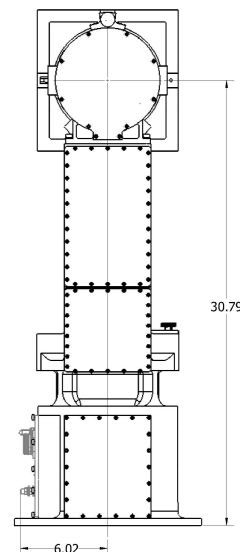
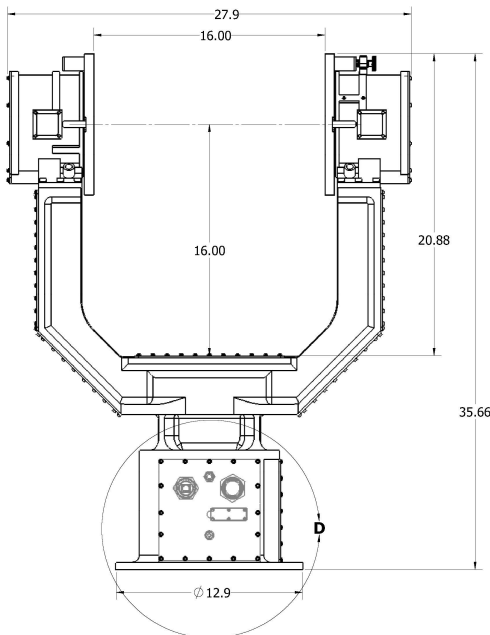


Model SPS-1000 Precision Positioner High Performance Positioning System

Features

- Cost-effective solution for precise positioning of payloads weighing up to 150 lbs (68.2 Kg)
- Brushless, direct drive motors reduce maintenance and EMI
- Zero backlash, highly reliable direct drive eliminates gearboxes
- Integrated Field Replaceable Control Electronics
- Lightweight:
 - 115 lbs (52.3 KG) for High Torque elevation (positioner and integrated controller)
 - angular contact bearing design for high stiffness and low running friction.
 - 110 lbs (50 Kg) for Standard torque elevation
- 32-Bit Absolute Optical Encoders
- C-based firmware: fast response, easy to use, flexible
- Controlled via Ethernet or serial communications (RS-422 or RS-232)
- Suitable for operation in military land and sea



Model SPS-1000 Precision Positioner High-Performance Positioning System

Performance Specifications

RESOLUTION:	<ul style="list-style-type: none"> 24 bits (0.4 μradians)
ACCURACY:	<ul style="list-style-type: none"> $\pm 0.002^\circ$ ($\pm 35 \mu$radians) uncalibrated
REPEATABILITY:	<ul style="list-style-type: none"> $\pm 0.001^\circ$ ($\pm 17.4 \mu$radians)
VELOCITY:	<ul style="list-style-type: none"> 0.01° to 300°/sec (payload inertia dependent)
ACCELERATION:	<ul style="list-style-type: none"> 200°/sec²(payload inertia dependent)
TRAVEL:	<ul style="list-style-type: none"> Azimuth - $\pm 270^\circ$ Azimuth - continuous Elevation - -15° to $+95^\circ$ standard Elevation - -30° to $+210^\circ$
RESONANT FREQUENCY:	<ul style="list-style-type: none"> Elevation 23 - 48 Hz
3RD MODE:	<ul style="list-style-type: none"> Locked Azimuth >30 Hz
BASE MOTION STABILIZATION WITH HIGH PERFORMANCE - FOG	<ul style="list-style-type: none"> < 50 μradians RMS
MOTOR TORQUE (PEAK):	<ul style="list-style-type: none"> 47 ft - lb (64 N m) AZ 25 ft - lb (34 N m) EL Standard 47 ft - lb (64 N m) EL optional

Configuration

PEDESTAL TYPE:	<ul style="list-style-type: none"> Direct drive, elevation over azimuth yoke
DRIVE MOTORS:	<ul style="list-style-type: none"> Brushless DC
WEIGHT, POSITIONER:	<ul style="list-style-type: none"> 110 lb (nominal)
PAYLOAD:	<ul style="list-style-type: none"> Up to 150 lb (68 Kg)

Environmental

TEMPERATURE:	<ul style="list-style-type: none"> -40° to $+55^\circ\text{C}$
RAIN:	<ul style="list-style-type: none"> Weather tight seals
RELATIVE HUMIDITY:	<ul style="list-style-type: none"> 98%
SHOCK & VIBRATION:	<ul style="list-style-type: none"> MIL Standard levels

Mechanical

MOUNTING:	12.125 inch (308 mm) dia. bolt circle, with 16 equally spaced 0.281 inch (7.14 mm) dia. holes
LOS:	30.79 inches above the pedestal mounting surface Yoke configuration

Power / Voltage

The system has separate power inputs for the control electronics and the amplifier bus.

- +28 VDC (controls)
- +28 VDC to +80 VDC (bus)

Options

SPS-1000 has many options from past programs such as, Gyro Stabilization, Slip Rings, FORJ, Transportable Base, and Customer Cabling through the positioner. Let us know any desired features or optional interfaces, as they already exist

Corrosion Prevention and Safety

The pedestal is pretreated with chemical conversion coating and a weather resistant urethane top coat. It uses all stainless steel hardware and is supplied with stow locks for safe transportation. A pedestal safe switch is included to allow maintenance personnel to immobilize the pedestal during maintenance. Mechanical stops and a payload specific electrical interface are also standard items