

Product Specifications



VHLPX4-18/A

1.2 m | 4 ft ValuLine® High Performance Low Profile Antenna, dual-polarized, 17.700–19.700 GHz



CHARACTERISTICS

General Specifications

Antenna Type	VHLPX - ValuLine® High Performance Low Profile Antenna, dual-polarized
Diameter, nominal	1.2 m 4 ft
Polarization	Dual

Electrical Specifications

Beamwidth, Horizontal	0.9 °
Beamwidth, Vertical	0.9 °
Cross Polarization Discrimination (XPD)	30 dB
Electrical Compliance	Brazil Anatel Class 2 Canada SRSP 317.8 Part A ETSI 302 217 Class 3 US FCC Part 101A
Front-to-Back Ratio	72 dB
Gain, Low Band	44.2 dBi
Gain, Mid Band	44.7 dBi
Gain, Top Band	45.1 dBi
Operating Frequency Band	17.700 – 19.700 GHz
Radiation Pattern Envelope Reference (RPE)	7062A
Return Loss	17.7 dB
VSWR	1.30

Mechanical Specifications

Fine Azimuth Adjustment	±20°
Fine Elevation Adjustment	±15°
Mounting Pipe Diameter	115 mm 4.5 in
Net Weight	55 kg 121 lb

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Side Struts, Included	1 inboard
Side Struts, Optional	1 inboard
Wind Velocity Operational	110 km/h 68 mph
Wind Velocity Survival Rating	250 km/h 155 mph

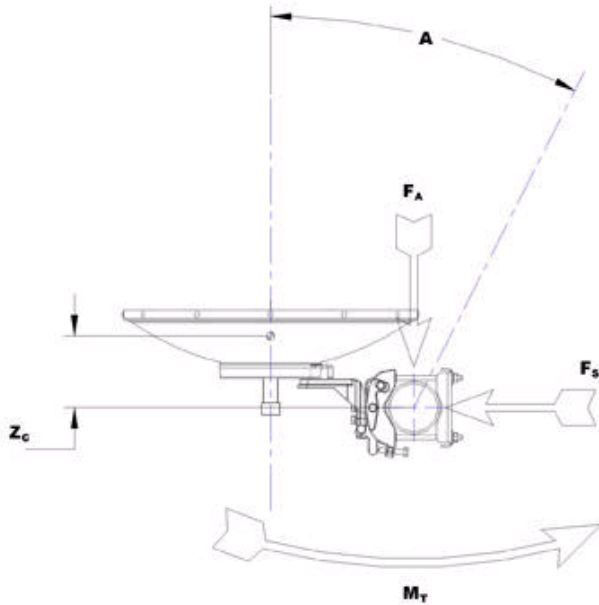
Wind Forces At Wind Velocity Survival Rating

Axial Force (FA)	3163 N 711 lbf
Side Force (FS)	1567 N 352 lbf
Twisting Moment (MT)	1570 N•m
Weight with 1/2 in (12 mm) Radial Ice	115 kg 254 lb
Zcg with 1/2 in (12 mm) Radial Ice	375 mm 15 in
Zcg without Ice	250 mm 10 in

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Wind Forces At Wind Velocity Survival Rating Image

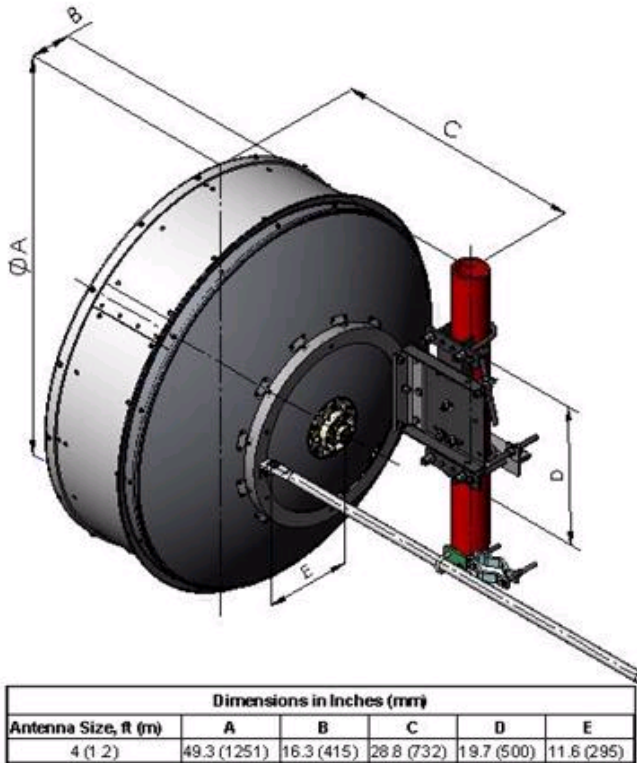


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Antenna Dimensions And Mounting Information



* Footnotes

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.
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.
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.
Operating Frequency Band	Bands correspond with CCIR recommendations or common allocations used

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	throughout the world. Other ranges can be accommodated on special order.
Radiation Pattern Envelope Reference (RPE)	Radiation patterns determine an antenna's ability to discriminate against unwanted signals under conditions of radio congestion. Radiation patterns are dependent on antenna series, size, and frequency.
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.
Side Force (FS)	Maximum axial forces exerted on support structures by side struts as a result of a 200 km/h (125 mph) wind from the most critical direction and extreme angle permitted. The forces are a component of, not in addition to, the maximum forces specified above.
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.
VSWR	Maximum; is the guaranteed Peak Voltage-Standing-Wave-Ratio within the operating band.
Wind Velocity Operational	The wind speed where the antenna deflection is equal to or less than 0.1 degrees.
Wind Velocity Survival Rating	Microwave antennas, including mounts and radomes, where applicable, will withstand the simultaneous wind and ice conditions as specified.