

VOPV-7

Very High-Volume Air Sampler



The VOPV-7 high-volume sampler is intended for air sampling of very high volumes allowing for follow-up contamination measurement. It is often utilised for the sampling and evaluation of radioactive aerosols, dust, etc. in the contaminated air.

Purpose

The VOPV-7 Very High-volume Air Sampler is intended for air sampling on filter media with adjustable flow rate. It is used for the sampling and consequent evaluation of radioactive aerosols, dust, and other compounds in the contaminated air.

Considering its high performance, low maintenance demands, and simple operation, the VOPV-7 air sampler can be utilised primarily as a sampling unit in outdoor environmental monitoring stations.

VOPV-7 is available with typical flow rate range 600 to 900 m³/h (353 to 530 cfm) for different applications.

The specific usage depends on the type of filter used. Optionally, it can be supplied with a customized air flow rate range and customized filter holder. The maximum flow rate could be limited by the type and dimension of used filters.

Description

By means of motor speed regulation, the sophisticated airflow control system provides a sustained pre-set air flow, regardless of filter fouling. The air sampler operates continuously for fixed period of time, or so long as required volume is sampled.

The radioactive pollutants retained on the filter can be subsequently analysed in a laboratory and the nuclide specific volume activities can be calculated.

Main Advantages

- Powerful vacuum pump allowing very high volumes of air to be sampled in a very short time; with long lifetime, higher reliability, lower maintenance costs
- Possibility of continuous operation and both indoor and outdoor use
- Regulation of the motor power according to the pressure difference on the filter allowing the flow rate to be constant no matter what the pollution of the filter is
- Easy control
- Optional display of data and control of the unit remotely from a host system



The display of VOPV-7 air sampler

Description

A powerful centrifugal pump with a motor, which is controlled by a micro-processor, is the primary component of the VOPV-7. Furthermore, precise flow-meter via control unit with keyboard and back-light graphic display ensures the required sampling volume.

The current airflow, total sampled volume from system start, sampled volume in selectable time interval, total number of operational hours from start, pressure and temperature of a sampled medium, status and error messages, and the real time can all be clearly seen on the display.

VOPV-7 can work in an autonomous mode (the airflow is controlled by a built-in control unit), or, optionally, can be connected to a host system and controlled by an external PC via RS-232 (or RS-485) interface.

The system is equipped with many sophisticated functions. The control unit provides, amongst others, simple adjustment of the desired airflow, automatically holding the desired airflow, motor overload protection, automatic restart after power supply failure recovery, etc.

Main parts

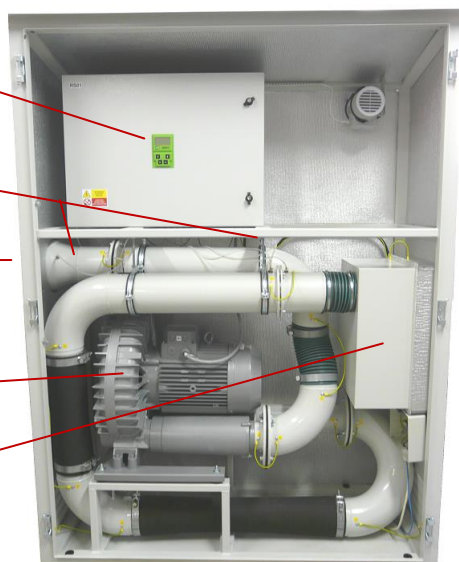
Control block
with display

Differential
pressure
gauge

Medium
input from
filter

Centrifugal
pump

Damper
at output



Aerosol filter
holder with
FPM filter



Specification

Available negative pressure	6 kPa
airflow of 600 m ³ /h (353 cfm)	(45 mmHg)
Standard medium junction	M76x1,5 or hose DN 80 mm
Control display	graphic LCD display 128 x 64 points
Connectivity to host system	RS-485 (Canon 9 pin)
Dimensions	240 x 74 x 220 cm (94½ x 29 x 86½ in)
Weight	app. 500 kg (1100 lb)
Power	3x400 VAC, 50 Hz max. 15 kVA
Protection	IP 43
Medium temperature	-5 ~ +35 °C (23 ~ 95 °F)
Ambient temperature	-5 ~ +35 °C (23 ~ 95 °F)

Models and Accessories

Type	Description
K0709	VOPV-7 High-Volume Air Sampler with one filter holder for filters 120 x 68 cm (47.2 x 26.7 in)
Optional Accessories	
<ul style="list-style-type: none"> ▪ Customized filter holder ▪ Software for remote control 	
Consumable Spare Parts	
K0022-05 K0022-06	FPM Cloth Filter models FPM 1515, FPM 1530 - filtering polymeric cloth
Related Products	
K0215	VOPV-12 Digital High-Volume Air Sampler
K0547	VOPV-10 Digital High-Volume Air Sampler



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