



ANTENNA EXPERTS

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Model # AH-450

430 – 475 MHz.

11 dBic. Gain

RHCP or LHCP CIRCULAR POLARIZED HELICAL ANTENNA

DESIGN FEATURES: The AH-450 uses extended stubs to provide the greater gain while maintaining the wider beam-width. This high-gain low-profile antennas use Circular Polarization Antenna Technology - which delivers better penetration through obstruction and interference. The AH-450 helical antenna is highly suitable to provide the uninterrupted communications in the tunnels. This commercial grade antenna provides superior performance as compare to significantly larger and more expensive products. Our AH series helical antennas are smaller than conventional yagi antenna. The AH-450 Helical Antenna is supplied with a specially designed mounting arrangement to hold the antenna at back end by using two stainless steel mounting brackets to withstand the higher wind rating. Optional: A mounting arrangement to support the antenna from front end can also fixed to handle the high wind pressure created by high speed trains. Both LHCP and RHCP models are available.



The part number for LHCP version is AH-450-LHCP and AH-450-RHCP is for RHCP version.

CONSTRUCTIONS: The AH-450, like all our AH series helical antennas, utilizes right hand circular polarization to minimize the effects of multipath interference. The AH-450 Helical Antenna is heavy duty, broadband and rugged helical antennas, supplied with fiberglass radome to protect the antenna from environment. Cylindrical enclosure is used for low wind loading and for minimal effect of ice formation on the helical antenna operation as well as providing an aesthetically pleasing appearance. Optional: Two drain holes can be provided at the bottom surface of helical antenna enclosure.

ELECTRICAL SPECIFICATIONS:

Frequency Range	430 -475 MHz.
Gain - Typical	11 dBic.
Bandwidth	430-475 MHz.
Polarization	Circular RHCP
Input Impedance	50 Ohms.
Radiation Pattern	Directional
Horizontal Beam-width –Half Power Points	50 Degrees Typical
Vertical Beam-width –Half Power Points	50 Degrees Typical
Front to Back Ratio	14 dB. Typical
VSWR – Better than	2:1
RF Power Handling Capacity	500 Watts.
Input Termination	N-Female

MECHANICAL SPECIFICATIONS:

Mounting Hardware	Marine Grade Stainless Steel
Gross Weight	14 Kgs.
Wind Rating	200 Km/Hr.
Radome Overall Length	1300 mm
Shipping Length	1450 mm
Radiating Materials	High Quality Copper
Enclosure Materials	High Strength Fiber Glass
Mounting Bracket	At Rear End of Antenna
Mast Diameter	45 - 60 mm
Reflector Materials	6061T6 Aluminum Alloy
Final Finish/Color	Olive Green

ENVIRONMENTAL SPECIFICATIONS:

Operating Temperature	(-) 30 to +70 Degrees Celsius
Storage Temperature	(-) 40 to +80 Degrees Celsius
Humidity	0 to 95% RH

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