F040 SERIES

In line medium pressure filters

Inline filters for operating pressure up to 70 bar, flow rate up to 400 l/min.

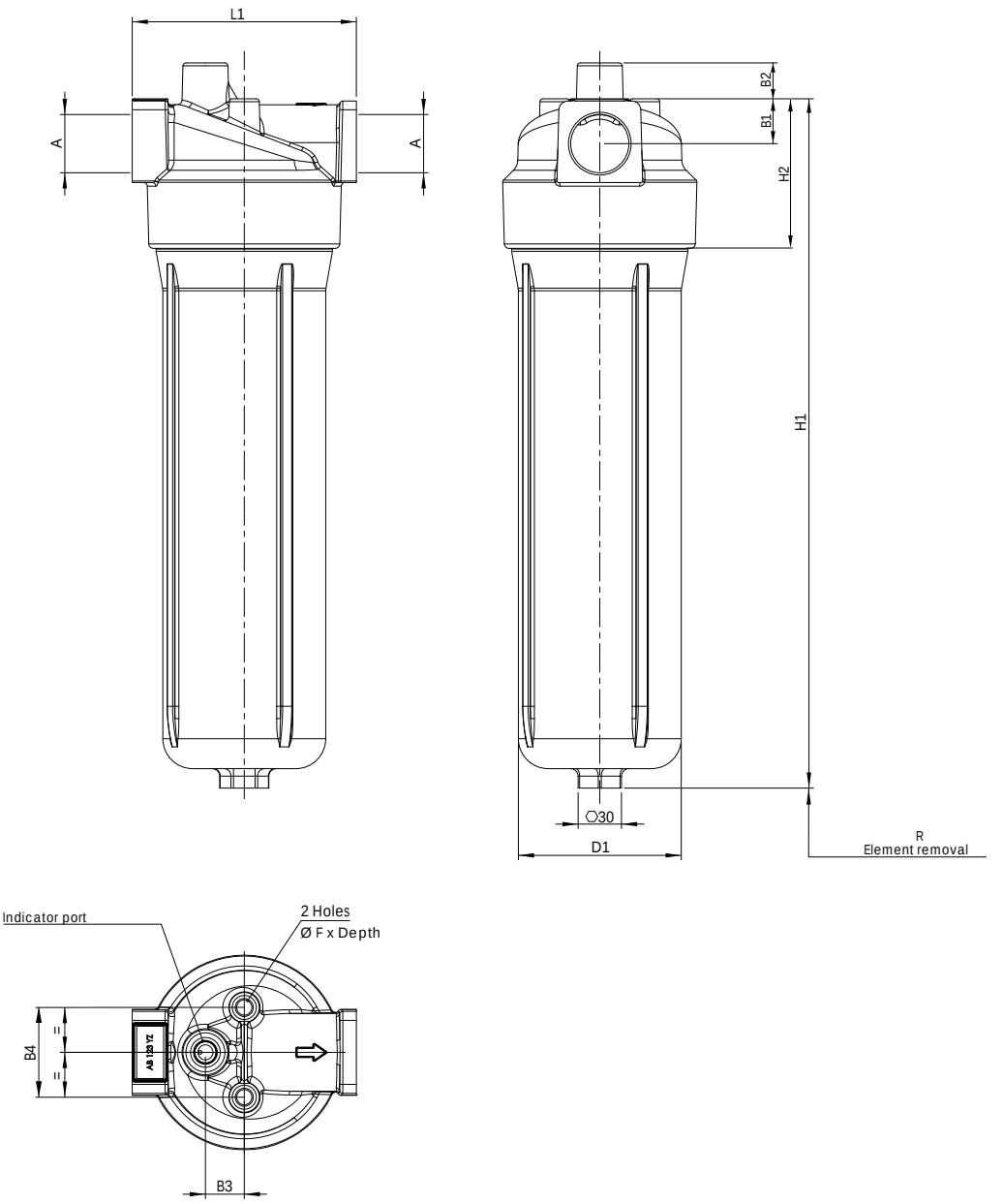
Available with or without bypass, indicator port is a standard option to fit a visual or electrical differential indicator.

TECHNICAL INFORMATION

HOUSING	tested according to NFPA T3.10.5.1 , ISO3968		
HYDRAULIC SYMBOL:			
PRESSURE:	Max operating:	F040 DMD0005-8-11 F040 DMD0015-30-45	70 bar 40 bar
	Burst:	F040 DMD0005-8-11 F040 DMD0015-30-45	210 bar 120 bar
CONNECTION PORTS:	G 3/4"÷1 1/4"		
MATERIALS:	Head: Bowl: Seal:	aluminium alloy aluminium alloy NBR (FKM on request)	
BYPASS:	No by-pass or 3,5 bar setting		

ELEMENT	tested according to ISO 2941, 2942, 2943, 3968, 16889, 23181	
FILTER MEDIA:	Inorganic microfiber: Paper:	E01- E03 - E05 - E10 - E15 - E20 D10
DIFFERENTIAL COLLAPSE PRESSURE:	30 bar	
OPERATING TEMPERATURE RANGE:	-25°C +100°C	
FLUID COMPATIBILITY:	Full with HH-HL-HM-HV (acc. To ISO 2943). For use with other fluid please contact Filtrec Customer Service (info@filtrec.it).	

OVERALL DIMENSIONS



NOMINAL SIZE

MODEL	A	B1	B2	B3	B4	D1	F	H1	H2	L1	R	WEIGHT
F040-DMD0005	G 3/4"	19	28	15	45	65	M8x12	160	100	95	110	1,0 Kg
F040-DMD0008								238				1,3 Kg
F040-DMD0011								312				1,6 Kg
F040-DMD0015	G 1 1/4"	30	24	26	60	109	M12x18	230	124	150	130	2,9 Kg
F040-DMD0030								343				3,9 Kg
F040-DMD0045								461				4,9 Kg

ORDERING INFORMATION

	1.	2.	3.	4.	5.	6.	7.	8.	9.
	F040	**DMD**	**0015**	**E10**	**B**	**B4**	**D**	**W**	**E02**
SPARE ELEMENT		**DMD**	**0015**	**E10**	**B**				

1. FILTER SERIES	F040		
2. FILTER ELEMENT SERIES	DMD		
3. FILTER SIZE	0005-0008-0011		
	0015-0030-0045		
4. FILTER MEDIA	000	no element	
	E01	glassfiber $ß_{4\ \mu m(c)} > 1.000$	
	E03	glassfiber $ß_{5\mu m(c)} > 1.000$	
	E05	glassfiber $ß_{7\mu m(c)} > 1.000$	
	E10	glassfiber $ß_{12\mu m(c)} > 1.000$	
	E15	glassfiber $ß_{17\mu m(c)} > 1.000$	
	E20	glassfiber $ß_{22\mu m(c)} > 1.000$	
	D10	paper $ß_{10\mu m(c)} > 2$	
5. SEALS	B	NBR	
	V	FKM	
6. CONNECTIONS	B4	G 3/4"	for sizes 0005-0008-0011
	B6	G 1 1/4"	for sizes 0015-0030-0045
7. BYPASS VALVE	0	no by-pass	
	D	3,5 bar	
8. INDICATOR PORT OPTION	S	with metal plug	
	W	with plastic plug	when using an indicator
9. INDICATOR	000	no indicator	
	V02	differential visual 2,7 bar	
	E02	differential electrical 2,7 bar	
	V05	differential visual 5 bar	no bypass version only
	E05	differential electrical 5 bar	

ACCESSORIES	LC24	LED connector

The accessories must be ordered separately

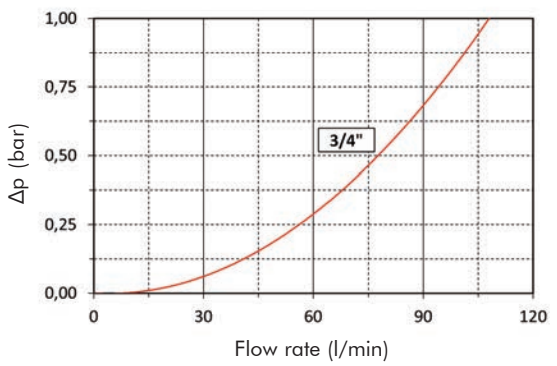
PRESSURE DROP (Δp) INFORMATION FOR FILTER SIZING

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/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.

F040DMD0005-0008-0011



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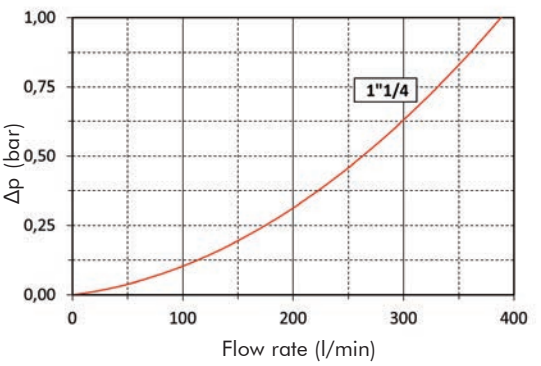

ELEMENT PRESSURE DROP

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: 60 l/min with DMD0011E10B and oil viscosity 46 cSt > 60 x 5,10/1000 x 46/32 = 0,44 bar

	E01B	E03B	E06B	E10B	E15B	E20B	D10B
DMD0005	49,98	34,99	29,14	17,71	12,16	10,67	8,84
DMD0008	30,99	21,69	12,56	9,00	5,92	4,99	3,56
DMD0011	22,17	15,52	9,30	5,10	3,75	3,15	2,58
DMD0015	10,55	7,39	4,25	2,40	1,68	1,20	1,04
DMD0030	5,62	3,93	2,57	1,18	0,93	0,72	0,63
DMD0045	3,48	2,43	1,53	0,99	0,68	0,50	0,48

EXAMPLE OF TOTAL Δp CALCULATION

F040DMD0011BB4DWV05 with 60 l/min and oil 46 cSt:
Housing Δp 0,27 bar + element Dp 0,44 bar (60 x 5,10/1000 x 46/32) = total assembly Δp 0,71 bar

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.

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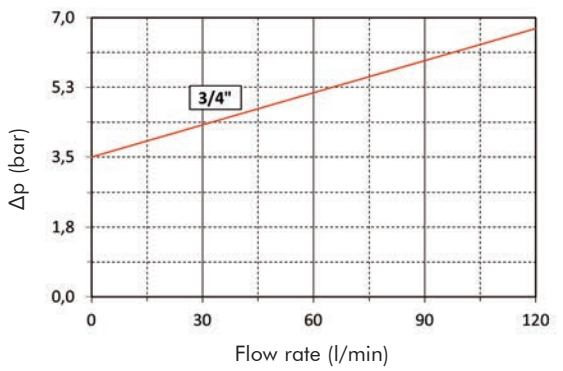

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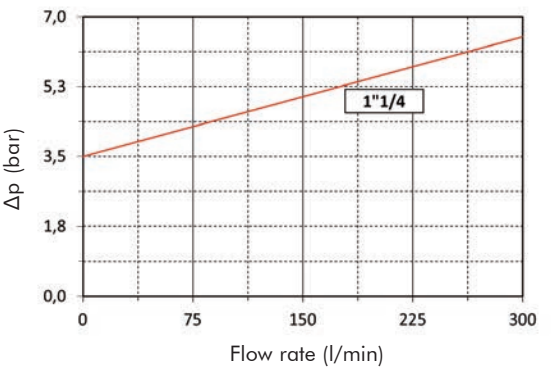

N.B. All the reported data have been obtained at our laboratory, according to specification ISO3968 with mineral oil having 32 cSt viscosity and density 0,875 Kg/dm^3.

USER TIPS

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

INDICATOR TIGHTENING TORQUE	
V02/E02/V05/E05	50 Nm

BOWL TIGHTENING TORQUE	
F040 DMD005/8/11	40 Nm
F040 DMD0015/30/45	60 Nm

SPARE SEAL KIT PART NUMBER

	NBR	FKM
F040 DMD005/8/11	06.021.00127	06.021.00128
F040 DMD0015/30/45	06.021.00129	06.021.00130

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 arrow shows 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 a easily viewable position
7. when a 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

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-clockwise and remove it
3. remove the dirty element (5)
4. fit a new FILTREC element (5), 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 (7) 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

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