

ID-230-3

Three-axis servo system

This three-axis servo turntable comprises an O-axis roll, O-axis pitch and U-axis yaw mechanism, and is used to simulate the three-dimensional angular motion of a platform for the purpose of testing inertial navigation systems.



Product Features

- Three-axis structure: roll, pitch, yaw
- High positional accuracy: better than $\pm 30''$
- Wide angular range: $\geq \pm 120^\circ$ on all three axes
- High angular acceleration: up to $\geq 300^\circ/\text{s}^2$
- Sufficient load capacity: $\geq 45 \text{ kg}$
- Equipped with a hollow interface: no less than $\phi 230 \text{ mm}$

Suitable scenarios

Suitable for the inertial navigation industry, specifically for the parameter calibration and performance testing of inertial navigation components such as gyroscopes and accelerometers.

Technical Specifications

Parameter categories	Parameter items	Parameter values
Accuracy Performance	Angular position accuracy	<30"
	Speed smoothness	$\leq 1.5^\circ/\text{s}$ (when $\omega \geq 1^\circ/\text{s}$)
Dynamic Performance	Maximum angular velocity	120°/s
	Maximum angular acceleration	Roll $\geq 300^\circ/\text{s}^2$, pitch/yaw $\geq 200^\circ/\text{s}^2$
	Range of motion	$\geq \pm 120^\circ$ (three axes)
Mechanical Specifications	Load capacity	$\geq 45 \text{ kg}$
	Table diameter/dimensions	$\phi 230 \text{ mm}$ (hollow dimension)
Environmental Protection	Protection rating	Ip20
	Operating temperature	20 °C $\pm$ 8 °C
Power and Communications	Power supply requirements	220 VAC $\pm$ 10 per cent / 50 Hz
	Control interface	RS422 / Ethernet port