

23L/D

HIGH POWER HF ANTENNA FOR VESSELS OVER 18 METRES (60 FEET) WITH LAY DOWN FACILITY FOR HORIZONTAL OPERATION TO OVERCOME SKIP ZONE PROBLEMS.

Designed to permit easy adjustment of antenna polarisation and to provide higher efficiency communications in transmit and receive modes for professional ocean going vessels where higher power and environmental capability is required. The antenna utilises our heavy duty aluminium lay down 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 without permanent deformation effects. 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 APO grey (other colours to order).

The base insulator is nylon 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 2 sections [base 3.76m; top 3.35m] 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 person. Simply releasing the pin and swinging the antenna (8kg) to the new position.



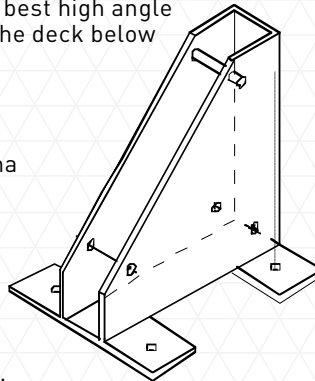
SPECIFICATIONS ▼

	STANDARD	OPTIONAL
Colour	AP0 Grey	Available to order
HF Marine Band	1.6-30 MHz	
Length	7.0 metres (23 ft)	
Pattern	Omnidirectional	
Polarisation	Vertical or horizontal (high angle)	
Frequency Range	Pre-tuned 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	800W PEP unloaded top sections; 500 w PEP 4.6 MHz top sections	
Radiator	Total radiating surface: 5,500 sq cm (5.9 sq ft)	
Mountings	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 4 x 10mm 3/8 in) bolts (not supplied).	
Base Mount Finish	Epoxy based enamel	
Connection	M6 stainless steel stud and lock nuts direct to side of antenna	
Packed Weight	Antenna: 8.5kg Mount: 2kg	



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.

These instructions should be read in conjunction with the antenna product specification sheet. When shipped the antenna (two sections) and mount are packed separately. The Antenna Joint Sealing Kit (option) and its instructions are packed separately with the mount.



Antenna assembly:

1. Remove the joint screws from the top section of the antenna.
2. Apply a thin layer of the conductive grease to the bare aluminium section of the joint and slide it inside the top of the base section. NOTE: This grease will greatly assist with future disassembly of the joint.
3. Replace the joint screws and tighten firmly by hand only.

Mounting:

If the antenna is to be used in the horizontal (laid down) position for improved high angle transmissions it will be necessary to select a position for the mount that will be as far as possible above the deck below or above the sea if laying over the stern or side of the vessel.

1. Remove the thick white (35 x 20 mm) recessed nylon washer for safe keeping.
2. Using the mount as a template mark the positions of the 3 mounting holes.
3. Remove the mount and drill 3 x 10 mm clearance holes in the deck, on thin decks it may be necessary to reinforce them with a plate under the deck.
4. Fasten the mount to the deck using 3 x 10 mm (3/8 in.) mounting bolts (not supplied).

Note 1: The thick white recessed nylon washer should be placed under the head of the mounting bolt that is inside the end of the mount.

Note 2: The antenna position locking pin and retaining clip lanyard (wire) is supplied with a lug on one end. This should be placed under the head of one of the side mounting bolts. This provides security for the locking pin and clip from being lost when the antenna is being raised or lowered.

5. Insert the base insulator of the antenna into the mount and replace the pivot bolt through the sides of the mount and the hole in the base insulator. Tighten the special nut.
6. Attach a suitable high voltage antenna feed cable to the feed point on the side of the antenna above the base insulator. Ensure that this cable has enough slack to allow the antenna to be laid down. Moonraker High Voltage Silicone Cable is recommended for this use. Ensure the cable does not touch any of the metal parts of the mount or the deck when in either of the two antenna positions.
7. Seal connections at antenna and at ATU or Receiving transformer with a suitable non corrosive sealant and tape over to protect against water ingress and corrosion.

Note: Only use neutral cure type sealants.

8. To lower or raise the antenna remove the retaining clip and locking pin and swing the antenna to the new position. Replace the pin and clip in the new position.

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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.



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