

# Tipping Bucket Rain Gages

## Models TB4 and CS700

The TB4 and CS700 rain gages are manufactured by Hydrological Services Pty. Ltd. For both rain gages, rain funnels into a tipping bucket mechanism that tips when 0.2 mm of rain has been collected. Each tip is marked by a dual reed switch closure that is recorded by a Campbell Scientific datalogger pulse count channel. After measurement, the water drains through two orifices (accepts 12 mm tubing) in the base, allowing the measured water to be collected in a separate container.

The rain gages include a siphoning mechanism that allows the rain to flow at a steady rate to the tipping bucket mechanism regardless of rainfall intensity. This reduces typical rain bucket errors and produces accurate measurements over a range of 0 to 700mm/hr<sup>1</sup> (27.5"/hr<sup>1</sup>) enabling the TB4 and CS700 to record intense rainfall events.

The major difference between the TB4 and CS700 is their base. The TB4 has a UV stabilized plastic base whereas the CS700 has a powder-coated aluminum base.

### Options

As shipped, the base of the gage is supported by three legs. The CM240 Mounting/Leveling Base or a user-supplied baseplate with leveling capability is recommended. The CM240 requires a user-supplied concrete pad and a 1.5" diameter IPS pipe to mount the gage at the recommended 1 m measurement height.

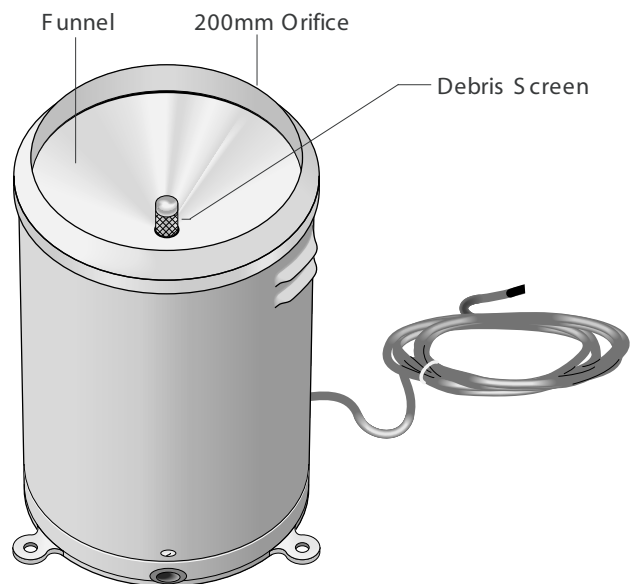
### Ordering Information

TB4-L\_\_ TB4 tipping bucket. Specify lead length (in feet) after the L.

CS700-L\_\_ CS700 tipping bucket. Specify lead length (in feet) after the L.



TB4 as viewed from above



CS700 as viewed from above



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## Specifications

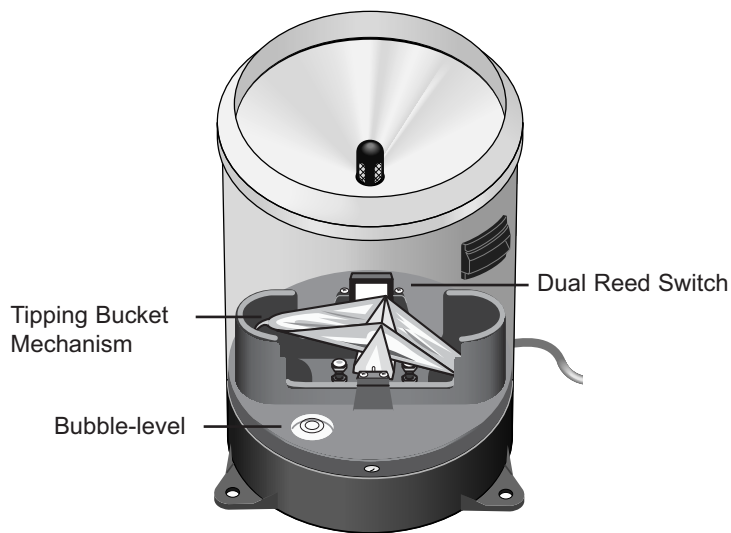
Sensor:	Tipping bucket with siphon
Orifice Diameter:	200 mm (7.9")
Drain Tube Diameter:	Both filters accept 12 mm ID tubing
Resolution:	0.2 mm
Measurement Range:	0 to 700 mm/hr <sup>-1</sup> (0 to 27.6"hr <sup>-1</sup> )
Environmental Conditions:	
Temperature:	0° to 70°C
Humidity:	0 to 100%

### TB4

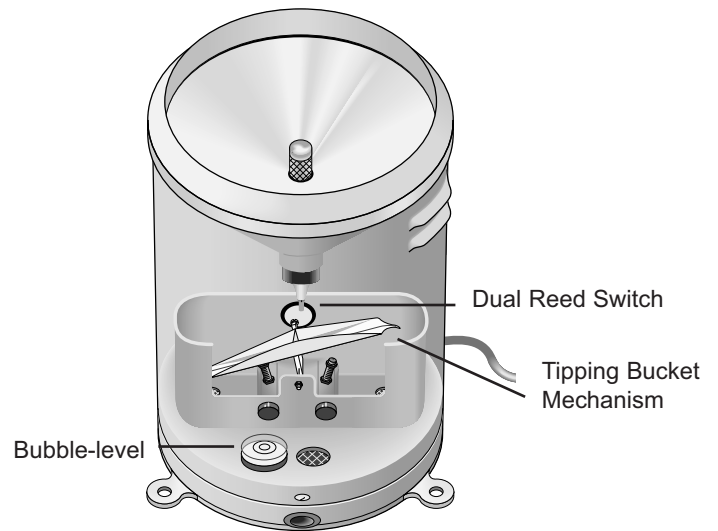
Accuracy:	Better than $\pm 3\%$ b/w 25 to 500 mm/hr <sup>-1</sup> (1 to 19.7mm hr <sup>-1</sup> )
Weight:	2 kg (4.4 lbs ) with 25 ft signal cable (two-conductor shielded)
Height:	33 cm (13" )

### CS700

Accuracy:	Better than $\pm 2\%$ @ (25 to 500 mm/hr)
Weight:	3.3 kg ( 7.4 lbs )with 25 ft signal cable (two-conductor shielded)
Height:	34.2 cm (13.5" )



Transparent view of TB4 shows tipping bucket mechanism



Transparent view of CS700 shows tipping bucket mechanism



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