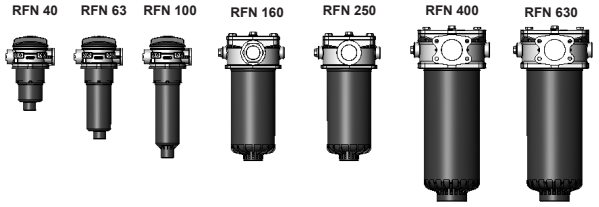
HYDAC INTERNATIONAL

Spare Parts List
Tank-Top Return Line Filter RFN
with Elements to DIN 24550
up to 630 l/min, up to 10 bar



1. MAINTENANCE

1.1 GENERAL

Please follow the maintenance instructions!

1.2 INSTALLATION

Before fitting 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 name plate on the filter!

1.3 COMMISSIONING

Check that the correct filter element is fitted. Fit cover and screw in cover bolts alternately (except RFN 40-100: screw in cover manually). Switch on the hydraulic system and check filter for leakage. Vent filter at an appropriate point in the system.

1.4 TOOLS REQUIRED FOR MAINTENANCE (TORQUE WRENCH)

Size	Torque value	Cover bolts ISO 4017 Ext. hex. spanner
40 - 100	Hand-tight	
160 - 630	35 Nm	AF width 18

1.5 TORQUE VALUE FOR CLOGGING INDICATORS

Type	Max. torque
VR	33 Nm 15 Nm (for B, BM F, LE and LZ indicators)
VMF	10 Nm

1.6 TIGHTENING TORQUES FOR STRAIGHT THREADED CONNECTION*

Pipe thread	Max. torque
G 1/2	50 Nm
G 3/4	60 Nm
G 1	70 Nm
G 1 1/4	70 Nm
G 1 1/2	70 Nm

* in acc. with DIN 3852

2 CHANGING THE ELEMENT

2.1 REMOVING THE ELEMENT

1. Switch off hydraulic system and release filter pressure.
2. Size 40 - 100:
   Unscrew cover manually
   Size 160 - 630:
   Loosen cover bolts and lift off cover.
3. Pull out the filter element with attached filter housing using handle.
4. Dismantle removed unit, i.e. lift out the filter element from the filter bowl by the handle.
5. Examine element surface for dirt residues and larger particles since these can be an indication of damage to components.
6. Replace filter element.
7. Clean housing and cover.
8. Examine filter, especially sealing surfaces, for mechanical damage.
9. Check O-rings – and replace if necessary

2.2 FITTING THE ELEMENT

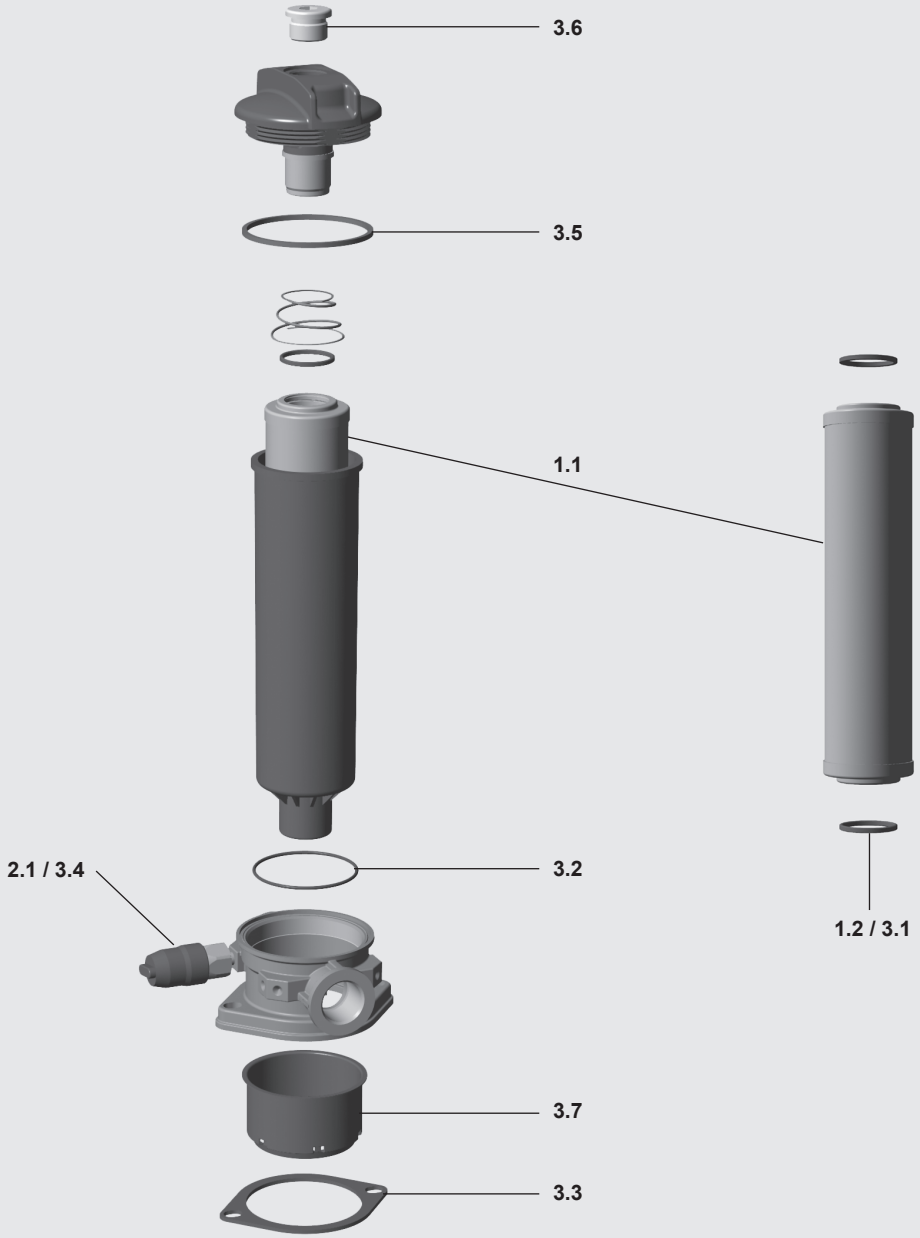
1. Wet the sealing surfaces on the filter housing and cover, as well as the O-ring, with clean operating fluid.
2. When fitting a new filter element, check that the designation corresponds to that of the old element.
3. Place filter element carefully on to the element spigot in the housing.
4. Install the filter element with attached filter housing.
5. Size 40 - 100:
   Replace cover and screw in manually.
   Size 160–630:
   Position cover and screw in cover bolts by hand; then tighten the cover bolts in alternation.
6. Switch on hydraulic system and vent filter at a suitable point in the system.
7. Check the filter for leakage.

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

EN 7.560.E2/07.17

3. SPARE PARTS

3.1 SPARE PARTS DRAWING RFN 40 – 100

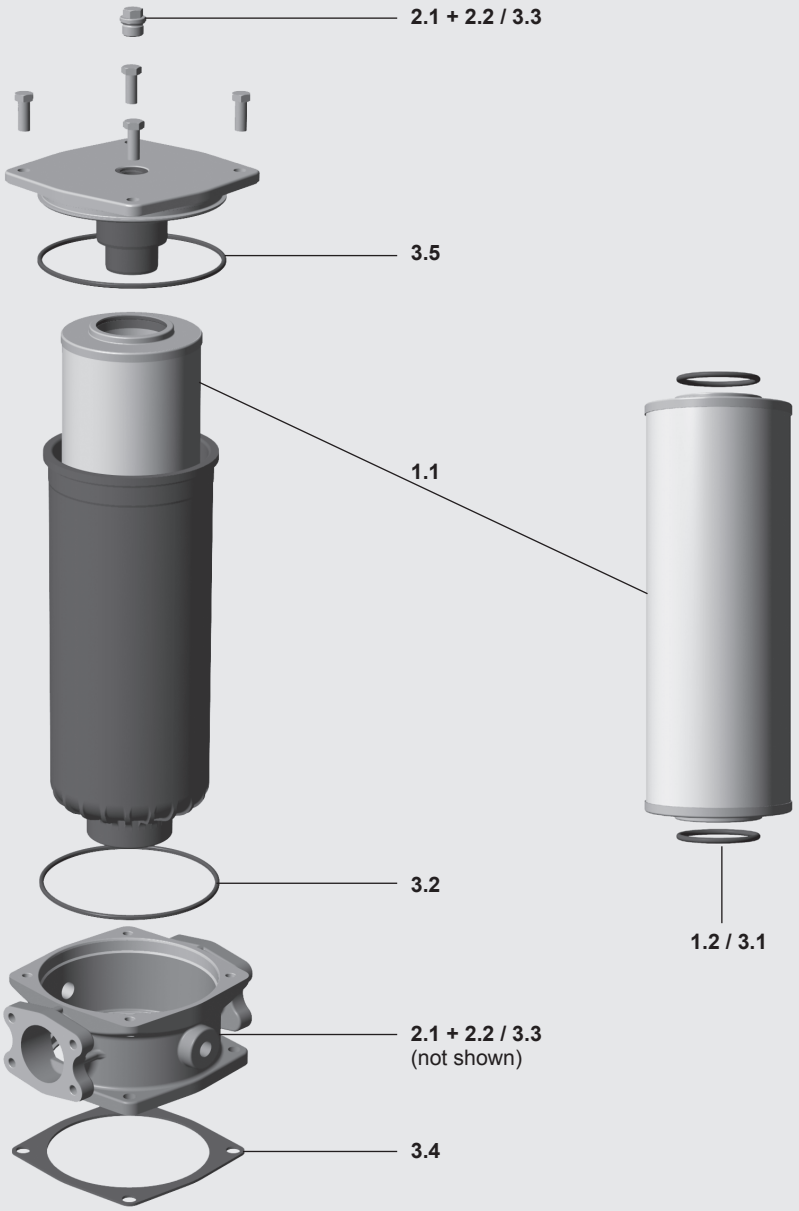


3.2 SPARE PARTS LIST RFN 40 – 100

Item	Con-sists	Description	RFN 40	RFN 63	RFN 100
1.		**Filter element**	**see Point 4. Replacement elements**		
	1.1	Filter element	0040 RN...	0063 RN...	0100 RN...
	1.2	O-ring	2 x 32.92 x 3.53	2 x 32.92 x 3.53	2 x 32.92 x 3.53
2.		**Clogging indicator or screw plug**	**See Point 5. Replacement clogging indicator VMF**		
	2.1	Screw plug or clogging indicator	VSTI G1/8 VMF...	VSTI G1/8 VMF...	VSTI G1/8 VMF...
3.		**Repair kit RFN Repair kit RFN /-V**	01261050 01261051	01261050 01261051	01261050 01261051
	3.1	O-ring (element)	2 x 32.92 x 3.53	2 x 32.92 x 3.53	2 x 32.92 x 3.53
	3.2	O-ring (head)	71.12 x 2.62	71.12 x 2.62	71.12 x 2.62
	3.3	Gasket	RFM 165	RFM 165	RFM 165
	3.4	Screw plug or clogging indicator	VSTI G1/8 VMF...	VSTI G1/8 VMF...	VSTI G1/8 VMF...
	3.5	Seal (cover)	Kantseal 85.32 x 3.4	Kantseal 85.32 x 3.4	Kantseal 85.32 x 3.4
	3.6	Screw plug	VSTI G3/4	VSTI G3/4	VSTI G3/4
	3.7	Oil separator	RFM 165	RFM 165	RFM 165

Other spare parts on request

3.3 SPARE PARTS DRAWING RFN 160 - 630



3.4 SPARE PARTS LIST RFN 160 - 630

Item	Con-sists	Description	RFN 160	RFN 250	RFN 400	RFN 630
1.		**Filter element**	**see Pt. 4. Replacement elements**			
	1.1	Filter element	0160 RN...	0250 RN...	0400 RN...	0630 RN...
	1.2	O-ring	2 x 53.34 x 5.33	2 x 53.34 x 5.33	2 x 69.22 x 5.33	2 x 69.22 x 5.33
2.		**Clogging indicator or screw plug**	**See Point 5. Replacement clogging indicator**			
	2.1	Screw plug VR 0 A.0 VR 0 A.0 /-V	 00306006 00305928	 00306006 00305928	 00306006 00305928	 00306006 00305928
	2.2	O-ring	18 x 2.5	18 x 2.5	18 x 2.5	18 x 2.5
3.		**Repair kit RFN** **Repair kit RFN /-V**	01261052 01261053	01261052 01261053	01261054 01261055	01261054 01261055
	3.1	O-ring (element)	2 x 53.34 x 5.33	2 x 53.34 x 5.33	2 x 69.22 x 5.33	2 x 69.22 x 5.33
	3.2	O-ring (head)	132.72 x 5.33	132.72 x 5.33	164.47 x 5.33	164.47 x 5.33
	3.3	O-ring (indicator)	2 x 18 x 2.5	2 x 18 x 2.5	2 x 18 x 2.5	2 x 18 x 2.5
	3.4	Gasket	RFN 250	RFN 250	RF 660 Size 4	RF 660 Size 4
	3.5	O-ring (cover)	132.72 x 5.33	132.72 x 5.33	164.47 x 5.33	164.47 x 5.33

Other spare parts on request

4. REPLACEMENT ELEMENT

0250 RN 010 BN4HC /-V

Size
0040, 0063, 0100, 0160, 0250, 0400, 0630

Type
RN

Filtration rating
BN4HC 003, 006, 010, 025

Filter material
BN4HC

Supplementary details
V (For description see "RFN" brochure)

5. REPLACEMENT CLOGGING INDICATOR

VR 2.5 D . X /-L24

Type of indicator
VR connection G 1/2
VMF connection G 1/8

Response pressure
2.5 standard 2.5 bar, others on request

Type of clogging indicator
A with screw plug in indicator port
B visual
C electrical
D visual and electrical

Modification number
X the latest version is always supplied

Supplementary details
L..., LED, V
(for description, see "Clogging Indicators" brochure)

6. MAINTENANCE INSTRUCTIONS

6.1 USER INSTRUCTIONS FOR FILTERS


Notice

This pressure equipment must only be put into operation in conjunction with a machine or system.


Notice

The pressure equipment must only be used as stipulated in the operating instructions of the machine or system.


Notice

This pressure equipment must only be operated using hydraulic or lubricating fluid.


Caution

The user must take appropriate action (e.g. venting) to prevent the formation of air pockets.


Caution

Repair, maintenance work and commissioning must be carried out by specialist personnel only.

Allow the pressure equipment to cool before handling.

The stipulations of the operating instructions of the machine or system must be followed.


Danger

Caution: pressure equipment! Before any work is carried out on the pressure equipment, ensure the pressure chamber concerned (filter housing) is depressurised.


Danger

On no account must any modifications (welding, drilling, opening by force etc.) be carried out on the pressure equipment.


Notice

It is the responsibility of the owner to comply with the water regulations of the country concerned.


Caution

Statutory accident prevention regulations, safety regulations and safety data sheets for fluids must be observed.


Caution

Filter housing must be earthed.


Caution

When working on, or in the vicinity of, hydraulic systems, naked flames, spark generation and smoking are forbidden.


Caution

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.


Caution

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

When using electrical clogging indicators, the electrical power supply to the system must be switched off before removing the clogging indicator connector.

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

Hydraulic filters are fluid power parts/components and are therefore excluded from the scope of the Machinery Directive. They do not bear the CE mark.

Before using these components, ensure compliance with the specifications provided by HYDAC Filtertechnik GmbH in this documentation.

The specifications also contain information on the relevant essential health and safety requirements (based on Machinery Directive 2006/42/EC) that are to be applied by the user.

We hereby declare that the filters are intended to be incorporated into machinery within the terms of the Machinery 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. Furthermore, our Terms of Sale and Delivery are available on our website (www.hydac.com).

SERVICE ADDRESSES

HYDAC Service GmbH
Postfach 1251
66273 Sulzbach / Saar, Germany

Factory address:
Werk 13
Friedrichsthaler Str. 15
66540 Neunkirchen / Heinitz
Germany

ServiCenter:
Tel.: +49 (0) 6897 / 509-9083
Fax: +49 (0) 6897 / 509-9881

Customer service:
Tel: +49 (0) 6897 / 509-412
Fax: +49 (0) 6897 / 509-828

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 after 1 year of operation at the latest.

When no clogging indicator has been fitted, 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 or 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.

NOTE

The information in this brochure relates to the operating conditions and applications described.
For applications and operating conditions not described. please contact the relevant technical department.
Subject to technical modifications.