

Warning

A filter housing is a pressure vessel, it must never be used above its stated maximum allowable working pressure and must be used within its stated temperature range. Ensure that these items are used in well-designed piping systems with suitable indicators to warn users and servicing personnel of the presence of pressure and high temperatures, wherever possible use pressure-limiting or safety devices. The pressure rating of the housing is reduced at higher temperatures and Classic Filters should be consulted for more information.

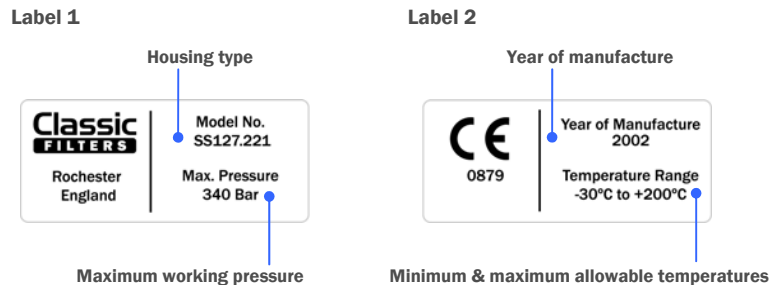
It is the responsibility of the user to ensure that the materials of construction of the filter housing, seal and filter media are suitable for the intended application. During servicing, a visual inspection must be made of the surfaces of the housing for signs of corrosion, erosion or general wear. The housing must be removed from service if any of these signs are evident as no corrosion allowances used in the design of these filters. It is not recommended that these filters be used on unstable fluids.

When installing the filter housing the user must take into account the following items -

- Static pressure and mass of contents
- Traffic, wind and earthquake loading
- Reaction forces and moments resulting from mounting
- Corrosion, erosion and fatigue
- Decomposition of unstable fluids.
- External fire.

Explanation of the Housing Labels

The filter housing will have one or two labels. If the housing falls within the Sound Engineering Practice (SEP) category of the Pressure Equipment Directive 97/23/EC then only Label 1 will be used. All other housings will have both Label 1 and Label 2.



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Installing the Filter Housing

As the filter housing is a pressure vessel the system connections and accessory outlets must be leak tight. It is normally good practice to use a pipe sealant on the fittings prior to connecting to the filter housing ports. This will allow disassembly at a later time, if required. Any sealant such as PTFE tape, paste or other compound may be used if compatible with the filtered media. The torque value of the fittings will depend upon the quality of the fittings and the type of sealant used but should typically be between 40Nm and 75Nm. Ensure the fittings get inspected during servicing and re-tightened if necessary.

Particulate Duty - If the filter housing is being used to remove solid particulates from a gas or liquid, the flow direction through the filter element should be from outside-to-inside direction. Most housings have an arrow showing the correct direction. If the ports on the housing are numbered, port 1 is the inlet, and port 2 the outlet.

Coalescing Duty - If the application is coalescing (removing liquids from gases) install the housing so the flow is in the opposite direction, inside-to-outside through the filter element. In this case port 2 is the inlet, and port 1 the outlet. Suspended liquids in the air or gas will be coalesced and then drain from the outside of the filter element into the bowl of the housing. The liquid may be removed with manual or automatic drains.

When installing filter housing and elements care should be taken to ensure the head and bowls are kept as a pair. It is not recommended that heads and bowls from different filter assemblies be swapped. Wherever possible, installation of filter housings should be made using an appropriate mounting bracket to avoid excessive loads on the piping.

Installing the Filter Element

Ensure there is no pressure in the housing. Remove the bowl, element retainer and filter element. Disposable and sintered PTFE filter elements are sealed by compression against a flat surface. Seals are not required between the filter element and components of the housing. The stainless steel elements use a seal at each end. The element is located by guides which fit the inside diameter of the tube at each end. In most housing the element is sealed by tightening a threaded element retainer.

The filter tube is securely sealed by tightening the element retainer a 1/4 to 1 turn after it first contacts the filter element, the amount will depend on the housing type and element size. A mark on the end of the retainer is used as a guide. Before replacing the housing bowl ensure that the mating threads and sealing faces are clean and damage free. It is recommended that the threads and sealing faces are lubricated with a small amount of silicone grease before assembly.

Important Information

Stainless steel housings fitted with a solid PTFE gasket the bowl should be tightened to a torque of between 30Nm and 40Nm.
 For housings fitted with High Temperature Seal refer to instruction CFF77 – Installing High Temperature Seal.

Service Intervals

A disposable microfibre filter element continues to filter at its original efficiency as long as it is kept in service. The life of the element is determined by the increase in flow resistance caused by trapped solids in the element. The element should be changed when the flow falls below an acceptable level, or the pressure drop becomes too high. In any case the element should be replaced before the pressure drop across it reaches 0.7 Bar. The disposable microfibre filter elements cannot be cleaned as the solids are trapped within the depth of the element not on the surface. Ensure that gaskets are changed at suitable intervals. The interval time will depend on service and operating conditions, but it should be at least every three months.

Other Information

Please contact Classic Filters Ltd. if you need any other information.