

# Unity Gain Base Station and Marine UHF Antenna

### DESCRIPTION

- This rod-type UHF antenna is developed for use onboard ships as well as on masts and covers the 450 MHz band in three models.
- The 1" revolving nut mounting system makes it possible to mount the antenna in the mast, in the auxiliary mast or on the cross-beam. By means of Procom's flange mount type "FLG", it can easily be mounted even on the rooftop.
- This antenna type can be used for a wide variety of purposes. It is very popular and widely used in connection with 70 cm CELLULAR systems as for instance the Nordic Mobile Telephone system NMT making it possible to extend the normally land based CELLULAR telephone system for maritime mobile service as well.
- The antenna is a ½ λ design and this means that it needs neither loading coils, groundplane, radials nor other auxiliary arrangements.
- Bear in mind that the higher the antenna is mounted the better coverage.
- Avoid mounting the antenna parallel with or in the neighbourhood of other metal parts, such as masts, supporting wires etc. Free mounting and as high as possible is most preferable, otherwise the SWR and the radiation diagram will be influenced.
- The antenna is a grounded radiator antenna and therefore it shows a DC-short across the coaxial cable.
- A conical glass fibre tube completely encloses the carefully designed radiating element to assure long dependable service in all climates.



#### **SPECIFICATIONS**

| Electrical              |  |  |
|-------------------------|--|--|
| Model                   | CXL 70-1/  |  |
| Frequency               | CXL 70-1/l : 380 - 430 MHz<br>CXL 70-1/h : 420 - 470 MHz<br>CXL 70-1/hs: 460 - 510 MHz |  |
| Antenna Type            | Coaxial dipole, broad-banded   |  |
| 3 dB Beamwidth, H-Plane | Omnidirectional  |  |
| Polarisation            | Vertical   |  |
| Pattern Type            | Omnidirectional  |  |
| 3 dB Beamwidth, E-Plane | 80 °   |  |
| Impedance               | 50 Ω   |  |
| Gain                    | 0 dBd (2.2 dBi)  |  |
| SWR                     | < 1.5:1  |  |
| Maximum Input Power     | 150 W  |  |
| Bandwidth               | 50 MHz   |  |
| HCM Code(s)             | HCM000ND00, 040DE00  |  |

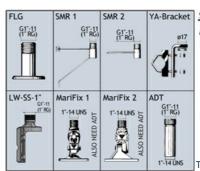
| Mechanical            |   |
|-----------------------|---|
| Wind Area             | 0.0093 sq. m / 0.10 sq. ft  |
| Connection(s)         | N(f)  |
| Materials             | Shroud: Polyurethane-coated glass fibre<br>Mounting bracket: Chromed brass                  |
| Colour                | White (RAL 9003)  |
| Height                | 600 mm / 23.62 in.  |
| Wind Load             | 12 N (160km/h)  |
| Dia. At Top<br>End    | 12 mm / 0.47 in.  |
| Weight                | 0.35 kg / 0.77 lb   |
| Dia. At Bottom<br>End | 16 mm / 0.63 in.  |
| Mounting              | On 1" RG (G1" - 11) threaded water pipe or on optional mounting brackets (see accessories ) |

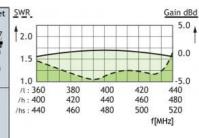
| Environmental               |                |  |
|-----------------------------|----------------|--|
| Operating Temperature Range | -30°C to +70°C |  |
| Survival Wind Speed         | 200 km/h       |  |
| Ingress Protection          | IP66           |  |

#### **DIAGRAM**

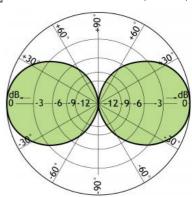
ACCESSORIES (to be ordered separately)

TYPICAL GAIN AND SWR CURVES





TYPICAL RADIATION PATTERN (E-PLANE)



TYPICAL RADIATION PATTERN (H-PLANE)



## **ORDERING**

| Туре        | Product No. | Frequency     |
|-------------|-------------|---------------|
| CXL 70-1/I  | 110000137   | 380 - 430 MHz |
| CXL 70-1/h  | 110000136   | 420 - 470 MHz |
| CXL 70-1/hs | 110000135   | 460 - 510 MHz |

