



Texas Electronics, Inc.

The Gold Standard in Weather Instrumentation Since 1957

Field Calibration Kit

FC-525



Description

The FC-525 Field Calibration Kit is designed to be a field verification of accuracy for a TR-525 series rain gauge. This unit is not intended to substitute a dynamic laboratory calibration; however it is a great indicator of accuracy. The kit comes complete with everything necessary to verify the accuracy and functionality of the rain gauge including multiple nozzles for testing over various rainfall rates.

Features & Benefits

- Quickly and accurately verifies calibration
- Works with any TR-525 series rain gauge
- Low cost verification
- Easy to use
- Eliminates unnecessary down time
- Multiple nozzles for various calibrations

Calibration Kit Contents

Pre-drilled graduated cylinder for accurate fluid measurement
 Black anodized calibration funnel
 #65 and #70 nozzles for multiple flow rates
 Cleaning pin for each nozzle
 Instructions for field calibration and adjustment

Calibration

There are typical two different types of calibration for a tipping bucket. The first, most common yet least accurate is a static calibration. The second and most accurate is a dynamic calibration. (Note: This kit allows for a dynamic calibration of a rain gauge in the field.)

Static calibration is when a specific volume of water is placed into a tipping mechanism. The mechanism is then adjusted until it tips. This process is sometimes continued until both sides of the tipping mechanism tip at the specified volume of water.

Dynamic calibration utilizes a similar technique but also tests over time. A specific volume of water is poured into the tipping mechanism over a specific period of time. The main difference in this calibration is that calibrating over time allows for compensation of error caused by spillage. When a tipping bucket fills to the point of tipping there is a brief time when additional water is allowed into the gauge. This additional water is called spillage or overage and typically causes tipping buckets to read low at high rainfall rates. Hence a quality rain gauge will be calibrated over a range of rainfall rates or flow rates to minimize this error. Note that ALL standard tipping buckets have spillage issues. This explains the need for a siphon rain gauge, such as our TR-525S, to regulate the flow into the tipping mechanism and therefore minimize the spillage over a much broader range of rainfall.

Tip Volume

Our ideal, factory calibrated tip volumes for each TR-525 series rain gauge is as follows:

Model #	Calibration (per tip)		
	0.01"	0.2 mm	0.1 mm
TR-525I	4.73 mL	3.72 mL	N/A
TR-525USW	8.23 mL	6.49 mL	N/A
TR-525M	N/A	N/A	4.73 mL
TR-525S	8.23 mL	6.49 mL	N/A
TR-4	1.95 mL	N/A	N/A

Ordering Information

Model #	Description
FC-525	Field Calibration Kit for TR-525

Works With:

TR-525* Rain Gauge/Tipping Bucket
(Please specify exact model)

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