ALL HEATED, WALL MOUNT SAMPLE FILTER & INTERFACE

PreFilter® MODEL 112WP

Gas emissions analyzers in CEM's or as stand alone are often exposed to heavy soot and dust contamination. Therefore it is necessary to filter the sample gas stream.

The J.U.M. Engineering PreFilter® is a very efficient, all heated and low pressure drop regenerative filter instrument for the removal of solids from a gaseous sample. The Model VE 112 utilizes our long time proven all stainless steel 2µm mesh filter and an electric stainless steel valve. All in a thermostatically controlled oven to prevent the loss of any condensable matter like high molecular weight hydrocarbons and others.

The Model VE 112 can be installed directly at the sampling spot or probe. However, today's typical position is down at the CEM Continuous Emissions Monitoring system. Either in a separate housing or integrated in the system's rack. With our unique sample backpurge system, very typically, no sample filter at the stack probe is needed. During purging, not only the internal sample filter is cleaned, but also the heated sample line between the stack probe and the CEM is rigorously cleaned and freed up from condensable hang up. Such guarantees extended working up times at comparatively low maintenance cost.

A calibration gas inlet offers the ability to test and calibrate a complete sample train including a heated sample line. Our proprietary rear panel adapter plate system allows cold-spot free coupling of a heated sample line inside the heated oven without the need of special tools.

The Model VE 112 is also available in a 19" rack mount case. In 1974, the PreFilter® was our first patented product and is used internationally in many systems.

Features

- Wall mount or panel mount. Easily fits into a purged cabinet for hazardous (Ex) area applications
- One sample inlet, 4 sample outlet, one „FID" sample outlet with the capability to couple the heated sample line inside the heated oven
- Two alternating sample inlets for „In and Out" applications are optionally available
- One Sample to Waste outlet (Bypass)
- All sample wetted components are housed inside the heated chamber
- Oven temperature 190°C (374°F)
- Permanent heated stainless steel sample filter, 2 µm mesh
- Sample filter backpurge system, allows sample filter and sample line to be cleaned in just a few seconds with compressed air or N2 without dismantling
- Programmable automatic sample filter backpurge timer optional
- Remote control for sample, calibrate and filter backpurge modes is standard
- Integrated heated sample pump (two capacity alternatives)

The 112WP is the Complete Sample Interface Solution for a smart CEM: Only a sample cooler, an optional cold pump and the emissions analyzers need to be connected to the 112WP to get a complete, and very compact continuous monitoring system.

Major Applications

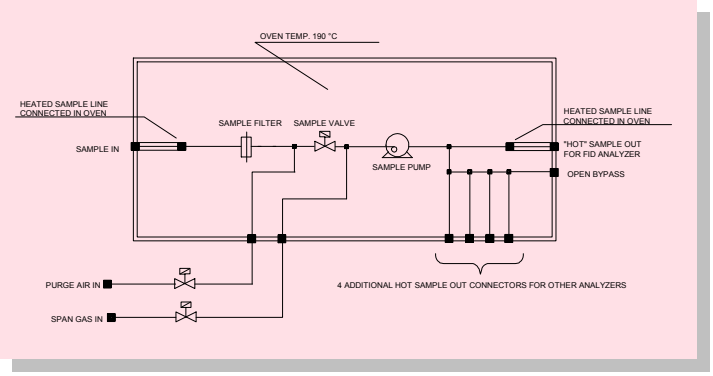
- Stationary or transportable CEMs for stack gas analysis
- Diesel, Gasoline or gas turbine raw exhaust analysis and Stationary diesel engines exhaust analysis
- Removing particles from a gaseous sample where condensation of heavy hydrocarbons is not desirable
- Inlet/ outlet applications on catalytic or thermal combustors

Product Brochure,
PreFilter® Model VE 112WP, english

Technical Data	
Sample filter material	All stainless steel
Filter pore size	2µm
Sample valve(s)	All stainless steel/Viton®
Purge air valve	All brass/Viton®
Calibration gas valve	All brass/Viton®, or to be specified
Sample pump	All stainless steel/Viton® diaphragm
Sample pump Capacity	12 l/min, unrestricted flow @ working temperature
Oven Temperature	190°C (374°F), electronic temperature controller
Oven Temperature Output	0-5 VDC @ 10mV/°C
Power Requirements	230VAC/50Hz, 1250W (115VAC/60Hz, 850W)
Ambient Temperature	5-43°C (41-110°F)
Dimensions (width x depth x height)	445 mm x 460 mm x 221 mm (h = 132 mm for VE 112A)
Weight	25 kg (55 lb.)
	Viton® is a registered trademark of DuPont Dow elastomers

Available Options	
APO 12	Built in automatic programmable backpurge timer for the sample filter; EXTERNAL MODULE ONLY ON VE 112A!
DSI 12	Two alternating sample inlets for applications where measurements before and after an emission source are needed.
EPC 12	Remote control for sample pump. Pump can be switched on and off externally if Instrument is in external mode.
PP 15	Internal heated sample pump, capacity 15 liters/minute unrestricted flow @ operating temperature; NOT AVAILABLE ON VE 112A!
PP 25	Internal heated sample pump, capacity 25 liters/minute unrestricted flow @ operating temperature; NOT AVAILABLE ON VE 112A!
TPR 12	External temperature controller for J.U.M. heated sample lines Model TJ 100 and TJ 100A

J.U.M. Engineering is offering a wide variety of stationary heated sample filters and filter/sequencers which can be tailored to your specifications.



The VE 112 is the ideal and most economical „All in One“ sample interface solution for stack gas emissions applications. Eventually a sample cooler is needed for „cold“ analyzers (CO, CO2, SO2, NO and others, Add your analyzers and sample cooler and extracting analyzers to the existing sample outlets to build a complete heated Continuous Emissions Monitoring System No stack probe filter is needed. The 112's are best suited for mobile systems!

J.U.M.® Engineering G.m.b.H.
Manufacturing, R&D, Distribution & Service

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