



# ANTENNA EXPERTS

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Model # QHA-450 400 – 512 MHz. 3 dBi Gain

## Quadrifilar Helix RHCP Omni or LHCP Omni High Power Antenna

**DESIGN FEATURES:** QHA-450 broadband LHCP omni-directional or RHCP omni-directional quadrifilar helix antenna is rugged all weather model, enclosed in a fiber glass radome, uses high class copper alloy and does not require any field tuning or adjustments. The compact size of RHCP omni-directional quadrifilar helix antenna allows easy handling, shipping and highly suitable for receiving, transmitting, scanning, monitoring, surveillance and jamming applications including TETRA bands without having the requirement of multiple antennas. The antenna is also highly suitable for Ground to Air communication/jamming application due to its wide elevation beamwidth with omni-directional properties. Antenna termination fitted just below the NATO mounting flange for complete weather protection. Other type of mounting hardware / configuration can be supplied on request.

**CONSTRUCTIONS:** The QHA-450 RHCP omni quadrifilar helix or LHCP omni quadrifilar helix antenna is consisting of two pair vertical loop radiating elements at right angles to each other, twisted into a helix turns vertically and enclosed in fibre glass radome. The special “Teflon Dielectric Transmission Line” technique is used to handle high power handling capacity allowing smooth VSWR and typical 3dBi. gain over the specified frequency band. The fiberglass enclosure has excellent transparency for RF signals and enough strength to withstand specified wind loads. The stainless steel mounting hardware is supplied with the antenna. Cylindrical shell/enclosure is used for low wind loading and for minimal effect of ice formation on the antenna operation as well as providing an aesthetically pleasing appearance.

### ELECTRICAL SPECIFICATIONS:

Frequency Range	400 -512 MHz.
Gain	3 dBi. Typical
Bandwidth	25 MHz
Polarization	Circular – RHCP or LHCP
Input Impedance	50 Ohms
Azimuth Radiation Pattern - Typical	Omni-directional
Elevation Radiation Pattern - Typical	Equivalent to Half Wave Dipole
Vertical Beam-width –Half Power Points.	120 Degrees
VSWR – Better Than	2:1
RF Power Handling Capacity	1000 Watts
Input Termination	N-Female

### MECHANICAL SPECIFICATIONS:

Materials	6063T6 Aluminum, Copper & Fiber
Mounting Hardware -Materials	Marine Grade Stainless Steel
Wind Rating	200 Km/Hr.
Overall Length	400 mm
Shipping Length	500 mm
Mounting Type	Pole/Mast/NATO or Customized
Enclosure Material	Fiber Glass
Enclosure Outer Diameter	400 mm
Gross Weight Approx	10 Kgs.

### ENVIRONMENTAL SPECIFICATIONS:

Operating Temperature	(-) 30 to +60 Degrees Celsius
Storage Temperature	(-) 40 to +70 Degrees Celsius
Humidity	0 to 95% RH

Please contact us for further information like radiation patterns & VSWR graph etc.

Note: All information contained in the datasheet is subject to change without any prior notice.