

Filters

RFD Series

Change-Over Return Line Filter

Service and Parts

up to 343 gpm (1300 l/min), up to 362 psi (420 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.

1.3 Commissioning

Check that the correct filter element is installed. Install lid, screw in cover plate bolts alternately. Switch lever to one filter side. Switch on hydraulic system and vent filter.

1.4 Maintenance Tools

Size	Torque value Nm [ft-lb]	Int. Lid Screws hex bolt Allen key
60/110	20 Nm [14]	Hex 6
160/240	20 Nm [14]	Hex 6
330	40 Nm [29]	Hex 8
660	150 Nm [110]	Hex 14
950/1300	200 Nm [147]	Hex 17

1.5 Torque Values

Type	Torque Nm[ft-lb]
VR clogging indicator	30 [22]

1.6 Torque Values for Reservoir Mounting Bolts

Size	Torque Nm [ft-lb]	Bolt Size
RFD 60/110	5 [3.7]	M5
RFD 160/240	8 [6]	M6
RFD 330	20 [15]	M8
RFD 660	20 [15]	M12
RFD 950/1300	25 [19]	M16

2. Element Replacement

2.1 Element Removal

- Switch lever slowly over to clean filter side.

Caution when installed inline:

Before opening the filter, slowly open the vent screw and release pressure. (release pressure in the tank, if any)

- Size 60-330:**

Loosen cover plate bolts and lift off the cover plate.

Sizes 660-1300:

Unscrew cover plate bolts by approx. 2 turns (no need to remove completely). Turn cover plate clockwise until it can be lifted off by holding near the bolts (bayonet fitting).

- Pull out filter element(s) (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.
- Remove contamination retainer (if present) by turning counter-clockwise – bayonet fitting.
- Replace or clean filter element(s) (only W/HC and V elements can be cleaned).
- Clean housing, cover plate and contamination retainer.
- Examine filter, especially sealing surfaces,

for mechanical damage.

- Check O-rings – and replace if necessary.

2.2 Element Installation

- Lubricate the sealing surfaces on the filter housing and cover plate, as well as the O-ring, with clean operating fluid.
- When installing a new filter element, check that the designation corresponds to that of the old element.
- If present, install the contamination retainer onto the new or cleaned filter element by turning clockwise.
- Place filter element carefully on to the element nozzle in the housing.
- Sizes 60-330:**
Replace cover plate and screw in cover plate bolts by hand; then tighten bolts alternately.
- Sizes 660-1300:**
Replace cover plate in correct position (dowel pin in the housing must line up with groove in cover plate) and turn counter-clockwise as far as it will go. Tighten cover plate bolts alternately.
- Vent filter at an appropriate point in the system.
- Check filter for leakage.

NOTE:

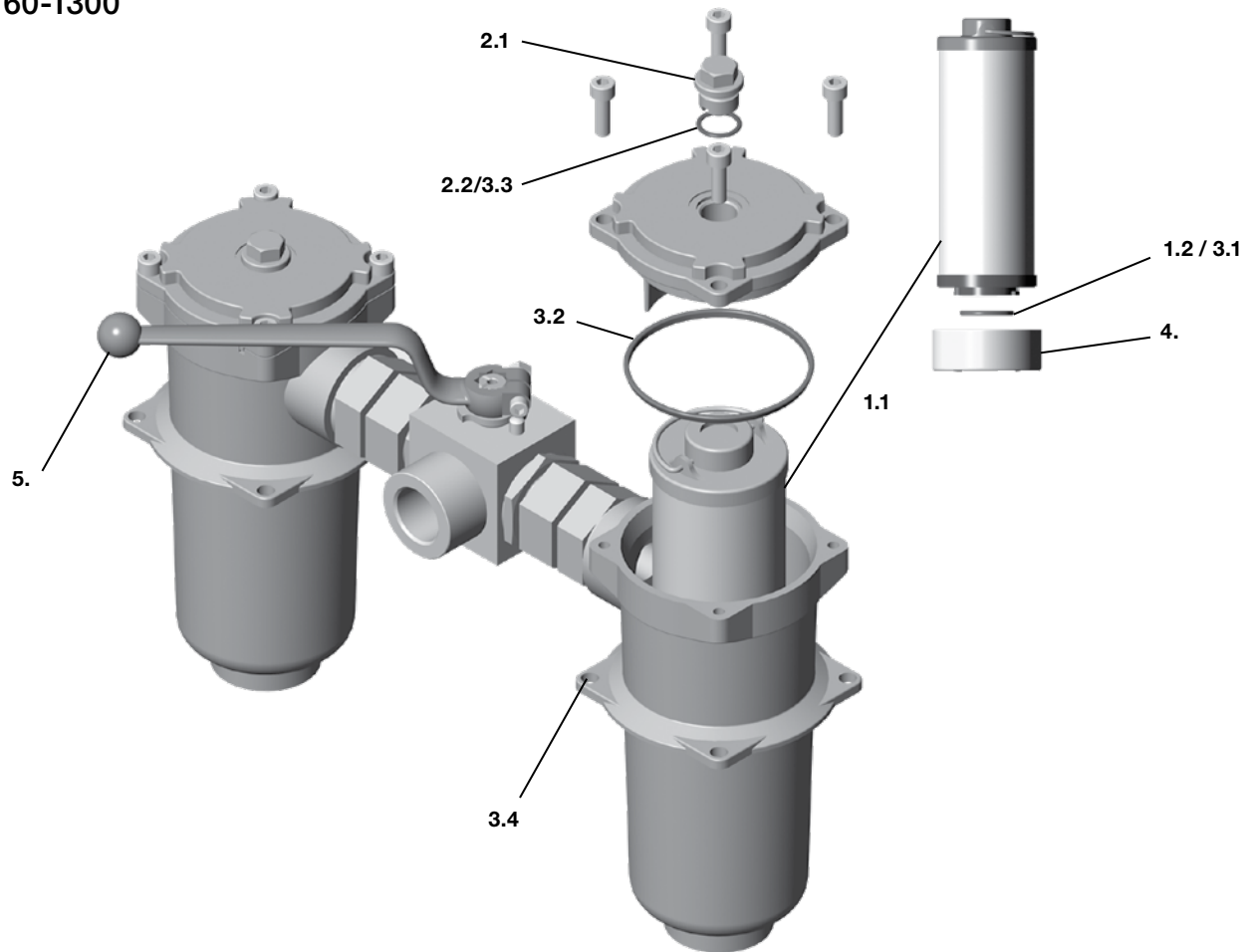
Contamination or incomplete pressure release on disassembly can lead to seizing of the bowl thread.

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

FILTER MAINTENANCE

3. Spare Parts

3.1 RFD 60-1300



Item	Consists	Designation	RFD 60†	RFD 110†	RFD 160†	RFD 240†	RFD 330**	RFD 660** 1.0	RFD 660** 1.1	RFD 950 1.0	RFD 1300 1.0	RFD 950 1.1	RFD 1300 1.1	
1.		Filter element	see Point 4. Replacement elements											
	1.1	Filter element	0060 R...	0110 R...	0160 R...	0240 R...	0330 R...	0660 R...	0660 R...	0950 R...	1300 R...	0950 R...	1300 R...	
	1.2	O-ring	22 x 3.5		34 x 3.5		48 x 3	68 x 5	68 x 5	97.8 x 5.33				
2.		Clogging indicator or indicator plug	See Point 5. Replacement clogging indicator											
	2.1	Indicator plug VR 0 A.0 VR 0 A.0 /-V						00306006 00305928						
	2.2	O-ring	18 x 2.5											
3.		Seal kit RFD Seal kit RFD /-V	1272908 1272909	1272912 1272913		2 x 00319613 2 x 00311702	2 x 303792 2 x 307622	2 x 1293042 2 x 1293039	1261127 1261128	2065071 2073676				
	3.1	O-ring (element)	22 x 3.5		34 x 3.5		48 x 3	68 x 5	68 x 5	97.8 x 5.33				
	3.2	O-ring (cover plate)	63.09 x 3.53		91.67 x 3.53		105 x 5	142 x 6	153 x 5	175 x 5		185 x 5		
	3.3	O-ring (indicator)	18 x 2.5											
	3.4	O-ring (tank seal)	82.14 x 3.53		110.72 x 3.53		00405588	03170653	03170653	00405590				
4.*		Contamination retainer RF/D...	00245028	00246164	00245029	00246182	00245030	00245031	00245031	00413196	00400985	00413196	00400985	
		Contamination retainer RF/D... HC	01202362		01202363		01202364	01202357	01202357	01204141				
5.		Lever RFD...	00270382				00270383				01205525			

*if present

Other spare parts on request

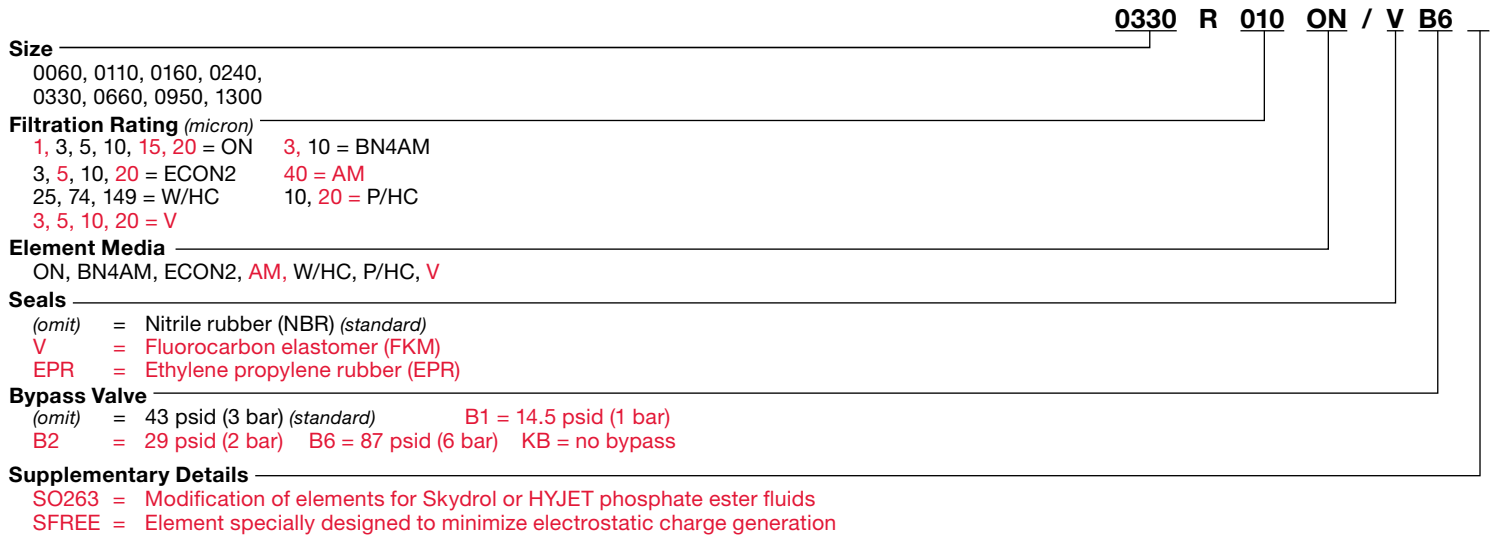
-O-Ring durometer can range from 70-80Sh. EPR Seal Kits available on request.

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

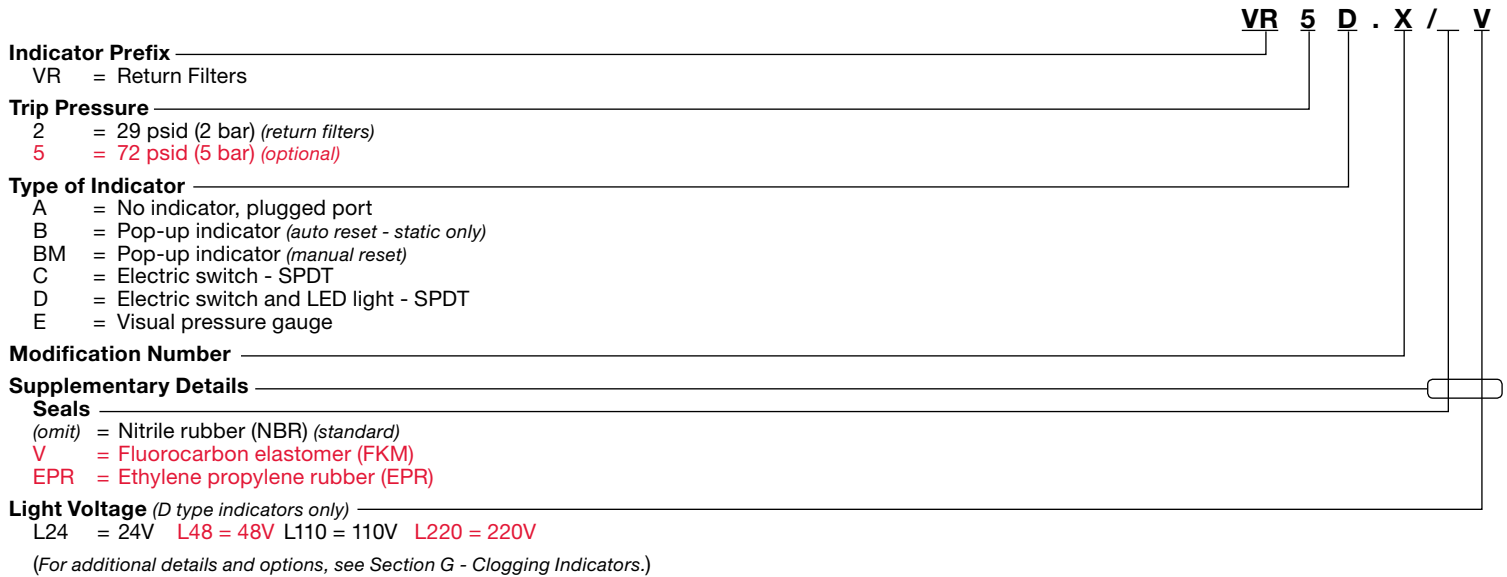
† For RFD 61, 111, 161, 241 seal kits consult HYDAC.

**RFD 330 and RFD 660 repair kits also available.

4. Replacement Element Code



5. Replacement Clogging Indicator



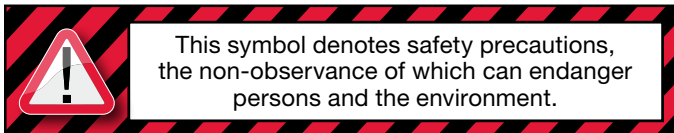
FILTER MAINTENANCE

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 ensured when using original HYDAC 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.

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.

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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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