



# 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

ETANDADD INI ET

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

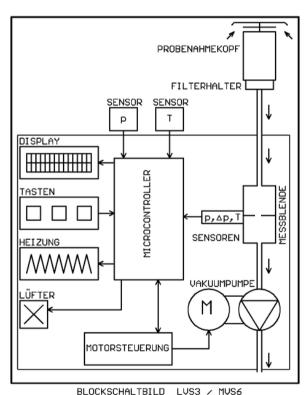
The Small Filter Devices (Kleinfiltergeräte) LVS3 and MVS6 are designed for outdoor use at very high as well as very low temperatures. The devices can be used also indoors.

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-m<sup>3</sup> and standard-m<sup>3</sup> with a sensitivity of 0,01 m<sup>3</sup> on the digital display. In case of a pressure drop across the filter of more than 300 mbar the device will auto- matically 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.



Subject to alterations Ed. 07/11

# **Model Variations**

#### LVS3

This model can be operated with controlled flow rates between 1,0 and 2,3 m<sup>3</sup>/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 m<sup>3</sup>/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 m<sup>3</sup>/h controlled 1,0-1,6-2,0-2,3 m<sup>3</sup>/h and standard-m3/h

Deviation from the set point: < 2%

Deviation from the set point: < 2%

MVS6 uncontrolled approx. 5 m<sup>3</sup>/h

Controlled 2,3-2,7-3,0-3,5 m3/h

and standard-m3/h

### 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

