



## Micropollutants high volume sampler

# ECHO HiVol

### MAIN CHARACTERISTICS

- According to:
  - ISO 12884 (particulate/gas)
  - ISO 16362 (particulate)
  - USEPA TO9 (particulate/gas)
  - USEPA TO13A(particulate/gas)
- Electronically controlled flowrate to standard and actual condition
- Large graphic display back-lighted with keyboard and RS232 interface
- Programming with permanent clock
- Sampling time with 1" resolution and selectable from 1' to 168h
- Measured and stored parameters: Flowrate, Total volume, Ambient temperature, Ambient pressure, filter load
- Capable of storing up to 60 sampling reports
- Capable of storing the sampling flow with 5 minutes interval
- Light alloy cabinet of small size and light weight suitable for outdoor mounting
- SMS remote control (\*)
- Sample conditioning depending on wind direction and velocity (\*)

\* *Optional*

ECHO HiVol is a "stand alone" automatic instrument designed to be used outdoor even in severe weather conditions.

The Venturi gas meter used is made according to ISO 5167 standards.

This kind of gas meter gives many advantages compared to other flow measurement systems: the measures stability in the long term, the capability of being used with all weather conditions, a reduced sensitivity to stain thanks to the gas meter self cleaning profile and the absence of elements which are sensitive once in contact with inhaled air.

The flow measure and regulation in relation to actual condition, make ECHO HiVol a unique instrument.



*Cabinet's lock details*



This feature allows the user to change the sample head and flow rate without recalibrating the flow meter.

Echo HiVol is equipped with a three stages brushless blower, practically maintenance free, and its averaged life is higher than 20000 hours (more than 2 non-stop operating years).





Two sampling inlets are available, PUF and TSP. These are freely interchangeable.

The PUF sampling module with filter holder of 102 mm and adsorbing cartridge (for PUF or XAD2) of 58 x 125 mm allows simultaneous sampling of particulate and gas fractions with

flow rate between 180 and 220 l/min.

In alternative a filter holder for total particulate (TSP) on membrane of 150 mm diam. is available.

This is required for working up to a 500 l/min flow.

### TECHNICAL CHARACTERISTICS

|                           |  |
|---------------------------|--|
| Range                     | 100 - 600 l/min (6 - 36 m <sup>3</sup> /h) |
| Pump                      | 3 stages brushless blower                  |
| Pump maintenance interval | 20 000 operating hours                     |
| Power supply              | 220/240 Volt 50Hz (3.5 A)                  |
| Operating condition       | -3 + 40°C (-20 + 40°C with low temp. kit*) |
| Low temperature kit       | AA99-009-9901SP                            |
| Size mm (w x d x h)       | 440 x 340 x 830 (without stand)            |
| Weight kg                 | 15 Kg                                      |
| <b>ECHO HiVol Sampler</b> | <b>AA99-020-0000SP</b>                     |

### SPARE PARTS ACCESSORIES AND CONSUMABLE

|   |                        |
|---|------------------------|
| Aluminum stand                            | AA99-020-9900SP        |
| Wind direction/speed interface            | AA99-009-9907SP        |
| Wind direction/speed sensor               | AA99-009-9908SP        |
| GSM Modem                                 | AA99-020-9903SP        |
| Software to download data                 | AA99-009-9909SP        |
| Calibration kit                           | AA99-020-9905SP        |
| <b>PUF sampling module</b>                | <b>AA99-020-0010SP</b> |
| Spare glass cartridge                     | AA99-020-0011SP        |
| 2 PTFE end caps for cartridge             | AA99-020-0012SP        |
| 25 quartz fibre filter 102 mm diam. box   | AA99-016-9950CR        |
| 100 glass fibre filter 102 mm diam. box   | AA99-016-9951CR        |
| 10 PUF cartridge h75 mm box               | AA99-016-9955CR        |
| 10 PUF cartridge h50 mm box               | AA99-016-9956CR        |
| PUF aluminum canister for shipping        | AA99-020-0019SR        |
| <b>Filter holder for TPS diam. 150 mm</b> | <b>AA99-020-0020SP</b> |
| 25 quartz fibre 150 mm diam. box          | AA99-018-9910CR        |
| 50 glass fibre 150 mm diam. box           | AA99-018-9911CR        |

\* Optional



PUF sampling module and cartridge with caps detail

AA99-020-0010SP



Filter holder for TSP collection detail

AA99-020-0020SP

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