



## 4.5 Meter Fixed Troposcatter Antenna System

The reflector is constructed from 3.1 mm (0.125 in) thick aluminum fabricated to a surface accuracy of 0.5 mm (0.020 in) rms or better.

The ASC Signal 4.5 meter (15 ft) antenna consists of a reflector structure, feed assembly, and support.

The reflector is a precision-formed aluminum spinning and dissected in half for easy transportation. The two-piece design ensures that the assembled antenna maintains extremely accurate contour and guaranteed performance without reflector alignment. Constructed from 3.1 mm (0.125 in) thick aluminum, the reflector is fabricated to a surface accuracy of 0.5 mm (0.020 in) rms or better. The back structure is hot dip galvanized structural steel.

All aluminum parts are corrosion coated and painted. The center fed "J" hook prime focus feed assembly, consisting of an orthocoupler and feed horn, are fabricated from brass extrusion. The feed assembly can be pressurized to prevent the ingress of moisture.

The feed window is formed polycarbonate and the feed is supported by three Mylar<sup>®</sup> guy wires.

- Exceptional electrical performance
- Simplified installation
- Outstanding wind survival
- Improved resistance to corrosion

## SPECIFICATIONS

### 4.5 Meter Fixed Troposcatter Antenna System

#### Electrical Performance

Frequency band .....	4.4 GHz to 5.0 GHz	
Antenna Gain .....	43.9 dBi @ 4.4 GHz 44.4 dBi @ 4.7 GHz 45.0 dBi @ 5.0 GHz	
Side Lobes .....	1st Sidelobe .....	-24 dB
	14° - 22° .....	-27 dB
	Greater than 22° .....	< -30 dB
VSWR .....	1.25:1 Maximum	
Beam Width 3 dB .....	0.94° - 1.05°	
Cross Polarization .....	< -30 dB	
Polarization .....	Dual Linear	
Power CW .....	5 Kw	

#### Options

Feed Heater

#### Mechanical Performance

Antenna Size .....	15 ft (4.5 m)	
Feed Type .....	Prime Focus	
Mount Type .....	Tower	
Reflector Construction .....	Two Piece Precision Spun Aluminum	
Reflector RMs .....	0.020 in	
Antenna Pointing Range .....	Elevation .....	±3.6°
	Azimuth .....	±5.0°
Material .....	Reflector .....	Aluminum
	Back Structure .....	Galvanized Steel
	Hardware .....	Stainless/Galvanized Steel
Wind Load Survival .....	125 mph (200 km/hr)	
Temperature .....	-40°C to 60°C	
Rain .....	4 in/h (10 cm/h)	
Relative Humidity .....	0% to 100% with Condensation	
Solar Radiation .....	360 BTU/h/ft <sup>2</sup> (1135 watts/m <sup>2</sup> )	
Tower .....	Height Increments .....	5 ft to 20 ft*
	Steel Components .....	ASTM/CSA Standards
	Galvanized Hardware .....	ASTM/CSA Standards

\* Height increments are subject to change and dependent on site specifications



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