FH323-324 SERIES

In line high pressure filters

In line filters for operating pressure up to 320 bar. Flow rate up to 100 l/min.

HOUSING

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

PRESSURE:	Max operating: up to 320 bar Fatigue rating: 10^6 cycles 0÷320 bar Burst: 960 bar
CONNECTIONS:	G 1/2" ÷ G 3/4" - M22 M18 (on request)
MATERIALS:	Head: cast iron Bowl: carbon steel Seal: NBR (FKM on request)
BYPASS VALVE:	7 bar

ELEMENT

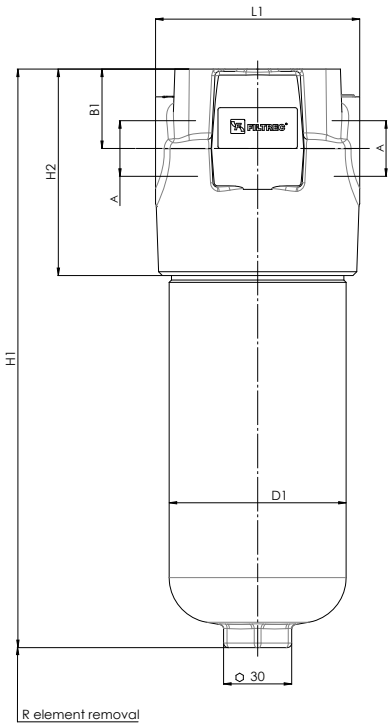
tested according to ISO 11170, 2941, 2942, 2943, 3724, 3968,16889, 16908, 23181

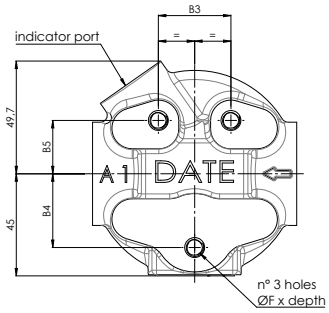
FILTER MEDIA:	Inorganic microfiber: G01 - G03 - G05 - G10 - G15 - G20
COLLAPSE PRESSURE:	20 bar

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

OVERALL DIMENSIONS

FH323



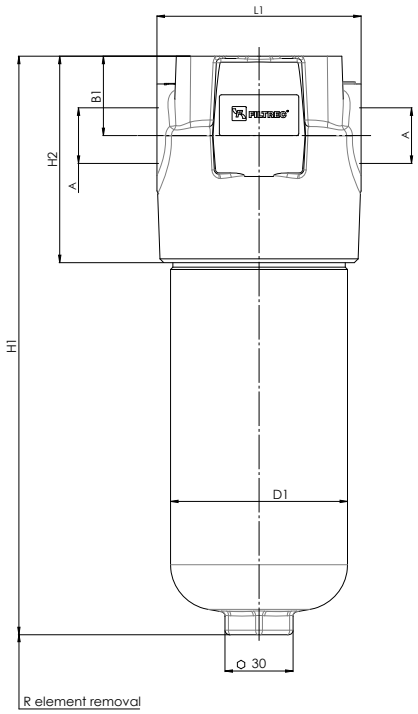


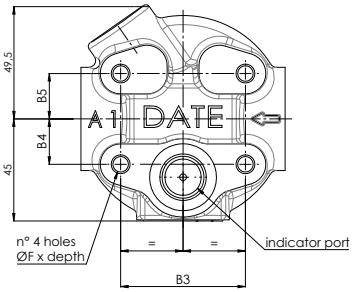
NOMINAL SIZE

MODEL	A	B1	B3	B4	B5	D1	F	H1	H2	L1	R	WEIGHT
FH323-DHD55	G 1/2" G 3/4" M18x1,5 M22x1,5	35	32	32,5	23,5	78	M8x13	204	91	90	110	4,2 Kg
FH323-DHD75								255				4,9 Kg
FH323-DHD95								295				5,4 Kg

OVERALL DIMENSIONS

FH324





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ORDERING INFORMATION

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
FH323/324	**DHD**	**95**	**G10**	**B**	**0**	**B4**	**H**	**W**	**000**	**S**	**0**
SPARE ELEMENT	**DHD**	**95**	**G10**	**B**							

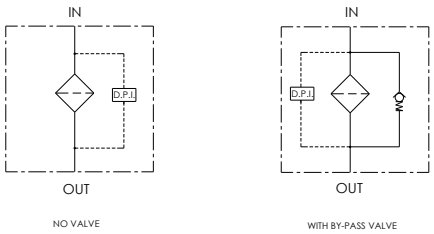
1. FILTER SERIES	FH323/324		
2. FILTER ELEMENT SERIES	DHD		
3. FILTER SIZE	55-75-95		
4. FILTER MEDIA	000	no element	
	G01	glassfiber $ß_{4\mu m(c)} \geq 1.000$	
	G03	glassfiber $ß_{5\mu m(c)} \geq 1.000$	
	G05	glassfiber $ß_{7\mu m(c)} \geq 1.000$	
	G10	glassfiber $ß_{12\mu m(c)} \geq 1.000$	
	G15	glassfiber $ß_{17\mu m(c)} \geq 1.000$	
	G20	glassfiber $ß_{22\mu m(c)} \geq 1.000$	
5. SEALS	B	NBR	
	V	FKM (on request)	
6. ELEMENT SUFFIX	0*	for element with std. connection	
* Omitted for spare element ** Only for spare element "/8"	8**	for element with special connection	
7. CONNECTIONS	B3	G 1/2"	
	B4	G 3/4"	
	M18	M18x1,5 (on request)	
	M22	M22x1,5	
8. BYPASS VALVE	0	no by-pass	
	H	7 bar	
9. INDICATOR PORT OPTION	S	on top - with metal plug	only for FH324
	W	on top- with plastic plug	
	T	on side - with metal plug	only for FH323
	P	on side - with plastic plug	
10. COMPULSORY FIELD	000	Filtrec standard	
11. CORROSION PROTECTION	S	phosphated - standard	
12. OPTION	0	standard	
	1	only for filter with element DHD.../8	

ACCESSORIES

The accessories must be ordered separately

INDICATOR (F) digit for FKM seal option **For other indicators, see the "Clogging Indicators" catalogue in the download section**	V05 (VF5)	differential visual 5 bar	
	E05 (EF5)	differential electric 5 bar	
	E05L (EF5L)	differential electric 5 bar + *LC24	
	VEF5	differential visual and electric 5 bar	
	V08 (VF8)	differential visual 8 bar	recommended for no by-pass option
	E08 (EF8)	differential electric 8 bar	
	E08L (EF8L)	differential electric 8 bar + *LC24	
	VEF8	differential visual and electric 8 bar	
ADDITIONAL INDICATOR	EC SERIES	differential electric indicator with integrated connector	
	EW SERIES	differential electric indicator with cable and connector	
	ET SERIES	differential electric indicator with thermostatic switch	

HYDRAULIC SYMBOLS



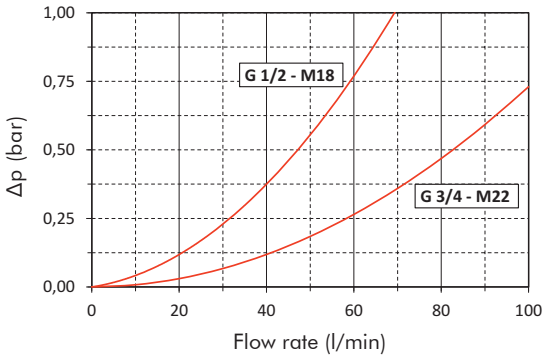
PRESSURE DROP (Δp) INFORMATION FOR FILTER SIZING

The total Delta P 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.

FH323-324



ELEMENT PRESSURE DROP

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: 80 l/min with DHD95G10B and oil viscosity 46 cSt = (80 x 4,12)/1000 x (46/32) = 0,474 bar

	G01	G03	G05	G10	G15	G20
DHD55	25,70	12,60	9,60	8,33	4,75	4,20
DHD75	17,45	9,23	7,69	5,38	4,03	3,08
DHD95	14,15	7,65	5,88	4,12	3,13	2,35

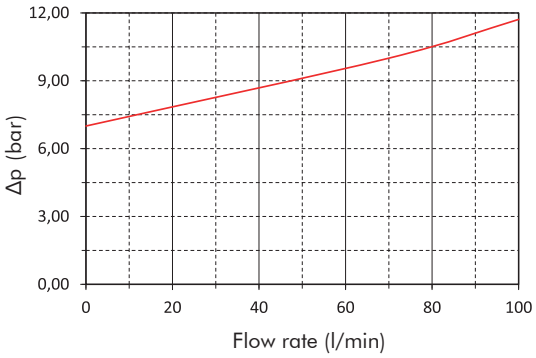
EXAMPLE OF TOTAL Δp CALCULATION

FH323DHD95G10B0B4HW000S0 with 80 l/min and oil 46 cSt:
Housing Δp 0,47 bar + element Δp 0,47 bar (80 x 4,12)/1000 x (46/32) = total assembly Δp 0,94 bar

BYPASS VALVE PRESSURE DROP

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

FH323-324



ADDITIONAL INDICATORS

These accessories must be ordered separately, for order codes see dedicated catalogues.

ET Series

- Electrical differential clogging indicators with thermostatic switch set at 30°C
- Connector type: according to DIN43650 with cable gland PG09/PG11
- Degree of protection: IP65 according to EN60529

Coding:
ET xx

- 05 setting 5,0 bar
- 08 setting 8,0 bar

EW Series

- Electrical differential indicators with cable and connector with and without thermostatic switch set at 30°C
- Connector type: Deutsch DT04-2P
  SUPERSEAL 1.5 2 WAY
  JUNIOR POWER TIMER 2 WAY
- Degree of protection: IP67 according to EN60529

Coding:
EW xx x x x

- 0 without thermostatic switch
- T with thermostatic switch
- A normally open
- C normally closed
- D Deutsch DT04-2P
- S Superseal 1,5 2 way
- J Junior Power timer 2 way
- 05 setting 5,0 bar
- 08 setting 8,0 bar

EC Series

- Electrical differential indicators with integrated connector
- Connector type: Deutsch DT04-2P
  SUPERSEAL 1.5 2 WAY
  JUNIOR POWER TIMER 2 WAY
- Degree of protection: IP67 according to EN60529

Coding:
EC xx x x 0

- A normally open
- C normally closed
- D Deutsch DT04-2P
- S Superseal 1,5 2 way
- J Junior Power timer 2 way
- 05 setting 5,0 bar
- 08 setting 8,0 bar

USER TIPS

1. FILTER HEAD
2. INDICATOR PORT
3. FIXING HOLES
4. FILTER ELEMENT
5. SEAL KIT
6. FILTER BOWL
7. IDENTIFICATION LABEL
8. INDICATOR PLUG

INDICATOR TIGHTENING TORQUE

90 Nm

SPARE SEAL KIT PART NUMBER (5)

	NBR	FKM
FH323-324	06.021.00495	06.021.00496

BOWL 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. The IN and OUT ports must be connected to the hoses in the correct flow direction an arrowshows on the filter head (1).
2. The filter housing should be preferably mounted with the bowl (6) downward.
3. Secure to the frame the filter head (1) using the threaded fixing holes (3).
4. Verify that no tension is present on the filter after mounting.
5. Enough space must be available for filter element replacement.
6. The visual clogging indicator must be in an easi lyviewable position.
7. When an electrical indicator is used, make sure that it is properly wired.

⚠ 8. Never run the system with no filter element fitted.
9. Keep in stock a spare FILTREC filter element for timely replacement when required.
10. 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. 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).
3. If no clogging indicator is mounted, 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 bowl (6) by turning it anti-clockwi seand remove it.
3. Remove the dirty element (4).
4. Fit a new FILTREC element (4), verifying 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.
5. Clean carefully the bowl; check the O-rings (5) conditions and replace if necessary.
6. Lubricate the bowl's thread (6) and screw it by hand in the filter head (1) by turning it clockwise.
7. Screw in the bowl to stop.

⚠ 8. The used filter elements cannot be cleaned and re-used.

FILTREC®

www.filtrec.com

Technical information may change without notice

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