FDD315 SERIES

Duplex high pressure filters

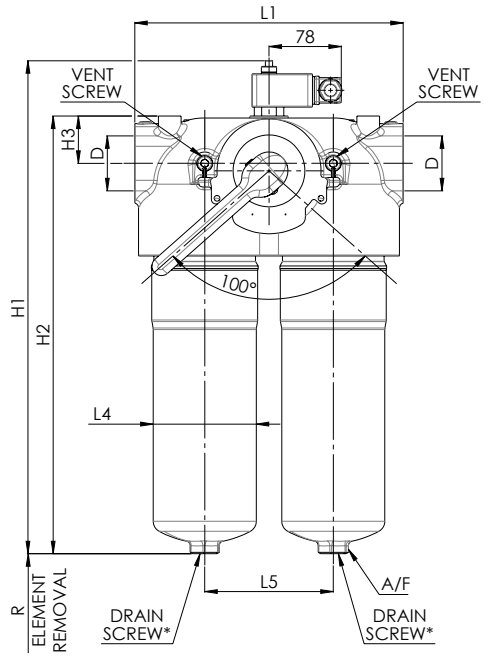
Inline filters for operating pressure up to 315 bar, flow rate up to 400 l/min. Duplex construction for uninterrupted service. Change over valve on upstream side, ergonomic switch-over handle with safety lock and pressure compensation. Filter elements sizes according to DIN 24550

HOUSING	tested according to NFPA T3.10.5.1, ISO 10771, ISO 3968
PRESSURE:	max operating 315 bar sizes 040 to 100 max operating 200 bar sizes 160 to 400
CONNECTIONS:	G 1" G 1 1/2" SAE Flange 1 1/2" 3000 psi
MATERIALS:	Head: painted cast iron Bowl: painted carbon steel Seal: NBR
BYPASS VALVE:	7 bar

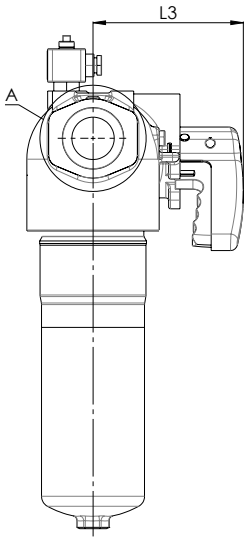
ELEMENT	tested according to ISO 11170, 2941, 2942, 2943, 3724, 3968,16889, 16908, 23181
FILTER MEDIA:	glassfiber G01 - G03 - G06 - G10 -G15 G25
COLLAPSE PRESSURE:	20 bar 210 bar

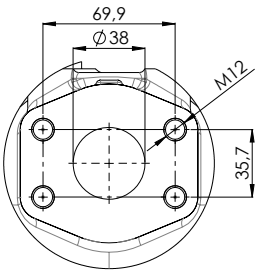
TEMPERATURE RANGE:	-30°C +100°C
FLUID COMPATIBILITY:	Full with HH-HL-HM-HV HETG-HEES (acc. to ISO 6743/4). For use with other fluid please contact Filtrec Customer Service (info@filtrec.it).

OVERALL DIMENSIONS

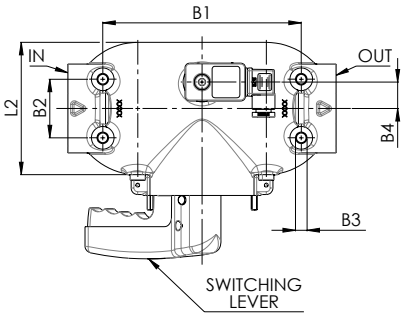


* AVAILABLE FOR SIZES FDD040XD250 AND FDD040XD400 ONLY





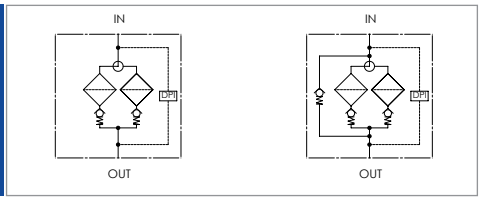
DETAIL A
IN & OUT FLANGES
SAE 1-1/2" 3000 psi - M12
DN38



NOMINAL SIZE

MODEL	B1	B2	B3	B4	D	L1	L2	L3	L4	L5	H1	H2	H3	A/F	R	kg
FDD315XD040	100	55	M8 x12	10	G 1"	182	90	144	66	86	285	228	38	27	80	10,5
FDD315XD063											345	288				12
FDD315XD100											427	370				14
FDD315XD160	210	62	M12 x18	28	G 1 1/2"	280	140	160	110	136	363	311	50	30	110	30
FDD315XD250											463	412				35
FDD315XD400					SAE FLANGE 1-1/2" 3000 psi - M12						614	562		30		41

HYDRAULIC SYMBOL



ORDERING INFORMATION

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
	FDD315	**XD**	**100**	**G10**	**A**	**B**	**B5**	**D**	**S**	**000**	**S**	**0**
SPARE ELEMENT		**XD**	**100**	**G10**	**A**							

1. FILTER SERIES	FDD315		
2. FILTER ELEMENT SERIES	XD		
3. FILTER SIZE	040-063-100		
	160-250-400		
4. FILTER MEDIA	000	no element	
	G01	glassfiber $ß_{4\mu m(c)} > 1.000$	
	G03	glassfiber $ß_{5\mu m(c)} > 1.000$	
	G06	glassfiber $ß_{7\mu m(c)} > 1.000$	
	G10	glassfiber $ß_{12\mu m(c)} > 1.000$	
	G15	glassfiber $ß_{17\mu m(c)} > 1.000$	
	G25	glassfiber $ß_{22\mu m(c)} > 1.000$	
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
	F7M	1 1/2″ SAE 3000 psi-M12	for sizes 400
8. BYPASS VALVE	0	no by-pass	
	D	7 bar	
9. INDICATOR PORT OPTION	S	with metal plug	
10. COMPULSORY FIELD	000	filtrec standard	
11. CORROSION PROTECTION	0	standard	
12. OPTION	0	no option	

ACCESSORIES

The accessories must be ordered separately

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

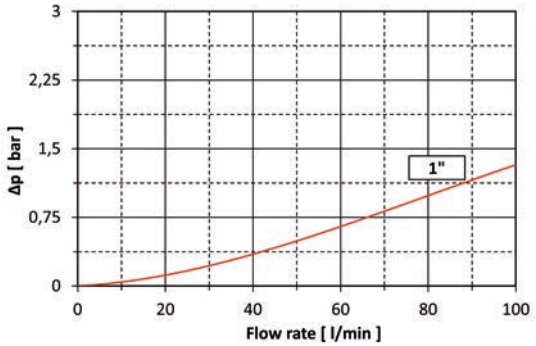
PRESSURE DROP (Δp) INFORMATION FOR FILTER SIZING

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

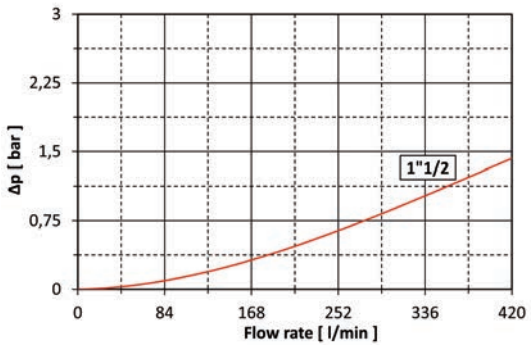
HOUSING PRESSURE DROP

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

FDD315 XD040-063-100



FDD315 XD160-250-400



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: 40 l/min with XD100G10A and oil viscosity 46 cSt: 40 x 3,6/1000 x 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
FDD315XD100G10ABB5BWFG5 with **40** l/min and oil **46** cSt:
Housing Δp 0,38 bar + element Dp 0,45 bar (40 x 3,6/1000 x 46/32) = total assembly Δp 0,59 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 Vx different than 32 cSt a corrective factor Vx/32 must be applied.
Example: 40 l/min with XD100G10B and oil viscosity 46 cSt: 40 x 6,75/1000 x 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

FDD315XD100G10BBB5BWFG5 with **40** l/min and oil **46** cSt:
Housing Δp 0,38 bar + element Dp 0,84 bar (40 x 6,75/1000 x 46/32) = total assembly Δp 0,77 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^3.

USER TIPS

1. FILTER HEAD
2. INDICATOR
3. FIXING HOLES
4. FILTER ELEMENT
5. SEAL KIT
6. FILTER BOWL
7. VENT

INDICATOR TIGHTENING TORQUE

90 Nm

SPARE SEAL KIT PART NUMBER

	NBR
XD040-063-100	06.021.00328
XD160-250-400	06.021.00330

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 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
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. 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.
2. Loosen vent screw of the filter side not in use by 2-3 turns; max. until contact is made with the safety stop.
3. Unscrew filter bowl by turning counter-clockwise. Clean the bowl using a suitable cleaning solvent. Warning: The shift lever may not, from now until the screwing back in of the filter bowl, be activated under any circumstances!
4. Remove filter element by pulling down carefully.
5. Check o-ring on the filter housing for damage. Replace, if necessary.

⚠ 6. Make sure that the order number on the spare element corresponds to the order number of the filter name-plate. To ensure no contamination occurs during the exchange of the element first open the plastic bag and push the element over the spigot in the filter head. Now remove plastic bag.
7. Lightly lubricate the threads of the filter bowl and screw into the filter head.
8. 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.
9. Tighten vent screw. Check filter for leaks by operating the pressure equalizing lever once again.

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Technical information may change without notice

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