

## Unity Gain ¼ λ Mobile Antenna for the 450 MHz Band

### DESCRIPTION

- Stainless steel whip with toggle joint.
- Type MU 1-Z/... cover a large frequency range from 370 - 470 MHz. (See Ordering Designations.)
- Stainless steel Z-mount with ball-joint and wing screw whip-fastening system.
- Available with bright or black-chromed metal parts (mount and whip):
  - MU 1-Z/... : Bright version
  - MU 1-BZ/... : Black version
- Simple mounting exclusively with access from the outside. Models with roof thickness from 2 mm to 7.5 mm mounting from the inside.
- Choice between two connection principles:
  - Z-mount : FME-connection (supplied without cable).
  - ZP4-mount : Permanently attached 4 m cable terminated with FME-connector.



### ORDERING

Type	Product No.	Description	Frequency
MU 1-Z/s	130000880	Z-mount with FME-system BRIGHT	370 - 410 MHz
MU 1-Z/sl	130002322	Same mount as above	380 - 430 MHz
MU 1-Z/l	130000872	Same mount as above	406 - 440 MHz
MU 1-Z/h	130000875	Same mount as above	430 - 470 MHz
MU 1-BZ/s	130000881	BZ-mount with FME-system BLACK	370 - 410 MHz
MU 1-BZ/sl	130002323	Same mount as above	380 - 430 MHz
MU 1-BZ/l	130000883	Same mount as above	406 - 440 MHz
MU 1-BZ/h	130000882	Same mount as above	430 - 470 MHz
MU 1-ZP4/s	130000870	ZP4-mount with 4 m cable and FME-connector BRIGHT	370 - 410 MHz
MU 1-ZP4/sl	130002324	Same mount as above	380 - 430 MHz
MU 1-ZP4/l	130000876	Same mount as above	406 - 440 MHz
MU 1-ZP4/h	130000877	Same mount as above	430 - 470 MHz
MU 1-BZP4/s	130000871	BZP4-mount with 4 m cable and FME-connector BLACK	370 - 410 MHz
MU 1-BZP4/sl	130002325	Same mount as above	380 - 430 MHz
MU 1-BZP4/l	130000873	Same mount as above	406 - 440 MHz
MU 1-BZP4/h	130000874	Same mount as above	430 - 470 MHz

### SPECIFICATIONS

Electrical	
Model	MU 1-Z/...
Frequency	450 MHz-band covered by four models
Antenna Type	Mobile whip antenna
Max. Input Power	100 W
Polarisation	Vertical
Impedance	50 Ω
VSWR	≤ 1.2:1 @ f <sub>res.</sub>
Bandwidth	≥ 45 MHz @ VSWR ≤ 1.5:1 ≥ 50 MHz @ VSWR ≤ 2.0:1
Gain (EIA RS-329-1)	0 dB

Mechanical	
Materials	Whip : Stainless steel, bright polished or black-chromed Chromed brass Mount : Chromed brass Weather- and shockproof plastics Stainless steel
Installation Torque	7.5 +/- 1 Nm
Colour	Bright or black, see above
Height	Approx. 185 mm / 7.28 in.
Weight	Z-version: Approx. 140 g / 0.31 lb. ZP4-version: Approx. 280 g / 0.62 lb.
Mounting	21 mm / 0.83 in. dia. hole (For roof thickness 2 mm / 0.08 in. up to 7.5 mm / 0.30 in. mounting hole should be 22 mm dia.)
Mounting Plate Thickness	Max. 2.0 mm / 0.08 in. (Models up to 7.5 mm / 0.30 in. on request)

ADDITIONAL DATA

Hat screw option:

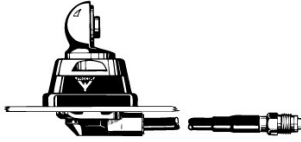


For antenna delivered with hat screw instead of wing screw add a K to the antenna designation.

THE WHIP IS COMPATIBLE WITH ALL BELOW MOUNTS.

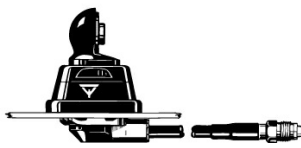
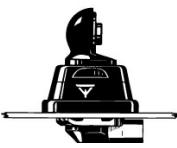
Z-Mount

ZP4-Mount



BZ-Mount

BZP4-Mount



INSTALLATION

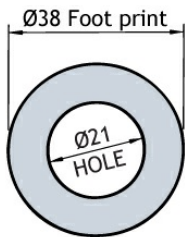
This antenna should always be mounted on the car roof to ensure best omnidirectional coverage.

The antenna is provided with type Z-mount. The whip is fastened to the mount by means of our standard ball-joint and wings crew system. The adjustable ball-joint ensures that the whip can always be mounted in a vertical position independent of the angle of the installation spot.

The Z-mount is particularly well suited for mounting on car roofs because of its ability to be installed exclusively with access from the outside. The Z-Mount for roof thickness from 2 mm to 7.5 mm must be mounted from the inside.

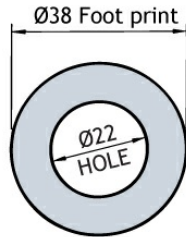
1. INSTALLATION DIMENSIONS

Z-MOUNT



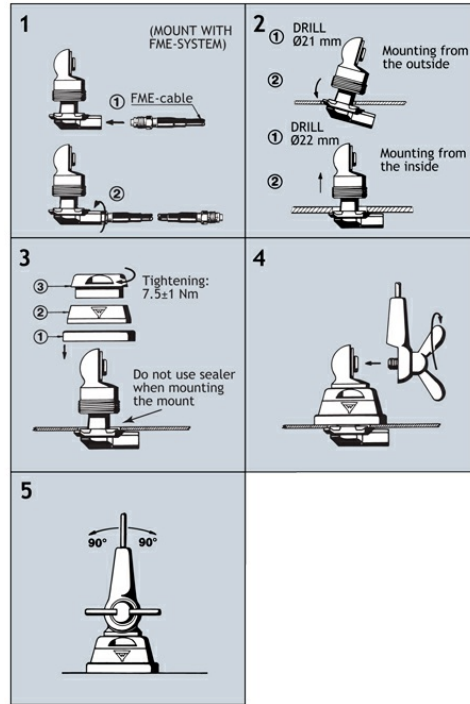
Build- in depth: 10.5 mm  
Mounting from the outside

Z-MOUNT



Build- in depth: 10.5 mm  
Mounting from the inside

2. INSTALLATION STEPS



Do not use sealer on rubber gasket or other places.

3. TUNING / MODEL CONVERSION

- The antenna is delivered factory-tuned and requires no further tuning.
- To convert an MU 1-Z/s model into an MU 1-Z/l model, cut off 12 mm of the top end of the whip.
- To convert an MU 1-Z/l model into an MU 1-Z/h model, cut off 10 mm of the top end of the whip.

PLEASE NOTE

As standard the antenna is provided with wing screw. However, the wing screw may be replaced by the less obtrusive hat screw (with key), which also gives an improved protection against theft. To order the antenna with hat screw, please add a "K" to the antenna designation.

