

# Professional Rain Gauge

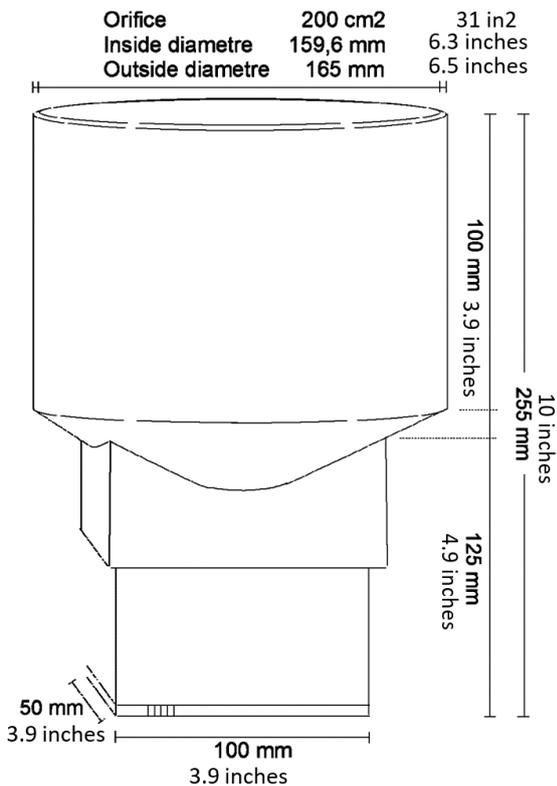
## Technical specifications

### Rain collector/Tipping spoon

The Professional rain gauge 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 collect precipitation once again. This means the counterweight always remains the same opposite to other conventional two spoons tipping bucket rain gauges.

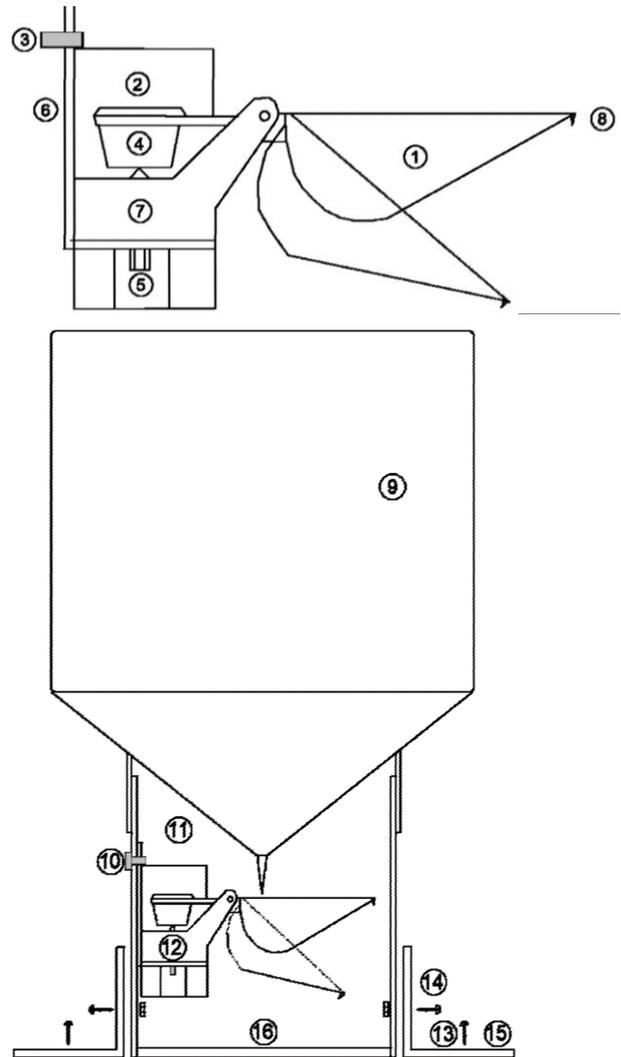
1. Self-emptying bucket
2. PCB with reed switch
3. Screw to hold the entire unit
4. Magnet
5. Adjustment screw
6. Angle brackets
7. Holder for bucket
8. Drip catcher
9. Funnel with grille
10. Screw for whole measurement unit
11. Box with measurement unit
12. Measurement unit
13. 4 pcs. screw
14. 4 pcs. screw with nuts
15. 2 pcs. angle brackets
16. Baseplate

### Measurements



### 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.



Splash room height incl. bottom: 170 mm 6.7 inches

Weight incl. angle brackets: 380 g 13.5 oz

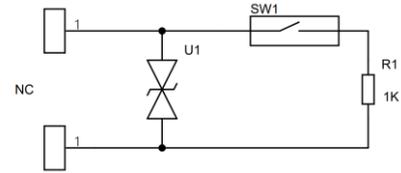
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## PCB

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.

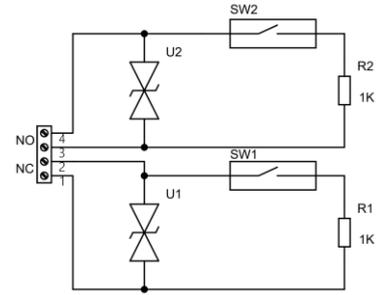
### PCB No. 9601

NC: normally closed. Two male spade connectors and 1 reed switch connected in series with a 1K ohm 1/4W resistor and a TVS-diode in parallel.



### PCB No. 9602

One screw Terminal with 4 connections:  
 1-2 NC: Normally closed 3-4 NO: Normally open.  
 Two separated circuits. Each with one reed switch connected in series with a 1K Ohm 1/4W resistor and a TVS-diodes in parallel.



## Typical switching times for PCB 9602

| Measurement unit | Terminal 1-2 NC               | Terminal 3-4 NO               |
|------------------|-------------------------------|-------------------------------|
| 2 ml             | 443ms, $\sigma = 14\text{mS}$ | 352ms, $\sigma = 14\text{mS}$ |
| 4 ml             | 380ms, $\sigma = 12\text{mS}$ | 280ms, $\sigma = 12\text{mS}$ |
| 5 ml             | 326ms, $\sigma = 11\text{mS}$ | 301ms, $\sigma = 12\text{mS}$ |
| 10 ml            | 322ms, $\sigma = 7\text{mS}$  | 305ms, $\sigma = 8\text{mS}$  |

$\sigma$  = Standard deviation  
 Filter design: Max 200msec recommended.

## Resolutions and Capacity

Max 12 tips per minute.

| Resolution | Max. pr. Min. | Max. pr. Hour |
|------------|---------------|---------------|
| 0.10 mm:   | 1.2 mm        | 72 mm         |
| 0.20 mm:   | 2.4 mm        | 144 mm        |
| 0.25 mm:   | 3.0 mm        | 180 mm        |
| 0.50 mm:   | 6.0 mm        | 360 mm        |

## Accuracy:

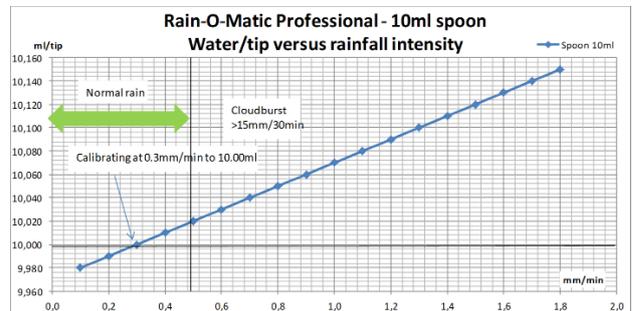
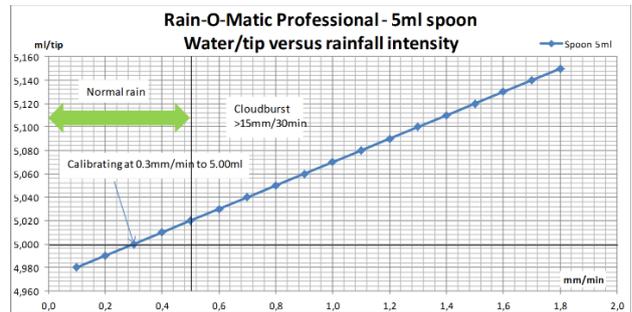
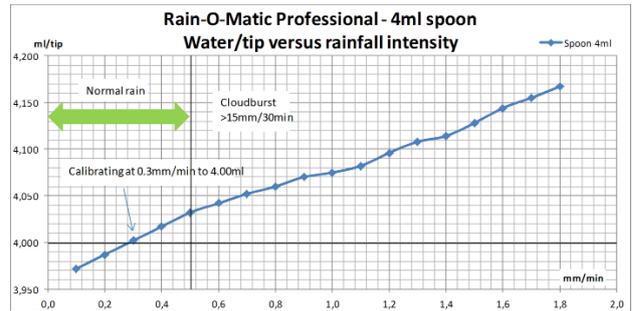
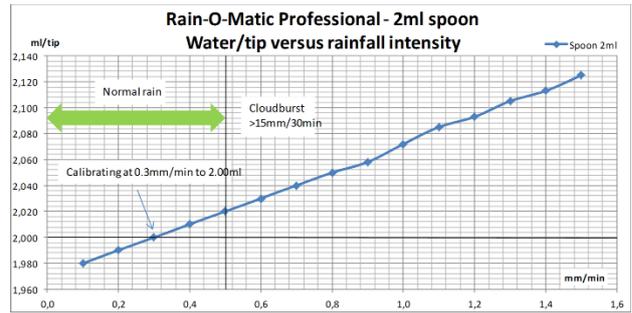
+/- 2%

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## Item list of complete collectors

|  |            |
|--|------------|
| Rain collector with PCB no. 9601<br>resolution 0.10 mm | 300.021-10 |
| Rain collector with PCB no. 9601<br>resolution 0.20 mm | 300.021-20 |
| Rain collector with PCB no. 9601<br>resolution 0.25 mm | 300.021-25 |
| Rain collector with PCB no. 9601<br>resolution 0.50 mm | 300.021-50 |
| Rain collector with PCB no. 9602<br>resolution 0.10 mm | 300.023-10 |
| Rain collector with PCB no. 9602<br>resolution 0.20 mm | 300.023-20 |
| Rain collector with PCB no. 9602<br>resolution 0.25 mm | 300.023-25 |
| Rain collector with PCB no. 9602<br>resolution 0.50 mm | 300.023-50 |

## Rainfall intensity diagrams



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