



Communications & Power Industries



malibu division

Model **HD40 SERIES** Antenna Pedestal

Product Data Sheet



Features:

- EL/AZ Configuration
- Portable, Compact, Lightweight
- Rugged Construction
- Supports Solid Reflectors up to 1.8 meters (6 ft)
- High Reliability and Accuracy
- High Torque and Low Backlash
- Rotary Joints & Sliprings for Continuous Azimuth Rotation
- Fast Slew Rates
- Brushless DC Motors
- PC-based Automated Computer Control with P-Series ACU
- Acquisition-Aid Antenna (Optional)
- Compass & Inclinometer Available (Optional)
- Fiber-Optic Control Available (Optional)
- Transit Cases Available (Optional)

The HD40 is designed to support solid reflectors up to 1.8-meters or a FLAPS™ reflector up to 2.4 meters, in winds of 45 MPH High output torque with low backlash is accomplished with the use of planocentric gearboxes and brushless DC motors. The rugged gearboxes use built-in angular ball bearing construction, which improves the ability to support external loads, increases moment rigidity and maximum allowable moment. The result is increased reliability and a reduction in maintenance. The use of roller bearings throughout the gearbox yields low backlash (less than 1 arc. min.).

For added reliability, the pedestal is designed with servo amplifiers that have protection for over-current, voltage, and temperature.

The HD40 pedestal is ideally suited for transportable applications where weight and shipping volume are key factors. Such features as a sectional solid reflector or a sectional FLAPS™ reflector, fiber-optic interface cables and a tripod mount or a small riser base, ensure that the system is lightweight and compact during transport.

The HD40 pedestal can be supplied with a tripod mount, with extendable legs, for transportable applications where no antenna-mounting pad is available at the test site or supplied with a small base for rigid mounting to mobile platforms, such as vans or RVs.

Related Data Sheets

- P-Series Antenna Control Unit
- Local/Remote ACU
- Acquisition-Aid Antenna
- Conically Scanning Feed

Model HD40 SERIES

Specifications

KEY PERFORMANCE VALUES WITH STANDARD HARDWARE COMPLEMENT

Antenna	Reflector Diameter (meters)	
	1.8 (6-ft)	2.4 (8-ft)
Operating Frequency ¹	1435-2400 MHz	
Polarization ²	Simultaneous Right Hand and Left Hand Circular	
VSWR	2.0:1 maximum	
Feed Type ³	Conically Scanning or Single Channel Monopulse	
Antenna Gain (minimum) Antenna gains, beamwidth, G/T are estimates and feed configurations may change the final values.		
1435 MHz	25.0 dBi	27.5 dBi
1540 MHz	25.5 dBi	28.1 dBi
1710 MHz	26.5 dBi	29.0 dBi
1850 MHz	27.1 dBi	29.7 dBi
2200 MHz	28.6 dBi	31.2 dBi
2400 MHz	29.1 dBi	31.9 dBi
Antenna Beamwidth (3 dB) (nominal)		
1435 MHz	7.7°	5.7°
1540 MHz	7.1°	5.4°
1710 MHz	6.4°	4.8°
1850 MHz	5.9°	4.5°
2200 MHz	5.0°	3.7°
2400 MHz	4.6°	3.4°
Sidelobes (nominal) G/T @ 10° elevation ⁴		
1435 MHz	18 dBp	20 dBp
1435 MHz	2.8 dB/°K	5.6 dB/°K
1540 MHz	3.4 dB/°K	6.2 dB/°K
1710 MHz	4.3 dB/°K	7.1 dB/°K
1850 MHz	5.0 dB/°K	7.8 dB/°K
2200 MHz	6.4 dB/°K	9.3 dB/°K
2400 MHz	7.2 dB/°K	10.0 dB/°K
Pedestal		
Type		Elevation/Azimuth
Velocity		≤ 25°/sec
Acceleration		≤ 25°/sec ²
Travel	Azimuth	420° minimum (cable wrap) 360° continuous with slipping
	Elevation	-10° to +190° (mechanical)
Torque	Continuous	900 ft-lbs
	Peak	1,800 ft-lbs
Compliance		2.0 x 10 ⁻⁵ radians/ ft-lbs
Environmental		
Temperature	Operating	-20°C to +52°C
	Storage	-54°C to +71°C
Relative Humidity		Up to 100%, including condensation
Rain		Up to 4 Inches per Hour
Ice		One-half Inch, Radial
Wind (Estimate)	Operating	80 km/h / 50 MPH (gusting to 105 km/h / 65 MPH)
	Storage	193 km/h / 120 MPH
Weight		398 kg / 875 lbs 500 kg / 1100 lbs
Power Requirements		110-220 VAC, 50-60 Hz, 1Ø

NOTES:

- Other frequency bands available upon request.
- Simultaneous orthogonal linear polarizations available.
- Specifications denoted are for conically scanning system.
- G/T specifications are nominal and may vary based upon system configuration.
- Continuous azimuth travel is available through the use of an optional slipping/rotary joint assembly.

Subject to change without notice.



Communications & Power Industries

