

# Multifunction Calibrator

# FLOWCAL X

Flowcal X, more than a simple flow calibrator...

A single instrument allows to perform all necessary controls to verify the calibration of some parameters, which are normally measured by sampler, like flowrate, pressure and temperature.

This characteristic makes Flowcal X unique to test the accuracy of an instrument and to follow a quality system procedure.

## MEASUREMENT TRACEABILITY

This is very important to follow a quality system procedure. Flowcal X generates a **calibration report**, containing the following data: cell in use, calibration expiration date, ambient conditions during verification test, deviations, test date and hour, etc.

It is no longer necessary write paper reports: the reports can be easily downloaded via the Micro-USB port, eliminating the need for outdated serial ports or converters.

**Data transfer** is quick and straightforward by simply **connecting the device to a computer**.

Sensor and measurement calibration have been performed with high accuracy and care.

Each sensor is calibrated through an accurate procedure and is traceable to standards.

Each instrument is supplied with a **calibration certificate**.

## MAIN FEATURES

- ⊗ Reference calibrator to measure:
  - > Flow;
  - > Absolute Pressure;
  - > Differential Pressure;
  - > Temperature (optional);
- ⊗ Flow calibrator with Interchangeable measurement cells Flowcell Air, available in different ranges;
- ⊗ High precision pressure calibrator, with thermal drift compensation device;
- ⊗ Creation of calibration report;
- ⊗ Creation of measurement log directly on the USB Key;
- ⊗ Powered by a rechargeable Li-Ion battery;
- ⊗ Long battery life;
- ⊗ Available with ISO 17025 accredited laboratory certificate.





## FLOWRATE CELLS FLOWCAL X

The flow measurement cells are **equipped with an internal microchip that stores all calibration and verification data.**

Operation is extremely simple: just connect the cell to the instrument and power it on. The system automatically recognizes the cell, making it immediately ready for flow measurement.

Each cell integrates an **ambient temperature sensor**, shielded from solar radiation for reliable outdoor use.

**The calibration data of the temperature sensor** is also stored directly on the cell's chip, ensuring accurate and consistent measurements.

The **cell connections are fully compatible with European LVS and US EPA standards** for sampling heads.

Flow values can be displayed under both actual conditions and standard conditions.

Finally, **Flowcal X is fully compatible with all legacy TCR Tecora® flow cells**, ensuring continuity and long-term usability.



## MODELS AND FEATURES

### Hi-Flow Venturi

#### Range

Flow measurement accuracy

#### Cell Material

Built-in Temp. Sensor accuracy

Working Temperature

Connection

#### Code

Hosebarb for Hi-Flow cell

**150 - 600 l/min**

1% f.s.

Anodized aluminum

Better than 1%  $\pm 0.2$  °C

-20 +60°C

Male fitting diam. 31.65mm

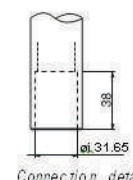
**AB99-008-0010SP**

**AB99-008-9910SP**



HF1 60-350 l/min  
(optional)

Hi-Flow  
150 - 600 l/min



Connection detail



## MODELS AND FEATURES

### MID Flow Venturi

Range

Flow measurement accuracy

Cell material

Built-in Temp. Sensor accuracy

Working Temperature

Connection

Application

**10 - 60 l/min**

1% f.s.

Anodized aluminum

Better than  $1\% \pm 0.2^\circ\text{C}$

-20 +60°C

Female fitting diam. 31.75mm

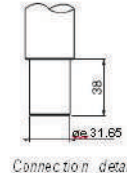
PM10/2.5 samplers, portable and isokinetic samplers

**Code**

Hosebarb for MID Flow cell

**AB99-008-0011SP**

**AB99-008-9911SP**



### Low Flow

(requires the software release)

Range

Flow measurement accuracy

Cell material

Built-in Temp. Sensor accuracy

Working Temperature

Connection

**Code**

**0.5 - 10.5 l/min**

1% f.s.

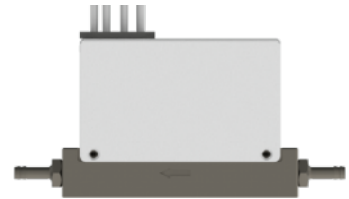
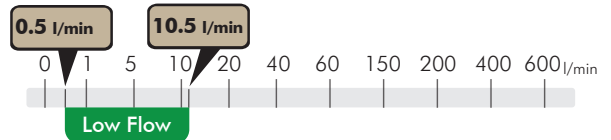
AISI 316 steel

Better than  $1\% \pm 0.2^\circ\text{C}$

-20 +60°C

Threaded hosebarb 1/4" gas

**AB99-008-0012SP**



### Laminar cell

Flow measurement accuracy

Cell material

Built-in Temp. Sensor accuracy

Working Temperature

Connection

**Code \***

1% f.s.

AISI 316 steel

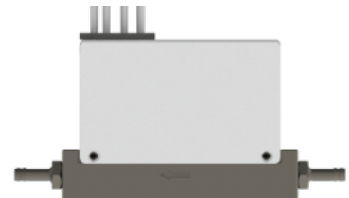
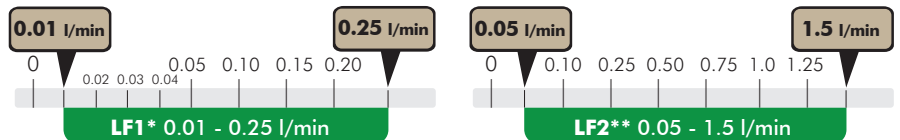
Better than  $1\% \pm 0.2^\circ\text{C}$

-20 +60°C

Threaded hosebarb 1/4" gas

**AB99-008-0013SP - LF1\***

**AB99-008-0014SP - LF2\*\***





# TRTECORA<sup>®</sup>

## POLLUTION CHECK



External Temperature  
(Optional)



Carrying Case  
(Optional)

### TECHNICAL SPECIFICATIONS

#### Differential Pressure

Range	0-6800 Pa (0-680 mmH <sub>2</sub> O)
Accuracy	Better than 1% of measure $\pm$ 2 Pa
Resolution	0.1 Pa (0.001 mmH <sub>2</sub> O)
Differential pressure max	30.000 Pa (3000 mmH <sub>2</sub> O)

#### Absolute Pressure (static and barometric)

Range	0 - 105 kPa
Accuracy	Better than 1% of measure $\pm$ 0.1 kPa
Resolution	0.1 kPa (0.1 mBar)

#### Temperature Probe Input (optional)

Range	-20 + 80°C
Accuracy	0.01°C
Resolution	1% of measure $\pm$ 0.2°C

#### General Specifications

Working temperature	-20 + 40°C
Power supply	Rechargeable Li-Ion battery
Display	3.5" Touch-Screen
USB port	Micro-USB
Weight	400g
Dimensions	H. 175 x L. 90 x P. 50 mm

### CODES FOR ORDERS

#### Flowcal X

##### The equipment includes:

- USB Flash disk 1 Gb
- User's manual
- Calibration certificate
- Micro-USB cable

AB99-008-0000SP

#### Optional temp. probe inlet

AB99-008-0006SP

#### External temperature sensor with connection cable

AB99-008-0020SP

#### Protective case

AC99-004-9900SN

