

3.0m | 10ft ValuLine® High Performance, High XPD Antenna, dual-polarized, 10.000 – 11.700 GHz, grey, PBR100 flange

### **Product Classification**

Product Type Microwave antenna

General Specifications

Antenna Type HX - ValuLine® High Performance, High XPD

Antenna, dual-polarized

33 dB

**Polarization** Dual

Antenna Input PBR100

Antenna Color Gray

**Reflector Construction** Two-piece reflector

Radome Color Gray

Radome Material Fabric

**Flash Included** Yes

Side Struts, Included 2

Side Struts, Optional 3

Dimensions

Diameter, nominal 3.0 m | 10 ft

**Electrical Specifications** 

**Boresite Cross Polarization Discrimination (XPD)** 

Operating Frequency Band 10.000 – 11.700 GHz

**Gain, Low Band** 47.2 dBi

**Gain, Mid Band** 47.9 dBi

**Gain, Top Band** 48.5 dBi

Front-to-Back Ratio 76 dB

Beamwidth, Horizontal 0.7 °

Beamwidth, Vertical 0.7 °



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Return Loss 26 dB

**VSWR** 1.1

Radiation Pattern Envelope Reference (RPE) 7420

Electrical Compliance ACMA FX03\_10a | ACMA FX03\_11a | ETSI 302

217 Class 3 | US FCC Part 105A | US FCC Part

107A

Cross Polarization Discrimination (XPD) Electrical Compliance ETSI EN 302217 XPD Category 2

Mechanical Specifications

**Compatible Mounting Pipe Diameter** 115 mm | 4.5 in

Fine Azimuth Adjustment Range  $\pm 5^{\circ}$ Fine Elevation Adjustment Range  $\pm 5^{\circ}$ 

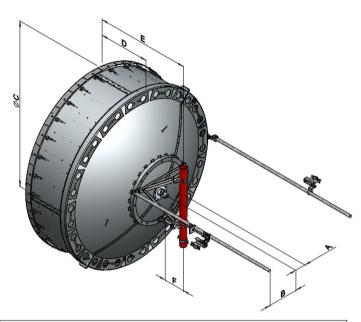
Wind Speed, operational 180 km/h | 111.847 mph

Wind Speed, survival 200 km/h | 124.274 mph



## Antenna Dimensions and Mounting Information

#### USX10



Dimensions in inches (mm)						
Antenna Size, ft (m)	А	В	С	D	E	F
10 (3)	8.0 (203)	22.5 (572)	125.0 (3174)	38.6 (980)	71.1 (1807)	10.3 (262)

### Wind Forces at Wind Velocity Survival Rating

**Axial Force (FA)** 18800 N | 4,226.409 lbf

Angle  $\alpha$  for MT Max -130  $^{\circ}$ 

**Side Force (FS)** -6560 N | -1,474.747 lbf

**Twisting Moment (MT)** -10725 N-m | -94,924.25 in lb

Force on Inboard Strut Side 9500 N | 2,135.686 lbf

Force on Outboard Strut Side 3350 N | 753.11 lbf

**Zcg without Ice** 618 mm | 24.331 in

**Zcg with 1/2 in (12 mm) Radial Ice** 744 mm | 29.291 in

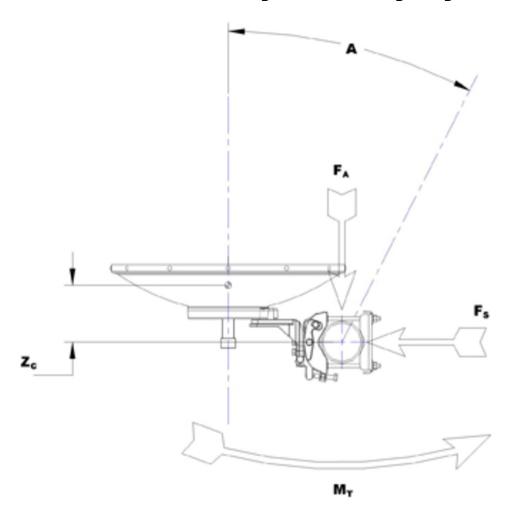


Weight with 1/2 in (12 mm) Radial Ice

466 kg | 1,027.353 lb



## Wind Forces at Wind Velocity Survival Rating Image



### Packaging and Weights

Volume

 Height, packed
 1170 mm | 46.063 in

 Width, packed
 1930 mm | 75.984 in

 Length packed
 3/410 mm | 13/4/252 in

**Length, packed** 3410 mm | 134.252 in

Packaging Type Standard pack

**Weight, gross** 513 kg | 1,130.97 lb

**Weight, net** 263 kg | 579.815 lb

Regulatory Compliance/Certifications



7.7 m<sup>3</sup> | 271.923 ft<sup>3</sup>

#### Agency

#### Classification

ISO 9001:2015

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.

**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°

±40°, 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 +/-1° 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  $0.3\,\mathrm{x}$  the  $3\,\mathrm{dB}$  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.

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Side Force (FS)

**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.

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.

**Twisting Moment (MT)**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.

Packaging Type

Andrew standard packing is suitable for export. Antennas are

shipped as standard in totally recyclable cardboard or wirebound crates (dependent on product). For your convenience,

Andrew offers heavy duty export packing options.