

HYDAC INTERNATIONAL

Filters



NFH Series Service and Parts

Index

1. General
- 1.4 Torque Requirements
2. Maintenance
3. Changing the Element
4. Spare Parts List
5. Replacement Element Model Code

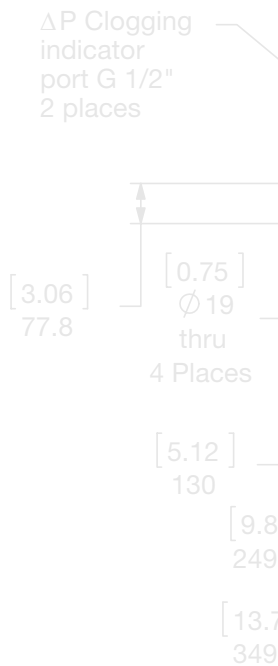
This symbol is followed by user tips and particularly useful information.

- This pressure unit is for use with hydraulic power or lube systems only.
- All repair, maintenance, installation and commissioning work must be carried out by trained personnel.
- Operate this pressure unit in accordance with hydraulic power or lube system operating instructions.
- Ensure the pressure unit is sufficiently cool before handling.
- This pressure unit is suitable for use with hydraulic or lubricating fluids only.
- It is the responsibility of the operator to comply with local water regulations.

CAUTION!

This symbol denotes safety precautions, the non-observance of which can endanger persons and the environment.

- Filter bowl may be full of hot hydraulic fluid. Collect oil in a suitable container and dispose of properly.
- Observe proper venting procedures to avoid the formation of air pockets.
- Caution: Pressurized unit. Purge system pressure before performing any work on the pressure unit.
- Under no circumstances must any modifications (*welding, drilling, or opening by force...*) be carried out on the pressure unit. Any modifications will void the warranty.
- Statutory accident prevention regulations, safety regulations and safety data sheets for fluids must be observed.
- When working on or near hydraulic systems, avoid exposure to open flames and spark generating equipment. Do not smoke near equipment.
- Comply with all regulations with regard to the disposal of used oil and waste.
- Wear proper protective clothing and guards to avoid injury or scalding due to high pressure or high temperature oil.
- Filter housing must be grounded.
- Disconnect all electrical power to the system and other electrical components, prior to working on filter clogging indicators.



NOTE: All details subject to technical modification

FILTER MAINTENANCE

1. General

1.1 Commitment to Quality

HYDAC demonstrates its commitment to quality through the implementation of an ISO 9001: 2008 program, which encompasses not only product design and manufacturing but service and delivery as well.

1.2. Installation

- Before installing the filter in the system, check that the operating pressure of the system does not exceed the maximum allowable operating pressure of the filter.
- Observe type code label on the filter.

1.3. Commissioning

Loosen cover plate screws. Remove lid and check that the correct filter element is installed. Reposition cover plate, screw in cover plate bolts by hand, tighten alternatively. Switch on hydraulic system and check filter for leakage. Vent filter at an appropriate point in the system.

1.4. Torque Values

Type	Max. Torque	Threads
VD clogging indicators	37 ft-lb	G 1/2
VM clogging indicators	22 ft-lb	G 1/2
Oil Drain Plug	135 ft-lb	1-1/16-12UN
Vent Plug	10 ft-lb	7/16-20UN
Bowl/ Lid or end cover	Do not Torque See 1.3 and 3.2	N/A

2. Maintenance

2.1. General

This section describes periodic maintenance requirements. Periodic and thorough maintenance will ensure operator safety and the life of the filter.

2.2. Maintenance Procedures

- Only high quality spare parts meeting the technical requirements specified by the manufacturer should be used, quality is always guaranteed with HYDAC original spare parts.
- Keep tools, working area and equipment clean.
- After disassembling the filter, clean all parts and check for damage or wear. Replace parts as required.
- When changing filter elements, a high level of cleanliness must be observed.
- Ultrasonic cleaning is used for cleaning Metal Fiber (V) and Wire Screen (W/HC) elements.

2.3. Interval Between Changing Elements

- To ensure optimum performance, HYDAC recommends replacing filter elements every 6 months or upon indication, whichever occurs first.
- HYDAC recommends installing the filter with a clogging indicator (*visual and/or electric or electronic*) to monitor for excessive filter element pressure drop.
- If the clogging indicator trips, immediately change or clean the filter element. (*Only wire mesh and metal fiber elements can be cleaned*).
- If no clogging indicator is installed, HYDAC recommends changing elements at specified intervals (*depends on filter sizing and conditions*). Higher dynamic loads across the element might necessitate shorter intervals between changes. Shorter intervals can also be expected during commissioning, repairs, oil changes, etc. of the hydraulic system.

3. Element Replacement

3.1. Element Removal

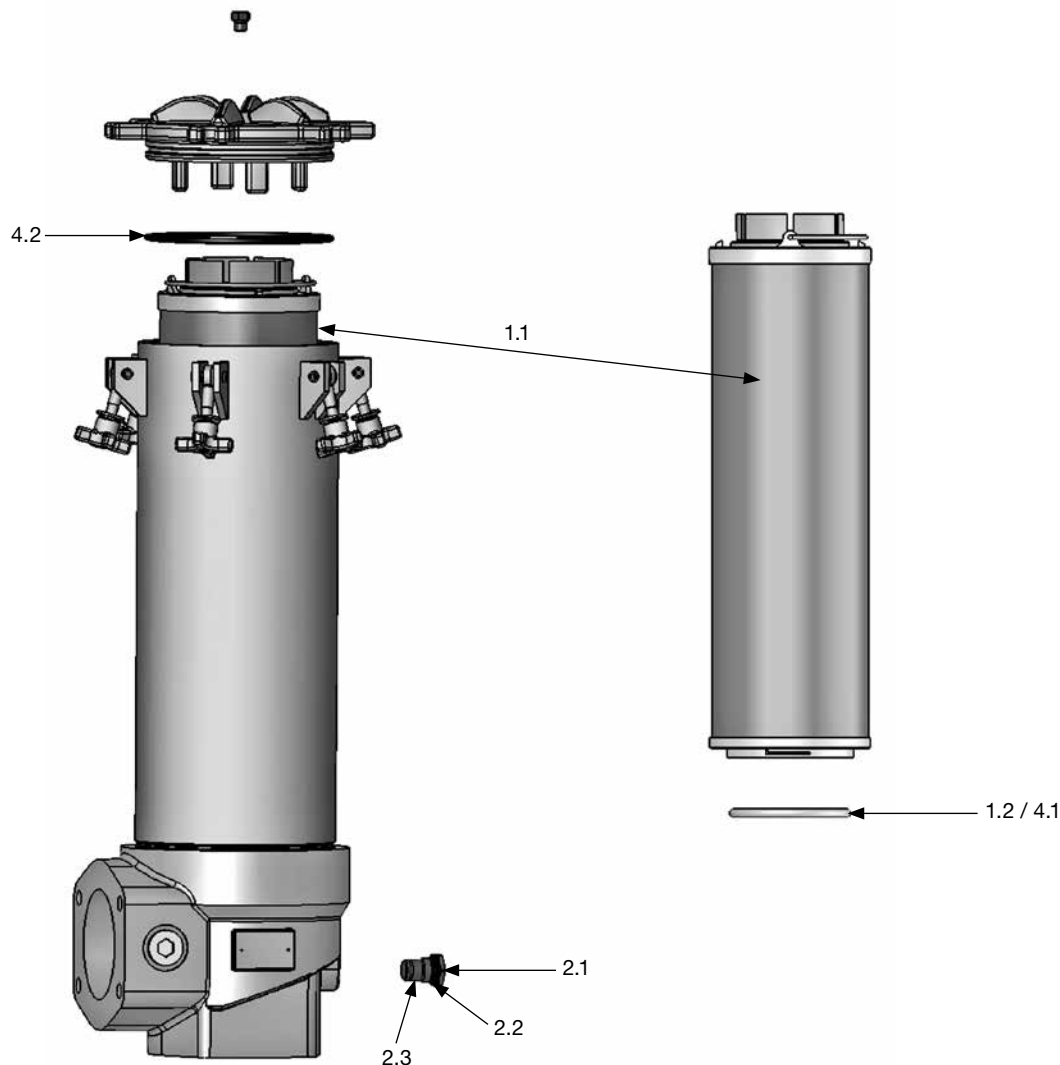
1. Switch off hydraulic system and release filter pressure.
2. Remove oil drain plug. Drain oil into a suitable container. Slowly open lid vent screw. (*clean or dispose of it in accordance with environmental regulations*).
3. Loosen cover plate screws. Swing bolts away from lid. Turn cover plate finger knobs (but do not fully remove) through 45° and lift off.
4. Remove filter element by handle (*examine surface of element for dirt residue and larger particles; these can indicate damage to the components*).
5. Replace or clean filter element (*only W, W/HC and V elements can be cleaned*).
6. Clean housing and cover plate, if necessary.
7. Examine filter, especially sealing surfaces, for damage.
8. Check O-rings and replace parts as necessary.

3.2. Element Installation

1. Lubricate sealing surfaces and thread on the filter head and bowl, and the seals with clean operating fluid.
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 location nozzle in the housing.
4. Apply silver grade anti-seize (per Mil-PRF-907E) to threads. Reposition cover plate, screw in cover plate bolts by hand; tighten alternately. Pivot swing bolts upward and tighten hand knobs again. Tighten alternately.
5. Switch on hydraulic system and vent filter at an appropriate point in the system.
6. Close vent screw.
7. Check filter for leakage. Once a steady stream of fluid (without air) emerges from the vent port, tighten the vent screw back onto the cover plate.

4. Spare Parts

4.1. NFH 1300/2600



Item	Consists of	Designation	NFH 1300-2600
1.		Filter element	See point 5 Replacement elements
	1.1	Filter element	According to order
	1.2	O-ring	97.8 x 5.33
		No. of elements per filter side / size	1 x 1300 R.../ 1 x 2600 R...
2.		Clogging indicator or indicator plug VD 0 A 1.0 VD 0 A 1.0 /-V	See Filter Clogging Indicator brochure 00305932 00305931
	2.1	Clogging indicator or indicator plug	See Filter Clogging Indicator brochure
	2.2	Profile seal ring	VA
	2.3	O-ring	15 x 1.5 (13.5 x 1.5, pre-2002 - both seals included in kit)
3.		SEAL KIT-E VD/VM/VR	00319648
		SEAL KIT-E VD/VM/VR /-V	00319638
4.*		SEAL KIT NFH 1300/2600 NBR	02065690
		SEAL KIT NFH 1300/2600 FKM	02077605
	4.1	O-ring (<i>element</i>)	97.8 x 5.33
	4.2	O-ring (<i>cover plate</i>)	158.34 X 3.53

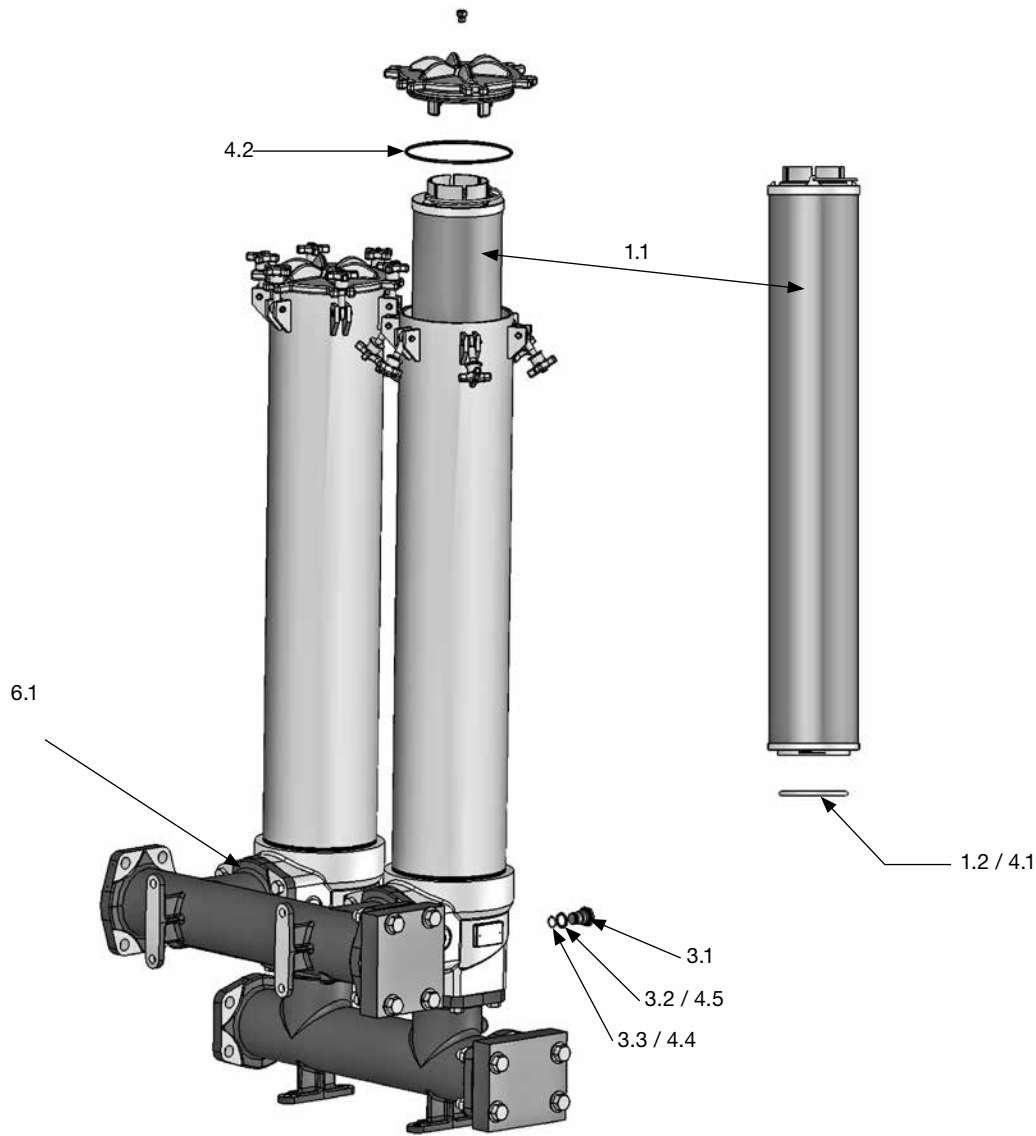
Other spare parts available on request
Bold items can be ordered.

-O-Ring durometer can range from 70-80Sh. EPR Seal Kits available on request.
-Bowl assembly kits - not available.

*Note - Included but not listed here are clogging indicator, bleed valve, head/tube, and vent seals

FILTER MAINTENANCE

4.2. NFH 5210/10410



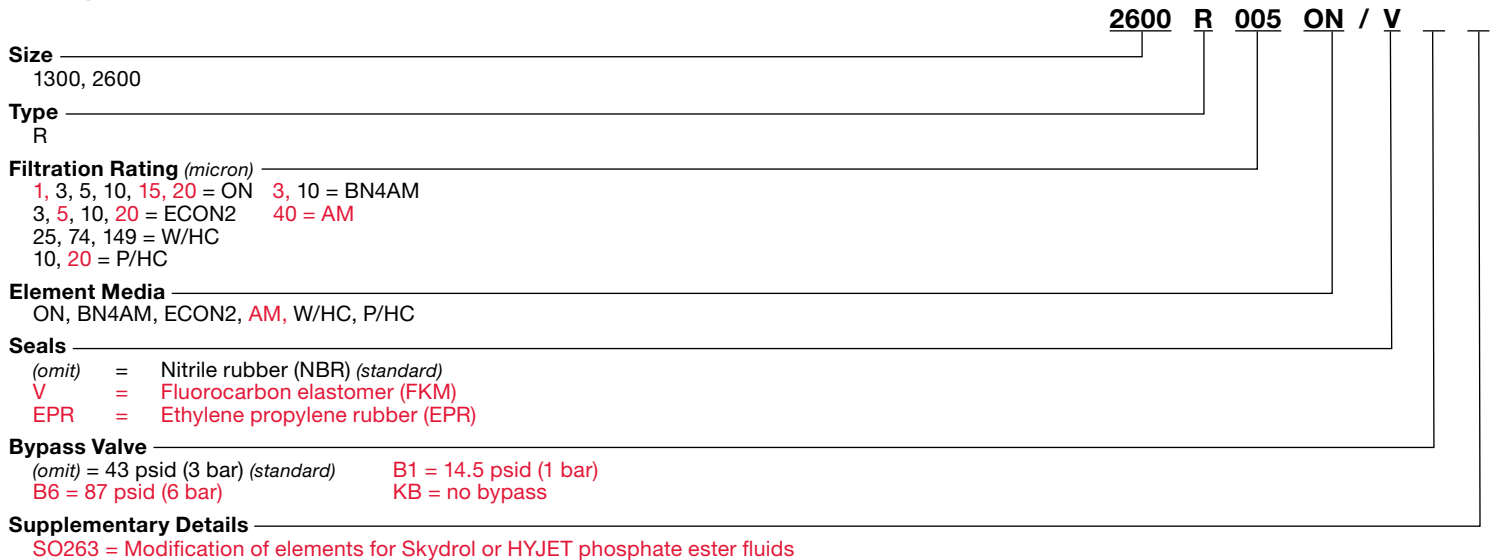
Item	Consists of	Designation	Quantity	NFH 5200	NFH 7800	NFH 10400
1.		Filter element	1	See point 5 Replacement elements		
	1.1	Filter element	1	2600 R...		
	1.2	O-ring	1	97.8 x 5.33		
3.		INDICATOR PLUG VD 0 A.1	1	00305932		
		INDICATOR PLUG VD 0 A.1 /-V	1	00305931		
	3.1	Indicator plug	1	VD...		
	3.2	Profile seal ring	1	VD...		
	3.3	O-ring	1	15 x 1.5		
4.*		SEAL KIT NFH 1300 / 2600 ...0.0	1	2 x 02065690	3 x 02065690	4 x 02065690
		SEAL KIT NFH 1300 / 2600 ...0.0 /-V	1	2 x 02077605	3 x 02077605	4 x 02077605
	4.1	O-ring (element)	1	97.8 x 5.33		
	4.2	O-ring (cover plate)	1	158.34 X 3.53		
	4.3	O-ring (VR 0 A.0)	2	18 x 2.5		
	4.4	O-ring (VD 0 A.1)	2	15 x 1.5 (13.5 x 1.5, pre-2002 - both seals included in kit)		
	4.5	Profile seal ring (VD 0 A.1)	2	VD...		
6.		SEAL KIT E INLINE CONNECTION	x	8 x 01279781	10 x 01279781	14 x 01279781
		SEAL KIT E INLINE CONNECTION /-V	x	8 x 01279782	10 x 01279782	14 x 01279782
	6.1	O-ring	x	110.72 x 3.53		

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

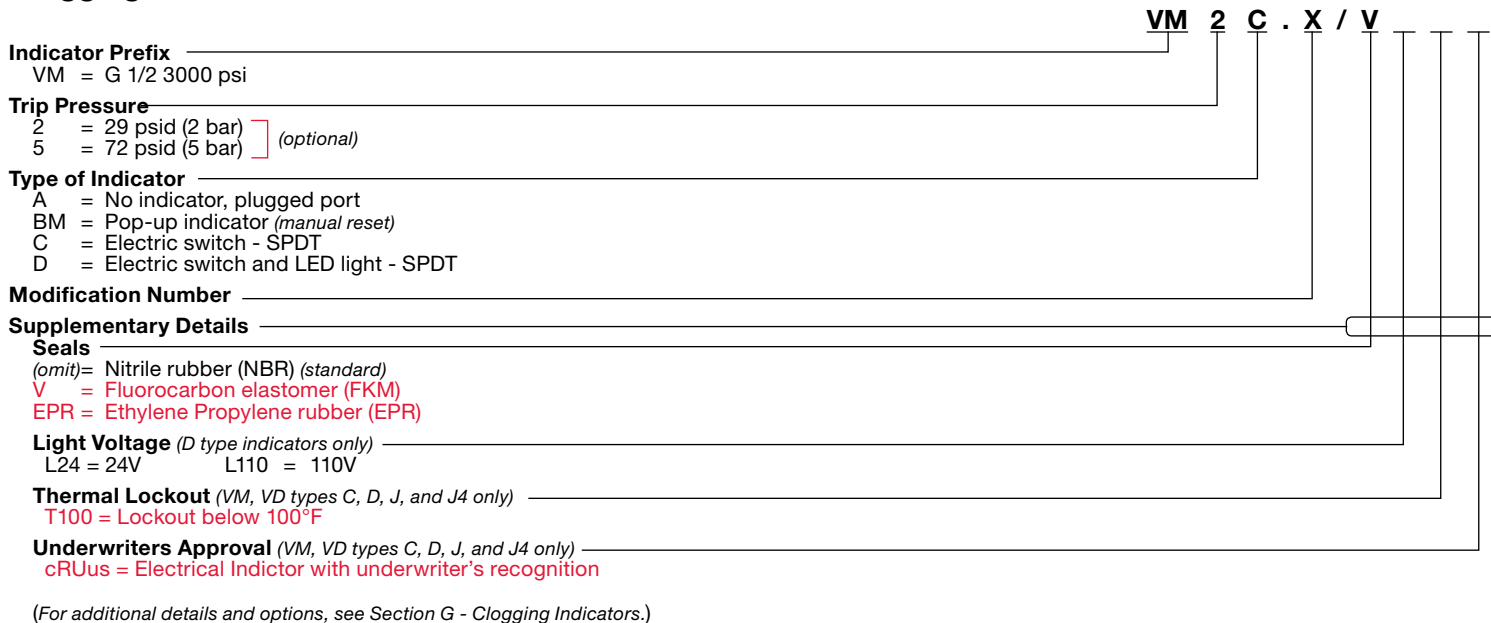
-O-Ring durometer can range from 70-80Sh. EPR Seal Kits available on request.
 -Bowl assembly kits not available.

*Note - Included but not listed here are bleed valve, head/tube, and vent seals

5. Replacement Element Model Code



Clogging Indicator Model Code



6. 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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