



## F&J SPECIALTY PRODUCTS, INC.

*The Nucleus of Quality Air Monitoring Programs*

# MOBILE LOW VOLUME AIR SAMPLER with DIGITAL FLOW METER MODEL DF-34ME

### NOTABLE FEATURES:

- Display in English or metric units set at factory
- Choices of flow/volume units:
  - scm        scc
  - SLPM      SL
  - SCMH      SCM
  - SCFM      SCF
- State of the Art microprocessor electronics
- Flowrate and volume totalizations displayed are corrected to a factory settable Reference Temperature and Pressure (4 options available)
  - 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
- 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
- Auto Shut-off on time or volume
- 220 – 240 VAC, 50/60Hz; single phase

### OPTIONS:

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



### GENERAL DESCRIPTION:

The Model DF-34ME cart mounted mobile low volume air sampler with digital flow meter has an adjustable, aluminum sampling gooseneck. The adjustable gooseneck permits sampling at heights varying from 4' to 7' above floor level. Model DF-34ME contains state of the art microprocessor electronics, which provides for corrected flow rate measurements, volume totalizations, and an RS232 communications port. It has a large bright LED display.

The DF-34ME Air Sampler includes an oil-less, carbon vane vacuum pump with a constant airflow regulator for use where a nearly constant airflow is desirable. The regulator holds a constant pressure drop across an in-line orifice by varying the flow through a bypass valve into the pump. This system allows the pump to work at a minimum pressure drop at all times, permitting it to run cooler, thus extending its lifetime. The oil-less pump requires no lubrication to maintain optimal efficiency during its service life. The pump is mounted on a mobile cart with two rubber wheels to permit mobile transportation of the unit.

The typical operating flow range is 1 to 8 CFM (28 to 226 LPM).

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# DF-34ME DIGITAL LOW VOLUME AIR SAMPLER (200-240VAC)

## Mobile Unit with Adjustable Sampling Height

### SPECIFICATIONS:

#### PUMP TYPE:

Oil-less, carbon vane 3/4 HP, 1425 RPM @ 60 Hz

#### MAXIMUM CAPACITY:

8 CFM (226 LPM) at 0" Hg Pressure drop

#### ULTIMATE VACUUM:

25" (635 mm) Hg at sea level

#### POWER REQUIREMENTS:

220 – 240VAC, 50/60 Hz;  
6 amperes; single phase

#### CIRCUIT BREAKER PROTECTION:

10 amperes

#### ELECTRICAL CORD:

All temperature, 3 wire, 14 gauge

#### THERMAL OVERLOAD PROTECTION:

Furnished as an integral part of the motor

#### CONSTANT AIRFLOW REGULATOR:

Aluminum construction with silicon diaphragm; adjustable from 1 to 8 CFM (28 - 226 LPM)

#### DIMENSIONS:

20"L × 27"W × 4' – 7'H  
(51L × 38W × 122-213 cm H)

#### WEIGHT:

77 lbs. (35 kg)

#### INSTALLATION CATEGORY:

Pollution Degree 2

#### OPERATING TEMPERATURE RANGE:

32° - 104°F (0° - 40°C)

#### SAMPLING GOOSENECK:

Adjustable 4' to 7'  
(122 cm - 213 cm) sturdy aluminum

#### WHEELS:

8", Hard rubber

### ELECTRONIC SPECIFICATIONS:

#### MEASUREMENT ACCURACY:

Air flow: +/- 4.0% of full scale  
Temperature: +/- 2°F (1.1°C)  
Barometric Pressure: 2% over measured range

#### CALIBRATION:

Factory calibration 1 per year

#### COMMUNICATIONS INTERFACE:

RS-232

#### ON-BOARD CALCULATIONS:

Flow calculation from differential pressure value using best-fit curve method  
Flow correction for standard temperature and pressure  
Auto-zero correction utilizing electro-pneumatic method to compensate for offset and drift (automatic, once every minute)

### COMBINATION FILTER HOLDER:

Durable plastic combination filter holders for F&J Model B, C or M charcoal cartridges and 47 mm, 2" or 50 mm diameter particulate filter paper are available. All models have quick-disconnect function.

### STANDARD COMBINATION FILTER HOLDERS:

FILTER HOLDER MODEL	CHARCOAL CARTRIDGE DIMENSIONS	PARTICULATE PAPER DIAMETER
FJ-05P	F&J MODEL B	2" or 50 mm
FJ-21P	F&J MODEL C	2" or 50 mm
FJ-35P	F&J MODEL B	47 mm
FJ-46P	F&J MODEL C	47 mm
FJ-51P	F&J MODEL M	2" or 50 mm
FJ-53P	F&J MODEL M	47 mm

### PUMP CURVE

Top line on curve is for 60-cycle performance  
Bottom line on curve is for 50-cycle performance

