

# AT Series

## Air Bearing Spin Tables

### Ultra-Precision Rotary Motion

**ABTech inc.** offers a full line of friction free air bearing rotary tables for applications requiring a sub-micron, ultra-precision reference axis, such as out-of-roundness, squareness, concentricity and parallelism measurements.

Air bearing rotary tables are offered in a variety of standard sizes and can be combined with our tilt and center worktables and direct drive servo motor systems. Combine with **ABTech's** gages, gage stands and granite bases to achieve precise total indicated run-out (TIR) measurements.

Ideal for precision rotary grinding, optical lens alignment staging and turbine component assembly.

**ABTech's** modular design approach and complete engineering services can respond quickly to provide a solution to your O.E.M. requirements for ultra-precision rotary motion.



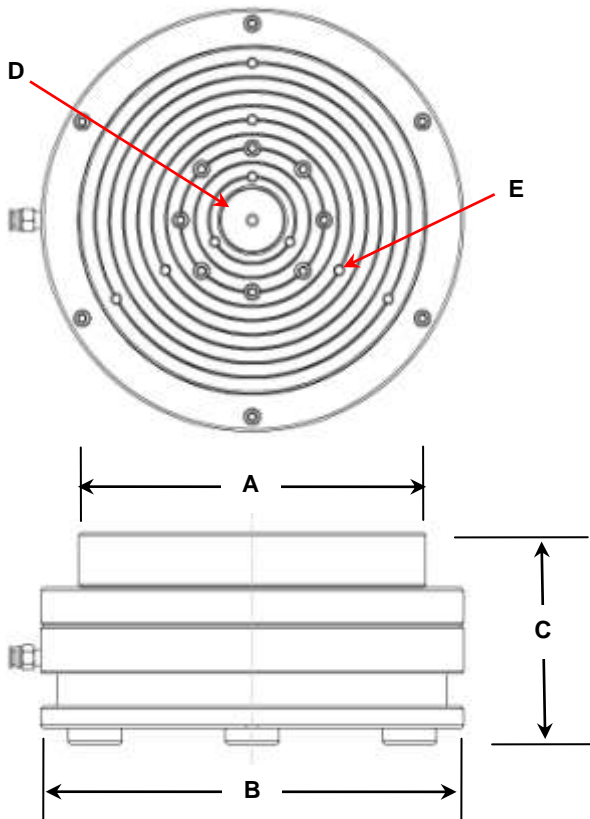
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### Features:

- *Ultra-smooth motion with absolute repeatability*
- *High load capacity and stiffness with low air consumption*
- *Four accuracy grades available for cost effective design options*
- *Six standard diameters from 4" (100 mm) to 16" (400 mm)*
- *Worktables available up to 24" (600 mm) in diameter*
- *Tilt and center worktables available in 4 knob or 8 knob designs*
- *Optional motor drives, encoders, drive amplifiers and controls*
- *Hardened 440C stainless steel*
- *Custom tooling and fixturing design and manufacturing available*
- *Modular design – custom systems can be provided for O.E.M.*
- *Made in USA*

## AT Series Ultra-Precision Air Bearing Tables



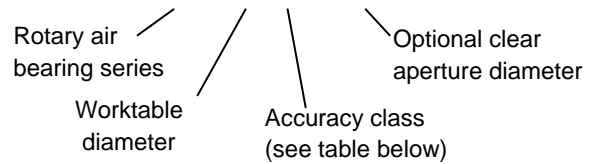
### Options & Accessories:

- Tilt and center worktables
- Standard and custom sized clear apertures
- Motor drives and controllers
- Encoders and amplifiers
- Granite surface plates & support stands
- Gage stands
- Dual element filter/regulators
- Custom bolt circle patterns
- Custom fixturing and work holder tooling

### Ordering Information:

To order by model number:

**AT100/100 - A1 - CA100**



Accuracy Class	Radial/Axial	Angular (coning)
A1	1.0 $\mu$ " (0.025 $\mu$ m)	0.5 $\mu$ "/in (0.012 $\mu$ m/25mm)
A2	2.0 $\mu$ " (0.05 $\mu$ m)	1.0 $\mu$ "/in (0.025 $\mu$ m/25mm)
A5	5.0 $\mu$ " (0.125 $\mu$ m)	1.0 $\mu$ "/in (0.025 $\mu$ m/25mm)
A10	10.0 $\mu$ " (0.25 $\mu$ m)	1.0 $\mu$ "/in (0.025 $\mu$ m/25mm)

	AT100	AT150	AT200	AT250	AT300	AT400
<b>Table Dia. (A)</b>	3.937" (100 mm)	5.906" (150 mm)	8.0" (203.2 mm)	10.0" (254 mm)	12.0" (304.8 mm)	15.75" (400 mm)
<b>Base Dia. (B)</b>	5.5" (139.7 mm)	8.0" (203.2 mm)	9.75" (247.65 mm)	13.25" (336.55 mm)	15.0" (381.0 mm)	19.0" (482.6 mm)
<b>Bearing Height (C)</b>	2.686" (68.2 mm)	3.50" (88.9 mm)	4.87" (123.7 mm)	5.81" (147.57 mm)	5.875" (149.2 mm)	6.25" (158.75 mm)
<b>Thru-hole Dia. (D)</b>	0.875" (22.23 mm)	1.25" (31.75 mm)	1.51" (38.35 mm)	1.51" (38.35 mm)	1.75" (44.45 mm)	2.0" (50.8 mm)
<b>Tapped Holes (E)</b>	M5 x 0.8*	M5 x 0.8*	M5 x 0.8*	1/4-28 UNF	1/4-28 UNF	1/4-28 UNF
<b>Worktable Sizes</b>	5.906" (150 mm)	7.875" (200 mm)	11.81" (300 mm) 15.75" (400 mm)	11.81" (300 mm) 15.75" (400 mm)	15.75" (400 mm) 19.68" (500 mm)	19.68" (500 mm) 23.62" (600 mm)
<b>Axial Load Cap.</b>	125 lbs (57 Kg)	250 lbs (113 Kg)	500 lbs (226 Kg)	750 lbs (340 Kg)	1000 lbs (454 Kg)	2000 lbs (907 Kg)
<b>Axial Stiffness</b>	0.3 lbs/ $\mu$ " (5.4 Kgf/ $\mu$ m)	0.75 lbs/ $\mu$ " (13.4 Kgf/ $\mu$ m)	1.5 lbs/ $\mu$ " (26.8 Kgf/ $\mu$ m)	2.0 lbs/ $\mu$ " (35.7 Kgf/ $\mu$ m)	3.0 lbs/ $\mu$ " (53.6 Kgf/ $\mu$ m)	4.0 lbs/ $\mu$ " (71.5 Kgf/ $\mu$ m)
<b>Air Usage</b>	1.0 scfm (1.7 m <sup>3</sup> /h)	1.5 scfm (2.6 m <sup>3</sup> /h)	1.5 scfm (2.6 m <sup>3</sup> /h)	1.5 scfm (2.6 m <sup>3</sup> /h)	1.5 scfm (2.6 m <sup>3</sup> /h)	2.0 scfm (3.4 m <sup>3</sup> /h)
<b>Weight</b>	10 lbs (4.54 Kg)	20 lbs (9.0 Kg)	65 lbs (29.5 Kg)	130 lbs (59.0 Kg)	190 lbs (86.2 Kg)	300 lbs (136.1 Kg)

\* Will accept #10-32 UNF  
 ~Specifications are at 60 psi (4 kgf/cm<sup>2</sup>)  
 ~Load capacities are balanced and centered on the work table  
 ~Performance can be affected by method of mounting the table and loading  
 ~Consult ABTech's applications engineers for details and mounting information