

# SHP2-42-XXX/B



0.6 m | 2 ft Sentinel® High Performance Antenna, single-polarized, 40.5–43.5 GHz, OEM custom flange, OEM custom colour

## Product Classification

<b>Product Type</b>	Microwave antenna
<b>Product Brand</b>	Sentinel®

## General Specifications

<b>Antenna Type</b>	SHP - Sentinel® High Performance Antenna, single-polarized
<b>Polarization</b>	Single
<b>Antenna Input</b>	Custom
<b>Antenna Color</b>	Custom
<b>Reflector Construction</b>	One-piece reflector
<b>Radome Color</b>	Gray
<b>Radome Material</b>	Polymer
<b>Flash Included</b>	No
<b>Side Struts, Included</b>	0
<b>Side Struts, Optional</b>	0

## Dimensions

<b>Diameter, nominal</b>	0.6 m   2 ft
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## Electrical Specifications

<b>Operating Frequency Band</b>	40.500 – 43.500 GHz
<b>Gain, Low Band</b>	45.7 dBi
<b>Gain, Mid Band</b>	46 dBi
<b>Gain, Top Band</b>	46.3 dBi
<b>Boresite Cross Polarization Discrimination (XPD)</b>	30 dB

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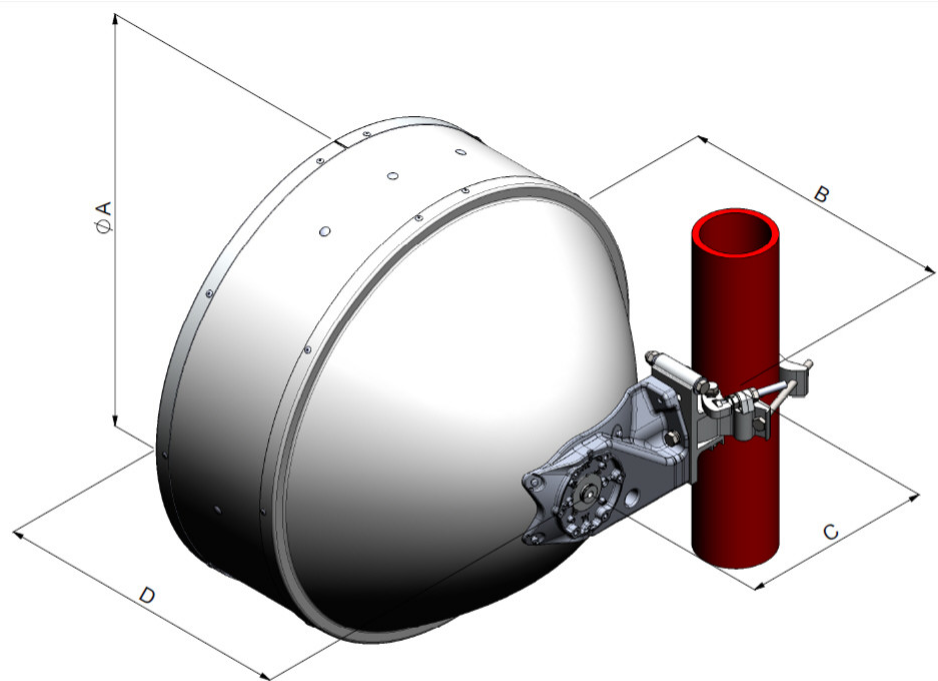
Front-to-Back Ratio	71 dB
Beamwidth, Horizontal	0.8 °
Beamwidth, Vertical	0.8 °
Return Loss	17.7 dB
VSWR	1.3
Radiation Pattern Envelope Reference (RPE)	7267B
Electrical Compliance	Brazil Anatel Class 2   ETSI 302 217 Class 4
Cross Polarization Discrimination (XPD) Electrical Compliance	ETSI EN 302217 XPD Category 2

## Mechanical Specifications

Compatible Mounting Pipe Diameter	50 mm–115 mm   2.0 in–4.5 in
Fine Azimuth Adjustment Range	±15°
Fine Elevation Adjustment Range	±15°
Wind Speed, operational	180 km/h   111.847 mph
Wind Speed, survival	250 km/h   155.343 mph

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## Antenna Dimensions and Mounting Information



Dimension in Inches(mm)				
Antenna size, ft(m)	A	B	C	D
2(0.6)	26.1(664)	17.4(441)	12.1(307)	18.8(478)

## Wind Forces at Wind Velocity Survival Rating

<b>Axial Force (FA)</b>	1290 N   290.004 lbf
<b>Angle <math>\alpha</math> for MT Max</b>	0 °
<b>Side Force (FS)</b>	639 N   143.653 lbf
<b>Twisting Moment (MT)</b>	395 N-m   3,496.045 in lb
<b>Zcg without Ice</b>	187 mm   7.362 in
<b>Zcg with 1/2 in (12 mm) Radial Ice</b>	185 mm   7.283 in
<b>Weight with 1/2 in (12 mm) Radial Ice</b>	34 kg   74.957 lb

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## Wind Forces at Wind Velocity Survival Rating Image



## Packaging and Weights

Height, packed	580 mm   22.835 in
Width, packed	735 mm   28.937 in
Length, packed	735 mm   28.937 in
Packaging Type	Standard pack
Volume	0 m³   0 ft³
Weight, gross	16 kg   35.274 lb
Weight, net	11 kg   24.251 lb

## Regulatory Compliance/Certifications

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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
Cross Polarization Discrimination (XPD) Electrical Compliance	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.
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.

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<b>Axial Force (FA)</b>	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.
<b>Side Force (FS)</b>	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.
<b>Twisting Moment (MT)</b>	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.
<b>Packaging Type</b>	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.