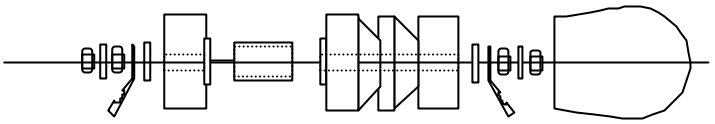
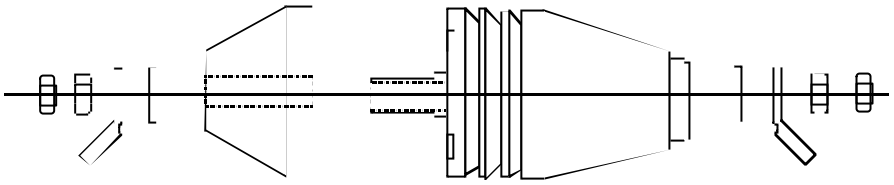
M O O N R A K E R

Feedthrough Insulators

High efficiency insulation for HF marine communications



Small Insulator



Large Insulator

Designed to provide high quality protection for HF antenna feed line on marine vessels where cable needs to be passed through decks and bulkheads.

Moonraker Feedthrough Insulators are constructed from high strength, low loss polypropylene. The surface is ribbed to provide a longer leakage path yet is smooth and easily washed free of salt and dust deposits. Fittings are of stainless steel and a weatherproof cap is provided for the small insulator to protect the external connection.

Important Factors

For maximum protection from water leakage, the small insulator weatherproof cap should be fitted with a silicone rubber sealant before being pushed on. Sealant should also be smeared around the insulator mounting hole before fitting the insulator. Only neutral cure silicone sealants should be used. Other types may corrode metal fixtures.

Specifications

Type	Small	Large
External Height of Insulator	35mm (1 3/8 in)	90mm (3.5 in)
Overall Height (including cap)	65mm (2.5 in)	125mm (4 7/8 in)
Internal Height of Insulator	12mm (2.5 in)	40mm (1.5 in)
Insulator Diameter	25mm (1 in)	50mm 2 in)
Conductor Diameter	5mm (3/16 in)	7.8mm (5/16 in)
Test Voltage	3kV	7kV
Deck/Bulkhead	3-25mm (1/8 -1 in)	3-35mm (1/8 -1 3/8 in)
Mounting Hole Diameter	12.7mm (0.5 in)	25mm (1 in)

Specifications subject to change 5/00

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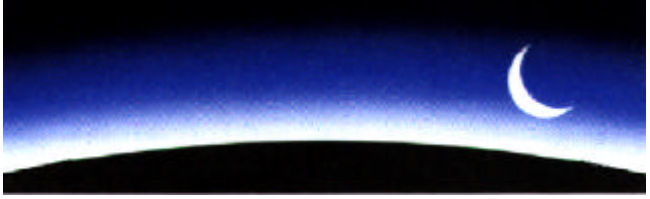
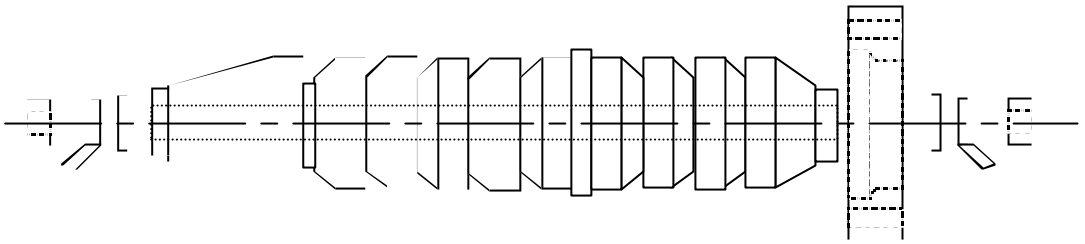


Extra Large Feedthrough

High efficiency insulation for HF marine communications



The Extra Large Feedthrough Insulator provides high quality protection for HF antenna feed line on marine vessels where cable needs to be passed through decks and bulkheads. It is designed for high power installations demanding high breakdown or flashover resistance and fits decks up to 114mm (4.5 in) thick.

Construction is from high strength, low loss polypropylene. The surface is ribbed to provide a longer leakage path yet is smooth and easily washed free of salt and dust deposits. Fittings are of stainless steel and lugs provide the external connections.

Mounting is simplified by a flange mount together with "O" ring seal, enabling one man installation from one side of the deck. The insulator body may be reversed to facilitate a wide range of deck or bulkhead thicknesses.

Specifications

Type	Extra Large Feedthrough
Insulator External Height	Reversible: 172mm (6.75 in) or 102mm (4 in)
Insulator Diameter	44mm (1.75 in)
Flange Mount	80mm (3.125mm)
Conductor Diameter	8mm (0.3in)
Standoff Set Screw	N/A
Mounting Hole Diameter	44mm (1.75 in)
Flange Mounting Holes	6.4mm (0.25 in) dia
Flange Mounting Bolts/Screws	4 x up to 6.4 mm dia (not supplied)
Deck/Bulkhead	114mm (4.5 in) maximum
Test Voltage	15kV
Packed Weight	0.75kg (1.7 lbs)

Specifications subject to change 2/02

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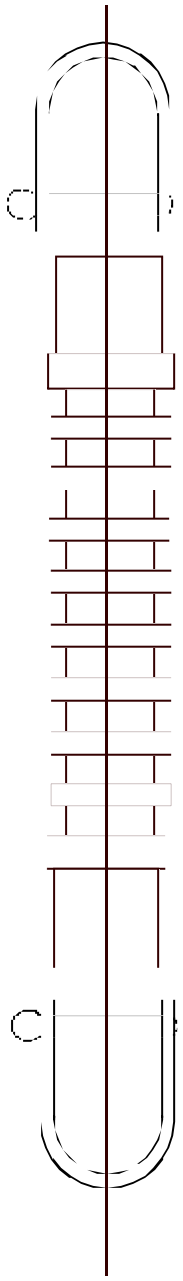
M O O N R A K E R

Long Wire Insulators

For land and marine long wire type antennas



Constructed from high strength, low loss polypropylene, long wire insulators have a multi ribbed surface to provide a long electrical leakage path.

Connection is provided by large stainless steel "D" shackles at each end.

Polypropylene is an excellent dielectric. Its dissipation factor and dielectric constant remain low over a wide range of frequencies and temperatures. Volume resistivity is high and this, together with its extremely low water absorption, makes it an ideal material for wire antenna insulators.

Power capability is 30,000 volts with a tensile strength of 1100 kg (2420 lbs) minimum.

Important Factors

As a further guard against leakage, long wire insulators are polished with a silicone grease compound. To ensure their integrity over long periods of use, we recommend that this process be repeated as the opportunity arises.

Specifications

Overall Length	270mm (10.6 in)
Length	175mm (6.9 in) between shackle pins
Effective Path Length	240mm (9.5 in)
Outside Diameter	35mm (1.4 in)
Tensile Strength	1100kg minimum (2425 lbs)
Test Voltage	30kV
Packed Weight	0.5 kg (1.1 lbs)

Specifications subject to change 5/00

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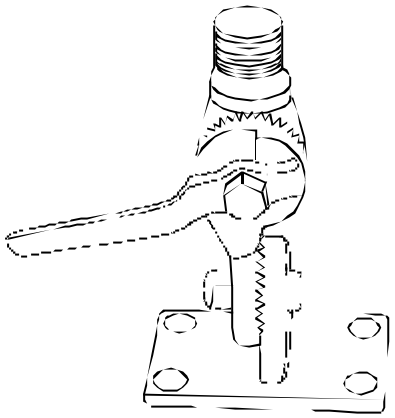
MOONRAKER

Swingdown Mounts

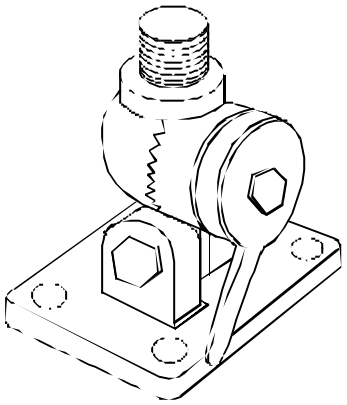
For variable angle mounting of antennas, etc.



Stainless Steel Mount

Designed to permit continuous adjustment of mounting angle for antennas up to 4.6 m (15ft) or any other mounting situation where angle adjustment is required. For 5.5m (18ft) antennas (maximum height) an additional supporting gate end mount is necessary to give adequate support.

This mount is both compact and sturdy. Both the mount and fittings are constructed of stainless steel 316 alloy. The antenna is easily locked into position by a heavy duty ratchet and handle. It may be mounted unobtrusively on deck or cabinside. The continuous angle adjustment in 10 steps permits the antenna to be lowered when passing under bridges or to be stored horizontally when not in use, thus being especially suitable for pleasure and trailed craft.



Nylon Mount

Designed to permit mounting in any position with a quick action release handle to lay the antenna down for antennas up to 2.6 metres (9 ft).

Constructed from heavy duty high quality nylon, this mount is pressure injection moulded and has a double knuckle joint permitting adjustment in two planes.

Specifications

Type	**Stainless Steel Mount**	**Nylon Mount**
Overall Height	154mm (5.9 in)	123mm (4.8 in)
Overall Length	148mm including handle (5.8in)	126mm (5 in)
Length (Base)	93.3mm (3.6 in)	92mm (3.6 in)
Width (Base)	56.8mm (2.2 in)	65mm (2.6 in)
Mountings	Fitted with a threaded 25.4mm (1 in) 14TPI stainless steel stud to suit antenna base; requires four 6mm (¼in) countersunk head screws (not supplied); side or base mounting	Fitted with a threaded 25.4mm (1 in) 14TPI stud to suit antenna base; requires four 6mm (¼in) countersunk head screws (not supplied)
Packed Weight	0.94 (2.1 lbs)	0.5 kg (1.1 lbs)

Specifications subject to change 2/02

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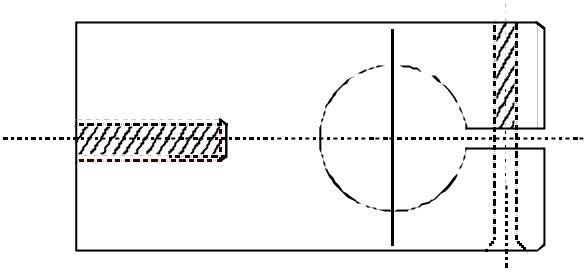
M O O N R A K E R

Sidemount Insulators

For mounting of antennas



Designed for easy mounting of antennas on cabinside, stub mast or similar and to provide rugged support and also efficient insulation for HF communications.

Moonraker Sidemount Insulators are available in three sizes to suit different antenna diameters. Antenna type should be specified when ordering.

Construction is of low loss high strength nylon, which ensures long life and for HF antennas system losses are kept to a minimum with maximum power available for radiation. The smooth surface is easily washed free of salt and dust deposits that may accumulate.

Mounting is easily effected with the stainless steel set bolts and washers provided.

Nylon Sidemount Extenders are also available to suit antenna types 29W/22W, 50 x 50 mm (2 x 2 in), and 18W/15W, 35 x 50 mm (1.4 x 2 in).

Specifications

Type	**Large**	**Medium**	**Small**
Overall Length	100mm (4 in)	63mm (2.5 in)	50mm (2 in)
Antenna Type	29W, 22W, 25P	18W, 15W, MD, 15BC	12W, BC Loop
Interchangeable Types	29W/22W	18W/MD or 15W/15BC	Both types
Diameter	50mm (2 in)	35mm (1.4 in)	30mm (1 3/16 in)
Attachment via stainless steel set screws and washers (supplied)	12mm	10mm	6mm

Specifications subject to change 4/00

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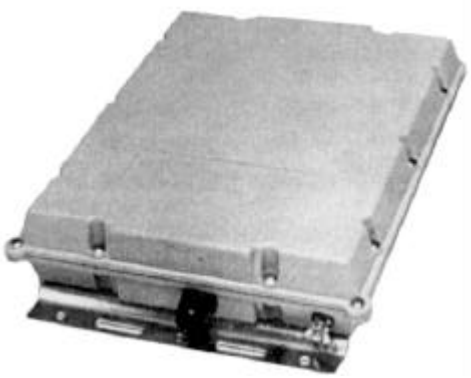
M O O N R A K E R

MSRA ATU

Automatic Antenna Tuning Unit suitable for the HF Band



A high quality HF tuner of American manufacture, chosen by Moonraker as a suitable compliment to its range of HF antenna systems.

The MSRA ATU features microprocessor controlled switching of lumped C and L. Many different configurations of Pi or L networks are possible. No connection to the transceiver other than the RF coaxial cable and a 12 volt supply is required. A switched low control line output is provided to operate a remote tuned indicator if required. Connection for the earth system is also provided.

The unit is housed in a weatherproof case, being designed for external operation closeby the antenna feed point. All external connections are by way of stainless steel terminals or sealing glands.

The system is DC isolated.

Specifications

Frequency Range	1.8-30 MHz (with suitable Moonraker Antenna)
Antenna Lengths	For 2-30 MHz shortest unloaded antenna Type 22W; loaded antennas will allow shorter length types; long wire antennas should be at least 8m (25ft) for the low frequencies
VSWR	Better than 2:1 (typical)
Input Impedance	50Ω
Power Capability	10-150 watts PEP
DC Input	13.8 v DC required (typical)
DC Operating Range	10-15v DC, 0.9 Amps average
Tuning Time (random)	Less than 4 seconds (typical)
Retune Time	Less than 15 milliseconds (typical)
Operating Temperature	-30°C to +60°C
Size	406 x 292 x 83 mm (16 x 11.5 x 3.25 in)
Packed Weight	4 kg (8.8 lbs)

Specifications subject to change 7/98

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