

SMARTLY DESIGNED AND RUGGEDLY BUILT TO WITHSTAND THE MOST EXTREME GLOBAL ENVIRONMENTS, THE 2.4 AEHP ANTENNA POSITIONER FROM ORBITAL SYSTEMS IS A HIGH QUALITY, HIGH-PRECISION INSTRUMENT SUITABLE FOR X AND L BAND OPERATION. THE 2.4M, ELEVATION OVER AZIMUTH POSITIONER PROVIDES ACCURACY, FLEXIBLE OPERATION, AND RELIABILITY UNSURPASSED IN THE INDUSTRY.

Features

Orbital Systems' 2.4 AEHP-2.4m Positioner comes standard with a 2.4m reflector, feed mounting poles, remote GPS antenna and cable, and a comprehensive tool kit.

Reflector

- Solid single piece of spun aluminum to eliminate the effects of rust.
- Maintains a surface accuracy good to 18GHz.
- Properly drained and designed to deflect rainfall from the electrical cabinet where key components are housed.

Pressurization

- Entire system (antenna and feed) is sealed and pressurized with dehydrated air or nitrogen gas to prevent corrosion of controller, electromechanical parts and feed.
- Temperature and humidity sensors located in the electrical cabinet and feed are monitored by the ACU which automatically purges the system when necessary by venting to admit fresh, dry air or nitrogen (when using a matching feed).
- Antenna runs even if pressurization fails.

Motors & Gears

- Fully integrated mechanical system components, with IP65 rated brushless motors and integrated brakes, matching motor drives, and generously overrated heavy duty gears.
- Gears and drives automatically heated as needed to achieve full performance down to -40°C.
- Gears are completely enclosed in a cast housing and operate inside a regulated, ideal environment to increase their life span.

Tracking

- Built-in precision GPS location and timing reference.
- Ethernet and RS422 control interface stores TLE for each satellite and tracks on simple command by named satellite.
- Antenna controller is in base of the positioner (no indoor rack space needed).
- Azimuth axis speed allows for tracking X and L Band satellites with no keyhole effect.

Feed

- A variety of matching feeds are available for various applications.
- High performance compared to commonly available feeds: Typical X-L feed performance is 24.5db/K and 8 db/K.
- Integrate with the communication control channel of the positioner controller.
- Built in purge valve to ventilate the entire antenna when excess humidity is detected in the electrical cabinet or in the feed.
- Cables to the feed are carried internally and are rated for life of product
- No noisy slip rings.

2.4 AEHP-2.4m Positioner



Applications

With the corresponding RF components installed, the 2.4 AEHP-2.4m Positioner can be used in the following applications.

- EOS reception of X-Band Terra, Aqua NPP, NPOESS, and other X and L Band EOS satellites.
- SARSAT reception of MEO satellites in S and L Bands.
- General telemetry downlinks and uplinks in X, L, and S-Band

Orbital Systems, Ltd.

3807 Carbon Road
Irving, TX 75038-3415
+1 972 915-3669
+1 972 915-3699 (FAX)

<http://www.orbitalsystems.com>

2.4 AEHP-2.4m Positioner

Operational Specifications

	Required	Continuous Capable
Azimuth Maximum Velocity	57°/ sec	>65°/ sec
Azimuth Maximum Acceleration	39°/ sec ²	>70°/ sec ²
Azimuth Maximum Torque	900 Nm (664 ft/lbs)	>1500 Nm (1106 ft/lbs)
Azimuth Maximum Travel		420°
Elevation Maximum Velocity	9°/ sec	>23°/ sec
Elevation Maximum Acceleration	0.9°/ sec ²	>10°/ sec ²
Elevation Maximum Torque	900 Nm (664 ft/lb)	>936 Nm (690 ft/lbs)
Elevation Maximum Travel		182°
Brake Holding Torque		2300 Nm (>1696 ft/lbs)
Mechanical Total Tracking Accuracy		0.1°
Absolute Position Feedback Accuracy		0.02°

Electrical, Mechanical, and Environmental Specifications

Input Voltage, Frequency	208-240 VAC, 20A, 50/60 Hz, single phase
Input Amperage	Typ 5A, Max14A, Fuse at 16-20A
Operating Temperature	-40° C to +55° C
Operating Maximum Wind Speed	88 k/hr (55 Mph)
Wind Speed Maximum with Stow Pins Installed	200 k/hr (125 Mph)
Non-operating Maximum Rain Load	25 cm (10") / hr
Maximum Ice Load	13mm (.05")
Antenna Weight	565 kg (1245 lbs)
Safety and Emissions Ratings	CE