PECO Model 55VX

Installation and Operating Instructions

XTREAMPURE®
VERTICAL LIQUID FILTER

A. GENERAL DATA

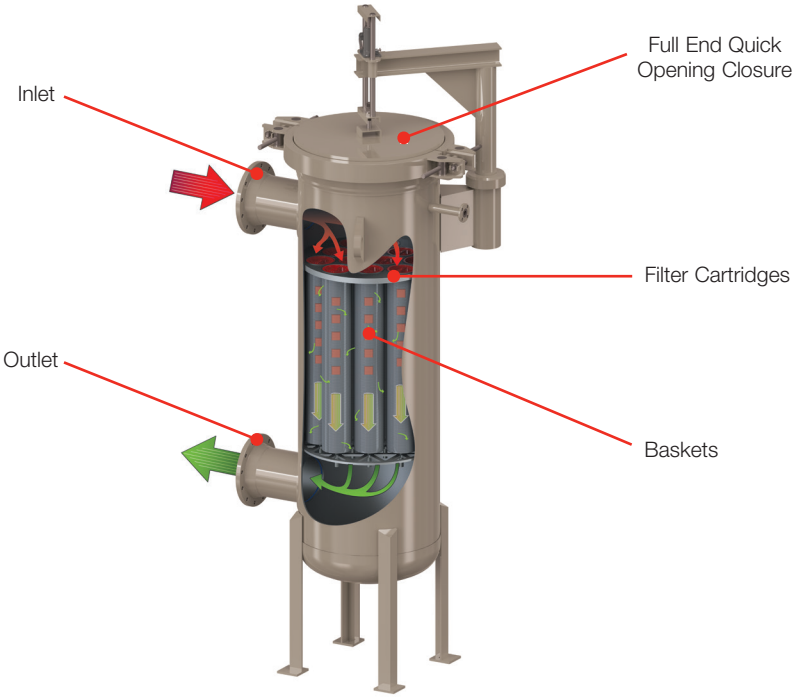
The XtreamPure® Model 55VX horizontal filter vessel is designed for particulate removal from a liquid stream. It is available in all major design codes and certifications from 10” through 84” diameter sizes. **The initial cartridges will be shipped separately outside the vessel and will need to be installed prior to startup.**

The vessel is a single stage design with baskets welded into a cartridge support plate that the replaceable filter cartridges are installed inside of. A quick-opening closure is provided on the vessel in order to changeout cartridges.

The cartridges in the vessel will become dirty or “spent” as solids collect on the cartridge. As this happens the differential pressure across the inlet and outlet flange connections of the vessel will begin to increase. The vessel should be serviced once the cartridges have reached the recommended change-out differential pressure. At that point the vessel should be taken off-line and the spent cartridges should be replaced with clean cartridges according to the procedure below.

Installation and operation should be undertaken in accordance with all plant safety procedures and standard operating procedures of the end user by authorized personnel only. If any difficulties are experienced during installation or in operation, consult Parker directly at (940) 325-2575 or your authorized, local Parker representative/distributor for assistance.

B. GENERAL ARRANGEMENT / FLOW



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C. INSTALLATION INSTRUCTIONS

1. Position the filter vessel on a flat surface and ensure there is adequate space above the closure to allow room to install/remove cartridges and for venting.

2. Connect inlet and outlet connections of filter vessel to piping of equal diameter. Check the filter vessel drawing to identify the location of each. It is recommended that the filter vessel be installed with by-pass and block valves to permit continued operation during cartridge changes.

   ⚠ **Check to ensure that all blind flange bolting is properly torqued. Flange bolting is torqued at the factory, however may relax or loosen during shipment to the installation site.**

3. Close inlet and outlet connection valves.

4. Open the vent valve.

5. The blow-down connection should be valved and piped to a pit, tank, or blow-down system.

6. Two pressure taps are furnished on the vessel. It is extremely important that an accurate differential pressure gauge be installed on the vessel. Pressure drop is the only indicator that the operator has to tell him/ her when the filter vessel should be blown-down or by-passed to change the filter cartridges.

7. Open the filter vessel closure **(according to closure manufacturer's procedures)** and inspect the inside of the vessel. Verify the internals have not been damaged and that the gasket for the closure is in place. Verify the cartridges are seated properly in the basket support and that the cartridge seals are fully engaged.

8. Cartridge installation: This particular model uses the PECO brand "XP" cartridges that are a tool-less design. Grab the handle on the open end of the cartridge and slide the closed end of the cartridge first inside of the basket welded to the support plate. Ensure the chevron gasket seal on the cartridge seats properly inside the basket lip.

9. Inspect the closure gasket to make sure it is new and in good condition. Make sure it is seated in the closure groove correctly.

10. Close the closure **(according to closure manufacturer's procedures).**

11. Prior to filling the filter Vessel with process fluid, verify that the operating pressure and temperature are within the design limits of the filter Vessel. The design conditions can be found on the filter Vessel nameplate.

12. Review and follow all operating company safety procedures for filter operation.

13. Follow all operating company safety and lockout/tag-out procedures.

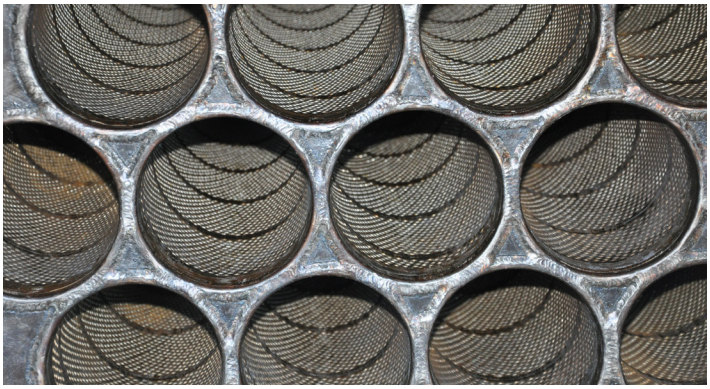
14. Verify that inlet and outlet connection valves are closed and that vent valve is open.

15. **Slowly and partially** open the inlet connection valve and introduce the process fluid stream into the filter Vessel. Allow fluid to purge air from the filter Vessel through the vent valve. Displaced gas may be hazardous depending on the liquid so take proper care when venting.

16. The filter Vessel is full once the process fluid comes out of the vent valve. Close vent valve.

17. Check for leaks. Should a leak occur, close inlet valve immediately and determine cause of leak.

    ⚠ **Make sure to fully drain and depressurize the vessel prior to attempting to fix the leak.**



D. OPERATING INSTRUCTIONS

1. Once the filter Vessel is full of fluid and no leaks are found, open the inlet valve all the way.

2. Slowly open the outlet connection valve and begin flow through Vessel. Flow should be set based on recommended flow rate provided during sizing.

3. Slowly open the vent valve to check for trapped gas once again. If gas continues to build up in the top of the filter Vessel, an automatic vent valve should be installed.

4. Monitor differential pressure across the inlet/outlet. The filter is typically designed for 2 psid (0.14 bar) or less differential pressure at start-up at normal operating conditions.

5. As the cartridge loads with solids, the differential pressure across the filter Vessel is expected to increase. The cartridge should be replaced when the differential pressure reaches 35 psid (2.4 bar) at normal operating pressure or every year, whichever comes first.
   - Do not backflow the filter Vessel. A high velocity flow inside the cartridges could cause damage or cause the cartridge seal to become disengaged.
   - Do not clean the filter Vessel with steam with the cartridges still installed. Make sure cartridges are removed prior to any steaming performed.

E. MAINTENANCE INSTRUCTIONS – CHANGING SPENT CARTRIDGES

1. Review all operating company safety procedures prior to cartridge replacement operations.

2. Follow all operating company safety and lockout/tag-out procedures.

3. Open filter bypass valve (if available) and then isolate the filter Vessel by closing the inlet and outlet connection valves.

4. Bleed off the pressure by opening the filter Vessel drain valve, followed by the blow-down connection or vent valve.

   Ensure that the filter vessel is drained and pressure is at atmospheric pressure prior to proceeding.

6. Open the closure **(according to closure manufacturer's procedures).**

7. Remove dirty (spent) cartridges.

   Dispose of spent cartridges in accordance with plant procedures and applicable laws and regulations for disposal in your area.

8. Inspect and clean the filter Vessel as needed. Make sure all debris is cleaned from the cartridge sealing surfaces. Make sure no cartridge gasket seals have been left in Vessel during cartridge removal. If any Vessel damage is found notify Parker immediately. Do not operate Vessel until damage is fixed.

9: Install the new cartridges. Grab the handle on the open end of the cartridge and slide the closed end of the cartridge first inside of the basket welded to the support plate. Ensure the chevron gasket seal on the cartridge seats properly inside the basket lip.

   The use of original OEM cartridges is highly recommended to ensure the best overall performance of the filter. Replacement cartridges can be ordered through your local Parker distributor. The cartridge Item Number and Model Description can be found in the Manufacturer's Data Book supplied with your vessel.

10. Install a new closure gasket.
    The use of original closure manufacturer's gasket is highly recommended to ensure the best overall performance of the filter. Replacement gaskets can be ordered through your local Parker distributor. The closure gasket Item Number and Model Description can be found in the Manufacturer's Data Book supplied with your vessel and also on the Vessel nameplate.

    Installation of a new closure gasket during each cartridge change is highly recommended.

11. Close the closure **(according to closure manufacturer's procedures).**

12. Make sure vent valve is open.

13. Make sure inlet and outlet valve are closed.

14. **Slowly and partially** open the inlet connection valve and introduce the process fluid stream into the filter vessel. Allow fluid to purge air from the filter Vessel through the vent valve. Displaced gas may be hazardous depending on the liquid so take proper care when venting.

15. The filter Vessel is full once the process fluid comes out of the vent valve. Close vent valve.

16. Check for leaks. Should leak occur, close inlet valve immediately and determine cause of leak.
    Make sure to fully drain and depressurize the vessel prior to attempting to fix the leak.

17. Once the filter Vessel is full of fluid and no leaks are found, open the inlet valve all the way.

18. Slowly open the outlet connection valve and begin flow through Vessel. Flow should be set based on recommended flow rate provided during sizing.

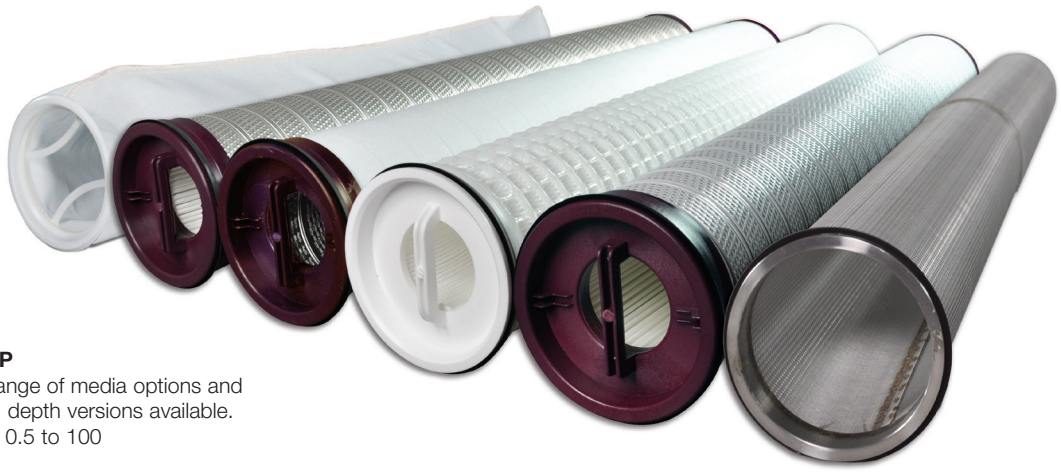
19. Slowly open the vent valve to check for trapped gas once again. If gas continues to build up in the top of the filter Vessel, an automatic vent valve should be installed.

F. SUMMARY DATA

Recommended Cartridge Change-out Differential Pressure:
35 psid (2.4 bar)

Maximum Cartridge Differential Pressure at Collapse:
50 psid (3.4 bar)

Note: The following pressure information is provided as a minimum guideline. Due to the variety of cartridge models that can be used in vessel, it is strongly suggested to refer to the specific cartridge data sheet for further detailed pressure information. To prevent damage, never exceed the maximum allowable differential pressure of the cartridge support plate in the vessel.



Cartridge Series XP
Available in a wide range of media options and lengths. Pleated and depth versions available. Micron Ratings from 0.5 to 100

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