

Part number:

**HYDROMA**  
HYDRAULICKÉ SYSTÉMY

**HIDROMA**  
SYSTEMS  
UKŁADY HYDRAULICZNE

**HYDROMA**  
ГИДРАВЛИЧЕСКИЕ СИСТЕМЫ

# FPC

## PRESSURE FILTERS

### DESCRIPTION

High pressure inline filter

### MATERIALS

Head: Cast iron

Bowl: Steel

Bypass valve: Steel

Seals: NBR Nitrile (FKM Fluoroelastomer on request)

Indicator housing: Brass

### PRESSURE

Max. working: 35 MPa (350 bar)

Collapse, differential for the filter element  
standard series 2 MPa (20 bar)

H+ series 21 MPa (210 bar)

### BYPASS VALVE

Setting: 350 kPa (3,5 bar)  $\pm$  10%

600 kPa (6 bar)  $\pm$  10%

### FLOW RATE

Qmax 150 l/min

### WORKING TEMPERATURE

From -25° to +110° C

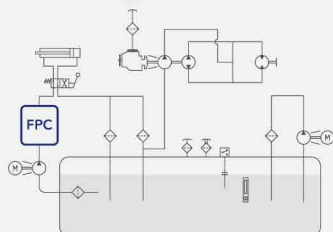
### COMPATIBILITY (ISO 2943)

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








### ORDERING AND OPTION CHART

F	P	C	COMPLETE FILTER FAMILY				FILTER ELEMENT FAMILY	E	P	C
			SIZE & LENGTH	51	53	55	SIZE & LENGTH			
			PORT TYPE							
			B = BSP thread	B	B	B				
			M = Metric thread (only M22x1,5)	M	M	M				
			S = SAE thread	S	S	S				
			PORT SIZE							
			04 = 1/2"	04	04	04				
			06 = 3/4"	06	06	06				
			08 = 1"	08	08	08				
			BYPASS VALVE							
			W = without	W	W	W				
			C = 600 kPa (6 bar)	C	C	C				
			D = 350 kPa (3,5 bar)	D	D	D				
			SEALS				SEALS			
			N = NBR Nitrile	N	N	N				
			F = FKM Fluoroelastomer	F	F	F				
			G = Treatment for water-glycol	G	G	G				
			FormulaUFI MEDIA				FormulaUFI MEDIA			
			FA = FormulaUFI.MICRON 5 $\mu\text{m}_{(c)}$ >1.000 $\Delta p$ 2MPa (20 bar)	FA	FA	FA				
			FB = FormulaUFI.MICRON 7 $\mu\text{m}_{(c)}$ >1.000 $\Delta p$ 2MPa (20 bar)	FB	FB	FB				
			FC = FormulaUFI.MICRON 12 $\mu\text{m}_{(c)}$ >1.000 $\Delta p$ 2MPa (20 bar)	FC	FC	FC				
			FS = FormulaUFI.MICRON 16 $\mu\text{m}_{(c)}$ >1.000 $\Delta p$ 2MPa (20 bar)	FS	FS	FS				
			FD = FormulaUFI.MICRON 21 $\mu\text{m}_{(c)}$ >1.000 $\Delta p$ 2MPa (20 bar)	FD	FD	FD				
			FE = FormulaUFI.MICRON 30 $\mu\text{m}_{(c)}$ >1.000 $\Delta p$ 2MPa (20 bar)	FE	FE	FE				
			CLOGGING INDICATOR**							
			00 = without predisposition	00	00	00				
			03 = port, plugged	03	03	03				
			5E = visual differential 500 kPa (5 bar)	5E	5E	5E				
			6E = electrical differential 500 kPa (5 bar)	6E	6E	6E				
			7E = indicator 6E with LED	7E	7E	7E				
			XE = electrical differential N.O. 500 kPa (5 bar)	XE	XE	XE				
			XD = electrical differential N.O. 240 kPa (2,4 bar)	XD	XD	XD				
			XL = electrical differential N.C. 240 kPa (2,4 bar)	XL	XL	XL				
			XG = electrical differential N.C. 340 kPa (3,4 bar)	XG	XG	XG				
			T2 = elect. diff. 500 kPa (5 bar) with thermostat 30°C	T2	T2	T2				
			ACCESSORI / ACCESSORIES							
			W = without clogging indicator predisposition	W	W	W				
			A = lateral indicator port (see DWG)	A	A	A				
			C = indicator port on the top (see DWG)	C	C	C				
			ACCESSORI / ACCESSORIES							
			X = no accessory available	X	X	X				

\*\*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)

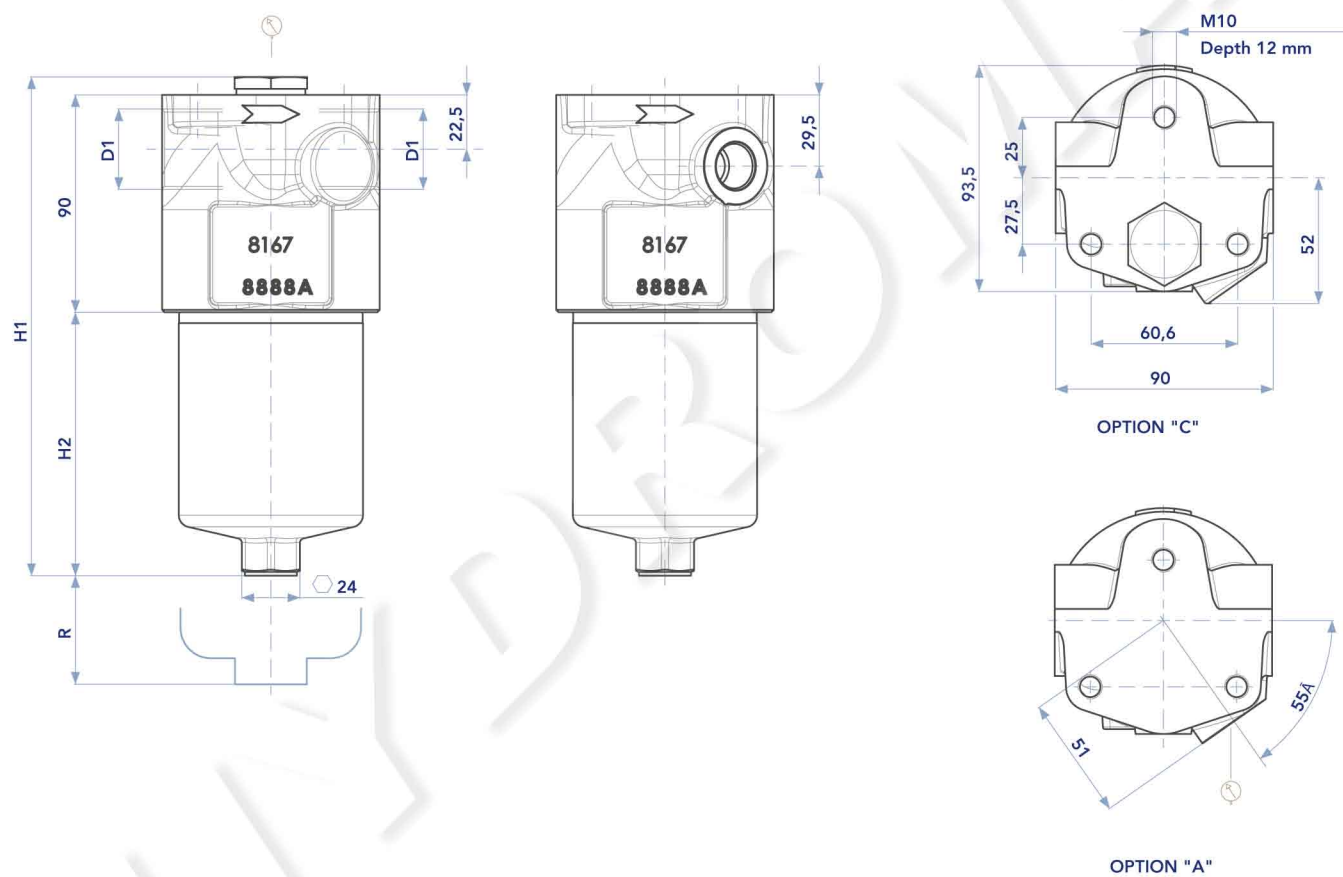
### SPARE PARTS

FILTER HOUSING	FILTER ELEMENT	CLOGGING INDICATOR
		
B P C	E P C	

## SPARE SEAL KIT

	NBR	FKM
FPC51-53-55	521.0131.2	521.0132.2

## INSTALLATION DRAWING



## FILTER HOUSING

	D1	H1	H2	Kg
FPC51	M22x1,5 - 1/2" - 3/4" - 1" BSP or SAE thread	206,5	109,0	4,2
FPC53	M22x1,5 - 1/2" - 3/4" - 1" BSP or SAE thread	254,5	157,0	4,7
FPC55	M22x1,5 - 1/2" - 3/4" - 1" BSP or SAE thread	307,0	209,5	5,3

# FPC

## PRESSURE FILTERS

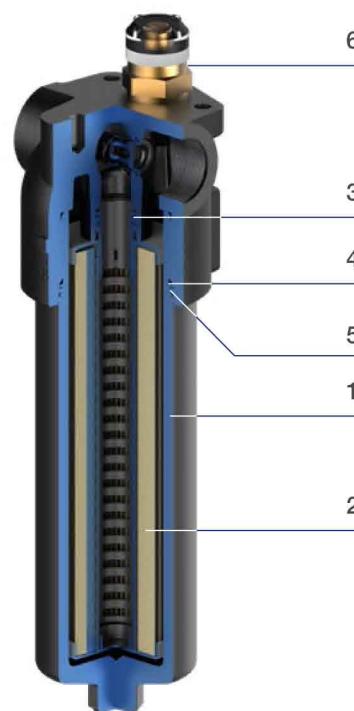
### FILTER ELEMENT

	A	B	C	Kg	AREA (cm <sup>2</sup> ) Media F+
<b>EPC51</b>	56,5	27	118	0,12	945
<b>EPC53</b>	56,5	27	166	0,15	1.401
<b>EPC55</b>	56,5	27	219	0,19	1.905



### MAINTENANCE

- 1) Stop the system and verify there is no pressure in the filter.
- 2) Collect the oil inside the filter with a suitable container.
- 3) Unscrew the bowl (1) and clean it.
- 4) Remove the dirty filter element (2).  
N.B. The used filter elements and oil dirty filter parts dirty are classified "Dangerous waste material" and must be disposed of according to the local laws, by authorized Companies.
- 5) Check the filter element part number on the filter label or in the ordering and option chart.  
Use only original spare parts.
- 6) Lubricate the new element o-ring gasket (3) with oil.
- 7) Insert the clean element into its seat with care.
- 8) Check the bowl o-ring condition (4) and lubricate with oil.  
If damaged, check the seal kit part number in the spare seal kit table.  
N.B. The anti-extrusion o-ring (5) must be positioned downwards (under the gasket).
- 9) Screw the bowl (1) until it stops, with a tightening torque of 70 Nm + 5/0.



#### Accessories:

Clogging indicator (6).

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

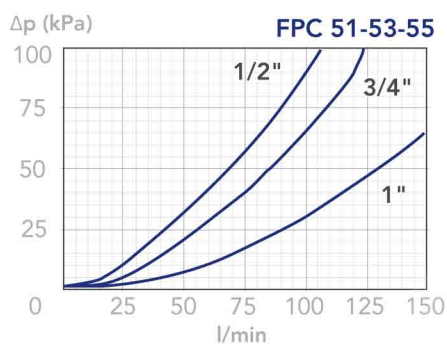
Lubricate the o-ring gasket with oil and tighten until it stops, with a tightening torque of 40 Nm +5/0.



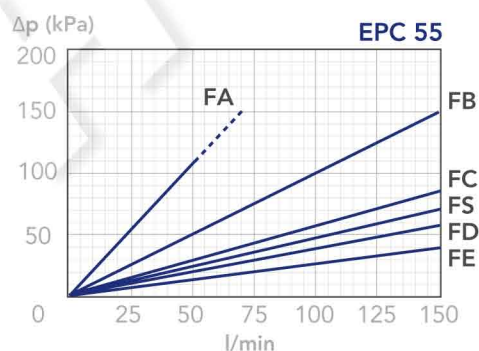
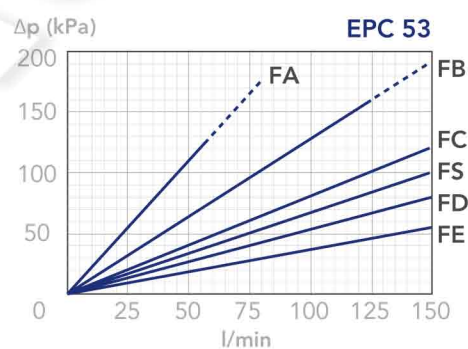
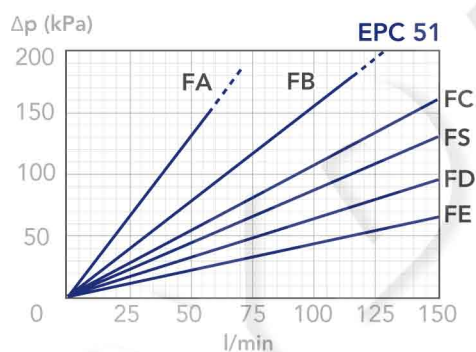
## PRESSURE DROP CURVES ( $\Delta p$ )

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 Rate and it must be

lower than 120 kPa (1,2 bar). In any case this value should never exceed 1/3 of the bypass valve setting.



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

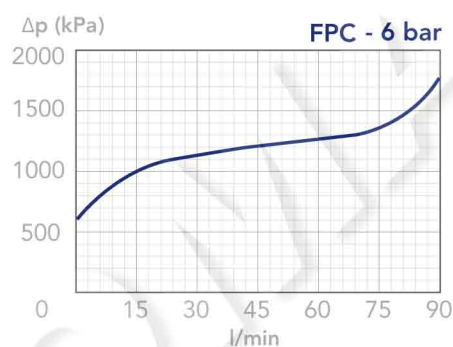
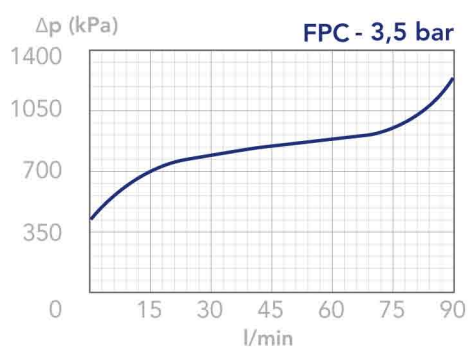


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### BYPASS VALVE PRESSURE DROP

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.



### 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 3968:2005. In case of discrepancy, please check the contamination level, viscosity and features of the fluid in use.