

1.8 m | 6 ft ValuLine® High Performance Low Profile Antenna, dual-polarized, 21.200–23.600 GHz, PBR220, white antenna, flexible woven polymer gray radome without flash, standard pack—one-piece reflector

#### **Product Classification**

Product Type Microwave antenna

Product Brand ValuLine®

General Specifications

Antenna Type VHLPX - ValuLine® High Performance Low Profile Antenna, dual-

polarized

0.5°

PolarizationDualAntenna InputPBR220

Antenna Color White

**Reflector Construction** One-piece reflector

Radome Color Gray

Radome Material Polymer

Flash Included No
Side Struts, Included 1

Side Struts, Optional 1 inboard

**Dimensions** 

Beamwidth, Horizontal

**Diameter, nominal** 1.8 m | 6 ft

**Electrical Specifications** 

Operating Frequency Band 21.200 – 23.600 GHz

Gain, Low Band48.7 dBiGain, Mid Band49.2 dBiGain, Top Band49.7 dBiBoresite Cross Polarization Discrimination (XPD)30 dBFront-to-Back Ratio80 dB

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Beamwidth, Vertical 0.5 °

**Return Loss** 17.7 dB

**VSWR** 1.3

Radiation Pattern Envelope Reference (RPE) 7070B

Electrical Compliance Brazil Anatel Class 3 | Canada SRSP 321.8 Part A | ETSI 302 217

Class 3 | US FCC Part 101A

Mechanical Specifications

**Compatible Mounting Pipe Diameter** 115 mm – 120 mm | 4.5 in – 4.7 in

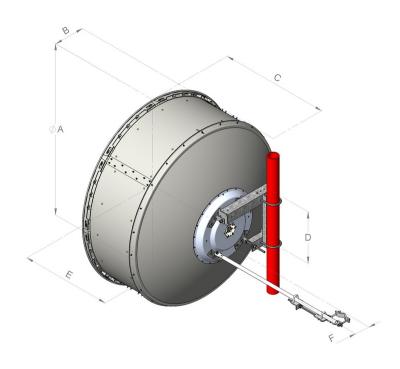
Fine Azimuth Adjustment Range  $\pm 15^{\circ}$ Fine Elevation Adjustment Range  $\pm 5^{\circ}$ 

 Wind Speed, operational
 180 km/h | 111.847 mph

 Wind Speed, survival
 250 km/h | 155.343 mph



#### Antenna Dimensions and Mounting Information



Dimensions in inches (mm)						
Antenna size, ft (m)	А	В	С	D	E	F
6 (1.8)	74.8 (1899)	13.4 (340)	47.5 (1206)	22.4 (570)	39.4 (1001)	6.9 (174)

### Wind Forces at Wind Velocity Survival Rating

**Axial Force (FA)** 10670 N | 2,398.712 lbf

Angle  $\alpha$  for MT Max -120  $^{\circ}$ 

**Side Force (FS)** 5286 N | 1,188.34 lbf

**Twisting Moment (MT)** 4752 N-m | 42,058.742 in lb

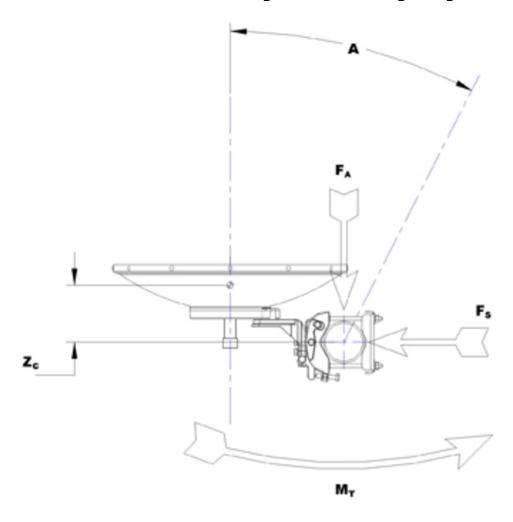
Zcg without Ice 363 mm | 14.291 in

**Zcg with 1/2 in (12 mm) Radial Ice** 543 mm | 21.378 in

**Weight with 1/2 in (12 mm) Radial Ice** 234 kg | 515.881 lb



### Wind Forces at Wind Velocity Survival Rating Image



#### Packaging and Weights

 Height, packed
 2110 mm | 83.071 in

 Width, packed
 450 mm | 17.717 in

 Length, packed
 1900 mm | 74.803 in

Packaging Type Standard pack

 Volume
 1.8 m³ | 63.566 ft³

 Weight, gross
 127 kg | 279.987 lb

 Weight, net
 86 kg | 189.597 lb

Regulatory Compliance/Certifications



#### 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

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.

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 wire-bound crates (dependent

on product). For your convenience, Andrew offers heavy duty export

packing options.

