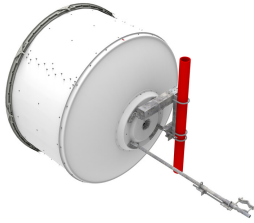


USX6-15

Base Product



1.8m | 6ft Sentinel® Ultra High Performance, Super High XPD Antenna, dual-polarized, 14.400 – 15.350 GHz

Product Classification

Product Type	Microwave antenna
Product Brand	Sentinel®

General Specifications

Antenna Type	USX - Sentinel® Ultra High Performance, Super High XPD Antenna, dual-polarized
Polarization	Dual
Side Struts, Included	1
Side Struts, Optional	1

Dimensions

Diameter, nominal	1.8 m 6 ft
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Electrical Specifications

Operating Frequency Band	14.400 – 15.350 GHz
Gain, Low Band	45.9 dBi
Gain, Mid Band	46.1 dBi
Gain, Top Band	46.3 dBi
Boresite Cross Polarization Discrimination (XPD)	40 dB
Front-to-Back Ratio	80 dB
Beamwidth, Horizontal	0.8 °
Beamwidth, Vertical	0.8 °
Return Loss	26 dB
VSWR	1.1
Radiation Pattern Envelope Reference (RPE)	7380
Electrical Compliance	ACMA FX03_15a CAN3145C ETSI 302 217 Class 4

USX6-15

Cross Polarization Discrimination (XPD) Electrical Compliance

ETSI EN 302217 XPD Category 3

Mechanical Specifications

Compatible Mounting Pipe Diameter

115 mm–120 mm | 4.5 in–4.7 in

Fine Azimuth Adjustment Range

±15°

Fine Elevation Adjustment Range

±5°

Wind Speed, operational

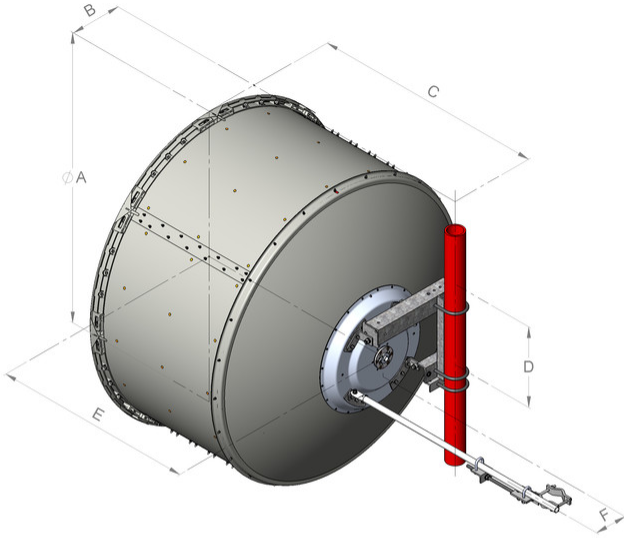
200 km/h | 124.274 mph

Wind Speed, survival

200 km/h | 124.274 mph

USX6-15

Antenna Dimensions and Mounting Information



Dimensions in inches (mm)						
Antenna size, ft (m)	A	B	C	D	E	F
6 (1.8)	74.8 (1899)	13.4 (340)	59.8 (1520)	20.9 (530)	51.8 (1315)	8.4 (214)

Wind Forces at Wind Velocity Survival Rating

Axial Force (FA)

6960 N | 1,564.671 lbf

Angle α for MT Max

-130 °

Side Force (FS)

2049 N | 460.634 lbf

Twisting Moment (MT)

4948 N-m | 43,793.488 in lb

Force on Inboard Strut Side

6187 N | 1,390.893 lbf

Zcg without Ice

498 mm | 19.606 in

Zcg with 1/2 in (12 mm) Radial Ice

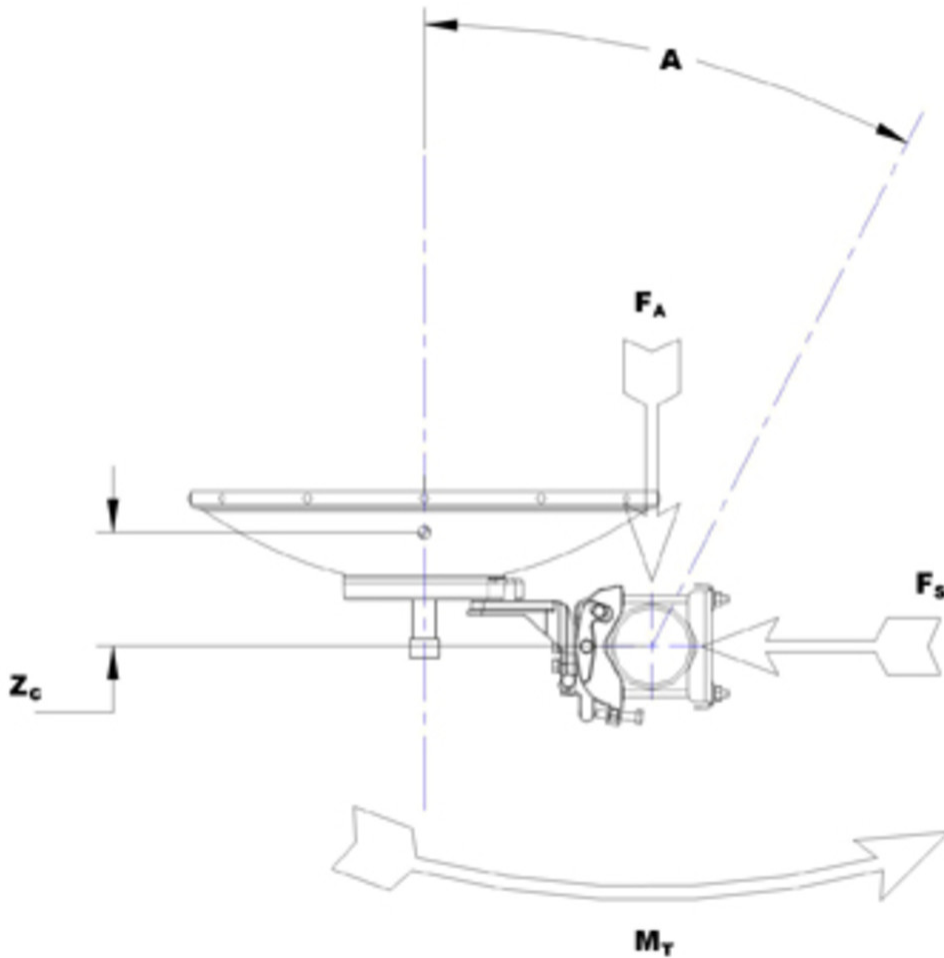
689 mm | 27.126 in

Weight with 1/2 in (12 mm) Radial Ice

291 kg | 641.544 lb

USX6-15

Wind Forces at Wind Velocity Survival Rating Image



Packaging and Weights

Weight, net

90 kg | 198.416 lb

Regulatory Compliance/Certifications

Agency

ISO 9001:2015

Classification

Designed, manufactured and/or distributed under this quality management system

* Footnotes

Operating Frequency Band

Bands correspond with CCIR recommendations or common allocations used throughout the world. Other ranges can be accommodated on special order.

USX6-15

Gain, Mid Band

For a given frequency band, gain is primarily a function of antenna size. The gain of Andrew antennas is determined by either gain by comparison or by computer integration of the measured antenna patterns.

Boresite Cross Polarization Discrimination (XPD)

The difference between the peak of the co-polarized main beam and the maximum cross-polarized signal over an angle twice the 3 dB beamwidth of the co-polarized main beam.

Front-to-Back Ratio

Denotes highest radiation relative to the main beam, at $180^\circ \pm 40^\circ$, across the band. Production antennas do not exceed rated values by more than 2 dB unless stated otherwise.

Return Loss

The figure that indicates the proportion of radio waves incident upon the antenna that are rejected as a ratio of those that are accepted.

VSWR

Maximum; is the guaranteed Peak Voltage-Standing-Wave-Ratio within the operating band.

Radiation Pattern Envelope Reference (RPE)

Radiation patterns define an antenna's ability to discriminate against unwanted signals. Under still dry conditions, production antennas will not have any peak exceeding the current RPE by more than 3dB, maintaining an angular accuracy of $\pm 1^\circ$ throughout

Cross Polarization Discrimination (XPD) Electrical Compliance

The difference between the peak of the co-polarized main beam and the maximum cross-polarized signal over an angle twice the 3 dB beamwidth of the co-polarized main beam.

Wind Speed, operational

For VHLP(X), SHP(X), HX and USX antennas, the wind speed where the maximum antenna deflection is 0.3 x the 3 dB beam width of the antenna. For other antennas, it is defined as a deflection is equal to or less than 0.1 degrees.

Wind Speed, survival

The maximum wind speed the antenna, including mounts and radomes, where applicable, will withstand without permanent deformation. Realignment may be required. This wind speed is applicable to antenna with the specified amount of radial ice.

Axial Force (FA)

Maximum forces exerted on a supporting structure as a result of wind from the most critical direction for this parameter. The individual maximums specified may not occur simultaneously. All forces are referenced to the mounting pipe.

Side Force (FS)

Maximum side force exerted on the mounting pipe as a result of wind from the most critical direction for this

parameter. The individual maximums specified may not occur simultaneously. All forces are referenced to the mounting pipe.

Maximum forces exerted on a supporting structure as a result of wind from the most critical direction for this parameter. The individual maximums specified may not occur simultaneously. All forces are referenced to the mounting pipe.

Twisting Moment (MT)