

# Tipping Bucket Rain Gauge

## METEOROLOGY

### General Description

HyQuest Solutions' TB7 is a new generation **high-quality tipping bucket rain gauge** for measuring rainfall and precipitation in remote and unattended locations when used in conjunction with HyQuest Solutions' Undercover data logger (see flip side) or a smart communication module. TB7 is a **reliable 'low cost' device** with a very good accuracy across a broad range of rainfall intensities.

The TB7'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**. Enclosure and base consists of robust UV-resistant ASA polymer, and fasteners and filter are made of stainless steel.

TB7 provides a **finger filter** that ensures the collector catch area remains unblocked when leaves, bird droppings and other debris find their way into the catch.

The TB7's base incorporates **two water outlets at the bottom** allowing for water collection and data verification.

**Maintenance of the TB7 is easy**, because removal of the outer enclosure and access to the tipping bucket mechanism and finger filter assembly is made easy with quick release fasteners.

### Output options

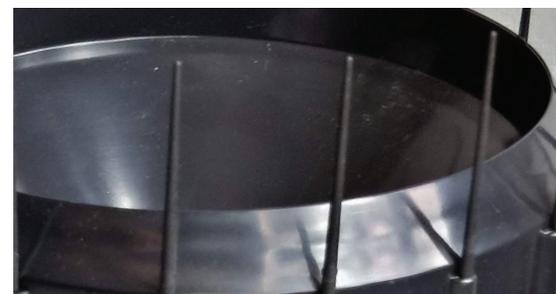
TB7 includes a **dual output 24 V DC reed switch** allowing for output redundancy or the addition of a second data logger. The reed switch incorporates **varistor protection against surges** that may be induced on long, inappropriately shielded signal cables.

### Applications

- Classical Meteorology and Climatology
- Hydrometeorology
- Environmental, hydrological and air quality monitoring
- Water treatment plants, dams, reservoirs
- Agriculture, agrometeorology
- Water resources management
- Research, citizen scientists

### Features

- Type: non-syphoning
- In-built bird guard
- Individually buretted and batch calibrated
- Long term stability
- Minimal maintenance required
- Robust design for all environments
- Expandability: Optional autonomous real-time rain monitoring and reporting system RainTrak Undercover with in-built telemetry and logging (see flip side)



## Technical Specifications

**Resolution** 0.2 mm, 0.5 mm, 0.01"

**Range** 700 mm per hour

**Accuracy**

	Resolution		
	0.2 mm	0.01"	0.5 mm
<b>Flow rate 0-200 mm/hr</b>	+/-5 %	+/-5 %	+/-5 %
<b>Flow rate 200-500 mm/hr</b>	NA	NA	better than -8 %

Alternatively: Individual accuracy +/-2 % at any set intensity specified by the user, calibration required (Please note: additional costs for individually calibrated units)

**Enclosure and Base** UV-resistant ASA

**Pivots** Ground sapphire pivots

**Bucket** Teflon impregnated injection moulded

**Dimensions**

- Height: 310 mm (H)
- Catch: 200 mm diameter

**Mass** 2.1 kg

## Accessories



**Pole Mount Bracket:** Pole mount bracket with stainless steel bolts, nuts and washers. Suits 50 mm NB galvanised pipe with 2" BSP thread.



**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 TBRGs, reducing TBRG down-time and thereby saving time and money.



**iRIS Undercover datalogger**

The compact unit facilitates installation within HyQuest Solutions' raingauge enclosures.

The single communication slot supports either a wireless 3G or 4G modem (SDI-12 optional). The iRIS Undercover provides a Wi-Fi hotspot that enables access to the device wirelessly using HyQuest Solution's free-of-charge iLink software.



**Autonomous System RainTrak Undercover:**

TB7 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.

Please ask for details.

## Reseller

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