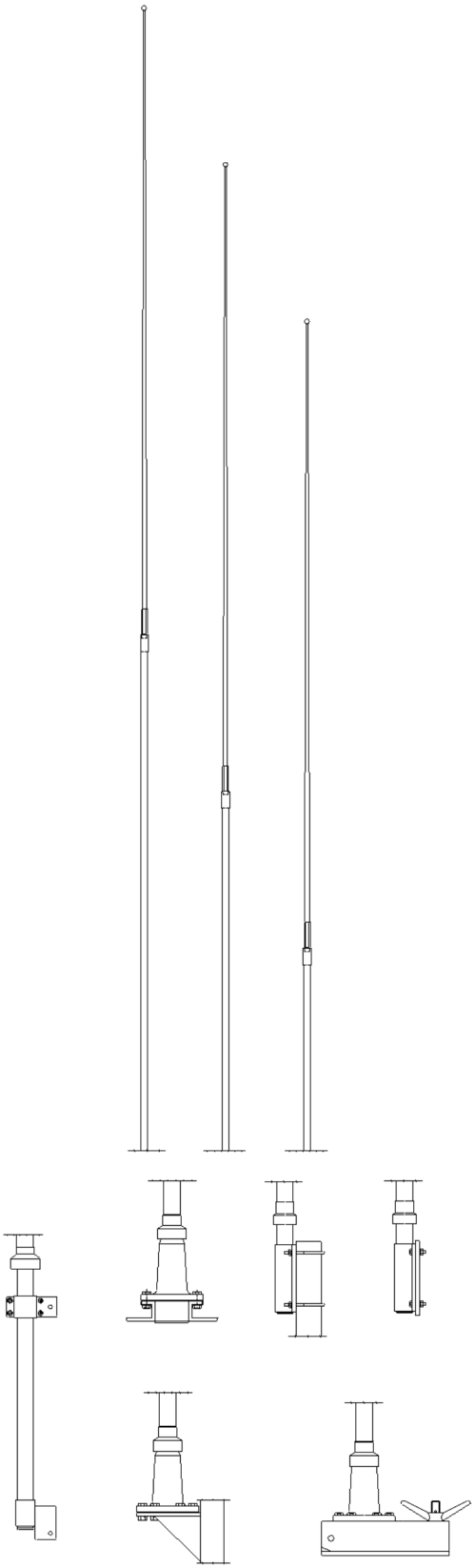
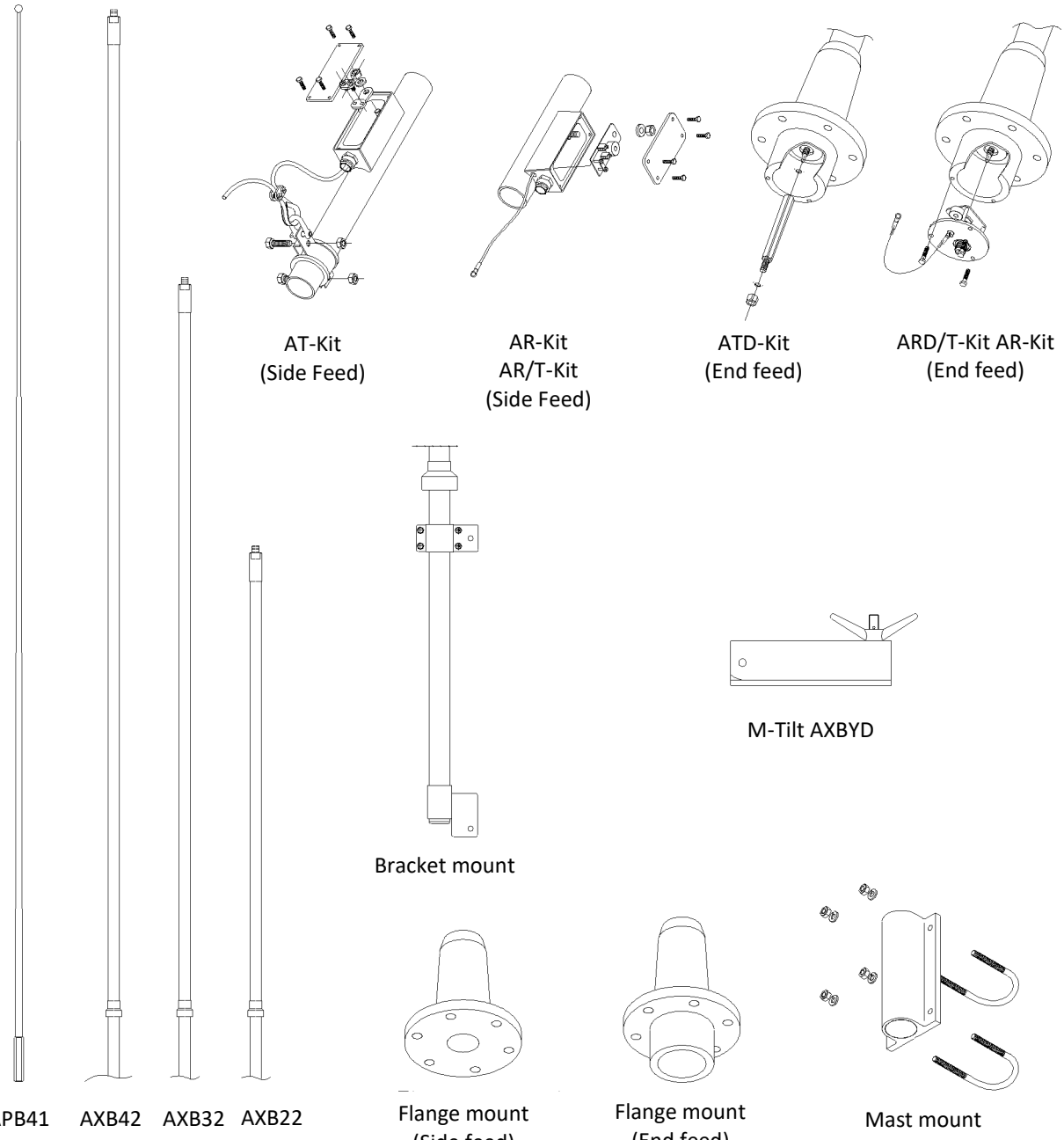


High quality, high performance fiberglass rod antennas
Transmitting antennas for simplex and duplex SSB

Application

- The modular MF-HF antenna system is our answer to the Global Maritime Distress and Safety System (GMDSS).
- The antennas can be used as part of any MF/HF communication system but are specially designed to satisfy the demands of the GMDSS.
- Depending on the equipment and the traffic pattern of the vessel you can choose between antennas of 6, 7 or 8 m length.
- Different installations demand different mounting solutions. The modular system provides you with all the solutions you need:
    - Installation on a mast, tube or directly to a bulkhead wall.
    - Installation onto welded brackets.
    - Flange or deck mounting with side feed.
    - Flange or deck mounting with end feed.
    - Flange mounted versions with side feed can be fitted with a manual or electrical tilting bracket (see page 6).
- The antennas can be equipped with connecting kit for transmitting/transceivers (AT-Kit) or a kit for receiving (AR-Kit). The receiving kit can be supplied with a matching transformer (AR/T-Kit).
- Receiving antennas can be supplied with protection against static discharges that can harm the receiver.

System Parts



Top Whip A 4 m (13 ft) top whip, APB41, is common to all antennas.

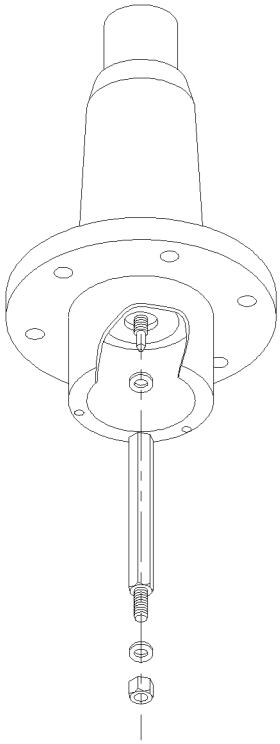
Bottom section The bottom section comes in three possible lengths 2, 3 and 4 m (6.7, 10 and 13 ft). For different mounting options, see the page 5 & 6.

Connecting kit There are 3 different connecting kits, AT, AR and AR/T. The AT is a transmitting/ transceiving kit while the AR is a receive only kit. The AR/T is a receiving kit with matching transformer (useful when a long cable is required).

MT-Tilt The M-Tilt is a manual tilting mechanism that allows you to tilt (lower) flange mounted side feed versions . Comrod can also supply an electrical tilting mechanism.

Transmitting Antennas

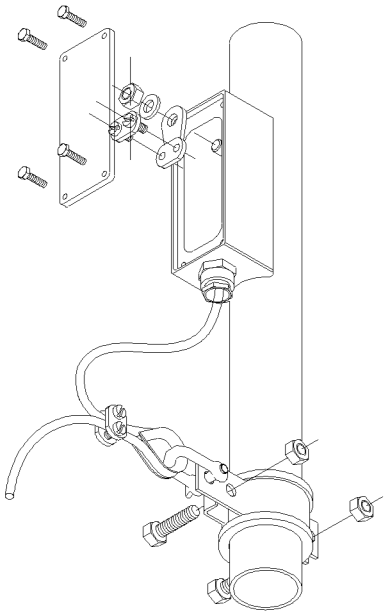
ATD-Kit
(End Feed)



Electrical specifications (transmitting antennas)

Frequency range	1.6-30 MHz
Power rating	1.5 kW PEP
Impedance	See table below
Polarization	Vertical
Pattern	Omnidirectional
Electrical length	5.5 m (18 ft) (add 0.5 m (1.7 ft) for base mount) 6.5m (21 ft) (add 0.5 m (1.7 ft) for base mount) 7.5 m (25 ft) (add 0.5 m (1.7 ft) for base mount, subtract 0.7 m (2.1 ft) for bracket mount).

AT-Kit
(Side Feed)

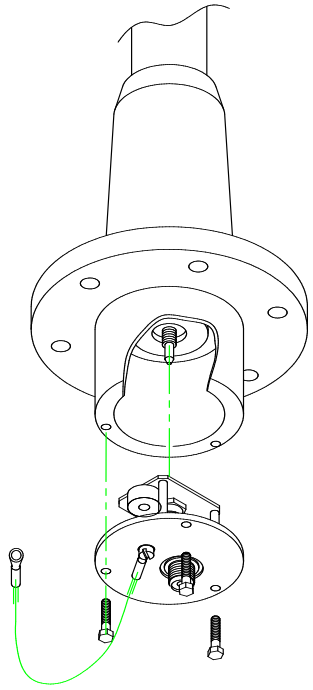


Impedance Measurements

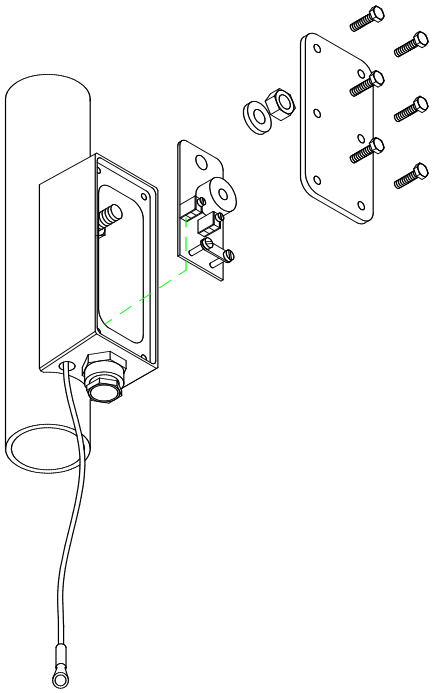
Antenna mounted on a 2m steel pipe over flat steel roof. Feed line 2m.

Frequency (MHz)	Transmitting Antenna 6 m	Transmitting Antenna 7 m	Transmitting Antenna 8 m
1.6	3-j1.310	3-j1.200	4-j1.060
2.0	4-j1.025	4-j950	5-j800
3.0	7-j970	8-j550	9-j470
4.0	9-j410	10-j325	11-j290
5.0	17-j260	18-j200	20-j145
6.0	20-j150	25-j95	28-j38
7.0	35-j65	40-j10	55+j55
8.0	40+j30	50+j90	60+j155
10.0	100+j190	130+j270	200+j400
12.0	600+j450	650+j450	1000+j300
16.0	1000+j200	900-j500	500-j500
18.0	700-j500	400-j500	250-j450
22.0	200-j400	90-j280	70-j80
25.0	90-j195	75-j10	240-j200
30.0	200+j150	500+j0	400-j300

ARD-Kit
(End Feed)



AR-Kit
(Side Feed)



Electrical specifications (receiving antennas)

Frequency range	0.15-30 MHz
Polarization	Vertical
Pattern	Omnidirectional
Electrical length	6m: 5.5 m (18 ft), (add 0.5 m (1.7 ft) for base mount) 7m: 6.5m (21.5 ft), (add 0.5 m (1.7 ft) for base mount) 8m: 7.5 m (25 ft), (add 0.5 m (1.7 ft) for base mount subtract 0.7 m (2.1 ft) for bracket mount)

Transformers for receiving antennas

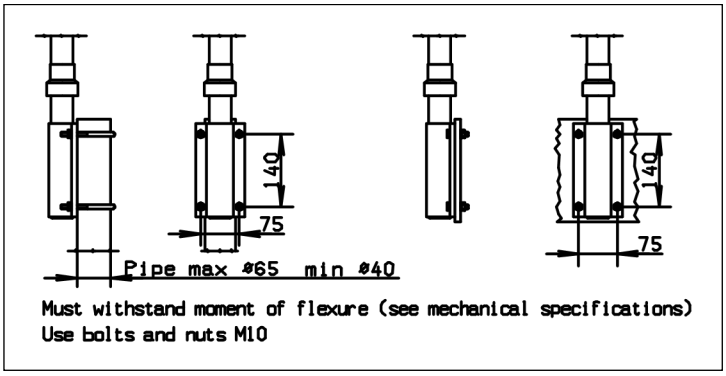
As being used in e.g AR82M/T, when a long feeding cable is necessary, a transformer is recommended to compensate for the signal strength loss in the cable. A transformer is also recommended if the antenna is used mainly on low frequencies.

The transformer is mounted on a circuit board that is easily installed. For specifications please refer to separate datasheet.

Mechanical specifications (transmit and receive antennas)

Design	Self supporting fiberglass rod with aluminium or COMPOSITE mounting hardware.
Height	6 m: (20 ft) 7 m: (23 ft) 8 m: (27 ft)
Weight	6 m: 7.0 kg 7 m: 7.6 kg 8 m: 8.2 kg
Sections	6 m: Base: AXB22 Bracket End feed: AXB22D flange Side feed: AXB22D/S Flange, side feed Top: APB41 7 m: Base: AXB32 Bracket End feed: AXB32D Flange Side feed: AXB32D/S Flange, side feed Top: APB41 8 m: Base: AXB42 Bracket End feed: AXB42D Flange Side feed: AXB42D/S Flange Side feed: AXB42H Welded brackets Top: APB41
Wind rating	55 m/s = 125 mph
Moment of flexure	6 m: 53.3 kpm at 55 m/s 7 m: 75.3 kpm at 55 m/s 8 m: 93.7 kpm at 55 m/s
Deflection due to wind load	6 m: 2.4 m (8 ft) at tip ball at 55 m/s wind load 7 m: 3.4 m (11 ft) at tip ball at 55 m/s wind load 8 m: 4.6 m (15 ft) at tip ball at 55 m/s wind load
Finish	Polyurethane lacquer, white
Temperature range	-55 °C, +55 °C, -67° F, +131 °F
Water Proofing	IP67
Ice build-up	Not affected

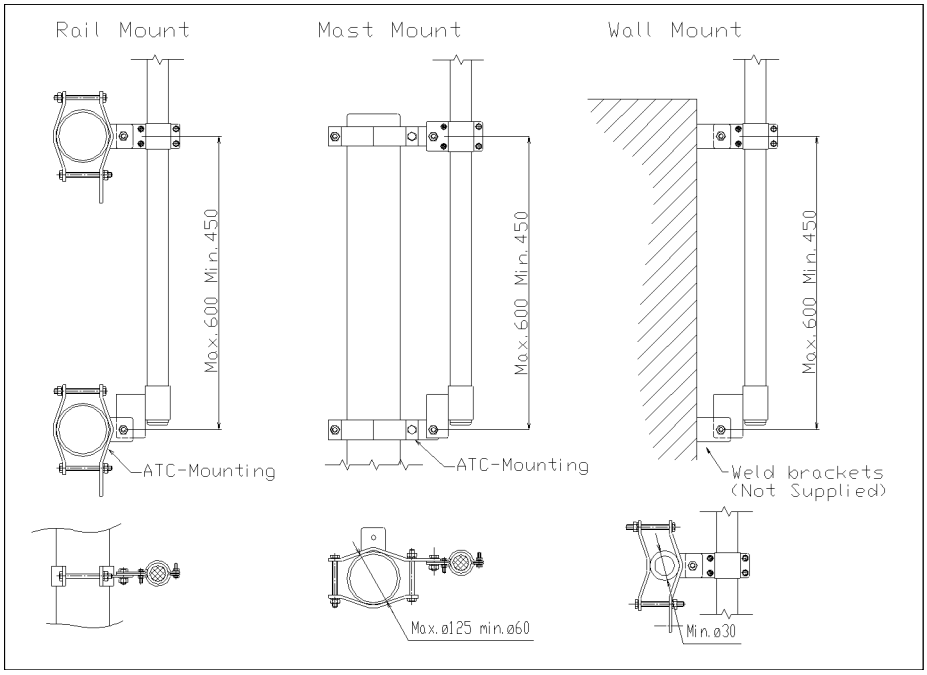
MOUNTING



Mast/wall mounting

Versions: AT82M, AT72M, AT62M
AR82M, AR72M, AR62M
AR82M/T, AR72M/T, AR62M/T

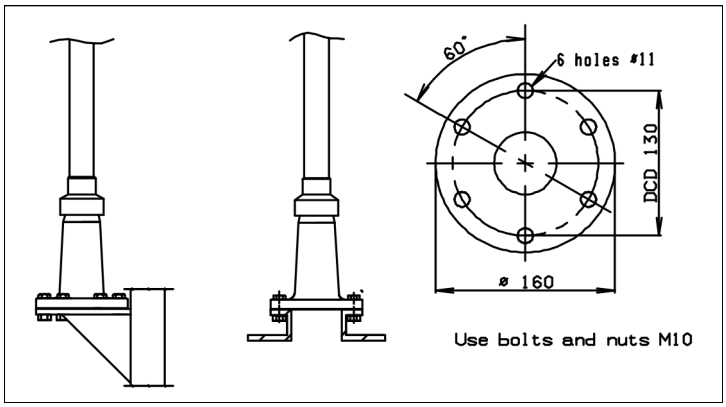
Mounting by means of U-bolts with nuts (included) or directly on wall or steel plate.



Mounting to weld brackets

Versions: AT82H
AR82H

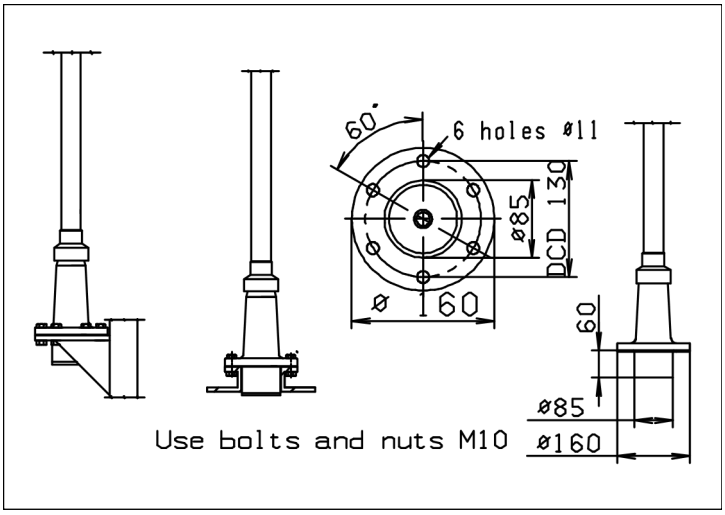
Mounting by means of 2 x M10 bolts to weld brackets or to a mast or rail by means of the ATC -mounting (included).



Base mount, side feed

Versions: AT82D/S, AT72D/S, AT62D/S
AR82D/S, AR72D/S, AR62D/S
AR82D/S/T, AR72D/S/T, AR62D/S/T

Mounting on deck or flange by means of 6 x M10 bolts.

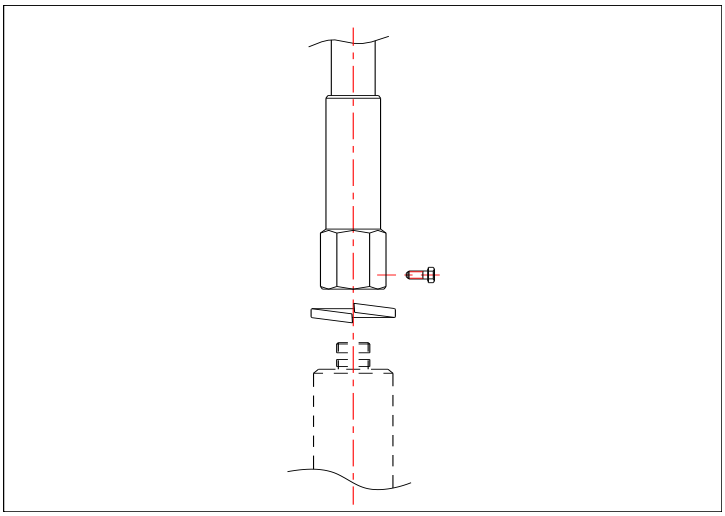


Base mount, End feed

Versions: AT82D, AT72D, AT62D
AR82D, AR72D, AR62D
AR82D/T, AR72D/T, AR62D/T

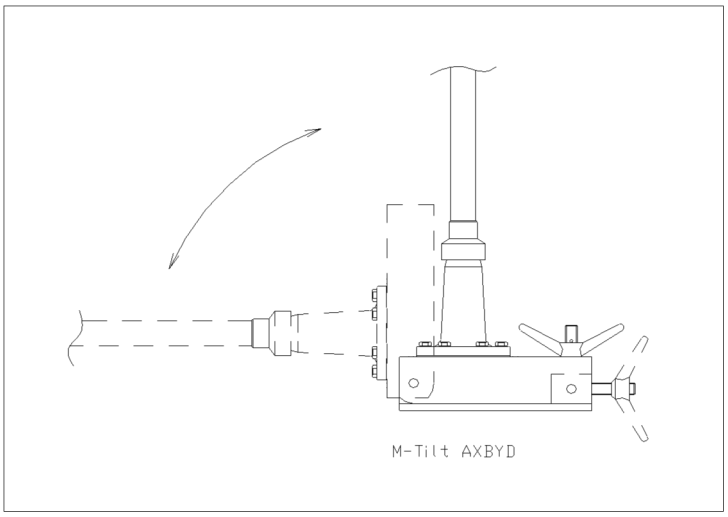
Mounted on a flange or bracket.

Cable is connected with a UHF female connector on the receive antennas.



Mounting of top whip

In order to mount the whip to the base section, use the spring washer and firmly screw the whip and base section together using a torque of 200 Nm. The Grub screw is then tightened, this prevents the top whip from unscrewing.



Optional tilting mechanism for base mount side feed versions

M-Tilt (AXBYD) - Manual tilting bracket.

M-Tilt is mounted on deck or pedestal by means of 4 x M12 bolts. Mountings to the antenna via 6 x flange holes. M10 x 40 bolts, nuts and washers are included as part of the tilt kit.