



## FA4 SERIES

In line medium pressure filters

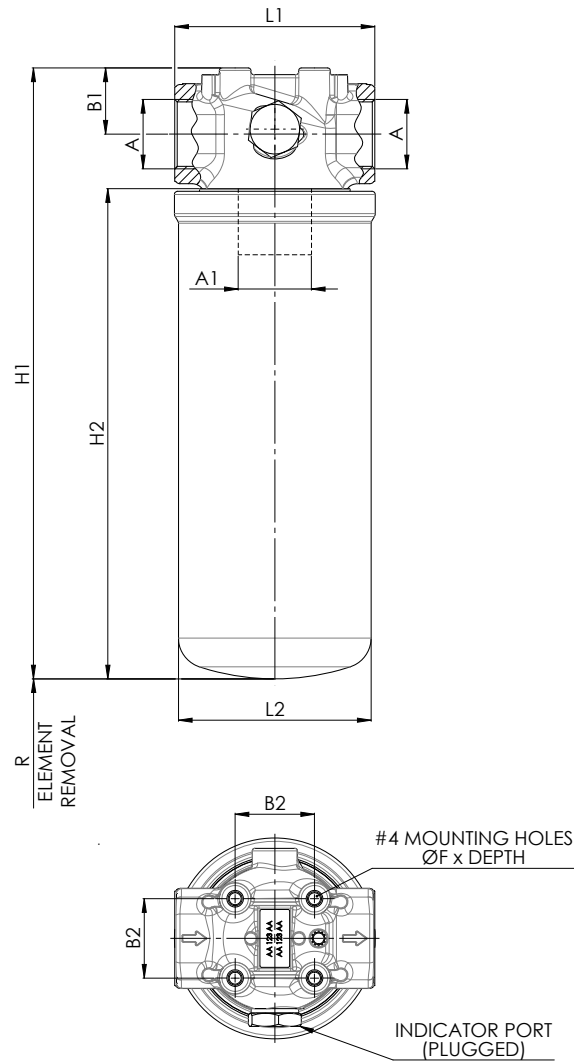
Inline filters with spin-on cartridge for operating pressure up to 35 bar, flow rate up to 250 l/min.

Available with bypass only; the optional indicator port allows to fit a visual or electrical differential indicator.



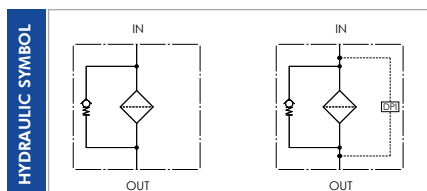
<b>HOUSING</b>	tested according to NFPA T3.10.17, ISO12829, ISO3968
<b>PRESSURE:</b>	Max operating: 34,5 bar for FA4 1x 24 bar for FA4 2x Burst: 69 bar for FA4 1x 55 bar for FA4 2x
<b>CONNECTION:</b>	G 3/4" - G 1" - G 1 1/4"
<b>MATERIALS:</b>	Head: aluminium alloy Bowl: painted steel Seal: NBR (FKM on request)
<b>BYPASS VALVE:</b>	3,5 bar setting
<b>ELEMENT</b>	tested according to ISO 11170, 2941, 2942, 2943, 3724, 3968,16889, 16908, 23181
<b>FILTER MEDIA:</b>	Inorganic microfiber: G03 - G06 - G10 - G15 G25 - G40 Paper: C10 - C25
<b>COLLAPSE PRESSURE:</b>	15 bar for FA4 1x 12 bar for FA4 2x
<b>TEMPERATURE RANGE:</b>	with NBR seal is from -30 °C to +100 °C  with FKM seal (OPTION) is from -25 °C to +120 °C
<b>FLUID COMPATIBILITY:</b>	Full with HH-HL-HM-HV HETG-HEES (acc. to ISO 6743/4). For use with other fluid please contact Filtrec Customer Service (info@filtrec.it).

## OVERALL DIMENSIONS



## NOMINAL SIZE

CODE	A	A1	B1	B2	F	H1	L1	R	WEIGHT	H2	L2
FA4-05						165			1,6 Kg	100	
FA4-11	G 3/4"					216			1,8 Kg	152	
FA4-12	G 1"	1" 3/8-12 UN 2B	34	35		245	100		1,9 Kg	180	97
FA4-13					M10x15	302		30	2,2 Kg	240	
FA4-21	G 1 1/4"	1" 3/4-12 UN 2B	40	48		369			3,2 Kg	295	
FA4-22						444	121		3,7 Kg	360	120



## ORDERING INFORMATION

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
	<b>FA4</b>	<b>21</b>	<b>G10</b>	<b>B</b>		<b>B6</b>	<b>D</b>	<b>T</b>	<b>000</b>	<b>S</b>	<b>0</b>
SPARE ELEMENT	<b>A4</b>	<b>21</b>	<b>G10</b>								

1. FILTER SERIES	F	
2. FILTER ELEMENT SERIES	A4	
3. FILTER SIZE	05-11-12-13	
	21-22	
4. FILTER MEDIA	000	no element
	C10	paper $\beta_{10\mu m(c)} > 2$
	C25	paper $\beta_{25\mu m(c)} > 2$
	G03	glassfiber $\beta_{5\mu m(c)} > 1.000$
	G06	glassfiber $\beta_{7\mu m(c)} > 1.000$
	G10	glassfiber $\beta_{12\mu m(c)} > 1.000$
	G15	glassfiber $\beta_{17\mu m(c)} > 1.000$
	G25	glassfiber $\beta_{22\mu m(c)} > 1.000$
5. SEALS	B	NBR (omit for element)
	V	FKM N.B. subject to MOQ
6. CONNECTIONS	B4	G 3/4" for sizes 05-11-12-13
	B5	G 1"
	B6	G 1 1/4" for size 2x
7. BYPASS VALVE	D	3,5 bar
8. INDICATOR PORT OPTION	0	no indicator port
	T	indicator port plugged
9. INDICATOR	000	compulsory field
10. CORROSION PROTECTION	S	standard (filter head with no treatment)
11. OPTIONS	0	no option

## ACCESSORIES

The accessories must be ordered separately

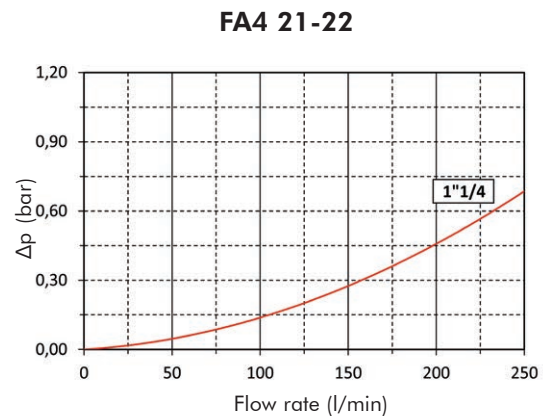
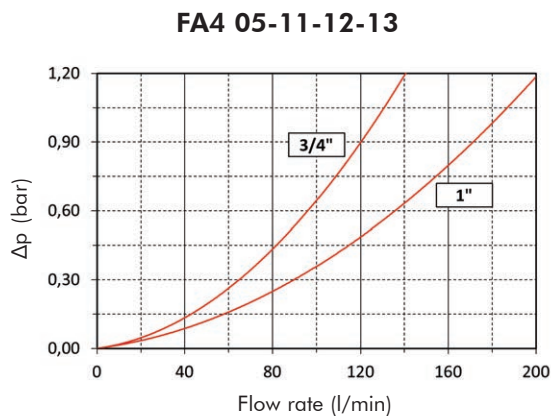
INDICATOR	EX2	differential electric 2,7 bar - NBR
	VX2	differential visual 2,7 bar - NBR
	VEXF2	differential visual-electric 2,7 bar - FKM
PLUG	P01	metal plug for indicator port - NBR
	PF1	metal plug for indicator port - FKM

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

The total Delta P through a filter assembly is given from Housing  $\Delta p$  + Element  $\Delta p$ . This ideally should not exceed 1,0 bar and should never exceed 1/3 of the set value of the by-pass valve. 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>.

### HOUSING PRESSURE DROP

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



### 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  $V_x$  different than 32 cSt a corrective factor  $V_x/32$  must be applied.

Example: 100 l/min with A421G10 and oil viscosity 46 cSt:  $(100 \times 1,75) / 1000 \times (46 / 32) = 0,25$  bar

	G03	G06	G10	G15	G25	G40	C10	C25
<b>A405</b>	25,00	13,89	7,00	5,00	4,67	1,67	3,33	2,78
<b>A411</b>	16,67	10,92	5,77	3,62	2,85	1,31	2,46	2,06
<b>A412</b>	11,11	6,67	4,92	3,13	2,78	1,04	2,08	1,67
<b>A413</b>	6,54	4,69	3,00	1,85	1,69	0,69	1,23	1,00
<b>A421</b>	3,64	2,90	1,75	1,10	0,80	0,40	0,60	0,50
<b>A422</b>	1,35	1,08	0,73	0,69	0,65	0,27	0,42	0,28

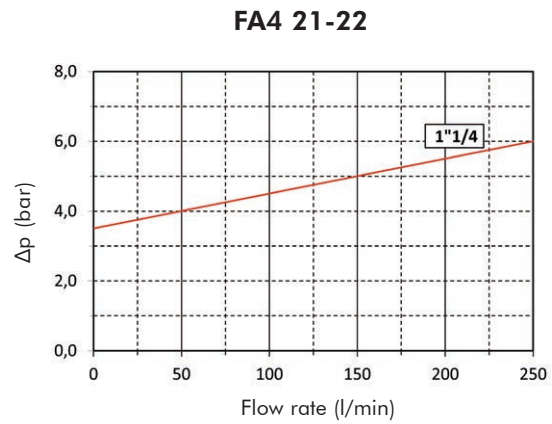
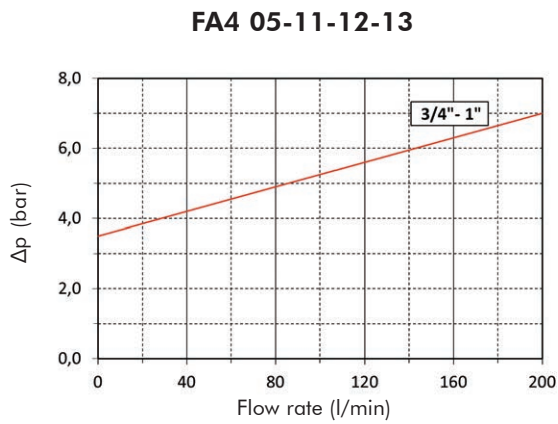
### EXAMPLE OF TOTAL $\Delta p$ CALCULATION

FA421G10BB6D0000S0 with 100 l/min and oil 46 cSt

Housing  $\Delta p$  0,14 bar + element  $\Delta p$  0,25 bar  $(100 \times 1,75/1000 \times 46/32)$  = total assembly  $\Delta p$  0,39 bar

## 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.



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>.

## USER TIPS



- 1 FILTER HEAD
- 2 INDICATOR PORT
- 3 FIXING HOLES
- 4 FILTER CARTRIDGE


### CARTRIDGE TIGHTENING TORQUE

All models	1/2 turn
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### INDICATOR TIGHTENING TORQUE

All models	50 Nm
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## 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. The IN and OUT ports must be connected to the hoses in the correct flow direction, an arrow shows on the filter head (1).
- 2. The filter housing should be preferably mounted with the cartridge (4) downward.
- 3. Secure to the frame the filter head (1) using the threaded fixing holes (3).
- 4. Verify that no tension is present on the filter after mounting.
- 5. Enough space must be available for filter element cartridge replacement.
- 6. The visual clogging indicator must be in a easily viewable position.
- 7. When a electrical indicator is used, make sure that it is properly wired.
-  8. Never run the system with no filter element fitted.
- 9. Keep in stock a spare FILTREC filter element for timely replacement when required.
- 10. Filter housing should be earthed.

## 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 (in cold start conditions, oil temperature lower than 30°C, a false alarm can be given due to oil viscosity).
- 3. If no clogging indicator is mounted, replace the element according to the system manufacturer's recommendations.

## MAINTENANCE

-  1. Make sure that the system is switched off and there is no residual pressure in the filter.
- 2. Unscrew the filter cartridge (4) by turning it anti-clockwise and remove it.
- 3. Fit a new FILTREC cartridge element (4), verifying the part number, particularly concerning the micron rating.
- 4. Ensure that the head mounting face is clean.
-  5. Lubricate the gasket of the replacement cartridge and the thread prior to assembly.
- 7. Spin on the new cartridge until it reaches the mounting face and tighten for 1/2 turn.



