



5.25 - 5.85 GHz Dual Polarized Standard Performance Parabolic Reflector Antenna



Benefits:

- Fully Preassembled at the factory – simplifies installation on site and guarantees “factory tested” quality
- Warranty – Industry leading 7 year warranty

Specifications

General

Part Number	RDH4503B	RDH4504B	RDH4505B	RDH4506B	RDH4507B
Antenna Type	Standard Performance Parabolic Reflector Antenna	Standard Performance Parabolic Reflector Antenna	Standard Performance Parabolic Reflector Antenna	Standard Performance Parabolic Reflector Antenna	Standard 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)	8 ft (2.4 m)
Polarization	Dual	Dual	Dual	Dual	Dual
Standard RF Connector Type	N Female	N Female	N Female	N Female	N Female

Electrical

Part Number	RDH4503B	RDH4504B	RDH4505B	RDH4506B	RDH4507B
Operating Frequency Band	5.25 - 5.85 GHz	5.25 - 5.85 GHz	5.25 - 5.85 GHz	5.25 - 5.85 GHz	5.25 - 5.85 GHz
Half Power Beam width, Horizontal	6.2 degrees	4.2 degrees	3.1 degrees	2.1 degrees	1.6 degrees
Half Power Beam width, Vertical	6.2 degrees	4.2 degrees	3.1 degrees	2.1 degrees	1.6 degrees
Cross Polarization Discrimination	30 dB	30 dB	30 dB	30 dB	30 dB
Front to Back Ratio (F/B)	38 dB	40 dB	44 dB	46 dB	52 dB
Gain, Low Frequency	28.5 dBi	32 dBi	34.4 dBi	37.4 dBi	40.4 dBi
Gain, Mid Frequency	29 dBi	32.5 dBi	34.9 dBi	37.9 dBi	40.9 dBi
Gain, High Frequency	29.5 dBi	33 dBi	35.4 dBi	38.4 dBi	41.4 dBi
VSWR	1.5:1	1.5:1	1.5:1	1.5:1	1.5:1
Return Loss	-14 dB	-14 dB	-14 dB	-14 dB	-14 dB

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Mechanical

Part Number	RDH4503B	RDH4504B	RDH4505B	RDH4506B	RDH4507B
Fine Azimuth Adjustment	+/- 10 degrees	+/- 10 degrees	+/- 10 degrees	+/- 10 degrees	+/- 5 degrees
Fine Elevation Adjustment	+/- 30 degrees	+/- 25 degrees	+/- 25 degrees	+/- 25 degrees	+/- 5 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)	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)	4.5 inch (11.4 cm)
Net Weight without radome	22 lbs (9.9 kg)	35 lbs (15.8 kg)	60 lbs (27 kg)	95 lbs (42.8 kg)	165 lbs (74.3 kg)
Net Weight with radome	26 lbs (11.7 kg)	43 lbs (19.4 kg)	80 lbs (36 kg)	125 lbs (56.3 kg)	250 lbs (113.4 kg)
Wind Velocity Operational	90 mph (145 km/h)	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)	125 mph (201 km/h)
Axial Force (FA) without radome	222 lbs (988 N)	492 lbs (2189 N)	855 lbs (3803 N)	1768 lbs (7865 N)	3795 lbs (16940 N)
Axial Force (FA) with radome	122 lbs (543 N)	271 lbs (1206 N)	469 lbs (2087 N)	973 lbs (4329 N)	2773 lbs (12334 N)
Side Force (FS) without radome	14 lbs (62 N)	40 lbs (178 N)	45 lbs (200 N)	98 lbs (436 N)	1115 lbs (4980 N)
Side Force (FS) with radome	24 lbs (107 N)	64 lbs (285 N)	93 lbs (414 N)	162 lbs (721 N)	1422 lbs (6325 N)
Twisting Moment (MT) without radome	225 ftlbs (305 Nm)	545 ftlbs (739 Nm)	1120 ftlbs (1518 Nm)	2270 ftlbs (3077 Nm)	4800 ftlbs (6508 Nm)
Twisting Moment (MT) with radome	194 ft-lbs (263 Nm)	394 ft-lbs (534 Nm)	784 lbs (1063 Nm)	2100 lbs (2847 Nm)	4400 lbs (5966 Nm)
Operating Temperature Range	40 to +60 C	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	5

Shipping Information

Part Number	RDH4503B	RDH4504B	RDH4505B	RDH4506B	RDH4507B
Package Type	Cardboard	Wood Crate	Wood Crate	Wood Crate	Wood Crate
Gross Weight	25 lbs (11.3 kg)	78 lbs (35.3 kg)	126 lbs (57.15 kg)	222 lbs (100.7 kg)	878 lbs (398.2 kg)
Dimensions, L x W x H	28 x 8 x 28 in (71 x 20 x 71 cm)	40 x 17 x 44 in (101 x 43 x 140 cm)	59 x 19 x 60 in (150 x 48 x 152 cm)	77 x 20 x 80 in (195 x 501 x 203 cm)	102 x 60 x 91 in (259 x 152 x 231 cm)
Shipping Volume	3.63 cu ft (0.1 cu m)	17.31 cu ft (0.49 cu m)	38.92 cu ft (1.1 cu m)	71.3 cu ft (2.02 cu m)	322.29 cu ft (9.13 cu m)

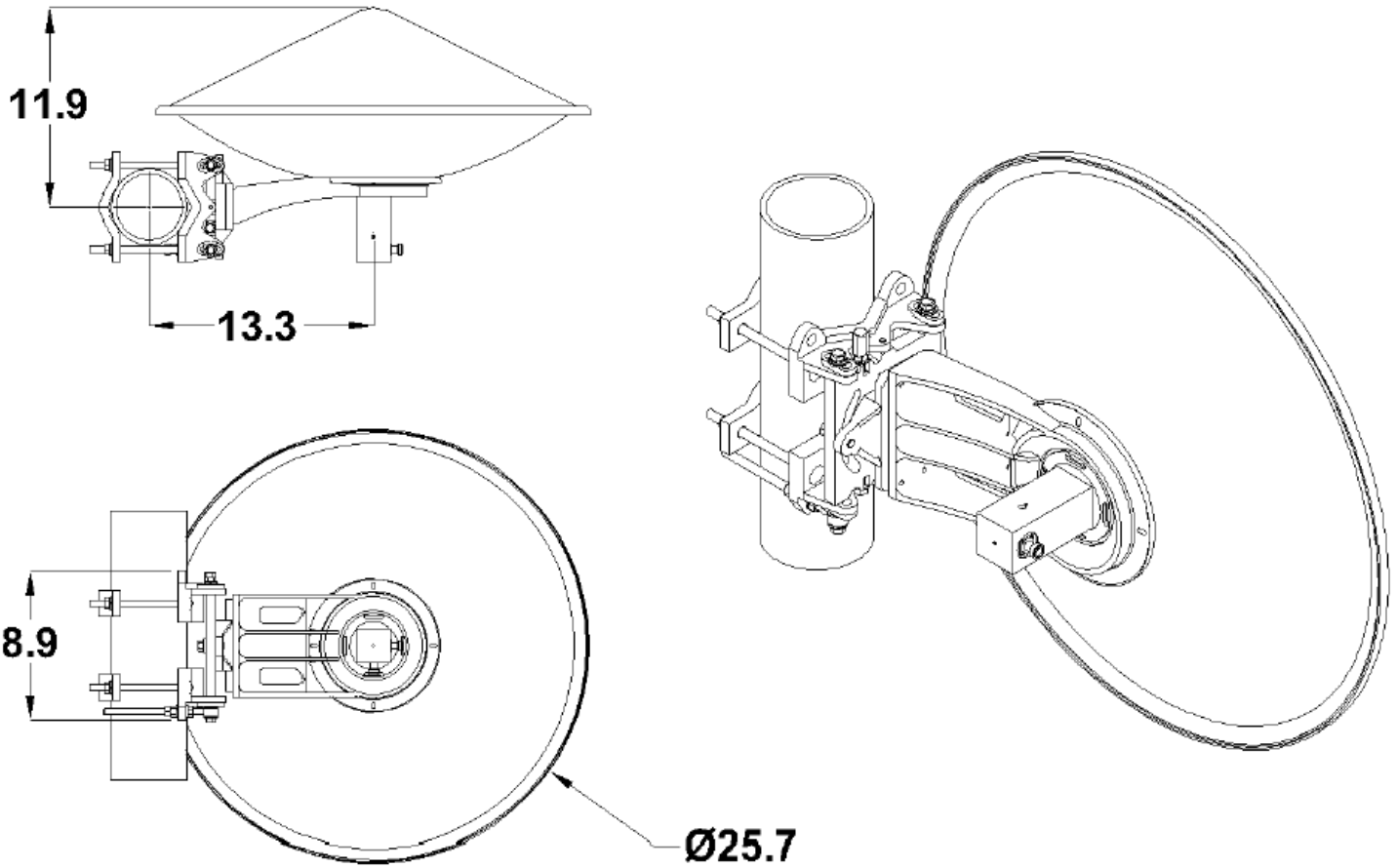
Regulation

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

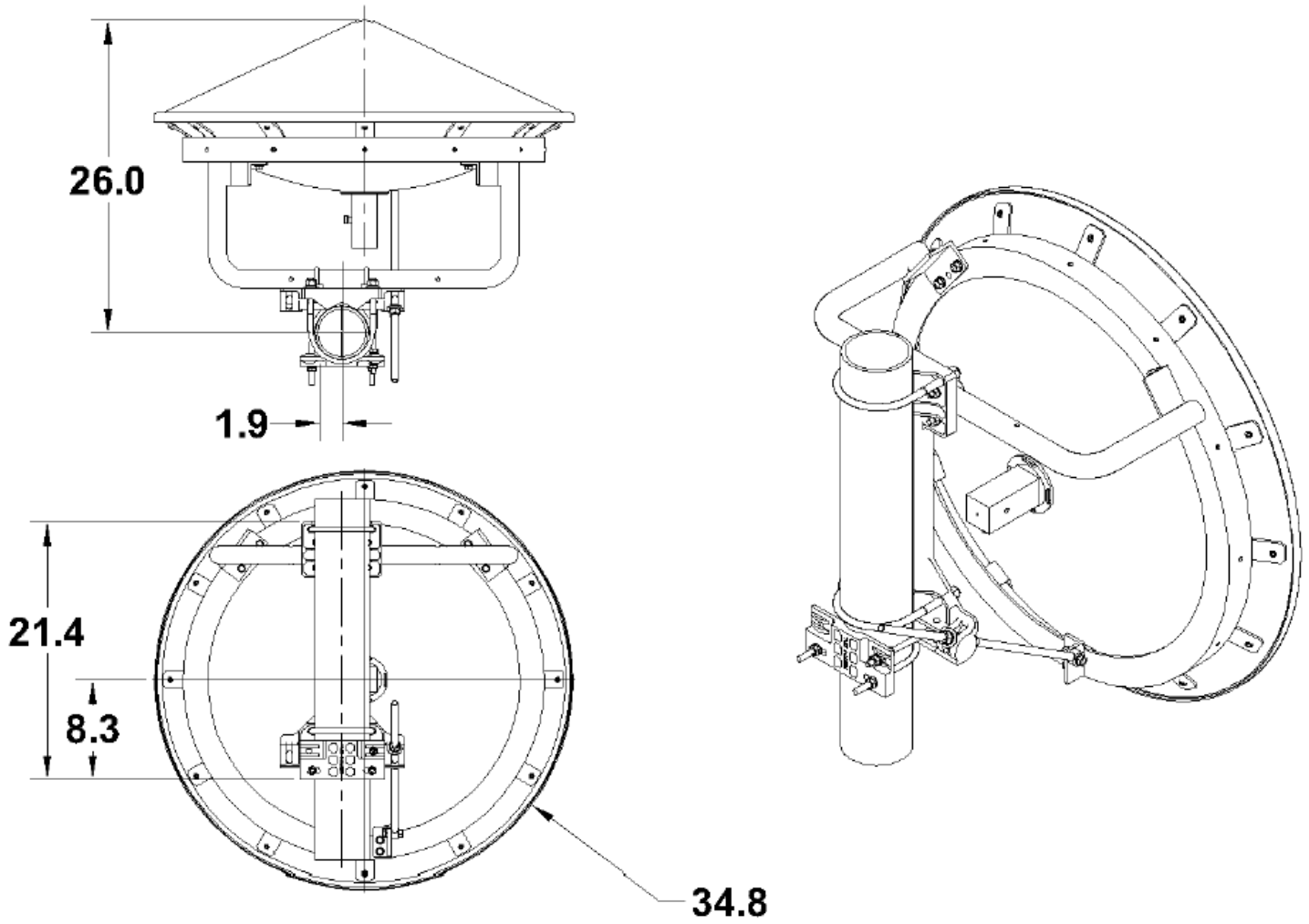
Technical Drawings

P/N	Description
RDH4503B	5.25-5.85 GHZ, 2-FT (0.6M), DUAL-POL, H-POL & V-POL



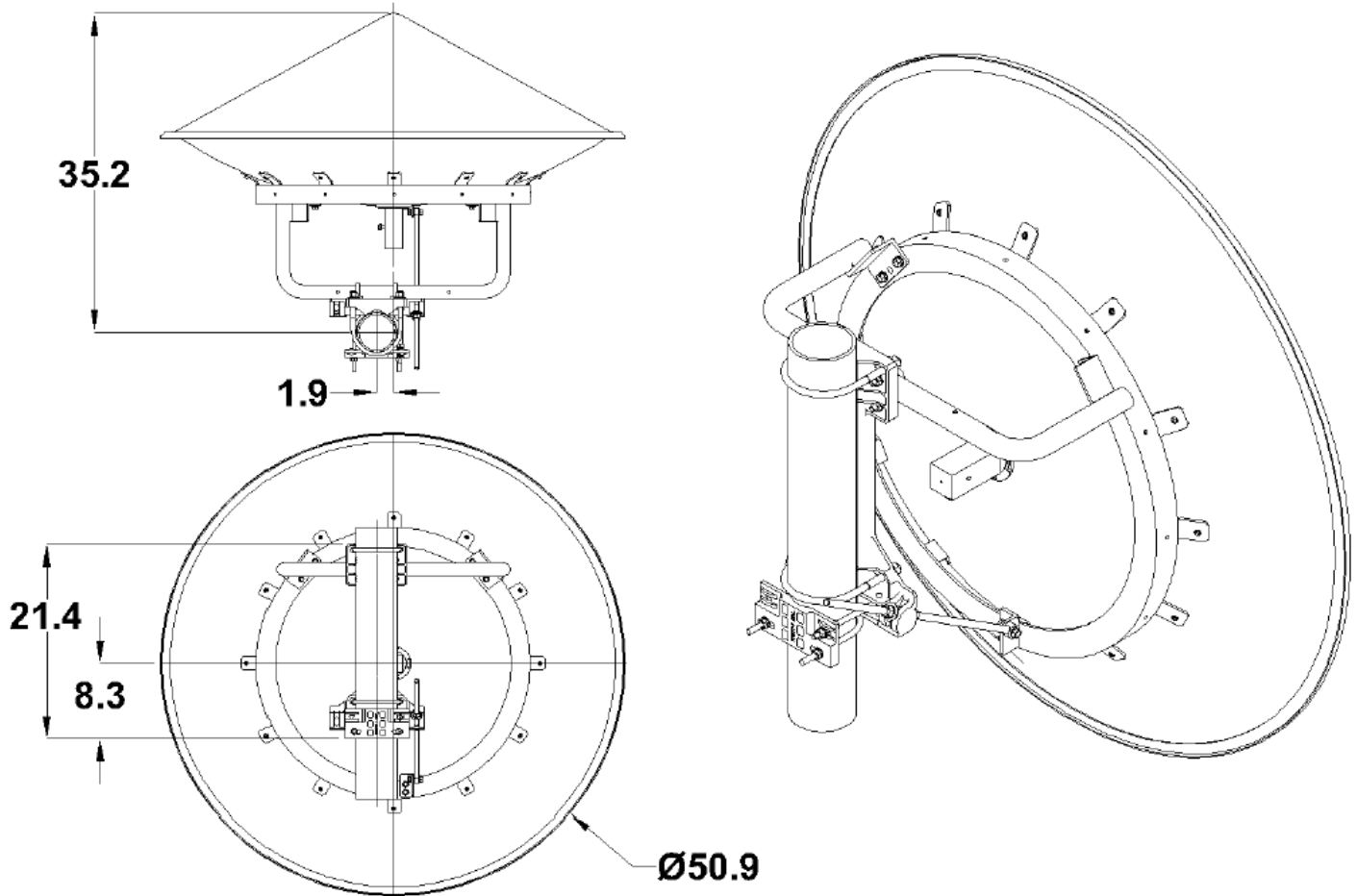
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P/N	Description
RDH4504B	5.25-5.85 GHz, 3-FT (0.9M), DUAL-POL, H-POL & V-POL



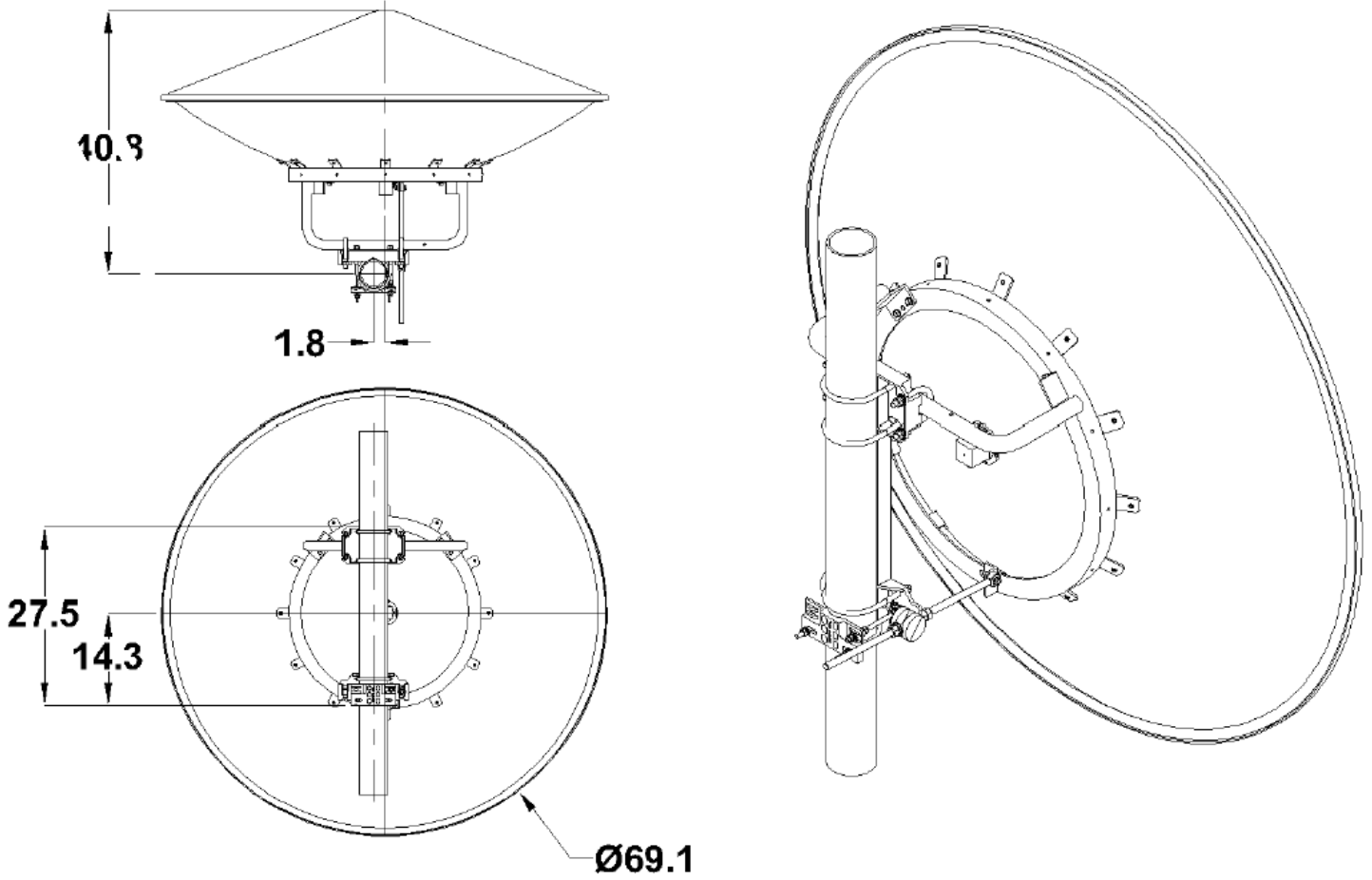
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P/N	Description
RDH4505B	5.25-5.85 GHZ, 4-FT (1.2M), DUAL-POL, H-POL & V-POL



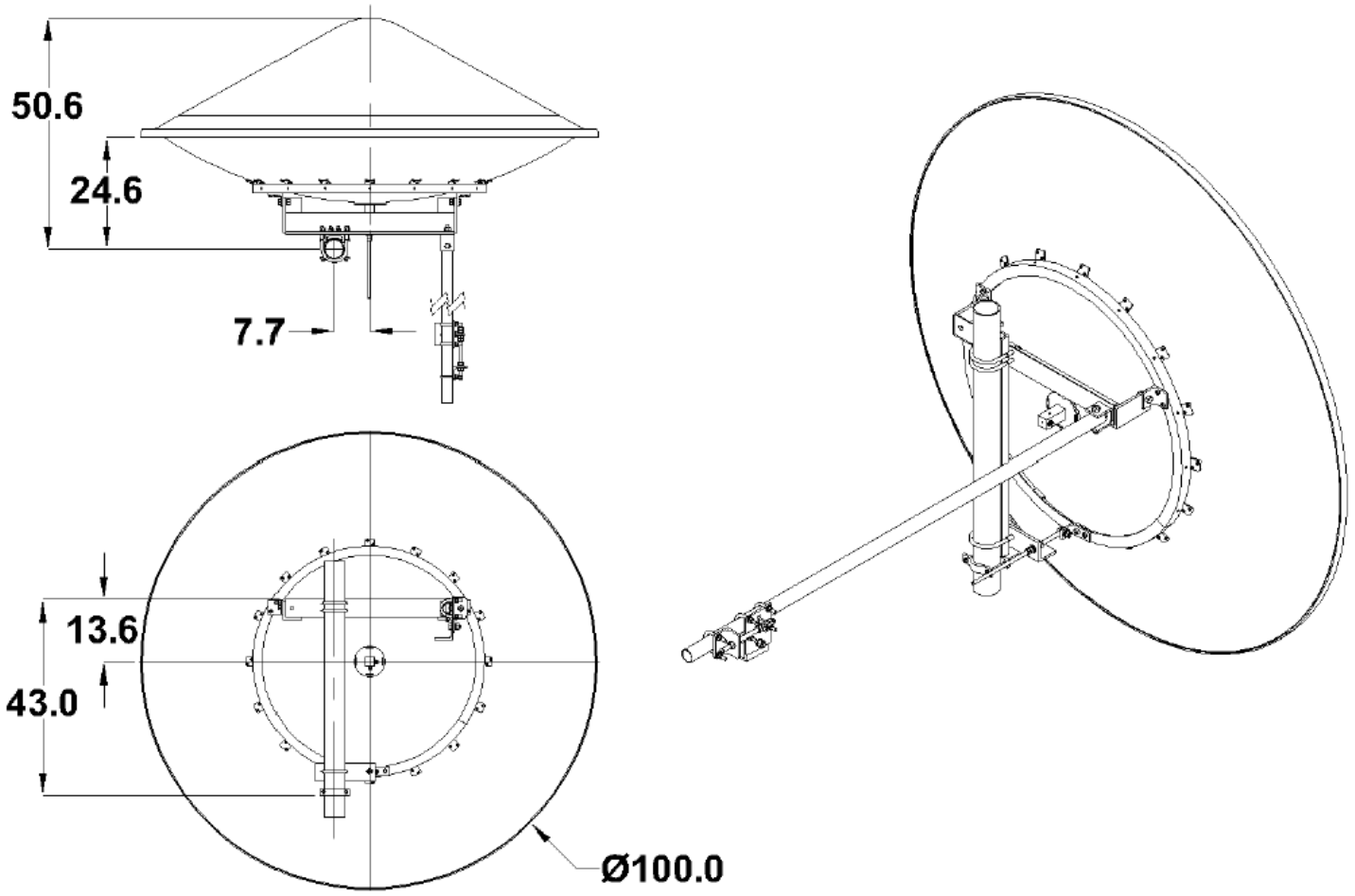
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P/N	Description
RDH4506B	5.25-5.85 GHZ, 6-FT (1.8M), DUAL-POL, H-POL & V-POL



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P/N	Description
RDH4507B	5.25-5.85 GHZ, 8-FT (2.4M), DUAL-POL, H-POL & V-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.