Leberstraße 63
10829 Berlin/Germany
☎ +49 (0) 30 78 95 50 11
+49 (0) 30 78 95 50 12
info@leckel.de
www.leckel.de
SVEN LECKEL
Ingenieurbüro GmbH

SMALL FILTER DEVICE (Kleinfiltergerät) LVS3

SMALL FILTER DEVICE (Kleinfiltergerät) MVS6

Features

- Rugged, light-weight construction for outdoor use (stainless steel), small set-up area
- Device will be automatically heated (winter operation) and ventilated
- Controlling of **operating-m³/h** (ambient air conditions) and **standard-m³/h** (0 °C or 20 °C, 760 mm Hg) by orifice plate
- Impactor inlets with exchangeable jets (8 pieces) for **PM10 – PM4,0 – PM2,5 – PM1,0**
- Inlets for **TSP, PU foam (with and without ozone denuder) and bioaerosols**
- Easy and self-explanatory 3-key menu-guided operation
- Data storage on **memory stick**
- **Bavarian-Hessian protocol**
- Pre-selectable activation, sampling duration and sampling intervals
- Protection of stored data against power failure, real-time clock
- External set-up of inlets
- Use of filters with diameter of **47 mm** and **50 mm**

REFERENCE SAMPLER

according to

VDI 2463 Parts 7 und 8
Total dust measurement by using the
STANDARD INLET

VDI 2465 Part 1
Soot (EC) measurement by using the
PM10 INLET

CEN EN 12341
PM10 measurement

PM2,5 STANDARD INLET (IMPAKTOR) according to CEN EN 14907

Description

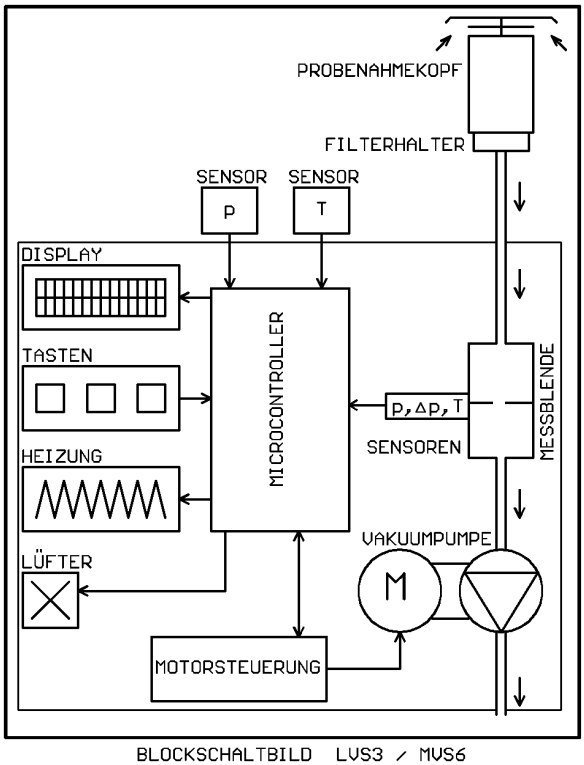
The Small Filter Devices (Kleinfiltergeräte) **LVS3** and **MVS6** are designed for outdoor use at very high as well as very low temperatures. The devices can be used also indoors.

The flow rates of the samplers are controlled in compliance with basic physical principles by means of a temperature- and pressure-compensated orifice plate according to Bernoulli's law and by conversion into operating-m³/h resp. standard-m³/h according to Boyle-Mariotte`s law. The sampled air volume is displayed in operating-m³ and standard-m³ with a sensitivity of 0,01 m³ on the digital display. In case of a pressure drop across the filter of more than 300 mbar the device will automatically shut down.

All relevant data are shown at the display and can be stored on a memory stick. In case of a power failure, all data stored in the micro controller and in the system's memory will be safe for several years thanks to a built-in high-capacity battery.

The device's housing consists of stainless steel sheet metal with a lockable door. The device's solid construction guarantees a high availability.

Because of their low noise emission level, the Small Filter Devices can be used in urban areas at any time of the day and indoors as well. The sampling head can also be set up externally, e.g. directly at kerbsides or in living rooms by using a hose connection to the instrument placed in a greater distance.



BLOCKSCHALTBILD LVS3 / MVS6

Subject to alterations Ed. 07/11

Model Variations

LVS3

This model can be operated with controlled flow rates between 1,0 and 2,3 m³/h. In the uncontrolled mode (UMODE), the device is identical with regard to its function to the type GS 050/3 described in the guideline VDI 2463 Part 7.

MVS6

This model can be operated with controlled flow rates between 2,3 and 3,5 m³/h. Its design is identical with model LVS3. The controlled flow rate of 2,7 m³/h meets the requirements of VDI 2463 parts 7 and 8.

Inlets

For ambient air, indoor and workplace measurements

- Measurement of PM10 (EN12341) and PM2,5 (EN14907)
- Measurement of PM4,0 and PM1,0
- Measurement of TSP (VDI 2463-8)
- Measurement of heavy metals (VDI 2267 and EN14902))
- Measurement of PCBs (VDI 2464-1)
- Measurement of soot (EC/OC) (VDI 2465)
- Measurement of dioxins and furans (VDI 3498-2)
- Measurement of bioaerosols (VDI 4252-2)
- Measurement of PAHs, PCDD, PCDF, PCB and house dust (VDI 4300 and ISO 16000-13)
- Measurement of lindane/PCP, house dust etc. (VDI 4301)
- Measurement of BaP (Scrubber/EN 15 549)

The dust collected on the filters can be also analysed on ions (sulphate, nitrate etc.) as well as radioactivity.

Technical Data

Flow rate

LVS3 uncontrolled approx. 3,2 m³/h
controlled 1,0-1,6-2,0-2,3 m³/h
and standard-m³/h
Deviation from the set point: < 2%

MVS6 uncontrolled approx. 5 m³/h
Controlled 2,3-2,7-3,0-3,5 m³/h
and standard-m³/h
Deviation from the set point: < 2%

Sampling time
minimum 1 h – maximum 999 h

Power supply
230 V, 50/60 Hz

Consumption
LVS3 approx. 250 VA – **MVS6** approx. 300 VA

Filter diameter
47 mm and 50 mm

Diameter of loaded filter surface
approx. 40 mm

Dimensions
Width 310 mm – Height 480 mm – Depth 250 mm

Weight
LVS3 approx. 22 kg **– MVS6** approx. 23 kg

Noise level according to DIN 2058
<< 35 dBA