



# ANTENNA EXPERTS

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Model # AS-500-4000 500 – 4000 MHz. 3-6 dBi. Gain

## CIRCULAR POLARIZED SPIRAL ANTENNA

**DESIGN FEATURES:** The cavity backed dual arm archimedean spiral antenna use 6063T6 ultra corrosion resistant architectural anodized aluminum alloy and designed to provide wideband directional transmission/reception of radio signals from 500-4000 MHz bands. The antenna is supplied with powder coating finish to protect the antenna further from severe environmental conditions. Both left hand circular polarization (LHCP) and right hand circular polarization (RHCP) are available. The cavity backed dual arm archimedean spiral antenna is a frequency independent antenna and this spiral antenna is weather protected suitable for outdoors use in applications requiring circularly polarized RF radiations. The AS-500-4000 uses extended coaxial stubs technique to provide constant 3+ dBi gain over entire 500-4000 MHz frequency band while maintaining the wider beam-width. This cavity backed spiral antenna is highly suitable for transmission, reception, monitoring, scanning, ECM, surveillance, signal intelligence (SIGINT), direction finding (DF), telemetry and airborne applications due to its ultra broad band design feature.

**CONSTRUCTIONS:** The spiral antenna is sealed in an aluminum cavity and is highly immune to noise. Matching circuit of spiral antenna is housed inside the main body of the antenna. A special mounting hardware to mount the spiral antenna on vertical pole having outer diameter of 38-52mm (1.5"-2"). Higher diameter mounting including any customized mounting can be supplied on request. Spiral antenna N-Female termination is fixed on top of the antenna body for easy connectivity. Other termination can be supplied on request. The AS-500-4000 spiral antenna is light weight, broadband and rugged spiral antennas, supplied with Nylon plastic cover to protect the antenna from environment. The spiral antenna is designed to perform with much higher efficiency than conventional rubber duck antenna.



### ELECTRICAL SPECIFICATIONS:

|  |                |
|--|----------------|
| Frequency Range                          | 500 -4000 MHz. |
| Gain                                     | 3-6 dBi.       |
| Bandwidth                                | Entire Band    |
| Polarization                             | Circular       |
| Input Impedance                          | 50 Ohms        |
| Front to Back Ratio                      | 18 dB.         |
| Radiation Pattern                        | Directional    |
| Horizontal Beam-width –Half Power Points | 60 Degrees     |
| Vertical Beam-width –Half Power Points   | 60 Degrees     |
| VSWR                                     | 2.5 : 1        |
| RF Power Handling Capacity               | 150 Watts      |
| Input Termination                        | N-Female       |

### MECHANICAL SPECIFICATIONS:

|                              |                             |
|------------------------------|-----------------------------|
| Cavity Materials             | 6063T6 Aluminum             |
| Weight                       | 3 Kgs.                      |
| Wind Rating                  | 200 Km/Hr.                  |
| Approx Diameter              | 305mm (12 Inches)           |
| Approx Height                | 150mm (6 Inches)            |
| Radiating Elements Materials | Copper Strips               |
| Front Enclosure Materials    | Nylon Plastic               |
| Approx Shipping Size         | 330 x 180mm (13 x 7 Inches) |

### ENVIRONMENTAL SPECIFICATIONS:

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

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