



5.25 - 5.85 GHz Dual Polarized High Performance Parabolic Reflector Antenna



Benefits:

- High Performance ETSI Class 2/3 (depends on frequency band) Parabolic Antennas
- Fully Preassembled at the factory – simplifies installation on site and guarantees “factory tested” quality
- Warranty – Industry leading 7 year warranty

Specifications

General

Part Number	RDH4508B	RDH4509B	RDH4510B	RDH4511B
Antenna Type	High Performance Parabolic Reflector Antenna			
Size, nominal	2 ft (0.6 m)	3 ft (0.9 m)	4 ft (1.2 m)	6 ft (1.8 m)
Polarization	Dual	Dual	Dual	Dual
Standard RF Connector Type	N Female	N Female	N Female	N Female

Electrical

Part Number	RDH4508B	RDH4509B	RDH4510B	RDH4511B
Operating Frequency Band	5.25 - 5.85 GHz			
Half Power Beam width, Horizontal	6.1 degrees	4.2 degrees	3 degrees	2 degrees
Half Power Beam width, Vertical	6.1 degrees	4.2 degrees	3 degrees	2 degrees
Cross Polarization Discrimination	28 dB	30 dB	30 dB	30 dB
Front to Back Ratio (F/B)	44 dB	46 dB	49 dB	52 dB
Gain, Low Frequency	28.3 dBi	31.8 dBi	34.2 dBi	37.2 dBi
Gain, Mid Frequency	28.8 dBi	32.3 dBi	34.7 dBi	37.7 dBi
Gain, High Frequency	29.3 dBi	32.8 dBi	34.7 dBi	38.2 dBi
VSWR	1.5:1	1.5:1	1.5:1	1.5:1
Return Loss	-14 dB	-14 dB	-14 dB	-14 dB

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Mechanical

Part Number	RDH4508B	RDH4509B	RDH4510B	RDH4511B
Fine Azimuth Adjustment	+/ 10 degrees	+/ 10 degrees	+/ 10 degrees	+/ 10 degrees
Fine Elevation Adjustment	+/ 30 degrees	+/ 25 degrees	+/ 25 degrees	+/ 25 degrees
Mounting Pipe Diameter, Min	2 inch (5.08 cm)	4.5 inch (11.4 cm)	4.5 inch (11.4 cm)	4.5 inch (11.4 cm)
Mounting Pipe Diameter, Max	4.5 inch (11.4 cm)	4.5 inch (11.4 cm)	4.5 inch (11.4 cm)	4.5 inch (11.4 cm)
Net Weight with radome	27 lbs (12.3 kg)	50 lbs (22.7 kg)	85 lbs (38.3 kg)	251 lbs (113 kg)
Wind Velocity Operational	90 mph (145 km/h)	90 mph (145 km/h)	90 mph (145 km/h)	90 mph (145 km/h)
Wind Velocity Survival Rating	125 mph (201 km/h)	125 mph (201 km/h)	125 mph (201 km/h)	125 mph (201 km/h)
Axial Force (FA) with radome	202 lbs (899 N)	403 lbs (1972 N)	737 lbs (3278 N)	1680 lbs (7473 N)
Side Force (FS) with radome	100 lbs (445 N)	200 lbs (890 N)	365 lbs (1623 N)	832 lbs (3700 N)
Twisting Moment (MT) with radome	194 ft-lbs (263 Nm)	344 ft-lbs (466 Nm)	784 lbs (1063 Nm)	2100 lbs (2847 Nm)
Operating Temperature Range	40 to +60 C	40 to +60 C	40 to +60 C	40 to +60 C
Max Pressure, PSIG, (if waveguide interface)	5	5	5	5

Shipping Information

Part Number	RDH4508B	RDH4509B	RDH4510B	RDH4511B
Package Type	Cardboard	Wood Crate	Wood Crate	Wood Crate
Gross Weight	48 lbs (28.7 kg)	143 lbs (69.8 kg)	196 lbs (88.9 kg)	401 lbs (181.8 kg)
Dimensions, L x W x H	31 x 31 x 25 in (79 x 79 x 64 cm)	47 x 28 x 48 in (119 x 71 x 122 cm)	59 x 35 x 60 in (150 x 89 x 152 cm)	77 x 35 x 80 in (195 x 89 x 203 cm)
Shipping Volume	13.9 cu ft (.39 cu m)	36.56 cu ft (1.04 cu m)	71.7 cu ft (2.03 cu m)	124.77.3 cu ft (3.53 cu m)

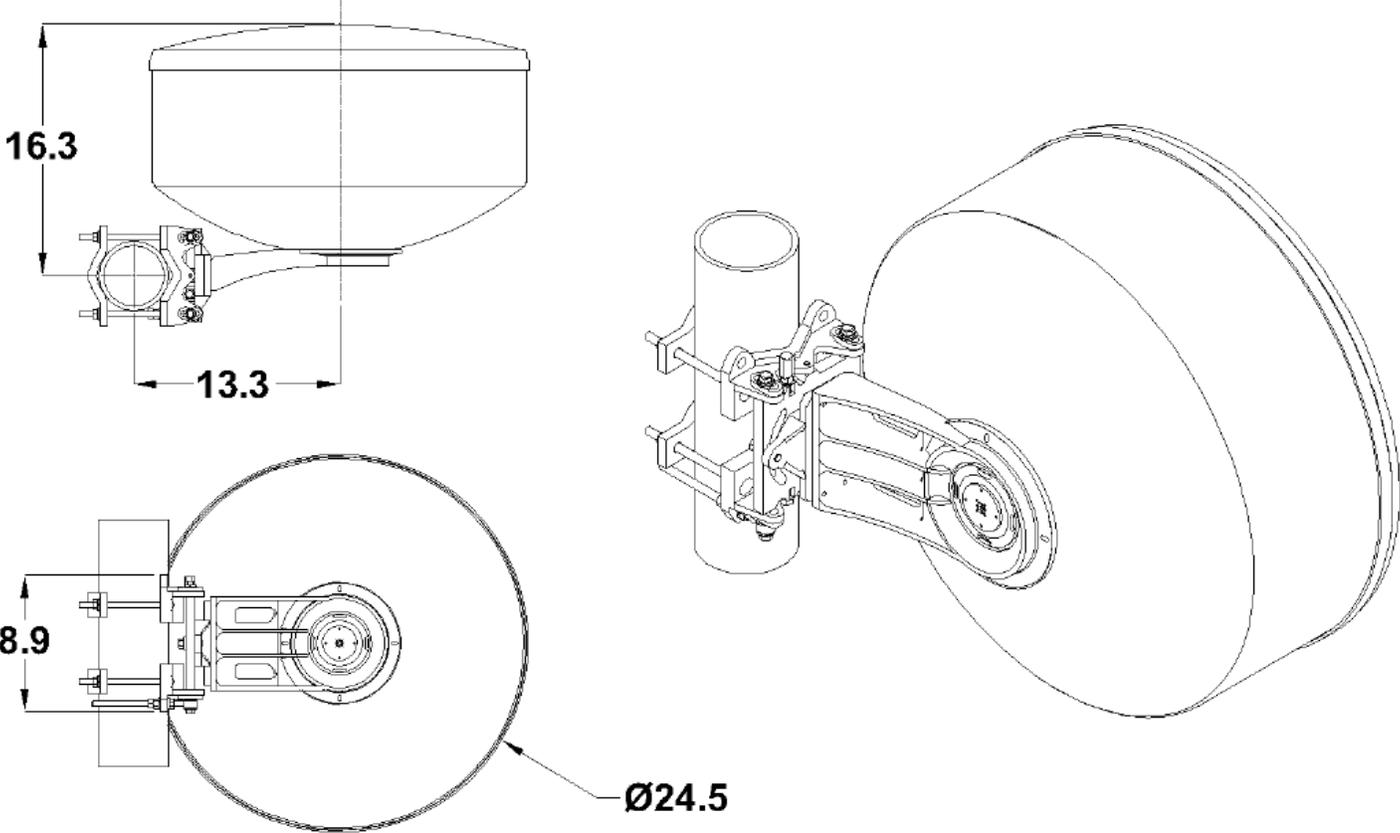
Regulation

FCC	undeclared
Industry Canada Compliance	undeclared
ETSI	undeclared
RoHS Compliance	Yes

Note: All antennas can operate 4.9-6.0 GHz with slightly degraded specifications

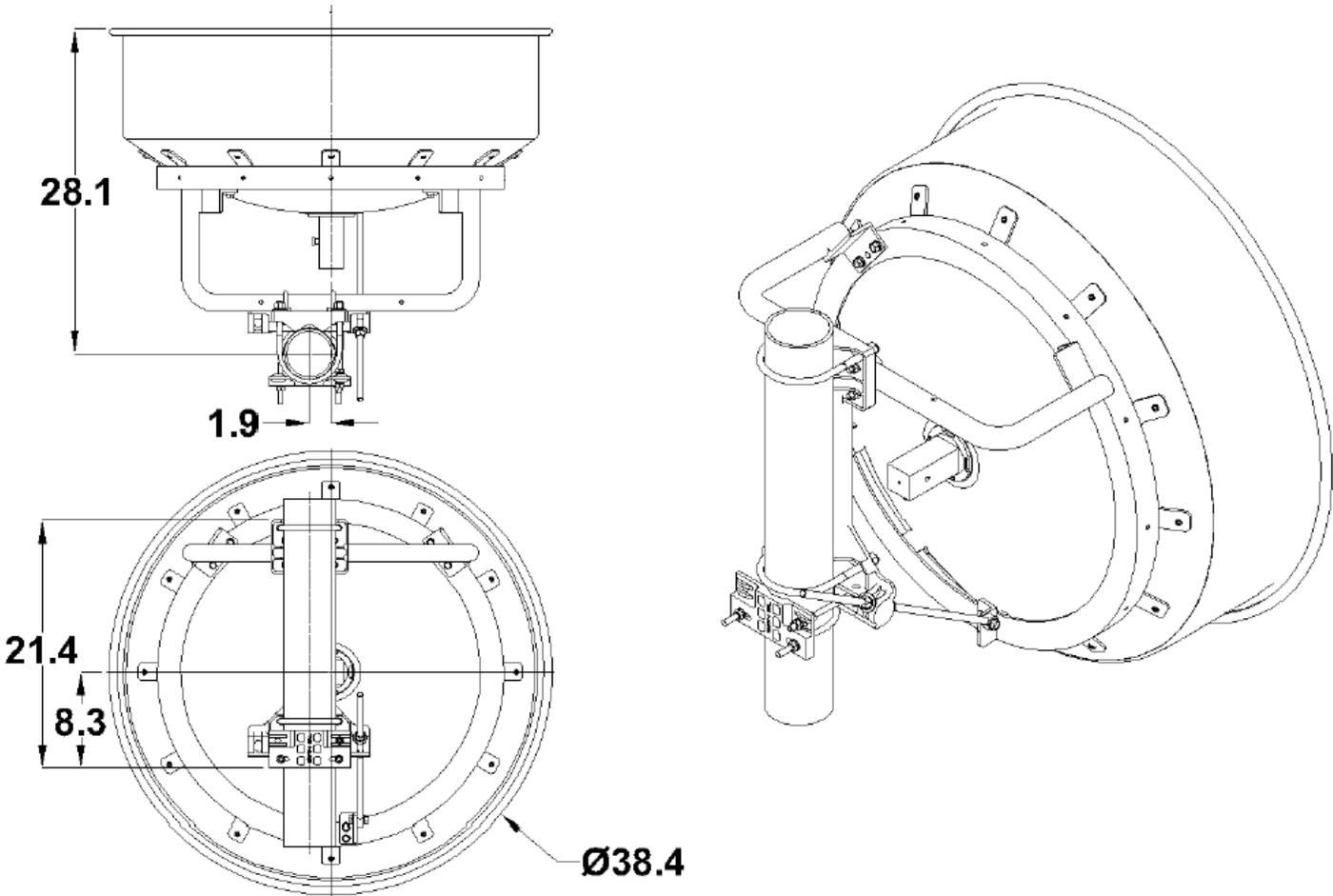
Technical Drawings

P/N	Description
RDH4508B	5.25-5.85 GHZ, 2-FT (0.6M), HIGH PERFORMANCE DUAL-POL



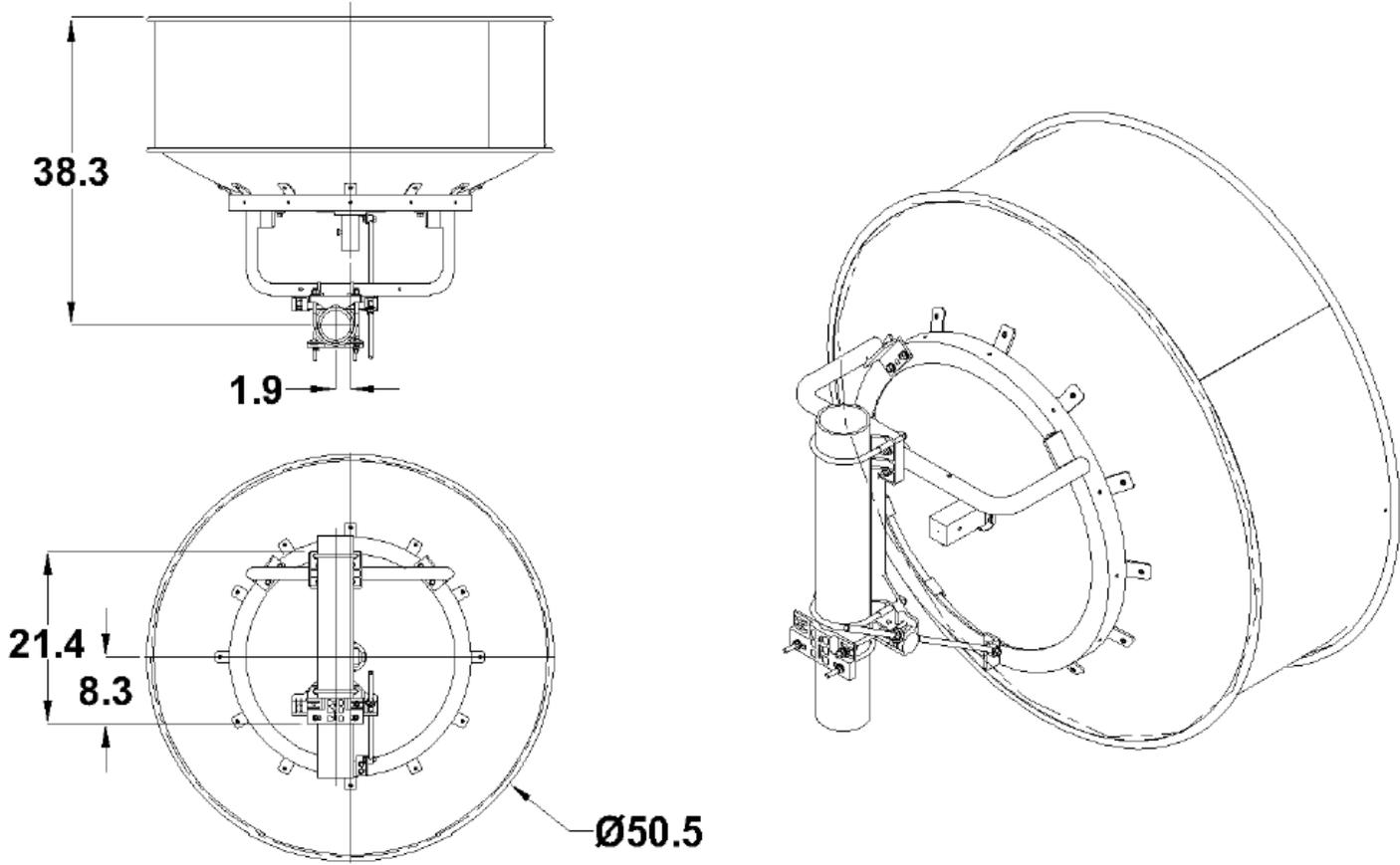
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P/N	Description
RDH4509B	5.25-5.85 GHz, 3-FT (0.9M), HIGH PERFORMANCE DUAL-POL



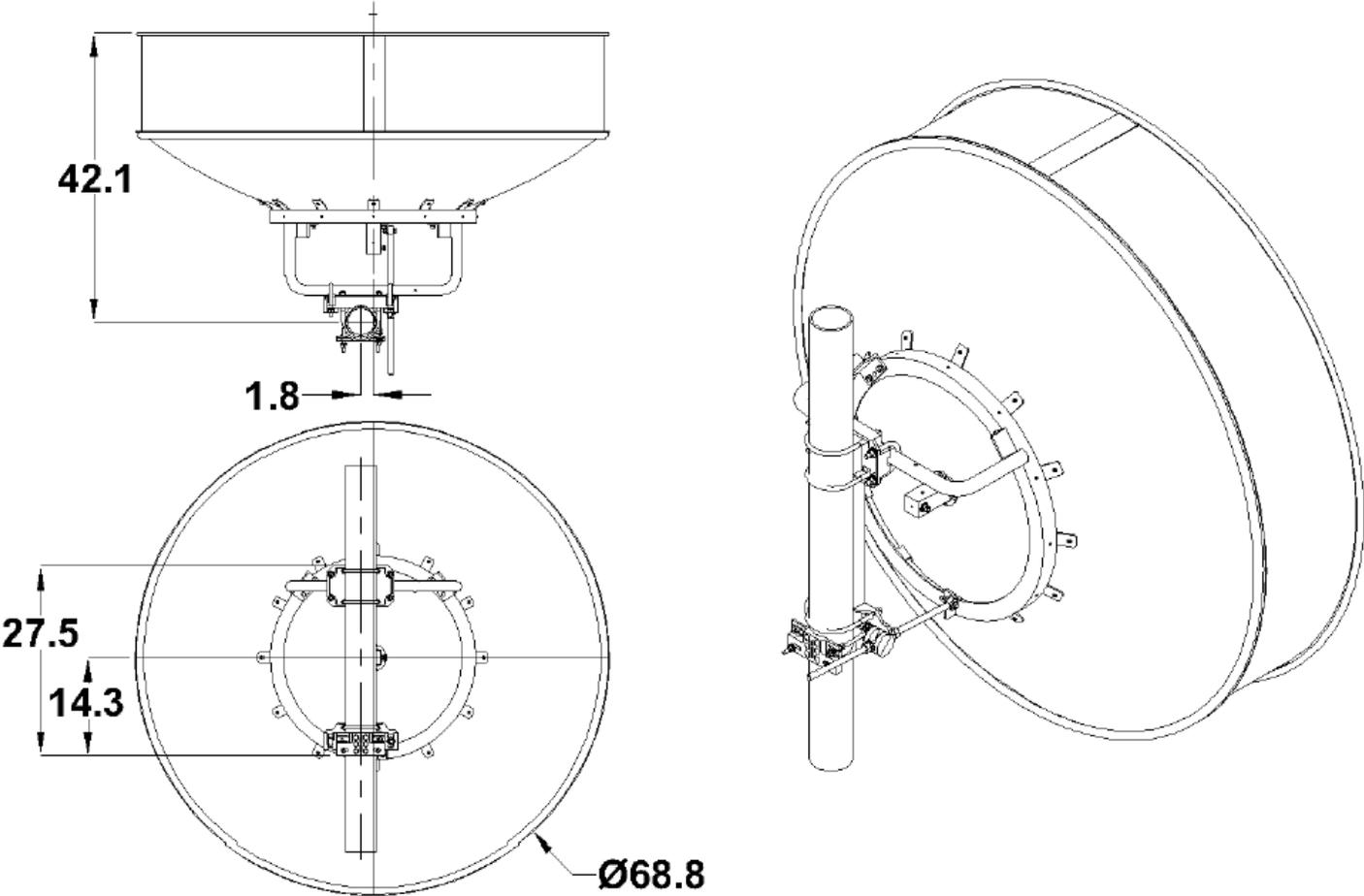
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P/N	Description
RDH4510B	5.25-5.85 GHZ, 4-FT (1.2M), HIGH PERFORMANCE DUAL-POL



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P/N	Description
RDH4511B	5.25-5.85 GHz, 6-FT (1.8M), HIGH PERFORMANCE DUAL-POL



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Glossary	Explanation
Axial Force	Force applied to the face of the antenna due to wind at specified wind speed
Beam width	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 beam widths.
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.