



# MOONRAKER

## Type 23L/D

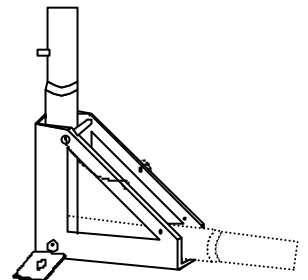
**High power HF antenna for vessels over 18 metres (60 feet)  
with laydown facility for horizontal operation to overcome skip zone problems**

Designed to permit easy adjustment of antenna polarisation and to provide higher efficiency communications in the transmit and receive modes for professional ocean going vessels where higher power and environmental capability is required. The antenna utilises our heavy duty aluminium laydown mount which permits the antenna to be operated in both horizontal (for high angle radiation) and vertical (low angle radiation) positions.

The type 23L/D is a 7 metre (23 ft) heavy duty self supporting whip antenna with a power capability of 800W PEP in the frequency range 1.6 to 30 MHz. The antenna is designed to withstand winds to 240 km/h (150 mph) without permanent deformation effects, being a version of the military type 23B/3C. It has minimal tip deflection which is very important when operating in the horizontal mode whilst the vessel is underway.

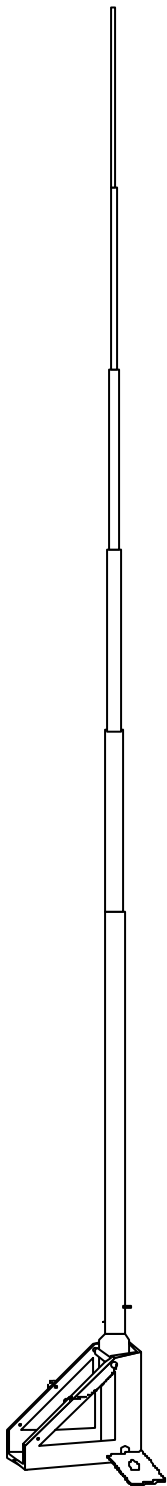
Construction is of heavy gauge marine grade tempered aluminium alloy tubing, providing a large, low loss radiating surface, fully protected by a high durability epoxy based coating resistant to chemical attack, abrasion and the effects of ozone and ultra-violet radiation. Standard colour is silver grey (other colours to order). The base insulator is nylon with stainless steel connection. A low loss loading coil 2.75 m (9 ft) from the top is available as an option. For ease of transport, the antenna breaks down into 2 sections [base 3.76m (12.3 ft); top 3.35m (11 ft)] which slip together and fasten with 3 stainless steel locking screws.

The system is designed with an easy quick lock pin so that lowering and erection can be carried out by one man. Simply releasing the pin and swinging the antenna (8kg) to the new position. The locking pin and lock are secured by safety wires. Ideally, for best high angle radiation, the antenna, when horizontal, should be as far above the deck below as possible, particularly when above a metal deck.



### SPECIFICATIONS

|                          |   |
|--------------------------|---|
| <b>HF Marine Band</b>    | 1.6-30 MHz  |
| <b>Length</b>            | 7.0 metres (23 ft)  |
| <b>Pattern</b>           | Omnidirectional   |
| <b>Polarisation</b>      | Vertical or horizontal (high angle)   |
| <b>Frequency Range</b>   | Pretuned to 4.6 MHz or, unloaded, 1.6-30 MHz with suitable ATU  |
| <b>Wind Loading</b>      | 8.8 kg at 100 km/h (19.5 lbs at 60 mph); 20 kg at 150 km/h (44 lbs at 94 mph). Antenna survival : 250 km/h (156 mph)  |
| <b>Power Capability</b>  | 800W PEP unloaded top sections; 500 w PEP 4.6 MHz top sections  |
| <b>Radiator</b>          | Total radiating surface: 5,500 sq cm (5.9 sq ft)  |
| <b>Mountings</b>         | Aluminium alloy angled base support which may be bolted directly to the deck 250mm x 60mm x 250mm high (9.8 x 2.4 x 9.8 in) (supplied) and 3 x 10mm 3/8 in) bolts (not supplied). |
| <b>Base Mount Finish</b> | Epoxy based enamel  |
| <b>Connection</b>        | 1/4 in Whitworth stainless steel stud and lock nuts direct to side of antenna   |
| <b>Packed Weight</b>     | Antenna: 8.5kg (18.7lbs; Mount 2kg (4.4lbs)   |



Specifications subject to change 9/02

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