

ID-580-1P

Single-axis turntable

A single-axis rotary stage is a high-precision test device, comprising primarily a stage and a drive and control unit. Its function is to enable continuous, infinitely variable angular positioning and rotational speed of the load, and it is used for testing inertial devices.



Product Features

- Large table diameter, $\geq \Phi 580$ mm
- High load capacity, ≥ 60 kg
- Continuous, unlimited rotation
- Angular position accuracy $\leq \pm 5''$
- Wide angular velocity range (0.001–1000°/s)
- Extremely high velocity stability

Suitable scenarios

Suitable for the inertial navigation and precision manufacturing industries, specifically for the calibration and testing of inertial components (such as gyroscopes and accelerometers), as well as the simulation of high-precision tracking equipment.

Technical Specifications

Parameter categories	Parameter items	Parameter values
Accuracy Performance	Angular position accuracy	$\leq \pm 5''$
	Angular position repeatability	$\leq \pm 2''$
	Speed stability	$\omega \leq 1^\circ/\text{s}$: 5×10^{-3} (averaged over 1°) $1^\circ/\text{s} < \omega < 10^\circ/\text{s}$: 5×10^{-4} (averaged over 10°) $\omega \geq 10^\circ/\text{s}$: 5×10^{-5} (averaged over 360°)
Dynamic Performance	Maximum angular velocity	$1,000^\circ/\text{s}$
	Maximum angular acceleration	$500^\circ/\text{s}^2$
	Range of motion	Continuous and infinite
	Range of azimuth/elevation motion	Single-axis; azimuth only, continuous and infinite
Mechanical Specifications	Load capacity	$\geq 60 \text{ kg}$
	Table diameter/dimensions	$\geq \Phi 580 \text{ mm}$
Environmental Protection	Operating temperature	0°C to $+40^\circ\text{C}$