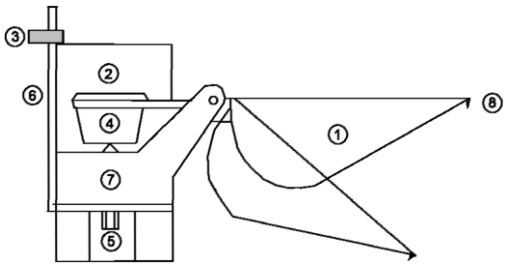
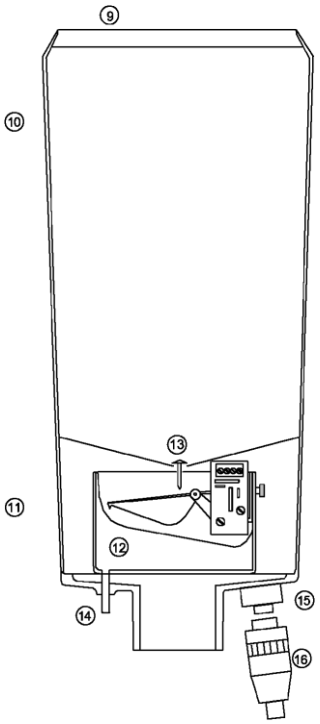
Technical specifications

Rain collector/Tipping bucket

Rain-O-Matic Meteorological measures the precipitation by means of a funnel (orifice 200 cm2), 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 collect precipitation once again. 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 data logger.



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 flang
12. Measuring unit
13. Drip filter
14. Drain pipe
15. Female connection plug
16. Male connection plug

ASA (Acrylonitrile Styrene Acrylate)

The rain gauge made in molded thermoplastic, also known as ASA, which has high outdoor weather ability. **ASA** is extremely resistant against the sun's UV radiation, it is frost-, and heat resistant, standing all climatically conditions.
The product is widely used in the automotive industry as well as several other outdoor applications.

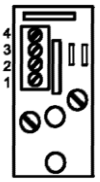
PCB

The electronic printed circuit board with individually tested and high quality reed switches 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 with 4 connections / 2 outlets and 2 reed switches connected-up in series by 1 kohm and1/4W resistor.

Typical switching times for PCB 9602

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

σ = Standard deviation

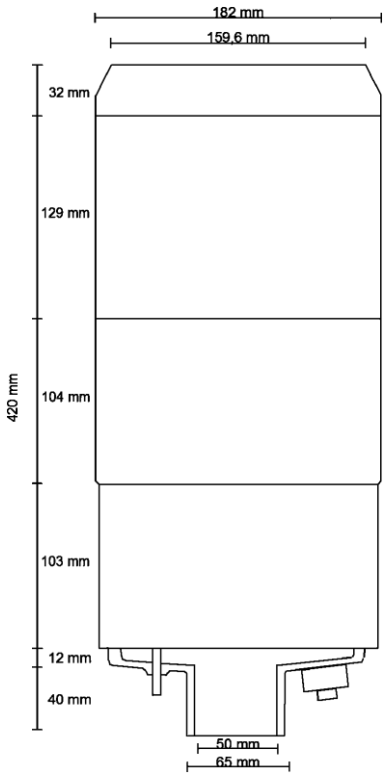
Resolution

- 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 Copy-right. 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.

Measurements



	Millimeter version	American version
Resolution	0,10 mm 0,20 mm 0,25 mm 0,50 mm	1/100 inch
Orifice	200 cm2	31 sq. Inch
Splash room height	290 mm	11,4 inch
Weight excl. Pylon	1300 g	45,9 oz

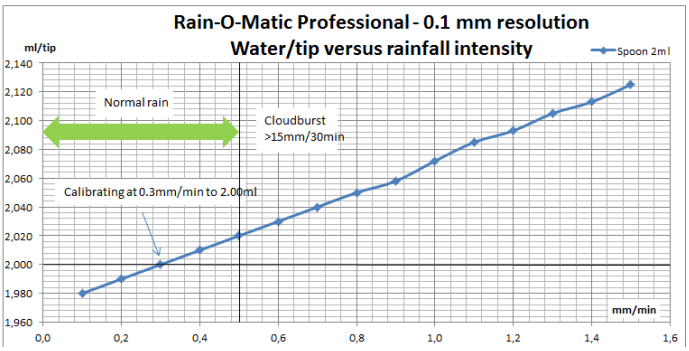
Capacity per minute with 12 tips

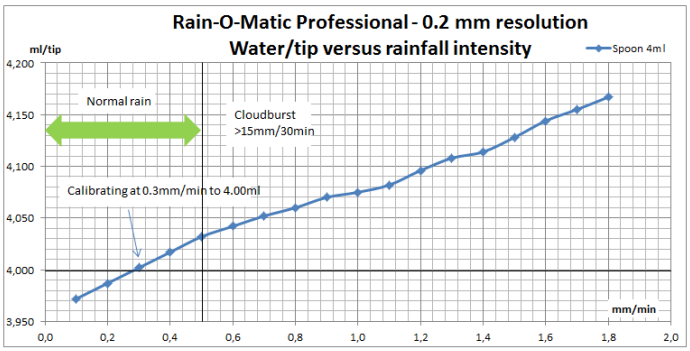
0,10 mm:	1,2 mm
0,20 mm:	2,4 mm
0,25 mm:	3,0 mm
0,50 mm:	6,0 mm

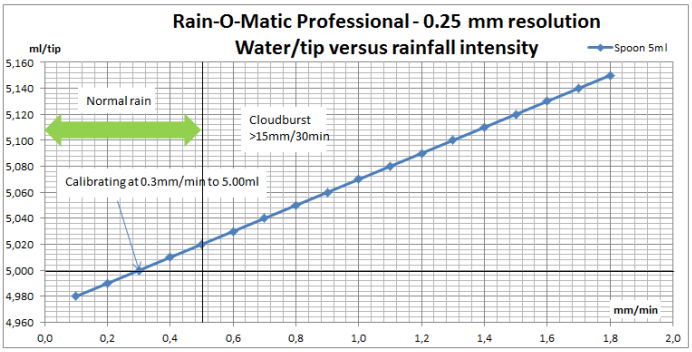
Item list of complete collectors

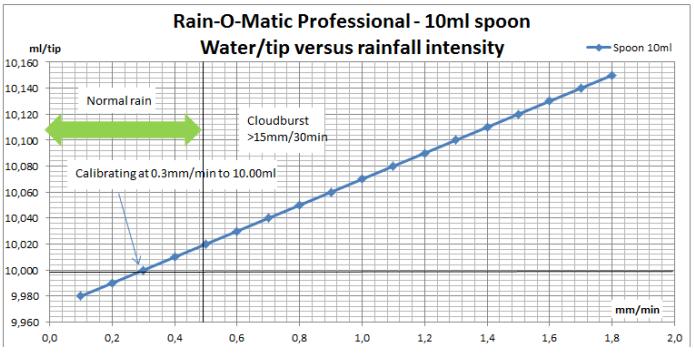
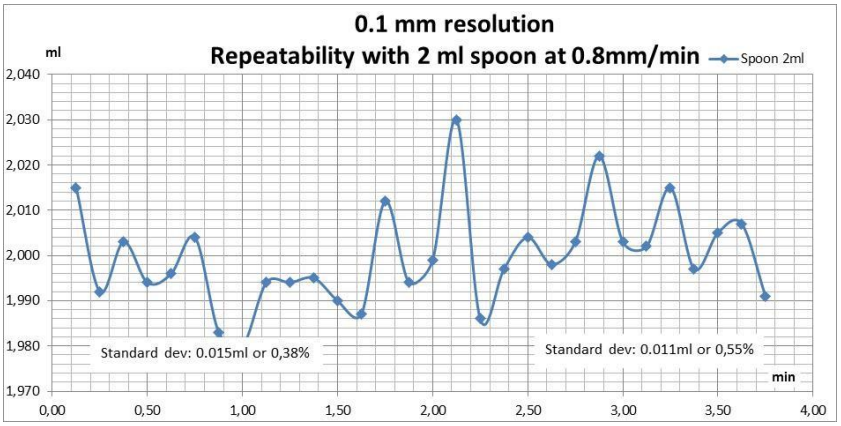
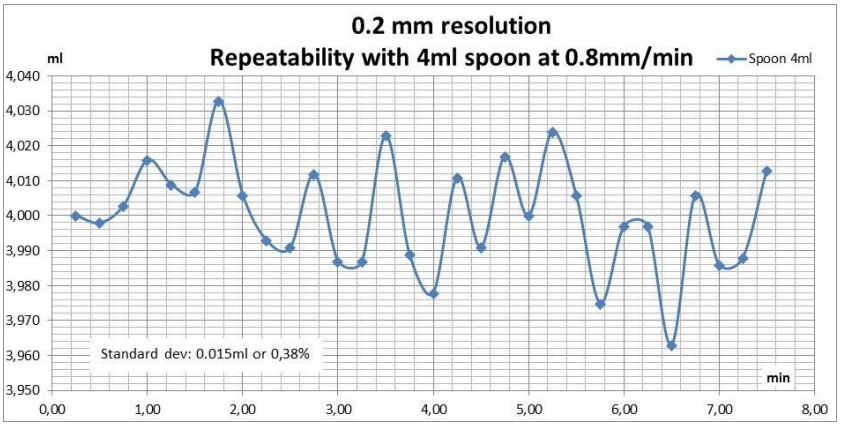
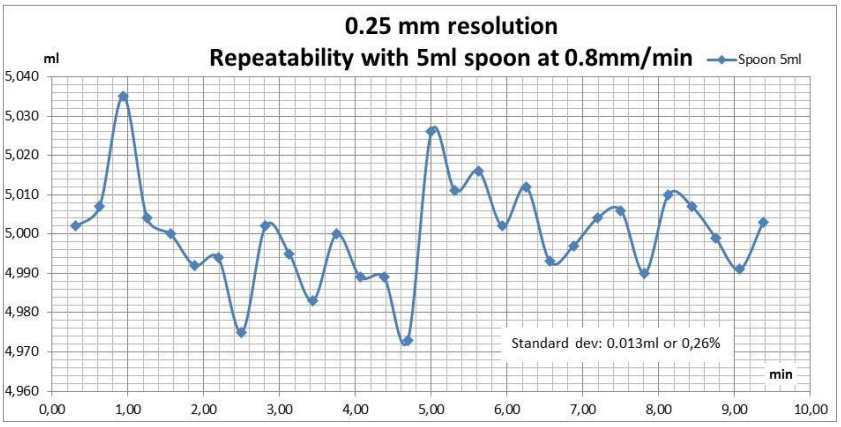
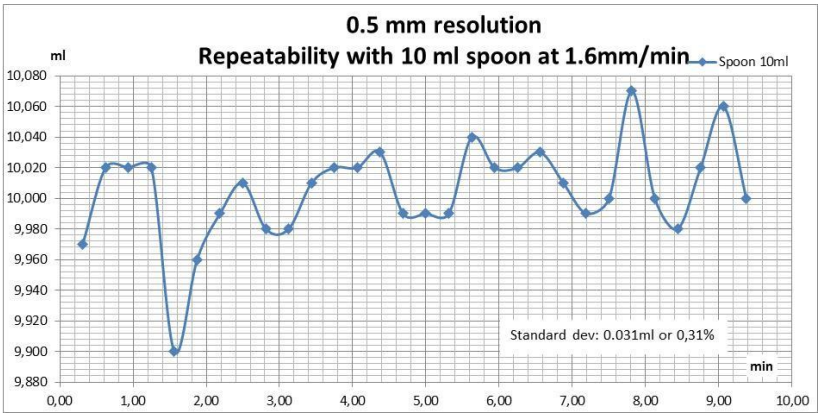
- Rain collector with PCB no. 9602 resolution 0,10 mm — 200.002-10
- Rain collector with PCB no. 9602 resolution 0,20 mm — 200.002-20
- Rain collector with PCB no. 9602 resolution 0,25 mm — 200.002-25
- Rain collector with PCB no. 9602 resolution 0,50 mm — 200.002-50

Rainfall intensity diagrams









Repeatability diagrams