

# GP 450-3/...

## Colinear, 3 dBd Ground-Plane Base Station and Marine Antenna for the 450 MHz Band

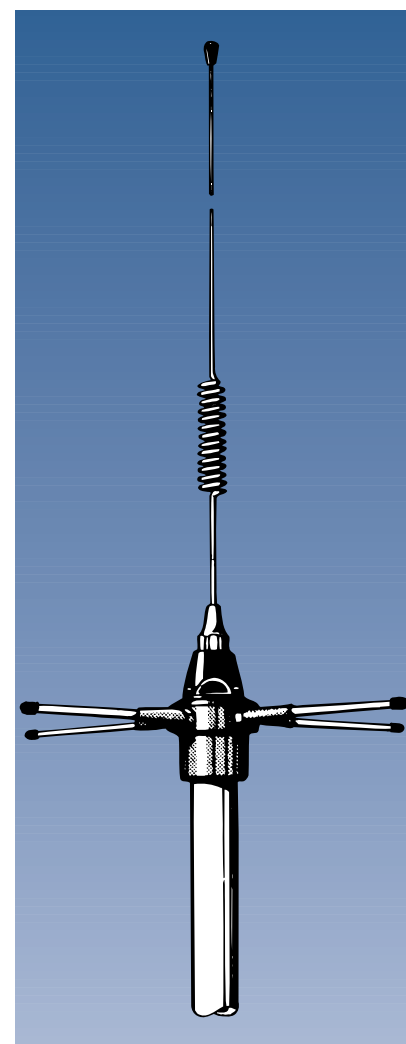
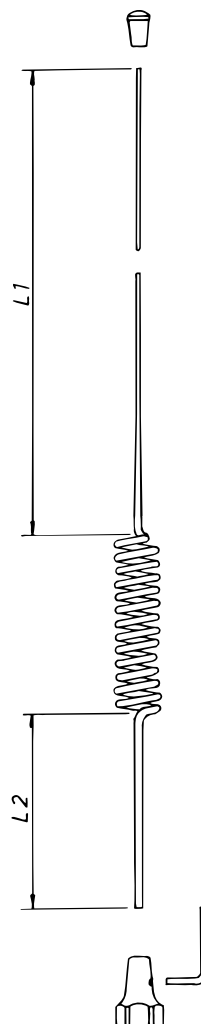


### DESCRIPTION:

- ★ The high gain of this antenna combined with its low height makes it the right choice for a wide variety of purposes.
- ★ The antenna is delivered in two models tunable by cutting within 380...410 MHz (l-version) and 406...470 MHz (h-version), respectively.
- ★ The GP 450-3/... is especially suitable as a marine antenna in connection with 450 MHz cellular radio telephone systems making it possible to extend the normally land-based cellular system for maritime mobile service as well.
- ★ The compactness of the GP 450-3/... also makes it highly qualified as a base station antenna.
- ★ The higher the antenna is mounted, the better coverage. Avoid mounting the antenna parallel to or in the neighbourhood of other metal parts such as masts, supporting wires etc., otherwise the SWR and the radiation pattern may be influenced.
- ★ The antenna is easily field-tuned following the instructions below, or it can be ordered factory-tuned for CELLULAR or customer-specified frequencies. See ordering information below.
- ★ Materials used are 18/8 stainless steel, UV-stabilized plastic and triple-plated chromed brass.

### SPECIFICATIONS:

ELECTRICAL	
MODEL	GP 450-3/...
ANTENNA TYPE	Colinear ground-plane antenna
FREQUENCY	Tunable by cutting within: l: 380...410 MHz h: 406...470 MHz
IMPEDANCE	Nom. 50 Ω
RADIATION	Omnidirectional
POLARISATION	Vertical
GAIN	5 dBi 3 dBd
BAND WIDTH	10 MHz @ SWR ≤ 1.5
SWR	≤ 1.3 @ f. res.
MAX. POWER	250 watts
MECHANICAL	
TEMP. RANGE	-30° C → +70° C
CONNECTOR	N-female
WIND SURFACE	0.0131 m²
WIND LOAD	17 N @ 160 km/h
COLOUR	Bright chrome
MATERIALS	Bright polished stainless steel. Bright chromed brass. Environment-proof plastic
TOTAL HEIGHT	Approx. 730 mm (at 406 MHz)
DIA. IN TOP END	2 mm
DIA. IN BOTTOM END	3 mm
WEIGHT	Approx. 780 g
MOUNTING	On 27 mm dia. mast tube (3/4" water pipe)



### ORDERING DESIGNATIONS

TYPE NO.	FREQUENCY
GP 450-3/l	Tunable within 380...410 MHz
GP 450-3/h	Tunable within 406...470 MHz

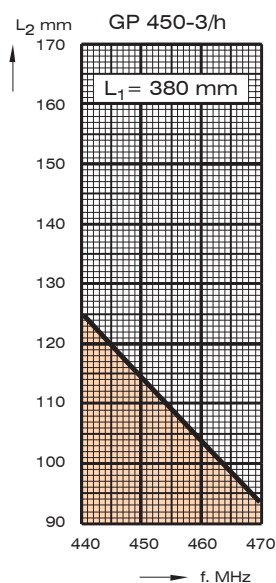
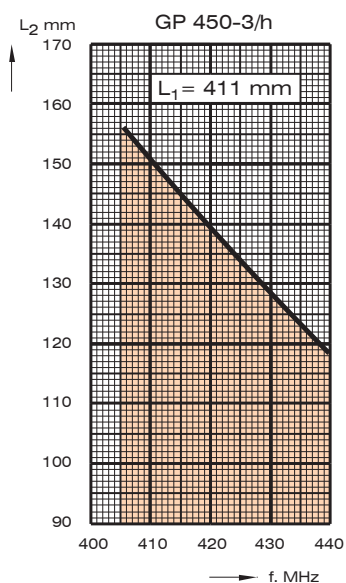
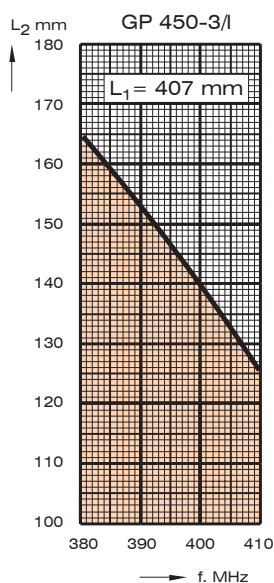
The GP 450-3/... can also be delivered factory tuned to a specific frequency or cellular network, such as TETRA. In this case, please add frequency or name of the network to the antenna model, e.g. GP 450-3/390 MHz.

# GP 450-3/...

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and Marine Antenna for the 450 MHz Band**



## CUTTING DIAGRAMS:



## TUNING INSTRUCTIONS:

The GP 450-3/... must be tuned to the operating frequency according to the following instructions:

1. Only for GP 450-3/h: Cut the top section ( $L_1$ ) above the phasing coil as indicated in the cutting diagram, depending on whether operating in the lower end or the higher end of the band 406–470 MHz.
2. Tune the antenna using an SWR-meter by cutting the bottom end of the whip ( $L_2$ ). The whip is loosened from the nipple using the accompanying hex key. Use the cutting diagram above as a guide for this procedure. Do not cut the radials.