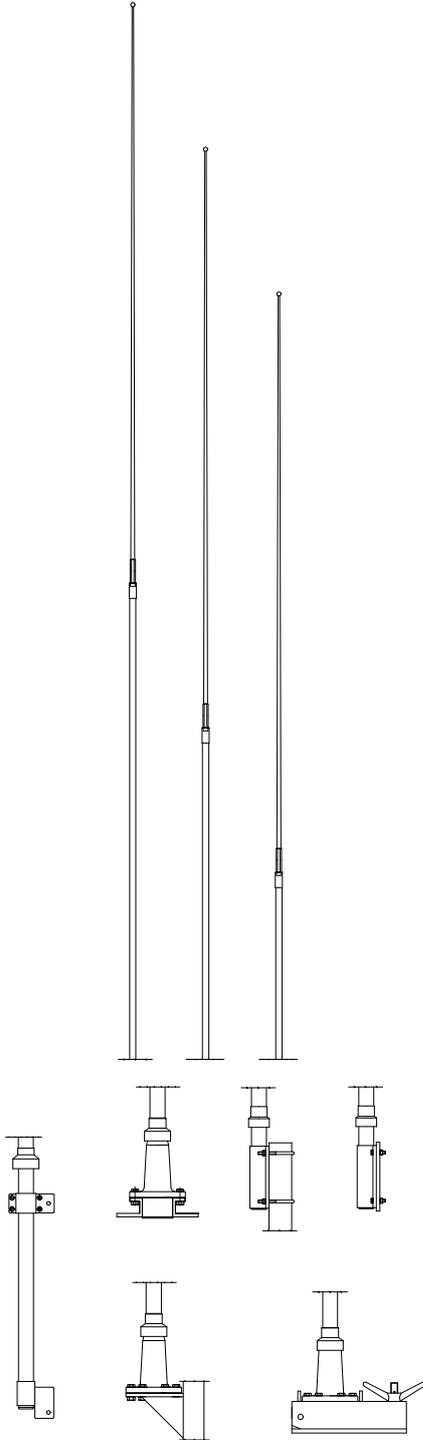


### High quality and high performance fiberglass rod antennas Transmitting antennas for simplex and duplex SSB Receiving antennas for MF-HF and SSB



#### Application:

The modular system is our answer to the GMDSS. The antennas can be part of any MF/HF communication system but is 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 possibilities. The modular system provides you with all the solutions you need:

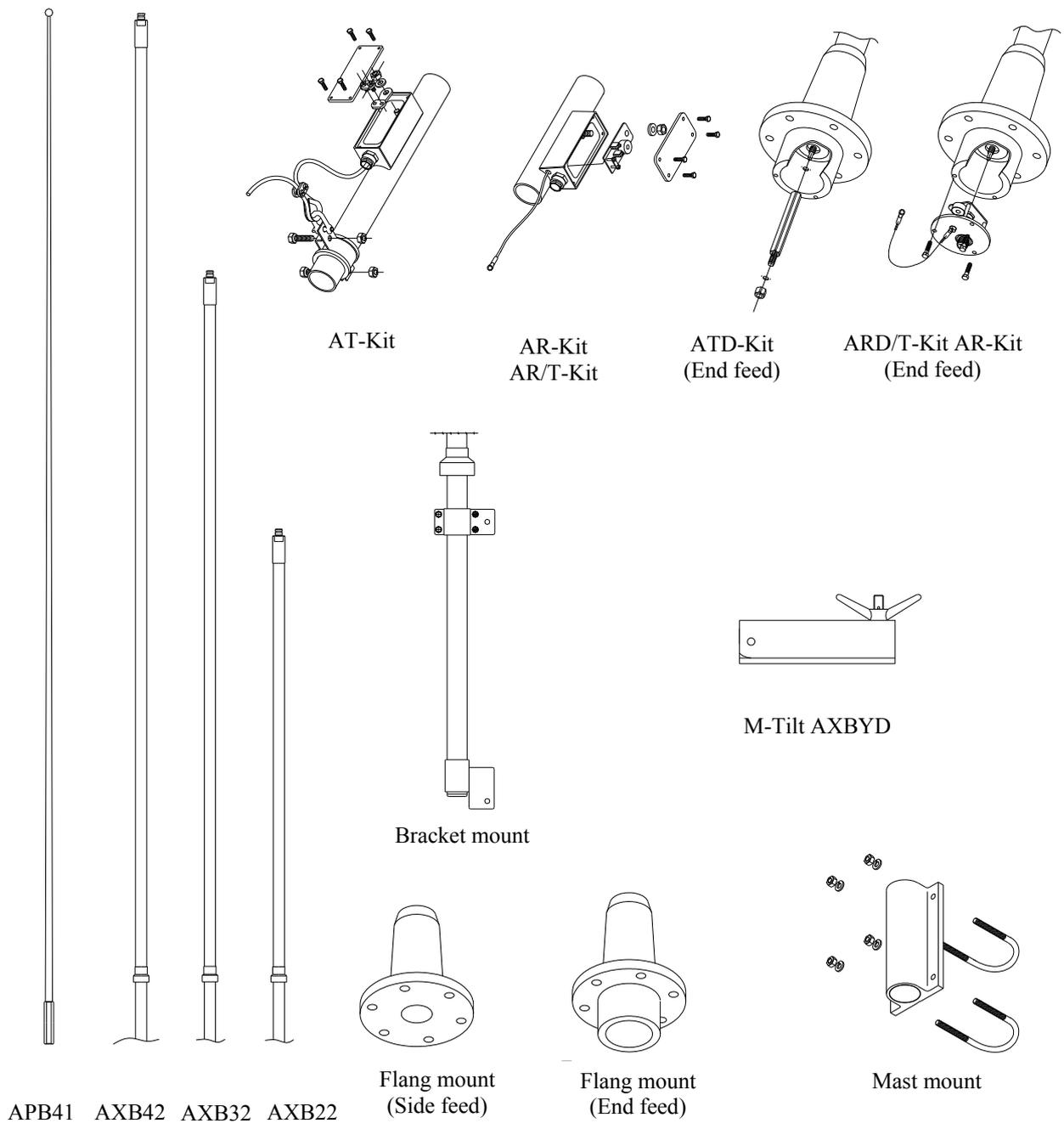
- \* Installation in mast or post or directly to wall.
- \* Installation on welded brackets.
- \* Flange or deck mounting with side feed.
- \* Flange or deck mounting with end feed.

The flange mounted, side feed versions can be fitted with a manual or electrical tilting device.

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 with matching transformer (AR/T-Kit).

Receiving antennas can be supplied with protection against static discharges that can harm the receiver, contact Comrod for prices and delivery time.

**Various lengths, Various mounting**



**System modules:**

**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 possibilities, see the last page.

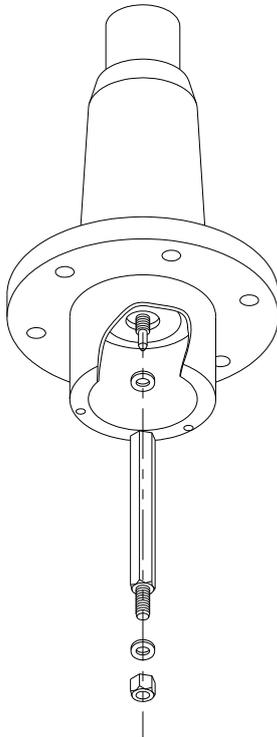
**Connecting kit**

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

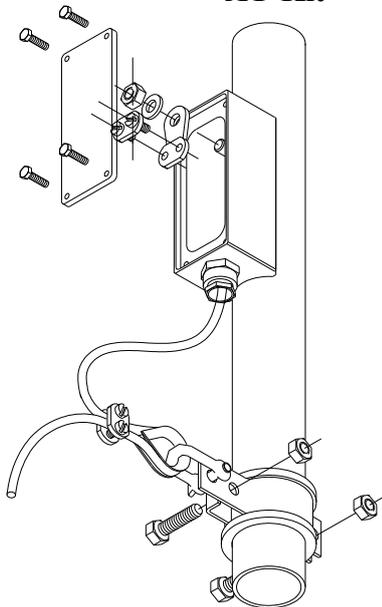
**MT-Tilt**

The M-Tilt is a manual tilting mechanism that allows you to tilt the flange mount side feed versions . We also supply an electrical tilting mechanism.

**ATD-Kit**



**AT-Kit**



**Electrical specifications transmitting antennas:**

|                   |  |
|-------------------|--|
| Frequency range   | 1.6-30 MHz   |
| Power rating      | 1.5 kW PEP   |
| Impedance         | See separate section   |
| Polarization      | Vertical   |
| Pattern           | Omnidirectional  |
| Electrical length | 5.5 m (18 ft) (add 0.5 m (1.7 ft) for base mount)<br>6.5m (21 ft) (add 0.5 m (1.7 ft) for base mount)<br>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). |

**Impedance Measurements:**

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

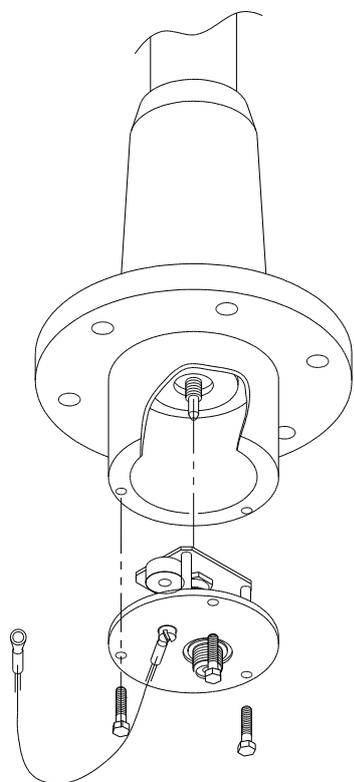
| Frequency (MHz) | Transmitting Antenna 6 m | Transmitting Antenna 7 m | Transmitting Antenna 8 m |
|-----------------|--------------------------|--------------------------|--------------------------|
| 1.6             | 3-j1.310                 | 3-j1.200                 | 4-j1.060                 |
| 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                 |

**Connection kits for End feed and Side feed transmitting antennas**

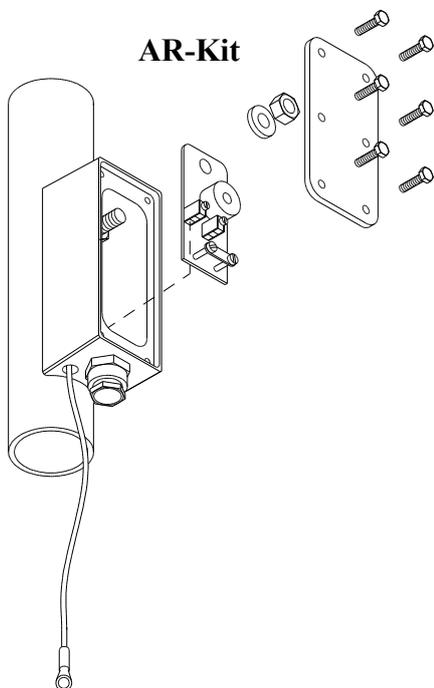
### Electrical specifications receiving antennas:

|                   |                 |   |
|-------------------|-----------------|---|
| Frequency range   | 0.15-30 MHz     |   |
| Polarization      | Vertical        |   |
| Pattern           | Omnidirectional |   |
| Electrical length | 5.5 m (18 ft)   | (add 0.5 m (1.7 ft) for base mount)   |
|                   | 6.5m (21.5 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)<br>subtract 0.7 m (2.1 ft) for bracket mount) |

ARD-Kit



AR-Kit



### 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.

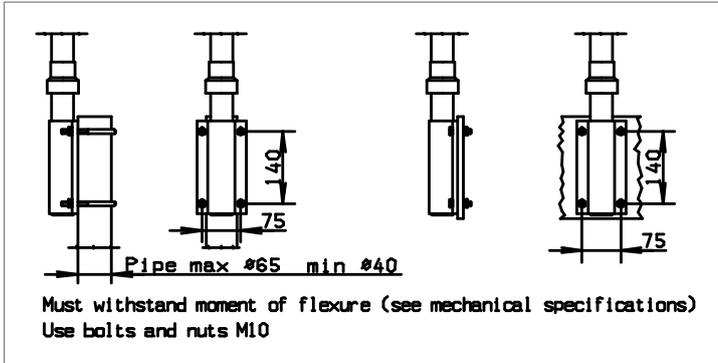
The transformer is mounted on a circuit board that is easily installed. For specifications please refer to separate datasheet.

### Mechanical specifications:

|                             |   |   |
|-----------------------------|---|---|
| Design                      | Selfsupporting fiberglass rod with aluminium or HMC 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                    | <u>6 m:</u><br>Base: AXB22 Bracket,<br>end feed: AXB22D flange,<br>side feed: AXB22D/S Flange, side feed<br>Top: APB41                              |   |
|                             | <u>7 m:</u><br>Base: AXB32 Bracket,<br>end feed: AXB32D Flange,<br>side feed: AXB32D/S Flange,<br>side feed Top: APB41                              |   |
|                             | <u>8 m:</u><br>Base: AXB42 Bracket,<br>end feed: AXB42D Flange,<br>side feed: AXB42D/S Flange,<br>side feed: AXB42H For mounting on welded brackets |   |
| Wind rating                 | 55 m/s = 125 mph  |   |
| Moment of flexure           | <u>6 m:</u>   | 53.3 kpm at 55 m/s                            |
|                             | <u>7 m:</u>   | 75.3 kpm at 55 m/s                            |
|                             | <u>8 m:</u>   | 93.7 kpm at 55 m/s                            |
| Deflection due to wind load | <u>6 m:</u>   | 2.4 m (8 ft) at tip ball at 55 m/s wind load  |
|                             | <u>7 m:</u>   | 3.4 m (11 ft) at tip ball at 55 m/s wind load |
|                             | <u>8 m:</u>   | 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 buildup                 | Not affected  |   |

End feed, side feed receiving antennas.

**MOUNTING:**

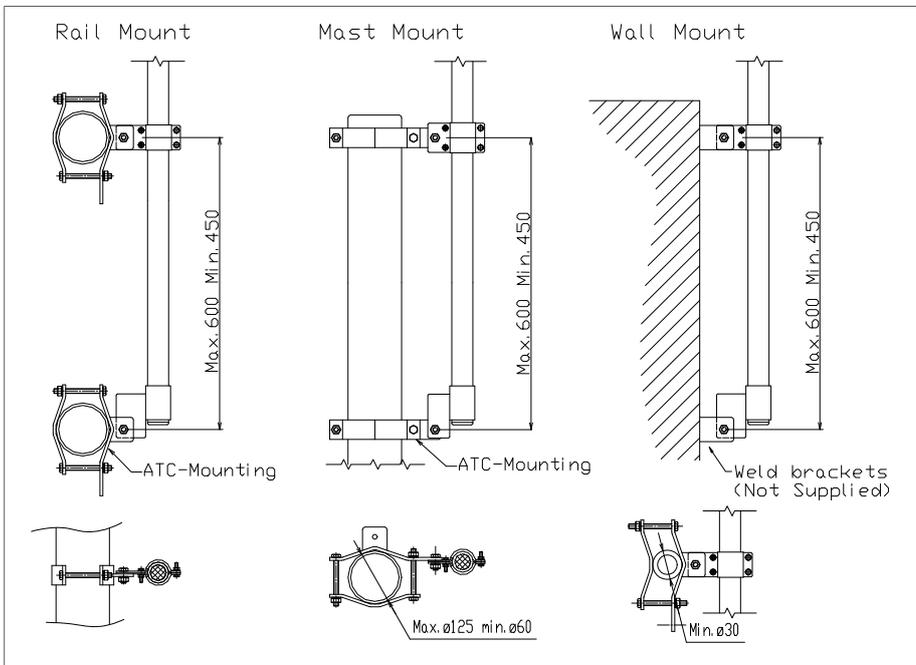


**Mast/wall mounting:**

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.

Mast/wall mounting.

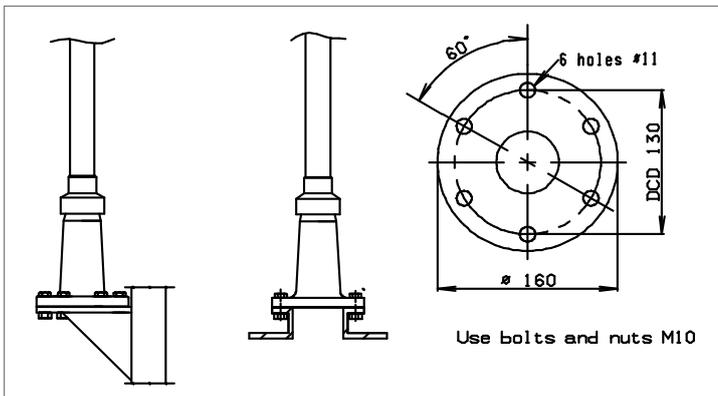


**Mounting to weld brackets.**

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).

Bracket mount



**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.

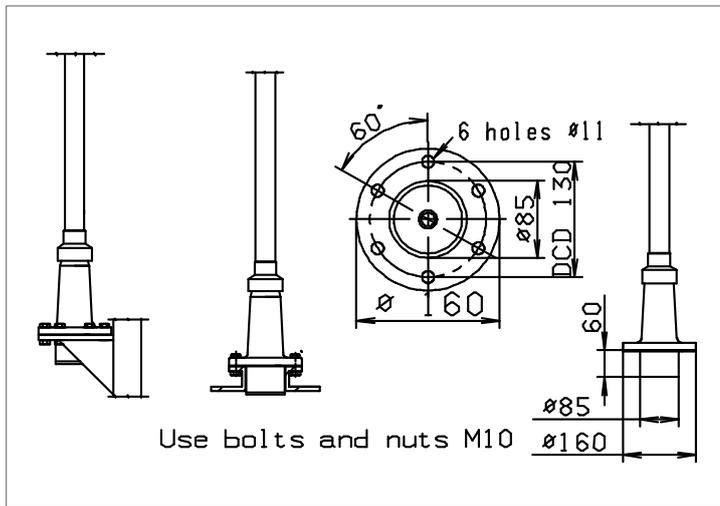
Base mount,side feed.

**Base mount, End feed:**

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

Mounted on a flange or bracket.

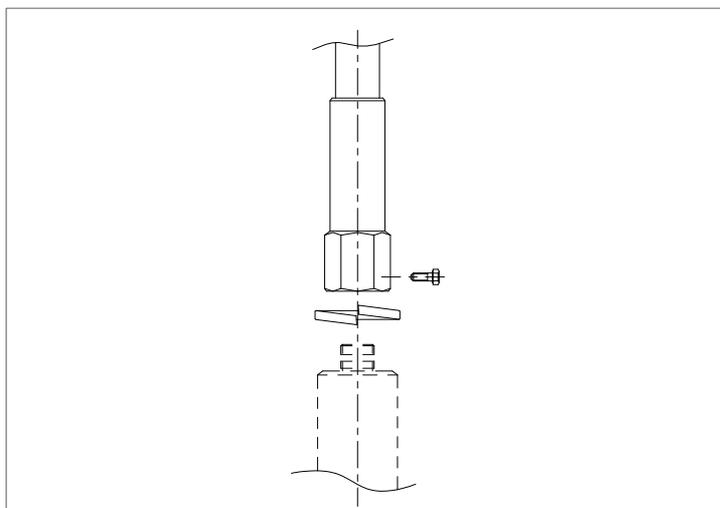
Cable is connected with a UHF female connector on the receive antennas.



Base mount, end feed.

**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.

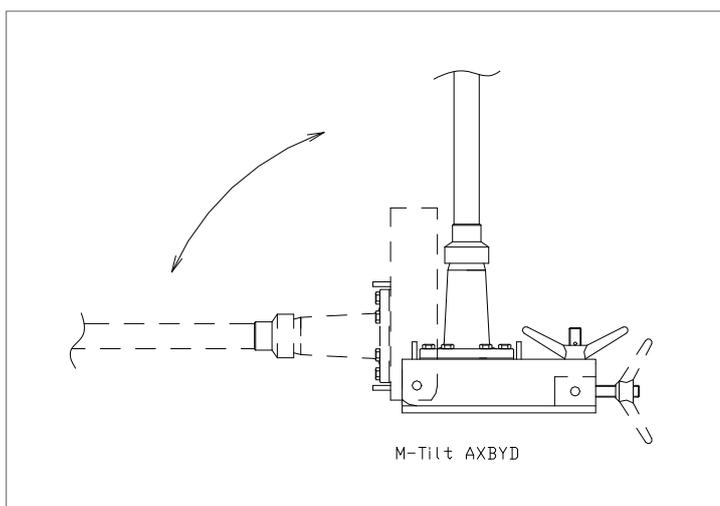


Top whip

**Tilting mechanism optional for Base mount side feed:**

M-Tilt AXBYD.  
 Electrical tilt after request.

M-Tilt is mounted on deck or pedestal by means of 4 x M12 bolts. Mountings to the antenna flang holes. 6pcs. M10x40 bolts with nuts (included).



Manual tilt.