

Filters



RFL Cast Series

Service and Parts

up to 343 gpm (1300 l/min), up to 580 psi (40 bar)

1. Maintenance

1.1 General

Please follow the maintenance instructions.

1.2 Installation

Before installing the filter into the system, check that the operating pressure of the system does not exceed the permitted operating pressure of the filter.

Refer to the type code label on the filter.

Filters must be flexibly mounted and not installed rigidly to the floor or used as a pipe support. When installing, ensure that system forces cannot be transferred to the filter. A filter with a stand may only be installed to the ground if there is no compensator, expansion loop or similar device installed in the line.

1.3 Commissioning

Check that the correct filter element is installed, replace cover plate and tighten cover plate screws alternately. Switch on the hydraulic system and vent filter.

1.4 Maintenance Tools

| Size | Vent screw | Int. Hex | Ext. Hex |
|------|------------|----------|----------|
| 661 | VR 0 A.0 | – | Hex 19 |
| 851 | VSTI G ½ | Hex 10 | – |
| 951 | VR 0 A.0 | – | Hex 19 |
| 1301 | VSTI G ½ | Hex 10 | – |
| 1321 | VR 0 A.0 | – | Hex 19 |

| Size | Cover plate bolts | Int. Hex. | Torque value Nm [ft-lb] |
|------|-------------------|-----------|-------------------------|
| 661 | M16 x 30 | Hex 14 | 150 [111] |
| 851 | M16 x 30 | Hex 14 | 150 [111] |
| 951 | M20 x 40 | Hex 17 | 250 [184] |
| 1301 | M20 x 40 | Hex 17 | 250 [184] |
| 1321 | M20 x 40 | Hex 17 | 250 [184] |

1.5 Torque Values

| Type | Torque Nm[ft-lb] |
|--------------------------|------------------------------------|
| VM/VD clogging indicator | 33 [24]/100 [74] |
| Bowl/Lid or end cover | Do not Torque (See 1.3 and 2.2) |

| Size | Vent Plug | Drain Plug | Int. Hex | Torque Value Nm[ft-lb] |
|-----------|-----------|------------|----------|------------------------|
| 661 | VSTI G1/2 | | Hex 10 | 80[59] |
| 851 | | VSTI G1/4 | Hex 6 | 30[22] |
| 951 | VSTI G1/2 | | Hex 10 | 80[59] |
| 1301-1321 | | VSTI G1/4 | Hex 6 | 30[22] |

2. Element Replacement

2.1 Element Removal

1. Switch off hydraulic system
2. Loosen vent screw to release pressure. Open oil drain plug and drain contaminated oil into a suitable container. The oil must not be put back into the system unless it is cleaned.
3. Loosen cover plate bolts and lift off the cover plate.
4. Pull out filter element (with contamination retainer, if present) by the handle. Examine element surface for dirt residues and larger particles since these can be an indication of damage to components.
5. Remove contamination retainer (if present) by turning counter-clockwise – bayonet fitting.
6. Replace or clean filter element(s) (only W/HC and V elements can be cleaned).
7. Clean housing, cover plate and contamination retainer.
8. Examine filter, especially sealing surfaces, for mechanical damage.
9. Check O-rings – and replace if necessary. Check O-rings – and replace if necessary

2.2 Element Installation

1. Lubricate the sealing surfaces on the filter housing and cover plate, as well as the O-ring, with clean operating fluid.
2. When installing a new filter element, check that the designation corresponds to that of the old element.
3. If present, install the contamination retainer onto the new or cleaned filter element by turning clockwise.
4. Place filter element carefully on to the element nozzle in the housing.
5. Re-position cover plate and screw in cover plate bolts by hand. Tighten alternately (see TORQUE VALUES).
6. Switch on hydraulic system and vent filter at a suitable point in the system.
7. Close vent plug and check filter for leaks.

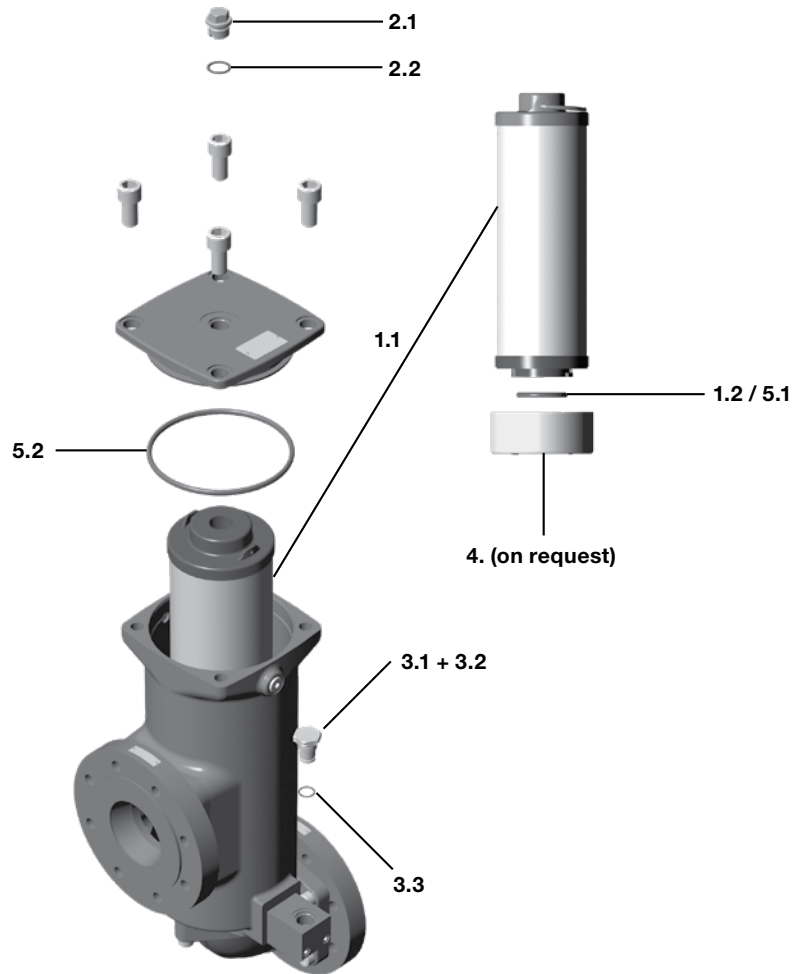
NOTE:

Filter elements which cannot be cleaned must be disposed of in accordance with environmental protection regulations.

FILTER MAINTENANCE

3. Spare Parts

3.1 RFL 661-1321



3.2

| Item | Consists | Designation | 661 | 851 | 951 | 1301 | 1321 | |
|------------|----------|--|---|--------------------------|----------------------|--------------------------|----------------------|--|
| 1. | | Filter element | See Point 4. Replacement elements | | | | | |
| | 1.1 | Filter element | 0660 R... | 0850 R... | 0950 R... | 1300 R... | 2600 R... | |
| | 1.2 | O-ring | 68 x 5 | | | 97.8 x 5.33 | | |
| 2. | | Vent plug or indicator plug | VR 0 A.0 | VSTI G ½ | VR 0 A.0 | VSTI G ½ | VR 0 A.0 | |
| | 2.1 | Indicator plug VR 0 A.0 VR 0 A.0 /-V | 00306006 00305928 | VSTI G ½ VSTI G ½ /-V | 00306006 00305928 | VSTI G ½ VSTI G ½ /-V | 00306006 00305928 | |
| | 2.2 | O-ring | 18 x 2.5 | - | 18 x 2.5 | - | 18 x 2.5 | |
| 3. | | Clotting indicator or indicator plug | See Point 5. Replacement clotting indicator | | | | | |
| | 3.1 | Indicator plug VD 0 A.1 VD 0 A.1 /-V | 00305932 00305931 | | | | | |
| | 3.2 | Profile seal ring | VD ... | | | | | |
| | 3.3 | O-ring | 15 x 1.5 | | | | | |
| 4.* | | Contamination retainer HC * | 01202357 | | 01204141 | | - | |
| 5. | | Seal kit-E RFL Seal kit-E RFL /-V | 00319869 01261084 | | | 01260555 00304464 | | |
| | 5.1 | O-ring (element) | 68 x 5 | | | 97.8 x 5.33 | | |
| | 5.2 | O-ring (cover plate) | 142 x 6 | | | 175 x 5 | | |

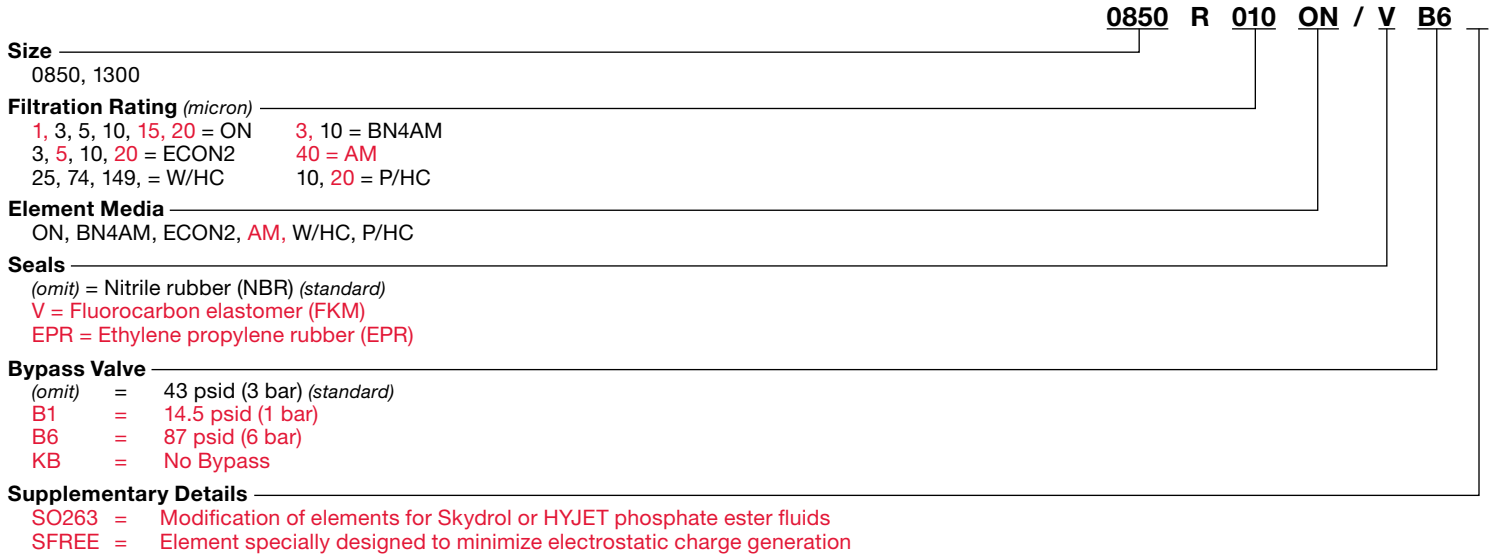
*On request

Other spare parts on request

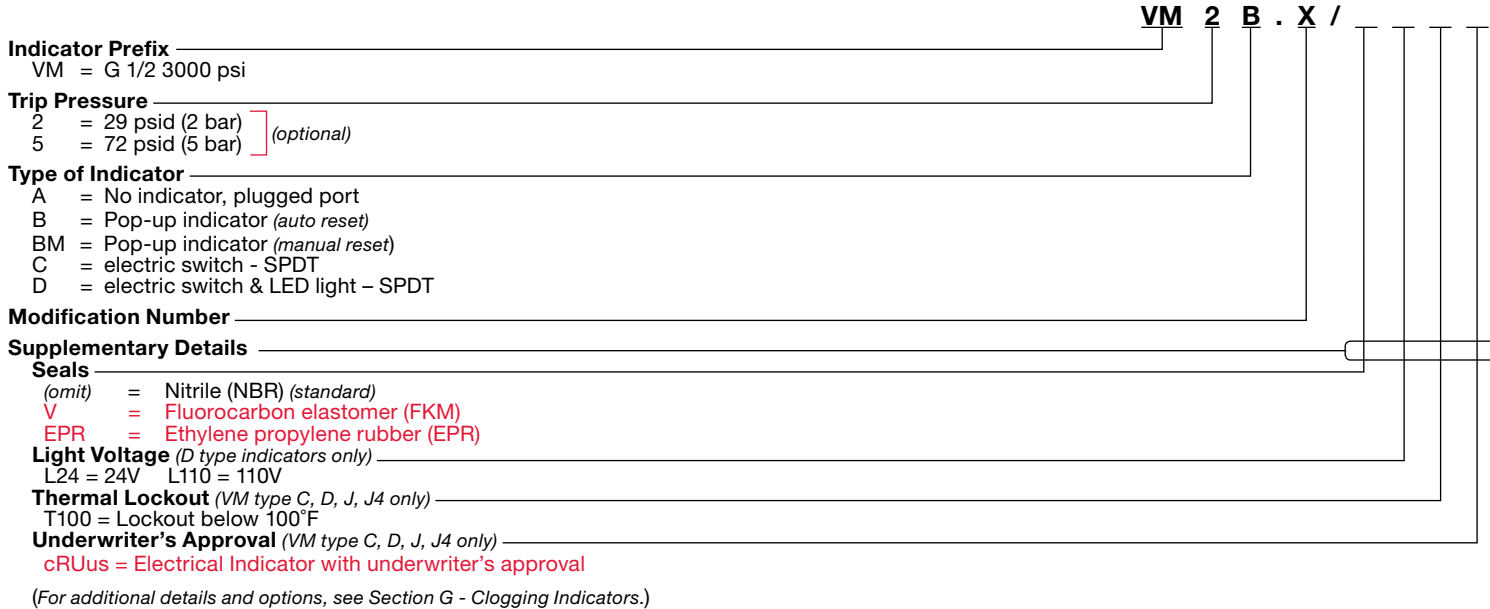
-O-Ring durometer can range from 70-80Sh. EPR Seal Kits available on request.

-Lid assembly kits on request - kits include complete lid with seals, vent plug (if present). Bolts not included.

4. Replacement Element Model Code



5. Clogging Indicator Model Code



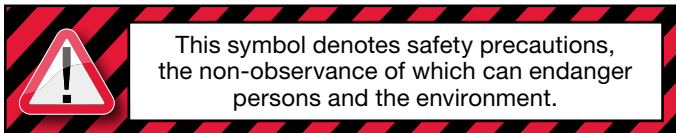
FILTER MAINTENANCE

6. Maintenance Instructions

6.1 User Instructions for Filters



- This pressure equipment must only be put into operation in conjunction with a machine or system.
- The pressure equipment must only be used as stipulated in the operating instructions of the machine or system.
- This pressure equipment must only be operated using hydraulic or lubricating fluid.
- It is the responsibility of the operator to comply with the water regulations of the country concerned.



CAUTION

- The user must take appropriate action (e.g. venting) to prevent the formation of air pockets.
- Repairs, maintenance work and commissioning must only be carried out by trained personnel.
- Allow the pressure equipment to cool before handling.
- The stipulations of the operating instructions of the machine or the system must be followed.
- Statutory accident prevention regulations, safety regulations and safety data sheets for fluids must be observed.
- Filter housing must be grounded.
- When working on, or in the vicinity of, hydraulic systems, open flames, sparks and smoking are forbidden.
- Hydraulic oils and water-polluting fluids must not be allowed to enter the soil or watercourses or sewer systems. Please ensure safe and environmentally friendly disposal of hydraulic oils. The relevant regulations in the country concerned with regard to ground water pollution, used oil and waste must be complied with.
- Whenever work is carried out on the filter, be prepared for hot oil to escape which can cause injury or scalding as a result of its high pressure or temperature.

DANGER!

- Caution: pressure equipment! Before any work is carried out on the pressure equipment, ensure the pressure chamber concerned (filter housing) is depressurized
- On no account must any modifications (welding, drilling, opening by force...) be carried out on the pressure equipment.
- When using electrical clogging indicators, the electrical power supply to the system must be switched off before removing the clogging indicator connector.

6.2 Maintenance, General

This section describes maintenance work which must be carried out periodically. The operational safety and life expectancy of the filter, and whether it is ready for use, depend to a large extent on regular and careful maintenance.

6.3 Maintenance Measures

- Spare parts must fulfil the technical requirements specified by the manufacturer. This is always guaranteed for HYDAC original spare parts.
- Keep tools, working area and equipment clean.
- After disassembling the filter, clean all parts, check for damage or wear and replace parts if necessary.
- When changing a filter element, a high level of cleanliness must be observed.

6.4 Interval Between Element Changes

In principle we recommend that the filter element is changed every 6 months or upon indication, whichever occurs first.

We recommend installing the filter with a clogging indicator (visual and/or electrical or electronic) to monitor the filter element.

If the clogging indicator responds, it is necessary to change or clean the filter element without delay (only W and V elements can be cleaned).

When no clogging indicator has been installed, we recommend changing the elements at specific intervals. (*The frequency of changing the filter elements depends on the filter design and the conditions under which the filter is operated*). When filter elements are subject to high dynamic loading it may prove necessary to change them more frequently. The same applies when the hydraulic system is commissioned, repaired or when the oil is changed.

The standard clogging indicators only respond when fluid is flowing through the filter. With electrical indicators the signal can also be converted into a continuous display on the control panel. In this case the continuous display must be switched off during a cold start or after changing the element.

If the clogging indicator responds during a cold start only, it is possible that the element does not yet need to be changed.

Customer Information in respect of Machinery Directive 2006/42/EC

Hydraulic filters are defined as fluid power parts / components and are therefore excluded from the scope of the Machinery Directive, sections 1.4.1 - 1.4.3. They do not bear the CE mark.

Before using these components, ensure compliance with the specifications provided by HYDAC Technology Corporation. The specifications also contain information on the relevant essential health and safety requirements (based on Machinery Directive 2006/42/EC).

We hereby declare that the filters are intended to be incorporated into machinery within the terms of the Directive 2006/42/EC. It is prohibited to put the filters into service until the machinery as a whole is in conformity with the provisions of the Machinery Directive.

Service address

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NOTE

The information in this brochure relates to the operating conditions and applications described.

For applications or operating conditions not described, please contact the relevant technical department.

Subject to technical modifications.

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