

# PH



## MATERIALS

Head:  
Aluminium alloy

Bowl:  
Steel

Bypass valve:  
Polyamide

Seals:  
NBR Nitrile

Indicator housing:  
Brass

## PRESSURE (ISO 10771-1:2002)

Max working:  
2 MPa (20 bar)

Test:  
4 MPa (40 bar)

Bursting:  
6 MPa (60 bar)

Collapse, differential  
for the filter element (ISO 2941):  
300 kPa (3 bar)

## BYPASS VALVE

Setting:  
170 kPa (1,7 bar)  $\pm$  10%

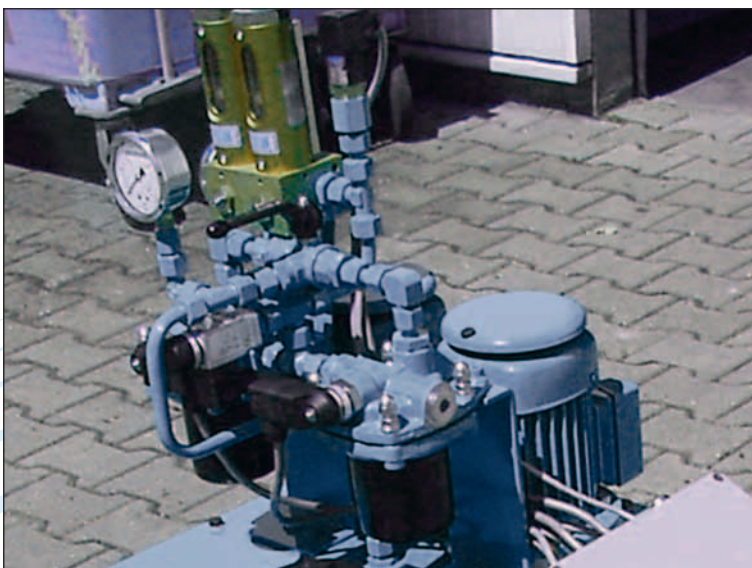
## WORKING TEMPERATURE

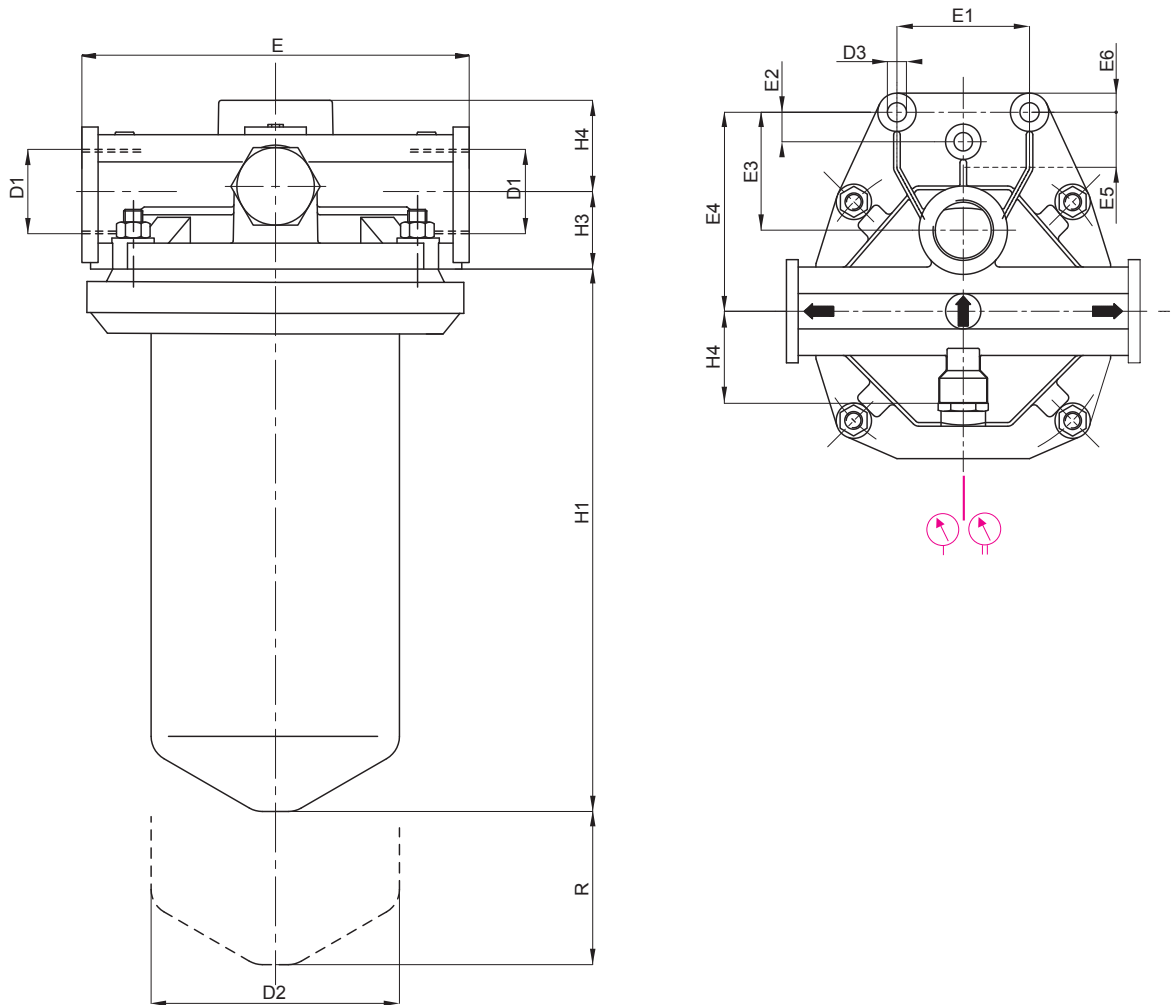
From -25° to +110° C

## COMPATIBILITY (ISO 2943:1999)

Full with fluids: HH-HL-HM-HV-HTG  
(according to ISO 6743/4)  
For fluids different than the above  
mentioned, please contact our Sales  
Department.

## APPLICATION EXAMPLE





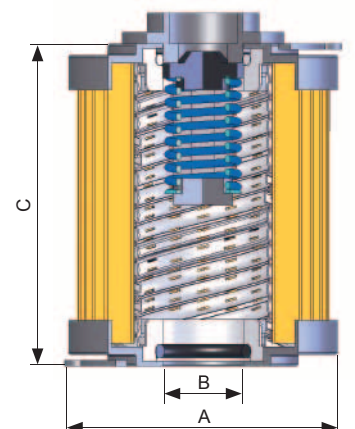
## FILTER HOUSING

	D1	D2	D3	E	E1	E2	E3	E4	E5	E6	H1	H2	H3	H4	R	kg
FPH31	3/8" - 1/2" M18x1,5	81	8,5	114	50	-	42	70	15	10	114	44	19	27	20	1,3
FPH40	3/4" - 1"	114	10,5	150	50	-	50	85	12	13	204	58	30	35	20	3,2
FPH50	1" 1/4	156	13	240	90	20	80	135	56	13	180	62	38	45	25	6,1
FPH52	1" 1/2	156	13	240	90	20	80	135	56	13	250	62	38	45	25	6,8

		<b>TYPE</b>					
		F = FILTER COMPLETE	F	F	F	F	
		B = FILTER HOUSING	B	B	B	B	
P	H	<b>FAMILY, NOMINAL SIZE &amp; LENGTH</b>				<b>ELEMENT</b>	
		31	40	50	52	E	
						<b>FAMILY SIZE &amp; LENGTH</b>	
		31	40	50	52	R	A
		<b>PORT TYPE</b>					
		B = BSP thread	B	B	B	B	
		N = NPT thread	N	N	N	N	
		M = metric thread (only M03)	M	-	-	-	
		<b>PORT SIZE</b>					
		03 = 3/8"	03	-	-	-	
		04 = 1/2"	04	-	-	-	
		06 = 3/4"	-	06	-	-	
		08 = 1"	-	08	-	-	
		10 = 1" 1/4	-	-	10	-	
		12 = 1" 1/2	-	-	-	12	
		18 = M18 x 1,5	18	-	-	-	
B		<b>BYPASS VALVE</b>					
		B = 170 kPa (1,7 bar)	B	B	B	B	
		<b>SEALS</b>				<b>SEALS</b>	
		N = NBR Nitrile	N	N	N	N	N = NBR
		F = FKM Fluoroelastomer	F	F	F	F	F = FKM
		<b>FILTER MEDIA</b>				<b>FILTER MEDIA</b>	
		FA = fiber 5 μm(e) β>1.000	FA	FA	FA	FA	FA = fiber 5 μm(e)
		FB = fiber 7 μm(e) β>1.000	FB	FB	FB	FB	FB = fiber 7 μm(e)
		FC = fiber 12 μm(e) β>1.000	FC	FC	FC	FC	FC = fiber 12 μm(e)
		FD = fiber 21 μm(e) β>1.000	FD	FD	FD	FD	FD = fiber 21 μm(e)
		CC = cellulose 10 μm β>2	CC	CC	CC	CC	CC = cellulose 10 μm
		CD = cellulose 25 μm β>2	CD	CD	CD	CD	CD = cellulose 25 μm
		ME = metal wire mesh 60 μm	ME	ME	ME	ME	ME = w. mesh 60 μm
		MF = metal wire mesh 90 μm	MF	MF	MF	MF	MF = w. mesh 90 μm
		<b>CLOGGING INDICATORS</b>					
		03 = port, plugged	03	03	03	03	When the filter is ordered with FKM seals, the first digit of the indicator code is a letter (please see page 182 - 183).
		5B = visual differential 1,3 bar (130 kPa)	5B	5B	5B	5B	
		6B = electrical differential 1,3 bar (130 kPa)	6B	6B	6B	6B	
		7B = indicator 6B with LED	7B	7B	7B	7B	
		T0 = elect. diff. 1,3 bar (130 kPa) with thermostat 30°C	T0	T0	T0	T0	
		0R = 1/8" predisposition	0R	0R	0R	0R	
		31 = pressure gauge	31	31	31	31	
		P1 = SPDT, pressure switch	P1	P1	P1	P1	N.B. Indicator series 70 only on request
		<b>ACCESSORIES</b>					
X	X	XX = no accessory available	XX	XX	XX	XX	

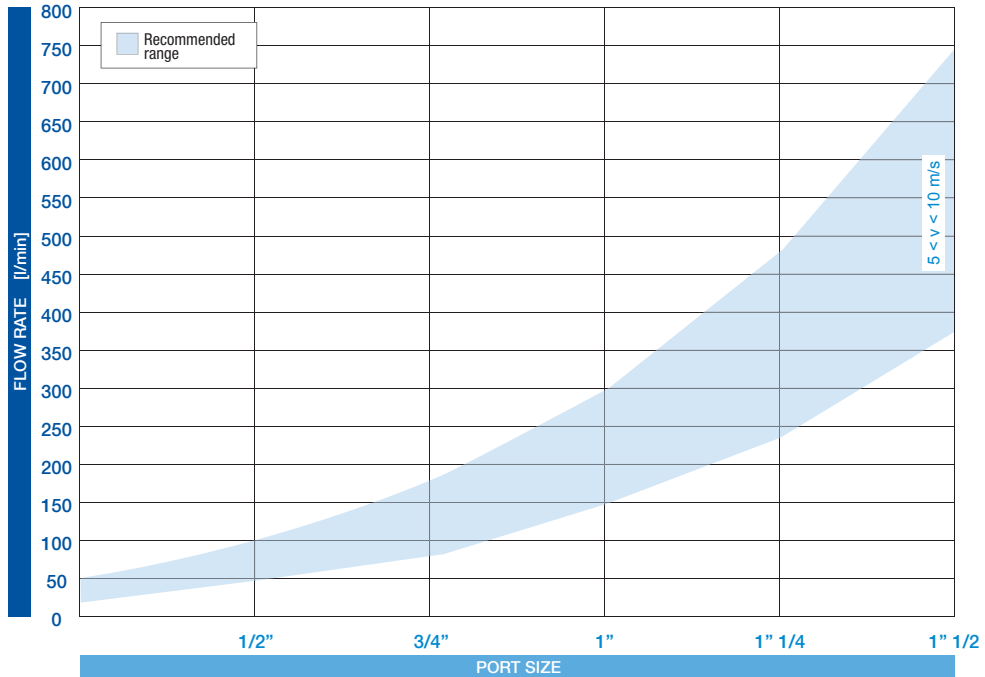
**FILTER ELEMENT**

	A	B	C	kg	Area (cm <sup>2</sup> )		
					Media F+	Media C+	Media M+
ERA31	70	28	93	0,20	620	990	460
ERA40	99	40	178	0,60	3.010	3.390	1.600
ERA50	130	63	148	1,00	4.140	4.360	2.550
ERA52	130	63	208	1,35	6.190	6.520	3.000



**FLUID SPEED**

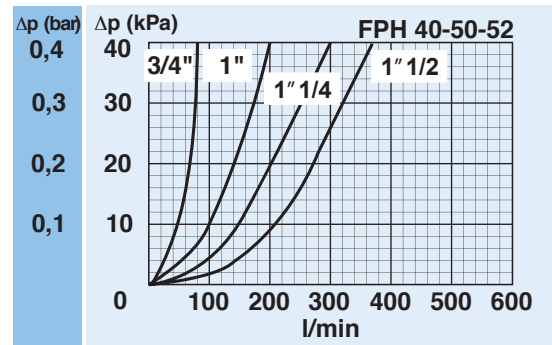
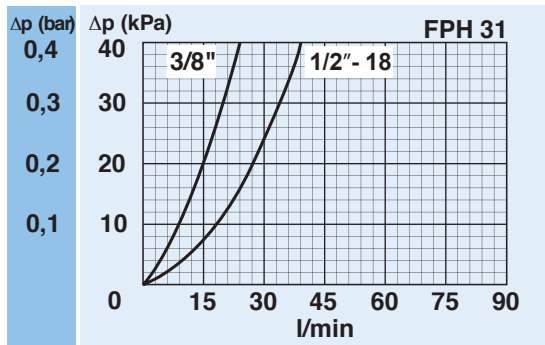
when selecting the filter size, we suggest to consider also the max recommended fluid speed (in pressure lines normally  $5 < v < 10$  m/s).



**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 50 kPa (0,5 bar).

**FILTER HOUSING PRESSURE DROP**  
(mainly depending on the port size)



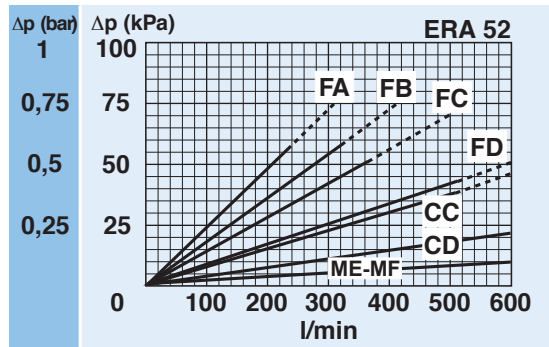
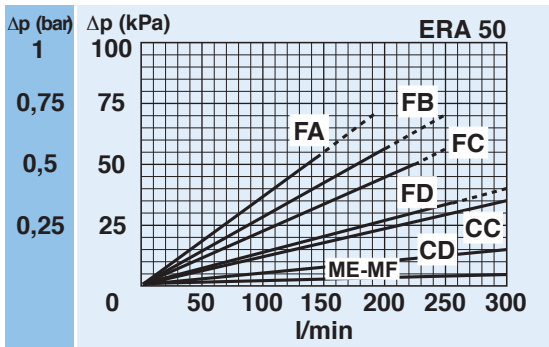
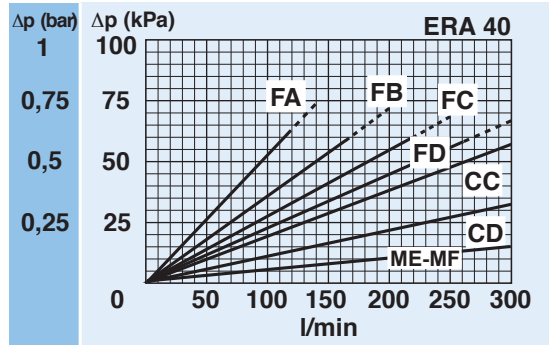
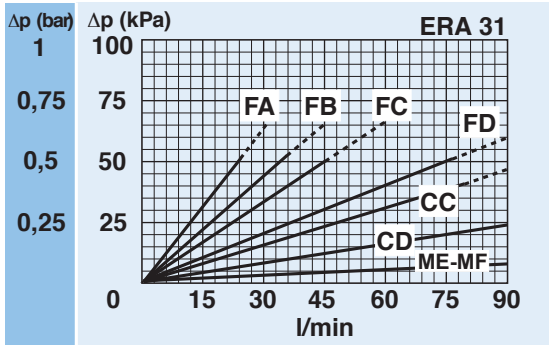
N.B. All the curves have been obtained with mineral oil having a kinematic viscosity 30 cSt and specific gravity 0,9 kg/dm<sup>3</sup>; for fluids with different features, please consider the factors described in the first part of this catalogue. All the curves are obtained from test done at the UFI HYDRAULIC DIVISION 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.

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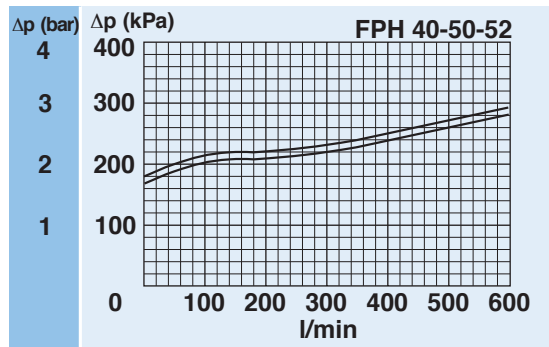
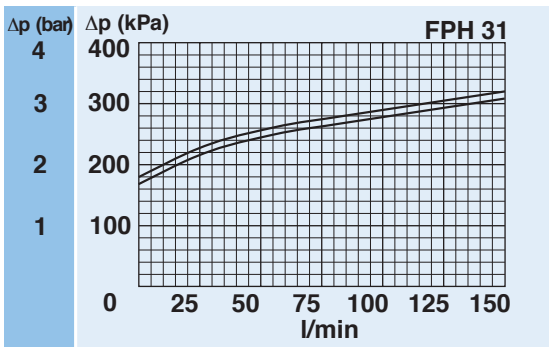
**CLEAN FILTER ELEMENT PRESSURE DROP WITH F+ AND C+ MEDIA**

(depending both on the internal diameter of the element and on the filter media)



**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 0,9 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 HYDRAULIC DIVISION 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.

## CLOGGING INDICATOR

A visual or visual-electrical differential indicator is available as an option and allows monitoring of the element conditions, giving an exact indication of the right time to replace the element.

## FLEXIBILITY OF MOUNTING

A second outlet, usually plugged, provides an optional mounting configuration allowing a common PH series unit to be used on variety of applications.

## NO LEAKS

The end caps with captive O-rings ensure a perfect seal between filter element and housing.

## "LONG LIFE" FILTER ELEMENT

The filter elements are designed with a very large filter area giving a highest dirt holding capacity.

## STRONG CONSTRUCTION

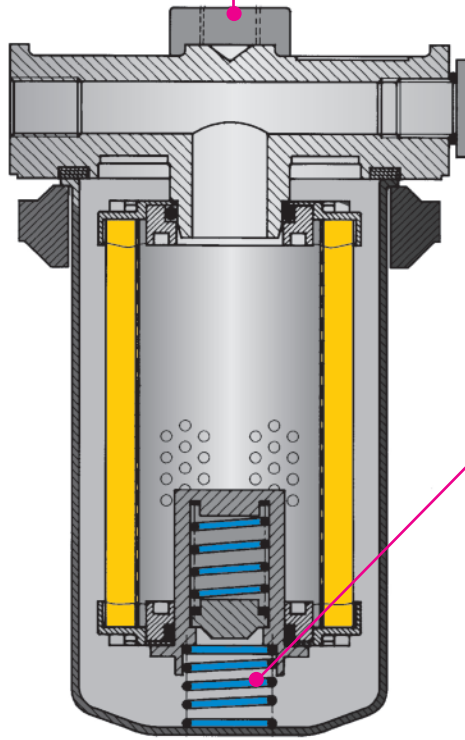
The materials and the design ensure a superior resistance to fatigue even at working pressures up to 2000 kPa (20 bar).

## CLOGGING INDICATOR

For further technical informations and other options see page 182-183.



Differential

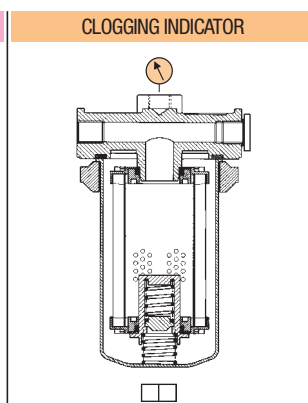
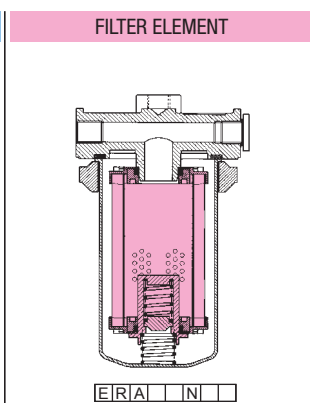
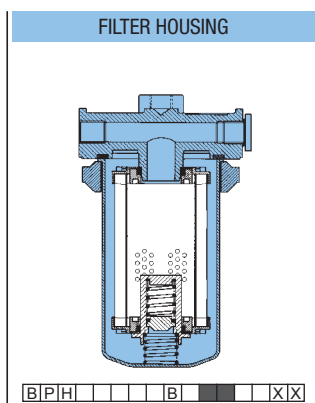


## SPARE SEAL KIT

	NBR	FKM
FPH31	521.0006.2	521.0075.2
FPH40	521.0007.2	521.0076.2
FPH50	521.0008.2	521.0077.2
FPH52	521.0008.2	521.0077.2

## SPARE SPRING

FPH31	008.0149.1
FPH40	008.0048.1
FPH50	008.0094.1
FPH52	008.0094.1



SPARE PARTS ELEMENTS  
(For filling up see table "Ordering and option chart")

