

Suitable for general meteorology – water resource studies – hydrology – flood warning systems – automatic logging systems

## Datasheet

# RIM-8300 Rain Gauge

The RIMCO RIM-8300 series of tipping bucket rain gauges offers a standard 300mm (12") diameter collection funnel and utilizes the tipping bucket and siphon designs of the RIM-7499 series to ensure consistent accuracy and a long stable service life.

All materials used in the RIMCO RIM-8300 rain gauges are corrosion resistant and designed for almost all environmental conditions.

The RIM-8300 is accurate to within 7% up to 250mm/hr. The 0.5mm and 1.0mm versions comply with the Australian Bureau of Meteorology's requirement for flood monitoring systems.

Rain falling on the 300mm diameter collecting funnel is directed through a flow through siphon where it discharges as a steady stream into a precise two compartment gold plated bucket mounted in unstable equilibrium. As each compartment fills, the bucket tilts alternately about its axis. Each tilt produces a momentary contact closure as a result of a magnet sweeping past a reed switch. Each contact closure corresponds to 0.2mm, 0.5mm or 1mm depending on the bucket capacity installed.

An individual calibration certificate is supplied with every RIM-8300 rain gauge.

## Applications

- General meteorology
- Water resources studies
- Hydrology
- Flood warning systems
- Automatic logging systems

## Features

- Low cost, excellent quality
- Rugged and corrosion resistant construction
- Minimal maintenance, 25 years+ deployment life
- Low friction, non-seizing bucket bearings
- Gold plated buckets for complete drainage
- Dual reed-switch output
- Stable calibration
- Built-in bubble level
- Optional heater for operation below  $-30^{\circ}\text{C}$
- Optional self-powered internal counter



## Specifications

Collector diameter	300mm (12" nom.) $\pm$ 1mm
Resolutions	0.2mm 0.5mm 1mm
Accuracy	$\pm$ 7% to 250mm/hr
Contacts	Two normally open magnetically actuated reed-switches Individual protection built-in
Reed-switch rating	30V AC/DC @0.5A non-inductive, series resistance 24 ohms
Closure timing	50ms min 150ms max Max bounce time 0.75ms
Termination	Screw termination (2.5mm <sup>2</sup> ) on switch holder
Heating option	12 or 24V AC/DC (factory set) with electronic control factory set to $5^{\circ}\text{C}$ . Power consumption dependent on ambient temperature. Above $5^{\circ}\text{C}$ it is nominally 50mW. Peak heater power is 48W. Duty cycle at $-30^{\circ}\text{C}$ ambient is approx. 50% with average power consumption approximately 24W. At $0^{\circ}\text{C}$ average power consumption is nominally 5W.



### Dimensions

Height	360mm
Body diameter	330mm
Mounting flange diameter	380mm

### Physical

Net weight	6.0kg
Shipping weight	7.5kg
Packing carton	450x450x500mm nominal

### Materials

Collector	Copper
Jacket	Stainless steel base Cast marine grade Aluminium
Bucket	Gold plated brass
Bridge	Anodized marine grade Aluminium
Switch holder	Delrin® or similar
Fasteners	Stainless steel

### Ordering information

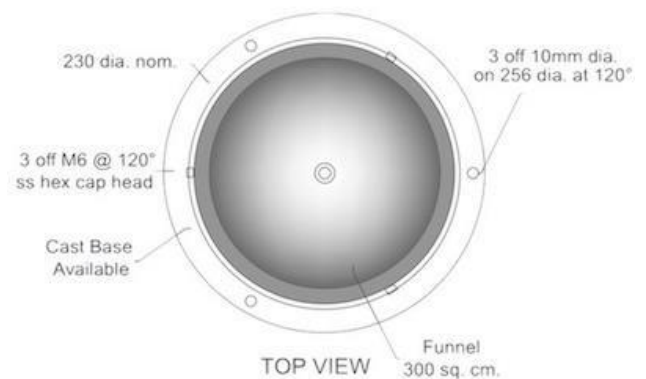
RIM-8300-02	Rain gauge 0.2mm bucket
RIM-8300-05	Rain gauge 0.5mm bucket
RIM-8300-10	Rain gauge 1.0mm bucket
	Order options as required

#### Note:

- Heater option (RIM-83HOPT), 12V or 24V AC/DC, 50W max.
- Non-siphon and imperial resolution versions are also available with differing accuracy specification.
- Other RIMCO rain gauge models are also available with 200cm<sup>2</sup> (RIM-8500).

### Mounting

Three 8.5mm holes at 120° pitch on the mounting flange with a 350mm diameter.



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