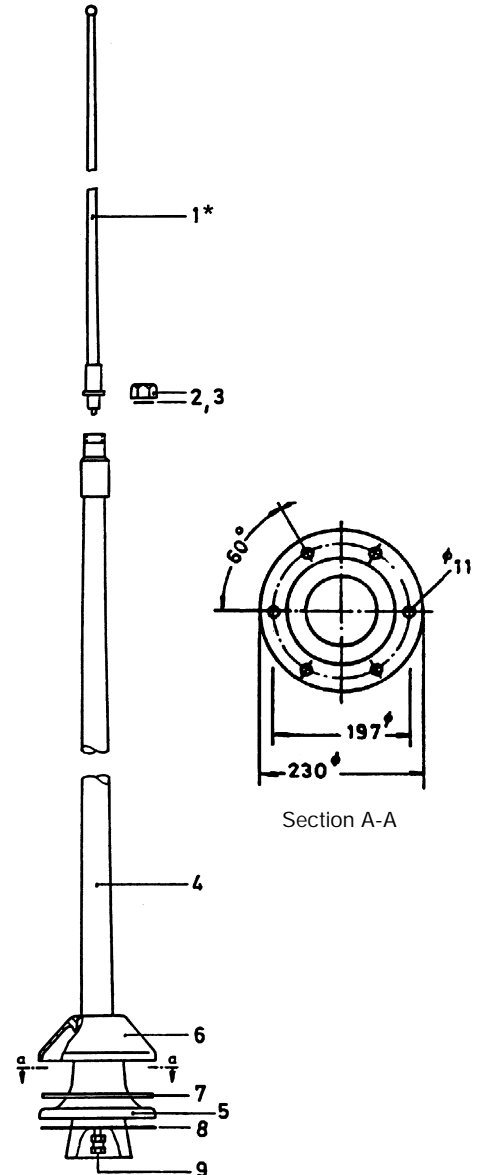


Specification

Frequency range	100 kHz – 30 MHz (receive)
RF power	15 kV eff.
Insulation	$> 10^7$ Ohm
Polarization	vertical
Characteristic	omnidirectional
Radiator	diameter 65 mm (lower section)
Length	STA 40 M - approx. 3940 mm STA 50 M - approx. 4940 mm STA 60 M - approx. 5940 mm
Weight	STA 40 M - approx. 11.5 kg STA 50 M - approx. 12.0 kg STA 60 M - approx. 12.5 kg
Colour	light grey, similar to RAL 7035
Deflexion at 150 km/h wind	STA 40 M - less than 165 mm STA 50 M - less than 380 mm STA 60 M - less than 870 mm
Max. Bending Stress at Base Insulator	STA 40 M - 990 Nm) STA 50 M - 1230 Nm) STA 60 M - 1510 Nm) represents 8 m/s ² overheeling acceleration plus 200 km/h wind
Ambient Temperature	-40° ... 50° C
Storage Temperature	-40° ... 60° C



- 1* STA 40 M: upper section STA 10 HV/M
- 1* STA 50 M: upper section STA 20 HV/M
- 1* STA 60 M: upper section STA 30 HV/M
- 2 Locking nut
- 3 O-Ring
- 4 Lower Section, complete with:
- 5 Base insulator
- 6 Insulator cap with water-protected area
- 7 Thrust collar
- 8 Sailing ring
- 9 Clamping cone Ø 6
- 10 Base flange detail

Application

This antenna is intended to meet the requirements of maritime mobile services. It should find application wherever on account of extreme climatical and operational conditions the antenna has to guarantee max. strength, stiffness, and reliability. It requires very low maintenance. The antenna mainly operates as a vertically polarized radiator with an omnidirectional pattern. It can be used as both transmitting and receiving antenna.

Receiving antennas may be equipped with wideband toroidal core matching transformers types EAU 60/240 resp. EAU 60/240/II as per data sheet.

Mechanical Specification

Design

This very robust antenna is the result of decades long experience with glassfibre reinforced synthetic resins. The electrolytic copper radiators are embedded into the resin laminate.

The antennas consist of two sections. The lower section with its base insulator has a length of approx. 3 m. This self-supporting lower section takes up the upper section by means of a junction assembly. Upper sections are available with lengths of 1, 2 and 3 meter.

The antenna is absolutely amagnetic.

Required Space

Only a minimum of space is required for this self-supporting out-standing stiff antenna construction, mounted on a base flange of 230 mm diameter.

On board of ships the antenna shall be mounted in a sloping position from 5 to 15° in order to avoid oscillation.

Environmental

Due to the extraordinary chemical resistance of the glassfibre reinforced material the antenna withstands any known marine environmental stress.

Maintenance

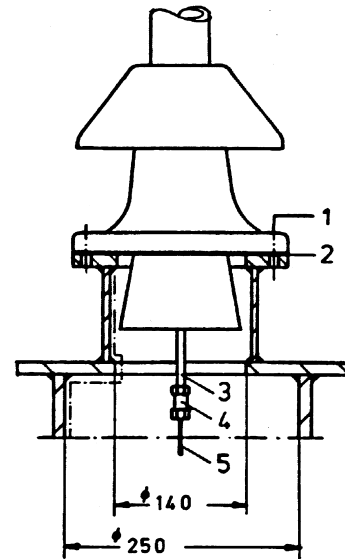
about zero

The antenna shall be cleaned from time to time with sweet water. In case of oily soil, please, add self detergents to the water.

Spare Parts List

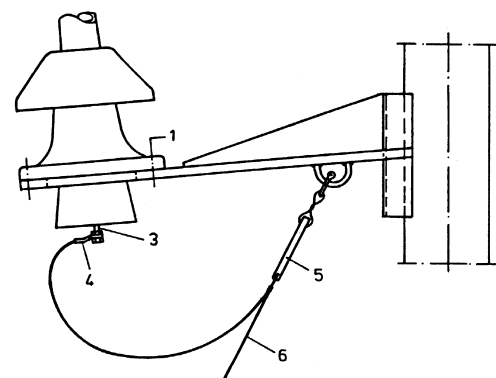
Position	Designation	Order-Code
1	STA 40 M	E 107-606
1	STA 50 M	E 107-607
1	STA 60 M	E 107-608
1*	upper section:	
	STA 10 HV/M (STA 40 M)	E 107-145
	STA 20 HV/M (STA 50 M)	E 107-146
	STA 30 HV/M (STA 60 M)	E 107-125
2	Locking nut	E 107-224
3	O-Ring	E 107-245
4	Lower Section	E 107-429
	(complete)	

Installation Proposal



- 1 Hexagon screw M 10 – DIN 933-A2
- 1 Washer 10.5 – DIN 125-A2
- 1 Self-locking hexagon nut M 10 – DIN 985-A2
- 2 Sealing
- 3 Axial-lengthening
- 4 Clamp-cone
- 5 Cu-tube 6 dia

..... to be insulated to avoid condensation of water



- 1 Hexagon screw M 10 – DIN 933-A2
- 1 Washer 10.5 – DIN 125-A2
- 1 Self-locking hexagon nut M 10 – DIN 985-A2
- 3 Axial-lengthening
- 4 Terminal
- 5 Insulator
- 6 Stranded wire 4-8 dia

pos. 1, Tightening torque max. 20 Nm

Antennenübertrager / Antenna Matching Transformer

EAU VA

Application

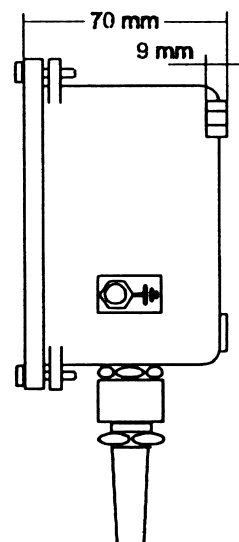
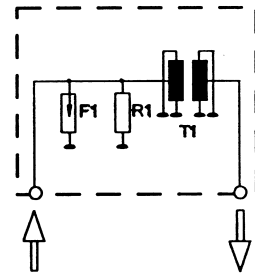
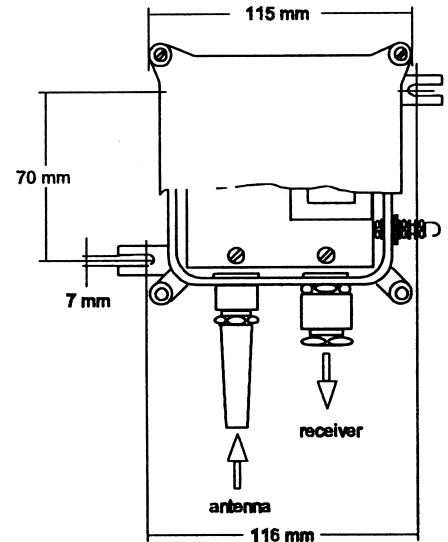
Matching transformer for passive receiving antennas.

When the antenna transformer is used, short rod or wire antennas (3 to 15 m) can be connected to a coaxial cable. The antenna transformer considerably improves the efficiency of the receiving antenna, particularly in the lower frequency range, and protects the receiver from static charges.

Specification

Dimension (w x d x h)	115 x 115 x 70 mm
Weight	1.7 kg
Ambient temperature	-40 ... +70°C
Storage temperature	-50 ... +80°C
Protection rating (vertical installation recommended)	IP54
Material casing	bronze-cast
Cable inlet (antenna side)	cable screw joint PG 13.5 for antenna wire litz d = 4.5 mm
Cable outlet (receiver side)	cable screw joint SHV-Erko for RG 213 U
Input protection	lightning arrester (90 V)
Frequency range	0.1 - 30 MHz
Max. permissible power acceptance	< 4 W
Output impedance	50 ... 75.
Transformer attenuation	< 1 dB
Part-No.	E 107 964

All data without tolerance are approximate values.



STA = Rod Antenna
E = Receiving Rod Antenna
EAU = Transformer

K = Tilt
TR = reinforced
SE = Transmit Antenna

SSB = internal feeding
SSB/E = external feeding
PM/M = dark grey (similar to RAL 7000)

NDB = Non Directional Radio Beacon



Antennenübertrager / Antenna Matching Transformer

EAU 60/240/II

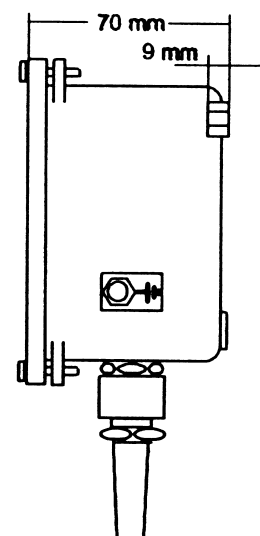
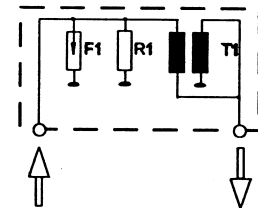
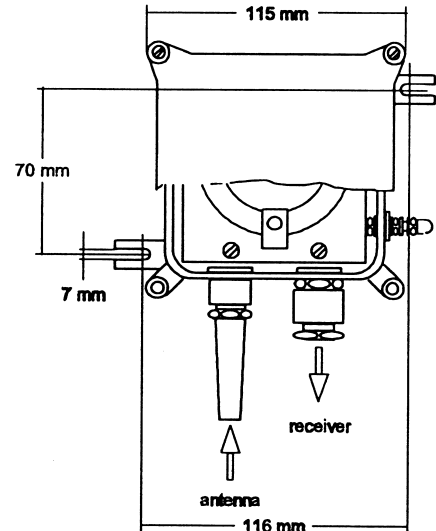
Application

When the antenna transformer is used, short rod or wire antennas (3 to 15 m) can be connected to a coaxial cable. The antenna transformer considerably improves the efficiency of the receiving antenna, particularly in the lower frequency range, and protects the receiver from static charges. Because of the high RF power limit of 100 W, the antenna transformer can also be used for receiving antennas which have been set up close to transmitting antennas.

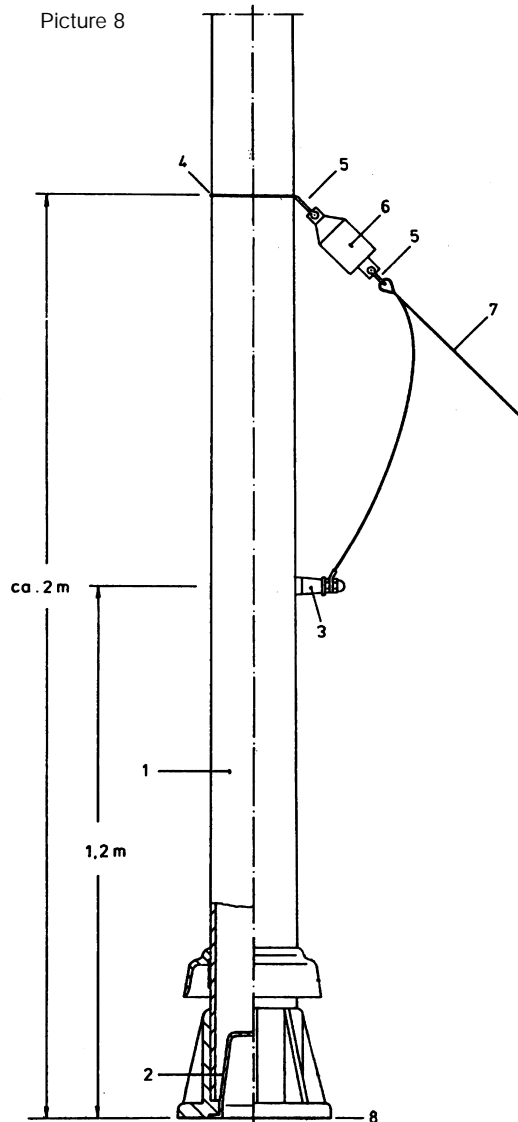
Specification

Dimensions (w x h x d)	115 x 115 x 70 mm
Weight	1.9 kg
Ambient temperature	-40 ... +70°C
Storage temperature	-50 ... +80°C
Protecting rating	IP 56 (vertical installation recommended)
Material of casing	bronze-cast
Colour EAU 60/240/II	RAL 7000
Cable inlet (antenna side)	cable screw joint PG 13.5 and insulator for antenna wire litz 7x7x0.5 $\varnothing = 4.5$ mm
Cable outlet (receiver side)	cable screw joint SHV-Erko 16/11/8 for coax cable RG 213/214 U
Frequency range	0.1 – 30 MHz
Max. permissible RF-power	100 W
Output impedance	50 ... 75 Ω
Transformer attenuation	< 1 dB
Lightning arrester	230 V
Part-No.	E 107 965
NSN	5985-12-190-2099

All data indicated without tolerance are approximate values.

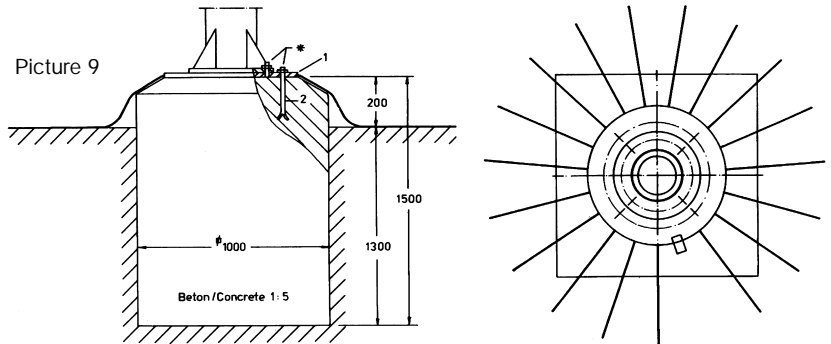


External feeding STA ... PM/E



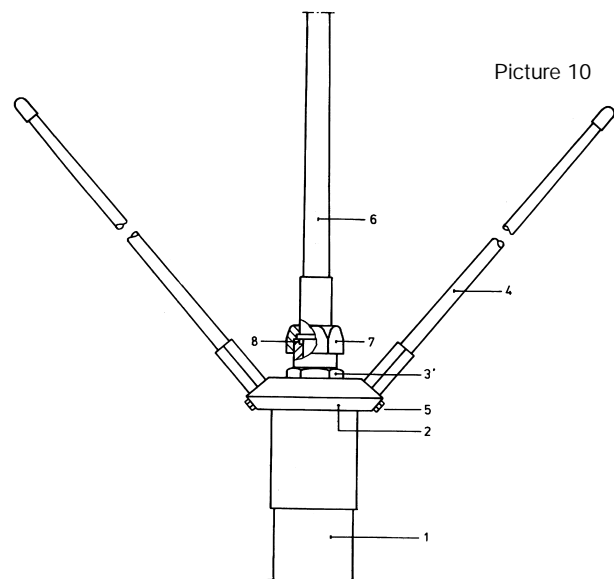
- 1 Lower section US 80 PM/E
- 2 Sealing cap
- 3 Lead-in insulator P 6
- 4 Holding rope
- 5 Shackle
- 6 Insulator
- 7 Wire feeder
- 8 Flat gasket

Concrete basement for STA ... PM/E



- 1 Foundation plate 8 A
- 2 Stone bold M 16 x 200 - DIN 529 (8x)
- 3 Counter poise CP 18 (18 radials 15 m length)
- * Tightening torque $M_A = 160 \text{ Nm}$

STA ... PM/D4/ ...



- 1 Lower section US 80 PM
- 2 Top fork capacity disk DK 4
- 3 Holding nut for DK 4
- 4 Top fork capacity STA ... D (4x)
- 5 Locking screw M 6 x 10 DIN 933 - stainless steel (4x)
- 6 Upper section STA ... HV
- 7 Locking nut for upper section
- 8 O-ring $\varnothing 29.1 \times 2.55$

STA = Rod Antenna
E = Receiving Rod Antenna
EAU = Transformer

K = Tilt
TR = reinforced
SE = Transmit Antenna

SSB = internal feeding
SSB/E = external feeding
PM/M = dark grey (similar to RAL 7000)

NDB = Non Directional Radio Beacon

Regarding supporting pipes and tilting mechanism (our tilting flange K 8 is shown on picture 7), which can be used in connection with these antennas and which offer a wide range of installation possibilities, if ground networks are being required as per picture 9, please, refer to our data sheet.
RF power is being injected through the base of the antenna as a standard (internal feeding as per picture 4).

It is, however, also possible to supply the antennas of the serie STA ... PM equipped for external feeding according to picture 8.

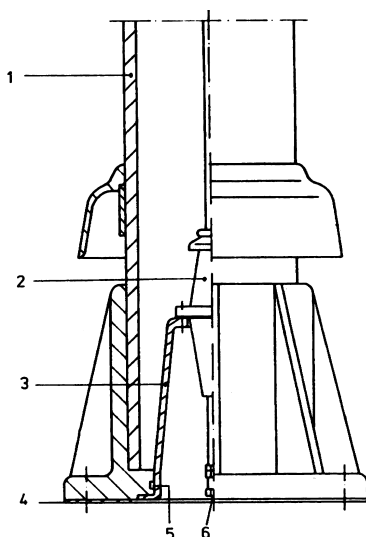
The externally fed equipment is marked with the additional letter "E" within the type designation (STA ... PM/E).

To improve the antenna's efficiency at low frequencies (1.5 - 4.5 MHz), it is possible to install an additional top fork capacitance on the top of the lower section US 80 PM (see picture 10).

This top fork capacitance consisting of four antenna rods with a length of 200 resp. 300 cm each can also be mounted supplementary at a later time.

Internal feeding

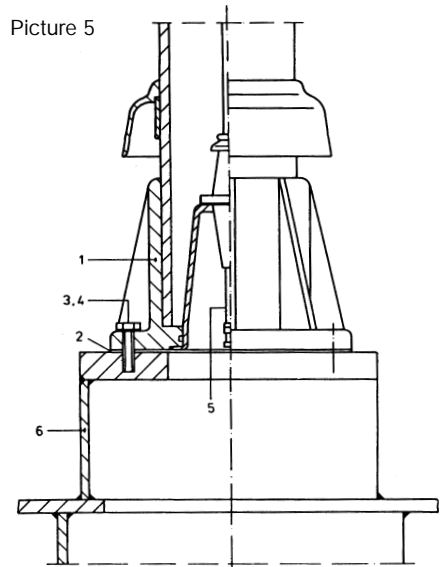
Picture 4



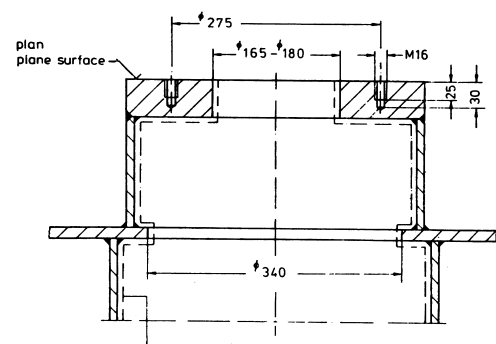
- 1 Lower section US 80 PM
- 2 Lead-through insulator P 75-1
- 3 Insulator holding device
- 4 Sealing
- 5 O-ring $\varnothing 129.8 \times 3.53$
- 6 Clamping cone $\varnothing 6$

Mounting Proposal

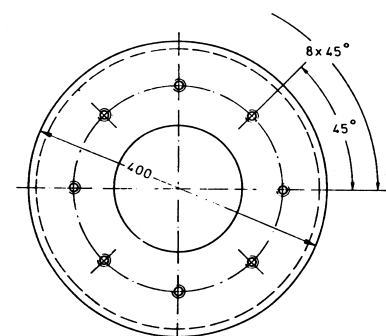
Picture 5



- 1 Pedetal
- 2 Sealing
- 3 Hexagon screw M 16 x 50
DIN 931-A2 (8x)
Tightening torque $M_A = 160 \text{ Nm}$
- 4 Disk B 17 DIN 125-A2 (8x)
- 5 Internal feeder with clamping cone $\varnothing 6$
- 6 Platform



to be insulation to avoid condensation of water

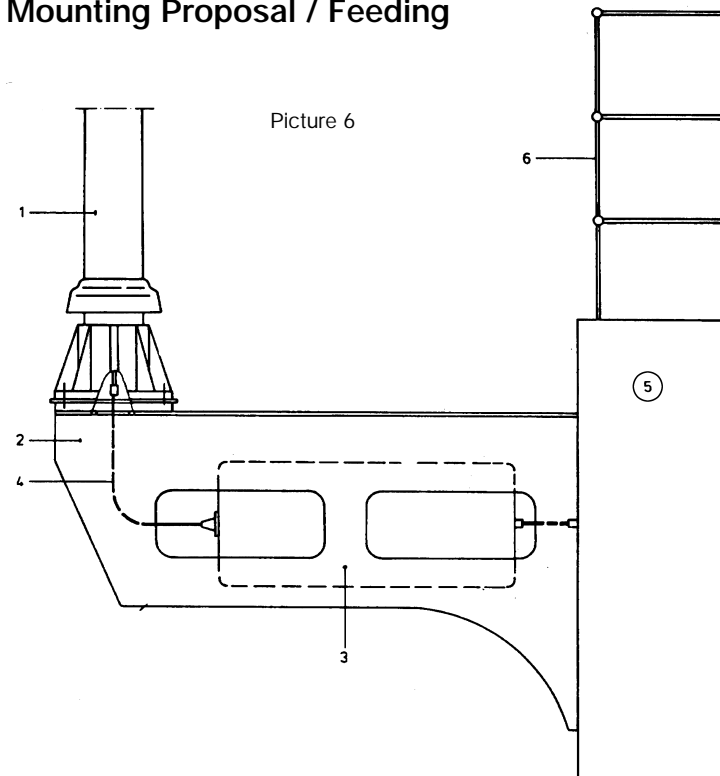


Specification

Frequency range	1.5 - 30 MHz (transmit) 0.1 - 30 MHz (receive)
RF power	1 kW
Insulation	> 10 ⁷ Ohms
Polarization	vertical
Characteristic	omnidirectional
Length ** (Picture 1)	STA 105 PM: approx. 10.5 m (abt. 35.0 ft.) STA 110 PM: approx. 11.0 m STA 120 PM: approx. 12.0 m (abt. 40.0 ft.) STA 140 PM: approx. 14.0 m (abt. 46.7 ft.)
Weight	STA 105 PM, approx. 61.0 kg STA 110 PM, approx. 62.0 kg STA 120 PM approx. 62.0 kg) ± 2.5 kg STA 140 PM, approx. 68.0 kg
Colour	light grey, resembling to RAL 7035 or grey, resembling to RAL 7000 (STA ... PM/M)
Temperature range	-40° ... +70° C
Deflection at 150 km/h wind	STA 105 PM - approx. 1.10 m STA 110 PM - approx. 1.30 m STA 120 PM - approx. 1.50 m STA 140 PM - approx. 2.50 m
Max. bending moment at antenna base	1300 daNm (represents 8 m/s overheeling acceleration plus 140 km/h wind)
Static Capacitance *)	STA 105 PM - 127 pF STA 110 PM - 130 pF STA 120 PM - 135 pF STA 140 PM - 147 pF

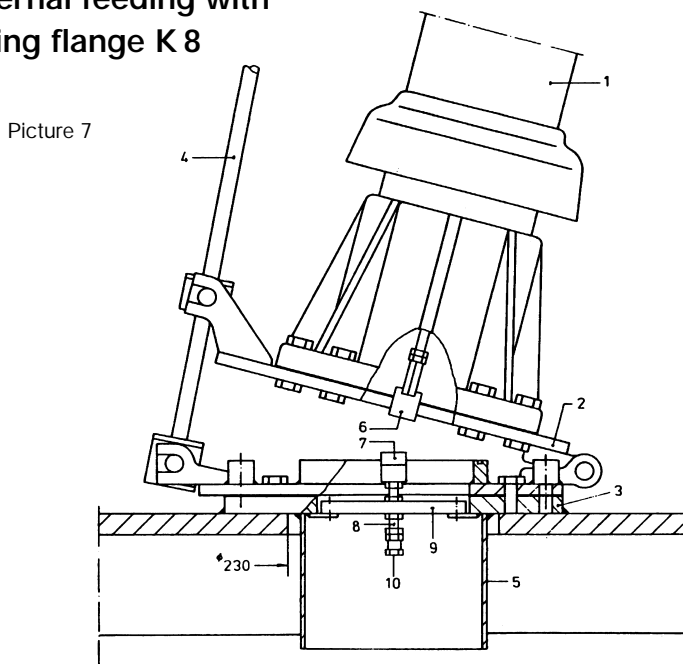
*) Can be increased by adding a top fork capacitance as per picture 10.

Mounting Proposal / Feeding



- 1 Antenna
- 2 Mounting support
- 3 Antenna matching unit
- 4 Copper base Ø 6
- 5 Operator room
- 6 Rail

Internal feeding with tilting flange K 8



- 1 Antenna STA ... PM
- 2 Tilting flange K 8
- 3 Connection flange
- 4 Spindle (Optional) SP/ ...
- 5 Decks lead-through pipe Ø 219.1 x 4.5
- 6 Knife contact
- 7 Contact spring
- 8 Axis
- 9 Plate insulator
- 10 Clamping cone Ø 6

Information for Orders

STA ... PM / . / .. / ..
 (1) (2) (3)

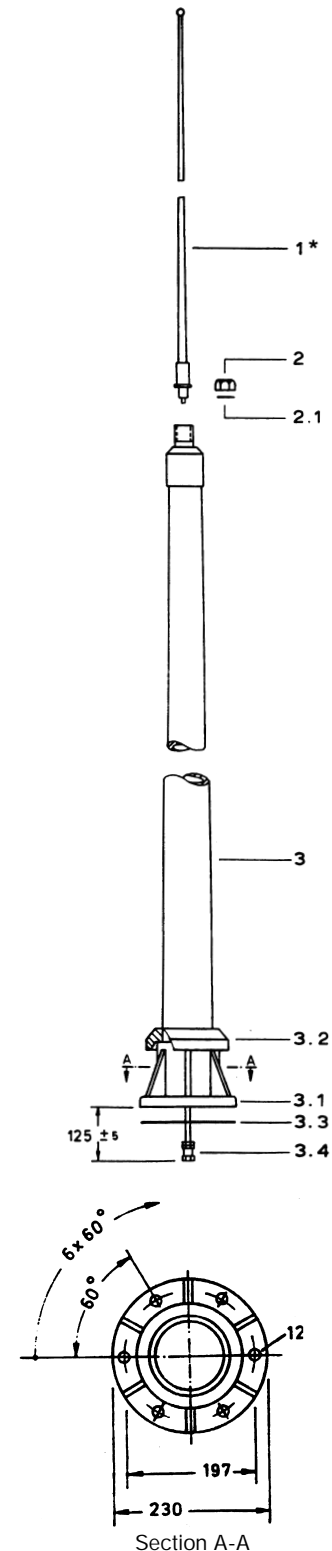
(1) Length of antenna	105 = 10.5 m 110 = 11.0 m 120 = 12.0 m 140 = 14.0 m
(2) Index "E"	for external feeding
(3) Index "D 4/20"	for top fork capacitance 2 m
Index "D 4/30"	for top fork capacitance 3 m
Standard Colour	Light grey resembling to RAL 7035 - or grey resembling to RAL 7000 (with description STA ... PM/M) other colours upon request.
Delivery Scope	Types STA 105 PM, STA 110 PM, STA 120 PM and STA 140 PM: as per picture 2
For external feeding	additional items 3 - 6 as per picture 8
For additional top fork capacitance	items 2 - 5 as per picture 10

Spare Parts List

Position	Designation	Order-Code
1	STA 105 PM	E 107-690
1	STA 110 PM	E 107-691
1	STA 120 PM	E 107-689
1	STA 140 PM	E 107-614
1a	top rod STA 25 HV (STA 105 PM)	E 107-638
1b	top rod STA 30 HV (STA 110 PM)	E 107-135
1c	top rod STA 40 HV (STA 120 PM)	E 107-185
1d	top rod STA 60 HV/2 (STA 140 PM)	E 107-082
2	Locking nut	E 107-224
3	O-Ring 29.1 x 2.55	E 107-245
4	Lower Section US 80 PM	E 107-492

Specification

Frequency range	1.5 - 30 MHz
RF power	1 kW pep (4 - 30 MHz)
Insulation	$> 10^8$ Ohm
Polarization	vertical
Characteristic	omnidirectional
Diameter of radiator	95 mm (lower section)
Feeding	internal (base injection)
Length	STA 70 PM/M: 7100 mm STA 80 PM/M: 8100 mm STA 90 PM/M: 9100 mm STA 100 PM/M: 9880 mm - Toleranz ± 30 mm -
Weight	STA 70 PM/M: ca. 25.5 kg STA 80 PM/M: ca. 26.0 kg STA 90 PM/M: ca. 26.9 kg STA 100 PM/M: ca. 27.0 kg
Colour	STA ... PM/M: dark grey, similar to RAL 7000 STA ... PM: light grey, similar to RAL 7035
Deflection	STA 70 PM/M: ca. 0.55 m STA 80 PM/M: ca. 0.90 m STA 90 PM/M: ca. 1.40 m STA 100 PM/M: ca. 2.00 m
Bending stress at antenne base	STA 70 PM/M: 200 daNm STA 80 PM/M: 230 daNm STA 90 PM/M: 260 daNm STA 100 PM/M: 280 daNm - represents 42 m/s resp 8 m/s ² overheeling acceleration plus 150 km/h wind -
Temperature	- 40° ... + 70° C



- | | |
|--------------------------------------|--------------------------------------|
| 1* STA 70 PM/M: top rod STA 20 HV/M | 3 Lower section US 50 PM/M |
| 1* STA 80 PM/M: top rod STA 30 HV/M | 3.1 Antenna base |
| 1* STA 90 PM/M: top rod STA 40 HV/M | 3.2 PTFE insulator cap with dry zone |
| 1* STA 100 PM/M: top rod STA 50 HV/M | 3.3 Flat gasket |
| 2 Locking Nut | 3.4 Clamping cone $\varnothing 6$ |
| 2.1 O-Ring 29.1 x 2.55 | |

STA = Rod Antenna K = Tilt SSB = internal feeding NDB = Non Directional Radio Beacon
 E = Receiving Rod Antenna TR = reinforced SSB/E = external feeding
 EAU = Transformer SE = Transmit Antenna PM/M = dark grey (similar to RAL 7000)

Mastantennen / Mast-Antennas

STA 70 - 100 PM/M

Application

This transmitting antenna is intended to meet the requirements of maritime mobile services. It should find application wherever on account of extreme climatical and operational conditions the antenna has to guarantee maximum strength, stiffness, and reliability. It requires very low maintenance.

The antenna mainly operates as a vertically polarized radiator with an omnidirectional pattern.

Mechanical Specification

Design

The antennas consist of two sections, and the lower section with its seawater resistant cast aluminium base has a length of approx. 5 meters. The self-supporting lower section takes up the upper section by means of a junction assembly. Upper sections are available with lengths up to 5 m. The tinned electrolytic copper radiators are embedded into the resin laminate.

The antenna is absolutely amagnetic.

Space required

Only a minimum of space is required for this self-supporting outstanding stiff antenna construction, mounted on base flange of 230 mm diameter.

Usually, the antenna is vertically mounted. On board of ships the antennas STA 90 PM/M and STA 100 PM/M, however, shall be mounted in a sloping position from 5° to 15° in order to avoid rotary oscillation.

Environmental:

Due to the extraordinary chemical resistance of these glassfibre reinforced materials the antenna withstands any known marine environmental stress.

Maintenance:

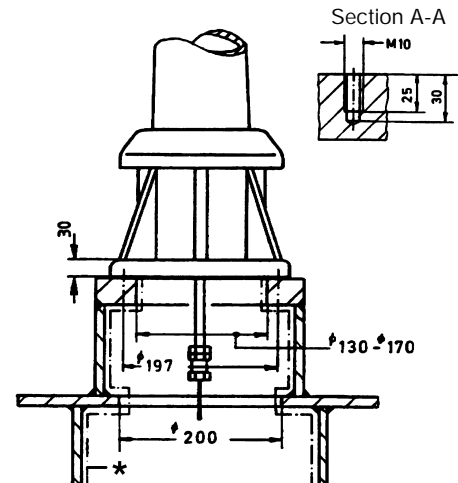
nearly zero

The antenna shall be cleaned from time to time with sweet water. In case of oily soil or salt please add soft detergents to the water.

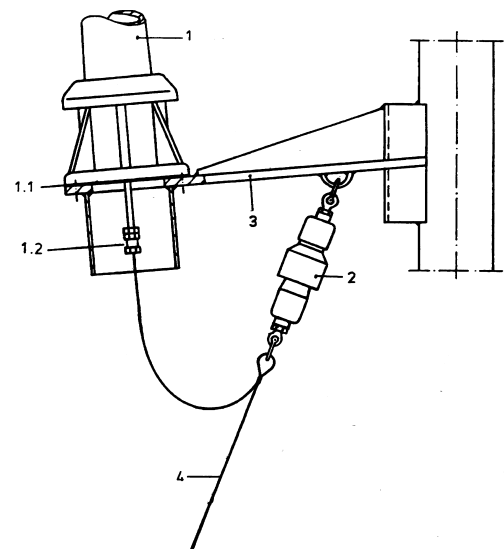
Crank mechanism:

quick mechanical tilting device, TIF

Installation Proposal

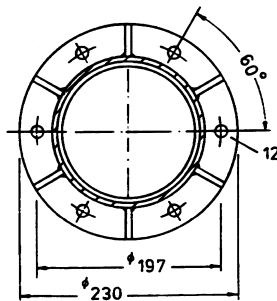


(not applicable with external feeding)
* to be insulated against condensation

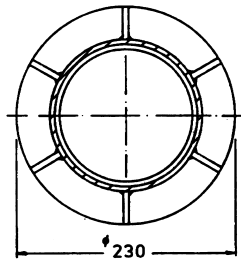


- 1 Antenna
- 1.1 Flat gasket
- 1.2 Clamping cone Ø 6
- 2 Isolator GT 300
- 3 Mounting support
- 4 Wire feeder

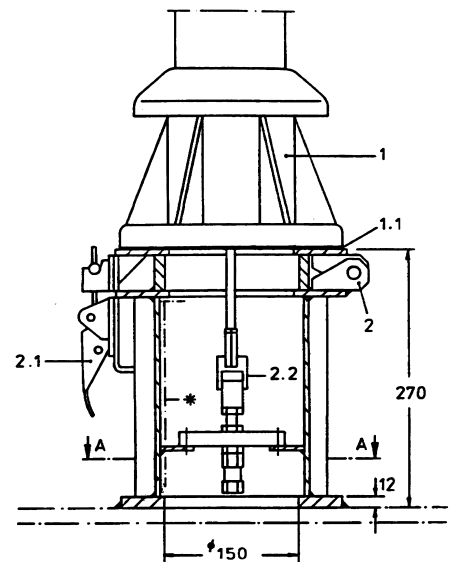
Manual Tilting Device with Toggle Fasteners TIF



Section A-A
Alternative



Section A-A



- 1 Antennas STA 70 to 100 PM/M
- 1.1 Flat gasket
- 2 Tilting device TIF
- 2.1 Toggle fastener
- 2.2 Contact

(not applicable with external feeding)

- * to be insulated against condensation

Spare Parts List

Position	Designation	Order-Code
1	STA 70 PM/M	E 107-609
1	STA 80 PM/M	E 107-610
1	STA 90 PM/M	E 107-611
1	STA 100 PM/M	E 107-612
1*	top rod:	
	STA 20 HV/M (STA 70 PM/M)	E 107-146
1*	STA 30 HV/M (STA 80 PM/M)	E 107-125
1*	STA 40 HV/M (STA 90 PM/M)	E 107-144
1*	STA 50 HV/M (STA 100 PM/M)	E 107-136
2	Locking nut	E 107-224
2.1	O-Ring 29.1 x 2.55	E 107-245
3	Lower Section US 50 PM/M	E 107-449

STA = Rod Antenna
E = Receiving Rod Antenna
EAU = Transformer

K = Tilt
TR = reinforced
SE = Transmit Antenna

SSB = internal feeding
SSB/E = external feeding
PM/M = dark grey (similar to RAL 7000)

NDB = Non Directional Radio Beacon

Empfangs-Mastantennen / MF/HF Transmitting Antennas

STA 115 C/MF/HF/E

This antenna is a self-supporting mast antenna for the mobile maritime radio service. It serves mainly as a transmitting antenna in the frequency bands

405 - 535 kHz and 1.5 - 30 MHz. 1)

The excellent efficiency in the MF range is due to a well positioned loading coil in the upper part of the antenna. The loading coil and the top load capacitance match ideally and provide a favourable voltage distribution on the antenna.

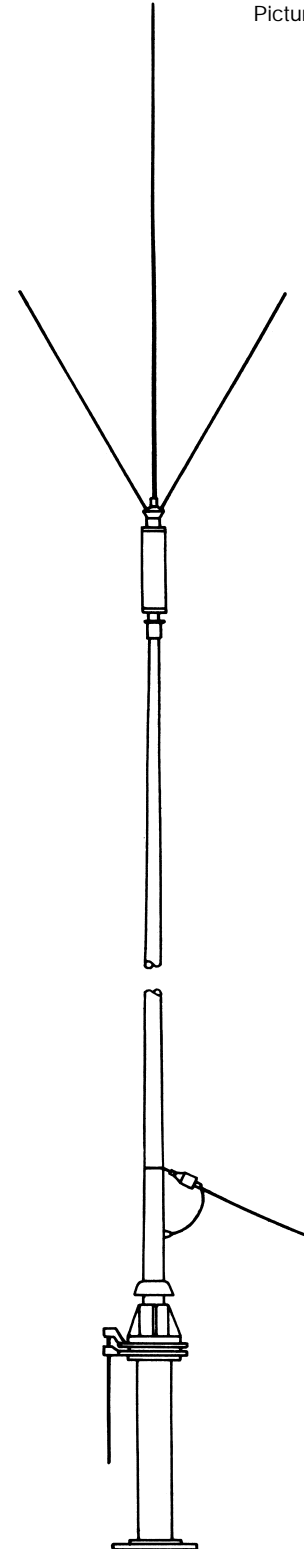
The top load assembly also serves as a resonant shortening circuit in the shortwave bands. Due to this shortening effect the antenna provides well defined low angle propagation throughout the HF bands qualifying it especially for long distance traffic.

The STA 115 C/MF/HF/E is an externally injected mast antenna. It can be installed on supports with appropriate tilting devices. The tilting devices may be furnished with hydraulic cylinders for both, manual or remote automatic operation.

Modified versions of this antenna are available for other frequency ranges, e.g. nondirectional beacons for shore and seaborne installations and aviation NDB's.

1) The frequency range can be expanded from 250 to 1000 kHz by using different loading coils according to our data sheet.

Picture 1



STA = Rod Antenna K = Tilt SSB = internal feeding NDB = Non Directional Radio Beacon
E = Receiving Rod Antenna TR = reinforced SSB/E = external feeding
EAU = Transformer SE = Transmit Antenna PM/M = dark grey (similar to RAL 7000)



Description

The antenna is a self-supporting mast antenna. It is made of glass-fibre reinforced plastic and consists of three different sections:

Lower Mast Section
Loading Coil Assembly
Top Rod Assembly

The complete top load assembly consisting of the loading coil and the five top rods is identical to the load assembly of the main transmit antenna STA 150 C.

This measure holds down the spare part stockage costs in case both, the STA 150 C and the STA 115 C, are being installed on board of the ship.

All parts are made interchangeable to its corresponding counterpart of the other antenna and no further adjustment of the antenna tuning unit is necessary after such replacements.

Type Designations Antennas and Supports

STA 115 C/MF/HF/E	antenna with external RF-feeder
STA 115 C/MF/HF/E/KS	idem, with tilting flange K 5/E (*), and spindle assembly SP/G (incl. ratchet)
TR 2 R/E (TR 2 R/E/B**)	supporting pipe (*) 0.20 m high for external feeding
TR 15 R/E (TR 15 R/E/B**)	idem (*), 1.50 high

(*) painted with rust preventing primer

(**) standard supports are for welding anchorage, supports with letter "B" are provided with base flange bore holes for fixing bolts

Specification

Frequency range	MF 405 - 520 kHz ¹⁾ HF 1.5 - 30 MHz (marine bands)
Max. RF load	MF 500 Watts ²⁾ HF 2000 Watts
Impedance MF *	Resistance: 0.5 ... 4 Ohm Capacitance: 200 ... 500 pF
Impedance HF *	refer to picture 3
Polarization	vertical
Characteristic	omnidirectional
Construction	self-supporting mast antenna
RF injection method	external lead-in
Material mast	glassfibre reinforced polyester
antenna base	G-Al Si10Mg (seawater resistant aluminium)
Colour	grey
Height	approx. 11.5 m
Weight	approx. 50 kg
Center of gravity of surface	4.0 m
Max. bending moment	600 daNm at 150 km/h wind + 8 m/s ² acceleration
Temperature Environment	-40° ... +80° C resistant to sea environment as met on board of seagoing vessels
Icing	isolation and foot impedance very little or non at all effected due to preventing protective measures
Mould growth and microbes Termites	not effected not effected

* incl. 5 m external feeder

1) The frequency range can be expanded from 250 to 1000 kHz by using different loading coils according to our data sheet.

2) Reduced power for frequencies below 400 kHz.

Empfangs-Mastantennen / MF/HF Transmitting Antennas

STA 150 C/MF/HF/...

This antenna is a self-supporting mast antenna for the mobile maritime radio service. It serves as main - and/or reserve transmitting antenna in the frequency bands

405 - 535 kHz and 1.5 - 30 MHz.

The excellent efficiency in the MF range is due to a well positioned loading coil in the upper part of the antenna. The loading coil and the top load capacitance match ideally and provide a favourable voltage distribution on the antenna.

The top load assembly also serves as a resonant shortening circuit in the shortwave bands. Due to this shortening effect the antenna provides well defined low angle propagation throughout the HF bands qualifying it especially for long distance traffic.

The STA 150 C is available base-injected (internal feed) as well as external feeding. Base injected antennas permit direct installation above the radio room and the transmitter thus saving additional installation equipment (e.g. lead-through insulators, trunks, etc.) and providing a short way between transmitter and antenna input.

Both antenna versions, the external and the base injected, can be installed on supports with appropriate tilting devices. Special attention has been paid to the watertight design of the base injected equipment.

The internally fed arrangement offers not only the cheaper installation, but is also much more insensitive to the environment. The tilting devices may be furnished with hydraulic cylinders for both, manual or remote automatic operation.

Modified versions of this antenna are available for other frequency ranges, e.g. nondirectional beacons for shore and seaborne installations and aviation NDB's.

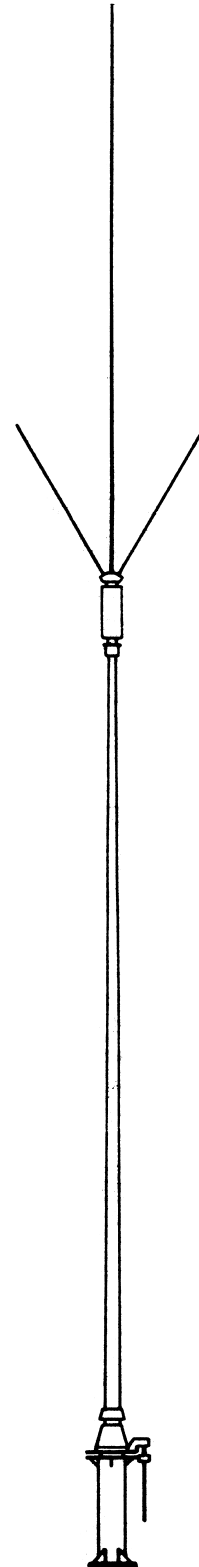
DESCRIPTION

The antenna is a self-supporting mast antenna. It is made of glass-fibre reinforced plastic and consists of three different sections:

**Lower Mast Section
Loading Coil Assembly
Top Rod Assembly**

The complete top load assembly consisting of the loading coil and the five top rods is identical to the load assembly of the reserve transmit antenna STA 115 C (as per DUK 202). Refer to the part lists of both antennas, please.

Picture 2



This measure holds down the spare part stockage costs in case both, the STA 150 C and the STA 115 C, are being installed on board of the ship.

All parts are made interchangeable to its corresponding counterpart on the other antenna, and no further adjustment of the antenna tuning unit is necessary after such replacements.

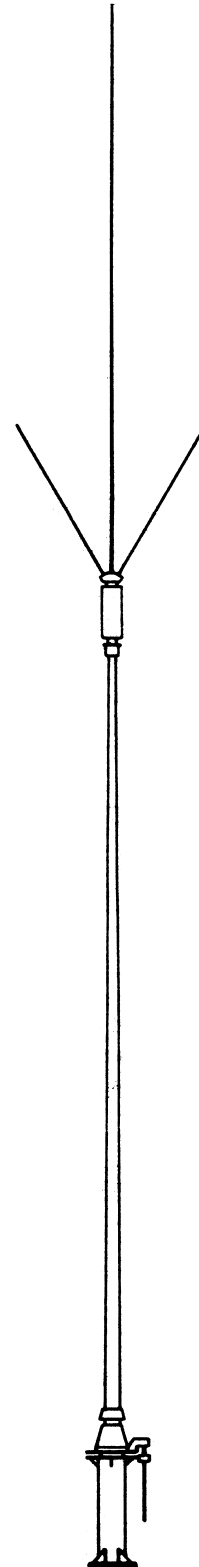
Lower Sections US 80 PM and US 80 PM/E (E for external)

The lower section is a conical tubular mast with radiators embedded in the mast's wall. The RF feed insulators, external and base-injected ones, are carefully designed in order to avoid instable antenna impedances. The base-injection runs concentrically into the mast tube. It is held by small supports of good dielectric constant.

On top of the lower section mast tube a joint armature carries the top load assembly. This joint fitting is connected to the embedded radiators and serves also as the electrical connection to the load assembly.

The lower section mast tube stands on a cast aluminium base. This antenna base is fixed to tilting flanges or other stands by means of eight stainless steel bolts.

Picture 2



Type Designation Antennas and Supports

STA 150 C/MF/HF	base injected (internal) antenna
STA 150 C/MF/HF/KS	idem, with tilting flange K 8 (*), crank and ratchet, knife contact assembly for RF-feeder
TR 4	supporting pipe (*) 0.40 m high, complete with internal RF-feeder, base injected
TR 12	idem, but 1.20 high
STA 150 C/MF/HF/E	antenna with external RF-feeder
STA 150 C/MF/HF/E/KS	idem, with tilting flange K 8/E (*), crank and ratchet
TR 4/E	supporting pipe (*) 0.40 m high for external antennas
TR 12/E	idem, but 1.20 m high

(*) painted with rust preventing primer

Empfangs-Mastantennen / MF/HF Transmitting Antennas

STA 150 C/MF/HF/...

Specification

Frequency range	MF 405 - 520 kHz HF 1.5 - 30 MHz (marine bands)
Max. RF load	MF 500 Watts HF 2000 Watts
Impedance MF	Resistance: 0.5 ... 4 Ohm Capacitance: 200 ... 500 pF
Polarization	vertical
Horizontal pattern (MF + HF)	omnidirectional
Vertical pattern (HF)	refer to pictures 4 + 5
Construction	self-supporting mast antenna
RF injection methods	1. internal base injection 2. external lead-in
Material mast antenna base	glassfibre reinforced polyester G-ALMg3Si (seawater resistant aluminium)
Colour	grey
Height	14.5 m
Weight	82 kg
Center of gravity of surface	4.8 m
Max. bending moment	1200 daNm at 150 km/h wind + 8 m/s ² acceleration
Temperature	-40° ... +80° C
Environment	resistant to sea environment as met on board of seagoing vessels
Icing	isolation and foot impedance very little or none at all effected due to preventing protective measures
Mould growth and microbes Termites	not effected not effected