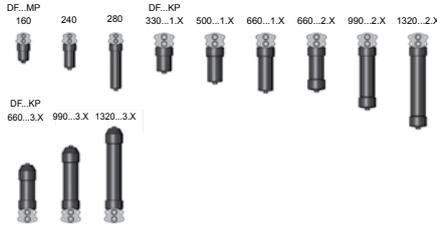




Spare Parts List Pressure Filter DF...KP, DF...MP Manifold Mounted, Rear Flanged up to 550 l/min, up to 260 bar



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 type code label on the filter!

Important:

When using filters without bypass valve and at operating pressures above 20 bar, robust filter elements of the type BH4HC should be used for safety reasons.

1.3 COMMISSIONING

Check that the correct filter element is fitted, screw in bowl again fully and then unscrew by one quarter-turn (the sealing effect will not be improved by overtightening!)

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

Size	Spanner for filter bowl	Int. hex. spanner for oil drain plug	Spanner for VD 0 A.1
160-280	SW 32	SW 10*	SW 27
330-1320	SW 36	SW 10	SW 27

*for SO184

1.5 TORQUE VALUES FOR CLOGGING INDICATORS

Type	Max. torque
VD	100 Nm (for indicator B, C, D)
	50 Nm (for indicator A, LE, LZ)
VM	33 Nm

2. CHANGING THE ELEMENT

2.1 REMOVING THE ELEMENT

1. Switch off hydraulic system and release filter pressure.
2. Remove oil drain plug (if present). Drain oil into container.
3. One-piece bowl (1.X):
Unscrew filter bowl (drain fluid into a suitable container and clean or dispose of it in accordance with environmental regulations).

Two-piece bowl (2.X):

Unscrew end cover (drain fluid into a suitable container and clean or dispose of it in accordance with environmental regulations) and remove threaded pin.

Top removable (3.X):

Unscrew cover plate (drain fluid into a suitable container and clean or dispose of it in accordance with environmental regulations).

4. Remove filter element from element spigot in filter head (check surface of element for dirt residue and larger particles; these can indicate damage to components).
5. Replace or clean filter element (only V and W/HC elements can be cleaned).
6. Clean filter bowl and filter head; particular attention must be given to the threads!
7. Examine filter, especially sealing surfaces, for mechanical damage.
8. Check O-rings – and replace if necessary

2.2 FITTING THE ELEMENT

1. Wet the sealing surfaces and thread on the filter head and bowl, 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 addition, on two-piece bowl (2.X):

Fix element with threaded pin.

4. One-piece bowl (1.X):
Screw in filter bowl fully.
Two-piece bowl (2.X) and top removable (3.X):
Screw in end cover fully.
5. Screw in oil drain plug (if present).
6. Unscrew filter bowl or end cover by one quarter-turn.
7. Switch on hydraulic system and vent filter at a suitable point in the system.
8. Check filter for leakage.

NOTE:

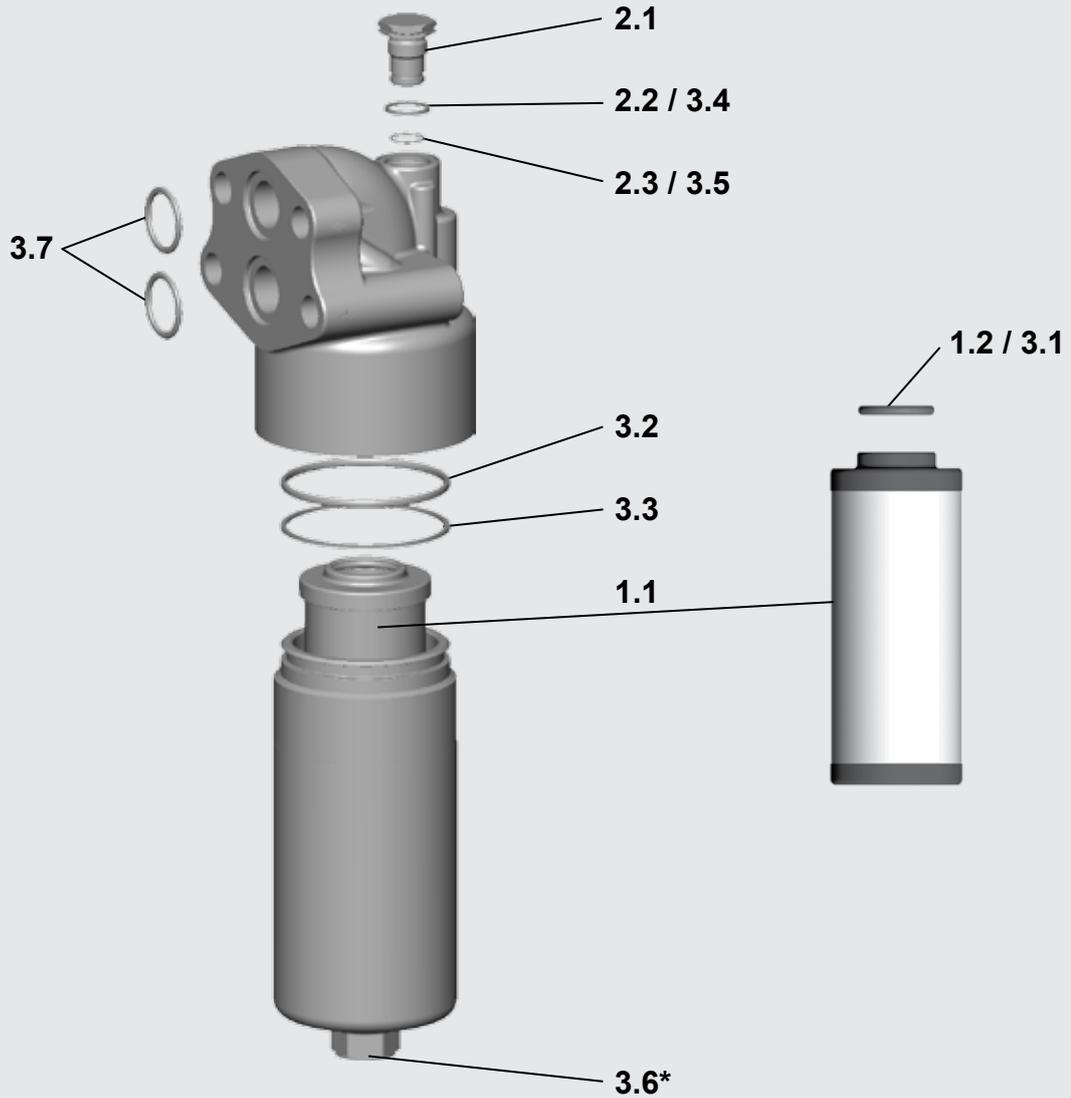
Contamination or incomplete pressure release on disassembly can lead to seizing of the bowl thread.

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

3. SPARE PARTS

3.1 SPARE PARTS DRAWING

DF 160-280 MP..., DF 330, 500, 660 KP...1.X



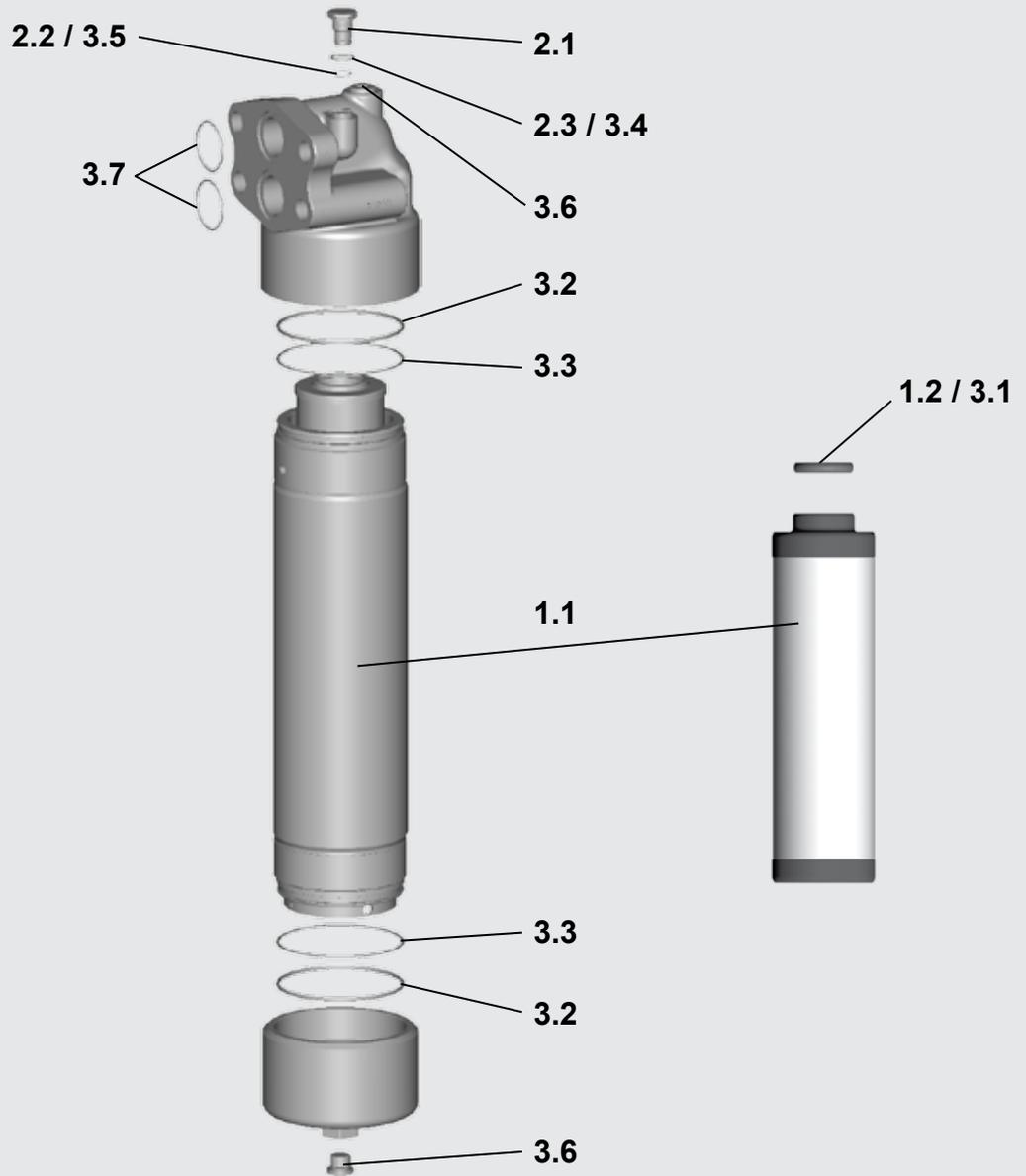
3.2 SPARE PARTS LIST DF 160, 240, 280 MP..., DF 300, 500, 660 KP...1.X

Item	Con-sists	Description	DF 160 MP	DF 240 MP	DF 280 MP	DF 330 KP	DF 500 KP	DF 660 KP
1.		Filter element	See Point 4. Replacement elements					
	1.1	Filter element	0160 D...	0240 D...	0280 D...	0330 D...	0500 D...	0660 D...
	1.2	O-ring	34 x 3			48 x 3		
2.		Clogging indicator or indicator plug	See Point 5. Replacement clogging indicator					
	2.1	Indicator plug VD 0 A.1 VD 0 A.1 /-V				00305932 00305931		
	2.2	Profile seal ring	VM...					
	2.3	O-ring	15 x 1.5					
3.		Repair kit DF...MP/KP Repair kit DF...MP/KP /-V	01303925 01303926			01303927 01303928		
	3.1	O-ring (element)	34 x 3			48 x 3		
	3.2	O-ring (bowl)	80 x 4			117 x 4		
	3.3	Back-up ring (bowl)	DF...160			DF...330		
	3.4	Profile seal ring (indicator)	VM...					
	3.5	O-ring (indicator)	15 x 1.5			15 x 1.5		
	3.6*	Oil drain plug	G 1/2			G 1/2		
	3.7	O-ring (flange)	29.75 x 3.53			46 x 3		

*if present

Other spare parts on request

3.3 SPARE PARTS DRAWING
DF 660, 990, 1320 KP... (2.X and 3.X)



3.4 SPARE PARTS LIST DF 660, 990, 1320 KP...(2.X AND 3.X)

Item	consists	Designation	DF 660 KP	DF 990 KP	DF 1320 KP
1.		Filter element	See Point 4. Replacement elements		
	1.1	Filter element	0660 D...	0990 D...	1320 D...
	1.2	O-ring	48 x 3		
2.		Clogging indicator or indicator plug	See Point 5. Replacement clogging indicator		
	2.1	Indicator plug VD 0 A.1 VD 0 A.1 /-V		00305932 00305931	
	2.2	Profile seal ring		VM...	
	2.3	O-ring		15 x 1.5	
3.		Repair kit DF...MP/KP Repair kit DF...MP/KP /-V		01303929 01303930	
	3.1	O-ring (element)		48 x 3	
	3.2	O-ring (bowl)		117 x 4	
	3.3	Back-up ring (bowl)		DF...330	
	3.4	Profile seal ring (indicator)		VM...	
	3.5	O-ring (indicator)		15 x 1.5	
	3.6	Oil drain plug		G 1/2	
	3.7	O-ring (flange)		46 x 3	

Other spare parts on request

4. REPLACEMENT ELEMENT

0240 D 010 BH4HC /-V

Size _____
0160, 0240, 0280, 0330, 0500
0660, 0990, 1320

Type _____
D

Filtration rating _____
BN4HC, BH4HC, V: 003, 005, 010, 020
W/HC: 025, 050, 100, 200

Filter material _____
BN4HC, BH4HC, V, W/HC

Supplementary details _____
V, W
(for description, see "MFM with L-hole" brochure)

5. REPLACEMENT CLOGGING INDICATOR

VD 5 D . X /-L24

Type of indicator _____
VD Differential pressure indicator up to
420 bar operating pressure

Pressure setting _____
5 Standard 5 bar, others on request

Type of clogging indicator _____
A with steel blanking 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, W
(for description, see "Clogging Indicators" brochure)

6. MAINTENANCE INSTRUCTIONS

6.1 USER INSTRUCTIONS FOR FILTERS



Note

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



Note

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



Note

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

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.



Danger

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



Danger

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



Note

It is the responsibility of the operator 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, sparks 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 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 Filtertechnik. 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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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.

We recommend fitting 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 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, 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 or operating conditions not described, please contact the relevant technical department. Subject to technical modifications.