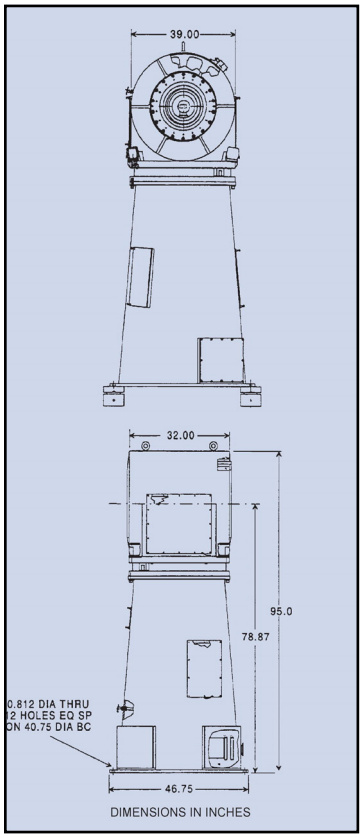
KRATOS
READY FOR WHAT'S NEXT™

Model P3200 Post Pedestal

Mid-Sized RF Pedestal for Tracking Systems

Pedestal Features

- Precision Bearings
- Dual Gear Driven with Bias, to Eliminate Backlash
- Up to 45 deg/sec Velocity
- Servo Driven Twin Motors on Elevation and Azimuth
- Precision Resolvers or Position Encoders for Angular Feedback
- 1000 Pound Payload Weight
- Environmentally Sealed



Ideal for applications that include tracking radars, satellite tracking antennas, communications systems, and ELINT antennas, the Kratos Model P3200 post pedestal is a mid-sized pedestal featuring dual, geared drives in azimuth and elevation. Reliability and long life are the hallmarks of this pedestal. Drive systems are biased electronically to eliminate mechanical backlash in the gearing. The resulting system provides high reliability and accurate pointing for RF antennas. Pedestal and control electronics yield wide bandwidth servo performance with very low jitter, suitable for automatic tracking or gyro stabilized performance.

The pedestal will support balanced loads of up to 1000 pounds at velocities of 45 deg/sec. Optional features include slip rings, rotary joints, and custom load support structures.

Only tested, field-proven components are used in the design of this pedestal. Hardware is military-temperature rated, and mechanical design is rugged.

Features

Dual Drives

Each axis contains dual, opposed drives consisting of DC servomotors operating through reduction gears. Axes have failsafe friction brakes and manual drives. By electronically biasing the amplifiers, the drive motors keep the gear trains constantly in contact, eliminating geartrain backlash.

Position Encoders

The position encoder in each axis is a resolver transmitter driven by anti-backlash gearing. Optional optical encoders may be installed.

Bearings

The bearings are large diameter, bull gear bearings with large cross sections, and each has an overturning moment capacity of 68,000 ft-lbs. This ensures a very safety margin, yet provides necessary stiffness to meet the specifications of highly accurate systems.

Seals

The rotating interfaces of the positioner are environmentally protected through the use of Teflon lip-seals, effectively designed to exclude water, dirt, and dust while producing minimum system friction.

Materials

The positioned is constructed of the highest quality materials, selected to provide maximum corrosion resistance with minimum weight. Typical components include 6061 aluminum alloy for structural material and cadmium plated 300 series CRES fasteners.

Axis Travel

Physical stops limit the rotation in each axis. The elevation axis travel is -10° to +95°, while the azimuth axis travel is +180° plus over-travel. Continuous azimuth travel is available with optional slip rings.

Riser

Customer requirements determine riser height.

Stow Pins

Stow pins are mounted on each axis to lock the axes in position for storage or transportation.

Load Platform (Optional)

Custom-designed platforms are bolted to the load supports of the elevation axis.

Model P3200 Specifications

Performance

Velocity

Azimuth	0.05°/sec min.	20°/sec rated	45°/sec max.
Elevation	0.05°/sec min.	20°/sec rated	45°/sec max.

Acceleration

Azimuth	40°/sec²
Elevation	40°/sec²

Accuracy

Bearing Wobble	0.01°
Orthogonality	0.02°
Backlash	0.00°

Output Torque, rated velocity

Azimuth	1,200 ft/lbs.
Elevation	1,200 ft/lbs.

Resonant Frequency, at rated inertia

Azimuth	12 Hz
Elevation	12 Hz

Static Repeatability

Model P32120-1	+0.03°
Model P32120-2	+0.002°

Configuration

Pedestal Type	Elevation-over-Azimuth post
Drive System	DC motor/planetary gear head (dual drive)
Servo Amplifier	Pulse width modulated (PWM) amplifier with analog rate loop
Pedestal Weight	3,100 pounds
Payload Weight	1,000 pounds (not including counterweights)

Interfaces

Mechanical

Base	40.75 inch diameter bolt circle, 12 holes equally spaced, 0.812inch diameter holes
Payload	Payload supports are optional, determined by customer specification.

Electrical

Base	MS Type Connectors
Payload	MS Type Connectors
Ground Stud	Located at base of pedestal

Features

Finish	Pretreatment; Final coat customer specified
Handcranks	Electrically Interlocked
Failsafe Brakes	Both Axes
Safety Switch	Mounted at Pedestal Base
Slip Rings (optional)	Azimuth Axis with 6 inch through hole

Kratos Defense & Security Solutions Inc.
1120 Jupiter Road, Suite 102
Plano, Texas, 75074
USA
Phone: 1 (214) 291-7654
Fax: 1 (214) 291-7655
www.KratosDefense,com
Space@KratosDefense.com

***Bulletin PED-04A** 06/20*