



**PRODUCT SPECIFICATIONS**

**Detail Photos**

*(on right from top to bottom)*

Pre-assembled Az/El Mount

Fine-elevation adjustment with stamped degree scale

RF tested Ku-Band feed assembly



# 1.2m RxTx Class II Antenna System

## TYPE 123

Type approved for use on Intelsat and Eutelsat Satellite Systems



The Andrew Corporation Type 123 1.2m Class II RxTx 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 reflector optics feature a long focal length for excellent cross-pol performance, required by many satellite operators.

The Az/El mount is constructed from heavy-gauge steel to provide a rigid support to the reflector. The Az/El mount secures the antenna to any 2.88"-3.00" (73-76mm) O.D. mast and prevents slippage in high winds. A specially

formulated powder paint process offers excellent protection from weather-related corrosion.

- One-piece precision offset thermoset-molded reflector.
- Long focal length optics for low cross-pol performance.
- Fine azimuth and elevation adjustments.
- Galvanized .75" (19mm) O.D. side feed support legs and 2" (51mm) O.D. lower feed support.
- Plated hardware for maximum corrosion resistance.
- Available with Ku-Band Co-Pol. or Cross-Pol. Feeds.
- Class II system designed for typical 2W and 4W Ku-Band Block Up-Converters (BUCs)\*

\* 12 Lb. or 5.4 Kg. max. weight for RF electronics (BUC and LNB)

## SPECIFICATIONS

### TYPE 123 1.2m RxTx Class II Antenna System

#### Type Approval Information\*

Antenna Model ..... 62-12362-01

Intelsat Standard ..... Standard G (IESS 601)

Approval Code ..... IA077A00

Antenna Model ..... 62-12362-01

Eutelsat Standard ..... VSAT

Approval Code ..... EA-V051

#### RF Performance

Effective Aperture	.....	1.2m (48 in.)
Operating Frequency	Tx	13.75-14.50 GHz
	Rx	10.70-12.75 GHz
Polarization	.....	Linear, Orthogonal
Gain ( $\pm 2$ dBi)	Tx	43.3 dBi @ 14.25 GHz
	Rx	41.8 dBi @ 11.95 GHz
3 dB Beamwidth	Tx	1.2° @ 14.3 GHz
	Rx	1.5° @ 12.0 GHz
Sidelobe Envelope (Tx, Co-Pol dBi)	.....	
1.5° < $\theta$ < 20°	.....	29-25 Log $\theta$
20° < $\theta$ < 26.3°	.....	-3.5
26.3° < $\theta$ < 48°	.....	32 - 25 Log $\theta$
48° < $\theta$ < 180°	.....	-10
Antenna Cross-Polarization	.....	>30 dB in 1 dB Contour
Antenna Noise Temperature	10° El	45°K
	20° El	31°K
	30° El	24°K
VSWR	Tx	1.3:1
	Rx	1.5:1
Isolation, Port to Port	Tx	110 dB
	Rx	35 dB
Feed Interface	Tx	WR75 Cover Flange (UBR120)
	Rx	WR75 Cover Flange (UBR120)

(All specifications typical)

#### Mechanical Performance

Reflector Material	.....	Glass Fiber Reinforced Polyester
Antenna Optics	.....	One-Piece Offset Feed Prime Focus Long Focal Length
Mount Type	.....	Elevation over Azimuth
Elevation Adjustment Range	.....	7°-84° Continuous Fine Adjustment
Azimuth Adjustment Range	.....	360° Continuous; $\pm 20^\circ$ Fine Adjustment
Mast Pipe Interface	.....	2.88 in.-3.00 in. (73-76 mm) Diameter
Wind Loading	Operational	50 mi/h (80 km/h)
	Survival	125 mi/h (200 km/h)
Temperature	.....	-50°C to 80°C
Humidity	.....	0 to 100% (Condensing)
Atmosphere	.....	Salt, Pollutants and Contaminants as Encountered in Coastal and Industrial Areas
Solar Radiation	.....	360 BTU/h/ft <sup>2</sup>
Shock and Vibration	.....	As Encountered During Shipping and Handling

\*See our web site for a complete list of type approvals.



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