# Mechanical specifications

## Input
- **4 x 7-16 female**

## Connector position
- **Bottom**

## Adjustment mechanism
- **2x, Position bottom continuously adjustable**

## Wind load (at Rated Wind Speed: 150 km/h)
- **Frontal:** 840 | 189
- **Maximal:** 880 | 208

## Max. wind velocity km/h mph
- **200**

## Height/width/depth mm inches
- **2631 / 374 / 106**
- **103.6 / 14.7 / 4.2**

## Category of mounting hardware
- **H (Heavy)**

## Weight kg lb
- **23 / 25 (clamps incl.)**
- **50.7 / 55.1 (clamps incl.)**

## Packing size mm inches
- **3055 x 133 x 388**
- **120.0 x 5.2 x 15.3**

## Scope of supply
- Panel and 2 units of clamps for 42–115 mm | 1.7–4.5 inches diameter

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## 4-Port Antenna 790–960/790–960 90°/90° 16/16dBi 0°–8°/0°–8°

### Type No. 80010817

<table>
<thead>
<tr>
<th>Lowbands</th>
<th>R1; R2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency range MHz</td>
<td>790 – 862</td>
</tr>
<tr>
<td>Polarization °</td>
<td>+45, −45</td>
</tr>
<tr>
<td>Average gain (dBi) Tilt °</td>
<td>15.4 ... 15.4 ... 15.0</td>
</tr>
<tr>
<td>0 ... 4 ... 8</td>
<td>0 ... 4 ... 8</td>
</tr>
</tbody>
</table>

### Horizontal Pattern:
- **Half-power beam width °** | 93 | 90 | 87
- **Front-to-back ratio (180°±0°) dB** | > 24 | > 24 | > 25
- **Front-to-back ratio (180°±30°) dB** | > 20 | > 21 | > 22
- **Cross polar ratio 0° ±60° dB** | Typically: 20 | Typically: 20 | Typically: 18 |
| > 10 | > 10 | > 10 |

### Vertical Pattern:
- **Half-power beam width °** | 7.4 | 7.2 | 6.9
- **Electrical tilt °** | 0–8, continuously adjustable
- **Sidelobe suppression for first sidelobe above main beam °** | 0 ... 4 ... 8 | 0 ... 4 ... 8 | 0 ... 4 ... 8 |
| > 17 ... 17 ... 15 | > 17 ... 17 ... 15 | > 17 ... 17 ... 15 |
- **Impedance Ω** | 50
- **VSWR** | < 1.5
- **Isolation, between ports dB** | Intrasystem: > 27, Intersystem: > 27
- **Intermodulation IM3 dBc** | < −150 (2 x 43 dBm carrier)
- **Max. effective power per port W** | 400 (at 50 °C ambient temperature)
- **Max. effective power for the antenna W** | 1200 (at 50 °C ambient temperature)
Accessories
General Information

Accessories (order separately if required)

<table>
<thead>
<tr>
<th>Type No.</th>
<th>Description</th>
<th>Remarks mm</th>
<th>inches</th>
<th>Weight approx. kg</th>
<th>lb</th>
<th>Units per antenna</th>
</tr>
</thead>
<tbody>
<tr>
<td>85010002</td>
<td>1 clamp</td>
<td>Mast diameter: 110 – 220</td>
<td>4.3 – 8.7</td>
<td>2.7</td>
<td>6.0</td>
<td>2</td>
</tr>
<tr>
<td>85010003</td>
<td>1 clamp</td>
<td>Mast diameter: 210 – 380</td>
<td>8.3 – 15.0</td>
<td>4.8</td>
<td>10.6</td>
<td>2</td>
</tr>
<tr>
<td>85010008</td>
<td>1 downtilt kit</td>
<td>Downtilt angle: 0° – 8°</td>
<td></td>
<td>4.3</td>
<td>9.5</td>
<td>1</td>
</tr>
</tbody>
</table>

Accessories (included in the scope of supply)

<table>
<thead>
<tr>
<th>Type No.</th>
<th>Description</th>
<th>Remarks mm</th>
<th>inches</th>
<th>Weight approx. kg</th>
<th>lb</th>
<th>Units per antenna</th>
</tr>
</thead>
<tbody>
<tr>
<td>738546</td>
<td>1 clamp</td>
<td>Mast diameter: 42 – 115</td>
<td>1.7 – 4.5</td>
<td>1.1</td>
<td>2.4</td>
<td>2</td>
</tr>
</tbody>
</table>

For downtilt mounting use the clamps for an appropriate mast diameter together with the downtilt kit.

Material:

- **Reflector screen**: Weather-proof aluminum. The grey fiberglass radomes of these antennas are very stable and extraordinarily stiff. They are resistant to ultraviolet radiation and can also be painted to match their surroundings.
- **All screws and nuts**: Stainless steel or hot-dip galvanized steel.

Grounding:

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

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Correlation Table

<table>
<thead>
<tr>
<th>Frequency range</th>
<th>Array</th>
<th>Connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>790–960 MHz</td>
<td>R1</td>
<td>1–2</td>
</tr>
<tr>
<td>790–960 MHz</td>
<td>R2</td>
<td>3–4</td>
</tr>
</tbody>
</table>

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Layout of interface:

All dimensions in mm | inches

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Any previous data sheet issues have now become invalid.
Mounting Hardware
Clamp Included in the Scope of Supply

<table>
<thead>
<tr>
<th>Suitable for mast diameter (mm)</th>
<th>42 – 115 [1.65 – 4.53]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antenna – mast distance (mm)</td>
<td>20 – 25 [0.79 – 0.98]</td>
</tr>
<tr>
<td>Material of clamp and screws</td>
<td>Hot-dip galvanized steel / stainless steel</td>
</tr>
<tr>
<td>Weight (kg)</td>
<td>1.1 [2.43]</td>
</tr>
</tbody>
</table>

Please note: Kathrein does not recommend to use counter nuts. The additional nuts supplied are only meant as spares.

All dimensions in mm and [inches]
General Instructions for Adjustment Mechanism

Description of the adjustment mechanism (protective cap removed):

1. Twist protection.
2. Downtilt spindle with integrated scale.
3. Thread for fixing the protective cap or the RCU (Remote Control Unit).
4. Gearwheel for RCU power drive.

To set the downtilt angle exactly, you must look horizontally at the scale. The lower edge of the gearwheel must be used for alignment.

Manual adjustment procedure:

Remove the protective cap and the twist protection completely.

Set downtilt angle by rotating the gearwheel.

Screw on the twist protection and the protective cap again.

Optional: RCU (Remote Control Unit) for remote-controlled downtilt adjustment:

For a description of RCU installation please refer to the respective data sheet.
Please note: In order not to damage the interfaces, please make sure that only the right tools are used. Tighten the feederline connector interfaces solely by using a common torque-wrench with a suitable wrench width.

**Description of bottom end cap (exemplary picture):**

- **Adjustment mechanism** (protective cap removed)
- **Ventilation hole**
- **Spindle with tilting scale**
- **7-16 female (long neck)**

**Colour coding:**
- Correlation of each RF input to:
  - the corresponding adjustment mechanism
  - the frequency range
  - the polarization

**Installation of the feederline connector and RCU (optional):**

In order to protect the adjustment mechanism, the protective caps have to be attached during feederline installation!

Carefully place the connector and fix the nut using a torque-wrench (according to the manufacturers guidelines).

Kathrein installation set: Type No. 85010077
Set has to be ordered separately!
Set consists of three spanners of divers width 27, 32 and 41 mm | 1.1, 1.3 and 1.6 inches

1/2˝ square actuation according to DIN 3120 Form C

All dimensions in mm | inches

These tools are suitable for 7-16 connectors with a wrench size of 27 or 32 mm | 1.1 or 1.3 inches, and the RCU attachment nut with a wrench size of 41 mm | 1.6 inches.

Tighten nuts within a torque range of 25 – 33 Nm depending on connector manufacturers’ specifications, respectively the RCU nut with a torque range of 15 – 18 Nm.