ID-180-2

Dual-axis test turntable

This dual-axis test turntable comprises a yaw axis and a pitch axis, enabling high-precision angular positioning (error ≤ 0.05°) and controlled angular velocity motion. It is capable of performing complex manoeuvres such as yawing and scanning, and is used for the performance testing and calibration of devices such as inertial navigation systems, gyroscopes and accelerometers.

Product Features

- High-precision positioning (error ≤ 0.05°)
- Wide range of angular acceleration (250°/s² in the heading direction)
- Independent dual-axis synchronised control
- Minimum angular velocity 0.03°/s
- Maximum angular velocity ≥ 20°/s
- System bandwidth ≥ 3 Hz

Suitable scenarios

Suitable for use in the aerospace and inertial navigation sectors, it is primarily used for the calibration and performance testing of inertial navigation systems, gyroscopes and accelerometers, as well as for hardware-in-the-loop simulation experiments.

Technical Specifications

Parameter categories	Parameter items	Parameter values
Accuracy Performance	Angular position accuracy	Error ≤ 0.05° (system accuracy after compensation: ±36″)
Dynamic Performance	Maximum angular velocity	≥ 20 °/s
	Maximum angular acceleration	Heading 250 °/s², pitch 300 °/s²
	Range of motion	Heading: -32° to +32°; pitch: -62° to +22°
Mechanical Specifications	Table diameter/dimensions	180 mm
Environmental Protection	Protection rating	Ip20
	Operating temperature	0 °C to +40 °C
Power and Communications	Power supply requirements	220 V ±10%, 50 Hz
	Control interface	Ethernet/RS422/fibre optic