

Scientific



Reference
Network Stations



KEY FEATURES

- ▶ Low axial ratios from horizon to horizon
- ▶ Very Tight Phase Center Variation (<1 mm / 0.03 in)
- ▶ Low current (45mA)
- ▶ Invariant performance from: +2.7 to 24 VDC
- ▶ IGS calibration for NONE, SCIS and SCIT
- ▶ Compatible with tall and short SCIGN radomes

The VeraChoke choke ring antenna, powered by Tallysman, has consistent performance (gain, axial ratio, PCV, and PCO) across the full bandwidth. It provides the lowest axial ratios (horizon to horizon, over all azimuths) across all GNSS frequencies (<0.5dB at zenith, <3 dB typ. at horizon). It has an exceptional front to back ratio, high efficiency (>80%), a tight PCV, and near constant PCO for all azimuth and elevation angles, over all in-band frequencies.

BENEFITS

- Consistent performance across all frequencies
- Extreme precision
- Excellent multipath rejection
- IP67, REACH, RoHS compliant

FEATURES

GNSS frequencies

L-Band (MSS)	
GPS	L1, L2, L5
GLONASS	L1, L2, L3
Galileo	E1, E5a, E5b, E6
BeiDou	B1, B2, B3
SBAS	L1, L5
IRNSS	L5
QZSS	L1, L2, L5, L6

Polarisation

RHCP

Axial ratio

< 0.5 db at zenith

Radiation coverage (dBic)

	L1	L2
Zenith	6.7	5.8
15° elevation	-3.5	-1.7
10° elevation	-4.3	-2.6
5° elevation	-5.5	-3.5
Horizon	-6.6	-4.4

Amplifier

Noise figure	2.0 dB typ. lower band	
Input voltage	+2.7 to +24 VDC nominal	
Current	<45 mA (50 dB gain)	
Impedance	50 Ω	
VSWR	<1.5:1 max.	
Gain variation with temp	3dB max over operational temperature range	
P1dB output	+12 dBm	

Out of band rejection	900 MHz	50 dB
	1400 MHz	35 dB
	1000 MHz	40 dB
	1500 MHz	56 dB
	1100 MHz	25 dB
	1360 MHz	30 dB
	1700 MHz	50 dB
Group delay variation	<10 ns for each band	

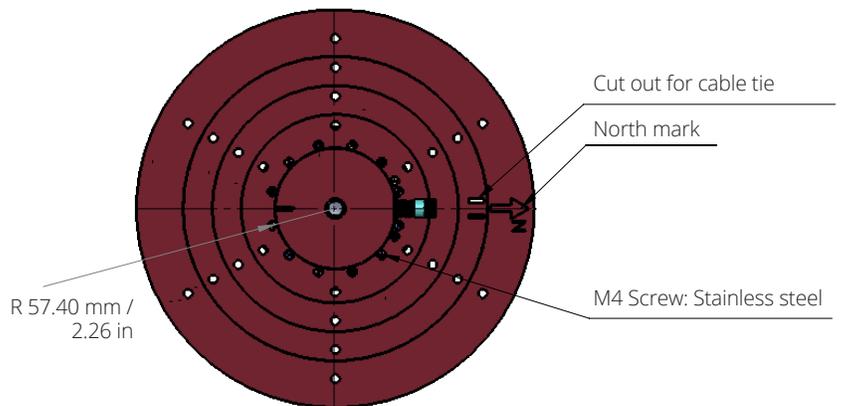
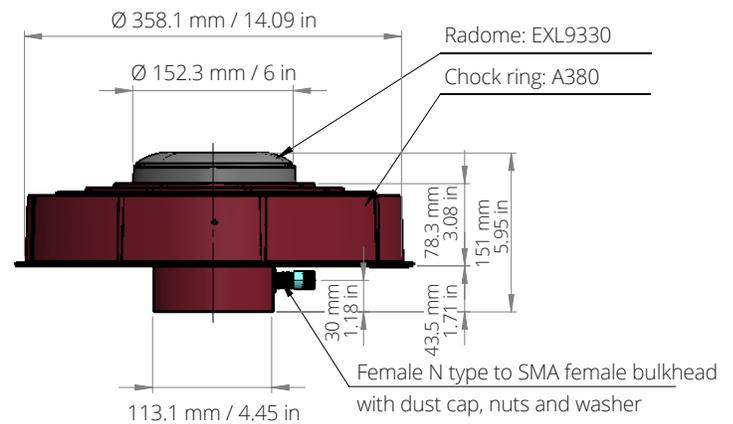
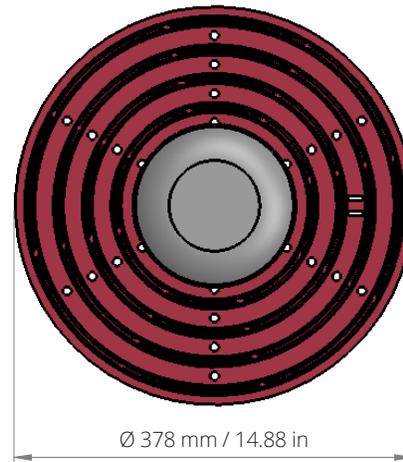
Antenna

Antenna gain	7.5 dBic to 8.5 dBic (all frequencies)	
Efficiency	>70%	
Phase centre variation	<1mm/0.03 in	
Phase centre offset (RMS)	± 0.2 mm / 0.008 in	
IGS reference	SEPVC6150L	

Mechanicals & Environmental

Antenna Reference Plane (ARP)	Bottom of 5/8" thread	
North orientation Indicator	Mark on choke aligned with connector	
Operating temperature range	-55° C to +85° C -40° F to +185° F	
Weight	4 Kg / 8.8 lb (no radome)	
Mounting thread	5/8" x 11 TPI female	
Connector	N-type female	
Certification	IP67, REACH, RoHS, WEEE, CE, FCC	
Shock	vertical axis: 50 G other axes: 30 G	
ESD Circuit Protection	15 kV air discharge	

DIMENSIONS



Performance Measured @ Vcc = 3V, and Temperature=25° C / 77° F



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