

MCV CAVA / Mb Sampler

Aerosol sampler compliant with NF M60-760, EN 12341 and EN 14907 standards

The CAVA Mb is a high flow aerosol sampler which allows sampling of airborne particles on paper filters.

This equipment benefits from the latest technological innovations in the field of aerosol sampling to meet regulatory and normative requirements, in particular NF M60-760 (August 2017), for the sampling of aerosols in the environment for off-line measurement of radioactivity.

OPERATING PRINCIPLES

The sampler allows sampling of particles suspended in the atmospheric air on paper filters.

The sampler is designed to take samples directly outdoors, 24 hours a day, 7 days a week.

Thanks to its low noise level, it can be located close to houses and can also be installed in an air monitoring station for more comfort.

Depending on the application, different sampling heads and filter diameters are available.



FUNCTIONS

Real-time display of the following parameters: actual volume flow rate in m³/h, standard volume flow rate in Nm³/h, actual volume sampled in m³, standard volume sampled in m³, sampling time, measurement of atmospheric and air circuit pressure, sampling status, power level used by the pump motor (in %).

Programming of the sampling parameters: setting of the sampling flow rate from 15 to 70 m³/h, setting of the sampling duration, choice of the sampling duration: motor hours or real time clock, choice of the flow rate regulation mode: normalised or real, choice of the flow rate normalisation temperature: from 0 to 25°C.

Programming of sampling cycles: choice of date and time for a delayed start, choice of sampling duration.

Remote report of the good functioning: by relay contact (T.O.R.): closed contact indicates a good functioning, open contact: indicates a bad functioning, by RS232: reception of all the states of the equipment on a computer or by SMS.

Safety: differential circuit breaker, fuses on the power and regulation boards, opening of the box with key, emergency battery for data backup and filter recovery.

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BENEFITS

- Low noise level
- Actual flow rate measurement (m³/h) or standard flow rate (Nm³/h)
- Easily user-configurable operating cycle time from 1 to 168 hours, i.e. up to one week
- Adjustment of the sampling duration either on the hours of the integrated clock or on the hours actually performed by the equipment
- Stability of the sampling rate
- Remote reporting of correct operation (T.O.R., SMS, RS232)
- Storage and security of sampling data
- Data retrieval via integrated printer and/or USB key

TECHNICAL SPECIFICATIONS

- **Flow rate range:** from 15 to 70 m³/h
- **Dimensions :** W x D x H = 580 x 420 x 880 mm
- **Weight :** 31 kg
- **Max. power:** 1 100 Watts
- **Mains supply :** 230 Volts 50 Hz
- **Noise level at 60m³/h :** 43 dB
- **Operating temperature :** from -5 to +40°C
- **Backlit LCD screen**
- **Sampling intervals :** from 10 minutes to 24 hours
- **Communication via RS232, T.O.R. or SMS**



SAMPLING HEADS

The sampler can be equipped with different types of sampling heads depending on the paper filter diameter and its application; PM10 head: selection of 10 µm particles, PM2.5 head: selection of 2.5 µm particles, TSP head: sampling of all particles.

In compliance with the NF M60-760 (2017) standard, the sampling point is located at 1.5 m from the ground, the sampling head is equipped with a rain cap and an anti-insect screen, and a stainless steel sampling line with grounding. The entire unit can be dismantled for easy cleaning.

In order to avoid the fixation of particles by phenomena created by static electric charges between the sampling point and the collection place (paper filter), the sampling line is composed of grounded conductive materials and an anti-insect grid, and a stainless steel sampling line with grounding. The whole system can be dismantled for easy cleaning.

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