POWERED BY ANDREW

ValuLine® High Performance, Point-to-Point Microwave Antenna

Low profile, single-polarized, high performance parabolic shielded antenna

Andrew Solutions VHLP Series antennas are ideal for microwave applications demanding excellent pattern performance where space is at a premium and aesthetics are important

Andrew Solutions specially engineered family of ValuLine Antennas provides exceptional performance and value in a low-profile design. In addition, ValuLine Antennas are designed to easily integrate with radio outdoor units to create a highly reliable, cost-effective transmission solution.

Andrew Solutions designs and engineers a complete range of point-to-point microwave antennas that help operators to maximize bandwidth efficiency and increase system reliability while minimizing both capital and operational expenditures.

The intelligent design of VHLP antennas combines efficient beam-forming capabilities with high gain, all while minimizing frequency congestion. Equipped with a painted reflector, each antenna also features a high effeiciency feed system, a long life radome, and vertical pipe mount. All are engineered and tested to Andrew's uncompromising standards.

Radiation Pattern Envelopes—For each antenna model, Andrew publishes a complete range of radiation pattern envelopes (RPEs). Each detailed pattern envelope provides an easy-to-read and informative description of how the antenna performs at various frequencies and along specific planes. Copies of the RPEs for each antenna are also on file at various regulatory offices around the world.

- Ideal for high density areas where space is at a premium and aesthetics are important
- Integrates easily with radio outdoor units
- Single polarized operation
- Low lifetime cost

Product Specifications

COMMSCOPE®

POWERED BY ANDREW®

VHLP1-13-1GR

0.3 m | 1 ft ValuLine® High Performance Low Profile Antenna, single-polarized, 12.700–13.250 GHz, WR75, gray antenna, polymer gray radome without flash, standard pack—one-piece reflector

General Specifications

Packing	Standard pack
Radome Color	Gray
Radome Material	Polymer
Reflector Construction	One-piece reflector
Antenna Input	WR75
Antenna Color	Gray
Antenna Type	VHLP - ValuLine® High Performance Low Profile Antenna, single-polarized
Diameter, nominal	0.3 m | 1 ft
Flash Included	No
Polarization	Single

Electrical Specifications

Beamwidth, Horizontal	4.7 °
Beamwidth, Vertical	4.7 °
Cross Polarization Discrimination (XPD)	30 dB
Electrical Compliance	Brazil Anatel Class 2 | Canada SRSP 312.7 Part B | ETSI 302 217 Class 3
Front-to-Back Ratio	56 dB
Gain, Low Band	30.8 dBi
Gain, Mid Band	30.9 dBi
Gain, Top Band	31.0 dBi
Operating Frequency Band	12.700 – 13.250 GHz
Radiation Pattern Envelope Reference (RPE)	7002A
Return Loss	17.7 dB
VSWR	1.30

Mechanical Specifications

Fine Azimuth Adjustment	±15°
Fine Elevation Adjustment	±15°
Mounting Pipe Diameter	50 mm–115 mm | 2.0 in–4.5 in
Net Weight	7 kg | 14 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
Side Force (FS)	221 N | 50 lbf
Twisting Moment (MT)	166 N•m
Weight with 1/2 in (12 mm) Radial Ice	13 kg | 28 lb
Zcg with 1/2 in (12 mm) Radial Ice	50 mm | 2 in

Product Specifications

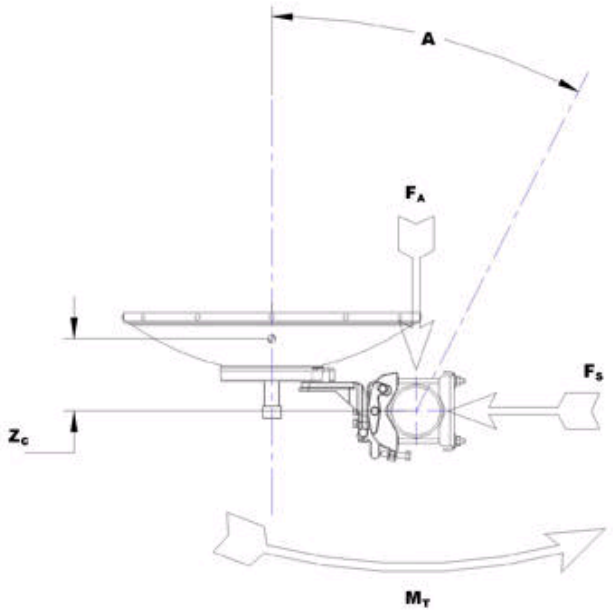
VHLP1-13-1GR

Zcg without Ice	25 mm | 1 in	

VHLP1-13-1GR

POWERED BY ANDREW®

Wind Forces At Wind Velocity Survival Rating Image



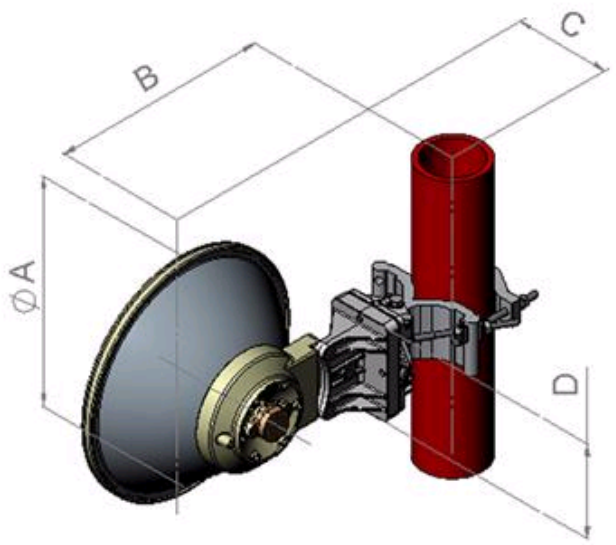
Packed Dimensions

Gross Weight, Packed Antenna	8.2 kg | 18.1 lb
Height	325.0 mm | 12.8 in
Length	640.0 mm | 25.2 in
Volume	0.1 m³
Width	460.0 mm | 18.1 in

Product Specifications

VHLP1-13-1GR

Antenna Dimensions And Mounting Information



Dimensions in inches (mm)				
Antenna size, ft (m)	ØA	B	C	D
1 (0.3)	15.3 (388)	14.7 (372)	6.5 (166)	6.3 (160)

Regulatory Compliance/Certifications

Agency	Classification
ISO 9001:2008	Designed, manufactured and/or distributed under this quality management system

* 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.
Packing	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.

VHLP1-13-1GR

POWERED BY ANDREW®

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 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.