



## F&J SPECIALTY PRODUCTS, INC.

*The Nucleus of Quality Air Monitoring Programs*

# HEAVY DUTY MOBILE LOW VOLUME AIR SAMPLER w/DIGITAL FLOWMETER MODEL DF-14MHTE

### 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
- 220 – 240 VAC, 50/60Hz; single phase



### GENERAL DESCRIPTION:

The Model DF-14MHTE heavy duty hand truck mounted mobile low volume air sampler 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 DF-14MHTE 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-14MHTE 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 hand truck with two 11" diameter pneumatic tires to facilitate mobile transportation of the unit.

The typical operating flow range is 0.5 to 4 CFM (14 to 115 LPM).

**Rev:** 02 October 2019

# DF-14MHTE DIGITAL LOW VOLUME AIR SAMPLER (220-240VAC)

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

**DIMENSIONS:** 21"L × 19"W × 55"H (53×48×140 cm)

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

**WHEELS:** 11" D pneumatic tires

**WEIGHT:** 67 lbs. (30,5 kg)

**OPERATING TEMPERATURE RANGE:** 32°-104°F (0°-40°C)

## ELECTRONIC SPECIFICATIONS:

### MEASUREMENT ACCURACY:

Air flow: +/- 4% 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)

## OPTIONS:

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

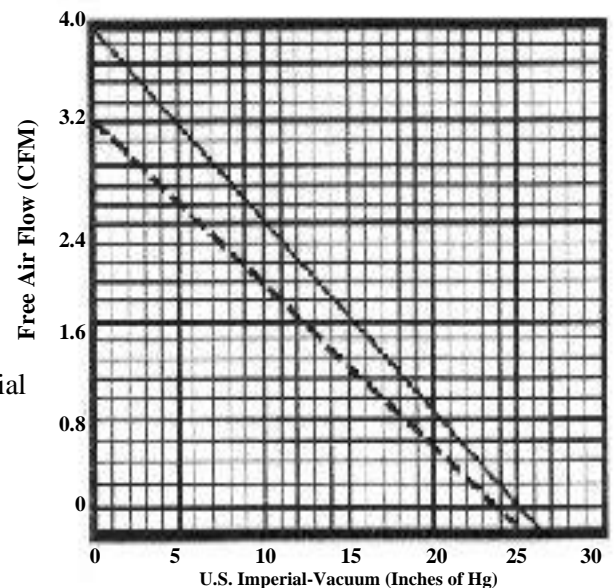
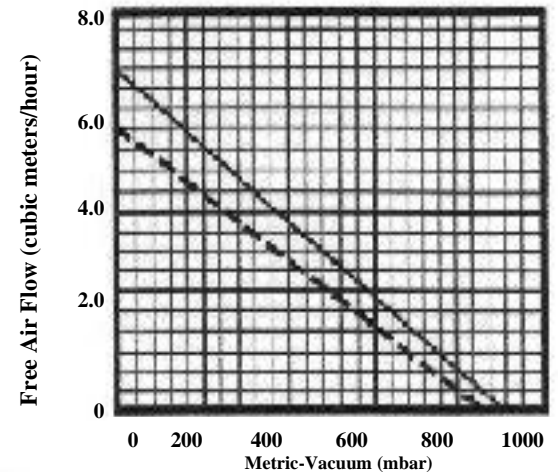
**COMBINATION FILTER HOLDER:** Durable plastic combination filter holders for F&J Model B, C or M charcoal cartridges and 47 mm, 2" or 50 mm diameter particulate filter paper are available. All models have quick-disconnect function.

## STANDARD COMBINATION FILTER HOLDERS:

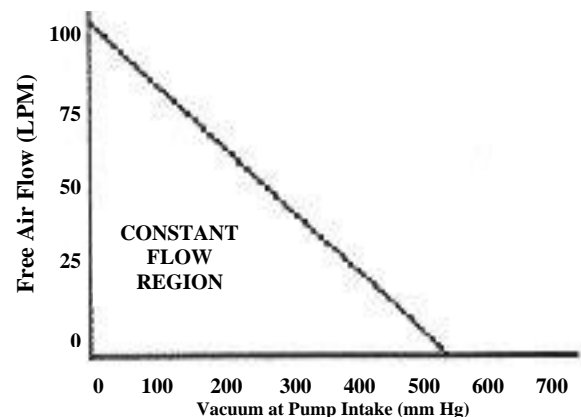
<u>FILTER HOLDER MODEL</u>	<u>CHARCOAL CARTRIDGE DIMENSIONS</u>	<u>PARTICULATE PAPER DIAMETER</u>
FJ-05P	F&J Model B	2" or 50 mm
FJ-21P	F&J Model C	2" or 50 mm
FJ-35P	F&J Model B	47 mm
FJ-46P	F&J Model C	47 mm
FJ-51P	F&J Model M	2" or 50 mm
FJ-53P	F&J Model M	47 mm

## PUMP CURVE

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



CONSTANT AIR FLOW REGULATOR CURVE  
 TYPICAL PUMP OPERATING FLOW RANGE



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