

# F&J SPECIALTY PRODUCTS, INC.

*The Nucleus of Quality Air Monitoring Programs*

## COMPACT DIGITAL AIR FLOW CALIBRATOR for AIR SAMPLERS

**The most flexible calibrator design available for laboratory or field use. Mobile venturi tube feature eliminates difficult set up positions during calibrations.**

### NOTABLE FEATURES:

- Differential Pressure Flow Sensor
- Display of flow in CFM, LPM or M<sup>3</sup>/min. by operator selection (LED display)
- Standard accuracy: ±2.0% Full Scale
- Flowrates displayed are corrected to a factory settable Reference Temperature and Pressure (4 options available)
 

Classical STP	0°C, 1 Atm
Normal T and P	20°C, 1 Atm
Modified Normal T and P	70°F, 1 Atm
Standard Ambient T and P	25°C, 1 Atm
- Display of barometric pressure in metric or English units
- Display of temperature in metric or English units
- Certified to UL, CSA and CE electrical safety standards for line power models
- NIST traceable calibration certificate
- Ambient or Reference flow is selectable by the operator
- 2 year warranty



### Models Available

#### Basic Line Power Models and Units with Battery Option

110–120VAC <u>MODEL NO.</u>	110V+Battery Option <u>MODEL NO.</u>	220–240VAC <u>MODEL NO.</u>	220V+Battery Option <u>MODEL NO.</u>	Air Flow Range	
				<u>CFM</u>	<u>LPM</u>
CD-801V.2	CD-801BV.2	CD-801EV.2	CD-801BEV.2	0.1 – 1	3 – 30
CD-802V.2	CD-802BV.2	CD-802EV.2	CD-802BEV.2	0.2 – 2	6 – 56
CD-812V.2	CD-812BV.2	CD-812EV.2	CD-812BEV.2	0.5 – 4	14 – 115
CD-828V.2	CD-828BV.2	CD-828EV.2	CD-828BEV.2	1 – 9	28 – 250
CD-814V.2	CD-814BV.2	CD-814EV.2	CD-814BEV.2	2 - 14	56 - 400
CD-530V.2	CD-530BV.2	CD-530EV.2	CD-530BEV.2	5 – 30	140 – 850
CD-540V.2	CD-540BV.2	CD-540EV.2	CD-540BEV.2	5 – 40	140 – 1130
CD-550V.2	CD-550BV.2	CD-550EV.2	CD-550BEV.2	5 – 50	140 – 1400
CD-870V.2	CD-870BV.2	CD-870EV.2	CD-870BEV.2	10 – 70	280 - 1980

### Options:

- 1% F.S. accuracy units available (add '-1' to model number); example: CD-812EV.2-1

# COMPACT DIGITAL AIR FLOW CALIBRATOR V.2

---

## 1. MEASUREMENT PRINCIPLE

- 1.1 Flow Sensor: Differential Pressure Sensor
  - 1.2 Standardization: Correction for standard temperature and barometric pressure
  - 1.3 Curve linearization: Individually calibrated and software corrected
- 

## 2. MEASUREMENT RANGES

- 2.1 Air flow: See Table on front page
  - 2.2 Temperature:  $-4^{\circ} - 122^{\circ} \text{ F}$  ( $-20^{\circ} - 50^{\circ} \text{ C}$ )
  - 2.3 Barometric pressure: 30 – 24 In-Hg (760 – 609 mm-Hg)  
approx. Sea level to 6000 ft. elevation above sea level
- 

## 3. MEASUREMENT ACCURACY

- 3.1 Air flow:  $\pm 2\%$  of full scale (Optional  $\pm 1\%$  of full scale)
  - 3.2 Temperature (Typical):  $1^{\circ}\text{C}$  over range  $-20^{\circ}\text{C}$  to  $50^{\circ}\text{C}$
  - 3.3 Barometric pressure:  $\pm 1\%$  of reading over measurement range of 22.00-30.00 “Hg
- 

## 4. DISPLAY 6 Digit LED 0.4” high

---

## 5. DISPLAYED PARAMETERS and RESOLUTIONS

	Parameter	Engineering Unit	Resolution	
5.1	CFM	Cubic feet per minute	0.01	CFM
5.2	LPM	Liter per minute	.1 or 1	LPM
5.3	M <sup>3</sup> /m	Cubic meter per minute	0.0001	M <sup>3</sup> /min
5.4	F	Degree Fahrenheit	0.1	Degree F
5.5	C	Degree Celsius	0.1	Degree C
5.6	In-Hg	Inches of Mercury	0.01	In-Hg
5.7	mm-Hg	Millimeters of Mercury	1	mm-Hg

---

## 6. GENERAL

- 6.1 Power requirements: 100–120 VAC;50/60Hz 0.3 Amps max; 220-240 VAC/50Hz
  - 6.2 Operating temperature:  $-4^{\circ}\text{F} - 122^{\circ}\text{F}$  ( $-20^{\circ}\text{C} - 50^{\circ}\text{C}$ )
  - 6.3 Storage temperature:  $-20^{\circ}\text{F} - 158^{\circ}\text{F}$  ( $-29^{\circ}\text{C} - 70^{\circ}\text{C}$ )
  - 6.4 Dimension (L×W×H) 8.625”×3.75”×8.375” (219×95.25×213mm)
  - 6.5 Weight: 8 lbs. 6 oz. (3.8 Kgs.)
  - 6.6 Installation Category: Pollution Degree 2
  - 6.7 Enclosure Rating: IPX0
- 

## 7. CALIBRATION

Factory calibration is recommended once per year

---

## 8. OPTIONS

- 8.1 RS-232 cable — All measured and calculated parameters are accessible through the RS-232 port to a computer.
- 8.2 Data acquisition and processing software is available upon request.
- 8.3 1% F.S. accuracy units are available.
- 8.4 Battery operable option with on-board charging system

# CALIBRATION SETUP ILLUSTRATIONS



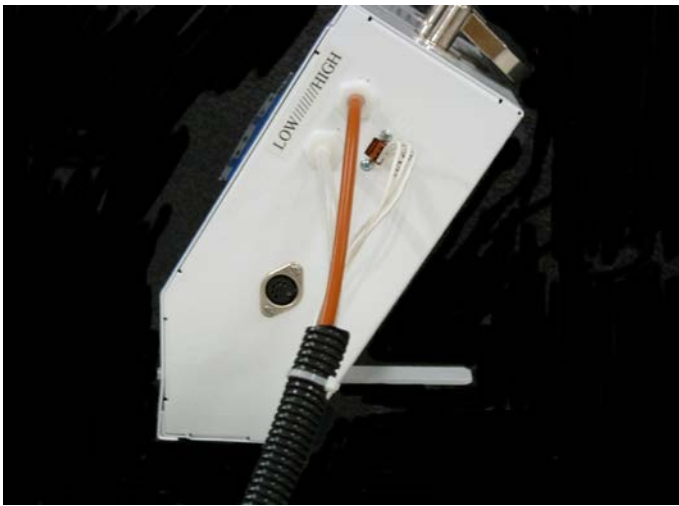
**Calibration Setup for High Volume Air Sampler with 8"×10" Filter Holder**



**Calibration Setup for Portable High Volume Air Sampler with 4" (102mm) D Filter Holder**



**Rear View Illustrating Support Mechanism**



**Side View of Calibrator  
Illustrating RS232 Port**



**Calibration Setup for F&J's Digital  
High Volume Air Sampler;  
Model DH-604V.2**



**Calibration Setup for Portable  
Low Volume Air Sampler  
with Small Diameter Filter Holder**