



**SBS500**  
Extremely rugged, 2.5 mm powder-coated aluminum construction



**ARG100**  
A rugged, UV resistant gauge offering precision at low cost (shown with optional RGB1 Levelling Baseplate)

## Aerodynamically Designed

Well proven method for automatic measurement of precipitation

### Overview

Tipping bucket rain gauges provide a well proven method for the automatic measurement of precipitation. The ARG100 and SBS500 offer a unique and world renowned approach, which was scientifically developed to ensure an accurate measurement. All models are compatible with any Campbell Scientific data logger.

Unlike conventionally shaped rain gauges the ARG100 and SBS500 are aerodynamically designed to minimize sampling errors that can occur during wind-driven rain. The deep collector body of the SBS series is also less susceptible to 'splash-out' errors. The profile of these gauges follows extensive research by the Institute of Hydrology at Wallingford in the UK, and is very similar to that derived theoretically and independently by the UK Meteorological Office as an 'ideal' shape.

Correction equations are available which extend accurate measurements in rainfall rates up to 1000 mm/hr.

The ARG100 is vacuum formed from UV-resistant plastic for a low cost yet rugged and precise instrument. The SBS500 collector bodies are precisely engineered from powder-coated aluminum, and the base from LM6 marine grade aluminum. They are corrosion-free, extremely rugged and provide increased rainfall catch with minimal airflow interference.

Recommended installation is by bolting to a concrete base. However, for fast, semi-permanent installations on soft ground the optional RGB1 Levelling Baseplate is available for the ARG100. The SBS500 has a built-in levelling device.

### Benefits and Features

#### ARG100

- Aerodynamic design that minimizes airflow disruption, thereby reducing risk of under-measurement
- Compatible with any Campbell Scientific datalogger
- A low cost robust gauge that provides accurate measurements
- Proven tipping bucket measurement method
- 500 mm/hr maximum rainfall rate

#### SBS500

- Aerodynamic design that minimizes airflow disruption thereby reducing risk of under-measurement
- Compatible with any Campbell Scientific datalogger
- Reduced susceptibility to 'splash out' errors
- Rugged, powder-coated, aluminum construction
- Reliable operation in rigorous environmental conditions
- 1000 mm/hr maximum rainfall rate



## Specifications

### ARG100

- **Funnel Diameter:** 254 mm
- **Overall Height:** 340 mm
- **Tip Sensitivity:** Standard setting 0.20 mm of rain per tip
- **Typical Accuracy:** 98% @ 20 mm/hr, 96% @ 50 mm/hr, 95% @ 120mm/hr
- **Maximum rainfall rate (with software correction):** 500 mm/hr
- **Output:** Contact closure at tip
- **Cable:** Custom lead length
- **Weight:** 1.0 kg

### SBS500

- **Collector Area:** 500 cm<sup>2</sup>
- **Overall Height:** 440 mm
- **Output:** Contact closure at tip (two reed switches providing two independent data channels).
- **Tip Sensitivity:\*** Standard setting 0.20 mm of rain per tip
- **Typical Accuracy:** 98% @ 20 mm/hr, 96% @ 50 mm/hr, 95% @ 120mm/hr
- **Maximum rainfall rate (with software correction):** 1000 mm/hr
- **Cable:** Custom lead length
- **Weight:** 6 kg

## Calibration (all models)

The nominal sensitivity of a raingauge is set by the manufacturer, and each gauge is subsequently calibrated to provide a calibration factor, which is given on a certificate provided with each new gauge. This factor can then be used in a datalogger program to improve the accuracy of recorded measurements.

Recalibration can be done either statically or dynamically when required (full details are provided in the raingauge manual). Campbell Scientific Ltd. offers a recalibration and maintenance service.

