GLOBAL LOW VOLUME AIR SAMPLING SYSTEM
F&J MODEL GAS-22-D

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: ±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
- HEPA filter for cooling air inlet

GENERAL DESCRIPTION:

The Model GAS-22-D **G**lobal **A**ir **S**ampling 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 venturi, 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 service life. The oil-less pump requires no lubrication to maintain optimal efficiency during its service life. The pump is mounted on a sliding base plate, which can be secured within the aluminum environmental weatherhouse, model WH-3HEPA designed for desert environments.

The GAS-22-D 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 flow management system electronics are enclosed in a dust protected enclosure. The cooling air inlet has a large area HEPA filter.

The GAS-22-D Global Air **S**ampling System is designed for continuous outdoor use in very dusty or wind blown sand environments. 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.***

Tel: 352.680.1177 **fandj@fjspecialty.com** **www.fjspecialty.com**

GAS-22-D Global Low Volume Air Sampling System (100—120 VAC)

SPECIFICATIONS

Pump Type:	Oil-less, carbon vane ¼ HP, 1725 RPM @ 60 Hz
Maximum Capacity:	4.3 CFM (122 LPM) @ 0" Hg Pressure drop
Ultimate Vacuum:	25" (635 mm) Hg @ sea level
Power requirements:	100-120VAC; 50/60Hz; 5 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 (14-115 LPM)
Dimensions:	32"L × 26"W × 48 ¼" H (w/legs)(81.3×66×122.6 cm)
Weight:	112 lbs. (51 kg)

ELECTRONIC SPECIFICATIONS:

Air flow:	± 3.0% of full scale
Temperature:	± 0.9ºF (0,5ºC)
Barometric Pressure:	1% over measured range
Operating Temperature:	32º - 122º F (0º- 50º C)
Storage Temperature Range:	-30º - 158ºF (-34º - 70ºC)
Calibration:	Operator calibration-verification 1 per year
Communications Interface:	Dual RS-232
Display:	VFD, 4lines × 24 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 or local printer via RS-232 serial link

On-Board Calculations:

Flow calculation from differential pressure value using best fit curve method

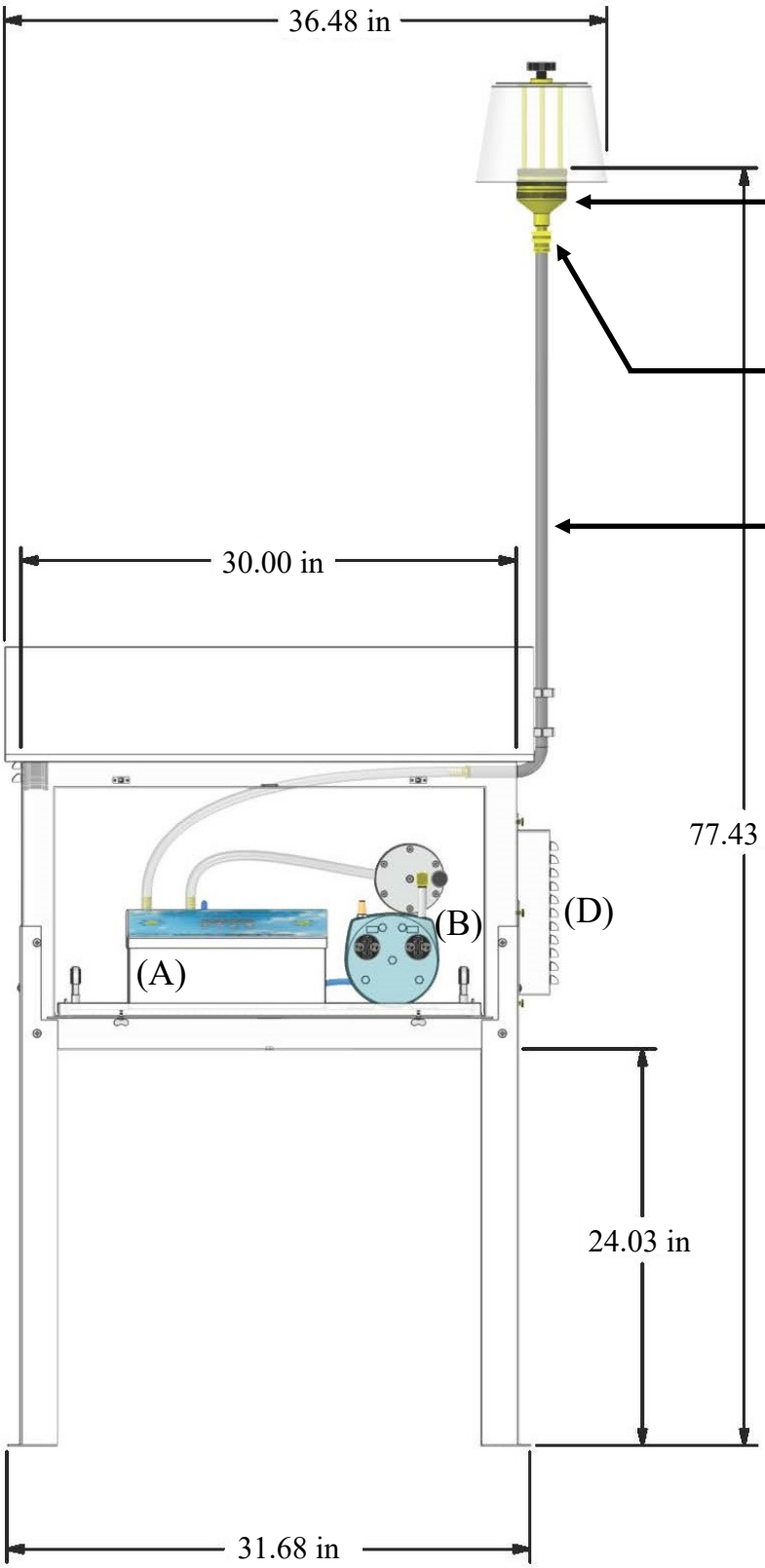
Flow correction for operator selectable reference temperature and pressure

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 HOLDERS AVAILABLE: 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.

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

Tel: 352.680.1177 fandj@fjspecialty.com www.fjspecialty.com



(A)- Global Air Sampler Flow Management System Electric Module

(B) - Oilless Carbon Vane Pump

(C) - Height above ground level can be adjusted

(D) - HEPA Filter for cooling air inlet

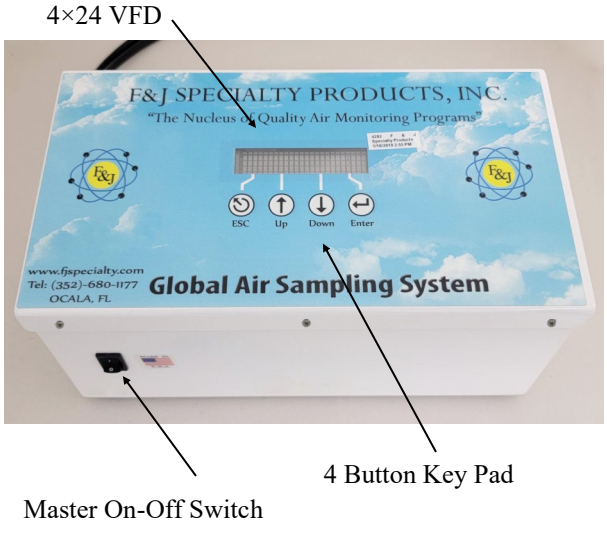
Tel: 352.680.1177 fandj@fjspecialty.com www.fjspecialty.com

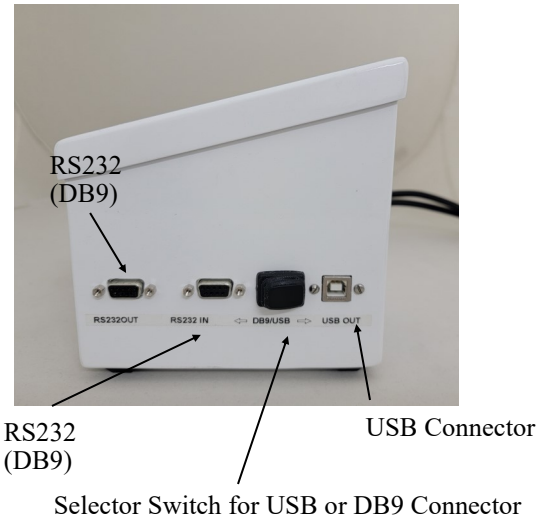
Global Air Sampler System Features

Operator Selectable Features in Setup Mode

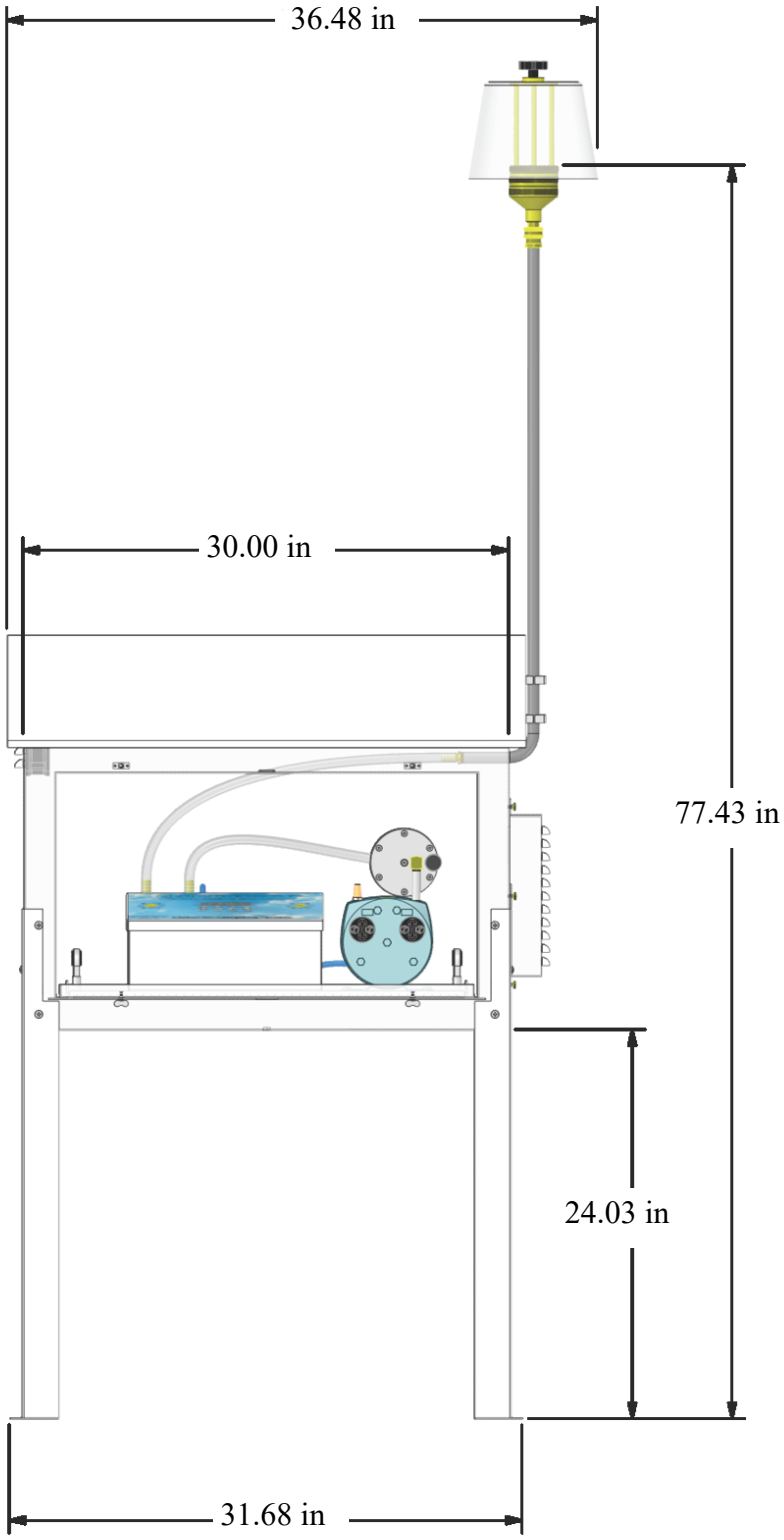
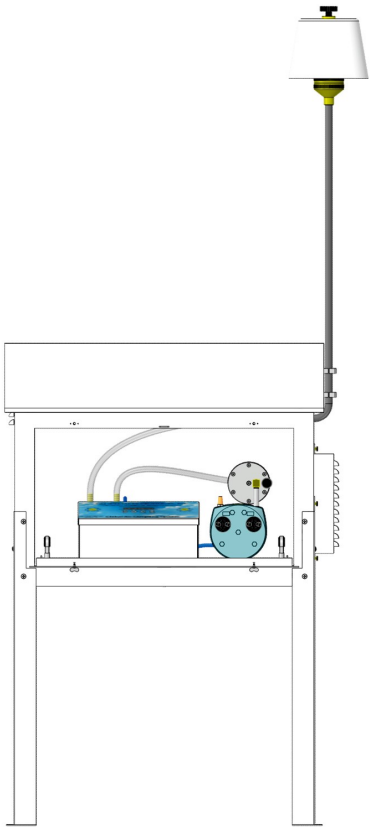
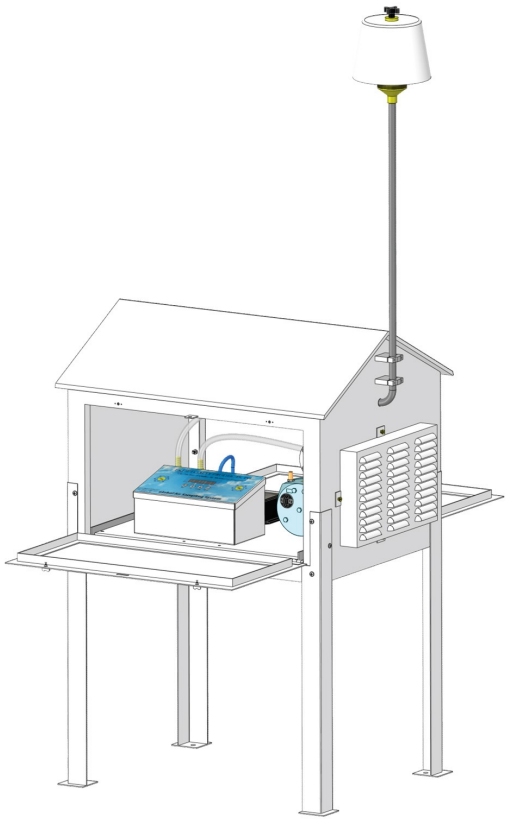
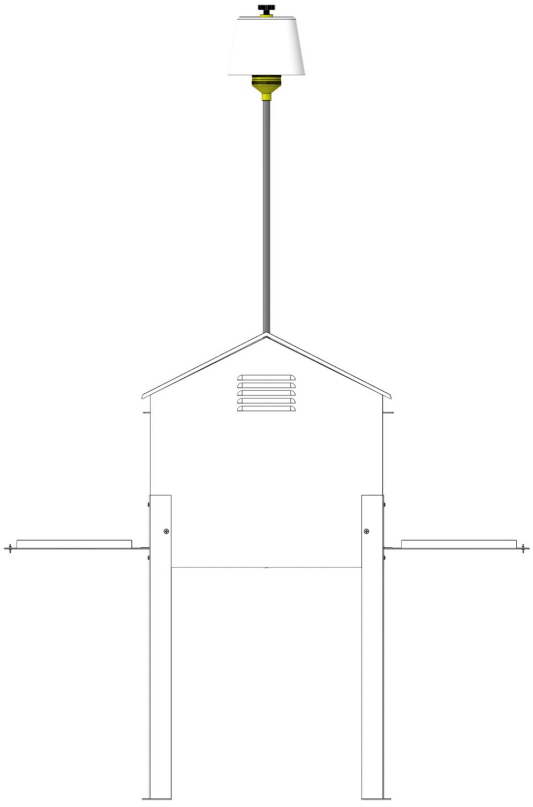
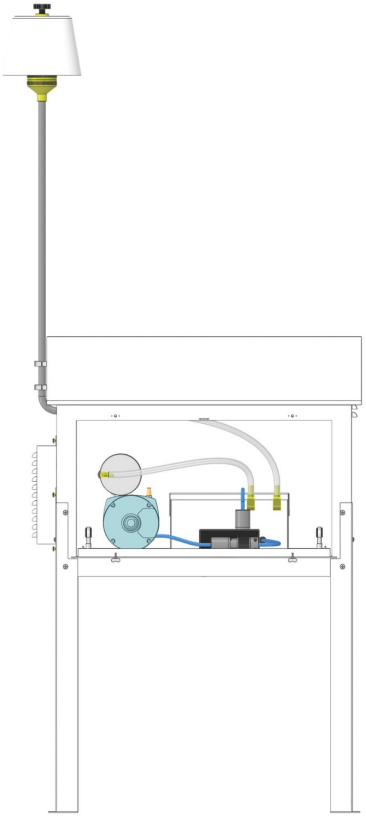
Language Options:	English
Sampling Mode:	Volumetric Flow or Mass Flow
Gas Type:	Air, O_2, N_2, H_2, CO, CO_2, C_3H_6, H_e, NH_3
Engineering Units	
Volumetric Flow:	sccm, SLPM, SCFM, sm^3/min, sm^3/hr
Mass Flow:	kg/hr, g/min, 1bs/hr
Temperature:	ºC, ºF
Pressure:	In. Hg, mm Hg, bar, atm, kPa, mbar, hPa
Reference T and P	
Reference T:	0ºC, 15ºC, 20ºC, 21.1ºC (70ºF), 25ºC
Reference P:	101.325 kPa (760 mm Hg), 100 kPa (1bar)
RS232 Data Output Frequency:	1 sec, 1 min, 10 min, 20 min, 30 min, 1 hr
Data Storage Frequency:	1 min, 10 min, 20 min, 30 min, 1 hr
Operating Mode:	Continuous, Periodic
Periodic Sampling Options:	Weekly (24 one hour periods for 7 days)
Ending Mode:	By time, By volume
Operator Selectable Passwords:	2 levels
Alarm Settings	Flow, inlet P. temperature, DP due to dust loading
Date and Time Setup	Input of real time and date

Close Up Photos of Control Box





Tel: 352.680.1177 fandj@fjspecialty.com www.fjspecialty.com


36.48 in
30.00 in
77.43 in
24.03 in
31.68 in