MeteoRain® IoT Compact

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- **AGRICULTURE**
- **HYDROLOGY**
- **METEOROLOGY**
- **SOLAR POWER PLANTS**
- **COASTAL**
- **INDUSTRIAL & PLC**
- **SMART CITIES & IOT**
- **WEATHER STATIONS**

Wireless Set-and-Forget Automatic Rain Gauge

Wireless MeteoRain® IoT Compact records rain rate along with the cumulative rain amount to ensure that every rain drop is counted. Designed with a self-balancing measuring mechanism with very high repeatability of measurement and accuracy even during high-rain rates. Highly resistant to soiling of the internal measuring mechanism, mechanical friction, and residual water remaining in the measuring spoon from last rain event. Additionally, MeteoRain® products offer high resistance to vibrations and non-level mounting.

Notable features include:

- Solar powered with 4+ months of battery life without sun
- Robust and impact resistant funnel and housing
- Strong stainless steel mount with multiple mounting options
- Simple and highly reliable measuring mechanism and electronics
- Easy to maintain and simple to clean with a removable funnel sieve/sift
- Measures rain amount, rain intensity, and sends a raingauge frost warning
- Effect of non-level mounting is minimized with this self-balancing design
- Easy adjustment and recalibration of internal measuring mechanism
- High-speed (0.13 s) self-emptying mechanism for high precipitation rate accuracy
- High-dynamic range certified up to 600 mm/hour (10 mm/minute) rain rates but can measure up to 2000 mm/hr.
- Low-profile funnel for easy cleaning with a sharp edge for accuracy
- Bird-spikes and leaf fence are available

OUTER Ø 188 mm (7.4")
4 x MOUNT Ø 174 mm (6.85")
200 cm² ORIFICE = Ø 159.6 mm (6.28")
116 mm (4.57")
155 mm (6.12")
OVERALL HEIGHT 171 mm (6.73")
4 x MOUNT Ø 118 mm (4.65")

Self-balancing, self-emptying magnetic tipping bucket technology to ensure uninterrupted measurement of precipitation regardless of amount and intensity.

It measures rain by means of a standardized orifice funnel which collects water into the precision measuring mechanism. The mechanism offers more **consistent long-term response** than standard tipping-bucket rain gauges and is accurate even in high rain rates.
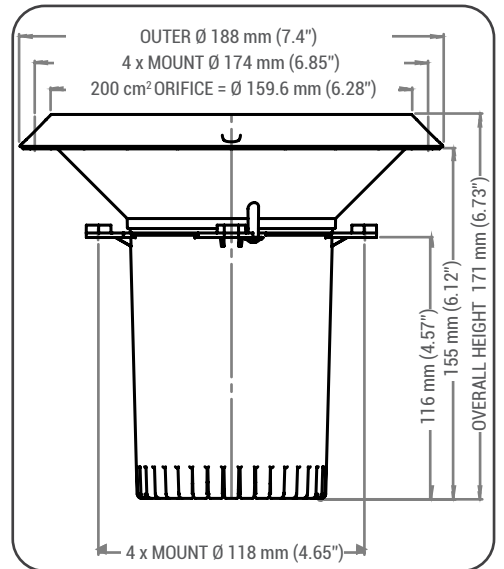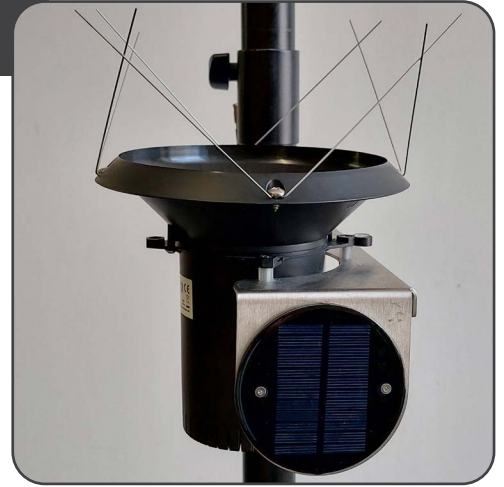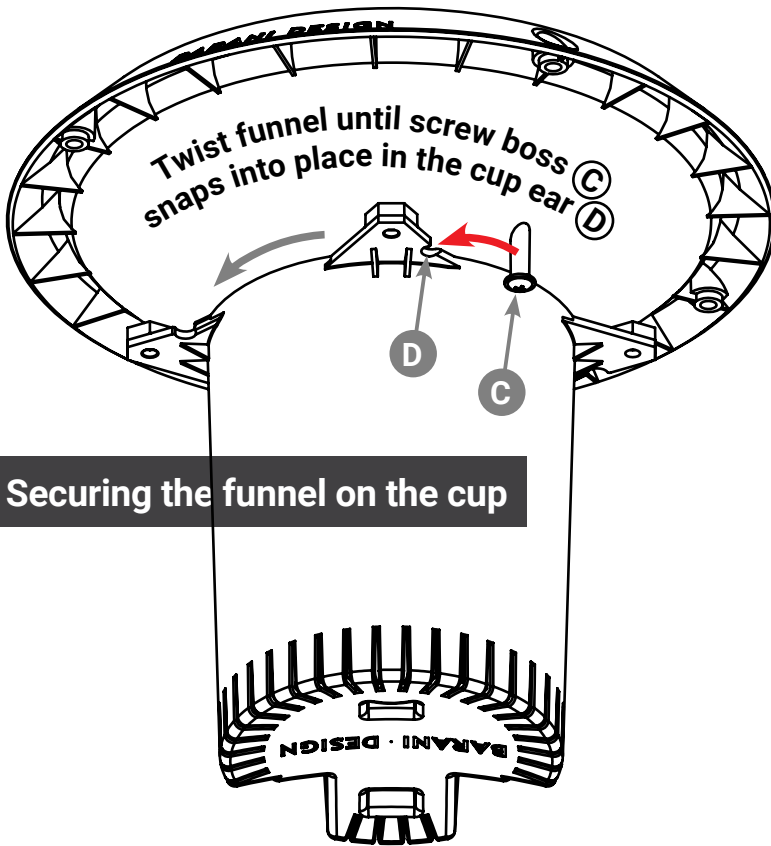
Individually tested and calibrated

Rain gauges are individually tested and use high quality sealed reed switches. Electronics are protected against salt spray, water, frost and heat by a weather-resistant coating.

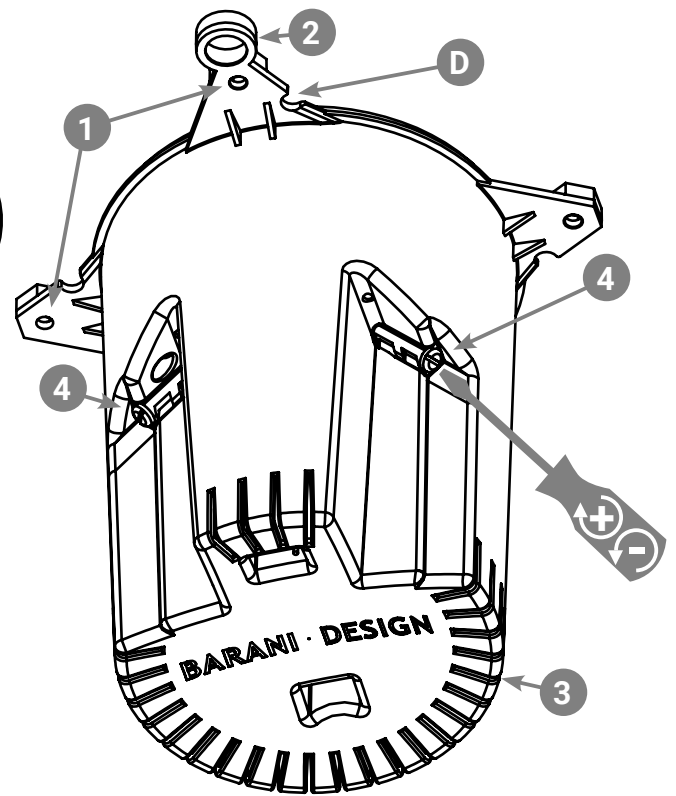| Pluviometer type	Accuracy	Stability	Resolution	Measuring range	Operating range	Starting threshold *	Rain orifice area
Precipitation type: Liquid (Rain)	Field performance ±2% (calib. ±1%)	< 0.0125 mm per year	0.1, 0.2, 0.25 mm (0.01")	Up to 600 mm/hr in above freezing conditions	-33 °C... 80 °C (battery limitation)	Resolution + 0.07 mm (0.0027") *	200 cm² (Ø 16.0 cm, 6.3")

* Rain gauge starting value is the amount of precipitation required to register a first reading. All funnel based rain gauges trap a small mount of precipitation on the funnel surface, which includes drops remaining on funnel surface (~1.4 ml), evaporation from the funnel surface, wetting of debris, dirt, and dust in the funnel catch sieve/sift and water opening (together an additional 1 ml). Rain gauge inspection interval should be determined by user experience and the environmental conditions.

Electrical Interface	Wireless network compatibility	Battery type	Battery life	Shock resistance
Wireless	All regions LoRaWAN and Sigfox.	Lithium Ion	10+ years	15 g

For applications where low-maintenance in combination with high-precision and longterm measurement stability are important. ISO:9001 quality.
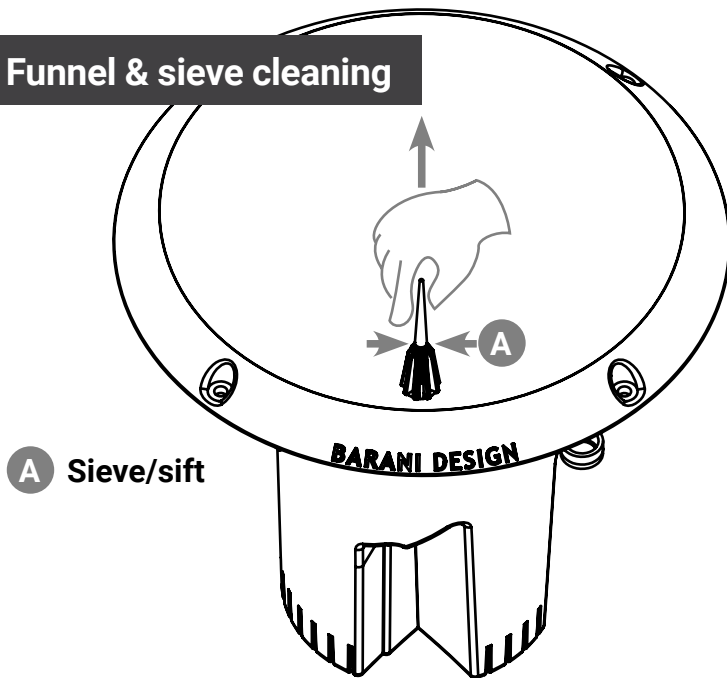
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Twist funnel until screw boss ©
snaps into place in the cup ear ©

Securing the funnel on the cup

Funnel & sieve cleaning

A Sieve/sift

1. Remove the funnel by twisting out of the snaps on the cup ears.
2. Remove the spiked sieve by gently pinching and pulling up.
3. Whipe the funnel with a moist cloth and clean the sieve.
4. Reinstall the funnel by twisting into the snaps on the cup ears.
5. Insert the sieve by pushing down until it snaps into place.
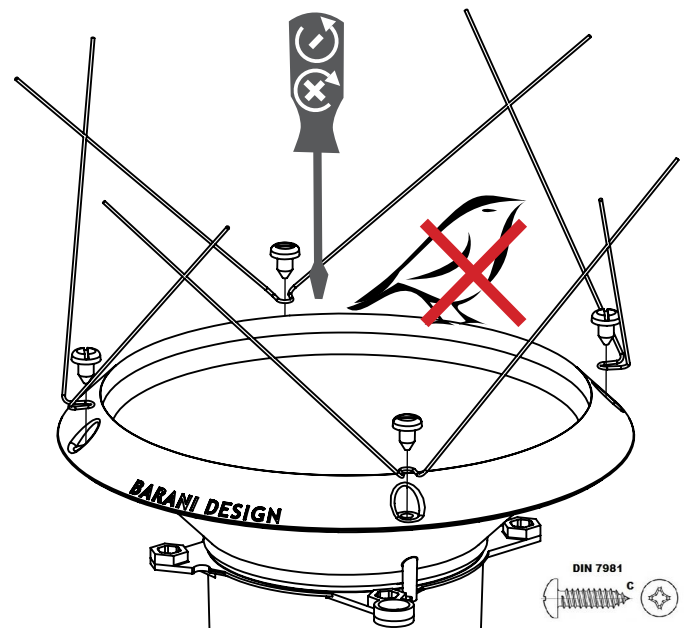
1 Cup leveling & mounting screw holes

2 Spirit level holder for rain gauge leveling

3 Drain slots all around the perimeter

4 Precalibrated adjustment screws for the self-balancing tipping bucket mechanism

DIN 7981

Bird spike mounting options

Stainless steel bird spikes can be mounted on the four funnel mounting points using the supplied flat head machine screws DIN 7981 Ø 4.8 mm (3/16") or similar. The mounting holes are Ø 4 mm (5/32") in diameter.