



In Compliance with:
ISO 12884, ISO 16362, USEPA TO9,
USEPA TO13A, ISO 5167.

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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. (*)

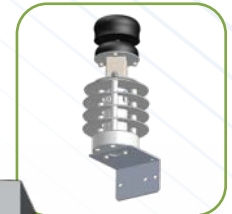
* Optional

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

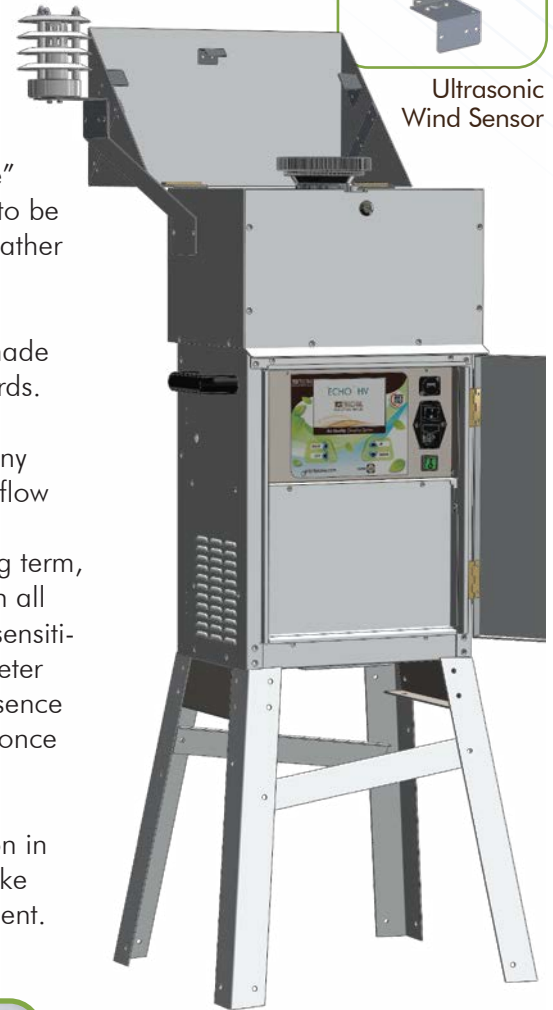
The Venturi gas meter used is made according to **ISO 5167** standards.

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.



Ultrasonic Wind Sensor



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. Possibility to monitor PM10, PM2.5, PM1, real time trend concentrations, 24 sizes classes particle distribution, CO₂ and relative humidity.

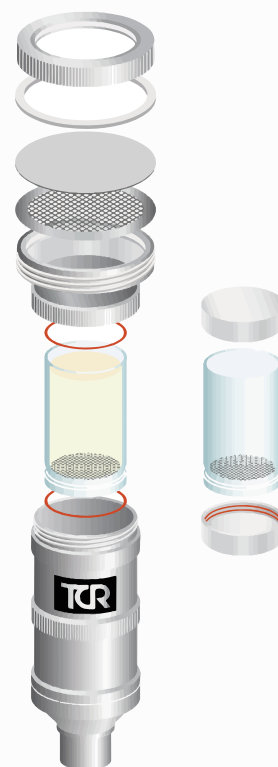
TECHNICAL CHARACTERISTICS

Range	100 - 600 l/min (6 - 36 m ³ /h)
Pump	0,1 l/min
Used Pump	4 stages brushless blower 60m ³ /h
Pump Maintenance Interval	20000 operating hours
Power Supply	220/240 Volt 50Hz (3.5 A)
Operational Condition -5 ÷ +45°C	-5°C + 45°C (-20 +45°C con kit basse temp.*)
Low Temperature Kit	AA99-009-9901SP
Size mm (w x d x h)	440 x 340 x 830 (without stand)
Weight Kg	15 Kg
ECHO HiVol Sampler	AA99-020-0000SP
PM10, PM2.5 e PM1	OPC Real Time
Dimensional Classes	24
CO ₂ and Relative Humidity	Real Time

SPARE PARTS ACCESSORIES AND CONSUMABLE

Stativo in alluminio	AA99-020-9900SP
Interfaccia Direzione/Velocità vento	AA99-009-9907SP
Sensore Direzione/Velocità vento	AA99-009-9908SP
Modem GSM	AA99-020-9903SP
Software "Downloader" per scarico dati	AA99-009-9909SP
Kit di calibrazione	AA99-020-9905SP
Modulo di campionamento PUF	AA99-020-0010SP
Cartuccia in vetro di ricambio	AA99-020-0011SP
Coppia tappi in PTFE per cartuccia	AA99-020-0012SP
Conf. 25 filtri in fibra quarzo diam. 102mm	AA99-016-9950CR
Conf. 100 filtri in fibra vetro diam. 102mm	AA99-016-9951CE
Conf. 10 substrati PUF h75 mm	AA99-016-9955CR
Conf. 10 substrati PUF h50 mm	AA99-016-9956CR
Contenitore in alluminio x trasporto PUF	AA99-020-0019SR
Portafiltro per PTS diam. 150 mm	AA99-020-0020SP
Conf. 25 in fibra quarzo diam. 150 mm	AA99-018-9910CR
Conf. 100 in fibra vetro diam. 150 mm	AA99-018-9911CR

* Opzioni facoltative



PUF sampling module and cartridge with caps detail

AA99-020-0010SP



Filter holder for TSP collection detail

AA99-020-0020SP

ECHO HiVol

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