

## SEQUENTIAL SAMPLER SEQ47/50

### Features

- Self-explanatory menu-guided operation by means of 3 keys:  
Start and stop by hand  
Start and stop automatic (pre-selectable)  
Interval mode
- Data storage on **USB and memory stick**  
Option: **GSM modem with SMS status signals** on smartphone  
Controlling of **operating-m<sup>3</sup>/h** by
- orifice plate
- Stainless steel housing for **outdoor** use; **19" rack version** for installation in **measuring stations**
- Impactor inlets with exchangeable jets (8 pieces) for **PM10 – PM4,0 – PM2,5 – PM1,0**
- **TSPM Inlet** according to **VDI 2463 parts 5 and 8**
- Impactor inlet with **ozone denuder for PAHs (BaP)** according to **CEN EN 15544**
- Long maintenance intervals of the fractionating inlets
- **Temperature measurement** directly downstream the filter
- **Cooled inlet system by sheath air and covered sampled filters** within the magazine, no losses of particulate volatile material



### **P M10 and PM2,5 STANDARD REFERENCE SAMPLER according to CEN EN 12341 (2014)**

(summary of the earlier standards CEN EN 12341 and CEN EN 14907)

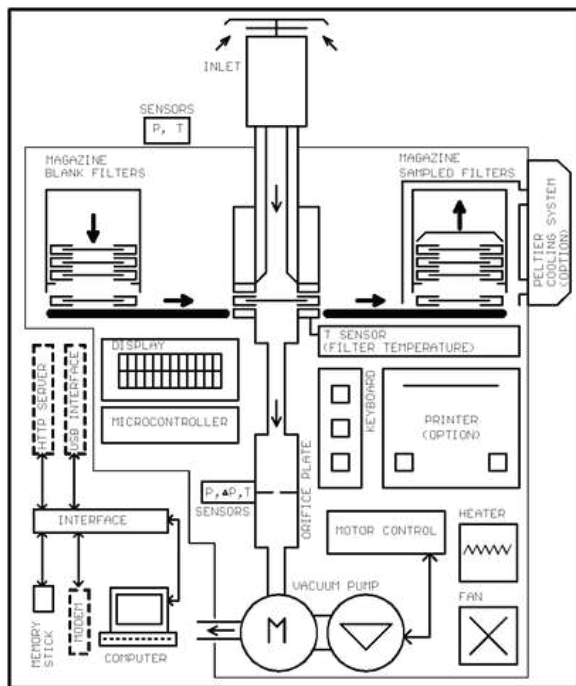
- Suction tube with large inside diameter, **no particles losses at the interior wall**
- Use of filters with diameters of **47 mm and 50 mm**

## Description

The sequential sampler **SEQ47/50** is designed for outdoor use at all temperatures and environmental conditions. **The sampler can also be installed into a 19" rack.**

The **magazines** for the blank and sampled filters are able to load 17 filter holders, each. By covering the upper sampled filter holder and superimposition of the following filter holders within the magazine for the sampled filters the air volume above each filter is so small that particulate volatile material cannot evaporate into the air. Additionally, the complete sampling system up to the filter is cooled by sheath air. By these measures a reliable determination of the particle masses collected on the filters is guaranteed also after the complete sampling period.

The **filter holders (made of POM)** are capable to take in filters with diameters of 47 mm and 50 mm as well. Filter holders for filters with a diameter of only 47 mm are also available.



The **flow rate** of the SEQ47/50 is 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- $m^3/h$  according to Boyle-Mariotte's law.

The flow rates as well as the temperature and pressure sensors can be easily re-calibrated by means of the 3 front keys.

The air flow's temperature is measured directly downstream the filter which is currently sampled.

**Subject to alterations Ed. 06/14**

The inside diameter of the sampling tube (stainless steel) is 27 mm.

The device's housing consists of stainless steel sheet metal of 1,5 mm thickness with a lockable door (outdoor version). The further solid construction guarantees a maintenance-free operation of the sampler for a long operating period.

## Inlets

- Use of all **PMX Inlets** (without filter holder) for the flow rates of **3,0 - 2,3 - 1,0  $m^3/h$**
- **PM10 and PM2,5 measurements according to CEN EN 12341**
- **Total dust measurement according to VDI 2463 Parts 5 and 8**
- **PAH (BaP) measurement according to CEN EN 15549 and Directive 2004/107/EC**
- **Measurements of heavy metals according to CEN EN 14902**

## Technical Data

### Flow rate

#### 3- $m^3$ -version

controlled 1,0 and 2,3  $m^3/h$   
Deviation from the set point: < 2 %

#### 8- $m^3$ -version

controlled 2,3 and 3,0  $m^3/h$   
Deviation from the set point: < 2 %

### Sampling time

minimum 1 h – maximum 168 h per filter

### Power supply

230 V, 50/60 Hz

### Consumption

approx. 300 VA (3- $m^3$ -version) resp.  
approx. 350 VA (8- $m^3$ -version)

### Filter diameter

47 – 50 mm

### Diameter of active filter area

approx. 40 mm

### Dimensions

Width 482 mm  
Depth 310 mm  
Height with inlet 1,58 m

### Weight

approx. 60 kg (transportable by casters)

### Noise level according to DIN 2058

in a distance of 8 m: << 35 dBA