



## DeltaCal Volumetric Air Flow Calibrator (Environmental)

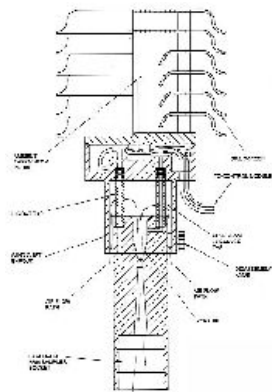


Designed to go anyplace, indoors or out. From the top a 15,000 ft mountain to a 55° C desert or a -30° C snow field. Our first principle, Venturi calibrators will operate for 20 continuous hours on 4 AA cells. We are pulsation free, accurate to less than 0.75% of the flow rate reading, NIST traceable and designed, built and calibrated in an ISO 9001:2008 facility. We have always built our calibrators to these standards. Now our output screens show both Actual and Standard flow rates. This feature is applicable to every calibrator that we have ever produced and will be applied, during a recalibration, to every instrument at no charge.

The BGI deltaCal is the first and only continuous volumetric flow calibration/audit device which gives a direct indication of volumetric flow rate, standard flow rate, barometric pressure (both mm/Hg & mb), ambient temperature and filter temperature in one instrument. It was developed for use with U.S. EPA PM<sub>2.5</sub> designated samplers and their PM<sub>10</sub> derivatives. With an accessory adapter it is usable with any air sampler in the 1.5 to 19.5 Lpm range. The DC100 version has a range of 10-60 Lpm. Typical screens are shown below on the left.

It is the only field audit/calibration device which meets the same temperature criteria as the EPA designated samplers themselves. The temperature range is -30° to 55° C (EPA requires up to 40° C).

The heart of the deltaCal is a venturi which is superior to an orifice, in that it offers no sharp edges which can be damaged and a 90% recovery of the measurement pressure drop, important when calibrating some forms of speciation samplers or other critical orifice controlled devices. Because flow through the instrument is uninterrupted, our graphic software provides a continuous output display of all functions.



Sectional View of  
Flow Measuring Head

### Applications

- Calibration and audits of PM<sub>2.5</sub> and PM<sub>10</sub> samplers to U.S. EPA requirements
- May be used on any sampler in the 1.5 to 19.5 Lpm range
- Usable in field or laboratory
- Calibration of European PM<sub>10</sub> samplers operating at 38.4 Lpm
- Calibration of 50 Lpm DICOT samplers and standard DICOT Samplers

### Features

- One switch (off/on) operation -- all data displayed on screen
- No moving parts, completely silent
- 20 hour battery life (4-AA)
- Furnished with universal power supply (120/240 VAC)
- Supplied software, with download and reporting capability





## Specifications

Specifications	
Flow Rate Range	1.5 – 19.5 Lpm (Euro 10 – 60 Lpm)
Temp Operational Range	-30° C to 40° C
Temp Reading Range	-40° C to 50° C
Baro. Pressure Range	400 to 800 mm of Hg (U.S. version) 534 to 1066 millibars (Euro version)

Dimensions	
Measuring Head	5 in. Max OD (12.7 cm) X 10 in. high (25.4 cm)
Control Module	8 in. high (20.3 cm) X 4 in. wide (10.15 cm) X 1.7 in. thick (4.32 cm)
Combined Weight	2.2 lbs (1 kg)
Hand-Held Temperature Probe	
Length of Cable	33 in (83.8 cm)
Length of Probe	5 in. (12.7 cm)

## Ordering Information

Part#	Description
DC1	deltaCal (calibration range 1.5-19.5 Lpm), Complete in Carrying Case, Std. Cond. Temp at 25° C
DC100	deltaCal (calibration range 10-60 lpm), Complete in Carrying Case , Std. Cond. Temp at 25° C
DC10	Adapter - deltaCal to 3/8 in. hose barb (use with SASS or TEOM)
DC11	Adapter - DeltaCal to 1/2" Hose Barb
DC12	Recalibration with NIST Traceability Certificate
DC2	Extension Temperature Probe
DC3	120-240 Volt Power Supply
DC4	Fitted Hard Carrying Case
DC6	Pressure Tap "O" Rings (4)
DC7	Venturi Thumb Screw – (1)
X010	Replacement Socket "O" Rings (2 sets of 2 rings)

