



F&J SPECIALTY PRODUCTS, INC.

TRIPOD MOUNTED MOBILE DIGITAL HIGH VOLUME AIR MONITORING SYSTEM F&J MODEL DF-5200

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
- Flow rate 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 collection or transmission
- Heavy duty tripod
- 100 – 120 VAC, 50/60Hz; single phase



GENERAL DESCRIPTION:

The DF-5200 Series Air Sampling Systems are designed for mobile high volume air sampling applications. The DF-5200 Series Air Samplers feature a brushed motor with electronic motor speed control that maintains a user selectable flow rate. The flow rate attainable through the filter media is dependent upon the air porosity of the filter media. The typical flow range is 10 to 60 SCFM (17 to 102m³/hr) are attainable with glass fiber filter media.

The DF-5200 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 mobile powder coat painted aluminum enclosure. The sample air is drawn in under the eaves of the hinged lid from all four sides and is exhausted out the side of the enclosure by a 239 CFM fan. The locking swing door on the enclosure provides convenient access for servicing the equipment inside. A lockable latch on the top cover restricts unauthorized tampering with the filter holder.

The electronic flow control measurement sub-system of the DF-5200 Series provides a reference standard flow measurement and an operator selectable constant flow of air through the filter medium. The air flow is measured by a precision-machined venturi differential pressure sensor. The controller can be readily set to any sampling flow rate between 10 to 60 SCFM (17 to 102m³/hr) 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 filter holder can be custom designed to accommodate a variety of filter sizes and types. The DF-5200 standard model utilizes an 8"x10" (20,3x25,4 cm) filter.

DF-5200 Specifications (100 — 120 VAC)

Performance:

Basic components of the system are modular and independently serviceable. Sample flow rate can be set between 10 and 60 CFM (17 and 102 m³/hr). The standard filter holder has the dimensions 20,3x25,4 cm (8"x10") filter.

Technology: Microprocessor controlled state of the art electronics

Operating Temperature Range: 32°F* to 122°F (0°C* to 50°C)

Operating Relative Humidity: 0 – 95% RH

Typical Flow Rate Range:* 10 – 60 CFM (17 to 102 m³/hr)
(Depending on filter paper dimensions and air resistance).

Motor: Brushed: 1.71 H.P.(1276 Watts) thermally protected motor with electronic motor speed control

Power: 100-120VAC; 50/60Hz; 10 amperes; single phase.

Housing: Powder coat painted aluminum Locking hinged cover
Removable hinged cover Locking swing door with key

Dimensions of Enclosure: 33”H × 19”W × 19”D (83 cm H × 48 cm W × 48 cm D)

Maximum Height of Tripod to Bottom of Enclosure : 67.5” (171.4 cm) *

Minimum Height of Tripod to Bottom of Enclosure : 42.38” (107.64 cm) *

*** Note: Tripod height is calculated assuming a 30° angle of the legs from vertical axis**

Weight: Approximately 56 lbs. (25 kg)

Installation Category: Pollution Degree 3

Enclosure Rating: IPX3

Tripod: Heavy duty

Automatic Flow Control:

The system microprocessor monitors flow rate relative to the preset Reference T and P flow rate established during the setup procedure and electronically adjusts the electronic motor speed adjustment, if necessary, to maintain the flow within ± 4% of setting. The microprocessor computes the STP flow rate by correcting the measured values of the Reference values.

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, 101.325 kPa |
| Normal T and P | 20°C, 101.325 kPa |
| Modified Normal T and P | 70°F, 101.325 kPa |
| Standard Ambient T and P | 25°C, 101.325 kPa |

Other System Features:

- Automatic shut off of system on totalized volume or elapsed time
- RS-232 port for real-time data download
- Utilization of 8”×10” (20,3×25,4 cm) 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)
- Ruggedized Cellular Phone