



FH700 SERIES

In line high pressure filters

In line filters for operating pressure up to 700 bar.
Flow rate up to 30 l/min.



HOUSING

tested according to NFPA T3.10.5.1, ISO 10771, ISO 3968

PRESSURE: Max operating: up to 700 bar
Fatigue rating: 10^6 cycles $0 \div 700$ bar
Burst: 2100 bar

CONNECTION PORTS: 1/4", 3/8", 1/2" NPTF

MATERIALS: Head: SS 316L
Bowl: SS 316L
Seal: NBR, FKM

BYPASS VALVE 6 bar

ELEMENT

tested according to ISO 11170, 2941, 2942, 2943, 3724, 3968, 16889, 16908, 23181

FILTER MEDIA: Fibreglass: G01 - G03 - G06
G10 - G15 - G25

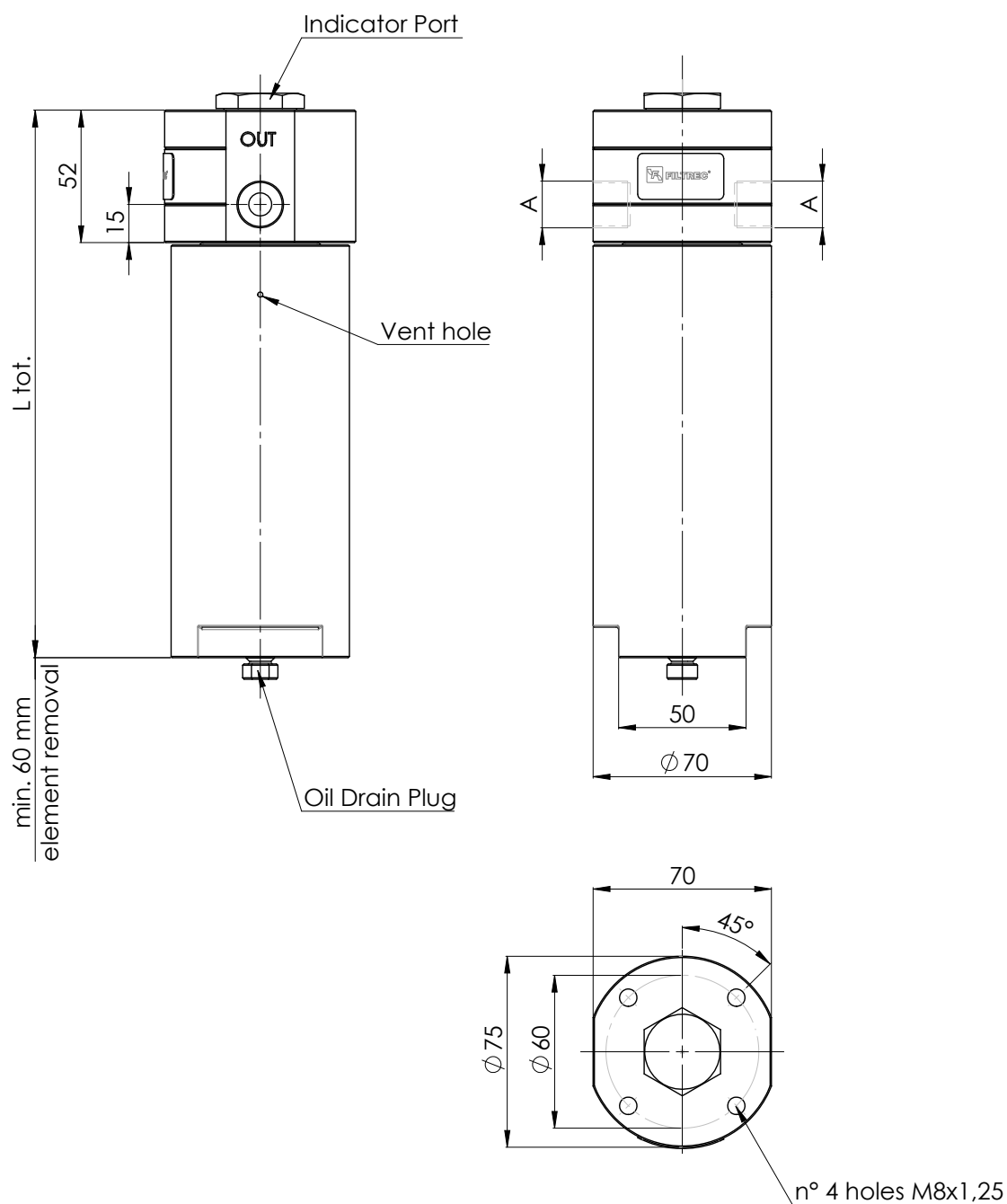
COLLAPSE PRESSURE: 21 bar
210 bar

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

with FKM seal
from -25 °C to +120 °C

FLUID COMPATIBILITY: HH, HG, HL, HM, HR, HV, HS, HE...HFDU, (HFB, HFC water < 50%) - ISO 6743/4
For use with other fluid please contact Filtrec Customer Service (info@filtrec.it).

OVERALL DIMENSIONS



NOMINAL SIZE

MODEL	A	L tot	WEIGHT
FH700-D1-01	1/4" NPTF - 3/8" NPTF - 1/2" NPTF	165,5	4,76 Kg
FH700-D1-02		214,5	5,8 Kg

ORDERING INFORMATION

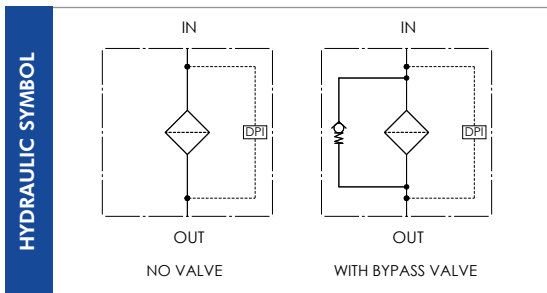
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
FH700	D1	02	G10	X	B0	NF2	D	W	000	S	0
SPARE ELEMENT	D1	02	G10	X	B0						

1. FILTER SERIES	FH700	
2. FILTER ELEMENT SERIES	D1	
3. FILTER SIZE	01	
	02	
4. FILTER MEDIA	000	no element
	G01	glassfiber $\beta_{4\mu m(c)} \geq 1.000$
	G03	glassfiber $\beta_{5\mu m(c)} \geq 1.000$
	G06	glassfiber $\beta_{7\mu m(c)} \geq 1.000$
	G10	glassfiber $\beta_{12\mu m(c)} \geq 1.000$
	G15	glassfiber $\beta_{17\mu m(c)} \geq 1.000$
	G25	glassfiber $\beta_{22\mu m(c)} \geq 1.000$
5. ELEMENT COLLAPSE	Y	21 bar
	X	210 bar
6. SEALS & COMPATIBILITY	B0	NBR
*= All metal parts in SS 316L Only for spare element "/" before digit suffix is needed	V0	FKM
	*B0/7	NBR Improved compatibility for high water content fluid
	*V0/7	FKM Improved compatibility for high water content fluid
		Only for high collapse filter element
7. CONNECTIONS	NF1	1/4" NPTF
For different thread options please check availability with Filtrtec Customer Service.	NF2	3/8" NPTF
	NF3	1/2" NPTF
8. BYPASS VALVE	0	no by-pass
	D	6 bar
9. INDICATOR PORT OPTION	S	with metal plug
	W	with plastic plug
10. COMPULSORY FIELD	000	standard
11. CORROSION PROTECTION	S	SS 316L as standard
12. OPTION	0	standard

ACCESSORIES

The accessories must be ordered separately

INDICATOR	000	no indicator
*LC24=Led connector For other options see clogging indicators catalogue	VSLXF5	visual 5 bar FKM reversed sockets
	ESLXF5	differential electrical 5 bar FKM reversed sockets
	ESLXF5L	differential electrical 5 bar FKM reversed sockets + *LC24
	VSLXF8	visual 8 bar FKM reversed sockets
	ESLXF8	differential electrical 8 bar FKM reversed sockets
	ESLXF8L	differential electric 8 bar FKM reversed sockets + *LC24
		recommended for no by-pass option



PRESSURE DROP (Δp) INFORMATION FOR FILTER SIZING

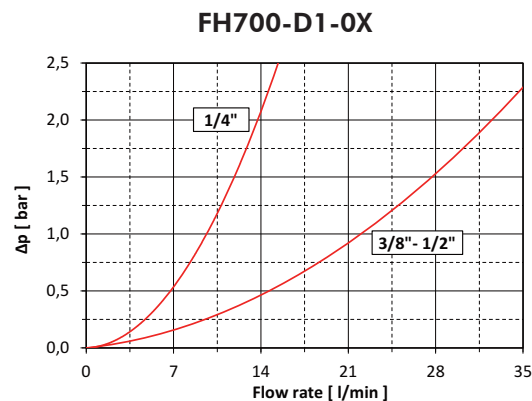
The total Δp through a filter assembly is given from Housing Δp + Element Δp .

This ideally should not exceed 1,0 bar and should never 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/dm³.

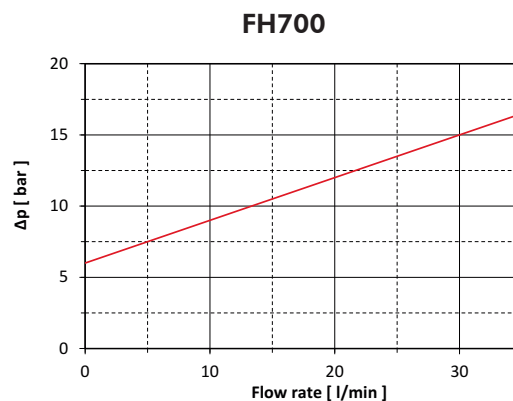
HOUSING PRESSURE DROP

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



BYPASS VALVE PRESSURE DROP

The bypass valve Δp is given by the curve of the considered model and setting, in correspondence of the flow rate value.



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/dm³.

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 V_x different than 32 cSt a corrective factor $V_x/32$ must be applied.

Example: 10 l/min with D102G10YB0 and oil viscosity 46 cSt: $(10 \times 22)/1000 \times (46/32) = 0,32$ bar

	G01	G03	G06	G10	G15	G25
D101	119,35	96,67	63,33	33,33	20,30	16,67
D102	77,43	64,58	44,23	22,00	13,90	12,00

EXAMPLE OF TOTAL Δp CALCULATION

FH700D102G10YB0NF2DW000S0 with 20 l/min and oil 46 cSt:

Housing Δp 0,25 bar + element Δp 0,32 bar $(10 \times 22)/1000 \times (46/32) =$ total assembly Δp 0,57 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 V_x different than 32 cSt a corrective factor $V_x/32$ must be applied.

Example: 10 l/min with D102G10XB0 and oil viscosity 46 cSt: $(10 \times 36)/1000 \times (46/32) = 0,52$ bar

	G01	G03	G06	G10	G15	G25
D101	173,16	138,32	76,50	53,33	34,50	30,00
D102	111,27	91,48	51,81	36,00	23,33	20,00

EXAMPLE OF TOTAL Δp CALCULATION

FH700D102G10XB0NF2DW000S0 with 20 l/min and oil 46 cSt:

Housing Δp 0,25 bar + element Δp 0,52 bar $(10 \times 36)/1000 \times (46/32) =$ total assembly Δp 0,77 bar

USER TIPS



INDICATOR TIGHTENING TORQUE

100 Nm


SPARE SEAL KIT PART NUMBER (5)

SIZE	NBR	FKM
FH700-D102/D101	06.021.00474	06.021.00475


BOWL TIGHTENING TORQUE

120 Nm



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

-  The IN and OUT ports must be connected to the hoses in the correct flow direction; the direction flow symbols shows on the filter head (1).
- The filter housing should be preferably mounted with the bowl (6) downward.
- Secure to the frame the filter head (1) using the threaded fixing holes (3).
- Verify that no tension is present on the filter after mounting.
- Enough space must be available for filter element replacement.
- The visual clogging indicator must be in an easily viewable position.
- When an electrical indicator is used, make sure that it is properly wired.
-  Never run the system with no filter element fitted.
- Keep in stock a spare FILTREC filter element for timely replacement when required.
- Filter housing should be earthed.

OPERATION

-  The filter must work within the operating conditions of pressure, temperature and compatibility given in the first page of this data sheet.
- The filter element must be replaced as soon as the clogging indicator signals at working temperature (in cold start conditions, oil temperature lower than 30°C, a false alarm can be given due to oil viscosity).
- If no clogging indicator is mounted, replace the element according to the system manufacturer's recommendations.

MAINTENANCE

-  Make sure that the system is switched off and there is no residual pressure in the filter.
- Unscrew the oil drain plug (8) by turning it anti clockwise, then make the same with the bowl (6) and remove it.
- Remove the dirty element (4).
- Fit a new FILTREC element (4), verify the part number, particularly concerning the micron rating; open its plastic protection on the open-end side and insert it onto the spigot in the filter head, then remove completely the plastic protection.
- Clean carefully the bowl; check the O-rings (5) conditions and replace them if necessary.
- Lubricate the bowl's thread and seal cone (6) and screw it by hand in the filter head (1) by turning it clockwise.
- Screw in the bowl with 120 Nm tightening torque.
- Lubricate the oil drain plug's thread and seal cone (8) and screw by turning it clockwise.
-  The used filter elements cannot be cleaned and re-used.

