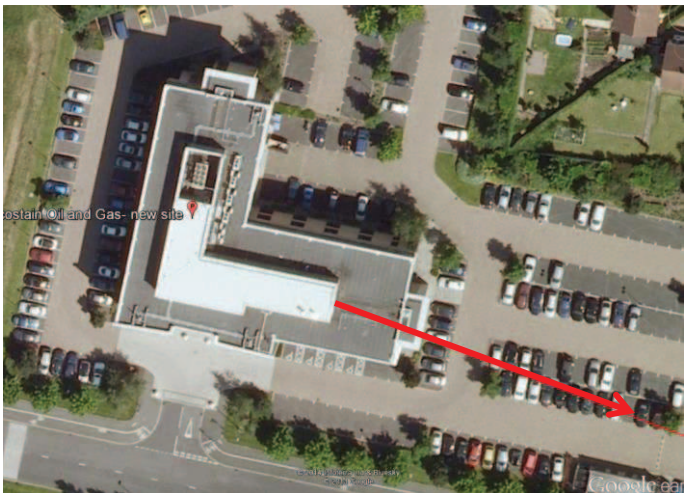
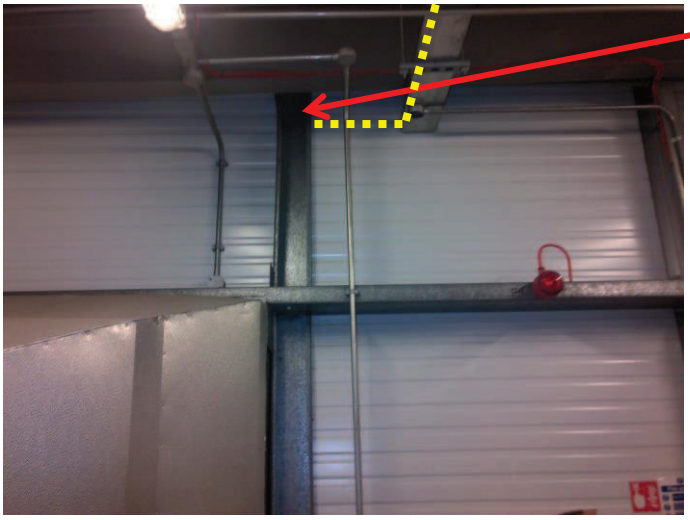




The antennas will be secured to a 6ft 89mm diameter pole. This pole will be secured to 3 x 6” channel brackets which intern will be secured to the cladded wall using M10 threaded rod, with Unistrut on the inside braced to the steel work to secure the equipment in place. The feeder cables will route from the antennas back to the server room where they will be terminated. The cable route is denoted by the yellow dotted line and will be secured along the route using cable zip ties. 2 x 10mm holes will be drilled to allow the cables to enter the plant room. 2 x through glands will be installed to protect the cable as it routes through the cladding. Step ladders will be used to install the cable and equipment and the 2nd engineer will foot the ladders during all step ladder works. From the exit door onto the roof, the man safe system will be used. The engineers will be secured to the man safe wire using his harness and restraint harness.

Pole / bracket and antenna location



Internal vertical steelwork witch the internal brackets / unistrut will be braced to. Also the internal area of the cable entry point.

The feeder cables will then route along the existing containment routing towards the riser

Product Specifications

VHLP1-28-1WH

1 ft ValuLine® High Performance Low Profile Antenna, single-polarized, 27.5–29.5 GHz, UG flange, white antenna, white radome



CHARACTERISTICS

General Specifications

Antenna Type	VHLP - ValuLine® High Performance Low Profile Antenna, single-polarized
Diameter, nominal	0.3 m | 1 ft
Antenna Input	UG-599
Polarization	Single
Feed Pressurization, maximum	35 kPa | 5 psi
Reflector Construction	One-piece reflector
Antenna Color	White
Radome Color	White
Radome Material	Polymer
Flash Included	No
Packing	Standard pack

Electrical Specifications

Operating Frequency Band	27.500 – 29.500 GHz
Gain, Top Band	38.6 dBi
Gain, Mid Band	38.1 dBi
Gain, Low Band	37.6 dBi
Front-to-Back Ratio	64 dB
Cross Polarization Discrimination (XPD)	30 dB
Beamwidth, Vertical	2.2 °
VSWR	1.30
Return Loss	17.7 dB
Radiation Pattern Envelope Reference (RPE)	7022
Electrical Compliance	Brazil Anatel Class 2 | ETSI 302 217 Class 3

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Product Specifications

VHLP1-28-1WH

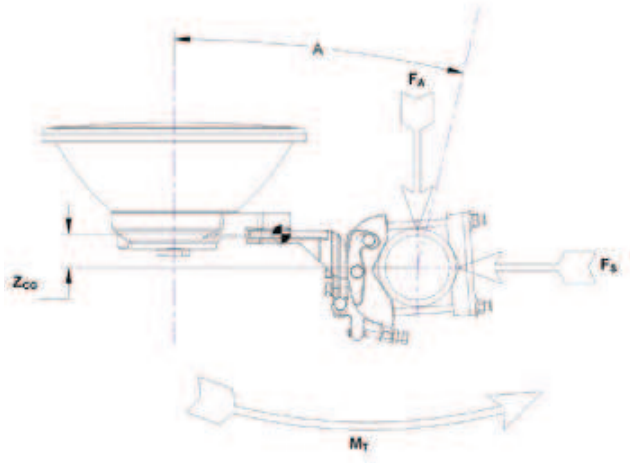
Mechanical Specifications

Wind Velocity Operational	113 km/h | 70 mph
Wind Velocity Survival Rating	249 km/h | 155 mph
Fine Azimuth Adjustment	±10°
Fine Elevation Adjustment	±25°
Mounting Pipe Diameter	50 mm–115 mm | 2 in–4.5 in
Side Struts, Included	0
Side Struts, Optional	0
Net Weight	6 kg | 14 lb

Wind Forces At Wind Velocity Survival Rating

Axial Force (FA)	445 N | 100 lbf
Side Force (FS)	196 N | 44 lbf
Twisting Moment (MT)	159 N•m
Zcg without Ice	47 mm | 2 in
Zcg with 1/2" (12 mm) Radial Ice	91 mm | 4 in
Weight with 1/2" (12 mm) Radial Ice	12 kg | 27 lb

Wind Forces At Wind Velocity Survival Rating Image



Packed Dimensions

Gross Weight, Packed Antenna	8.9 kg | 19.7 lb
Length	635.0 mm | 25.0 in
Width	457.2 mm | 18.0 in
Height	323.9 mm | 12.8 in
Volume	5737.5 in³

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Product Specifications

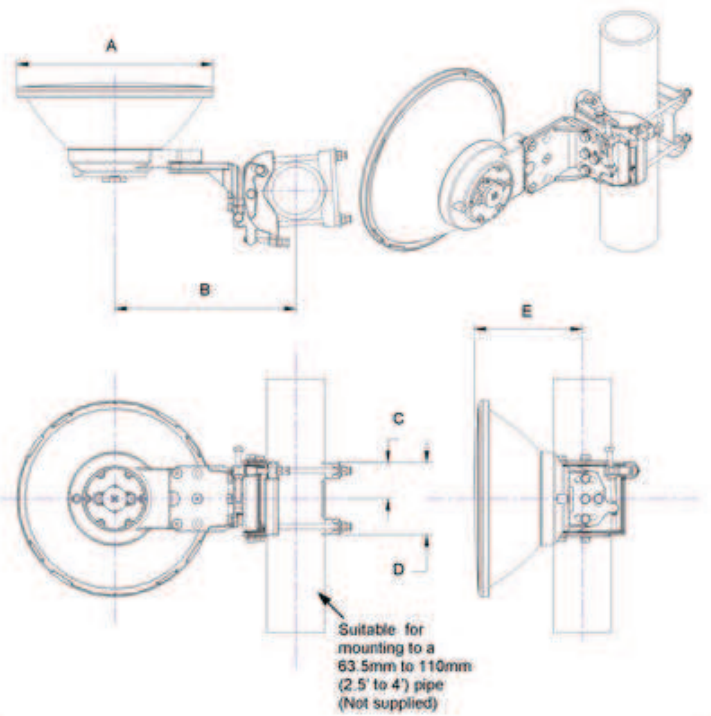
VHLP1-28-1WH

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Product Specifications

VHLP1-28-1WH

Antenna Dimensions And Mounting Information



ANTENNA DIMENSIONS All dimensions in mm (inches)			
A	389 (15.3)	D	143 (5.6)
B	358 (14.1)	E	220 (8.7)
C	72 (2.8)		

* 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

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	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.
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.

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