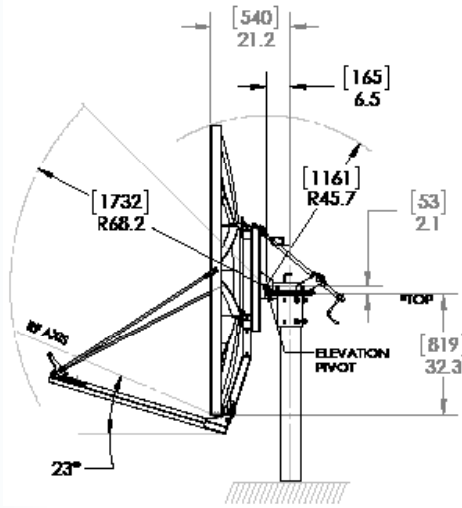
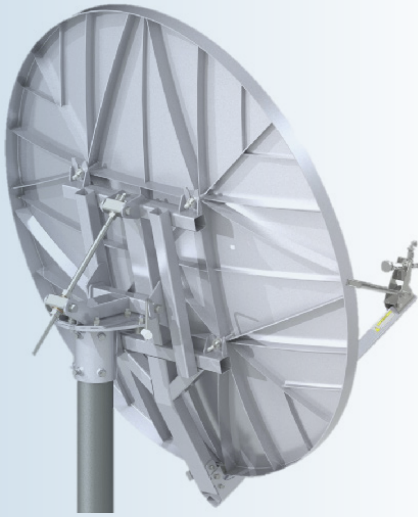


Type 181: 1.8m Rx/Tx Ka-Band Circularly Polarized SFL Antenna



- ISO 9001:2008 Certificate of Registration
- One-piece precision SMC Reflector
- Precision Az/EI Mount
- Fine Azimuth and Elevation Adjustment Features
- All Materials Comply with EU Directive No. 2002/95/EC (RoHS)



- 720 Hour Salt Spray Hardware
- Designed for Skyware Global Ka-Band Transceivers

The **Skyware Global 1.8m Rx/Tx Ka-Band Circularly Polarized SFL Antenna** is a rugged, commercial quality product suitable for the most demanding applications.

- The reflector is constructed from glass fiber reinforced polyester (SMC) for strength and accuracy. A proprietary process developed by Skyware Global insures high RF reflectivity as needed for Ka-Band operation
- The precision Az/EI mount is made of galvanized steel for excellent corrosion resistance. This mount includes special features to increase pointing accuracy with low backlash and lockdown error.
- This Az/EI allows the antenna to be installed on standard 127mm (5.0") or 141mm (5.56") diameter pipe.
- All hardware is plated to 720 hour salt spray standards tested in accordance with ASTM B-117.
- Designed for use with the Skyware Global line of Ka-band Feed assemblies.
- Tx Cross-Polarization Isolation of 25dB on 1dB contour.
- Excellent Tx Port to Port Isolation of 90dB or better.
- Meets or exceeds regulator agency requirements.
- System designed for typical Ka-band RF Electronics.



Satcom solutions for the long haul

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• **PRODUCT SPECIFICATIONS**

RF Performance

Operating Frequency

Extended

TX 28.30-30.00GHz
 RX 18.30-20.20GHz

Standard

TX 29.50-30.00GHz
 RX 19.20-21.20GHz

Polarization

TX Circular, RH or LH
 RX Circular, RH or LH

Gain¹ (min)

TX 52.5 dBi @ 30.0GHz
 RX 49.1 dBi @ 20.2GHz

3 dB Beamwidth

TX 0.4° @ 30GHz
 RX 0.6° @ 20GHz

Sidelobe Envelope (Tx, Co-Pol dBi)

100 λ/D < θ < 20° 29-25 log θ dBi
 20° < θ < 26.3° -3.5 dBi
 26.3° < θ < 48° 32-25 log θ dBi
 48° < θ < 180° -10 dBi (Typical)

Antenna Cross-Polarization within 1dB contour

TX 25dB
 RX 25dB

Antenna Noise Temperature¹

..... @ 30° EL 57K Mk

VSWR 1.2:1 Max

Isolation

TX 90dB
 RX 75dB

Feed Interface

TX WR28 Flat Flange
 RX WR42 Flat Flange

¹ Gain and Noise Temperature at Feed Horn Flange
 (All specifications typical)

1.8m Rx/Tx Ka-Band Circularly Polarized SFL Antenna

Mechanical Performance

Reflector Material. Glass Fiber Reinforced Polyester

Antenna Optics One-Piece Offset Feed Prime Focus

Mount Type Elevation Over Azimuth

Elevation Adjustment Range 10°-90° Continuous
 Fine Adjustment

Azimuth Adjustment Range 360° Continuous
 ± 3° Fine Adjustment

Mast Size Interface. 5" (127mm) Diameter Min
 5.56" (141mm) Diameter Max

Antenna Weight. Approx 113.6Kg
 (Not Including Mast)

Enviromental Performance

Windloading
 Operational. 50mph (80km/h)

Functional Survival 80mph (128km/h)

Ultimate Survival 125mph (200km/h)

Survival Temperature -50°C to +80°C

Operational Temperature -40°C to +55°C

Humidity. 0 to 100% (Condensing)

Corrosion Protection. Hardware meets
 720 hour Salt Spray Test (ASTM B-117)

Solar Radiation 360 BTU/h/ft²

Shock and Vibration. As Encountered during
 Shipping and handling



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