



Rain Gauge RGTB-4™

Tipping Bucket Rain Gauge, Siphon Flow Control

DATA SHEET

- 200 mm orifice
- Tipping bucket mechanism
- Siphon flow control
- Integrated leaf filter
- Machined outlet
- Easy to service
- Dual reed switches
- Varistor protection
- Encapsulated electronics
- Discharge collection ports
- Powder coated aluminum



DESCRIPTION

Rain Gauge Tipping Bucket RGTB-4™ utilizes a siphon control on the funnel discharge, increasing accuracy at high precipitation rates.

RGTB-4™ is manufactured by Hydrological Services. 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.

RGTB-4™ uses dual, normally-open reed switches for switch redundancy and connecting parallel equipment.

RGTB-4™ is available in several resolutions, including 0.01", 1.0 mm, 0.5 mm, 0.2 mm, and 0.1 mm.

Note: For low precipitation areas or where accuracy at low precipitation rates is emphasized, please evaluate RGTB-6, which uses a standard funnel construction. The siphon on RGTB-4 requires approximately 0.25 mm (0.01") to activate. Precipitation below this amount may not be detected.

KEY FEATURES

Funnel Outlet: Machined Delrin and brass.

Upper Construction: The cast aluminum funnel is mounted to a spun aluminum cylinder. All aluminum is powder coated.

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 ABS injection molded tipping bucket is thick chrome plated to provide consistent and long-lived performance.

The injection molded base is made of UV-resistant ABS, 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 Hydrological Services cable with a jacketed outdoor rated cable.

Electronics: The reed switches, varistors, and connector are encapsulated in pliable RTV, which prevents cracking from handling and temperature fatigue.

Mounting: **RGTB-4™** includes an integrated bubble level. Three-point mounting holes can be mounted to any flat surface.

Accessories: Accessories include a pole mount, bird guard, and calibration device.

MEASUREMENT

Orifice	200 mm +/- 0.3 mm (7.87")
Sensitivity	One tip (See Resolution Options.)
Accuracy	+/- 2% at 0 to 250 mm/hr +/- 3% at 250 to 500 mm/hr
Resolution Options	0.5 mm, 0.2 mm, 0.1 mm, and 0.01"

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

MECHANICAL

Upper	Powder coated cast aluminum collector and spun aluminum cylinder. Machined Delrin fitting with brass siphon.
Base	UV stabilized black ABS. Thick wall injection molded.
Bucket	Injection molded ABS, chrome plated, and balanced.
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	Stainless steel axle and axle rest.
Weight	2 kg
Dimensions	237 mm x 315 mm (9.3" x 12.4")

ACCESSORIES

Accessories	Pole mount Bird guard Calibration device
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Image 1: Collection funnel.

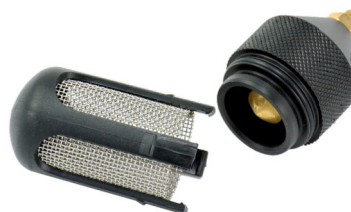


Image 3: Siphon flow control.



Image 2: Chrome tipping bucket and spirit level.



Image 4: Discharge collection ports.