



FDD040 SERIES

Duplex low pressure filters

Sizes XD040 to XD400 according to DIN 24550 mounting XD series element

Sizes DMD0005 to DMD0045 mounting DMD series element

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.



*image representative

HOUSING

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

PRESSURE: max operating 63 bar sizes XD040 to XD100
DMD0005 to DMD0011
max operating 32 bar sizes XD160 to XD400
DMD0015 to DMD0045

CONNECTIONS: G 1"
G 1 1/2"

MATERIALS: Head: aluminium alloy
Bowl : aluminium alloy; painted
carbon steel for size FDD040XD400 only
Seals: NBR

BYPASS VALVE: 3,5 bar

ELEMENT

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

FILTER MEDIA: For element XD
Inorganic microfiber G01-G03-G06 -
G10-G15-G25
For element DMD
For 30 bar differential collapse pressure:
Inorganic microfiber:
E01B-E03B-E05B-E10B-E15B-E25B
For 210 bar differential collapse pressure:
Inorganic microfiber:
F01B-F03B-F05B-F10B-F15B-F250B

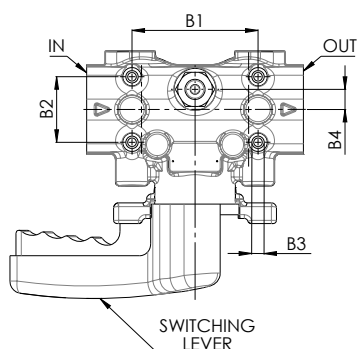
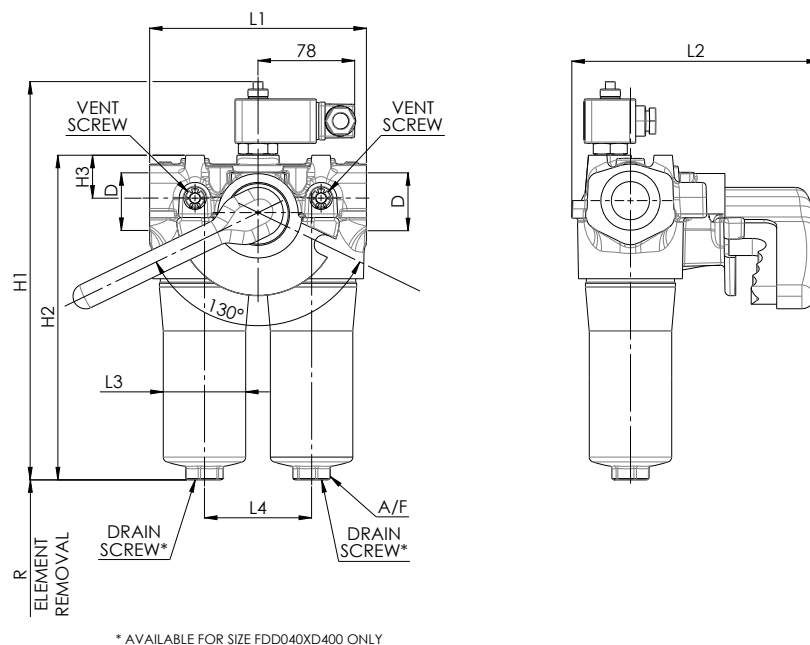
COLLAPSE PRESSURE: 20 bar for XD / 30 bar for DMD
210 bar for both

TEMPERATURE RANGE: -30°C +100°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

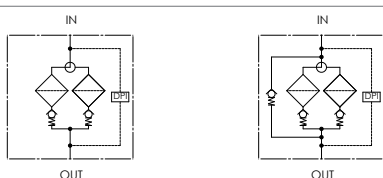
FDD040-XD040-400



NOMINAL SIZE

MODEL	B1	B2	B3	B4	D	L1	L2	L3	L4	H1	H2	H3	A/F	R	WEIGH
FDD040XD040	100	52	M8x15	16	G 1"	172	189	66	85	258	200	34	27	80	2,6 Kg
FDD040XD063										316	258				2,9 Kg
FDD040XD100										406	348				3,3 Kg
FDD040XD160	210	62	M10x20	19	G 1 1/2"	283	252	109	140	347	284	42	32	110	8,6 Kg
FDD040XD250										448	385				9,5 Kg
FDD040XD400										590	527				19,0 Kg

HYDRAULIC SYMBOL



ORDERING INFORMATION

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
	FDD040	XD	100	G10	A	B	B5	D	S	000	S	0
SPARE ELEMENT		XD	100	G10	A							

1. FILTER SERIES	FDD040	
2. FILTER ELEMENT SERIES	XD	
3. FILTER SIZE	040-063-100	
	160-250-400	
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	A	21 bar
	B	210 bar
6. SEALS	B	NBR
7. CONNECTIONS	B5	G 1" for sizes 040-063-100
	B7	G 1 1/2" for sizes 160-250-400
8. BYPASS VALVE	0	no by-pass
	D	3,5 bar
9. INDICATOR PORT OPTION	S	with metal plug
10. COMPULSORY FIELD	000	filtrec standard
11. CORROSION PROTECTION	S	standard
12. OPTION	0	no option

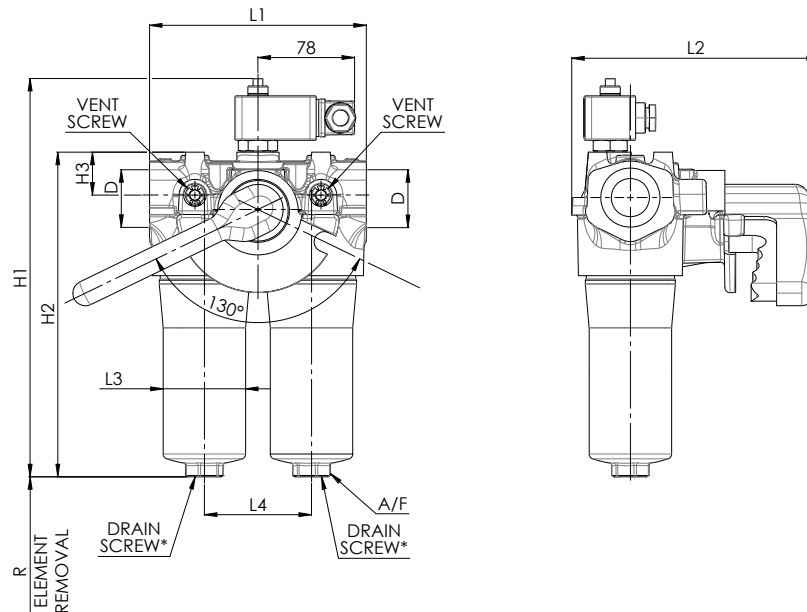
ACCESSORIES

The accessories must be ordered separately

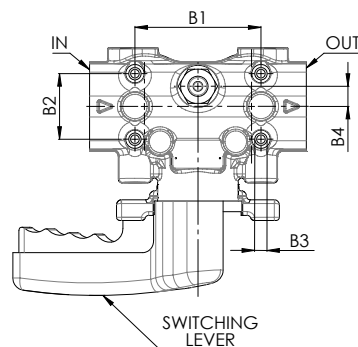
INDICATOR	FG2	differential visual and electric 2,2 bar	
For indicators detail see service instructions	FG5	differential visual and electric 5 bar	recommended for no bypass option
	FG8	differential visual and electric 8 bar	

OVERALL DIMENSIONS

FDD040-DMD0005-0045



* AVAILABLE FOR SIZE FDD040DMD0045 ONLY



NOMINAL SIZE

MODEL	B1	B2	B3	B4	D	L1	L2	L3	L4	H1	H2	H3	A/F	R	WEIGH
FDD040DMD0005										261	203				2,7 Kg
FDD040DMD0008	100	52	M8x15	16	G 1"	172	189	66	85	319	261	34	27	80	3,0 Kg
FDD040DMD0011										409	351				3,4 Kg
FDD040DMD0015										327	264				8,5 Kg
FDD040DMD0030	210	62	M10x20	19	G 1 1/2"	283	252	109	140	448	385	42	32	110	9,5 Kg
FDD040DMD0045										560	497				18,9 Kg

ORDERING INFORMATION

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
	FDD040	DMD	0011	E10B	B	B5	D	S	000	S	0
SPARE ELEMENT		DMD	0011	E10B							

1. FILTER SERIES	FDD040	
2. FILTER ELEMENT SERIES	DMD	
3. FILTER SIZE	0005-0008-0011	
	0015-0030-0045	
4. FILTER MEDIA	000	no element
	E01B	glassfiber $\beta_{4\mu m(c)} \geq 1.000$
	E03B	glassfiber $\beta_{5\mu m(c)} \geq 1.000$
	E05B	glassfiber $\beta_{7\mu m(c)} \geq 1.000$
	E10B	glassfiber $\beta_{12\mu m(c)} \geq 1.000$
	E15B	glassfiber $\beta_{17\mu m(c)} \geq 1.000$
	E20B	glassfiber $\beta_{22\mu m(c)} \geq 1.000$
	F01B	glassfiber $\beta_{4\mu m(c)} \geq 1.000$
	F03B	glassfiber $\beta_{5\mu m(c)} \geq 1.000$
	F05B	glassfiber $\beta_{7\mu m(c)} \geq 1.000$
	F10B	glassfiber $\beta_{12\mu m(c)} \geq 1.000$
	F15B	glassfiber $\beta_{17\mu m(c)} \geq 1.000$
	F20B	glassfiber $\beta_{22\mu m(c)} \geq 1.000$
5. SEALS *complete filter seals	B	NBR
6. CONNECTIONS	B5	G 1" for sizes 0005-0008-0011
	B7	G 1 1/2" for sizes 0015-0030-0045
7. BYPASS VALVE	0	no by-pass
	D	3,5 bar
8. INDICATOR PORT OPTION	S	with metal plug
9. COMPULSORY FIELD	000	filtrec standard
10. CORROSION PROTECTION	S	standard
11. OPTION	0	no option

ACCESSORIES

The accessories must be ordered separately

INDICATOR	FG2	differential visual and electric 2,2 bar
For indicators detail see service instructions	FG5	differential visual and electric 5 bar recommended for no bypass option
	FG8	differential visual and electric 8 bar

PRESSURE DROP (Δp) INFORMATION FOR FILTER SIZING

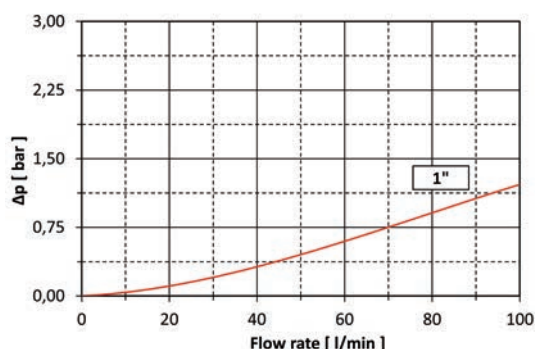
The total Delta P through a filter assembly is given from Housing Δp + Element Δp .

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.

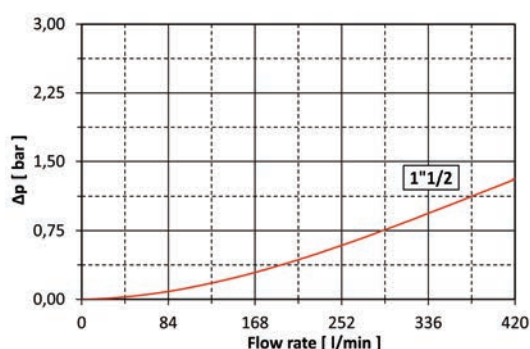
HOUSING PRESSURE DROP

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

FDD040 XD040-063-100/DMD0005-0008-00011



FDD040 XD160-250-400 / DMD0015-0030-0045



ELEMENT XD040-400 PRESSURE DROP (filter elements 20 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: 40 l/min with XD100G10A and oil viscosity 46 cSt: $(40 \times 3,6)/1000 \times (46/32) = 0,21$ bar.

	G01A	G03A	G06A	G10A	G15A	G25A
XD040	22	15,4	13,5	7,88	6,75	5,63
XD063	16,15	11,31	9	5,54	4,85	4,15
XD100	12	8,4	5,85	3,6	3,15	2,7
XD160	7,81	5,47	4,47	2,63	1,84	1,49
XD250	5,2	3,64	2,61	1,68	0,91	0,86
XD400	3,25	2,28	1,52	1,12	0,64	0,57

EXAMPLE OF TOTAL Δp CALCULATION

FDD040XD100G10ABB5DS000S0 with **40** l/min and oil **46** cSt:

Housing Δp 0,38 bar + element Δp 0,21 bar $(40 \times 3,6)/1000 \times (46/32) =$ total assembly Δp 0,59 bar.

ELEMENT XD040-400 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: 40 l/min with XD100G10B and oil viscosity 46 cSt: $(40 \times 6,75)/1000 \times (46/32) = 0,39$ bar.

	G01B	G03B	G06B	G10B	G15B	G25B
XD040	34,97	24,48	22,5	14,63	12,38	10,13
XD063	29,23	20,46	16,62	10,38	8,65	6,92
XD100	19	13,3	10,35	6,75	5,85	4,95
XD160	8,13	5,69	4,74	3,37	2,81	2,25
XD250	5,4	3,78	3,06	2,52	2,16	1,8
XD400	3,38	2,36	1,94	1,57	1,29	1,01

EXAMPLE OF TOTAL Δp CALCULATION

FDD040XD100G10ABB5DS000S0 with **40** l/min and oil **46** cSt:

Housing Δp 0,38 bar + element Δp 0,39 bar $(40 \times 6,75)/1000 \times (46/32) =$ total assembly Δp 0,77 bar.

ELEMENT DMD0005-0045 PRESSURE DROP (filter elements 30 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: 50 l/min with DMD0011E10B and oil viscosity: $(50 \times 5,10)/1000 \times (46/32) = 0,37$ bar

	E01B	E03B	E05B	E10B	E15B	E20B
DMD0005	49,98	34,99	29,14	17,71	12,16	10,67
DMD0008	30,99	21,69	12,56	9,00	5,92	4,99
DMD0011	22,17	15,52	9,30	5,10	3,75	3,15
DMD0015	10,55	7,39	4,25	2,40	1,68	1,20
DMD0030	5,62	3,93	2,57	1,18	0,93	0,72
DMD0045	3,48	2,43	1,53	0,99	0,68	0,50

EXAMPLE OF TOTAL Δp CALCULATION

FDD040DMD0011E10BBB5DS000S0 with **50** l/min and oil **46** cSt:

Housing Δp 0,50 bar + element Δp 0,37 bar $(50 \times 5,10)/1000 \times (46/32) =$ total assembly Δp 0,87 bar

ELEMENT DMD0015-0045 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: 50 l/min with DMD0011F10B and oil viscosity 46 cSt: $(50 \times 6,63)/1000 \times (46/32) = 0,48$ bar

	F01B	F03B	F05B	F10B	F15B	F20B
DMD0005	64,37	45,23	37,88	23,41	15,81	13,84
DMD0008	40,29	28,34	16,33	11,39	7,70	6,63
DMD0011	28,82	20,18	12,09	6,63	4,88	4,36
DMD0015	13,72	9,80	5,53	3,12	2,18	1,56
DMD0030	7,35	5,23	3,34	1,54	1,21	0,94
DMD0045	4,52	3,16	1,99	1,39	0,88	0,65

EXAMPLE OF TOTAL Δp CALCULATION

FDD040DMD0011F10BBB5DS000S0 with **50** l/min and oil **46** cSt:

Housing Δp 0,38 bar + element Δp 0,48 bar $(50 \times 6,63)/1000 \times (46/32) =$ total assembly Δp 0,86 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/dm³.

USER TIPS

FDD040-XD040-400



INDICATOR TIGHTENING TORQUE

50 Nm

SPARE SEAL KIT PART NUMBER (5)*

	NBR
XD040-063-100	06.021.00322
XD160-250-400	06.021.00324

*The kit also includes gaskets for the vents and the switching lever.

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

-  The IN and OUT ports must be connected to the hoses in the correct flow direction an arrow 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 a easily viewable position.
- When a 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

-  Operate and hold pressure equalizing lever located behind switching lever. Pull catch knob and swivel switching lever. Engage the catch on the clear filter side. Place through or drip pan underneath to collect leaving oil.
- Loosen vent screw of the filter side not in use by 2-3 turns; max. until contact is made with the safety stop.
- Unscrew filter bowl by rotating same counter-clockwise and clean with a suitable medium.
Warning: The shift lever may not, from now until the screwing back in of the filter bowl, be activated under any circumstances!
- Remove filter element with a side-to-side motion.
- Check O-ring on the filter bowl for damage and replace, if necessary. If there are leaks from the vent or the switching lever, replace the corresponding gaskets as well.
-  Make sure that the order number on the spare element corresponds to the order number of the filter name-plate.
- Lightly lubricate the threads of the filter bowl and screw into the filter head.
- To refill the filter chamber, operate only the pressure equalizing lever (leave the switching lever arrested in its catch) long enough for the medium to emerge bubble-free from the vent bore.
- Tighten vent screw and check filter for leaks by operating the pressure equalizing lever once again.

USER TIPS

FDD040DMD0005-0045



INDICATOR TIGHTENING TORQUE

50 Nm

SPARE SEAL KIT PART NUMBER (5)*

	NBR
DMD0005-0008-0011	06.021.00528
DMD0015-0030-0045	06.021.00529

*The kit also includes gaskets for the vents and the switching lever.

BOWL TIGHTENING TORQUE

screw up filter bowl till end

WARNING

- Make sure that Personal Protective Equipment (PPE) is worn during installation and maintenance operation.

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- Unscrew filter bowl by rotating same counter-clockwise and clean with a suitable medium.
Warning: The shift lever may not, from now until the screwing back in of the filter bowl, be activated under any circumstances!
- Remove filter element with a side-to-side motion.
- Check that the O-ring on the head shank is not damaged and, if necessary, replace it.
- Check O-ring on the filter bowl for damage and replace, if necessary. If there are leaks from the vent or the switching lever, replace the corresponding gaskets as well.
- Make sure that the order number on the spare element corresponds to the order number of the filter name-plate.
- Lightly lubricate the threads of the filter bowl and screw into the filter head.
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- Tighten vent screw and check filter for leaks by operating the pressure equalizing lever once again.

