



F&J SPECIALTY PRODUCTS, INC.

Digital Air Monitoring System Enzyme Dust Samplers F&J Models:

DF-804-30, DF-804DT-30, DF-804-30EC and DF-804-30HT

GENERAL DESCRIPTION:

The DF-804-30 high volume enzyme dust air sampling systems are designed for remote unattended continuous air sampling applications. The DF-804-30 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-804-30 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-804-30 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 40 CFM (141-1132 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-804-30 model utilizes a 15 cm diameter filter. An alternate filter holder can be custom designed to accommodate any filter size and type.

NOTABLE FEATURES:

- Display in English or metric units set at factory
- Choices of flow/volume units:
 - sccm scc
 - 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
- 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
- Optional Design Configurations Available



DF-804-30

DF-804-30 Series (100 – 120VAC)

Performance:

Basic components of the system are modular and independently serviceable. Sample flow rate can be set between 5 and 40 CFM (141 and 1132 LPM). Filter holder is a 15 cm diameter standard for enzyme dust collection.

Technology: Microprocessor controlled state of the art electronics

Operating Temperature Range: -31°F to 122°F (-35°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.(800 Watt) motor with electronic motor speed control

Power: 100-120VAC; 50/60Hz; 10 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 $\pm 4\%$ 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, 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 |

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-804DT-30
with Casters
(standard configuration)**



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



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

