# **HF ANTENNA SYSTEMS**



## HIGHER POWER CAPABILITY BASE MOUNTED MARINE HF WHIP ANTENNA FOR LARGE VESSELS OVER 18 METRES (60 FEET)

The type 23B/3 is a 7 metre (23 ft) heavy duty self supporting whip antenna with a power capability of 1.2 kW PEP in the frequency range 1.6 to 30 MHz. It is designed to provide efficient and reliable communications for professional ocean going vessels, where higher power and environmental capability is required.

The 23B/3 is base mounted and designed to withstand constant wind speeds up to 250 km/h without permanent deformation effects. Construction is of heavy gauge marine grade aluminium alloy tubing to give a large low loss surface area for maximum radiating efficiency, fully protected by a high durability epoxy based coating resistant to chemical attack, abrasion and the effects of ozone and ultra-violet radiation. The base insulator is ribbed low loss polypropylene with stainless steel connection. A low loss loading coil 2.75 m from the top is available as an option.

For ease of transport, the antenna breaks down into two sections [base 3.76m; top 3.35m] which slip together and fasten with four stainless steel locking screws.

The 23B/3 is available unloaded or resonant at a single frequency of 4.6 MHz. For operation on frequencies other than the resonant frequency, the difference is made up in the antenna tuning unit.

	STANDARD	OPTIONAL
Colour	White	Other colours available
HF Marine Band	2-30 MHz	
Length	7.0 metres (23 ft)	
Pattern	Omnidirectional	
Polarisation	Vertical	
Base Diameter	32mm	
Frequency Range	Pretuned to 4.6 MHz or, unloaded, 1.6-30 MHz with suitable ATU	
Wind Loading	8.8 kg at 100 km/h	
	20 kg at 150 km/h	
	Antenna survival :	
	250 km/h	
Power Capability	1.2 kW PEP for unloaded top sections,800 w PEP for 4.6 MHz top sections	
Base Insulator	>25 kV insulator flash over voltage (test conditions: antenna dry)	
Radiator	Total radiating surface: 5,500 sq cm	
Mountings	Cast aluminium alloy base flange and support tube with integral base insulator, O ring seal and corona shield, silicone joint shroud	
Base Mount Finish	Epoxy based enamel	
Connection	M6 stainless steel stud and lock nuts direct to antenna	
Weight	Packed: 9 kg with mountings	
	Unpacked: Antenna and ba	se 7 kg



# 23B/3 INSTALLATION INSTRUCTIONS **V**



# CONTACT DETAILS **V**

## **CBG Systems**

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#### Assembly:

- 1. For ease of maintenance lightly smear the antenna middle joint with grease and push firmly together. Place silicone sealant on screw thread before screwing into place.
- 2. Tighten screws firmly and cover heads with sealant.
- 3. Drill four 8 mm clearance holes to suit base mount in position required. Erect the aerial and bolt down using 8mm S/S bolts.
- 4. Use sealant on underside of mount and on bolts to prevent ingress of moisture.

### **Connection:**

Connecting wire from tuning unit to aerial should be not less than 7/1.04 hard drawn insulated copper cable. It should be run well clear of metal objects and be as short and direct as possible. Cover the connections liberally with silicone sealant.

N.B. Sealant should be non-acid neutral cure type. Acid cure type sealant will attack copper and aluminium.

Moonraker products represent the pinnacle of antenna design. With over 45 years' experience supplying Defence, Commercial and Recreational industries. Moonraker antennas are individually tuned and manufactured to our stringent extreme marine quality standards that ensure maximum performance and service life.

