



F&J SPECIALTY PRODUCTS, INC.

The Nucleus of Quality Air Monitoring Programs

EMERGENCY RESPONSE MOBILE HIGH VOLUME AIR SAMPLING SYSTEM MODEL GAS-ERHV-DT-PUF

NOTABLE FEATURES:

- Precision machined DP flow sensor
- State-of-the-Art electronics
- Vacuum fluorescent display (VFD); 4 lines×24 characters
- Flow rate and Volume measurements corrected to operator selectable Reference Temperature and Pressure
- Automatic flow control
- Operator selectable units of measurement
- Dual RS-232 communication ports
- Flow rate accuracy: $\pm 3.0\%$ Full Scale
- Auto zero calibration feature of flow sensor
- Continuous or periodic sampling mode
- Multiple operator selectable data storage rates
- Display of Multiple on-board calculations
- Powerful 1100 Watt motor
- 100-120VAC; 50/60Hz, single phase



GAS-ERHV-DT-PUF coupled to FJ-TP4PUF
Tripod Mounted Filter Holder.
GAS Electronic
Flow Management System

GENERAL DESCRIPTION:

The GAS-ERHV-DT-PUF Series Air Sampling Systems are designed for remote unattended continuous air sampling applications. The GAS-ERHV-DT-PUF Series Air Samplers feature a brushless motor with electronic motor speed control that maintains a user selectable flow rate. The flow rate range attainable through the filter media is dependent upon the air porosity of the filter media. Flow rates as high as 56 to 400 SLPM are attainable with 3" long (unwashed) Poly-Urethane Foam (PUF) and 4" Quartz Filter Paper. The GAS-ERHV-DT-PUF Series design accommodates rapid field service and component replacement.

For mobility and durability, the air sampler is housed in a rugged weather resistant polypropylene enclosure with wheels and multiple handles. The tripod, accessories and consumables are stored in an identical heavy duty polypropylene case. The air sampler is connected to the discharge port of the filter holder mounted on the tripod by a rugged flexible plastic hose.

The electronic flow control measurement sub-system of the GAS-ERHV-DT-PUF Series provides an operator selectable reference standard corrected flow measurement and a constant flow of air through the filter medium. The air velocity is measured by a precision-machined DP sensor. The controller can be readily set to any sampling flow rate between 56 to 400 SLPM (2 to 14 CFM). The flow rate obtainable depends on the filter paper air resistance and dimensions. The bright VFD readout displays multiple air sampling information including current flow rate, average flow rate, current temperature and totalized volume. The GAS-ERHV-DT-PUF standard model utilizes an 102mm (FJ-102PUF) filter that can house a 3" long (unwashed) PUF. The optional software PC data acquisition and report writing program (GASdaq) is available to download air-sampling data via an RS-232 port. The software provides a monitoring report, file creation and setup via a laptop computer.

REV: 01 October 2019

Performance:

Basic components of the system are modular and independently serviceable. Sample flow rate can be set between the calibrated flow range.

Technology: Microprocessor controlled state-of-the-art electronics

Operating Temperature Range: 0°F* to 122°F (-17°C* to 50°C)
* warm start/continuous operation

Operating Relative Humidity: 0 – 95% RH

Typical Flow Rate Range:* 56 to 400 SLPM (2 to 14 SCFM)
(Depending on filter paper dimensions and air resistance).
* Approximate value for 102mm quartz paper plus 3” PUF filter

Motor: Brushless: 1.5 H.P. (1100 Watt) motor with electronic motor speed control

Power: 100-120VAC; 50/60Hz; 10 amperes; single phase. (1200 Watts)

Housing: Dual Heavy duty polypropylene cases with strong ABS latches and wide-track polyurethane wheels. Features stainless steel pins, hardware, and padlock protectors.

Dimensions: 48.00in x 17.00in x 14.00in (121.92cm x 43.18cm x 35.56)

Weight: 53 lbs. (24 kg.)

Shipping Weight: ~ 75 lbs. (34 kg.)

Installation Category: Pollution Degree 3

Enclosure Rating: IPX3

Automatic Flow Control:

The system microprocessor monitors flow rate relative to the operator selectable preset Reference T and P corrected flow rate established during the setup procedure and electronically adjusts the electronic motor speed adjustment, if necessary, to maintain the flow within $\pm 3.0\%$ of setting. The microprocessor computes the Reference flow rate by correcting the measured values of temperature and pressure to the reference values.

On-Board Measurement, Calculations and Other System Features

Measurements:

- Temperature of air flow through system
- Inlet pressure to the flow sensor
- Differential Pressure of the flow sensor
- Ambient pressure

Calculations/Determinations:

- Totalized volume, STP
- Current flow rate, STP
- Minimum and maximum temperature
- Minimum and maximum inlet pressure
- Elapsed time
- Selectable ambient flow rate and volume

Optional Items:

- Optional data acquisition and report writing software communications software to download data from instrument to PC after completion of sampling activity
- Ruggedized cellular phone system to provide alarm notifications

Other System Features:

- Display of data in English or metric units by selection
- Automatic shut off of system on totalized volume or elapsed time
- Real time clock with battery backup
- Various data storage options
- Dual password protection
Operator password
System Administrator password
- Periodic sampling scenario based on periods within a week
selectable by the user
- Utilization of 4” (102 mm) diameter filters and 3” long PUF
- Vacuum Fluorescent Display; 4lines \times 24 characters
- Operator Selectable Temperature & Pressure for data correction to standard condition.

FJ-TP4-PUF



- **CASE:**

Heavy Duty Polypropylene case with strong ABS latches and wide-track polyurethane wheels. Features stainless steel pins, hardware, and padlock pro.

Dimensions: 48.00in x 17.00in x 14.00in
(121.92cm x 43.18cm x 35.56cm)

- **FILTERS:**

1 Box of 4" filters, 100 each.
Filter type will vary depending on customer specifications.

10 each, 3" long (unwasjed) Poly-Urethane Foam (PUF) (P/N: PUF-3IN)

- **FILTER HOLDER:**

Aluminum, 102mm Particulate with 3" Poly-Urethane Foam combination open face with rain hood.

- **TRIPOD:**

- ◆ Medium Sized Hevy Duty Tripod with Maximum Height of 63 inches (160 cm)
- ◆ Close height: 38in (97cm)
- ◆ Weight: 8.2 lbs. (3.7kg.)