

# HiVol 3000

## HIGH VOLUME AIR SAMPLER

The HiVol 3000 Particulate Sampler performs remote unattended sampling of PM<sub>2.5</sub>, PM<sub>10</sub> 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<sub>10</sub>
- Meets Australian standard for PM<sub>10</sub> and TSP monitoring
- Meets RCM requirements with CE optional
- 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

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

## COMMUNICATION & DATA LOGGING

### Number 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<sub>10</sub>, PM<sub>2.5</sub> or TSP size selective inlets
- Calibration plate & field calibration transport case
- Manometer
- WS/WD sensors
- Muffler.

