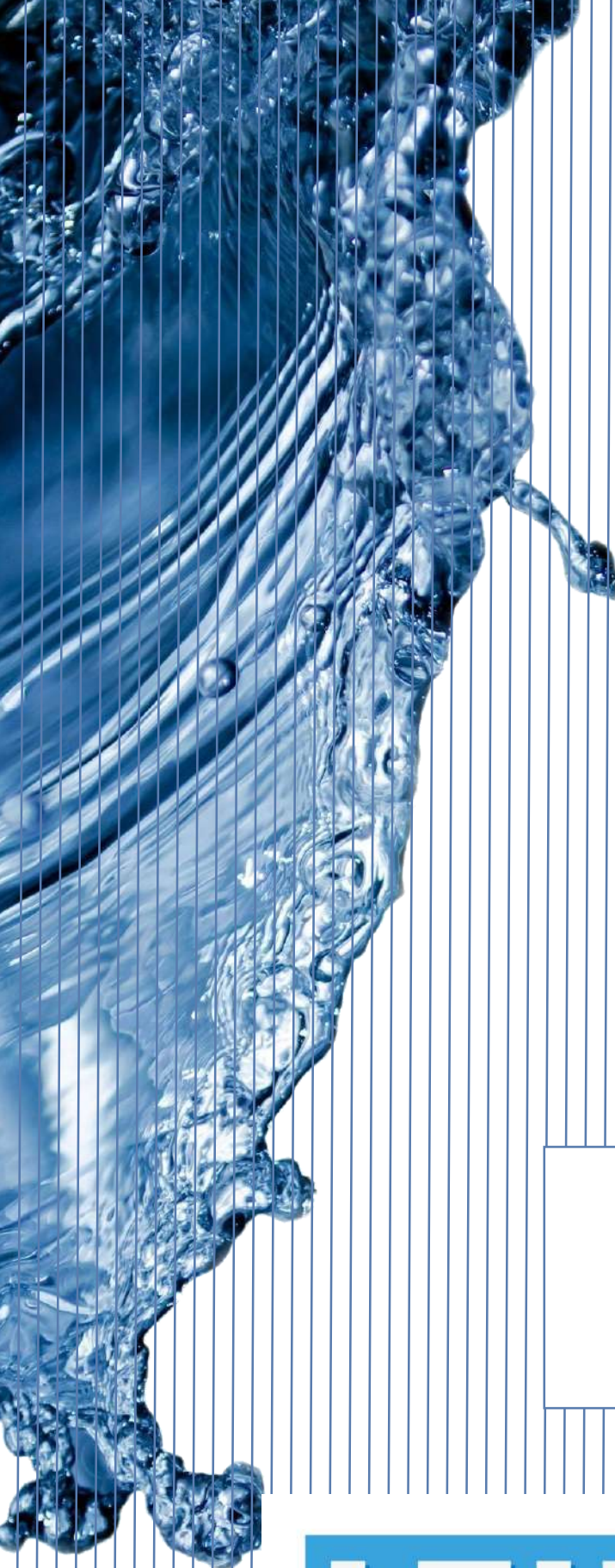




UFI FILTERS FPL



 HYDRAULIC
COMPONENTS
& FLUID CONTAMINATION
CONTROL



FPL

PRESSURE FILTERS



DESCRIPTION

Pressure filter manifold side mounting

MATERIALS

Head: Cast iron

Bowl: Steel

Bypass valve: Steel

Seals: NBR Nitrile (FKM Fluoroelastomer on request)

Indicator housing: Brass

PRESSURE

Max. working: 31,5 MPa (315 bar)

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

H+ series: 21 MPa (210 bar)

BYPASS VALVE

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

FLOW RATE

Qmax 400 l/min

WORKING TEMPERATURE

From -25° to +110° C

COMPATIBILITY (ISO 2943)

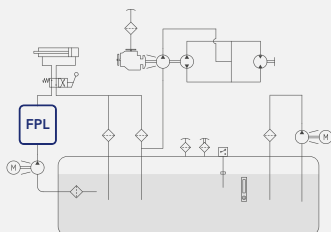
Full with fluids: HH-HL-HM-HV-HTG

(according to ISO 6743/4)

For fluids different than the above mentioned,
please contact our Customer Service



HYDRAULIC DIAGRAM



Is this datasheet the latest release? Please check on our website

FPL

PRESSURE FILTERS

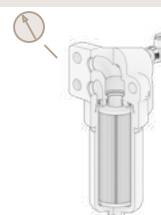
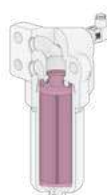


ORDERING AND OPTION CHART

COMPLETE FILTER FAMILY												FILTER ELEMENT FAMILY			
F	P	L											E	P	B
			SIZE & LENGTH										SIZE & LENGTH		
			PORT TYPE												
			C = Flanges 90° (manifold)												
			PORT SIZE												
			15 = size 15												
			20 = size 20												
			32 = size 32												
			BYPASS VALVE												
			W = without												
			C = 600 kPa (6 bar)												
			SEALS										SEALS		
			N = NBR Nitrile												
			F = FKM Fluoroelastomer												
			FormulaUFI MEDIA										FormulaUFI MEDIA		
			FA = FormulaUFI.MICRON 5 $\mu\text{m}_{(c)}$ $\beta > 1.000 \Delta p$ 2MPa (20 bar)												
			FB = FormulaUFI.MICRON 7 $\mu\text{m}_{(c)}$ $\beta > 1.000 \Delta p$ 2MPa (20 bar)												
			FC = FormulaUFI.MICRON 12 $\mu\text{m}_{(c)}$ $\beta > 1.000 \Delta p$ 2MPa (20 bar)												
			FS = FormulaUFI.MICRON 16 $\mu\text{m}_{(c)}$ $\beta > 1.000 \Delta p$ 2MPa (20 bar)												
			FD = FormulaUFI.MICRON 21 $\mu\text{m}_{(c)}$ $\beta > 1.000 \Delta p$ 2MPa (20 bar)												
			FE = FormulaUFI.MICRON 30 $\mu\text{m}_{(c)}$ $\beta > 1.000 \Delta p$ 2MPa (20 bar)												
			HA = FormulaUFI.MICRON 5 $\mu\text{m}_{(c)}$ $\beta > 1.000 \Delta p$ 21MPa (210 bar)												
			HB = FormulaUFI.MICRON 7 $\mu\text{m}_{(c)}$ $\beta > 1.000 \Delta p$ 21MPa (210 bar)												
			HC = FormulaUFI.MICRON 12 $\mu\text{m}_{(c)}$ $\beta > 1.000 \Delta p$ 21MPa (210 bar)												
			HD = FormulaUFI.MICRON 21 $\mu\text{m}_{(c)}$ $\beta > 1.000 \Delta p$ 21MPa (210 bar)												
			CLOGGING INDICATOR**												
			03 = port, plugged												
			5E = visual differential 500 kPa (5 bar)												
			5F = visual differential 800 kPa (8 bar)												
			6E = electrical differential 500 kPa (5 bar)												
			6F = electrical differential 800 kPa (8 bar)												
			7E = indicator 6E with LED												
			7F = indicator 6F with LED												
			T2 = elect. diff. 500 kPa (5 bar) with thermostat 30°C												
			T3 = elect. diff. 800 kPa (8 bar) with thermostat 30°C												
X	X		ACCESSORI / ACCESSORIES												
			XX = no accessory available												

** 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)

CLOGGING INDICATOR

[illegible]

E	P	B					
---	---	---	--	--	--	--	--

--	--

	NBR	FKM
FPL11-12-13	521.0080.2	521.0083.2
FPL21-22	521.0081.2	521.0084.2

	NBR	FKM
FPL31-32-33-34-35	521.0082.2	521.0085.2

Technical drawing of the 3000 series hydraulic cylinder, showing front and side views with dimensions.

Front View Dimensions:

- Total height: 120
- Top flange diameter: $\varnothing 11$
- Flange width: 58
- Flange thickness: 13
- Flange to main body distance: 26
- Main body diameter: $\varnothing 82$
- Main body inner diameter: $\varnothing 66$
- Main body height: H1
- Bottom flange diameter: 30
- Bottom flange height: 100

Side View Dimensions:

- Total width: 86
- Top flange width: 45
- Main body diameter: $\varnothing 15$

	H1	Kg
FPL11	75	4,4
FPL12	107	4,6
FPL13	201	5,2

FPL2

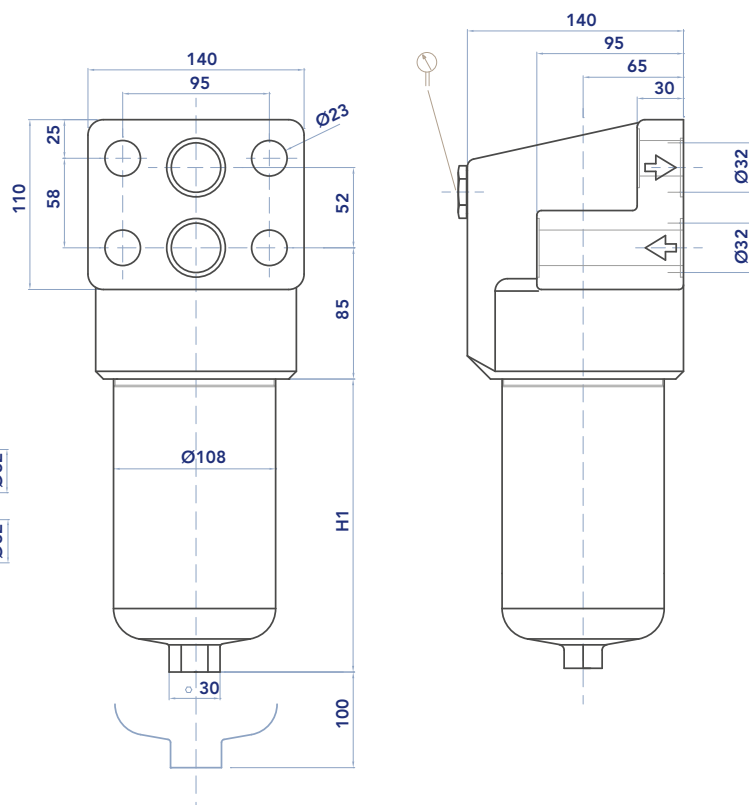


	H1	Kg
FPL21	107	6,6
FPL22	202	8,2

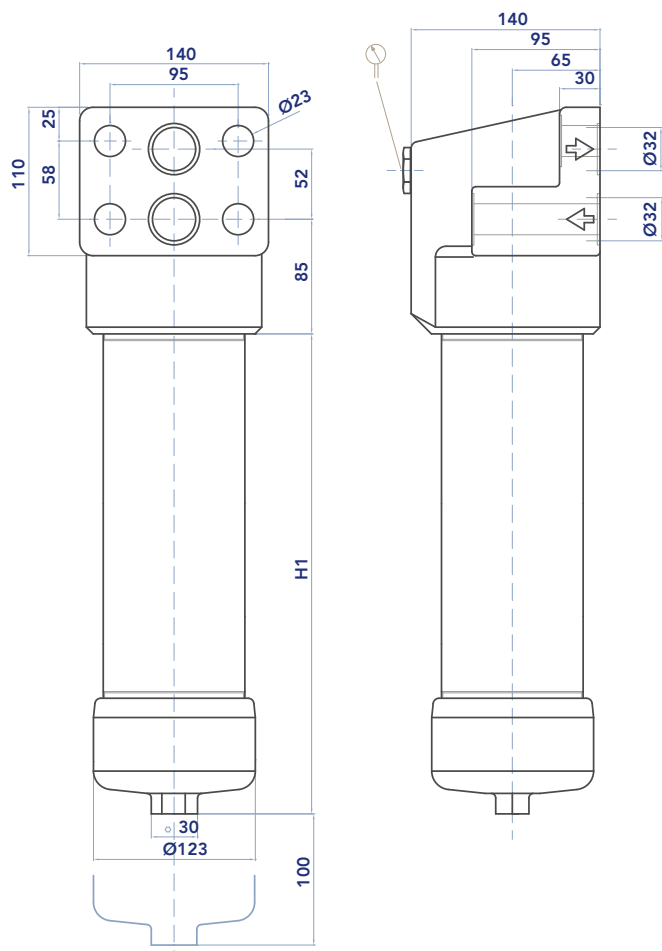


INSTALLATION DRAWING

FPL 31-32-33



FPL 34-35



FILTER HOUSING

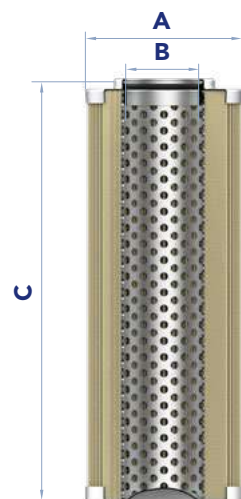
	H1	Kg
FPL31	105	11,0
FPL32	199	13,9
FPL33	321,5	17,2
FPL34	420	22,0
FPL35	520	25,0

FPL

PRESSURE FILTERS

FILTER ELEMENT

	A	B	C	Kg Media F	Kg Media H	AREA (cm ²)	
						Media F+	Media H+
EPB11	45	25	85	0,15	0,25	355	340
EPB12	45	25	116	0,20	0,55	500	475
EPB13	45	25	211	0,30	0,45	935	915
EPB21	52	23,5	115	0,25	0,40	975	975
EPB22	52	23,5	210	0,35	0,55	1.830	1.785
EPB31	78	42,5	118	0,40	0,70	2.000	1.470
EPB32	78	42,5	210	0,80	1,30	3.695	2.695
EPB33	78	42,5	330	1,00	1,60	5.025	4.325
EPB34	78	42,5	430	1,20	1,80	6.585	5.685
EPB35	78	42,5	530	1,40	2,00	8.145	7.045



MAINTENANCE

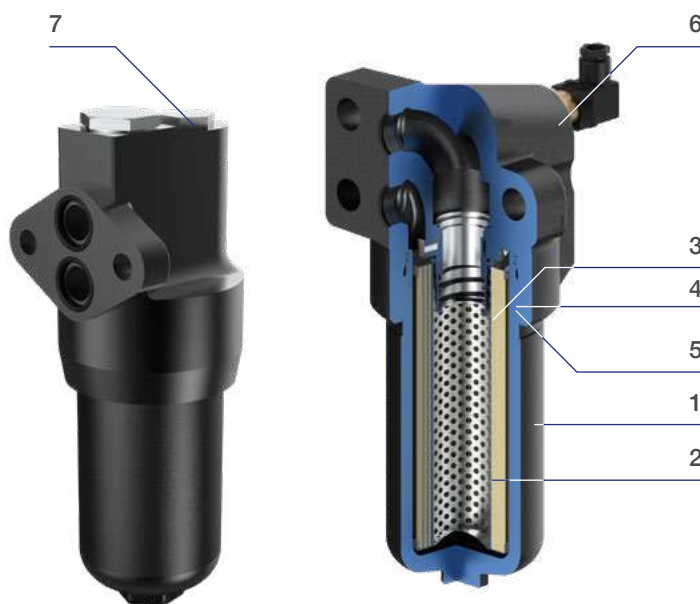
- 1) Stop the system and verify there is no pressure in the filter.
- 2) Collect the oil inside the filter with a suitable container.
- 3) Unscrew the bowl (1) and clean it.
- 4) Remove the dirty filter element (2).
N.B. The exhausted filter elements and the oil dirty filter parts are classified "Dangerous 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 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.



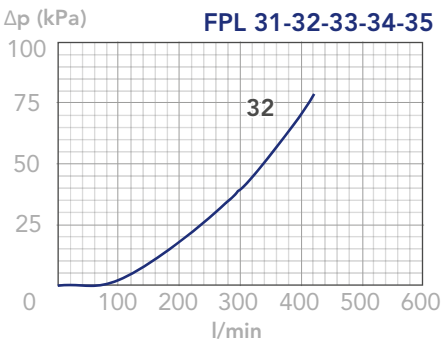
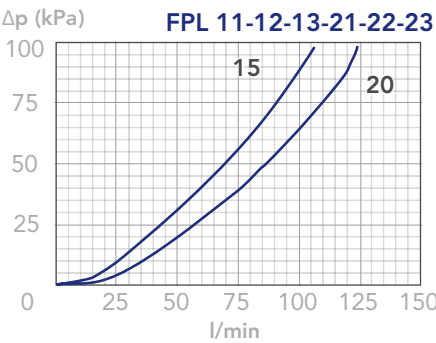


PRESSURE DROP CURVES (Δp)

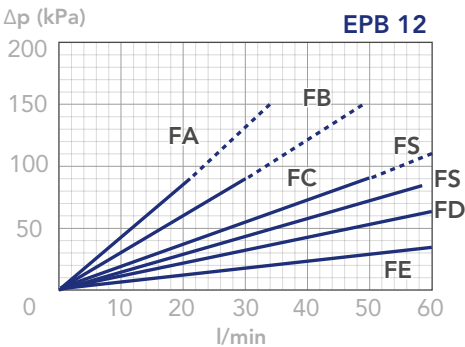
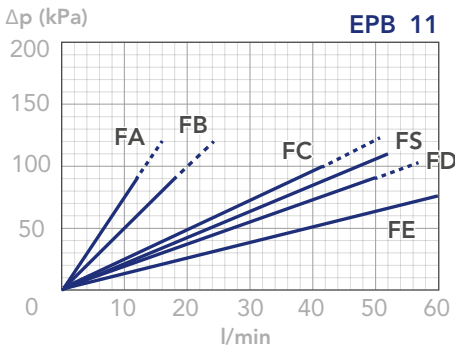
The “Assembly Pressure Drop (Δp)” is obtained by adding the pressure drop values of the Filter Housing and of the Clean Filter Element corresponding to the considered Flow Rate and it must be

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

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

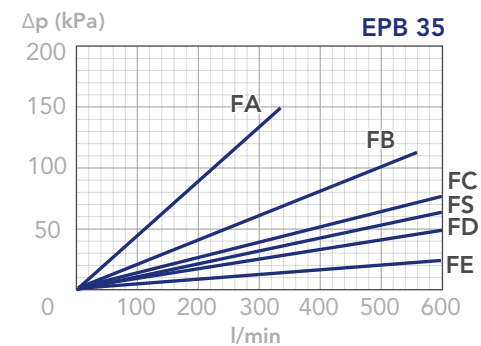
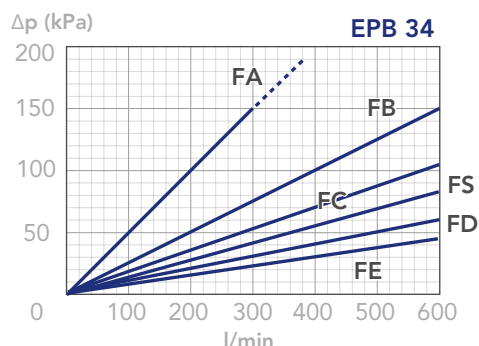
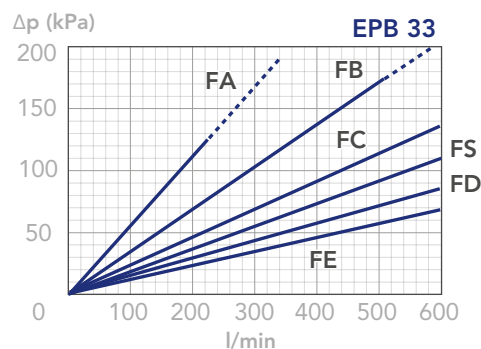
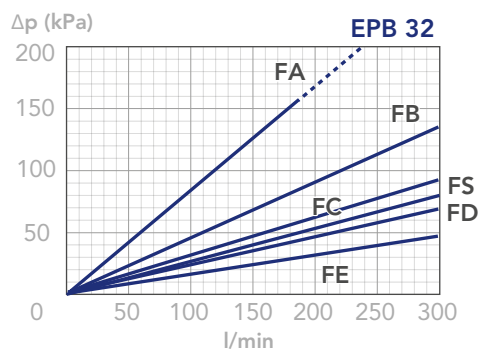
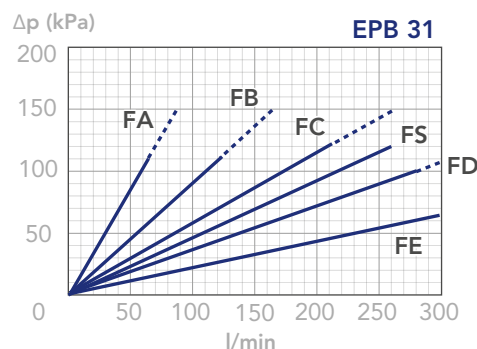
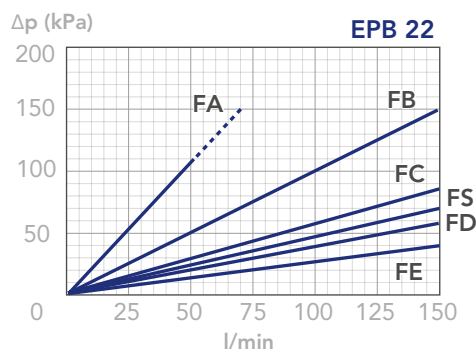
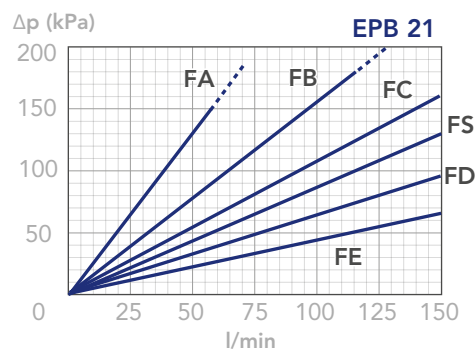
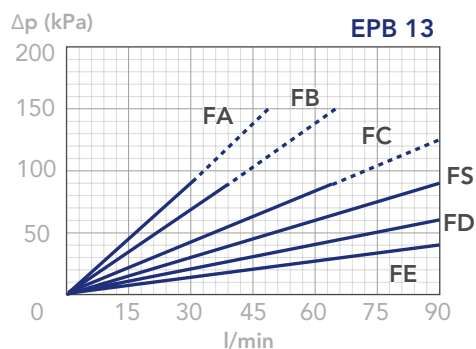


CLEAN FILTER ELEMENT PRESSURE DROP WITH F+ MEDIA
(depending both on the internal diameter of the element and on the filter media)



FPL

PRESSURE FILTERS



N.B.

All the curves have been obtained with mineral oil having a kinematic viscosity 30 cSt and specific gravity 0,86 kg/dm³; for fluids with different features, please consider the factors described in the first part of this catalogue. All the curves

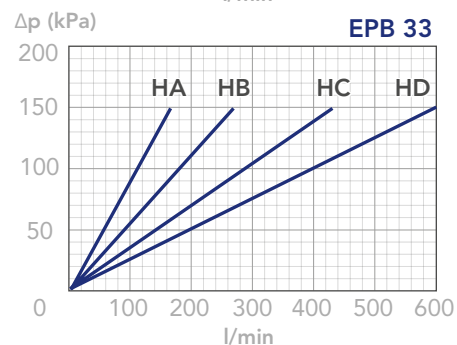
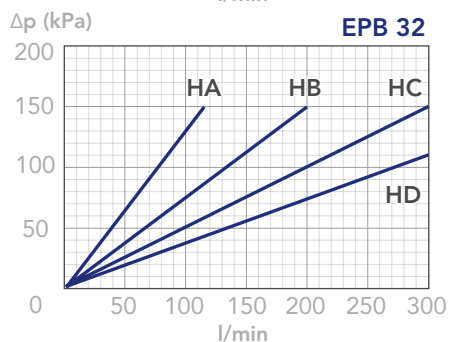
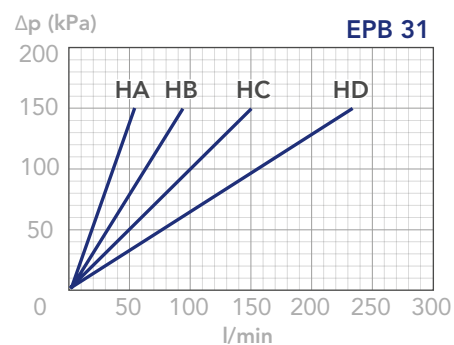
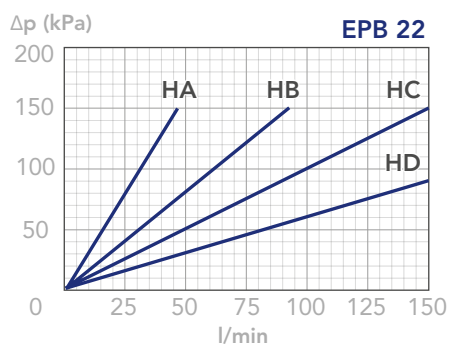
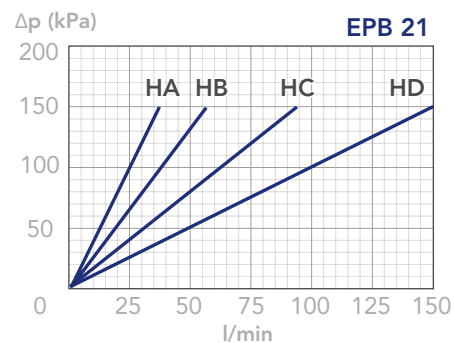
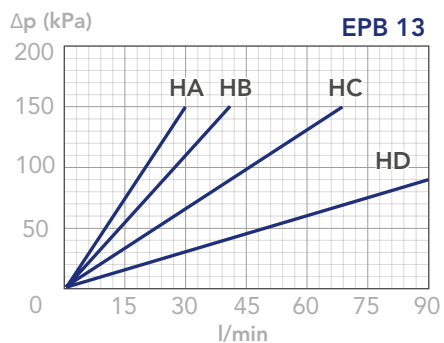
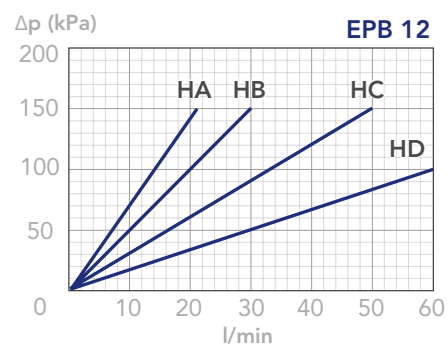
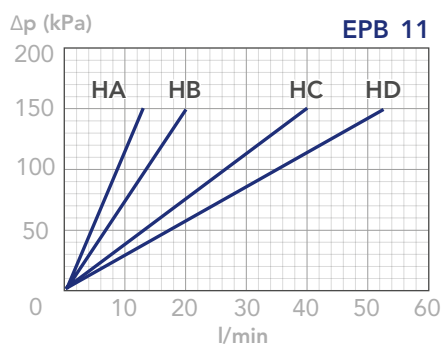
are obtained from test done at the UFI FILTERS HYDRAULICS Laboratory, according to the specification ISO 3968. In case of discrepancy, please check the contamination level, viscosity and features of the fluid in use.



PRESSURE DROP CURVES (Δp)

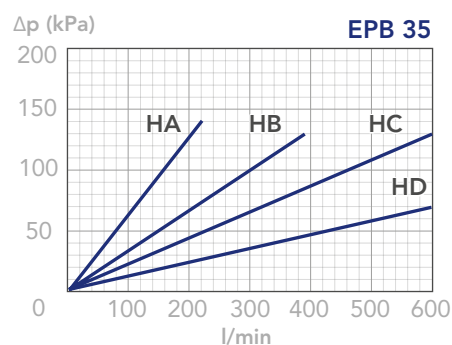
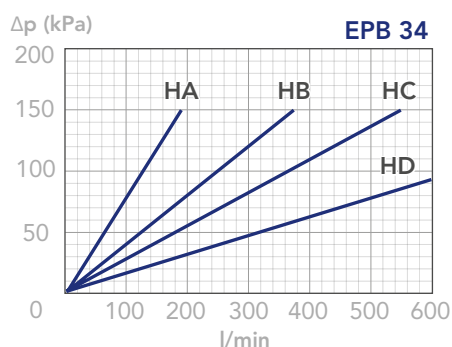
CLEAN FILTER ELEMENT PRESSURE DROP WITH H+ MEDIA

depending both on the internal diameter of the element and on the filter media) - Recommended with no bypass option



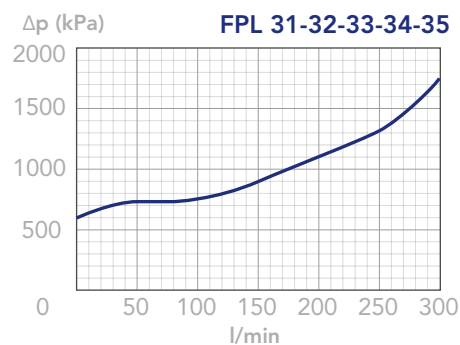
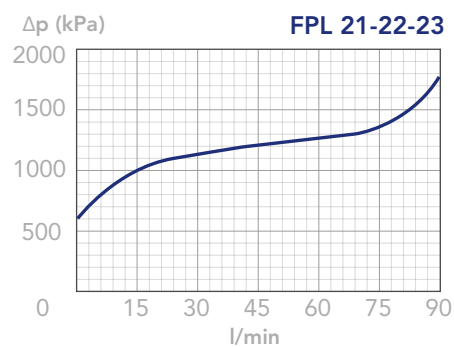
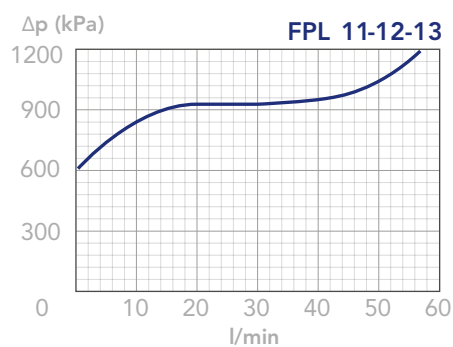
FPL

PRESSURE FILTERS



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.

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