

# SP1-2.4

0.3 m | 1 ft Standard Performance Parabolic Reflector Antenna, Single-polarized, 2.4-2.7GHz



## General Specifications

Antenna Type	Standard Performance Parabolic Reflector Antenna
Size, nominal	1 ft   0.3 m
Polarization	Single

## Electrical Specifications

Operating Frequency Band	2.4 - 2.7 GHz
Half Power Beamwidth, Horizontal	28 degrees
Half Power Beamwidth, Vertical	28 degrees
Cross-Polarization Discrimination	17 dB
Front to Back Ratio (F/B)	25 dB
Gain, Low Frequency	13.5 dBi
Gain, Mid Frequency	14 dBi
Gain, High Frequency	14.5 dBi
VSWR	1.5:1
Return Loss	-14 dB

## Mechanical Specifications

Fine Azimuth Adjustment	+/- 10 degrees
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Fine Elevation Adjustment	+/- 30 degrees
Mounting Pipe Diameter, Min	2 inch   5.08 cm
Mounting Pipe Diameter, Max	4.5 inch   11.4 cm
Net Weight	15 lbs   6.8 kg
Wind Velocity Operational	90 mph   145 km/h
Wind Velocity Survival Rating	125 mph   201 km/h
Mechanical Configuration	SP1
Axial Force (FA)	46 lbs   204 N
Side Force (FS)	13 lbs   58 N
Twisting Moment (MT)	27 ft-lbs   36 Nm
Operating temperature range	-40 to +60 C
Max pressure, psig, (if waveguide interface)	na

## Regulatory Compliance

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FCC	undeclared
ETSI	undeclared
RoHS-complaint	Yes

## Shipping Information

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Package Type	Cardboard
Gross Weight	18 lbs   8.1 kg
Dimensions, L x W x H	16 x 16 x 10in   40 x 40 x 13 cm
Shipping Volume	1.48 cu ft   0.04 cu m

## Additional Comments

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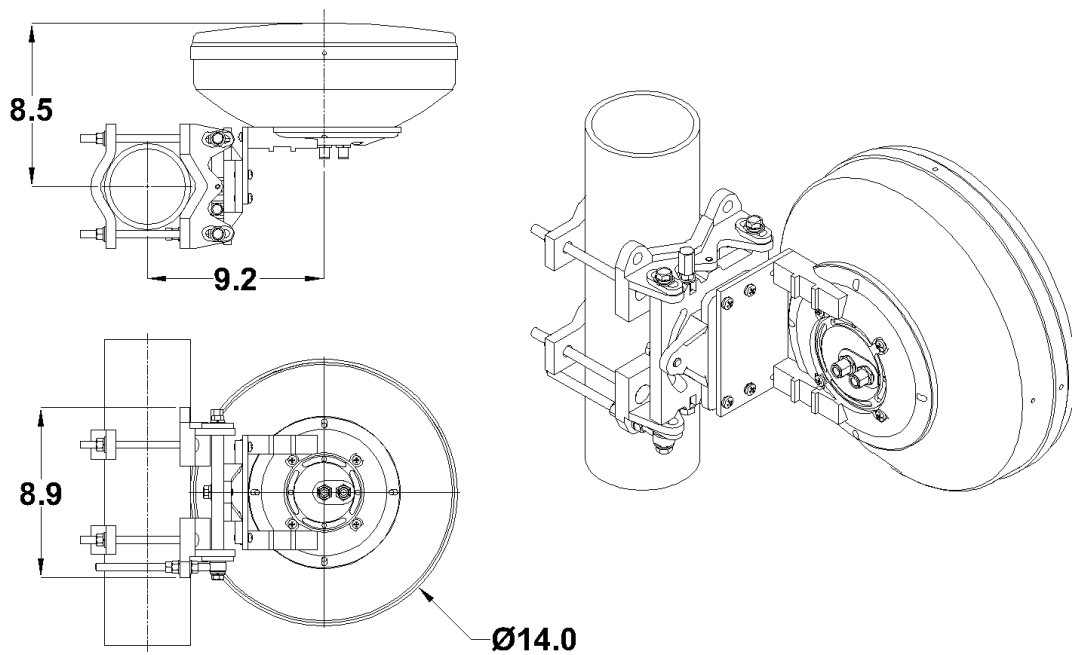
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## Technical Drawings

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**SP1**

## Radiowaves Glossary

Axial Force:	Force applied to the face of the antenna due to wind at specified wind speed
Beamwidth	The total width of the main beam measured in degrees between the 3-dB (half-power) points on either side of the peak of the main beam
Cross Polarization Discrimination (XPD)	The dB difference between maximum received co-polarized signal at electrical boresight and maximum received cross-polarized signal
Front to Back Ratio (F/B)	The dB difference between maximum received signal at electrical boresight to maximum received signal behind the antenna (180 +/- 40 degrees)
Gain	A measure of how well the antenna focuses available energy into a single beam. Larger antennas typically have higher gains and smaller beamwidths.
Gross Weight	Shipping weight, includes weight of antenna plus packaging materials
Net Weight	Weight of antenna only as mounted on tower.
Operating Frequency Band	The frequency limits between which the antenna meets declared specifications. Antennas may operate outside the frequency band with mild performance degradation.
Return Loss	A measure of how much rf energy incident upon the antenna is reflected back from whence it came, expressed as a negative dB value.
Side Force (FS)	Force applied to the side of the antenna due to wind at specified wind speed
Twisting Moment (MT)	The torsional (twisting) moment (force x distance) applied to the mounting pipe due to wind at the specified wind speed.

VSWR

A measure of how much rf energy incident upon the antenna is reflected back from whence it came, expressed as a ratio

Wind Velocity Operational

Wind speed where the antenna deflection is less than or equal to 0.1 degrees

Wind Velocity Survival Rating

Wind speed where the antenna will not suffer permanent damage, but may require re-pointing.