

ID-350-2P

Small dual-axis electric turntable

This compact dual-axis electric turntable comprises a mechanical base and a measurement and control system, and features a U-T configuration. Its primary function is to provide the test load with precise horizontal and positional references, as well as rate references, for the static testing, calibration and multi-position measurement of inertial systems (such as inertial navigation systems).



Product Features

- High load capacity: rated load 20 kg
- High accuracy: dual-axis positional accuracy $\pm 3''$
- Wide speed range: inner ring ± 0.001 to $\pm 200^\circ/\text{s}$
- Multiple motion modes: including position, speed and sinusoidal oscillation
- Lightweight table: ≤ 150 kg
- Excellent perpendicularity: Perpendicularity between inner and outer rings $\pm 5''$

Suitable scenarios

Suitable for use in the fields of inertial navigation, aerospace and precision manufacturing, specifically for the static testing, calibration and rate measurement of sensors such as inertial measurement units (IMUs), gyroscopes and accelerometers.

Technical Specifications

Parameter categories	Parameter items	Parameter values
Accuracy Performance	Angular position accuracy	Outer frame: $\pm 3''$, inner frame: $\pm 3''$
	Tracking/pointing accuracy	Same as positional accuracy: $\pm 3''$
	Rate stability	When $\omega \leq 1^\circ/\text{s}$: 2×10^{-3} When $1-10^\circ/\text{s}$: 2×10^{-4} When $\geq 10^\circ/\text{s}$: 2×10^{-5}
Dynamic Performance	Maximum angular velocity	Inner frame: $\pm 200^\circ/\text{s}$ Outer frame: $\pm 100^\circ/\text{s}$
	Maximum angular acceleration	Inner frame: $>100^\circ/\text{s}^2$ Outer frame: $>80^\circ/\text{s}^2$
Mechanical Specifications	Load capacity	20 kg
	Table diameter/dimensions	$\Phi 350$ mm
Power and Communications	Power supply requirements	AC 220V $\pm 10\%$, 50Hz
	Control interface	Ethernet/RS422/fibre optic