

Tipping Bucket Rain Gauge

METEOROLOGY

General Description

HyQuest Solutions' TB7 is a new generation **high-quality tipping bucket rain gauge** for measuring rainfall 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
	Flow rate 0-200 mm/hr	Flow rate 0-200 mm/hr	Flow rate 0-200 mm/hr
	+/-5 %	+/-5 %	+/-5 %
	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

Operating Temperature +4 °C to +70 °C

Dimensions

- Height: 310 mm
- 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 Solutions' 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.

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