



## **Digital Air Monitoring System Enzyme Dust Samplers F&J Models: DF-804E-30, DF-804E-30EC and DF-804E-30HT**

### **GENERAL DESCRIPTION:**

The DF-804E-30 series high volume enzyme dust air sampling systems are designed for remote unattended continuous air sampling applications. The DF-804E-30 Series Air Samplers feature a brushless motor with electronic motor speed control that maintains a user selectable flow rate. The flowrate range attainable through the filter media is dependent upon the air porosity of the filter media. The DF-804E-30 Series design accommodates rapid field service and component replacement.

The basic components of the system are assembled in a modular fashion so that each component can be readily and independently removed for service.

For durability and weather resistance, the system is housed in a freestanding powder coat painted aluminum enclosure. The sample air is drawn horizontally into the filter holder from all four sides and is exhausted near the bottom of the enclosure. The locking swing door of the enclosure provides convenient access for servicing the equipment inside.

The electronic flow control measurement sub-system of the DF-804E-30 Series provides a reference condition flow measurement or an ambient condition flow measurement. Constant flow of air through the filter medium is maintained by comparing the operator setup value to the measured flow and adjusting motor rpm as necessary to obtain the setup flow rate. The air flow is measured by a precision-machined differential pressure sensor. The controller can be readily set to any sampling flow rate between 5 and 50 CFM (141-1415 LPM) depending on the filter paper air resistance and dimensions. The bright LED readout displays multiple air sampling information including current flow rate, current elapsed sample time and totalized volume. The DF-804E-30 model utilizes a 15 cm diameter filter. An alternate filter holder can be custom designed to accommodate any filter size and type.

**Rev.:** 04 August 2014



**DF-804E-30**



**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)
- Reference Flow or Ambient flow conditions are operator selectable
- 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
- 220 – 240 VAC, 50/60Hz; single phase
- Optional Design Configurations Available

## DF-804E-30 Series (220 – 240VAC)

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### Performance:

Basic components of the system are modular and independently serviceable. Sample flow rate can be set between 5 and 50 CFM (141 and 1415 LPM). Filter holder is a 15 cm diameter standard for enzyme dust collection.

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

**Operating Temperature Range:** 15°F to 122°F (-9°C to 50°C)

**Typical Flow Rate Range:** 5 – 50 CFM (141 to 1415 LPM)  
(Depending on filter paper dimensions and air resistance).

**Motor:** Brushless: 1 H.P.(1100 Watt) motor with electronic motor speed control

**Power:** 220-240VAC; 50/60Hz; 15 amperes; single phase.

**Housing:** Powder coat painted aluminum Locking swing door with key

**Dimensions:** 26”H × 26.5”W × 16.5”D (66 cm × 67 cm × 41cm) (Standard configuration)

**Weight:** Approximately 60 lbs. (27,2 kg) (Standard configuration)

**Shipping Weight:** Approximately 100 lbs. (45,5 kg) (Standard configuration)

**Installation Category:** Pollution Degree 3

**Enclosure Rating:** IPX3

### Automatic Flow Control:

The system microprocessor monitors flow rate relative to the preset flow rate corrected to a reference T and P or to ambient conditions established during the setup procedure. The DFM system electronically adjusts the electronic motor speed adjustment, if necessary, to maintain the flow within  $\pm 4.0\%$  of setting. The microprocessor computes the reference or ambient flow rate by correcting for temperature and pressure.

## 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
- Current flow rate
- Elapsed time

### Factory Settable Reference T and P

Classical STP	0°C, 760 mm Hg
Normal T and P	20°C, 760 mm Hg
Modified Normal T and P	70°F, 1 ATM
Standard Ambient T and P	25°C, 760 mm Hg

### Other System Features:

- Automatic shut off of system on totalized volume or elapsed time
- RS-232 port for real-time data download
- Utilization of 15 cm diameter filters
- Bright LED display
- Automatic flow control

### OPTIONS:

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

# Optional Configurations that are Available

**Model DF-804E-30  
with Casters  
(standard configuration)**



**Model DF-804E-30HT  
Hand Truck Mounted**

**Model DF-804E-30EC  
with Elevated Cabinet**



# F&J FlashCard Datalogging System



Data Storage Device, RS232 Input, Data stored in SD Card (SD Card not included)

**P/N: 232FCDS**

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## 2 GB Secure Digital Card

The SD card is ideally suited to meet the demands of small portable devices that need high capacity flash memory in a very small size. The F&J FlashCard Data Storage Device uses this type of flash memory.



### Main Features

Flash memory card; 2GB; SD Memory Card

**P/N: 372239**

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## PC FlashCard Reader

The ImageMate 12 in 1 Card Reader/Writer is a Hi-Speed USB 2.0 Multi-card Reader/Writer that connects to your computer's USB 2.0 port. The reader will read CF I, CF II, MS, MS Pro, MMC, SD, SM, MS Duo, xD, MS PRO Duo, miniSD and RS-MMC types of flash memory card.

**P/N: SDDR-199-A20**