Knowledge Beyond Measure.

Compact Catalytic Vapor Filter

Model CCVF100

Designed to eliminate unpleasant exhaust vapor

Butanol and isopropyl alcohol are common working fluids used in Condensation Particle Counters (CPCs). However, the exhaust of these devices will contain residual hydrocarbon vapors that may, at worst, contaminate a sensitive working environment or at best, generate unpleasant odors.

The Compact Catalytic Vapor Filter CCVF100 is designed to eliminate the hydrocarbon vapors emitted from the exhaust of alcohol-based CPCs, ensuring a clean environment in the vicinity of the instruments.

The CCFV100 uses a catalyst to oxidize the CPC's effluent alcohol vapor and emits it as CO_2 and H_2O gas, much in the same way as catalytic converter in an automobile works. Since the catalyst is not consumed and operates continuously, the CCFV100 eliminates the need for costly and wasteful charcoal filters, which must be changed at regular intervals due to their limited storage capacity and often require disposal as hazardous waste. The CCFV100 has a self-contained control system with safety alarm and indicator, is insulated, and has a built-in cooling coil in the exhaust to ensure continuous operation.

Applications

Catalytic Vapor Filters are useful in a variety of applications due to their ease of use and compatibility with multiple CPC models. A few common applications are listed below:

- Ambient air monitoring (especially when combined with gas sensors)
- Basic and applied aerosol research
- Cleanroom monitoring
- Health effect studies

Features and Benefits

- Excellent removal of hydrocarbon vapors (>99.99% concentration reduction of butanol vapor)
- Compact footprint and easy-to-use with automatic temperature control
- Compatible with all common TSI® butanol or isopropyl alcohol CPC models up to 1.5 L/min
- No consumable parts or user maintenance required
- Status light and alarm built-in for visual and audible feedback should an issue arise
- Highly insulated catalyst and built-in cooling coil to ensure safe surface and exhaust temperatures
- Convenient built-in power switch

Specifications

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Power Consumption
~50 W

Oxidation Efficiency
>99.99% of CPC butanol effluent removal

Maximum Flow Capacity
1.5 L/min

Catalyst Operating Temperature
300°C (non-adjustable)

Input Power Requirements
100-240 VAC, 50/60 Hz (internal power is 24 VDC via included power supply block)

Weight
9.9 lbs and 4,5 kg

Size
138 x 303 x 138 mm

Outlet Temperature at 1 L/min
<60°C

Pressure Drop at 1 L/min
<0.5 kPa

Inlet and Outlet Tube Diameter
1/4 in.

Warm-up Time
<15 min

Carrier Gas
Air or inert gas mixture with 10-21% oxygen

CPC Model Compatibility
377X, 375X series, 3790 series (only one CPC at a time)

Environmental
For indoor use only

Ambient Temperature	10-40°C
Pressure	+200 to -500 mbar relative to ambient
Ambient Humidity	0-95% RH (non-condensing)

Included Accessories
Two hose clamps, 2m vacuum tubing, condensation water trap, user manual, 24 VDC power supply, region-specific power cord

To Order

Specify	Description
CCVF100	Compact Catalytic Vapor Filter

Optional Accessories

Specify	Description
3032	Vacuum pump
3032-EC	Vacuum pump (available in EU only)

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