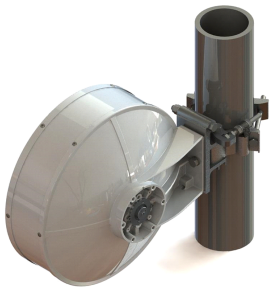
Product Specifications



VHLP1-80A

0.3 m | 1 ft ValuLine® High Performance Low Profile Antenna, single-polarized, 71.000 – 86.000 GHz, FCC Cat A

MPN: AN-1215-0

Product Classification

Brand	ValuLine®
Product Type	Microwave antenna

General Specifications

Antenna Type	VHLP - ValuLine® High Performance Low Profile Antenna, single-polarized
Diameter, nominal	0.3 m | 1 ft
Polarization	Single

Electrical Specifications

Beamwidth, Horizontal	0.8 °
Beamwidth, Vertical	0.8 °
Cross Polarization Discrimination (XPD)	30 dB
Electrical Compliance	ETSI 302 217 Class 3 | US FCC Part 101.115
Front-to-Back Ratio	64 dB
Gain, Low Band	45.0 dBi
Gain, Mid Band	46.0 dBi
Gain, Top Band	47.0 dBi
Operating Frequency Band	71.000 – 86.000 GHz
Radiation Pattern Envelope Reference (RPE)	7364A
Return Loss	14.0 dB
VSWR	1.50

Mechanical Specifications

Fine Azimuth Adjustment	±15°
Fine Elevation Adjustment	±15°
Mounting Pipe Diameter	51 mm–115 mm | 2.0 in–4.5 in
Net Weight	5 kg | 10 lb
Side Struts, Included	0
Side Struts, Optional	0
Wind Velocity Operational	200 km/h | 124 mph
Wind Velocity Survival Rating	250 km/h | 155 mph

Wind Forces At Wind Velocity Survival Rating

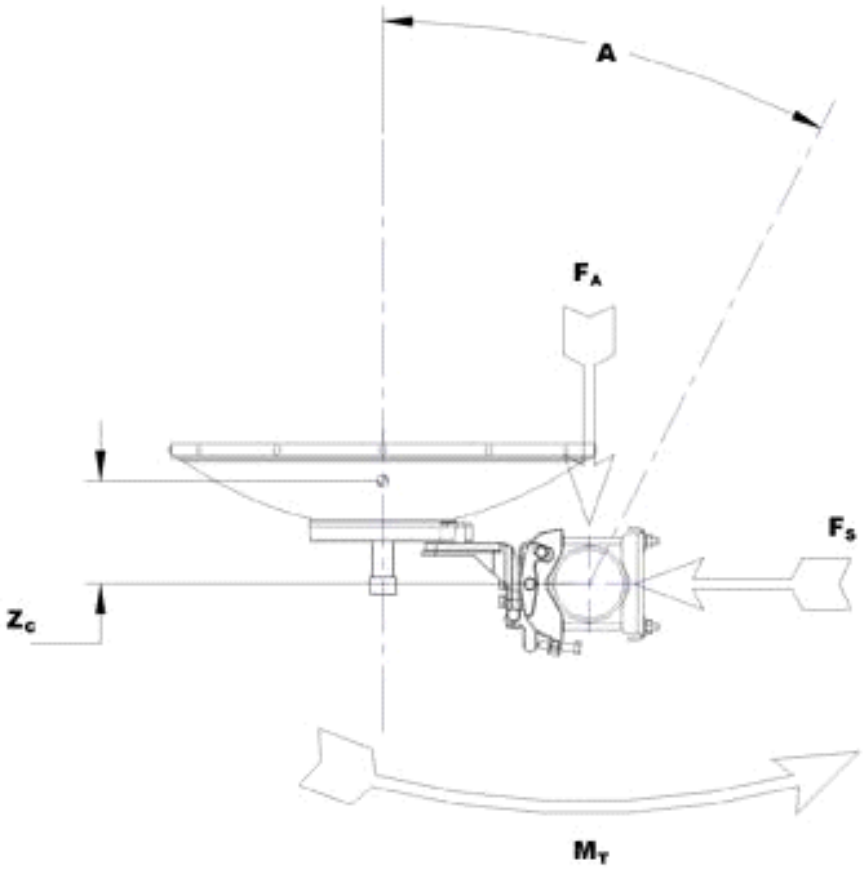
Axial Force (FA)	445 N | 100 lbf

Product Specifications

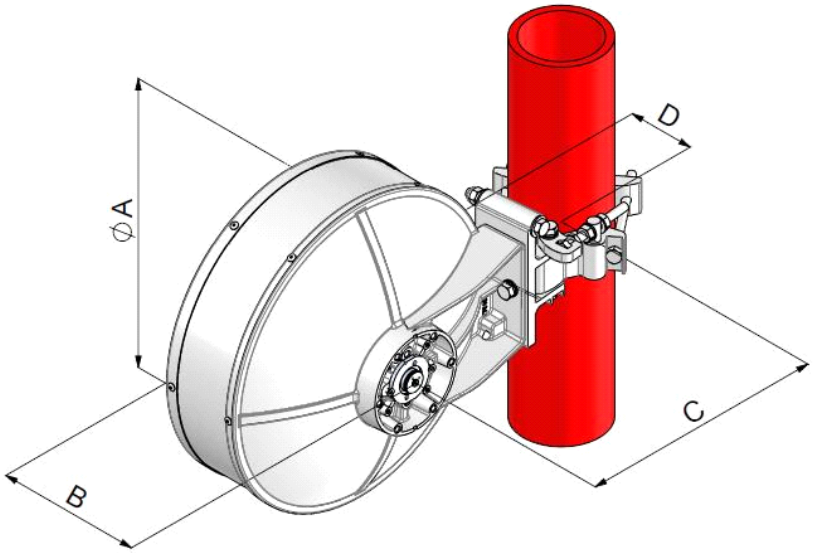
VHLP1-80A

Side Force (FS)	200 N | 45 lbf
Twisting Moment (MT)	144 N•m
Weight with 1/2 in (12 mm) Radial Ice	7 kg | 15 lb
Zcg with 1/2 in (12 mm) Radial Ice	3 mm | 0 in
Zcg without Ice	11 mm | 0 in

Wind Forces At Wind Velocity Survival Rating Image



Antenna Dimensions And Mounting Information



Dimensions in Inches (mm)				
Antenna Size, ft(m)	**A**	**B**	**C**	**D**
1(0.3)	14.9(380)	7.5(191)	12.7(323)	3.5(88)

* 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° ±40°, 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 throughout the world. Other ranges can be accommodated on special order.
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
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 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.
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. In the case of ValuLine antennas, it is defined as a maximum deflection of 0.3 x the 3 dB beam width of the antenna.
Wind Velocity Survival Rating	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.