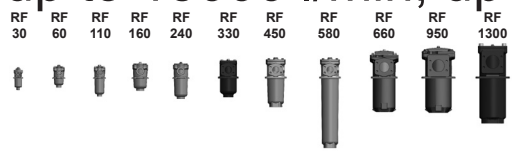
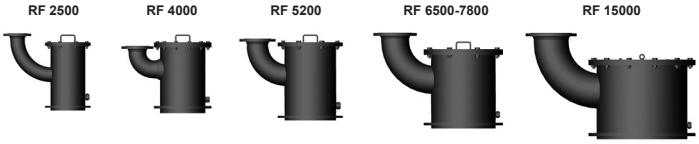
HYDAC INTERNATIONAL

Spare Parts List
Return line filter RF
up to 15000 l/min, up to 25 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 cover for RF 30). 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	Torque value	Int. hex. Allen key
30	Hand-tight	
60/110	20 Nm	AF width 6
160/240	20 Nm	AF width 6
330	40 Nm	AF width 8
450/580	30 Nm	AF width 8
660	150 Nm	AF width 14
950/1300	200 Nm	AF width 17

Size	Torque value	Ext. hex.
2500/4000	150 Nm	AF width 24
5200	250 Nm	AF width 30
6500/15000	250 Nm	AF width 36

1.5 TORQUE VALUE FOR CLOGGING INDICATORS

Type	Max. torque
VR	10 Nm (for RF 30) 33 Nm (for RF 60-330) 50 Nm (for RF 660-15000)
VR	15 Nm (for B, BM F, LE and LZ indicators and only for RF 60-15000)
VM	33 Nm

2. CHANGING THE ELEMENT

2.1 REMOVING THE ELEMENT

1. Switch off hydraulic system and release filter pressure.
   Caution: when fitted inline:
   Before opening the filter, slowly open the air bleed screw and release pressure (release possible pressure in the tank).
2. Size 30:
   Unscrew cover manually
   Size 60-330 and 2500-15000:
   Loosen cover bolts and lift off cover.
   Size 450 und 580:
   Loosen cover bolts. Screw two of the bolts into the tapped extraction holes in the cover plate, so that the cover plate is released from its seat.
   Lift off the cover plate, with the filter element attached, from the housing.
   Size 660-1300:
   Unscrew cover bolts by approx. 2 turns (no need to remove completely). Turn cover clockwise until it can be lifted off by holding near the bolts (bayonet).
3. Pull out filter element (with dirt retainer, if present) by the handle.
   Size 450 und 580:
   Turn the filter element to loosen it from the cover (bayonet fitting).
   Then unscrew and remove the forcing screws from the cover.
4. Examine element surface for dirt residues and larger particles since these can be an indication of damage to components.
5. Remove dirt retainer (if present) by turning anti-clockwise – bayonet fitting
6. Replace or clean filter element(s) (only W/HC and V elements can be cleaned).
7. Clean housing, cover and dirt retainer.
8. Examine filter, especially sealing surfaces, for mechanical damage.
9. Check O-rings – and replace if necessary

2.2 FITTING THE ELEMENT

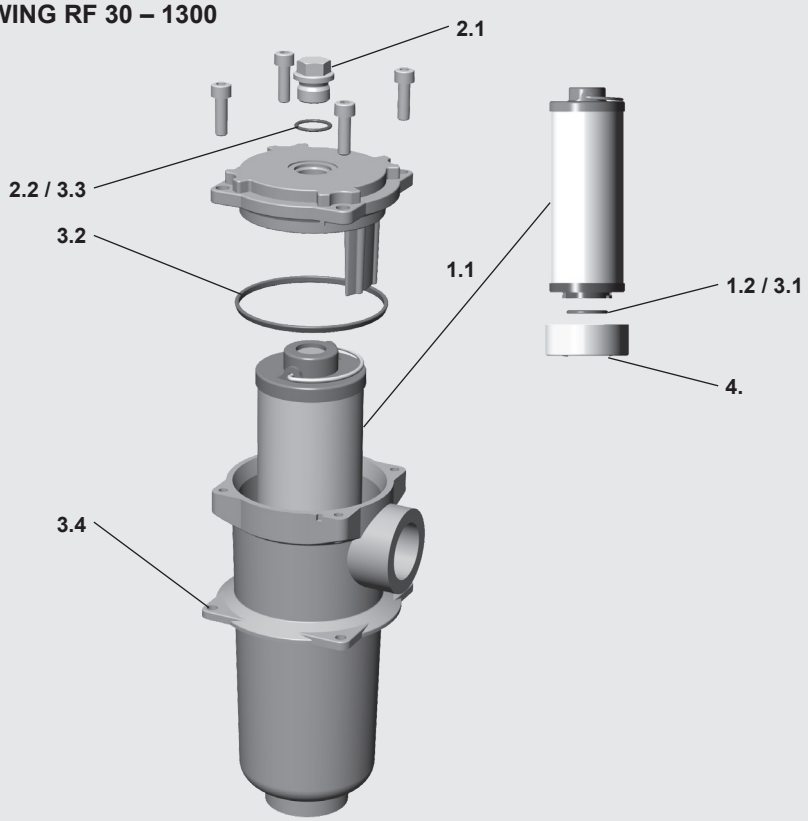
1. Wet the sealing surfaces on the filter housing and cover, as well as the O-ring, with clean operating fluid.
2. When fitting a new filter element, check that the designation corresponds to that of the old element.
3. If present, fit the dirt retainer onto the new or cleaned filter element by turning clockwise.
4. Place filter element(s) carefully on to the element spigot in the housing.
   Size 450 und 580:
   Push filter element onto the cover plate and turn to secure (bayonet fitting).
   Place cover plate with filter element into the housing. In so doing, the filter element will locate automatically in the element spigot in the housing.
5. Size 30:
   Replace cover and screw in manually.
   Size 60-330 and 2500-15000:
   Position cover and screw in cover bolts by hand; then tighten the cover bolts in alternation.
   Size 450 and 580:
   Position cover and screw in cover bolts by hand; then tighten the cover bolts in alternation.
   Size 660-1300:
   Replace cover in correct position (dowel pin in the housing must line up with groove in the cover) and turn anti-clockwise as far as it will go.
   Tighten cover bolts alternately.
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 7.116.E4/08.17

3. SPARE PARTS

3.1 SPARE PARTS DRAWING RF 30 – 1300



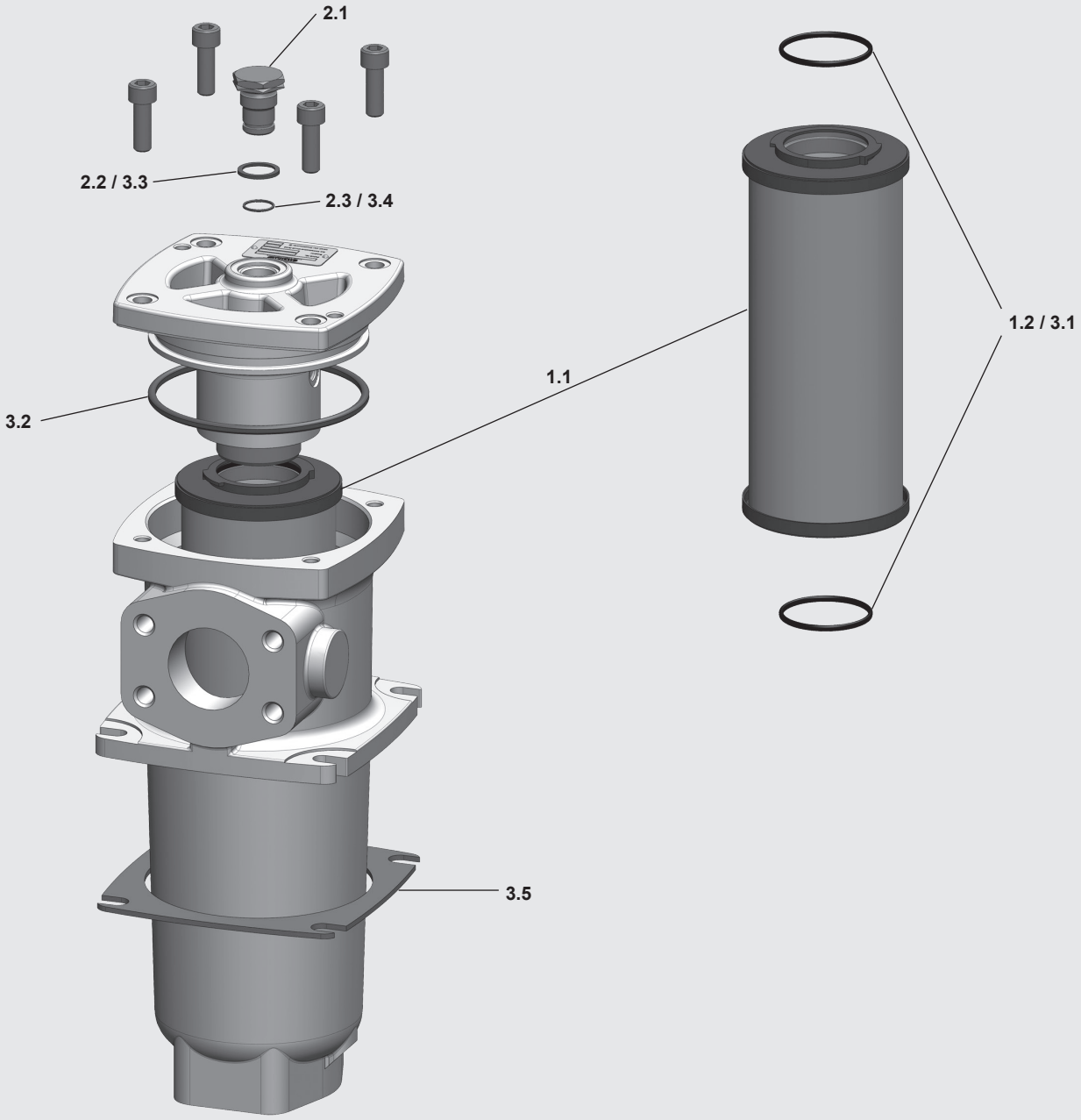
3.2 SPARE PARTS LIST RF 30 – 1300

Item	Consists	Description	RF 30 B B	RF 60 D C	RF 110 D C	RF 160 D E	RF 240 D E
1.		**Filter element**	**see Point 4. Replacement elements**				
	1.1	Filter element	1 x 0030 R...	1 x 0060 R...	1 x 0110 R...	1 x 0160 R...	1 x 0240 R...
	1.2	O-ring	12.37 x 2.62	22 x 3.5		34 x 3.5	
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				
	2.2	O-ring	18 x 2.5				
3.		**Repair kit RF** **Repair kit RF /-V**	00307664 00303733	01267827 01267828		01270657 01270658	
	3.1	O-ring (element)	12.37 x 2.62	22 x 3.5		34 x 3.5	
	3.2	O-ring (cover)	56 x 3	63.09 x 3.53		91.67 x 3.53	
	3.3	O-ring (indicator)	18 x 2.5				
	3.4	O-ring (tank seal)	01205967	82.14 x 3.53		110.72 x 3.53	
4.*		**Dirt retainer RF...**	01202459	00245028	00246164	00245029	00246182
		Dirt retainer RF...HC	01202459	01202362		01202363	
without		Air filter	00246178	–	–	–	–

Item	Consists	Description	RF 330 D G	RF 330 D L	RF 660 D N RF 660 D M	RF 950 D O	RF 1300 D P
1.		**Filter element**	**see Point 4. Replacement elements**				
	1.1	Filter element	1 x 0330 R...	1 x 0330 R...	1 x 0660 R...	1 x 0950 R...	1 x 1300 R...
	1.2	O-ring	48 x 3		68 x 5	97.8 x 5.33	
2.		**Clogging indicator or screw plug**	**See Point 5. Replacement clogging indicators**				
	2.1	Screw plug VR 0 A.0 VR 0 A.0 /-V	00306006 00305928				
	2.2	O-ring	18 x 2.5				
3.		**Repair kit RF** **Repair kit RF /-V**	00319613 00311702		01293042 01293039	01293043 01293040	
	3.1	O-ring (element)	48 x 3		68 x 5	97.8 x 5.33	
	3.2	O-ring (cover)	105 x 5		153 x 6	185 x 5	
	3.3	O-ring (indicator)	18 x 2.5				
	3.4	O-ring (tank seal)	00405588		03170653	00405590	00405590
4.*		**Dirt retainer RF...**	00245030		00245031	00413196	-
		Dirt retainer RF...HC	01202364		01202357	01204141	

*if present
Other spare parts on request

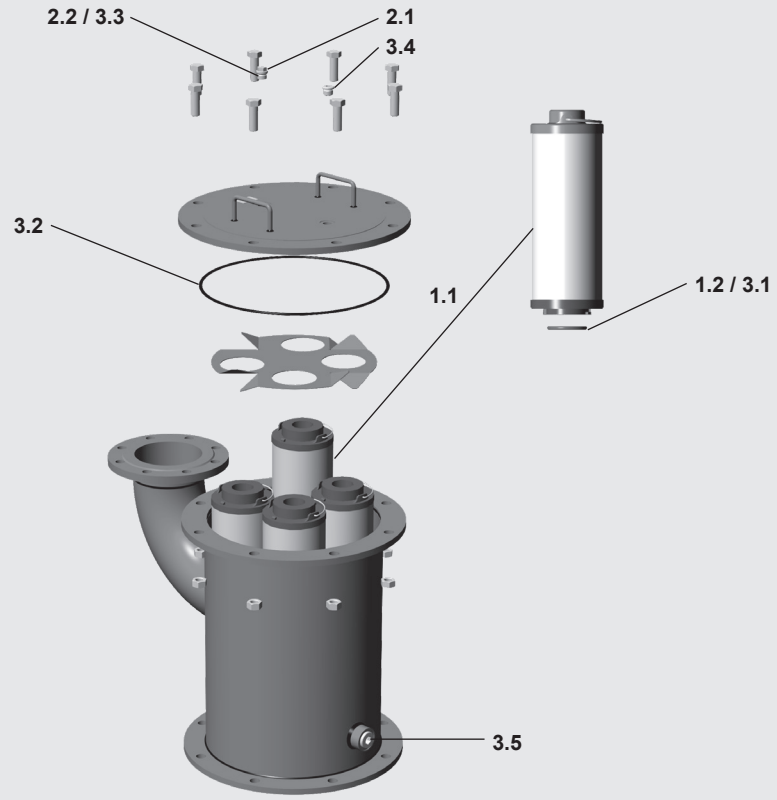
3.3 SPARE PARTS DRAWING RF 450 – 580



3.4 SPARE PARTS LIST RF 450 – 580

Item	Con-sists	Description	RF 450 C L	RF 580 C L
1.		**Filter element**	**see Point 4. Replacement elements**	
	1.1	Qty. and type of element	1 x 0450 R...	1 x 0580 R...
	1.2	O-ring	48 x 3	48 x 3
2.		**Clogging indicator or screw plug**	**See Point 5. Replacement clogging indicator**	
	2.1	Screw plug VD 0 A.1 VD 0 A.1 /-V	 00305932 00305931	
	2.2	Profile seal ring	VD…	
	2.3	O-ring	15 x 1.5	
3.		**Repair kit RF** **Repair kit RF /-V**	01300526 01300527	
	3.1	O-ring (element)	48 x 3	
	3.2	O-ring (cover)	115 x 5	
	3.3	Profile seal ring (indicator)	VD...	
	3.4	O-ring (indicator)	15 x 1.5	
	3.5	Tank seal	03401359	

3.5 SPARE PARTS DRAWING RF 2500 – 15000



3.6 SPARE PARTS LIST RF 2500 – 15000

Item	Consists	Description	RF 2500 B R	RF 2500 B U	RF 4000 B U	RF 4000 B V	RF 5200 B U	RF 5200 B V
1.		**Filter element**	**see Point 4. Replacement elements**					
	1.1	Qty. and type of element	3 x 0850 R...	3 x 0850 R...	5 x 0850 R...	5 x 0850 R...	4 x 1300 R...	4 x 1300 R...
	1.2	O-ring	68 x 5				97.8 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					
	2.2	O-ring	18 x 2.5					
3.		**Repair kit RF** **Repair kit RF /-V**	01273117 01273118		01273119 01273120		01273121 01273122	
	3.1	O-ring (element)	3x 68 x 5		5x 68 x 5		4x 97.8 x 5.33	
	3.2	O-ring (cover)	278.77 x 5.33		370 x 5		405.26 x 7	
	3.3	O-ring (indicator)	18 x 2.5					
	3.4	Screw plug VSTI G ½ (cover)	00607166 00613168 for /-V					
	3.5	Screw plug VSTI G1 (drain)	00607168 00625536 for /-V					

Item	Consists	Description	RF 6500 B V	RF 6500 B W	RF 7800 B W	RF 7800 B X	RF 15000 B X	RF 15000 B Y
1.		**Filter element**	**see Point 4. Replacement elements**					
	1.1	Qty. and type of element	5 x 1300 R...	5 x 1300 R...	6 x 1300 R...	6 x 1300 R...	10 x 1300 R...	10 x 1300 R...
	1.2	O-ring	97.8 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					
	2.2	O-ring	18 x 2.5					
3.		**Repair kit RF** **Repair kit RF /-V**	01273123 01273124		01273830 01273831		01273125 01273126	
	3.1	O-ring (element)	5x 97.8 x 5.33		6x 97.8 x 5.33		10x 97.8 x 5.33	
	3.2	O-ring (cover)	506.86 x 6.99				715 x 8.4	
	3.3	O-ring (indicator)	18 x 2.5					
	3.4	Screw plug VSTI G ½ (cover)	00607166 00613168 for /-V					
	3.5	Screw plug VSTI G1 (drain)	00607168 00625536 for /-V					

Other spare parts on request

4. REPLACEMENT ELEMENT

0330 R 010 ON /-V

Size
0030, 0060, 0110, 0160, 0240, 0330, 0450, 0580, 0660, 0950, 1300

Type
R

Filtration rating

ON:	001, 003, 005, 010, 015, 020
V:	003, 005, 010, 020
W/HC:	025, 050, 100, 200
P/HC:	010, 020
BN4AM:	003, 010
AM:	040

Filter material
ON, V, W/HC, P/HC, BN4AM, AM

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

5. REPLACEMENT CLOGGING INDICATOR

VR 2 D . X /-L24

Type of indicator

VR	return line indicator (standard; for RF 450/580 on request)
VM	differential pressure indicator (only possible for RF 450/580)

Response pressure

2	standard 2 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).

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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 guaranteed for 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 or operating conditions not described, please contact the relevant technical department.
Subject to technical modifications.

NOTES