

ID-300-2P-02

Dual-axis position-velocity electric turntable

This dual-axis electric turntable comprises mechanical structures for the pitch and azimuth axes, an electric control system and high-precision angular measurement components. It is capable of high-precision positioning and high-speed movement under heavy loads.



Product Features

- High load capacity (≥ 100 kg)
- High positioning accuracy ($\leq 5''$)
- High rate resolution ($< 0.001^\circ/\text{s}$)
- Low minimum steady-state rate ($< 0.005^\circ/\text{s}$)
- High angular acceleration accuracy ($0.1^\circ/\text{s}^2$)
- High rate stability (better than $5e-003$)

Suitable scenarios

Suitable for the testing of inertial devices and the hardware-in-the-loop simulation industry; specifically used for the calibration and performance testing of devices such as gyroscopes, accelerometers and inertial navigation systems.

Technical Specifications

Parameter categories	Parameter items	Parameter values
Accuracy Performance	Angular position accuracy	$\leq 5''$
	Angular position repeatability	$\leq 5''$
	Speed smoothness	$< 2 \times 10^{-2}$ when $\omega < 1^\circ/\text{s}$; $< 5 \times 10^{-3}$ when $1^\circ \leq \omega$
Dynamic Performance	Maximum angular velocity	Pitch: $20^\circ/\text{s}$; Azimuth: $20^\circ/\text{s}$
	Maximum angular acceleration	Pitch/Azimuth: $100^\circ/\text{s}^2$ (adjustable)
Range of Motion	Range of azimuth/elevation movement	Pitch: -60° to $+50^\circ$; Azimuth: $0^\circ \pm 170^\circ$
Mechanical Specifications	Load capacity	$\geq 100 \text{ kg}$
	Table diameter/dimensions	$1050 \text{ mm} \times 1694 \text{ mm} \times 1455 \text{ mm}$
Environmental Protection	Protection rating	Ip20
	Operating temperature	10°C to 40°C
Power and Communications	Power supply requirements	Three-phase 380 V/50 Hz, power $\leq 5 \text{ kVA}$
	Control interface	Reflective memory/Ethernet/RS422