

Precipitation Gauges

300 Series

The accurate measurement of rain and snow precipitation remains one of the most basic elements of meteorology. To enable accurate measurement of precipitation in all environments, Met One Instruments provides a series of instruments incorporating a tipping bucket mechanism. The tipping bucket design allows accurate, repeatable measurements, requires no regular operator maintenance, and is economical and proven in operation.

Features

- Jeweled bearings
- Teflon coated bucket
- Reed switch
- Self-emptying
- Corrosion resistant materials
- Quality construction

Each model in the series is optimized to meet a particular site and sampling requirement.

Operation

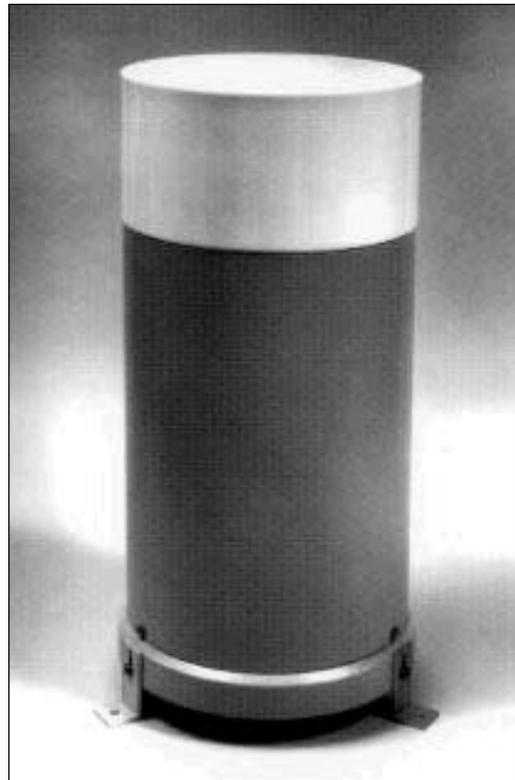
A dual-chambered tipping bucket assembly is located below the collection funnel. When a precise amount of precipitation has been collected in one side of the bucket, gravity tips the assembly and activates a reed switch. A momentary electrical contact closure through the switch is provided for each increment of rainfall. The sample is discharged through the base of the gauge. For environments that can typically expect a

significant amount of frozen precipitation, internal sensor heaters are available. The heating elements are thermostatically controlled to melt and measure the water content of snow and frozen rain, but to avoid evaporative loss.

Construction

The heavy machined aluminum base provides a stable platform for the tipping assembly. The bucket is made from stainless steel and is Teflon coated to prevent retention of

the sample. The bucket pivots are precision machined and fitted with jeweled bearings to reduce wear and friction. The funnel is powder coated aluminum and has two screens for preventing leaves and other debris from entering or clogging the gauge. A circular bubble-level and adjustable feet facilitate proper mounting of the unit. Major components are finished in catalyzed polyurethane paint, with a color and texture chosen to allow the sensor to blend into the environment.



The Model 370 Rain Gauge



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Specifications

Rain Gauges

Model Number	Funnel Diameter	Standard Calibration	Optional Calibration
370	8 in (20.3 cm)	0.01 in	0.2 or 0.25 mm
372	8 in (20.3 cm)	0.5 mm	N/A
380	12 in (30.5 cm)	0.01 in	0.2 or 0.25 mm
382	12 in (30.5 cm)	0.1 mm	N/A

Rain and Snow Gauges

Model Number	Funnel Diameter	Standard Calibration	Optional Calibration	Heater Voltage
375	8 in (20.3 cm)	0.01 in	0.2 or 0.25 mm	115 VAC, 315 watts
376	8 in (20.3 cm)	0.01 in	0.2 or 0.25 mm	220 VAC, 315 watts
377	8 in (20.3 cm)	0.5 mm	N/A	115 VAC, 315 watts
379	8 in (20.3 cm)	0.5 mm	N/A	220 VAC, 315 watts
385	12 in (30.5 cm)	0.01 in	0.2 or 0.25 mm	115 VAC, 315 watts
386	12 in (30.5 cm)	0.01 in	0.2 or 0.25 mm	220 VAC, 315 watts
387	12 in (30.5 cm)	0.1 mm	N/A	115 VAC, 315 watts
389	12 in (30.5 cm)	0.1 mm	N/A	220 VAC, 315 watts

Thermostat Set Point:	Funnel Heater	40°F (4.4°C)
	Base Heater	40°F (4.4°C)
Heaters:	Funnel	240 watts, composite with built-in thermostat
	Base	75 watts, composite with built-in thermostat
Operating Temperature:	-50°C to +50°C	
Accuracy:	at 0.5"/hr	±0.5%
	at 1" to 3"/hr	±1.0%
Switch:	Type	Reed
	Rating	10 mA, 28 VDC
Height:	8 in Gauges	18 in (46 cm)
	12 in Gauges	20.5 in (52 cm)
Weight:	8 in Rain Gauges	6 lbs (2.7 kg)
(not including cabling)	12 in Rain Gauges	7.5 lbs (3.4 kg)
	8 in Rain/Snow	6.5 lbs (3 kg)
	12 in Rain/Snow	11.5 lbs (5.2 kg)
Shipping Weight:	8 in Rain Gauges	8.5 lbs (3.9 kg)
(not including cabling)	12 in Rain Gauges	10 lbs (4.5 kg)
	8 in Rain/Snow	9 lbs (4 kg)
	12 in Rain/Snow	14 lbs (6.4 kg)

Finish: White gloss/beige textured powder coat and clear anodized aluminum

Ordering Information

Specify Model Number, calibration factor, cable length(s), and accessories

Cable:	Signal	PN 1566-xx (xx=length in feet)
	Power (as required)	PN 2517-xx (xx=length in feet)

Accessories

Model 820440 Wind Screen: The improved Alter-design screen is constructed of 32 free-swinging, separated leaves. It can greatly improve the accuracy of the precipitation catch by reducing local turbulence.
