

SPECTRUM Inox Multiround Stainless Steel Cartridge Housings

Instruction Scope

This document provides the necessary information to ensure the correct installation, operation and maintenance procedures for the removal and change out of various multiround filter housings. For safety and environmental protection reasons, the safety instructions given in this document must be strictly followed. Although these instructions offer a reference to correct practices for a range of products, some system installations will not be included. The person installing or maintaining the equipment should have the following:

- Sufficient training in filter cartridges and housings
- Knowledge of water and filtration system installation
- Suitable plumbing skills

When to change a filter cartridge

Regular maintenance and/or replacement of a filter cartridge is recommended to ensure that the system's integrity is preserved and remains effective. The following parameters should be used to determine when the cartridge should be replaced:

Parameter/Instrument	Detail
Differential Pressure/PG3	When the differential pressure is greater than 2 bar (30psi)
Filter capacity	When the calculated or approximate volume or daily capacity of the filter has been reached.



Maximum Operating Parameters

Housing Type	Maximum Operating Parameters	
	Pressure (bar)	Temperature (°C)
SFH-SPC (V-band clamp)	10	120
PFH-SPC (Swing bolt)	10	120

Installation & Cartridge changeout

Tools required:

- Protective/waterproof clothing and gloves.
- Safety glasses.
- Cloths/mop/bucket for any spillages.
- Suitable container for liquid drained from the system.
- Food grade lubricant (such as DOW corning or petroleum jelly).
- Soapy warm water.
- Clean, warm water for rinsing.
- Application suitable fluid for sanitising such as unscented bleach (5.25% Sodium Hypochlorite).
- Replacement cartridge(s).

Personnel

Only qualified and professional personnel, with the relevant training and experience are recommended to carry out the necessary work. Knowledge of the applicable regulations, safety rules and operator considerations are required prior to installation.

Pre-installation checks

Before starting work please check the following:

- Ensure that there are no signs of damage to the packaging and that the product has not come into contact with liquid or any external contamination during transport, storage or handling.
- Make sure the incoming water line has been turned off and depressurised.
- The workspace is clear of any obstructions or electrical hazards.
- All protective packaging has been removed before cartridge installation.

Full product specification: including minimum operating temperature, recommended changeout pressure drop and maximum flow rates can be found on the relevant product datasheet available from our website.

Procedure

NOTE: If installing filter cartridges for the first time in a new system, follow steps 1, 4, 5 and 8 onwards.

1. Close the stopcock or turn off the incoming feed supply.
2. Depressurise the housing using a pressure relief valve or vent, if present, or by opening an outlet downstream of the system.

You must ensure the housing is fully depressurised before releasing the clamp/swing bolt mechanism to avoid product damage or personal injury.

3. Drain any remaining liquid in the housing through the drain port, if present.
4. Open/remove the filter housing lid.
5. If present, remove the cartridge top plate and nut(s) (see Image 1) and if also present the individual cartridge springs and put to one side (see image 2). Ensure these components are cleaned with warm soapy water, sanitised with diluted bleach and rinsed with clean water before reinstalling within the housing.
6. Remove the used cartridge(s) from the housing and dispose of in accordance with company and local authority guidelines.
7. Remove the housing O-ring and wipe both the O-ring groove and O-ring clean. Put the O-ring to one side ensuring this is kept clean before reinstalling within the housing.
8. Clean and sanitise the interior of the housing with warm soapy water, then with a diluted bleach solution or application suitable fluid, wipe the inside of the housing with a non-abrasive cloth. Ensure the housing is finally rinsed with warm, clean water and again drained as required.
9. Inspect the housing O-ring for any damage, such as nicks, cuts, swelling, twists or distortions and replace with a new O-ring if necessary, which is compatible with the solution being filtered (contact housing supplier for information regarding replacement O-rings).
10. Re-lubricate the housing O-ring with a small even coating of food grade lubricant (or petroleum jelly) and place back into the O-ring groove ensuring the O-ring is seated correctly.
11. Remove all cartridge packaging before installation. Make sure that the correct filter cartridges are in the correct housings.

NOTE: Generally, the larger micron rating cartridges should be situated upstream of lower micron ratings.

12. When installing cartridges avoid any cross contamination by using clean gloves. Ensure that the O-ring seal/gasket of the cartridge, if present, is correctly fitted. If using a double-open ended (DOE) cartridge, ensure that a knife edge seal is formed between the housing and the gasket/cartridge media at each end of the filter. Once you are sure the cartridge is secure continue to fit additional cartridges as required.
13. Refit the individual cartridge springs (if required for DOE and closed recessed end-caps) in the correct orientation ensuring a secure knife edge seal with each cartridge. Once the springs are installed, fit the top plate ensuring that the top of each spring is located through the holes in the top plate and secure with a nut on each of the threaded rods that are also showing through the top plate. Ensure the plate is securely screwed down which in turn will apply enough pressure to the top of the springs/cartridge(s) ensuring a positive secure seal at the base of the housing. Be careful not to overtighten the top plate nut(s) as cartridge damage may occur.
14. Add the lid back on to housing, ensure it is seated centrally and secure.
 - i) SFH-SPC housings utilise a V-band clamp for closure. Wrap the clamp around the head and sump join and push together. Place the end of the T-bolt device into the recess on the clamp and tighten.
 - ii) PFH-SPC housings utilise swing bolts for closure. Ensure the lid and sump are lined up so the swing bolts (attached to the sump) locate into the recesses on the lid. Tighten the swing bolts in place.
15. Slowly turn the liquid supply back on, allow the system to fill and check for leaks. If a leak is detected check that the lid/sump is secure enough. If this does not solve the leak remove the lid and check the seating of the O-ring/seal. Air can be purged from the system using the vent, or by slowly opening an outlet downstream of the system.
16. Flush the cartridge(s) thoroughly by discarding the liquid passed through the system during the first 5-10 minutes of start-up or until the liquid runs clear.
17. The system is now ready to use.

Appendix

Image 1



Cartridge hold down plate
(top plate)

Image 2



Cartridge locator spring