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SEQUENTIAL SAMPLER SEQ47/50-CD WITH COOLER

Features

- **Cooling of the magazine for the sampled filters to ≤ 23 °C** according to **CEN EN 12341** by Peltier cooler (up to 35 °C ambient temperature)
- **Measurement of the temperature of the sampled filters directly inside the magazine** (not the temperature of the cold air flow close to the cooler)
- Covered filters within the magazine
- Data storage on **USB and memory stick**
- Sampling system equipped with sheath air
- Temperature measurement directly downstream the filter
- Stainless steel housing for outdoor use
- Impactor inlets with exchangeable jets (1 set: 8 pieces, each) for **PM10 – PM4,0 – PM2,5 – PM1,0**
- **TSPM Inlet (VDI 2463 parts 5 and 8)**
- Impactor inlet **with ozone denuder for PAHs (BaP) (CEN EN 15549)**
- Use of filters with diameters of **47 mm** and **50 mm**

PM10- and PM2,5 STANDARD REFERENCE SAMPLER according to CEN EN 12341

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

Description

The sequential sampler **SEQ47/50 equipped with Peltier cooler** is designed for outdoor use.

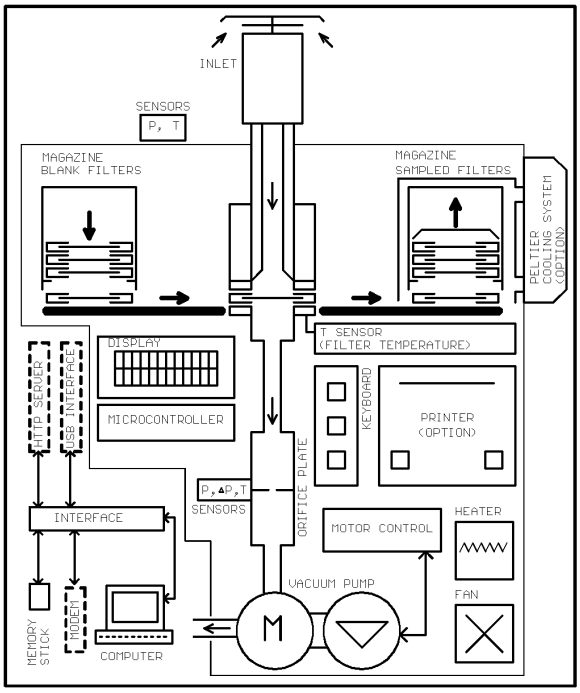
The menu-guided operation of the sequential sampler is self-explanatory. The magazines for the blank and sampled filters are able to load 17 filter holders, each.

The magazine containing the filter holders with the sampled filters consists of thin-walled aluminium and is placed in a small insulated housing. The magazine is cooled by a strong Peltier aggregate. The filter temperature is measured inside the magazine. The filter holders are covered by a cap.

The sampling system is cooled by sheath air (ambient air) up to the filter.

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.



BLOCK DIAGRAM SEQ47/50

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-m³/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 behind the filter, which is currently sampled.

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 m³/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-m³-version
controlled 1,0 and 2,3 m³/h
Deviation from the set point: < 2 %

8-m³-version
controlled 2,3 and 3,0 m³/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. 450 VA (3-m³-version) resp.
approx. 500 VA (8-m³-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. 80 kg (transportable by casters)

Noise level according to DIN 2058 in a distance of 8 m
<< 35 dBA

Subject to alterations Ed. 04/14