FAP A4 SERIES

In line medium pressure filters

Inline filters with coupled spin-on cartridges, specifically designed for hydraulic applications. Operating pressure up to 24 bar, flow rate up to 500 l/min.

The indicator ports allow to fit a visual electrical differential indicator and an absolute clock manometer or pressure switch.

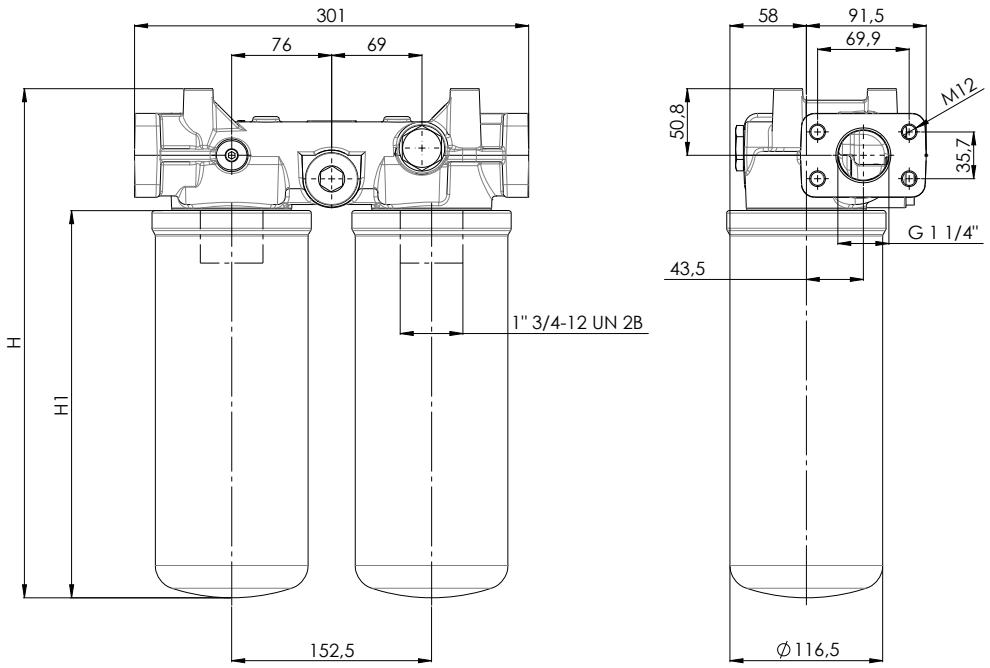
Sampling port, for fluid contamination analysis, available and easily accessible on the filter head.

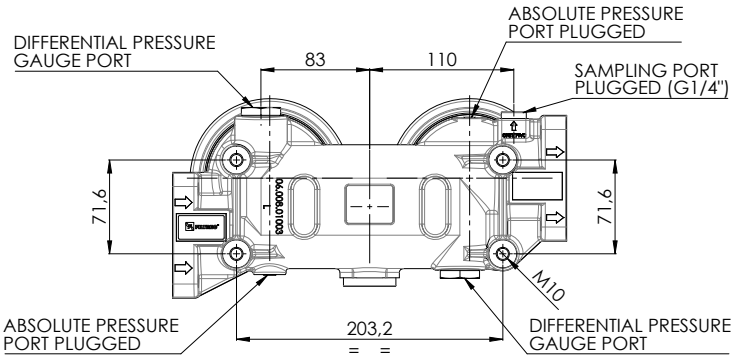
HOUSING	tested according to NFPA T3.10.17, ISO12829, ISO3968
PRESSURE:	Max operating: 24 bar Burst: 55 bar
CONNECTION:	G 1 1/4" and 1 1/2" SAE 3000
MATERIALS:	Head: aluminium alloy Bowl: painted steel Seal: NBR (FKM on request)
BYPASS VALVE:	No bypass 3,5 bar setting

ELEMENT	tested according to ISO 11170, 2941, 2942, 2943, 3724, 3968,16889, 16908, 23181
FILTER MEDIA:	Inorganic microfiber: G03 - G06 - G10 - G15 G25 - G40 Paper: C10 - C25
COLLAPSE PRESSURE:	12 bar

TEMPERATURE RANGE:	with NBR seal is from -30 °C to +100 °C with FKM seal (OPTION) is from -25 °C to +120 °C
FLUID COMPATIBILITY:	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

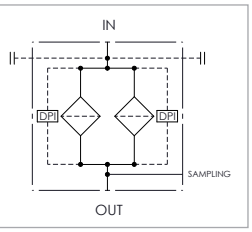




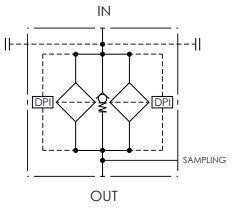
NOMINAL SIZE

CODE	H	H1	WEIGHT
FAPA4-21	388	295	9,2 Kg
FAPA4-22	452	358	10,3 Kg

HYDRAULIC SYMBOL NO BY-PASS



HYDRAULIC SYMBOL WITH BY-PASS



ORDERING INFORMATION

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
	FAP	**A4**	**21**	**G10**	**B**	**B6F7M**	**0**	**Z**	**000**	**S**	**0**
SPARE ELEMENT		**A4**	**21**	**G10**							

1. FILTER SERIES	FAP	
2. FILTER ELEMENT SERIES	A4	
3. FILTER SIZE	21-22	
4. FILTER MEDIA	000	no element
	G03	glassfiber $ß_{5\mu m(c)} \geq 1.000$
	G06	glassfiber $ß_{7\mu m(c)} \geq 1.000$
	G10	glassfiber $ß_{12\mu m(c)} \geq 1.000$
	G15	glassfiber $ß_{17\mu m(c)} \geq 1.000$
	G25	glassfiber $ß_{22\mu m(c)} \geq 1.000$
	G40	glassfiber $ß_{35\mu m(c)} \geq 1.000$
	C10	cellulose $ß_{10\mu m(c)} \geq 2$
	C25	cellulose $ß_{25\mu m(c)} \geq 2$
5. SEALS	*B	NBR
*omitted for spare element	V	FKM
6. CONNECTIONS	B6F7M	G 1 1/4" + 1 1/2" SAE 3000 FLANGE
7. BYPASS VALVE	0	no bypass
Inbuilt into the filter head	D	3,5 bar
8. INDICATOR PORT OPTION	Z	ports for absolute pressure gauge and differential clogging indicator all plugged with metal plug
9. COMPULSORY FIELD	000	Filtrec standard
10. CORROSION PROTECTION	S	standard (filter head with no treatment)
11. OPTIONS	0	no option

ACCESSORIES

The accessories must be ordered separately

INDICATOR	MP0	pressure gauge rear connection, scale 0-16 bar
(Y and F) digit for FKM seal option For other options see clogging indicators catalogue	MPC	pressure gauge rear connection, setting 3 bar, scale 0-10 bar
	MRC	pressure gauge radial connection, setting 3 bar, scale 0-10 bar
	EX2 (EY2)	differential electric 2,7 bar
	VX2 (VY2)	differential visual 2,7 bar
	VEXF2	differential visual electric 2,7 bar
	P01 (PF1)	metal plug for indicator seat
ACCESSORIES	PF4NF6F7M	FKM flange kit
	FMSA08S0	sampling point - check coupling M16x2 with G"1/4 connection thread
	FMSA09S0	microhose for check coupling M16x2 – length 1m

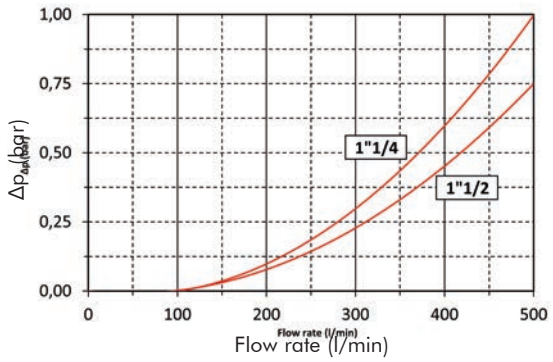
PRESSURE DROP (Δp) INFORMATION FOR FILTER SIZING

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.

FAP A4 2x



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: 200 l/min with A421G10 and oil viscosity 46 cSt:200 x (0,88/1000) x (46/32) = 0,25bar

	G03	G06	G10	G15	G25	G40	C10	C25
A421	1,82	1,45	0,88	0,55	0,40	0,20	0,30	0,25
A422	0,68	0,54	0,37	0,35	0,33	0,14	0,21	0,14

EXAMPLE OF TOTAL Δp CALCULATION

FAPA421G10BB6F7M0Z000S0 with 200 l/min and oil 46 cSt (using G 1 ¼" threaded port)
Housing Δp 0,12 bar + element Dp 0,25 bar (200 x 0,88/1000 x 46/32) = total assembly Δp 0,37 bar

ACCESSORIES

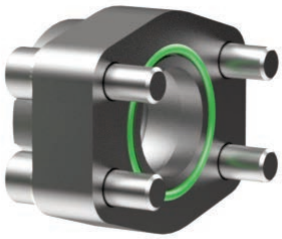
These accessories must be ordered separately.

04.006.00539	**FMSA08S0**	sampling point - check coupling M16x2 with G 1/4 connection thread

Allows you to control the pressure safely while the system is at full capacity and can be used to obtain fluid samples.

04.006.00538	**FMSA09S0**	microhose for check coupling M16x2 – length 1m

Allows to connect the check coupling to the microhose by screwing them together by hand, without the use of special tools and without the risk of leaks while the system is in operation. The connection is automatically sealed and does not become loose as a result of vibration or pressure surges.



07.036.00109	**PF4NF6F7M**	FKM flange kit

Flange to switch from 1 1/2" SAE 3000 connection to 1 1/2" NPTF. The kit includes 1 flange, 1 o-ring, 4 screws and 4 washers.

USER TIPS

1. FILTER HEAD
2. INDICATOR PORT
3. FIXING HOLES
4. FILTER CARTRIDGES
5. SAMPLING PLUG PORT

CARTRIDGE TIGHTENING TORQUE	
All models	1/2 turn

INDICATOR TIGHTENING TORQUE	
Differential	50 Nm
Absolute	10 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 (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 an easily viewable position.
7. When an 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, fluid 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 cartridges (4) by turning them anti-clockwise and remove them. Check the condition of the gaskets located at the end of the threated spigots; replace them if necessary.
3. Fit new FILTREC cartridge elements (4), verifying the part number, particularly concerning the micron rating.

⚠ 4. Ensure that the head mounting face is clean.
5. Lubricate the gaskets of the replacement cartridges and the threads prior to assembly.
6. Spin on the new cartridges until they reach the mounting face and tighten for 1/2 turn.

FILTREC®

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Technical information may change without notice

CT140-04/25