

Frictionless Motion. Absolute Precision.

Spherical Air Bearing for Aerospace Technologies



3-Axis
Frictionless Motion



Microgravity
Simulation



High
Payload Capacity

Key Applications







Hardware-in-the-Loop (HIL) ADCS Testing: Beyond pure software simulation; physical attitude validation of actual satellite components, including star trackers, reaction wheels, and magnetorquers, under true dynamics.

Inertial Navigation (IMU/IRU) Calibration: High-precision gyroscope and accelerometer drift testing within a frictionless environment.

Mass Properties Balancing: High-precision center of gravity (CG) determination for complex systems (satellites, rockets, UAVs, etc.).

Optical & Laser Stabilization: Vibration and target tracking tests for electro-optical cameras, gimbals, and laser pointing systems deployed on UAVs and satellites.

Technical Specification

 Roll / Pitch / Yaw Rotation	$\pm 45^\circ / \pm 45^\circ / 360^\circ$
 Permissible push force in Z	1680 N @ 6 bar, 31.8 L/min
 Overall Mass and Diameter*	3620 g & Ø 150 mm
 Moment of Inertia (X-Y-Z)	$\approx 4635 \text{ kg}\cdot\text{mm}^2$
 Operating pressure	4-6 bar (clean, dry, oil-free)
 Material	Hardcoat aluminum MIL-A 8625 Type III

**Nominal value for the Ø150 mm model. Fully customizable sizes are available for specific payload needs.*

