# Multi-band Antenna
## Vertical Polarization
### Half-power Beam Width
### Fixed Electrical Downtilt

<table>
<thead>
<tr>
<th>Type No.</th>
<th>80010368</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Frequency range</strong></td>
<td></td>
</tr>
<tr>
<td>1710 – 1880 MHz</td>
<td>[1710–2180]</td>
</tr>
<tr>
<td>1850 – 1990 MHz</td>
<td></td>
</tr>
<tr>
<td>1920 – 2180 MHz</td>
<td></td>
</tr>
<tr>
<td><strong>Polarization</strong></td>
<td>Vertical</td>
</tr>
<tr>
<td><strong>Gain</strong></td>
<td>18.1 dBi</td>
</tr>
<tr>
<td><strong>Horizontal Pattern:</strong></td>
<td></td>
</tr>
<tr>
<td>Half-power beam width</td>
<td>13.3°</td>
</tr>
<tr>
<td>Front-to-back ratio (180°±30°)</td>
<td>&gt; 30 dB</td>
</tr>
<tr>
<td>Sidelobe suppression</td>
<td>&gt; 18 dB</td>
</tr>
<tr>
<td><strong>Vertical Pattern:</strong></td>
<td></td>
</tr>
<tr>
<td>Half-power beam width</td>
<td>37°</td>
</tr>
<tr>
<td>Electrical tilt</td>
<td>0°, fixed</td>
</tr>
<tr>
<td>Sidelobe suppression for first sidelobe above main beam</td>
<td>&gt; 18 dB</td>
</tr>
<tr>
<td><strong>Impedance</strong></td>
<td>50 Ω</td>
</tr>
<tr>
<td><strong>VSWR</strong></td>
<td>&lt; 1.5</td>
</tr>
<tr>
<td><strong>Intermodulation IM3</strong></td>
<td>&lt; –150 dBc (2 x 43 dBm carrier)</td>
</tr>
<tr>
<td><strong>Max. power per input</strong></td>
<td>300 W (at 50 °C ambient temperature)</td>
</tr>
</tbody>
</table>

### Mechanical specifications
- **Input**: 1 x 7-16 female
- **Connector position**: Side (see picture)
- **Wind load**:<br>Frontal: 340 N (at 150 km/h)<br>Lateral: 25 N (at 150 km/h)<br>Rearside: 400 N (at 150 km/h)
- **Max. wind velocity**: 200 km/h
- **Height/width/depth**: 299 / 743 / 69 mm
- **Weight**: 9 kg
- **Packing size**: 442 x 852 x 124 mm

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All specifications are subject to change without notice.
The latest specifications are available at www.kathreinusa.com
Accessories

General Information

Material:
- **Reflector screen:** Tin-plated copper.
- **Radiator:** Tin-plated zinc.
- **Flat fiberglass radome:** The max. radome depth is only 69 mm. Fiberglass material guarantees optimum performance with regards to stability, stiffness, UV resistance and painting. The color of the radome is grey.
- **All screws and nuts:** Stainless steel.

Grounding:
The metal parts of the antenna including the mounting kit and the inner conductors are DC grounded.

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

Ice protection: Due to the very sturdy antenna construction and the protection of the radiating system by the radome, the antenna remains operational even under icy conditions.

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.

Dimensions:

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. Wind loads are calculated according to DIN 1055-4. 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.

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**Accessories (order separately)**

<table>
<thead>
<tr>
<th>Type No.</th>
<th>Description</th>
<th>Remarks</th>
<th>Weight approx.</th>
<th>Units per antenna</th>
</tr>
</thead>
<tbody>
<tr>
<td>738546</td>
<td>1 clamp Mast: 42 – 115 mm diameter</td>
<td>1.1 kg</td>
<td>2 (order separately if required)</td>
<td></td>
</tr>
<tr>
<td>731651</td>
<td>1 clamp Mast: 28 – 60 mm diameter</td>
<td>0.8 kg</td>
<td>2 (order separately if required)</td>
<td></td>
</tr>
<tr>
<td>85010002</td>
<td>1 clamp Mast: 110 – 220 mm diameter</td>
<td>2.7 kg</td>
<td>2 (order separately if required)</td>
<td></td>
</tr>
<tr>
<td>85010003</td>
<td>1 clamp Mast: 210 – 380 mm diameter</td>
<td>4.8 kg</td>
<td>2 (order separately if required)</td>
<td></td>
</tr>
<tr>
<td>733677</td>
<td>1 clamp Mast: 60 – 115 mm diameter</td>
<td>2.0 kg</td>
<td>2 (order separately if required)</td>
<td></td>
</tr>
<tr>
<td>733678</td>
<td>1 clamp Mast: 115 – 210 mm diameter</td>
<td>2.6 kg</td>
<td>2 (order separately if required)</td>
<td></td>
</tr>
<tr>
<td>733679</td>
<td>1 clamp Mast: 210 – 380 mm diameter</td>
<td>4.0 kg</td>
<td>2 (order separately if required)</td>
<td></td>
</tr>
<tr>
<td>733680</td>
<td>1 clamp Mast: 380 – 521 mm diameter</td>
<td>5.3 kg</td>
<td>2 (order separately if required)</td>
<td></td>
</tr>
</tbody>
</table>

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