

# Omnidirectional Antenna Vertical Polarization

1920–2170

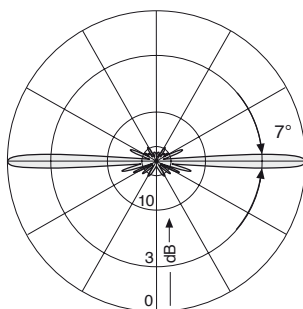
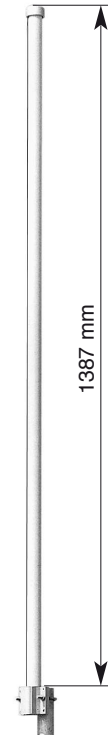
V

**KATHREIN**

Antennen · Electronic

## VPol Omni 1920–2170 360° 11dBi

Type No.	<b>741 790</b>
Frequency range	1920 – 2170 MHz
Polarization	Vertical
Gain	11 dBi
Impedance	50 Ω
VSWR	< 1.5
Intermodulation IM3	< -150 dBc (2 x 43 dBm carrier)
Max. power	150 W (at 50 °C ambient temperature)



Vertical Pattern

Mechanical specifications	
Input	7-16 female
Connector position	Bottom
Weight	5 kg
Radome diameter	51 mm
Wind load	120 N (at 150 km/h)
Max. wind velocity	200 km/h
Packing size	1570 x 148 x 112 mm
Height	1387 mm

936.1648/e Subject to alteration.

### Accessories (order separately)

Type No.	Description	Remarks	Weight approx.	Units per antenna
738 908	2 clamps	Mast: 94 – 125 mm diameter	2.8 kg	1

**Mounting:** The antenna can be attached laterally at the tip of a tubular mast of 50 – 94 mm diameter with one U-bolt bracket supplied with the antenna (connecting cable runs outside the mast).

**Material:** **Radiator:** Copper and brass. **Radome:** Fiberglass, colour: Grey.  
**Base:** Weather-proof aluminum.  
**Mounting kit, screws and nuts:** Stainless steel.

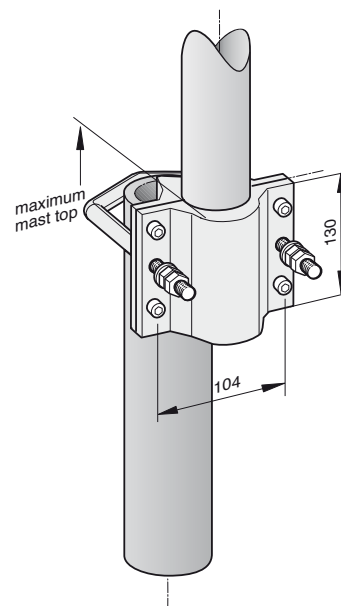
**Solid, reliable construction:** Omnidirectional antennas are often installed at exposed sites on the top of masts, so special attention has been paid to their mechanical construction. The exceptionally stiff fiberglass tube with low tip deflection will withstand wind velocities of up to 200 km/h.

**Anti-static protection:** All metal parts of the antenna as well as the supplied clamp attachment are grounded. The inner conductor is capacitively coupled.

**Lightning protection:** The antenna is designed to withstand a lightning current of up to 150 KA (impulse: 10/350  $\mu$ s), according to IEC 62305 parts 1–4 and VDE 0855-300, and thereby fulfils the requirements of lightning protection class II. Grounding cross-section: 22 mm<sup>2</sup> copper.

**Environmental conditions:** Kathrein cellular antennas are designed to operate under the environmental conditions as described in ETS 300 019-1-4 class 4.1 E. The antennas exceed this standard with regard to the following items:  
– Low temperature: –55 °C  
– High temperature (dry): +60 °C

**Environmental tests:** Kathrein antennas have passed environmental tests as recommended in ETS 300 019-2-4. The homogenous design of Kathrein's antenna families use identical modules and materials. Extensive tests have been performed on typical samples and modules.



**Please note:** **As a result of more stringent legal regulations and judgements regarding product liability, we are obliged to point out certain risks that may arise when products are used under extraordinary operating conditions.**

The mechanical design is based on the environmental conditions as stipulated in ETS 300 019-1-4 and thereby respects the static mechanical load imposed on an antenna by wind at maximum velocity. Extraordinary operating conditions, such as heavy icing or exceptional dynamic stress (e.g. strain caused by oscillating support structures), may result in the breakage of an antenna or even cause it to fall to the ground. These facts must be considered during the site planning process.

**The installation team must be properly qualified and also be familiar with the relevant national safety regulations. The details given in our data sheets have to be followed carefully when installing the antennas and accessories. The limits for the coupling torque of RF-connectors, recommended by the connector manufacturers must be obeyed.**

**Any previous datasheet issues have now become invalid.**

