

# F&J SPECIALTY PRODUCTS, INC.

*The Nucleus of Quality Air Monitoring Programs*

## PORTABLE DIGITAL FLOW METER HIGH VOLUME AIR SAMPLERS

### 100 — 120 VAC



Portable Grab Sampler  
DF8400 Series



ULTRA High Volume  
Portable Grab Sampler  
DFHV-200 Series



Brushless High Volume  
Grab Sampler  
DFHV-1S-BL-T Series



DFHV-1



DFHV-1S



DFHV-1DT



DFHV-1DTS

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## BY F&J SPECIALTY PRODUCTS. INC.

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## DIGITAL FLOW METER HIGH VOLUME AIR SAMPLER F&J MODEL DF8400



### NOTABLE FEATURES:

- State-of-the-art Microprocessor Controlled Electronics
- Accurate flow sensor
- Flowrate and Volume totalizations displayed are corrected to a factory settable Reference Temperature and Pressure (4 options available)
- Very accurate elapsed time meter
- Very durable polypropylene plastic housing
- Lightweight < 4,3 kg (9 lbs.)
- Variable speed control up to full flow
- Thermally Protected Motor
- Powerful 1.4 H.P. dual ball bearing motor
- Bright LED display
- Standard 4-inch (102 mm) diameter filter holder; also accommodates optional 8"×10" (20,3 × 25,4 cm) filter holder w/adapter

### SPECIFICATIONS

#### Pump Type:

Two stage, through flow, thermally protected 1.4 H.P., dual ball bearing vacuum blower motor.

#### Power Requirements:

100-120 VAC; 50/60 Hz; single phase

**Power Cord:** 7'; 18 gauge, 3 conductor

**Circuit Breaker:** 10 amp (able to reset)

**Flow Control** Variable Speed up to full flow

**Dimensions:** 40L × 22,9W × 27,9 cm H  
(15 ¾"L × 9"W × 11"H)

**Weight:** 11 lbs. (5 kg)

**Handle:** Durable plastic/metal

**Particulate Holder:** A durable plastic 4-inch (102 mm) diameter holder is standard

#### Digital Flowmeter Displays:

Flowrate: Corrected to STP

Elapsed Time: hhh:mm

Volume: Corrected to STP

## DIGITAL FLOW METER HIGH VOLUME AIR SAMPLER F&J MODEL DFHV-200



### NOTABLE FEATURES:

- State-of-the-art Microprocessor Controlled Electronics
- Accurate flow sensor
- Flow rate and Volume totalizations displayed are corrected to a factory settable Reference Temperature and Pressure (4 options available)
- Very accurate elapsed time meter
- Very durable polycarbonate plastic housing
- Lightweight 14.4 lbs. (6,5 kg)
- Variable speed control up to full flow
- Thermally Protected Motor
- Powerful 3 H.P. dual ball bearing tangential discharge brushed vacuum blower
- Bright LED display
- Standard 4-inch (102 mm) diameter filter holder; also accommodates optional 110 mm, 125 mm, 140 mm and 150 mm filter holders

### SPECIFICATIONS

#### Pump Type:

Three stage, through flow, dual ball bearing 3.0 H.P., tangential discharge brushed vacuum blower motor.

#### Power Requirements:

100-120 VAC; 50/60 Hz; single phase

**Power Cord:** 5'8"; 14 gauge, 3 conductor

**Circuit Breaker:** 20 amp (able to reset)

**Flow Control:** Variable Speed up to full flow

**Noise Level @ 1 meter:** ~96 dB (max rpm) \*

**Dimensions:** 48.2cm L x 40.6cm H x 26.0 cm D  
(19" L x 16" H x 10.25" D)

**Weight:** 14,4 lbs (6,5 kg)

**Handle:** Durable plastic/built into housing

**Particulate Holder:** A durable plastic 4-inch (102 mm) diameter holder is standard

#### Digital Flowmeter Displays:

Flowrate: Corrected to STP

Elapsed Time: hhh:mm

Volume: Corrected to STP

\* Hearing protection is recommended when operating this air sampler above 85dB noise level

## DIGITAL FLOW METER HIGH VOLUME AIR SAMPLER F&J MODEL DFHV-1S-BL-T



**450 Watt Brushless Motor**

### NOTABLE FEATURES:

- Display in English or metric units set at factory
- Choices of flow/volume units:  
SLPM    SL  
SCMH    SCM  
SCFM    SCF
- State of the Art microprocessor electronics
- Automatic Flow Control
- Auto Shut-off on time or volume
- Flowrate and volume totalizations displayed are corrected to a factory settable Reference Temperature and Pressure (4 options available)
- Elapsed time meter
- Auto zero calibration feature of flow sensor
- Bright LED display
- Flow rate accuracy within  $\pm 4.0\%$  F.S.
- RS-232 Communication Port w/Operator selectable download frequency for real-time data
- 100 – 120 VAC, 50/60Hz; single phase

### SPECIFICATIONS

**Pump Type:** The pump is a 450W brushless blower with 3 phase commutation for more precise speed control

**Humidity Operating Range:**  
0-95% RH (non-condensing)

**Temperature Operating Range:**  
18 to 122°F (-8 to 50°C)

**Ultimate Vacuum:** 58.9" H<sub>2</sub>O (4.34 Hg) at standard temperature, pressure and zero flow restriction

**Power Requirements:** 100 – 120VAC;  
50/60 Hz at 3 amperes; single phase

**Circuit Breaker Protection:** 10 amperes

**Electrical Cord:** All temp, 3-wire, 16 gauge

**Handle:** Durable plastic

**Dimensions:** 24.4cm L x 21.0cm W x 24.8cm H  
(10"L x 8 1/4"W x 9 3/4"H)

**Noise Level:** Average dB 83.8 @ 1 meter

**Weight:** Approx 12 lbs (5,43 kg)

**Installation Category:** Pollution Degree 2

**Digital Flow Meter Displays:**

Flowrate: Corrected to STP

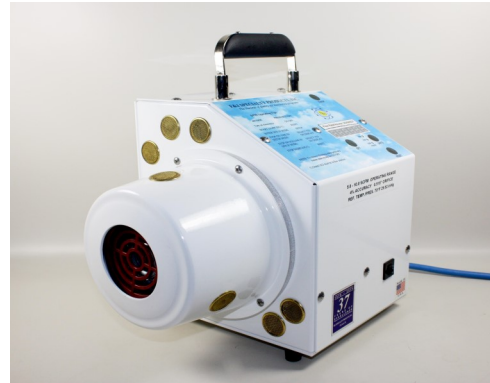
Elapsed Time: hhh:mm

Volume: Corrected to STP

**Flow Calibration:**

Factory calibration recommended once per year

## Digital Flow Meter High Volume Technology F&J Model DFHV-1



### NOTABLE FEATURES:

- Display in English or metric units set at factory
- Choices of flow/volume units:  
SLPM SL  
SCMH SCM  
SCFM SCF
- State of the Art microprocessor electronics
- Automatic Flow Control
- Auto Shut-off on time or volume
- Flowrate and volume totalizations displayed are corrected to a factory settable Reference Temperature and Pressure (4 options available)
- Elapsed time meter
- Auto zero calibration feature of flow sensor
- Bright LED display
- Flow rate accuracy within  $\pm 4.0\%$  F.S.
- RS-232 Communication Port w/Operator selectable download frequency for real-time data
- 100 – 120 VAC, 50/60Hz; single phase

### SPECIFICATIONS

**Pump Type:** Two stage, dual ball-bearing, bypass type with an independent cooling system for the motor that provides thermal overload protection.

**Humidity Operating Range:** 0 – 95% RH (non-condensing)

**Temperature Operating Range:** 18 to 122°F (-8 to 50°C)

**Ultimate Vacuum:** 80" H<sub>2</sub>O at standard temperature, pressure and zero flow restriction

**Power Requirements:** 100 – 120VAC; 50/60 Hz at 6 amperes; single phase

**Electrical Cord:** All temp, 3-wire, 16 gauge

**Handle:** Durable plastic

**Dimensions:** 28,1 × 23,8 × 25,4 cm  
(11 <sup>1</sup>/<sub>16</sub>"L × 9 <sup>3</sup>/<sub>8</sub>"W × 10 <sup>3</sup>/<sub>4</sub>"H)

**Noise Level:** Average dB 83.8 @ 1 meter

**Weight:** Approx 13.4 lbs. (6,1 kg)

**Installation Category:** Pollution Degree 2

**Digital Flow Meter Displays:**

Flowrate: Corrected to STP

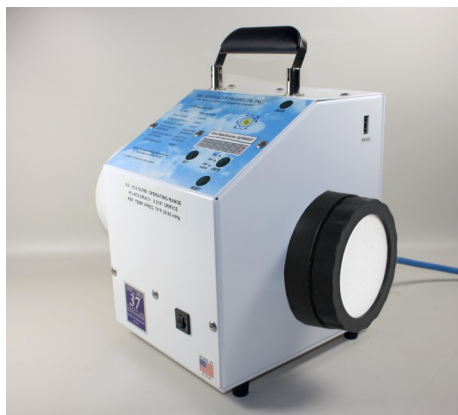
Elapsed Time: hhh:mm

Volume: Corrected to STP

**Flow Calibration:**

Factory calibration recommended once per year

## Digital Flow Meter High Volume Technology F&J Model DFHV-1S



### NOTABLE FEATURES:

- Display in English or metric units set at factory
- Choices of flow/volume units:  
SLPM SL  
SCMH SCM  
SCFM SCF
- State of the Art microprocessor electronics
- Automatic Flow Control
- Auto Shut-off on time or volume
- Flowrate and volume totalizations displayed are corrected to a factory settable Reference Temperature and Pressure (4 options available)
- Elapsed time meter
- Auto zero calibration feature of flow sensor
- Bright LED display
- Flow rate accuracy within  $\pm 4.0\%$  F.S.
- RS-232 Communication Port w/Operator selectable download frequency for real-time data
- 100 – 120 VAC, 50/60Hz; single phase

### SPECIFICATIONS

**Pump Type:** Two-stage, dual ball-bearing, bypass type with an independent cooling system for the motor that provides thermal overload protection.

**Humidity Operating Range:** 0 – 95% RH (non-condensing)

**Temperature Operating Range:** 18 to 122°F (-8 to 50°C)

**Ultimate Vacuum:** 80" H<sub>2</sub>O at standard temperature, pressure and zero flow restriction

**Power Requirements:**

100 – 120 VAC; 50/60 Hz at 6 amperes; single phase

**Circuit Breaker Protection:** 8 amperes

**Electrical Cord:** All temp, 3-wire, 16 gauge

**Handle:** Durable plastic

**Dimensions:** 27.3 x 18.3 x 24.7 cm  
(10<sup>3/4</sup>"L x 7<sup>1/4</sup>"W x 9<sup>3/4</sup>"H)

**Noise Level:** Average dB 83.3 @ 1 meter

**Weight:** Approx 12 lbs. (5,5 kg)

**Installation Category:** Pollution Degree 2

**Digital Flow Meter Displays:**

Flowrate: Corrected to STP

Elapsed Time: hhh:mm

Volume: Corrected to STP

**Flow Calibration:**

Factory calibration recommended once per year

## DIGITAL FLOW METER HIGH VOLUME F&J MODEL DFHV-1DT

### NOTABLE FEATURES:

- Display in English or metric units set at factory
- Choices of flow/volume units:
  - SLPM SL
  - SCMH SCM
  - SCFM SCF
- State of the Art microprocessor electronics
- Automatic Flow Control
- Auto Shut-off on time or volume
- Flowrate and volume totalizations displayed are corrected to a factory settable Reference Temperature and Pressure (4 options available)
- Elapsed time meter
- Auto zero calibration feature of flow sensor
- Bright LED display
- Flow rate accuracy within  $\pm 4.0\%$  F.S.
- RS-232 Communication Port w/Operator selectable download frequency for real-time data
- 100 – 120 VAC, 50/60Hz; single phase
- Brushless motor (1100 watts)



**New!**  
**1100 watt brushless motor**

### SPECIFICATIONS

**PUMP TYPE:** The pump is a 1100 W brushless blower with 3 phase commutation for more precise speed control

**HUMIDITY OPERATING RANGE:**  
0-95% RH (non-condensing)

**TEMPERATURE OPERATING RANGE:**  
18 to 122°F (-8 to 50°C)

**ULTIMATE VACUUM:** 8" H<sub>2</sub>O at standard temperature, pressure and zero flow restriction

**POWER REQUIREMENTS:** 100 – 120 VAC;  
50/60 Hz at 3 amperes; single phase

**CIRCUIT BREAKER PROTECTION:** 20 amperes

**ELECTRICAL CORD:** All temp, 3 wire 16 gauge

**FLOW CONTROL:** Electronic motor speed control

**HANDLE:** Durable metal/plastic

**DIMENSIONS:** (11.5"L × 8 1/4"W × 9 3/4"H)

**AVERAGE dB:** 78.4

**WEIGHT:** Approx 17.5 lbs. (7.9 kg)

**INSTALLATION CATEGORY:** Pollution Degree 2

#### DIGITAL FLOWMETER DISPLAYS:

Flowrate: Corrected to Ref. T and P

Elapsed Time: hhh:mm

Volume: Corrected to Ref. T and P

#### FLOW CALIBRATION:

Factory calibration or calibration check recommended once per year.



## DIGITAL FLOW METER HIGH VOLUME F&J MODEL DFHV-1DTS

### NOTABLE FEATURES:

- Display in English or metric units set at factory
- Choices of flow/volume units:  
SLPM SL  
SCMH SCM  
SCFM SCF
- State of the Art microprocessor electronics
- Automatic Flow Control
- Auto Shut-off on time or volume
- Flowrate and volume totalizations displayed are corrected to a factory settable Reference Temperature and Pressure (4 options available)
- Elapsed time meter
- Auto zero calibration feature of flow sensor
- Bright LED display
- Flow rate accuracy within  $\pm 4.0\%$  F.S.
- RS-232 Communication Port w/Operator selectable download frequency for real-time data
- 100 – 120 VAC, 50/60Hz; single phase
- Brushless motor (1100 watts)



**New!**  
**1100 watt brushless motor**

### SPECIFICATIONS

**PUMP TYPE:** Three-stage, dual ball-bearing tangential discharge, type brushless motor with an independent cooling system. The motor has thermal overload protection.

**POWER:** 1100 Watts

**HUMIDITY OPERATING RANGE:**

0 – 95% RH (non-condensing)

**TEMPERATURE OPERATING RANGE:**

18°F to 122°F (-8°C to 50°C)

**ULTIMATE VACUUM:** 121.9" H<sub>2</sub>O at 28.40" Hg and 76°F and zero flow restriction

**POWER REQUIREMENTS:**

100 – 120 VAC; 50/60 Hz at 9.2 amperes; single phase

**CIRCUIT BREAKER PROTECTION:**

12 amperes

**ELECTRICAL CORD:** All temp, 3 wire 16 gauge

**FLOW CONTROL:**

PWM Electronic motor speed control

**HANDLE:** Durable metal/plastic

**DIMENSIONS:** 13.8" L × 9.2" W × 11.0" H  
(35.1 × 23.3 × 27.9 cm)

**WEIGHT:** Approx. 16.75 lbs. (7.59 kg)

**INSTALLATION CATEGORY:**

Pollution Degree 2

**DIGITAL FLOWMETER DISPLAYS:**

Flowrate: Corrected to Ref. T and P

Elapsed Time: hhh:mm

Volume: Corrected to Ref. T and P

**FLOW CALIBRATION:**

Factory calibration or calibration check recommended once per year.

## Digital Flow Meter Series Features for High Volume Air Samplers

### Standard Features:

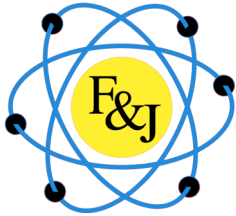
- Bright LED Display
- Flow and totalized volume are corrected to a factory reference Temperature and Pressure (4 options available)
  - Classical STP 0°C, 760 mmHg
  - Normal T and P 20°C, 760 mmHg
  - Modified Normal T and P 21.1°C (70°F), 760 mmHg
  - Standard Ambient T and P 25°C, 760 mmHg
- Elapsed time meter
- RS232 Data export in ASCII format in comma delimited text string at various operator selectable download frequencies
- Storage of elapsed time and volume in the event of power outage
- Detection of zero flow condition after return of power to pause elapsed time until flow returns
- Auto Shut-off on time or volume
- Automatic Flow Control
- Selectable engineering units for flow and volume (to be set at factory).

<u>Flow</u>	<u>Volume</u>
sccm	scc
SLPM	SL
SCMH	SCM
SCFM	SCF

### Optional Features:

- FlashCard Datalogger to capture and store real-time data from the RS232 port.

232FCDS	Data Storage Device
372239	2 GB Secure Digital Card
SDDR-199-A20	FlashCard Reader



## F&J SPECIALTY PRODUCTS, INC.

*The Nucleus of Quality Air Monitoring Programs*

### PRODUCT PROFILE

#### Air Sampling Systems

- High Volume Air Samplers
  - Portable Grab Samplers
  - Environmental Systems
  - Enzyme Dust Samplers
  - PM10 Systems
- Continuous Air Samplers
  - Environmental Systems
  - Portable
  - Fixed Station
- Personal Air Samplers
- Emergency Response DC Powered Air Sampling Systems

#### Filter Paper

- Glass Fiber
- Cellulose
- Membrane
- Quartz

#### Filter Holders

- Open face
- In-Line
- PAS Filter Holders
- Materials
  - Plastic
  - Aluminum
  - Stainless Steel

#### Radon Detection Devices

- 2-Day Passive Charcoal Canisters
- 7-Day Passive Charcoal Canisters
- Continuous Radon Monitors

#### Tritium Detection Systems

- Portable and Fixed Station Collection Systems utilizing Silica Gel or Molecular Sieve Absorbents
- Continuous Tritium Monitors

#### New Products

- Global Air Sampling Systems
- Digital Flowmeter Air Samplers
- C-14 Collection Systems
- ELITE DIGITAL LIGHT (EDL) Air Samplers
- Isokinetic Air Sampling Systems
- MEGA High Volume Air Samplers
- ULTRA High Volume (CTBTO) Air Samplers

#### Radioiodine Collection Cartridges

- TEDA Impregnated Charcoal
- Silver Zeolite
- Custom Cartridges
- Bulk Silver Zeolite

#### Air Flow Calibrators

- World Calibrator Series
- Compact Digital V.2 Series
- Mini-Calibrator