

ID-300-1P

Precision single-axis position and speed rotary stage

This precision single-axis position and velocity rotary stage comprises a stage surface, a drive system and an angular measurement system, and is capable of continuous, infinitely variable angular positioning and velocity motion.



Product Features

- Load capacity: 20 kg; table diameter: $\phi 300$ mm
- Angular position accuracy: $\pm 10''$
- Angular measurement resolution: 0.0001°
- Rate range: $0.01\text{--}1000^\circ/\text{s}$
- Maximum rate stability: 5×10^{-5}
- Continuous, unlimited angular position

Suitable scenarios

Suitable for testing applications in fields such as inertial navigation and aerospace, it is primarily used for testing and calibrating the angular position and angular rate performance of inertial components—such as gyroscopes and accelerometers—and servo systems.

Technical Specifications

Parameter categories	Parameter items	Parameter values
Accuracy Performance	Angular position accuracy	$\pm 10''$
	Angular position repeatability	$\pm 5''$
	Speed smoothness	$\leq 5 \times 10^{-5}$ (averaged over 360° , when $\omega \geq 10^\circ/\text{s}$)
Dynamic Performance	Maximum angular velocity	$1000^\circ/\text{s}$
	Maximum angular acceleration	$200^\circ/\text{s}^2$
Range of motion	Range of azimuth/elevation movement	Continuous, unlimited (azimuth axis) / No pitch
Mechanical Specifications	Load capacity	20 kg
	Table diameter/dimensions	$\phi 300 \text{ mm}$
Environmental Protection	Protection rating	Ip20
	Operating temperature	0°C to $+40^\circ\text{C}$
Power and Communications	Power supply requirements	AC 220 V $\pm 10\%$, 50 Hz, $\leq 1 \text{ kVA}$
	Control interface	Ethernet/RS232/RS422