

F&J SPECIALTY PRODUCTS, INC.

The Nucleus of Quality Air Monitoring Programs

ENVIRONMENTAL GLOBAL LOW VOLUME AIR SAMPLER MODEL GAS-2234



Full view illustrating
the exterior



View inside
weatherhouse
illustrating digital
flowmeter



NOTABLE FEATURES:

- Precision machined DP flow sensor
- State-of-the-Art electronics
- Vacuum fluorescent display; 4 line × 24 characters
- Flow rate and volume measurements corrected to operator selectable Reference Temperature and Pressure
- Constant air flow regulator
- Display in English or various metric units
- Dual RS-232 communication ports
- Flow rate accuracy: $\pm 3.0\%$ Full Scale
- Auto zero calibration feature of flow sensor
- Various operator selectable sampling modes
- Multiple operator selectable data storage and data transmission frequency rates
- Display of Multiple on-board calculations
- Wide temperature range electronics

GENERAL DESCRIPTION:

The Model GAS-2234 Global Air Sampling System is a microprocessor controlled low-volume air sampler consisting of 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 head drop at all times, 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 removable base plate, which can be secured within the GFCI protected aluminum environmental Weatherhouse, model WH-3 having an enclosure rating of IPX3.

The GAS-2234 utilizes a bright VFD that has four (4) lines by 24 characters and utilizes wide temperature range electronic components for use in extreme ambient conditions.

The GAS-2234 Global Air Sampling System is designed for continuous outdoor use. Please consult the product specifications for the design temperature range and the installation category.

The typical operating flow range is 1 to 8.5 CFM (28 – 240 LPM).

REV: 12 January 2022

MODEL GAS-2234 LOW VOLUME AIR SAMPLER (100-120VAC)

SPECIFICATIONS:

PUMP TYPE: Oil-less, carbon vane, 3/4 HP, 1725 RPM @ 60 Hz

MAXIMUM CAPACITY: 8,5 CFM (240 LPM) at 0" Hg
Pressure drop.

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

POWER REQUIREMENTS: 100-120VAC; 50/60 Hz @ 6
amperes; single phase

ELECTRICAL CORD: All-temperature, 3-wire, 16 gauge

FUSE PROTECTION: 8 Amperes

THERMAL OVERLOAD PROTECTION: Furnished as an
integral part of the motor

CONSTANT AIRFLOW REGULATOR: Aluminum
construction with silicone diaphragm; adjustable from
1 to 8 CFM (28 - 226 LPM).

HANDLES: 2-steel, on base plate

DIMENSIONS: 81,3L x 66,0W x 61,6 cm H
(32"L x 26"W x 48 1/4") with Legs

WEIGHT: 61 kg (135 lbs.)

VOLUME TOTALIZER: Volume totalizations corrected to operator selectable
Reference conditions for T and P

ELECTRONIC SPECIFICATIONS:

Air flow ± 3.0% of full scale

Temperature ± 0.9°F (0,5°C)

Barometric Pressure 1% over measured range

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

STORAGE TEMPERATURE RANGE: -30° - 158°F (-34° - 70°C)

CALIBRATION: Operator calibration-
verification 1 per year

COMMUNICATIONS INTERFACE: Dual RS-232

DISPLAY: VFD, 4x24 characters

DATA STORAGE:

Simultaneous data storage of all measured parameters in non-volatile
memory; time and date stamp on records. Data storage for continuous
sampling

Optional reporting of all stored data and/or summary record for host
computer

ON-BOARD CALCULATIONS:

Flow calculation from differential pressure value using best fit curve
method

Flow correction for operator selectable reference temperature and pressure
Auto-zero correction utilizing electro-pneumatic method to compensate for
offset and drift (automatic, once every minute)

Minimum and maximum values of measured parameters

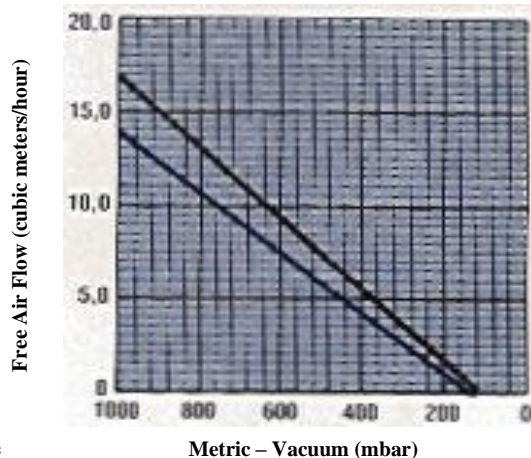
COMBINATION FILTER HOLDER: Durable plastic
combination filter holders for F&J Model B, C or M charcoal
cartridges and 47 mm, 2" or 50 mm diameter particulate
filter paper are available. All models have quick-disconnect
function.

STANDARD COMBINATION FILTER HOLDERS:

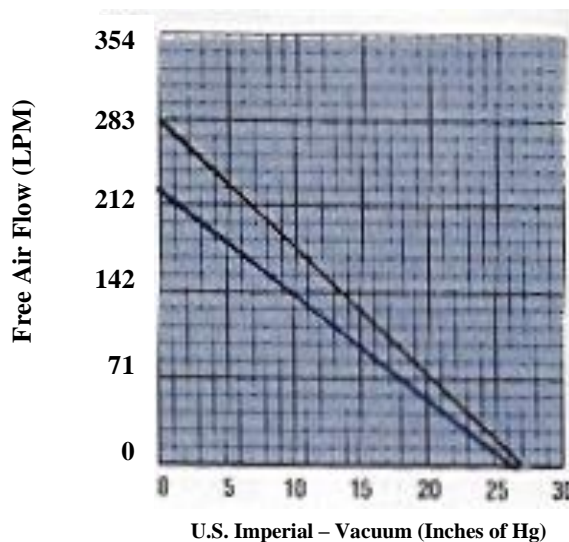
FILTER HOLDER MODEL	CHARCOAL CARTRIDGE DIMENSIONS	PARTICULATE PAPER DIAMETER
FJ-05P	F&J MODEL B	2" or 50 mm
FJ-21P	F&J MODEL C	2" or 50 mm
FJ-35P	F&J MODEL B	47 mm
FJ-46P	F&J MODEL C	47 mm
FJ-51P	F&J MODEL M	2" or 50 mm
FJ-53P	F&J MODEL M	47 mm

PUMP CURVE

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



Metric - Vacuum (mbar)



U.S. Imperial - Vacuum (Inches of Hg)

