

# 74cm Ka RxTx Class I Antenna System

## RF Performance



### Type 748 Antenna Product Specification

- Precision pressed steel reflector
- Fine azimuth and elevation adjustment features
- ISO 9001:2008 Certificate of Registration
- Meets or exceeds regulatory agency requirements

Effective Aperture. . . . .	74cm (29.1in)
Operating Frequency. . . . . Tx. . . . .	28.30-30.00 GHz
Rx. . . . .	18.10-20.20 GHz
Polarization. . . . .	Circular RH or LH
Gain (0.3 dBi). . . . . Tx. . . . .	45.2 dBi @ 30.00 GHz
Rx. . . . .	42.2 dBi @ 20.20 GHz
3dB Beamwidth. . . . . Tx. . . . .	0.96° @ 29.75 GHz
Rx. . . . .	1.38° @ 19.70 GHz
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 (averaged)
Antenna Cross-Polarization (within 1 dB B/W)	
Tx. . . . .	25 dBi
Rx. . . . .	22 dBi
Antenna Noise Temperature*	
10° El. . . . .	96K
20° El. . . . .	69K
30° El. . . . .	54K
VSWR . . . . .	1.3:1 Max
Isolation (Port to Port) . . . . . Tx. . . . .	.90dB
Rx. . . . .	.80dB
Feed Interface . . . . . Tx. . . . .	WR28
Rx. . . . .	WR42

## Mechanical Performance

Reflector Material . . . . .	Steel
Antenna Optics. . . . .	One-Piece Offset Feed Prime Focus
Mount Type. . . . .	Elevation over Azimuth
Elevation Adjustment Range . . . . .	5° - 90° Continuous Fine Adjustment
Azimuth Adjustment Range . . . . .	360° Continuous, ±10° Fine
Mast Pipe Interface. . . . .	73.2 mm (2.88 in) Diameter O.D.
Wind Loading. . . . . Operational . . . . .	80km/h (50 mph)
Survival . . . . .	201 km/h (125 mph)
Temperature . . . . .	-40°C to 60°C
Humidity . . . . .	0 to 100% (Condensing)
Rain . . . . .	1/2" / hr
Atmosphere . . . . .	Standard Hardware Meets 720 Hour Salt Spray Test Requirements (ASTM B-117)
Solar Radiation. . . . .	.360 BTU/h/ft2
Shock and Vibration . . . . .	As Encountered During Shipping and Handling
Shipping Specifications	
Approx. Net Weight. . . . .	.45lbs (20kg)
Approx. Packaged Weight . . . . .	.55lbs (25kg)



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