



# ANTENNA EXPERTS

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Model AHQ-1417-21

1400 – 1700 MHz.

21 dBic. Gain

## Circular Polarized High Gain High Power Quad Stacked helical Antenna

**DESIGN FEATURES:** The AHQ-1417-21 quad stacked helical antenna uses extended stubs to provide the greater gain while maintaining the wider beam-width and designed to provide wideband directional transmission/reception of radio signals from 1400-1700 MHz bands. The AHQ-1417-21 quad stacked 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 AHQ-1417-21 Quad Stacked Helical Antenna is supplied with a specially designed mounting arrangement to hold the antenna at back end by using stainless steel mounting brackets to withstand the higher wind rating. The AH-1417-21 helical antenna is supplied with a specially designed mounting arrangement for steering the antenna in both planes, 360 degrees in Azimuth and 90 degrees in Elevation for terrestrial and satellite link. Both LHCP and RHCP models are available. The part number for LHCP version is AHQ-1417-21-LHCP and AHQ-1417-21-RHCP is for RHCP version.

**CONSTRUCTIONS:** The AHQ-1417-21, like all our AH series helical antennas, utilizes right hand circular polarization to minimize the effects of multipath interference. The AHQ-1417-21 Helical Antenna is heavy duty, broadband and rugged helical antennas, supplied with fiberglass radome to protect the antenna from environment. The radiating element of high power helical antenna is made of high quality high strength enameled coated copper wire and winding is secure alongside wall of fiber glass enclosure/hosing/radome to keep the helical winding/radiating element to its appropriate location to prevent RF inter-modulation. The antenna is designed as per MIL-STD-810G standards. Quad Stacked Helical Antenna is supplied with power splitter/combiner, phasing harness cables, stacking pipe and mounting hardware to mount the dual stacked helical antenna on tower/mast.

### ELECTRICAL SPECIFICATIONS:

Frequency Range	1400 - 1700 MHz.
Gain – Typical @ Cf	21 dBic.
Bandwidth	1.4 – 1.7 GHz.
Polarization	Circular – LHCP or RHCP
Input Impedance	50 Ohms.
Radiation Pattern	Directional
Horizontal Beam-width –Half Power Points	14+/-2 Degrees Typical
Vertical Beam-width –Half Power Points	14+/-2 Degrees Typical
Front to Back Ratio	35 +/-2 dB. Typical
VSWR – Better Than	2 : 1
RF Power Handling Capacity	300 Watts.
Input Termination	N-Female

### MECHANICAL SPECIFICATIONS:

Mounting Hardware	Marine Grade Stainless Steel
Gross Weight	15 Kgs.
Wind Rating	180 Km/Hr.
Overall Length – Single Antenna	1200 mm
Shipping Length – Single Antenna	1250 mm
Radiating Materials	High Quality Copper
Enclosure Materials	High Strength ABS
Reflector Materials	6063T6 Aluminum Alloy
Enclosure Length – Single Antenna	1100 mm
Maximum Mount Pipe Diameter	52 mm (2 Inches)
Elevation Tilt Mechanism	0-90 Degrees
Final Color / Finish	Olive Green

### ENVIRONMENTAL SPECIFICATIONS:

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

Please contact us for detailed pictures, VSWR Chart, Gain Chart, Radiation Pattern and Accessories.

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