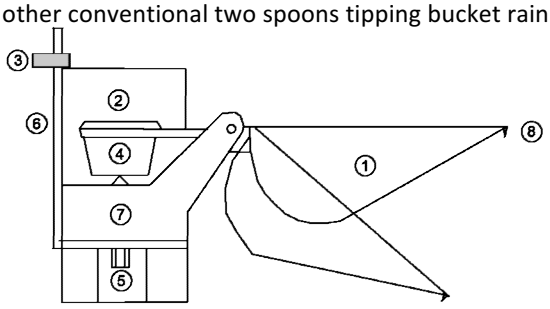
# PRONAMIC® Rain-O-Matic Professional Rain Gauge

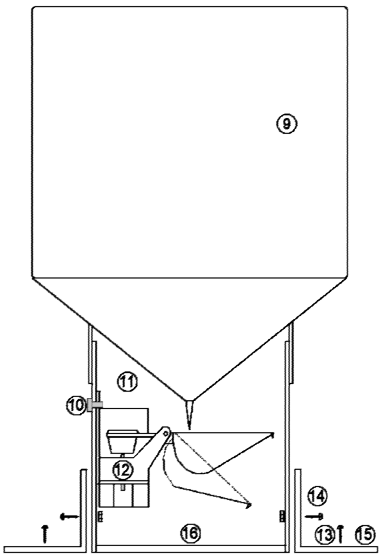
## Technical specifications

### Rain collector/Tipping spoon

RAIN-O-MATIC PROFESSIONAL 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.




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. Funnel with grille
10. Screw for whole measurement unit
11. Box with measurement unit
12. Measurement unit
13. 4 pcs. screw
14. 4 pcs. screw with nuts
15. 2 pcs. angle brackets
16. Baseplate

### 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.

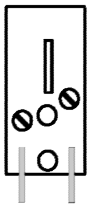
### PCB

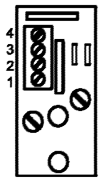
The electronic printed circuit board with individually tested and high quality reed switches protected against extreme weather conditions such as extreme frost or heat. This include corrosion from salt water due to the PCB is coated with weather-resistant varnish.

#### 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 k ohm and 1/4W resistor.

### Typical switching times for PCB 9602

| Spoon | Terminal 1-2<br>Normally closed | Terminal 3-4<br>Normally open |
|---|---|---|
| 2ml | 443ms<br>σ = 14mS | 352ms<br>σ = 14mS |
| 4ml | 307ms<br>σ = 12mS | 278ms<br>σ = 12mS |
| 5ml | 326ms<br>σ = 11mS | 301ms<br>σ = 12mS |
| 10ml | 322ms<br>σ = 7mS | 305ms<br>σ = 8mS |

σ = Standard deviation

Filter design: Max 200msec recommended.

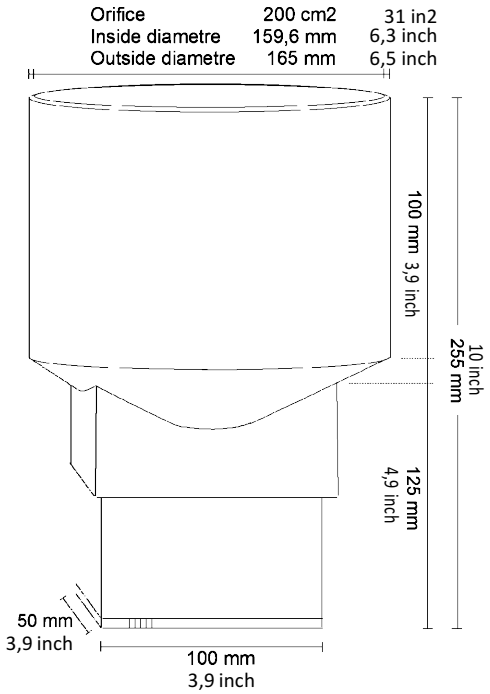
### Resolution

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

### Patent

# Rain-O-Matic Professional Rain Gauge

## Measurements




| | | |
|---|---|---|
| Splash room height | | |
| incl. bottom: | 170 mm | 6,7 inch |
| Weight incl. angle brackets: | 380 g | 13,5 oz |

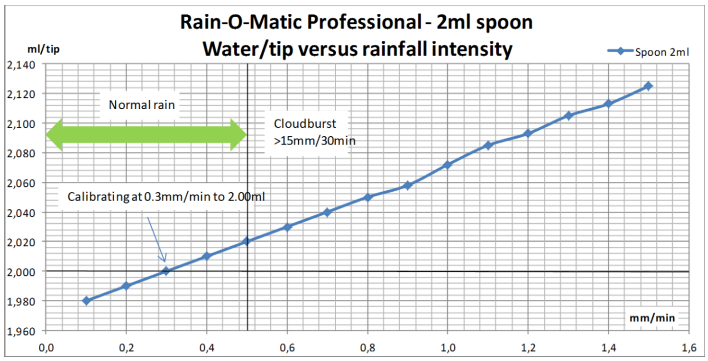
## Capacity per minute with 12 tips

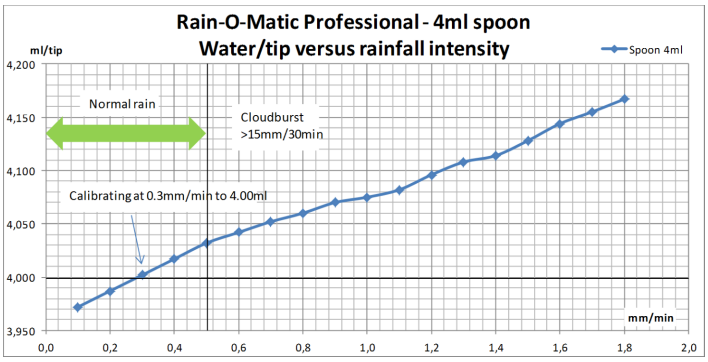
| | |
|---|---|
| 0,10 mm: | 1,2 mm |
| 0,20 mm: | 2,4 mm |
| 0,25 mm: | 3,0 mm |
| 0,50 mm: | 6,0 mm |

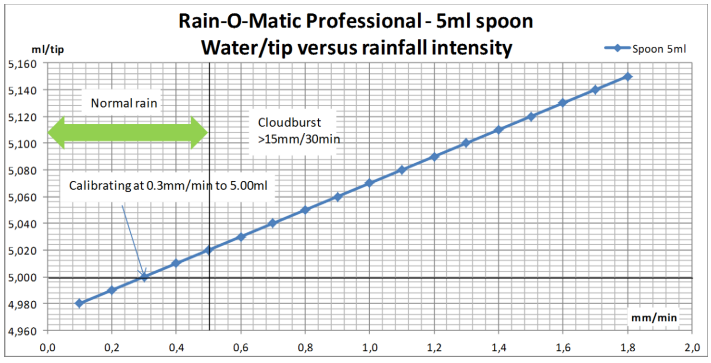
## Item list of complete collectors

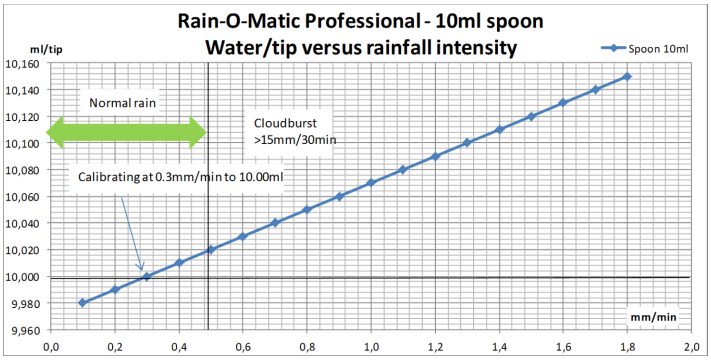
| | |
|---|---|
| Rain collector with PCB no. 9601 resolution 0,10 mm | 300.021-10 |
| Rain collector with PCB no. 9601 resolution 0,20 mm | 300.021-20 |
| Rain collector with PCB no. 9601 resolution 0,25 mm | 300.021-25 |
| Rain collector with PCB no. 9601 resolution 0,50 mm | 300.021-50 |
| Rain collector with PCB no. 9602 resolution 0,10 mm | 300.023-10 |
| Rain collector with PCB no. 9602 resolution 0,20 mm | 300.023-20 |
| Rain collector with PCB no. 9602 resolution 0,25 mm | 300.023-25 |
| Rain collector with PCB no. 9602 resolution 0,50 mm | 300.023-50 |

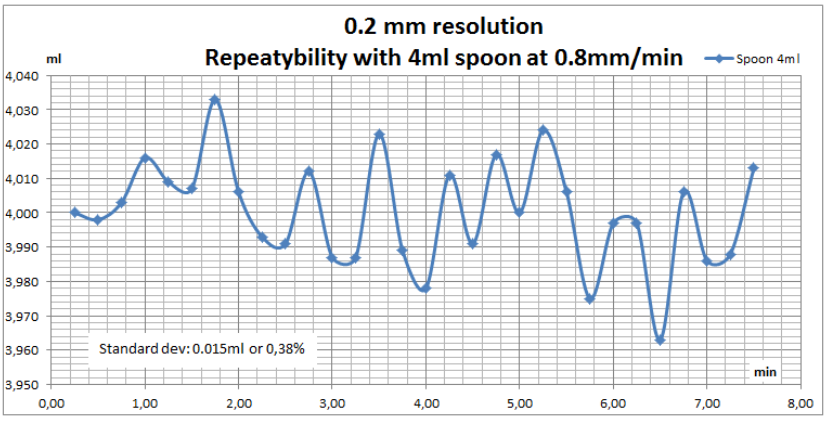
## Rainfall intensity diagrams

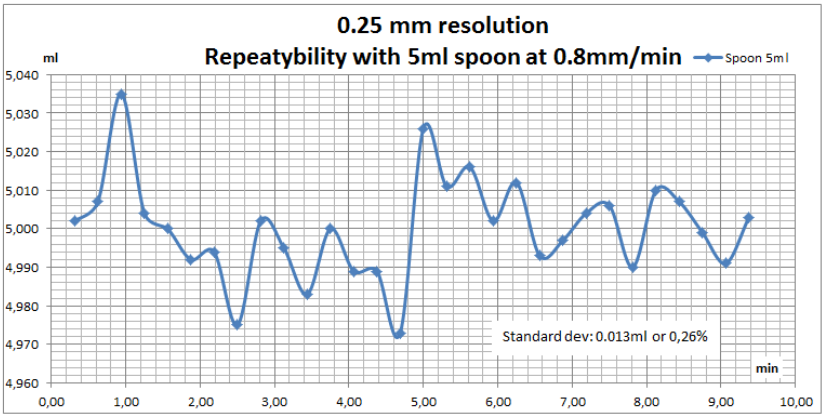


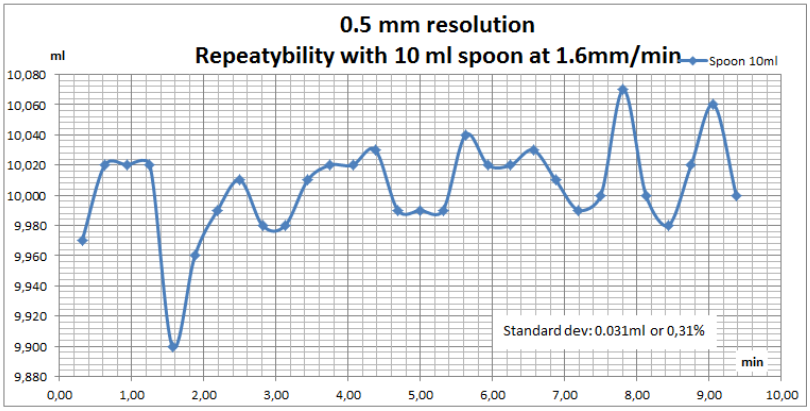



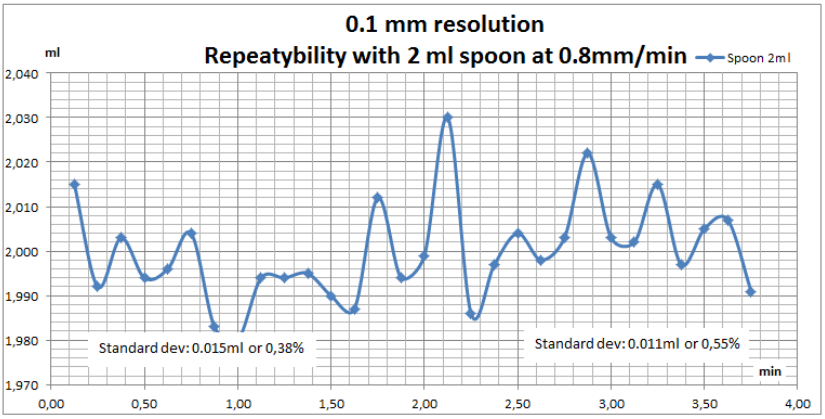




0.2 mm resolution
Repeatybility with 4ml spoon at 0.8mm/min
Spoon 4ml
ml
4,040
4,030
4,020
4,010
4,000
3,990
3,980
3,970
3,960
3,950
Standard dev: 0.015ml or 0,38%
min
0,00
1,00
2,00
3,00
4,00
5,00
6,00
7,00
8,00


0.25 mm resolution
Repeatybility with 5ml spoon at 0.8mm/min
Spoon 5ml
ml
5,040
5,030
5,020
5,010
5,000
4,990
4,980
4,970
4,960
Standard dev: 0.013ml or 0,26%
min
0,00
1,00
2,00
3,00
4,00
5,00
6,00
7,00
8,00
9,00
10,00


0.5 mm resolution
Repeatybility with 10 ml spoon at 1.6mm/min
Spoon 10ml
ml
10,080
10,060
10,040
10,020
10,000
9,980
9,960
9,940
9,920
9,900
9,880
Standard dev: 0.031ml or 0,31%
min
0,00
1,00
2,00
3,00
4,00
5,00
6,00
7,00
8,00
9,00
10,00


0.1 mm resolution
Repeatybility with 2 ml spoon at 0.8mm/min
Spoon 2ml
ml
2,040
2,030
2,020
2,010
2,000
1,990
1,980
1,970
Standard dev: 0.015ml or 0,38%
Standard dev: 0.011ml or 0,55%
min
0,00
0,50
1,00
1,50
2,00
2,50
3,00
3,50
4,00