

# Economical Primary Standard Gas Mass Flow Calibrator Industrial & Environmental

## FEATURES

- Primary standard dry piston prover
- Accuracy: +/-1.0% of reading mass flow rate
- Flow ranges from 5 sccm up to 30,000 sccm (30 slpm)
- Portable mass flow calibrator for gases
- Quality: manufactured to ISO 17025 standard at NIST-accredited lab (NVLAP)
- Ideal for quality control in manufacturing of: Air Samplers, GC's, and Particle Counters
- Fast: 1 to 15 seconds per reading (approximate)
- Ease-of-Use: simple push-button navigation and intuitive user interface allows for quick set up and easy operation
- Unlike traditional bubble provers:
  - No preparation involved
  - No messy soap bubble solutions
- Flexible: user-selectable flow units and time intervals
- Leak test checks for internal leaks
- RoHS and CE compliant

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# CalTrak 350



## DESCRIPTION

**S**ierra's CalTrak® 350 was developed specifically for calibrations and verification of critical industrial and environmental tools, including quality control for manufacturers of air samplers, gas chromatographs, and particle counters. It provides the accuracy, customization and durability needed in today's exacting, fast-paced workplace.

The 350 allows users to verify gas mass flow rates, in the field or in the lab, to an accuracy of +/- 1.0% of reading, including temperature and pressure compensation. CalTrak 350's positive displacement technology provides immediate indication of actual gas mass flow rate – accurately and independently of gas type. Integrated temperature and pressure sensors in the flow stream allow users to automatically standardize volumetric flow readings to standard conditions, for traceable verifications of mass flow devices.



## WHY PRIMARY STANDARD?

CalTrak 350 is a true primary standard in every sense of the word, because its accuracy is based upon primary SI units: The interior diameter of the glass measuring cylinder; the length of piston travel within the cylinder; and the time it takes the piston to travel this distance, implying a known volume. Our patented technology, therefore, offers accuracies at the level of national laboratories in a very compact and portable device.

## PERFORMANCE SPECIFICATIONS

### Mass Flow Accuracy

+/- 1.0% of reading

### Pressure Accuracy

+/- 3.5 mmHg (.07 psi) typical, 7.0 mm (.14 psi) maximum

Pressure sensor in the flow stream

### Temperature Accuracy

+/- 0.8° C (33.44°F) typical, 1.3° C (34.34°F) maximum

### Time per Measurement

1 to 15 seconds per reading (approximate)

Temperature sensor in the flow stream

### Type

Single (manual), continuous or burst

Averaging function user-selectable from

1 to 100 measurements

## OPERATION SPECIFICATIONS

### Flow Ranges\*

350-L: 5 sccm to 50 sccm (0.5 slpm)\*

350-M: 50 sccm to 5,000 sccm (5 slpm)\*

350-H: 300 sccm to 30,000 sccm (30 slpm)\*

\*Note: At gas pressure of 760 mmHg, (1 atm) and a gas temperature of 25°C (77°F) with standardization temperature set to 0°C (32°F)

### Operating Pressure

15 psia maximum (1.03 barA)

### Operating Temperature

0°C to 50°C (32°F to 122°F)

### Ambient Humidity

0–70%, non-condensing

### Storage Temperature

0°C to 70°C (32°F to 158°F)

### Flow Modes

Suction or pressure

### Gas compatibility

Non-corrosive, humidity less than 70% non-condensing

### Pressure & Suction Fittings

1/4-inch ID Swagelok® compression fittings for low and medium models, 3/8-inch ID for high model

### Standardized Flow Units

scc/min, sml/min, sL/min, scf/min

### Pressure Units

mmHg, psi, kPa

### Temperature Units

°C, °F

### Warranty

1 year; battery 6 months

### Approvals

RoHS and CE Compliant

### Digital Communication

RS-232 port, or if your PC does not have an RS-232 port you will need a USB to RS-232 adapter

## PHYSICAL SPECIFICATIONS

### Dimensions

Height: 5.5 inches (140 mm)

Width: 6 inches (150 mm)

Depth: 3 inches (75mm)

### Weight

29 oz (820 g)

### Configuration

Integrated flow measuring cell, valve and timing mechanism

## POWER REQUIREMENTS

### AC Power Adapter/Charger

12VDC, >250ma, 2.5 mm, center positive

### Battery

6V rechargeable, sealed lead-acid, 6 to 8 hours typical operation

### Battery Operational Time (5 cycles/min)

3 hours backlight on; 8 hours backlight off

## USER INTERFACE & SOFTWARE

### Local Interface

Backlit LCD graphical display; Four directional arrow buttons on the control panel allow you to navigate through the menu; user selectable flow units plus time intervals

### CalSoft™ Software

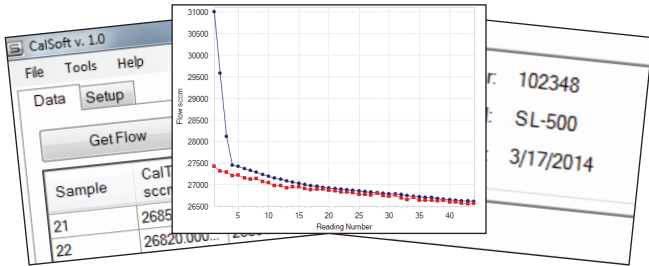
Software System Requirements

Windows® XP, Windows® 7

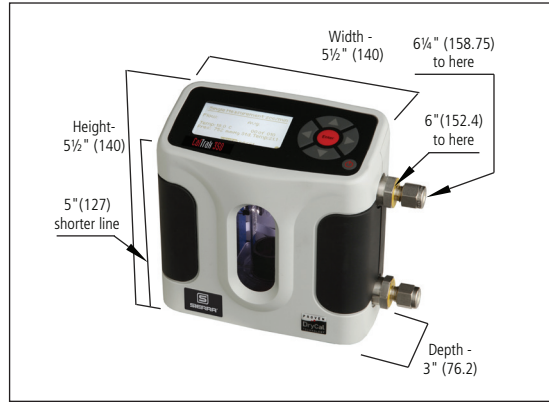
Microsoft Excel® 2003 and up

## USER INTERFACE & SOFTWARE (CONTINUED)

- Captures flow data from your CalTrak instrument for easy export into common software packages, a PC, or Microsoft environment.
- Real-time data monitoring
- Upload the latest version of the firmware to your CalTrak
- Enter flow rates from pumps or other flow source or flow meters and calibrate the flow source.
- Compare the flow measurements from your CalTrak precision calibrator.

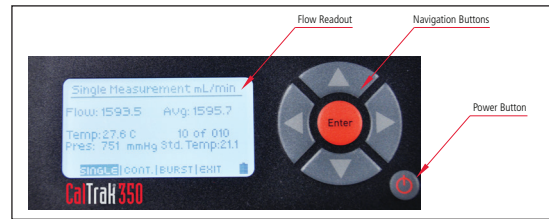


## DIMENSIONS



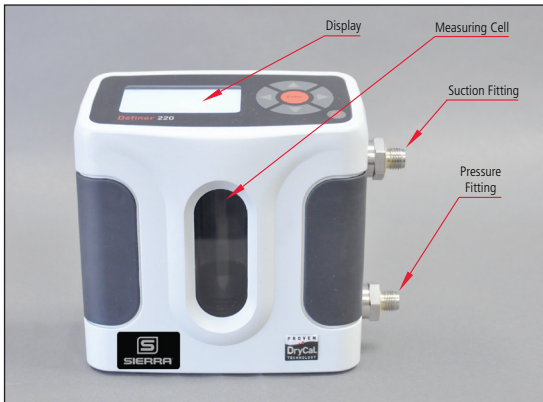
## DISPLAY & INTERFACE

Close up of display

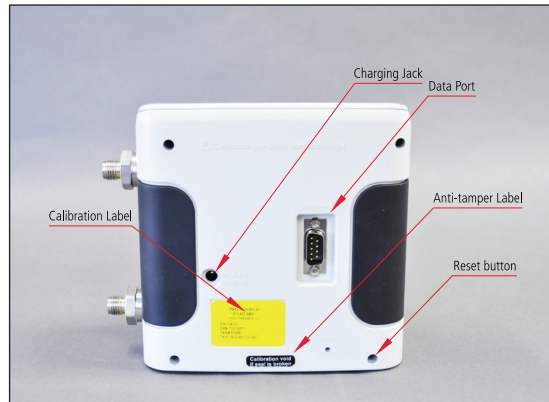


## PRODUCT FEATURES

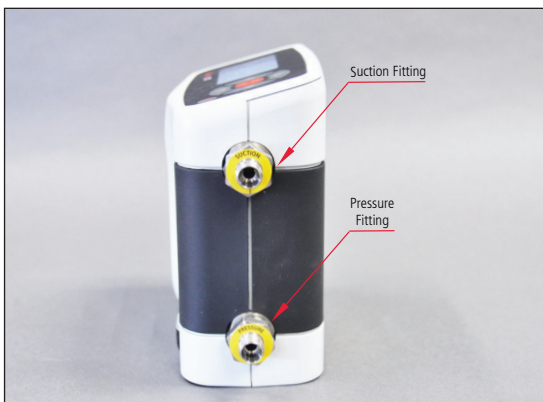
CalTrak 350 Front View



CalTrak 350 Back View



Side view



Parent -

Instructions: To order a CalTrak 350, please fill in each feature number block by selecting the codes from the corresponding features below.

Primary Flow Meter; CalTrak® 350	
<b>350-L</b>	Low flow range, 5 sccm to 50 sccm (0.5 slpm), rated accuracy ± 1.0% of reading standardized*. Shipment includes a universal 100-240V AC power adapter/charger, plastic leak test cap (1), NIST-Traceable calibration certificate, mini-manual, ¼ inch Swagelok® fittings.
<b>350-M</b>	Medium flow range, 50 sccm to 5,000 sccm (5 slpm), rated accuracy ± 1.0% of reading standardized*. Shipment includes a universal 100-240V AC power adapter/charger, plastic leak test cap (1), NIST-Traceable calibration certificate, mini-manual, ¼ inch Swagelok® fittings
<b>350-H</b>	High flow range, 300 sccm to 30,000 sccm (30 slpm), rated accuracy ± 1.0% of reading standardized*. Shipment includes a universal 100-240V AC power adapter/charger, plastic leak test cap (1), NIST-Traceable calibration certificate, mini-manual, ⅜ inch Swagelok® fittings

\*At gas pressure of 760 mmHg (1 atm), and a gas temperature of 25°C (77°F) with standardization temperature set to 0°C (32°F).

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