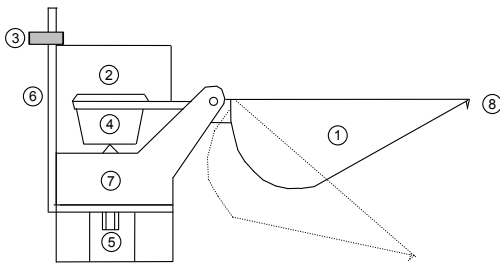


# Rain-O-Matic Meteorological Rain Gauge

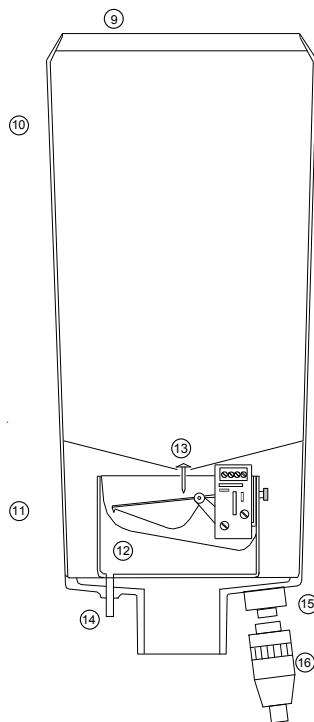
## Technical specifications

### Rain collector/Tipping bucket

Rain-O-Matic Meteorological measures the precipitation by means of a funnel (orifice 200 cm<sup>2</sup>), which leads the water down into the self-emptying tipping POM bucket, held in place by a hard ferrite magnet. The magnet always exerts just enough tension to allow the measuring bucket to empty in one quick movement (less than 300 ms) and then return to its normal position, ready to once again collect precipitation. This means the counter weight always remains the same opposite to other conventional two spoons tipping bucket rain gauges. In the bottom of the rain gauge there is space for a small internal datalogger.



1. Self-emptying bucket
2. PCB with reed switch
3. Screw to hold the entire unit
4. Magnet
5. Adjustment screw
6. Angle brackets
7. Holder for bucket
8. Drip catcher



9. Top ring
10. Middle ring
11. Bottom with flange
12. Measuring unit
13. Drip filter
14. Drain pipe
15. Female connection plug
16. Male connection plug

### Styrosun

The rain gauge is mainly made in moulded modified high-impact polystyrene also known as STYROSUN which is a highly weather-resistant polymer that reduces breakdown and discoloration.

STYROSUN which has passed the Arizona test is extremely resistant against the sun's UV radiation and it is frost- and heat resistant standing all climatically conditions.

STYROSUN is resistant to common household cleaners, recyclable and easily decorated.

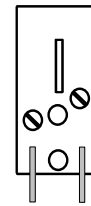
### PCB

The electronic printed circuit board with individually tested and high quality reed switches is protected against extreme weather conditions such as extreme frost or heat. This include corrosion from salt water due to the PCB is coated with weather-resistant varnish.

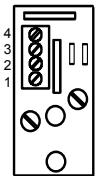
### The printed circuit board comes in two versions

- Version 1: PCB No. 9601 (NC—normally closed) has male connection and 1 reed switch .

PCB no. 9601



PCB no. 9602



- Version 2: PCB No. 9602 (NC—Normally closed, NO—Normally open) Terminal strip, 4 connections / 2 outlets) and 2 reed switches, connected-up in series by 1 k W 1/4W resistor.

### Typical switching times for PCB 9602

Resolution	Terminal 1-2 Normally closed	Terminal 3-4 Normally open
0,10 mm	443ms $\sigma = 14\text{mS}$	352ms $\sigma = 14\text{mS}$
0,20 mm	307ms $\sigma = 12\text{mS}$	278ms $\sigma = 12\text{mS}$
0,25 mm	326ms $\sigma = 11\text{mS}$	301ms $\sigma = 12\text{mS}$
0,50 mm	322ms $\sigma = 7\text{mS}$	305ms $\sigma = 8\text{mS}$

$\sigma$  = Standard deviation

Filter design: Max 200msec recommended.

### Resolution

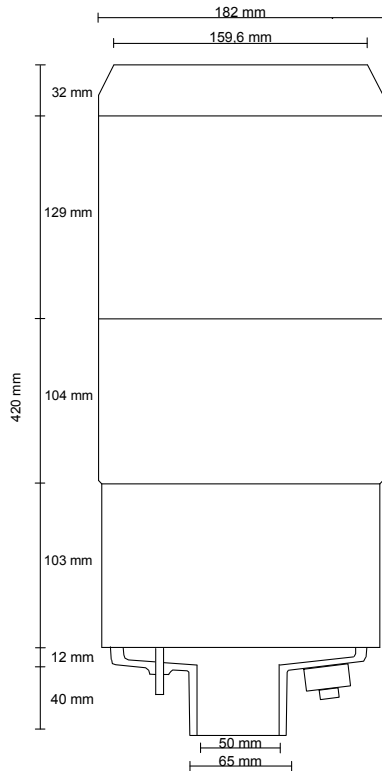
- 0,10 mm
- 0,20 mm
- 0,25 mm
- 0,50 mm

### Patent

Rain-O-Matic Meteorological is patented and protected by the Law of Copyright. Patent no. UM-27598, AU pat. 565951, EPO Pat. 014212, US pat. 4.644.786, CA Pat. 126181, Japan Pat. 501208/83 Taiwan Reg. 74-201292 Components may NOT be used for other products or purposes without a written approval from PRONAMIC ApS. Violation implies immediate prosecution.

# Rain-O-Matic Meteorological Rain Gauge

## Measurements



	Millimeter version	American version
Resolution	0,10 mm 0,20 mm 0,25 mm 0,50 mm	1/100 inch
Orifice	200 cm <sup>2</sup>	31 sq. Inch
Splash room height	290 mm	11,4 inch
Weight excl.	1300 g	45,9 oz

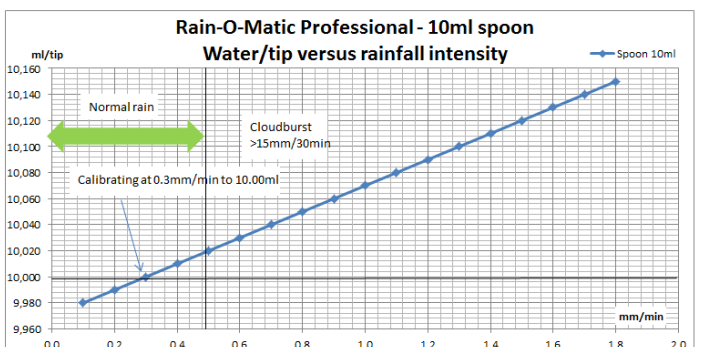
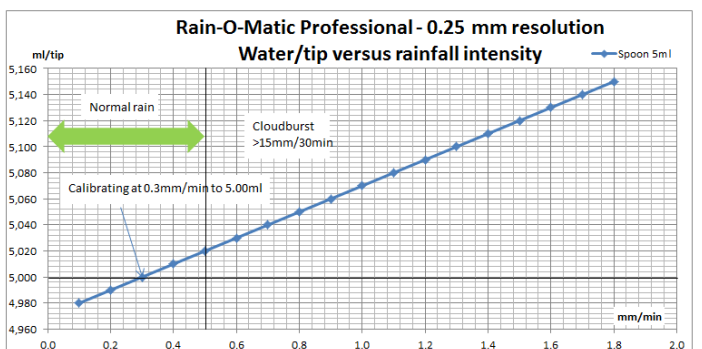
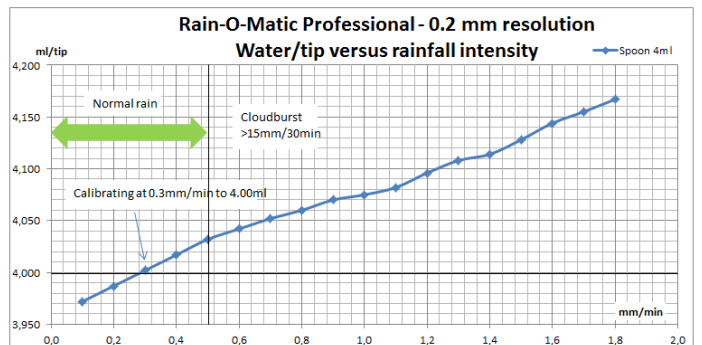
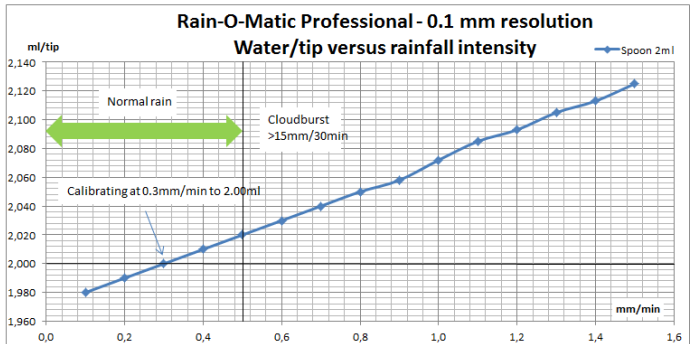
## Capacity per minute with 12 tips

0,10 mm:	1,2 mm
0,20 mm:	2,4 mm
0,25 mm:	3,0 mm
0,50 mm:	6,0 mm

## Item list of complete collectors

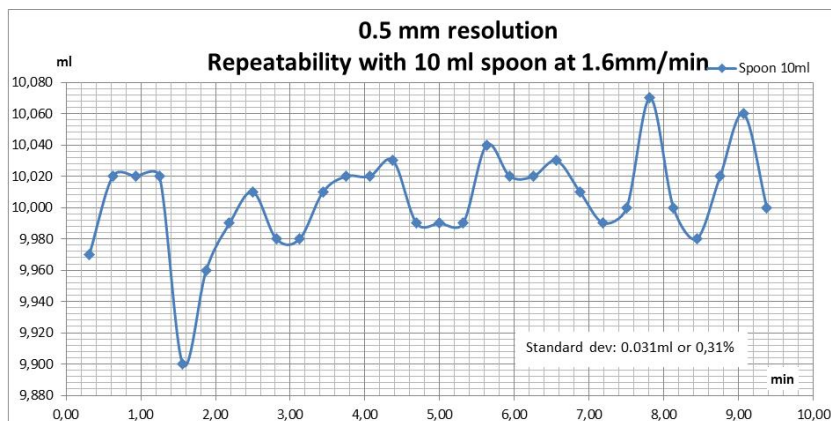
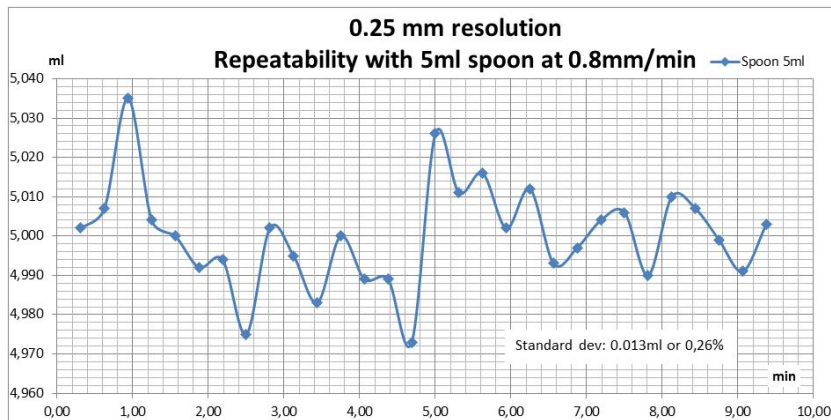
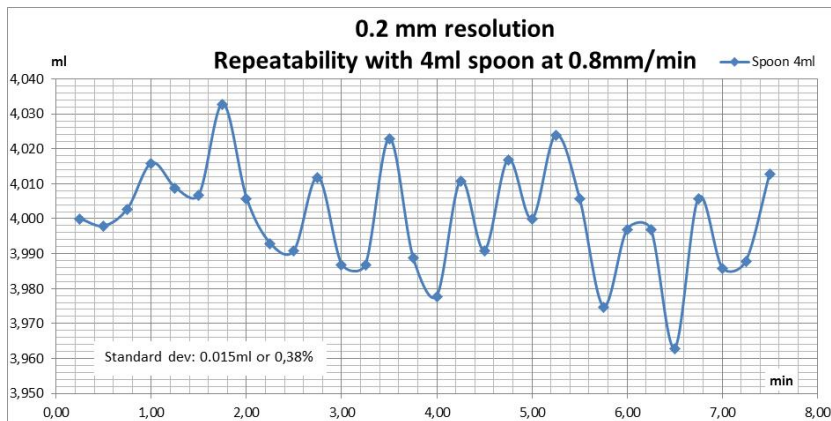
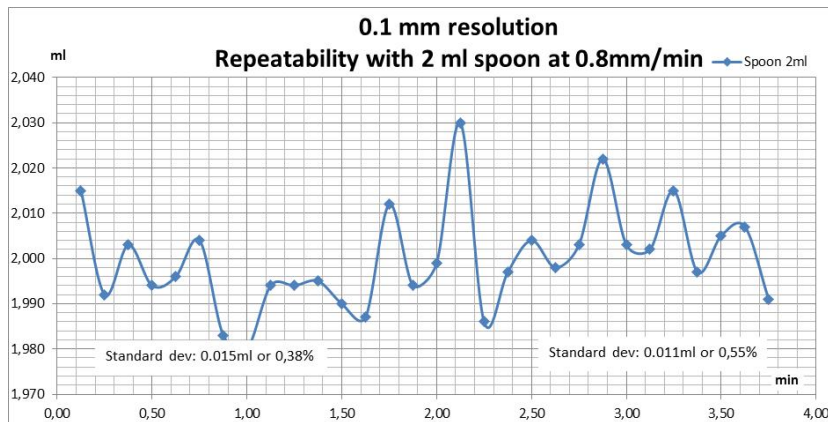
- Rain collector with PCB no. 9602 JRM-002-10 resolution 0,10 mm
- Rain collector with PCB no. 9602 JRM-002-20 resolution 0,20 mm
- Rain collector with PCB no. 9602 JRM-002-25 resolution 0,25 mm
- Rain collector with PCB no. 9602 JRM-002-50 resolution 0,50 mm

## Rainfall intensity diagrams



# Rain-O-Matic Meteorological Rain Gauge

## Repeatability diagrams



# Rain-O-Matic Meteorological Rain Gauge

**Rain-O-Matic Meteorological rain gauge with our patented self-emptying tipping bucket is one of the most accurate and reliable precipitation gauges on the market that comply with WMO standards.**



**For 28 years we have supplied more than 200.000 rain gauges to 41 countries on 5 continents. We deliver our products to OEM customers only and we are not competing with you for the end users.**

## **Tipping bucket:**

RAIN-O-MATIC Meteorological patented self-emptying tipping bucket is one of the most accurate and reliable rain gauges on the market. It gives you advantages in:

- More accurate measurements
- Only one adjustment screw which makes it easy to recalibrate.
- Bucket made in POM, which is a more dismissive material and therefore makes dust and dirt not stick so easily on the spoon and maximize water release.

## **WMO compliant**

Rain-O-Matic Meteorological complies with World Meteorological Organization standard (WMO guide no.8) Such as:

- Deep funnel to avoid splash out and evaporation.
- 200 cm<sup>2</sup> orifice angel top-ring with sharp edges.

- Drain pipe for collection of precipitation.

- Drip-rod/filter in plastic

## **Calibration**

Calibration is a very important issue for Pronamic and therefore all Meteorological rain gauges are manually calibrated. It gives you the guarantee for a very accurate measurement. Accuracy: +/- 2%

## **Minimal maintenance**

Our rain gauges require minimal maintenance due to:

-Outer shell is made from Styrosun which makes the surface easy to clean.

- High quality materials and a simple design for a very long durability (10-20 years)

## **Flexible cable connections**

We can manufacture the rain gauges with a variety of connection cables so they will fit into your system. For example:

- Multi-plug C16-1 (standard)
- Binder connection.
- Jack plug.

## **Applications areas**

The Rain-O-Matic Meteorological is accurate and rugged which makes it perfect for:

- Weather stations
- Meteorological institutes
- Research facilities
- Water works
- Wastewater treatment plants
- Hydropower stations
- Agriculture

## **Tests**

All components are RoHS compliant. Rain-O-Matic Meteorological has been tested 100 % frost proof.

## **Warranty**

Our rain gauges are of such a high quality that we offer 24 months of warranty on mechanical- and plastic parts. See Service & Support for further information.

## **Accessories**

Currently we can offer following accessories:

- Air Bubble leveling
- Bird protection
- Leaf filter
- Standard Pylon with earth spear
- Spider protection
- Stainless steel top ring