

ID-700-3

Electric Three-Axis T-Type Test Turntable

This three-axis electric rotary stage consists primarily of a three-axis (inner/middle/outer ring) mechanical stage, a drive and control system, and a measurement unit. Its core function is to provide high-precision positioning and motion at high rates, for use in attitude motion simulation and the testing and calibration of inertial devices (such as inertial measurement units).



Product Features

- High load capacity (≥ 70 kg)
- T-slot worktable
- Three-axis speed of up to $20^\circ/\text{s}$
- Angular acceleration accuracy of $0.1^\circ/\text{s}^2$
- Positioning accuracy of ≤ 5 arcseconds
- Minimum steady-state speed of $0.005^\circ/\text{s}$

Suitable scenarios

Suitable for the aerospace and inertial navigation industries, it is used for the dynamic calibration and performance testing of devices such as inertial measurement units, gyroscopes and accelerometers.

Technical Specifications

Parameter categories	Parameter items	Parameter values
Accuracy Performance	Angular position accuracy	$\leq 5''$ (three axes)
	Angular position repeatability	$\pm 2''$
	Rate stability	When $\omega < 1^\circ/\text{s}$: $< 2 \times 10^{-2}$ When $\omega \geq 1^\circ/\text{s}$: $< 5 \times 10^{-3}$
Dynamic Performance	Maximum angular velocity	$20^\circ/\text{s}$ (pitch, azimuth and roll axes synchronised) ¹
	Maximum angular acceleration	$00^\circ/\text{s}^2$ (pitch, azimuth and roll axes synchronised)
Mechanical Specifications	Load capacity	$\geq 70 \text{ kg}$
	Table diameter/dimensions	$\geq \phi 700 \text{ mm}$ (T-slot mounting)
Environmental Protection	Protection rating	Ip20
	Operating temperature	0°C to 40°C
Power and Communications	Power supply requirements	Single-phase 220V/50Hz
	Control interface	Rs422