

F&J SPECIALTY PRODUCTS, INC.

The Nucleus of Quality Air Monitoring Programs

LOW VOLUME AIR SAMPLER WITH DIGITAL FLOW METER F&J MODEL DF-28BE

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
- Reference or ambient flow/volume reporting is operator selectable
- 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
- 220-240VAC, 50/60Hz; single phase



GENERAL DESCRIPTION:

The Model DF-28BE environmental air sampling system with digital flow meter is a low volume air sampler consisting of a 1/4 H.P. oil-less carbon vane vacuum pump with a constant air flow regulator for use where a nearly constant air flow 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 head drop at all times by permitting it to run cooler; thus extending its service life. The oil-less pump requires no lubrication to maintain optimal efficiency during its service life. The pump is mounted on a base plate within a weather resistant aluminum environmental enclosure having four rubber feet. Handles are provided on the enclosure to facilitate transportation. The digital flowmeter has a large bright LED display.

The DF-28BE is designed for continuous indoor or outdoor use. This unit can be adapted for tripod mounting if desired. 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 – 115 LPM).

** All pictures are being used for illustrative purposes only. Actual product may vary slightly.*

** Specifications, availability and components are subject to change without notice.*

REV: 12 March 2020

DF-28BE Digital Low Volume Air Sampler Specifications (220—240VAC)

SPECIFICATIONS:

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

MAXIMUM CAPACITY: 4 CFM (115LPM) at 0" Hg

Pressure drop

ULTIMATE VACUUM: 25" (635 mm) Hg at sea level

POWER REQUIREMENTS: 220 – 240VAC; 50/60 Hz;

3 amperes; single phase

CIRCUIT BREAKER PROTECTION: 6 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 0.5 to 4 CFM (14-115 LPM)

HANDLE: Steel

DIMENSIONS: 48,3L × 31,75W × 33,7 cm H
(19"L × 12 1/2"W × 13 1/4"H)

WEIGHT: 26,8 kg (59 lbs.)

ELECTRONIC SPECIFICATIONS:

MEASUREMENT ACCURACY

Air flow: ± 4.0% of full scale

Temperature: ± 2,0°F (1,1°C)

Barometric Pressure: 2% over measured range

OPERATING TEMPERATURES: 32°-104°F (0°-40°C)

STORAGE TEMPERATURE: 32°-122°F (-0°-50°C)

CALIBRATION: Factory calibration once 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

OPTIONS

232FCDS Data Storage Device

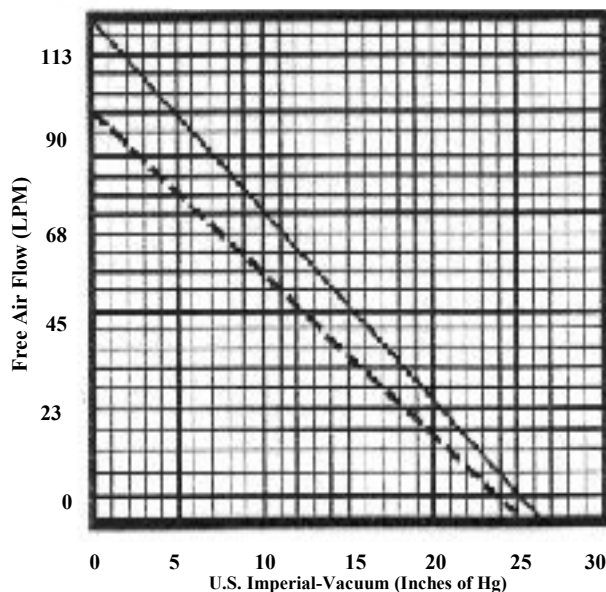
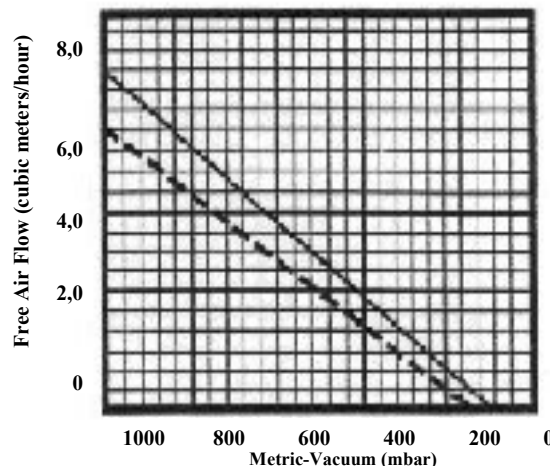
372239 Secure Digital Card

SDDR-199-A20 FlashCard Reader

PUMP CURVE

Top line on curve is for 60-cycle performance

Bottom line of curve is for 50-cycle performance



CONSTANT AIR FLOW REGULATOR CURVE
TYPICAL PUMP OPERATING FLOW RANGE

