



### FDD040 SERIES

Duplex low pressure filters

Sizes 040 to 400 according to DIN 24550

Inline filters for operating pressure up to 63 bar, flow rate up to 400 l/min.

Duplex construction for uninterrupted service. Change over valve on upstream side, ergonomic switch-over handle with safety lock and pressure compensation.

## TECHNICAL INFORMATION

### HOUSING

**PRESSURE:** max operating 63 bar sizes 040 to 100  
max operating 32 bar sizes 160 to 400

**CONNECTION PORTS:** G1 sizes 040 to 100  
G1 ½ sizes 160-400

**MATERIALS:** Filter head: aluminium alloy  
Filter bowl: aluminium alloy  
seals: NBR

**BYPASS** setting 3,5 bar

**ELECTRICAL CLOGGING INDICATOR:** setting 2,2 bar

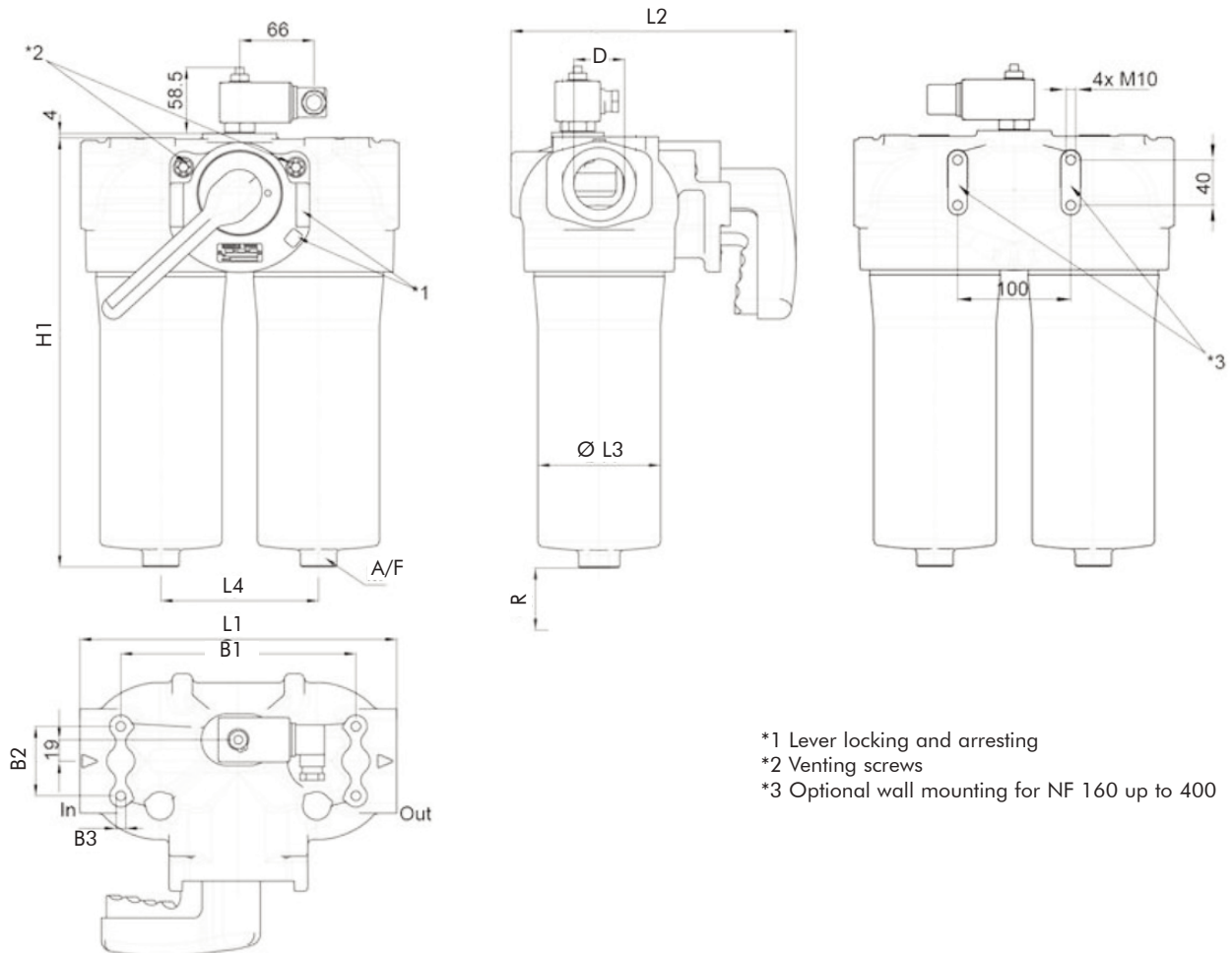
### ELEMENT

**FILTER MEDIA:** glassfiber G03 - G06 - G10 - G25

**DIFFERENTIAL COLLAPSE PRESSURE:** 20 bar or 210 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**


- \*1 Lever locking and arresting
- \*2 Venting screws
- \*3 Optional wall mounting for NF 160 up to 400

MODEL	B1	B2	B3	D	L1	L2	L3	L4	H1	A/F	R	kg
FDD040XD040									203			2,6
FDD040XD063	100	52	M8	G 1"	172	189	66	85	261	27	80	2,9
FDD040XD100									351			3,3
FDD040XD160									288			8,6
FDD040XD250	210	62	M12	G 1 1/2"	283	252	109	140	389	32	110	9,5
FDD040XD400									531			19,0

## ORDERING INFORMATION

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
	<b>FDD040</b>	<b>XD</b>	<b>100</b>	<b>G10</b>	<b>A</b>	<b>B</b>	<b>B5</b>	<b>B</b>	<b>W</b>	<b>FG2</b>
SPARE ELEMENT		<b>XD</b>	<b>100</b>	<b>G10</b>	<b>A</b>					

1. FILTER SERIES	FDD040	
2. FILTER ELEMENT SERIES	XD	
3. FILTER SIZE	040-063-100	
	160-250-400	
4. FILTER MEDIA	000	no element
	G03	glassfiber $\beta_{4,5\mu\text{m(c)}} > 1.000$
	G06	glassfiber $\beta_{7\mu\text{m(c)}} > 1.000$
	G10	glassfiber $\beta_{12\mu\text{m(c)}} > 1.000$
	G25	glassfiber $\beta_{22\mu\text{m(c)}} > 1.000$
5. ELEMENT COLLAPSE	A	21 bar <span style="float: right;">recommended with by-pass option</span>
	B	210 bar
6. SEALS	B	NBR
7. CONNECTIONS	B5	G 1" <span style="float: right;">for sizes 040-063-100</span>
	B7	G 1 1/2" <span style="float: right;">for sizes 160-250-400</span>
8. BYPASS VALVE	0	no by-pass
	B	3,5 bar
9. INDICATOR PORT OPTION	W	standard
10. INDICATOR	FV2	differential visual 2,2 bar
	FG2	differential electrical 2,2 bar

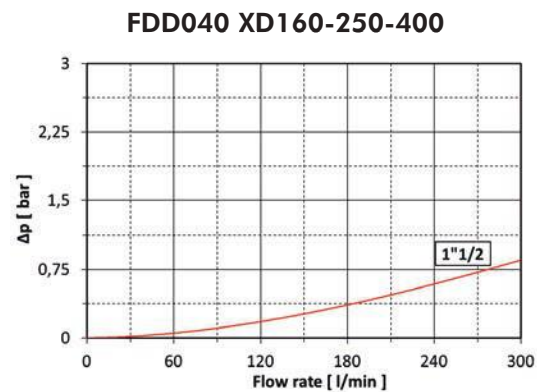
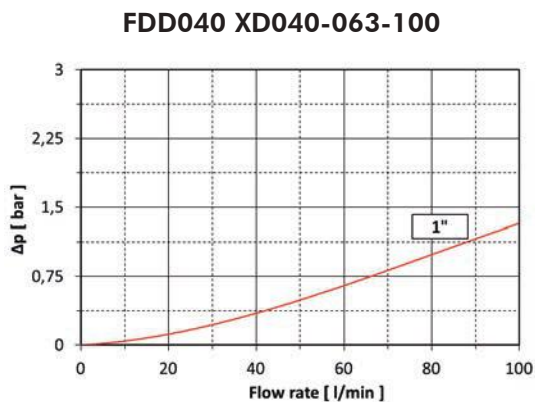
## PRESSURE DROP ( $\Delta p$ ) INFORMATION FOR FILTER SIZING

The total Delta P through a filter assembly is given from Housing  $\Delta p$  + Element  $\Delta p$ .

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<sup>3</sup>.

### HOUSING PRESSURE DROP

The housing  $\Delta p$  is given by the curve of the considered model and port, in correspondence of the flow rate value.



### ELEMENT PRESSURE DROP (filter elements 20 bar collapse)

The element  $\Delta p$  (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: 40 l/min with XD100G10A and oil viscosity 46 cSt >  $40 \times 4,00/1000 \times 46/32 = 0,23$  bar

	<b>G03A</b>	<b>G06A</b>	<b>G10A</b>	<b>G25A</b>
<b>XD040</b>	22,00	15,00	8,75	6,25
<b>XD063</b>	16,15	10,00	6,15	4,62
<b>XD100</b>	12,00	6,50	4,00	3,00
<b>XD160</b>	7,81	4,96	2,92	1,66
<b>XD250</b>	5,20	2,90	1,86	0,96
<b>XD400</b>	3,25	1,69	1,24	0,64

### EXAMPLE OF TOTAL $\Delta p$ CALCULATION

FDD040XD100G10ABB5BWFG2 with 40 l/min and oil 46 cSt:

Housing  $\Delta p$  0,38 bar + element  $\Delta p$  0,23 bar ( $40 \times 4,00/1000 \times 46/32$ ) = total assembly  $\Delta p$  0,61 bar

### ELEMENT PRESSURE DROP (filter elements 210 bar collapse)

The element  $\Delta p$  (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: 40 l/min with XD100G10B and oil viscosity 46 cSt  $> 40 \times 7,50/1000 \times 46/32 = 0,43$  bar

	<b>G03B</b>	<b>G06B</b>	<b>G10B</b>	<b>G25B</b>
<b>XD040</b>	34,97	25,00	16,25	11,25
<b>XD063</b>	29,23	18,46	11,54	7,69
<b>XD100</b>	19,00	11,50	7,50	5,50
<b>XD160</b>	8,13	5,00	3,75	2,50
<b>XD250</b>	5,40	3,40	2,80	2,00
<b>XD400</b>	3,38	2,16	1,75	1,13

### EXAMPLE OF TOTAL $\Delta p$ CALCULATION

FDD040XD100G10BBB5BWFG2 with **40** l/min and oil **46** cSt:

Housing  $\Delta p$  0,38 bar + element  $\Delta p$  0,43 bar ( $40 \times 7,50/1000 \times 46/32$ ) = total assembly  $\Delta p$  0,81 bar

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<sup>3</sup>.

## USER TIPS

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The filter element that can be replaced is in the side opposite to the switch-over handle (a label on the handle show it).

When the indicator shows and the filter element must be replaced, the flow must be diverted to the clean element acting with the switch-over handle.

**Follow carefully the instructions given in the User Handbook.**

N.B. in case of cold start the indicator could give a false alarm: wait for the operating temperature to be reached and press down the red pop-up button. If at this stage the red button pops up again and the electrical signal does not switch off the filter element must be replaced.

The electrical indicator is supplied with normally closed contacts. The switching function may be changed to normally open contacts by turning the electric upper part by 180°.

For any further information please contact our Customer Service ([info@filtrec.it](mailto:info@filtrec.it))