



APPLICATIONS

- Weather stations.
- Meteorological institutes.
- Avalanche facilities Water works.
- Wastewater treatment plants.
- Hydropower stations.
- Road authorities.
- Skiing resorts.
- Research facilities.

KEY FEATURES

- POM bucket.
- Heated copper funnel (200cm²).
- Drip filter.
- Resistant to hard conditions.
- High precision and reliability.
- Easy installation.
- Manually calibration.
- No maintenance.
- Long service life.
- Complies with WMO standard.

ASA (Acrylonitrile Styrene Acrylate)

The rain gauge is 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. Rain-O-Matic Meteorological Snow & Rain. Terminal strip with 4 connections / 2 outlets and 2 reed switches connected-up in series by 1 kohm and 1/4W resistor.

July 2017

SP-220.000 Meteorological snow, rain and precipitation sensor



The rain gauge *SP-220.000* is the ideal solution for the measurement of precipitation in adverse conditions because it has integrated a heating system.

The rain gauge measures the precipitation and snowfall by means of a heated copper 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 once again collect precipitation.

This means the counter weight always remains the same opposite to other conventional two spoons tipping bucket raingauges.

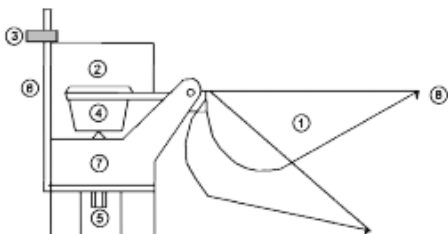
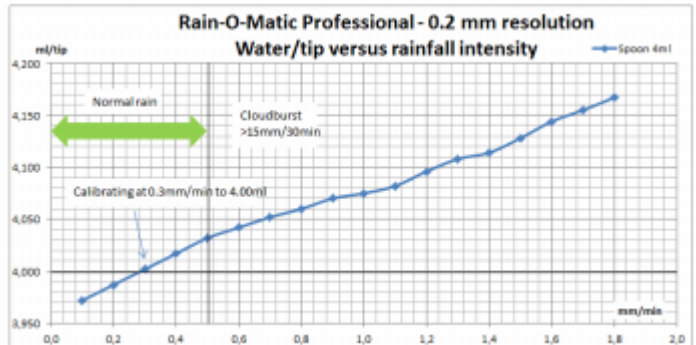
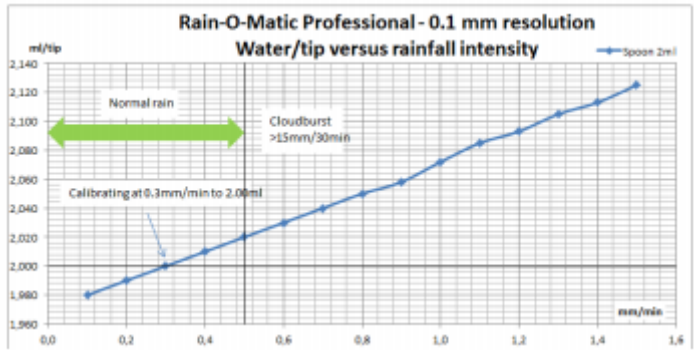
The heating system has integrated thermal safety switches to prevent evaporation of precipitation.

The collected data can be analyzed by **the Smartyplanet web based platform** thanks to its total compatibility and by the main dataloggers.

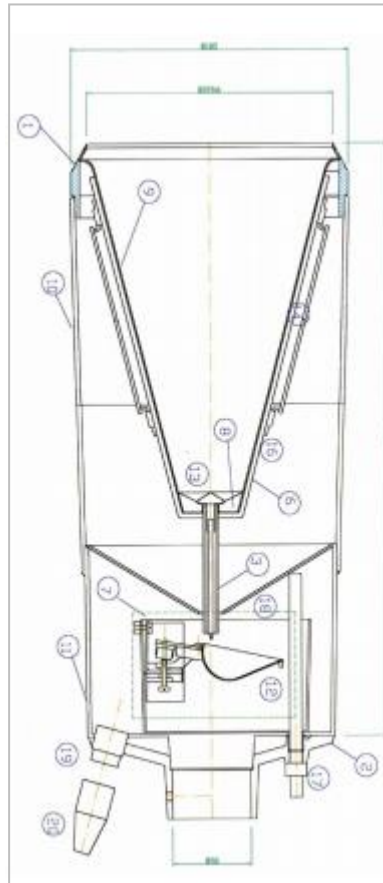


Mechanical construction

Collector funnel material	Copper
External parts material	Styrosun
Orifice	200 cm ²
Diametre	159,6 mm
Total height	420 mm
Splashroom height	225 mm
Weight excl.pylon	2100 g
Measurement range	0 to 200 mm
Resolution	0,1mm; 0,2mm; 0,25mm; 0,5mm
Max. Desviation	± 2%
Top ring angle	60 degrees
Operating temperature	-40°C to +70°C
Temperature control	Electronic
Heated rooms	Funnel compartment: 3°C, ±1°C Registration compartment: 22°C, ±1°C
Safety thermostat	Yes
Power supply	In: 100-230 VAC/50-60Hz Out: 24 VDC ±5% Max. Power: 50W
Output regulation	Max. Power: 50W
Weather proof connections	IP68
Typical switching time	0,10mm resolution - 352ms
	0,20mm resolution - 278ms
	0,25mm resolution - 301ms
	0,50mm resolution - 305ms



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



1. Top ring
2. Aluminium flange
3. Funnel tube
6. Aluminium plate with heating element
7. Electronic regulator
8. Copper ring
9. Copper funnel
10. Middle ring
11. Bottom compartment
12. Measuring unit
13. Drip filter
14. Heating regulator for funnel
16. Heating element
17. Drain pipe
18. Heating element for drain
19. Male connection plug
20. Female connection plug