FILTREC®

FHLC SERIES

Pressure filters

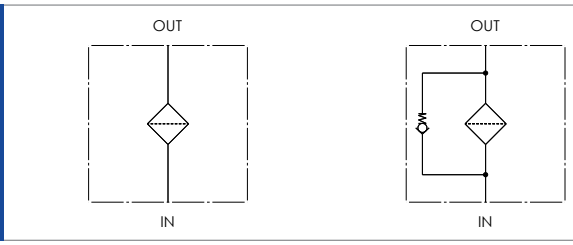
FHLC filters help prevention of sudden, critical failure in fluid systems by providing protection to point-of-use components. Designed to supplement the main filtration systems, they are mounted upstream of critical components such as valves and nozzles.

HOUSING	tested according to NFPA T3.10.5.1, ISO 10771, ISO 3968	
PRESSURE:	max operating 420 bar	
CONNECTION PORTS:	G 1/2" - G 3/4" - M22x1,5 - M26x1,5	
MATERIALS:	Housing:	Zinc plated carbon steel
	Seals:	NBR - FKM

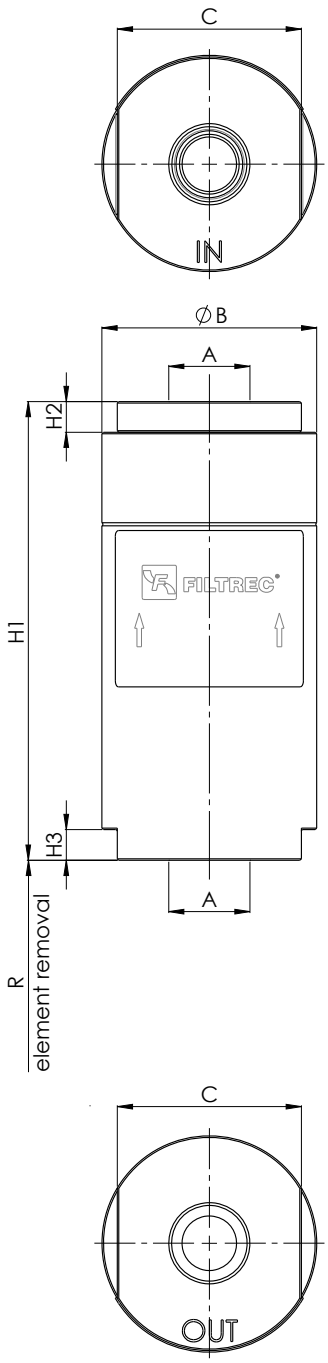
ELEMENT	tested according to ISO 11170, 2941, 2942, 2943, 3724, 3968,16889, 16908, 23181
FILTER MEDIA:	G10 - G25 - T60 - T125
COLLAPSE PRESSURE:	21- 210 bar
BYPASS	3 or 6 bar or no bypass

TEMPERATURE RANGE:	with NBR seal from -30 °C to +100 °C with FKM seal 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).

HYDRAULIC SYMBOL



OVERALL DIMENSIONS



NOMINAL SIZE

MODEL	A	B	C	H1	H2	H3	R	WEIGHT
FHLC D101	G1/2" M22 M26	Ø50	42	108	7,5	10	70	1,1 Kg
FHLC D102				158				1,4 Kg
FHLC D109	G 3/4"	Ø70	60	150	10	10	80	2,7 Kg

ORDERING INFORMATION

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
	FHLC	**D1**	**02**	**G10**	**X**	**B**	**0**	**B3**	**S**	**0**
SPARE ELEMENT		**D1**	**02**	**G10**	**X**	**B**	**0**			

1. FILTER SERIES	FHLC		
2. FILTER ELEMENT SERIES	D1		
3. FILTER SIZE	01		
	02		
	09		
4. FILTER MEDIA For different media options please check availability with Filtrec Customer Service.	000	no element	
	G10	glassfiber $\beta_{12\mu m(c)} \geq 1.000$	
	G25	glassfiber $\beta_{22\mu m(c)} \geq 1.000$	
	T60	wire mesh	
	T125	wire mesh	
5. ELEMENT COLLAPSE	0	no element	
	Y	21 bar	available with bypass only
	X	210 bar	available with no bypass only
	A	21 bar	available for wire mesh with bypass only
	B	210 bar	available for wire mesh with no bypass only
6. SEALS	B	NBR	
	V	FKM	
7. BYPASS SETTING	0	no bypass	
	3	3 bar	
	6	6 bar on request	
8. CONNECTIONS	B3	G 1/2"	
	M22	M22x1,5	for size D101 and D102
	M26	M26x1,5	
	B4	G 3/4"	for size D109
9. CORROSION PROTECTION	S	standard	
10. OPTION	0	no option	

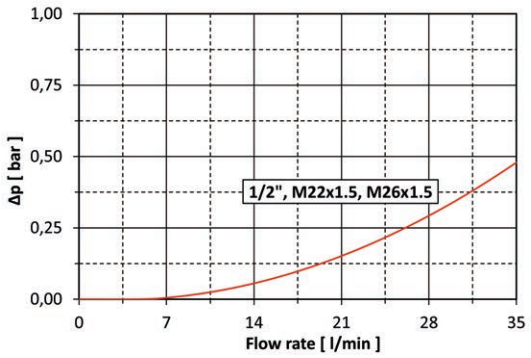
PRESSURE DROP (Δp) INFORMATION FOR FILTER SIZING

The total Δp through a filter assembly is given from Housing Δp + Element Δp.
This ideally should not 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.

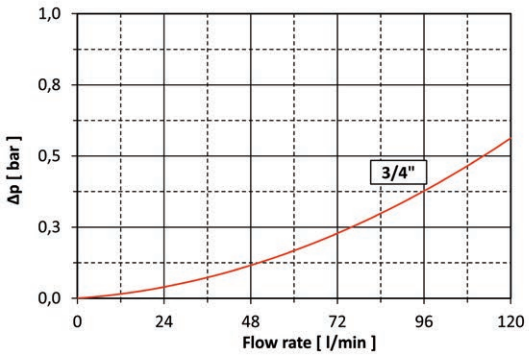
HOUSING PRESSURE DROP

The housing Δp is given by the curve of the considered model and port, in correspondence of the flow rate value.

FHLC-D101-D102



FHLC_D109



ELEMENT PRESSURE DROP (filter elements 21 bar collapse)

The element Δp (bar) is given by the flow rate (l/min) multiplied by the factor in the table here below corresponding 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: 20 l/min with D102G10YB6 and oil viscosity 45 cSt (20 x 22)/1000 x (46/32) = 0,63 bar

	G10	G25	T60	T125
D101	33,33	16,67	4	3,5
D102	22	12	3,05	2,35
D109	13,75	7,5	1,25	1

EXAMPLE OF TOTAL Δp CALCULATION

FHLCD102G10YB6B3S0 with 20 l/min and oil 46 cSt
Housing Δp 0,15 bar + element Dp 0,63 bar (20 x 22)/1000 x (46/32) = total assembly Δp 0,78 bar

ELEMENT PRESSURE DROP (filter elements 210 bar collapse)

The element Δp (bar) is given by the flow rate (l/min) multiplied by the factor in the table here below corresponding 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: 20 l/min with D102G10XB0 and oil viscosity 45 cSt (20 x 36)/1000 x (46/32) = 1,04 bar

	G10	G25	T60	T125
D101	53,33	30	4	3,5
D102	36	20	3,05	2,35
D109	17,5	12,5	1,25	1

EXAMPLE OF TOTAL Δp CALCULATION

FHLCD102G10XB0B3S0 with 20 l/min and oil 46 cSt
Housing Δp 0,15 bar + element Dp 1,04 bar (20 x 36)/1000 x (46/32) = total assembly Δp 1,19 bar

USER TIPS

1. FILTER HEAD
2. SEAL KIT
3. FILTER ELEMENT
4. FILTER BOWL

SPARE SEAL KIT PART NUMBER (2)		
SIZE	**NBR**	**FKM**
FHLC-D101/02	06.021.00395	06.021.00396
FHLC-D109	06.021.00398	06.021.00399

TIGHTENING TORQUE
Screw up filter bowl till end

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. Verify that no tension is present on the filter after mounting.
2. Enough space must be available for filter element replacement.
⚠ 3. Never run the system with no filter element fitted.
4. Keep in stock a spare FILTREC filter element for timely replacement when required.
5. 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. 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 bowl (4) by turning it anti-clockwise and remove it.
3. Remove the dirty filter element (3).
4. Clean carefully the filter bowl (4); check the seals (2) conditions and replace if necessary.
5. Before fitting a new FILTREC element (3), verify the part number, particularly concerning the micron rating; then insert the element into the filter bowl (4).
6. Lubricate the filter bowl (4) thread and screw it by hand in the filter head (1) by turning it clock wise.
7. Screw in the bowl to stop.
⚠ 8. The used filter elements cannot be cleaned and re-used.