

ID-300-3-01

Three-axis electric rotary stage

This three-axis electric turntable comprises a mechanical base, a measurement and control system, and software. It is primarily used for the functional testing, commissioning and calibration of rate and position parameters in inertial components such as fibre-optic gyroscopes, MEMS gyroscopes and IMUs.



Product Features

- Stable performance and reliable operation
- Simple to operate and easy to carry
- Continuous, unlimited rotation on three axes
- Angular position accuracy of up to $\pm 5''$
- Low purchase cost
- Supports a wide range of rates from $\pm 0.001^\circ/\text{s}$ to $\pm 200^\circ/\text{s}$

Suitable scenarios

Suitable for the inertial technology sector, for research, testing, production, commissioning, maintenance and calibration of fibre-optic gyroscopes, MEMS gyroscopes and IMUs.

Technical Specifications

Parameter categories	Parameter items	Parameter values
Accuracy Performance	Angular position accuracy	$\pm 5''$ (inner/middle/outer frame)
	Angular position repeatability	$\pm 2''$ (three axes)
	Speed smoothness	Better than 2×10^{-3} to 2×10^{-5} (depending on speed range)
Dynamic Performance	Maximum angular velocity	$\pm 200^\circ/\text{s}$ (three axes)
	Maximum angular acceleration	Outer frame $> 50^\circ/\text{s}^2$, middle/inner frames $> 100^\circ/\text{s}^2$
Range of Motion	Range of azimuth/elevation movement	Three-axis continuous, unlimited ($360^\circ \times N$)
Mechanical Specifications	Load capacity	20 kg
	Table diameter/dimensions	$\Phi 300$ mm
Environmental Protection	Protection rating	Ip20
	Operating temperature	0°C to $+40^\circ\text{C}$
Power and Communications	Power supply requirements	220 V $\pm 10\%$ / 50 Hz
	Control interface	Ethernet/RS232