



F&J SPECIALTY PRODUCTS, INC.

The Nucleus of Quality Air Monitoring Programs

MOBILE LOW VOLUME AIR SAMPLER w/DIGITAL FLOWMETER MODEL DF28BMHT



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
- 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
- Reference or Ambient Flow Corrections are operator selectable
- 110 – 120 VAC, 50/60Hz; single phase

GENERAL DESCRIPTION:

The Model DF28BMHT heavy duty hand truck mounted mobile low volume air sampler designed for outdoor use with digital flowmeter and an adjustable, aluminum sampling gooseneck. The adjustable gooseneck permits sampling at heights varying from 4' to 7' above floor level. Model DF28BMHT 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 air sampler is contained in a powder coat painted environmental enclosure mounted ~ 4 inches above ground level.

The DF28BMHT 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 rugged mobile hand truck with two 10.5" diameter pneumatic tires to facilitate mobile transportation of the unit.

The DF28BMHT is designed for continuous indoor or outdoor use. Please consult the product specifications for the design temperature range and the installation category.

The typical operating flow range is 0.5 to 4 CFM (14 to 115 LPM) depending upon resistance of air filters utilized.

Rev: 17 April 2019

DF28BMHT DIGITAL LOW VOLUME AIR SAMPLER (110-120VAC)

Mobile Unit with Adjustable Sampling Height

SPECIFICATIONS:

PUMP TYPE: Oil-less, carbon vane 1/4 HP, 1725 RPM @ 60 Hz

MAXIMUM CAPACITY:

4 CFM (115 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 silicone diaphragm; adjustable from 0.5 to 4 CFM (10-115 LPM)

DIMENSIONS: 24"L × 21"W × 55"H
(61cm × 53 cm × 140 cm)

SAMPLING GOOSENECK: Adjustable to 7' (213 cm) sturdy aluminum

WHEELS: 10.5"D, pneumatic tires

WEIGHT: 80 lbs. (36 kg)

OPERATING TEMPERATURE RANGE:

20° to 122°F (-7° to 50°C)

ELECTRONIC SPECIFICATIONS:

MEASUREMENT ACCURACY:

Air flow: +/- 4.0% of full scale

Temperature: +/- 2.0°F (1.1°C)

Barometric Pressure: 2% over measured range

CALIBRATION: Calibration verification 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 47mm, 2" or 50mm diameter particulate filter paper are available. All models have quick-disconnect function.

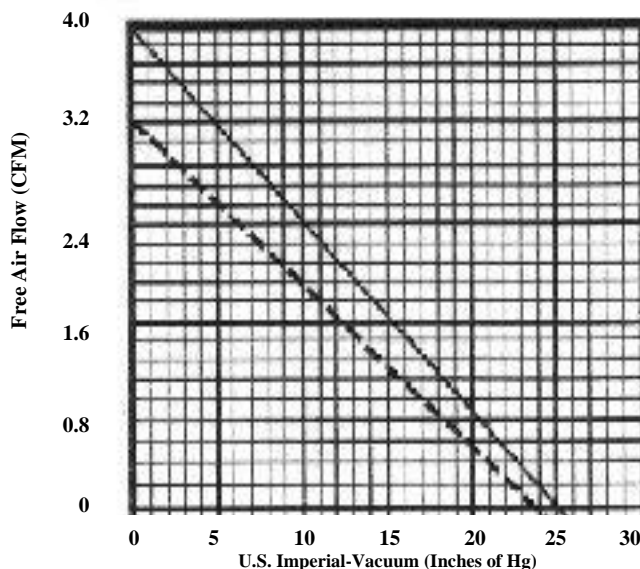
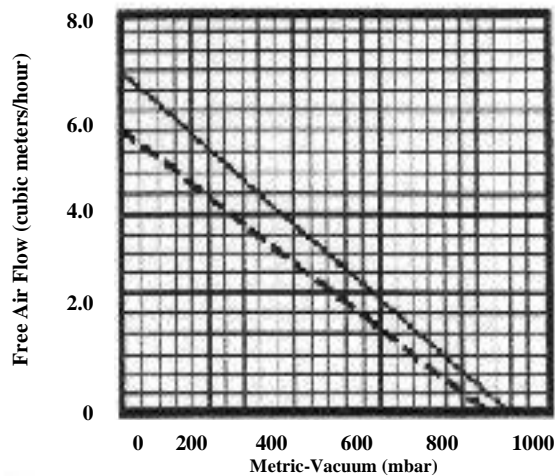
STANDARD COMBINATION FILTER HOLDERS:

<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



CONSTANT AIR FLOW REGULATOR CURVE
TYPICAL PUMP OPERATING FLOW RANGE

