



Maintenance and spare parts Return line suction filter RKM

SIZES

407



807



1. MAINTENANCE

1.1 GENERAL

Please follow the maintenance instructions on the last page!

1.2 INSTALLATION

Before installing the filter, check the permitted operating pressure of the system – it must be lower than permitted operating pressure of the filter. Refer to the identification plate on the filter!

1.3 INITIAL START-UP

Check that the correct filter element is fitted, apply the end cap and secure it. Switch on the hydraulic system and check filter for leakage.

Vent filter at an appropriate point in the system.

1.4 TIGHTENING TORQUES

Thread	Max. torque
Cover screws	
M12	40 Nm
Clogging indicator:	
G 1/8	10 Nm
Straight threaded connection:	
G 1	70 Nm
G 1 1/4	70 Nm
G 1 1/2	70 Nm
Flange:	
CS 2 (M12)	40 Nm
Other	
M14	
M18	

2. TECHNICAL DATA

2.1 REMOVING THE ELEMENT

1. Switch off hydraulic system and release filter pressure (if necessary, release the pressure in the tank).
2. Loosen cover bolts and lift off the cover (4).
3. Pull out the dividing plate (3). To overcome the O-ring friction, the dividing plate (3) can additionally be turned anticlockwise.
4. Flip up the handle on the top of the element and unscrew the element (1) anticlockwise fully to remove it from the pin, then remove the filter element (1).
5. Clean bowl, end cap (4) and dividing plate (3).
6. Examine filter, especially sealing surfaces, for mechanical damage.
7. Check O-rings – and replace if necessary.

2.2 FITTING THE ELEMENT

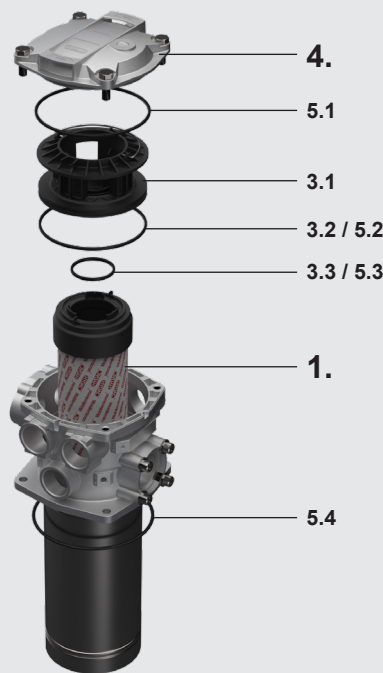
1. Clean all removed parts and check for damage. Replace damaged parts and ensure that sealing surfaces, thread and O-rings are wetted with clean operating fluid.
2. When fitting a new filter element (1), check that the designation corresponds to that of the old element (1).
3. Place element (1) on element connecting piece in the housing and turn clockwise. Overcome initial resistance → ball joint is unlocked, element (1) can be tilted. Tighten finger-tight to the stop and align element vertically.
4. Install dividing plate (3) without performing any anticlockwise rotary movement!
5. Position end cap (4), screw in cover bolts by hand and tighten them crosswise (for tightening torque see Point 1.4).
6. Switch on hydraulic system and vent filter at a suitable point in the system.
7. Check the filter for leakage.

NOTICE:

Filter elements are to be disposed of in an environmentally safe manner.

3. SPARE PARTS

3.1 SPARE PARTS DRAWING



3.2 SPARE PARTS LIST

No.	Con-sists	Designation	
1.		Filter element	See Point 4. Replacement element
2.		Clogging indicator or indicator plug	See Point 5. Replacement clogging indicator
3.		Dividing plate E RKM..407 W.0	01329627
		Dividing plate E RKM..407 W.0 /-NRF125	01329628
	3.1	Dividing plate	RKM 407
	3.2	O-ring	148.59 x 5.33
	3.3	O-ring	56.52 x 5.33
4.		END CAP E RKM..407 W.0	*
5.		Repair kit E RKM...407 B.. 0.0	01329626
	5.1	O-ring (end cap)	158.12 x 5.33
	5.2	O-ring (dividing plate – head)	148.59 x 5.33
	5.3	O-ring (dividing plate – element)	56.52 x 5.33
	5.4	O-ring (flange)	183.52 x 5.33

* Part number is generated during ordering process.

Other spare parts on request.

4. FILTER ELEMENTS

	<u>0407</u>	<u>RK</u>	<u>010</u>	<u>MM</u>	<u>/-V</u>
Size					
0407, 0807					
Type					
RK					
Filtration rating					
MM 008, 010, 015					
Filter material					
MM					
Supplementary details					
V FKM					
(for further descriptions, see “RKM” brochure)					

5. CLOGGING INDICATOR

	<u>VMF</u>	<u>2</u>	<u>E</u>	<u>X</u>	<u>/-V</u>
Type of indicator					
VMF connection G 1/8					
Response pressure					
0.2 -0.2 bar (negative pressure)					
2 2 bar (back pressure)					
Type of clogging indicator					
F pressure switch					
K dynamic and vacuum pressure indicator					
R dynamic pressure indicator					
UF vacuum pressure switch					
Modification number					
X the latest version is always supplied					
Supplementary details					
V FKM					
(for further descriptions, see “Clogging indicators” brochure)					

6. MAINTENANCE INSTRUCTIONS

6.1 USER INSTRUCTIONS FOR FILTERS

DANGER

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

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

Filter housings must be earthed.

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

WARNING

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

Repairs, maintenance work and commissioning must only be carried out by trained personnel. Allow the filter 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.

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

INFO

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

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

This filter 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.

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 BASIC PRINCIPLES

This document is for information purposes and for the avoidance of dangers during installation, during the operation of the system and for the handling of operating materials.

Safe and economical operation of the system is only possible if the installation manual is observed closely.

This installation manual does not substitute the instruction manual of the device or the system.

The individual installation manuals for the installed components of the overall system apply in addition.

6.4 QUALIFICATIONS OF PERSONNEL / TARGET GROUP

This installation manual is exclusively geared towards use by trained specialists and it must be made accessible at the place of use.

6.5 INTENDED USE

The filter is only suitable for the filtration of operating fluids.

The filter is not useable on its own. The filter is intended for installation in a hydraulic system.

Any other or extending use beyond this shall not be considered intended use. HYDAC Filtertechnik GmbH will assume no liability for any loss or damage as the result thereof.

6.6 MAINTENANCE MEASURES

- Spare parts must conform to the technical requirements specified by the manufacturer. This is always ensured when using original HYDAC spare parts.
- Tools, working area and devices are to be kept 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!

6.7 EXPLANATION OF SYMBOLS AND WARNINGS

This type of safety symbol or instruction...

DANGER

indicates a situation that is dangerous in a threatening manner that will lead to death or serious injury if it is not avoided.

WARNING

indicates a situation that could lead to death or serious injury, or serious harm to health, if it is not avoided.

INFO

indicates a notice regarding correct handling of the pressure equipment. Non-observance of these notes may lead to damage of the pressure equipment or its immediate surroundings.

WASTE DISPOSAL

indicates a notice regarding special measures for environmental protection. Professional, environmentally friendly material disposal.

NOTICE

indicates a notice regarding special user tips and other specially useful or important information.

6.8 INTERVAL BETWEEN ELEMENT CHANGES

In principle we recommend that the filter element is changed after one year of operation at the latest.

We recommend fitting the filter with a clogging indicator (visual and/or electric 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 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 only responds during a cold start, it is possible that the element does not need to be changed yet.

6.9 CUSTOMER INFORMATION CONCERNING THE MACHINERY DIRECTIVE 2006/42/EC

Hydraulic filters are fluid power parts/ components and are therefore excluded from the scope of the Machinery Directive. They will 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 device as a whole conforms to the provisions of the Machinery Directive. Furthermore, our Terms of Sale and Delivery are available on our website (www.hydac.com).

NOTE

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

For applications and/or operating conditions not described, please contact the relevant technical department. Subject to technical modifications.

In accordance with our Terms of Sale and Delivery, guarantees are subject to the use of original HYDAC parts only and correct fitting, as per service and maintenance instructions.

EXCLUSION OF LIABILITY

This installation manual was made to the best of our knowledge. Nevertheless and despite the greatest care, it cannot be excluded that mistakes could have crept in.

Therefore please understand that in the absence of any provisions to the contrary hereinafter, our warranty and liability – for any legal reasons whatsoever – are excluded in respect of the information in this installation manual.

In particular, we shall not be liable for lost profit or other financial loss.

This exclusion of liability does not apply in cases of intent or gross negligence. Moreover, it does not apply to defects which have been deceitfully concealed or whose absence has been guaranteed, nor in cases of culpable harm to life, physical injury and damage to health. If we negligently breach any material contractual obligation, our liability shall be limited to foreseeable damage. Claims due to the product liability shall remain unaffected.

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