

MegaVol 3000 Particulate Sampler

The MegaVol 3000 Particulate Sampler provides a flexible platform for remote unattended sampling of heavy metal and radiation exposure in the environment.

The MegaVol has a very high flow rate (120-150m³/hr) which allows it to sample a larger sample of air than a standard unit, and accumulate trace concentrations that make up a small percentage of pollution (such as heavy metals and radioactive particulates).

This accumulated sample provides laboratories with sufficient sample to perform quantitative and qualitative analysis and allows either increased sampling periods (more per week) or greater accuracy in measurements (especially for trace levels).

Optional attachments allow the sampler to measure wind speed and direction which can then be used as triggers to start sampling and fence-line monitoring.



Features

- Sampling of Total Suspended Particulates (TSP)
- Advanced active volumetric flow control system automatically corrected to STP conditions
- Ability to perform conditional sampling based on wind speed and direction measurements or time-based sampling (fence-line monitoring)
- RS232 output for data collection and networking
- Internal data logging of WS/WD, temperature, pressure, and flow
- Simple programming of sampling periods, including daily and weekly programs, with built-in "1-in-X-day" sampling capability
- Automatic supply voltage monitoring and shut-down facility prevents damage to instrument
- Weatherproof marine-quality anodized aluminum cabinet
- Sampler setup via four-line LCD display and keypad

Specifications

Operation:	Microprocessor controlled with internal data logging
Pump/Motor	Side channel blower driven by an induction motor (brushless)
Flow Controller:	Variable frequency drive
Volumetric Flow Range:	Nominal 120-150 m ³ /hr
Vacuum Capability:	130 mBar max at 150 m ³ /hr
Flow Accuracy:	± 2 m ³ /hr
Flow Repeatability:	± 1% of reading
Construction:	Anodized aluminum and stainless steel
Filter Size:	250 x 200 mm rectangular element
Dimensions:	18" (456 mm) W x 18" (456 mm) D x 58" (1480 mm) H including TSP inlet
Weight:	143 lbs. (65 kg)
Operating Voltage:	200-240 V ± 10% 50/60 Hz (std)
Power Usage:	3500VA nominal (depending on filter loading & flow rate)
Barometric Pressure	
Measurement Range:	600-900 mmHg ± 4 mmHg
Number of Readings:	150 (averaging period is user selectable; for example, 75 hours of 30 minute averages)
External Inputs:	1 x wind direction sensor input (10k potentiometer) 1 x wind speed sensor input (contact closure) or alternatively 1 x spare contact closure input (e.g., tipping bucket rain gauge)

Options:

- Calibration plate
- WS/WD sensors
- RH sensor
- Muffler
- Field calibration transport case
- Manometer

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