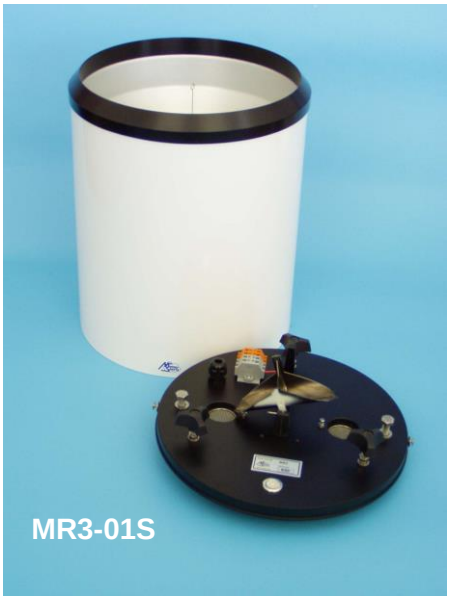
MR3(xx) and MR3H(xx) Rain Gauges

Basic characteristics:

- "tipping bucket " measuring principle
- 500 cm^2 catching area
- measures liquid precipitations (**unheated MR3(xx) versions**),
  measures liquid and solid precipitation (**heated MR3H(xx) versions**)
- different versions with different parameters



Versions and parameters:

Version (name)	Measures	Resolution	Range	Measurement error* (without correction)
MR3-01s	liquid precipitation only	0,1 mm	0…500 mm/hour	**Intensity:** / **Measurement error:** up to 20 mm/hour — under 4 % 20.. 60 mm/hour — under 9 % 60..200 mm/hour — under 18 %
MR3H-01s	liquid and solid precipitation	0,1 mm	0…500 mm/hour	**Intensity:** / **Measurement error:** up to 20 mm/hour — under 4 % 20.. 60 mm/hour — under 9 % 60..200 mm/hour — under 18 %
MR3-02s	liquid precipitation only	0,2 mm	0…550 mm/hour	**Intensity:** / **Measurement error:** up to 20 mm/hour — under 1 % 20.. 60 mm/hour — under 5 % 60..200 mm/hour — under 9 %
MR3H-02s	liquid and solid precipitation	0,2 mm	0…550 mm/hour	**Intensity:** / **Measurement error:** up to 20 mm/hour — under 1 % 20.. 60 mm/hour — under 5 % 60..200 mm/hour — under 9 %
MR3-02v	liquid precipitation only	0,2 mm	0…1200 mm/hour	**Intensity:** / **Measurement error:** up to 20 mm/hour — under 0,5 % 20.. 60 mm/hour — under 2 % 60..200 mm/hour — under 5 %
MR3H-02v	liquid and solid precipitation	0,2 mm	0…1200 mm/hour	**Intensity:** / **Measurement error:** up to 20 mm/hour — under 0,5 % 20.. 60 mm/hour — under 2 % 60..200 mm/hour — under 5 %

* Above mentioned measurement error is valid for liquid precipitation only and for rain gauges with Calibration Certificate by METEOSERVIS v.o.s.

Optionally, it is possible to supply the rain gauge with the description of the error function (dependence of the error on the precipitation intensity). The correct using of this error curve allows to reduce the error of measuring under 5 % in whole range of precipitation intensity.

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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 (MR3Hxx versions), and 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.


MR3H-01S
Base

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

Other common technical parameters		
Catching area		500 cm^2
Output		Pulses– switching contact
Voltage necessary for heating (for MR3Hxx only)		42 - 46 V AC
Power of heating elements (for MR3Hxx only)		48 - 57 W
Dimensions (height without fixing bolts x diameter)		347 mm x 278 mm
Temperature for thermostat switching (for MR3Hxx only)		+15°C ± 3°C
Weight	MR3H (xx) MR3 (xx)	4,5 kg 4,25 kg
Operating temperature	MR3H (xx) MR3 (xx)	-20°C ... + 60°C + 2°C ... + 60°C
Fixing bolt dimension		M8 x 50