

ID-360-3MP

Three-axis position and velocity turntable

This three-axis position and rate turntable comprises three frames: inner, middle and outer. It is primarily used to simulate the three-dimensional motion and attitude of a carrier, providing a high-precision testing environment for the angular position, rate and acceleration of the load



Product Features

- Independent three-axis synchronised control
- High rigidity with a load capacity of 20 kg
- Magnetic leakage on the work surface ≤ 0.1 mT
- Positioning accuracy of $\pm 5''$
- Maximum rate of $\pm 500^\circ/\text{s}$
- Rate stability of $5\text{e-}005$

Suitable scenarios

Suitable for the aviation, aerospace, defence and precision instrumentation industries, it is primarily used for performance testing and calibration of sensors such as inertial navigation units (IMUs), gyroscopes and accelerometers during research, development and production.

Technical Specifications

Parameter categories	Parameter items	Parameter values
Accuracy Performance	Angular position accuracy	$\leq \pm 5''$
	Speed stability	$\omega \leq 1^\circ/\text{s}$: 5e-003 (averaged over 1°) $1^\circ \leq \omega < 10^\circ/\text{s}$: 5e-004 (averaged over 10°) $10^\circ/\text{s} \leq \omega$: 5e-005 (averaged over 360°)
Dynamic Performance	Maximum angular velocity	Inner frame: $\pm 500^\circ/\text{s}$ Middle frame: $\pm 400^\circ/\text{s}$ Outer frame: $\pm 300^\circ/\text{s}$ Three-axis synchronisation: $\pm 100^\circ/\text{s}$
	Maximum angular acceleration	Inner frame: $300^\circ/\text{s}^2$ Middle frame: $200^\circ/\text{s}^2$ Outer frame: $100^\circ/\text{s}^2$
Mechanical Specifications	Load capacity	Load capacity
	Table diameter/dimensions	Table diameter/dimensions
Environmental Protection	Operating temperature	Operating temperature
Power and Communications	Power supply requirements	Power supply requirements
	Control interface	Control interface