

PRINCIPLE OF OPERATION

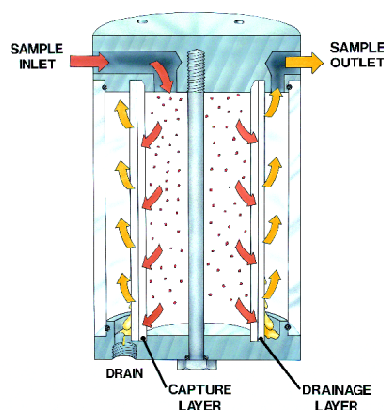


Figure 1 - Illustration

FF-250™ Series Filters may be connected for particulate only or for coalescing and particulate filtration. It will remove liquid droplets and particles down to 0.1 micron with an efficiency of 95% or greater. The thick, high capacity borosilicate glass and Teflon filter element will uniformly drain coalesced liquids to bottom of housing, where they can be evacuated through the 1/8" NPT drain port.

Coalescing filtration is achieved by forcing gas stream through the inside of the filter element. Figure 1 shows the flow path in a coalescing application. In this mode, small aerosol particles are forced together as they pass through the fine inner layer of the filter element. Larger drops created in this process begin to fall out of the gas stream due to their mass. The coarse drain layer on the outside of the filter element assists this physical separation.

When used in a particulate-only application, the filter can be installed so that the gas stream fills the filter shell first then is forced through the element. Captured particulate collects on the visible, outside surface of the element. This allows visual determination of the element condition.

FF-250™ is a Trademark of Perma Pure LLC, Kynar® is a Registered Trademark of Elf Autochem North America, Hastelloy is a Registered Trademark of Haynes International, Teflon® is a Registered Trademark of E.I. DuPont.

Bulletin 221

FF-250™ Series Filter

User Manual



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FILTER SPECIFICATIONS

Description	Specification
Top and Bottom Materials	316 SST or Kynar®
Shell Material	Borosilicate Glass or 316 SST
Maximum Temperature	Shell: Kynar 120°C, SST 230°C
Maximum Pressure	30 PSIG
Dimensions	2.5" dia. X 4.0" h
Inlet, Outlet and Drain Ports	1/8" NPT Female
Center Bolt	1/4-20 x 3.25", Hastelloy® C276

INSTALLATION

All ports are 1/8" NPT female. To use filter as a particulate filter, connect sample to port aligned with hole on underside of top cap. (Refer to Figure 4)

To use as a coalescer, have sample flow inside filter element by connecting sample inlet to other port.

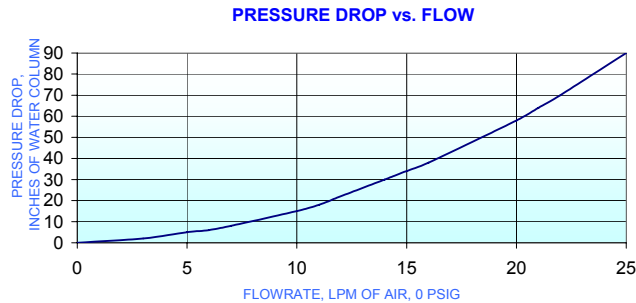


Figure 2 - Pressure Drop Curve

PERFORMANCE

FF-250 filters will remove liquid droplets and particles down to 0.1 micron with an efficiency of 95% or greater.

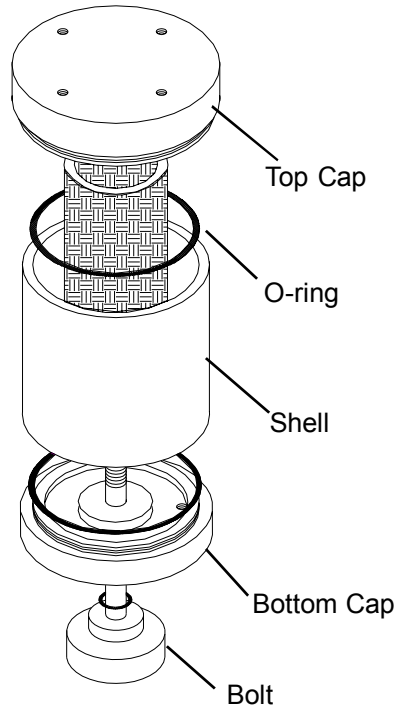


Figure 3 - Exploded View

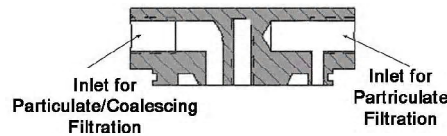
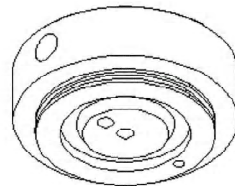


Figure 4 - Top Cap

REPLACING FILTER ELEMENT

FF-250 filter should be checked regularly to ensure element is in good condition. If filter element appears to be dirty or begins to cause flow restriction in system, it should be replaced.

1. Loosen bolt on bottom of filter housing.
2. Pull assembly apart and remove element.
3. Install glass shell onto bottom piece - a slight twist may be necessary to get the shell over the o-ring.
4. Place the new element into grooves in top and bottom of housing.
5. Assemble top to shell assembly.
6. Make sure the element is seated correctly in top groove.
7. Replace bolt through bottom piece and screw into top piece. Tighten just enough so it does not vibrate loose.

PART NUMBERS FOR REPLACEMENT

Part Number	Qty	Description
FF-250-E-2.5G	1	Replacement Filter Element
FF-250-3	1	Replacement O-Rings, Set of 3