

## Filters



# HFDK4P Series

## Service and Parts

up to 158 gpm (600 l/min), up to 4500 psi (315 bar)

## 1. Maintenance

### 1.1 General

Please follow the maintenance instructions. 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. Document subject to technical modifications. 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 regulations.

### 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

Unscrew lid and check that the correct filter element is installed. Screw in lid again fully (metal to metal contact) then loosen 1/4 turn. Switch on the hydraulic system and check filter for leakage. Vent filter at an appropriate point in the system.

### 1.4. Maintenance Tools

Lid HEX	Drain plug – internal HEX	Vent HEX	Clogging indicator – HEX
36mm	5/16"	9/16"	30mm

### 1.5. Torque Values

Type	Torque in Nm [ft-lb]
Clogging indicator – VD.LE/LZ/A	50 [37]
All other indicators – VD...except LE/LZ/A	100 [74]

## 2. Element replacement

### 2.1 Element removal

1. Do not switch off hydraulic system.
2. Establish which filter side is in operation (indicated by lever on the filter).
3. First equalize the pressure in both filter sides by opening the pressure equalization valve. To switch over, turn lever through 90° - the other filter side is now in operation. Close spindle again.
4. Remove oil drain plug of the filter side not in operation. Drain fluid into a suitable container and clean or dispose of in accordance with environmental regulations.
5. Remove lid from housing. To remove the lid, it may be necessary to use a strap wrench to prevent the housing from coming off the filter head. Caution: Cap is spring loaded.
6. Remove spring and grommet cap.
7. Remove filter element from element nozzle (examine surface of element for dirt residue and larger particles; these can indicate damage to the components).
8. Replace filter element.
9. Clean lid, paying particular attention to the screw threads.
10. Examine filter, especially sealing surfaces, for damage.
11. Check O-Rings and replace parts as necessary.

### 2.2 Element Installation

1. Lubricate sealing surfaces and thread on the filter housing and lid, as well as the O-Ring, with clean operating fluid. Apply silver grade antiseize (per Mil-PRF-907E) to threads.
2. When installing a new element, verify that the designation corresponds to that of the old element.
3. Place filter element carefully onto the element nozzle in the housing. In addition, close the open end of the element with the grommet cap, then insert spring into grommet cap (see drawing in section 3).
4. Screw in lid fully. Then loosen 1/4 turn. Screw in oil drain plug.
5. Vent filter at an appropriate point in the system.
6. Check filter for leakage.

### 2.3 Venting

After the element has been changed, the cleaned filter side must be vented. For this purpose there is a vent plug on top of each lid.

### 2.4 Pressure Equalization Spindle

#### Removal:

- Switch system off.
- Unscrew threaded M5 set screw (set screw in the filter head, close to the equalization spindle).
- Unscrew spindle.
- Replace O-Ring.

#### Installing:

- Screw in spindle with new
- O-ring.
- Screw in set screw fully.
- Turn spindle and check that the bore of the set screw matches with the groove in the spindle.
- Turn spindle again firmly so that the pressure equalization line is closed.
- CAUTION: set screw prevents the spindle from unscrewing.
- Switch system on again.

#### NOTE:

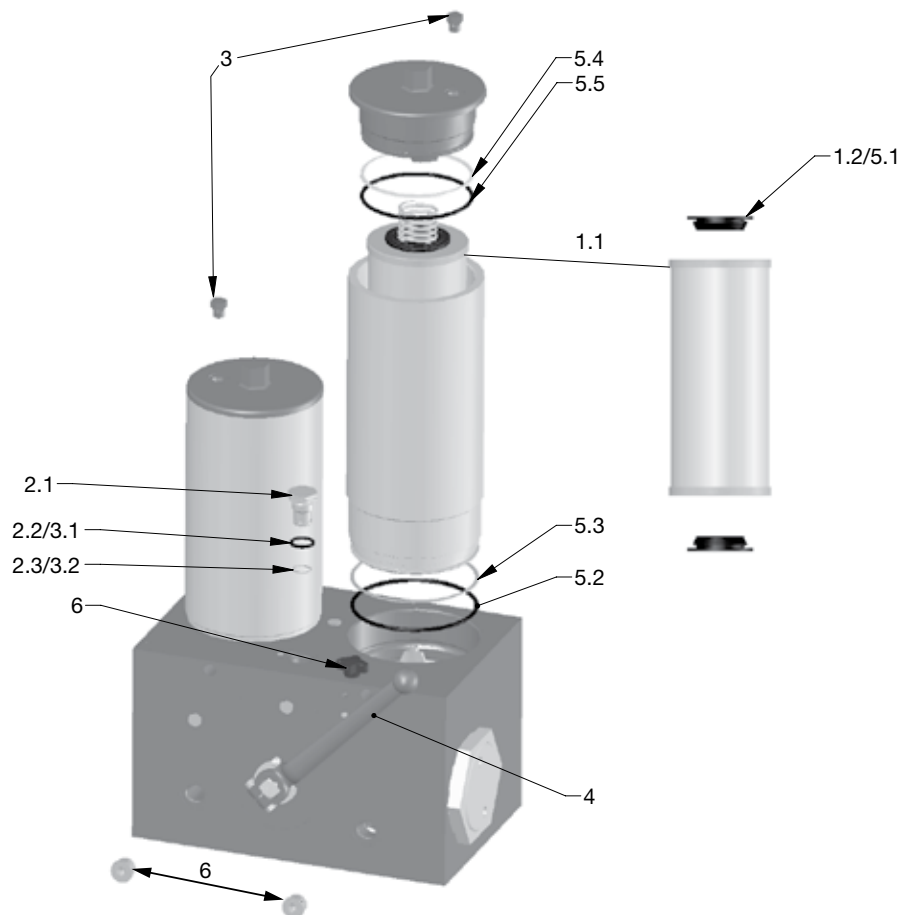
Contamination or incomplete pressure release on disassembly can lead to seizing of the bowl thread.

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

# FILTER MAINTENANCE

## 3. Spare Parts

### 3.1. HFDK4P



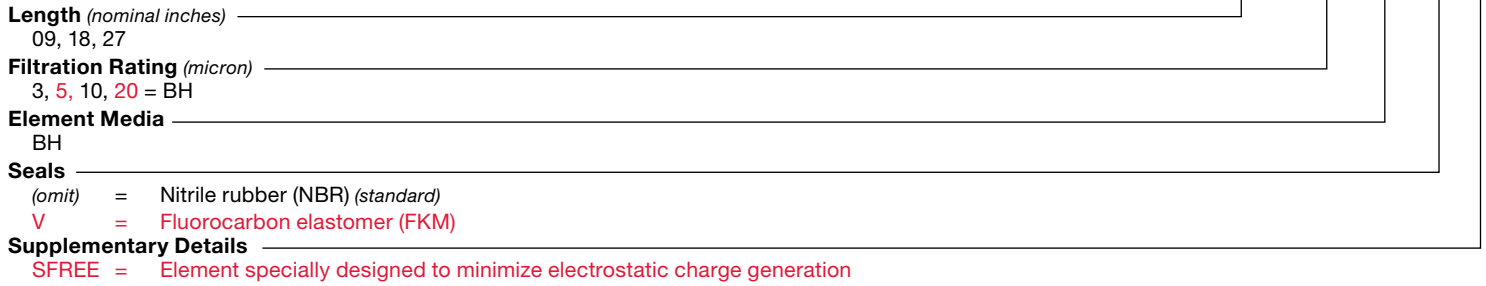
Item	Consists of	Description	09	18	27
1.		<b>Filter element</b>	See point 5 Replacement elements		
	1.1	Filter element	On request		
	1.2	grommet	4		
2.		<b>Clogging indicator or indicator plug</b> <b>VD 0 A.1</b> <b>VD 0 A.1 /-V</b>	See Filter Clogging Indicator brochure 00305932 00305931		
	2.1	Indicator plug	VD...		
	2.2	Profile seal ring	VD...		
	2.3	O-ring	15 x 1.5		
3.		<b>SEAL KIT-E VD</b>	00319648		
		<b>SEAL KIT-E VD /-V</b>	00319638		
	3.1	Profile seal ring	VD...		
	3.2	O-ring	15 x 1.5		
4.		<b>Handle</b>			
	4.1	Lever	01261484		
	4.2	Spindle	01252241		
5.		<b>REPAIR KIT HFDK4P 1.0</b>	2088080		
		<b>REPAIR KIT HFDK4P 1.0 /-V</b>	2096207		
	5.1	Seal element (grommet)	4 pcs		
	5.2	O-Ring (head-bowl)	117x4 (2 pcs)		
	5.3	Backup-ring (head-bowl)	2 pcs		
	5.4	Backup-ring (lid-bowl)	2 pcs		
	5.5	O-Ring (lid/bowl)	101.19x3.53 (2 pcs) - (AS568A-242)		
	5.6	O-Ring (clogging indicator)	15x1.5 (1 pc)		
	5.7	Profile seal ring (clogging indicator)	1 pc		
	5.8	Oil drain plug SAE-8	2 pcs		
	5.9	Vent plug SAE-4	2 pcs		
	5.10	Spindle O-Ring	6x2 (1 pc)		
5.11	internal seals	internal seals for the changeover unit are included (not shown in exploded view).			

Other spare parts available on request  
Bold items can be ordered.

- O-Ring durometer can range from 70-80Sh. EPR Seal Kits available on request.  
- Bowl assembly kits on request – kits include complete bowl with seals, plug, and threaded pin (if present).

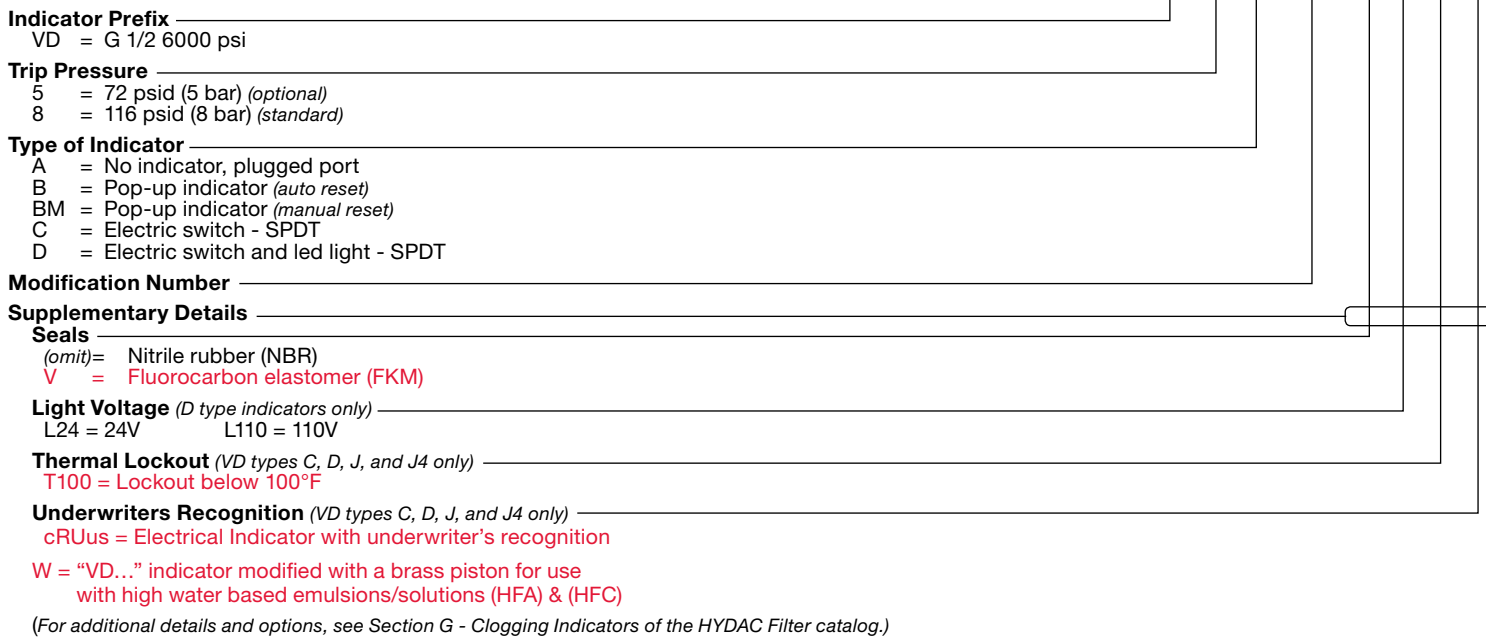
## Replacement Element Model Code

**5 . 03 . 27 D 05 BH /-V**



## Clogging Indicator Model Code

**VD 8 C . X / V**



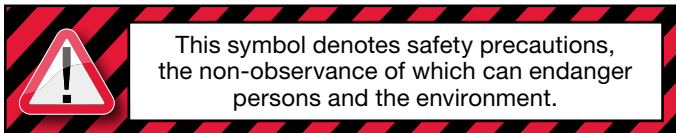
# FILTER MAINTENANCE

## 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 or opening by force, etc.) 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.

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

##### HYDAC Technology Corporation Filter Division

2260 City Line Road  
Bethlehem, PA 18017  
+1.610.266.0100

#### 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.



Global Headquarters  
HYDAC INTERNATIONAL  
GMBH

Industriegebiet  
D – 66280 Sulzbach/Saar  
Germany

Tel.: +49 6897 509-01

Fax: +49 6897 509-577

Internet: [www.hydac.com](http://www.hydac.com)  
Email: [info@hydac.com](mailto:info@hydac.com)

## North America Locations

### USA

[www.HYDAC-NA.com](http://www.HYDAC-NA.com)

**North America Headquarters**  
**HYDAC TECHNOLOGY CORPORATION**  
**Filter Division**

2260 City Line Road  
Bethlehem, PA 18017  
**+1.610.266.0100**

**HYDAC TECHNOLOGY CORPORATION**  
**Electronic Division**  
**Process Filter Division**

**HYDAC CORPORATION**  
**Accumulator Division**  
90 Southland Drive  
Bethlehem, PA 18017  
**+1.610.266.0100**

**HYDAC TECHNOLOGY CORPORATION**  
**Accessory Division**

2204 Avenue C  
Bethlehem, PA 18017  
**+1.610.266.0100**

**HYDAC TECHNOLOGY CORPORATION**  
**Filter System Division**  
**Process Filter Division**  
**Fuel Filtration Division**

580 West Park Road  
Leetsdale, PA 15056  
**+1.724.318.1100**

**HYDAC TECHNOLOGY CORPORATION**  
**Hydraulic Division –**  
**Compact Hydraulics**

450 / 445 Windy Point Drive  
Glendale Heights, IL 60139  
**+1.630.545.0800**

**HYDAC TECHNOLOGY CORPORATION**  
**Hydraulic Division – Tech Center**

430 Windy Point Drive  
Glendale Heights, IL 60139  
**+1.630.545.0800**

**HYDAC TECHNOLOGY CORPORATION**  
**Cooling System Division**

1051 Airlie Parkway  
Denver, NC 28037  
**+1.610.266.0100**

**HYDAC TECHNOLOGY CORPORATION**  
**Mobile Hydraulic Division**

1660 Enterprise Parkway • Suite E  
Wooster, OH 44691  
**+1.610.266.0100**

**HYDAC CYLINDERS LLC**

540 Carson Road North  
Birmingham, AL 35217  
**+1.205.520.1220**

**HYDAC TECHNOLOGY CORPORATION**  
**HYDAC CORPORATION**  
**Sales Office & Operations**

510 Stonegate Drive  
Katy, TX 77494  
**+1.281.579.8100**

**HYDAC TECHNOLOGY CORPORATION**  
**HYDAC CORPORATION**  
**NW Sales Office & Operations**

1201 NE 144th St. Bldg. B • Suite 111  
Vancouver, WA 98685  
**+1.610.266.0100**

**HYDAC TECHNOLOGY CORPORATION**  
**HYDAC CORPORATION**  
**NE Sales Office**

1660 Enterprise Parkway • Suite E  
Wooster, OH 44691  
**+1.610.266.0100**

**HYDAC TECHNOLOGY CORPORATION**  
**HYDAC CORPORATION**  
**SE Sales Office**

1051 Airlie Parkway  
Denver, NC 28037  
**+1.610.266.0100**

**HYDAC TECHNOLOGY CORPORATION**  
**HYDAC CORPORATION**  
**NC Sales Office**

9415 West Forest Home Ave. • Suite 200  
Hales Corners, WI 53130  
**+1.610.266.0100**

### Canada

[www.HYDAC-NA.com](http://www.HYDAC-NA.com)

**HYDAC CORPORATION**

14 Federal Road  
Welland, Ontario, Canada L3B 3P2  
**+1.905.714.9322**

**HYDAC CORPORATION**  
**Sales Office**

5160 75 Street NW  
Edmonton, Alberta, Canada T6E 6W2  
**+1.780.484.4228**

**HYDAC CORPORATION**  
**Sales Office**

Montreal, Québec, Canada J2M 1K9  
**+1.877.539.3388**

### Mexico

[www.HYDACmex.com](http://www.HYDACmex.com)

**HYDAC INTERNATIONAL SA de CV**

Calle Alfredo A Nobel No 35  
Col Puente de Vigas  
Tlalnepantla, Edo Mexico  
CP 54090  
Mexico  
**+011.52.55.4777.1262**