

ID-150-3

Three-axis frame position and velocity turntable

This three-axis position-rate turntable comprises a mechanical base and a measurement and control system, and is used to apply angular position, angular velocity and angular acceleration stimuli. It enables static attitude simulation testing and accuracy calibration of the test specimen.



Product Features

- Three-axis 360° continuous, infinite rotation
- Angular positioning accuracy $\leq \pm 45''$
- Angular velocity range: 0.01°/s to $\pm 100^\circ/\text{s}$
- Load capacity: 5 kg; work surface: 150 × 150 mm
- Supports computerised automatic control and data acquisition
- Optional 12-ring slip ring and RS232/422 communication

Suitable scenarios

Suitable for the aerospace and inertial navigation industries, it is used for attitude simulation and accuracy calibration testing of precision instruments such as inertial components, gyroscopes and accelerometers.

Technical Specifications

Parameter categories	Parameter items	Parameter values
Accuracy Performance	Angular position accuracy	$\leq \pm 45''$ (positioning accuracy)
	Angular position repeatability	$\leq \pm 20'' @ 2 \times 10^{-2} (\omega < 1^\circ/\text{s})$;
	Speed smoothness	$5 \times 10^{-3} (\omega \geq 1^\circ/\text{s})$
Dynamic Performance	Maximum angular velocity	$\pm 100^\circ/\text{s}$
	Maximum angular acceleration	$100^\circ/\text{s}^2$
Range of Motion	Azimuth/elevation movement range	Continuous 360° rotation on all three axes
Mechanical Specifications	Load capacity	5 kg
	Table diameter/dimensions	150 mm $\times$ 150 mm
Environmental Protection	Operating temperature	-10°C to 35°C
Power and Communications	Power supply requirements	220 V $\pm$ 10%, 50 Hz, 2 kW
	11. Control interface	Rs232 / Rs422