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.

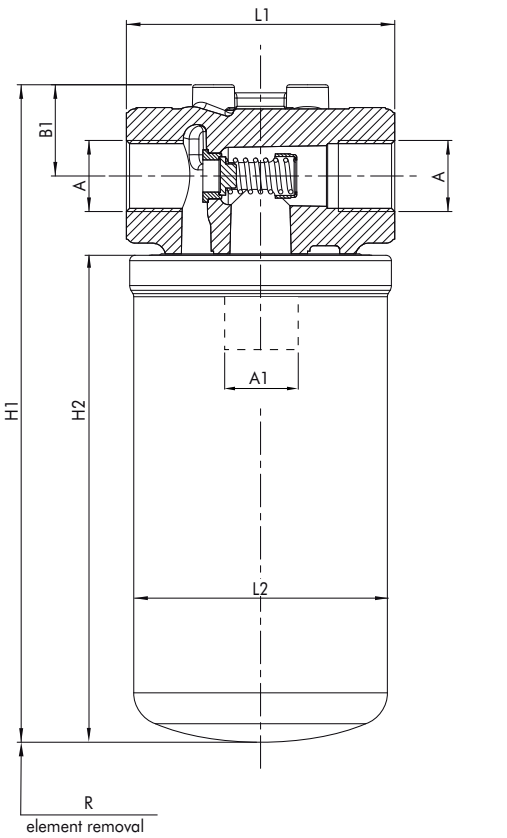
Available with or without bypass, the optional indicator port allows to fit a visual or electrical differential indicator.

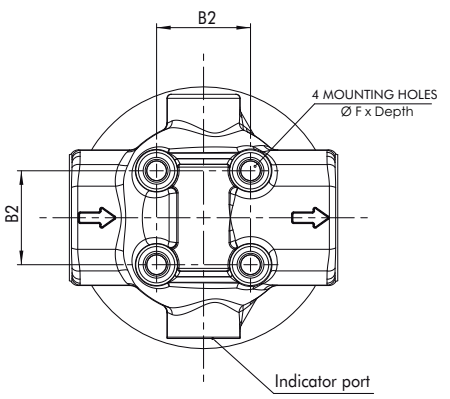
TECHNICAL INFORMATION

HOUSING	tested according to NFPA T3.10.17 , ISO3968
HYDRAULIC SYMBOL:	
PRESSURE:	Max operating: 34,5 bar for FA4 1x 24 bar for FA4 21 Burst: 69 bar for FA4 1x 55 bar for FA4 21
CONNECTION PORTS:	G 3/4" - G 1" - G 1 1/4"
MATERIALS:	Head: aluminium alloy Bowl: painted steel Seal: NBR (FKM on request)
BYPASS:	No by-pass or 3,5 bar setting

ELEMENT	tested according to ISO 2941, 2942, 2943, 3968, 16889, 23181
FILTER MEDIA:	Inorganic microfiber: G03 - G06 - G10 - G15 - G25 - G40 Paper: C10 - C25
DIFFERENTIAL COLLAPSE PRESSURE:	15 bar for FA4 1x 12 bar for FA4 21
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





NOMINAL SIZE

CODE	A	A1	B1	B2	F	H1	L1	R	WEIGHT	ELEMENT	H2	L2
FA4-05	G 3/4" G 1"	1" 3/8-12 UN 2B	34	35	M10x15	165	100	30	1,6 Kg	A405	100	97
FA4-11						216			1,8 Kg	A411	152	
FA4-12						245			1,9 Kg	A412	180	
FA4-13						302			2,2 Kg	A413	240	
FA4-21	G 1 1/4"	1" 3/4-12 UN 2B	40	48		369	121		3,2 Kg	A421	295	120

ORDERING INFORMATION

1.	2.	3.	4.	5.	6.	7.	8.
F	**A4**	**21**	**G10**	**B**	**B6**	**D**	**Z34**
SPARE ELEMENT	**A4**	**21**	**G10**				

1. FILTER SERIES	F		
2. FILTER ELEMENT SERIES	A4		
3. FILTER SIZE	05-11-12-13		
	21		
4. FILTER MEDIA	000	no element	
	C10	paper $ß_{10\mu m(c)} > 2$	
	C25	paper $ß_{25\mu m(c)} > 2$	
	G03	glassfiber $ß_{4,5\mu m(c)} > 1.000$	
	G06	glassfiber $ß_{7\mu m(c)} > 1.000$	
	G10	glassfiber $ß_{12\mu m(c)} > 1.000$	
	G15	glassfiber $ß_{18\mu m(c)} > 1.000$	
	G25	glassfiber $ß_{22\mu m(c)} > 1.000$	
	G40	glassfiber $ß_{35\mu m(c)} > 1.000$	
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 21
7. BYPASS VALVE	0	no by-pass	
	D	3,5 bar	
8. INDICATOR	000	no indicator	
	Z00	indicator port plugged	
	Z34	differential visual 2,7 bar	
	Z35	differential electrical 2,7 bar	

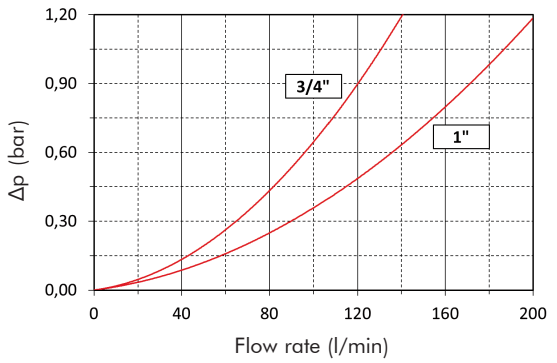
PRESSURE DROP (Δp) INFORMATION FOR FILTER SIZING

The total Delta P through a filter assembly is given from Housing Δp + Element Δp.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^3.

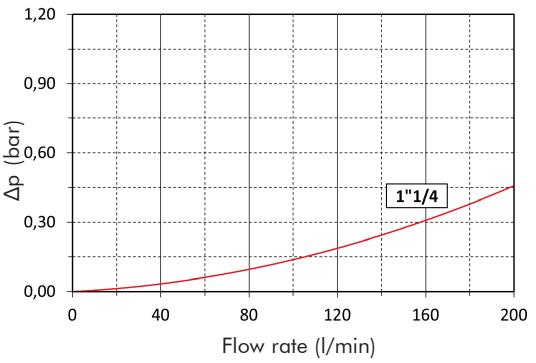
HOUSING PRESSURE DROP

The housing Δp is given by the curve of the considered model and port, in correspondence of the flow rate value.

FA4 05-11-12-13



FA4 21



ELEMENT PRESSURE DROP

The element Δp (bar) is given by the flow rate (l/min) multiplied by the factor in the table here below correspon-ding to the selected media and divided by 1000.If the oil has a viscosity Vx different than 32 cSt a corrective factor Vx/32 must be applied.
Example: 100 l/min with A421G10 and oil viscosity 46 cSt > 100 x 1,75/1000 x 46/32 = 0,25 bar

	G03	G06	G10	G15	G25	G40	C10	C25
A405	25,00	13,89	7,00	5,00	4,67	1,67	3,33	2,78
A411	16,67	10,92	5,80	3,69	2,85	1,31	2,46	2,06
A412	11,11	6,67	4,92	3,13	2,78	1,04	2,08	1,67
A413	6,54	4,69	3,00	1,85	1,69	0,69	1,23	1,00
A421	4,00	2,90	1,75	1,10	0,80	0,40	0,60	0,50

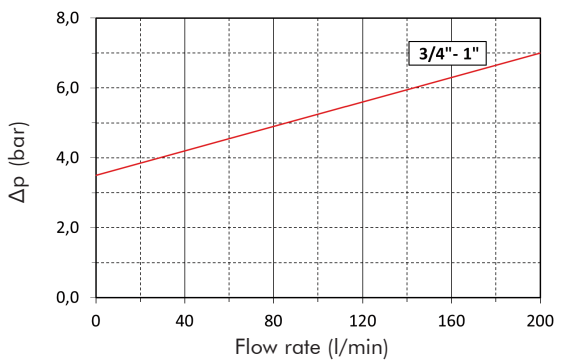
EXAMPLE OF TOTAL Δp CALCULATION

FA421G10BB6DZ34 with 100 l/min and oil 46 cSt
Housing Δp 0,16 bar + element Dp 0,25 bar (100 x 1,75/1000 x 46/32) = total assembly Δp 0,41 bar

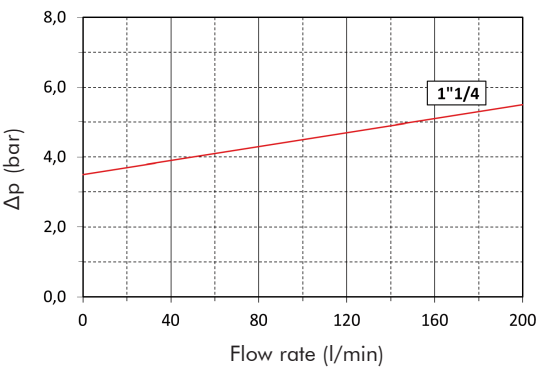
BYPASS VALVE PRESSURE DROP

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

FA4 05-11-12-13

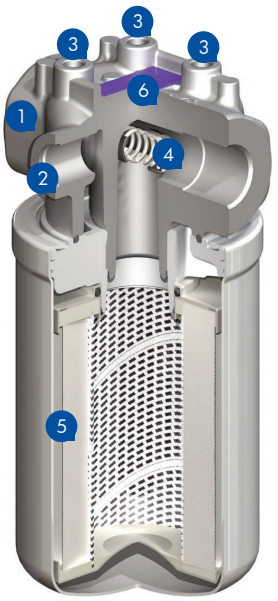


FA4 21



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^3.

USER TIPS



1. FILTER HEAD
2. INDICATOR PORT
3. FIXING HOLES
4. BY- PASS VALVE
5. FILTER ELEMENT
6. IDENTIFICATION LABEL

CARTRIDGE TIGHTENING TORQUE	
All models	1/2 turn

INDICATOR TIGHTENING TORQUE	
Z34 - Z35	50 Nm

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 (5) 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

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 (5) by turning it anti-clockwise and remove it
3. fit a new FILTREC cartridge element (5), 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.

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