SPS-500 Precision Positioner

Cost Effective, High-Performance Positioning System

Cobham Advanced Electronic Solutions, Lansdale, PA - USA

The most important thing we build is trust

SPS Series Precision Positioners

Features

- Precision Positioning for 60-lb payloads
- Yoke, T-bar or 3-axis configurations
- Easily set-up and optimized for varying payloads
- Brushless, direct-drive motors provide high torque and dynamic response
- Zero backlash, highly reliable direct-drive eliminates gearboxes
- Lightweight – 35 lbs. (positioner only)
- Angular resolution of 21 bits (3 μradians)
- High-speed microprocessor control
- C-based firmware: fast, easy, flexible
- Controlled by analog joystick, or digitally by PC
- Suitable for military land, sea and airborne environments

SPS-500

Cobham's standardized, commercial off-the-shelf (COTS) SPS Series of Precision Positioners are based on a scalable design resulting from over 25 years of satisfying demanding customer requirements. Precise positioning, high reliability, high payload to weight ratios, low maintenance and cost effective solutions are hallmarks of Cobham's SPS Series of Precision Positioners. As our customer, you will benefit from Cobham's proven experience in electronic imaging, signal processing, control systems and system integration.

For further information please contact:

Cobham Advanced Electronic Solutions
305 Richardson Road, Lansdale, PA 19446-1485 USA
Tel. +1 (215) 996-2000 or (215) 996-2416
Fax +1 (215) 996-2076
E-mail: RFQLansdale@Cobham.com
Local Contact: Alex.Doig@cobham.com or Alvin.Penton@cobham.com

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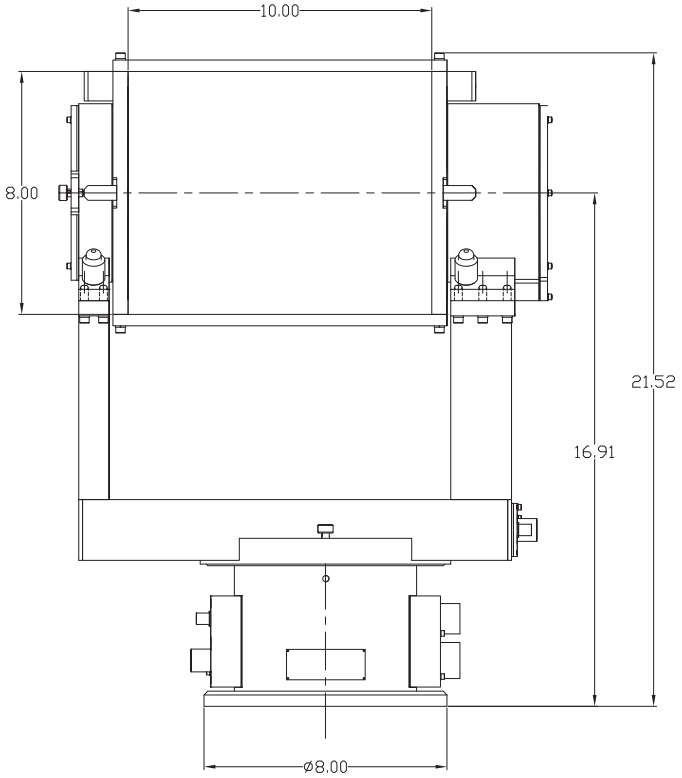
SPS-500 Performance Specifications*

Resolution	21 bits (3 µradians)
Accuracy	±0.0057° (± 100 µradians)
Repeatability	±0.0014° (± 25 µradians)
Velocity	0.01° to 90° /sec (nominal)
Acceleration	90°/sec² (nominal)
Travel:	
Azimuth	± 270° standard
Elevation	-15° to + 95° standard
Resonant Frequency	Azimuth >30Hz
(payload dependent)	Elevation >40Hz
Base Motion Stabilization with high performance-FOG	<100 µradians RMS
Motor Torque, Peak (nominal)	20 ft-lb AZ
	10 ft-lb EL

Mechanical Data (not to scale)



Yoke Configuration shown

T-Bar Version Available

Coatings and Fittings

The pedestal is pre-treated with chemical conversion coating and finished by powder-coating. Alternately, it can be painted according to customer specifications. It is supplied with stow locks for safe transportation, mechanical end-stops and a payload-specific electrical interface.

Configuration

Pedestal Type	Direct-drive, Elevation over Azimuth Post/T-Bar, Yoke or 3-Axis
Drive Motors	Brushless DC
Weight, Positioner	35 lb. Yoke (nominal)
Weight, Payload	Up to 60 lb.

Mechanical

Mounting	6" dia. bolt circle, with 6 equally spaced 0.28" dia. holes

Environmental

Temperature	-30° to + 55° C
Rain	Weather-tight seals
Relative humidity	98%
Shock & Vibration	MIL Standard Levels

Options

Sensors	Joystick	Payload/system integration
Slip rings	Risers	Tripod
Leveling	LOS Stabilization	Rotary joints
Turnkey systems	Video tracker	GPS/INU's

Power

The Positioner derives its power from the servo control unit. The servo control unit operates from:

- 115/240 VAC, single-phase, 50/60 Hz power;
- 208 VAC (optional), three-phase, 50/60 Hz power;
- 24/28 VDC (optional).

* Specifications subject to change without notice

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