SMALL ROTARY TABLES

8″ Diameter

Plain

With Motor Drive

The Federal 8″ diameter Rotary Tables are available in four different radial accuracies (±.5 μ″, ±1μ″, ±2.5μ″ and ±5μ″) and can be ordered with or without motor drive (see Specifications). Options include a Tilt-Centering Table, a Shaft Mount, Extension Arms and a Test Ball (see below).

The precision base unit incorporates a fully compensated, hydrostatic (air) bearing with double thrust plate construction*. The spindle is completely supported, completely cushioned by air so the Table can be moved without any danger of spindle damage. All air bearing parts are hardened and stabilized stainless steel.

The 8″ Rotary Tables are hardened, ground and lapped flat to within .0001″ radially and to within .0001″ along any path of constant radius. The Tables have concentric grooves every $^{5}/_{16}$″ as guides for approximate centering of the workpiece. Nine tapped holes (#10-32) facilitate attaching fixtures. Each Table has a 1½″ diameter opening which extends through the base to accommodate long shafts. A Center Plate fits over the opening for checking parts that are 1½″ or less in diameter. It is hardened stainless steel, ground and lapped flat to within .000020″ radially and within .000010″ along any path of constant radius.

Tables can be hand rotated or ordered with an integral 1 RPM motor drive. (Other speeds, fixed and variable, are available by special quotation.) An electric clutch disengages when the motor is switched off, permitting hand rotation.

Each Table is furnished with a Regulator-Filter Unit (DR-7) to set pressure from 40 to 125 psig and to remove particles down to 5 microns. It measures 4″ W x 7″ L x 5½″ H and can be remotely located. Unit is provided with two air hoses and SAE 7/16-20 fittings. To assure clean air, Oil and Water Separator Trap AFL-9 is recommended.

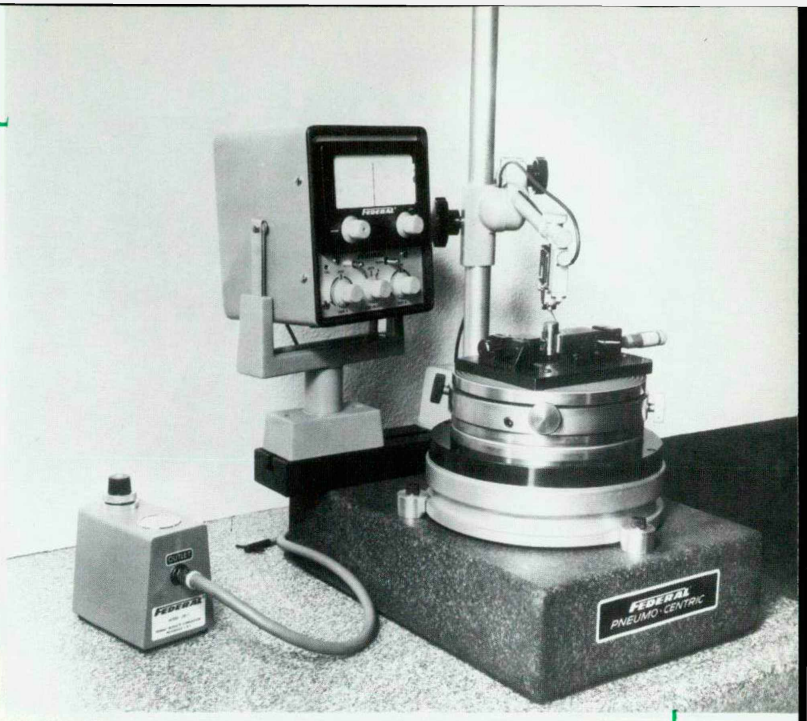
*The lowest accuracy Table has single thrust plate construction.

ACCESSORIES

TILT-CENTERING TABLE AT-96

The Tilt-Centering Table mounts on top of the 8″ Rotary Table and is flat to within .0001″ in both radial and circular paths. It permits precise centering of workpieces through two fine pitch adjustment screws working against spring-loaded stops. Range of adjustment is ±.025″. The Table also has tilt adjustment over a range of ±½° for proper alignment of part face to make squareness measurements or to compensate for lack of squareness between the axis of the part and the surface upon which it must rest. Spherical seat design places the center of tilt at 3″ above the Table. Working diameter is 8″ and the Table adds $1\,^{11}/_{16}$″ of height to the Rotary Table. Table top is hardened and

chrome plated with 9 tapped holes (10-32) plus centering reference grooves. Weight is approximately 25 pounds.



This circular geometry gage uses an 8″ Rotary Table with special fixturing to permit fast positioning of roller bearings for a squareness check on their end face. A "vee" block with a micrometer adjustment provides quick size changes for various diameters of workpieces. Initial setup is facilitated by the Tilt Centering Table.

Readout for tolerances as close as ±.000010″ is provided by a Federal "Multi-Choice" electronic amplifier with five different magnifications. Scale values for each are displayed individually to prevent operator confusion. All components of Model 1800B-124 are mounted on a granite plate for stability.

SPECIFICATIONS

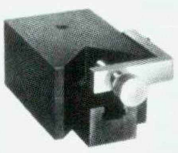
MODEL	Overall Height	Weight	Radial Accuracy	Axial Accuracy	Coning Error*	Axial Stiffness	Motor Drive
ATE-08010	4¼″	45 lbs.	±5μ″	±5μ″	2μ″/in.	100,000 lbs./in.	None
ATE-08005	4¼″	52 lbs.	±2.5μ″	±2μ″	1μ″/in.	1,500,000 lbs./in.	None
ATE-08002	4¼″	52 lbs.	±1μ″	±1μ″	.5μ″/in.	1,500,000 lbs./in.	None
ATE-08001	4¼″	52 lbs.	±.5μ″	±.5μ″	.5μ″/in.	1,500,000 lbs./in.	None
ATE-08010M	7⅞″	58 lbs.	±5μ″	±5μ″	2μ″/in.	100,000 lbs./in.	1 RPM
ATE-08005M	7⅞″	65 lbs.	±2.5μ″	±2μ″	1μ″/in.	1,500,000 lbs./in.	1 RPM
ATE-08002M	7⅞″	65 lbs.	±1μ″	±1μ″	.5μ″/in.	1,500,000 lbs./in.	1 RPM
ATE-08001M	7⅞″	65 lbs.	±.5μ″	±.5μ″	.5μ″/in.	1,500,000 lbs./in.	1 RPM

* Starting at 1″ above table.

Table Diameter	8″	Maximum Balanced Load	500 lbs. @ 50 psig
Through Hole	1½″ dia.	Source Pressure	60 to 125 psig
Base Diameter	10″	Spindle Support Pressure	50 psig
Table Flatness	.0001″ radial, .0001″ circular	Air Consumption	1.5 cfm

EXTENSION ARMS AT-97

Extension Arms increase support diameter of table to 16″. The three arms can be easily attached to either the regular Table or the Tilt-Centering Table.



SHAFT MOUNT AT-98

Shaft Mount provides fast, precise means of vertically holding slim, cylindrical parts from ⅛″ to 1½″ in diameter. Attaches quickly to Tilt-Centering Table.

TEST BALL MR-1800

Highly-precise Test Ball is permanently mounted on a stainless steel base which locates on three magnetic pads. Test Ball has screw-on cover for protection.