

Rain Gauge RGTB-7TM

Tipping Bucket Rain Gauge, Standard Funnel

DATA SHEET

FEATURE SUMMARY

- 200 mm orifice
- Tipping bucket mechanism
- Ground sapphire pivots
- Integrated leaf filter
- Easy to service
- Dual reed switches
- Teflon impregnated bucket
- Varistor protection
- Over-molded electronics
- Discharge collection ports
- Molded ASA
- Integrated Bird Spikes

DESCRIPTION

Rain Gauge Tipping Bucket RGTB-7TM is manufactured by Hydrological Services, a leading manufacturer of rain gauges. Dyacon evaluated several instruments for serviceability, insect protection, construction simplicity, debris screen construction, price, and manufacturing quality.

Hydrological Services gauges offer exceptional value and performance, especially the RGTB-7.

RGTB-7TM utilizes a standard funnel catch mechanism suitable for low- and medium-precipitation rates.

Dual, normally-open reed switches allow for switch redundancy and for connecting parallel equipment.

RGTB-7 is available in several resolutions, including 0.01", 1.0 mm, 0.2 mm, and 0.5 mm.

Note: RGTB-7 is an excellent choice where measurements of low to moderate precipitation is desired. However, the unrestricted flow of water through a normal funnel can lead to greater data error at high precipitation rates. For areas where accurately capturing higher precipitation rates is critical, the RGTB-4, with its integrated siphon flow regulator, is recommended.



KEY FEATURES

Upper Construction: The molded ASA funnel is mounted to a the standard ASA molded based.

The cylinder is mounted to the base using keyhole slots. The cylinder can be removed without fully removing the screws, a feature that minimizes the potential for lost screws when servicing equipment.

Lower Construction: An Teflon-impregnated tipping bucket with trip release geometry minimizes retained water for improved accuracy.

The injection molded base is made of UV-resistant ASA, which is field proven in desert conditions beyond eight years.

Data Connection: Each bucket tip momentarily closes a reed switch, indicating one incremental step of the gauge resolution.

Dyacon replaces the standard Hyquest Services cable with a jacketed outdoor rated cable.

Electronics: The reed switches, varistors, and connector are low-pressure over molded for excellent weather resistance.

Mounting: **RGTB-7** includes an integrated bubble level. Three-point mounting holes can be mounted to any flat surface.

MEASUREMENT

Orifice/Collector	200 mm +/-0.3 mm (7.87")
Resolution	One tip (See Resolution Options.)
Accuracy	Better than 5% at 0 to 200 mm/hr*
Resolution Options	1.0 mm, 0.5 mm, and 0.01" (standard)

ENVIRONMENTAL

Operating Humidity	0% to 100% RH
Operating Temperature	-20°C to 70°C

ELECTRICAL

Switch Characteristics	Dual, isolated reed switches 500 mA max 12 V max working voltage Varistor protection 0.1 ohms nominal 10 ⁸ to 10 ⁹ MTBF
Wire Connection	4-position screw (slotted) terminal block

*RGTB-7 uses the same tipping bucket mechanism as the more expensive Hyquest rain gauges. Individual calibration by the use can achieve accuracy in the range of +/-2%.

MECHANICAL

Upper	Injection molded ASA.
Base	Thick wall injection molded ASA.
Bucket	Teflon impregnated.
Mounting Holes	3 holes, 9.4 mm (0.370") diameter at radius of 117 mm from center Compatible with 8 mm or 5/16" bolts
Discharge Ports	2 ports, 12.4 mm OD Compatible with 12 mm ID tube
Insect and Debris Protection	Collector, discharge ports and venting screens, 1 mm typical pin size, 1.5 mm max
Tipping Pivots	Sapphire pivots
Weight	2 kg
Dimensions	315 mm ht x 230 mm wd (12.1" x 9") Not including mounting feet.
Bird Guard	Integrated. Replaceable pins.

ACCESSORIES

Accessories	Pole mount and leveling bracket
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