

COMPO CARE
 Pressure Filters

PB



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.

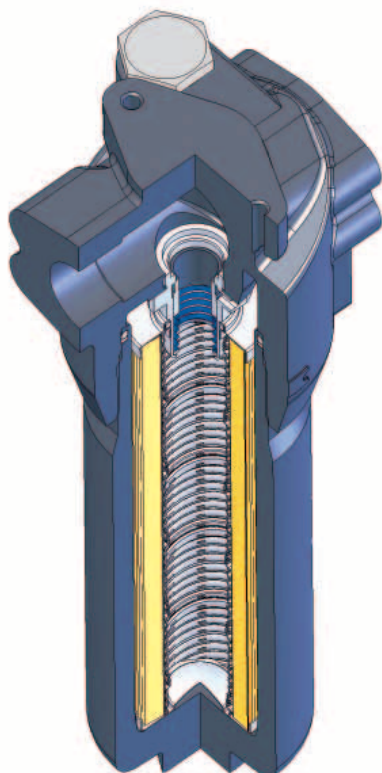


FILTER HOUSING
 The head by high performance cast iron and the bowl by extruded steel ensure the best fatigue resistance to the working pressures.

FILTER ELEMENT
 The filter element is manufactured with filter medias selected in the UFI laboratory and mechanically supported to maintain the highest performance even at high differential pressures.

SEAL GUARANTEED
 A perfect O-ring seal is always ensured as it is not dependent on the tightening torque applied to the bowl.

EASY MAINTENANCE
 The hexagon end of the bowl allows for easy maintenance by using a simple hexagon wrench.



MATERIALS

Head:
 Cast iron

Bowl:
 Steel

Bypass valve:
 Steel

Seals:
 NBR Nitrile
 (FKM - on request fluoroelastomer)

Indicator housing:
 Brass

PRESSURE (ISO 10771-1:2002)

Max. working: 42 MPa (420 bar)

Test: 62 MPa (620 bar)

Bursting: 126 MPa (1.260 bar)

Collapse, differential for the filter element (ISO 2941):
 serie standard 2 MPa (20 bar)
 serie H+ 21 MPa (210 bar)

BYPASS VALVE

Setting:
 600 kPa (6 bar) +/-10%

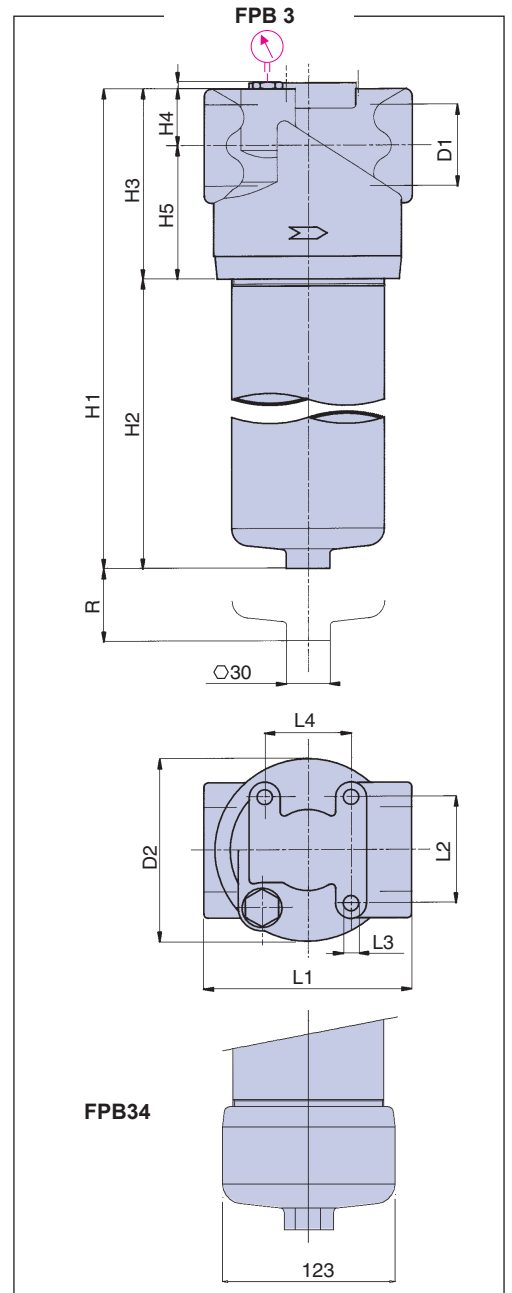
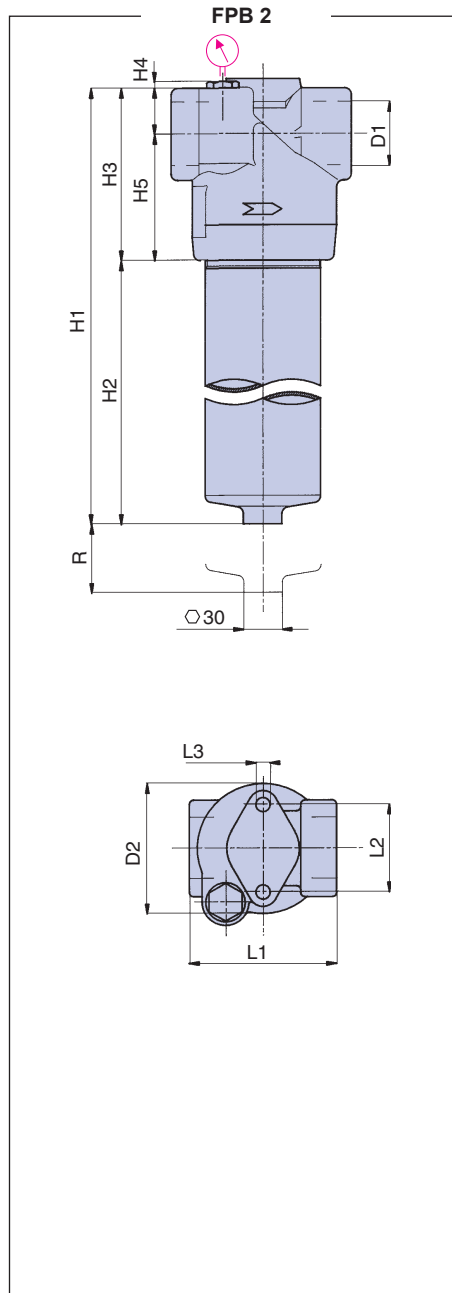
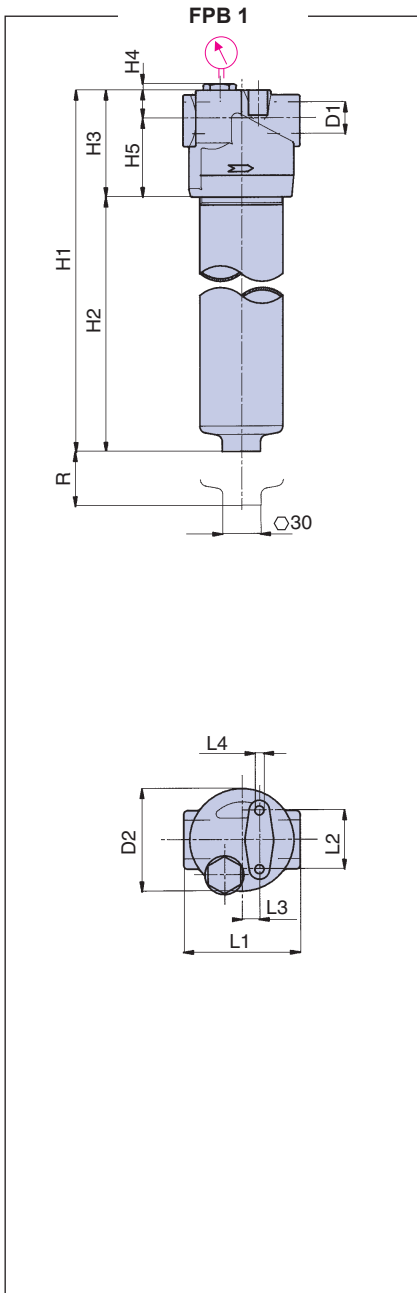
WORKING TEMPERATURE

From -25° to +110° C

COMPATIBILITY (ISO 2943:1999)

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

INSTALLATION DRAWING



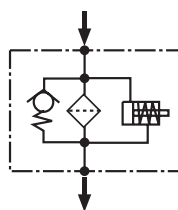
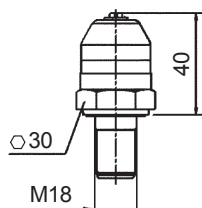
DIMENSIONS AND WEIGHTS

FILTER HOUSING

	D1	D2	H1	H2	H3	H4	H5	L1	L2	L3	L4	R	kg
FPB11	1/2" - 3/4"	82	165	79	86	23	63	85	46	M8	12,5	100	4,4
FPB12	1/2" - 3/4"	82	195	109	86	23	63	85	46	M8	12,5	100	4,6
FPB13	1/2" - 3/4"	82	295	209	86	23	63	85	46	M8	12,5	100	5,2
FPB21	3/4" - 1"	94	226	116	110	35	77	107	65	M8	-	100	6,6
FPB22	3/4" - 1"	94	317	207	110	35	77	107	65	M8	-	100	8,2
FPB31	1" - 1 1/4" - 1 1/2"	128	244	107	137	44	93	143	88	M10	43	100	11,0
FPB32	1" - 1 1/4" - 1 1/2"	128	336	199	137	44	93	143	88	M10	43	100	13,9
FPB33	1" - 1 1/4" - 1 1/2"	128	456	319	137	44	93	143	88	M10	43	100	17,2
FPB34	1" - 1 1/4" - 1 1/2"	128	557	420	137	44	93	143	88	M10	43	100	22,0

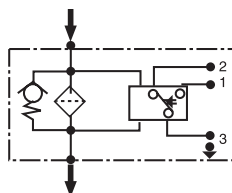
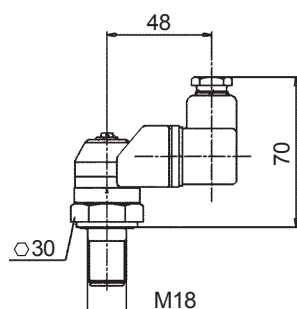
CLOGGING INDICATORS Differential

SERIES K2 & K3



Series K2 & K3:
differential visual indicator,
set 500 kPa (5 bar) -Y2
& 800 kPa (8 bar)-Y3 +/-10%

SERIES Y2 - Y3



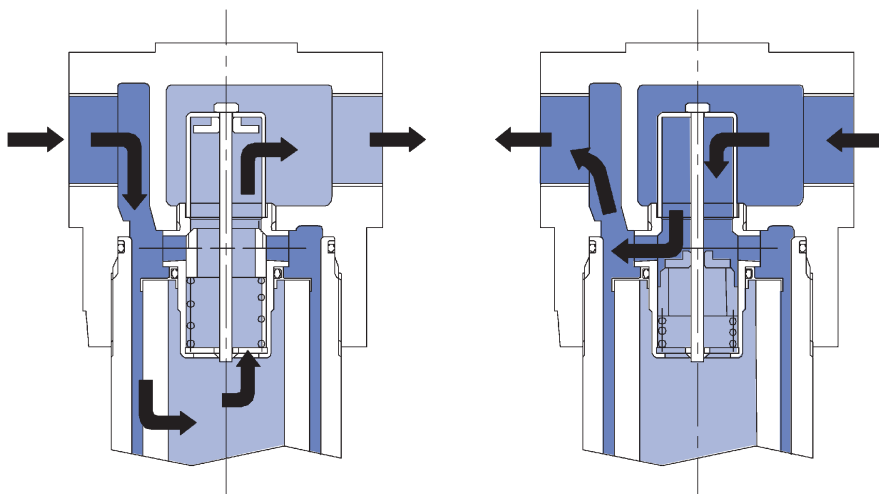
Series Y2 & Y3:
differential visual-electrical indicator,
set 500 kPa (5 bar)-Y2 &
800 kPa (8 bar)-Y3 +/-10%.
Connector according to DIN 43650.
Protection IP65 according to DIN 40050.
SPDT: C.A. 125-250 V
> max resistive or inductive load 1A;
C.C. 30-50-75-125 V
> max resistive load 2-0,5-0,25-0,2A resp.
> max inductive load 2-0,5-0,25-0,03A resp.

Recommended tightening torque 90 Nm

REVERSE FLOW VALVE

NORMAL FLOW

REVERSE FLOW



For hydraulic systems where reverse flow can occur, the pressure filters series FPB2+ and FPB3+ are available with a free reverse flow valve allowing the fluid to pass through the filter element in the normal direction and to bypass the filter element in the reverse direction (option "R"). The reverse flow valve is available also with incorporated bypass valve for the normal flow direction, set at 6 bar (option "P").

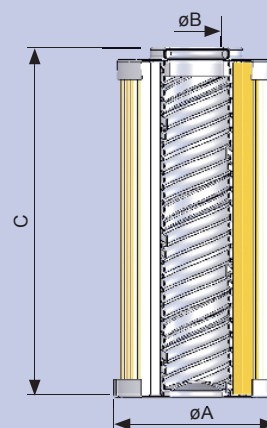
In normal flow conditions the whole flow pass through the filter element. In the option "P", if the differential pressure across the element exceeds 6 bar the bypass is activated.

In reverse flow conditions the flow bypasses the filter element.

Pressure drop through the valve in the reverse direction:
0,4 bar at 100 L/min
0,6 bar at 200 L/min
0,8 bar at 300 L/min

FILTER ELEMENT

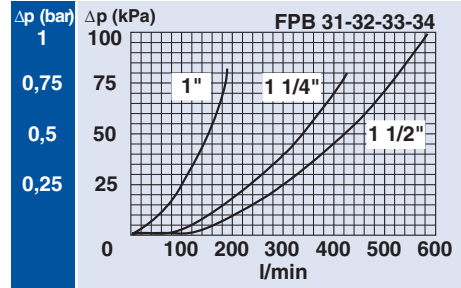
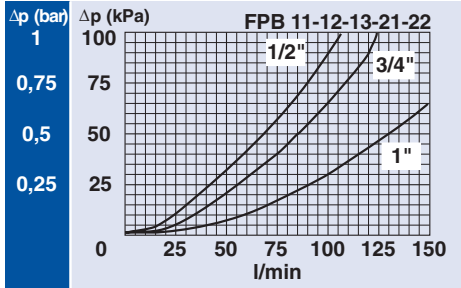
	A	B	C	Kg media F+ & C+	Kg media H+	Area (cm ²)		
						Media F+	Media H+	Media C+
EPB11	45	25	85	0,15	0,25	355	340	310
EPB12	45	25	116	0,20	0,55	500	475	435
EPB13	45	25	211	0,30	0,45	935	915	815
EPB21	52	23,5	115	0,25	0,40	975	975	780
EPB22	52	23,5	210	0,35	0,55	1.830	1.785	1.465
EPB31	78	42,5	118	0,40	0,70	2.000	1.470	1.720
EPB32	78	42,5	210	0,80	1,30	3.695	2.695	3.170
EPB33	78	42,5	210	1,00	1,60	5.025	4.325	4.025
EPB34	78	42,5	430	1,20	1,80	6.585	5.685	6.585



PRESSURE DROP CURVES (Δp)

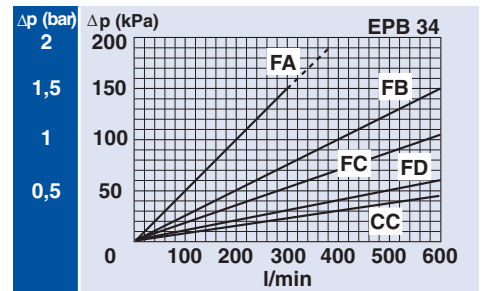
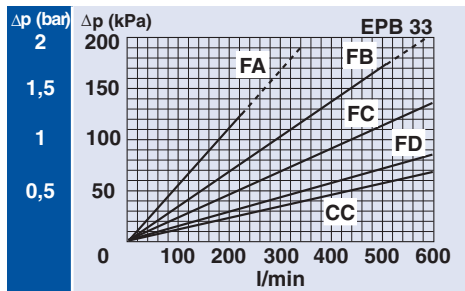
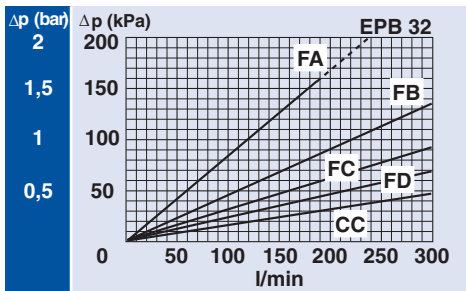
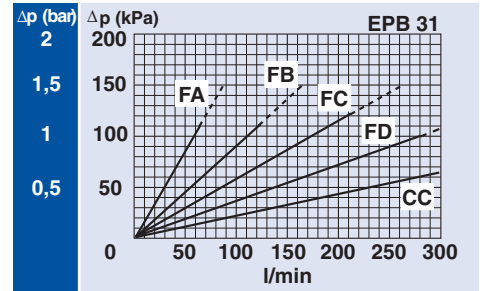
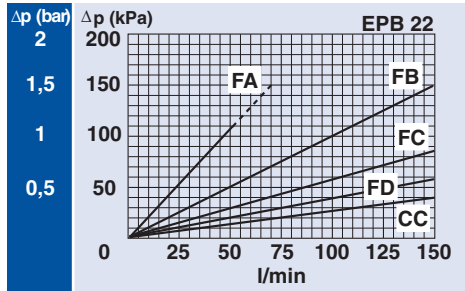
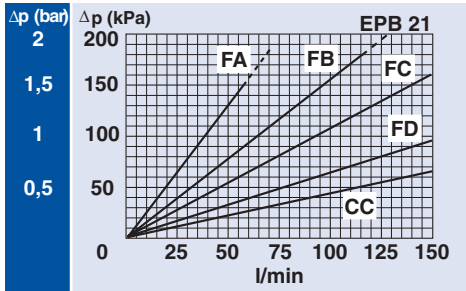
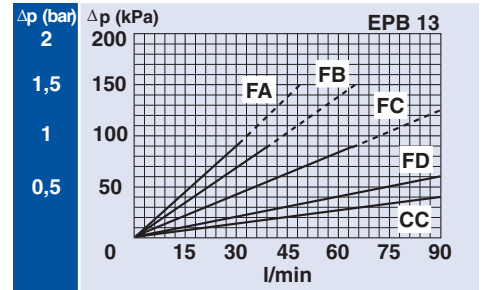
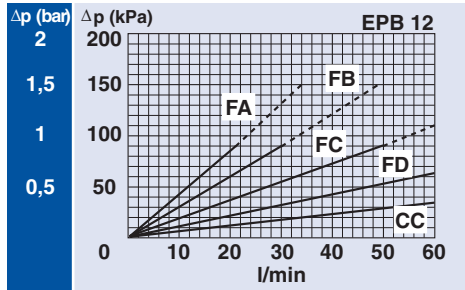
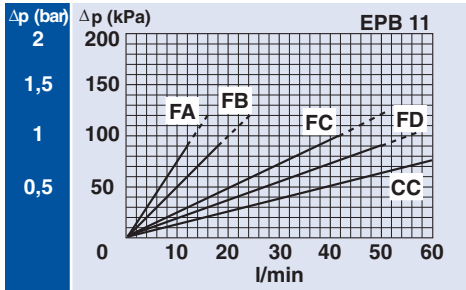
The "Assembly Pressure Drop (Δp)" is obtained by adding the pressure drop values of the Filter Housing and and of the Clean Filter Element corresponding to the considered Flow Rate and it must be lower than 120 kPa (1,2 bar).

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



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

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



PRESSURE DROP CURVES (Δp)

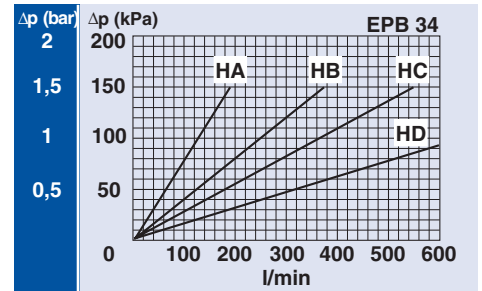
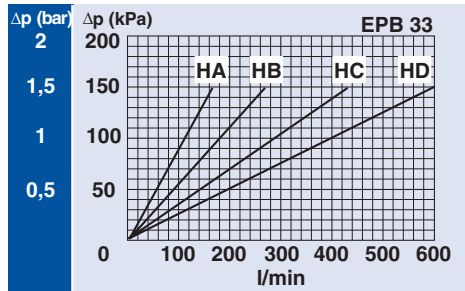
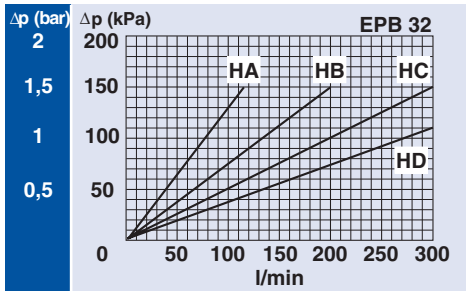
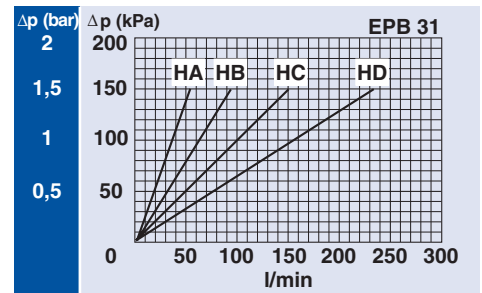
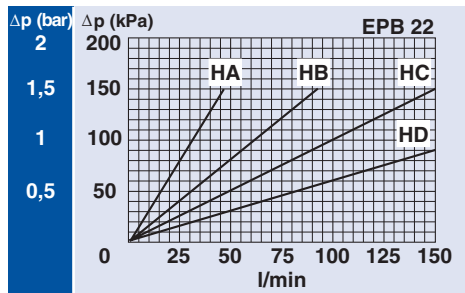
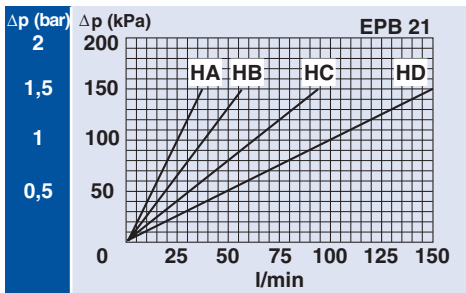
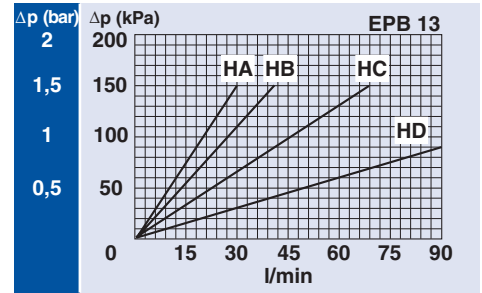
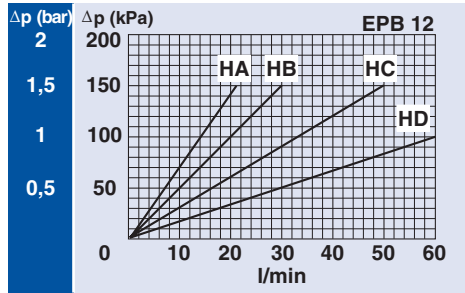
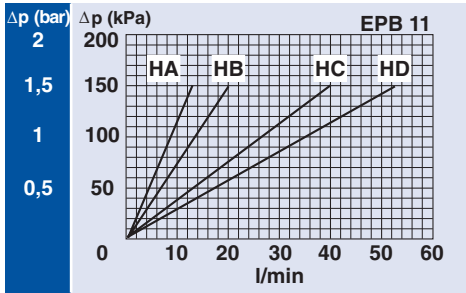
The "Assembly Pressure Drop (Δp)" is obtained by adding the pressure drop values of the Filter Housing and of the Clean Filter Element corresponding to the considered Flow Rate and it must be lower than 120 kPa (1,2 bar).

CLEAN FILTER ELEMENT PRESSURE DROP

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

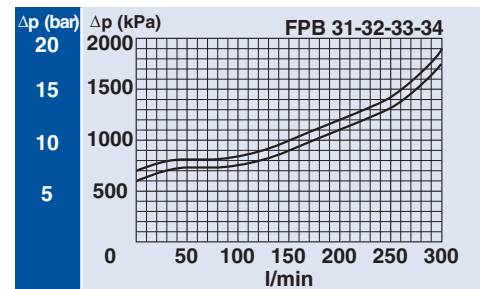
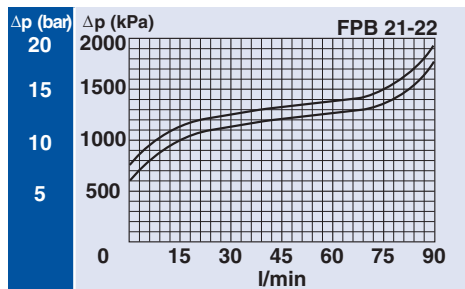
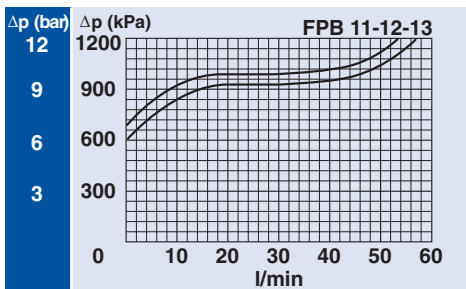
WITH H+ MEDIA

(recommended with no bypass option)



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.



ORDERING AND OPTIONS CHART

TYPE		F	F	F	F	F	F	F	F	F	ELEMENT		E	
F = FILTER COMPLETE		F	F	F	F	F	F	F	F	F	FAMILY		P	B
B = FILTER HOUSING		B	B	B	B	B	B	B	B	B	SIZE & LENGTH			
P	B	FAMILY, SIZE & LENGTH												
		11	12	13	21	22	31	32	33	34				
PORT TYPE														
B = BSP - thread		B	B	B	B	B	B	B	B	B				
N = NPT - thread		N	N	N	N	N	N	N	N	N				
S = SAE - thread		S	S	S	S	S	S	S	S	S				
F = SAE Flange 3000 psi		-	-	-	F	F	F	F	F	F				
G = SAE Flange 6000 psi		-	-	-	G	G	G	G	G	G				
PORT SIZE														
04 = 1/2" (N04 not available)		04	04	04	-	-	-	-	-	-				
06 = 3/4"		06	06	06	06	06	-	-	-	-				
08 = 1" (G08 not available; F08 for PB2+ only)		-	-	-	08	08	08	08	08	08				
10 = 1 1/4"		-	-	-	-	-	10	10	10	10				
12 = 1 1/2" (G12 option not available)		-	-	-	-	-	12	12	12	12				
BYPASS VALVE														
W = without		W	W	W	W	W	W	W	W	W				
C = 600 kPa (6 bar)		C	C	C	C	C	C	C	C	C				
R = reverse flow valve		-	-	-	R	R	R	R	R	R				
P = reverse flow + bypass valve		-	-	-	P	P	P	P	P	P				
SEALS												SEALS		
N = NBR Nitrile		N	N	N	N	N	N	N	N	N	N = NBR			
F = FKM Fluoroelastomer		F	F	F	F	F	F	F	F	F	F = FKM			
FILTER MEDIA												FILTER MEDIA		
FA = fiber 5 μm(β) β>1.000 Δp 20 bar		FA	FA	FA	FA	FA	FA	FA	FA	FA	FA = fib. 5 μm(β) 20 bar			
FB = fiber 7 μm(β) β>1.000 Δp 20 bar		FB	FB	FB	FB	FB	FB	FB	FB	FB	FB = fib. 7 μm(β) 20 bar			
FC = fiber 12 μm(β) β>1.000 Δp 20 bar		FC	FC	FC	FC	FC	FC	FC	FC	FC	FC = fib. 12 μm(β) 20 bar			
FD = fiber 21 μm(β) β>1.000 Δp 20 bar		FD	FD	FD	FD	FD	FD	FD	FD	FD	FD = fib. 21 μm(β) 20 bar			
HA = fiber 5 μm(β) β>1.000 Δp 210 bar		HA	HA	HA	HA	HA	HA	HA	HA	HA	HA = fib. 5 μm(β) 210 bar			
HB = fiber 7 μm(β) β>1.000 Δp 210 bar		HB	HB	HB	HB	HB	HB	HB	HB	HB	HB = fib. 7 μm(β) 210 bar			
HC = fiber 12 μm(β) β>1.000 Δp 210 bar		HC	HC	HC	HC	HC	HC	HC	HC	HC	HC = fib. 12 μm(β) 210 bar			
HD = fiber 21 μm(β) β>1.000 Δp 210 bar		HD	HD	HD	HD	HD	HD	HD	HD	HD	HD = fib. 21 μm(β) 210 bar			
CC = cellulose 10 μm β>2 Δp 20 bar		CC	CC	CC	CC	CC	CC	CC	CC	CC	CC=cel.10 μm 20 bar			
CLOGGING INDICATORS														
02 = port, plugged		02	02	02	02	02	02	02	02	02				
K2 = differential, visual 500 kPa (5 bar)		K2	K2	K2	K2	K2	K2	K2	K2	K2				
K3 = differential, visual 800 kPa (8 bar)		K3	K3	K3	K3	K3	K3	K3	K3	K3				
Y2 = differ., visual-electrical 500 kPa (5 bar)		Y2	Y2	Y2	Y2	Y2	Y2	Y2	Y2	Y2				
Y3 = differ., visual-electrical 800 kPa (8 bar)		Y3	Y3	Y3	Y3	Y3	Y3	Y3	Y3	Y3				
When the filter is ordered with FKM seals, the first digit of the indicator code is a letter (please ask for relevant information)ø														
X ACCESSORIES														
X = no accessory available		X	X	X	X	X	X	X	X	X				

