

AERIAL OY ATEX-PRODUCTS



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AERIAL OY ATEX PRODUCTS

This document includes the brochures, mounting instructions, type examination certificates and declaration of conformity of the following Aerial Oy ATEX-product range.

Aerial Oy code:

#17489
 #17493
 #17497
 #17501
 #17502
 #17505
 #17506
 #17507
 #17509
 #17510
 #17511
 #17512
 #17513
 #17514
 #17515
 #17516
 #17517
 #18639
 #18670
 #18671
 #19114

Aerial Oy typename:

AV1314-H-EXnA-440FN2
 AV1314-R-H-EXnA-440FN2
 AV1314-T-H-EXnA-440FN2
 AV1312-1A-EXnA-131FN2
 AV1312-2-EXnA-160FN2
 AV1430-EXnA-131FN2
 AV1431-EXnA-160FN2
 AV1468-EXnA-390FN2
 AV1468-EXnA-420FN2
 AV1468-EXnA-460FN2
 AV1915-H-EXnA-440FN2
 AV1916-EXnA-915FN2
 TR2401-EXnA-160FN1
 TR2501-EXnA-405FN1
 TR4501-EXnA-405FN1
 TR1:2-150-470-EXnA-FN1 (TR2481-EXnA-310FN1)
 TR1:4-150-470-EXnA-FN1 (TR4481-EXnA-310FN1)
 AV1463-EXnA-313FN2
 AV1434-EXnA-2450FN2
 AV1438-EXnA-2450FN2
 AV1916-EXnA-826FN2

Mechanical mounting interface:

All ATEX-products contain hardware as indicated in the attached mounting instructions, for normal mounting to a 35...115mm round tube no other additional hardware is normally needed than silicone self vulcanizing tape. Other mounting kits are offered on request.

RF-interface:

Antennas are equipped with a 1m fixed jumper, this jumper length can be modified on request. The connector at the end of this jumper is by default N-female. Power dividers are equipped with N-female panel connectors.

Painting/color:

All ATEX-products are painted light grey, other colors/shades are offered on request.

For other details please refer type specific datasheets and mechanical mounting instructions.



1. **TYPE EXAMINATION CERTIFICATE**
2. **Equipment or Protective System Intended for use in
Potentially explosive atmospheres
Directive 94/9/EC**
3. Reference: **VTT 12 ATEX 052X Issue 2**
4. Equipment: **Antenna products**

Certified types: **AV1314-H-EXnA-440FN2
AV1314-R-H-EXnA-440FN2
AV1314-T-H-EXnA-440FN2
AV1312-1A-EXnA-131FN2
AV1312-2-EXnA-160FN2
AV1430-EXnA-131FN2
AV1431-EXnA-160FN2
AV1468-EXnA-...FN2
AV1915-H-EXnA-440FN2
AV1916-EXnA-915FN2
TR2401-EXnA-160FN1
TR2501-EXnA-405FN1
TR4501-EXnA-405FN1
TR1:2-150-470-EXnA-FN1 (TR2481-EXnA-310FN1)
TR1:4-150-470-EXnA-FN1 (TR4481-EXnA-310FN1)
AV1463-EXnA-313FN2
AV1434-EXnA-2450FN2
AV1438-EXnA-2450FN2
AV1916-ExnA-826FN2**
5. Applicant: **Aerial Oy**
6. Address: **Pietolankatu 9A
PL 22
FI 04400 Järvenpää
FINLAND**
7. These equipment and any acceptable variations thereto are specified in the schedule and possible supplements to this Certificate and the documents therein referred to.



8. VTT Expert Services Ltd, Certification Body No.S017 accredited by the Finnish Accreditation Service (FINAS), certifies that this equipment has been found to comply with the Essential Health and Safety Requirements in Annex II to European Union Directive 94/9/EC of March 1994 relating to the design and construction of Category 3 equipment intended for use in potentially explosive atmospheres. The examination and test results are recorded in confidential report no. VTT-S-08680-12.
9. Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 60079-0 (2012)
EN 60079-15 (2010)
10. If there appears sign X in the code, there are special conditions for safe use which are specified in the Annex of this Certificate.
11. This Type examination certificate relates only to the design, examination and tests of the specified equipment in accordance to the directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of the equipment. These are not covered by this certificate.
12. The marking of the equipment shall include the following:



II 3 G Ex nA IIA/IB/IC T6 Gc

Espoo, 16.4.2015
VTT Expert Services Ltd



Kari Koskela
Expert



Risto Sulonen
Product Manager

13. **Schedule**
14. **TYPE EXAMINATION CERTIFICATE VTT 12 ATEX 052X Issue 2**
15. Description of Equipment

Antenna elements and power dividers for antennas.

Rated values:

$$\begin{aligned} P_{\max}(\text{EIRP}) &= 6 \text{ W for Group IIA} \\ &= 3,5 \text{ W for Group IIB} \\ &= 2 \text{ W for Group IIC} \end{aligned}$$

Documents specifying the equipment:

AV1314-L-390FN1 (dated 16.11.2012)
AV1314-R (dated 16.11.2012)
AE11566 (dated 16.11.2012)
AE11998 (dated 16.11.2012)
AV1312-2 (dated 16.11.2012)
AE11951 (dated 16.11.2012)
TR2501 (dated 16.11.2012)
TR4501-N (dated 16.11.2012)
AV1468 (dated 16.11.2012)
AE11660 (dated 16.11.2012)
AV1916 (dated 16.11.2012)
TR2481 (dated 16.11.2012)
TR4481 (dated 16.11.2012)
AV1430 (dated 16.11.2012)
AE11636 (dated 16.11.2012)
AE19163 (dated 27.8.2014)
AE19159 (dated 27.8.2014)
AE19157 (dated 27.8.2014)
AE22360 (dated 18.3.2015)
AE22361(dated 16.2.2105)
List of main components and materials (dated 13.3.2015)

16. Report VTT-S-08680-12.
17. Special conditions for safe use

The allowed ambient temperature range of the equipment is -45 °C...+ 60 °C.

The maximum EIRP-power for radiating antenna products shall not exceed in group IIA 6W CW, group IIB 3,5W CW and group IIC 2 W CW.

Antennas with radome have electrostatic charging hazard, refer to the manufacturer's instruction.

Cable glands HSK-MZ-Ex are capable of withstanding an impact energy of 4 J and shall be applied such that the risk of mechanical danger is low.

18. Essential Health and Safety Requirements

Met by the compliance with the standards referred in the clause 9.

Certificate history

Issue	Date	Report No.	Comment
-	17.1.2013	VTT-S-08680-12	Prime certificate
1	13.10.2014	-	The introduction of three new models.
2	16.4.2015	-	The introduction of one new model.

Espoo, 16.4.2015
VTT Expert Services Ltd



Kari Koskela
Expert



Risto Sulonen
Product Manager

**EY – VAATIMUKSEN MUKAISUUSVAKUUTUS
ATEX Direktiivi 94/9/EY**

**EC – DECLARATION OF CONFORMITY
ATEX Directive 94/9/EC**

Valmistaja: Aerial Oy
Manufacturer:

Osoite: Pietolankatu 9A, PL 22, FI 04400 Järvenpää, FINLAND
Address:

Vakuuttaa että
Hereby declares that

Antennituotteet:	Aerial Oy koodi:	Aerial Oy tyyppinimi:
Antenna products:	Aerial Oy code:	Aerial Oy typename:
	#17489	AV1314-H-EXnA-440FN2
	#17493	AV1314-R-H-EXnA-440FN2
	#17497	AV1314-T-H-EXnA-440FN2
	#17501	AV1312-1A-EXnA-131FN2
	#17502	AV1312-2-EXnA-160FN2
	#17505	AV1430-EXnA-131FN2
	#17506	AV1431-EXnA-160FN2
	#17507	AV1468-EXnA-390FN2
	#17509	AV1468-EXnA-420FN2
	#17510	AV1468-EXnA-460FN2
	#17511	AV1915-H-EXnA-440FN2
	#17512	AV1916-EXnA-915FN2
	#17513	TR2401-EXnA-160FN1
	#17514	TR2501-EXnA-405FN1
	#17515	TR4501-EXnA-405FN1
	#17516	TR1:2-150-470-EXnA-FN1 (TR2481-EXnA-310FN1)
	#17517	TR1:4-150-470-EXnA-FN1 (TR4481-EXnA-310FN1)
	#18639	AV1463-EXnA-313FN2
	#18670	AV1434-EXnA-2450FN2
	#18671	AV1438-EXnA-2450FN2
	#19114	AV1916-EXnA-826FN2

- Täyttävät ATEX direktiivin 94/9/EY ja siihen liittyvien muutosten sekä ne voimaansaatettavien kansallisten säädösten määräykset.
- Are in conformity with the provisions of the ATEX directive 94/9/EC, as amended, and with national implementing legislation.

EX-merkintä:  II 3G, Ex nA IIA/IIB/IIC T6 Gc
EX-marking:

Sertifikaattinumero: VTT 12 ATEX 052X
Number of certificate:

Sertifikaatin myöntäjä: Expert Services Ltd, Kivimiehentie 4, FI 02044 VTT, Espoo, Finland
Certificate issued by:

Ja lisäksi vakuuttaa, että
And furthermore declares that

- Seuraavia standardeja (tai niiden osia /kohtia) on sovellettu:
- The following standards (or parts/clauses of) have been applied:

EN 60079-0 (2012)
EN 60079-15 (2010)

ETS 300 019-1-1 class 1.1
ETS 300 019-1-2 class 2.3
ETS 300 019-1-4 class 4.1 E

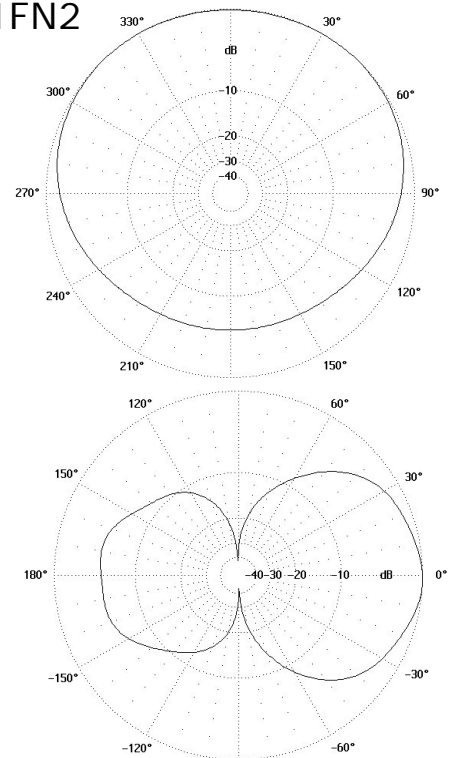
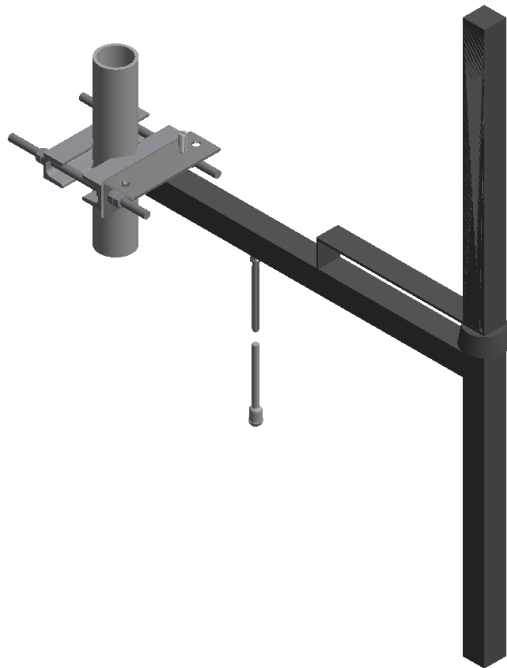
Aerial Oy:n puolesta
On behalf of Aerial Oy


Järvenpää, 18.03.2015



Kristian Tiihonen
Suunnitteluinsinööri
R&D Engineer

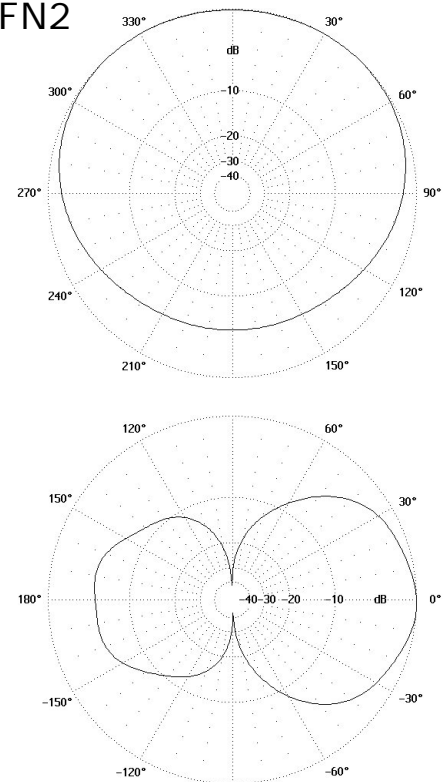
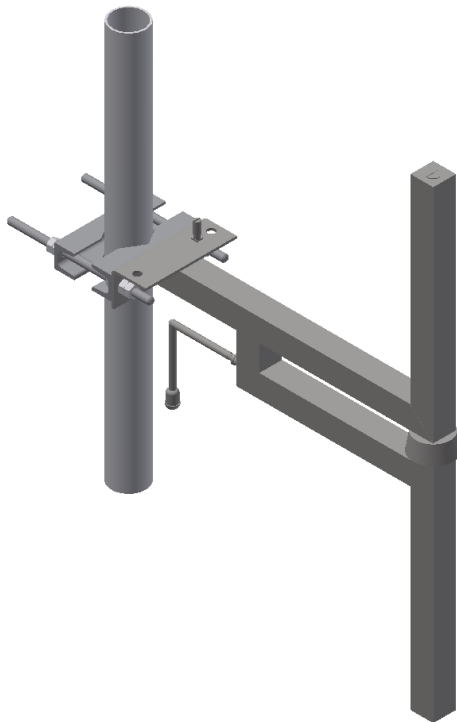
ATEX APPROVED LOW GAIN BASE STATION ANTENNA AV1312-1A-EXnA-131FN2




Type	AV1312-1A-EXnA-131FN2
Frequency	118...136 MHz / 118...144 MHz
Bandwidth	18 MHz / 26 MHz
Impedance	50 Ω DC grounded
VSWR	1,5 typical
Polarisation	Vertical
Gain	2 dBi nominal in free space *) 4 dBi nominal at the top of a 60mm tube (L=4xdipole length) *) 4 dBi nominal at the side of a 60mm tube (L=4xdipole length) *) For other mounting configurations please contact Aerial Oy
E-plane 3 dB beamwidth	70°
H-plane 3 dB beamwidth	200°/depending on mounting *)
Electrical downtilt	None
Front to back ratio	6 dB/depending on mounting *)
Max. Continuous power	In non-ATEX environment: -500W CW, limited by input connector In ATEX environment: -Group IIC: 2,0W (33,0dBm) -Group IIB: 3,5W (35,4dBm) -Group IIA: 6,0W (37,7dBm) -All three EIRP-power values
RF-connector	N-female on a 1000mm fixed jumper
Operational windspeed	40 m/s (default)
Survival windspeed	55 m/s (default)
Effective wind area (A_{eff})	0,10 m ²
Dimensions (H x W x D) (\varnothing x H)	1021 x 160 x 659 mm
Weight	7 kg antenna only, add 2 kg for standard mounting kit AETM160-6-A4
Mounting diameter	\varnothing 30...115 mm pipe standard mounting kit AETM160-6-A4
Materials	AISI304 AISI316 Glass reinforced PE
Options	Mounting kit and colour
Atex marking	 II 3G, Ex nA IIA/IIB/IIC T6 Gc
Ambient temperature	-45 °C \leq Tamb \leq +60 °C (Class T6)

*) Limited and/or controlled when used in ATEX-environment. See related EC DECLARATION OF CONFORMITY ATEX Directive 94/9/EC, TYPE EXAMINATION CERTIFICATE, installation instruction and their attachments for more details, information and before installation and assembly.

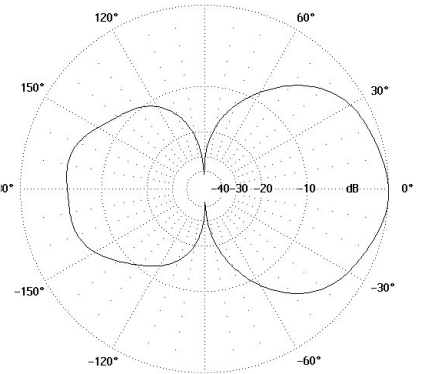
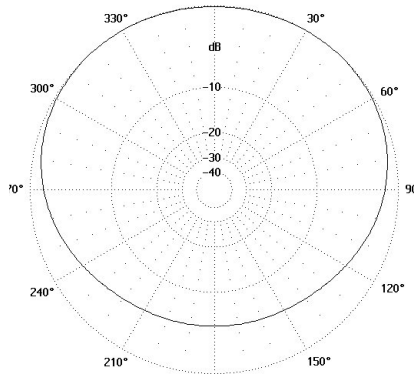
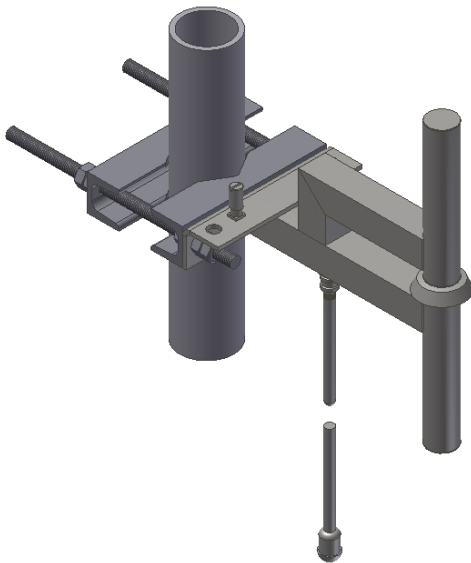
ATEX APPROVED LOW GAIN BASE STATION ANTENNA AV1312-2-EXnA-160FN2




Type	AV1312-2-EXnA-160FN2
Frequency	146...174 MHz
Bandwidth	28 MHz
Impedance	50 Ω DC grounded
VSWR	1,5 typical
Polarisation	Vertical
Gain	2 dBi nominal in free space *) 4 dBi nominal at the top of a 60mm tube (L=4xdipole length) *) 4 dBi nominal at the side of a 60mm tube (L=4xdipole length) *) For other mounting configurations please contact Aerial Oy.
E-plane 3 dB beamwidth	70°
H-plane 3 dB beamwidth	200°/depending on mounting *)
Electrical downtilt	None
Front to back ratio	6 dB/depending on mounting *)
Max. Continuous power	In non-ATEX environment: -500W CW, limited by input connector In ATEX environment: -Group IIC: 2,0W (33,0dBm) -Group IIB: 3,5W (35,4dBm) -Group IIA: 6,0W (37,7dBm) -All three EIRP-power values
RF-connector	N-female on a 1000mm fixed jumper
Operational windspeed	40 m/s (default)
Survival windspeed	55 m/s (default)
Effective wind area (A_{eff})	0,11 m ²
Dimensions (H x W x D) (\varnothing x H)	816 x 160 x 519 mm
Weight	6,8 kg antenna only, add 2 kg for standard mounting kit AETM160-6-A4
Mounting diameter	\varnothing 30...115 mm pipe standard mounting kit AETM160-6-A4
Materials	AISI304 AISI316 Glass reinforced PE
Options	Mounting kit and colour
Atex marking	 II 3G, Ex nA IIA/IIB/IIC T6 Gc
Ambient temperature	-45 °C \leq Tamb \leq +60 °C (Class T6)

*) Limited and/or controlled when used in ATEX-environment. See related EC DECLARATION OF CONFORMITY ATEX Directive 94/9/EC, TYPE EXAMINATION CERTIFICATE, installation instruction and their attachments for more details, information and before installation and assembly.

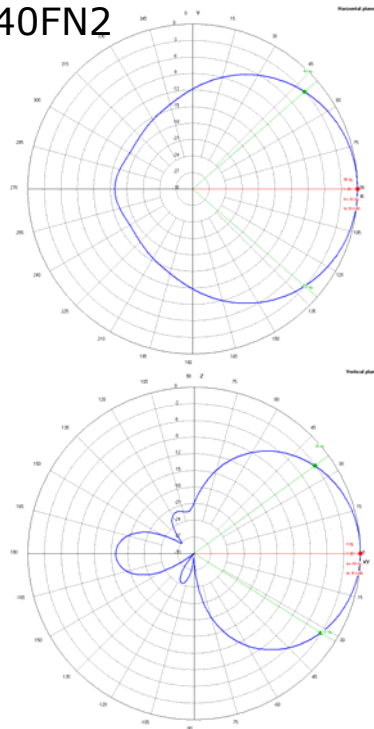
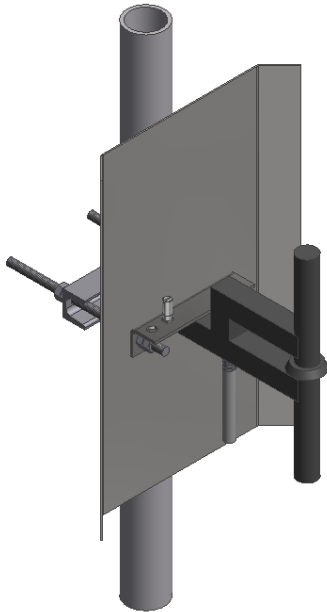
ATEX APPROVED LOW GAIN BASE STATION ANTENNA AV1314-H-EXnA-440FN2




Type	AV1314-H-EXnA-440FN2
Frequency	380...470 MHz
Bandwidth	90 MHz
Impedance	50 Ω DC grounded
VSWR	1,5 typical
Polarisation	Vertical
Gain	2 dBi nominal in free space *) 4 dBi nominal at the top of a 60mm tube (L=4xdipole length) *) 4 dBi nominal at the side of a 60mm tube (L=4xdipole length) *) For other mounting configurations please contact Aerial Oy.
E-plane 3 dB beamwidth	70°
H-plane 3 dB beamwidth	200°/depending on mounting *)
Electrical downtilt	None
Front to back ratio	6 dB/depending on mounting *)
Max. continuous power	In non-ATEX environment: -500W CW, limited by input connector In ATEX environment: -Group IIC: 2,0W (33,0dBm) -Group IIB: 3,5W (35,4dBm) -Group IIA: 6,0W (37,7dBm) -All three EIRP-power values
RF-connector	N-female on a 1000mm fixed jumper
Operational windspeed	40 m/s (default)
Survival windspeed	55 m/s (default)
Effective wind area (A_{eff})	0,03 m ²
Dimensions (H x W x D) (\varnothing x H)	313 x 160 x 234 mm
Weight	1,7 kg antenna only, add 2 kg for standard mounting kit AETM160-6-A4
Mounting diameter	\varnothing 30...115 mm pipe standard mounting kit AETM160-6-A4
Materials	AISI304 AISI316 Glass reinforced PE
Options	Mounting kit and colour
Atex marking	 II 3G, Ex nA IIA/IIB/IIC T6 Gc
Ambient temperature	-45 °C \leq Tamb \leq +60 °C (Class T6)

*) Limited and/or controlled when used in ATEX-environment. See related EC DECLARATION OF CONFORMITY ATEX Directive 94/9/EC, TYPE EXAMINATION CERTIFICATE, installation instruction and their attachments for more details, information and before installation and assembly.

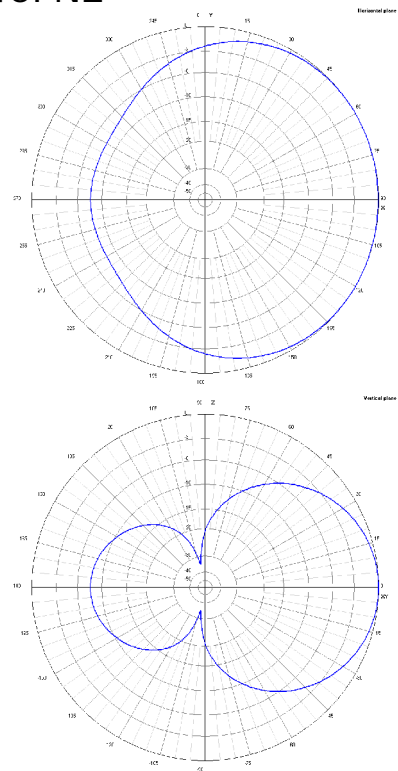
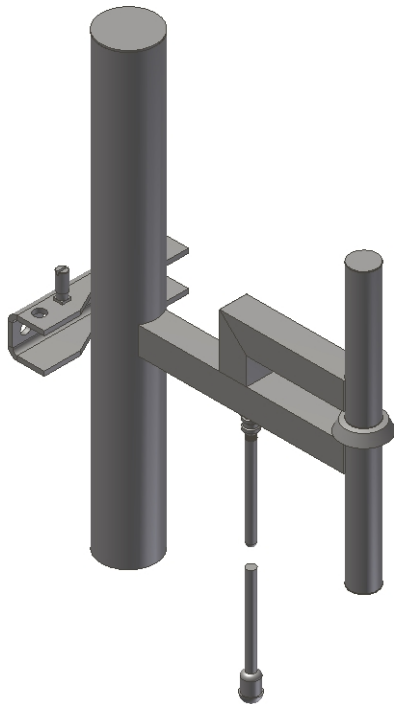
ATEX APPROVED LOW GAIN BASE STATION ANTENNA AV1314-R-H-EXnA-440FN2




Type	AV1314-R-H-EXnA-440FN2
Frequency	380...470 MHz
Bandwidth	90 MHz
Impedance	50 Ω DC grounded
VSWR	1,5 typical
Polarisation	Vertical
Gain	8 dBi nominal in free space *) For other mounting configurations please contact Aerial Oy.
E-plane 3 dB beamwidth	60°
H-plane 3 dB beamwidth	80°
Electrical downtilt	None
Front to back ratio	15 dB
Max. Continuous power	In non-ATEX environment: -500W CW, limited by input connector In ATEX environment: -Group IIC:2,0W (33,0dBm) -Group IIB:3,5W (35,4dBm) -Group IIA:6,0W (37,7dBm) -All three EIRP-power values
RF-connector	N-female on a 1000mm fixed jumper
Operational windspeed	40 m/s (default)
Survival windspeed	55 m/s (default)
Effective wind area (A_{eff})	0,32 m ²
Dimensions (H x W x D) (\varnothing x H)	500 x 320 x 300 mm
Weight	4,4 kg antenna only, add 2 kg for standard mounting kit AETM160-6-A4
Mounting diameter	\varnothing 30...115 mm pipe standard mounting kit AETM160-6-A4
Materials	AISI304 AISI316 Glass reinforced PE
Options	Mounting kit and colour
Atex marking	 II 3G, Ex nA IIA/IIB/IIC T6 Gc
Ambient temperature	-45 °C \leq Tamb \leq +60 °C (Class T6)

*) Limited and/or controlled when used in ATEX-environment. See related EC DECLARATION OF CONFORMITY ATEX Directive 94/9/EC, TYPE EXAMINATION CERTIFICATE, installation instruction and their attachments for more details, information and before installation and assembly.

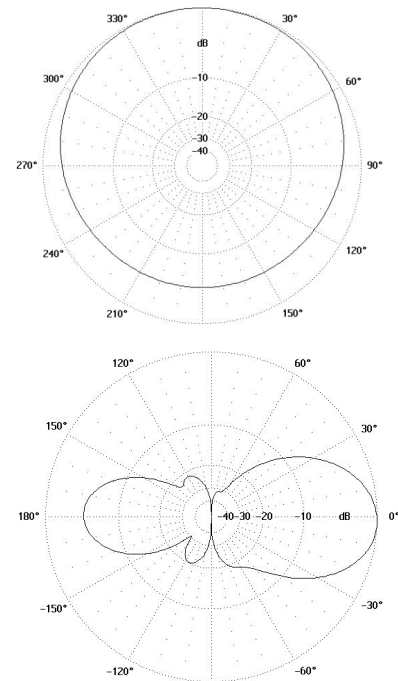
ATEX APPROVED LOW GAIN BASE STATION ANTENNA AV1314-T-H-EXnA-440FN2




Type	AV1314-T-H-EXnA-440FN2
Frequency	380...470 MHz
Bandwidth	90 MHz
Impedance	50 Ω DC grounded
VSWR	1,5 typical
Polarisation	Vertical
Gain	5 dBi nominal in free space *) For other mounting configurations please contact Aerial Oy.
E-plane 3 dB beamwidth	75°
H-plane 3 dB beamwidth	180°
Electrical downtilt	None
Front to back ratio	8 dB
Max. Continuous power	In non-ATEX environment: -500W CW, limited by input connector In ATEX environment: -Group IIC: 2,0W (33,0dBm) -Group IIB: 3,5W (35,4dBm) -Group IIA: 6,0W (37,7dBm) -All three EIRP-power values
RF-connector	N-female on a 1000mm fixed jumper
Operational windspeed	40 m/s (default)
Survival windspeed	55 m/s (default)
Effective wind area (A_{eff})	0,07 m ²
Dimensions (H x W x D) (\varnothing x H)	502 x 160 x 334 mm
Weight	3,8 kg antenna only, add 2 kg for standard mounting kit AETM160-6-A4
Mounting diameter	\varnothing 30...115 mm pipe standard mounting kit AETM160-6-A4
Materials	AISI304 AISI316 Glass reinforced PE
Options	Mounting kit and colour
Atex marking	 II 3G, Ex nA IIA/IIB/IIC T6 Gc
Ambient temperature	-45 °C \leq Tamb \leq +60 °C (Class T6)

*) Limited and/or controlled when used in ATEX-environment. See related EC DECLARATION OF CONFORMITY ATEX Directive 94/9/EC, TYPE EXAMINATION CERTIFICATE, installation instruction and their attachments for more details, information and before installation and assembly.

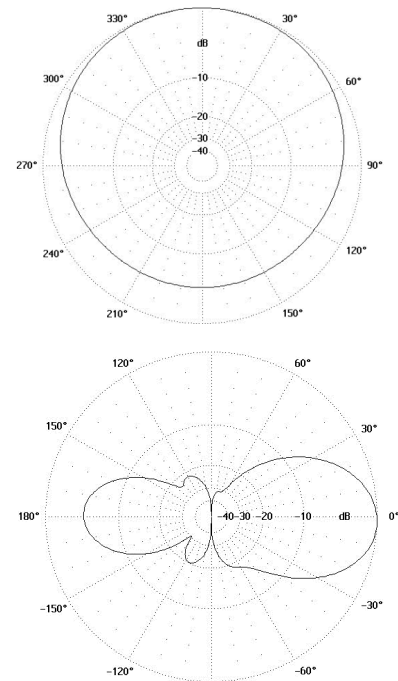
ATEX APPROVED MEDIUM GAIN BASE STATION ANTENNA AV1430-EXnA-131FN2




Type	AV1430-EXnA-131FN2
Frequency	118...136 / 118...144 MHz
Bandwidth	18 MHz / 26 MHz
Impedance	50 Ω DC grounded
VSWR	1,5 typical
Polarisation	Vertical
Gain	7 dBi nominal in free space *) For other mounting configurations please contact Aerial Oy.
E-plane 3 dB beamwidth	40°
H-plane 3 dB beamwidth	180°
Electrical downtilt	None
Front to back ratio	6 dB
Max. Continuous power	In non-ATEX environment: -500W CW, limited by input connector In ATEX environment: -Group IIC: 2,0W (33,0dBm) -Group IIB: 3,5W (35,4dBm) -Group IIA: 6,0W (37,7dBm) -All three EIRP-power values
RF-connector	N-female on a 1000mm fixed jumper
Operational windspeed	40 m/s (default)
Survival windspeed	55 m/s (default)
Effective wind area (A_{eff})	0,45 m ²
Dimensions (H x W x D) (\varnothing x H)	3220 x 440 x 70 mm
Weight	21,6 kg antenna only, add 5 kg for standard mounting kit AETM160-4-A4
Mounting diameter	\varnothing 30...115 mm pipe standard mounting kit AETM160-6-A4
Materials	AISI304 AISI316 Glass reinforced PE
Options	Mounting kit and colour
Atex marking	 II 3G, Ex nA IIA/IIB/IIC T6 Gc
Ambient temperature	-45 °C \leq Tamb \leq +60 °C (Class T6)

*) Limited and/or controlled when used in ATEX-environment. See related EC DECLARATION OF CONFORMITY ATEX Directive 94/9/EC, TYPE EXAMINATION CERTIFICATE, installation instruction and their attachments for more details, information and before installation and assembly.

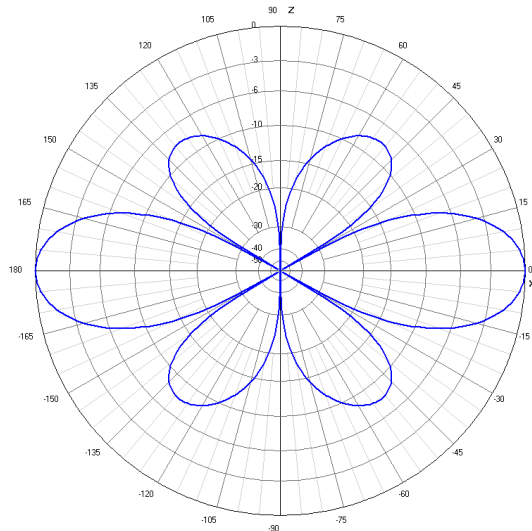
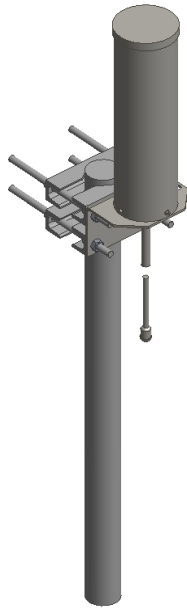
ATEX APPROVED MEDIUM GAIN BASE STATION ANTENNA AV1431-EXnA-160FN2




Type	AV1431-EXnA-160FN2
Frequency	146...174 MHz
Bandwidth	28 MHz
Impedance	50 Ω DC grounded
VSWR	1,5 typical
Polarisation	Vertical
Gain	7 dBi nominal in free space *) For other mounting configurations please contact Aerial Oy.
E-plane 3 dB beamwidth	40°
H-plane 3 dB beamwidth	180°
Electrical downtilt	None
Front to back ratio	6 dB
Max. Continuous power	In non-ATEX environment: -500W CW, limited by input connector In ATEX environment: -Group IIC: 2,0W (33,0dBm) -Group IIB: 3,5W (35,4dBm) -Group IIA: 6,0W (37,7dBm) -All three EIRP-power values
RF-connector	N-female on a 1000mm fixed jumper
Operational windspeed	40 m/s (default)
Survival windspeed	55 m/s (default)
Effective wind area (A_{eff})	0,45 m ²
Dimensions (H x W x D) (\varnothing x H)	2920 x 395 x 70 mm
Weight	16,5 kg antenna only, add 5 kg for standard mounting kit AETM160-4-A4
Mounting diameter	\varnothing 30...115 mm pipe standard mounting kit AETM160-6-A4
Materials	AISI304 AISI316 Glass reinforced PE
Options	Mounting kit and colour
Atex marking	 II 3G, Ex nA IIA/IIB/IIC T6 Gc
Ambient temperature	-45 °C \leq Tamb \leq +60 °C (Class T6)

*) Limited and/or controlled when used in ATEX-environment. See related EC DECLARATION OF CONFORMITY ATEX Directive 94/9/EC, TYPE EXAMINATION CERTIFICATE, installation instruction and their attachments for more details, information and before installation and assembly.

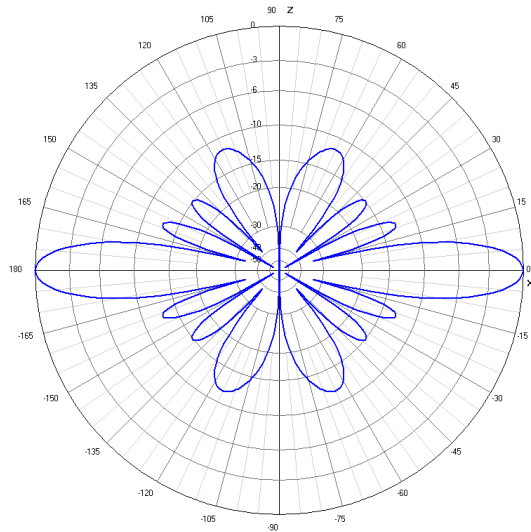
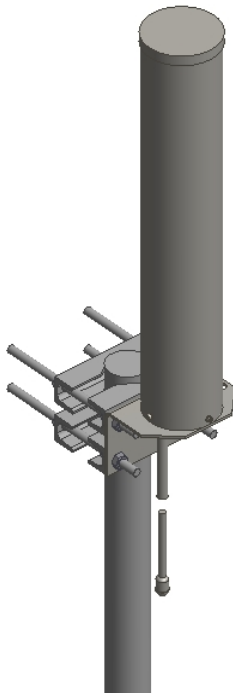
ATEX APPROVED MEDIUM GAIN BASE STATION ANTENNA AV1434-EXnA-2450FN2




Type	AV1434-EXnA-2450FN2
Frequency	2400...2500 MHz
Bandwidth	100 MHz
Impedance	50 Ω DC grounded
VSWR	1,5 typical
Polarisation	Vertical
Gain	5 dBi nominal in free space *) For other mounting configurations please contact Aerial Oy.
E-plane 3 dB beamwidth	30°
H-plane 3 dB beamwidth	-°
Electrical downtilt	None
Front to back ratio	- dB
Max. Continuous power	In non-ATEX environment: -500W CW, limited by input connector In ATEX environment: -Group IIC: 2,0W (33,0dBm) -Group IIB: 3,5W (35,4dBm) -Group IIA: 6,0W (37,7dBm) -All three EIRP-power values
RF-connector	N-female on a 1000mm fixed jumper
Operational windspeed	40 m/s (default)
Survival windspeed	55 m/s (default)
Effective wind area (A_{eff})	0,1 m ²
Dimensions (H x W x D) (\varnothing x H)	412 x 160 x 116 mm
Weight	2,5 kg antenna only, add 2 kg for standard mounting kit AETM160-1-A4
Mounting diameter	\varnothing 30...115 mm pipe standard mounting kit AETM160-1-A4
Materials	AISI304 AISI316 Glass reinforced PE Glass fiber
Options	Mounting kit and colour
Atex marking	 II 3G, Ex nA IIA/IIB/IIC T6 Gc
Ambient temperature	-45 °C \leq Tamb \leq +60 °C (Class T6)

*) Limited and/or controlled when used in ATEX-environment. See related EC DECLARATION OF CONFORMITY ATEX Directive 94/9/EC, TYPE EXAMINATION CERTIFICATE, installation instruction and their attachments for more details, information and before installation and assembly.

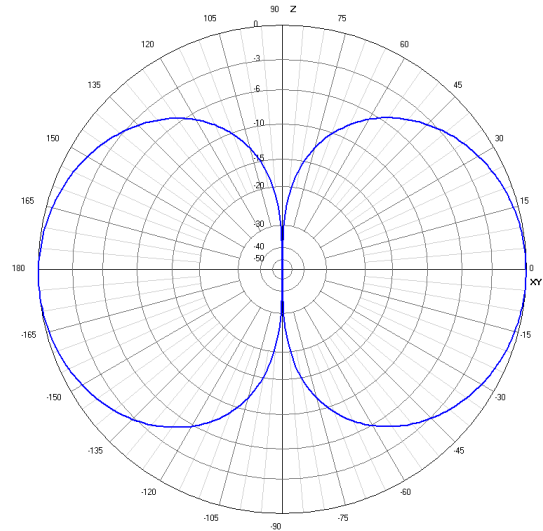
ATEX APPROVED MEDIUM GAIN BASE STATION ANTENNA AV1438-EXnA-2450FN2




Type	AV1438-EXnA-2450FN2
Frequency	2400...2500 MHz
Bandwidth	100 MHz
Impedance	50 Ω DC grounded
VSWR	1,5 typical
Polarisation	Vertical
Gain	8 dBi nominal in free space *) For other mounting configurations please contact Aerial Oy.
E-plane 3 dB beamwidth	15°
H-plane 3 dB beamwidth	-°
Electrical downtilt	None
Front to back ratio	- dB
Max. Continuous power	In non-ATEX environment: -500W CW, limited by input connector In ATEX environment: -Group IIC: 2,0W (33,0dBm) -Group IIB: 3,5W (35,4dBm) -Group IIA: 6,0W (37,7dBm) -All three EIRP-power values
RF-connector	N-female on a 1000mm fixed jumper
Operational windspeed	40 m/s (default)
Survival windspeed	55 m/s (default)
Effective wind area (A_{eff})	0,2 m ²
Dimensions (H x W x D) (\varnothing x H)	687 x 160 x 116 mm
Weight	4,6 kg antenna only, add 3,5 kg for standard mounting kit AETM160-6-A4
Mounting diameter	\varnothing 30...115 mm pipe standard mounting kit AETM160-6-A4
Materials	AISI304 AISI316 Glass reinforced PE Glass fiber
Options	Mounting kit and colour
Atex marking	 II 3G, Ex nA IIA/IIB/IIC T6 Gc
Ambient temperature	-45 °C \leq Tamb \leq +60 °C (Class T6)

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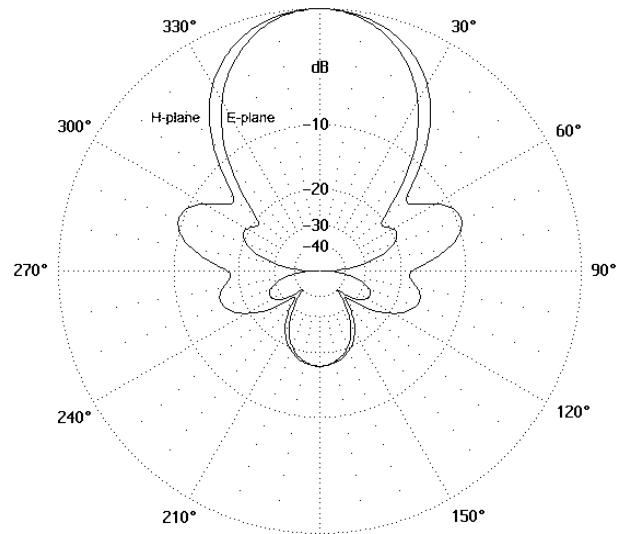
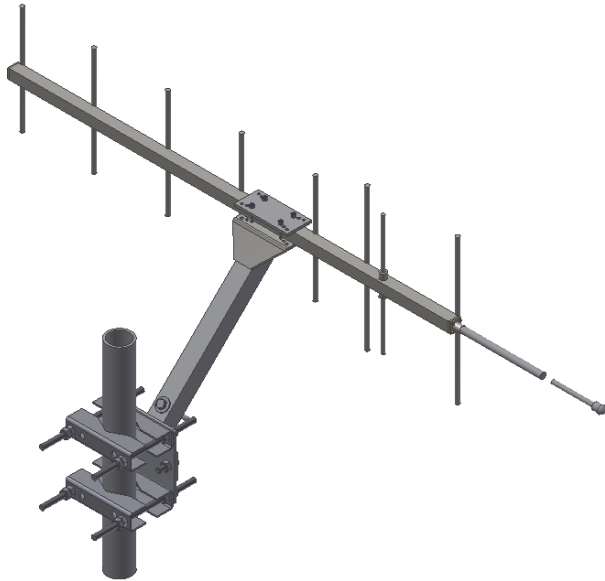
ATEX APPROVED LOW GAIN BASE STATION ANTENNA AV1463-EXnA-313FN2




Type	AV1463-EXnA-313FN2
Frequency	225...400 MHz
Bandwidth	175 MHz
Impedance	50 Ω DC grounded
VSWR	1,5 typical
Polarisation	Vertical
Gain	2 dBi nominal in free space *) For other mounting configurations please contact Aerial Oy.
E-plane 3 dB beamwidth	70°
H-plane 3 dB beamwidth	-°
Electrical downtilt	None
Front to back ratio	- dB
Max. Continuous power	In non-ATEX environment: -500W CW, limited by input connector In ATEX environment: -Group IIC: 2,0W (33,0dBm) -Group IIB: 3,5W (35,4dBm) -Group IIA: 6,0W (37,7dBm) -All three EIRP-power values
RF-connector	N-female on a 1000mm fixed jumper
Operational windspeed	40 m/s (default)
Survival windspeed	55 m/s (default)
Effective wind area (A_{eff})	0,1 m ²
Dimensions (H x W x D) (\varnothing x H)	518 x 479 mm
Weight	3,5 kg antenna only, no mounting kit.
Mounting diameter	\varnothing 30...115 mm pipe standard mounting kit AETM160-6-A4
Materials	AISI304 AISI316 Glass reinforced PE
Options	Mounting kit and colour
Atex marking	 II 3G, Ex nA IIA/IIB/IIC T6 Gc
Ambient temperature	-45 °C \leq Tamb \leq +60 °C (Class T6)

*) Limited and/or controlled when used in ATEX-environment. See related EC DECLARATION OF CONFORMITY ATEX Directive 94/9/EC, TYPE EXAMINATION CERTIFICATE, installation instruction and their attachments for more details, information and before installation and assembly.

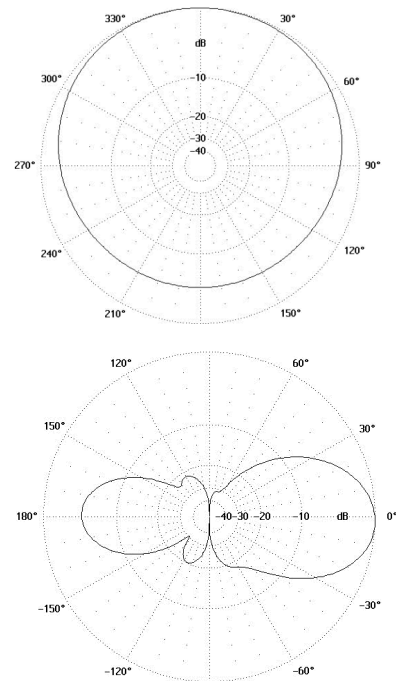
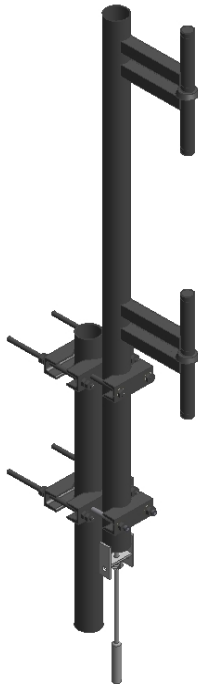
ATEX APPROVED YAGI ANTENNA AV1468-EXnA-...FN2




Type	AV1468-EXnA-...FN2
Frequency	AV1468-390 : 380...400 MHz AV1468-420 : 400...440 MHz AV1468-460 : 440...480 MHz
Bandwidth	AV1468-390 : 20 MHz AV1468-420 : 40 MHz AV1468-460 : 40 MHz
Impedance	50 Ω DC grounded
VSWR	1,5 typical
Polarisation	Horizontal or Vertical
Gain	10 dBi nominal in free space *) For other mounting configurations please contact Aerial Oy.
E-plane 3 dB beamwidth	44°
H-plane 3 dB beamwidth	56°
Electrical downtilt	None
Front to back ratio	15 dB
Max. Continuous power	In non-ATEX environment: -500W CW, limited by input connector In ATEX environment: -Group IIC: 2,0W (33,0dBm) -Group IIB: 3,5W (35,4dBm) -Group IIA: 6,0W (37,7dBm) -All three EIRP-power values
RF-connector	N-female on a 1000mm fixed jumper
Operational windspeed	40 m/s (default)
Survival windspeed	55 m/s (default)
Effective wind area (A_{eff})	0,1 m ²
Dimensions (H x W x D) (\varnothing x H)	400 x 50 x 1200 mm antenna only, with outrigger 550 x 365 x 1120mm
Weight	3 kg antenna only, add 5,8 kg for standard mounting kit AETM160-6-A4 and outrigger
Mounting diameter	\varnothing 30...115 mm pipe standard mounting kit AETM160-6-A2
Materials	AISI304 AISI316 Glass reinforced PE
Options	Mounting kit and colour
Atex marking	 II 3G, Ex nA IIA/IIB/IIC T6 Gc
Ambient temperature	-45 °C \leq Tamb \leq +60 °C (Class T6)

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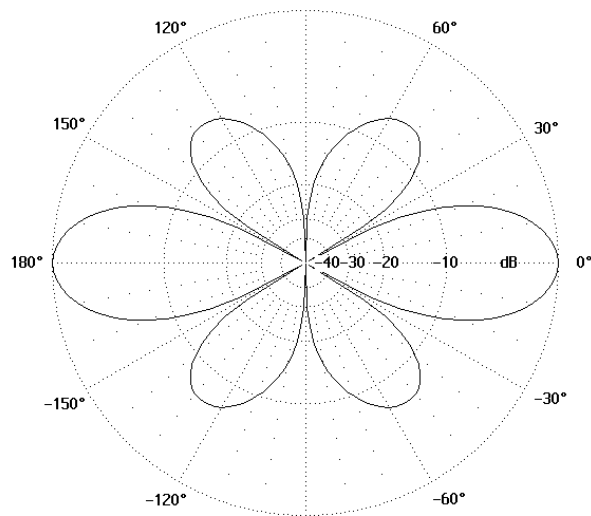
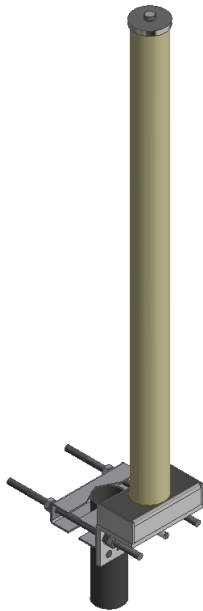
ATEX APPROVED MEDIUM GAIN BASE STATION ANTENNA AV1915-H-EXnA-440FN2




Type	AV1915-H-EXnA-440FN2
Frequency	350...470 MHz
Bandwidth	120 MHz
Impedance	50 Ω DC grounded
VSWR	1,5 typical
Polarisation	Vertical
Gain	7 dBi nominal in free space *) For other mounting configurations please contact Aerial Oy.
E-plane 3 dB beamwidth	30°
H-plane 3 dB beamwidth	180°
Electrical downtilt	None
Front to back ratio	6 dB
Max. Continuous power	In non-ATEX environment: -500W CW, limited by input connector In ATEX environment: -Group IIC: 2,0W (33,0dBm) -Group IIB: 3,5W (35,4dBm) -Group IIA: 6,0W (37,7dBm) -All three EIRP-power values
RF-connector	N-female on a 1000mm fixed jumper
Operational windspeed	40 m/s (default)
Survival windspeed	55 m/s (default)
Effective wind area (A_{eff})	0,4 m ²
Dimensions (H x W x D) (\varnothing x H)	1450 x 200 x 60 mm
Weight	7,2 kg antenna only, add 5 kg for standard mounting kit AETM160-4-A4
Mounting diameter	\varnothing 30...115 mm pipe standard mounting kit AETM160-6-A4
Materials	AISI304 AISI316 Glass reinforced PE
Options	Mounting kit and colour
Atex marking	 II 3G, Ex nA IIA/IIB/IIC T6 Gc
Ambient temperature	-45 °C \leq Tamb \leq +60 °C (Class T6)

*) Limited and/or controlled when used in ATEX-environment. See related EC DECLARATION OF CONFORMITY ATEX Directive 94/9/EC, TYPE EXAMINATION CERTIFICATE, installation instruction and their attachments for more details, information and before installation and assembly.

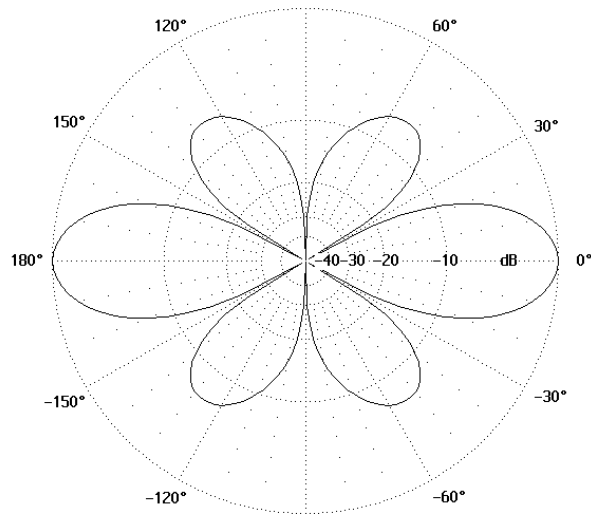
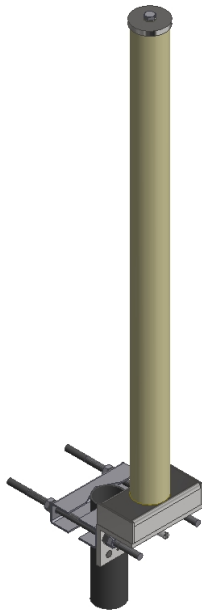
ATEX APPROVED MEDIUM GAIN BASE STATION ANTENNA AV1916-EXnA-826FN2




Type	AV1916-EXnA-826FN2
Frequency	790..862 MHz
Bandwidth	72 MHz
Impedance	50 Ω DC grounded
VSWR	1,5 typical
Polarisation	Vertical
Gain	6 dBi nominal in free space *) For other mounting configurations please contact Aerial Oy.
E-plane 3 dB beamwidth	26°
H-plane 3 dB beamwidth	-°
Electrical downtilt	None
Front to back ratio	- dB
Max. Continuous power	In non-ATEX environment: -500W CW, limited by input connector In ATEX environment: -Group IIC: 2,0W (33,0dBm) -Group IIB: 3,5W (35,4dBm) -Group IIA: 6,0W (37,7dBm) -All three EIRP-power values
RF-connector	N-female on a 1000mm fixed jumper
Operational windspeed	40 m/s (default)
Survival windspeed	55 m/s (default)
Effective wind area (A_{eff})	0,1 m ²
Dimensions (H x W x D) (\varnothing x H)	1053 x 160 x 85 mm
Weight	6 kg antenna only, add 2 kg for standard mounting kit AETM160-6-A4
Mounting diameter	\varnothing 30...115 mm pipe standard mounting kit AETM160-6-A4
Materials	AISI304 AISI316 Glass fiber
Options	Mounting kit and colour
Atex marking	 II 3G, Ex nA IIA/IIB/IIC T6 Gc
Ambient temperature	-45 °C \leq Tamb \leq +60 °C (Class T6)

*) Limited and/or controlled when used in ATEX-environment. See related EC DECLARATION OF CONFORMITY ATEX Directive 94/9/EC, TYPE EXAMINATION CERTIFICATE, installation instruction and their attachments for more details, information and before installation and assembly.

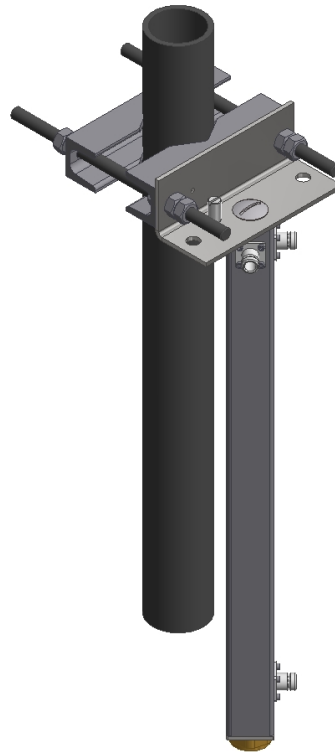
ATEX APPROVED MEDIUM GAIN BASE STATION ANTENNA AV1916-EXnA-915FN2




Type	AV1916-EXnA-915FN2
Frequency	870...960 MHz
Bandwidth	90 MHz
Impedance	50 Ω DC grounded
VSWR	1,5 typical
Polarisation	Vertical
Gain	6 dBi nominal in free space *) For other mounting configurations please contact Aerial Oy.
E-plane 3 dB beamwidth	26°
H-plane 3 dB beamwidth	-°
Electrical downtilt	None
Front to back ratio	- dB
Max. Continuous power	In non-ATEX environment: -500W CW, limited by input connector In ATEX environment: -Group IIC: 2,0W (33,0dBm) -Group IIB: 3,5W (35,4dBm) -Group IIA: 6,0W (37,7dBm) -All three EIRP-power values
RF-connector	N-female on a 1000mm fixed jumper
Operational windspeed	40 m/s (default)
Survival windspeed	55 m/s (default)
Effective wind area (A _{eff})	0,1 m ²
Dimensions (H x W x D) (∅ x H)	1053 x 160 x 85 mm
Weight	5,8 kg antenna only, add 2 kg for standard mounting kit AETM160-6-A4
Mounting diameter	∅ 30...115 mm pipe standard mounting kit AETM160-6-A4
Materials	AISI304 AISI316 Glass reinforced PE
Options	Mounting kit and colour
Atex marking	 II 3G, Ex nA IIA/IIB/IIC T6 Gc
Ambient temperature	-45 °C ≤ Tamb ≤ +60 °C (Class T6)

*) Limited and/or controlled when used in ATEX-environment. See related EC DECLARATION OF CONFORMITY ATEX Directive 94/9/EC, TYPE EXAMINATION CERTIFICATE, installation instruction and their attachments for more details, information and before installation and assembly.

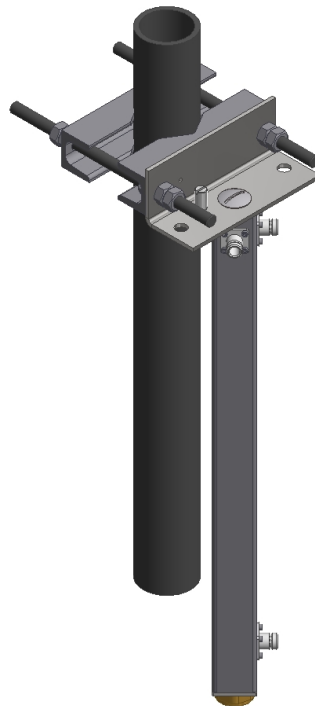
ATEX APPROVED POWER DIVIDER TR2401-EXnA-160FN1




Type	TR2401-EXnA-160FN1
Frequency	146...174 MHz
Bandwidth	28 MHz
Impedance	50 Ω
VSWR	1,1 typical
Split/type	1:2 even
Insertion loss	0,1 dB typical
Max. Continuous power	In non-ATEX environment: -500W CW, limited by input connector In ATEX environment: -Group IIC: 2,0W (33,0dBm) -Group IIB: 3,5W (35,4dBm) -Group IIA: 6,0W (37,7dBm) -All three EIRP-power values
Input RF-connector	1xN-female panel-type
Output RF-connector	2xN-female panel-type
Operational windspeed	40 m/s (default)
Survival windspeed	55 m/s (default)
Effective wind area (A_{eff})	0,05 m ²
597	560 x 160 x 64 mm
Weight	3,1 kg divider only, add 2 kg for standard mounting kit AETM160-6-A4
Mounting diameter	\varnothing 30...115 mm pipe standard mounting kit AETM160-6-A4
Materials	AISI304 AISI316 Glass reinforced PE
Options	Mounting kit and colour
Atex marking	 II 3G, Ex nA IIA/IIB/IIC T6 Gc
Ambient temperature	-45 °C \leq Tamb \leq +60 °C (Class T6)

*) Limited and/or controlled when used in ATEX-environment. See related EC DECLARATION OF CONFORMITY ATEX Directive 94/9/EC, TYPE EXAMINATION CERTIFICATE, installation instruction and their attachments for more details, information and before installation and assembly.

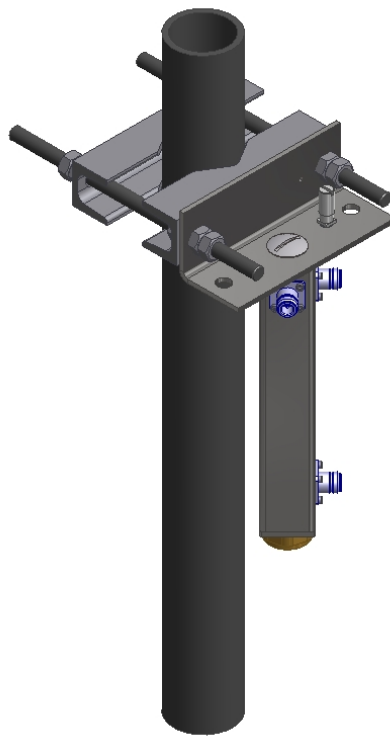
ATEX APPROVED POWER DIVIDER TR1:2-150-470-EXnA-FN1 (TR2481-EXnA-310FN1)




Type	TR1:2-150-470-EXnA-FN1
Frequency	150...470 MHz
Bandwidth	320 MHz
Impedance	50 Ω
VSWR	1,2 typical
Split/type	1:2 even
Insertion loss	0,1 dB typical
Max. Continuous power	In non-ATEX environment: -500W CW, limited by input connector In ATEX environment: -Group IIC: 2,0W (33,0dBm) -Group IIB: 3,5W (35,4dBm) -Group IIA: 6,0W (37,7dBm) -All three EIRP-power values
Input RF-connector	1xN-female panel-type
Output RF-connector	2xN-female panel-type
Operational windspeed	40 m/s (default)
Survival windspeed	55 m/s (default)
Effective wind area (A _{eff})	0,04 m ²
Dimensions (H x W x D) (∅ x H)	502 x 160 x 64 mm
Weight	2,7 kg divider only, add 2 kg for standard mounting kit AETM160-6-A4
Mounting diameter	∅ 30...115 mm pipe standard mounting kit AETM160-6-A4
Materials	AISI304 AISI316 Glass reinforced PE
Options	Mounting kit and colour
Atex marking	 II 3G, Ex nA IIA/IIB/IIC T6 Gc
Ambient temperature	-45 °C ≤ Tamb ≤ +60 °C (Class T6)

*) Limited and/or controlled when used in ATEX-environment. See related EC DECLARATION OF CONFORMITY ATEX Directive 94/9/EC, TYPE EXAMINATION CERTIFICATE, installation instruction and their attachments for more details, information and before installation and assembly.

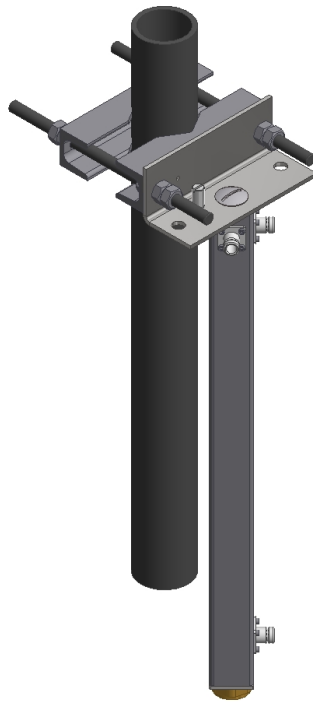
ATEX APPROVED POWER DIVIDER TR2501-EXnA-405FN1




Type	TR2501-EXnA-405FN1
Frequency	340...470 MHz
Bandwidth	130 MHz
Impedance	50 Ω
VSWR	1,1 typical
Split/type	1:2 even
Insertion loss	0,1 dB typical
Max. Continuous power	In non-ATEX environment: -500W CW, limited by input connector In ATEX environment: -Group IIC: 2,0W (33,0dBm) -Group IIB: 3,5W (35,4dBm) -Group IIA: 6,0W (37,7dBm) -All three EIRP-power values
Input RF-connector	1xN-female panel-type
Output RF-connector	2xN-female panel-type
Operational windspeed	40 m/s (default)
Survival windspeed	55 m/s (default)
Effective wind area (A_{eff})	0,03 m ²
Dimensions (H x W x D) (\varnothing x H)	307 x 160 x 62 mm
Weight	1,6 kg divider only, add 2 kg for standard mounting kit AETM160-6-A4
Mounting diameter	\varnothing 30...115 mm pipe standard mounting kit AETM160-6-A4
Materials	AISI304 AISI316 Glass reinforced PE
Options	Mounting kit and colour
Atex marking	 II 3G, Ex nA IIA/IIB/IIC T6 Gc
Ambient temperature	-45 °C \leq Tamb \leq +60 °C (Class T6)

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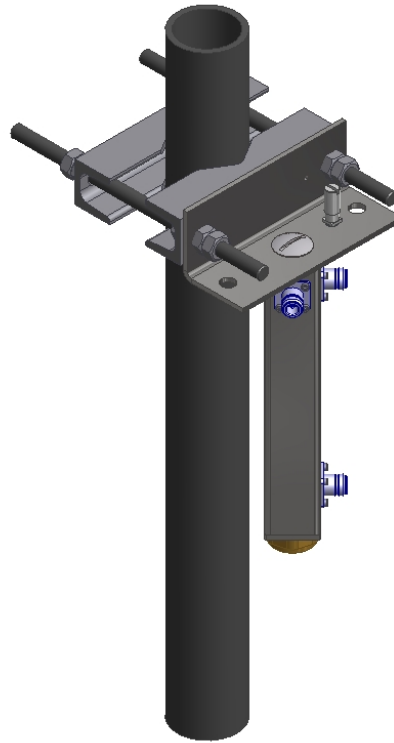
ATEX APPROVED POWER DIVIDER TR1: 4-150-470-EXnA-FN1 (TR4481-EXnA-310FN1)




Type	TR1:4-150-470-EXnA-FN1
Frequency	150...470 MHz
Bandwidth	320 MHz
Impedance	50 Ω
VSWR	1,2 typical
Split/type	1:4 even
Insertion loss	0,1 dB typical
Max. Continuous power	In non-ATEX environment: -500W CW, limited by input connector In ATEX environment: -Group IIC: 2,0W (33,0dBm) -Group IIB: 3,5W (35,4dBm) -Group IIA: 6,0W (37,7dBm) -All three EIRP-power values
Input RF-connector	1xN-female panel-type
Output RF-connector	4xN-female panel-type
Operational windspeed	40 m/s (default)
Survival windspeed	55 m/s (default)
Effective wind area (A_{eff})	0,04 m ²
Dimensions (H x W x D) (\varnothing x H)	502 x 160 x 64 mm
Weight	2,8 kg divider only, add 2 kg for standard mounting kit AETM160-6-A4
Mounting diameter	\varnothing 30...115 mm pipe standard mounting kit AETM160-6-A4
Materials	AISI304 AISI316 Glass reinforced PE
Options	Mounting kit and colour
Atex marking	 II 3G, Ex nA IIA/IIB/IIC T6 Gc
Ambient temperature	-45 °C \leq Tamb \leq +60 °C (Class T6)

*) Limited and/or controlled when used in ATEX-environment. See related EC DECLARATION OF CONFORMITY ATEX Directive 94/9/EC, TYPE EXAMINATION CERTIFICATE, installation instruction and their attachments for more details, information and before installation and assembly.

ATEX APPROVED POWER DIVIDER TR4501-EXnA-405FN1



Type	TR4501-EXnA-405FN1
Frequency	340...470 MHz
Bandwidth	130 MHz
Impedance	50 Ω
VSWR	1,1 typical
Split/type	1:4 even
Insertion loss	0,1 dB typical
Max. Continuous power	In non-ATEX environment: -500W CW, limited by input connector In ATEX environment: -Group IIC: 2,0W (33,0dBm) -Group IIB: 3,5W (35,4dBm) -Group IIA: 6,0W (37,7dBm) -All three EIRP-power values
Input RF-connector	1xN-female panel-type
Output RF-connector	4xN-female panel-type
Operational windspeed	40 m/s (default)
Survival windspeed	55 m/s (default)
Effective wind area (A_{eff})	0,03 m ²
Dimensions (H x W x D) (\varnothing x H)	312 x 160 x 64 mm
Weight	1,7 kg divider only, add 2 kg for standard mounting kit AETM160-6-A4
Mounting diameter	\varnothing 30...115 mm pipe standard mounting kit AETM160-6-A4
Materials	AISI304 AISI316 Glass reinforced PE
Options	Mounting kit and colour
Atex marking	 II 3G, Ex nA IIA/IIB/IIC T6 Gc
Ambient temperature	-45 °C \leq Tamb \leq +60 °C (Class T6)

*) Limited and/or controlled when used in ATEX-environment. See related EC DECLARATION OF CONFORMITY ATEX Directive 94/9/EC, TYPE EXAMINATION CERTIFICATE, installation instruction and their attachments for more details, information and before installation and assembly.

Coaxial Cable RG_393_/U

Description

PFA - 50 Ohm - double screen



Technical Data

Construction

	Material	Detail	Diameter
Centre conductor	Copper, Silver plated	Strand-07	2.46 mm
Dielectric	PFA (Perfluoroalkoxy)		7.25 mm
Outer conductor	Copper, Silver plated	Braid, 92%	8 mm
Outer conductor	Copper, Silver plated	Braid, 94 %	8.75 mm
Jacket	FEP (Fluorinated ethylene propylene)	RAL 8015 - br	9.9 mm +/- 0.25

Print: HUBER+SUHNER RG 393 U 50 Ohm (PA no.)

Electrical Data

Impedance	50 Ω +/- 2
Operating Frequency	6 GHz
Capacitance	95.9 pF/m
Velocity of signal propagation	70 %
Signal delay	4.79 ns/m
Insulation resistance	≥ 1 x 10 ⁸ MΩm
Min. screening effectiveness	≥ 81 dB (up to 6 GHz)
Max. operating voltage	≤ 5.4 kV _{rms} (at sea level)
Test voltage	10.8 kV _{rms} (50 Hz/1 min)

Mechanical Data

Weight		22.9 kg/100 m
Min. bending radius	static	60 mm
	repeated (for ≤ bendings)	100 mm
	dynamic	150 mm

Environmental Data

Temperature range	-65 °C... +165 °C
Installation temperature	-20 °C... +60 °C
Flammability	IEC 60332-3-25, ,
2011/65/EU (RoHS)	compliant

Additional Information

Ordering Information

Order as RG_393_/U

Remarks

(For details refer to the HUBER+SUHNER RF CABLES GENERAL CATALOGUE or contact your nearest HUBER+SUHNER partner)

Suitable Connectors

Cable group U33 7 mm / 50 Ohm

Coaxial Cable RG_393_/U

Matrix typical Attenuation [formula: $(a \cdot f^{0.5} + b \cdot f)$] and maximum Power CW [formula: $(p/f^{0.5})$]

Coefficients:

a = 0.1749

b = 0.129

$f_{\max} = 6$

P at 1GHz = 1461

Frequency (GHz)	Nom. attenuation (dB / m) sea level 25° C ambient temperature	Nom. attenuation (dB / ft) sea level 25° C ambient temperature	Max. CW power (watt) sea level 40° C ambient temperature
0.3	0.13	0.041	2667
0.6	0.21	0.065	1886
0.9	0.28	0.086	1540
1.2	0.35	0.106	1334
1.5	0.41	0.124	1193
1.8	0.47	0.142	1089
2.1	0.52	0.160	1008
2.4	0.58	0.177	943
2.7	0.64	0.194	889
3.0	0.69	0.210	844
3.3	0.74	0.227	804
3.6	0.8	0.243	770
3.9	0.85	0.259	740
4.2	0.9	0.274	713
4.5	0.95	0.290	689
4.8	1.0	0.306	667
5.1	1.05	0.321	647
5.4	1.1	0.336	629
5.7	1.15	0.351	612
6.0	1.2	0.366	596

ASENNUSOHJE ATEX Direktiivin 94/9/EY MUKAISILLE ANTENNITUOTTEILLE
MOUNTING INSTRUCTION FOR ANTENNA PRODUCTS MADE ACCORDING TO ATEX Directive 94/9/EC

TUNNISTUS
IDENTIFICATION

Aerial Oy:n valmistamat ATEX direktiivin 94/9/EY mukaiset antennituotteet tunnistaa seuraavista merkinnöistä:

Antenna products made according to ATEX directive 94/9/EC by Aerial Oy can be recognized from the following markings:

Sertifikaattinumero: VTT 12 ATEX 052X
 Number of certificate:

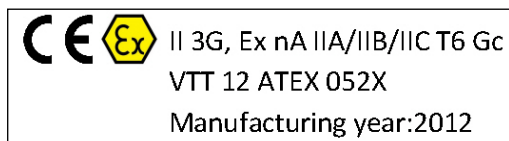
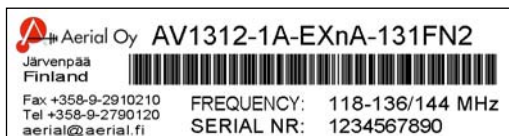
EX-merkintä:  II 3G, Ex nA IIA/IIB/IIC T6 Gc
 EX-marking:

Valmistaja: Aerial Oy
 Manufacturer:

Osoite: Pietolankatu 9A, PL 22, FI 04400 Järvenpää, FINLAND
 Address:

Antennituotteet:	Aerial Oy koodi:	Aerial Oy tyyppinimi:
Antenna products:	Aerial Oy code:	Aerial Oy typename:
	#17489	AV1314-H-EXnA-440FN2
	#17493	AV1314-R-H-EXnA-440FN2
	#17497	AV1314-T-H-EXnA-440FN2
	#17501	AV1312-1A-EXnA-131FN2
	#17502	AV1312-2-EXnA-160FN2
	#17505	AV1430-EXnA-131FN2
	#17506	AV1431-EXnA-160FN2
	#17507	AV1468-EXnA-390FN2
	#17509	AV1468-EXnA-420FN2
	#17510	AV1468-EXnA-460FN2
	#17511	AV1915-H-EXnA-440FN2
	#17512	AV1916-EXnA-915FN2
	#17513	TR2401-EXnA-160FN1
	#17514	TR2501-EXnA-405FN1
	#17515	TR4501-EXnA-405FN1
	#17516	TR1:2-150-470-EXnA-FN1 (TR2481-EXnA-310FN1)
	#17517	TR1:4-150-470-EXnA-FN1 (TR4481-EXnA-310FN1)
	#18639	AV1463-EXnA-313FN2
	#18670	AV1434-EXnA-2450FN2
	#18671	AV1438-EXnA-2450FN2
	#19114	AV1916-EXnA-826FN2

Tyypillinen merkintä:
 Typical marking:



LÄMPÖILARAJOITUKSET:
TEMPERATURE LIMITATIONS:

Käyttölämpötilan (T_{amb}) tulee olla välillä $-45\text{ °C} \leq T_{amb} \leq +60\text{ °C}$ (Luokka T6).

The ambient temperature (T_{amb}) must be within $-45\text{ °C} \leq T_{amb} \leq +60\text{ °C}$ (Class T6).

TEHORAJOITUKSET:
POWER LIMITATIONS:

Alueella 2 tai muuten niin vaadittaessa on huomioitava seuraavat RF-tehorajoitukset:

-Säteilevän antennituotteen maksimi EIRP-teho ei saa ylittää seuraavia arvoja ryhmä IIA 6W CW, ryhmä IIB 3,5W CW ja ryhmä IIC 2W CW. Tehonjakajille ei ole tehorajoituksia, tehonjakajaan kytkettyjen antennien muodostaman ryhmän tulee kuitenkin myös noudattaa em. tehorajoja.

-EIRP-tehoa määriteltäessä tulee asennusympäristön vaikutus antennivahvistukseen huomioida.

When the installation is at zone 2 or if otherwise requested the following RF-power limitations must be taken into account:

- The maximum EIRP-power for all above listed radiating antenna products shall not exceed in group IIA 6W CW, group IIB 3,5W CW and group IIC 2 W CW. There are no power limitations for power dividers and splitters, however if an antenna group is formed by connecting individual antennas together with a power splitter or divider, then this array has to fulfill the above power limitations.

-When calculating the EIRP-power the effect of the installation environment to the antenna gain must be taken into account.

MEKAANINEN ASENNUS
MECHANICAL INSTALLATION

Antennituotteen mekaaninen asennus tehdään aina tyyppiokohtaisen asennusohjeen mukaan (kts. liitteet), tässä ohjeessa esimerkkinä on käytetty AV1314-H-EXnA-440FN2 antenna.

Alueella 2 tai muuten niin vaadittaessa on lisäksi huomioitava tässä ohjeessa esitetyt yksityiskohdat. Jokaisen antennituotteen mukana toimitetaan lisäksi:

-Maadoitusarja.

-Eristyssarja, jossa on yksi (a' 400x200mm) tai yksi/kaksi ohutta (a' 400x60mm) PTFE/PE/kumi-/eristyslevyä ja kaksi tai neljä nippusidettä eristyslevyjen kiinnittämiseen. Levyt kierretään ja kiinnitetään nippusitein asennusputken ympärille ennen asennusta vähentämään/estämään galvaanista korroosiota kiinnityspalojen ja asennusputken välillä.

The mechanical installation of each individual antenna product must be done according to the product specific installation drawing (see attachments), in this document AV1314-H-EXnA-440FN2-antenna has been used as a sample. When the installation is at zone 2 or if otherwise requested the details presented in this instruction must be noted. With each antenna product the following additional components are delivered:

-Grounding set.

-Isolation set, including one (a' 400x200mm) or one/two (a' 400x60mm) thin dielectric PTFE/PE/rubber sheets with 2 or 4 pcs plastic cable ties. The sheets are wrapped around the mounting tube before installation and secured with the plastic cable ties. This done to reduce contact and corrosion between the antenna tube and mounting brackets.



Kuva 1): Kiinnityspalasarja ja eristyssarja.

Picture 1): Mounting kit with the isolation set.

MAADOITUS GROUNDING

Maadoitus tulee tehdä tuotteen omalla maadoitussarjalla. Maadoitusvaijeria voidaan käyttää myös turvavaijerina estämään tuotteen putoaminen varsinaisen kiinnityksen irrotessa/pettäessä. Maadoituspisteen rakenteessa tulee olla tyyppiä "bonding". Maadoitussarja sisältää:

- 3,5 metriä 4mm:n AISI316 monisäievaijeria.
- 2 kpl 4mm:n AISI316 vaijerilukkoa.
- 2 kpl 4mm:n AISI316 kaussia.
- 2 kpl 4mm:n AISI316 sakkelia.
- 1 kpl 4mm:n AISI316 kaapelikenkä.

Vaijerin tuotteen puoleisessa päässä on lenkki kausseineen valmiiksi puristusholkitettuna. Toinen pää tulee tehdä sopivan mittaiseksi asennuspaikalla. Kaapelikenkää käytetään tarvittaessa.

Grounding must be done with the grounding set that is delivered with each product. The grounding wire can also be used as a safety wire to prevent the product from falling if the initial mounting loosens/fails. The grounding point on the structure shall be of bonding-type. The grounding set includes:

- 3,5 meters 4mm AISI316 multi strand wire.
- 2 pcs 4mm AISI316 wire locks.
- 2 pcs 4mm AISI316 thimbles.
- 2 pcs 4mm AISI316 shackles.
- 1 pcs 4mm AISI316 cable shoe.

The grounding wire product end loop is premade at factory with a compression sleeve and including the coush. The other end must be made on site so that it fits the mounting environment. Cable shoe is to be used as seen necessary.



Kuva 2: maadoitussarja ennen asennusta. Tuotteen puoleinen pää vasemmalla.

Picture 2: grounding set before installation. Product end loop at left.

Maadoitus ja varmistus tehdään valokuvien 2) ja 3) mukaan (esimerkkinä AV1314-H-EXnA-440FN2 antenni). Sakkelit tulee varmistaa lukkosokin. Sakkeleiden ja vaijerilukkojen kiristysmomentti tulee olla 1,5...2,0 Nm. Kaikissa edellä kohdassa 1) luetelluissa antennituotteissa on maadoitusvaijerin kiinnitystä varten erillinen maadoitusruuvi. Maadoitusruuvien kiristysmomentin tulee olla 1,0...2,0Nm "Hawke"-mallissa ja 3,2Nm maks. "Weco"-mallissa, mutta jotta M4-A4-kiinnitysruuvien suurin kiristysmomentti ei ylittyisi suositellaan momentiksi kummallekin 1,8...2,2Nm. Maadoitusruuville on useimmissa tuotteissa vaihtoehtoisia asennuspisteitä, mikäli jotain niistä käytetään pitää seuraavat seikat huomioida:

- Tehdasasennuksen yhteydessä on M4-A4-kiinnitysruuviin lisätty lukite (Loctite 243), tämän vuoksi voi olla tarpeen lämmittää liitosta ennen sen avaamista.
- Kokoonpano ja osien sijainnut tulee kopioida tehdasasennuksesta, lukite tulee lisätä uuteen asennuspisteeseen.
- M4-A4-kiinnitysruuvien kiristysmomentti riippuu huomattavasti liukupintojen ominaisuuksista, mutta kiristysmomentiksi suositellaan 1,8...2,2Nm.

Grounding and securing must be done as in the pictures 2) and 3) (AV1314-H-EXnA-440FN2 used as a sample). Shackles must be secured with locking pins. Wire lock and shackle tightening torque must be 1,5...2,0Nm. All products listed in chapter 1) are equipped with a separate grounding terminal. The tightening torque of the grounding screw is to be 1,0...2,0Nm for Hawke and 3,2Nm max. for Weco type terminals, but to be on the safe side relative to the M4 mounting screw a value between

1,8...2,2Nm is recommended. There are alternative attachment points for the grounding terminal in most of the products, should they be used, the following shall be noted:

-At factory locking agent (Loctite 243) is applied onto the M4-A4-mounting screw attaching the grounding terminal to the ATEX-product, therefore heat may need to be applied to the terminal before this connection can be opened.

-The assembly and part locations at the new attachment point shall match the original assembly, also locking agent shall be re-applied.

-The correct tightening torque for a A4 4mm (M4) thread is highly dependent on the friction between the surfaces. A value between 1,8...2,2Nm should be used.



Kuva 3) ja 4): Maadoitus ja varmistus tuotteessa.

Picture 3) and 4): Grounding and securing at product end.

ANTENNIN LIITTÄMINEN SYÖTTÖLINJAAN ANTENNA TO FEEDLINE CONNECTION

Kaikissa edellä kohdassa 1) luetelluissa tuotteissa on yhden metrin kiinteä hyppyykaapeli, jossa on liittimenä N-naaras. Kaapelin tyyppi on RG393/U. Tehonjakajissa on N-naaras paneliliitin. N-liitoksen kiristysmomentti tulee olla n. 0,7...1,2Nm hieman liitinvalmistajasta riippuen. Ennen liitoksen tekemistä on tarkistettava että liittimet ovat ehjät, kuivat ja puhtaat. Kun liitos on kiristetty tulee liitos suojata silikonipohjaisella vulkanoituvalle teipillä esim. "Stockvis 4Splice BA-17-009 YE", "Le Mark Kraken tape" tai "Tesa 4600", teipin tulee kestää lämpötiloja luokassa " T6" ja sen tulee myös olla ulkokäyttöön soveltuvaa. Teippaus tehdään kaksi kertaa liitoksen yli siten että peräkkäisten kierrosten peitto on n. 30...40% ja teippauksen tulee ulottua n. 50mm kummankin liitinrungon ulkopuolelle. Tehonjakajien teippauksessa tulee varmentua varsinkin siitä, että paneliliittimien puolella teippaus on tiivis ja ulottuu mahdollisimman pitkälle liittimen laippaan saakka.

All antennas listed in chapter 1) have one meter fixed jumper with N-female connector. The cable type used is RG393/U. The power dividers have N-female panel connectors on all ports. Before making the connection it is good to check that the both connectors are undamaged, clean and dry. The tightening torque of the N-connector coupling nut must be app. 0,7...1,2Nm, depending a bit on the connector manufacturer. After the connection is tightened it must be protected with self vulcanizing silicone tape, for instance with "Stockvis 4Splice BA-17-009 YE", "Le Mark Kraken tape" or "Tesa 4600 tape", the tape used must withstand temperatures in range "T6" and it must also be suitable for outdoor environment. The applying of the tape is done so that each round of tape applied overlaps the previous one by app. 30...40%. The tape should extend over the both connector bodies by app. 50mm. When taping the power dividers it is important that the panel connectors are taped right until the connector flange.



Kuva 5) ja 6): Liitoksen suojaus, yllä runkoliittimessä ja alla kaapelissa.

Picture 5) and 6): Taping the connection, above at the panel connector and bottom at the cable connector.

Asennuksen valmistuttua on hyvä tarkistaa seuraavat asiat:

- Syöttö- ja hyppykaapeli eivät ole liian suurella vedolla ja mutkalla.
- Maadoitusvaijerissa ei ole liikaa löysää ja se ei myöskään saa kulkea liian läheltä antennin säteileviä osia tai niiden läpi.
- Kaikki kaapelit ja vaijerit pitää olla kiinnitetty siten etteivät ne ympäristöolosuhteista johtuen pääse liikkumaan, erityisen tärkeää on minimoida kaikkien RF-kaapeliin vapaat mitat.

After the installation is complete the following details must be checked:

- The jumper and feed cables are not bent or tensioned too much.
- The grounding wire is not too loose/long nor does it go through the antenna structure or nearby the radiating parts.
- All wires and cables must be attached so that there is no movement due to the effect of the environment, it is especially important to minimize the free lengths in all the RF-cables.

STAATTISEN SÄHKÖN VARAUTUMISEN ESTÄMINEN: PREVENTING THE ELECTROSTATIC DISCHARGE:

Koska antennituotteiden muoviosissa on staattisen sähkön varautumisen mahdollisuus, pitää antenni asennuksen ja käsittelyn jälkeen pyyhkiä kostealla kankaalla. Antennituotteet joissa tämä tulee tehdä on varoitustarra tai -merkki tekstillä: "WARNING – POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS"

Because there is a possibility of electrostatic discharge, after installation and handling the antenna must be wiped with a damp cloth. The antenna products with which this must be done are marked with a sticker or sign with text: "WARNING – POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS"

YLEISOHJEITA:
GENERAL INSTRUCTIONS:

Kaikki asennustyö tulee tehdä IEC 60079-14 mukaan ja kaikkien asennuksessa käytettävien muiden komponenttien tulee täyttää standardien IEC 60079-0 ja IEC 60079-15 vaatimukset.

All installation work must be done according to IEC 60079-14 and all additional installation components and accessories must fulfill the requirements of standards IEC 60079-0 and IEC 60079-15.

Jokaisen antennituotteen mukana toimitetaan yksi kopio tästä ohjeesta, tuotekohtaisesta asennusohjeesta ja EY-vaatimuksen mukaisuusvakuutuksesta.

A copy of this instruction, a product specific mechanical mounting instruction and a copy of the EU-declaration of conformity will be delivered with each antenna product.

Aerial Oy:n puolesta
 On behalf of Aerial Oy

Järvenpää, 14.07.2016



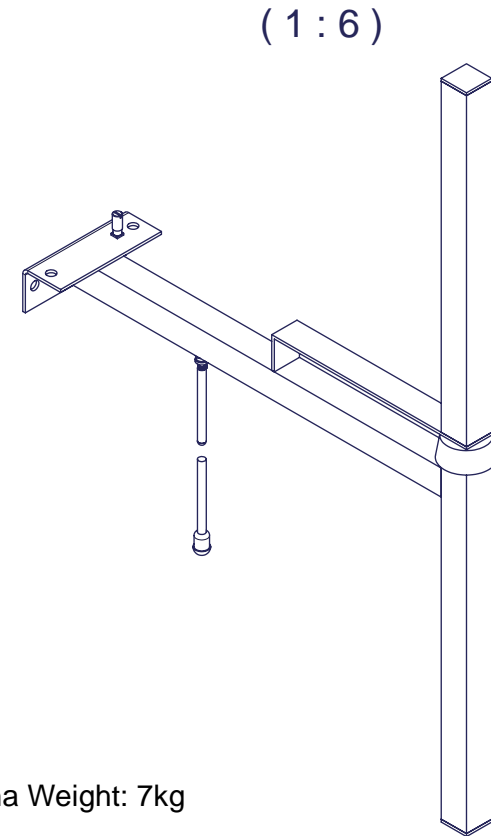
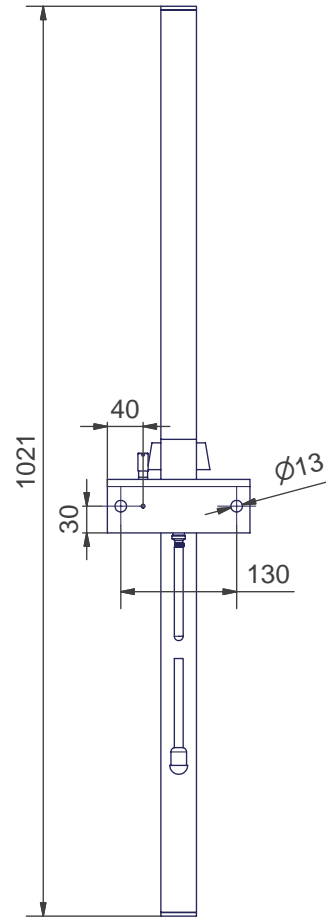
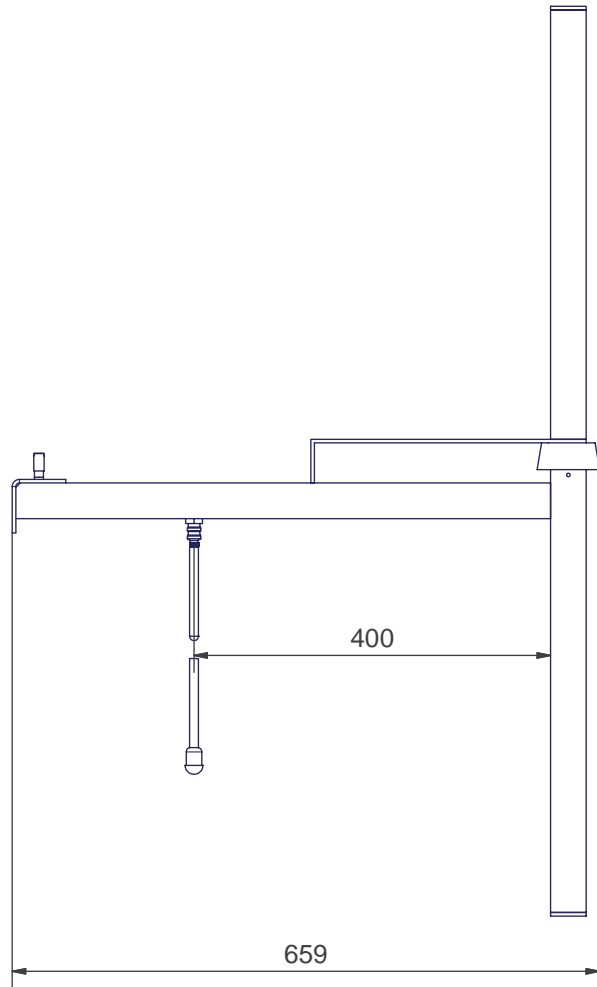
Kristian Tiihonen
 Suunnitteluinsinööri
 R&D Engineer

Liitteet:

Appendices:

- AV1314-H-EXnA-440FN2 mechanical mounting and dimensions, 2 files.
- AV1314-R-H-EXnA-440FN2 mechanical mounting and dimensions, 2 files.
- AV1314-T-H-EXnA-440FN2 mechanical mounting and dimensions, 2 files.
- AV1312-1A-EXnA-131FN2 mechanical mounting and dimensions, 2 files.
- AV1312-2-EXnA-160FN2 mechanical mounting and dimensions, 2 files.
- AV1430-EXnA-131FN2 mechanical mounting and dimensions, 2 files.
- AV1431-EXnA-160FN2 mechanical mounting and dimensions, 2 files.
- AV1468-EXnA-???FN2 mechanical mounting and dimensions, 2 files.
- AV1915-H-EXnA-440FN2 mechanical mounting and dimensions, 2 files.
- AV1916-EXnA-915FN2 mechanical mounting and dimensions, 2 files.
- TR mounting, mounting instruction for all power dividers, 1 file.
- TR2401-EXnA-160FN1, dimensions, 1 file.
- TR2501-EXnA-405FN1, dimensions, 1 file.
- TR4501-EXnA-405FN1, dimensions, 1 file.
- TR1:2-150-470-EXnA-FN1 (TR2481-EXnA-310FN1) , dimensions, 1 file.
- TR1:4-150-470-EXnA-FN1 (TR4481-EXnA-310FN1) , dimensions, 1 file.
- AV1463-EXnA-313FN2 mechanical mounting and dimensions, 2 files.
- AV1434-EXnA-2450FN2 mechanical mounting and dimensions, 2 files.
- AV1438-EXnA-2450FN2 mechanical mounting and dimensions, 2 files.
- AV1916-EXnA-826FN2 mechanical mounting and dimensions, 2 files.
- RG393/U datasheet, 1 file

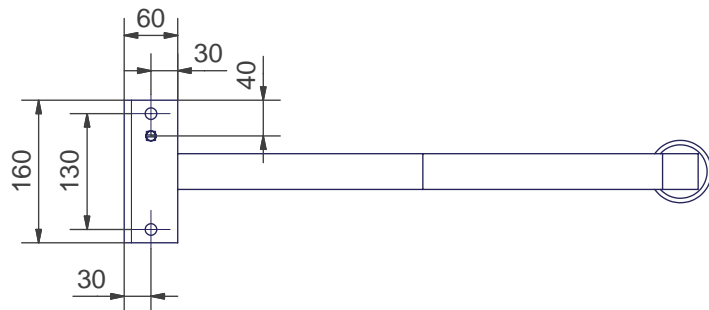
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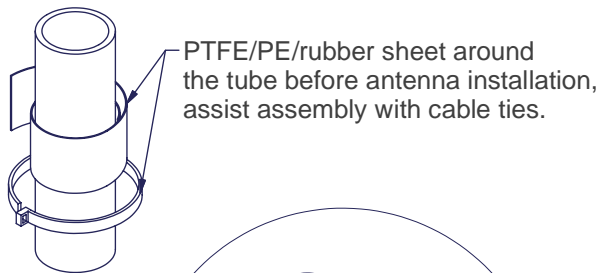
Antenna Weight: 7kg

Mounting Kit Weight: 1,7kg

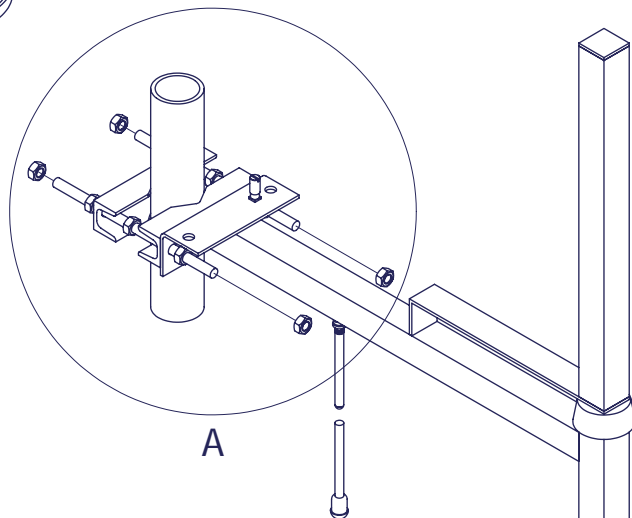
Altogether: 8,7kg



Yleistoleranssi General tolerance SFS-EN 1090-2		Profiili Profile		Väri Color
Pintakäsittely Coating Powder paint		Materiaali Material AISI 316		KORRO PVB
Suunn. Design 23.12.2015 VL	Mittakaava Scale	Kuvaus Description AV1312-1A-EXnA-131FN2 118-136/118-144MHZ, N-f-1000mm, AETM160-6-A2/A4		Paino Mass
Tark. Checked 23.12.2015 KKT				Projekti nimi Project name
Hyv. Approved 23.12.2015 KKT		Mechanical Dimensions		Sivu Versio
 Piitolankatu 9, 04400 Järvenpää tel. +358-9-2790120, fax +358-9-2910210, www.aerial.fi		Tuotekoodi Product code 17501	A	
		Piirustus no. Drawing no. AE11998		



PTFE/PE/rubber sheet around the tube before antenna installation, assist assembly with cable ties.



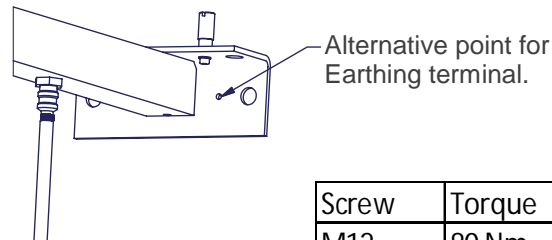
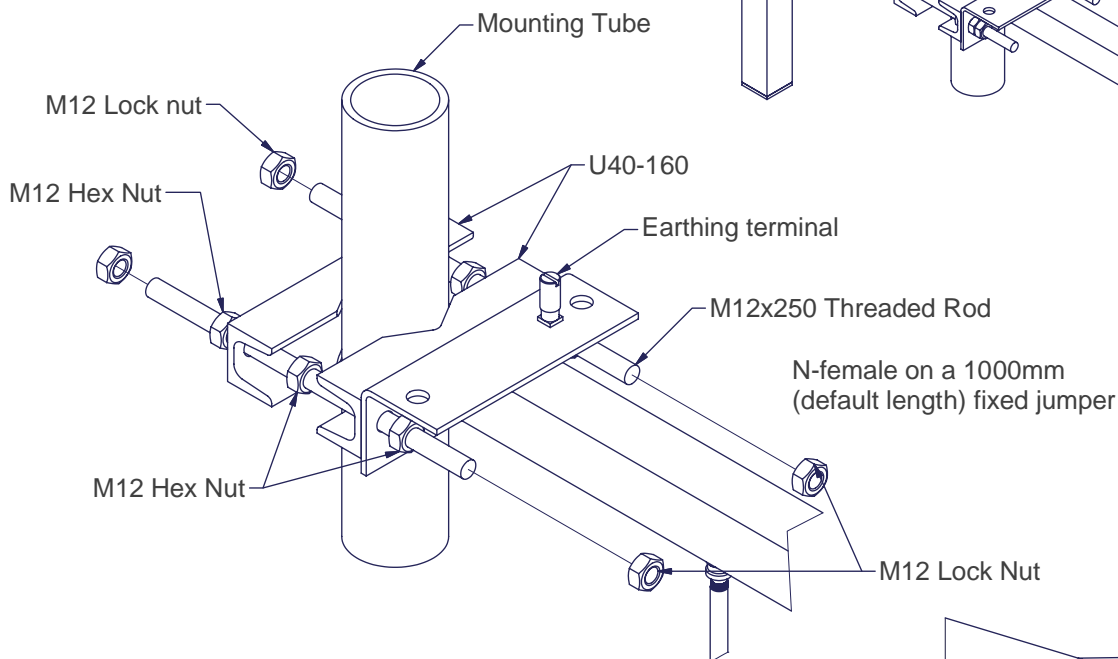
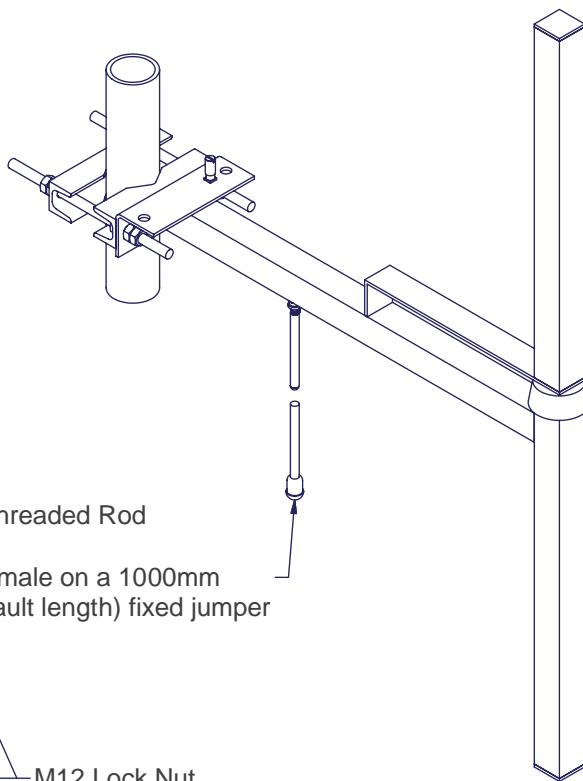
A

Isolation set:

- 1 pc (a' 400x60mm) thin dielectric PTFE/PE/rubber sheet
- 2 pcs plastic cable ties.

Grounding set:

- 3,5 meters 4mm AISI316 multi strand wire.
- 2 pcs 4mm AISI316 wire locks.
- 2 pcs 4mm AISI316 shackles.
- 1 pc 4mm AISI316 thimble.
- 1 pc 4-6mm² AISI316 cable shoe (M6).



Alternative point for Earthing terminal.

Screw	Torque
M12	80 Nm

Mounting set:

- 1 pc AV1312-1A-EXnA-131FN2
- 2 pcs U40-160 AISI316
- 10 pcs M12 Hex Nut AISI316
- 2 pcs M12x250 Threaded Rod AISI316

Lock nut set:

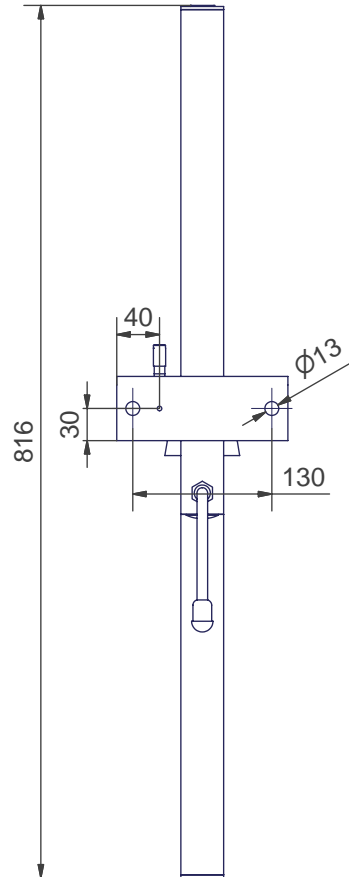
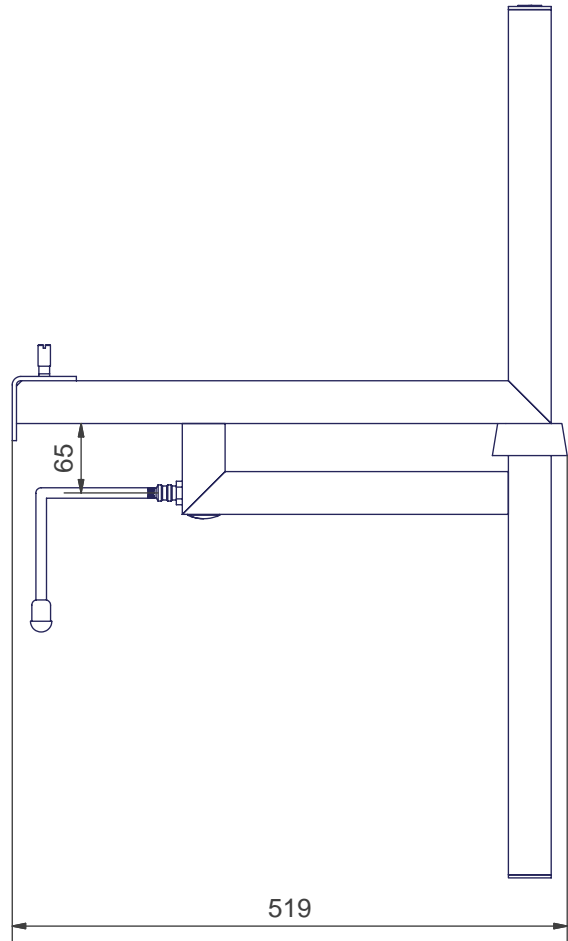
- 4 pcs M12 DIN980

For additional instructions, refer to document: **"Mounting instruction for antenna products made according to ATEX Directive 94/9/EC".**

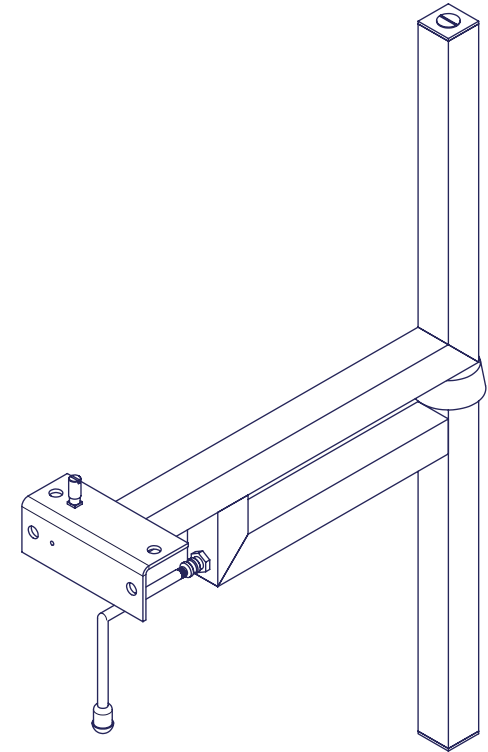
Yleistoleranssi General tolerance		Profilin Profile		Väri Color	
Pintakäsittely Coating		Materiaali Material		Paino Mass	
Suunn. Design	23.12.2015 VL		Kuvas Description	8,7	
Tark. Checked	23.12.2015 KKT			Piirustus Drawing	
Hyv. Approved		Mittakaava Scale	AV1312-1A-EXnA-131FN2 Mechanical Mounting	Kokoonpano	
23.12.2015 KKT		Projektin nimi Project name		Sivu Sheet	
				1 / 1	
				Versio Revision	
				A	
		Tuotekoodi Product code			
		Piirustus no. Drawing no.		AE11888	



Pietilänkatu 9, 04400 Järvenpää
tel. +358-9-2790120, fax +358-9-2910210, www.aerial.fi



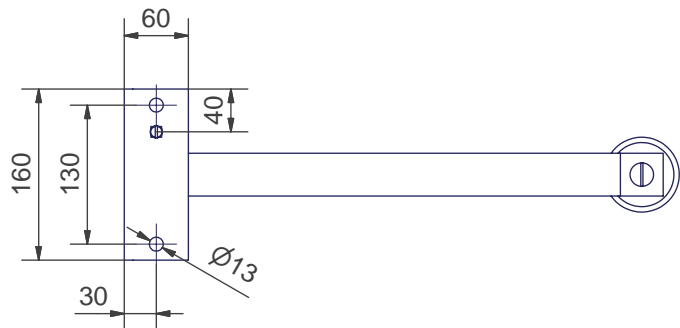
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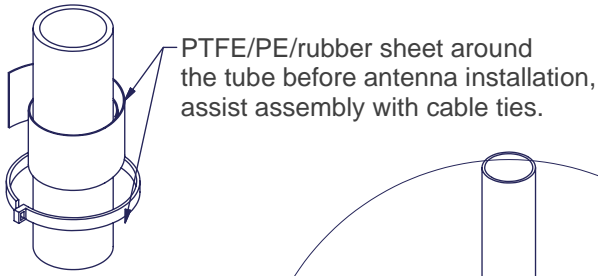
Antenna Weight: 6,8kg

Mounting Kit Weight: 1,7kg

Altogether: 8,5kg



Yleistoleranssi General tolerance SFS-EN 1090-2		Profiili Profile		Väri Color
Pintakäsittely Coating Powder paint		Materiaali Material AISI 316		KORRO PVB
Suunn. Design	23.12.2015 VL	Kuvaus Description AV1312-2-EXnA-160FN2 146-174MHz, N-f-1000mm, AETM160-6-A2/A4	Paino Mass	
Tark. Checked	23.12.2015 KKT		Piirustus Assembly / Drawing Kokoonpano	
Hyv. Approved	23.12.2015 KKT	Projektin nimi Project name Mechanical Dimensions	Sivu Sheet	
 <small>Pietolankatu 9, 04400 Järvenpää tel. +358-9-2790120, fax +358-9-2910210, www.aerial.fi</small>		Tuotekoodi Product code 17502	A	
		Piirustus no. Drawing no. AE21393		
		Version Revision		

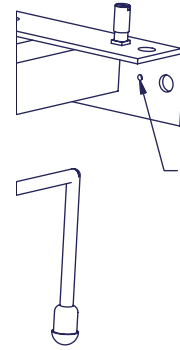
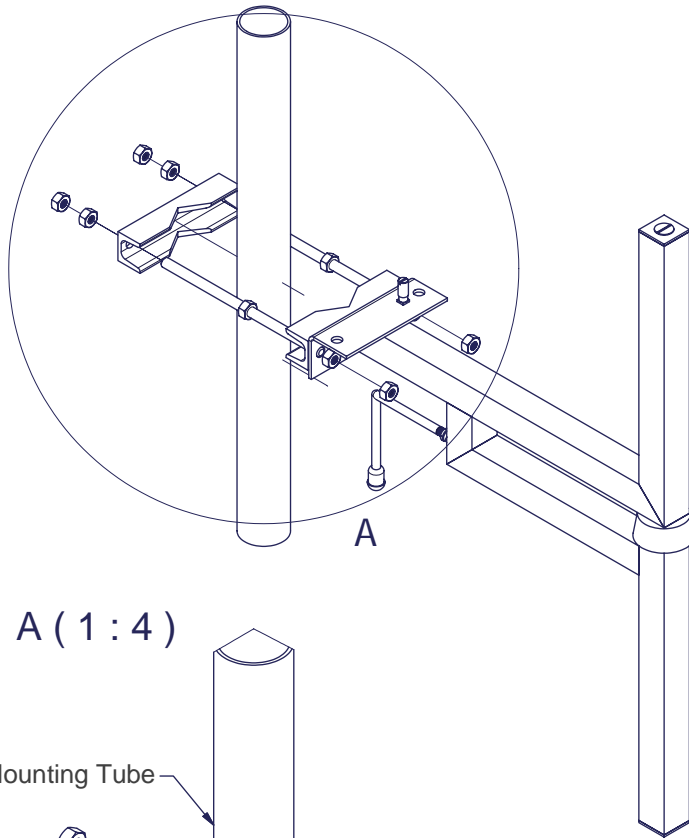


Isolation set:

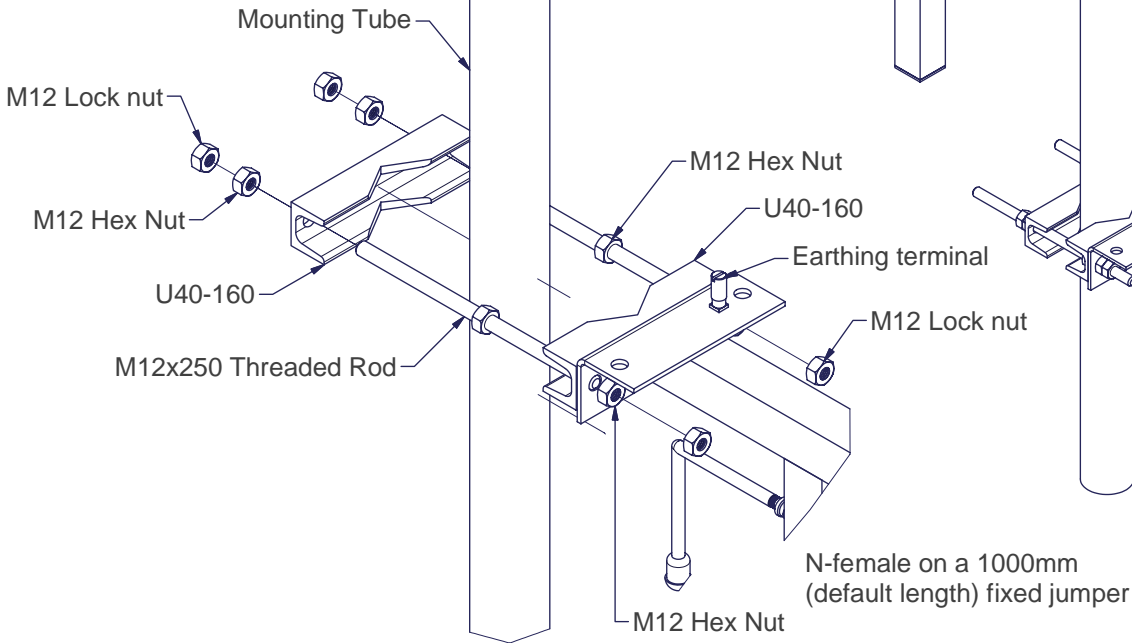
- 1 pc (a' 400x60mm) thin dielectric PTFE/PE/rubber sheet
- 2 pcs plastic cable ties.

Grounding set:

- 3,5 meters 4mm AISI316 multi strand wire.
- 2 pcs 4mm AISI316 wire locks.
- 2 pcs 4mm AISI316 shackles.
- 1 pc 4mm AISI316 thimble.
- 1 pc 4-6mm² AISI316 cable shoe (M6).



A (1 : 4)



Mounting set:

- 1pc AV1312-2-EXnA-160FN2
- 2pc U40-160 AISI316
- 10pcs M12 Hex Nut AISI316
- 2pcs M12x250 Threaded Rod AISI316

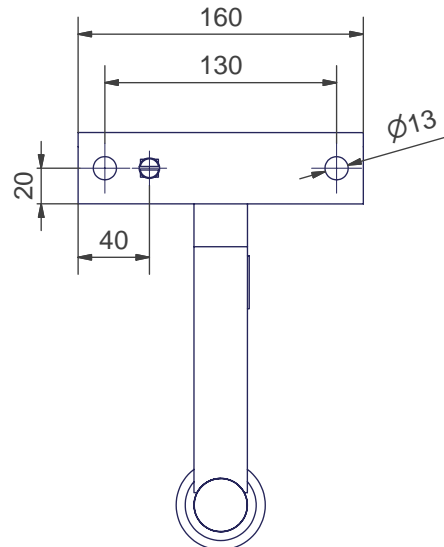
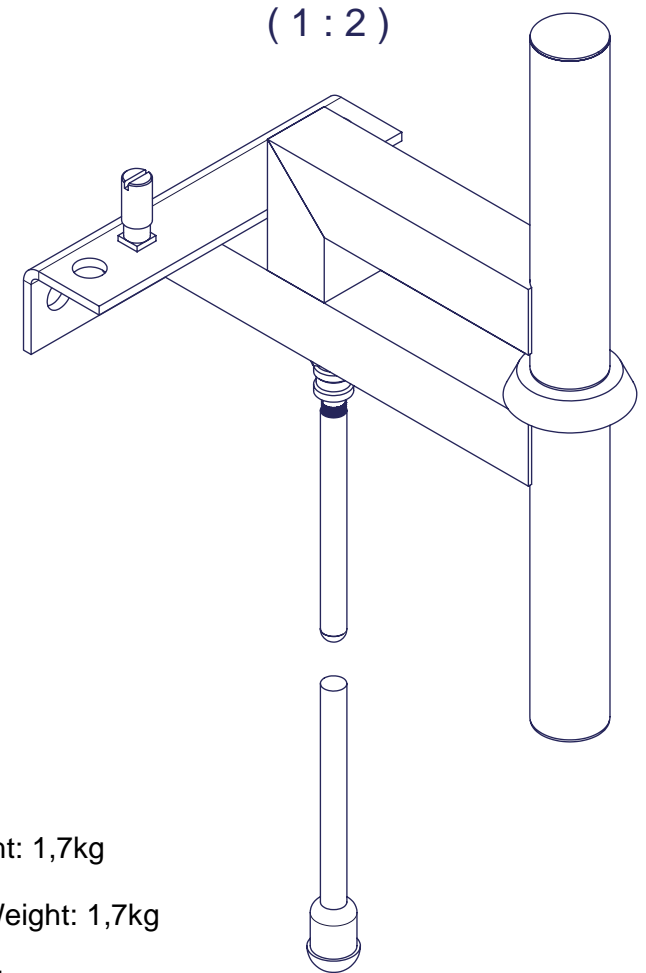
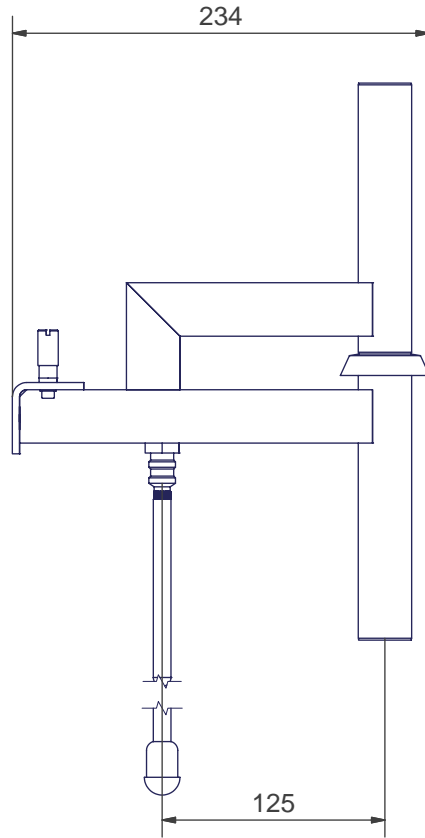
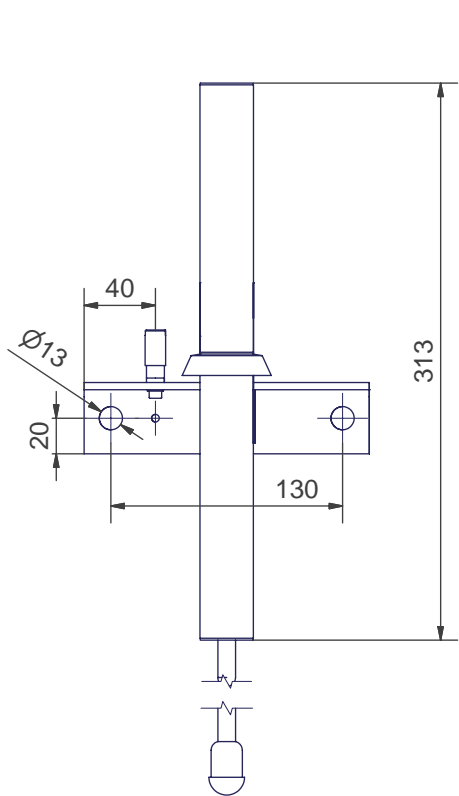
Lock nut set:

- 4pcs M12 DIN980

Screw	Torque
M12	80 Nm

For additional instructions, refer to document: **"Mounting instruction for antenna products made according to ATEX Directive 94/9/EC"**.



Yleistoleranssi General tolerance		Profilin Profile		Väri Color		
Pintakäsittely Coating		Materiaali Material		Paino Mass		
Suunn. Design	23.12.2015 VL	Mittakaava Scale	Kuvaus Description	8,5		
Tark. Checked	23.12.2015 KKT			AV1312-2-EXnA-160FN2 Mechanical Mounting		
Hyv. Approved	23.12.2015 KKT	Projektin nimi Project name		Piirustus Drawing		
 <small>Pietilänkatu 9, 04400 Järvenpää tel. +358-9-2790120, fax +358-9-2910210, www.aerial.fi</small>			Tuotekoodi Product code		Sivu Sheet	
			Piirustus no. Drawing no.			1 / 1
			AE21394		Versio Revision	
					A	

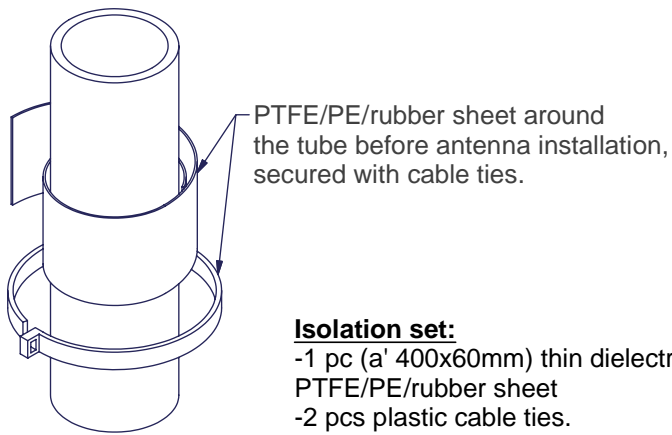


Antenna Weight: 1,7kg

Mounting Kit Weight: 1,7kg

Altogether: 3,4kg

Yleistoleranssi General tolerance		SFS-EN 1090-2		Profiili Profile			
Pintakäsittely Coating		Powder paint		Materiaali Material		AISI 316	
Suunn. Design		30.12.2015 VL		Kuvaus Description		Väri Color	
Tark. Checked		30.12.2015 KKT		 Mittakaava Scale		KORRO PVB	
Hyv. Approved		30.12.2015 KKT				AV1314-H-EXnA-440FN2 380-470MHz, N-f-1000mm, AETM160-6-A2/A4	
				Projektin nimi Project name		Piirustus Drawing	
				Mechanical Dimensions		Kokoonpano Assembly	
 Pietolankatu 9, 04400 Järvenpää tel. +358-9-2790120, fax +358-9-2910210, www.aerial.fi				Tuotekoodi Product code		Sivu Sheet	
				17489		Versio Revision	
				Piirustus no. Drawing no.		AE15786	
						A	



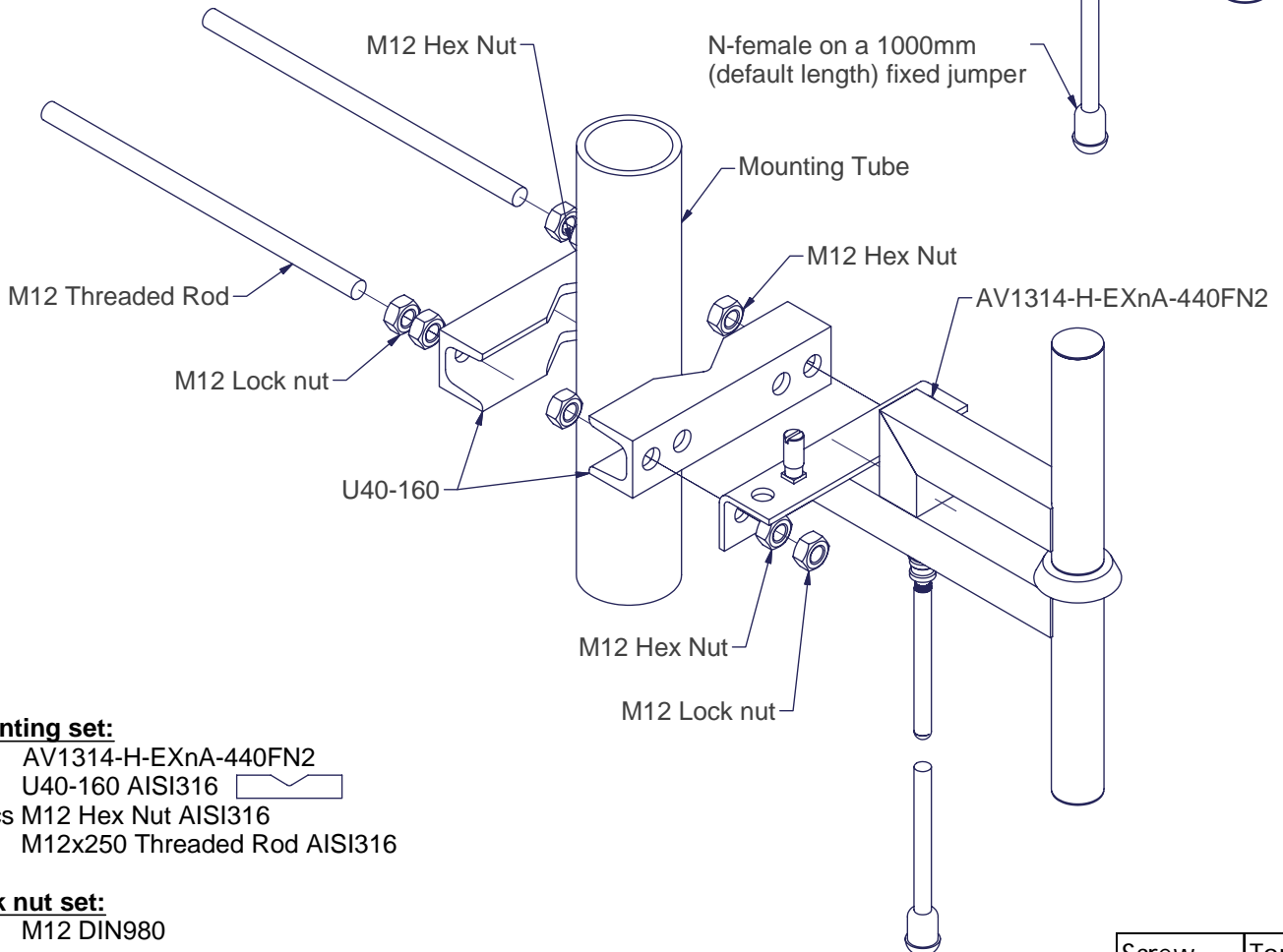
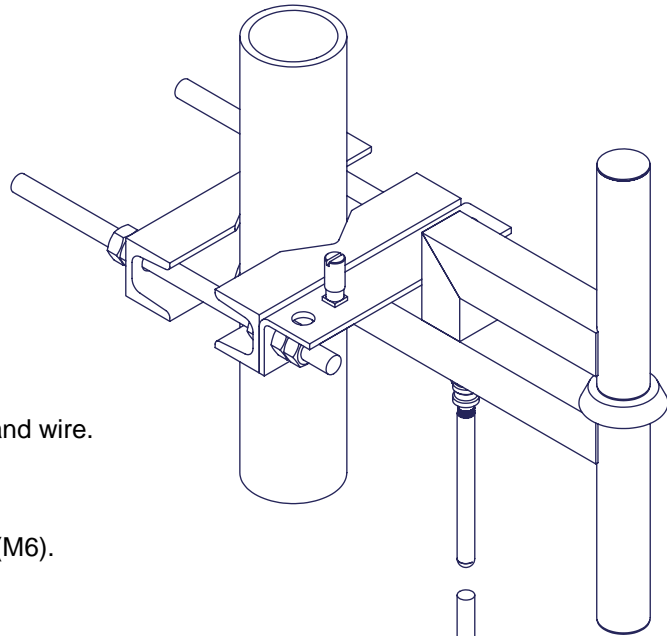
PTFE/PE/rubber sheet around the tube before antenna installation, secured with cable ties.

Isolation set:

- 1 pc (a' 400x60mm) thin dielectric PTFE/PE/rubber sheet
- 2 pcs plastic cable ties.

Grounding set:

- 3,5 meters 4mm AISI316 multi strand wire.
- 2 pcs 4mm AISI316 wire locks.
- 2 pcs 4mm AISI316 shackles.
- 1 pc 4mm AISI316 thimble.
- 1 pc 4-6mm² AISI316 cable shoe (M6).



Mounting set:


- 1pc AV1314-H-EXnA-440FN2
- 2pcs U40-160 AISI316
- 10pcs M12 Hex Nut AISI316
- 2pcs M12x250 Threaded Rod AISI316

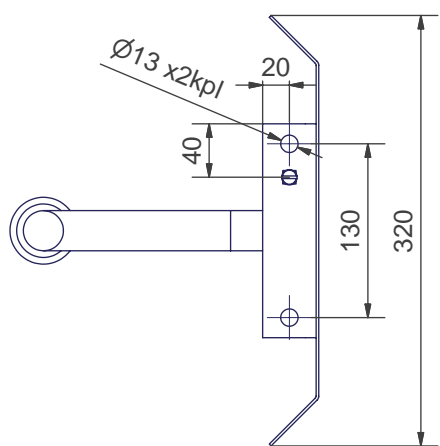
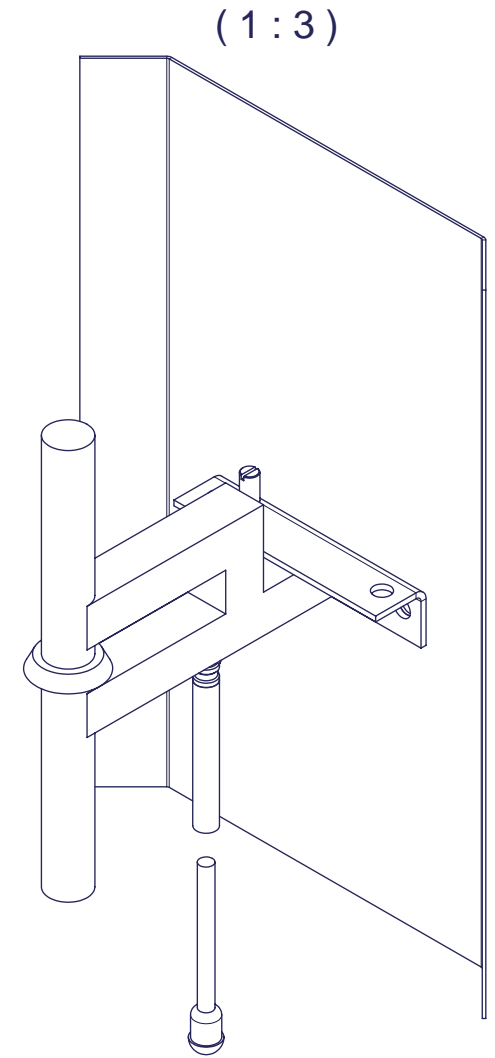
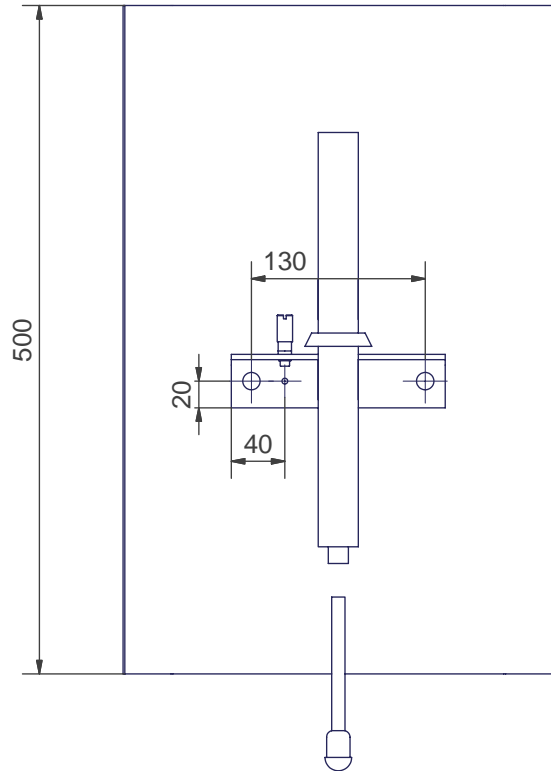
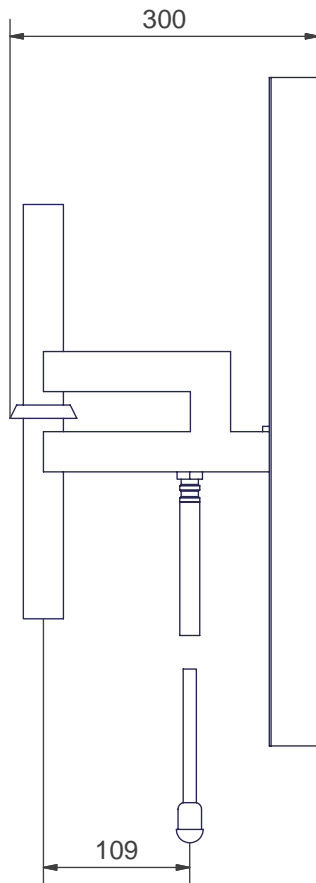
Lock nut set:

- 4pcs M12 DIN980


Screw	Torque
M12	80 Nm

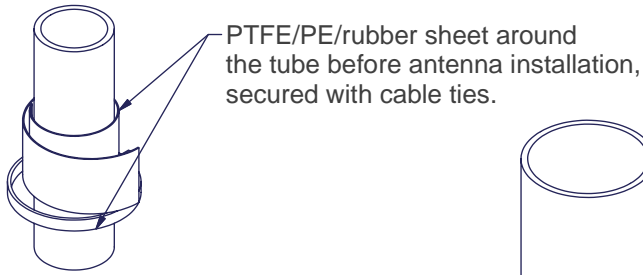
For additional instructions, refer to document: **"Mounting instruction for antenna products made according to ATEX Directive 94/9/EC".**

Yleistoleranssi General tolerance		Profilin Profile		Väri Color	
Pintakäsittely Coating		Materiaali Material		Paino Mass	
Suunn. Design	21.01.2015 VL	Kuvaus Description	AV1314-H-EXnA-440FN2 Mechanical Mounting	Piirustus Assembly / Drawing Kokoonpano	
Tark. Checked	21.01.2015 KKT			Sivu Sheet 1 / 1	
Hyv. Approved	21.01.2015 KKT	Projektin nimi Project name		Versio Revision	
			Tuotekoodi Product code		A
			Piirustus no. Drawing no. AE11954		



Antenna Weight: 4,4kg
 Mounting Kit Weight: 1,7kg
 Alltogether: 6,1kg

Yleistoleranssi General tolerance		SFS-EN 1090-2		Profiili Profile			
Pintakäsittely Coating		Powder paint		Materiaali Material	AISI 316		
Suunn. Design		07.01.2016	VL	Kuvaus Description	Väri Color		
Tark. Checked		07.01.2016	KKT		KORRO PVB		
Hyv. Approved		07.01.2016	KKT				
Mittakaava Scale				AV1314-R-H-EXnA-440FN2 380-470MHz, N-f-1000mm, AETM160-6-A2/A4	Paino Mass		
					Piirustus Drawing		
				Projekti nimi Project name	Sivu Sheet		
				Mechanical Dimensions	Version Revision		
 Aerial Oy <small>Pietolankatu 9, 04400 Järvenpää tel. +358-9-2790120, fax +358-9-2910210, www.aerial.fi</small>				Tuotekoodi Product code	A		
						17493	
						Piirustus no. Drawing no.	AE21396



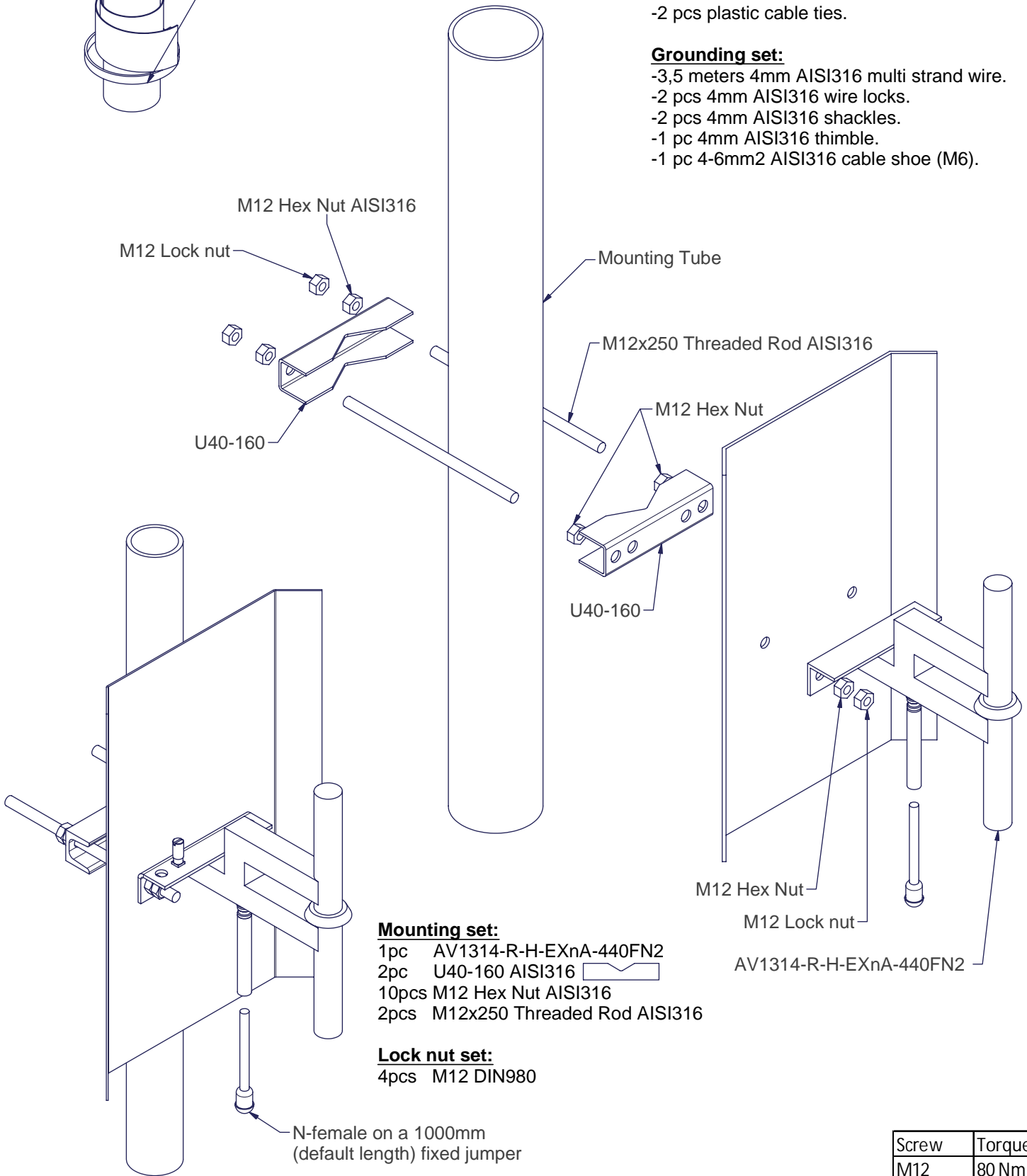
PTFE/PE/rubber sheet around the tube before antenna installation, secured with cable ties.

Isolation set:

- 1 pc (a' 400x60mm) thin dielectric PTFE/PE/rubber sheet
- 2 pcs plastic cable ties.

Grounding set:

- 3,5 meters 4mm AISI316 multi strand wire.
- 2 pcs 4mm AISI316 wire locks.
- 2 pcs 4mm AISI316 shackles.
- 1 pc 4mm AISI316 thimble.
- 1 pc 4-6mm² AISI316 cable shoe (M6).



Mounting set:

- 1pc AV1314-R-H-EXnA-440FN2
- 2pc U40-160 AISI316
- 10pcs M12 Hex Nut AISI316
- 2pcs M12x250 Threaded Rod AISI316


Lock nut set:

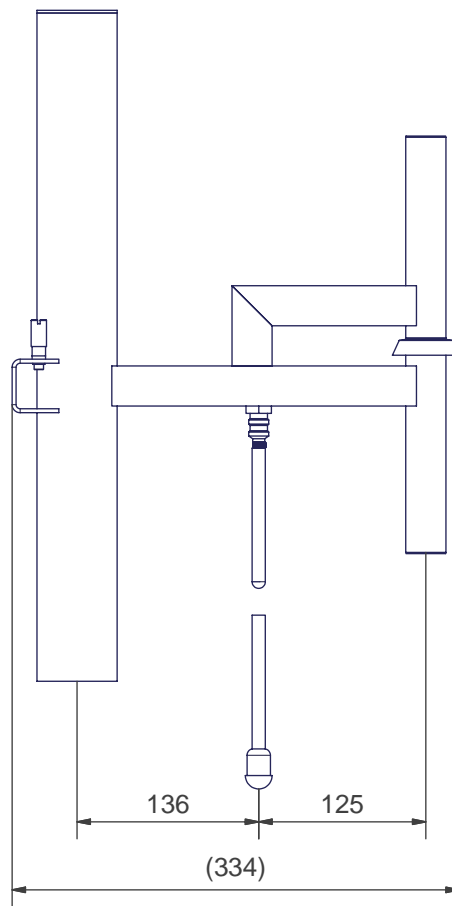
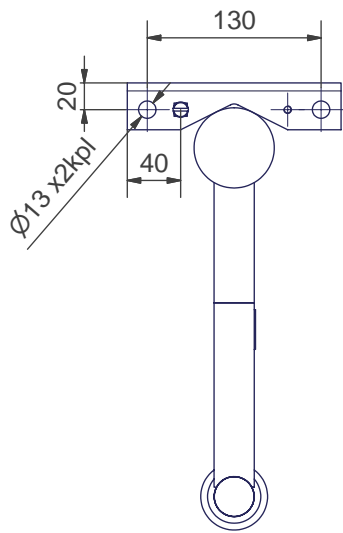
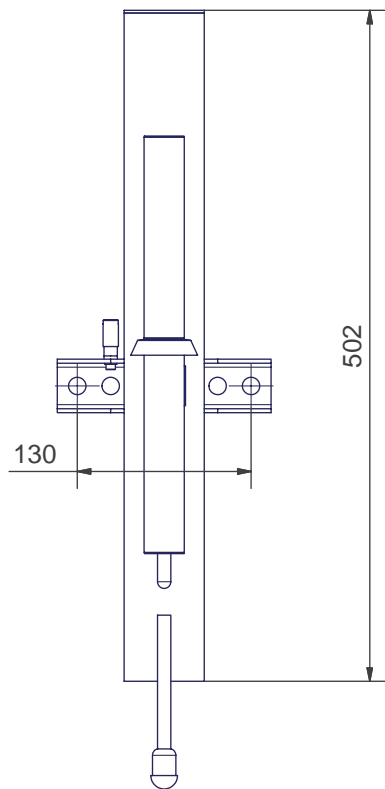
- 4pcs M12 DIN980

N-female on a 1000mm (default length) fixed jumper

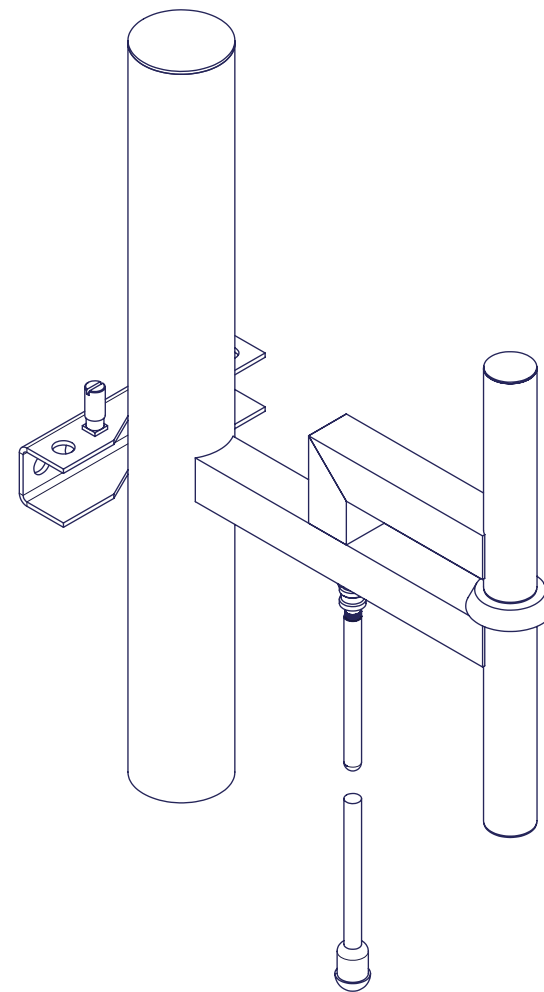
Screw	Torque
M12	80 Nm

For additional instructions, refer to document: **"Mounting instruction for antenna products made according to ATEX Directive 94/9/EC"**.

Yleistoleranssi General tolerance		Profilili Profile		Väri Color	
Pintakäsittely Coating		Materiaali Material		Paino Mass	
Suunn. Design	21.01.2015 VL	Kuvaus Description AV1314-R-H-EXnA-440FN2 Mechanical Mounting	Piirustus Kokoontulo / Drawing Kokoontulo		
Tark. Checked	21.01.2015 KKT		Sivu Sheet		
Hyv. Approved	21.01.2015 KKT		Versio Revision		
Mittakaava Scale		Projektin nimi Project name		Tuotekoodi Product code	
 <small>Pietilänkatu 9, 04400 Järvenpää tel. +358-9-2790120, fax +358-9-2910210, www.aerial.fi</small>		Piirustus no. Drawing no.		AE21395	




(1:3)

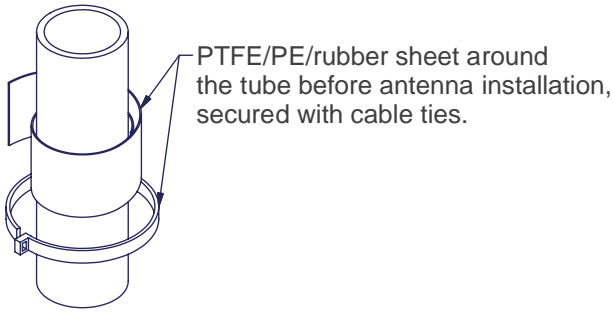


Antenna Weight: 3,8kg

Mounting Kit Weight: 1,7kg

Alltogether: 5,5kg

Yleistoleranssi General tolerance SFS-EN 1090-2		Profiili Profile		Väri Color KORRO PVB
Pintakäsittely Coating Powder paint		Materiaali Material AISI 316		Paino Mass
Suunn. Design 07.01.2016 VL	Mittakaava Scale	Kuvaus Description AV1314-T-H-EXnA-440FN2 380-470MHz, N-f-1000mm, AETM160-6-A2/A4		Piirustus Assembly / Drawing Kokoonpano
Tark. Checked 07.01.2016 KKT				Sivu Sheet
Hyv. Approved 07.01.2016 KKT		Projektin nimi Project name Mechanical Dimensions		Version Revision
 <small>Pietolankatu 9, 04400 Järvenpää tel. +358-9-2790120, fax +358-9-2910210, www.aerial.fi</small>		Tuotekoodi Product code 17497	A	
		Piirustus no. Drawing no. AE11566		



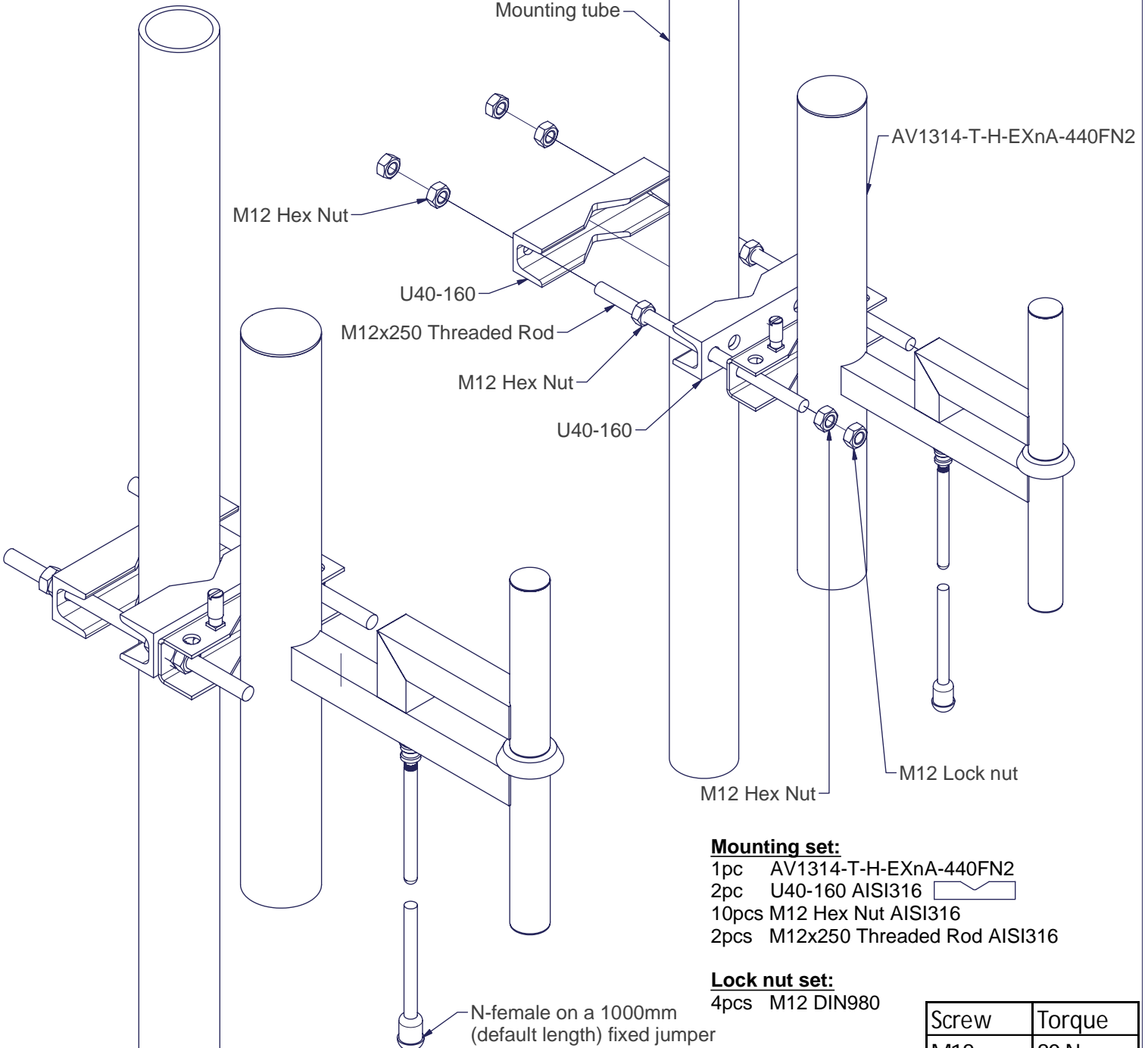
PTFE/PE/rubber sheet around the tube before antenna installation, secured with cable ties.

Isolation set:

- 1 pc (a' 400x60mm) thin dielectric PTFE/PE/rubber sheet
- 2 pcs plastic cable ties.

Grounding set:

- 3,5 meters 4mm AISI316 multi strand wire.
- 2 pcs 4mm AISI316 wire locks.
- 2 pcs 4mm AISI316 shackles.
- 1 pc 4mm AISI316 thimble.
- 1 pc 4-6mm² AISI316 cable shoe (M6).



Mounting set:

- 1pc AV1314-T-H-EXnA-440FN2
- 2pc U40-160 AISI316
- 10pcs M12 Hex Nut AISI316
- 2pcs M12x250 Threaded Rod AISI316

Lock nut set:

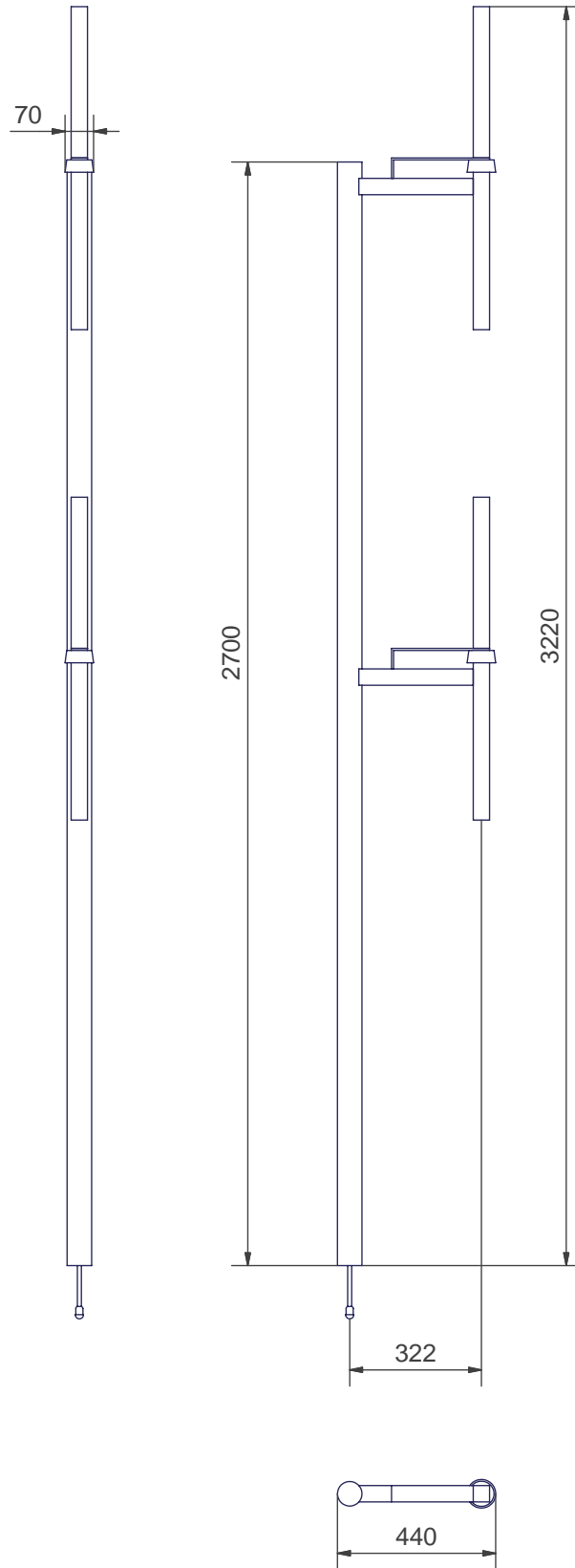
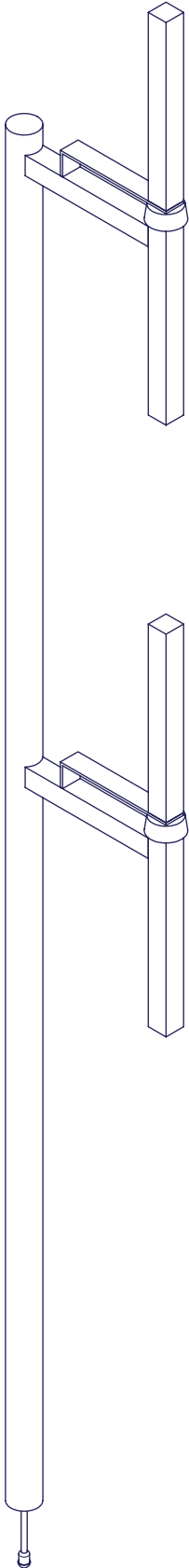
- 4pcs M12 DIN980

Screw	Torque
M12	80 Nm



For additional instructions, refer to document: **"Mounting instruction for antenna products made according to ATEX Directive 94/9/EC"**.

Yleistoleranssi General tolerance		Profilin Profile		Väri Color	
Pintakäsittely Coating		Materiaali Material		Paino Mass	
Suunn. Design	21.01.2015 VL		Kuvaus Description AV1314-T-H-EXnA-440FN2 Mechanical Mounting	Piirustus Drawing	
Tark. Checked	21.01.2015 KKT			Sivu Sheet	
Hyv. Approved	21.01.2015 KKT			1 / 1	
Aerial Oy <small>Pietilänkatu 9, 04400 Järvenpää tel. +358-9-2790120, fax +358-9-2910210, www.aerial.fi</small>			Tuotekoodi Product code Piirustus no. Drawing no.		
			AE11887		A

(1:8)



Antenna Weight: 21,6kg
 Mounting Kit Weight: 4,8kg
 Altogether: 26,4kg

Yleistoleranssi General tolerance		SFS-EN 1090		Profilin Profile					
Pintakäsittely Coating		Powder paint		Materiaali Material		AISI 316			
Suunn. Design		07.01.2016 VL		 Kuvaus Description AV1430-EXnA-131FN2 118-136/118-144MHz, N-f-1000mm, AETM160-4-A2/A4		Väri Color			
Tark. Checked		07.01.2016 KKT				KORRO PVB			
Hyv. Approved		07.01.2016 KKT				Paino Mass			
				Mittakaava Scale		Piirustus Assembly / Drawing			
				Projektin nimi Project name		Kokoonpano			
				Mechanical Dimensions		Sheet			
 Aerial Oy <small>Pietilänkatu 9, 04400 Järvenpää tel. +358-9-2790120, fax +358-9-2910210, www.aerial.fi</small>				Tuotekoodi Product code		17505			
				Piirustus no. Drawing no.		AE21536		A	

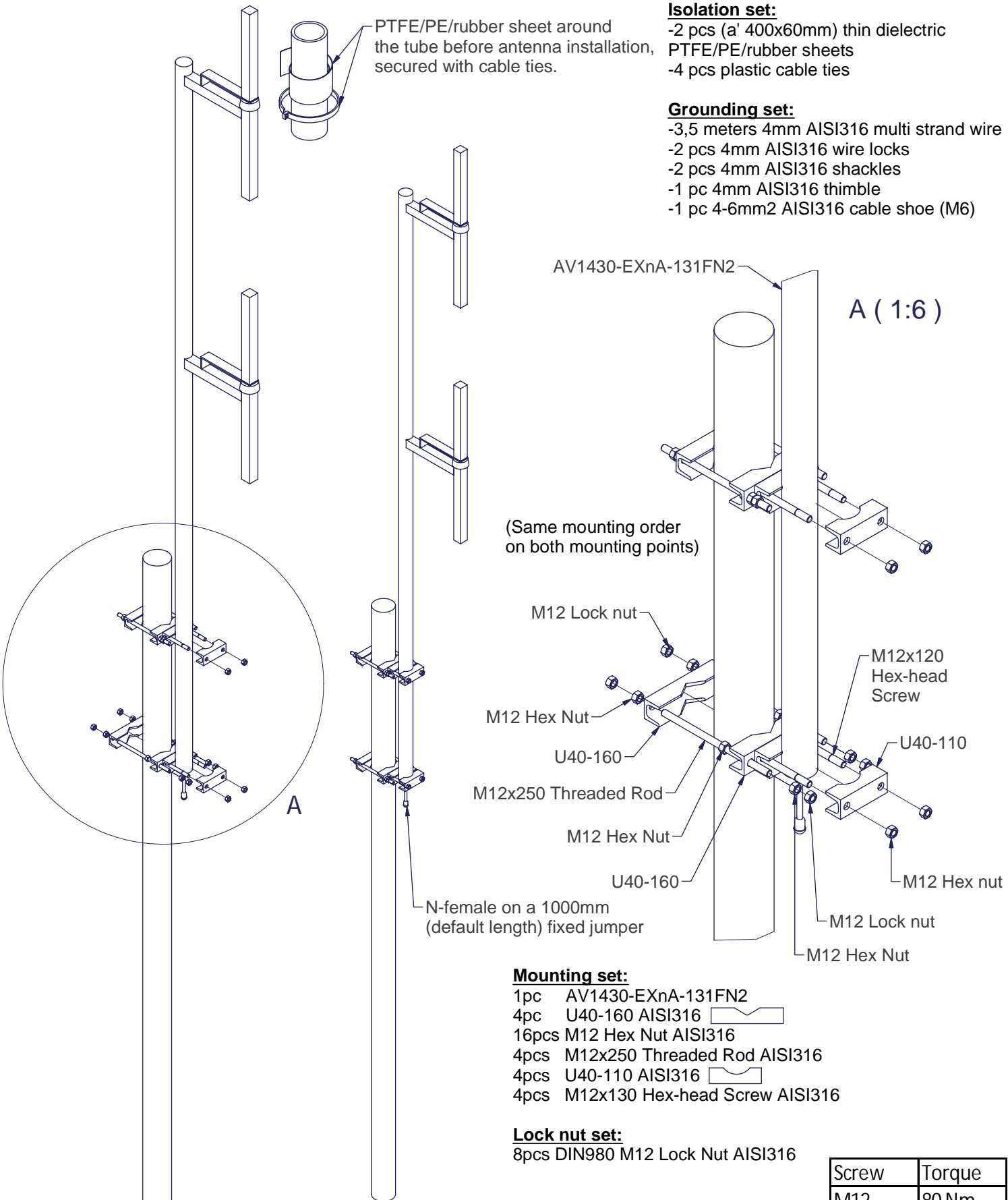
PTFE/PE/rubber sheet around the tube before antenna installation, secured with cable ties.

Isolation set:

- 2 pcs (a' 400x60mm) thin dielectric PTFE/PE/rubber sheets
- 4 pcs plastic cable ties

Grounding set:

- 3,5 meters 4mm AISI316 multi strand wire
- 2 pcs 4mm AISI316 wire locks
- 2 pcs 4mm AISI316 shackles
- 1 pc 4mm AISI316 thimble
- 1 pc 4-6mm² AISI316 cable shoe (M6)



Mounting set:

- 1pc AV1430-EXnA-131FN2
- 4pc U40-160 AISI316
- 16pcs M12 Hex Nut AISI316
- 4pcs M12x250 Threaded Rod AISI316
- 4pcs U40-110 AISI316
- 4pcs M12x130 Hex-head Screw AISI316

Lock nut set:

- 8pcs DIN980 M12 Lock Nut AISI316

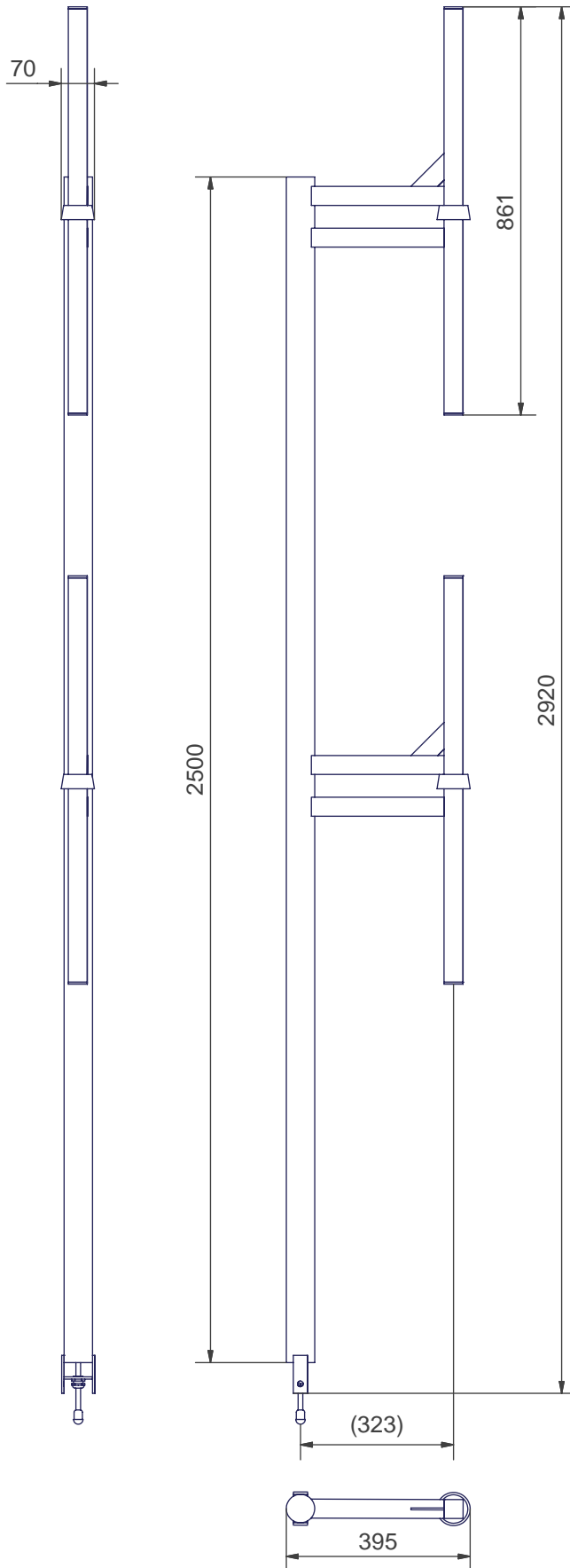
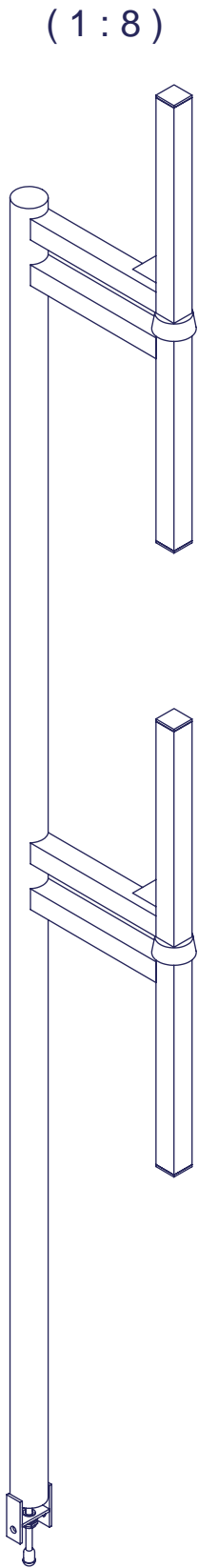
Screw	Torque
M12	80 Nm

For additional instructions, refer to document: **"Mounting instruction for antenna products made according to ATEX Directive 94/9/EC"**.



Yleistoleranssi General tolerance		Profilili Profile		Väri Color	
Pintakäsittely Coating		Materiaali Material		Paino Mass	
Suunn. Design	21.01.2015 VL	Mittakaava Scale	Kuvaus Description	24,6	
Tark. Checked	21.01.2015 KKT			Piirustus Drawing	
Hyv. Approved	21.01.2015 KKT			Kokoonpano	
Projekti nimi Project name			Sivu Sheet		1 / 1
Tuotekoodi Product code			Versio Revision		A
Piirustus no. Drawing no.			AE21398		

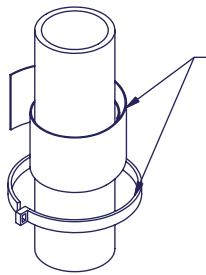


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Antenna Weight: 16,5kg
 Mounting Kit Weight: 4,8kg
 Altogether: 21,3kg

Yleistoleranssi General tolerance		SFS-EN 1090		Profilin Profile					
Pintakäsittely Coating		Powder paint		Materiaali Material		AISI 316			
Suunn. Design		07.01.2016 VL		 Kuvaus Description AV1431-EXnA-160FN2 146-174MHz, N-f-1000mm AETM160-4-A2/A4		Väri Color			
Tark. Checked		07.01.2016 KKT				Paino Mass			
Hyv. Approved		07.01.2016 KKT				Piirustus Drawing			
				Projektin nimi Project name		Kokoonpano Sheet			
				Mechanical Dimensions		Versio Revision			
 Aerial Oy <small>Pietilänkatu 9, 04400 Järvenpää tel. +358-9-2790120, fax +358-9-2910210, www.aerial.fi</small>				Tuotekoodi Product code		17506			
				Piirustus no. Drawing no.		AE11636		A	



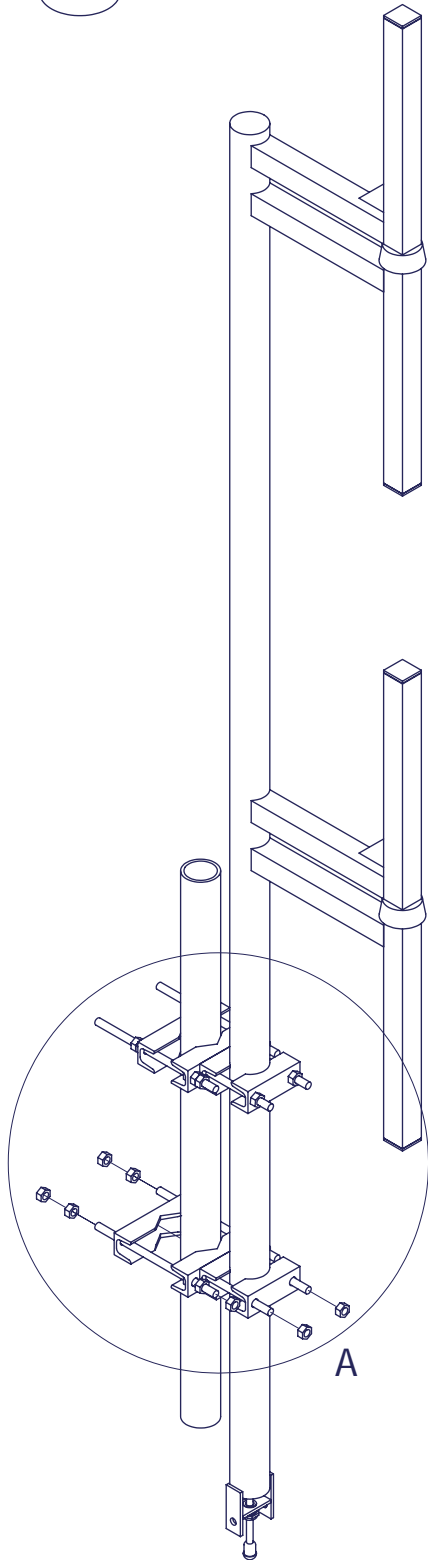
PTFE/PE/rubber sheet around the tube before antenna installation, secured with cable ties.

Isolation set:

- 2 pcs (a' 400x60mm) thin dielectric PTFE/PE/rubber sheets
- 4 pcs plastic cable ties

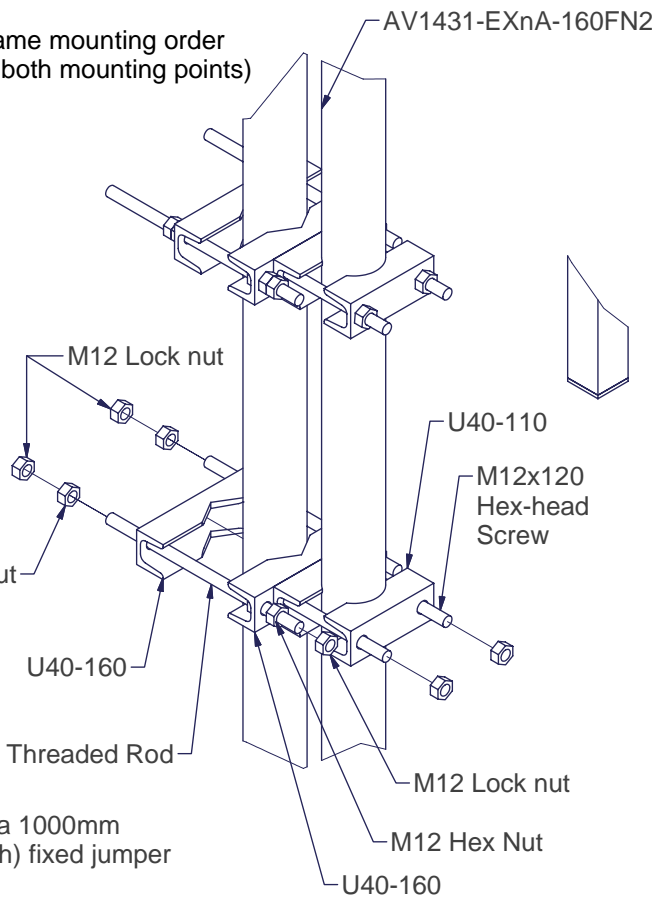
Grounding set:

- 3,5 meters 4mm AISI316 multi strand wire
- 2 pcs 4mm AISI316 wire locks
- 2 pcs 4mm AISI316 shackles
- 1 pc 4mm AISI316 thimble
- 1 pc 4-6mm² AISI316 cable shoe (M6)



A (1:5)

(Same mounting order on both mounting points)



Mounting set:


- 1pc AV1431-EXnA-160FN2
- 4pc U40-160 AISI316
- 16pcs M12 Hex Nut AISI316
- 4pcs M12x250 Threaded Rod AISI316
- 4pcs U40-110 AISI316
- 4pcs M12x120 Hex-head Screw AISI316

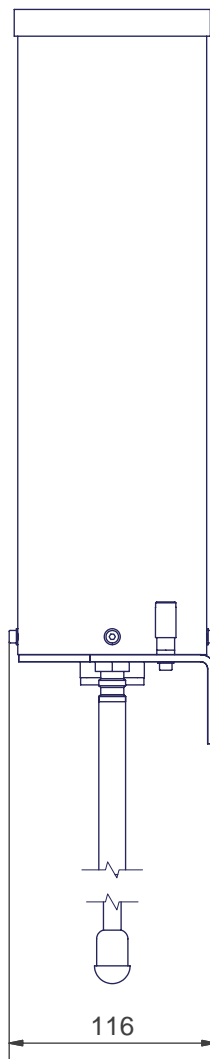
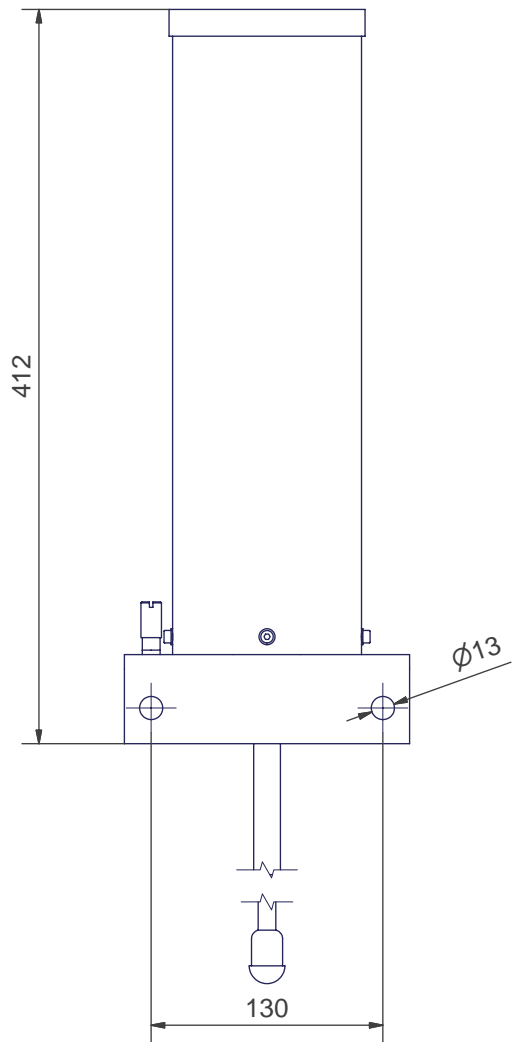
Lock nut set:

- 8pcs M12 DIN980

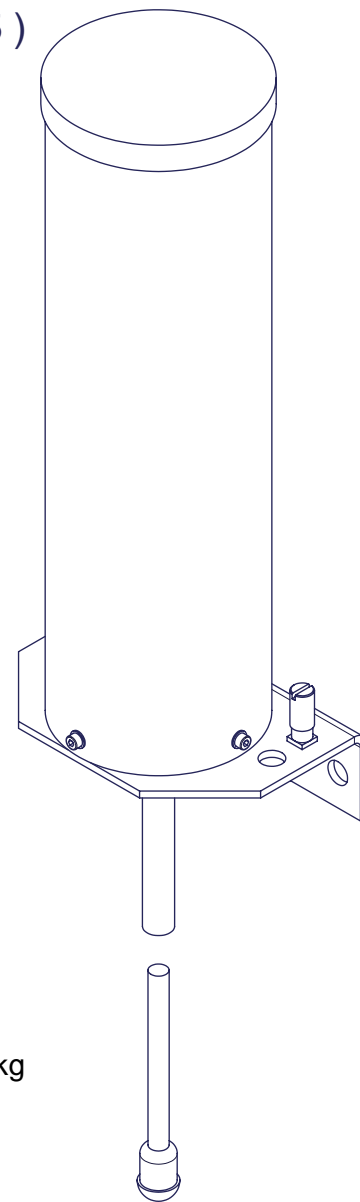
Screw	Torque
M12	80 Nm

For additional instructions, refer to document: **"Mounting instruction for antenna products made according to ATEX Directive 94/9/EC"**.

Yleistoleranssi General tolerance		Profilili Profile		Väri Color	
Pintakäsittely Coating		Materiaali Material		Paino Mass	
Suunn. Design	16.01.2015 VL	Kuvaus Description	AV1431-EXnA-160FN2 Mechanical Mounting	Piirustus Drawing	
Tark. Checked	16.01.2015 KKT			Kokoonpano	
Hyv. Approved		Projektin nimi Project name		Sivu Sheet	
16.01.2015 KKT				1 / 1	
 <small>Pietilänkatu 9, 04400 Järvenpää tel. +358-9-2790120, fax +358-9-2910210, www.aerial.fi</small>		Tuotekoodi Product code		A	
		Piirustus no. Drawing no.			
		AE21506			



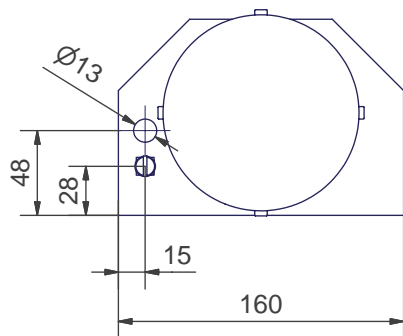
(1 : 2,5)



Antenna Weight: 2,5kg

Mounting Kit Weight: 1,7kg

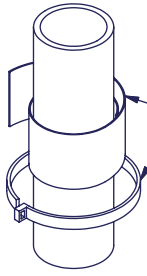
Altogether: 4,2kg



Yleistoleranssi General tolerance		SFS-EN 1090-2		Profiili Profile			
Pintakäsittely Coating		Powder paint		Materiaali Material		AISI 316	
Suunn. Design		06.08.2015 VL		Kuvaus Description		Väri Color	
Tark. Checked		07.01.2016 KKT		AV1434-EXnA-2450FN2 2,4-2,5GHz, N-f-1000mm, AETM160-6-A2/A4		KORRO PVB	
Hyv. Approved		07.01.2016 KKT				Paino Mass	
				Mittakaava Scale		Piirustus Drawing	
						Kokoonpano Assembly	
						Sivu Sheet	
						1 / 1	
						Versio Revision	
						A	
				Tuotekoodi Product code		18670	
				Piirustus no. Drawing no.		AE19159	

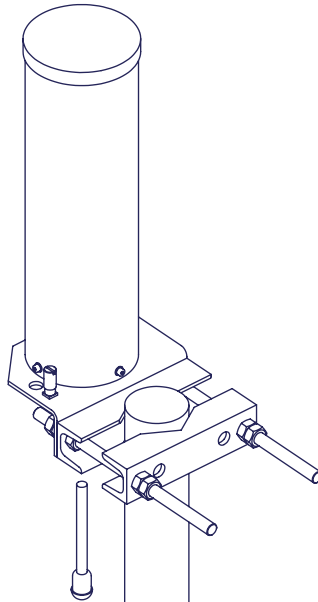


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PTFE/PE/rubber sheet around the tube before antenna installation, secured with cable ties.

(1 : 4)

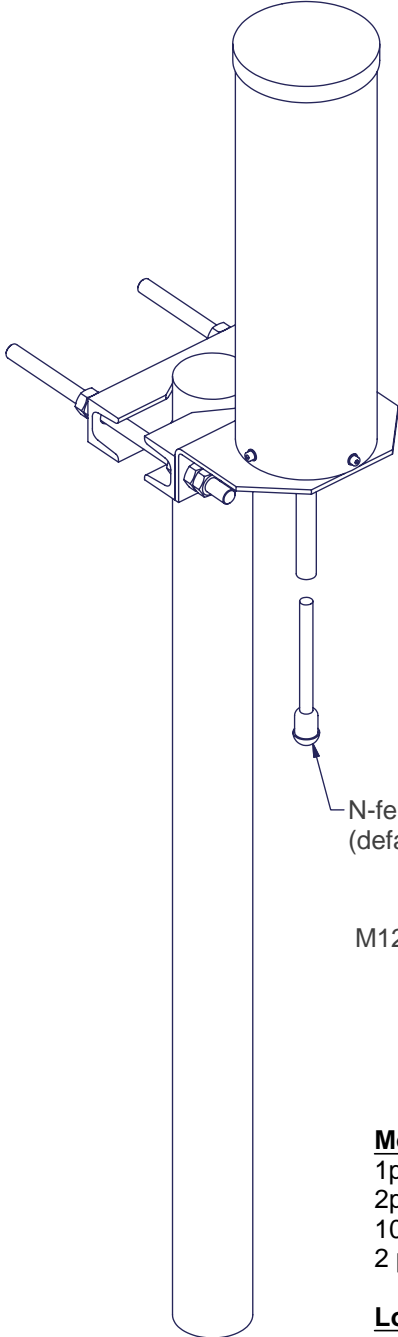


Isolation set:

- 1 pc (a' 400x60mm) thin dielectric PTFE/PE/rubber sheet
- 2 pcs plastic cable ties.

Grounding set:

- 3,5 meters 4mm AISI316 multi strand wire.
- 2 pcs 4mm AISI316 wire locks.
- 2 pcs 4mm AISI316 shackles.
- 1 pc 4mm AISI316 thimble.
- 1 pc 4-6mm² AISI316 cable shoe (M6).



N-female on a 1000mm (default length) fixed jumper

M12 Lock nut

M12 Hex nut

AV1434-EXnA-2450FN2

M12x250 Threaded rod

U40-160

M12 Lock nut

M12 Hex nut

U40-160

Mounting tube

Mounting set:


- 1pc AV1434-EXnA-2450FN2
- 2pcs U40-160 AISI316
- 10pcs M12 Hex Nut AISI316
- 2 pcs M12x250 Threaded Rod AISI316

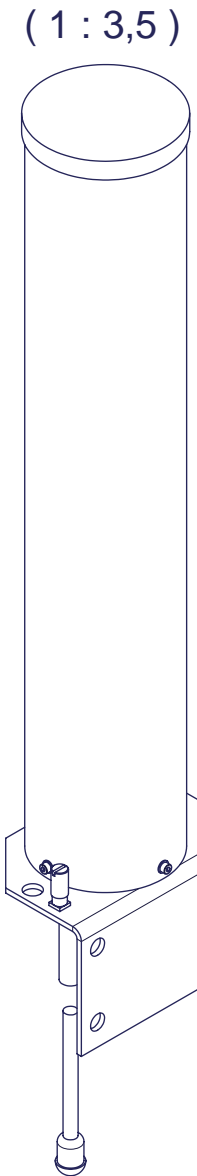
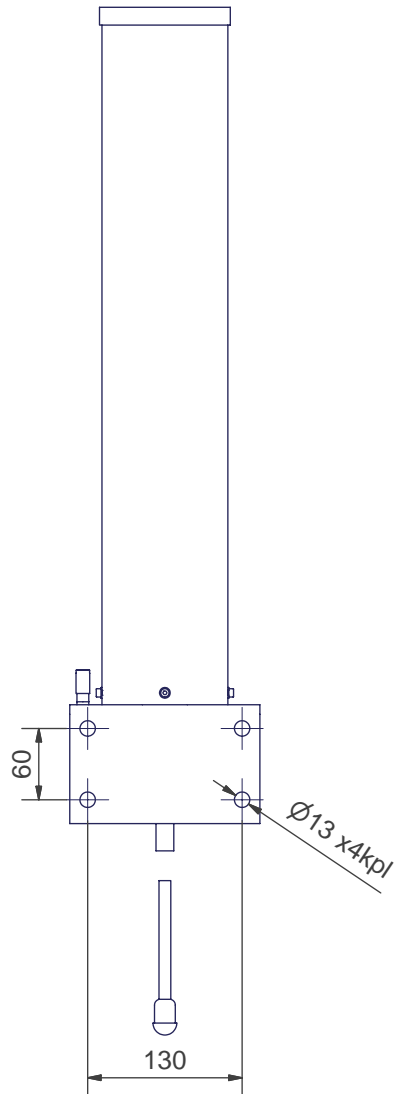
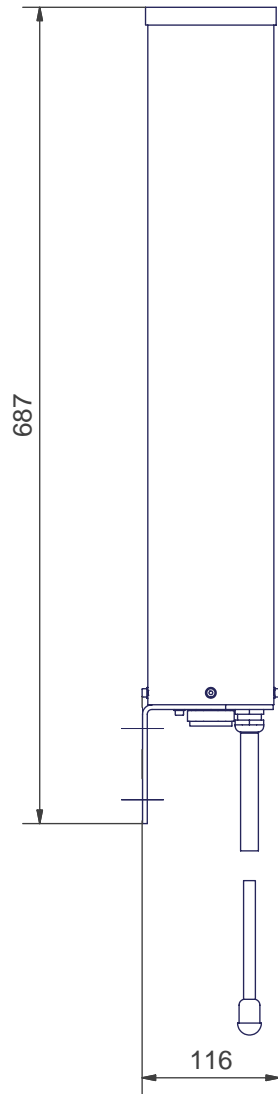
Lock nut set:

- 4pcs M12 DIN980

Screw	Torque
M12	80 Nm

For additional instructions, refer to document: **"Mounting instruction for antenna products made according to ATEX Directive 94/9/EC".**

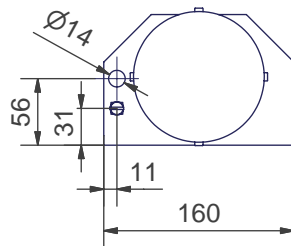
Yleistoleranssi General tolerance		Profilin Profile		Väri Color	
Pintakäsittely Coating		Materiaali Material		Paino Mass	
Suunn. Design		Kuvaus Description		Piirustus Drawing	
21.01.2015	VL	AV1434-EXnA-2450FN2 Mechanical Mounting		Kokoonpano	
Tark. Checked	21.01.2015	Projektin nimi Project name		Sivu Sheet	
21.01.2015	KKT			1 / 1	
Hyv. Approved		Tuotekoodi Product code		Versio Revision	
21.01.2015		KKT		A	
		Piirustus no. Drawing no.			
Pietilänkatu 9, 04400 Järvenpää tel. +358-9-2790120, fax +358-9-2910210, www.aerial.fi		AE21542			




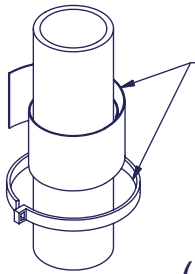
Antenna Weight: 4,6kg

Mounting Kit Weight: 1,7kg

Altogether: 6,3kg

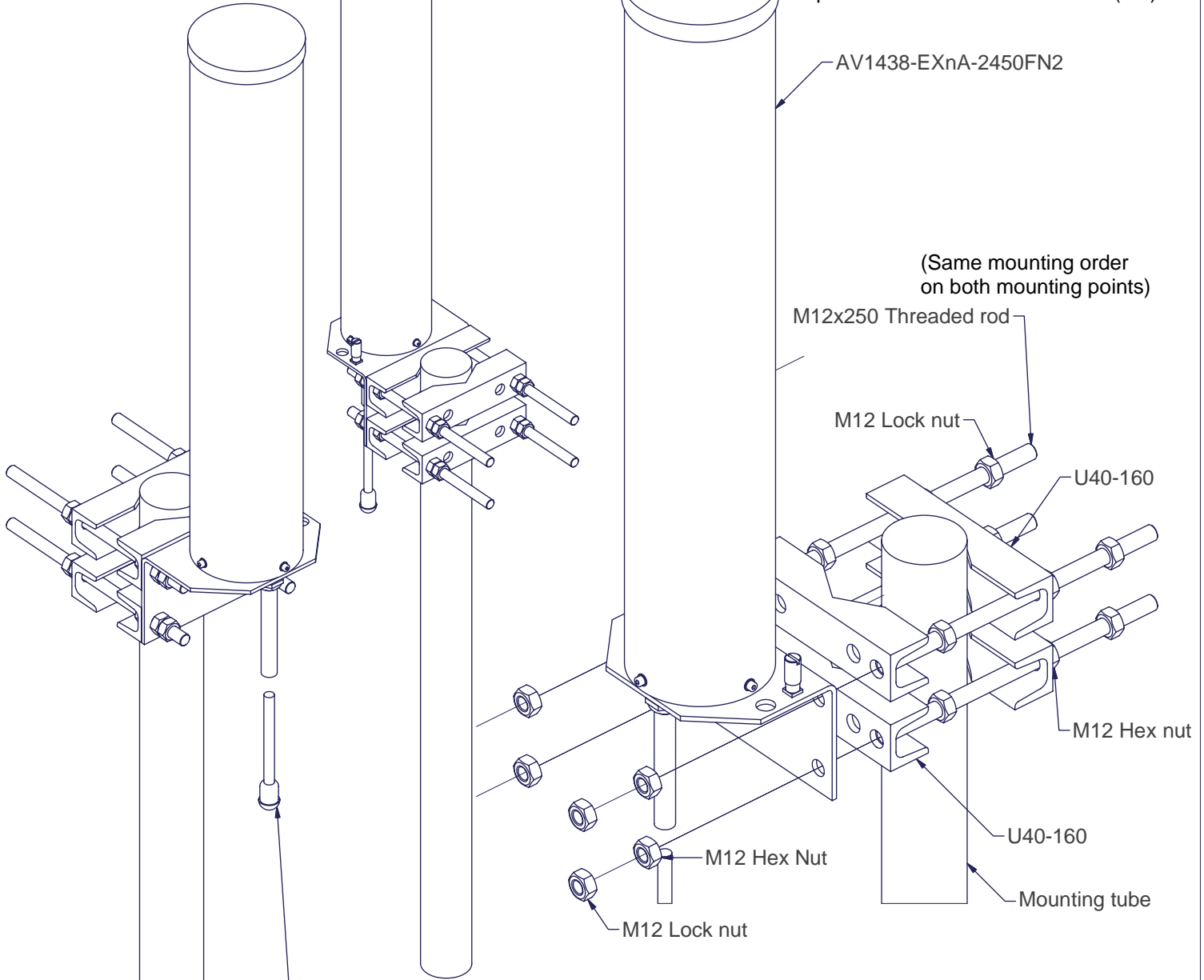


Yleistoleranssi General tolerance SFS-EN 1090-2		Profiili Profile		Väri Color KORRO PVB	
Pintakäsittely Coating Powder paint		Materiaali Material AISI 316		Paino Mass 4,6	
Suunn. Design 21.01.2015 VL	Mittakaava Scale	Kuvaus Description AV1438-EXnA-2450FN2 2,4-2,5GHz, N-f-1000mm, AETM160-1-A2/A4		Piirustus Assembly / Drawing Kokoonpano	
Tark. Checked 07.01.2016 KKT				Sivu Sheet 1 / 1	
Hyv. Approved 07.01.2016 KKT	Projektin nimi Project name Mechanical Dimensions			Versio Revision	
 <small>Pietolankatu 9, 04400 Järvenpää tel. +358-9-2790120, fax +358-9-2910210, www.aerial.fi</small>		Tuotekoodi Product code 18671		A	
		Piirustus no. Drawing no. AE19157			



PTFE/PE/rubber sheet around the tube before antenna installation, secured with cable ties.

(1 : 4)



Isolation set:

- 2 pcs (a' 400x60mm) thin dielectric PTFE/PE/rubber sheets
- 4 pcs plastic cable ties

Grounding set:

- 3,5 meters 4mm AISI316 multi strand wire
- 2 pcs 4mm AISI316 wire locks
- 2 pcs 4mm AISI316 shackles
- 1 pc 4mm AISI316 thimble
- 1 pc 4-6mm² AISI316 cable shoe (M6)

Mounting set:

- 1pc AV1438-EXnA-2450FN2
- 4pcs U40-160 AISI316
- 20pcs M12 Hex Nut AISI316
- 4 pcs M12x250 Threaded Rod AISI316

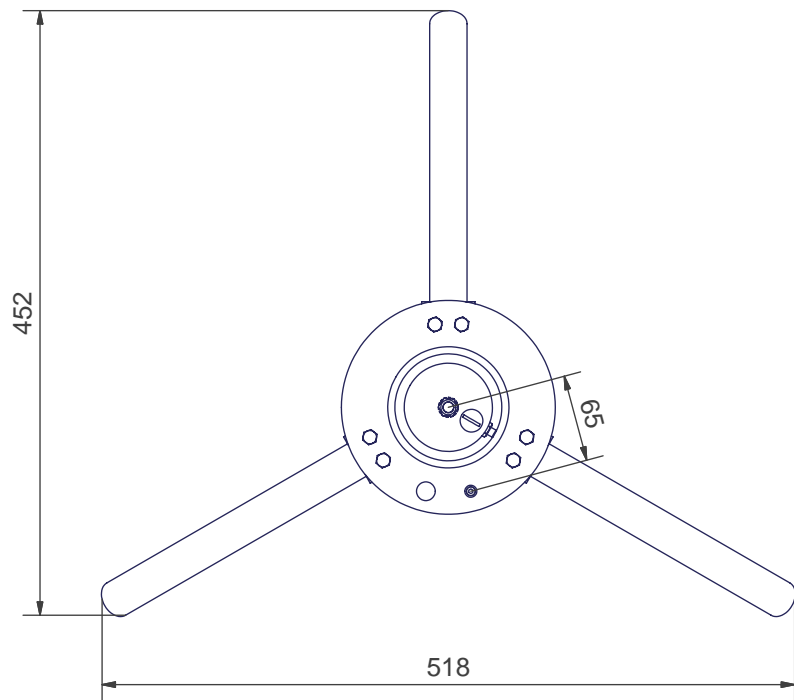
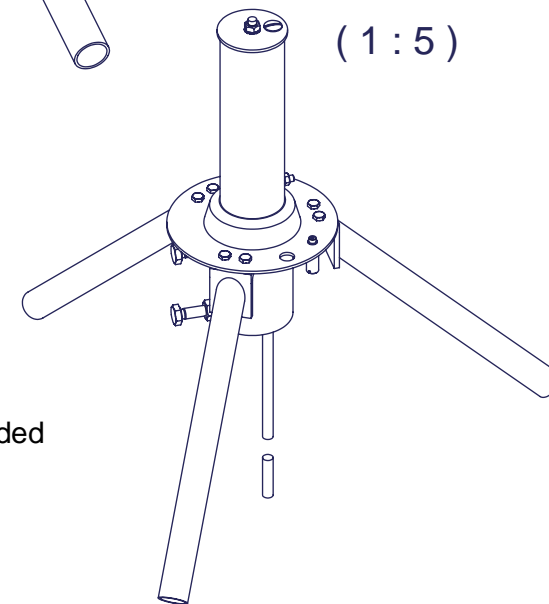
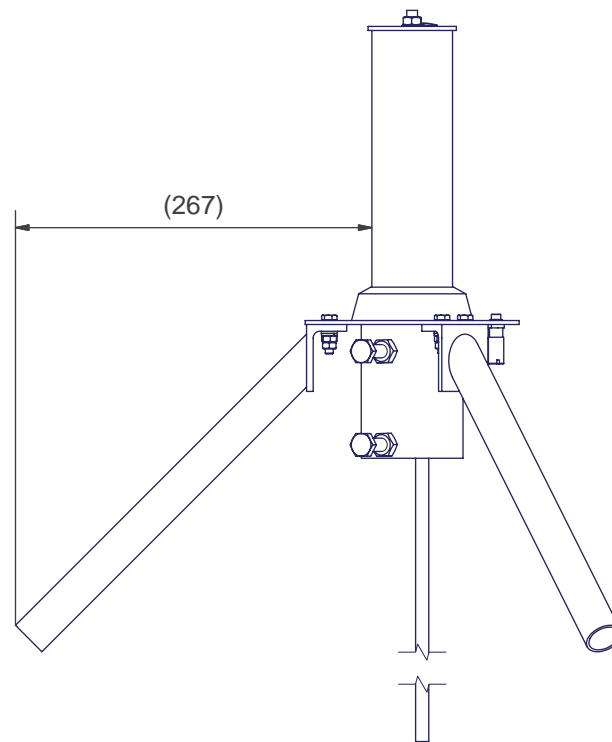
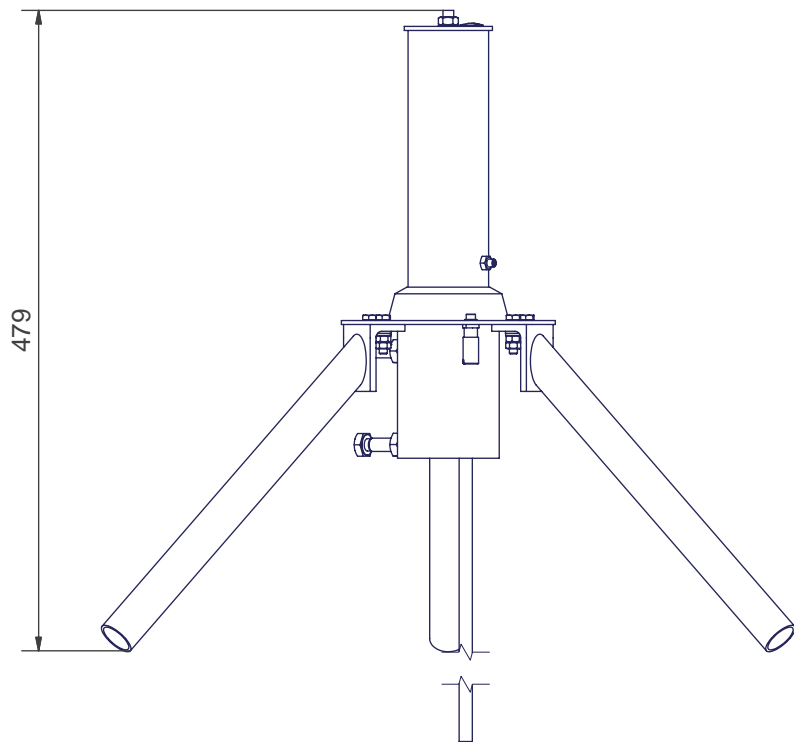
Lock nut set:

- 8pcs M12 DIN980

Screw	Torque
M12	80 Nm

For additional instructions, refer to document: **"Mounting instruction for antenna products made according to ATEX Directive 94/9/EC"**.

Yleistoleranssi General tolerance		Profilin Profile		Väri Color	
Pintakäsittely Coating		Materiaali Material		Paino Mass	
Suunn. Design		Mittakaava Scale		Piirustus Drawing	
21.01.2015	VL	AV1438-EXnA-2450FN2 Mechanical Mounting		Kokoontulo Assembly	
Tark. Checked	21.01.2015	Projektin nimi Project name		Sivu Sheet	
21.01.2015	KKT			1 / 1	
Hyv. Approved		Tuotekoodi Product code		Versio Version	
21.01.2015		KKT		Revision	
		Piirustus no. Drawing no.			
		AE21544			



Antenna Weight: 3,5kg

Mounting Kit Weight: Not included

Altogether: 3,5kg

Yleistoleranssi General tolerance		SFS-EN 1090-2		Profiili Profile		
Pintakäsittely Coating		Powder paint		Materiaali Material	AISI 316	
Suunn. Design	07.01.2016	VL	Mittakaava Scale	Kuvaus Description	Väri Color	
Tark. Checked	07.01.2016	KKT			AV1463-EXnA-313FN2 225-400MHz, N-f-1000mm, spigot/collar mounting	KORRO PVB
Hyv. Approved	07.01.2016	KKT			Projekti nimi Project name	Paino Mass
				AV1463-EXnA-313FN2	4	
				Tuotekoodi Product code	Piirustus Drawing	
				18639	Assem. / Kokoonpano	
				Piirustus no. Drawing no.	Sivu Sheet	
				AE19163	1 / 1	
					Versio Revision	
					A	



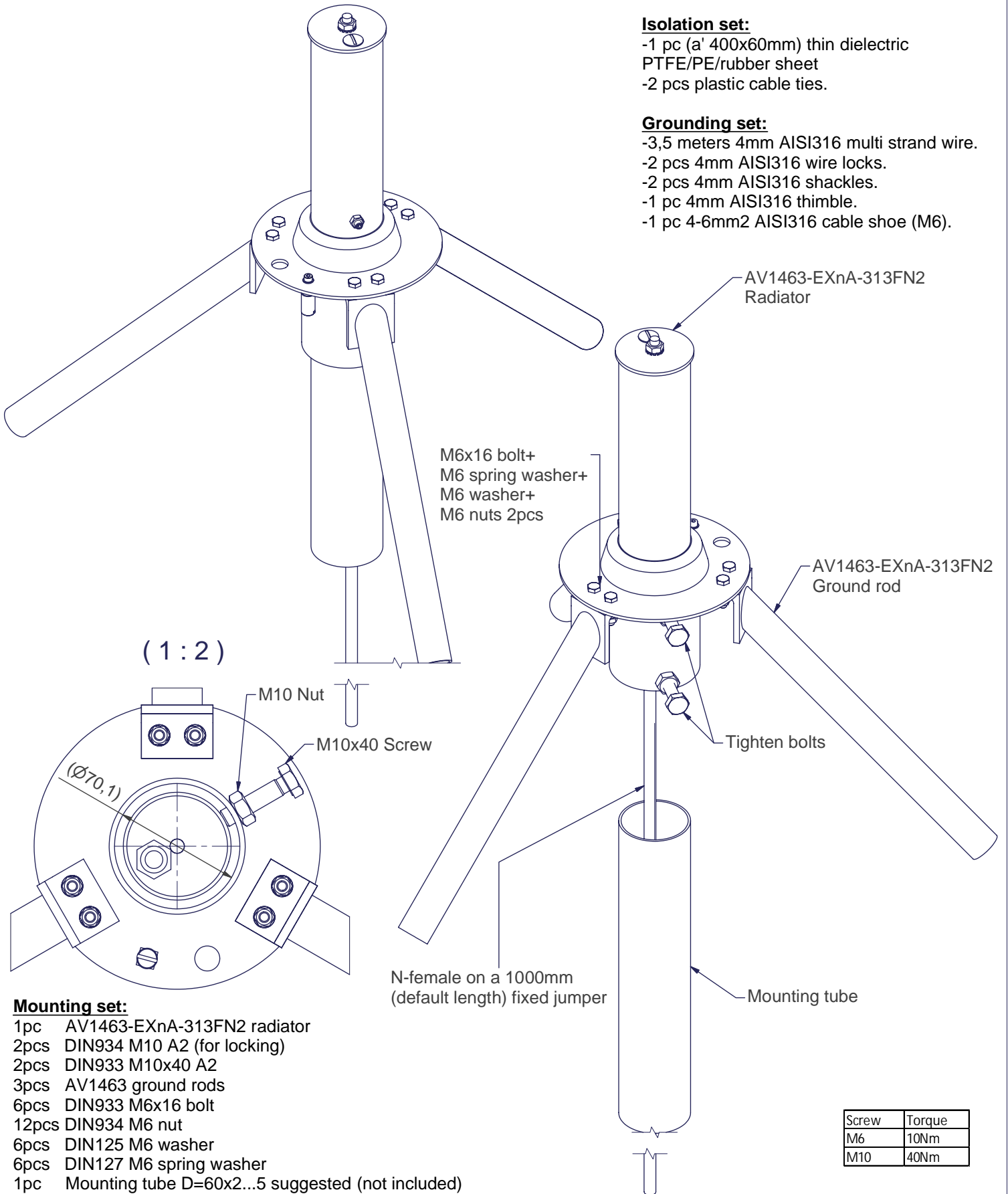
Pietolankatu 9, 04400 Järvenpää
tel. +358-9-2790120, fax +358-9-2910210, www.aerial.fi

Isolation set:

- 1 pc (a' 400x60mm) thin dielectric PTFE/PE/rubber sheet
- 2 pcs plastic cable ties.

Grounding set:

- 3,5 meters 4mm AISI316 multi strand wire.
- 2 pcs 4mm AISI316 wire locks.
- 2 pcs 4mm AISI316 shackles.
- 1 pc 4mm AISI316 thimble.
- 1 pc 4-6mm² AISI316 cable shoe (M6).


**Mounting set:**

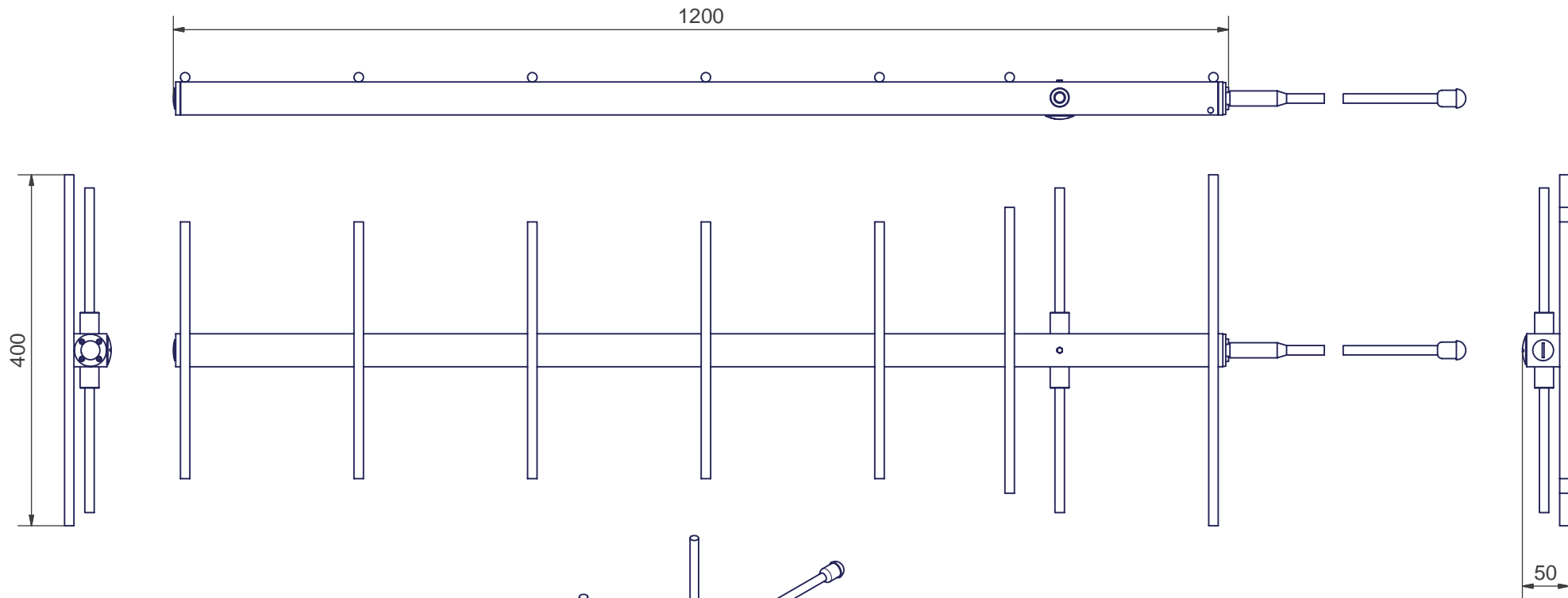
- 1pc AV1463-EXnA-313FN2 radiator
- 2pcs DIN934 M10 A2 (for locking)
- 2pcs DIN933 M10x40 A2
- 3pcs AV1463 ground rods
- 6pcs DIN933 M6x16 bolt
- 12pcs DIN934 M6 nut
- 6pcs DIN125 M6 washer
- 6pcs DIN127 M6 spring washer
- 1pc Mounting tube D=60x2...5 suggested (not included)

Screw	Torque
M6	10Nm
M10	40Nm

For additional instructions,
refer to document:

**"Mounting instruction for antenna
products made according to
ATEX Directive 94/9/EC".**

Yleistoleranssi General tolerance		Profilii Profile		Väri Color		
Pintakäsittely Coating		Materiaali Material		Paino Mass		
Suunn. Design	27.08.2014 VL	Mittakaava Scale	Kuvaus Description	AV1463-EXnA-313FN2 Mechanical Mounting		
Tark. Checked	27.08.2014 KKT			Piirustus Drawing		Kokoontulo Kokoontulo
Hyv. Approved	27.08.2014 KKT			Sivu Sheet		1 / 1
Projekti nimi Project name			Tuotekoodi Product code		Versio Revision	
Piirustus no. Drawing no.			AE19179			
						




(1:5)

Antenna Weight: 3kg

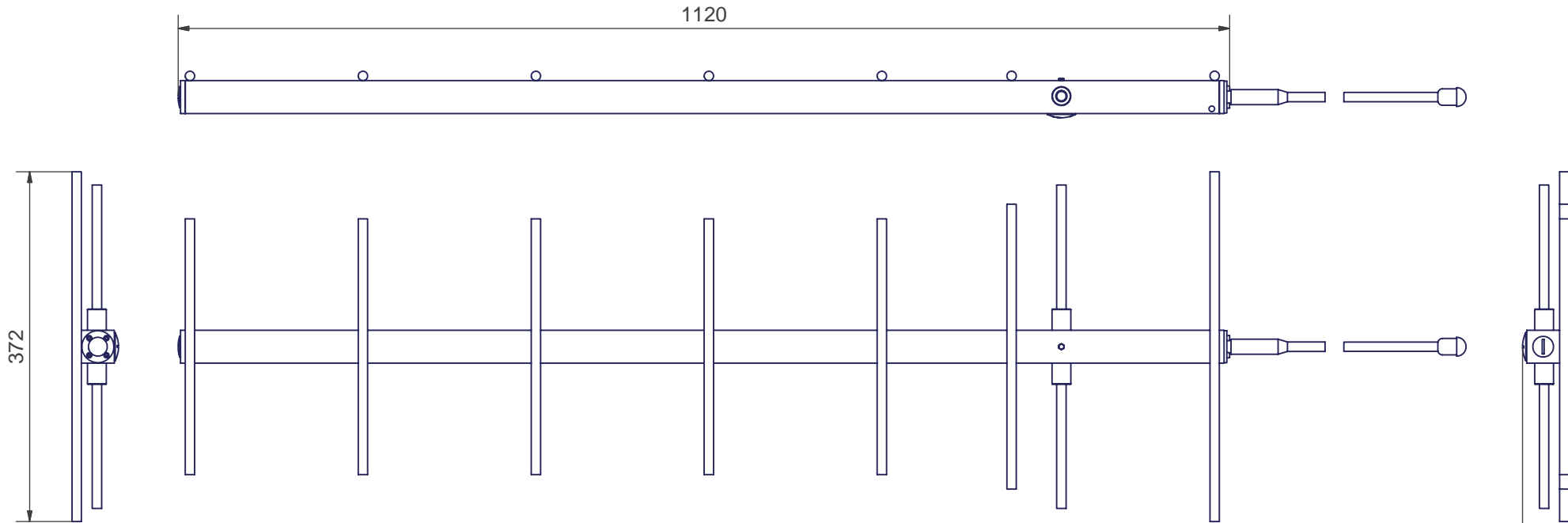
Mounting Kit Weight: 5,8kg

All together: 8,8kg

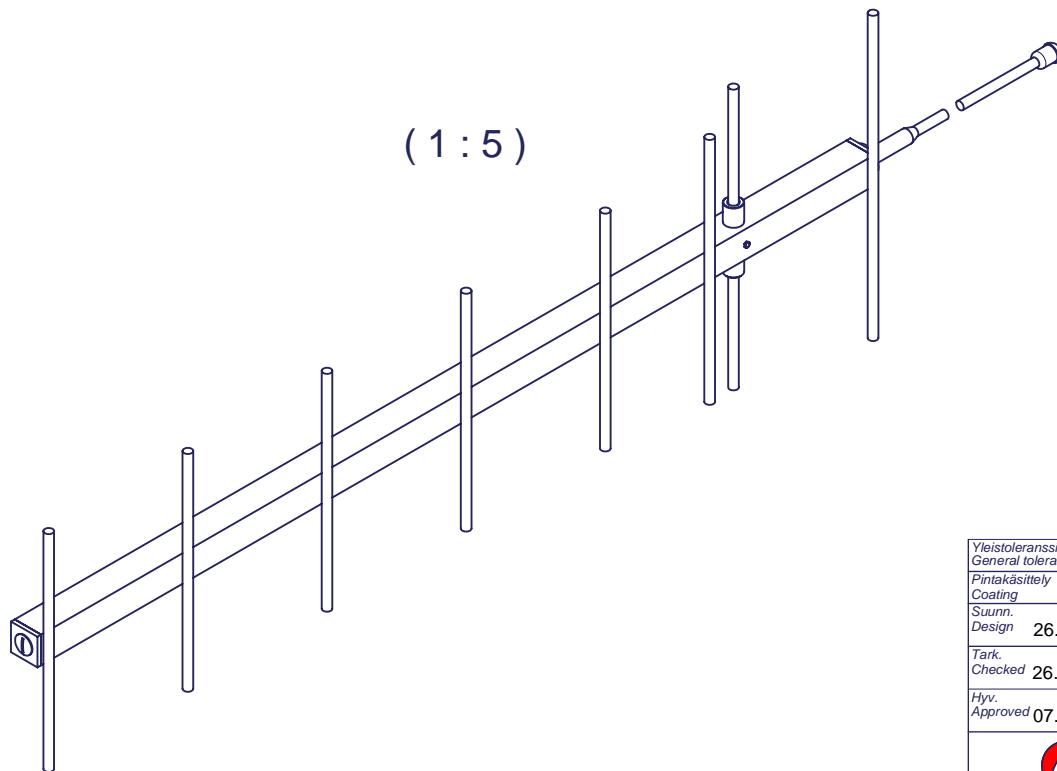
Yleistoleranssi General tolerance		SFS-EN 1090-2		Profiili Profile					
Pintakäsittely Coating		Powder paint		Materiaali Material		AISI 316			
Suunn. Design		07.01.2016 VL		Kuvaus Description		Väri Color			
Tark. Checked		07.01.2016 KKT		 <small>MITAT ON ELLÄ MUISTI NÄHRITTY DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED</small>		KORRO PVB			
Hyv. Approved		07.01.2016 KKT				Projektin nimi Project name Mechanical Dimensions		Paino Mass	
				Mittakaava Scale		Piirustus Drawing			
						Sheet 1 / 1			
						Revisio Revision			
						A			
				Tuotekoodi Product code				17507	
				Piirustus no. Drawing no.				AE25166	



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(1:5)

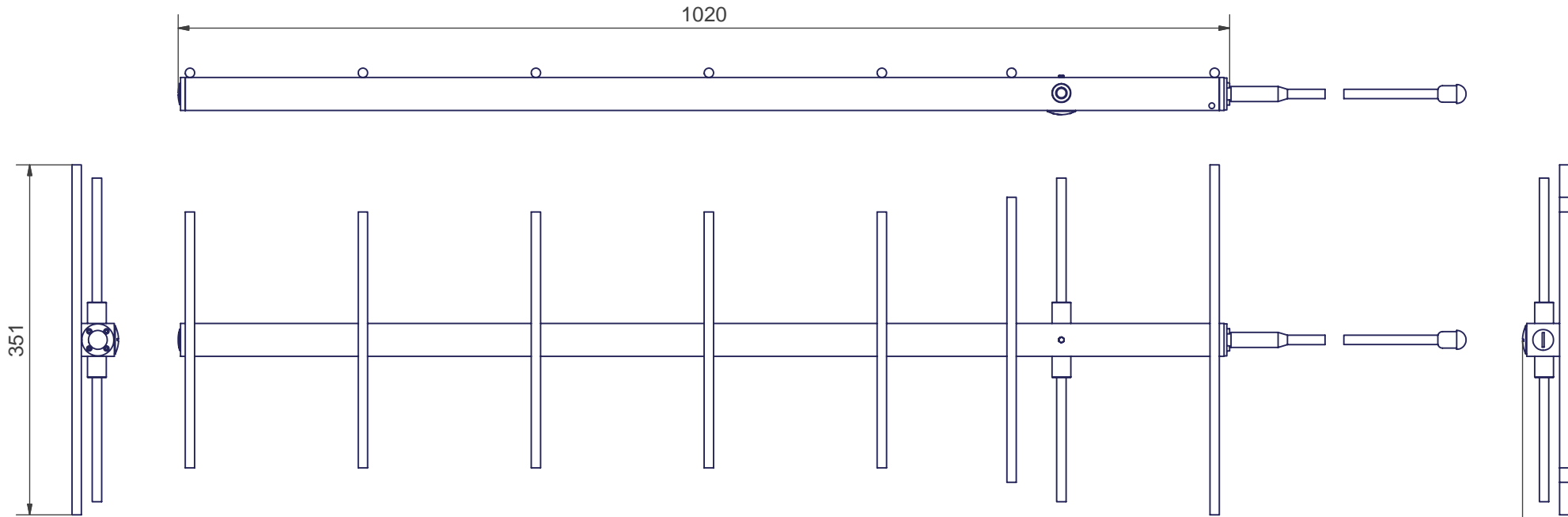


Antenna Weight: 3kg

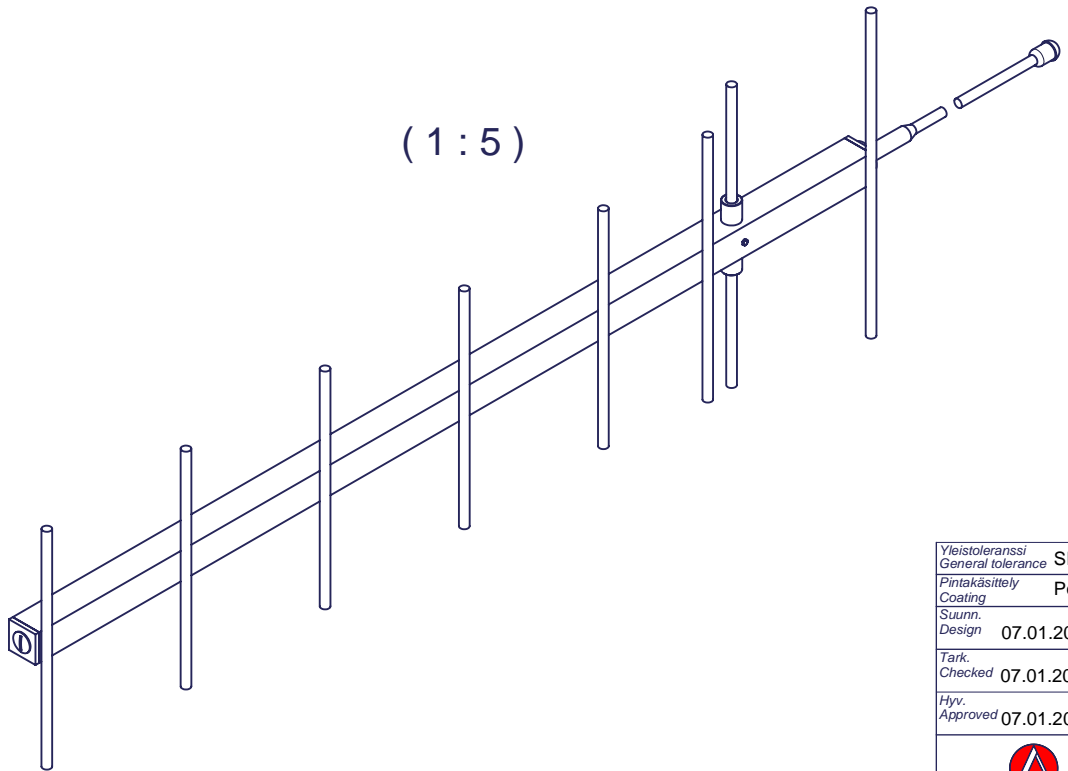
Mounting Kit Weight: 5,8kg

Altogether: 8,8kg



Yleistoleranssi General tolerance SFS-EN 1090-2		Profiili Profile		Väri Color KORRO PVB	
Pintakäsittely Coating Powder paint		Materiaali Material AISI 316		Paino Mass	
Suunn. Design 26.03.2015 VL	Mittakaava Scale	Kuvaus Description AV1468-EXnA-420FN2 , N-f-1000mm, AETM160-6-A2/A4		Piirustus Assemby / Drawing Kokoonpano	
Tark. Checked 26.03.2015 HH				Sivu Sheet 1 / 1	
Hyv. Approved 07.01.2016 KKT	Mechanical Dimensions			Revisio Revision	
 Aerial Oy Pietolankatu 9, 04400 Järvenpää tel. +358-9-2790120, fax +358-9-2910210, www.aerial.fi		Tuotekoodi Product code 17509		A	
		Piirustus no. Drawing no. AE22800			



(1:5)



Antenna Weight: 3kg
 Mounting Kit Weight: 5,8kg
 Altogether: 8,8kg

Yleistoleranssi General tolerance		SFS-EN 1090-2		Profiili Profile					
Pintakäsittely Coating		Powder paint		Materiaali Material		AISI 316			
Suunn. Design		07.01.2016 VL		Kuvaus Description		Väri Color			
Tark. Checked		07.01.2016 KKT		 Mittakaava Scale		KORRO PVB			
Hyv. Approved		07.01.2016 KKT				AV1468-EXnA-460FN2 , N-f-1000mm, AETM160-6-A2/A4		Paino Mass Piirustus Assembly / Drawing Kokoonpano	
				Projektin nimi Project name				Sivu Sheet	
				Mechanical Dimensions				1 / 1	
 Aerial Oy <small>Pietolankatu 9, 04400 Järvenpää tel. +358-9-2790120, fax +358-9-2910210, www.aerial.fi</small>				Tuotekoodi Product code		17510		A	
				Piirustus no. Drawing no.		AE25169			

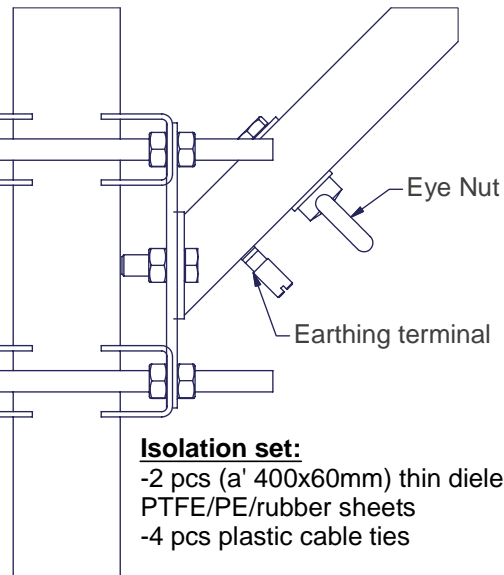
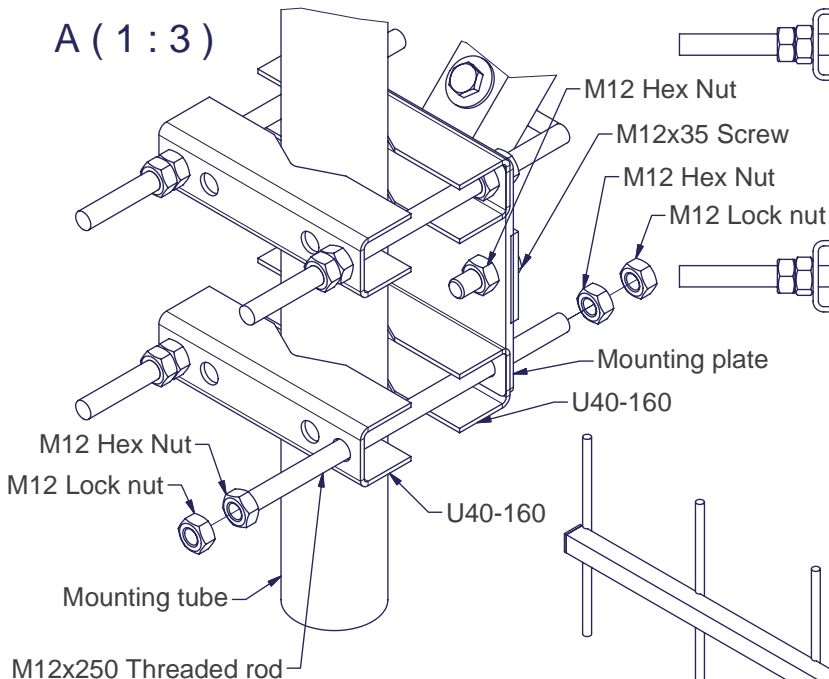
For additional instructions, refer to document:

"Mounting instruction for antenna products made according to ATEX Directive 94/9/EC".

(Same mounting order on both mounting points)

Side view (1 : 3)

A (1 : 3)



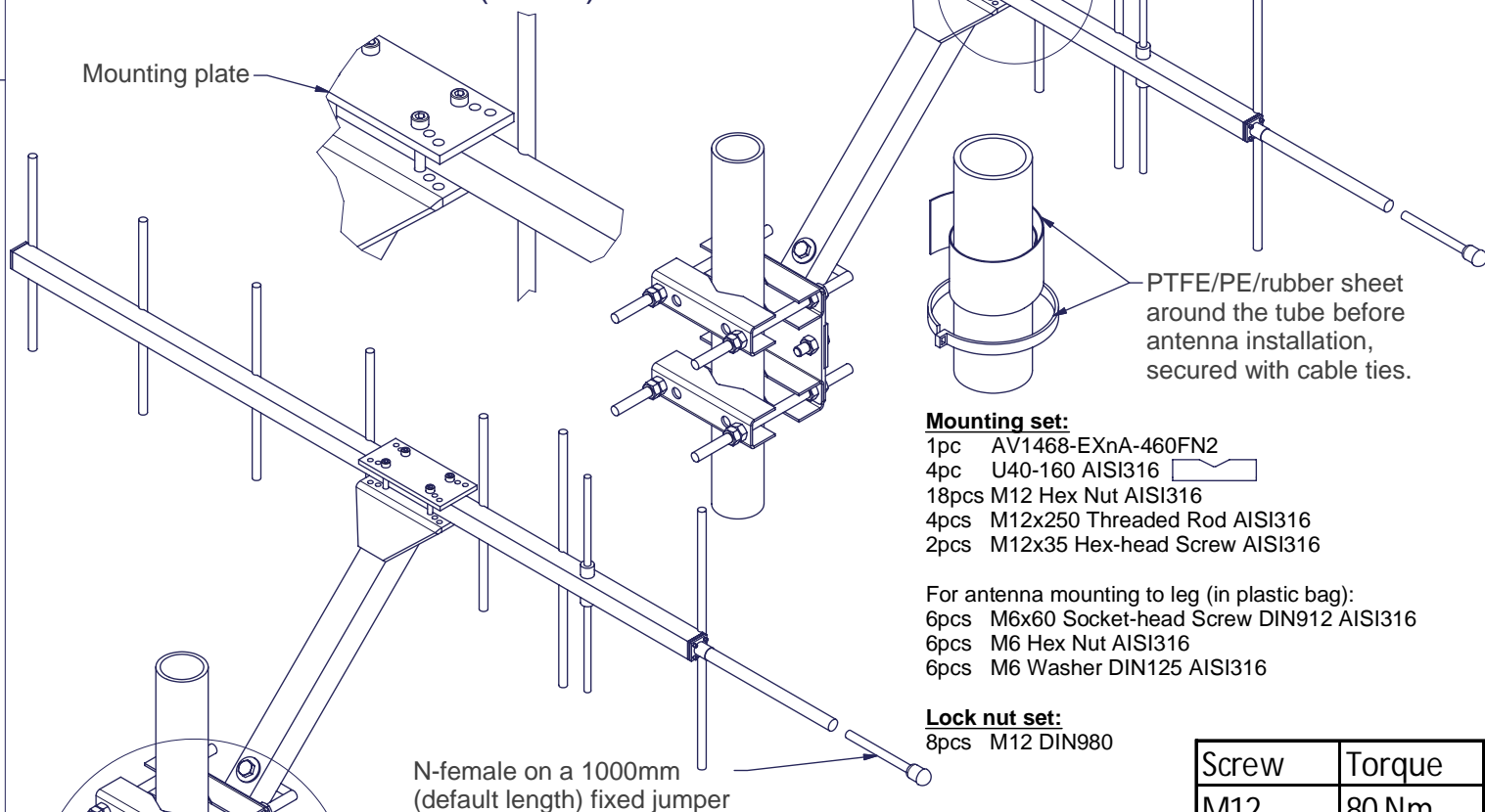
Isolation set:

- 2 pcs (a' 400x60mm) thin dielectric PTFE/PE/rubber sheets
- 4 pcs plastic cable ties

Grounding set:

- 3,5 meters 4mm AISI316 multi strand wire
- 2 pcs 4mm AISI316 wire locks
- 2 pcs 4mm AISI316 shackles
- 1 pc 4mm AISI316 thimble
- 1 pc 4-6mm² AISI316 cable shoe (M6)

M6 screw tightening torque 10Nm B (1 : 3)



Mounting set:

- 1pc AV1468-EXnA-460FN2
- 4pc U40-160 AISI316
- 18pcs M12 Hex Nut AISI316
- 4pcs M12x250 Threaded Rod AISI316
- 2pcs M12x35 Hex-head Screw AISI316


For antenna mounting to leg (in plastic bag):

- 6pcs M6x60 Socket-head Screw DIN912 AISI316
- 6pcs M6 Hex Nut AISI316
- 6pcs M6 Washer DIN125 AISI316

Lock nut set:

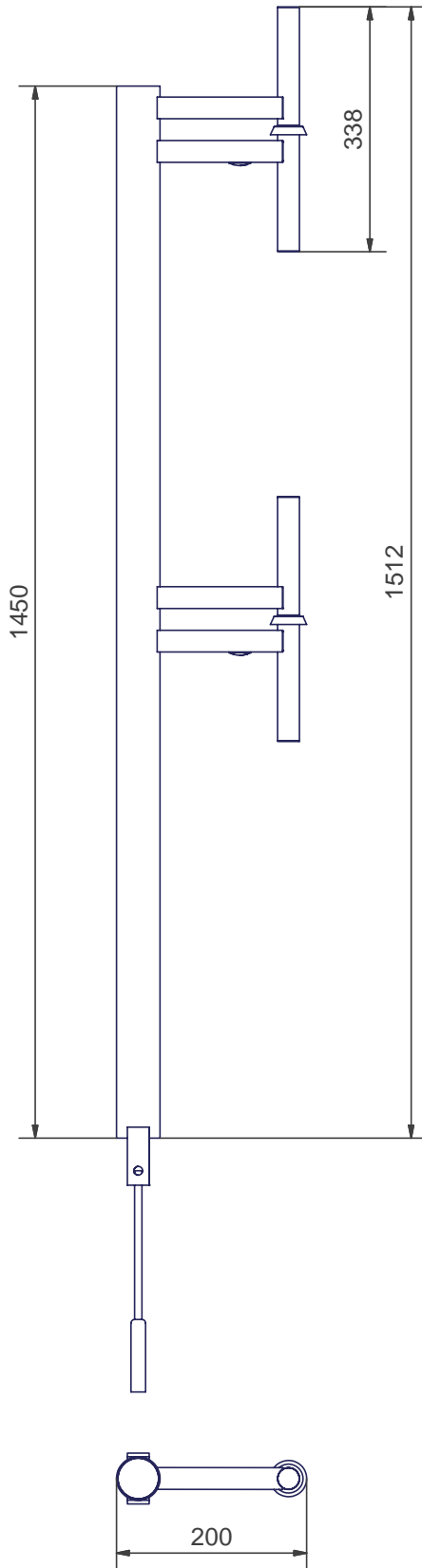
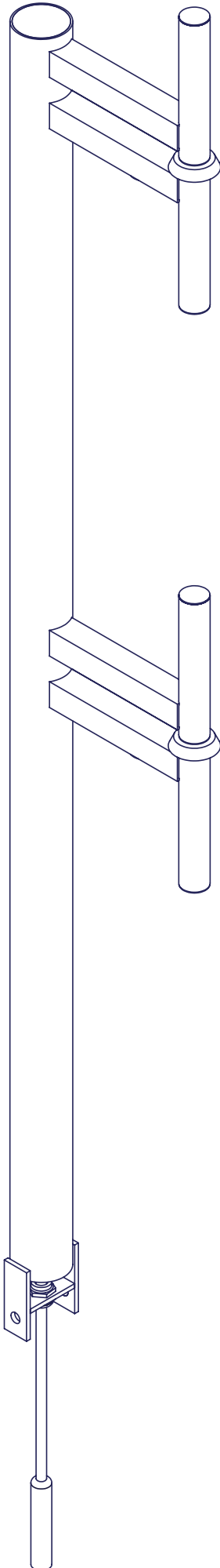
- 8pcs M12 DIN980

Screw	Torque
M12	80 Nm



Yleistoleranssi General tolerance		Profilili Profile		Väri Color	
Pintakäsittely Coating		Materiaali Material		Paino Mass	
Suunn. Design	21.01.2015 VL	Kuvaus Description AV1468-EXnA-xxxFN2 Mechanical Mounting	Piirustus Assembly / Drawing Kokoontulo		
Tark. Checked	21.01.2015 KKT		Sivu Sheet 1 / 1		
Hyv. Approved	21.01.2015 KKT	Projektin nimi Project name	Versio Revision		
		Tuotekoodi Product code	A		
		Piirustus no. Drawing no.			

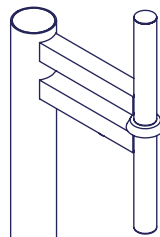
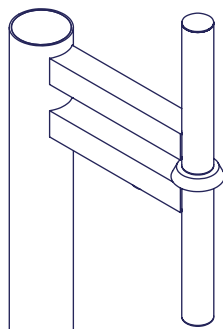
A

(1:4)



Antenna Weight: 7,2kg
 Mounting Kit Weight: 4,5kg
 Altogether: 11,7kg

Yleistoleranssi General tolerance		SFS-EN 1090-2		Profilin Profile					
Pintakäsittely Coating		Powder paint		Materiaali Material		AISI 316			
Suunn. Design		08.01.2016 VL		 Kuvaus Description AV1915-H-EXnA-440FN2 350-470MHz, N-f-1000mm, AETM160-4-A2/A4		Väri Color			
Tark. Checked		08.01.2016 KKT				KORRO PVB			
Hyv. Approved		08.01.2016 KKT				Paino Mass			
				Mittakaava Scale		Piirustus Assembly / Drawing			
				Projektin nimi Project name		Kokoonpano			
				Mechanical Dimensions		Sheet			
 Aerial Oy <small>Pietilänkatu 9, 04400 Järvenpää tel. +358-9-2790120, fax +358-9-2910210, www.aerial.fi</small>				Tuotekoodi Product code		17511			
				Piirustus no.		AE21403		Versio	
				Drawing no.		AE21403		Revision	
						A			

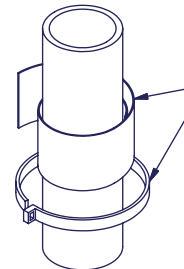


Isolation set:

- 2 pcs (a' 400x60mm) thin dielectric PTFE/PE/rubber sheets
- 4 pcs plastic cable ties

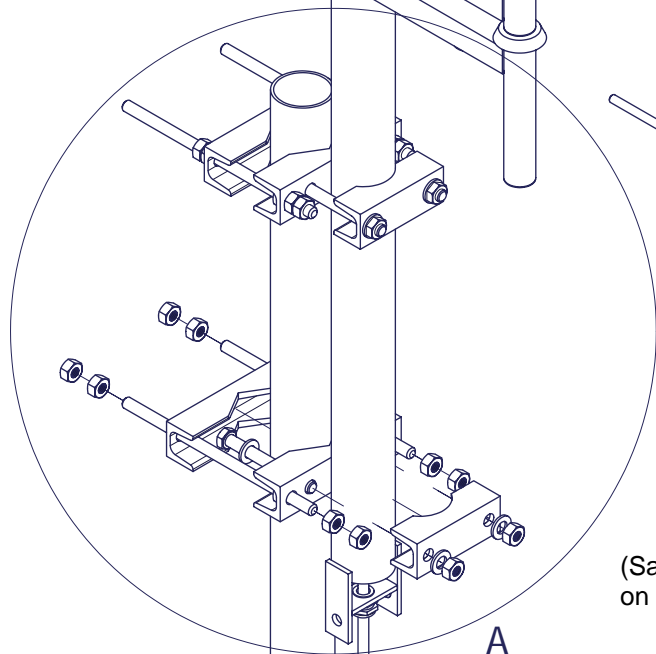
Grounding set:

- 3,5 meters 4mm AISI316 multi strand wire
- 2 pcs 4mm AISI316 wire locks
- 2 pcs 4mm AISI316 shackles
- 1 pc 4mm AISI316 thimble
- 1 pc 4-6mm² AISI316 cable shoe (M6)



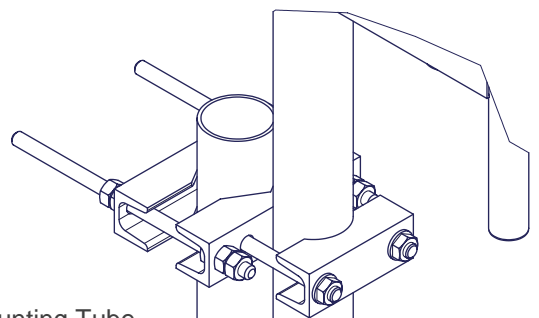
PTFE/PE/rubber sheet around the tube before antenna installation, secured with cable ties.

Screw	Torque
M12	80 Nm



A

A (1 : 4)



Mounting Tube

(Same mounting order on both mounting points)

M12 Hex Nut

U40-160

M12 Washer

M12 Threaded Rod

M12x110 Hex-head Screw

M12 Hex Nut

M12 Hex Nut

M12 Washer

U40-110

Mounting set:


- 1pc AV1915-H-EXnA-440FN2
- 4pc U40-160 AISI316
- 24pcs M12 Hex Nut AISI316
- 4pcs M12x250 Threaded Rod AISI316
- 2pcs U40-110 AISI316
- 4pcs M12x110 Hex-head Screw AISI316
- 8pcs M12 Washer AISI316

Lock nut set:

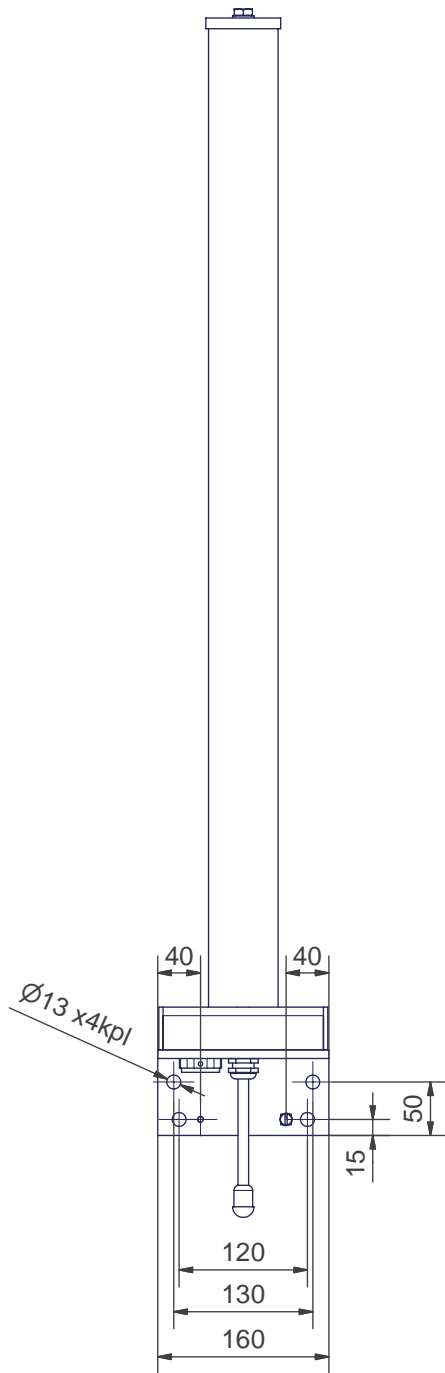
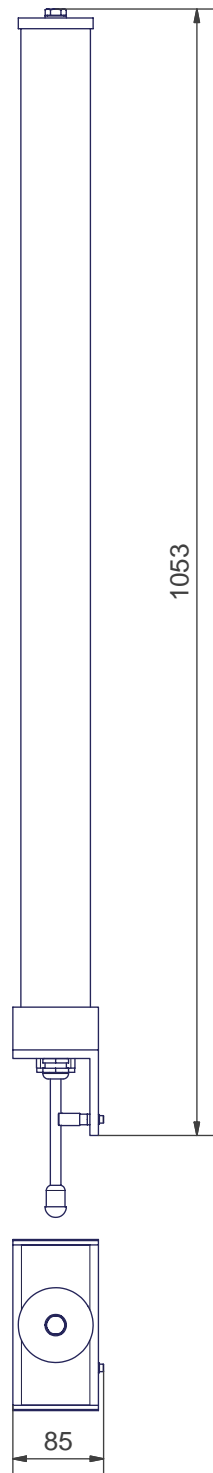
- 8pcs M12 DIN980

For additional instructions, refer to document:

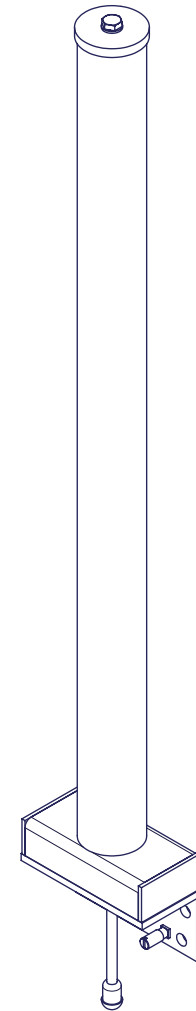
"Mounting instruction for antenna products made according to ATEX Directive 94/9/EC".

Yleistoleranssi General tolerance		Profilin Profile		Väri Color
Pintakäsittely Coating		Materiaali Material		Väri Color
Suunn. Design	16.01.2015	VL	Kuvaus Description AV1915-H-EXnA-440FN2 Mechanical Mounting	Paino Mass
Tark. Checked	16.01.2015			Piirustus Drawing
Hyv. Approved	16.01.2015	KKT	Projektin nimi Project name	Piirustus Drawing
			Tuotekoodi Product code	1 / 1
			Piirustus no. Drawing no.	AE19605

A




(1:5)

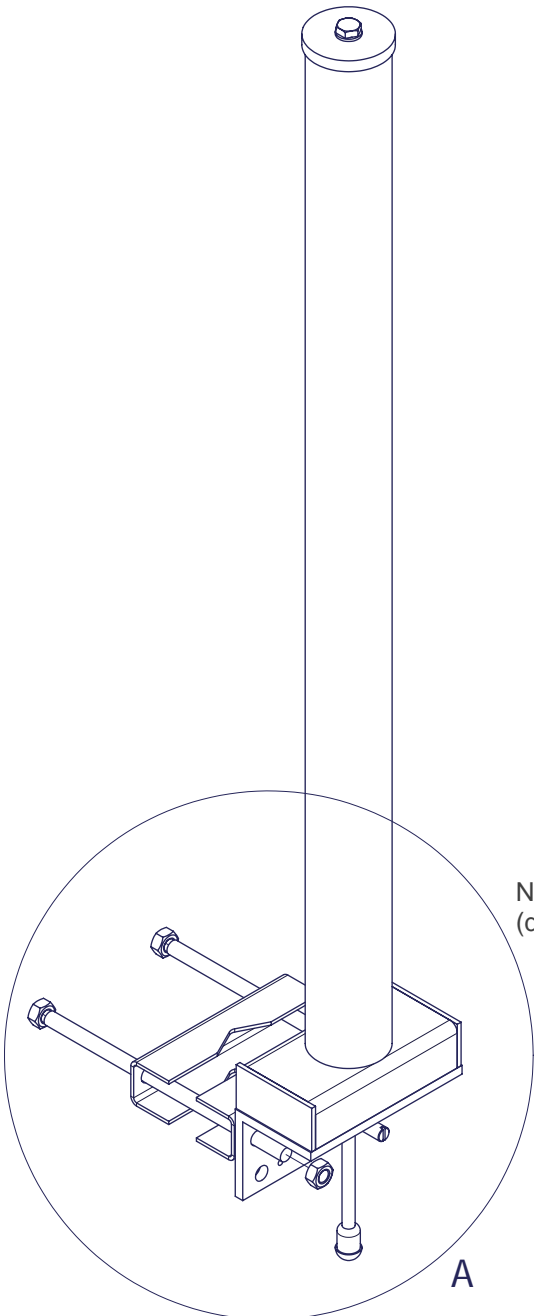


Antenna Weight: 6kg

Mounting Kit Weight: 1,7kg

Altogether: 7,7kg

Yleistoleranssi General tolerance SFS-EN 1090-2		Profiili Profile		Väri Color KORRO PVB	
Pintakäsittely Coating Powder paint		Materiaali Material AISI 316		Paino Mass	
Suunn. Design 18.03.2015 VL	Mittakaava Scale	Kuvaus Description AV1916-EXnA-826FN2, 870-960MHz, N-f-1000mm		Piirustus Drawing Assembly / Kokoonpano	
Tark. Checked 08.01.2016 KKT				Sivu Sheet 1 / 1	
Hyv. Approved 08.01.2016 KKT		Projektin nimi Project name Mechanical Dimensions		Revisio Revision	
 <small>Pietolankatu 9, 04400 Järvenpää tel. +358-9-2790120, fax +358-9-2910210, www.aerial.fi</small>		Tuotekoodi Product code 19114		A	
		Piirustus no. Drawing no. AE22360			



Mounting set:

- 1pc AV1916-EXnA-826FN2
- 2pc U40-160 AISI316
- 10pcs M12 Hex Nut AISI316
- 2pcs M12x250 Threaded Rod AISI316

Lock nut set:

- 4pcs M12 DIN980



N-female on a 1000mm (default length) fixed jumper

AV1916-EXnA-826FN2

M12 Lock Nut
M12x250 Threaded Rod

M12 Hex Nut

U40-160

Mounting Tube

M12 Lock Nut

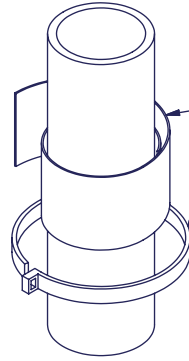
M12 Hex Nut

Isolation set:

- 1 pc (a' 400x60mm) thin dielectric PTFE/PE/rubber sheet
- 2 pcs plastic cable ties.

Grounding set:

- 3,5 meters 4mm AISI316 multi strand wire.
- 2 pcs 4mm AISI316 wire locks.
- 2 pcs 4mm AISI316 shackles.
- 1 pc 4mm AISI316 thimble.
- 1 pc 4-6mm² AISI316 cable shoe (M6).




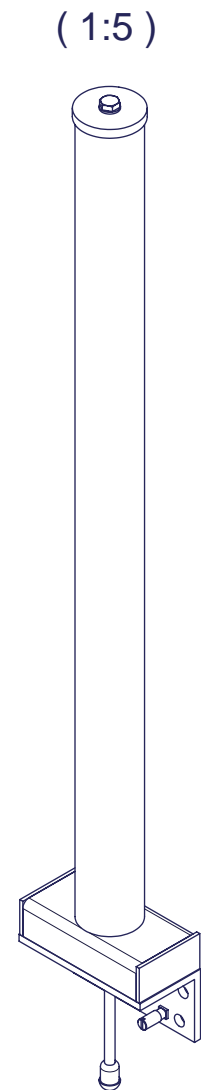
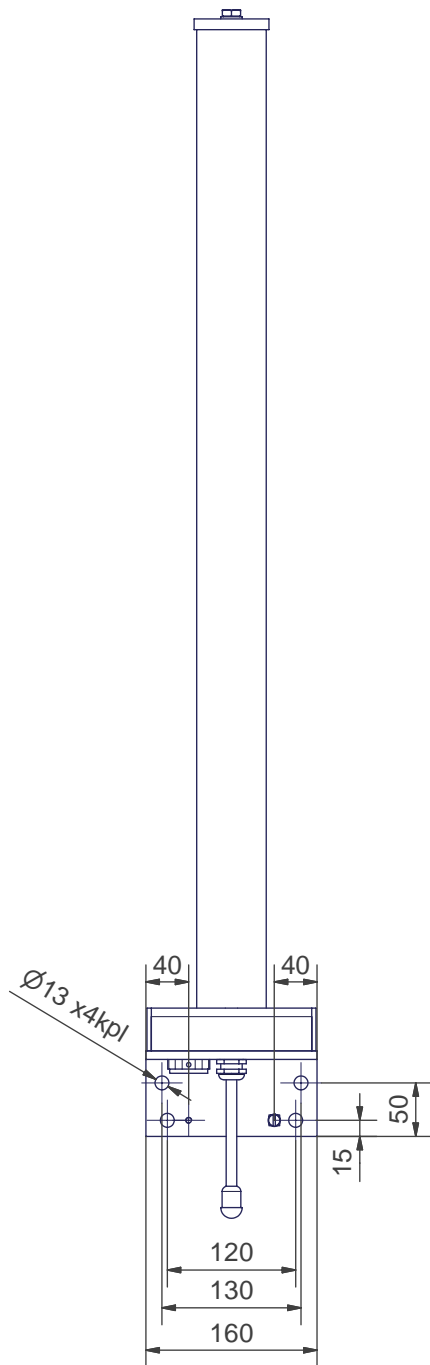
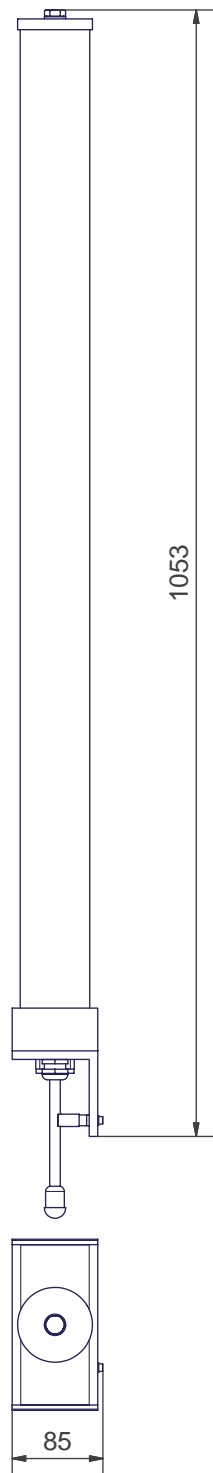
PTFE/PE/rubber sheet around the tube before antenna installation, secured with cable ties.

A (1 : 3)

Screw	Torque
M12	80 Nm

For additional instructions, refer to document: **"Mounting instruction for antenna products made according to ATEX Directive 94/9/EC"**.


Yleistoleranssi General tolerance		Profilili Profile		Väri Color	
Pintakäsittely Coating		Materiaali Material		Paino Mass	
Suunn. Design	16.02.2015 VL	Kuvaus Description	AV1916-EXnA-826FN2 Mechanical Mounting	Piirustus Drawing	
Tark. Checked	16.02.2015 KKT			Kokoonpano Assembly	
Hyv. Approved		Projektin nimi Project name		Sivu Sheet	
16.02.2015 KPT		AV1916-EXnA-826FN2		1 / 1	
		Tuotekoodi Product code		A	
		19114			
		Piirustus no. Drawing no.			
		AE22361			



Antenna Weight: 5,8kg

Mounting Kit Weight: 1,7kg

Altogether: 7,5kg

Yleistoleranssi General tolerance		SFS-EN 1090-2		Profiili Profile					
Pintakäsittely Coating		Powder paint		Materiaali Material		AISI 316			
Suunn. Design		02.10.2014 VL		Kuvaus Description		Väri Color			
Tark. Checked		08.01.2016 KKT				KORRO PVB			
Hyv. Approved		08.01.2016 KKT				AV1916-EXnA-915FN2, 870-960MHz, N-f-1000mm		Paino Mass	
				Projektin nimi Project name				Piirustus Drawing	
				Mechanical Dimensions				Sheet	
				Tuotekoodi Product code				1 / 1	
				Piirustus no. Drawing no.				Revision	
				17512				A	
				AE16019					



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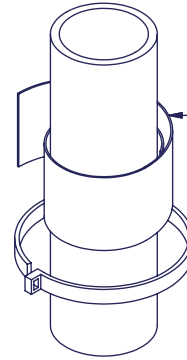


Isolation set:

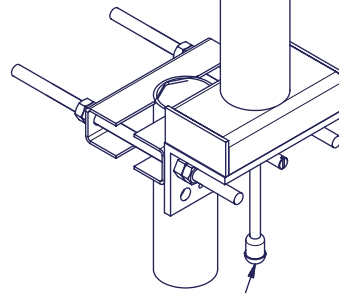
- 1 pc (a' 400x60mm) thin dielectric PTFE/PE/rubber sheet
- 2 pcs plastic cable ties.

Grounding set:

- 3,5 meters 4mm AISI316 multi strand wire.
- 2 pcs 4mm AISI316 wire locks.
- 2 pcs 4mm AISI316 shackles.
- 1 pc 4mm AISI316 thimble.
- 1 pc 4-6mm² AISI316 cable shoe (M6).

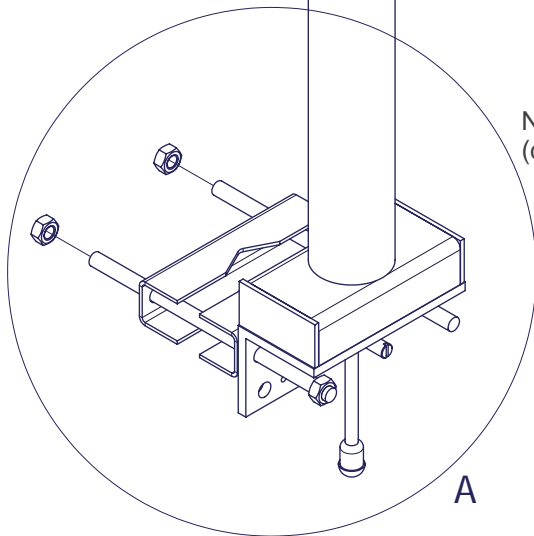


PTFE/PE/rubber sheet around the tube before antenna installation, secured with cable ties.



N-female on a 1000mm (default length) fixed jumper

A (1 : 3)



A

AV1916-EXnA-915FN2

M12 Lock Nut
M12x250 Threaded Rod
M12 Hex Nut

U40-160

Mounting Tube

M12 Lock Nut
M12 Hex Nut

Mounting set:


- 1pc AV1916-EXnA-915FN2
- 2pc U40-160 AISI316
- 10pcs M12 Hex Nut AISI316
- 2pcs M12x250 Threaded Rod AISI316

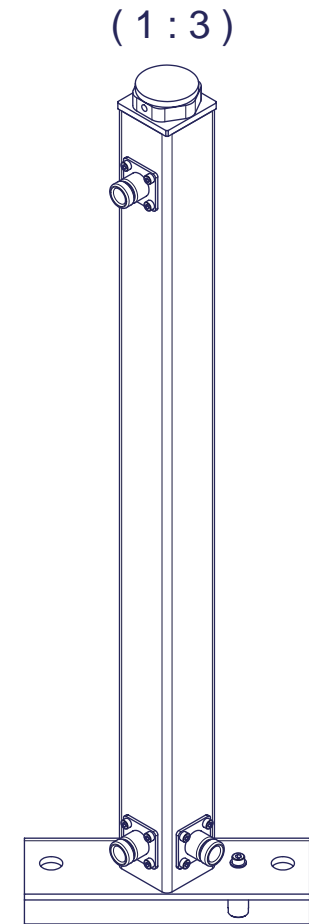
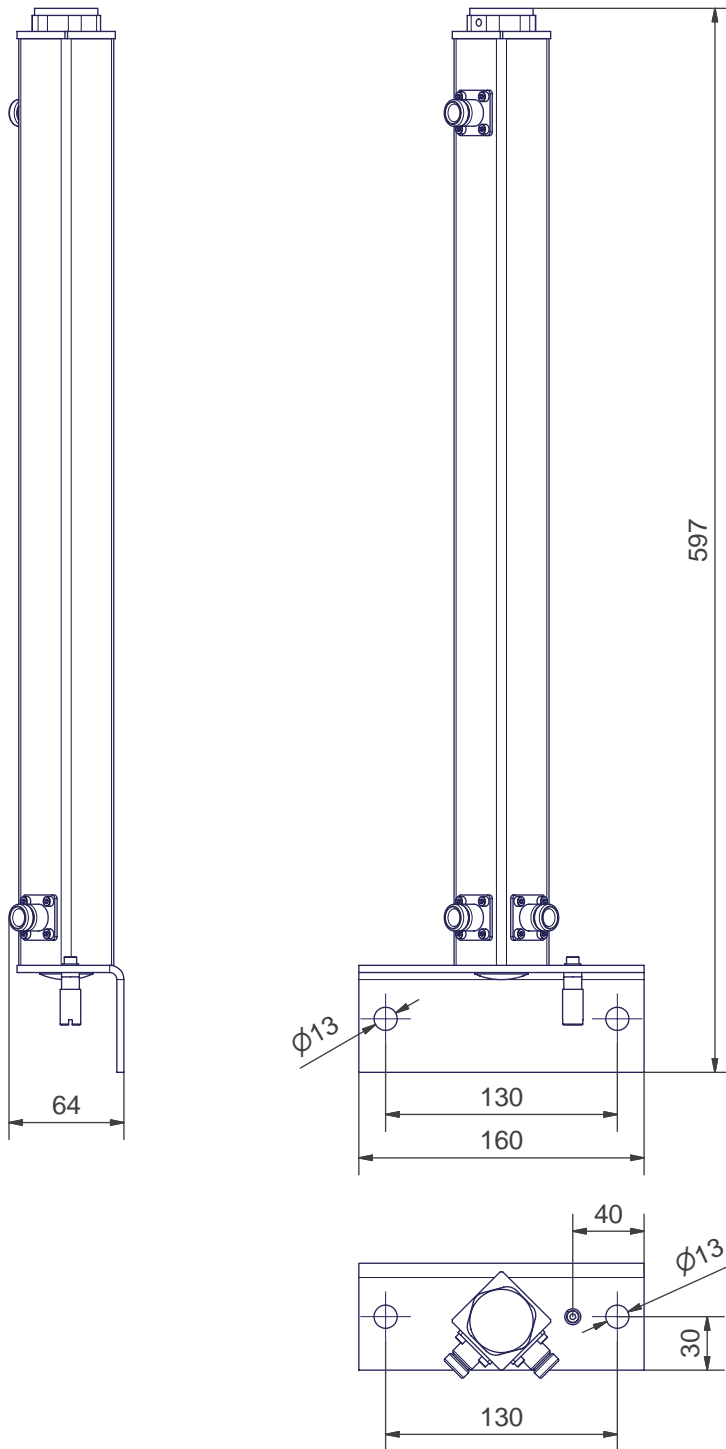
Lock nut set:

- 4pcs M12 DIN980

Screw	Torque
M12	80 Nm

For additional instructions, refer to document: **"Mounting instruction for antenna products made according to ATEX Directive 94/9/EC"**.


Yleistoleranssi General tolerance		Profilin Profile		Väri Color	
Pintakäsittely Coating		Materiaali Material		Paino Mass	
Suunn. Design	19.01.2015 VL	Kuvaus Description AV1916-EXnA-915FN2 Mechanical Mounting	Piirustus Drawing		
Tark. Checked	19.01.2015		Kokoonpano Assembly		
Hyv. Approved	19.01.2015 KKT	Projektin nimi Project name	Sivu Sheet		
 <small>Pietilänkatu 9, 04400 Järvenpää tel. +358-9-2790120, fax +358-9-2910210, www.aerial.fi</small>		Tuotekoodi Product code	Revisio Revision		
		Piirustus no. Drawing no.	1 / 1		
		AE16040			



Antenna Weight: 3,1kg

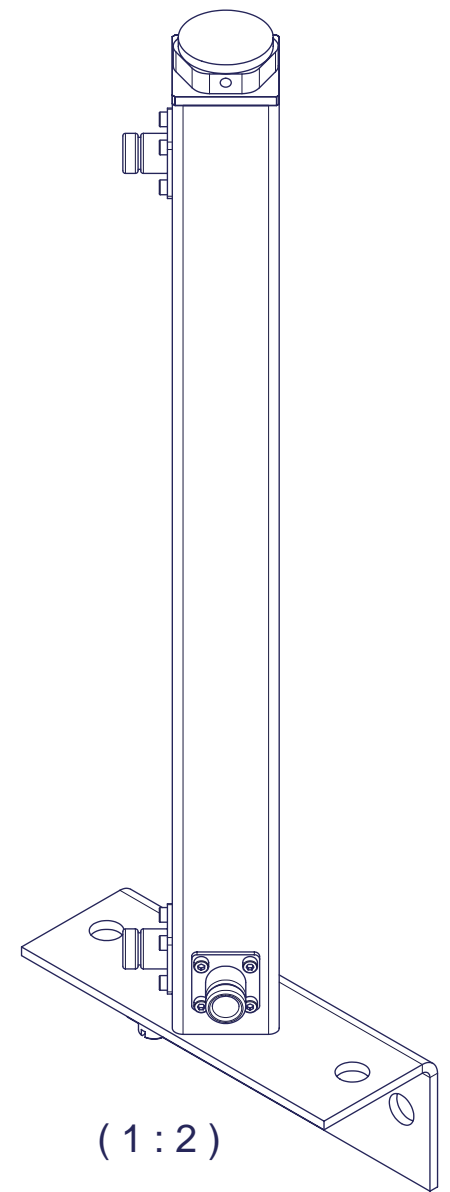
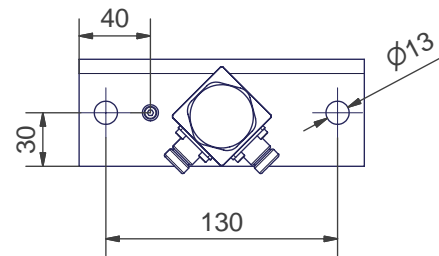
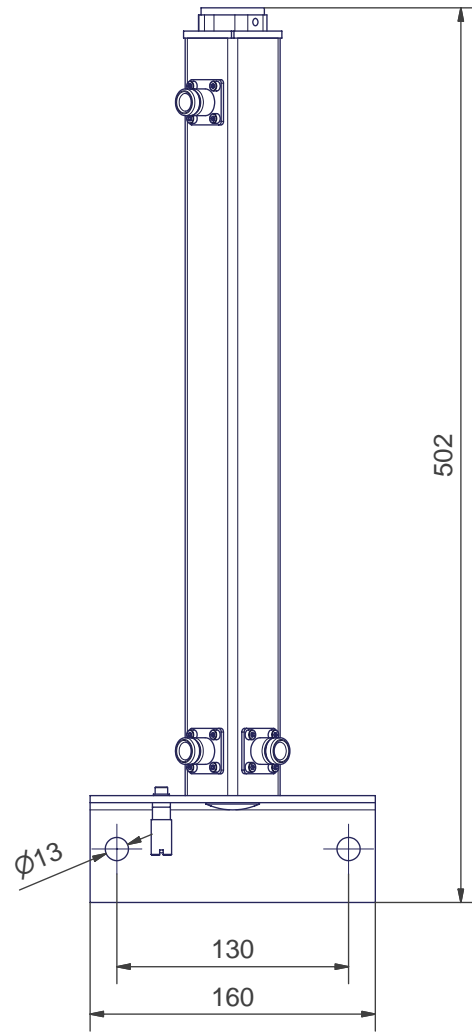
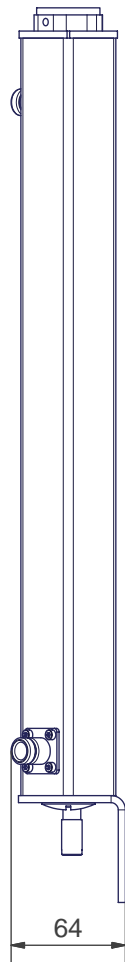
Mounting Kit Weight: 1,7kg

Altogether: 4,8kg

Yleistoleranssi General tolerance		SFS-EN 1090-2		Profiili Profile					
Pintakäsittely Coating		Powder paint		Materiaali Material		AISI 316			
Suunn. Design		08.01.2016 VL		Kuvaus Description		Väri Color			
Tark. Checked		08.01.2016 KKT		 Mittakaava Scale		KORRO PVB			
Hyv. Approved		08.01.2016 KKT				TR2401-EXnA-160FN1 146-174MHz, 3xN-f-panel, AETM160-6-A2/A4		Paino Mass	
				Projektin nimi Project name				Piirustus Drawing	
				Mechanical Dimensions				Kokoonpano Sheet	
				Tuotekoodi Product code				Versio Revision	
				17513				A	
				Piirustus no. Drawing no.				AE11951	




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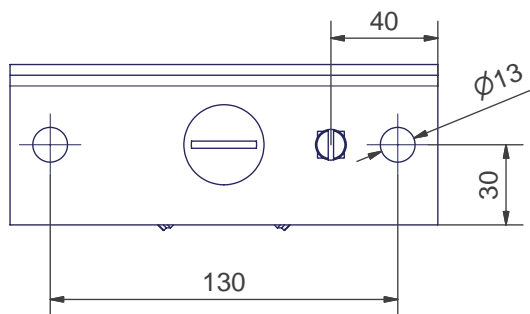
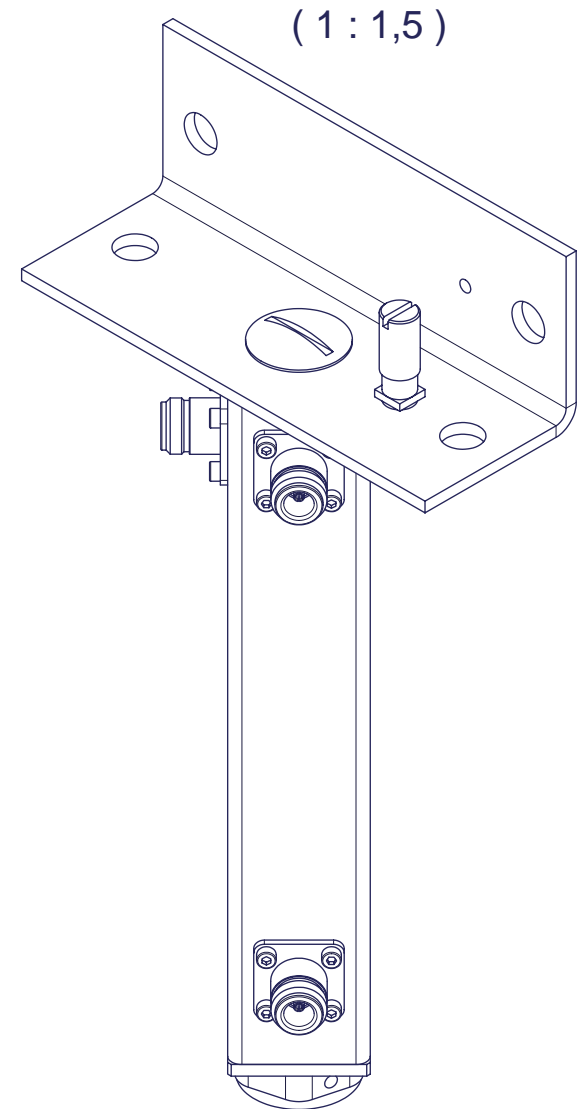
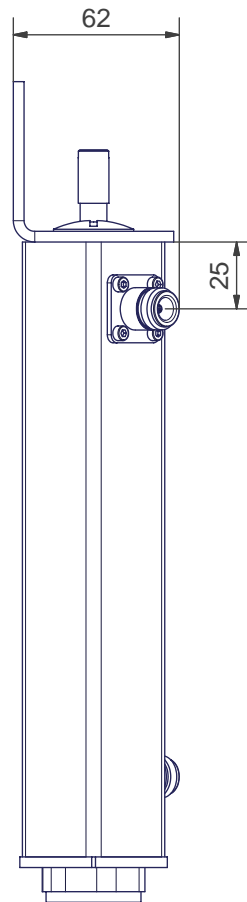
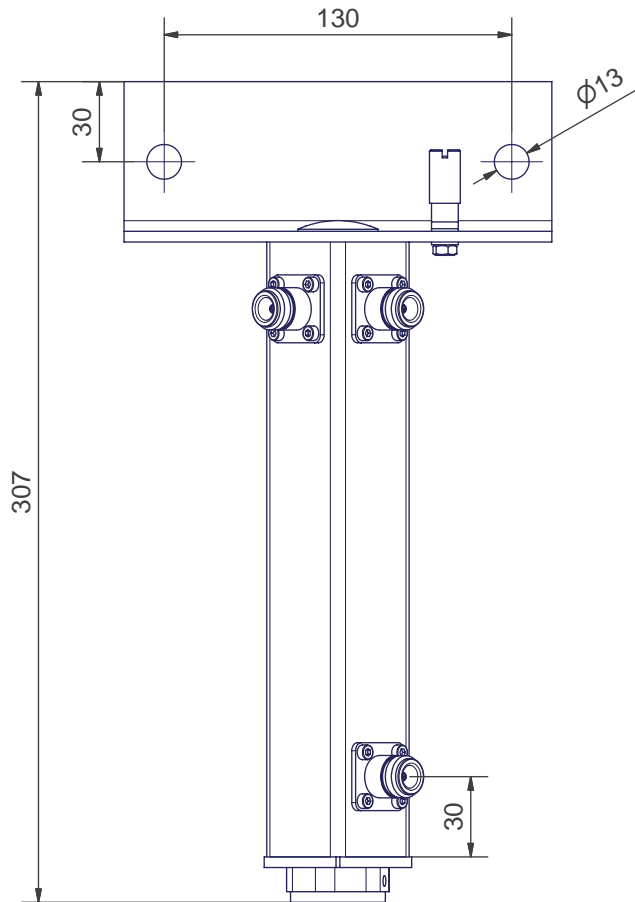
Antenna Weight: 2,7kg

Mounting Kit Weight: 1,7kg

Altogether: 4,4kg

Yleistoleranssi General tolerance		SFS-EN 1090-2		Profiili Profile			
Pintakäsittely Coating		Powder paint		Materiaali Material		AISI 316	
Suunn. Design		08.01.2016 VL		Kuvaus Description		Väri Color	
Tark. Checked		08.01.2016 KKT		 Mittakaava Scale		KORRO PVB	
Hyv. Approved		08.01.2016 KKT				TR2481-EXnA-310FN1 150-470MHz, 3xN-f-panel, AETM160-6-A2/A4	
				Projektin nimi Project name			
				Mechanical Dimensions			
				Tuotekoodi Product code			
				17516			
				Piirustus no. Drawing no.			
				AE16858			




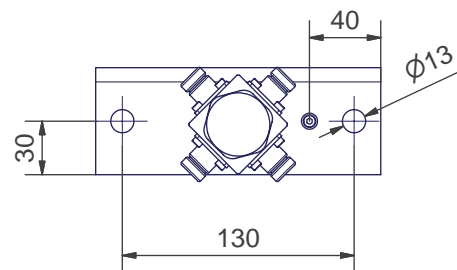
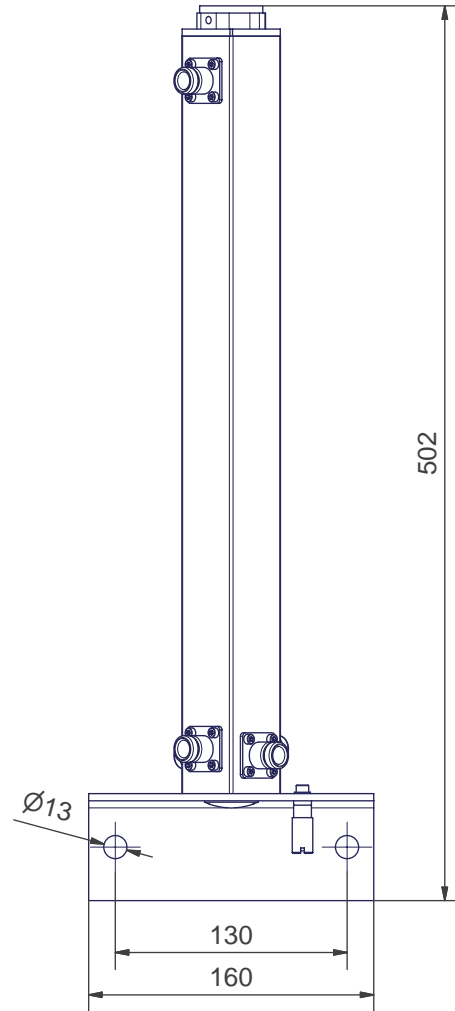
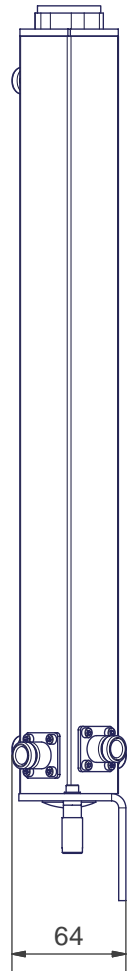


Antenna Weight: 1,6kg

Mounting Kit Weight: 1,7kg

Altogether: 3,3kg

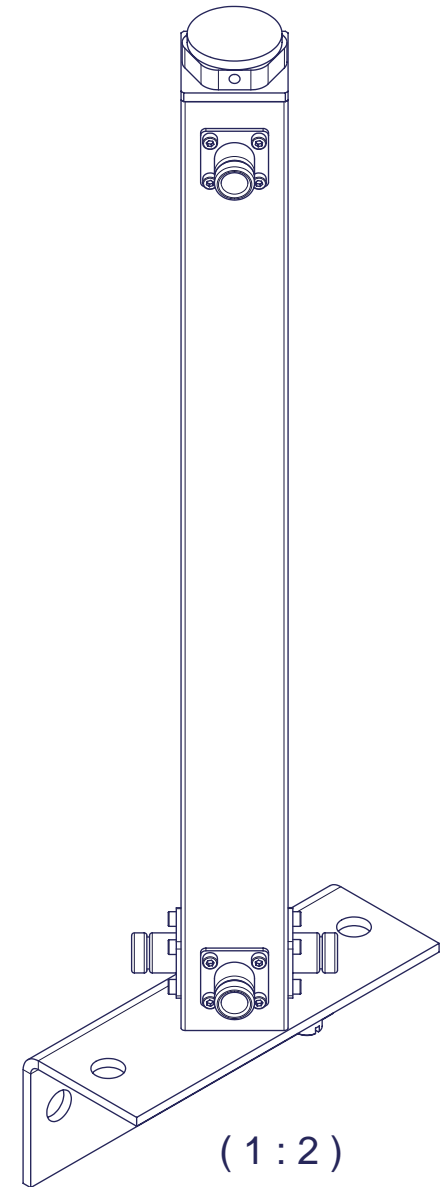
Yleistoleranssi General tolerance SFS-EN 1090-2		Profiili Profile	
Pintakäsittely Coating Powder paint		Materiaali Material AISI 316	
Suunn. Design 01.12.2014 VL		Kuvaus Description TR2501-EXnA-405FN1 340-470MHz, 3xN-f-panel, AETM160-6-A2/A4	Väri Color KORRO PVB
Tark. Checked 03.12.2014 HH			Paino Mass
Hyv. Approved 08.01.2016 KKT			Piirustus Assembly / Drawing Kokoonpano
Mittakaava Scale		Projekti nimi Project name Mechanical Dimensions	Sivu Sheet 1 / 1
 <small>Pietolankatu 9, 04400 Järvenpää tel. +358-9-2790120, fax +358-9-2910210, www.aerial.fi</small>		Tuotekoodi Product code 17514	B
		Piirustus no. Drawing no. AE16856	




Antenna Weight: 2,8kg

Mounting Kit Weight: 1,7kg

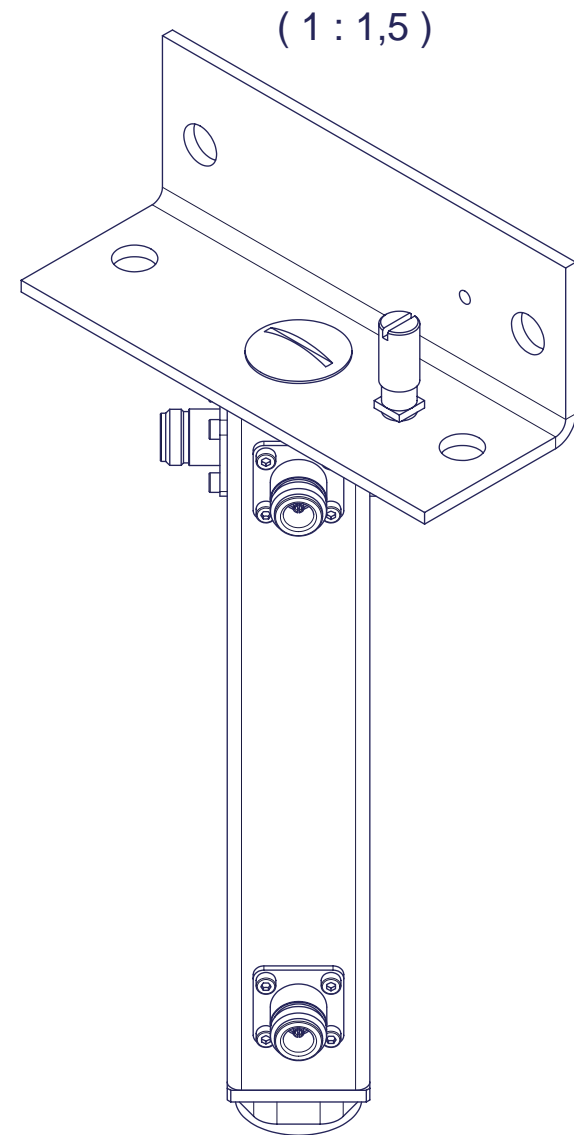
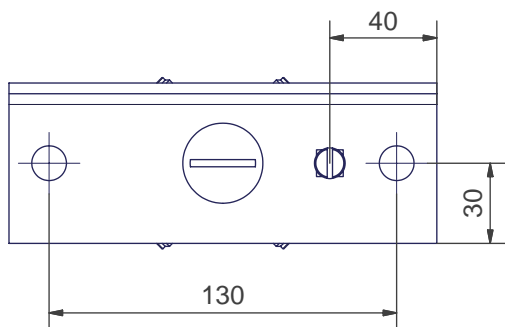
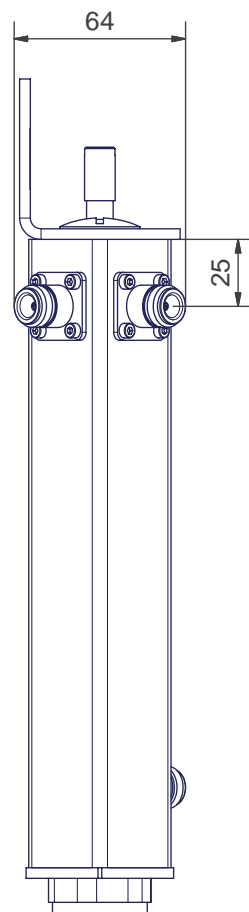
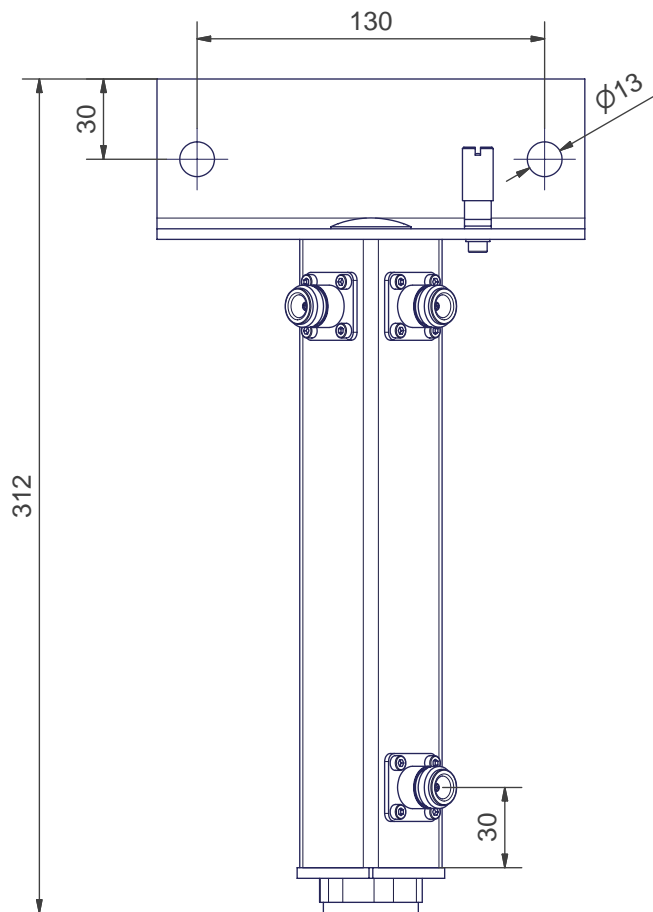
Altogether: 4,5kg



Yleistoleranssi General tolerance		SFS-EN 1090-2		Profiili Profile					
Pintakäsittely Coating		Powder paint		Materiaali Material		AISI 316			
Suunn. Design		08.01.2016 VL		Kuvaus Description		Väri Color			
Tark. Checked		08.01.2016 KKT		 Mittakaava Scale		KORRO PVB			
Hyv. Approved		08.01.2016 KKT				TR4481-EXnA-310FN1 150-470MHz, 5xN-f-panel, AETM160-6-A2/A4		Paino Mass	
				Projektin nimi Project name				Piirustus Assemby / Drawing Kokoonpano	
				Mechanical Dimensions				Sivu Sheet	
				Tuotekoodi Product code				Versio Revision	
				17517				A	
				Piirustus no. Drawing no.					
				AE16861					




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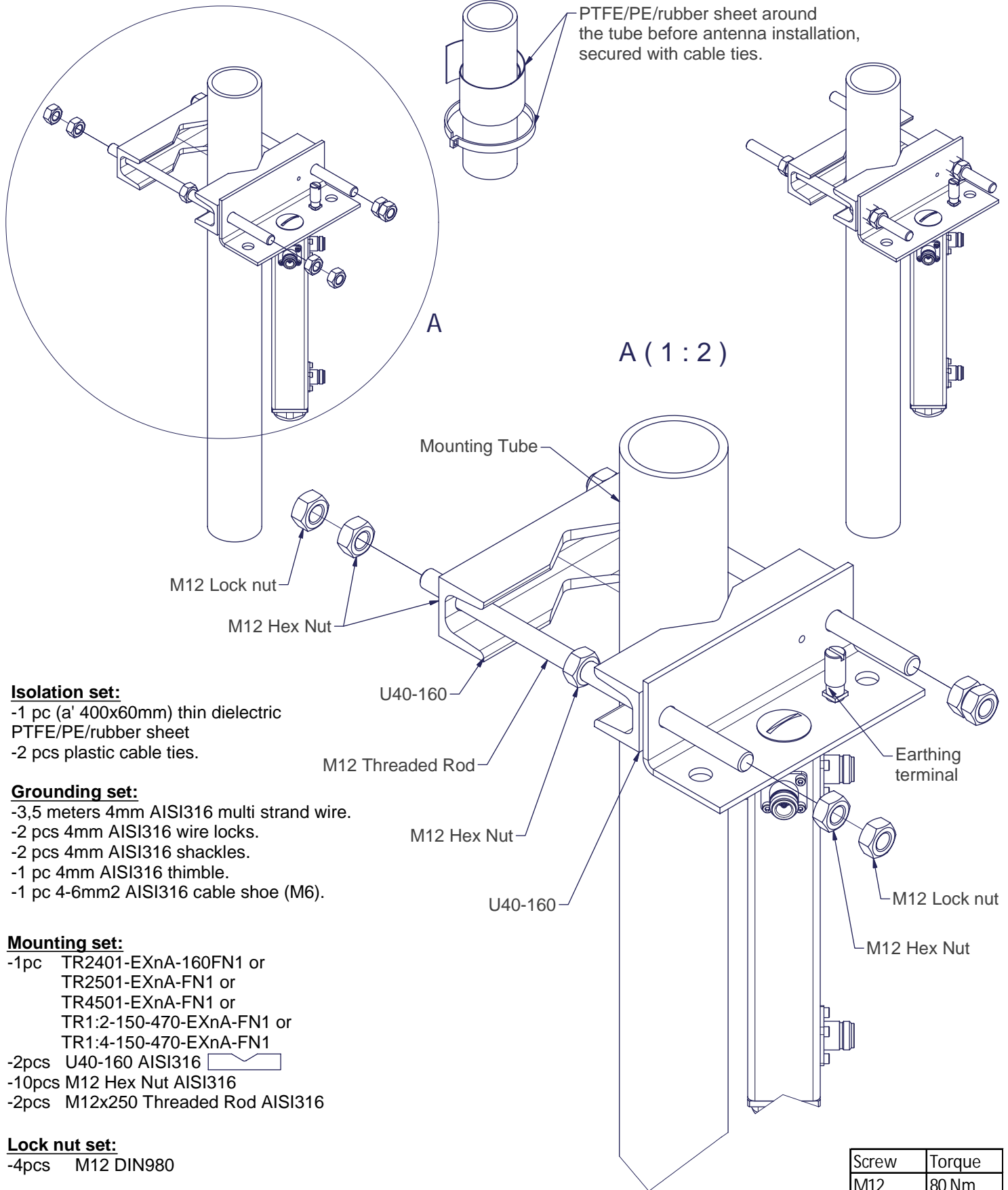


Antenna Weight: 1,7kg

Mounting Kit Weight: 1,7kg

Altogether: 3,4kg

Yleistoleranssi General tolerance SFS-EN 1090-2		Profiili Profile		Väri Color KORRO PVB	
Pintakäsittely Coating Powder paint		Materiaali Material AISI 316		Paino Mass 1,38	
Suunn. Design 01.12.2014 VL	Mittakaava Scale	Kuvaus Description TR4501-EXnA-405FN1 340-470MHz, 5xN-f-panel, AETM160-6-A2/A4		Piirustus Drawing Assembly /	
Tark. Checked 08.01.2016 KKT				Sivu Sheet 1 / 1	
Hyv. Approved 08.01.2016 KKT	Projektin nimi Project name Mechanical Dimensions		Revisio Revision		A
 <small>Pietolankatu 9, 04400 Järvenpää tel. +358-9-2790120, fax +358-9-2910210, www.aerial.fi</small>		Tuotekoodi Product code 17515			
		Piirustus no. Drawing no. AE16855			



Isolation set:

- 1 pc (a' 400x60mm) thin dielectric PTFE/PE/rubber sheet
- 2 pcs plastic cable ties.

Grounding set:

- 3,5 meters 4mm AISI316 multi strand wire.
- 2 pcs 4mm AISI316 wire locks.
- 2 pcs 4mm AISI316 shackles.
- 1 pc 4mm AISI316 thimble.
- 1 pc 4-6mm² AISI316 cable shoe (M6).

Mounting set:

- 1pc TR2401-EXnA-160FN1 or TR2501-EXnA-FN1 or TR4501-EXnA-FN1 or TR1:2-150-470-EXnA-FN1 or TR1:4-150-470-EXnA-FN1
- 2pcs U40-160 AISI316
- 10pcs M12 Hex Nut AISI316
- 2pcs M12x250 Threaded Rod AISI316

Lock nut set:

- 4pcs M12 DIN980

Screw	Torque
M12	80 Nm

For additional instructions, refer to document:
"Mounting instruction for antenna products made according to ATEX Directive 94/9/EC".

Yleistoleranssi General tolerance		Profilili Profile		Väri Color		
Pintakäsittely Coating		Materiaali Material		Paino Mass		
Suunn. Design	21.01.2015 VL		Kuvaus Description TRxxxx-EXnA Mechanical Mounting	Piirustus Assembly / Drawing Kokoonpano		
Tark. Checked	21.01.2015 KKT			Mittakaava Scale	Sivu Sheet 1 / 1	
Hyv. Approved	21.01.2015 KKT			Projekti nimi Project name	Versio Revision	
			Tuotekoodi Product code	A		
Piirustus no. Drawing no. AE21363						