

# Tipping Bucket Rain Gage



## Description

The tipping bucket rain gage is recognized as the standard for measuring rainfall and precipitation in remote and unattended locations.

The integrated siphon mechanism delivers high levels of accuracy across a broad range of rainfall intensities. Each unit consists of a collector funnel with stainless steel leaf filter, an integrated siphon control mechanism, an outer enclosure with quick release fasteners, and base which houses the tipping bucket mechanism. The unit includes dual output reed switches with varistor protection (helps shield sensitive components against excessive transient voltage) as well as dual rainfall discharge outlets for water collection and/or analysis.

The bucket tips when precipitation of 0.01 inch, 0.2mm, 0.5mm or 1.0mm has been collected. Each tip activates a reed switch closure which is detected by a data logger and/or telemetry system.

## Features

- Meets all international requirements
- Dual output signal
- Optional internal logger
- Accurate in high rainfall events

## Applications

- Meteorological stations
- Hydromet stations
- Stormwater management

# Tipping Bucket Rain Gage

## Technical Specifications

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Since 1911, Stevens Water Monitoring Systems, Inc. has provided complete water monitoring solutions including:

- Water Level Sensors
- Water Quality Sensors
- Soil Moisture Sensors
- Chart Recorders
- Staff Gages
- Telemetry Systems
- Data Collection Platforms

The tipping bucket rain gage consists of a collector funnel, a stainless steel filter and a tipping bucket mechanism. A siphon system is supplied to improve accuracy during high rainfall events.

#### Receiver

200 mm (8 inch) diameter with machined aluminum rim

#### Sensitivity

One tip at 0.2, 0.5, 1.0 mm or 0.01 in

#### Measurements

Range: 0-700 mm/hour  
Accuracy:  $\pm 2\%$  25-500 mm/hour  
 $\pm 1$  tip from 1-25 mm/hour

#### Sensor

Tipping bucket with siphon

#### Syphon

0.4mm capacity of rainfall - made from brass with a non-hygroscopic outer body

#### Contacts

Type: dual reed-switch (make contact), momentary Rating: 12 VA (0.5 amp max)  
Duration: 0.1 second

#### Physical Size

342 mm x 229 mm (H x D)  
13.5" x 9" (H x D)  
Weight: 6.6 lbs or 3 kg

#### Bucket

Chrome plated, injected moulded non-hygroscopic ABS balanced  $\pm 0.05$  gms

#### Base

Die cast aluminium

#### Mounting Holes

Three (3) 10mm diameter mounting holes

#### Drain fittings

Able to attach 12mm inside diameter tubing, to catch rainfall after passing through buckets

#### Pivots

Ground sapphire pivots with stainless steel shaft

#### Insect covers

Stainless steel mesh on all openings to prevent insects from entering gauge.

#### Outer enclosure

Keyed to enable the release of the outer enclosure without the need for the removal of the three securing screws.

### ORDERING INFORMATION

Part #	Description
48195	Tipping bucket rain gage, 0.01 inch of precipitation
48196	Tipping bucket rain gage, 0.2 mm of precipitation
48197	Tipping bucket rain gage, 0.5 mm of precipitation
48198	Tipping bucket rain gage, 1.0 mm of precipitation
48204	Rainfall data logger, including software
24272	Additional 2 conductor cable, 18 gauge, stranded