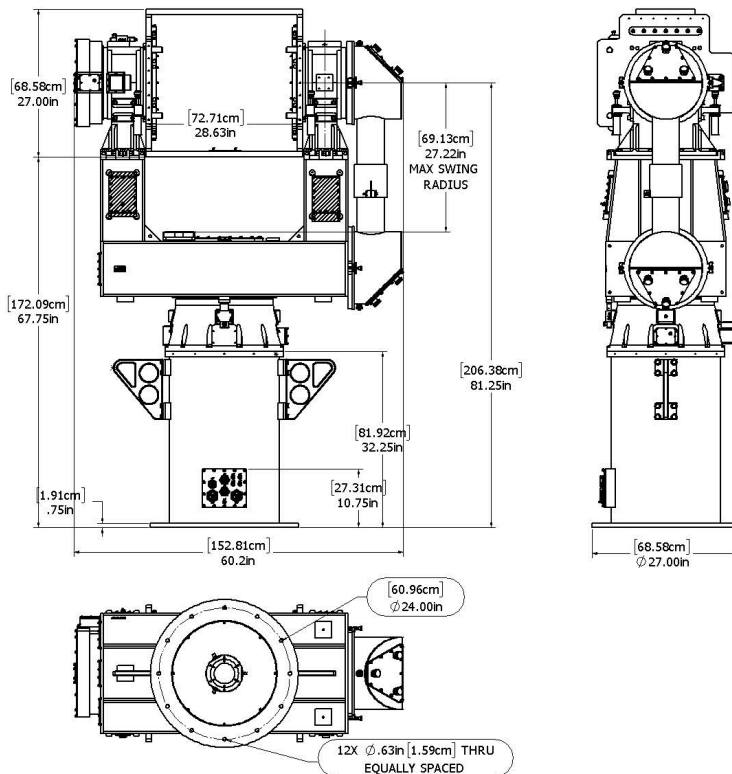


Model SPS-4000 Precision Positioner High Performance Positioning System

Features

- Cost-effective solution for precise positioning of payloads weighing up to 1000 lbs (454 Kg)
- Brushless, direct drive motors, reduce maintenance and EMI (cogless motors optional for low jitter tracking)
- Zero backlash, highly reliable direct drive eliminates gearboxes
- Coude' optical paths up to 3.70 inches (95 mm)
- Angular resolution of 24 bits (0.4 μ radians with Inductosyns)
- C-based firmware: fast response, easy to use, flexible
- Controlled digitally via PC
- Suitable for operation in military land, sea, and airborne environments



Model SPS-4000 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"> $\pm 0.0007^\circ$ ($\pm 12 \mu$radians) $\pm 0.0003^\circ$ ($\pm 6 \mu$radians)
REPEATABILITY:	<ul style="list-style-type: none"> $\pm 0.00034^\circ$ (6 μradians) $\pm 0.00028^\circ$ ($\pm 4.85 \mu$radians)
ACCELERATION:	<ul style="list-style-type: none"> $90^\circ/\text{sec}^2$ (payload inertia dependent)
TRAVEL:	<ul style="list-style-type: none"> Azimuth - $\pm 180^\circ$ continuous Elevation - -15° to $+195^\circ$
RESONANT FREQUENCY:	<ul style="list-style-type: none"> Azimuth > 30 Hz Elevation > 40 Hz
3RD MODE:	<ul style="list-style-type: none"> Locked Azimuth >30 Hz
MOTOR TORQUE (PEAK):	<ul style="list-style-type: none"> 200 ft - lb (271 N m) AZ 100 ft - lb (135 N m) EL Standard

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"> 3150 lb (1430 Kg) - Steel 1300 lb (590 Kg) - Aluminum
PAYLOAD:	<ul style="list-style-type: none"> Up to 1000 lb (454 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 x .63 inch diameter holes on a 24.000 inch diameter bolt
LOS:	81.25 inches above the positioner mounting surface

Power / Voltage

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

- 115 VAC single phase, 50/60 HZ power
- 3,450 Watts (peak) depending on dynamic requirements

Options

SPS-4000 has many options from past programs such as, Gyro Stabilization, FORJ, 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