



## FVR7SERIES

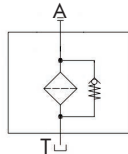
### Return filter inserts

Filter inserts for mounting inside the tank on the return line. Filtration from inside to outside. Flow rates up to 1.200 l/min.

## TECHNICAL INFORMATION

### HOUSING

HYDRAULIC SYMBOL:



MATERIALS:

Insert holder: aluminium alloy  
 Diffuser: zinc plated steel  
 Seal: NBR

BYPASS:

1,7 bar

### ELEMENT

tested according to ISO 2941, 2942, 2943, 3968, 16889, 23181

FILTER MEDIA:

Microglass fiber: G03 - G06 - G10 - G25  
 Paper: C10 - C25  
 Wire mesh: T60

DIFFERENTIAL BURST PRESSURE:

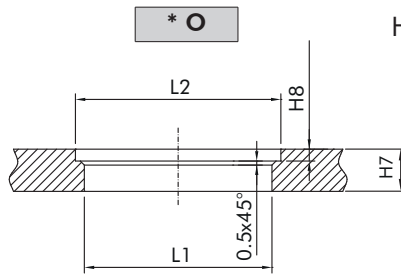
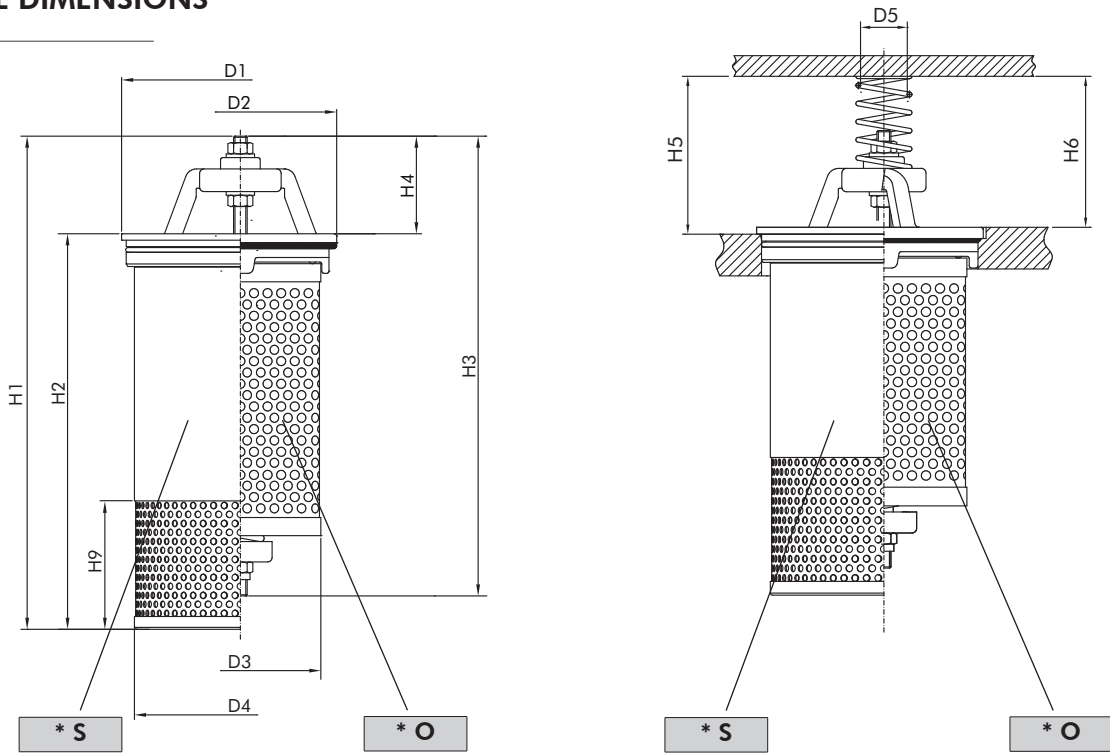
10 bar

OPERATING TEMPERATURE RANGE:

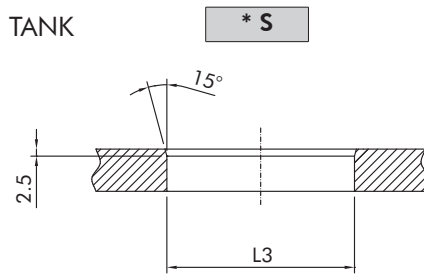
-25°C + 100°C

FLUID COMPATIBILITY:

Full with HH-HL-HM-HV (acc. To ISO 2943).  
 For use with other fluid please contact Filtrec Customer Service  
 (info@filtrec.it).

**OVERALL DIMENSIONS**


HOLE ON THE TANK


**NOMINAL SIZE**

MODEL	D1	D2	D3	D4	D5	H1	H2	H3	H4	H5	H6	H7	H8	H9	L1	L2	L3	WEIGHT		
																		* O	* S	
FVR-7-11						226	180	196											1,5 Kg	2,10 Kg
FVR-7-12						266	220	240											1,7 Kg	2,30 Kg
FVR-7-13	120	85	72	98,5	20	316	270	290	46	74	64	12	7,5	60	81,5	86,5	110		1,9 Kg	2,60 Kg
FVR-7-14						416	370	390											2,3 Kg	3,10 Kg
FVR-7-20						330	267	314											4,1 Kg	5,20 Kg
FVR-7-21	155	118	106	130		400	337	384	63	90	80	14	9	91	112	119,5	145		4,4 Kg	5,70 Kg
FVR-7-22						605	542	589											5,7 Kg	7,60 Kg
FVR-7-30					31	384	308	358											4,9 Kg	6,50 Kg
FVR-7-31						464	388	438											5,2 Kg	7,10 Kg
FVR-7-32	185	150	126	165		654	578	628	76	114	100	18	12,5	100	139	151,5	178		7,5 Kg	8,70 Kg
FVR-7-33						564	488	538											6,8 Kg	10,20 Kg

## ORDERING INFORMATION

1.	2.	3.	4.	5.	6.	7.
<b>FVR7</b>	<b>30</b>	<b>G10</b>	<b>B</b>	<b>B</b>	<b>M</b>	<b>S</b>
<b>R7</b>	<b>30</b>	<b>G10</b>	SPARE ELEMENT			

1. FILTER SERIES	FVR7	
2. FILTER SIZE	11-12-13-4	
	20-21-22	
	30-31-32-33	
3. FILTER MEDIA	G03	glassfiber $\beta_{4,5\mu\text{m(c)}} > 1.000$
	G06	glassfiber $\beta_{7\mu\text{m(c)}} > 1.000$
	G10	glassfiber $\beta_{12\mu\text{m(c)}} > 1.000$
	G25	glassfiber $\beta_{22\mu\text{m(c)}} > 1.000$
	C10	paper $\beta_{10\mu\text{m(c)}} > 2$
	C25	paper $\beta_{25\mu\text{m(c)}} > 2$
	T60	wire mesh 60 $\mu\text{m}$
4. SEALS	B	NBR
5. BYPASS VALVE	B	1,7 bar
6. MAGNET	0	no magnet
	M	with magnets
7. DIFFUSER	0	no diffuser
	S	with diffuser

## CLOGGING INDICATOR

The use of a clogging indicator is always recommended, to know when the filter element must be replaced. A simple 1/8" threaded hole (in the area of the tank cover where the insert is located – see page 6) allows to fit a clogging indicator that must be ordered separately.

## PRESSURE DROP ( $\Delta p$ ) INFORMATION FOR FILTER SIZING

The max recommended total  $\Delta p$  for return filters is 0,4 - 0,6 bar with clean element.

### ELEMENT PRESSURE DROP

The element  $\Delta p$  (bar) is given by the flow rate (l/min) multiplied by the factor in the table here below corresponding to the selected media and divided by 1000.

If the oil has a viscosity  $V_1$  different than 32 cSt a corrective factor  $V1/32$  must be applied.

Example: 200 l/min with R722G10 and oil viscosity 46 cSt  $> 200 \times 0,69/1000 \times 46/32 = 0,20$  bar

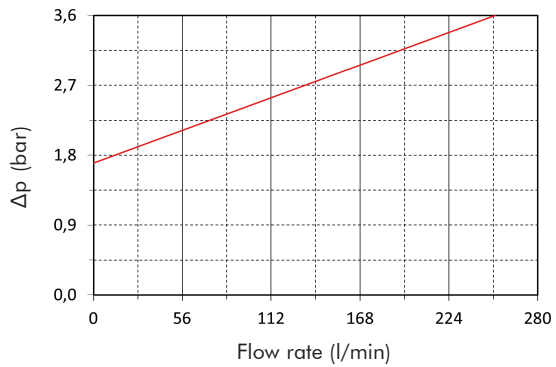
	<b>G03</b>	<b>G06</b>	<b>G10</b>	<b>G25</b>	<b>C10</b>	<b>C25</b>	<b>T60</b>
<b>R711</b>	19,02	16,88	6,93	4,61	2,95	2,52	1,58
<b>R712</b>	11,68	10,81	4,32	3,10	2,93	2,50	1,36
<b>R713</b>	7,75	6,85	3,72	2,73	2,15	1,85	1,34
<b>R714</b>	5,52	4,95	2,38	2,18	1,74	1,49	1,32
<b>R720</b>	4,02	3,28	1,45	1,08	0,98	0,85	0,14
<b>R721</b>	2,61	2,21	1,09	0,85	0,76	0,65	0,12
<b>R722</b>	1,86	1,58	0,69	0,46	0,38	0,25	0,11
<b>R730</b>	3,12	2,49	1,34	0,92	0,84	0,70	0,10
<b>R731</b>	2,06	1,90	0,84	0,39	0,33	0,25	0,09
<b>R732</b>	1,31	1,19	0,49	0,26	0,23	0,18	0,08
<b>R733</b>	1,47	1,23	0,62	0,28	0,25	0,20	0,09

N.B. All the reported data have been obtained at our laboratory, according to specification ISO3968 with mineral oil having 32 cSt viscosity and density 0,875 Kg/dm<sup>3</sup>.

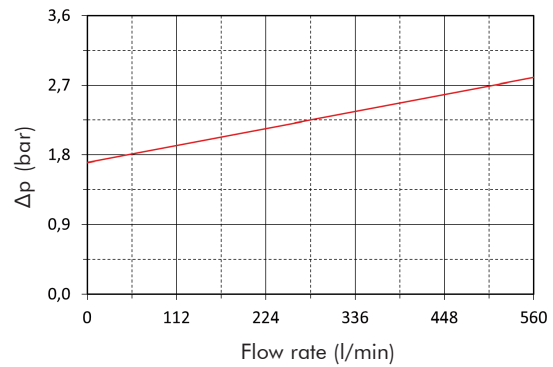
## BYPASS VALVE PRESSURE DROP

The bypass valve  $\Delta p$  is given by the curve of the considered model and setting, in correspondence of the flow rate value.

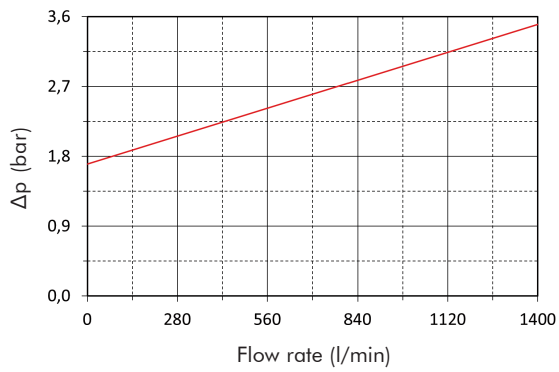
### FVR7 11-14



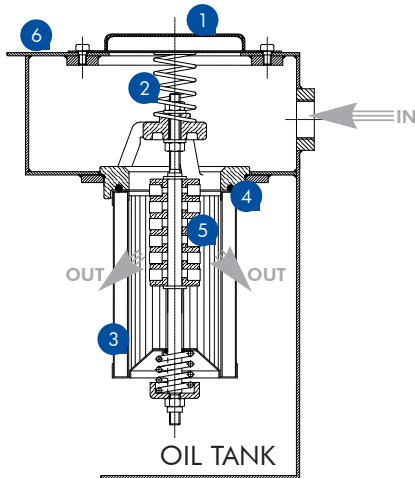
### FVR7 20-22



### FVR730-33



## USER TIPS



- 1 ACCESS COVER
- 2 SPRING
- 3 FILTER ELEMENT
- 4 SEALS
- 5 MAGNETS
- 6 INDICATOR PORT  
(a 1/8" hole can be located in this area)

## WARNING

- ⚠ Make sure that Personal Protective Equipment (PPE) is worn during installation and maintenance operation.

## DISPOSAL OF FILTER ELEMENT

- ⚠ The used filter elements and the filter parts dirty of oil are classified as "Dangerous waste material": they must be disposed according to the local laws by authorized Companies.

## INSTALLATION

- ⚠ 1. Make sure that the insert assembly is properly located as well as the positioning spring (2) between the insert support and the access cover.
- 2. enough space must be available for filter element replacement
- 3. keep in stock a spare FILTREC filter element for timely replacement when required

## OPERATION

- ⚠ 1. the filter must work within the operating conditions of pressure, temperature and compatibility given in the first page of this data sheet
- 2. the filter element must be replaced as soon as the clogging indicator signals at working temperature
- 3. If no clogging indicator is mounted, replace the element according to the system manufacturer's recommendations

## MAINTENANCE

- ⚠ 1. before removing the access cover (1), ensure that the system is switched off and there is no residual pressure in the filter
- 2. remove the access cover (1)
- 3. remove the spring (2) and extract the filter assembly
- ⚠ 4. warning : a certain quantity of oil can be retained within the filter element, provide to have a proper container available for it
- 5. unscrew the nut at the bottom of the insert and slip the dirty filter element carefully
- 6. clean the tie rod (and the magnets if present) and check the support gaskets (4) conditions, replace them if necessary
- 7. Fit a new FILTREC element over the tie rod and block it by tightening the bottom nut
- 8. put the insert assembly into its seat within the tank, put the spring (2) in its position over the insert support, then mount the access cover (1) and secure it properly
- ⚠ 9. the used filter elements cannot be cleaned and re-used



