Ecotech
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HiVol 3000

HIGH VOLUME AIR SAMPLER

The HiVol 3000 particulate sampler performs remote unattended sampling of $PM_{2.5}$, PM_{10} or TSP along with basic meteorological parameters.

The HiVol 3000 incorporates advanced programming functions and electronic volumetric flow control to maintain a consistent flow and collect a truly representative sample of particulate matter.

Optional attachments allow the sampler to measure wind speed and direction which can then be used to trigger sector selectable sampling (e.g. fence-line monitoring).

APPROVALS

- US EPA Manual Reference Method: RFPS-0706-162 approval for PM_{10}
- Meets Australian standard for PM_{10} and TSP monitoring
- Only high volume air sampler with CE and C-tick approval
- Manufactured under ISO9001.

RELIABLE SAMPLING

- Volumetric flow control automatically corrected to standard reference temperature
- Programmable reference temperatures
- Industrial brushless motor (100,000 hours continuous field operation)
- Weather-proof marine quality anodised aluminium cabinet
- Automatic supply voltage monitoring and shut-down facility reduces damage to instrument.

DIRECTIONAL SAMPLING

- Wind direction and speed used to activate/de-activate sampler
- External trigger (0 - 5 VDC) can be used for activating sampling program.

ENHANCED COMMUNICATION

- RS232 output for data collection and remote communication
- Filter blocked and instrument error alarms
- Total control of instrument remotely from PC
- Simple programming of sampling periods, including daily and weekly programs, with in-built “1-in-X day” sampling capability.

SPECIFICATIONS

Operation:	Microprocessor controlled (internal data logging)
Pump/Motor:	Side channel blower driven by an induction motor (brushless)
Flow controller:	Variable frequency drive
Volumetric flow range:	Nominal 45 - 96 m^3/hr
Vacuum capability:	140 mBar max
Flow accuracy:	Better than ± 1 m^3/hr
Flow repeatability:	± 1 % of reading
Construction:	Anodised aluminium and stainless steel fasteners
Filter size:	250 x 200 mm rectangular element
Dimensions:	380 x 380 x 1200 mm plus inlet
Weight:	45 kg plus inlet weight
Operating voltage:	200 - 240 V + 10 % 50/60 Hz (optional 115 V 60 Hz)
Power Consumption:	1500 VA Max (depending on filter loading & flow rate)
Temp measurement range:	0 - 50 °C
Barometric pressure:	600 - 900 mmHg ± 4 mmHg

COMMUNICATION & DATA LOGGING

No. of readings

- 150 (user selectable averaging period, e.g. 75 hrs of 30 min averages)

External inputs

- 1 x wind direction sensor input (10k potentiometer)
- 1 x wind speed sensor input (contact closure)
- 1 x spare contact closure input (e.g. tipping bucket rain gauge).

Output

- RS232C

OPTIONS

- PM_{10}, $PM_{2.5}$ or TSP size selective inlets
- Calibration plate and field calibration transport case
- Manometer
- WS/WD sensors
- RH Sensor
- Muffler.

bsi. ISO 9001 Quality Management FS 603790 AS/NZS 4801 Occupational Health and Safety Management OHS 603791

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