



GLOBAL ULTRA HIGH VOLUME AIR SAMPLING SYSTEM F&J MODEL GAS-UHV300-DTE

NOTABLE FEATURES:

- Precision machined DP flow sensor
- State-of-the-Art electronics
- Vacuum fluorescent display; 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: ±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
- 220-240VAC; 50/60Hz, single phase
- Rain-Guarded sample inlet with 24in x 24in (61cm x 61cm) filter media



GENERAL DESCRIPTION:

The GAS-UHV300-DTE Series Air Sampling Systems are designed for remote unattended continuous air sampling applications. The GAS-UHV300-DTE Series Air Samplers feature dual brushless motors 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 300 CFM (510 m³/hr) are attainable with certain glass fiber filter media. GAS-UHV300-DTE Series design accommodates rapid field service and component replacement. The rain-gaurded inlet supports 24in x 24in (61cm x 61cm) filter media and is supported with rugged torque hinges to facilitate easy and quick filter changes.

For durability and weather resistance, the system is housed in a freestanding powder coat painted aluminum enclosure. The sample air is drawn in under the perimeter of the rain guard and is exhausted near the bottom of the enclosure. The locking swing door on the enclosure provides convenient access for servicing the equipment inside. A lockable latch of the cabinet restricts unauthorized access to components within the enclosure. The sample inlet also has a latch available to prevent unauthorized tampering of the filter media.

The electronic flow control measurement sub-system of the GAS-UHV300-DTE 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 50 and 300 CFM (85-510 m³/hr). 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. Software is available as a option to download air-sampling data via an RS-232 port. The software is a powerful tool providing various management reports, file archiving and setup via a PC device.

GAS-UHV300-DTE Ultra High Volume Air Sampler Specifications

Performance:

Basic components of the system are modular and independently serviceable. Sample flow rate can be set between 50 and 300 CFM. The standard filter holder has the dimensions 24in x 24in (61cm x 61cm).

Technology: Microprocessor controlled state of the art electronics

Operating Temperature Range: -7F to 122°F (-20°C to 50°C)

Typical Flow Rate Range: 50 – 300 CFM (85 to 510 m³/hr)
(Depending on filter paper dimensions and filter media air resistance)

Motor: Dual Brushless: 2.4 H.P. (1800 Watt) motors with electronic motor speed control

Power: 220-240VAC; 50/60Hz; 20 amperes; single phase.

Housing: Powder coat painted aluminum Latch hinged cover
Removable hinged cover Locking swing door with key

Dimensions: 66”H × 29”W × 29”D (168cm H × 74cm W × 74cm D)

Weight: Approximately 220 lbs. (91 kg)

Shipping Weight: Approximately 225 lbs. (102 kg)

Installation Category: Pollution Degree 3

Enclosure Rating: IPX3

Sample Inlet: Various powder coated or anodized aluminum alloys. Stainless steel hardware and perforated inlet support screen

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, Reference T and P*
- Current flow rate, Reference T and P*
- Minimum and maximum temperature
- Minimum and maximum inlet pressure
- Elapsed time
- Ambient flow rate and volume

* Operator selectable REF T and P

Data Acquisition Software:

- Optional data communications software to download data from instrument to PC after completion of sampling activity

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
- Dual RS-232 communication ports
- Periodic sampling scenario based on periods within a week selectable by the user
- Utilization of 24in x 24in (61cm x 61cm) filters
- Vacuum Fluorescent Display; 4lines ×24 characters