



# GRF

## RETURN FILTERS



### DESCRIPTION

Ecofriendly in-out tank top return filter

### MATERIALS

Head and cover: Aluminum alloy  
Diffusor: Zinc plated steel  
Element support: Aluminum alloy  
Magnetic core: Syntherized magnetic material  
Seals: NBR Nitrile (FKM Fluoroelastomer on request)  
Indicator housing: Brass

### PRESSURE

Max. working: 1 MPa (10 bar)  
Collapse, differential for the filter element (ISO 2941):  
1 MPa (10 bar)

### BYPASS VALVE

Setting: 170 kPa (1,7 bar)  $\pm$  10%

### FLOW RATE

Qmax 1200 l/min

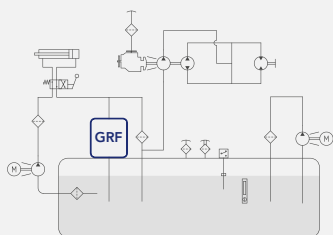
### WORKING TEMPERATURE

From -25° to +110° C

### COMPATIBILITY (ISO 2943)

Full with fluids: HH-HL-HM-HV-HTG  
(according to ISO 6743/4)  
For fluids different than the above mentioned, please contact  
our Customer Service.

### HYDRAULIC DIAGRAM



Is this datasheet the latest release? Please check on our website



## RETURN FILTERS

## ORDERING AND OPTION CHART

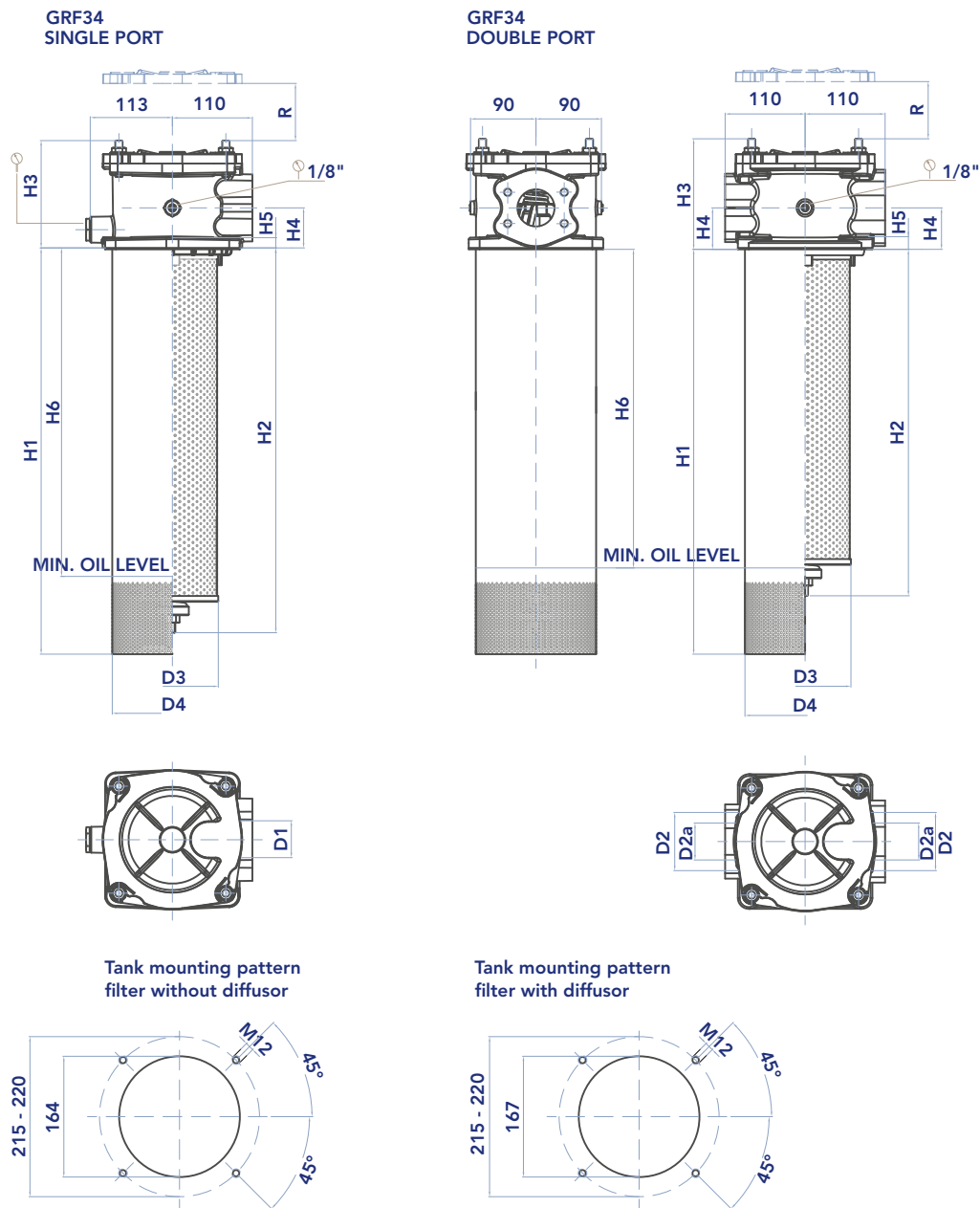
\*\* When the filter is ordered with FKM seals, the first digit of the indicator code is a letter  
(please see Clogging Indicator Chapter for further details)

## SPARE PARTS

[illegible]



# INSTALLATION DRAWING



## FILTER HOUSING

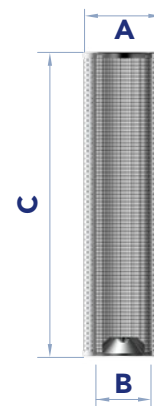
|       | D1         | D2         | D2a        | D3  | D4    | H1  | H2  | H3  | H4 | H5 | H6  | R   | Kg   |
|-------|------------|------------|------------|-----|-------|-----|-----|-----|----|----|-----|-----|------|
| GRF34 | 2" - 2"1/2 | 2" - 2"1/2 | 1"1/2 - 2" | 126 | 165,5 | 543 | 530 | 155 | 55 | 14 | 460 | 620 | 9,10 |

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## RETURN FILTERS

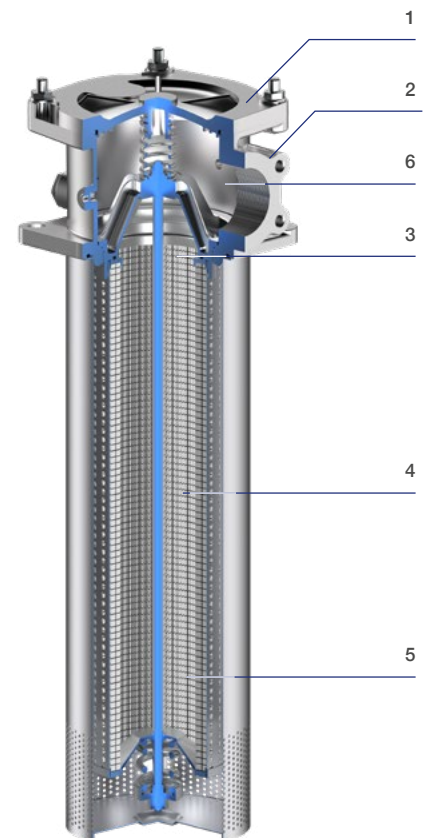
### FILTER ELEMENT

|       | A  | B     | C   | Kg   | AREA (cm <sup>2</sup> )<br>Media F+ |
|-------|----|-------|-----|------|-------------------------------------|
| IRF34 | 90 | 120,8 | 480 | 0,75 | 10.810                              |



### MAINTENANCE

- 1) Stop the system and verify there is no pressure in the filter.
- 2) Loosen the nuts (1) on the cover (2). N.B. it is not necessary to disassemble the nuts, use the slots on the cover.
- 3) Turn the cover (2) clockwise and remove it.
- 4) Extract the filter element using the handle (3).
- 5) At the bottom of the element, unscrew the nut (4) from the tie-rod (5) locking the nut (6) with a wrench to prevent rotation of the tie-rod. Remove the spring holder washer (7) and the spring (8).
- 6) Remove the dirty filter element (9).  
N.B. The exhausted filter elements and the dirty filter components are classified "Dangerous waste material" and must be disposed of according to the local laws, by authorized Companies.
- 7) Check the filter element part number on the filter label or in the ordering and option chart. Use only original spare parts.
- 8) Insert the clean element (9) in the perforated pipe (10) until it stops on lower cap (10a).
- 9) Assembly the spring (8), the spring holder (7) and screw the nut (4) on the tie-rod (5) until it stops.
- 10) Check the correct position and the condition of handle O-ring gasket (11). Clean and lubricate with oil. If damaged, check the seal kit part number in the catalogue or contact the customer care service.
- 11) Replace the filter element assembly (with the handle) into the housing with the upper spring (12).
- 12) Check the correct positioning and the condition of the O-ring gasket (13) of the cover (2) and lubricate with oil. If damaged, check the seal kit part number in the catalogue or contact the customer care service.
- 13) Position the cover (2) and tighten the nuts (1) until it stops.



#### Accessories:

##### Clogging indicator

If damaged, unscrew and replace it (check the part number in the ordering and option chart).

Indicators with thread M20x1,5: Lubricate the O-ring gaskets and tighten until it stops, with a tightening torque of 40 Nm +5/0.

Indicators with conical thread 1/8": Apply a thread-sealing and screw until tight. N.B. An over-tightening can damage the thread.

## PRESSURE DROP CURVES ( $\Delta p$ )

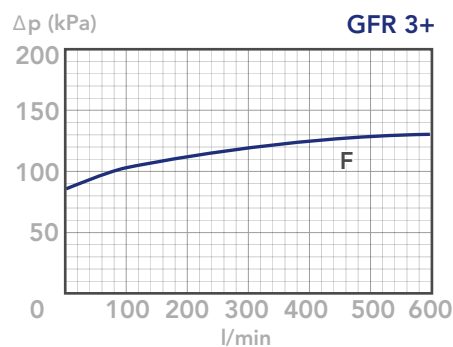
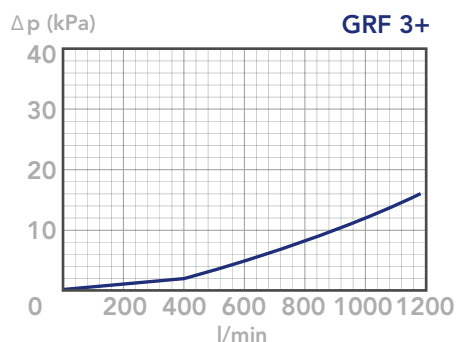
The “Assembly Pressure Drop ( $\Delta p$ )” is obtained by adding the pressure drop values of the Filter Housing and of the Clean Filter Element corresponding to the considered Flow

**FILTER HOUSING PRESSURE DROP**  
(mainly depending on the port size)

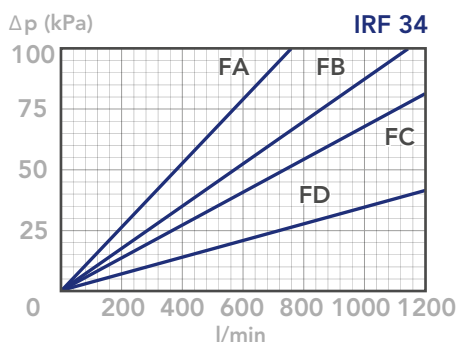
Rate and it must be lower than 50 kPa (0,5 bar) and should never exceed 1/3 of the bypass valve setting.

**BYPASS VALVE PRESSURE DROP**

When selecting the filter size, these curves must be taken into account if it is foreseen that any flow peak is to be absorbed by the bypass valve, it also must be of proper configuration to avoid pressure peaks. The valve pressure drop is directly proportional to fluid specific gravity.



**CLEAN FILTER ELEMENT PRESSURE DROP WITH F+ MEDIA**  
(depending both on the internal diameter of the element and on the filter media)



### N.B.

All the curves have been obtained with mineral oil having a kinematic viscosity 30 cSt and specific gravity 0,86 kg/dm<sup>3</sup>; for fluids with different features, please consider the factors described in the first part of this catalogue. All the curves

are obtained from test done at the UFI FILTERS HYDRAULICS Laboratory, according to the specification ISO 3968. In case of discrepancy, please check the contamination level, viscosity and features of the fluid in use.