

Tipping Bucket Rain Gauge

METEOROLOGY | PRECIPITATION | RAINFALL

General Description

HyQuest Solutions' TB6 is a **non-siphoning high-quality tipping bucket rain gauge** for measuring rainfall and precipitation in urban and rural locations. The TB6 is the device of choice for **accurately measuring low rainfall events** (0-50 mm/hr with better than +/- 1 % accuracy), because the water passes through the nozzle and enters the bucket directly allowing small rainfall events to be measured.

The TB6's tried and proven design ensures **long-term, accurate and repeatable results**. It is manufactured from high quality, **durable materials ensuring long term stability in the harshest of environments**. It consists of a robust powder-coated aluminium enclosure, a UV-resistant ASA polymer base, and stainless steel fasteners and finger filter.

Easy maintenance

Removal of the outer enclosure and access to the tipping bucket mechanism and finger filter assembly is made easy with quick release fasteners. The finger filter can be removed easily during a field service. It ensures the collector catch area remains unblocked when leaves, bird droppings and other debris find their way into the catch.

The TB6's base incorporates **two water outlets at the bottom** allowing for water collection and data verification.

Output options

TB6 includes a **dual output 24 V DC reed switch** allowing for output redundancy or the addition of a second data logger. The second output could also be used for connecting HyQuest Solutions' current meter counter CMCbt paired with the free FCD application that allow for easy and accurate field calibration even in noisy (urban) environments. The reed switch incorporates **varistor protection against surges** that may be induced on long, inappropriately shielded signal cables.

Main Features

- Standard 200 mm diameter catch
- Long term stable calibration
- Minimal maintenance required
- Robust design for all environments
- Optional: **autonomous real-time rain monitoring and reporting system**
RainTrak Undercover with in-built telemetry and logging (see flip side)



Alternative Models TB3 and TB4

Industry-grade HS tipping buckets TB3 and TB4 are equipped with an integrated siphon mechanism which delivers high levels of accuracy across a broad range of rainfall intensities.

Technical Specifications

| | | |
|---------------------------------|--|--|
| Resolution | 0.1 mm, 0.2 mm, and 0.01 inch | 0.5 mm and 1.0 mm |
| Accuracy | <ul style="list-style-type: none"> ■ 0-50 mm per hour: better than +/- 1 % ■ 50-100 mm per hour: better than -3 % ■ 100-150mm per hour: better than -5 % ■ 150-200 mm per hour: better than -7 % ■ 200-300 mm per hour: better than -10 % | <ul style="list-style-type: none"> ■ 0-100 mm per hour: better than +/- 2 % ■ 100-150 mm per hour: better than +/- 4 % ■ 150-200 mm per hour: better than +/- 5 % |
| Range | 700 mm per hour | |
| Material | <ul style="list-style-type: none"> ■ Enclosure: powder-coated aluminium ■ Base: UV-resistant ASA ■ Bucket: chrome plated ASA | |
| Pivots | Sapphire tipped | |
| Height & Mass | 330 mm, 2.1 kg | |
| Environmental Conditions | Operating Temperature Range: +4 °C to +70 °C; Humidity: 0 - 100 % | |

Accessories & Additional Options



Autonomous System

RainTrak Undercover: TB6 can be used as a component of the RainTrak to provide a reliable and autonomous real-time rain monitoring and reporting system. Features: turnkey operation, battery operated with solar panel, integrated undercover IP-capable data logger, periodic or event-driven data communication, wireless communication, incl. antenna, custom designed for harsh environments.



Pole Mount Bracket:

Pole mount bracket with stainless steel bolts, nuts and washers to suit TB3, TB4 or TB6 model tipping bucket rain gauge base. Suits 50 mm NB galvanised pipe with 2" BSP thread.



Bird Guard: The bird guard prevents wild or feral birds from perching or roosting and thus increases accuracy by stopping bird faeces from dropping inside the gauge funnel.



Portable Field Calibration Device (FCD): The FCD effectively enables field technicians to run functional tests and calibrations of any given rain gauge in the field avoiding dismantling of TBRG's, reducing TBRG downtime and thereby saving time and money.



iRIS dataloggers and data modems:

- Robust housing
- IP over one or two channels of your choice: xG / GPRS, satellite, IoT
- I/O: analog, digital, SDI-12, Modbus
- iLink software
- Telemetry or cloud app



Pulse Counter CMCbt:

The CMCbt is a blue-tooth pulse counter that provides an interface between the TBRG's reed switch output and the FCD-App calibration software used in conjunction with HyQuest Solutions' Field Calibration Device FCD.

Please ask for details.

Reseller

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