

## TORNADO series

### Features:

- # Base station antenna, Mono-band
- # Low-gain, Omnidirectional
- # TORNADO 36-42, 42-50 and 50-60 tunable by whip lenght adjust
- # Made of aluminium alloy 6063 T-832

### Specifications

#### Electrical Data

Type .....	5/8 Ground Plane
TORNADO 43 .....	design frequency 43 MHz
TORNADO 36-42 .....	tunable from 36 to 42 MHz
TORNADO 42-50 .....	tunable from 42 to 50 MHz
TORNADO 50-60 .....	tunable from 50 to 60 MHz
Impedance .....	50 Unbalanced
Radiation (H-plane) .....	360° Omnidirectional
Polarization .....	Vertical
Gain .....	1.2 dBd - 3.35 dBi
Bandwidth at V.S.W.R. 2:1: TORNADO 43 .....	2.7 MHz
TORNADO 36-42 .....	2.3 MHz at 36 MHz
TORNADO 42-50 .....	2.7 MHz at 42 MHz
TORNADO 50-60 .....	3.1 MHz at 50 MHz
V.S.W.R. at res. freq. ....	1.2 : 1
Max Power .....	1000 Watts
Feed System / Position .....	Transformer / Base
Connection .....	UHF-Female

#### Mechanical Data

Materials .....	Aluminium, Nylon, Brass
Wind Load / Resistance .....	146 N at 150 Km/h / 150 Km/h
Wind surface .....	0.13 m <sup>2</sup>
Height (approx.)	
TORNADO 43 / 36-42 .....	4580 / 5650 mm
TORNADO 42-50 / 50-60 .....	5010 / 4100 mm
Weigth (approx.) .....	2100 gr
Radial Length (approx.) .....	1170 mm
Mounting Mast .....	35 - 42 mm

- code 2108701.00 TORNADO 43
- code 2108601.00 TORNADO 36-42
- code 2107801.00 TORNADO 42-50
- code 2108901.00 TORNADO 50-60

## BOOMERANG 43

### Features:

- # Balcon or temporary installation antenna
- # Mono-band, Unity-gain, Omnidirectional

### Specifications

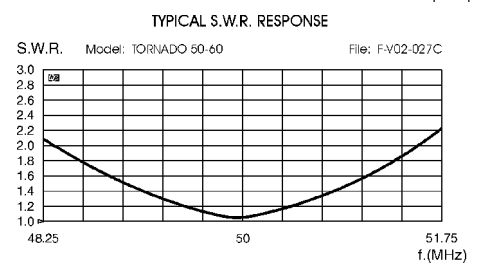
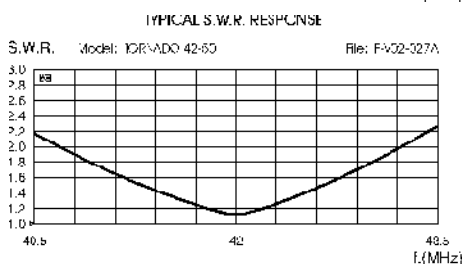
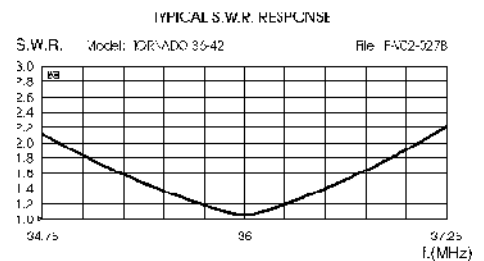
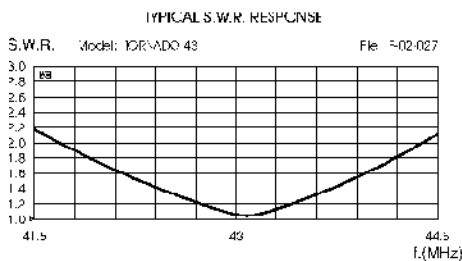
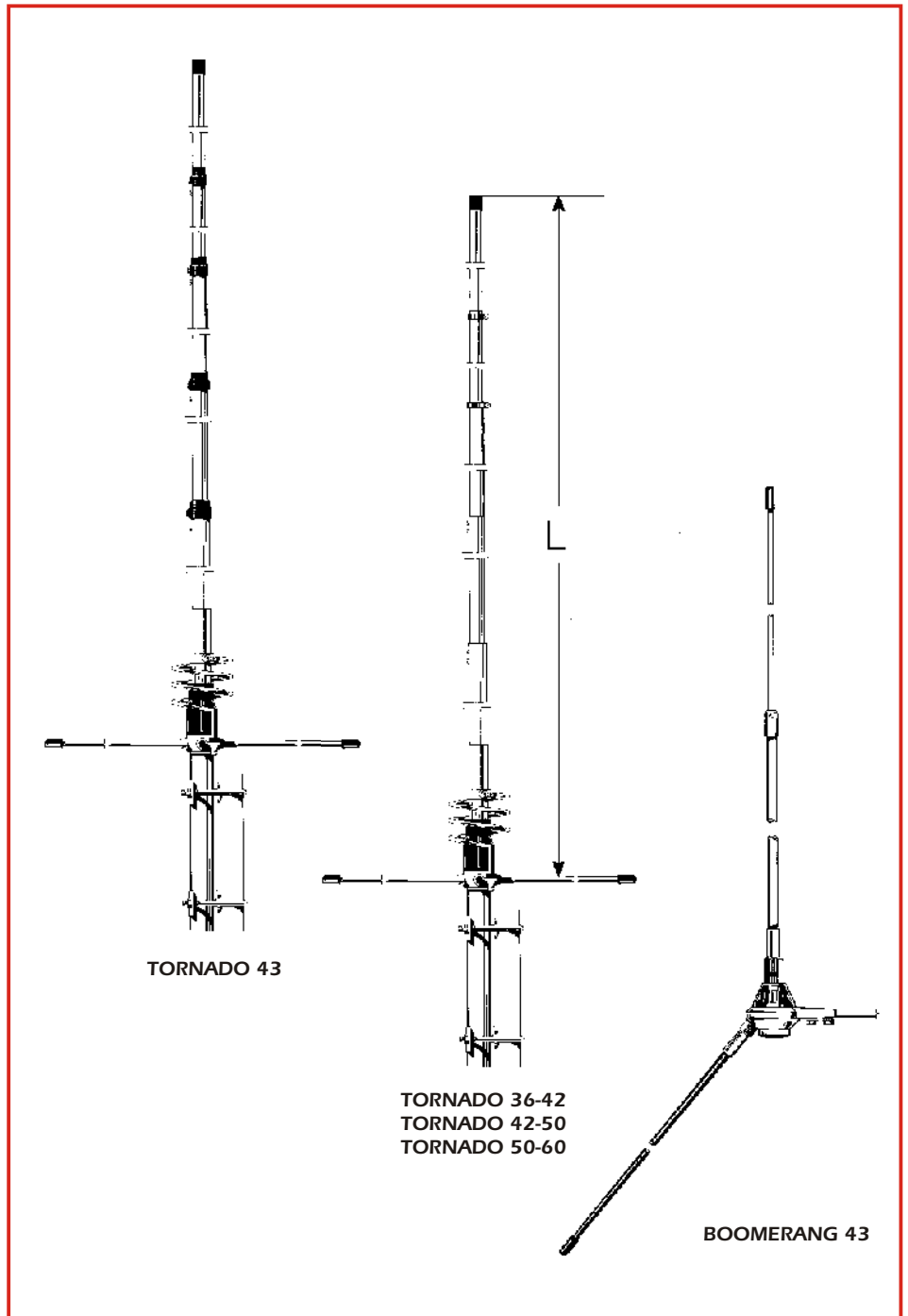
#### Electrical Data

Type .....	1/4 Ground Plane Boomerang
Design Frequency .....	43 MHz
Impedance .....	50 Unbalanced
Radiation (H-plane) .....	360° Omnidirectional
Polarization .....	Vertical
Gain .....	0 dBd - 2.15 dBi
Bandwidth at V.S.W.R. 2:1 .....	2.4 MHz
V.S.W.R. at res. freq. ....	1.2 : 1
Max Power .....	150 Watts
Feed System / Position .....	Direct / Center
Connection .....	UHF-Female

#### Mechanical Data

Materials .....	Aluminium, Glass fibre, Steel
Wind Load / Resistance .....	22 N at 150 Km/h / 150 Km/h
Wind surface .....	0.02 m <sup>2</sup>
Height (approx.) .....	2270 mm
Weigth (approx.) .....	460 gr
Radial Length (approx.) .....	685 mm

- code 2107101.00 BOOMERANG 43



**GPA 40-70**

**Features:**

- # Base station antenna, Mono-band
- # Unity-gain, Omnidirectional
- # Tunable by whip length adjust
- # Made of aluminium alloy 6063 T-832
- # Side mast mounting allowed by optional bracket FT-2 code 2510004.00 (pag. 59)

**Specifications**

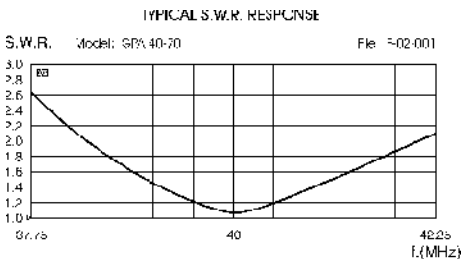
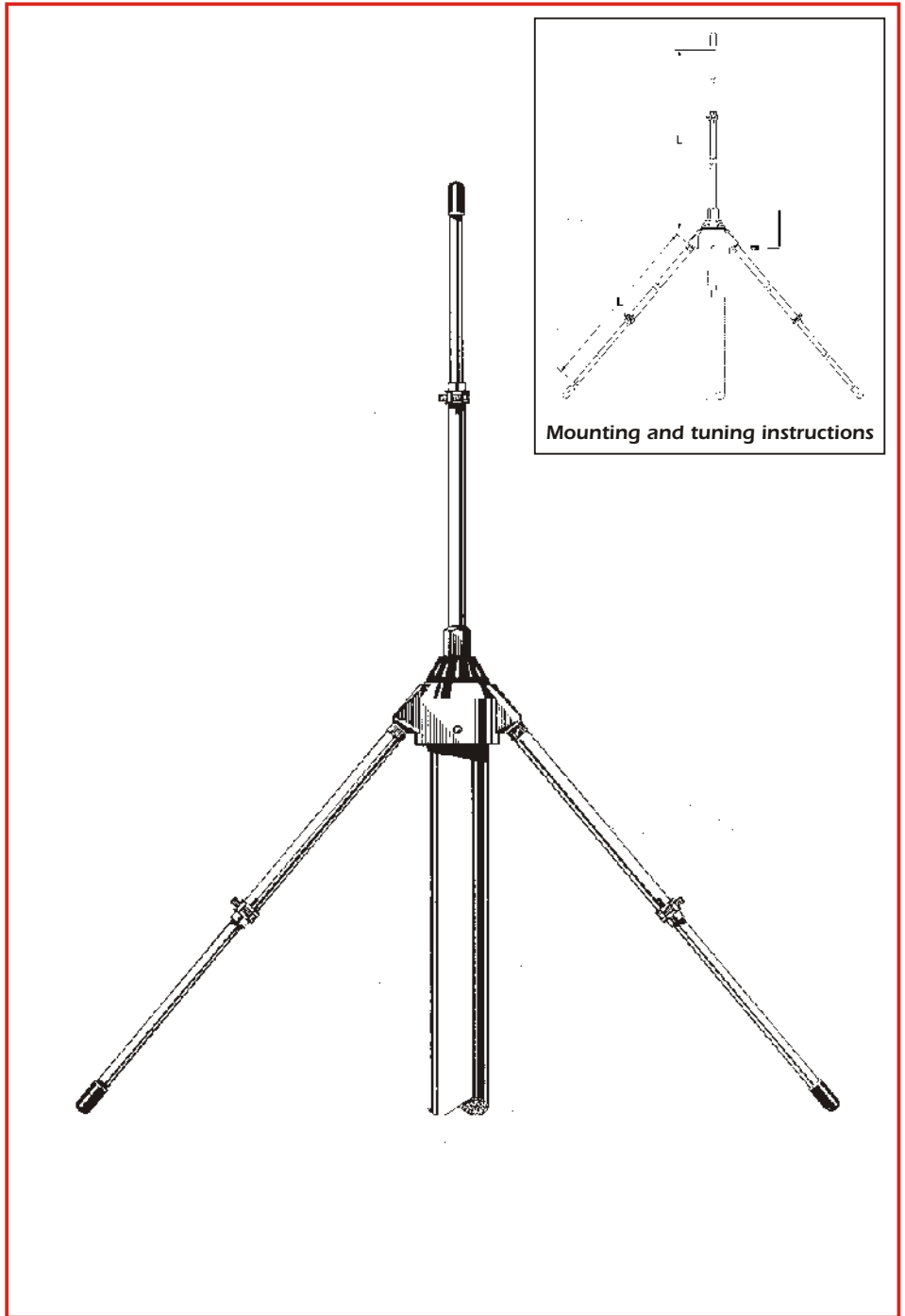
**Electrical Data**

Type ..... 1/4 Ground Plane  
 Frequency Range ..... tunable from 40 to 70 MHz  
 Impedance ..... 50 Unbalanced  
 Radiation (H-plane) ..... 360° Omnidirectional  
 Radiation (E-plane) ..... Beamwidth at -3 dB = 86°  
 Radiation angle deg. .... 0°  
 Polarization ..... Vertical  
 Gain ..... 0 dBd - 2.15 dBi  
 Bandwidth at V.S.W.R. 2:1 ..... 3.7 MHz at 40 MHz  
 V.S.W.R. at res. freq. .... 1.2 : 1 at 40 MHz  
 Max Power ..... 1000 Watts  
 Feed System / Position ..... Direct / Center  
 Connection ..... UHF-Female

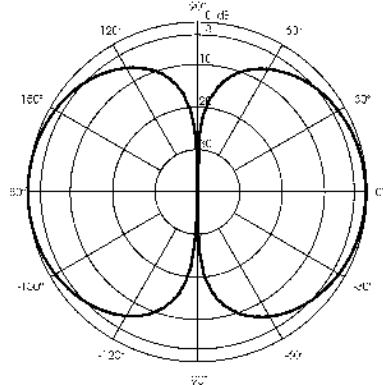
**Mechanical Data**

Materials ..... Aluminium, Chromed Brass, Nylon  
 Wind Load / Resistance ..... 85 N at 150 Km/h / 150 Km/h  
 Wind Surface ..... 0.07 m<sup>2</sup>  
 Height (approx.) ..... 3200 mm  
 Weight (approx.) ..... 935 gr  
 Radial Length (approx.) ..... 1800 mm  
 Mounting Mast ..... 35 - 40 mm

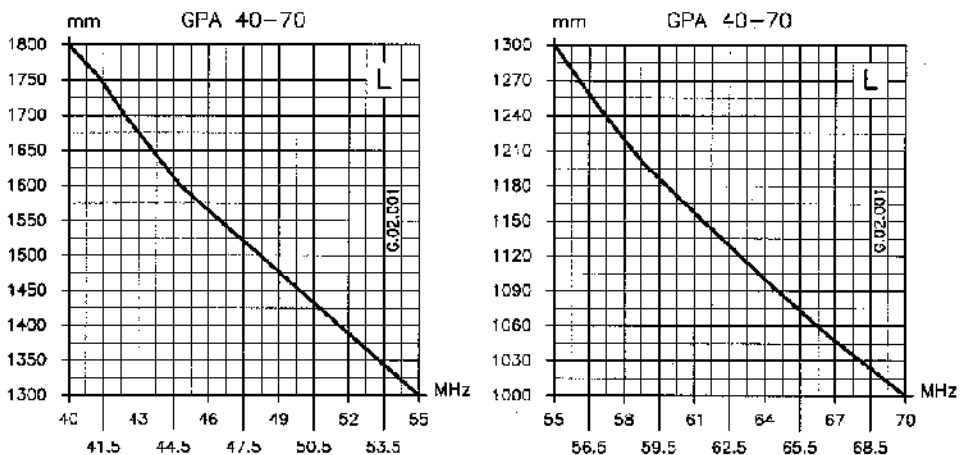
**code 2101401.00**



TYPICAL RADIATION PATTERN in E-plane at 40 MHz  
 File: 5-02-001 Source: linear



TYPICAL TUNING DIAGRAMS\*



\* Diagrams are recommended to be used as a guide and fine tuning by means of SWR-meter

## GPA 66-108

**Features:**

- # Base station antenna, Mono-band
- # Unity-gain, Omnidirectional
- # Tunable by whip length adjust
- # Made of aluminium alloy 6063 T-832
- # Side mast mounting allowed by optional bracket FT-2 code 2510004.00 (pag. 59)

**Specifications**

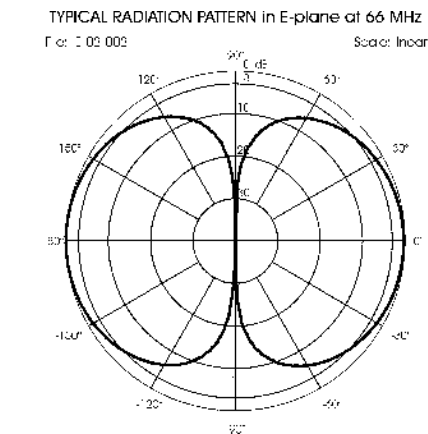
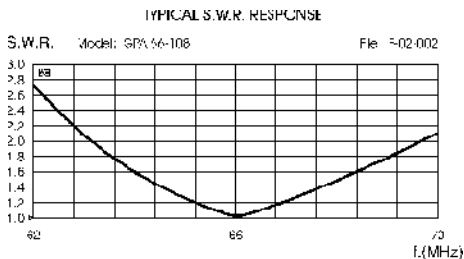
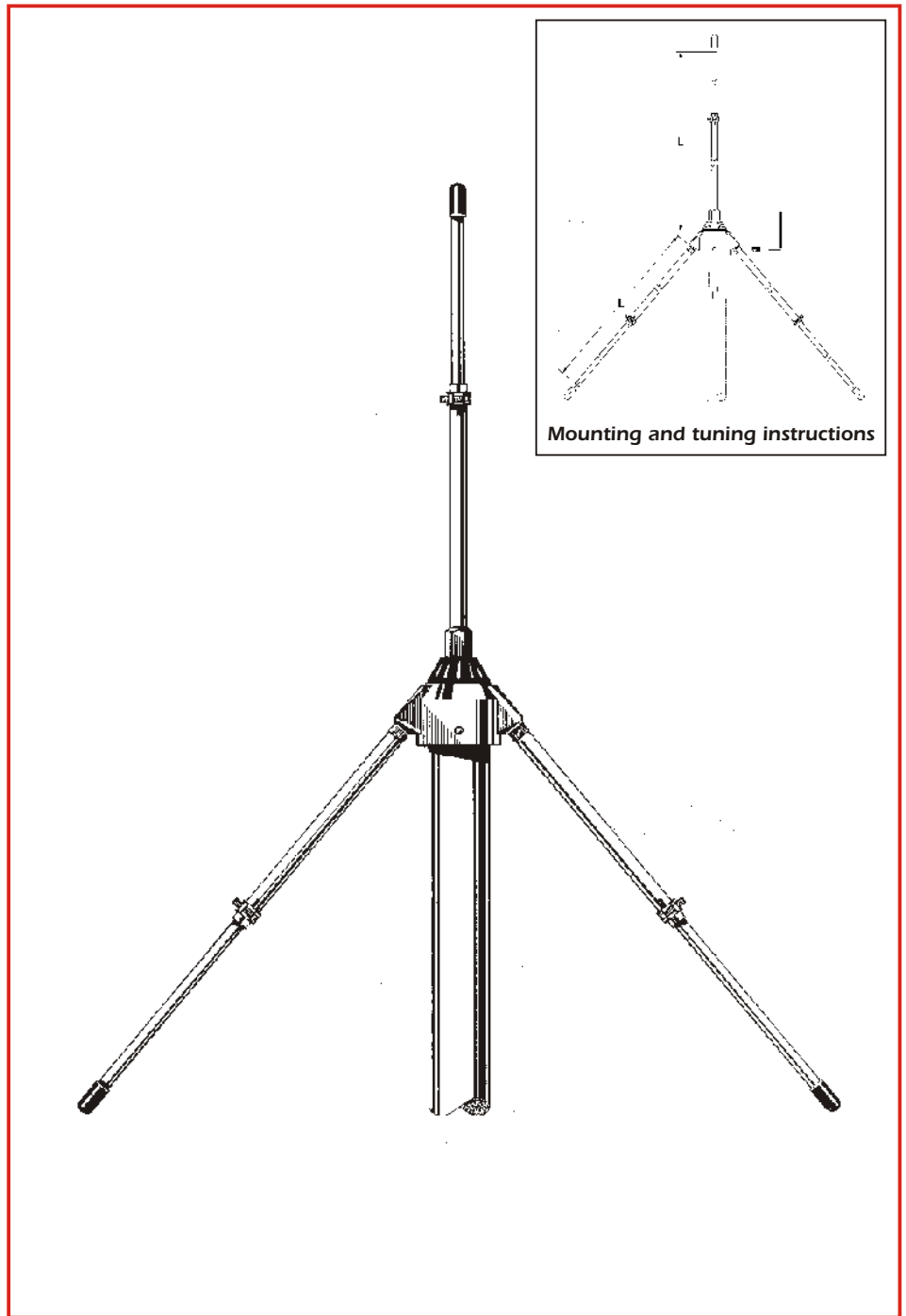
**Electrical Data**

Type ..... 1/4 Ground Plane  
 Frequency Range ..... tunable from 66 to 108 MHz  
 Impedance ..... 50 Unbalanced  
 Radiation (H-plane) ..... 360° Omnidirectional  
 Radiation (E-plane) ..... Beamwidth at -3 dB = 86°  
 Radiation angle deg. .... 0°  
 Polarization ..... Vertical  
 Gain ..... 0 dBd - 2.15 dBi  
 Bandwidth at V.S.W.R. 2:1 ..... 6.5 MHz at 66 MHz  
 V.S.W.R. at res. freq. .... 1.2 : 1 at 66 MHz  
 Max Power ..... 500 Watts  
 Feed System / Position ..... Direct / Center  
 Connection ..... UHF-Female

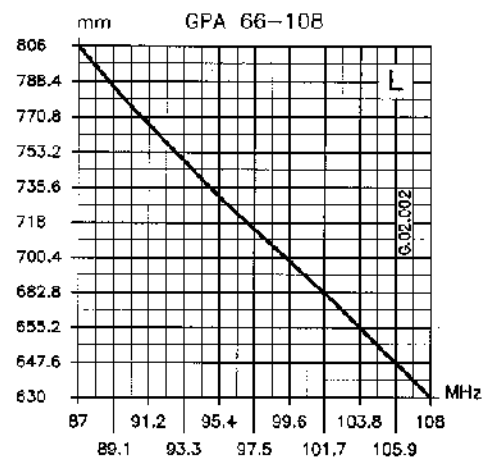
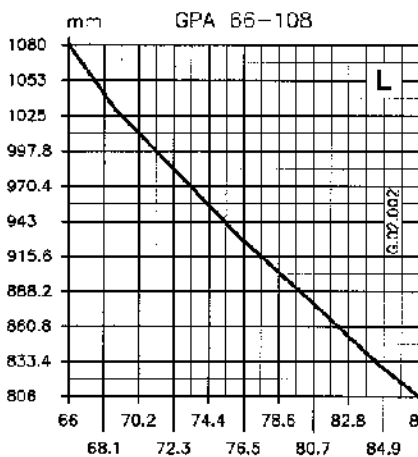
**Mechanical Data**

Materials ..... Aluminium, Chromed Brass, Nylon  
 Wind Load / Resistance ..... 54 N at 150 Km/h / 150 Km/h  
 Wind Surface ..... 0.05 m<sup>2</sup>  
 Height (approx.) ..... 1930 mm  
 Weight (approx.) ..... 700 gr  
 Radial Length (approx.) ..... 1080 mm  
 Mounting Mast ..... 35 - 40 mm

**code 2101501.00**



TYPICAL TUNING DIAGRAMS\*



\* Diagrams are recommended to be used as a guide and fine tuning by means of SWR-meter

## GP 66-78 LB GP 76-88 LB

### UP-GRADED Features:

- # More protection against the worst weather conditions
- # New radials locking system "screw-on"
- # Stainless steel hardware
- # New feeding system design
- # New connectors available: standard "UHF" female with gold plated central pin or "N" female with gold plated central pin and teflon insulator
- # Mounting on mast up to Ø 40 mm (old version max Ø 38 mm)

### Features:

- # Base station antenna, Wide-band
- # Unity-gain, Omnidirectional
- # Protection from static discharges DC-Ground
- # Made of anodized aluminium alloy
- # Side mast mounting allowed by optional bracket FT-2 code 2510004.00 (pag. 59)

### Specifications

#### Electrical Data

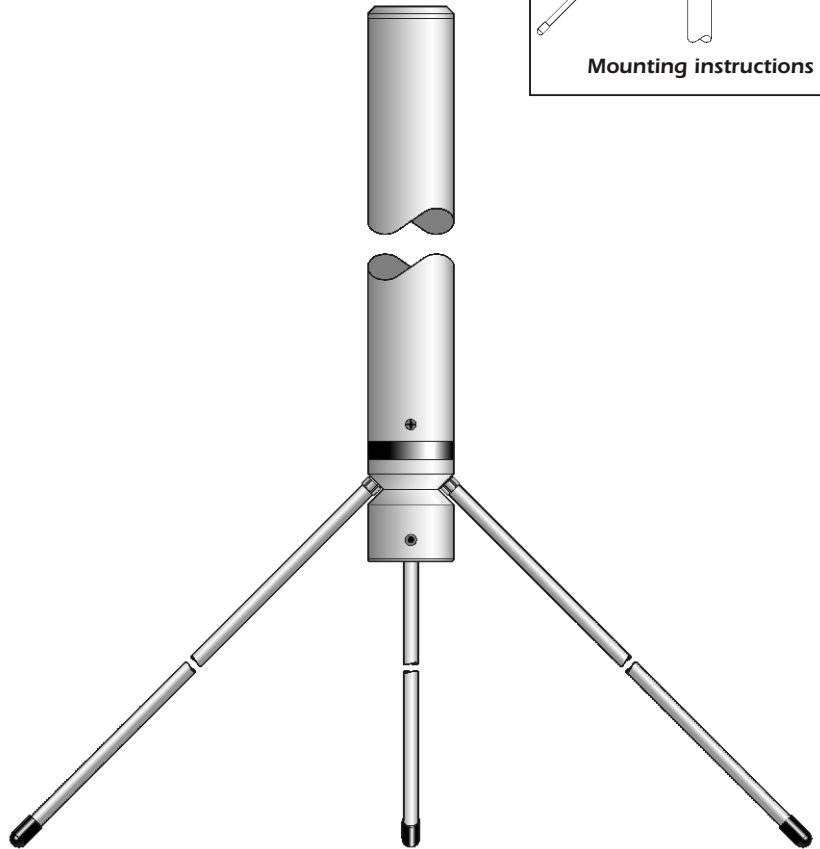
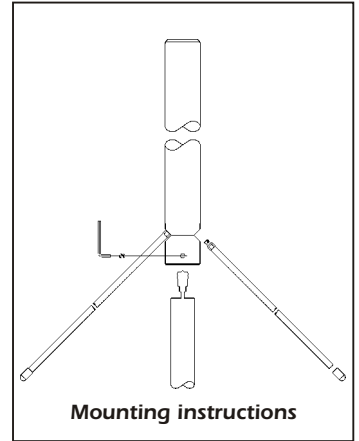
Type .....	1/4	Folded Ground Plane
Frequency Range at V.S.W.R. 2:1		
GP 66-78 LB .....	66-78	MHz
GP 76-88 LB .....	76-88	MHz
Impedance .....	50	Unbalanced
Radiation (H-plane) .....	360°	Omnidirectional
Radiation (E-plane) .....	Beamwidth at -3 dB = 78°	
Radiation angle deg. ....	0°	
Polarization .....	Vertical	
Gain .....	0 dBd - 2.15 dBi	
Bandwidth at V.S.W.R. 2:1		
GP 66-78 LB .....	12	MHz
GP 76-88 LB .....	14	MHz
V.S.W.R. at res. freq. ....	1.2 : 1	
Max Power .....	1000	Watts
Feed System / Position .....	Direct DC-Ground / Center	Connection
GP xxx LB/ UHF .....	UHF-Female	
GP xxx LB/N .....	N-Female	

#### Mechanical Data

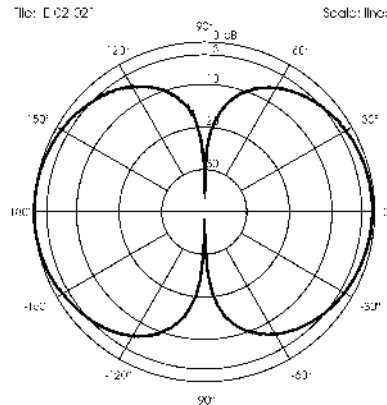
Materials .....	Anodized Aluminium, Nylon, Stainless Steel	
Wind Load / Resistance		
GP 66-78 LB .....	98 N at 150 Km/h / 130 Km/h	
GP 76-88 LB .....	85 N at 150 Km/h / 130 Km/h	
Wind Surface		
GP 66-78 LB .....	0.09	m <sup>2</sup>
GP 76-88 LB .....	0.07	m <sup>2</sup>
Height (approx.)		
GP 66-78 LB .....	1640	mm
GP 76-88 LB .....	1400	mm
Weight (approx.)		
GP 66-78 LB .....	1930	gr
GP 76-88 LB .....	1710	gr
Radial Length (approx.)		
GP 66-78 LB .....	1160	mm
GP 76-88 LB .....	1030	mm
Mounting Mast .....	36-40	mm

code 2105601.00	GP 66-78 LB/UHF
code 2105701.00	GP 76-88 LB/UHF
code 2105601.00/N	GP 66-78 LB/N
code 2105701.00/N	GP 76-88 LB/N

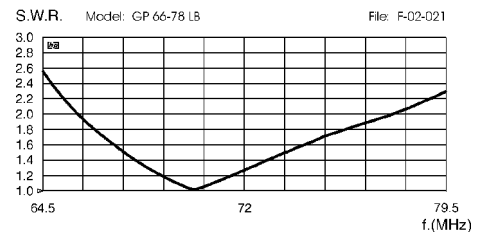
**NEW  
UP-GRADED  
MODEL**



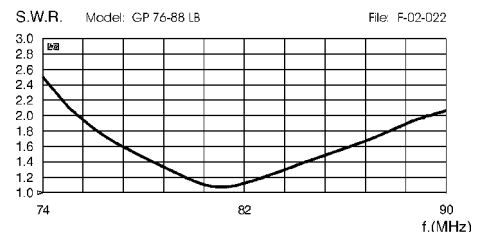
TYPICAL RADIATION PATTERN in E-plane at mid-band



TYPICAL S.W.R. RESPONSE



TYPICAL S.W.R. RESPONSE



## CX 4 m

### Features:

- # Base station antenna, Low-gain
- # Omnidirectional, Mono-band
- # Factory tunable according to specific customer's frequency
- # Protection from static discharges DC-Ground
- # Made of aluminium alloy 6063 T-832

### Specifications

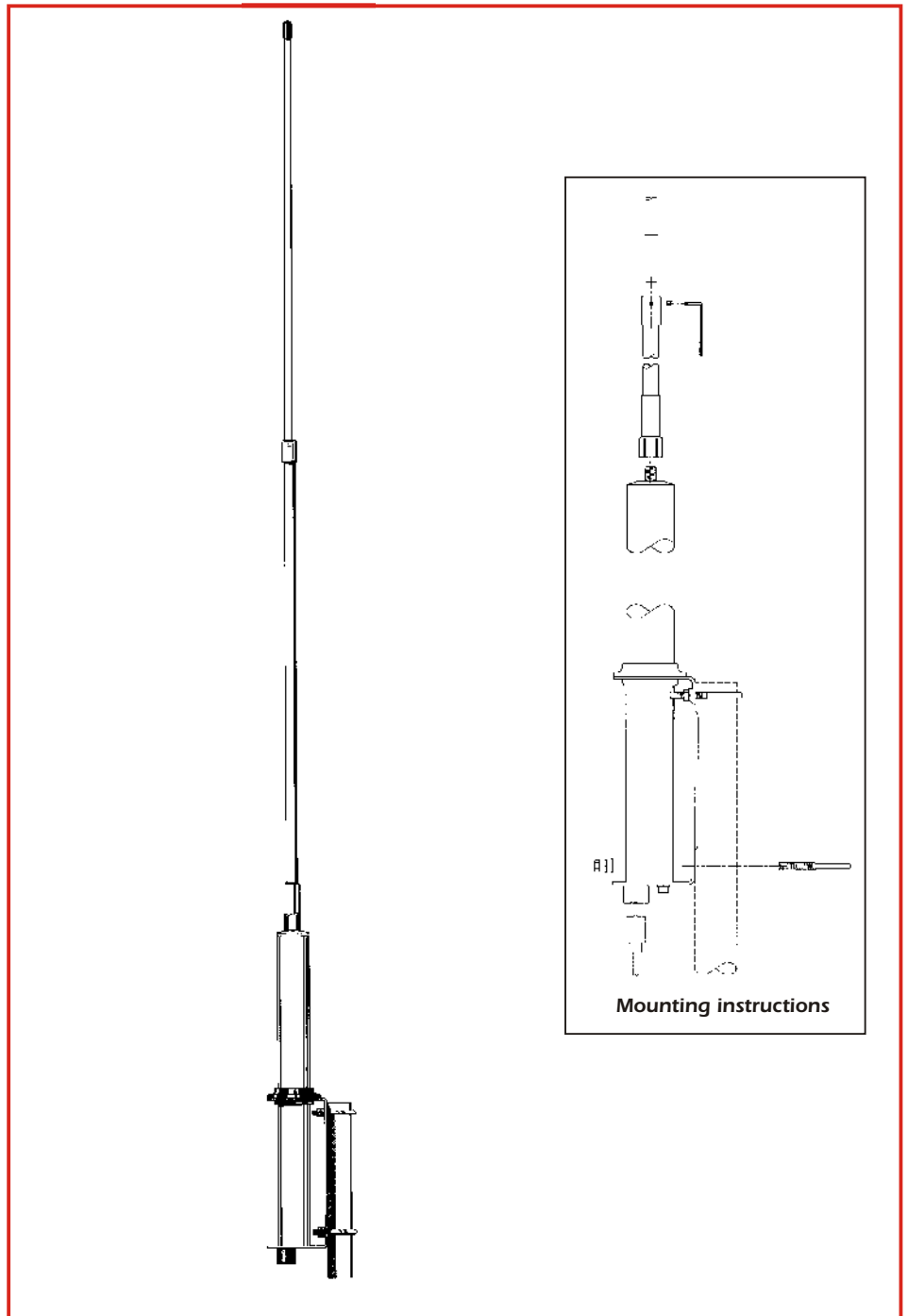
#### Electrical Data

Type .....	3/4 Coaxial J-Pole
Frequency Range at V.S.W.R. 2:1	
CX 4-71 .....	70-74 MHz
CX 4-75 .....	73-77 MHz
CX 4-79 .....	77-81 MHz
CX 4-83 .....	81-85 MHz
Impedance .....	50 Unbalanced
Radiation (H-plane) .....	360° Omnidirectional
Radiation (E-plane) .....	Beamwidth at -3 dB = 60°
Radiation angle deg. ....	3°
Polarization .....	Vertical
Gain .....	2 dBd - 4.15 dBi
Bandwidth at V.S.W.R. 2:1 .....	4 MHz
V.S.W.R. at res. freq. ....	1.2: 1
Max Power .....	500 Watts
Feed System / Position .....	Gamma Match / Base Connection
Connection .....	UHF-Female

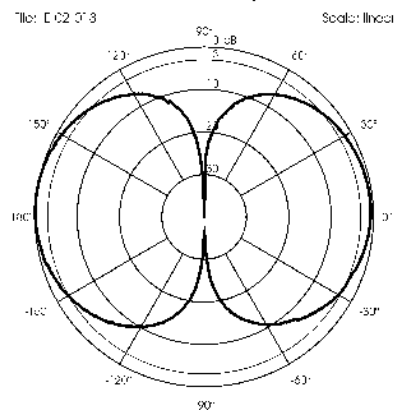
#### Mechanical Data

Materials .....	Aluminium, Nylon, Stainless Steel, Brass
Wind Load / Resistance .....	97 N at 150 Km/h / 150 Km/h
Wind Surface .....	0.08 m <sup>2</sup>
Height (approx.)	
CX 4-71 .....	2975 mm
CX 4-75 .....	2890 mm
CX 4-79 .....	2725 mm
CX 4-83 .....	2605 mm
Weight (approx.)	
CX 4-71 .....	1600 gr
CX 4-75 .....	1500 gr
CX 4-79 .....	1500 gr
CX 4-83 .....	1400 gr
Mounting Mast .....	35-42 mm

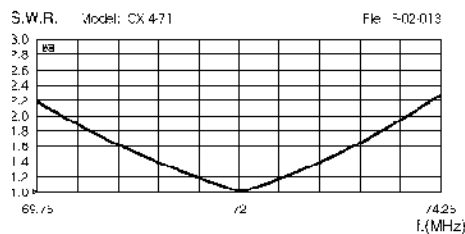
- code 2104301.00 CX 4-71**
- code 2104401.00 CX 4-75**
- code 2104501.00 CX 4-79**
- code 2104601.00 CX 4-83**



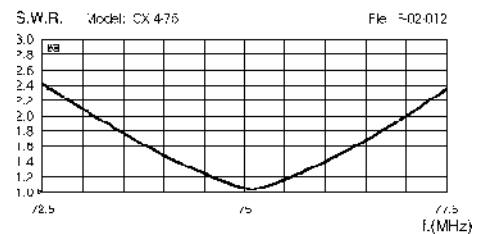
TYPICAL RADIATION PATTERN in E-plane at mid-band



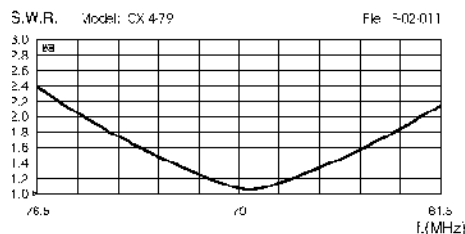
TYPICAL S.W.R. RESPONSE



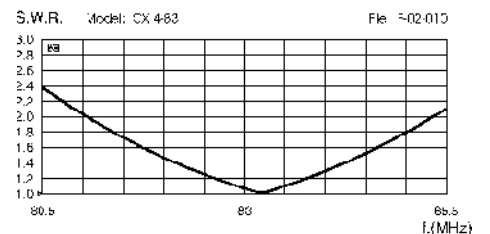
TYPICAL S.W.R. RESPONSE



TYPICAL S.W.R. RESPONSE



TYPICAL S.W.R. RESPONSE



**GP 87-108 LB**  
**GP 108-136 LB**

**UP-GRADED Features:**

- # More protection against the worst weather conditions
- # New radials locking system "screw-on"
- # Stainless steel hardware
- # New feeding system design
- # New connectors available: standard "UHF" female with gold plated central pin or "N" female with gold plated central pin and teflon insulator
- # Mounting on mast up to Ø 40 mm (old version max Ø 38 mm)

**Features:**

- # Base station antenna, Wide-band
- # Unity-gain, Omnidirectional
- # Protection from static discharges DC-Ground
- # Made of anodized aluminium alloy
- # Side mast mounting allowed by optional bracket FT-2 code 251 0004.00 (pag. 59)

**Specifications**

**Electrical Data**

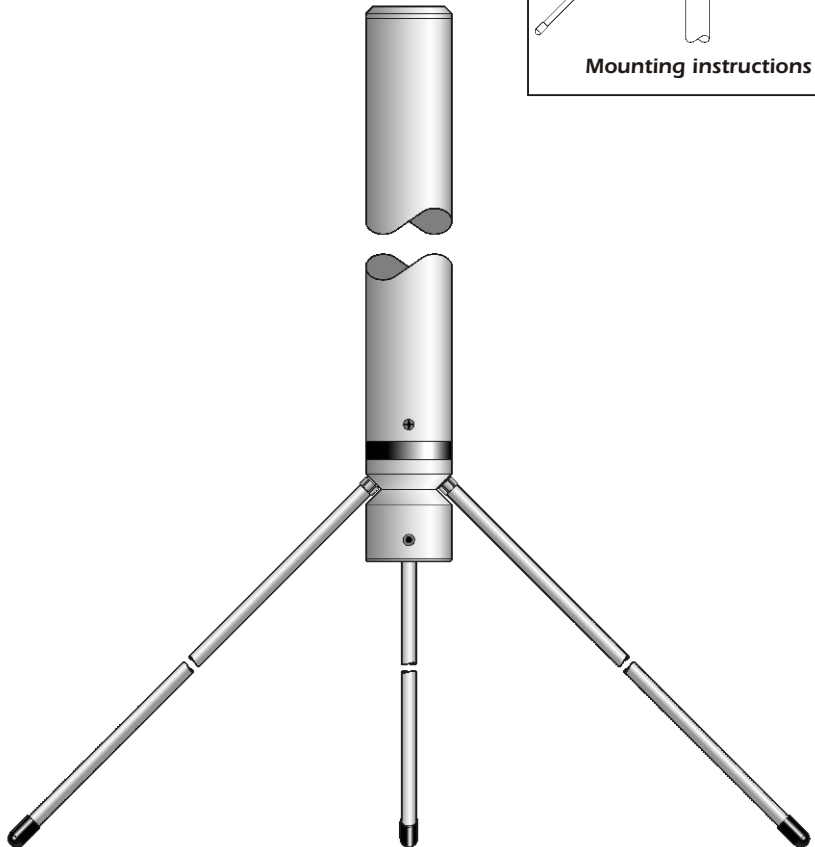
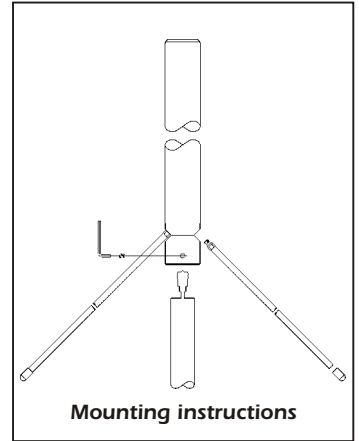
Type .....	1/4	Folded Ground Plane
Frequency Range		
GP 87-108 LB .....	87-108 MHz (V.S.W.R. 2.5:1)	
GP 108-136 LB .....	RX 108-136 MHz;	
.....	TX 118-136 MHz (V.S.W.R. 2:1)	
Impedance .....	50	Unbalanced
Radiation (H-plane) .....	360°	Omnidirectional
Radiation (E-plane) .....	Beamwidth at -3 dB = 78°	
Radiation angle deg. ....	0°	
Polarization .....	Vertical	
Gain .....	0 dBd - 2.15 dBi	
Bandwidth at V.S.W.R. 2:1		
GP 108-136 LB .....	22 MHz	
V.S.W.R. at res. freq. ....	1.2 : 1	
Max Power .....	1000 Watts	
Feed System / Position .....	Direct DC-Ground / Center	
Connection		
GP xxx LB/UHF .....	UHF-Female	
GP xxx LB/N .....	N-Female	

**Mechanical Data**

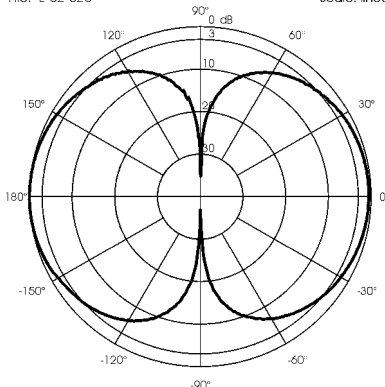
Materials .....	Anodized Aluminium, Nylon, Stainless Steel
Wind Load / Resistance	
GP 87-108 LB .....	67 N at 150 Km/h / 160 Km/h
GP 108-136 LB .....	56 N at 150 Km/h / 160 Km/h
Wind Surface .....	0.05 m <sup>2</sup>
Height (approx.)	
GP 87-108 LB .....	1190 mm
GP 108-136 LB .....	890 mm
Weight (approx.)	
GP 87-108 LB .....	1500 gr
GP 108-136 LB .....	1310 gr
Radial length (approx.)	
GP 87-108 LB .....	1200 mm
GP 108-136 LB .....	655 mm
Mounting Mast .....	36-40 mm

- code 2105801.00 GP 87-108 LB/UHF**
- code 2101901.00 GP 108-136 LB/UHF**
- code 2105801.00/N GP 87-108 LB/N**
- code 2101901.00/N GP 108-136 LB/N**

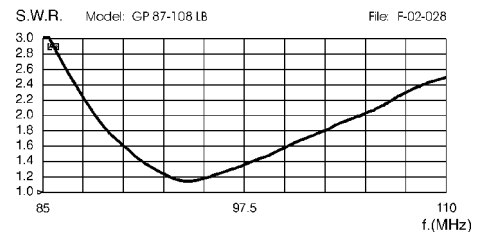
**NEW UP-GRADED MODEL**



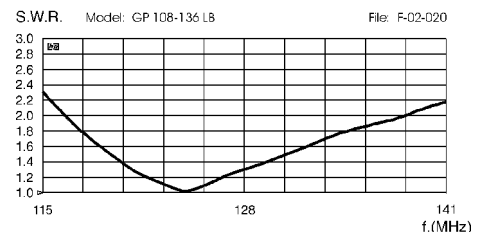
**TYPICAL RADIATION PATTERN in E-plane at 122 MHz**  
File: E-02-020 Scale: linear



**TYPICAL S.W.R. RESPONSE**



**TYPICAL S.W.R. RESPONSE**



## GP 160 LB

### UP-GRADED Features:

- # More protection against the worst weather conditions
- # New radials locking system "screw-on"
- # Stainless steel hardware
- # New feeding system design
- # New connectors available: standard "UHF" female with gold plated central pin or "N" female with gold plated central pin and teflon insulator
- # Mounting on mast up to Ø 40 mm (old version max Ø 38 mm)

### Features:

- # Base station antenna, Wide-band
- # Unity-gain, Omnidirectional
- # Protection from static discharges DC-Ground
- # Made of anodized aluminium alloy
- # Side mast mounting allowed by optional bracket FT-2 code 2510004.00 (pag. 59)

### Specifications

#### Electrical Data

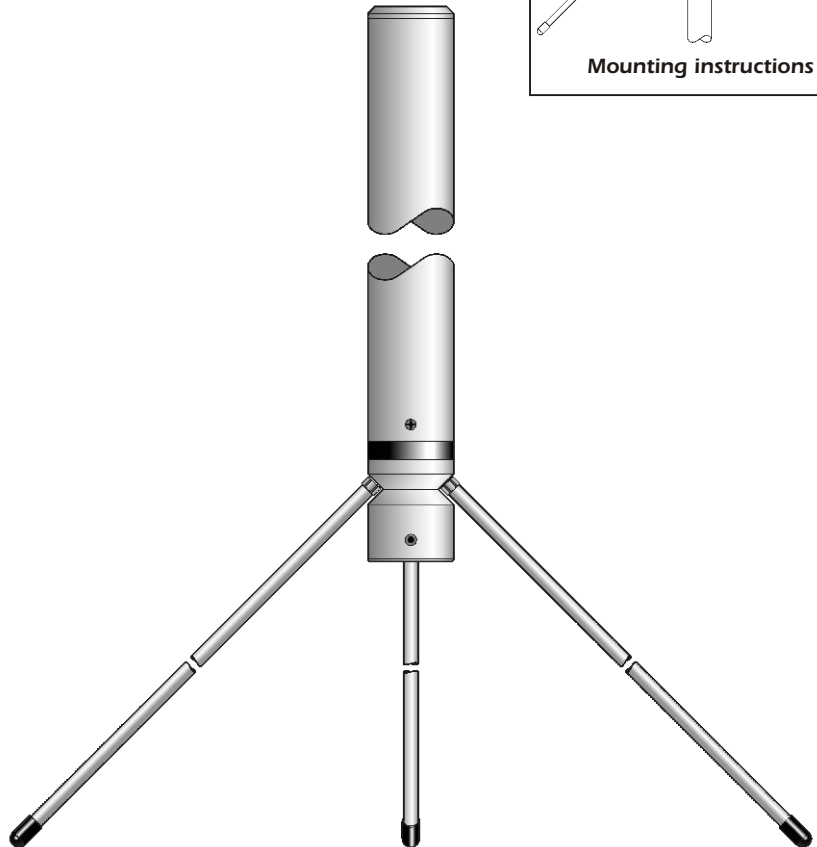
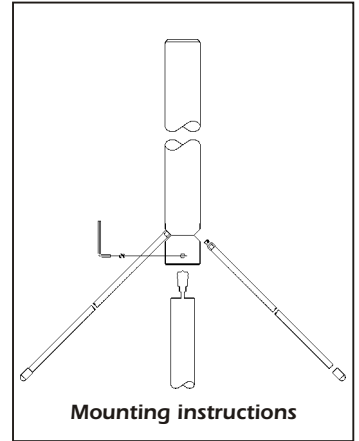
Type .....	1/4	Folded Ground Plane
Frequency Range at V.S.W.R. 2:1 .....	145-175	MHz
Impedance .....	50	Unbalanced
Radiation (H-plane) .....	360°	Omnidirectional
Radiation (E-plane) .....	Beamwidth at -3 dB = 78°	
Radiation angle deg. ....	0°	
Polarization .....	Vertical	
Gain .....	0 dBd - 2.15 dBi	
Bandwidth at V.S.W.R. 2:1 .....	30	MHz
V.S.W.R. at res. freq. ....	1.2: 1	
Max Power .....	1000	Watts
Feed System / Position .....	Direct DC-Ground / Center	Connection
GP 160 LB/UHF .....	UHF-Female	
GP 160 LB/N .....	N-Female	

#### Mechanical Data

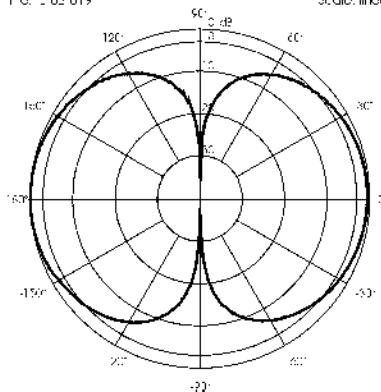
Materials .....	Anodized Aluminium, Nylon, Stainless Steel
Wind Load / Resistance .....	43 N at 150 Km/h / 160 Km/h
Wind Surface .....	0.04 m <sup>2</sup>
Height (approx.) .....	700 mm
Weight (approx.) .....	1150 gr
Radial lenght (approx.) .....	520 mm
Mounting Mast .....	36-40 mm

**code 2102001.00 GP 160 LB/UHF**  
**code 2102001.00/N GP 160 LB/N**

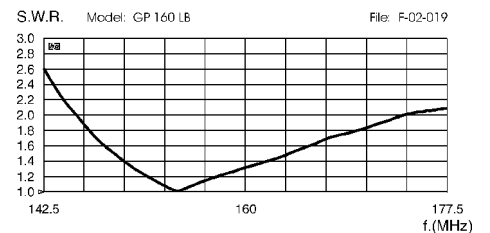
**NEW UP-GRADED MODEL**



TYPICAL RADIATION PATTERN in E-plane at 160 MHz  
 File: F-02-019 Scale: linear



TYPICAL S.W.R. RESPONSE  
 Model: GP 160 LB File: F-02-019



# GPA 108-136

**Features:**

- # Base station antenna, Mono-band
- # Unity-gain, Omnidirectional
- # Tunable by whip length adjust
- # Made of aluminium alloy 6063 T-832
- # Side mast mounting allowed by optional bracket FT-2 code 2510004.00 (pag. 59)

**Specifications**

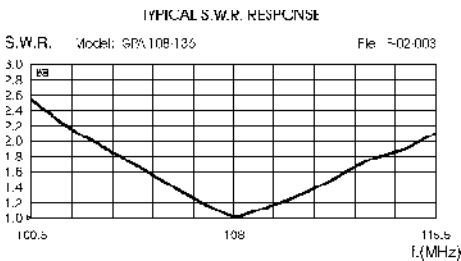
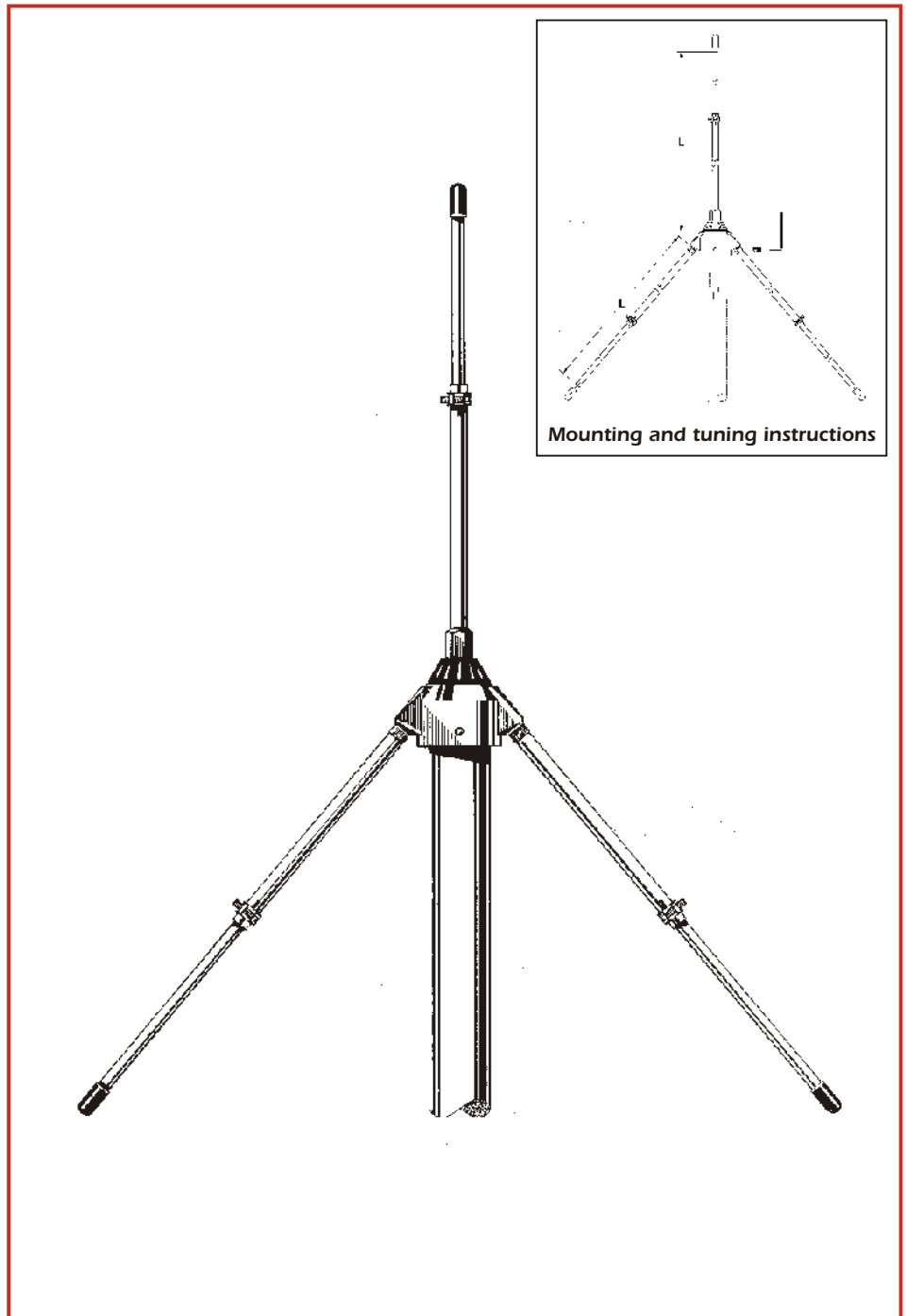
**Electrical Data**

Type ..... 1/4 Ground Plane  
 Frequency Range ..... tunable from 108 to 136 MHz  
 Impedance ..... 50 Unbalanced  
 Radiation (H-plane) ..... 360° Omnidirectional  
 Radiation (E-plane) ..... Beamwidth at -3 dB = 86°  
 Radiation angle deg. .... 0°  
 Polarization ..... Vertical  
 Gain ..... 0 dBd - 2.15 dBi  
 Bandwidth at V.S.W.R. 2:1 ..... 12.2 MHz at 108 MHz  
 V.S.W.R. at res. freq. .... 1.2:1 at 108 MHz  
 Max Power ..... 500 Watts  
 Feed System / Position ..... Direct / Center  
 Connection ..... UHF-Female

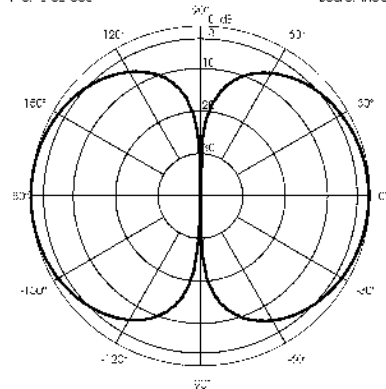
**Mechanical Data**

Materials ..... Aluminium, Chromed Brass, Nylon  
 Wind Load / Resistance ..... 35 N at 150 Km/h / 150 Km/h  
 Wind Surface ..... 0.03 m<sup>2</sup>  
 Height (approx.) ..... 1185 mm  
 Weight (approx.) ..... 565 gr  
 Radial Length (approx.) ..... 650 mm  
 Mounting Mast ..... 35 - 40 mm

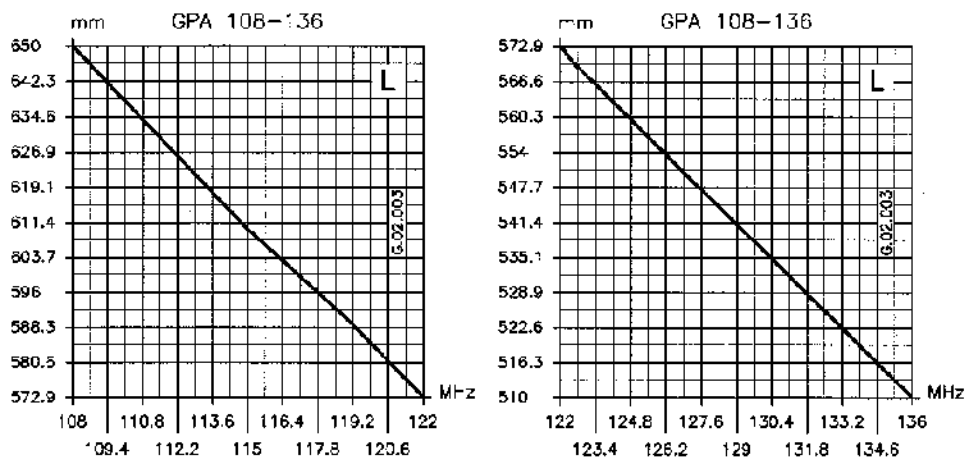
**code 2108501.00**



TYPICAL RADIATION PATTERN in E-plane at 108 MHz  
 File: 5-02-003 Source: linear



TYPICAL TUNING DIAGRAMS\*



\* Diagrams are recommended to be used as a guide and fine tuning by means of SWR-meter



## GPA 135-175

### Features:

- # Base station antenna, Mono-band
- # Unity-gain, Omnidirectional
- # Tunable by whip length adjust
- # Made of aluminium alloy 6063 T-832
- # Side mast mounting allowed by optional bracket FT-2 code 251 0004.00 (pag. 59)

### Specifications

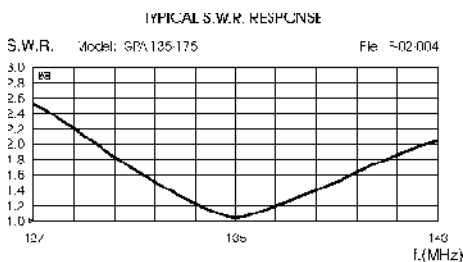
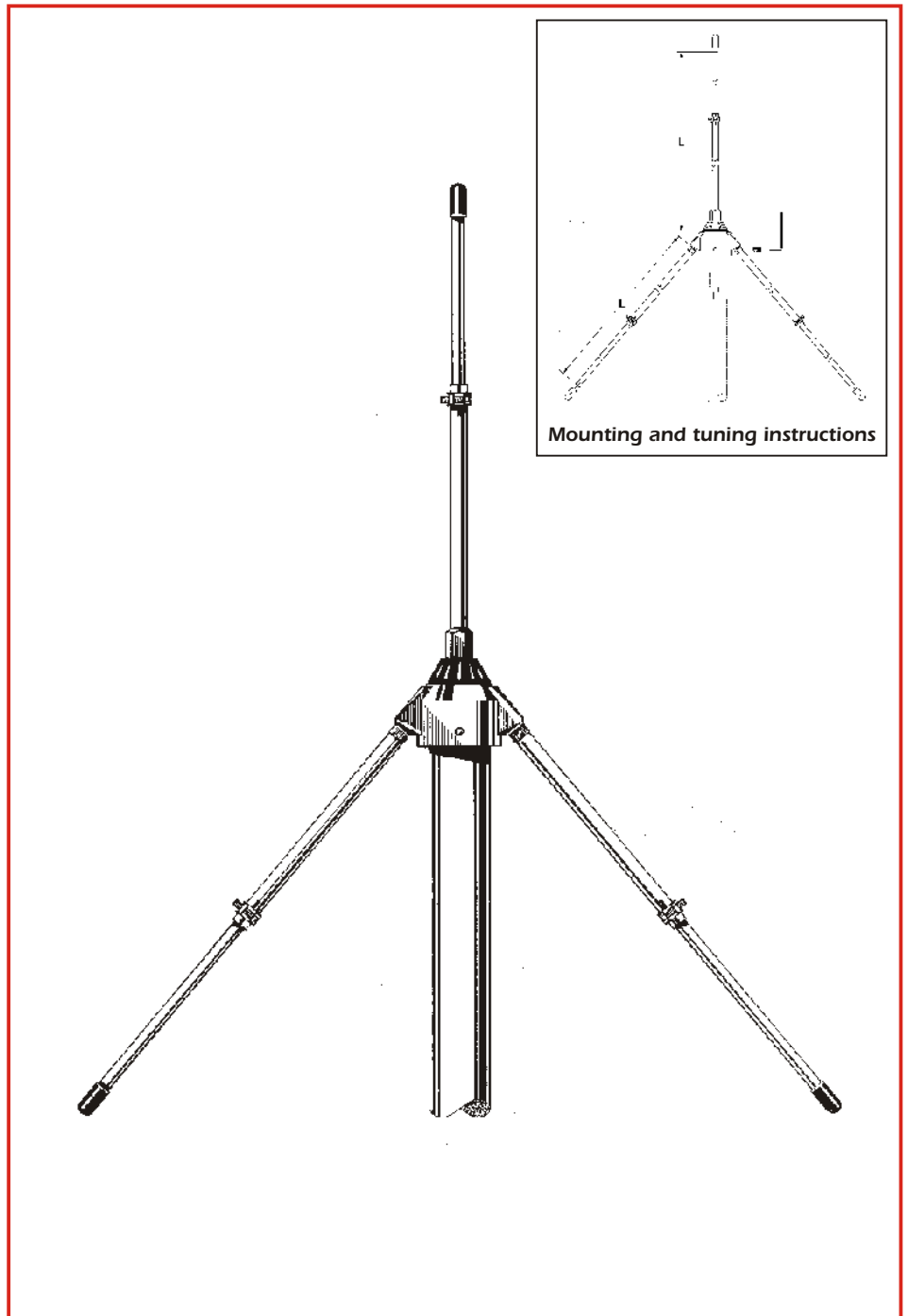
#### Electrical Data

Type ..... 1/4 Ground Plane  
 Frequency Range ..... tunable from 135 to 175 MHz  
 Impedance ..... 50 Unbalanced  
 Radiation (H-plane) ..... 360° Omnidirectional  
 Radiation (E-plane) ..... Beamwidth at -3 dB = 86°  
 Radiation angle deg. .... 0°  
 Polarization ..... Vertical  
 Gain ..... 0 dBd - 2.15 dBi  
 Bandwidth at V.S.W.R. 2:1 ..... 13 MHz at 135 MHz  
 V.S.W.R. at res. freq. .... 1.2 : 1 at 135 MHz  
 Max Power ..... 300 Watts  
 Feed System / Position ..... Direct / Center  
 Connection ..... UHF-Female

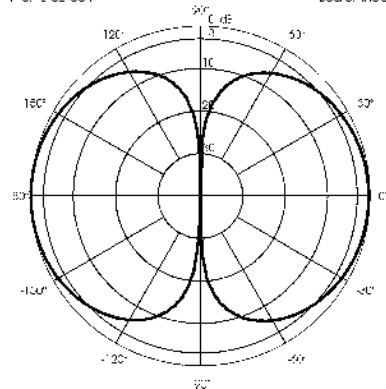
#### Mechanical Data

Materials ..... Aluminium, Chromed Brass, Nylon  
 Wind Load / Resistance ..... 29 N at 150 Km/h / 180 Km/h  
 Wind Surface ..... 0.03 m<sup>2</sup>  
 Height (approx.) ..... 960 mm  
 Weight (approx.) ..... 520 gr  
 Radial Length (approx.) ..... 520 mm  
 Mounting Mast ..... 35 - 40 mm

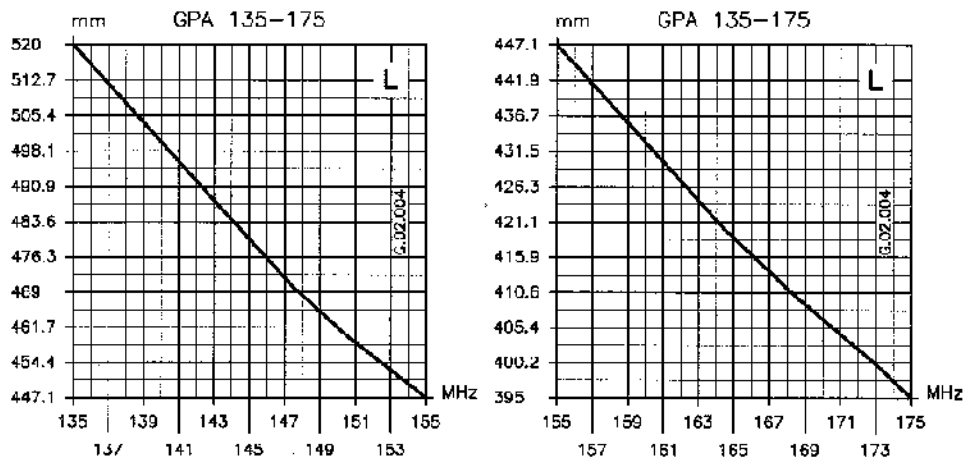
code **2101601.00**



TYPICAL RADIATION PATTERN in E-plane at 135 MHz  
 File: 5-02-004 Source: linear



TYPICAL TUNING DIAGRAMS\*



\* Diagrams are recommended to be used as a guide and fine tuning by means of SWR-meter

**GP 3-F**

**Features:**

- # Base station antenna, Omnidirectional
- # Low-gain, Mono-band
- # Suitable for land and marine service
- # Tunable by whip cutting
- # Protection from static discharges DC-Ground
- # White fiberglass conic whip and radials
- # Side mast mounting allowed by optional bracket FT-3 code 2511301.00 (pag. 59)

**Specifications**

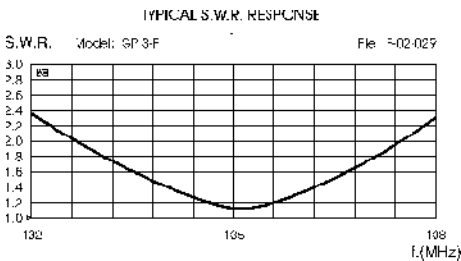
**Electrical Data**

Type ..... 5/8 Ground Plane  
 Frequency Range ..... tunable from 135 to 175 MHz  
 Impedance ..... 50 Unbalanced  
 Radiation (H-plane) ..... 360° Omnidirectional  
 Radiation (E-plane) ..... Beamwidth at -3 dB = 68°  
 Radiation angle deg. .... 25°  
 Polarization ..... Vertical  
 Gain ..... 1.5 dBd - 3.65 dBi  
 Bandwidth at V.S.W.R. 2:1 ..... 4.8 MHz at 135 MHz  
 V.S.W.R. at res. freq. .... 1.2 : 1 at 135 MHz  
 Max Power ..... 200 Watts  
 Feed System / Position ..... Transformer DC-Ground / Base  
 Connection ..... UHF-Female

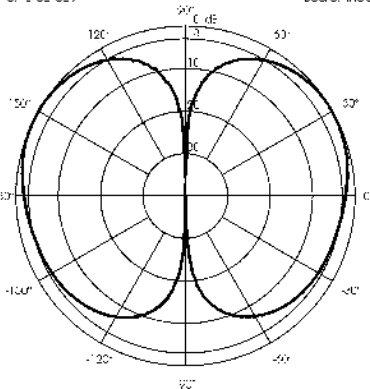
**Mechanical Data**

Materials ..... Fibreglass, Chromed Brass, Nylon  
 Wind Load / Resistance ..... 23 N at 150 Km/h / 150 Km/h  
 Wind Surface ..... 0.02 m<sup>2</sup>  
 Height (approx.) ..... 1335 mm  
 Weight (approx.) ..... 585 gr  
 Radial Length (approx.) ..... 470 mm  
 Mounting Mast ..... 25-30 mm

**code 2108020.00**



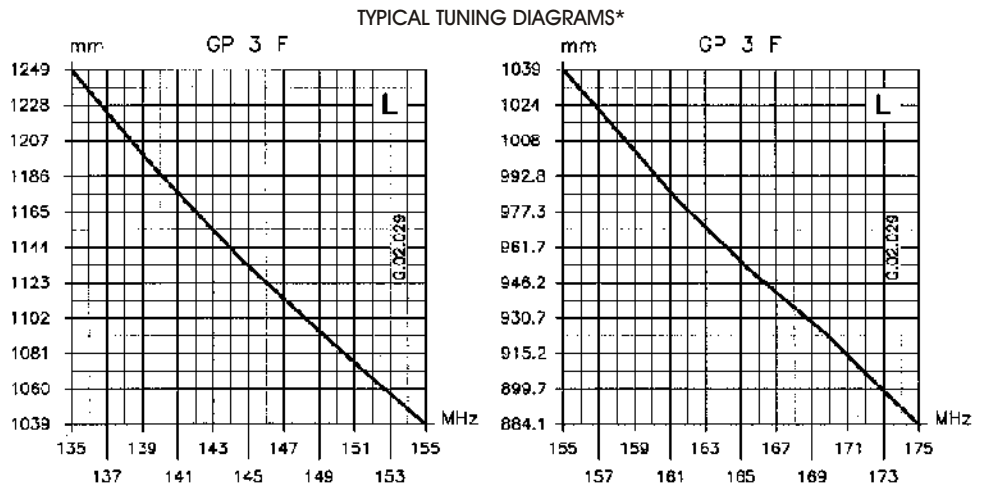
TYPICAL RADIATION PATTERN in E-plane at 145 MHz  
 File: 1-02-029 Scale: linear



TYPICAL MATCHING DIAGRAM vs FREQUENCY  
 S.W.R. at res. freq. File: 0-02-020

TYPICAL BANDWIDTH DIAGRAM vs F-FREQUENCY  
 N=2 of S.W.R. File: 11-02-020

Mounting and tuning instructions



\* Diagrams are recommended to be used as a guide and fine tuning by means of SWR-meter

**GP 3-E**

**Features:**

- # Base station antenna, Omnidirectional
- # Low-gain, Mono-band
- # Suitable for land and marine service
- # Tunable by whip length adjust
- # Protection from static discharges DC-Ground
- # Made of aluminium alloy 6063 T-832
- # Side mast mounting allowed by optional bracket FT-3 code 2511301.00 (pag. 59)

**Specifications**

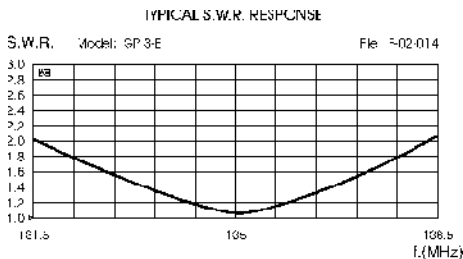
**Electrical Data**

Type ..... 5/8 Ground Plane  
 Frequency Range ..... tunable from 135 to 175 MHz  
 Impedance ..... 50 Unbalanced  
 Radiation (H-plane) ..... 360° Omnidirectional  
 Radiation (E-plane) ..... Beamwidth at -3 dB = 67°  
 Radiation angle deg. .... 18°  
 Polarization ..... Vertical  
 Gain ..... 1.5 dBd - 3.65 dBi  
 Bandwidth at V.S.W.R. 2:1 ..... 6.7 MHz at 135 MHz  
 V.S.W.R. at res. freq. .... 1.2 : 1 at 135 MHz  
 Max Power ..... 200 Watts  
 Feed System / Position ..... Transformer DC-Ground / Base  
 Connection ..... UHF-Female

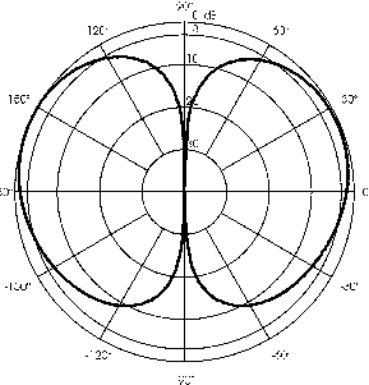
**Mechanical Data**

Materials ..... Aluminium, Copper, Nylon  
 Wind Load / Resistance ..... 28 N at 150 Km/h / 150 Km/h  
 Wind Surface ..... 0.02 m<sup>2</sup>  
 Height (approx.) ..... 1480 mm  
 Weight (approx.) ..... 570 gr  
 Radial Length (approx.) ..... 530 mm  
 Mounting Mast ..... 25-30 mm

**code 2101801.00**



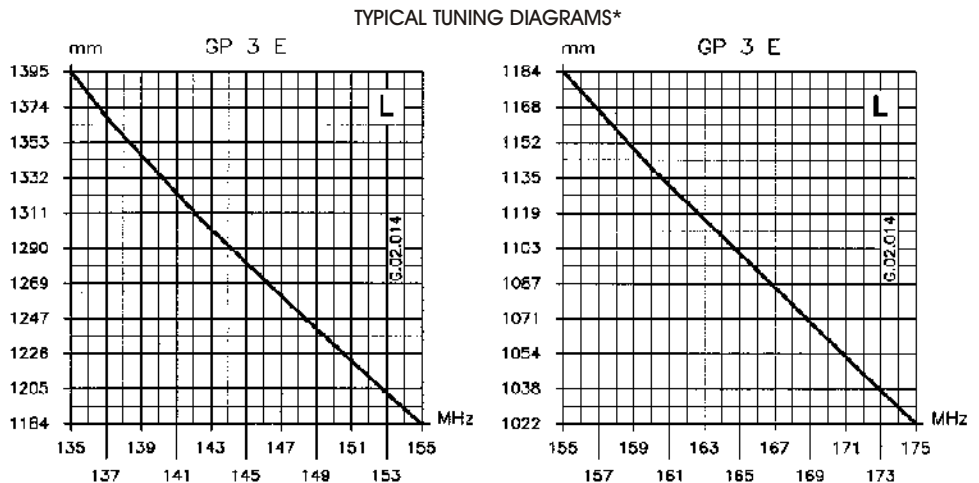
TYPICAL RADIATION PATTERN in E-plane at 145 MHz  
 File: F-02-014 Scale: linear



TYPICAL MATCHING DIAGRAM vs FREQUENCY

TYPICAL BANDWIDTH DIAGRAM vs FREQUENCY

Mounting and tuning instructions



\* Diagrams are recommended to be used as a guide and fine tuning by means of SWR-meter

**GP 6-E**

**Features:**

- # Base station antenna, Omnidirectional
- # Medium-gain, Mono-band
- # Suitable for land and marine service
- # Tunable by whip cutting
- # Protection from static discharges DC-Ground
- # Made of aluminium alloy 6063 T-832
- # Side mast mounting allowed by optional bracket FT-3 code 2511301.00 (pag. 59)

**Specifications**

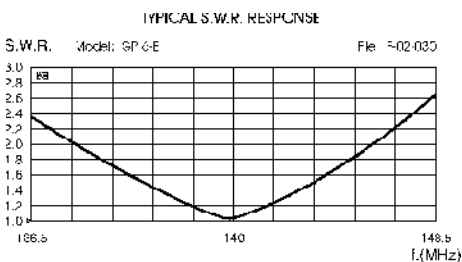
**Electrical Data**

Type ..... 2 x 5/8 Ground Plane Colinear  
 Frequency Range ..... tunable from 140 to 175 MHz  
 Impedance ..... 50 Unbalanced  
 Radiation (H-plane) ..... 360° Omnidirectional  
 Radiation (E-plane) ..... Beamwidth at -3 dB = 30°  
 Radiation angle deg. .... 3.6°  
 Polarization ..... Vertical  
 Gain ..... 3.8 dBd - 5.95 dBi  
 Bandwidth at V.S.W.R. 2:1 ..... 5.2 MHz at 140 MHz  
 V.S.W.R. at res. freq. .... 1.2 : 1 at 140 MHz  
 Max Power ..... 200 Watts  
 Feed System / Position ..... Transformer DC-Ground / Base  
 Connection ..... UHF-Female

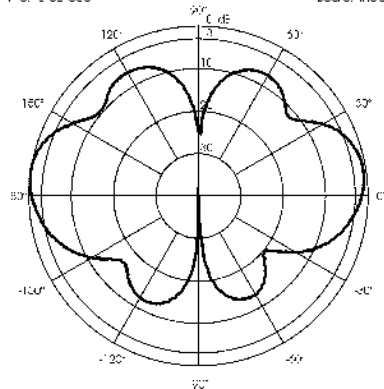
**Mechanical Data**

Materials ..... Aluminium, Chromed Brass, Nylon  
 Wind Load / Resistance ..... 46 N at 150 Km/h / 120 Km/h  
 Wind Surface ..... 0.04 m<sup>2</sup>  
 Height (approx.) ..... 3060 mm  
 Weight (approx.) ..... 750 gr  
 Radial Length (approx.) ..... 530 mm  
 Mounting Mast ..... 25-30 mm

**code 2108101.00**



TYPICAL RADIATION PATTERN in E-plane at 145 MHz  
 File: F-02-030 Scale: linear

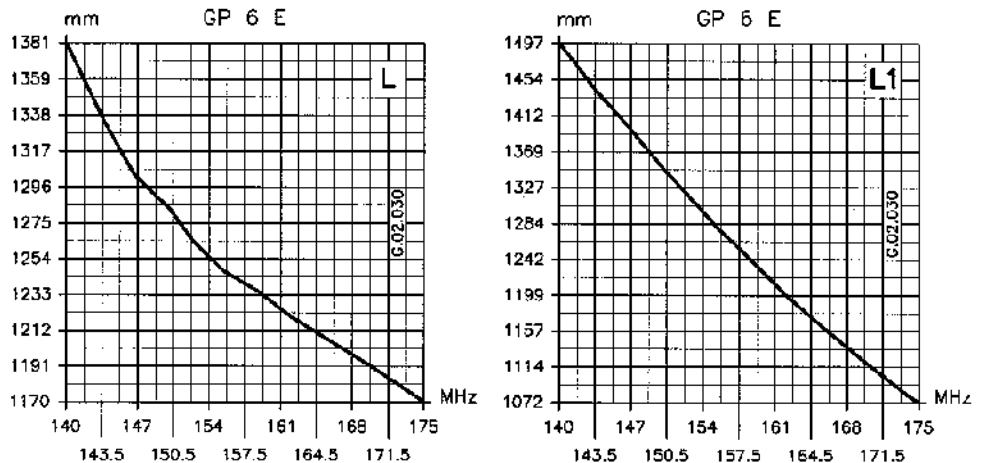


This section contains three diagrams:
 

- TYPICAL MATCHING DIAGRAM vs FREQUENCY:** A graph of SWR at resonance frequency vs frequency (MHz) from 139 to 175. It shows a series of peaks and troughs.
- TYPICAL BANDWIDTH DIAGRAM vs FREQUENCY:** A graph of SWR vs frequency (MHz) from 139 to 175. It shows a curve that rises from 1.0 at 140 MHz to approximately 2.0 at 175 MHz.
- Mounting and tuning instructions:** A schematic diagram showing the antenna's connection to a mast and the location of the whip cutting point (L1).

 The main image shows the antenna assembly with a vertical mast and a horizontal base with two side arms.

TYPICAL TUNING DIAGRAMS\*



\* Diagrams are recommended to be used as a guide and fine tuning by means of SWR-meter

## GPF 21-N

### Features:

- # Base station antenna, Mono-band
- # Low-gain, Omnidirectional
- # Suitable for land and marine service
- # Tunable by whip cutting
- # Protection from static discharges DC-Ground
- # Stainless steel hardware and radials
- # Equipped with anodized aluminium bracket for an easy side mast installation
- # High quality whip made of brass and copper protected by fiberglass tube

### Specifications

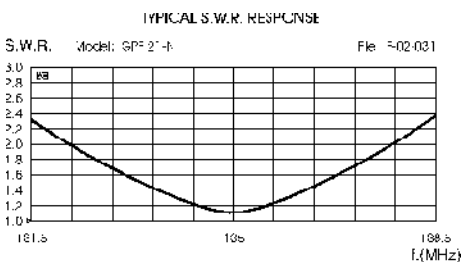
#### Electrical Data

Type .....	5/8 Ground Plane
Frequency Range .....	tunable from 135 to 175 MHz
Impedance .....	50 Unbalanced
Radiation (H-plane) .....	360° Omnidirectional
Radiation (E-plane) .....	Beamwidth at -3 dB = 80°
Radiation angle deg. ....	28°
Polarization .....	Vertical
Gain .....	1.5 dBd - 3.65 dBi
Bandwidth at V.S.W.R. 2:1 .....	5.6 MHz at 135 MHz
V.S.W.R. at res. freq. ....	1.2 : 1 at 135 MHz
Max Power .....	200 Watts
Feed System / Position .....	Transformer DC-Ground / Base
Connection .....	N-Female Gold Plated

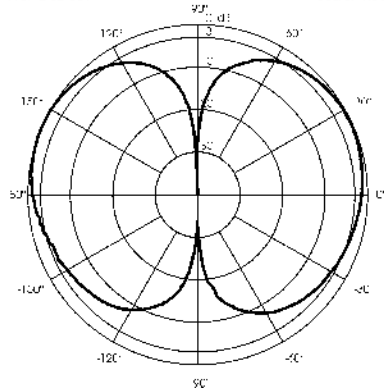
#### Mechanical Data

Materials .....	Fibreglass, Aluminium, Brass, Stainless Steel
Wind Load / Resistance .....	55 N at 150 Km/h / 200 Km/h
Wind Surface .....	0.05 m <sup>2</sup>
Height (approx.) .....	1730mm
Weight (approx.) .....	1200 gr
Radial Length (approx.) .....	495 mm
Mounting Mast .....	35-54 mm

code **2109720.00**



TYPICAL RADIATION PATTERN in E-plane at 145 MHz  
File: 6-02-031 Search: near

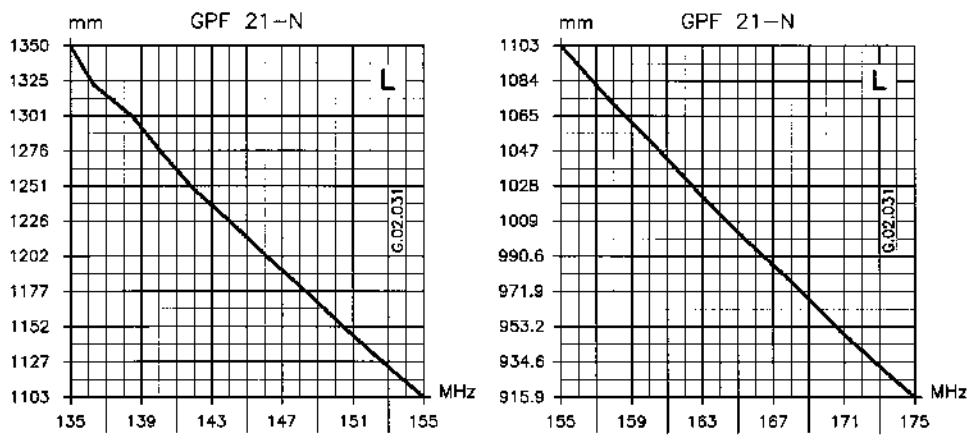


TYPICAL MATCHING DIAGRAM vs FREQUENCY  
S.W.R. at res. freq. File: 6-02-031

TYPICAL BANDWIDTH DIAGRAM vs F-FREQUENCY  
N=2 of S.W.R. 2 File: 11-02-031

Mounting and tuning instructions

TYPICAL TUNING DIAGRAMS\*



\* Diagrams are recommended to be used as a guide and fine tuning by means of SWR-meter

## GPF 22-N

### Features:

- # Base station antenna, Mono-band
- # Medium-gain , Omnidirectional
- # Suitable for land and marine service
- # Tunable by whip cutting
- # Protection from static discharges DC-Ground
- # Stainless steel hardware and radials
- # Equipped with anodized aluminium bracket for an easy side mast installation
- # High quality whip made of brass and copper protected by fiberglass tube

### Specifications

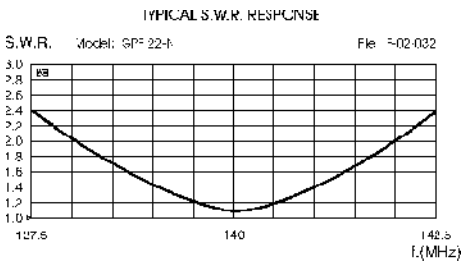
#### Electrical Data

Type ..... 2 x 5/8 Ground Plane Colinear  
 Frequency Range ..... tunable from 140 to 175 MHz  
 Impedance ..... 50 Unbalanced  
 Radiation (H-plane) ..... 360° Omnidirectional  
 Radiation (E-plane) ..... Beamwidth at -3 dB = 33°  
 Radiation angle deg. .... 0°  
 Polarization ..... Vertical  
 Gain ..... 3.8 dBi - 5.95 dBi  
 Bandwidth at V.S.W.R. 2:1 ..... 4 MHz at 140 MHz  
 V.S.W.R. at res. freq. .... 1.2 : 1 at 140 MHz  
 Max Power ..... 200 Watts  
 Feed System / Position ..... Transformer DC-Ground / Base  
 Connection ..... N-Female Gold Plated

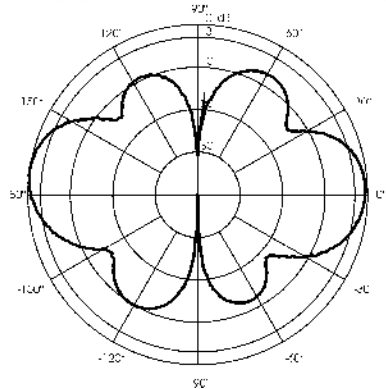
#### Mechanical Data

Materials ..... Fibreglass, Aluminium, Brass, Stainless Steel  
 Wind Load / Resistance ..... 95 N at 150 Km/h / 150 Km/h  
 Wind Surface ..... 0.08 m<sup>2</sup>  
 Height (approx.) ..... 3230mm  
 Weight (approx.) ..... 1630 gr  
 Radial Length (approx.) ..... 495 mm  
 Mounting Mast ..... 35-54 mm

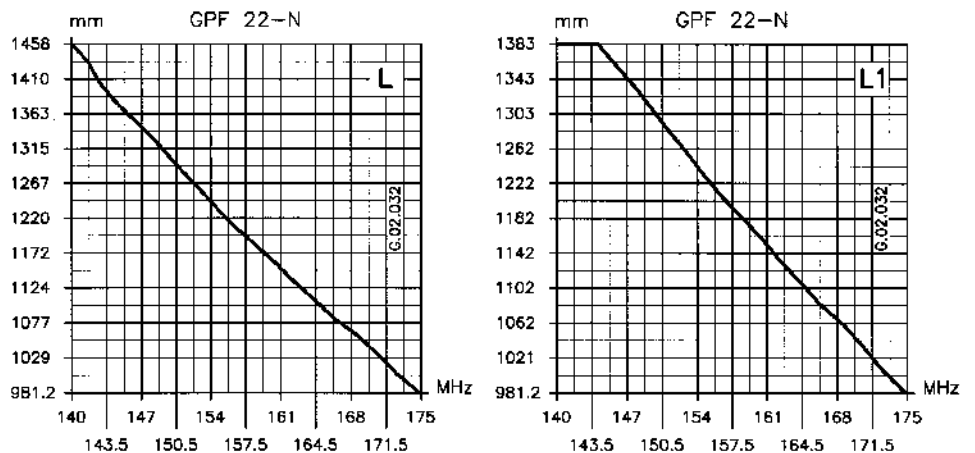
code **2109820.00**



TYPICAL RADIATION PATTERN in E-plane at 145 MHz  
 File: 1-02-032 Search: near



TYPICAL TUNING DIAGRAMS\*



\* Diagrams are recommended to be used as a guide and fine tuning by means of SWR-meter

## SA 22-N

### Features:

- # Base station antenna
- # Omnidirectional
- # Medium-gain
- # Mono-band
- # Protection from static discharges  
DC-Ground
- # Perfect protection against the worst weather conditions
- # Stainless steel hardware and radials
- # Fiberglass whip made of two conic sections jointed by ABS parts for distortion free radiation diagram
- # Equipped with anodized aluminium bracket for an easy side mast installation

### Specifications

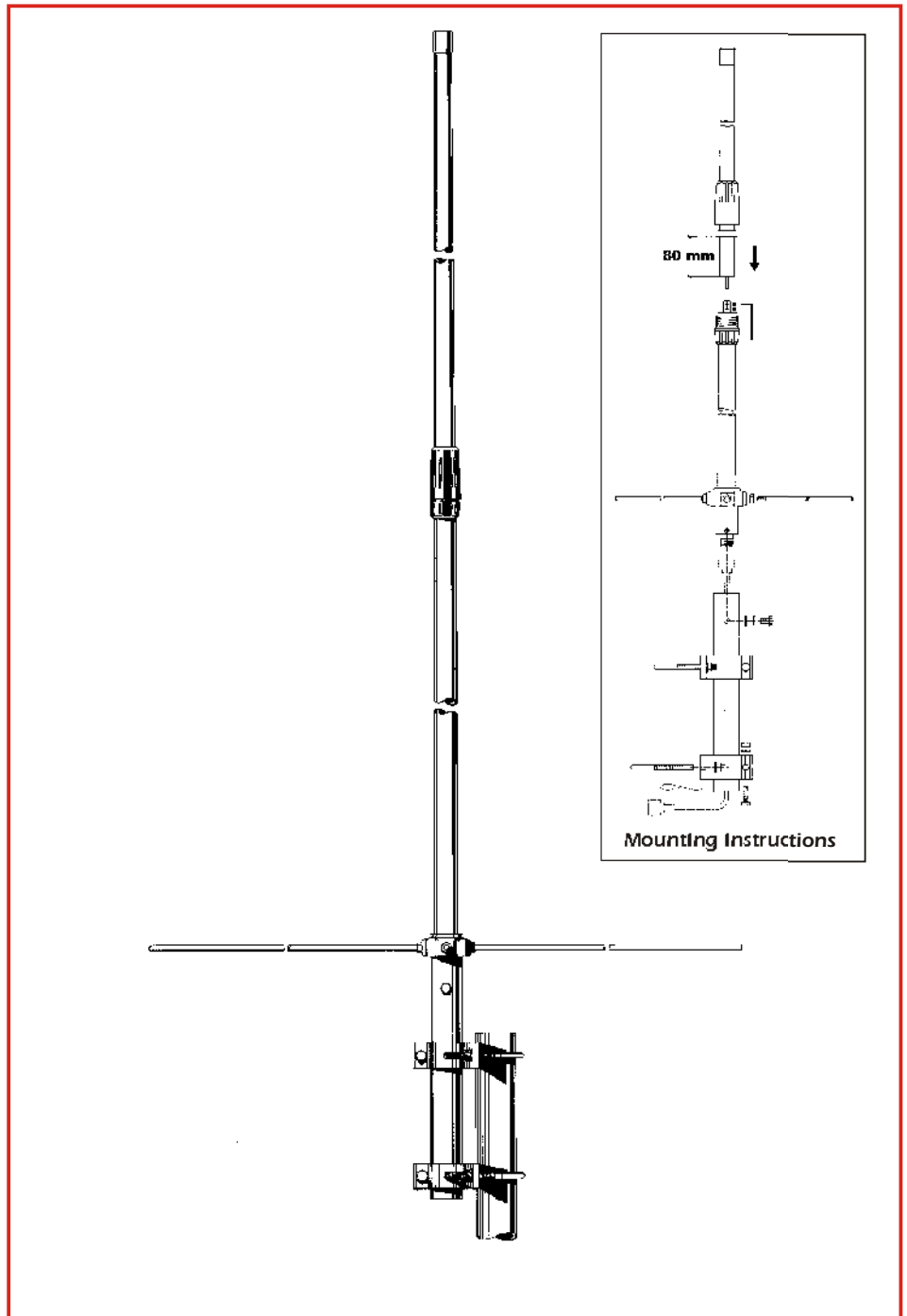
#### Electrical Data

Type ..... 2 x 5/8 Ground Plane Colinear  
 Design frequency ..... 145 MHz  
 Impedance ..... 50 Unbalanced  
 Radiation (H-plane) ..... 360° Omnidirectional  
 Radiation (E-plane) ..... Beamwidth at -3 dB = 35°  
 Radiation angle deg. .... -14°  
 Polarization ..... Vertical  
 Gain ..... 3.6 dBd - 5.75 dBi  
 Bandwidth at V.S.W.R. 2:1 ..... 6 MHz  
 V.S.W.R. at res. freq. .... 1.2 : 1  
 Max Power ..... 200 Watts  
 Feed System / Position ..... Transformer DC-Ground / Base  
 Connection ..... N-Female Gold Plated

#### Mechanical Data

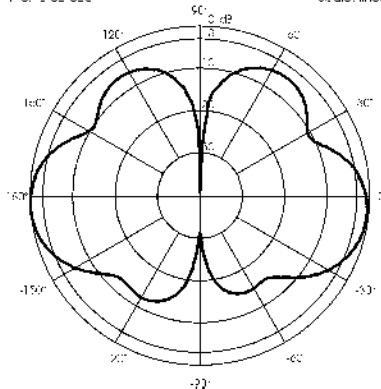
Materials ..... Fibreglass, Stainless Steel, Brass, Nylon  
 Wind Load / Resistance ..... 81 N at 150 Km/h / 160 Km/h  
 Wind Surface ..... 0.07 m<sup>2</sup>  
 Height (approx.) ..... 2790 mm  
 Weight (approx.) ..... 1220 gr  
 Radial Length (approx.) ..... 495 mm  
 Mounting Mast ..... 35-54 mm

code **2106220.00**



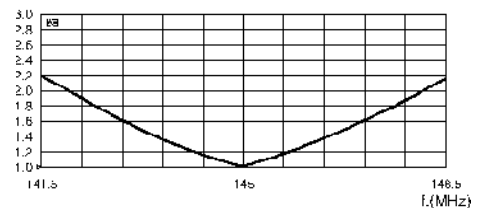
TYPICAL RADIATION PATTERN in E-plane at 145 MHz

Γ<sub>av</sub> = 0.03 0.033 Scale: linear



TYPICAL S.W.R. RESPONSE

S.W.R. Model: SA 22 N File: F02-023



## CX 2 m

### Features:

- # Base station antenna, Mono-band
- # Low-gain, Omnidirectional
- # Factory tunable according to specific customer's frequency (minimum order 100 pcs)
- # Protection from static discharges DC-Ground
- # Made of aluminium alloy 6063 T-832

### Specifications

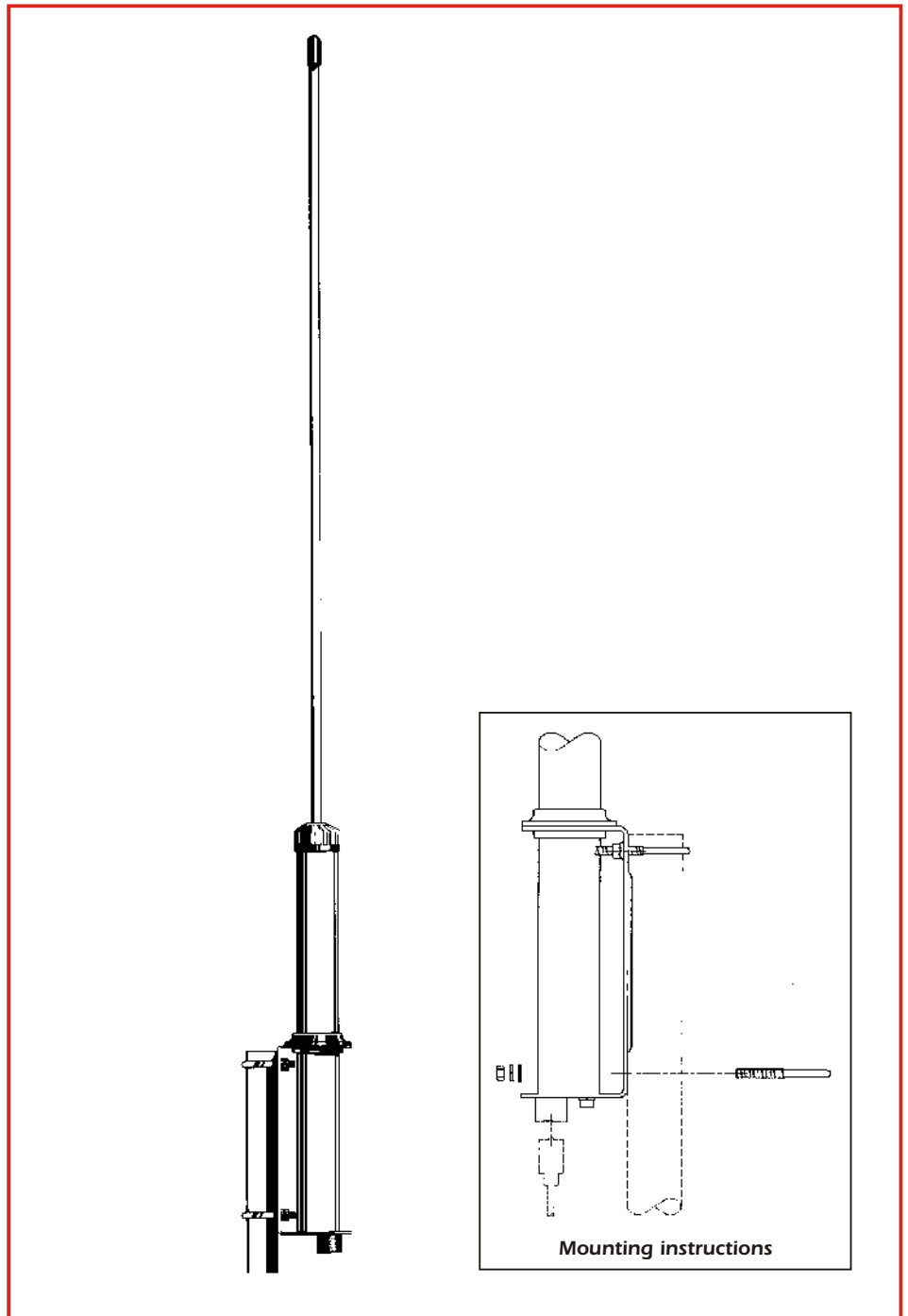
#### Electrical Data

Type .....	3/4 Coaxial J-Pole
Frequency Range at V.S.W.R. 1.5:1 .....	
CX 145 .....	144-148 MHz
CX 152 .....	150-154 MHz
CX 156 .....	156-160 MHz
CX 160 .....	160-164 MHz
Impedance .....	50 Unbalanced
Radiation (H-plane) .....	360° Omnidirectional
Radiation (E-plane) .....	Beamwidth at -3 dB = 68°
Radiation angle deg. ....	0°
Polarization .....	Vertical
Gain .....	2 dBd - 4.15 dBi
Bandwidth at V.S.W.R. 2:1 .....	
CX 145 .....	7.45 MHz
CX 152 .....	7.1 MHz
CX 156 .....	6 MHz
CX 160 .....	8.1 MHz
V.S.W.R. at res. freq. ....	1.2 : 1
Max Power .....	250 Watts
Feed System / Position .....	Gamma Match / Base
Connection .....	UHF-Female

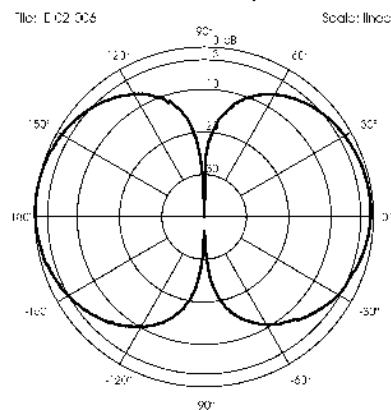
#### Mechanical Data

Materials .....	Aluminium, Brass, Steel, Nylon
Wind Load / Resistance .....	51 N at 150 Km/h / 180 Km/h
Wind Surface .....	0.04 m <sup>2</sup>
Height (approx.) .....	
CX 145 .....	1535 mm
CX 152 .....	1480 mm
CX 156 .....	1410 mm
CX 160 .....	1375 mm
Weight (approx.) .....	1000 gr
Mounting Mast .....	35-42 mm

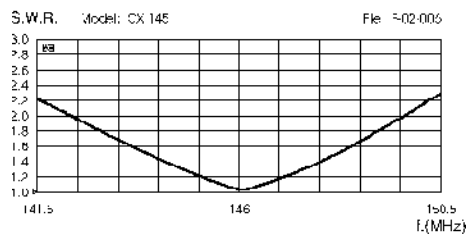
- code 2102201.00 CX 145**
- code 2103901.00 CX 152**
- code 2102301.00 CX 156**
- code 2102401.00 CX 160**



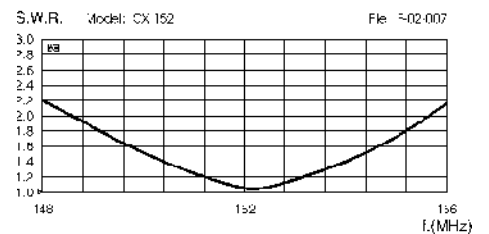
TYPICAL RADIATION PATTERN in E-plane at mid-band



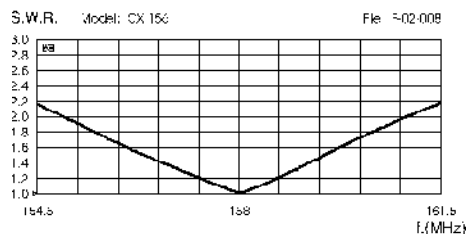
TYPICAL S.W.R. RESPONSE



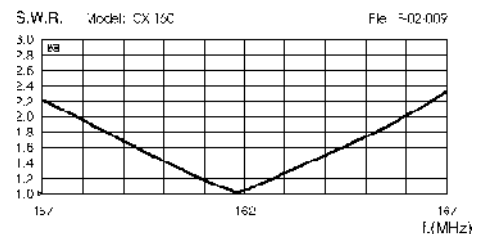
TYPICAL S.W.R. RESPONSE



TYPICAL S.W.R. RESPONSE



TYPICAL S.W.R. RESPONSE





# GPA 170-230

**Features:**

- # Base station antenna, Mono-band
- # Unity-gain, Omnidirectional
- # Tunable by whip length adjust
- # Made of aluminium alloy 6063 T-832
- # Side mast mounting allowed by optional bracket FT-2 code 2510004.00 (pag. 59)

**Specifications**

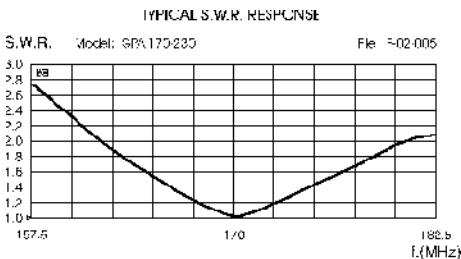
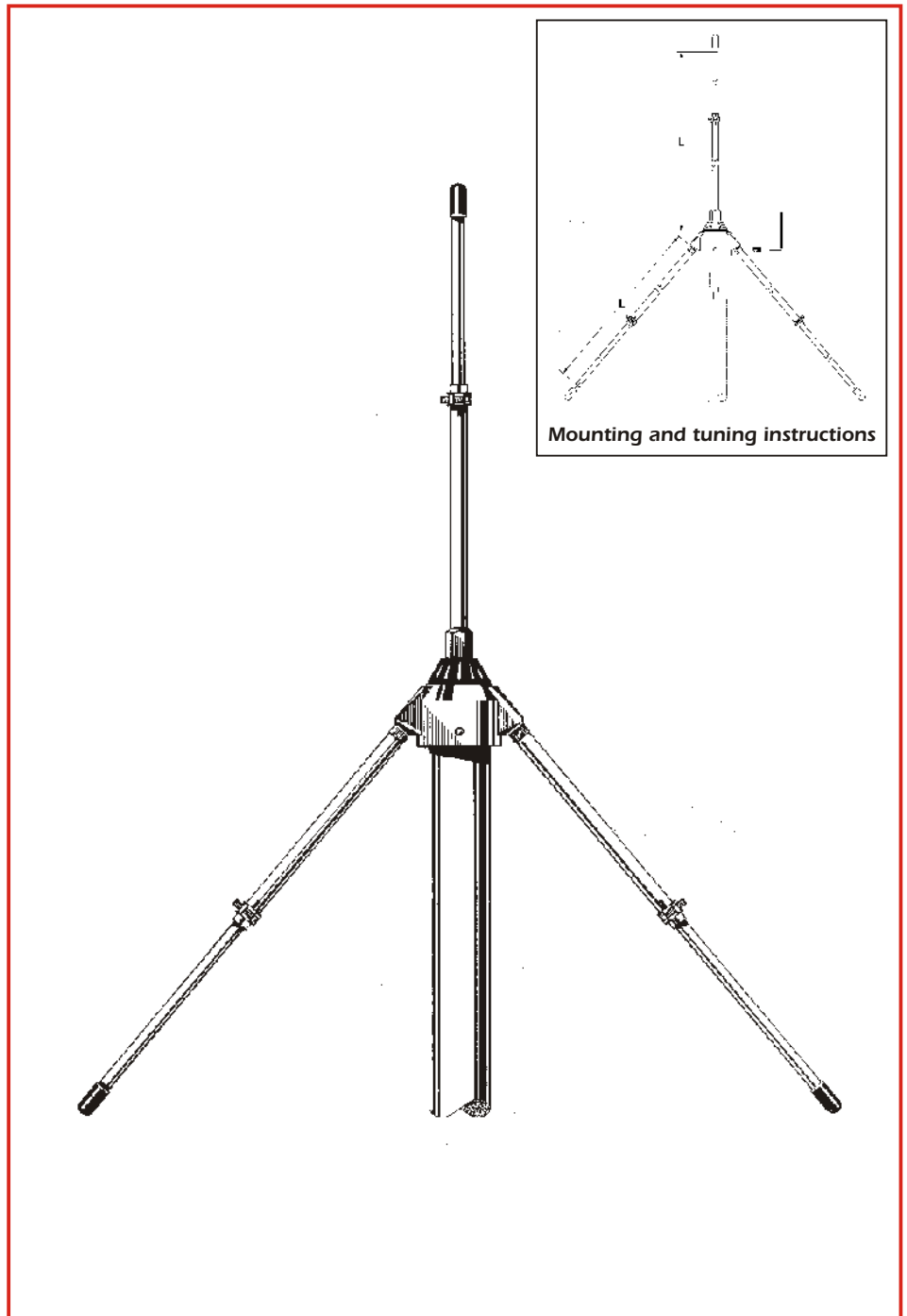
**Electrical Data**

Type ..... 1/4 Ground Plane  
 Frequency Range ..... tunable from 170 to 230 MHz  
 Impedance ..... 50 Unbalanced  
 Radiation (H-plane) ..... 360° Omnidirectional  
 Radiation (E-plane) ..... Beamwidth at -3 dB = 86°  
 Radiation angle deg. .... 0°  
 Polarization ..... Vertical  
 Gain ..... 0 dBd - 2.15 dBi  
 Bandwidth at V.S.W.R. 2:1 ..... 19 MHz at 170 MHz  
 V.S.W.R. at res. freq. .... 1.2 : 1 at 170 MHz  
 Max Power ..... 300 Watts  
 Feed System / Position ..... Direct / Center  
 Connection ..... UHF-Female

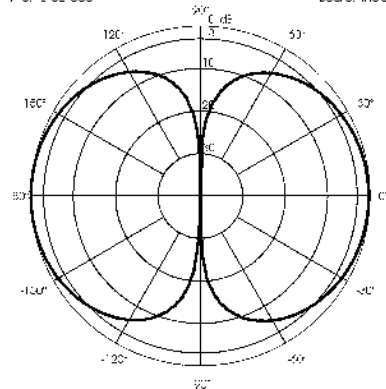
**Mechanical Data**

Materials ..... Aluminium, Chromed Brass, Nylon  
 Wind Load / Resistance ..... 24 N at 150 Km/h / 180 Km/h  
 Wind Surface ..... 0.02 m<sup>2</sup>  
 Height (approx.) ..... 760 mm  
 Weight (approx.) ..... 480 gr  
 Radial Length (approx.) ..... 410 mm  
 Mounting Mast ..... 35 - 40 mm

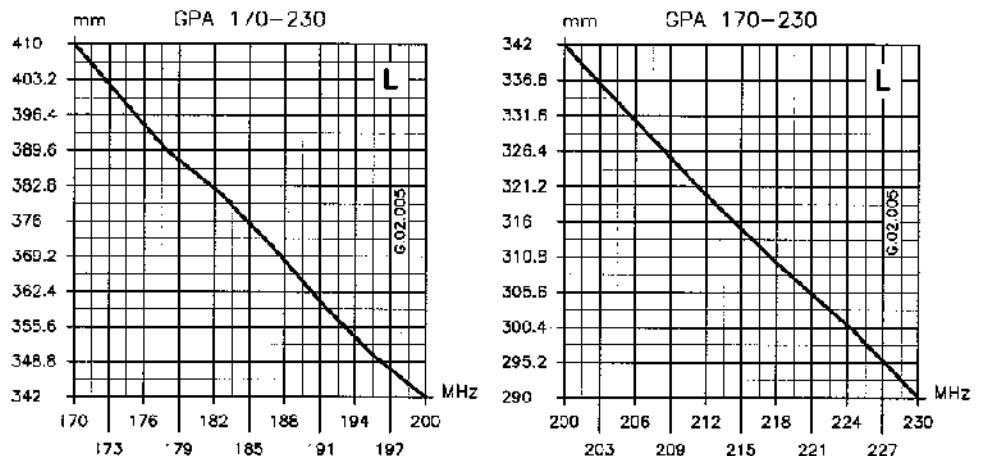
**code 2105001.00**



TYPICAL RADIATION PATTERN in E-plane at 170 MHz  
 File: F-02-005 Source: linear



TYPICAL TUNING DIAGRAMS\*



\* Diagrams are recommended to be used as a guide and fine tuning by means of SWR-meter

## CX 220 CX 260

### Features:

- # Base station antenna, Omnidirectional
- # Low-gain , Mono-band
- # Factory tunable according to specific customer's frequency (minimum order 100 pcs)
- # Protection from static discharges DC-Ground
- # Made of aluminium alloy 6063 T-832

### Specifications

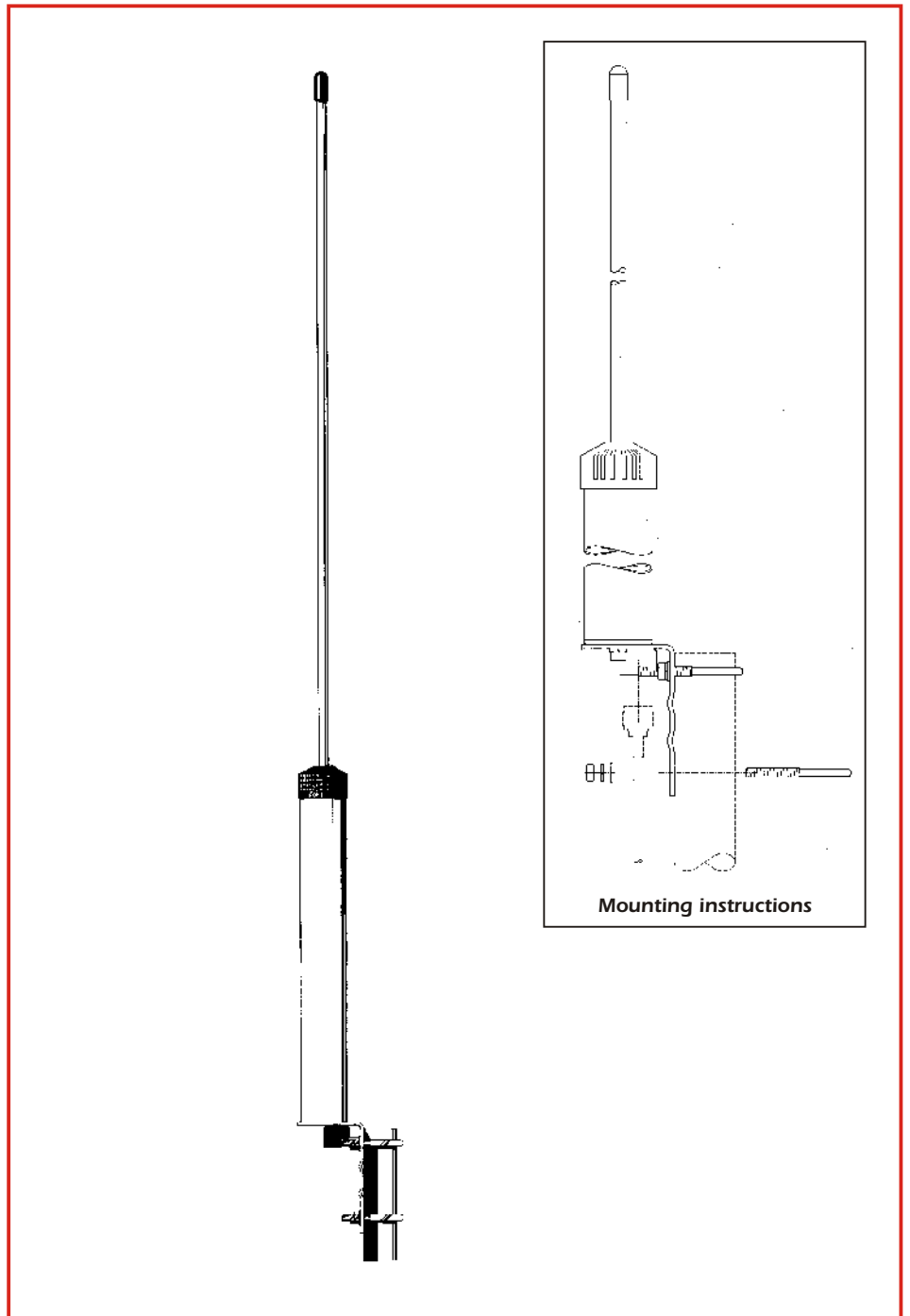
#### Electrical Data

Type .....	3/4 Coaxial J-Pole
Frequency Range at V.S.W.R. 2:1	
CX 220 .....	216-229 MHz
CX 260 .....	250-266 MHz
Impedance .....	50 Unbalanced
Radiation (H-plane) .....	360° Omnidirectional
Radiation (E-plane) .....	Beamwidth at -3 dB = 60°
Radiation angle deg. ....	-2°
Polarization .....	Vertical
Gain .....	2 dBd - 4.15 dBi
Bandwidth at V.S.W.R. 2:1	
CX 220 .....	13 MHz
CX 260 .....	16 MHz
V.S.W.R. at res. freq. ....	1.2:1
Max Power .....	200 Watts
Feed System / Position .....	Gamma Match / Base
Connection .....	N-Female

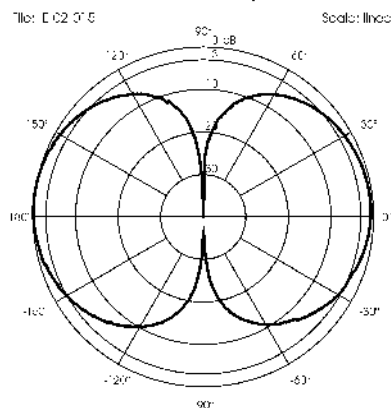
#### Mechanical Data

Materials .....	Aluminium, Brass, Steel, Nylon
Wind Load / Resistance .....	36 N at 150 Km/h / 180 Km/h
Wind Surface .....	0.03 m <sup>2</sup>
Height (approx.)	
CX 220 .....	1100 mm
CX 260 .....	950 mm
Weight (approx.) .....	630 gr
Mounting Mast .....	35-42 mm

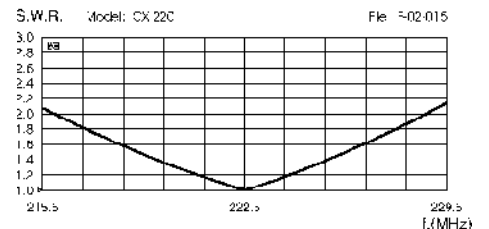
code **2106101.00** CX 220  
code **2106001.00** CX 260



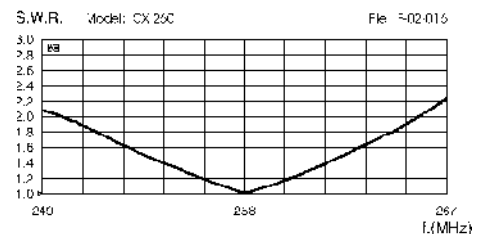
TYPICAL RADIATION PATTERN in E-plane at mid-band



TYPICAL S.W.R. RESPONSE



TYPICAL S.W.R. RESPONSE



## TURBO 2000 Low Band

### Features:

- # Mobile antenna, Mono-band
- # Unity-gain, Omnidirectional
- # Tunable by whip cutting
- # Protection from static discharges DC-Ground
- # 17/7 PH tapered stainless steel whip
- # 90° inclination and adjustable whip, detachable for car-washes access
- # Magnetic mount version available

### Specifications

#### Electrical Data

Type	1/4 Base Loaded
Frequency Range	
A type	tunable from 29.0 to 32.5 MHz
B type	tunable from 32.5 to 37.0 MHz
C type	tunable from 37.0 to 43.0 MHz
D type	tunable from 42.5 to 51.5 MHz
E type	tunable from 51.5 to 67.5 MHz
Impedance	50 Unbalanced
Radiation (H-plane)	360° Omnidirectional
Polarization	Vertical
Gain	0 dB ref to /4 whip
Bandwidth at V.S.W.R. 2:1	
A type	1.2 MHz at 29.0 MHz
B type	1.8 MHz at 32.5 MHz
C type	2.1 MHz at 37.0 MHz
D type	3.1 MHz at 42.5 MHz
E type	7.5 MHz at 51.5 MHz
V.S.W.R. at res. freq.	1.2: 1 at lower frequency
Max Power	250 Watts
Feed System / Position	Transformer DC-ground / Base Connection
TURBO 2000 PL Low Band	UHF-Male
TURBO 2000 Low Band	NE-TURBO connection
Cable Length / Type	4 m / RG 58 (TURBO 2000 only)
<b>Mechanical Data</b>	
Materials	Stainless Steel 17/7 PH, Nylon, Brass
Height (approx.) Both models	1430 mm
Weight (approx.)	530 gr
Mounting Hole	12.5 mm (TURBO 2000 only)

code 2213006.40 TURBO 2000 Low Band  
code 2213006.43 TURBO 2000 PL Low Band

Available versions: please indicate your required frequency range.

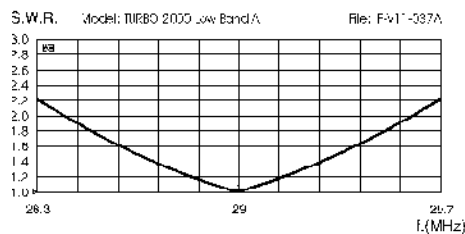
- A 29.0-32.5 MHz**
- B 32.5-37.0 MHz**
- C 37.0-43.0 MHz**
- D 42.5-51.5 MHz**
- E 51.5-67.5 MHz**

**TYPICAL TUNING DIAGRAMS\***

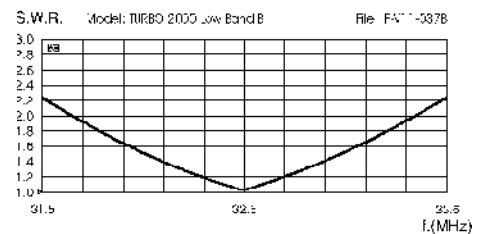
**Mounting instructions**

\* Diagrams are recommended to be used as a guide and fine tuning by means of SWR-meter

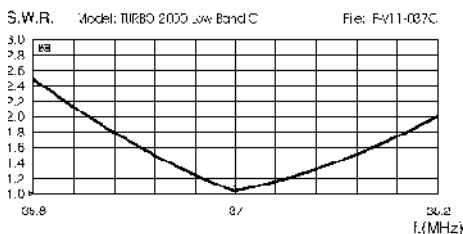
TYPICAL S.W.R. RESPONSE



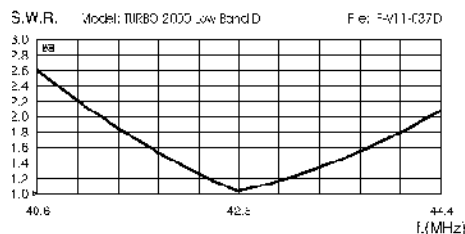
TYPICAL S.W.R. RESPONSE



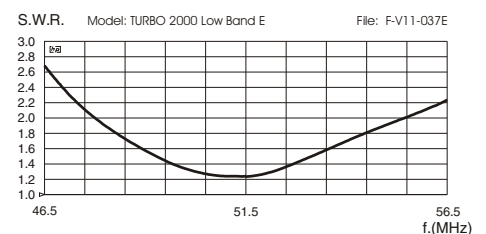
TYPICAL S.W.R. RESPONSE



TYPICAL S.W.R. RESPONSE



TYPICAL S.W.R. RESPONSE



## MICRO 43

### Features:

- # Mobile antenna, Mono-band
- # Unity-gain, Omnidirectional
- # 90° inclination and adjustable whip, detachable for car-washes access
- # Magnetic mount version available

### Specifications

#### Electrical Data

Type ..... 1/4 Base Loaded  
 Design Frequency ..... 43 MHz  
 Impedance ..... 50 Unbalanced  
 Radiation (H-plane) ..... 360° Omnidirectional  
 Polarization ..... Vertical  
 Gain ..... 0 dB ref to /4 whip  
 Bandwidth at V.S.W.R. 2:1 ..... 2.5 MHz  
 V.S.W.R. at res. freq. .... 1.2: 1  
 Max Power ..... 30 Watts  
 Feed System / Position ..... Direct / Base  
 Standard Mount ..... "CE-S"  
 Cable Length / Type ..... 4 m / RG 58

#### Mechanical Data

Materials ..... Stainless Steel 17/7 PH, Nylon, Copper  
 Height (approx.) ..... 550 mm  
 Weight (approx.) ..... 260 gr  
 Mounting Hole ..... 10 mm

code 2210806.38 MICRO 43

## TITANIUM 43

### Features:

- # Mobile antenna, Mono-band
- # Unity-gain, Omnidirectional
- # 17/7 PH tapered stainless steel whip
- # 180° inclination and adjustable whip, detachable for car-washes access
- # Wide range of optional mounting bases available
- # Magnetic mount version available

### Specifications

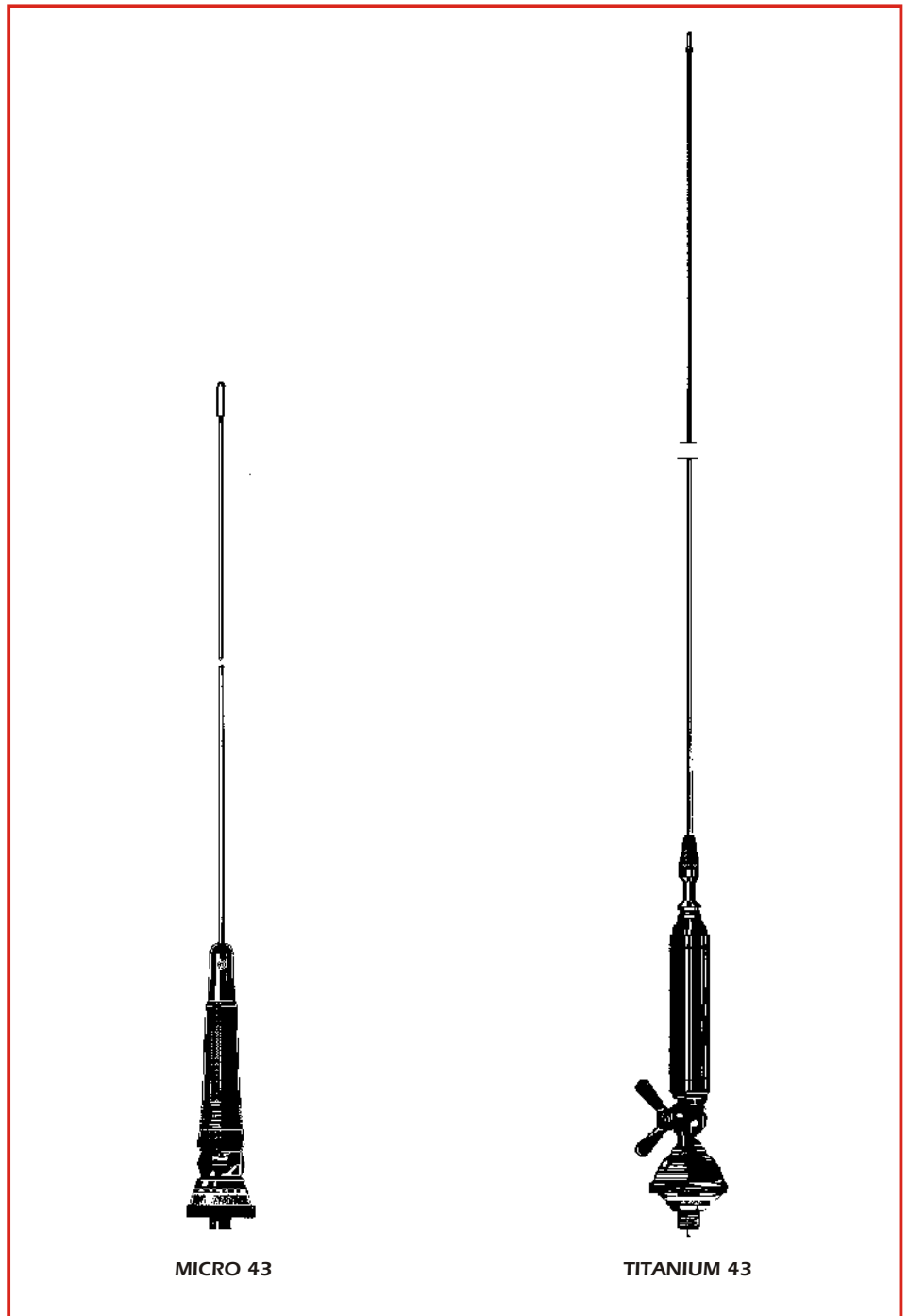
#### Electrical Data

Type ..... 1/4 Base Loaded  
 Design Frequency ..... 43 MHz  
 Impedance ..... 50 Unbalanced  
 Radiation (H-plane) ..... 360° Omnidirectional  
 Polarization ..... Vertical  
 Gain ..... 0 dB ref to /4 whip  
 Bandwidth at V.S.W.R. 2:1 ..... 3.6 MHz  
 V.S.W.R. at res. freq. .... 1.2: 1  
 Max Power: ..... 100 Watts  
 Feed System / Position ..... Direct / Base  
 Standard Mount ..... "N"  
 Cable Length / Type ..... 4 m / RG 58

#### Mechanical Data

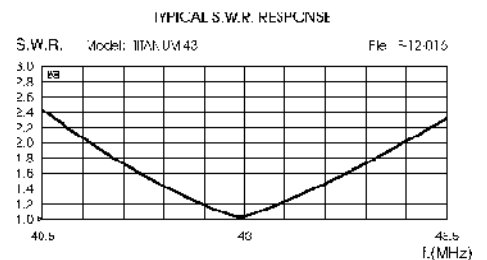
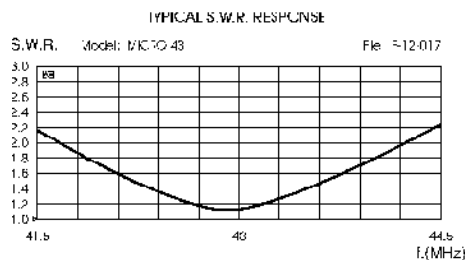
Materials ..... Stainless Steel 17/7 PH, Nylon, Copper  
 Height (approx.) ..... 1090 mm  
 Weight (approx.) ..... 400 gr  
 Mounting Hole ..... 12.5 mm

code 2210906.02 TITANIUM 43



MICRO 43

TITANIUM 43



## SM 66-88 SMA 66-88

### Features:

- # Mobile antenna, Mono-band
- # Unity-gain, Omnidirectional
- # Tunable by whip cutting
- # Factory tunable according to specific customer's frequency
- # SM 66-88 Black fiberglass conic whip
- # SMA 66-88 17/7 PH tapered stainless steel whip
- # 180° inclination and adjustable whip, detachable for car-washes access
- # Black chrome version available
- # Magnetic mount version available

### Specifications

#### Electrical Data

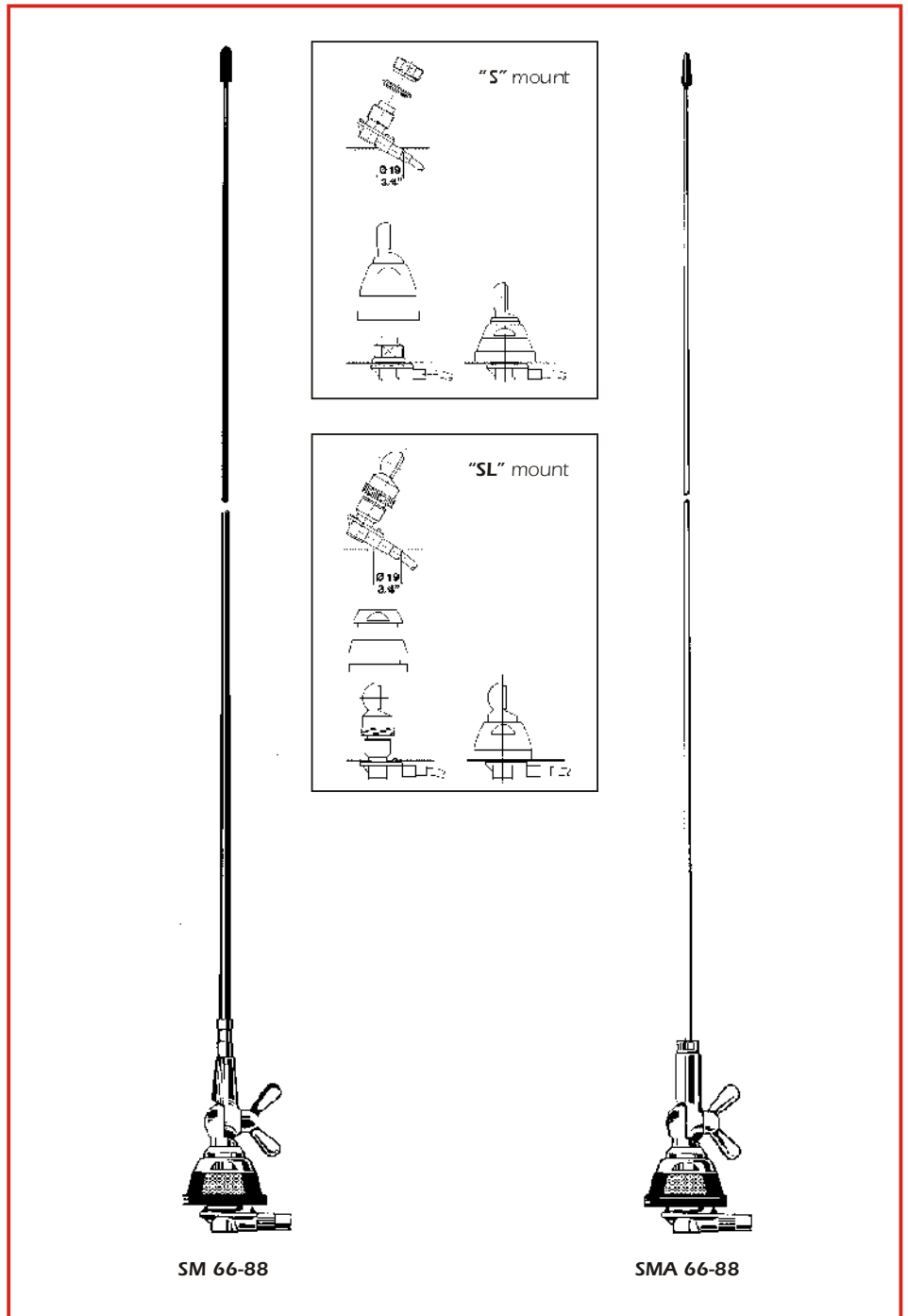
Type .....	1/4
Frequency Range .....	tunable from 66 to 88 MHz
Impedance .....	50 Unbalanced
Radiation (H-plane) .....	360° Omnidirectional
Polarization .....	Vertical
Gain .....	0 dB ref. to /4 whip
Bandwidth at V.S.W.R. 2:1	
SM 66-88 .....	7.9 MHz at 66 MHz
SMA 66-88 .....	9.7 MHz at 66 MHz
V.S.W.R. at res. freq. ....	1.2: 1 at 66 MHz
Max Power .....	100 Watts
Feed System / Position .....	Direct / Base
Standard Mount .....	"S"
Cable Length / Type .....	5 m / RG 58

#### Mechanical Data

Materials	
SM 66-88 .....	Glass Fibre, Chromed Brass, Nylon
SMA 66-88 .....	Stainless Steel 17/7 PH, Nylon
Height (approx.)	
SM 66-88 .....	1085 mm
SMA 66-88 .....	1200 mm
Weigth (approx.)	
SM 66-88 .....	380 gr
Mounting Hole .....	19 mm

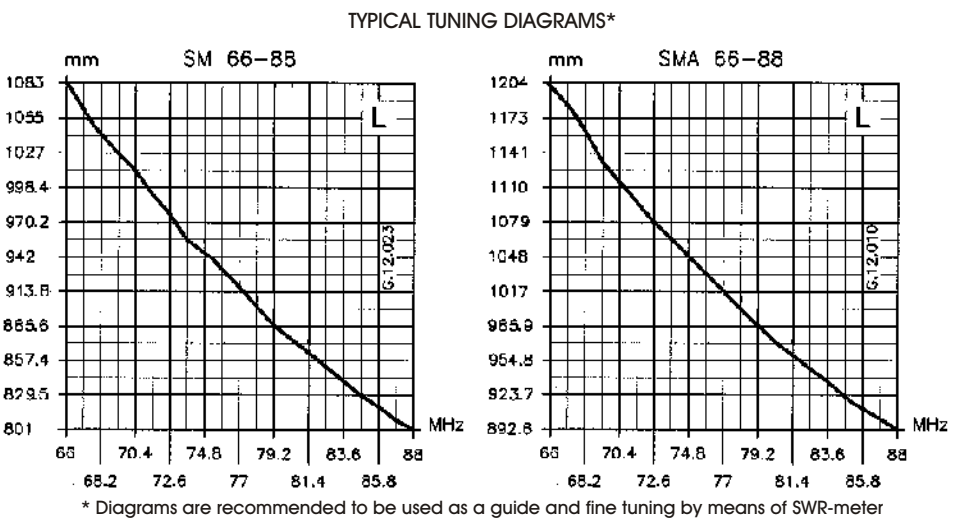
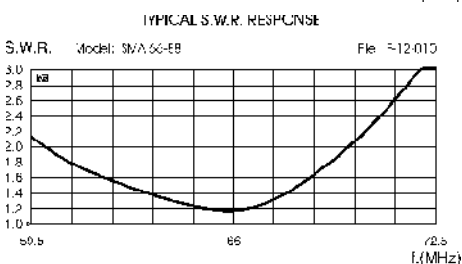
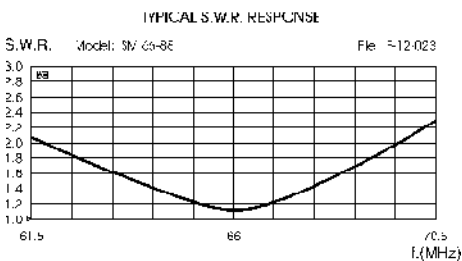
code 2209624.28 SM 66-88 S mount  
code 2209624.32 SM 66-88 SL mount

code 2209605.28 SMA 66-88 S mount  
code 2209605.32 SMA 66-88 SL mount



SM 66-88

SMA 66-88



## MG 75 MGA 75 C

### Features:

- # Mobile antenna, Mono-band
- # Unity-gain, Omnidirectional
- # Tunable by whip cutting
- # Factory tunable according to specific customer's frequency
- # Supplied with a strong stainless steel spring
- # MG 75 Black fiberglass conic whip  
MGA 75 C 17/7 PH tapered stainless steel whip
- # 180° inclination and adjustable whip, detachable for car-washes access

### Specifications

#### Electrical Data

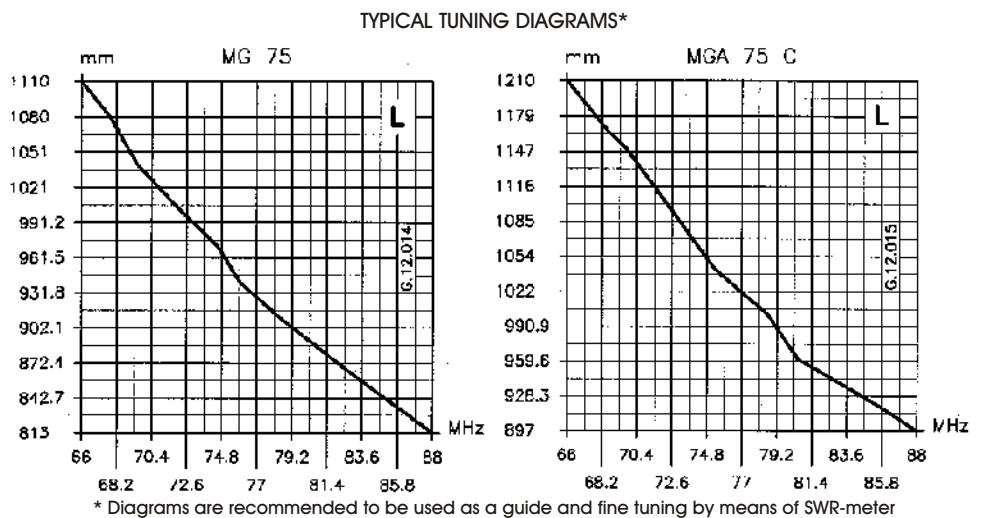
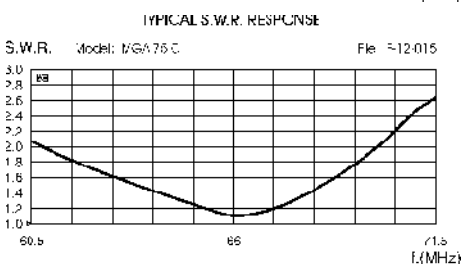
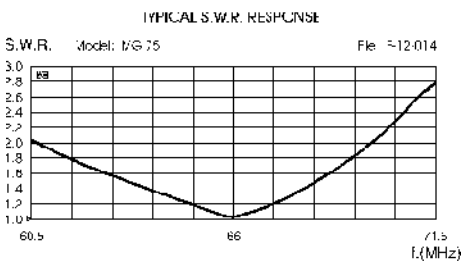
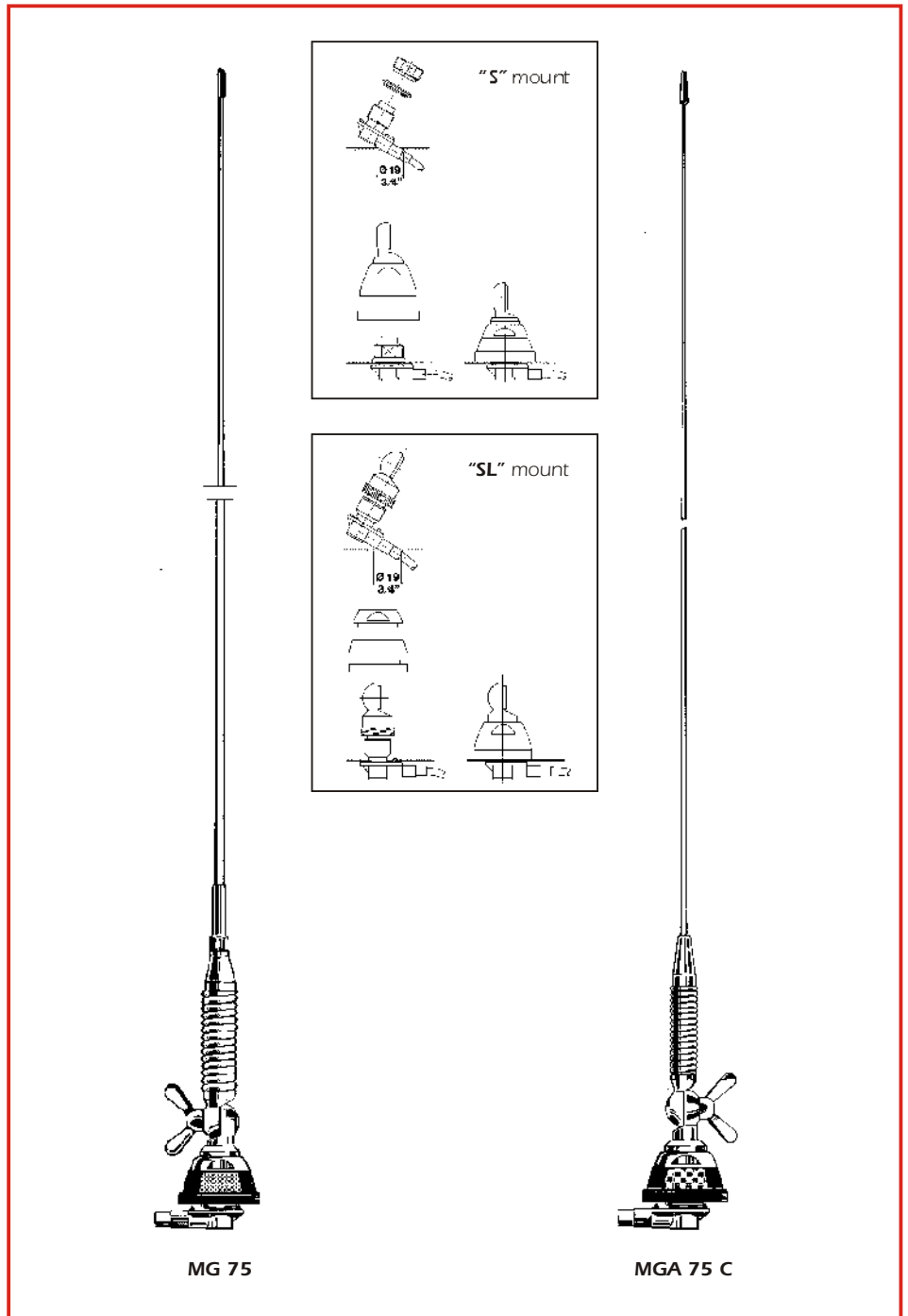
Type .....	1/4
Frequency Range .....	tunable from 66 to 88 MHz
Impedance .....	50 Unbalanced
Radiation (H-plane) .....	360° Omnidirectional
Polarization .....	Vertical
Gain .....	0 dB ref. to /4 whip
Bandwidth at V.S.W.R. 2:1 .....	9 MHz at 66 MHz
V.S.W.R. at res. freq.	
MG 75 .....	1.2: 1 at 66 MHz
MGA 75 C .....	1.3: 1 at 66 MHz
Max Power .....	100 Watts
Feed System / Position .....	Direct / Base
Standard Mount .....	"S"
Cable Length / Type .....	5 m / RG 58

#### Mechanical Data

Materials	
MG 75 .....	Glass Fibre, Chromed Brass, Nylon
MGA 75 C ..	Stainless Steel 17/7 PH, Nylon, Chromed Brass
Height (approx.)	
MG 75 .....	1110 mm
MGA 75 C ..	1210 mm
Weigth (approx.)	
MG 75 .....	500 gr
MGA 75 C ..	420 gr
Mounting Hole .....	19 mm

code 2205824.28 MG 75 S mount  
code 2205824.32 MG 75 SL mount

code 2205905.28 MGA 75 C S mount  
code 2205905.32 MGA 75 C SL mount



**SKB 115-175 1/4**  
**SKB 140-175 1/4**

**Features:**

- # Mobile antenna, Mono-band
- # Unity-gain, Omnidirectional
- # Tunable by whip cutting
- # Factory tunable according to specific customer's frequency
- # Rigid whip, detachable for car-washes access
- # Magnetic mount version available  
CELL-MAG code 2510202.06

**Specifications**

**Electrical Data**

Type ..... 1/4  
 Frequency Range ..... tunable from 115 to 175 MHz  
 SKB 115-175 1/4 ..... tunable from 140 to 175 MHz  
 Impedance ..... 50 Unbalanced  
 Radiation (H-plane) ..... 360° Omnidirectional  
 Polarization ..... Vertical  
 Gain ..... 0 dB ref. to /4 whip  
 Bandwidth at V.S.W.R. 2:1  
 SKB 115-175 1/4 ..... 10.5 MHz at 115 MHz  
 SKB 140-175 1/4 ..... 12 MHz at 140 MHz  
 V.S.W.R. at res. freq. .... 1.6: 1  
 Max Power ..... 100 Watts  
 Feed System / Position ..... Direct / Base  
 Cable Length / Type ..... 5 m / RG 58

**Mechanical Data**

Materials ..... Stainless Steel 17/7 PH, Chromed Brass  
 Height (approx.) ..... 680 mm  
 SKB 115-175 1/4 ..... 525 mm  
 Weight (approx.) ..... 280 gr  
 Mounting Hole ..... 14 or 18 mm

code 2213206.48 SKB 115-175 1/4  
 code 2209706.48 SKB 140-175 1/4

**SKA 140-230**

**Features:**

- # Mobile antenna, Mono-band
- # Unity-gain, Omnidirectional
- # Tunable by whip cutting
- # Factory tunable according to specific customer's frequency
- # 90° inclination and adjustable whip, detachable for car-washes access

**Specifications**

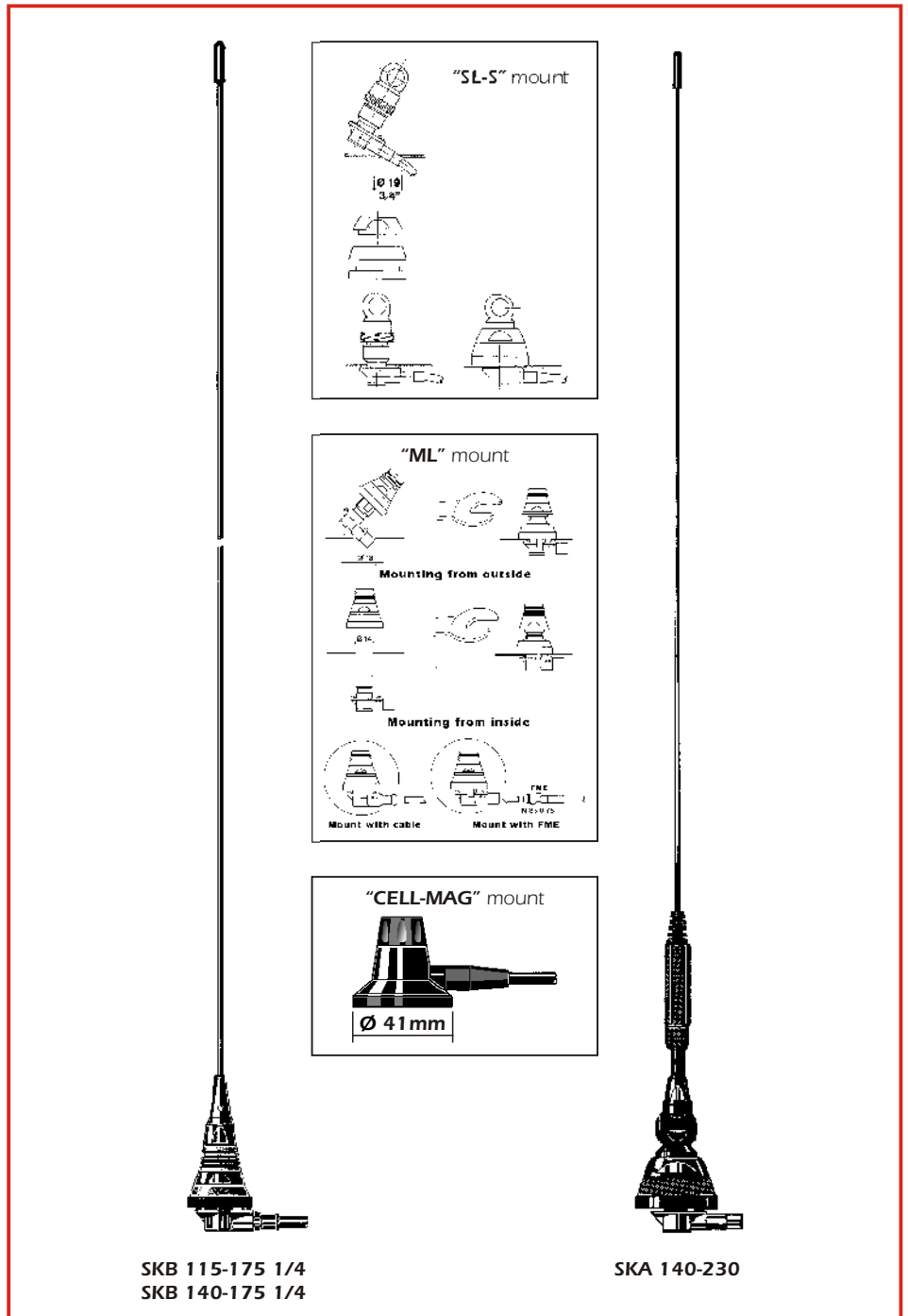
**Electrical Data**

Type ..... 1/4  
 Frequency Range ..... tunable from 140 to 230 MHz  
 Impedance ..... 50 Unbalanced  
 Radiation (H-plane) ..... 360° Omnidirectional  
 Polarization ..... Vertical  
 Gain ..... 0 dB ref. to /4 whip  
 Bandwidth at V.S.W.R. 2:1 ..... 14 MHz at 140 MHz  
 V.S.W.R. at res. freq. .... 1.5: 1 at 140 MHz  
 Max Power ..... 100 Watts  
 Standard Mount ..... "SL-S"  
 Cable Length / Type ..... 5 m / RG 58

**Mechanical Data**

Materials ... Stainless Steel 17/7 PH, Nylon, Chromed Brass  
 Height (approx.) ..... 555 mm  
 Weight (approx.) ..... 360 gr  
 Mounting Hole ..... 19 mm

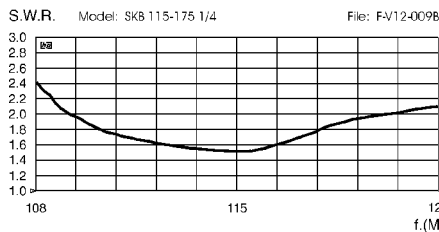
code 2206606.34 SKA 140-230



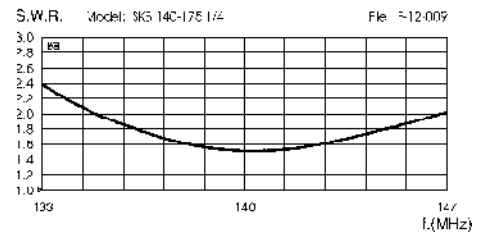
SKB 115-175 1/4  
SKB 140-175 1/4

SKA 140-230

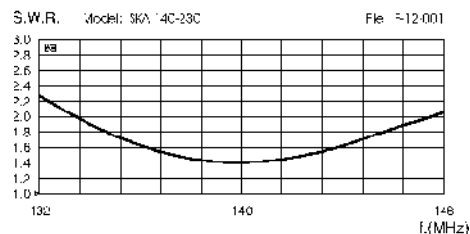
TYPICAL S.W.R. RESPONSE



TYPICAL S.W.R. RESPONSE



TYPICAL S.W.R. RESPONSE



## TURBO VHF 135-175

### Features:

- # Mobile antenna, Mono-band
- # Low-gain, Omnidirectional
- # Tunable by whip cutting
- # Protection from static discharges DC-Ground
- # 17/7 PH tapered stainless steel whip
- # 90° inclination and adjustable whip, detachable for car-washes access
- # Magnetic mount version available

### Specifications

#### Electrical Data

Type ..... 5/8  
 Design Frequency ..... tunable from 135 to 175 MHz  
 Impedance ..... 50 Unbalanced  
 Radiation (H-plane) ..... 360° Omnidirectional  
 Polarization ..... Vertical  
 Gain ..... 1.5 dB ref to /4 whip  
 Bandwidth at V.S.W.R. 2:1 ..... 6 MHz at 135 MHz  
 V.S.W.R. at res. freq. .... 1.2: 1 at 135 MHz  
 Max Power ..... 150 Watts  
 Feed System / Position ..... Transformer DC-ground/ Base Connection  
 TURBO VHF 135-175 ..... NE-TURBO connection  
 TURBO VHF 135-175 PL ..... UHF-Male  
 Cable Length / Type ..... 4 m / RG 58 (TURBO VHF only)

#### Mechanical Data

Materials ..... Stainless Steel 17/7 PH, Nylon, Brass  
 Height (approx.) ..... 1470 mm  
 Weight (approx.) ..... 540 gr  
 Mounting Hole ..... 12.5 mm (TURBO VHF only)

code 2212906.40 TURBO VHF  
 code 2212906.43 TURBO VHF PL

## MGA 140-175

### Features:

- # Mobile antenna, Mono-band
- # Unity-gain, Omnidirectional
- # Tunable by whip cutting
- # Supplied with a strong stainless steel spring
- # 180° inclination and adjustable whip, detachable for car-washes access

### Specifications

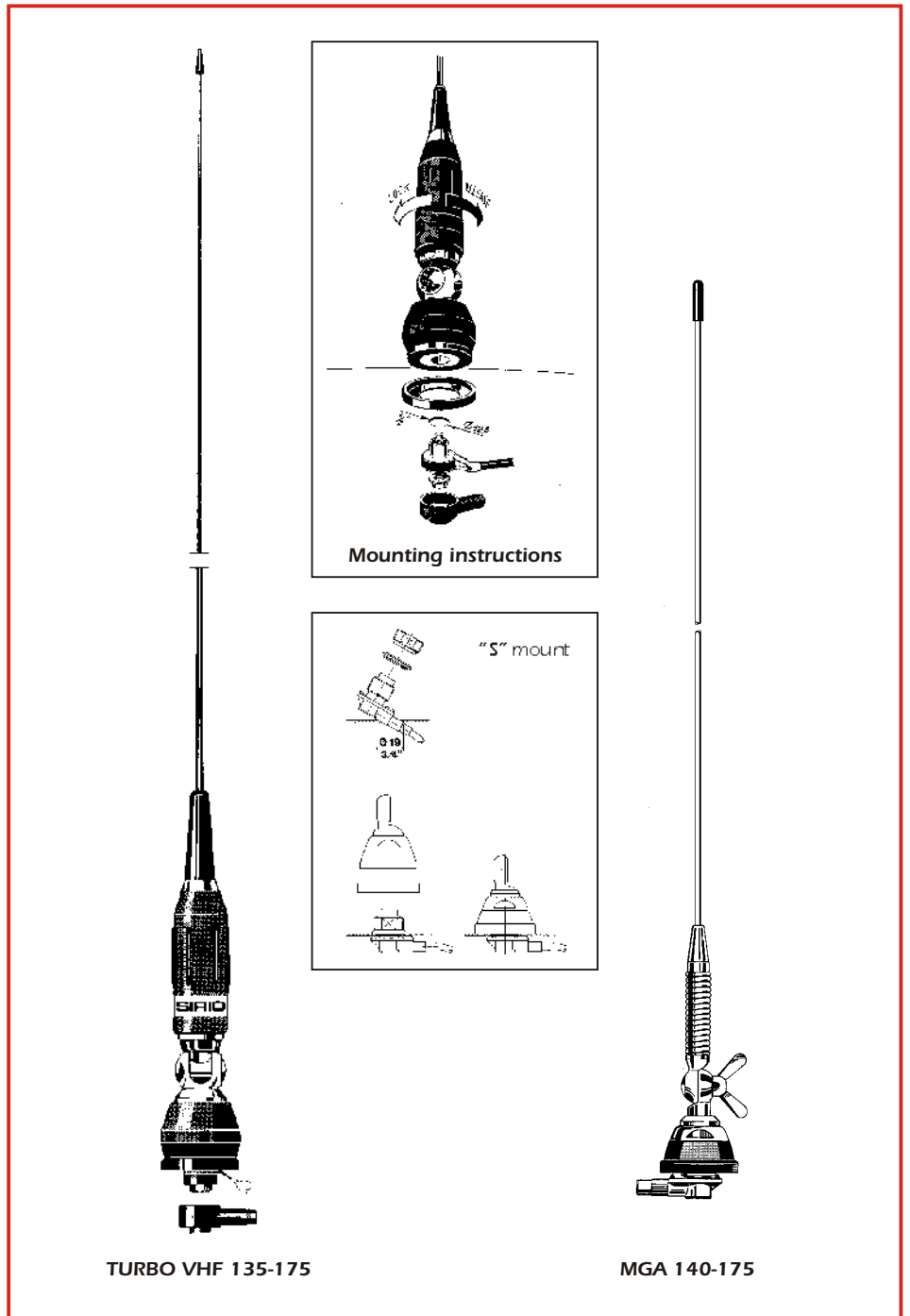
#### Electrical Data

Type ..... 1/4  
 Design Frequency ..... tunable from 140 to 175 MHz  
 Impedance ..... 50 Unbalanced  
 Radiation (H-plane) ..... 360° Omnidirectional  
 Polarization ..... Vertical  
 Gain ..... 0 dB ref to /4 whip  
 Bandwidth at V.S.W.R. 2:1 ..... 16 MHz at 140 MHz  
 V.S.W.R. at res. freq. .... 1.4: 1 at 140 MHz  
 Max Power: ..... 100 Watts  
 Feed System / Position ..... Direct / Base  
 Standard Mount ..... "S"  
 Cable Length / Type ..... 5 m / RG 58

#### Mechanical Data

Materials ..... Stainless Steel 17/7 PH, Chromed Brass  
 Height (approx.) ..... 543 mm  
 Weight (approx.) ..... 400 gr  
 Mounting Hole ..... 19 mm

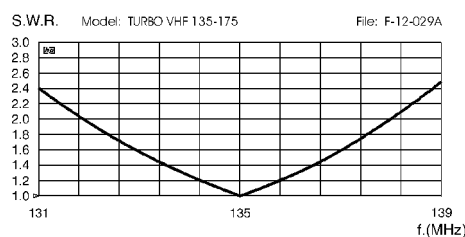
code 2213805.28 MGA 140-175 S mount  
 code 2213805.32 MGA 140-175 SL mount



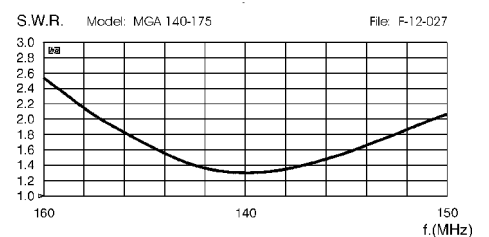
TURBO VHF 135-175

MGA 140-175

TYPICAL S.W.R. RESPONSE



TYPICAL S.W.R. RESPONSE





## HP 2000 HP 2000 C HP 140-175

### Features:

- # Mobile antenna, Mono-band
- # Low-gain, Omnidirectional
- # Suitable for fitting on magnetic mounts, angular connectors, or portable transceiver
- # HP 140-175 Tunable by whip cutting
- # Protection from static discharges DC-Ground
- # 17/7 PH tapered stainless steel whip
- # 90° tiltable whip and detachable for car-washes access
- # Magnetic mount version available

### Specifications

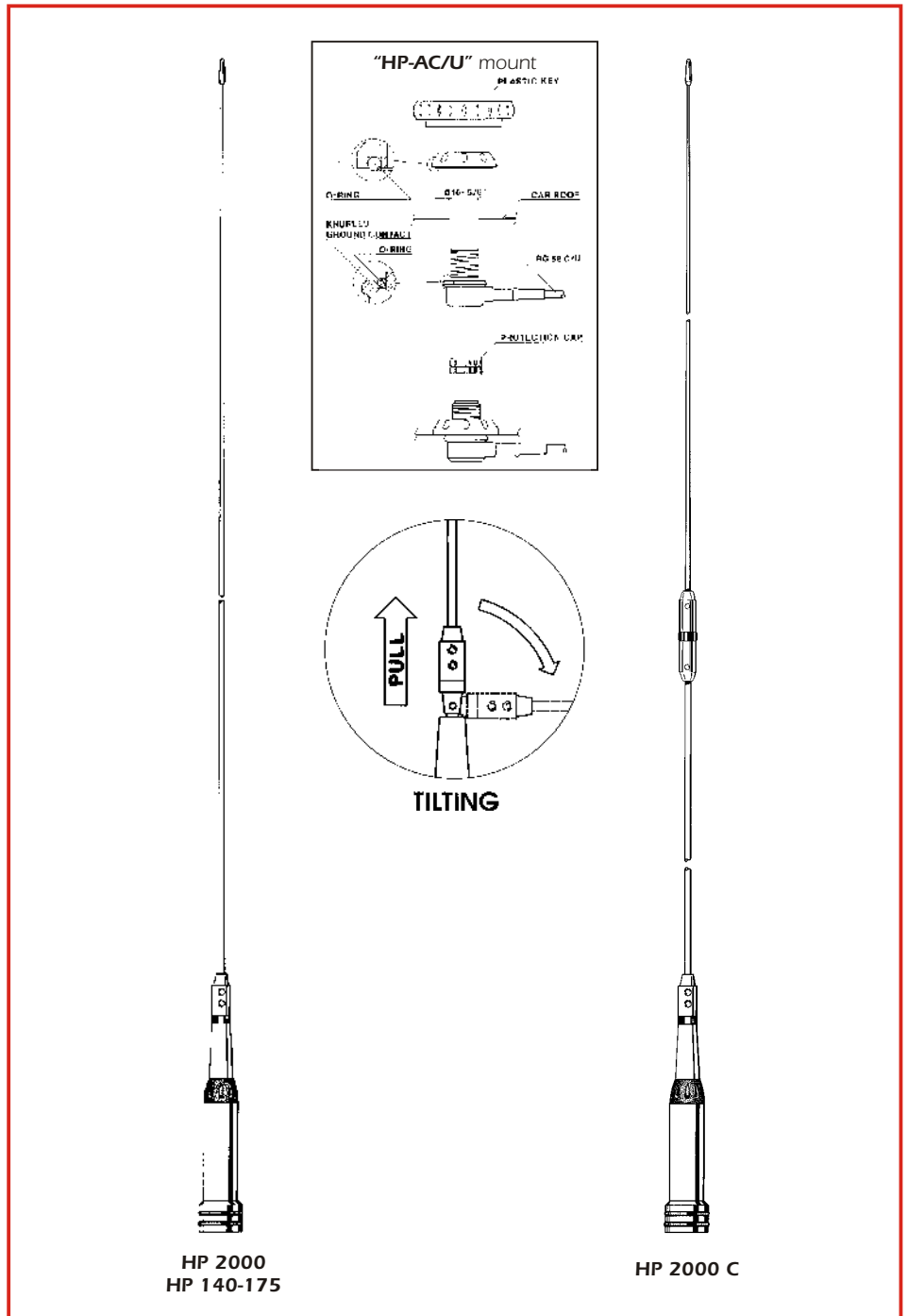
#### Electrical Data

Type	
HP 2000 .....	1/2
HP 2000 C .....	C-Loaded
HP 140-175 .....	5/8
Frequency Range	
HP 2000, HP 2000 C .....	design frequency 145 MHz
HP 140-175 .....	tunable from 139.3 to 175 MHz
Impedance .....	50 Unbalanced
Radiation (H-plane) .....	360° Omnidirectional
Polarization .....	Vertical
Gain	
HP 2000, HP 140-175 .....	1.5 dB ref. to /4 whip
HP 2000 C .....	2 dB ref. to /4 whip
Bandwidth at V.S.W.R. 2:1	
HP 2000 .....	5.5 MHz
HP 2000 C .....	20 MHz
HP 140-175 .....	6.6 MHz at 139.3 MHz
V.S.W.R. at res. freq.	
HP 2000, HP 2000 C .....	1.2: 1
HP 140-175 .....	1.2: 1 at 139.3 MHz
Max Power .....	150 Watts
Feed System / Position .....	Transformer DC-Ground / Base
Connector Type .....	UHF-Male

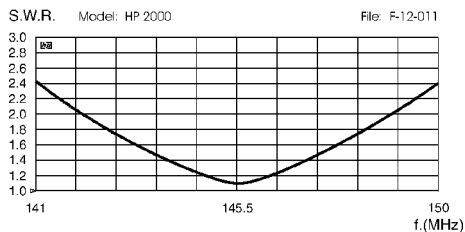
#### Mechanical Data

Materials ...	Stainless Steel 17/7 PH, Nylon, Chromed Brass
Height (approx.)	
HP 2000 .....	1050 mm
HP 2000 C .....	1410 mm
HP 140-175 .....	1435 mm
Weight (approx.) .....	320 gr

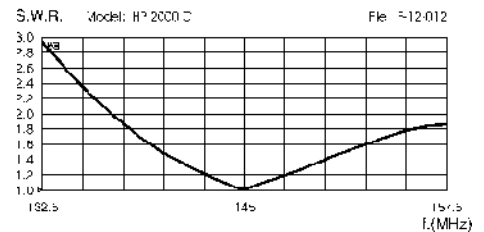
code **2210105.05** HP 2000  
code **2210205.05** HP 2000 C  
code **2213405.05** HP 140-175



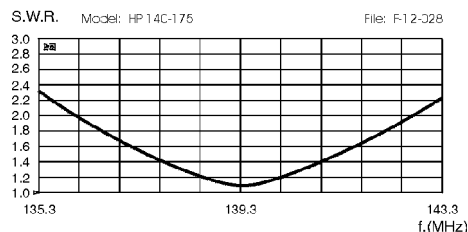
TYPICAL S.W.R. RESPONSE



TYPICAL S.W.R. RESPONSE



TYPICAL S.W.R. RESPONSE



**SM 2**  
**SMA 2**

**Features:**

- # Mobile antenna, Mono-band
- # Low-gain, Omnidirectional
- # Tunable by whip cutting
- # Factory tunable according to specific customer's frequency
- # SM 2 Black fiberglass conic whip
- # SMA 2 17/7 PH tapered stainless steel whip
- # Supplied with a strong stainless steel spring
- # 180° inclination and adjustable whip, detachable for car-washes access
- # Black chrome version available
- # Magnetic mount version available

**Specifications**

**Electrical Data**

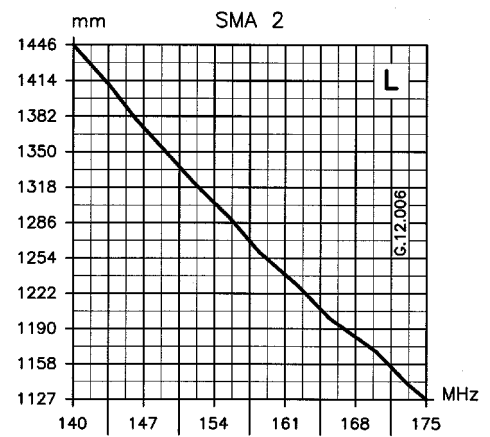
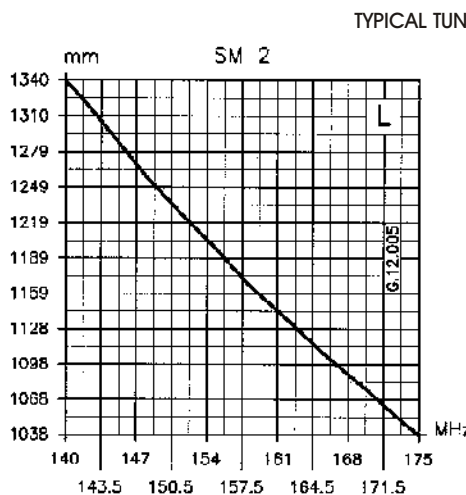
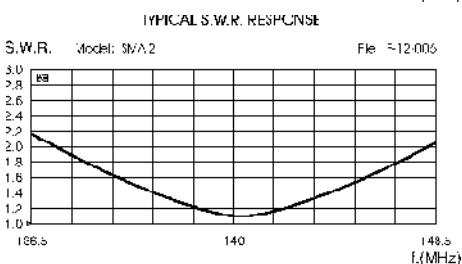
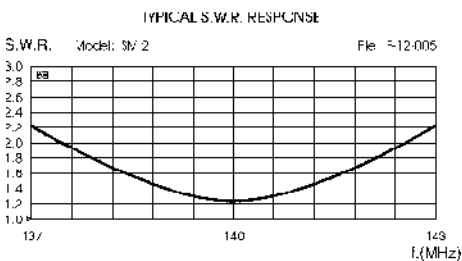
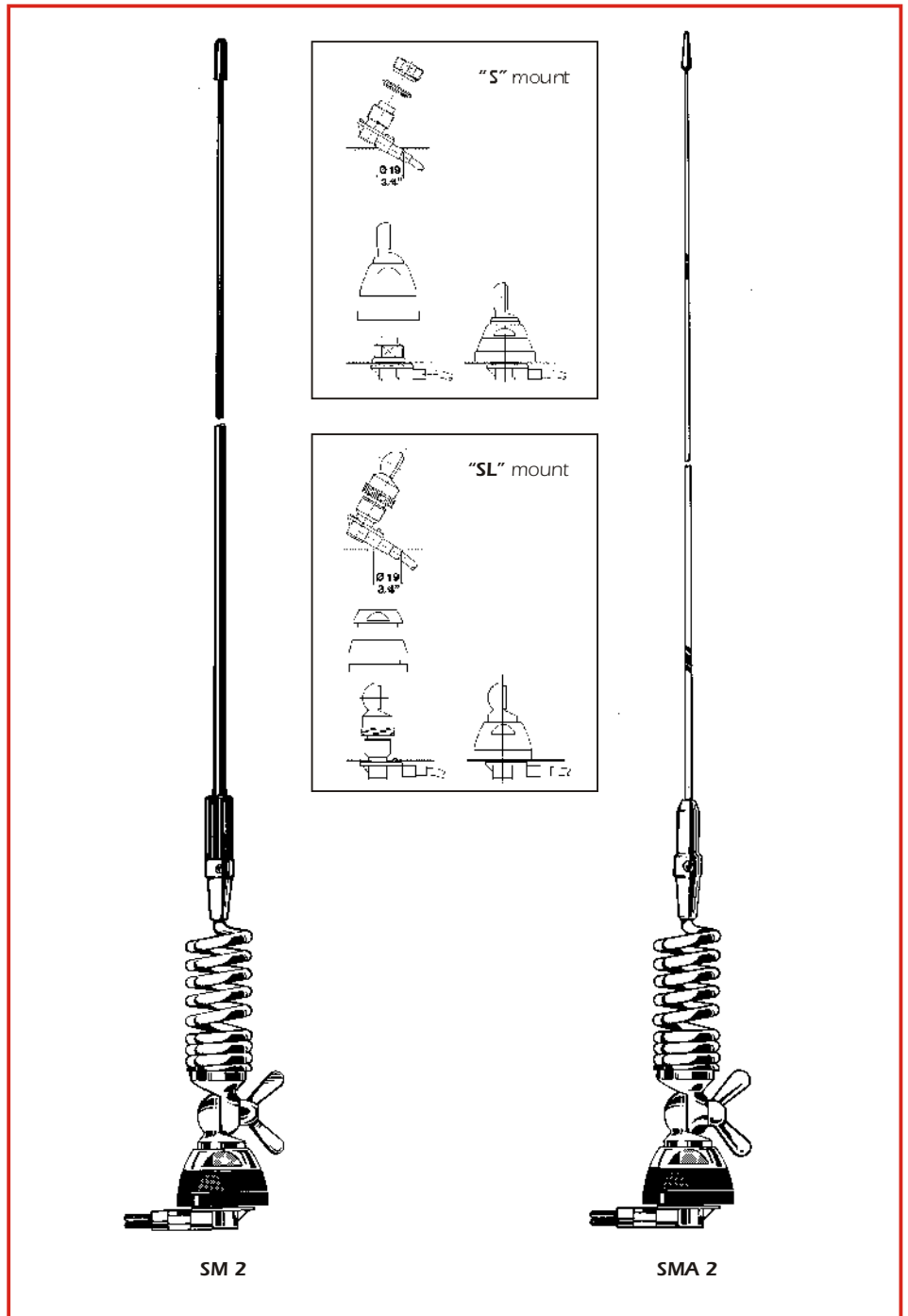
Type ..... 5/8  
 Frequency Range ..... tunable from 140 to 175 MHz  
 Impedance ..... 50 Unbalanced  
 Radiation (H-plane) ..... 360° Omnidirectional  
 Polarization ..... Vertical  
 Gain ..... 1.5 dB ref. to /4 whip  
 Bandwidth at V.S.W.R. 2:1  
 SM 2 ..... 5.3 MHz at 140 MHz  
 SMA 2 ..... 6.5 MHz at 140 MHz  
 V.S.W.R. at res. freq. .... 1.2: 1 at 140 MHz  
 Max Power ..... 100 Watts  
 Feed System / Position ..... Transformer / Base  
 Standard Mount ..... "S"  
 Cable Length / Type ..... 5 m / RG 58

**Mechanical Data**

Materials  
 SM 2 ..... Glass Fibre, Stainless Steel, Nylon  
 SMA 2 ..... Stainless Steel 17/7 PH, Nylon  
 Height (approx.)  
 SM 2 ..... 1345 mm  
 SMA 2 ..... 1440 mm  
 Weight (approx.) ..... 350 gr  
 Mounting Hole ..... 19 mm

**code 2205024.28 SM 2 S mount**  
**code 2205024.32 SM 2 SL mount**

**code 2205105.28 SMA 2 S mount**  
**code 2205105.32 SMA 2 SL mount**



\* Diagrams are recommended to be used as a guide and fine tuning by means of SWR-meter

**SM 4  
SMA 4**

**Features:**

- # Mobile antenna, Mono-band
- # Unity-gain, Omnidirectional
- # Tunable by whip cutting
- # Factory tunable according to specific customer's frequency
- # SM 4 Black fiberglass conic whip
- # SMA 4 17/7 PH stainless steel cylindrical whip
- # 180° inclination and adjustable whip, detachable for car-washes access
- # Black chrome version available
- # Magnetic mount version available

**Specifications**

**Electrical Data**

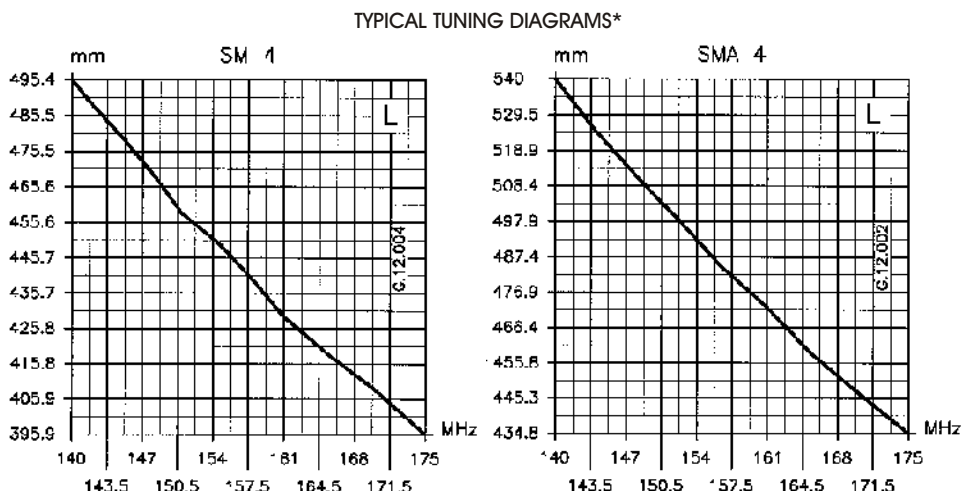
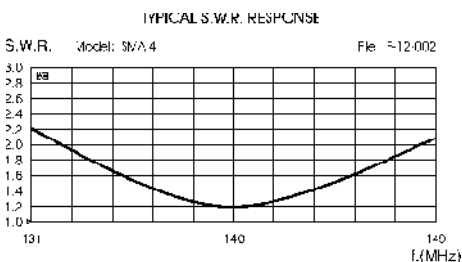
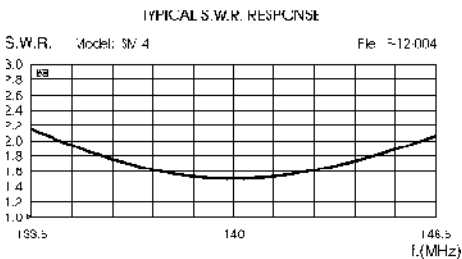
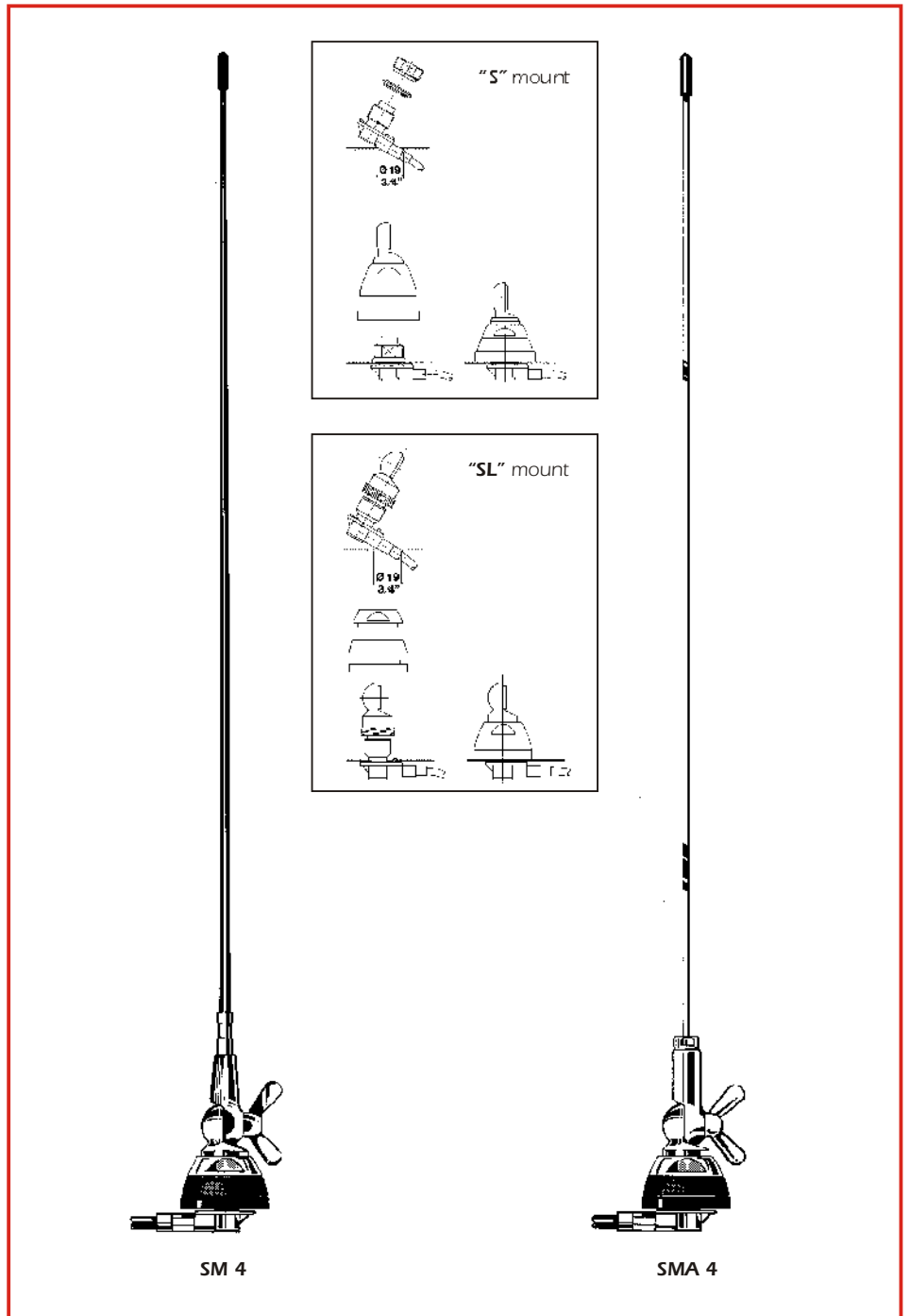
Type ..... 1/4  
 Frequency Range ..... tunable from 140 to 175 MHz  
 Impedance ..... 50 Unbalanced  
 Radiation (H-plane) ..... 360° Omnidirectional  
 Polarization ..... Vertical  
 Gain ..... 0 dB ref. to /4 whip  
 Bandwidth at V.S.W.R. 2:1  
 SM 4 ..... 11 MHz at 140 MHz  
 SMA 4 ..... 16 MHz at 140 MHz  
 V.S.W.R. at res. freq.  
 SM 4 ..... 1.5: 1 at 140 MHz  
 SMA 4 ..... 1.3: 1 at 140 MHz  
 Max Power ..... 100 Watts  
 Feed System / Position ..... Direct / Base  
 Standard Mount ..... "S"  
 Cable Length / Type ..... 5 m / RG 58

**Mechanical Data**

**Materials**  
 SM 4 ..... Glass Fibre, Chromed Brass  
 SMA 4 ..... Stainless Steel 17/7 PH, Chromed Brass  
 Height (approx.)  
 SM 4 ..... 500 mm  
 SMA 4 ..... 540 mm  
 Weight (approx.) ..... 200 gr  
 Mounting Hole ..... 19 mm

**code 2205224.28 SM 4 S mount**  
**code 2205224.32 SM 4 SL mount**

**code 2205305.28 SMA 4 S mount**  
**code 2205305.32 SMA 4 SL mount**



\* Diagrams are recommended to be used as a guide and fine tuning by means of SWR-meter

## SKA 140-175 5/8

**Features:**

- # Mobile antenna, Mono-band
- # Low-gain, Omnidirectional
- # Tunable by whip cutting
- # 17/7 PH stainless steel whip
- # 180° inclination and adjustable whip, detachable for car-washes access
- # Magnetic mount version available

**Specifications**

**Electrical Data**

Type ..... 5/8  
 Frequency Range ..... tunable from 138 to 175 MHz  
 Impedance ..... 50 Unbalanced  
 Radiation (H-plane) ..... 360° Omnidirectional  
 Polarization ..... Vertical  
 Gain ..... 1.5 dB ref. to /4 whip  
 Bandwidth at V.S.W.R. 2:1 ..... 6 MHz at 138 MHz  
 V.S.W.R. at res. freq. .... 1.2: 1 at 138 MHz  
 Max Power ..... 100 Watts  
 Feed System / Position ..... Transformer / Base  
 Standard Mount ..... "S"  
 Cable Length / Type ..... 5 m / RG 58

**Mechanical Data**

Materials ..... Stainless Steel 17/7 PH, Chromed Brass  
 Height (approx.) ..... 1440 mm  
 Weight (approx.) ..... 280 gr  
 Mounting Hole ..... 19 mm

code 2206706.29 SKA 140-175 5/8 S mount  
 code 2206706.33 SKA 140-175 5/8 SL mount

## MAG 160 5/8

**Features:**

- # Mobile antenna, Mono-band
- # Low-gain, Omnidirectional
- # Suitable for fitting on magnetic mounts, angular connectors, or portable transceiver
- # MAG 160 5/8 SPRING is supplied with a strong stainless steel spring
- # Tunable by whip cutting
- # 17/7 PH stainless steel whip
- # Black chrome version available
- # Magnetic mount version available

**Specifications**

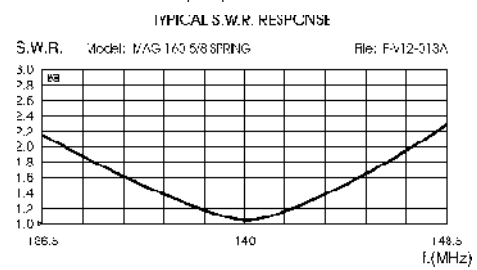
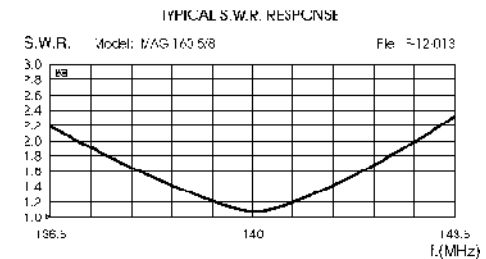
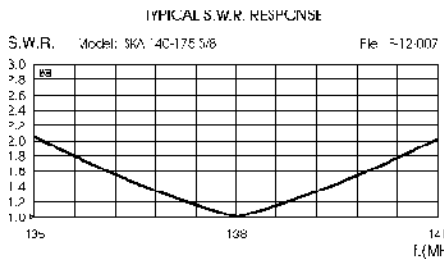
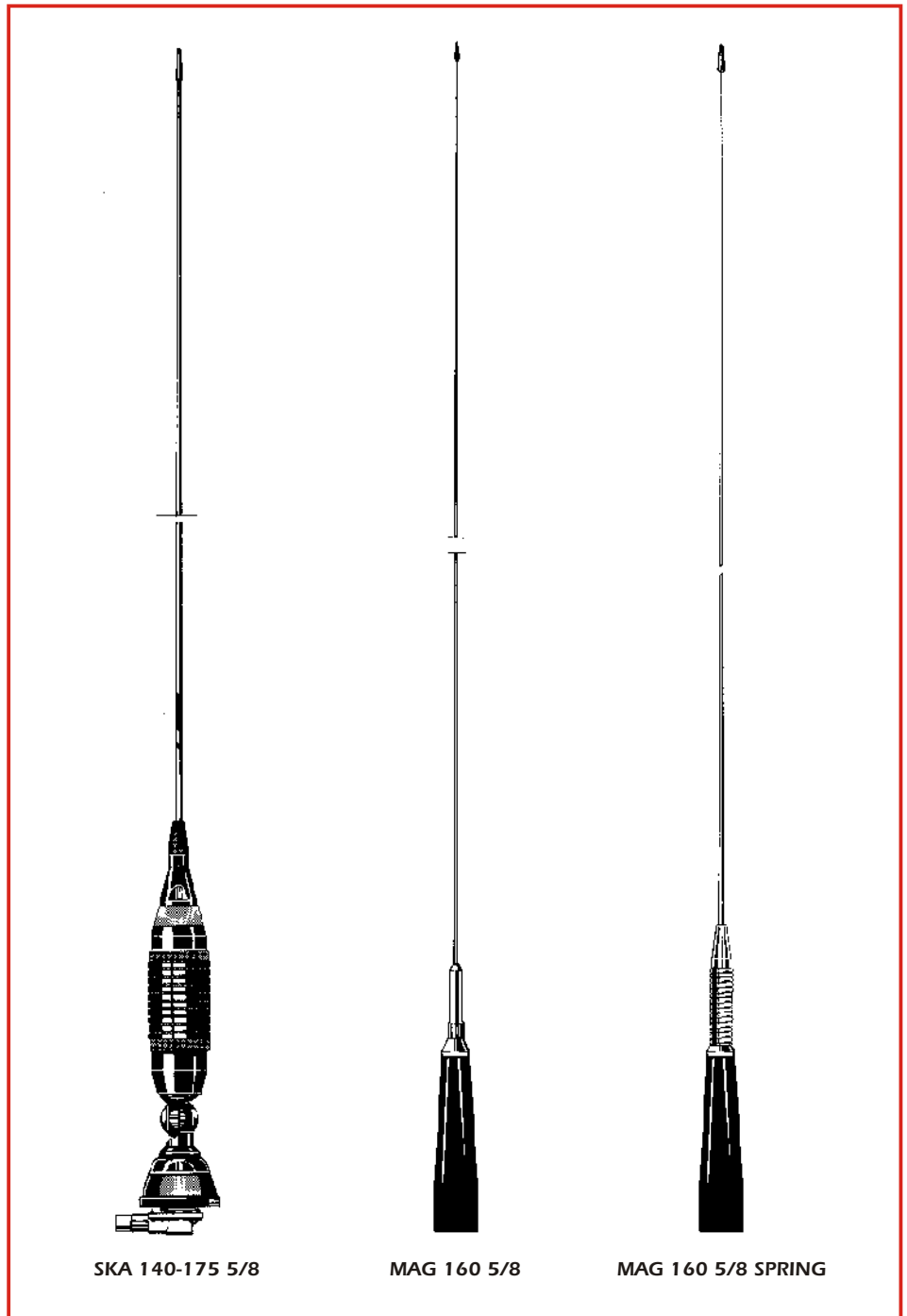
**Electrical Data**

Type ..... 5/8  
 Frequency Range ..... tunable from 140 to 175 MHz  
 Impedance ..... 50 Unbalanced  
 Radiation (H-plane) ..... 360° Omnidirectional  
 Polarization ..... Vertical  
 Gain ..... 1.5 dB ref. to /4 whip  
 Bandwidth at V.S.W.R. 2:1 ..... 6 MHz at 140 MHz  
 V.S.W.R. at res. freq. .... 1.3: 1 at 140 MHz  
 Max Power ..... 100 Watts  
 Feed System / Position ..... Transformer / Base  
 Connector Type ..... UHF-Male

**Mechanical Data**

Materials ... Stainless Steel 17/7 PH, Chromed Brass, Nylon  
 Height (approx.) ..... 1390 mm  
 Weight (approx.) ..... 160 gr

code 2430505.05 MAG 160 5/8  
 code 2431705.05 MAG 160 5/8 SPRING



# MAG 144 PL PL 144 M

**Features:**

- # Suitable for fitting on magnetic mounts, angular connectors, or portable transceiver
- # Unity-gain, Omnidirectional, Mono-band
- # Tunable by whip cutting
- # Factory tunable according to specific customer's frequency
- # MAG 144 PL 17/7 PH stainless steel cylindrical whip
- # PL 144 M Supplied with a strong stainless steel spring, 17/7 PH tapered stainless steel whip
- # Magnetic mount version available

**Specifications**

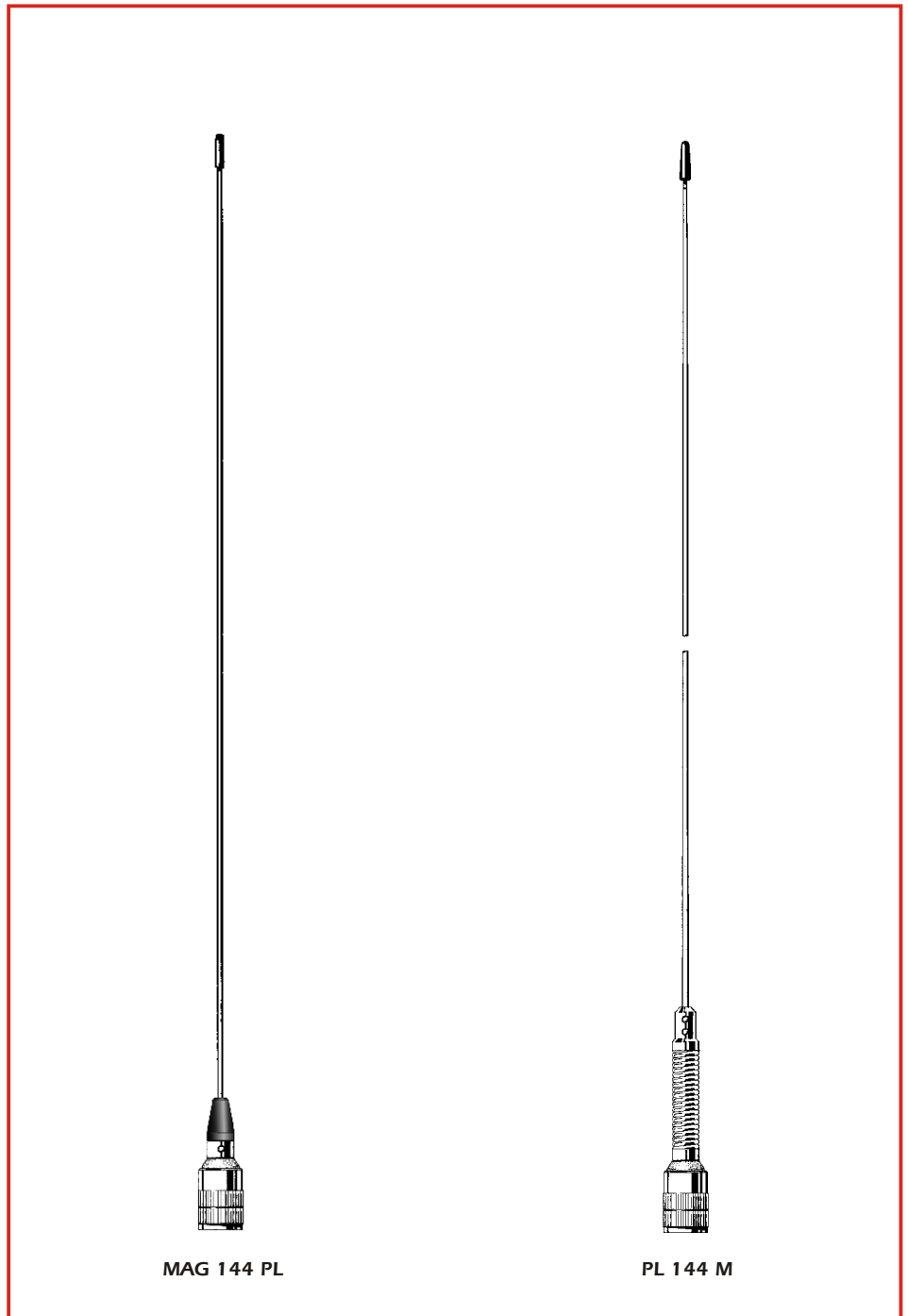
**Electrical Data**

Type .....	1/4
Frequency Range .....	tunable from 140 to 175 MHz
Impedance .....	50 Unbalanced
Radiation (H-plane) .....	360° Omnidirectional
Polarization .....	Vertical
Gain .....	0dB ref. to /4 whip
Bandwidth at V.S.W.R. 2:1	
MAG 144 PL .....	16 MHz at 140 MHz
PL 144 M .....	17 MHz at 140 MHz
V.S.W.R. at res. freq.	
MAG 144 PL .....	1.3: 1 at 140 MHz
PL 144 M .....	1.2: 1 at 140 MHz
Max Power .....	100 Watts
Feed System / Position .....	Direct / Base
Connector Type .....	UHF-Male

**Mechanical Data**

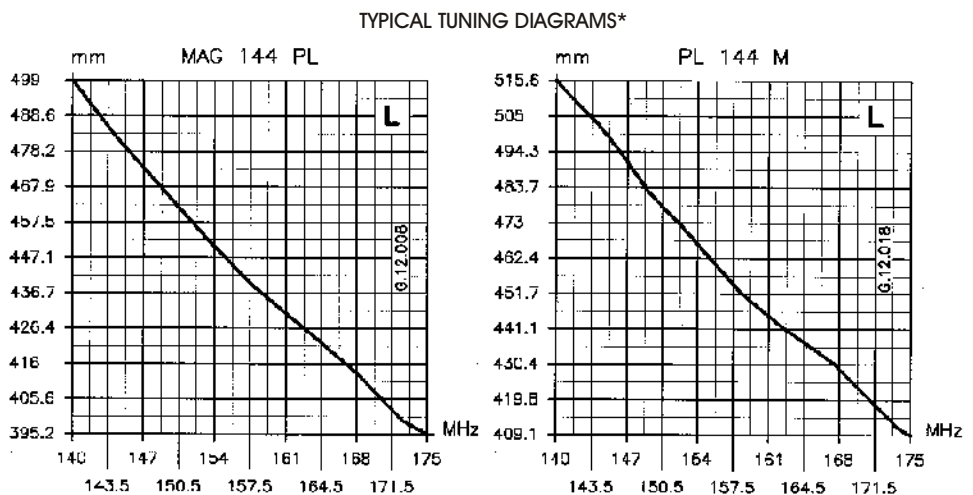
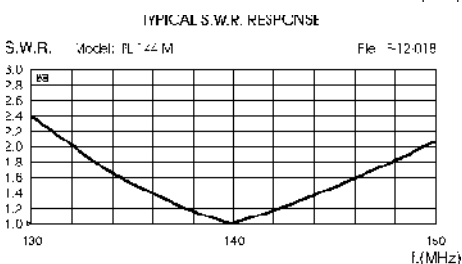
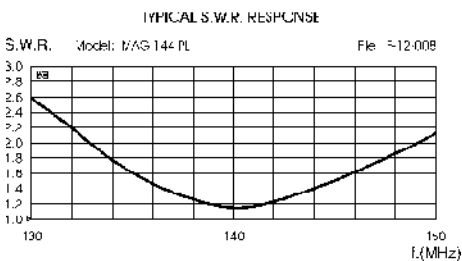
Materials .....	Stainless Steel 17/7 PH, Chromed Brass
Height (approx.)	
MAG 144 PL .....	500 mm
PL 144 M .....	520 mm
Weight (approx.)	
MAG 144 PL .....	54 gr
PL 144 M .....	66 gr

**code 2430205.05 MAG 144 PL**  
**code 2431505.05 PL 144 M**



MAG 144 PL

PL 144 M



\* Diagrams are recommended to be used as a guide and fine tuning by means of SWR-meter

## MARINER 43 S2

**Features:**

- # Marine antenna, Mono-band
- # Unity-gain, Omnidirectional
- # Designed to work without Ground Plane
- # Protection from static discharges DC-Ground
- # Perfect protection against the worst weather conditions
- # Stainless steel hardware
- # High quality white fiberglass tapered whip
- # 180° inclination and adjustable whip

**Specifications**

**Electrical Data**

Type ..... 1/4 Base Loaded  
 Design frequency ..... 43 MHz  
 Impedance ..... 50 Unbalanced  
 Radiation (H-plane) ..... 360° Omnidirectional  
 Polarization ..... Vertical  
 Gain ..... 0 dBd, 2.15 dBi  
 Bandwidth at V.S.W.R. 2:1 ..... 6.7 MHz  
 V.S.W.R. at res. freq. .... 1.3: 1  
 Max Power ..... 50 Watts  
 Feed System / Position ..... Transformer DC-ground / Base  
 Connector Type ..... UHF-Female

**Mechanical Data**

Materials ..... Glass Fibre, Chromed Brass, Nylon  
 Height (approx.) ..... 1420 mm  
 Weigh (approx.) ..... 455 gr

code **2304020.85** MARINER 43 S2

## TA 43 TA 43 INOX

**Features:**

- # Marine antenna, Mono-band
- # Unity-gain, Omnidirectional
- # Designed to work without Ground Plane
- # Perfect protection against the worst weather conditions
- # Provided with stainless steel bracket for an easy installation on mast top
- # Stainless steel hardware
- # TA 43 High quality whip made of brass and copper protected by fiberglass tube
- # TA 43 INOX 17/7 PH tapered stainless steel whip

**Specifications**

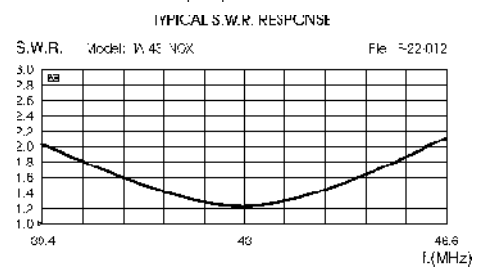
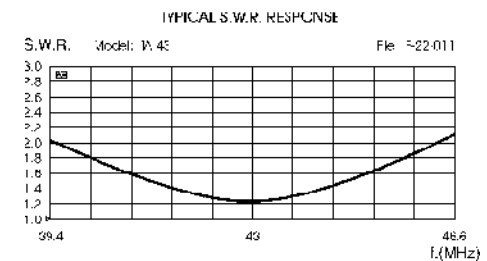
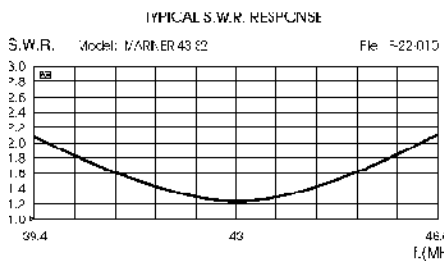
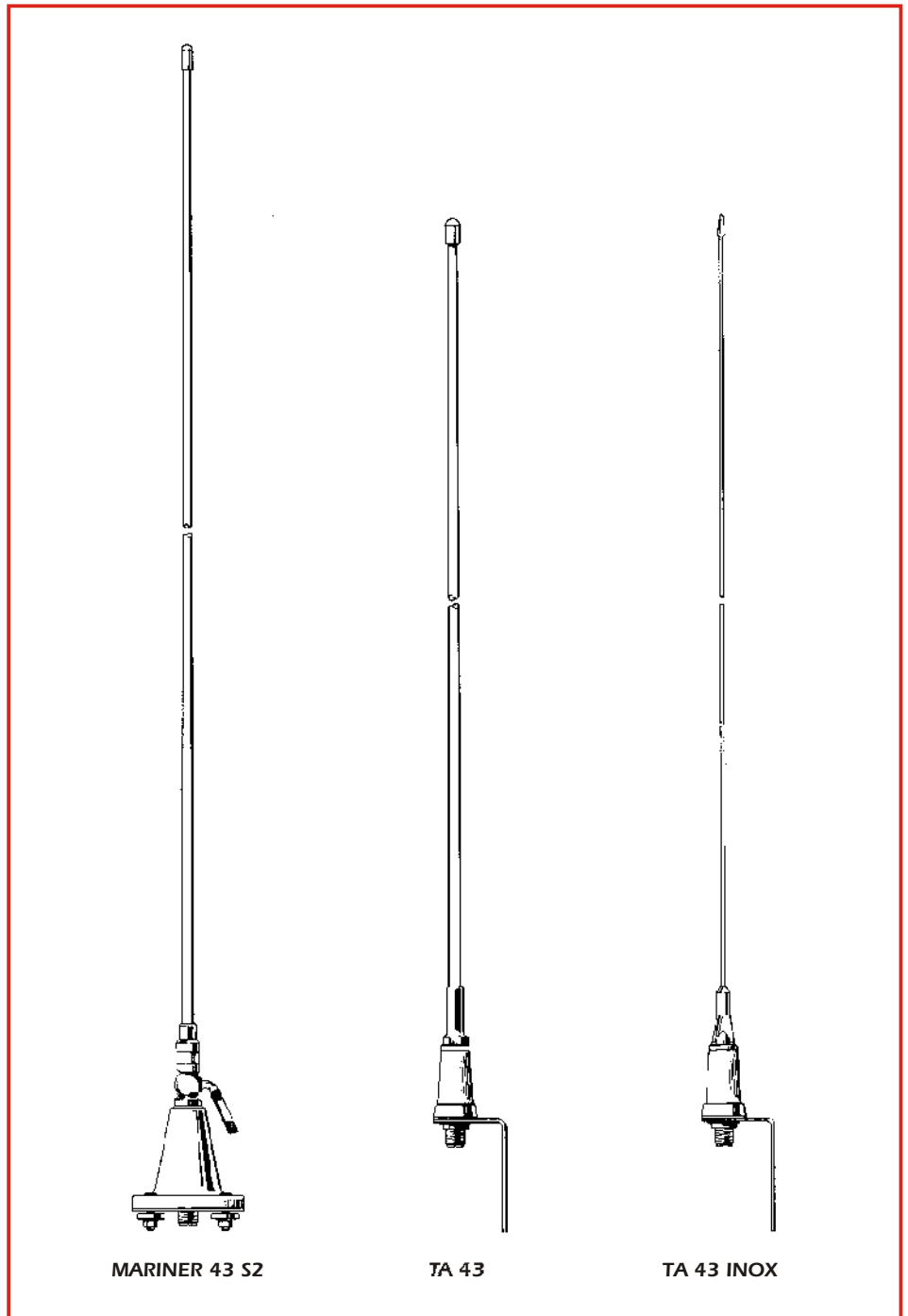
**Electrical Data**

Type ..... 1/4 Base Loaded  
 Design frequency ..... 43 MHz  
 Impedance ..... 50 Unbalanced  
 Radiation (H-plane) ..... 360° Omnidirectional  
 Polarization ..... Vertical  
 Gain ..... 0 dBd, 2.15 dBi  
 Bandwidth at V.S.W.R. 2:1 ..... 6.7 MHz  
 V.S.W.R. at res. freq. .... 1.3: 1  
 Max Power ..... 50 Watts  
 Feed System / Position ..... Transformer DC-ground / Base  
 Connector Type ..... UHF-Female

**Mechanical Data**

Materials ..... Glass Fibre, 17/7 PH Stainless Steel, Nylon  
 Height (approx.) ..... 1070 mm  
 Weigh (approx.) ..... 380 gr

code **2304320.80** TA 43  
 code **2304305.80** TA 43 INOX



## SB 43 M

### Features:

- # Marine antenna, Mono-band
- # Unity-gain, Omnidirectional
- # Designed to work without Ground Plane
- # Perfect protection against the worst weather conditions
- # Chrome-plated brass ferrule
- # Supplied with white coaxial cable RG-58 C/U directly connected
- # Stainless steel hardware
- # High quality whip made of brass and copper protected by fiberglass tube
- # Wide range of optional mounting bases

### Specifications

#### Electrical Data

Type ..... 3/8  
 Design frequency ..... 43 MHz  
 Impedance ..... 50 Unbalanced  
 Radiation (H-plane) ..... 360° Omnidirectional  
 Polarization ..... Vertical  
 Gain ..... 0 dBd, 2.15 dBi  
 Bandwidth at V.S.W.R. 2:1 ..... 12 MHz  
 V.S.W.R. at res. freq. .... 1.3: 1  
 Max Power ..... 50 Watts  
 Feed System / Position ..... Transformer DC-ground / Base  
 Standard Mount ..... "M3-OT"  
 Cable Length / Type ..... 7 m / white RG 58

#### Mechanical Data

Materials ..... Glass Fibre, Chromed Brass, Nylon  
 Height (approx.) ..... 2600 mm  
 Weight (approx.) ..... 1720 gr

code **2304220.84 SB 43 M**

## CRUISER 43

### Features:

- # Marine antenna, Mono-band
- # Unity-gain, Omnidirectional
- # Designed to work without Ground Plane
- # Protection from static discharges DC-Ground
- # Perfect protection against the worst weather conditions
- # Supplied with white coaxial cable RG-58 C/U directly connected
- # Stainless steel hardware
- # High quality white fiberglass tapered whip
- # 180° inclination and adjustable whip

### Specifications

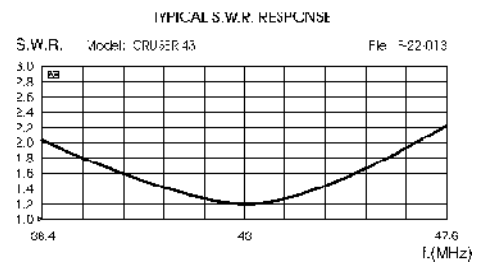
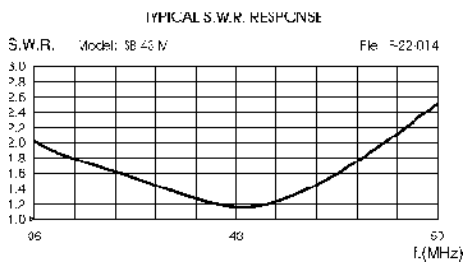
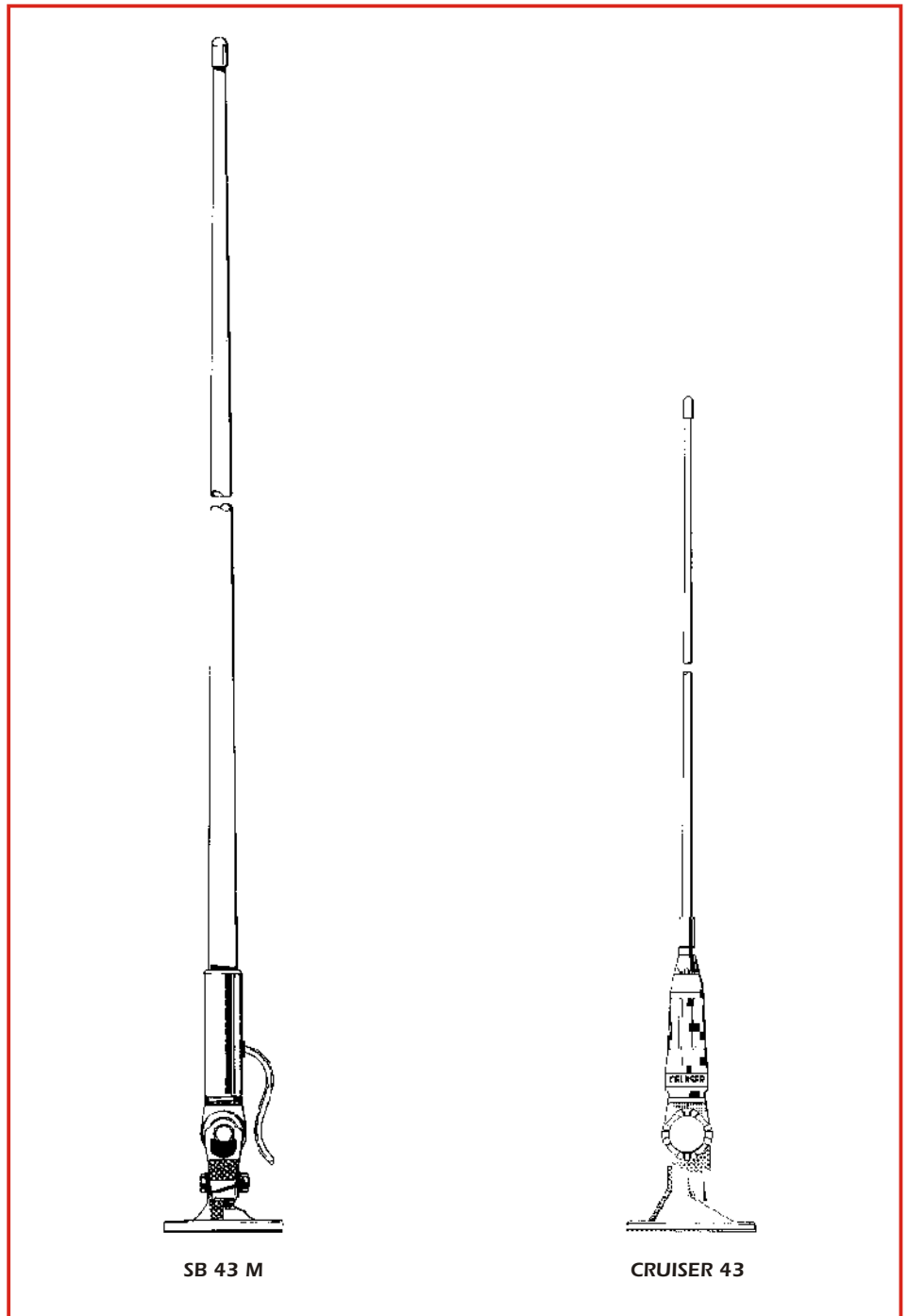
#### Electrical Data

Type ..... 1/4 Base Loaded  
 Design frequency ..... 43 MHz  
 Impedance ..... 50 Unbalanced  
 Radiation (H-plane) ..... 360° Omnidirectional  
 Polarization ..... Vertical  
 Gain ..... 0 dBd, 2.15 dBi  
 Bandwidth at V.S.W.R. 2:1 ..... 8.3 MHz  
 V.S.W.R. at res. freq. .... 1.3: 1  
 Max Power ..... 50 Watts  
 Feed System / Position ..... Transformer DC-ground / Base  
 Standard Mount ..... "M8-NY"  
 Cable Type / Length ..... 5 m / white RG 58

#### Mechanical Data

Materials ..... Glass Fibre, Chromed Brass, Nylon  
 Height (approx.) ..... 1505 mm  
 Weight (approx.) ..... 720 gr

code **2304120.83 CRUISER 43**



## CRUISER VHF

### Features:

- # Marine antenna
- # Mono-band
- # Unity-gain
- # Omnidirectional
- # Designed to work without Ground Plane
- # Perfect protection against the worst weather conditions
- # Supplied with white coaxial cable RG-58 C/U directly connected
- # Stainless steel hardware
- # High quality white fiberglass conic whip
- # 180° inclination and adjustable whip

### Specifications

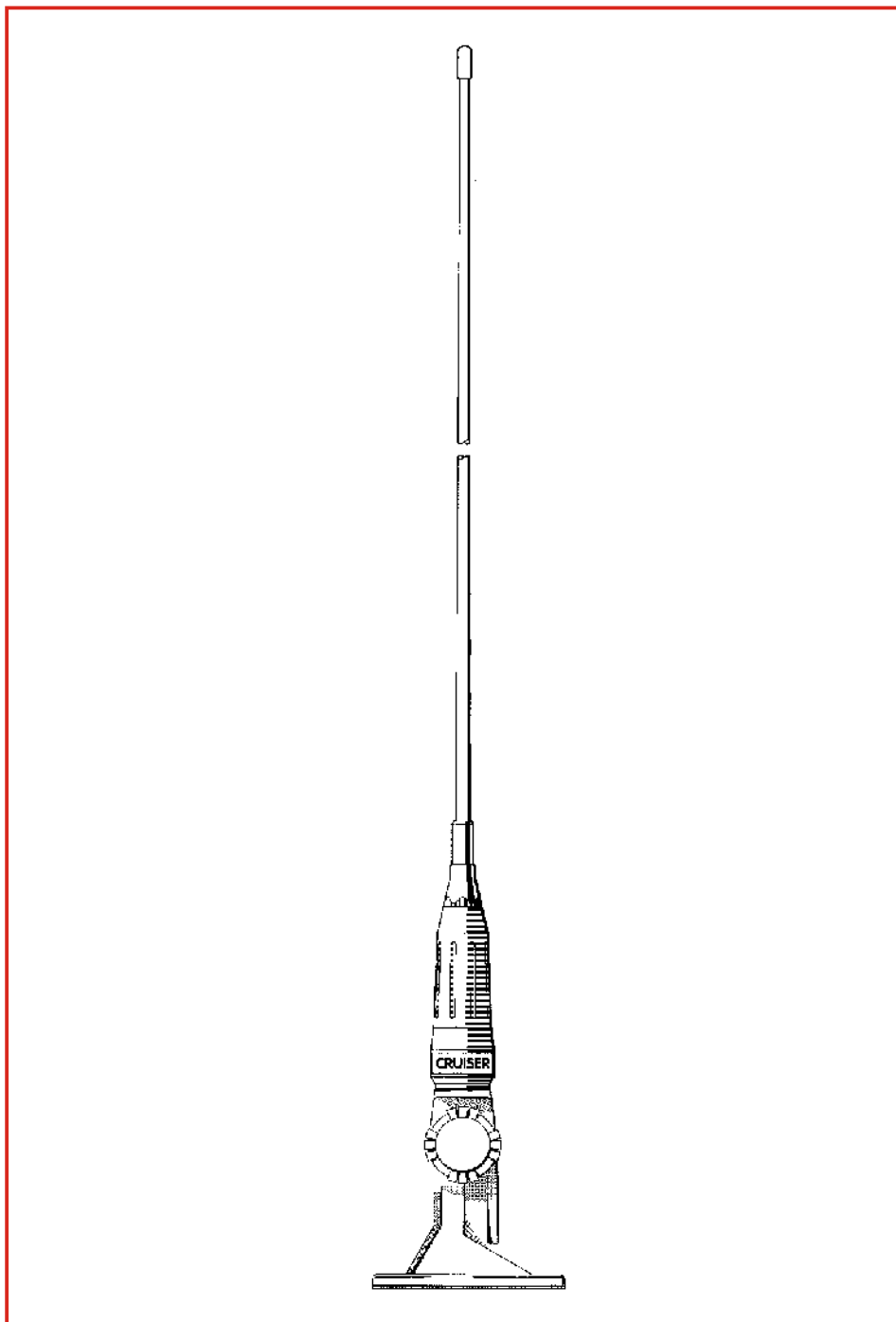
#### Electrical Data

Type ..... 1/2  
 Frequency Range at V.S.W.R. 2:1 ..... 154-162.6 MHz  
 Impedance ..... 50 Unbalanced  
 Radiation (H-plane) ..... 360° Omnidirectional  
 Radiation (E-plane) ..... Beamwidth at -3 dB = 60°  
 Radiation angle deg. .... 23°  
 Polarization ..... Vertical  
 Gain ..... 0 dBd, 2.15 dBi  
 Bandwidth at V.S.W.R. 2:1 ..... 8.6 MHz  
 V.S.W.R. at res. freq. .... 1.3: 1  
 Max Power ..... 100 Watts  
 Feed System / Position ..... Transformer DC-ground / Base  
 Standard Mount ..... "M8-NY"  
 Cable Length / Type ..... 5.5 m / white RG 58

#### Mechanical Data

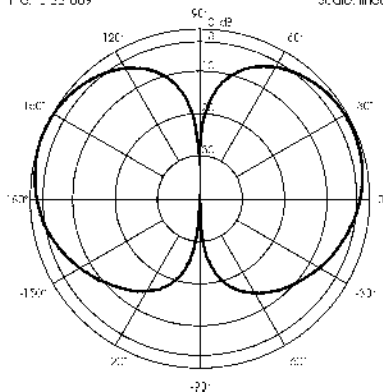
Materials ..... Glass Fibre, Chromed Brass, Nylon  
 Height (approx.) ..... 1100 mm  
 Weight (approx.) ..... 680 gr

code **2301520.83**



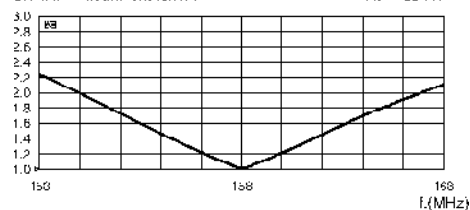
TYPICAL RADIATION PATTERN in E-plane at 158 MHz

File: 22-009 Scale: linear



TYPICAL S.W.R. RESPONSE

S.W.R. Model: CRUISER VHF File: 22-009





## MARINER 160 S2 MARINER 160 S3

### Features:

- # Marine antenna, Mono-band
- # Omnidirectional
- # MARINER 160 S2 Unity-gain,  
MARINER 160 S3 Low-gain
- # Designed to work without Ground Plane
- # Protection from static discharges  
DC-Ground
- # Stainless steel hardware
- # High quality white fiberglass whip

### Specifications

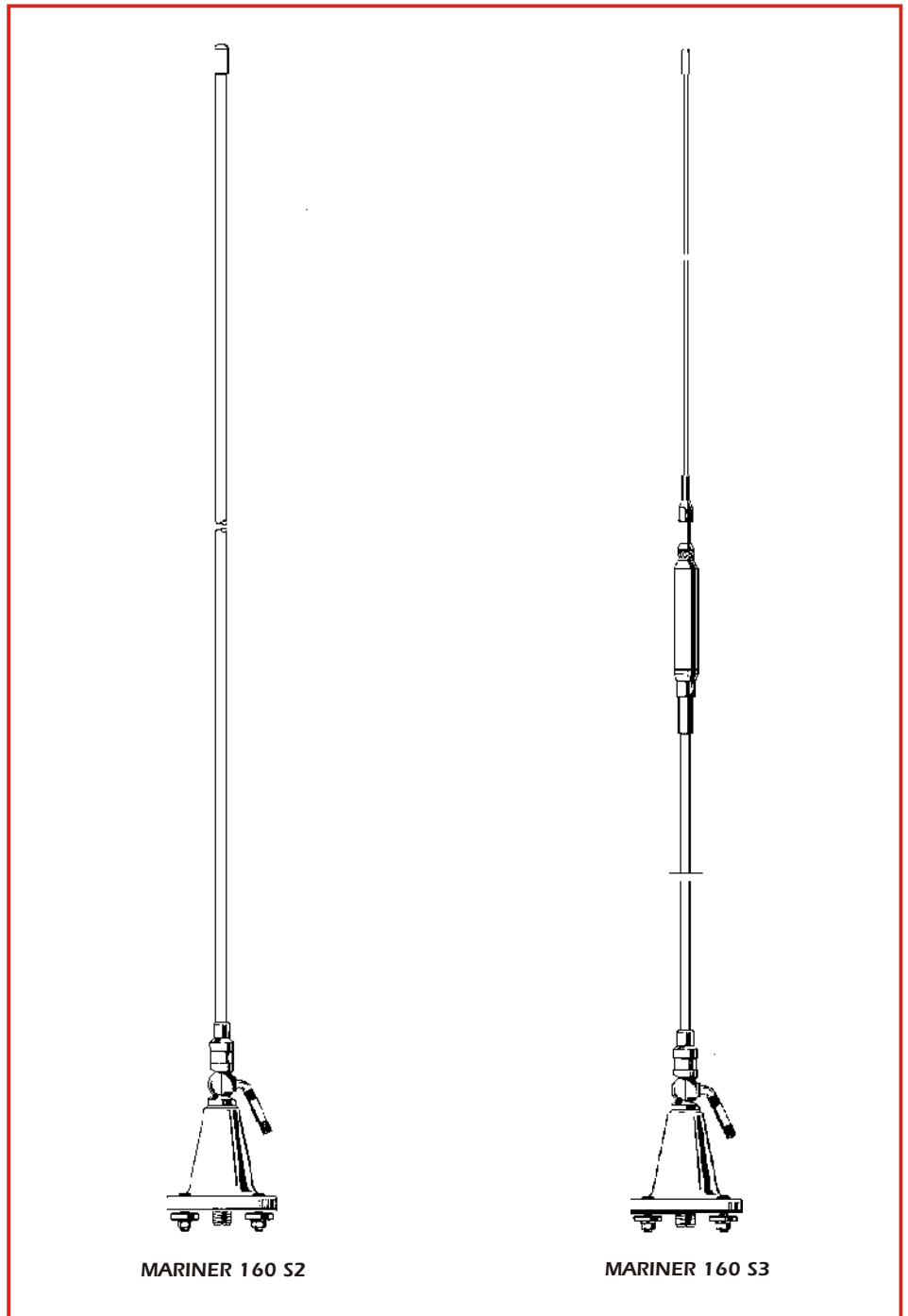
#### Electrical Data

Type	
MARINER 160 S2	1/2
MARINER 160 S3	2 x 1/2 Colinear
Frequency Range at V.S.W.R. 2:1	
MARINER 160 S2	155-162 MHz
MARINER 160 S3	155-160.6 MHz
Impedance	50 Unbalanced
Radiation (H-plane)	360° Omnidirectional
Radiation (E-plane)	
MARINER 160 S2	Beamwidth at -3 dB = 60°
MARINER 160 S3	Beamwidth at -3 dB = 35°
Radiation angle deg.	
MARINER 160 S2	23°
MARINER 160 S3	-14°
Polarization	Vertical
Gain	
MARINER 160 S2	0 dBd, 2.15 dBi
MARINER 160 S3	2 dBd, 4.15 dBi
Bandwidth at V.S.W.R. 2:1	
MARINER 160 S2	6.7 MHz
MARINER 160 S3	5.6 MHz
V.S.W.R. at res. freq.	1.2: 1
Max Power	100 Watts
Feed System / Position	Transformer DC-ground / Base
Connector Type	UHF-Female

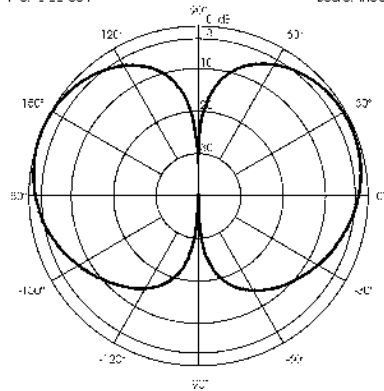
#### Mechanical Data

Materials	Glass Fibre, Chromed Brass, Nylon
Height (approx.)	
MARINER 160 S2	900 mm
MARINER 160 S3	2020 mm
Weight (approx.)	
MARINER 160 S2	420 gr
MARINER 160 S3	530 gr

code **2300320.82** MARINER 160 S2  
code **2301620.82** MARINER 160 S3

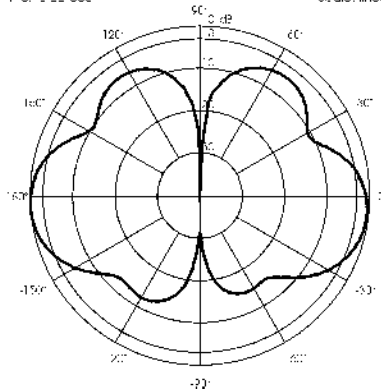


TYPICAL RADIATION PATTERN in E-plane at 158 MHz  
File: F-22-004



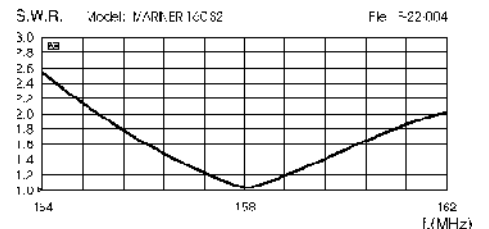
MARINER 160 S2

TYPICAL RADIATION PATTERN in E-plane at 158 MHz  
File: F-22-006

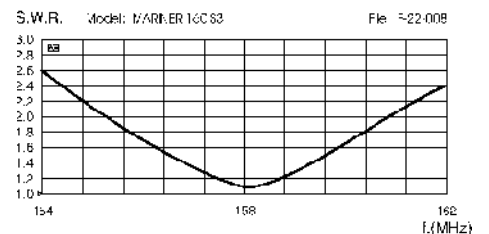


MARINER 160 S3

TYPICAL S.W.R. RESPONSE



TYPICAL S.W.R. RESPONSE



## SB 1 S SB 2 S

### Features:

- # Marine antenna, Mono-band
- # Unity-gain, Omnidirectional
- # Designed to work without Ground Plane
- # Protection from static discharges DC-Ground
- # Perfect protection against the worst weather conditions
- # Provided with stainless steel bracket for an easy installation on mast top
- # Stainless steel hardware
- # SB 1 S High quality whip made of brass and copper protected by fiberglass tube
- # SB 2 S 17/7 PH tapered stainless steel whip

### Specifications

#### Electrical Data

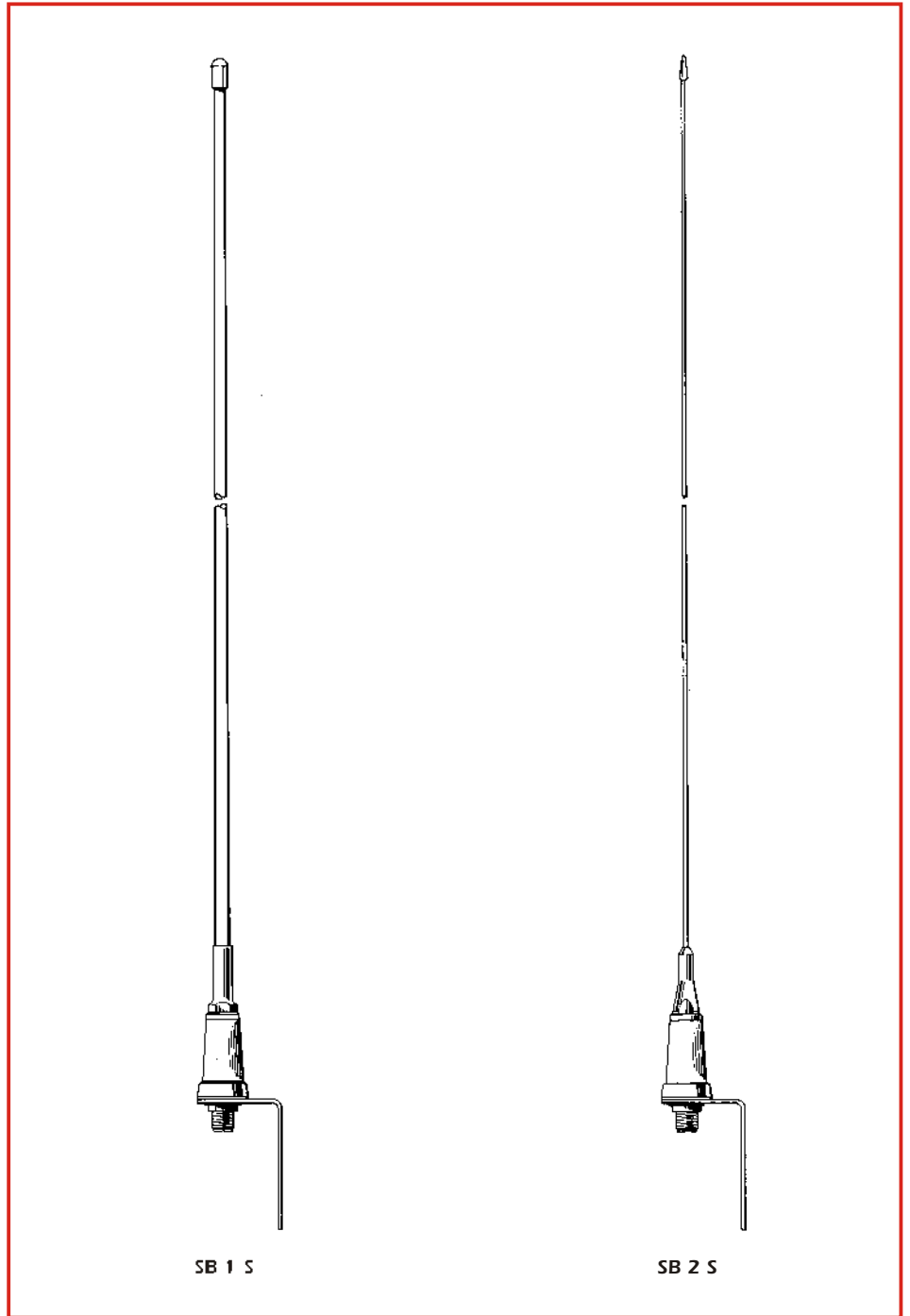
Type ..... 1/2  
 Frequency Range at V.S.W.R. 2:1 ..... 154.4-163.5 MHz  
 Impedance ..... 50 Unbalanced  
 Radiation (H-plane) ..... 360° Omnidirectional  
 Radiation (E-plane) ..... Beamwidth at -3 dB = 60°  
 Radiation angle deg. .... 23°  
 Polarization ..... Vertical  
 Gain ..... 0 dBd, 2.15 dBi  
 Bandwidth at V.S.W.R. 2:1 ..... 9.1 MHz  
 V.S.W.R. at res. freq. .... 1.2: 1  
 Max Power ..... 100 Watts  
 Feed System / Position ..... Transformer DC-ground / Base  
 Connection ..... UHF-Female

#### Mechanical Data

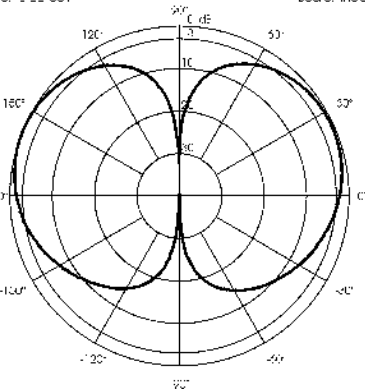
##### Materials

SB 1 S ..... Glass Fibre, Chromed Brass, Nylon  
 SB 2 S ..... 17/7 PH Stainless Steel, Chromed Brass, Nylon  
 Height (approx.)  
 SB 1 S ..... 1060 mm  
 SB 2 S ..... 1050 mm  
 Weigth (approx.)  
 SB 1 S ..... 380 gr  
 SB 2 S ..... 330 gr

code 2300420.80 SB 1 S  
 code 2301120.80 SB 2 S

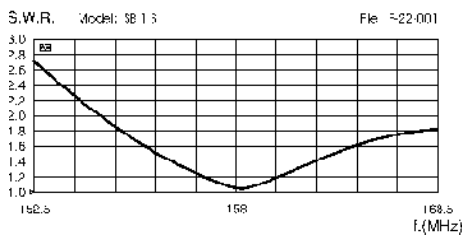


TYPICAL RADIATION PATTERN in E-plane at 158 MHz  
 Γ: 0.22-0.01 Source: linear



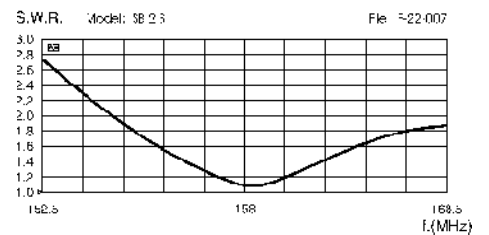
SB 1 S

TYPICAL S.W.R. RESPONSE



SB 2 S

TYPICAL S.W.R. RESPONSE



## SB 3 U SB 3 S/...

### Features:

- # Marine antenna, Mono-band
- # Low-gain, Omnidirectional
- # Designed to work without Ground Plane
- # Protection from static discharges DC-Ground
- # Perfect protection against the worst weather conditions
- # Provided with stainless steel bracket for an easy installation on mast top
- # Stainless steel hardware
- # High quality whip made of brass and copper protected by fiberglass tube
- # SB 3 S Supplied with white coaxial cable RG-58 C/U directly connected

### Specifications

#### Electrical Data

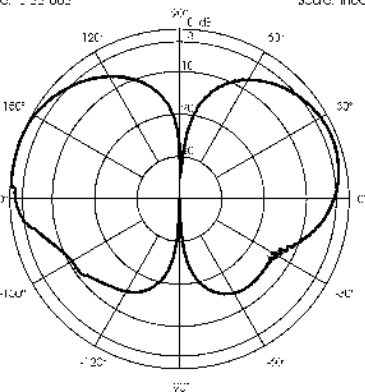
Type .....	3/4 J-pole
Frequency Range at V.S.W.R. 2:1 .....	
SB 3 U .....	155.8-160.1 MHz
SB 3 S/... .....	155.5-160.5 MHz
Impedance .....	50 Unbalanced
Radiation (H-plane) .....	360° Omnidirectional
Radiation (E-plane) .....	Beamwidth at -3 dB = 39°
Radiation angle deg. ....	21°
Polarization .....	Vertical
Gain .....	2 dBd, 4.15 dBi
Bandwidth at V.S.W.R. 2:1 .....	
SB 3 U .....	4.3 MHz
SB 3 S/... .....	5 MHz
V.S.W.R. at res. freq. ....	
SB 3 U .....	1.5: 1
SB 3 S/... .....	1.3: 1
Max Power .....	100 Watts
Feed System / Position .....	1/4 Parallel line stub / Base
Connection .....	UHF-Female (SB 3 U only)
Cable Length/Type ...	5, 18 or 25 m / white RG 58 (SB 3 S only)

#### Mechanical Data

Materials .....	Glass Fibre, Chromed Brass, Nylon
Height (approx.) .....	1465 mm
Weight (approx.) .....	
SB 3 U .....	300 gr
SB 3 S/5 .....	485 gr

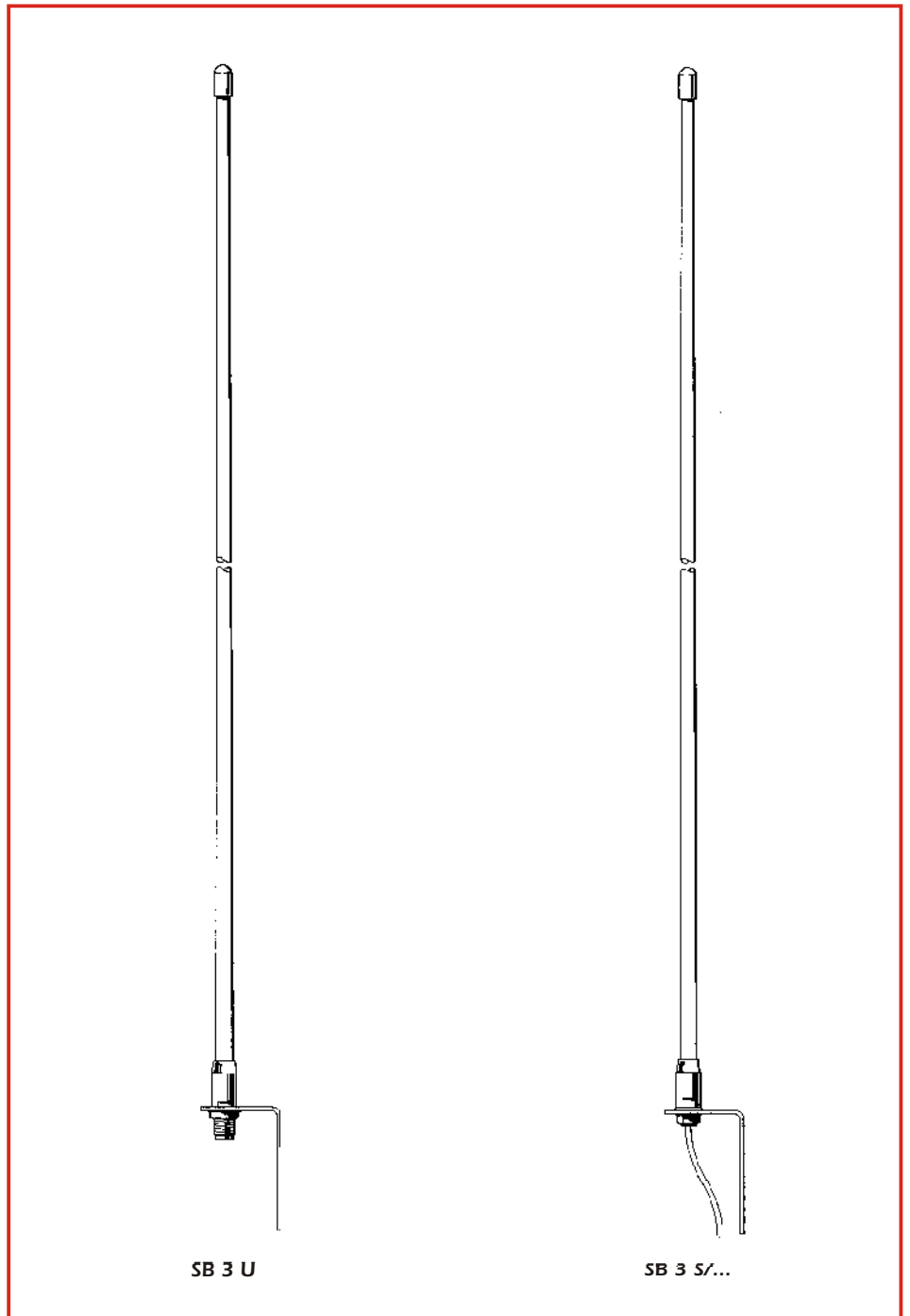
- code 2300520.80 SB 3 U
- code 2300620.80 SB 3 S/5 ( 5 m cable)
- code 2300720.80 SB 3 S/18 (18 m cable)
- code 2301020.80 SB 3 S/25 (25 m cable)

TYPICAL RADIATION PATTERN in E-plane at 158 MHz  
Γ<sub>ref</sub> = 0.0002 Source: Linear



SB 3 U

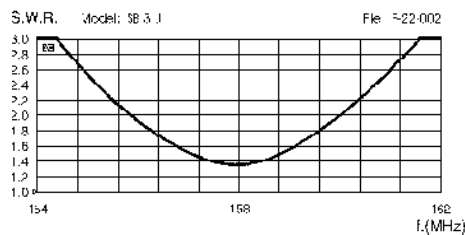
SB 3 S/...



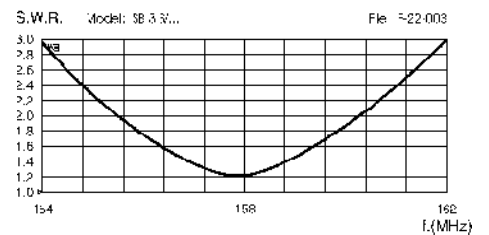
SB 3 U

SB 3 S/...

TYPICAL S.W.R. RESPONSE



TYPICAL S.W.R. RESPONSE



**SB 3 M**  
**SB 6 M**

**Features:**

- # Marine antenna, Mono-band
- # Omnidirectional
- # SB 3 M Low-gain, SB 6 M Medium-gain
- # Designed to work without Ground Plane
- # Protection from static discharges DC-Ground
- # Chrome-plated brass ferrule
- # Stainless steel hardware
- # High quality whip made of brass and copper protected by fiberglass tube
- # Supplied with white coaxial cable RG-58 C/U directly connected
- # Wide range of optional mounting bases

**Specifications**

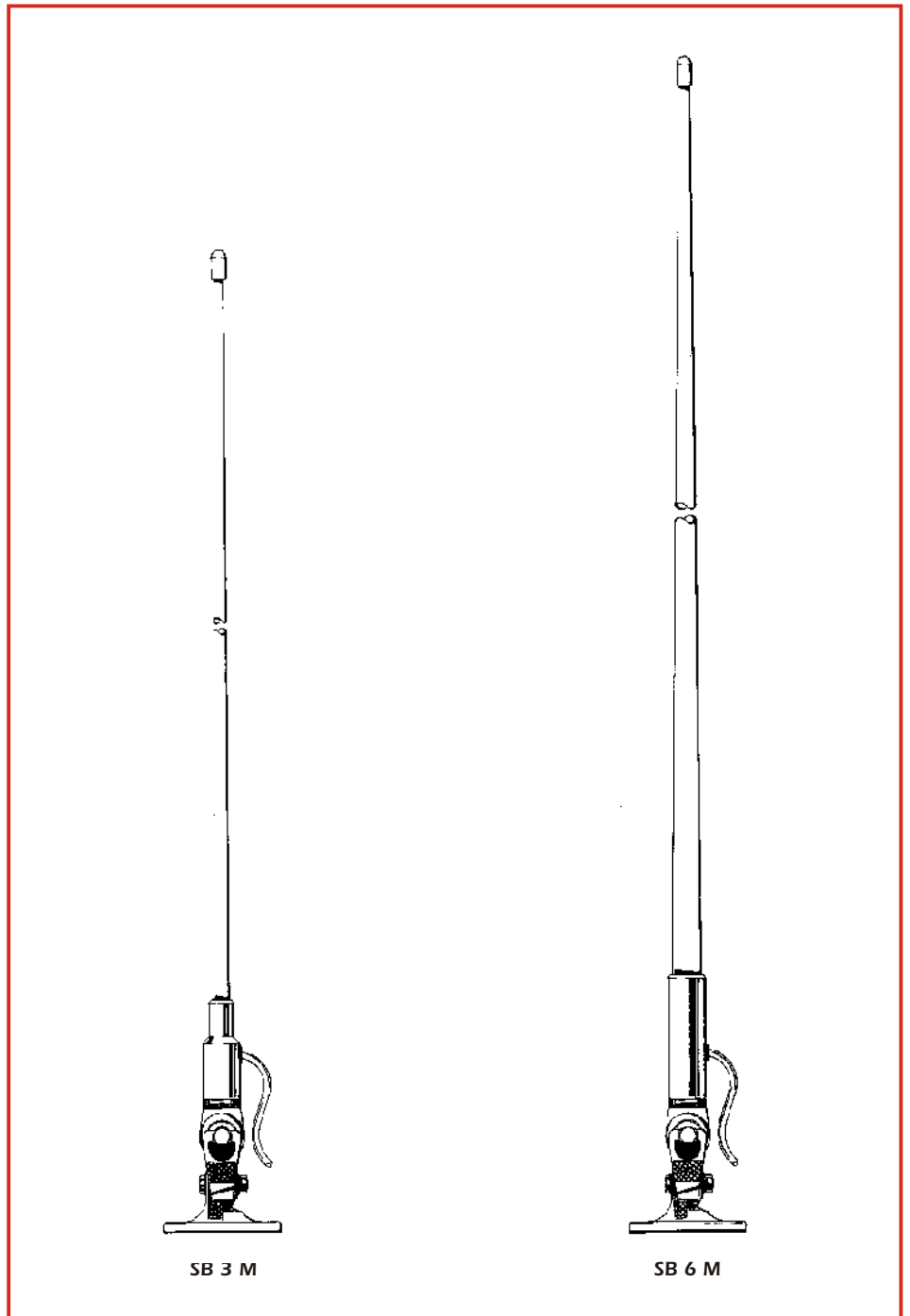
**Electrical Data**

Type SB 3 M	3/4 J-pole
SB 6 M	3/4 + 1/2 Colinear J-pole
Frequency Range at V.S.W.R. 2:1	
SB 3 M	155.5-160 MHz
SB 6 M	155-160.4 MHz
Impedance	50 Unbalanced
Radiation (H-plane)	360° Omnidirectional
Radiation (E-plane)	SB 3 M Beamwidth at -3 dB = 39°
	SB 6 M Beamwidth at -3 dB = 31°
Radiation angle deg.	SB 3 M 21°
	SB 6 M -7°
Polarization	Vertical
Gain SB 3 M	2 dBd, 4.15 dBi
SB 6 M	3.5 dBd, 5.65 dBi
Bandwidth at V.S.W.R. 2:1	SB 3 M 4.5 MHz
	SB 6 M 5.4 MHz
V.S.W.R. at res. freq.	SB 3 M 1.4:1
	SB 6 M 1.2:1
Max Power	100 Watts
Feed System / Position	1/4 Parallel line stub / Base
Standard Mount SB 3 M	"M8-NY"
SB 6 M	"M3-OT"
Cable Length / Type	SB 3 M 5 m / white RG 58
	SB 6 M 7 m / white RG 58

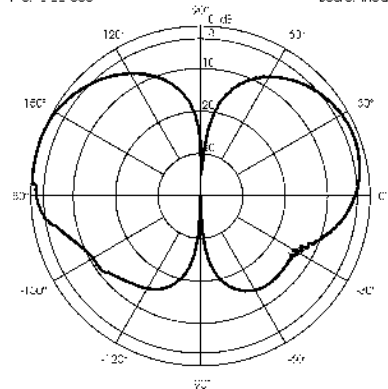
**Mechanical Data**

Materials	Glass Fibre, Chromed Brass, Copper
Height (approx.)	SB 3 M 1480 mm
	SB 6 M 2600 mm
Weight (approx.)	SB 3 M 750 gr
	SB 6 M 1700 gr

**code 2300820.83 SB 3 M**  
**code 2300920.84 SB 6 M**

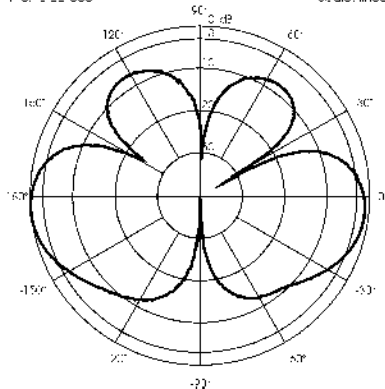


TYPICAL RADIATION PATTERN in E-plane at 158 MHz  
Γ: 2 22 006 Scale: linear



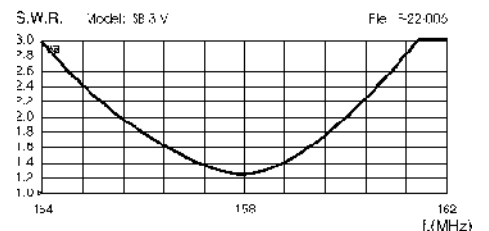
**SB 3 M**

TYPICAL RADIATION PATTERN in E-plane at 159 MHz  
Γ: 2 22 006 Scale: linear

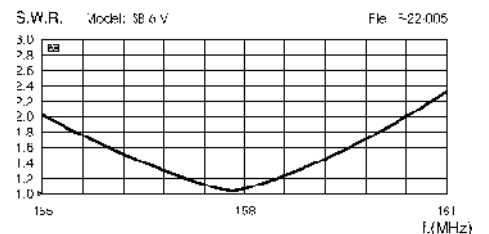


**SB 6 M**

TYPICAL S.W.R. RESPONSE



TYPICAL S.W.R. RESPONSE





### "S" Mount Type

Frequency Range: from DC to 300 MHz  
 Overall Size: 42 mm  
 Mounting Hole: 19 mm  
 "S" Chrome ..... 2501002.01  
 "S" Black ..... 2501002.02



### "SL" Mount Type

Frequency Range: from DC to 500 MHz  
 Overall Size: 39 mm  
 Mounting Hole: 19 mm  
 "SL" Chrome ..... 2501102.01  
 "SL" Black ..... 2501102.02



### "SL-S" Mount Type

Frequency Range: from DC to 500 MHz  
 Overall Size: 39 mm  
 Mounting Hole: 19 mm  
 "SL-S" Black ..... 2501102.04



### "ML" Mount Type

Frequency Range: from DC to 1000 MHz  
 Overall Size: 30mm  
 Mounting Hole: 14 or 18 mm  
 "ML" ..... 2501202.06



### "ABN" Trunk Mount

Fixing Hole: 16 mm  
 Material: Painted Steel  
 ABN Black ..... 2504105.00



### "TRUNK TOP 2" Mount

DV/PL Chrome ..... 2504406.12  
 DV/PL Black ..... 2504407.13  
 PL-3/8 Chrome ..... 2504406.14  
 PL-3/8 Black ..... 2504407.14



### "KF" Gutter Mount

Fixing Hole: 16 mm  
 Material: Painted Zinc  
 KF Black ..... 2504205.00  
 KF Black 3/8 + PL + Cable ..... 2504205.03



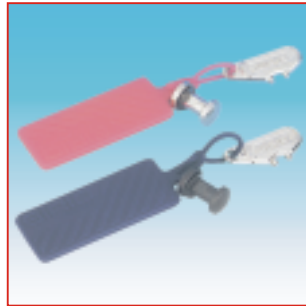
### "Screw & Bolt"

Materials: Brass and Zinc, Chrome plated  
 Chrome ..... 2506206.00  
 Black ..... 2506207.00



### "Wing Bolt"

Materials: Brass, Chrome plated  
 Chrome ..... 2506306.00  
 Black ..... 2506307.00



### "Safety Set"

Materials: Brass and Zinc, Chrome plated  
 Chrome ..... 2506506.00  
 Black ..... 2506507.00



### "FT-2" Fixing Bracket

Top Size: 38 mm for antenna fitting  
 Bottom Size: 45/50 mm for fitting on the mast  
 Weight (approx.): 1100 gr  
 Material: Galvanized Steel  
 FT-2 Universal ..... 2510004.00



### "FT-3" Fixing Bracket

Top Size: 30 mm for antenna fitting  
 Bottom Size: 35/54mm for fitting on the mast  
 Weight (approx.): 350 gr  
 Material: Anodized aluminium, Stainless steel  
 FT-3 ..... 2511301.00



### "M-1" Marine Bracket

Dimension L x W x H : 38 x 64 x 98 mm  
 Weight (approx.): 120 gr  
 Material: Stainless Steel  
 M-1 Marine Bracket ..... 2503503.00



### "M-3" Marine Mount

Connection: standard 1"x14 threads  
 Dimension L x W x H : 60 x 95 x 130 mm  
 Weight (approx.): 860 gr  
 Materials: Chromed Brass, Stainless steel hardware  
 M-3 OT Marine Mount ..... 2503606.00



### "M-8" Marine Mount

Connection: standard 1"x14 threads  
 Dimension L x W x H : 70 x 105 x 130 mm  
 Weight (approx.): 250 gr  
 Materials: Nylon, Stainless steel hardware  
 M-8 NY Marine Mount ..... 2503301.00



### "M-10" Marine Mount

Connection: standard 1"x14 threads  
 Fixing diameter: 1"  
 Weight (approx.): 600 gr  
 Materials: Chromed Brass, Stainless steel hardware  
 M-10 OT Marine Mount ..... 2503406.00

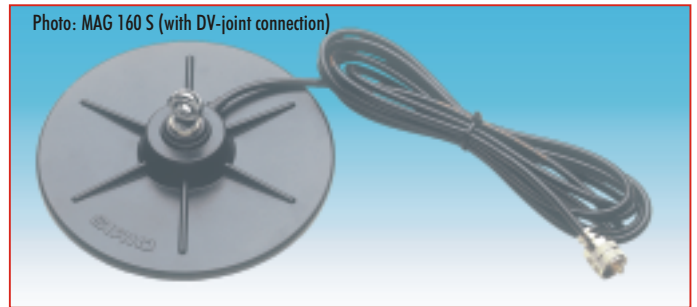
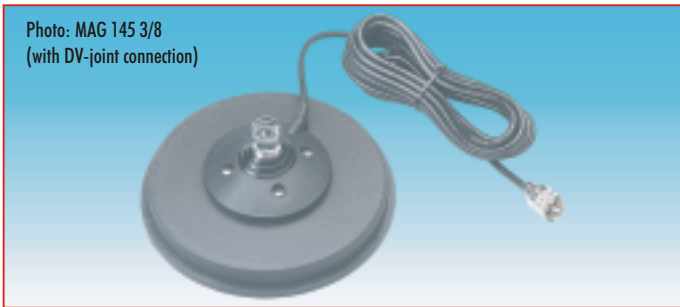


**"MAG H 12" Magnet Mount**

MAG H 12 PL .....	2502502.05
MAG H 12 S .....	2502502.01
MAG H 12 S Black .....	2502502.02
MAG H 12 3/8 .....	2502502.03

**"MAG 125" Magnet Mount**

MAG 125 PL .....	2502602.05
MAG 125 S .....	2502602.01
MAG 125 S Black .....	2502602.02
MAG 125 3/8 .....	2502602.03



**"MAG 145" Magnet Mount**

MAG 145 PL .....	2502702.05
MAG 145 S .....	2502702.01
MAG 145 S Black .....	2502702.02
MAG 145 3/8 .....	2502702.03

**"MAG 160" Magnet Mount**

MAG 160 PL .....	2502802.05
MAG 160 S .....	2502802.01
MAG 160 S Black .....	2502802.02
MAG 160 3/8 .....	2502802.03



**"HP MAG H 12 PL" Magnet Mount**

Frequency Range: from DC to 500 MHz  
 Materials: Nylon, Chromed brass, Teflon insulator,  
 Gold plated pin, 3.6m RG58C/U MILC17  
 HP MAG H 12 PL ..... 2511802.05

**"HP MAG 125 PL" Magnet Mount**

Frequency Range: from DC to 500 MHz  
 Materials: Nylon, Chromed brass, Teflon insulator,  
 Gold plated pin, 3.6m RG58C/U MILC17  
 HP MAG 125 PL ..... 2511202.05



**"HP-AC/U" Angular Connector**

Frequency Range: from DC to 500 MHz  
 Materials: Brass nichel plated, Teflon insulator,  
 Gold plated pin, 5m RG58 C/U MIL C17  
 HP-AC/U + Cable ..... 2510805.00

**"Antennas Display"**

Materials: Painted Zinc with rubber gasket  
 Fixing Hole: 8 x 12.5 mm  
 DISPLAY ..... 2508008.00



**Wall Antennas' Dispenser**

Dimension L x H : 140 x 190 mm  
 Materials: Aluminium, Painted steel  
 Wall antennas' dispenser ..... 32.0002



**SMA-male**

Crimp type for RG 58, CO 100 ..... 30.SMA001.00  
Crimp type for RG 174, RG 316 .... 30.SMA002.00



**SMA-female**

Crimp type for RG 58, CO 100 ..... 30.SMA003.00  
Crimp type for RG 174, RG 316 .... 30.SMA004.00



**BNC-male**

Crimp type for RG 58, CO 100 ..... 30.BNC001.00



**TNC-male**

Crimp type for RG 58, CO 100 ..... 30.TNC001.00



**N-male**

Crimp type for RG 58, CO 100 ..... 30.N001.00



**N-female**

Crimp type for RG 58, CO 100 ..... 30.N002.00



**FME-male**

Crimp type for RG 58, CO 100 ..... 30.FME001.00  
Crimp type for RG 174, RG 316 .... 30.FME005.00



**FME-female**

Crimp type for RG 58, CO 100 ..... 30.FME002.00  
Crimp type for RG 174, RG 316 .... 30.FME003.00



**FME-m / UHF-m  
adaptor**

Code ..... 30.AD002.00



**FME-m / Mini UHF-m  
adaptor**

Code ..... 30.AD004.00



**FME-m / BNC-m  
adaptor**

Code ..... 30.AD005.00



**FME-m / N-m  
adaptor**

Code ..... 30.AD006.00

## COAXIAL CABLES Data

Type	Impedance	External diameter	Color
<b>RG 58 C/U</b>	<b>50</b>	<b>4.95 mm</b>	<b>Black</b>
<b>CO 100</b>	<b>50</b>	<b>4.95 mm</b>	<b>White</b>
<b>RG 174</b>	<b>50</b>	<b>2.8 mm</b>	<b>Black</b>
<b>RG 316/U</b>	<b>50</b>	<b>2.5 mm</b>	<b>Brown</b>

### Attenuation dB for 100 m

Freq. Cable	25 MHz	50 MHz	100 MHz	200 MHz	300 MHz	400 MHz	500 MHz	800 MHz	1 GHz	1.6 GHz	1.8 GHz	2.0 GHz	2.2 GHz	2.4 GHz	2.5 GHz	3.0 GHz
<b>RG 58 C/U</b>	7	10	15	21	26	30	34	44	50	66	70	76	78	86	87	98
<b>CO 100</b>	5	7	10	14	17	20	23	29	33	42	45	48	50	53	54	60
<b>RG 174</b>	13	18	27	39	48	56	64	84	95	124	133	141	150	159	162	184
<b>RG 316/U</b>	12	17	26	38	47	55	62	80	91	118	126	134	141	149	152	169