

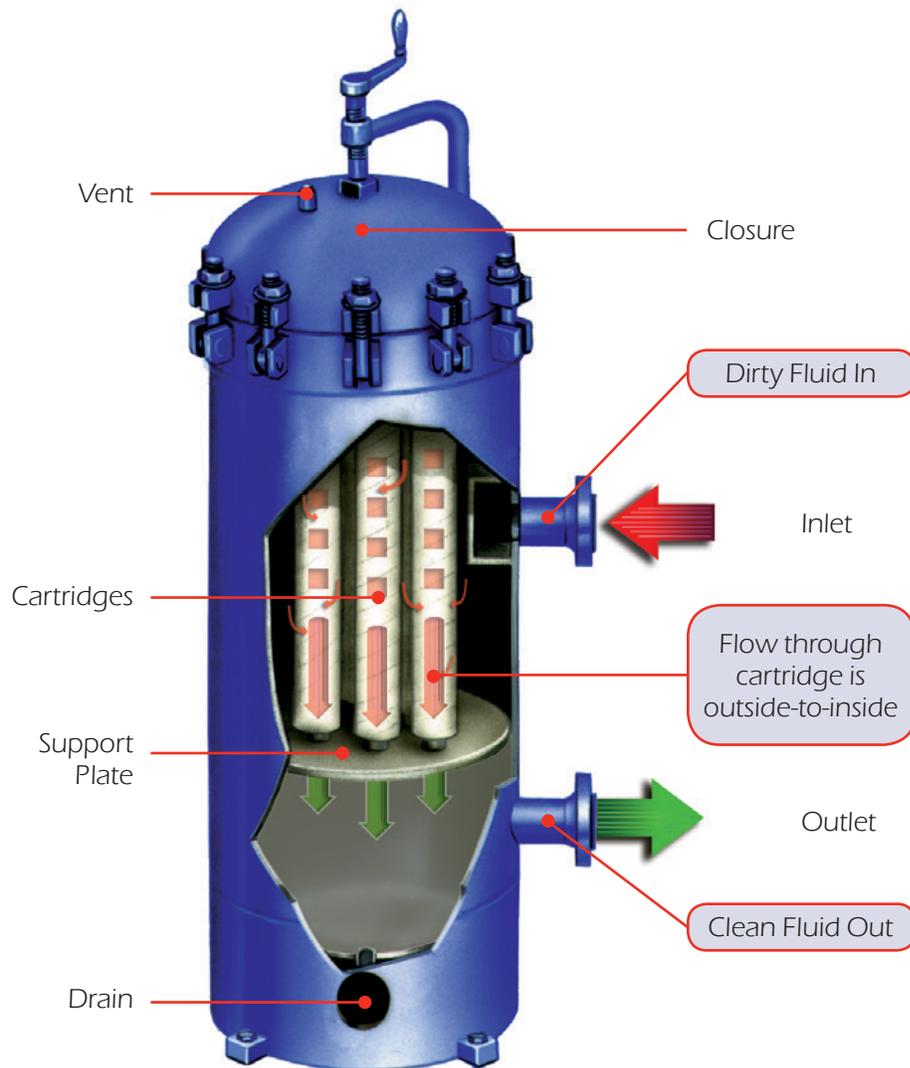
Model 55 Vertical Liquid Filter Installation and Operating Instructions

GENERAL DATA

The PECOFacet Model 55 filter housing is a robust, vertical design that uses 2.5" or 3" diameter cartridges to remove particulate from a liquid stream. Housings have diameter ranges from 6" through 72" and come standard with 1/8" corrosion allowance, all major design codes and certifications, Quick Opening PECOFacet Swing-Bolt Closures, and easy to use closure davits. Other closure designs are available upon request. Flow rates up to 4,775 gpm and design pressures through 10,000 psi are available. A variety of cartridge types can be used in the housing depending on your application needs.

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 PECOFacet direct at (940) 325-2575 or your authorized, local PECOFacet representative/distributor for assistance.

GENERAL ARRANGEMENT / FLOW



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A. INSTALLATION INSTRUCTIONS

1. Position the housing on a flat surface and ensure adequate space above the closure to allow room to remove cartridges.
2. Connect inlet and outlet connections of filter housing to piping of equal diameter. Check the filter housing drawing to identify the location of each. It is recommended that the filter housing be installed with by-pass and block valves to permit continued operation during cartridge changes.
3. Close inlet and outlet connection valves.
4. Hook up any auxiliary equipment as required, such as differential pressure gauge.
5. Open the filter housing closure and inspect the inside of the housing. Verify the internals have not been damaged and that the o-ring for the closure is in place.
6. Open the closure in accordance with closure opening/closing procedure.
7. Cartridge installation:
 - a. In most instances the cartridges will ship from the factory already installed in the housing. In this case you will need to verify housing condition and inspect to make sure all cartridges are still sealed/seated correctly and are in place so no bypass occurs.
 - b. If cartridges were shipped separately from the housing you will need to install the cartridges. Slide open end of cartridge over riser post and center on riser seat. If cartridge is open ended on both sides, install reusable cap and spring to top of cartridge.
 - c. Cartridge sealing is typically done using springs that get compressed by the compression plate in the swing bolt closure. Two options are available: *option 1* the spring is attached to the cartridge and disposed of with the spent cartridge; *option 2* the spring is reusable and comes separate from the cartridge. When using option 2 it is important to make sure none of the springs tip over or fall off when putting the compression plate against the springs.
8. Inspect the closure gasket to make sure it is new and in good condition. Make sure it is seated in the closure groove correctly.
9. Close the closure in accordance with closure opening/closing procedure.
10. Prior to filling the filter housing with the fluid, verify that the operating pressure and temperature are within the design limits of the filter housing. The design conditions can be found on the filter housing nameplate.
11. Review all operating company safety procedures for filter operation.
12. Follow all operating company safety and lockout/tag-out procedures.
13. **Slowly** open the inlet connection valve and introduce the fluid stream into the filter housing. Fill the housing with fluid and bleed off any trapped air or off gas using the vent valve on the closure. Take proper caution when venting as some displaced off gas may be hazardous.
14. The filter housing is full once the fluid comes out of the vent valve. Close the vent valve and carefully check the filter housing for leaks. Should a leak occur, shut off flow to housing immediately and determine cause of leak.

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B. OPERATING INSTRUCTIONS

1. Once filter housing is purged of air or off gas and no leaks are found, open the inlet valve all the way.
2. **Slowly** open the outlet connection valve and begin flow through housing. Flow should be set based on recommended flow rate provided during sizing.
3. Continue to monitor venting of trapped air or off gases as needed to prevent vapor lock in housing.
4. Monitor differential pressure across the inlet/outlet. The filter is typically designed for 2 psid or less differential pressure at start-up at normal operating temperature. Filter cartridges should be replaced when the differential pressure reaches 20 psid at normal operating temperature or every six (6) months, whichever comes first.
Note: Due to the variety of cartridge types that can be used in the Model 55, be sure to check the cartridge data sheet for the specific recommended change-out pressure and collapse pressure of the specific cartridge you are using. Failure to change cartridges at recommended pressure could result in cartridge collapse and contaminant bypass.
5. If no noticeable pressure drop occurs in six (6) months, the filter housing should be taken off line and the cartridges should be inspected for possible bypass or damage.

Pressure gauges are an optional feature supplied by the manufacturer. If the differential pressure builds up quickly, check the vent valve for additional trapped air or off gas and vent as needed. If air or off gas continues to build up in the top of the filter housing, an automatic vent valve should be installed.

C. MAINTENANCE INSTRUCTIONS – CHANGING CARTRIDGES

1. Review all operating company safety procedures prior to cartridge change-out operations.
2. Follow all operating company safety and lockout/tag-out procedures.
3. To replace the filter cartridges, stop all flow to the housing by closing the outlet and inlet connection valves.
4. Open the closure vent valve to relieve any pressure on the housing.
 **CAUTION: ENSURE THAT THE FILTER HOUSING PRESSURE IS AT ATMOSPHERIC PRESSURE PRIOR TO PROCEEDING.**
5. Open the drain connections and drain the fluid from the filter housing completely before opening the closure. Care must be taken as the fluid may be hazardous due to its contents, pH or temperature. Dispose of fluid based on plant procedures. **UNDER NO CIRCUMSTANCES IS THE CARTRIDGE TO BE REMOVED UNTIL THE PROCESS FLUID IS DRAINED FROM THE FILTER HOUSING.**
6. Open the closure in accordance with closure opening/closing procedure.
7. Remove spent (used) cartridges and dispose according to plant procedures.
8. Inspect and clean the filter housing as needed. If any damage is found notify PECOFacet immediately. Do not operate housing until damage is fixed.
9. Install new cartridges and ensure proper sealing on the riser post and seat.
10. Install new closure gasket and close the closure in accordance with closure opening/closing procedure. **INSTALLATION OF A NEW CLOSURE GASKET DURING EACH CARTRIDGE CHANGE IS HIGHLY RECOMMENDED.**
11. Slowly open the inlet connection valve and introduce the fluid stream into the filter housing. Fill the housing with fluid and bleed off any trapped air or off gas using the vent valve on the closure.
12. Check filter housing for leaks.
13. Repeat operating instructions in section B.

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Disposal of spent (used) cartridges: Dispose of spent (used) cartridge in accordance with applicable laws and regulations for disposal in your area.

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

D. SUMMARY DATA

Recommended Cartridge Change-Out Differential Pressure.....20 psid*
Maximum Cartridge Differential Pressure at Collapse.....50 psid*

* The following pressure information is provided as a minimum guideline. Due to the variety of cartridge types that can be used in the Model 55, it is strongly suggested to refer to the specific cartridge data sheet for further detailed pressure information to determine if higher pressures can be reached. To prevent damage, never exceed the maximum allowable differential pressure of the cartridge support plate in the housing.

Be sure to register your PECOFacet housing/vessel at
<http://www.pecofacet.com/Resources/Housing-Registration> to receive important product notifications.
You will need the Vessel Serial Number located on the nameplate on the outside of the housing.