

# Portable Field Calibration Device for Tipping Bucket Rain Gauges

## METEOROLOGY

### General Description

HyQuest Solutions' **Field Calibration Device FCD** checks rain gauges in the field for accuracy. The **portable lightweight** device effectively enables field technicians to run functional tests and verifications of any rain gauge in the field. The use of FCD **saves time and money**, because the tipping bucket rain gauges can remain fixed in their location without the need for dismantling and transport and with very short downtimes for calibration only.

**FCD checks whether a rain gauge is providing accurate readings:** It discharges a certain volume of water into the rain gauge collector. Then, the number of tips has to be counted and checked with the calibration specifications (included). The tips generated when emptying the FCD water volume can be counted

- manually by listening for the tips,
- by a data logger, and
- most accurate and comfortable: by means of connecting the CMCbt Blue-Tooth converter (optional) and using the FCD-App (free download) on an Android mobile device

Please note: Data loggers, FCD-App and further useful accessories are available from HyQuest Solutions. Please see flip side and ask for details.

### Applications

- Field Service
- Site Visits
- Maintenance

### Main Features

- Compact, light-weight, portable, packed in a robust aluminium carry case
- Corrosion-resistant (made of stainless steel, nickle silver and UV stabilized delrin)
- No maintenance required
- Design based on the HyQuest Solutions laboratory calibrator (conform to the Australian Bureau of Meteorology (BOM) calibration procedure)
- Usable with 3rd party tipping bucket rain gauges with catchments of 200 mm or 203 mm diameter (model FCD-314 and FCD-653)



#### TB340A: Lab Calibration Device for Tipping Bucket Rain Gauges

HyQuest Solutions' TB340A utilizes load cell technology in order to dispense water by mass for increased repeatability. It is integrated with a Programmable Logic Controller (PLC) and can calibrate up to two tipping bucket rain gauges at a time.

## Technical Specifications

<b>Material</b>	<ul style="list-style-type: none"> <li>■ Body: synthetic thermoplastic resin (polycarbonate)</li> <li>■ Nozzle: delrin and nickle silver</li> <li>■ Vent: stainless steel</li> <li>■ Adaptor: delrin</li> </ul>
<b>Capacity</b>	<ul style="list-style-type: none"> <li>■ Model FCD-314: 314 ml (used with TB3, TB4, TB6, TB7)</li> <li>■ Model FCD-653: 653 ml (used with TB3, TB4, TB6, TB7)</li> <li>■ Model FCD-730: 730 ml (used with HS-305, TB300, TB305)</li> </ul>
<b>Nozzle</b>	50 mm/hr, 100 mm/hr, 200 mm/hr or 300 mm/hr
<b>Carry Case</b>	Robust aluminium carry case, with heavy duty foam
<b>Dimensions in Case</b>	400 x 250 x 95 mm
<b>Packed Weight and Size</b>	<ul style="list-style-type: none"> <li>■ FCD-314: 1.8 kg, 400 x 250 x 95 mm (WxDxH)</li> <li>■ FCD-653: 2.4 kg, 400 x 250 x 95 mm (WxDxH)</li> <li>■ FCD-730: 2.6 kg, 455 x 330 x 152 mm (WxDxH)</li> </ul>
<b>Scope of Delivery</b>	<ul style="list-style-type: none"> <li>■ One nozzle included (extra nozzles with different nozzle rates optionally available)</li> <li>■ Calibration specifications</li> <li>■ Carry case</li> </ul>

## Accessories



### Pulse Counter CMCbt:

The CMCbt is a Bluetooth Pulse Counter that provides an interface between the rain gauges reed switch output and the FCD-App calibration software.



**FCD-App:** The FCD-App is free software developed and supported by HyQuest Solutions. It provides the most accurate and comfortable way for collecting data when performing a field calibration of a tipping bucket rain gauge. The app operates on any Android platform (customer's own tablet or phone) with bluetooth technology. The App is used in combination with HyQuest Solutions' counter CMCbt.



### Tipping Bucket Rain Gauges

(various models): HyQuest Solutions' tipping bucket rain gauges are recognized as the world standard for measuring rainfall and precipitation in urban and rural

locations. With a 200 mm diameter catch and integrated syphon mechanism (optional) they deliver high levels of accuracy across a broad range of rainfall intensities. The devices are robust, built for harsh environmental conditions and require hardly any maintenance. They are used worldwide in meteorology, climatology, hydrological and air quality monitoring stations, environmental monitoring, water treatment plants, dams, reservoirs, etc.

Please ask for details

Reseller

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