

# F&J SPECIALTY PRODUCTS, INC.

*The Nucleus of Quality Air Monitoring Programs*

## EMERGENCY RESPONSE MOBILE HIGH VOLUME AIR SAMPLING SYSTEM MODEL DF-ERHV-DT-CFH

### NOTABLE FEATURES:

- Digital Flow Meter Flow Management Electronics
- 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 (T) and Pressure (P) (4 options available)
- Elapsed time meter
- Auto zero calibration feature of flow sensor
- Bright LED display
- Flowrate 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



DF-ERHV-DT-CFH  
Digital Flow Meter  
Electronic Flow Management System  
Mobile High Volume Air Sampler  
For  
Circular Filter Media

### GENERAL DESCRIPTION:

The DF-ERHV-DT-CFH Series Air Sampling Systems are designed for temporary or emergency response continuous air sampling applications. The DF-ERHV-DT-CFH Series Air Samplers feature a brushless motor with electronic motor speed control that maintains a user selectable flow rate. The flow rate range attainable through the filter media is dependent upon the air porosity of the filter media and its dimensions. The flow rate range attainable through the filter media is dependent upon the air porosity of the filter media and its dimensions. The DF-ERHV-DT-CFH Series design accommodates rapid field service and component replacement.

For mobility, the air sampler is housed in a rugged weather resistant polypropylene enclosure with wheels and multiple handles. The tripod, accessories and consumables are stored in an identical heavy duty polypropylene case. The air sampler is connected to the discharge port of the filter holder mounted on the tripod by a rugged flexible plastic hose. The DF-ERHV-DT-CFH model utilizes circular filter media. Filter holder options include 102mm, 110mm, 120mm, 125mm, 130mm, 140mm and 150mm.

The electronic flow control measurement sub-system of the DF-ERHV-DT-CFH Series provides an operator selectable reference standard corrected flow measurement and a constant flow of air through the filter medium. The air flow rate is measured by a precision-machined DP sensor. The flow rate obtainable depends on the filter paper air flow resistance and the diameter of the filter paper.

REV: 29 August 2019

**Performance:**

Basic components of the system are modular and independently serviceable.

**Technology:** Microprocessor controlled state-of-the-art electronics

**Operating Temperature Range:** 0°F\* to 122°F (-17°C\* to 50°C)  
\* warm start/continuous operation

**Operating Relative Humidity:** 0 – 95% RH

**Typical Flow Rate Range:** Varies with specific filter media type and dimensions

**Motor:** Brushless: 1.5 H.P. (1100 Watt) motor with electronic motor speed control

**Power:** 100-120VAC; 50/60Hz; 9.5 amperes; single phase.

**Housing:** Heavy duty polypropylene case with strong ABS latches and wide-track polyurethane Wheels. Features stainless steel pins, hardware, and padlock protectors.

**Dimensions Case 1 & 2:** [48.00 in x 17.00 in x 14.00 in (121.92 cm x 43.18 cm x 35.56 cm)]

**Weight:** 58 lbs. ( 26.4 kgs.) Case 1; 40 lbs. (18.1 kgs.) Case 2

**Shipping Weight:** 75 lbs. ( 34.0 kgs.) Case 1; 50 lbs. (22.7 kgs.) Case 2

**Installation Category:** Pollution Degree 3

**Enclosure Rating:** IPX3

**Automatic Flow Control:**

The system microprocessor monitors flow rate relative to the preset STP flow rate established during the setup procedure and electronically adjusts the electronic motor speed if necessary, to maintain the flow within  $\pm 4\%$  of setting. The microprocessor computes the STP flow rate by correcting for temperature and pressure observed at field conditions

### On-Board Measurement, Calculations and Other System Features

**Measurements:**

- Temperature of air flow through system
- Inlet pressure to the flow sensor
- Differential Pressure of the flow sensor

**Calculations/Determinations:**

- Totalized volume, STP
- Current flow rate, STP
- Elapsed time

**Factory Settable Reference T and P**

|                         |             |
|-------------------------|-------------|
| Classical STP           | 0°C, 1 ATM  |
| Normal T and P          | 20°C, 1 ATM |
| Modified Normal T and P | 70°F, 1 ATM |

**Other System Features:**

- Automatic shut off of system on totalized volume or elapsed time
- RS-232 port for real-time data download
- Bright LED display
- Automatic flow control
- Utilization of 8"×10" (20,3×25,4 cm) rectangular filter

**OPTIONS:**

- Data Storage Device (P/N: 232FCDS)
- 2 GB Secure Digital Card (P/N: 372239)
- Flash card Reader (P/N: SDDR-199-A20)
- Ruggedized Cellular Phone (P/N: CASRPS-DFM)

### Filter Holder Options (Aluminum)

| Diameter | Part Number |
|----------|-------------|
| 102 mm   | FJ-102MM-HV |
| 110 mm   | FJ-110MM-HV |
| 120 mm   | FJ-120MM-HV |
| 125 mm   | FJ-125MM-HV |
| 130 mm   | FJ-130MM-HV |
| 140 mm   | FJ-140MM-HV |
| 150 mm   | FJ-150MM-HV |

### Filter Holder Standard Design



### Photo Gallery



**Sample Inlet**



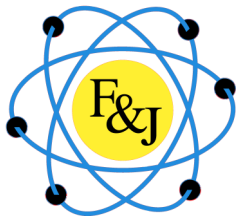
**Sample Inlet  
Without Cover**



**Transportation Storage Case for  
Air Sampler**



**Transportation Storage Case for Tripod,  
Filter Holder with Rainshield, Particulate Filter Paper**



## 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