

## Collinear 4 dB Mobile Antenna for the 450 MHz Band

### DESCRIPTION

- Encapsulated phasing coil.
  - Black-chromed, stainless steel whip.
  - Choice between general purpose tunable models.
  - Stainless steel X-mount with M6-thread whip-fastening system.
  - Simple mounting exclusively with access from the outside.
  - Models available with X-mount (oblong) and CX-mount (circular).
  - Choice between two connection principles:
    - X-mount: FME-connection (supplied without cable).
    - XP4-mount: Permanently attached 4 m cable terminated with FME-connector.
- All whips are compatible with all mounts.



### SPECIFICATIONS

| Electrical          |  |
|---------------------|--|
| Model               | MU 11-X/...  |
| Frequency           | 450 MHz-band covered by four models  |
| Antenna Type        | Collinear stainless steel whip mobile antenna  |
| Max. Input Power    | 100 W  |
| Polarisation        | Vertical   |
| Impedance           | 50 Ω   |
| VSWR                | ≤ 1.3 @ f. res.  |
| Bandwidth           | ≥ 20 MHz @ VSWR ≤ 1.5  |
| Gain (EIA RS-329-1) | 4 dB   |
| Mechanical          |  |
| Materials           | Whip : Black-chromed stainless steel and brass<br>Durable plastics<br>Mount : Black-chromed brass<br>Weather- and shockproof plastics<br>Stainless steel |
| Installation Torque | 4 ±1 Nm  |
| Colour              | Black  |
| Height              | Approx. 60 mm / 2.36 in.   |
| Weight              | X-version: Approx. 160 g / 0.35 lb.<br>XP4-version: Approx. 300 g / 0.66 lb.   |
| Mounting            | 18 mm dia. hole  |
| Environmental       |  |
| Ingress Protection  | IPX5   |

ORDERING

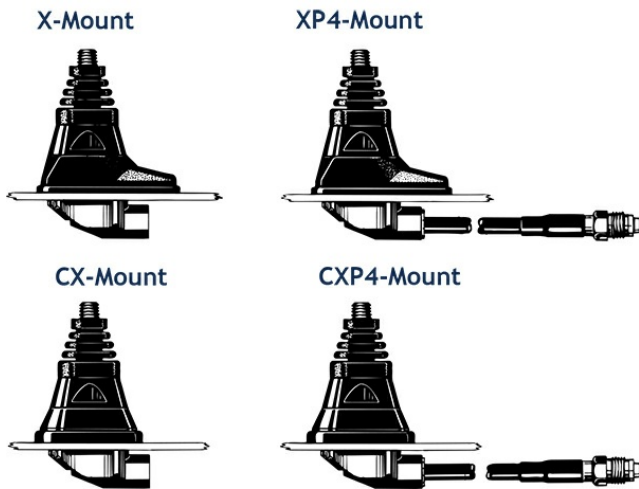
| Model           | Product No. | Description  | Frequency     |
|-----------------|-------------|--|---------------|
| MU 11-CX/f      | 130000796   | CX-mount (circular)with FME                          | 406...430 MHz |
| MU 11-CXP4/f    | 130000798   | CXP4-mount (circular)with 4 m cable andFME-connector | 406...430 MHz |
| MU 11-CX/h      | 130000800   | CX-mount (circular)with FME                          | 440...470 MHz |
| MU 11-CXP4/h    | 130000802   | CXP4-mount (circular)with 4 m cable andFME-connector | 440...470 MHz |
| MU 11-CX/l      | 130001483   | CX-mount (circular)with FME                          | 420...450 MHz |
| MU 11-CXP4/l    | 130000805   | CXP4-mount (circular)with 4 m cable andFME-connector | 420...450 MHz |
| MU 11-CX/CEL1   | 130001484   | CX-mount (circular)with FME                          | 450 - 470 MHz |
| MU 11-CXP4/CEL1 | 130000808   | CXP4-mount (circular)with 4 m cable andFME-connector | 450 - 470 MHz |
| MU 11-CXP4/CEL4 | 130000811   | CXP4-mount (circular)with 4 m cable andFME-connector | 414 - 430 MHz |
| MU 11-CXP4/CEL2 | 130000815   | CXP4-mount (circular)with 4 m cable andFME-connector | 440 - 455 MHz |
| MU 11-CX/s      | 130000814   | CX-mount (circular)with FME                          | 380...410 MHz |
| MU 11-CXP4/s    | 130000817   | CXP4-mount (circular)with 4 m cable andFME-connector | 380...410 MHz |
| MU 11-CX/CEL4   | 130001487   | CX-mount (circular)with FME                          | 414 - 430 MHz |
| MU 11-CX/CEL3   | 130001486   | CX-mount (circular)with FME                          | 425 - 440 MHz |
| MU 11-X/f       | 130000795   | X-mount (oblong)with FME                             | 406...430 MHz |
| MU 11-XP4/f     | 130000797   | XP4-mount (oblong)with 4 m cable andFME-connector    | 406...430 MHz |
| MU 11-X/h       | 130000799   | X-mount (oblong)with FME                             | 440...470 MHz |
| MU 11-XP4/h     | 130000801   | XP4-mount (oblong)with 4 m cable andFME-connector    | 440...470 MHz |
| MU 11-X/l       | 130000803   | X-mount (oblong)with FME                             | 420...450 MHz |
| MU 11-XP4/l     | 130000804   | XP4-mount (oblong)with 4 m cable andFME-connector    | 420...450 MHz |
| MU 11-X/CEL1    | 130000806   | X-mount (oblong)with FME                             | 450 - 470 MHz |
| MU 11-XP4/CEL1  | 130000807   | XP4-mount (oblong)with 4 m cable andFME-connector    | 450 - 470 MHz |
| MU 11-XP4/CEL4  | 130000809   | XP4-mount (oblong)with 4 m cable andFME-connector    | 414 - 430 MHz |
| MU 11-XP4/CEL2  | 130000810   | XP4-mount (oblong)with 4 m cable andFME-connector    | 440 - 455 MHz |
| MU 11-X/s       | 130000813   | X-mount (oblong)with FME                             | 380...410 MHz |
| MU 11-XP4/s     | 130000816   | XP4-mount (oblong)with 4 m cable andFME-connector    | 380...410 MHz |
| MU 11-X/CEL4    | 130000818   | X-mount (oblong)with FME                             | 414 - 430 MHz |
| MU 11-X/CEL3    | 130000819   | X-mount (oblong)with FME                             | 425 - 440 MHz |
| MU 11-CX/CEL2   | 130001485   | CX-mount (circular)with FME                          | 440 - 455 MHz |
| MU 11-CXP4/CEL3 | 130000812   | CXP4-mount (circular)with 4 m cable andFME-connector | 425 - 440 MHz |
| MU 11-X/CEL2    | 130001478   | X-mount (oblong)with FME                             | 440 - 455 MHz |
| MU 11-XP4/CEL3  | 130001482   | XP4-mount (oblong)with 4 m cable andFME-connector    | 425 - 440 MHz |

PLEASE NOTE

To help selecting the correct model for a specific cellular network, please consult the survey of cellular network frequencies under USEFUL DATA in our catalogues.

THE WHIP IS COMPATIBLE WITH ALL BELOW MOUNTS

2. INSTALLATION STEPS



INSTALLATION

This antenna can be mounted anywhere on the car, however, roof top mounting is always recommended.

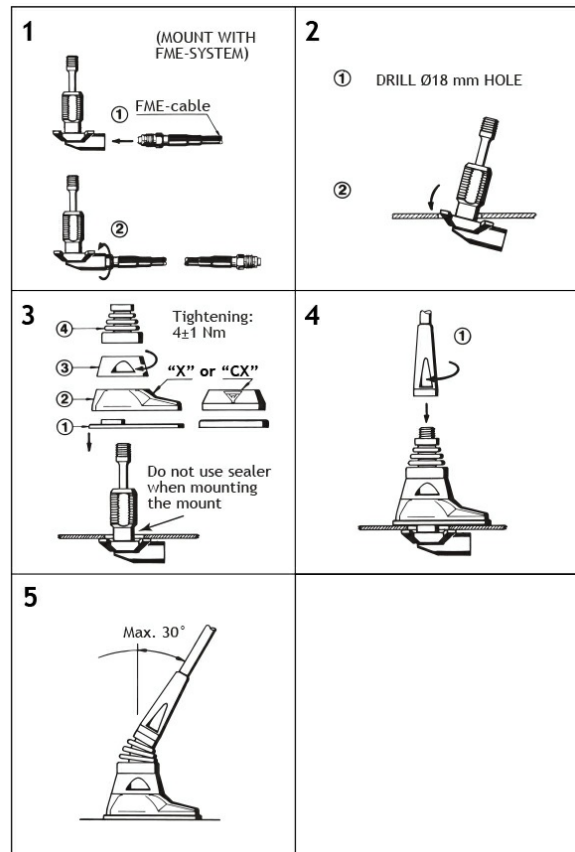
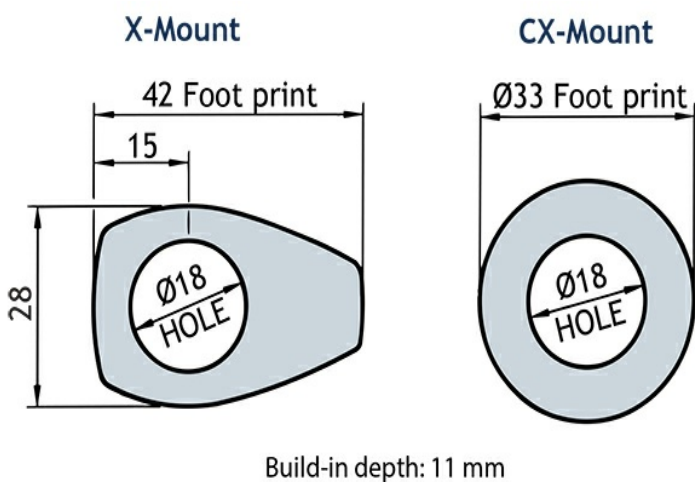
The oblong X-mount can be mounted on the often very narrow strip on the rear wing between the trunk lid and the side of the car.

Mounting can take place exclusively with access from the outside when drilling an 18 mm dia. hole. Mounting can take place from the inside by drilling a 14 mm dia. hole. When mounting in a 14 mm dia. hole, remove the bottom plastic ring of the packing gasket with a sharp cutter.

When cleaning the car in car-washing machines, remove the whip using a spanner, size 9 mm. After wash, refit the whip and tighten it lightly with the spanner.

As the mounts are internally equipped with a bendable section, the antennas can always be adjusted to an upright position independent of the tilt angle of the installation spot

1. INSTALLATION DIMENSION



Do not use sealer on rubber gasket or other places.

3. TUNING

The tunable models are tuned to the desired frequency within the indicated tuning range by positioning the adjustment disc according to the diagrams below.

