

ID-300-2P-01

Dual-axis speed and position turntable

This dual-axis rate and position gimbal comprises a base, a load mounting platform and a control system. Its primary function is to provide high-precision dual-axis angular positioning and rate motion for loads weighing up to 0.5 kg, for use in the testing and calibration of inertial devices.



Product Features

- High positioning accuracy for both axes
- Excellent angular velocity accuracy for both axes
- Load platform diameter of up to 300 mm
- Rotation range from 0° to 360°
- Lightweight unit, weighing 42.5 kg
- Compact design, allowing for flexible transport and deployment

Suitable scenarios

Suitable for use in the fields of inertial navigation and aerospace, it is primarily used for high-precision rate testing and position calibration of inertial measurement units (IMUs), gyroscopes and accelerometers.

Technical Specifications

Parameter categories	Parameter items	Parameter values
Accuracy Performance	Angular position accuracy	$\pm 15''$
	Angular position repeatability	$\leq \pm 5''$
	Speed smoothness	Better than $\pm 0.05\%$ (at $10^\circ/\text{s}$)
Dynamic Performance	Maximum angular velocity	$300^\circ/\text{s}$
	Maximum angular acceleration	$50^\circ/\text{s}^2$
	Range of motion	Azimuth/elevation movement range: $0^\circ\text{--}360^\circ$ (Continuous on both axes)
Mechanical Specifications	Load capacity	0.5 kg
	Table diameter/dimensions	$\geq \phi 300\text{ mm}$
Environmental Protection	Protection rating	Ip20
	Operating temperature	10°C to 40°C
Power and Communications	Power supply requirements	$220\text{ V} \pm 10\%$, 50 Hz
	Control interface	Ethernet/RS232