck set bolts and adjust the runout to become zero with the adjusting bolt located on the side of the chuck. Next, tighten the chuck set bolts to fix the chuck. When setting the valve lever to "UNCLAMP", the chuck can be freely revolved clockwise. Insert a round bar into a hole on the circumference of the turret and perform centering while rotating the turret.

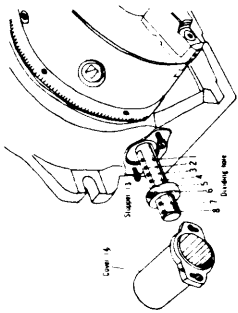


Fig. 2

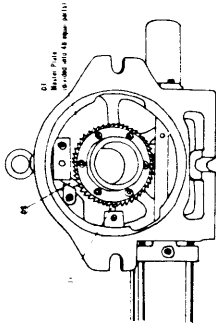


Fig. 3

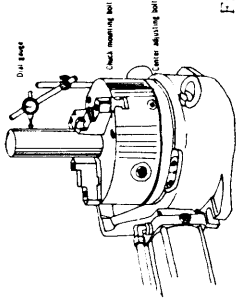


Fig. 4

- (5) Set the hand valve lever located at the rear of the cylinder to "INDEX CLAMP", the turret revolves and is clamped simultaneously. In this case of dividing by 60° , the turret is clamped where it stops. So, carry out machining operation.

After completion of machining, return the lever to "UNCLAMP". However, do not set it to "INDEX CLAMP" immediately after this. If air within the cylinder is not completely purged out, the gear is not fully fed, thus the turret revolving in the middle of the preset dividual number. Be sure to purge air before setting the lever to "INDEX CLAMP".

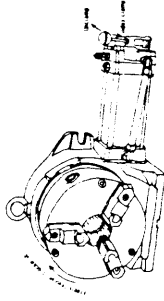


Fig. 5

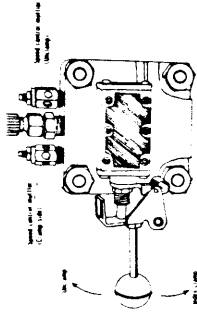


Fig. 6

(Example) In case of trisection

Set the stopper of the cylinder rod at the position of dividing into 6 equal parts. Then, operate the valve twice, thereby revolving the turret by 120° . The turret cannot be revolved by more than 60° in one operation of the valve lever.

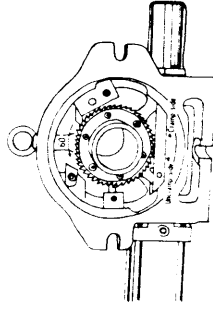


Fig. 7

Index Table

Dividual number	Angle	Stopper position	Number of operations of valve lever
48	7.5°	1	1
24	15°	2	1
16	22.5°	3	1
12	30°	4	1
-	37.5°	5	1
8	45°	6	1
-	52.5°	7	1
6	60°	8	1
4	90°	6	2
3	120°	8	2
2	180°	8	3

Adjustment of each part of the cylinder

1. The speeds of "INDEX CLAMP" and "UNCLAMP" are separately adjusted by turning the adjusting screw of speed control muffler.
2. The cushion valve on the UNCLAMP side is fully opened, but that on the CLAMP side is actuated. The cushion valve is adjusted with the adjusting screw.

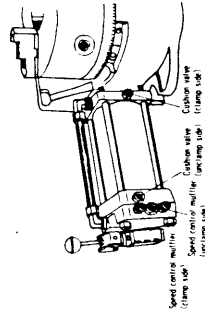


Fig. 8

Special Accessories

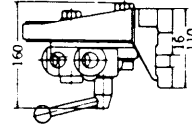
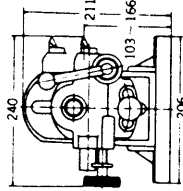
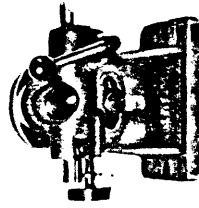
- * Tailstock

When the machine proper is set down on a vertical mill, accurate operation is possible with this tailstock.

The direction of centering is provided with a right-hand type.

- * Face plate
- * Outer diameter 1" (25.4mm) with set bolt
- * Solenoid valve

Remove the hand operating valve and set the solenoid valve. Thus, this device can be interlocked with the machine proper. Types for AC 100V and AC 200V are available.



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"The Pillar of Quality"

Special Accessories on Order

Master index plates of 30-, 40-tooth types, etc. are manufactured upon request.

To use this master index plate, the cylinder rod should be replaced. So, the master index plate alone cannot be changed.

In case of 30-tooth type

Minimum angle of revolution per tooth: 12°

Dividual numbers available: 2, 3, 5, 6, 10 and 15

In case of 40-tooth type

Minimum angle of revolution per tooth: 9°

Dividual numbers available: 2, 4, 5, 8, 10 and 20