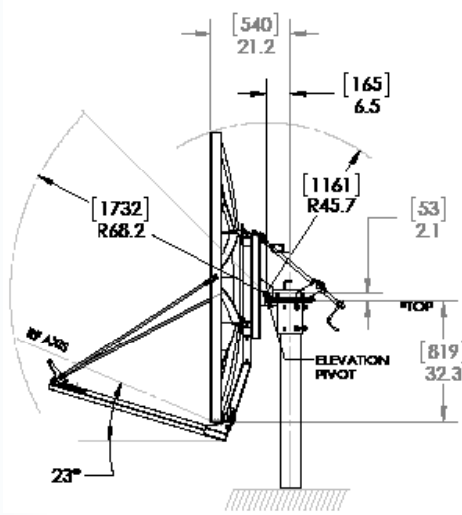
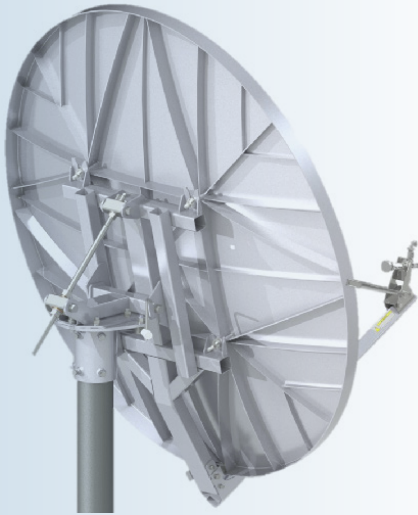


# Type 181: 1.8m Rx/Tx Ka-Band Circularly Polarized SFL Antenna



- 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.



• 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

Gain<sup>1</sup> (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 Temperature<sup>1</sup>  
 ..... @ 30° EL 57K Mk

VSWR ..... 1.2:1 Max

Isolation  
 TX ..... 90dB  
 RX ..... 75dB

Feed Interface  
 TX ..... WR28 Flat Flange  
 RX ..... WR42 Flat Flange

<sup>1</sup> 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)

**Environmental Performance**

Windloading  
 Operational. . . . . 50mph (80km/h)

Functional Survival . . . . . 80mph (128km/h)

Ultimate Survival . . . . . 125mph (200km/h)

Survival Temperature . . . . . -50°C to +80°C

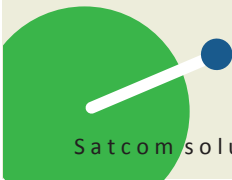
Operational Temperature . . . . . -40°C to +55°C

Humidity. . . . . 0 to 100% (Condensing)

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

Solar Radiation . . . . . 360 BTU/h/ft<sup>2</sup>

Shock and Vibration. . . . . As Encountered during  
 Shipping and handling



Request A Quote