



F&J SPECIALTY PRODUCTS, INC.

The Nucleus of Quality Air Monitoring Programs

MOBILE LOW VOLUME AIR SAMPLER with DIGITAL FLOWMETER MODEL DF-34M

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
- 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 $\pm 4\%$ F.S.
- RS-232 Communication Port w/Operator selectable download frequency for real-time data
- Auto Shut-off on time or volume
- 110 – 120 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-34M cart mounted mobile low volume air sampler with digital flowmeter has an adjustable, aluminum sampling gooseneck. The adjustable gooseneck permits sampling at heights varying from 4' to 7' above floor level. Model DF-34M 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-34M 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 (30 to 230 LPM).



DF-34M DIGITAL LOW VOLUME AIR SAMPLER (110-120VAC)

Mobile Unit with Adjustable Sampling Height

SPECIFICATIONS:

PUMP TYPE:

Oil-less, carbon vane 3/4 HP, 1725 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: 110 – 120VAC, 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 (30-230 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% 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:

<u>FILTER HOLDER MODEL</u>	<u>CHARCOAL CARTRIDGE DIMENSIONS</u>	<u>PARTICULATE PAPER DIAMETER</u>
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

