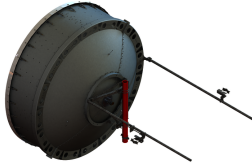


# HX10-7W-4GF

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3.0m | 10ft ValuLine® High Performance, High XPD Antenna, dual-polarized, 7.125 – 8.500 GHz, grey, PDR84 flange

## Product Classification

**Product Type**

Microwave antenna

## General Specifications

**Antenna Type**

HX - ValuLine® High Performance, High XPD Antenna, dual-polarized

**Polarization**

Dual

**Antenna Input**

PDR84

**Antenna Color**

Gray

**Reflector Construction**

Two-piece reflector

**Radome Color**

Gray

**Radome Material**

Fabric

**Flash Included**

Yes

**Side Struts, Included**

2

**Side Struts, Optional**

3

## Dimensions

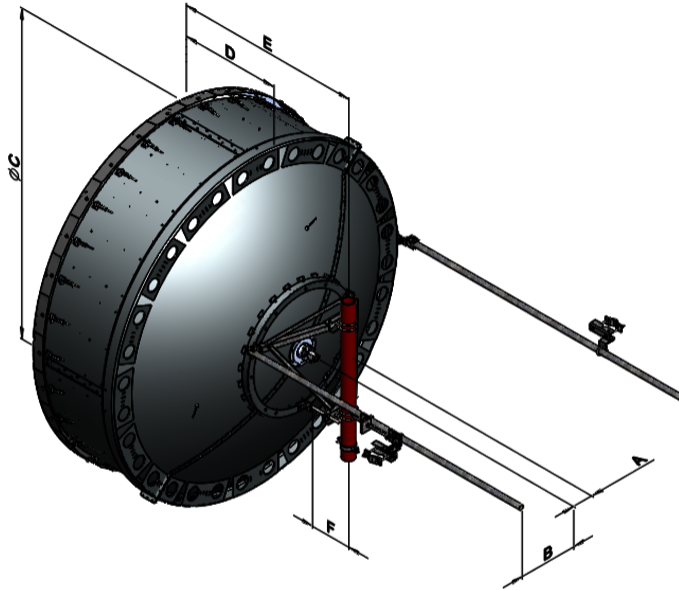
**Diameter, nominal**

3.0 m | 10 ft

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## Antenna Dimensions and Mounting Information

### USX10



Dimensions in inches (mm)						
Antenna Size, ft (m)	A	B	C	D	E	F
10 (3)	8.0 (203)	22.5 (572)	125.0 (3174)	38.6 (980)	71.1 (1807)	10.3 (262)

## Electrical Specifications

<b>Operating Frequency Band</b>	7.125 – 8.500 GHz
<b>Gain, Low Band</b>	43.7
<b>Gain, Mid Band</b>	44.4
<b>Gain, Top Band</b>	45
<b>Boresite Cross Polarization Discrimination (XPD)</b>	33
<b>Front-to-Back Ratio</b>	72
<b>Beamwidth, Horizontal</b>	0.9
<b>Beamwidth, Vertical</b>	0.9
<b>Return Loss</b>	26

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<b>VSWR</b>	1.1
<b>Radiation Pattern Envelope Reference (RPE)</b>	7419
<b>Electrical Compliance</b>	ACMA FX03_7p5a   ETSI 302 217 Class 3
<b>Cross Polarization Discrimination (XPD) Electrical Compliance</b>	ETSI EN 302217 XPD Category 2

## Mechanical Specifications

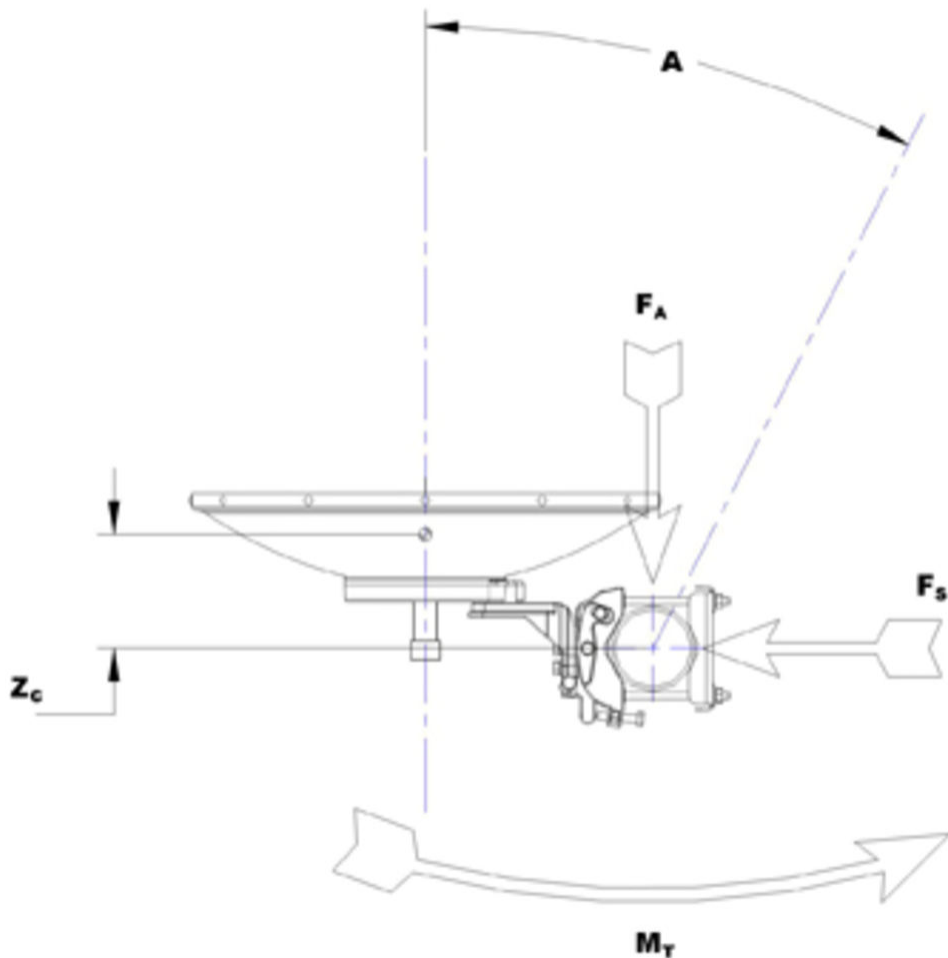
<b>Fine Azimuth Adjustment Range</b>	±5°
<b>Fine Elevation Adjustment Range</b>	±5°
<b>Wind Speed, operational</b>	180
<b>Wind Speed, survival</b>	200

## Wind Forces at Wind Velocity Survival Rating

<b>Axial Force (FA)</b>	18800
<b>Angle # for MT Max</b>	-130
<b>Side Force (FS)</b>	-6500
<b>Twisting Moment (MT)</b>	-10725
<b>Force on Inboard Strut Side</b>	9500
<b>Force on Outboard Strut Side</b>	3350
<b>Zcg without Ice</b>	618
<b>Zcg with 1/2 in (12 mm) Radial Ice</b>	744
<b>Weight with 1/2 in (12 mm) Radial Ice</b>	466

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## Wind Forces at Wind Velocity Survival Rating Image



## Packaging and Weights

<b>Height, packed</b>	1170 mm   46.063 in
<b>Width, packed</b>	1930 mm   75.984 in
<b>Length, packed</b>	3410 mm   134.252 in
<b>Packaging Type</b>	Standard pack
<b>Volume</b>	7.7 m <sup>3</sup>   271.923 ft <sup>3</sup>
<b>Weight, gross</b>	513 kg   1,130.97 lb

## Regulatory Compliance/Certifications

<b>Agency</b>	<b>Classification</b>
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system

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## \* 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.

### **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.

### **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.

### **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 throughout the world. Other ranges can be accommodated on special order.

### **Packaging Type**

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 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  $\pm 1^\circ$  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

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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 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.