

# Type 122: 1.2m Rx/Tx Class I Antenna System



- ISO 9001:2008 Certificate of Registration
- All materials comply with EU Directive No. 2002/95/EC (RoHS).
- One-piece precision offset thermoset-molded reflector.
- Available with Ku-band co-pol or cross-pol feeds.
- Galvanized 19 mm (.75 in) O.D. feed support legs for lightweight outdoor units (ODU's).
- Plated hardware for maximum corrosion resistance.
- Az/EI mount includes both elevation and azimuth fine adjustments.
- Class I system designed for typical lightweight Ku-band RF Electronics.\*
- Marinised version option is finished in a 2-part Epoxy paint on all 316 stainless steel hardware and galvanised steel fabricated components.

\* 2.0 kg or 4.5 lb max. weight (For BUC and LNB) 2.2 kg or 4.8 lb max. weight (For Transceiver)



The **Skyware Global 1.2m Rx/Tx Class I Antenna** is a rugged commercial grade product suitable for the most demanding applications.

- The reflector is thermoset-molded for strength and surface accuracy. Molded into the rear of the reflector is a network of support ribs which not only strengthens the antenna, but also helps to sustain the critical parabolic shape necessary for transmit performance.
- The precision Az/EI mount is constructed from heavy-gauge steel to provide a rigid support to the reflector.
- The Az/EI mount secures the antenna to any 73-76 mm (2.88"-3.00") mast and prevents slippage in high winds.
- A specially formulated powder paint process offers excellent protection from weather-related corrosion.
- The antenna features a unique feed which provides cross-pol performance that exceeds industry standards.

## • PRODUCT SPECIFICATIONS

### Type Approval Information

Antenna Model ..... 62-1225401/02

(See Our Website for a Complete List of Type Approvals)

### RF Performance

Effective Aperture ..... 1.2m (48 in)

#### Operating Frequency

TX ..... 13.75-14.50GHz  
RX ..... 10.70-12.75GHz

Polarization ..... Linear, Orthogonal  
(Co-Pol Optional)

#### Gain ( $\pm 0.3$ dB)

TX ..... 43.3 dBi @ 14.3GHz  
RX ..... 41.8 dBi @ 12.0GHz

#### 3 dB Beamwidth

TX ..... 1.2° @ 14.3GHz  
RX ..... 1.5° @ 12.0GHz

#### Sidelobe Envelope (Tx, Co-Pol dBi)

Mainbeam  $< \theta < 20^\circ$  ..... 29-25 log  $\theta$  dBi  
 $20^\circ < \theta < 26.3^\circ$  ..... -3.5 dBi  
 $26.3^\circ < \theta < 48^\circ$  ..... 32-25 log  $\theta$  dBi  
 $48^\circ < \theta < 180^\circ$  ..... -10

Antenna Cross-Polarization. .... 30 db in 1 dB  
Contour

#### Antenna Noise Temperature

10° EL ..... 48°K  
20° EL ..... 35°K  
30° EL ..... 29°K

#### VSWR

TX ..... 1.3:1  
RX ..... 1.5:1

#### Isolation (Port to Port)

TX ..... 90db  
RX ..... 40db

#### Feed Interface

TX ..... WR75 Flat Flange  
RX ..... WR75 Flat Flange

(All specifications typical)

## 1.2 m Rx/Tx Class I 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 ..... 8°-90° Continuous  
Fine Adjustment

Azimuth Adjustment Range ..... 360° Continuous  
 $\pm 5^\circ$  Fine Adjustment

Mast Pipe Interface. .... 73-76mm (2.88in-3.00in)  
Diameter

### Environmental Performance

#### Wind Loading

Operational. .... 45mph (72km/h)

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

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

Operational Temperature. .... -40°C to +60°C

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

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

Atmosphere. .... Standard Hardware 500 Hrs  
SST Requirements (ASTM B-117)  
..... Marinised Option has AISI  
316 Stainless Steel Hardware

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

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



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