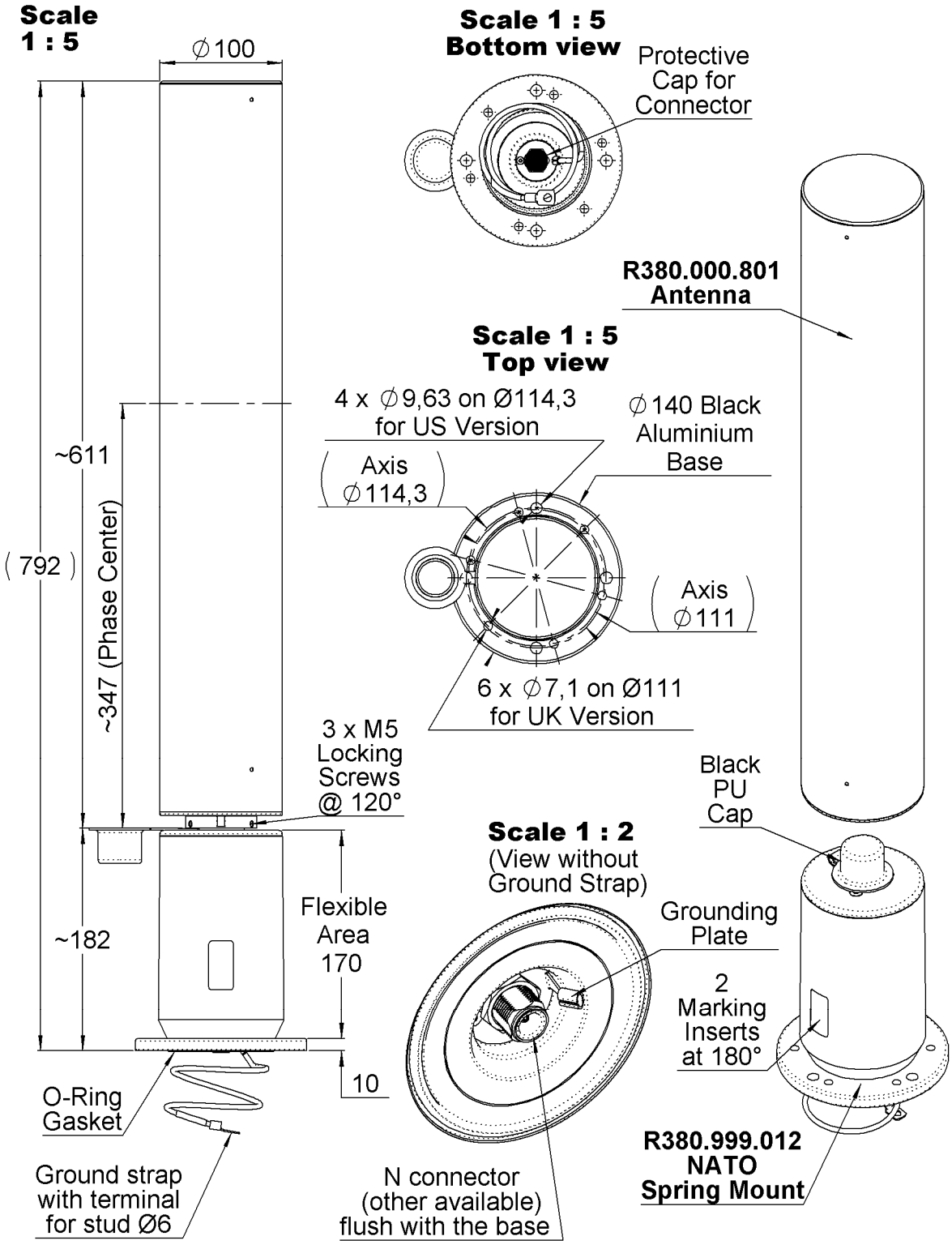
NATO SPRING MOUNT, VEHICULAR ANTENNA

225 - 520 MHZ - 300W - N FEMALE RECEPTACLE

R380.000.800

Series : **ANTENNA**



All dimensions are in mm

Issue : 1018 A

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Part	Material
Radome	Polycarbonate, NATO Green, Matt
Antenna Base	Aluminum, Black
Base Body	Aluminum, Black
Connector bodies	Brass, Black Cr.
Insulators	PTFE
Central Contacts	Brass, Ni2Au1.3
Spring	Stainless Steel, Black.
Compression Spring	Polyurethane, Black
Coaxial Cable	Specially developed 5/50Ω coax

The **R380.000.800** is a 300W, Dipolar Design, Broadband Vehicular Antenna. The Phase-Center is located near the Middle of the Tubular Radome..

The **R380.000.801** is a Ground plane Independent Antenna, that can be Mast-Mounted without particular impact on Electrical Performances.

ELECTRICAL CHARACTERISTICS

Frequency :	**225-520**	MHz
Nominal Impedance :	**50**	Ω
VSWR (225 - 520 MHz) :.....	**2.5:1**	Max
	2.0:1	Typ.
Polarization :.....	**VERTICAL**	
Radiation Pattern:	**OMNIDIRECTIONNAL**	
Ripple in Azimuth Plane:	**± 1**	dB
Power withstanding :	**300**	W CW
Connector (Antenna side) :.....	**Custom**	
Connector (NATO Base) :.....	**N Female**	
Gain (1.2 x 1.2 m ground plane):	**2**	**dBi (typ.)**
Gain in Azimuth plane (1.2 x 1.2 m ground plane):	**1.5±2**	**dBi**
DC Grounding):	**NO**	

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MECHANICAL CHARACTERISTICS

Radome material:.....	**PolyCarbonate**
Finish :	**NATO green , Matt**
Weight (incl. NATO Spring Mount) : .	**6,40** kg (TBC)
Antenna length (with NATO Spring Mount):	**792** mm (TBC)
Antenna Diameter:	**100** mm
"Oak" Beam Test :.....	**25 Times @ 40 km/h @ 0.55 m**

ENVIRONMENTAL CHARACTERISTICS

Operating Temperature :.....	**-55 / +71°C** ° C
Storage & Transport Temperature :.....	**-55 / +85°C** ° C
Fluid contamination :.....	**Iaw Mil Std 810F meth. 504**
Ingress Protection :	**IP67**
Salt Spray:	**48 h**
Vibration:	**Iaw Mil Std 810F meth 514.5 proc I, cat.20 (Track & wheeled vehicules)**
Shocks:	**Iaw Mil Std 810F meth 516.5 proc I & V**
Solar Radiation:	**Iaw Mil Std 810F proc II, desert conditions**
Sand & Dust:	**Iaw Mil Std 810F proc I&II**
Flexibility (Spring Mount) :	**5 000 90° bends** (1 250 in each direction) **40 000 30° bends** (10 000 in each direction)

Mechanical performances of the antenna are obtained with the specific R380.999.012 Spring Mount .

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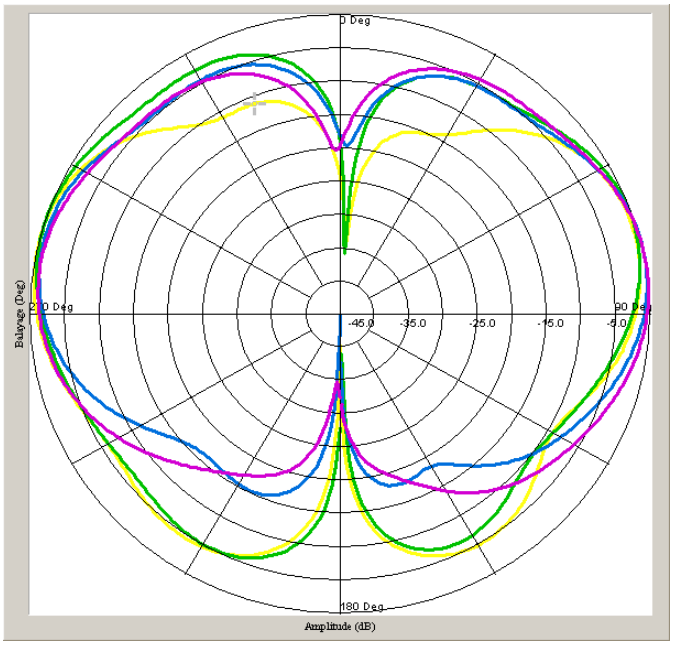
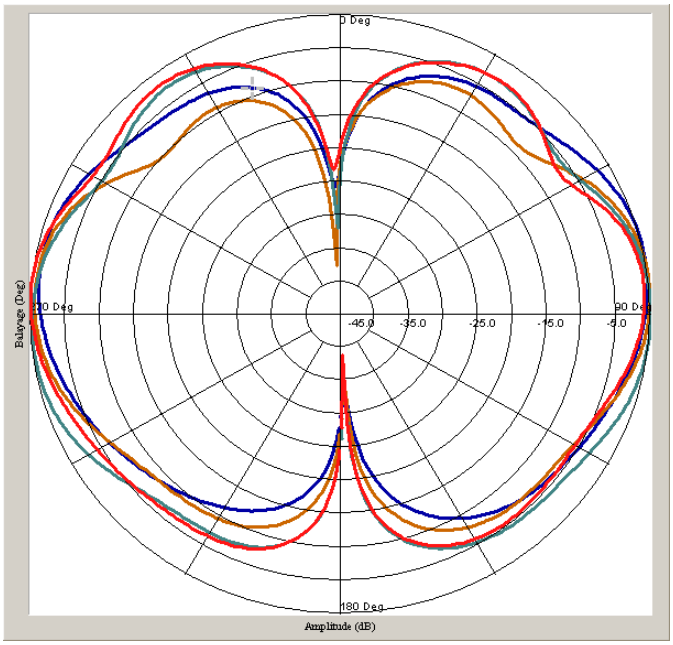
RADIATION PATTERNS (With Ground Plane)

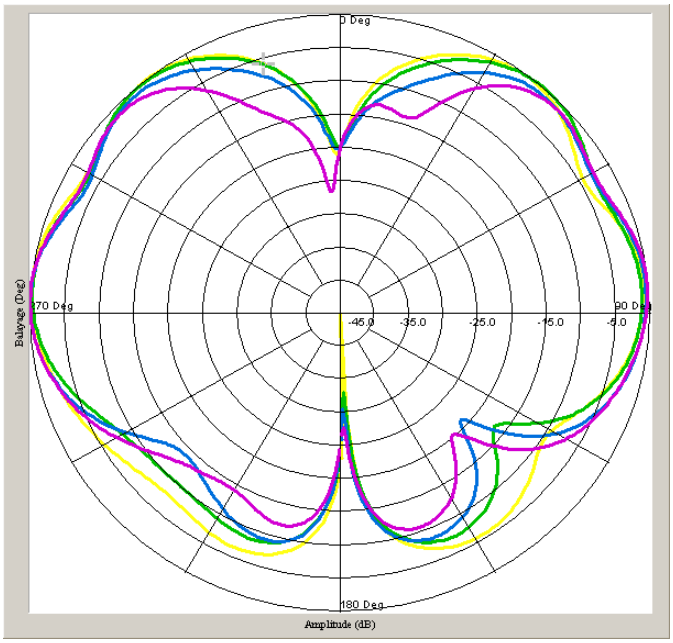
Radiation Patterns measured in Anechoïd Chamber with a 1.2 x 1.2 m ground plane.
(radiation patterns are normalized to 0dB)



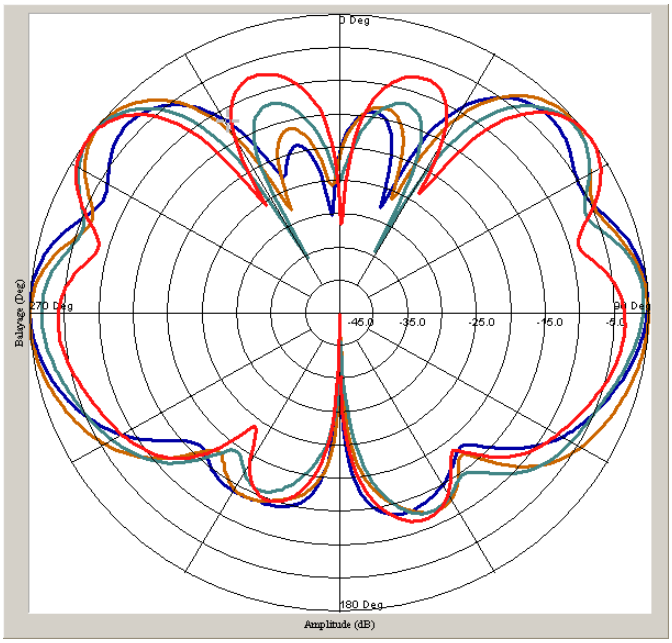
Frequency 220➔280 MHz



Frequency 300➔360 MHz



Frequency 380➔440 MHz



Frequency 460➔520 MHz

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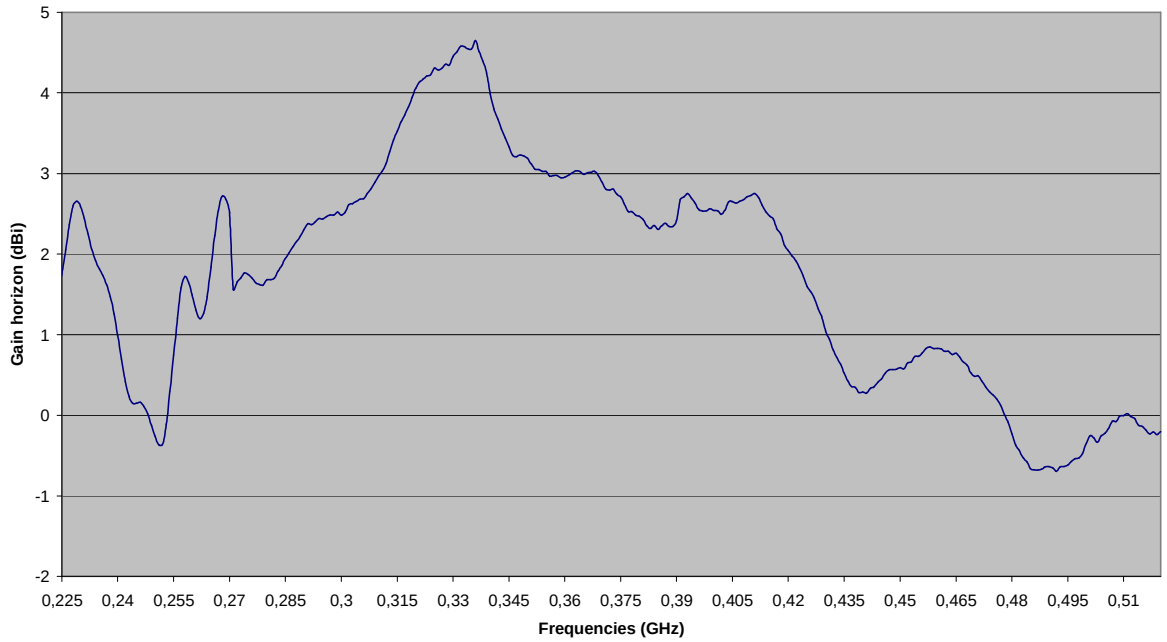
Series : **ANTENNA**

TYPICAL PERFORMANCE (With Ground Plane)

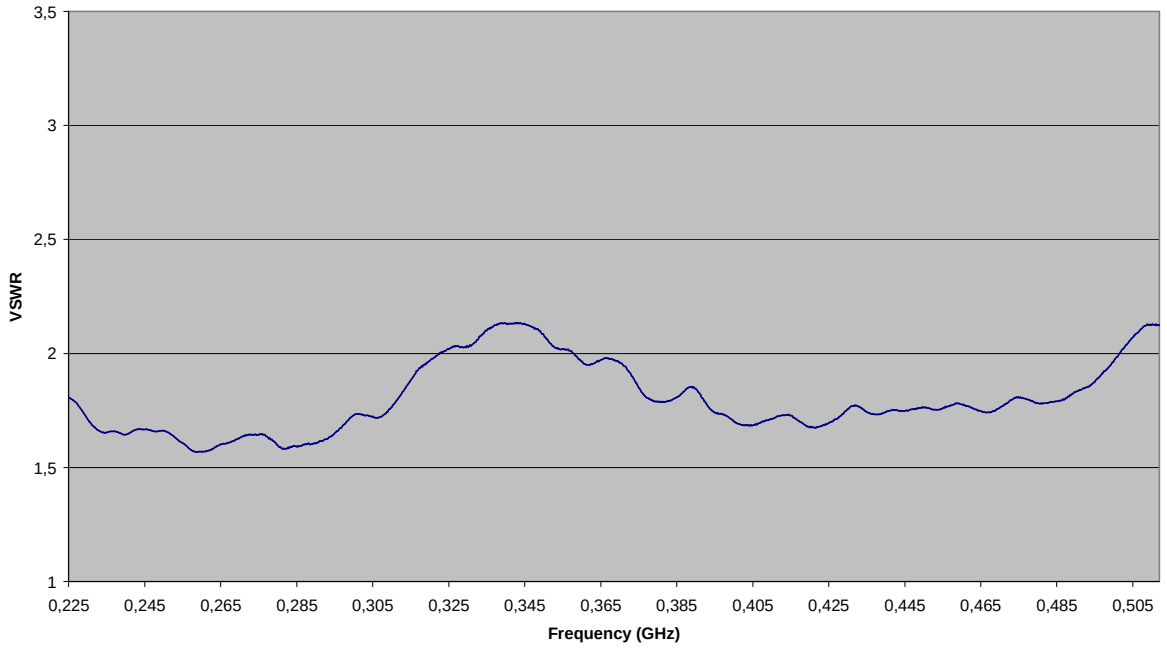
ANTENNA GAIN in AZIMUTH PLANE

horizon gain with ground plane 1.2x1.2m



VSWR

VSWR with ground plane 1.2x1.2m



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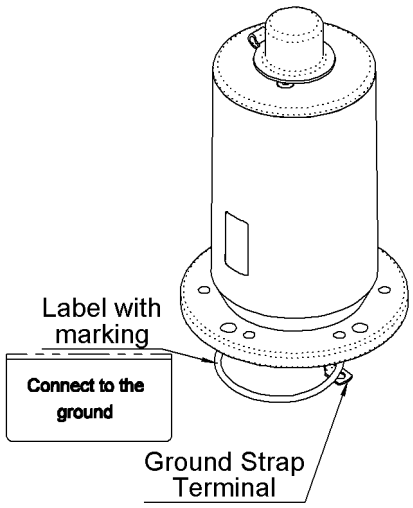
MOUNTING INSTRUCTIONS

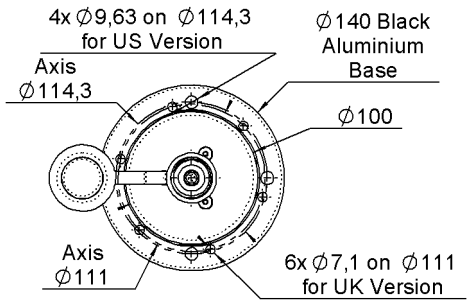
STEP1:



Connect the terminal of the ground strap provided with the spring mount to the chassis of the vehicle for ground reference.
The terminal is compatible with M6 studs / screws.

Connect the connector of the cable assembly to the N connector located in the base of the spring mount.
Recommended mating torque is 130N.cm

STEP2:

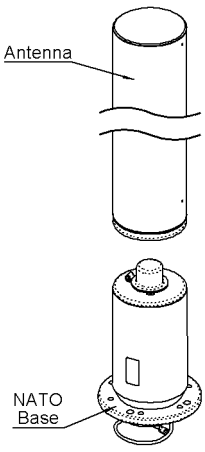


Secure the spring mount on the bracket or on the chassis of the vehicle using one of the two following options:
Option A: use 4 3/8 screws (or eq.) to secure the mount through 4 holes equally spaced on a ∅114.3 mm circle..
Option B: use ¼ screws (or eq.) to secure the mount through 6 holes located on a ∅111 mm circle

Refer to the technical drawing of the base for more details on both options.

Washers should be used to prevent major scratches that might reduce the mount's compatibility to salt spray.

STEP3:

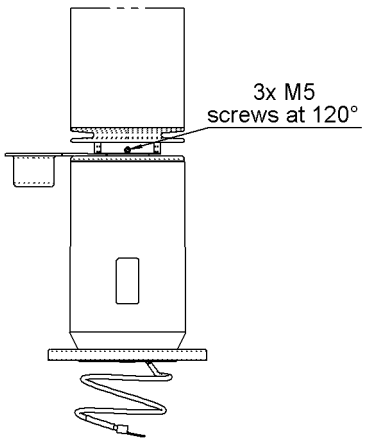


Remove the protective cap located on top of the spring mount.

Inspect visually the inner part of the connector of the antenna to make sure no sand, dirt or plastic material will prevent proper electrical mating.

Screw the antenna tube onto the spring mount until it comes a mechanical stop.

STEP4:



Secure the assembly using the M5 screw sets provided with the antenna tube.
At least one out of the 3 screws shall be tightly screwed to prevent un-mating of the antenna with shocks or vibrations.