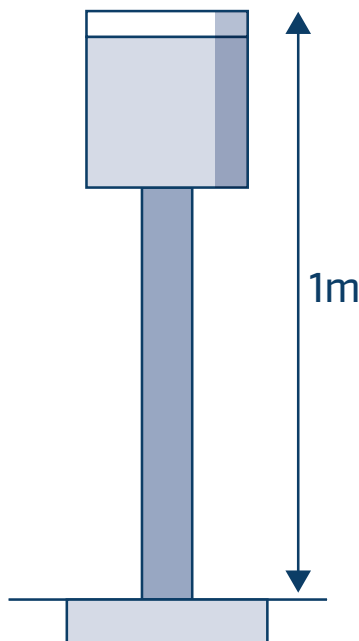
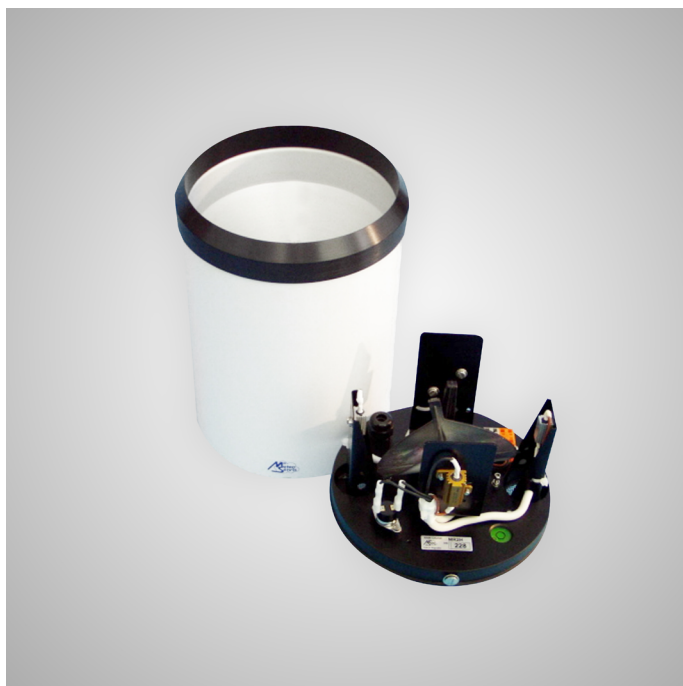


MR2, MR2H

Rain Gauges

A principle of the rain gauge function lies in the utilization of “tipping bucket” mechanism to get electrical pulses in dependence on a precipitation quantity. The MR2 is non-heated rain gauge intended for a liquid precipitation measurement and the MR2H is heated rain gauge intended for a liquid and solid precipitation measurement.



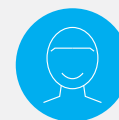
Tipping bucket



High precision



High intensities



Reliable

All rain gauges are made from non-corrosive materials. The funnel and also the circle in the upper part of the rain gauge, which creates the exact area for the falling precipitation (catching area of the rain gauge) - all these parts are made from aluminum alloy. The cylindrical casing is made from stainless steel.

The tipping bucket mechanism is placed inside the rain gauge body on the plastic base. Together with the bucket there are also:

- a spirit level for checking the rain gauge horizontal position,
- a terminal board for the cable connection,
- arresting screws for calibrating,
- two openings for water outflow,
- a heating system including thermostat (MR2H only),
- three screws for adjustment of the horizontal position.

The tipping bucket mechanism (movable body and immovable holder as well) is made from plastic, the bucket axis is from stainless steel wire. The inner space of bucket is coated by titanium layer and exposed to accelerated weathering. Above the catching opening there is a vertical sieve, preventing gross mechanical impurities from entering the outflow.

The heating is provided by thermal resistors placed under the funnel in a space near the “tipping bucket” on the rain gauge base. The funnel is heated by means of heat transmission from that space. The thermal resistors provide heating also for the rain gauge outflow openings. The switching on and off of the rain gauge heating is controlled by thermostat.

Main constructional differences between versions are in size of buckets and used funnel outflow nozzles.

The rain gauge is fixed in the 1 m height above the earth surface. The rain gauge stand consists of two circular bases, connected with an iron tube. The lower circular base is fixed with bolts to the underground basal concrete stone (weight

50 kg). The rain gauge is attached to the upper circular base. The stand surface is protected by zinc coating, top coat is in white color.

MR2 / MR2H Technical data

| | |
|--|--|
| Catch area | 200 cm ² |
| Output | pulses - switching contact |
| Voltage for heating (MR2Hxx only) | 42 to 46 V AC (different parameters upon request) |
| Performance of heating elements (MR2Hxx only) | 48 to 57 W (different parameters upon request) |
| Dimensions (height without fixing screw x diameter) | 262 x 179 mm |
| Temperature for switching on the thermostat (MR2Hxx only) | +5 °C |
| Weight | MR2H (xx) 2.1 kg MR2 (xx) 1.9 kg |
| Operating temperature | MR2H (xx) -20 °C to +60 °C (different parameters upon request) MR2 (xx) +2 °C to +60 °C |
| Fastening screw size | M8 x 50 |

Variants and its parameters

| | Resolution | Measuring range | Measurement error for different rainfall | |
|------------------|------------|-----------------|--|---------------------------|
| | | | Intensity | Measurement error |
| MR2-01m-C | 0.1 mm | 0 to 600 mm/h | < 20 mm/h 20 to 600 mm/h | < 1 % < 2 % |
| MR2-02s-C | 0.2 mm | 0 to 900 mm/h | < 20 mm/h 20 to 600 mm/h | < 1 % < 2 % |
| MR2-05v-C | 0.5 mm | 0 to 2500 mm/h | < 20 mm/h 20 to 600 mm/h | < 1 % < 2 % |
| MR2-01m | 0.1 mm | 0 to 450 mm/h | < 20 mm/h 20 to 60 mm/h 60 to 200 mm/h | < 1 % < 10 % < 26 % |
| MR2-02s | 0.2 mm | 0 to 900 mm/h | < 20 mm/h 20 to 60 mm/h 60 to 200 mm/h | < 1 % < 4 % < 10 % |
| MR2-05v | 0.5 mm | 0 to 2500 mm/h | 20 mm/h 20 to 60 mm/h 60 to 200 mm/h | < 1 % < 2 % < 5 % |