



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® guy wires.

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

SPECIFICATIONS

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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 ² (1135 watts/m ²)
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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