



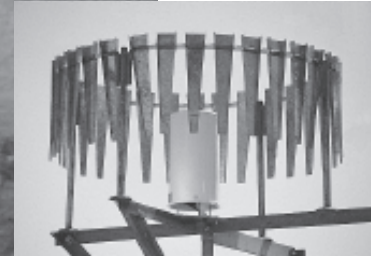
# Tipping Bucket Rain Gauge and Heated Rain and Snow Gauge

## Tipping Bucket Rain Gauge

The 6011 series Tipping Bucket Rain Gauges are standard, precision instruments for measuring rainfall volume and/or rate. Rain enters the gauge through a large funnel, the rim of which is protected by a metal ring to prevent distortion. Collected water passes through a debris-filtering screen and is funneled into one of two tipping buckets inside the gauge. The bucket tips when a given amount of water has been collected; the amount is determined by gauge calibration. As the bucket tips, it causes a 0.1-second switch closure. The tip also brings a second bucket into position under the funnel, ready to fill and repeat the cycle. After the rain water is measured, it drains out through tubes in the base of the gauge. The drain holes are covered by screens to prevent insect entry.

## Electrically Heated Rain and Snow Gauge

For areas where snow or freezing rain may occur, the 6021 series Electrically Heated Rain and Snow Gauges are available. Each gauge includes 4 separate heaters. A NiChrome wire heater wraps around the collection funnel to melt the precipitation. A second NiChrome wire heater warms the internal components and the gauge base to prevent refreezing of the water inside the gauge. In addition, a cartridge heater is installed into each of the two gauge drain tubes so that the measured precipitation passes out of the gauge freely without freezing on contact with the cold outside air. The funnel and the base heaters are controlled by thermostats; the drain tube heaters are continuous duty. Rain gauge models may operate on either 115 VAC or 230 VAC power.



*Above: Precipitation Wind Screen on Electrically Heated Rain and Snow Gauge*

- Accurate, trouble-free operation
- Heater upgrades available

## Available Models

The 6011 and 6021 series gauges have an orifice diameter of approximately 8 inches and a resolution of either 0.01 inch or 0.1 mm.

All gauges utilize a mercury-wetted reed switch. The mercury wetting prevents the arcing that is common with reed switches and provides a better electrical contact.

## Features

All AWI rain gauges are designed for many years of accurate, trouble-free operation. They utilize all metal construction, including aluminum, nickel-plated brass, and stainless steel. The built-in level and pre-drilled feet aid in proper installation. The calibrated measurement accuracy is  $\pm 0.5\%$  at a precipitation rate of 0.5 inch per hour, with a repeatability of  $\pm 3\%$ .

## Wind Screen

This Alter-Type Wind Screen minimizes the formation of strong updrafts which can distort the trajectories of precipitation particles falling toward a gauge. The screen also generates turbulent air motions over the gauge orifice to break up streamlines and thus improve the catch. Use of a wind screen is recommended with all precipitation gauges located in windy areas. The screen consists of 32 free-swinging galvanized metal leaves, evenly spaced around a 4-foot diameter ring. Each leaf is fabricated from 22-gauge sheet metal, 16" long, 3" wide at the top and 2" wide at the bottom. One of the quadrants is hinged and swings out to permit easy access to the gauge. Two lengths of legs (two feet and three feet) are available due to variations in gauge height. A mounting kit is available.

## Tipping Bucket Rain Gauge

Sensor Type:	Tipping bucket
Output:	0.1-second switch closure
Switch:	Form A reed, mercury-wetted
Sensitivity:	
Model 6011-A:	1 tip per 0.01"
Model 6011-B:	1 tip per 0.1 mm
Calibrated accuracy:	±0.5% at 0.5"/hr
Repeatability:	±3% at 0.5"/hr
Collector Orifice:	8.214" diameter (208 mm)
Size:	8.5" dia x 17.5" H (210 x 445 mm)
Weight/Shipping:	8 lbs/15 lbs (3.6 kg/6.8 kg)

## Electrically Heated Rain and Snow Gauge

Sensor Type:	Tipping bucket
Output:	0.1-second switch closure
Switch:	Form A reed, mercury-wetted
Sensitivity:	
Model 6021-A:	1 tip per 0.01"
Models 6021-B, 6021-D:	1 tip per 0.1 mm
Calibrated accuracy:	±0.5% at 0.5"/hr
Repeatability:	±3% at 0.5"/hr
Collector orifice:	8.214" diameter (208 mm)
Heaters:	
Funnel:	NiChrome wire n foil, 125W, thermostatically controlled
Base:	NiChrome wire in foil, 150 W, thermostatically controlled
Drain Tubes:	2, cartridge, 20 W each, continuous duty
Thermostat Set Point:	Funnel heater: approx 11°C (52°F) Base heater: approx 6°C (43°F)
Operating Temperature:	-25° to + 40°C
Input Voltage:	
Model 6021-A, 6021-B:	115 Vac, 60 Hz
Model 6021-D:	230 Vac, 50 Hz
Size:	8.25" dia x 17.5" H (210 x 445 mm)
Weight/Shipping:	8 lbs/15 lbs(3.6 kg/6.8 kg)

## Precipitation Gauge Wind Screen

Material:	22-gauge sheet metal, galvanized
Size:	
Model 6410:	48" dia x 24" H (1219 x 610 mm)
Model 6411:	48" dia x 36" H (1219 x 914 mm)
Weight/shipping:	45 lbs/50 lbs

## Tipping Bucket Rain Gauge

6011-A	Tipping Bucket Rain Gauge, 0.01"/tip
6011-B	Tipping Bucket Rain Gauge, 0.1 mm/tip

## Electrically Heated Rain and Snow Gauge

6021-A	Electrically Heated 8" Rain and Snow Gauge, 0.01"/tip, 115 Vac, less power cable
6021-B	Electrically Heated 8" Rain and Snow Gauge, 0.1 mm/tip, 115 Vac
6021-D	Electrically Heated 8" Rain and Snow Gauge, 0.1 mm/tip, 230 Vac
60211	Heater Kit Option to convert 6011 Series gauge to 6021 Series, 115 Vac input; less power cable
60212	Heater Kit Option to convert 6011 Series gauge to 6021 Series, 230 Vac input; less power cable

## Cables

T600502	Cable to connect rain gauge to output device, 2-conductor, 20 AWG shielded
T600723	Power Cable, 3-conductor, 16 AWG/heated rain gauges

## Precipitation Gauge Wind Screen

6410	Precipitation Gauge Wind Screen, 24" legs
6411	Precipitation Gauge Wind Screen, 36" legs
64101	Leg Extender Kit, converts 6410 to 6411
64102	Wind Screen Mounting Kit



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