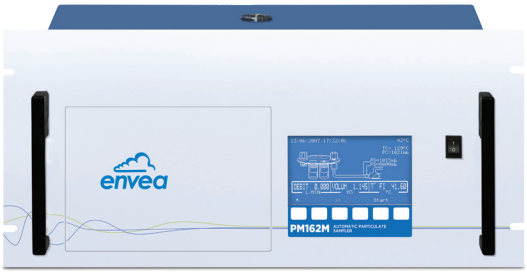
PM162M

Automatic, Low Volume, Particulate Sampler

AIR QUALITY MONITORING SYSTEMS

PM162M is a sequential automatic sampling device for particulate matter in the ambient air. The particles are sampled at constant flow rate (1 m^3/h or 2.3 m^3/h) and collected on filters for gravimetric weighing and possible physicochemical laboratory analysis.



SPECIFIC FEATURES:

- The PM162M is equiped with a filter holder carrying 22 filters capacity, which corresponds to 3 weeks of normal, 24 hours samplings, fully autonomous
- True volumetric air flow control with atmospheric temperature and pressure sensors to avoid artifacts in the size fractionating inlet
- Temperature-regulated sampling tube to prevent artefacts on the filter (evaporative losses of semi-volatile particulates...)
- Programmable Rest Time function: enables a rest time (without sampling) between the sampling cycles
- User-selectable starting time mode (immediate, delayed, hourly synchronization)
- LCD graphic display and interactive user-friendly multi-task software
- Highly reliable components and robust design allow the PM162M very low maintenance.
- Option: very high size filter holder (max 70 filters) allowing up to 10 weeks of sampling

Example: wall-mounted version of the sampler, installed in a fixed, outdoor station

MAIN APPLICATIONS:

› Sequential sampling through PM10, PM2.5, PM1 and TSP size selective inlets
› Heavy metals sampling in ambiant air
› Indoor air sampling
› Field survey before setting up of a continuous analyzer
› Follow-up of a specific pollutant...

COMPLIANCE WITH:

› **EU CEN recommendations for PM2.5 sampling & measurement**
› **EN 12341 certified (LECES, n°RC/L 9826)**

PM162M rack version charging of the filter holder

Automatic, Low Volume Particulate Sampler **PM162M**

PRINCIPLE OF OPERATION:

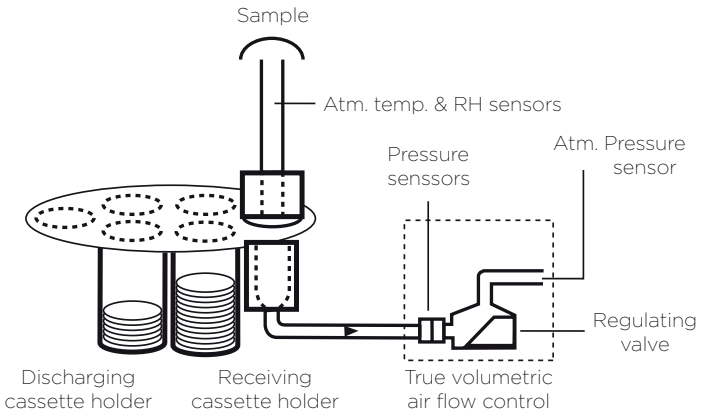
The PM162M sampler is compliant with the EN12341 standard and can be used to determine the average ambient particulate concentration over the sampling period. The collected material is weighed to determine concentration and can be subsequently chemically analyzed.

Its fine dust sampling system is designed to collect particles with aerodynamic diameters of approximately 100 Qm or less to be deposited uniformly across the surface of a filter located downstream of the sampler inlet.

Suspended dust in ambient air are caught through a sampling head which sorts particles according to size in order to sample a conventional fraction (TSP, PM10, PM2.5 or PM1) of the atmospheric aerosol.

After passing through the sampling head, the sample is pumped down onto the filter passing across a thermo-controlled line. This line, designed according to the RST (Regulaled Sampling Tube) technology, is equipped with a temperature and humidity sensor located near to the sampling point.

Air sampling is carried out at atmospheric temperature. When relative humidity of ambient air is high, the RST line is controlled at 5°C above the atmospheric temperature in order to avoid condensation in the sampling line.Moreover, the control of sampling temperature avoids mass losses resulting from volatile compoundsof dust got into gaseous phase around 40°C.



OPTIONS :

- Temperature-regulated sampling tube: 1m, 2m or 2.75m
- Conditioned or ventilated cabinet for outdoor installation
- Memory extension
- External opto-isolated I/O interface with:
  - 4 independent analog inputs
  - 4 independent analog outputs
  - 4 remote control inputs
  - 6 dry contacts outputs
- I/O boards can be used for external sensors connection to the sampler, e.g meteorological sensors.
- Special version with 70 filters capacity
- Choice of TSP, PM10, PM2.5 or PM1 sampling inlets

TECHNICAL SPECIFICATIONS

Filter holder capacity	22 filters
User-selectable sampling duration	1, 2, 3, 4, 6, 12, 24, 48, 72, 96, 120 or 168h cycle
Filter diameter	47mm
Filtering diameter	40 mm
Flow rate	1 m^3/h or 2,3 m^3/h (user selectable)
Backup saving time of stored data	> 6 mois
Presentation	Rack mount 19" / 5U
Dimensions (standard 22 filters version)	483x242x220 mm (WxDxH)
Weight	16 kg
Power supply	220 V - 50 Hz (115 V - 60 Hz on request)
Power consumption	max 360 VA
Standard operating temperature	+5°C à +40°C
Digital output	2 RS232 or RS 422 ports
Programmable Rest time function	1/4, 1/2, 1, 2, 3, 4, 6, 12, 18, 24, 48, 72, 96, 120 and 168 h

Filter temperature measurement and external sampling pump included in standard

US-EPA


TSP


PM10 louvered


PM2.5 & PM1 standalone


VSCC PM2.5 Adapter

EN 12341 / EN 14907


PM10


PM2.5

envea KNOWLEDGE IN ACTION

ENVEA (Headquarters)
111 Bd Robespierre - CS 80004
78300 Poissy / Cedex 4 - FRANCE
☎ +33(0) 1 39 22 38 00
✉ info@envea.global

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CERTIFICATION

Visit us on:
www.envea.global