



FLR-R4 SERIES

In line medium pressure filters

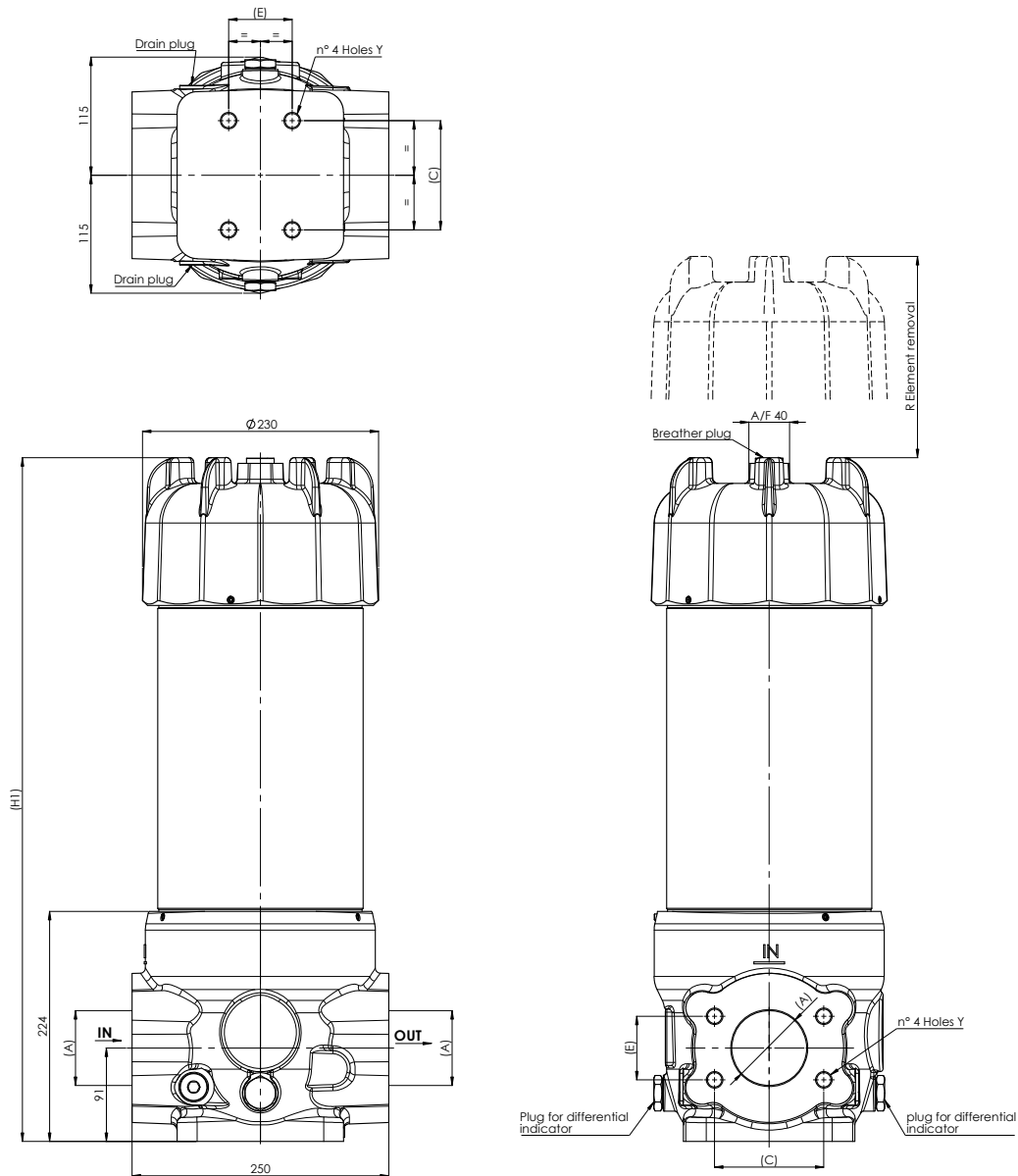
In line filters for operating pressure up to 30 bar.
Flow rate up to 2600 l/min.



HOUSING		tested according to NFPA T3.10.5.1, ISO 10771, ISO 3968
PRESSURE:	Max operating:	30 bar
	Fatigue rating:	10 ⁶ cycles 0÷30 bar
	Burst:	90 bar
CONNECTIONS:	3" - 4" SAE 3000 FLANGE	
MATERIALS:	Head:	anodized aluminium
	Bowl:	anodized aluminium
	Body:	anticorodal aluminium
	Seal:	NBR (FKM on request)
BYPASS VALVE:	no bypass	
	3 bar	
ELEMENT		tested according to ISO 11170, 2941, 2942, 2943, 3724, 3968, 16889, 16908, 23181
FILTER MEDIA:	Fibreglass: G01 - G03 - G06 - G10	
	G15 - G25 - G40 - GW03 - GW10 AW40	
COLLAPSE PRESSURE:	10 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).	

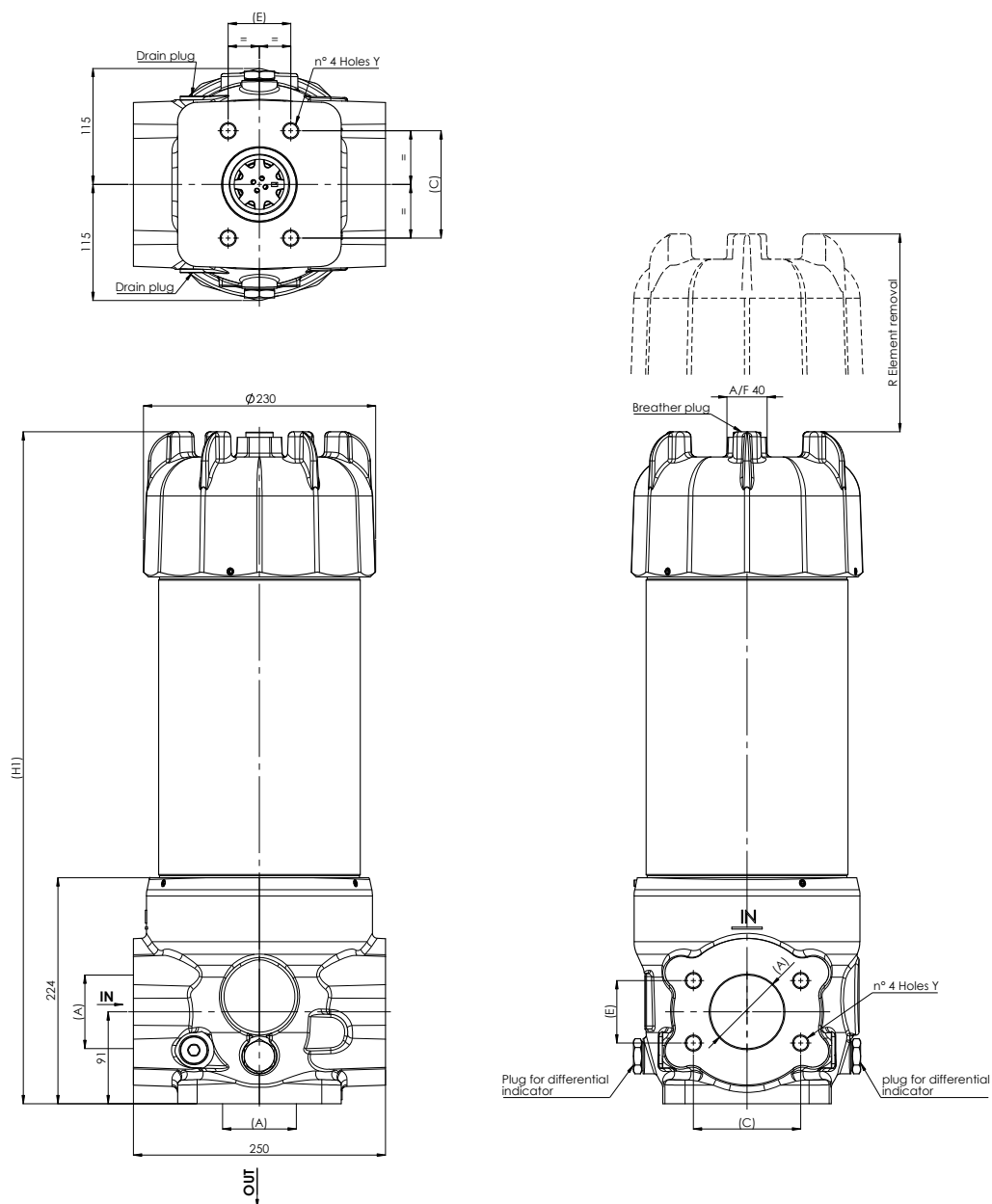
OVERALL DIMENSIONS

A Version



OVERALL DIMENSIONS

B Version



NOMINAL SIZE

MODEL	PORT SIZE A	Y	A	C	E	H1	R	BODY WEIGHT
FLR-R432	FLANGE 3" SAE 3000-M	M16 x 24	Ø73	106,38	61,93	666	430	29 Kg
	FLANGE 4" SAE 3000-M		Ø99	130,18	77,77			
FLR-R434	FLANGE 3" SAE 3000-M		Ø73	106,38	61,93	1219	990	35 Kg
	FLANGE 4" SAE 3000-M		Ø99	130,18	77,77			

ORDERING INFORMATION

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
	FLR	R4	34	G10	B	3	F10M	A	2	000	A	0
SPARE ELEMENT	R4	34	G10									

1. FILTER SERIES	FLR	
2. FILTER ELEMENT SERIES	R4	
3. FILTER SIZE	32	
	34	
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 $\beta_{22\mu m(c)} \geq 1.000$
	G40	glassfiber $\beta_{35\mu m(c)} \geq 1.000$
	GW03	glassfiber $\beta_{5\mu m(c)} \geq 1.000$ + water absorbent
	GW10	glassfiber $\beta_{12\mu m(c)} \geq 1.000$ + water absorbent
	AW40	water absorbent only
5. SEALS	B*	NBR
*omitted for filter elements	V	FKM
6. BYPASS VALVE	0	no bypass or no element
as separate part into the filter housing	3	3 bar
7. MAIN PORT	F10M	3" SAE 3000 FLANGE
	F12M	4" SAE 3000 FLANGE
8. PORTS LAYOUT	A	straight: horizontal inlet - horizontal outlet
	B	corner: horizontal inlet - vertical outlet
9. INDICATOR PORT OPTION	1	indicator seat on both sides: left metal plug, right plastic cap
	2	indicator seat on both sides with metal plug preferred option
10. COMPULSORY FIELD	000	filtrec standard
11. CORROSION PROTECTION	A	anodized
12. OPTION	0	no option
	1	internal tube for low flow rate 150-200 LPM

ORDERING INFORMATION

ACCESSORIES

The accessories must be ordered separately

INDICATOR

(F) digit for FKM seal option

***LC24**=Led connector

For other options see clogging indicators catalogue

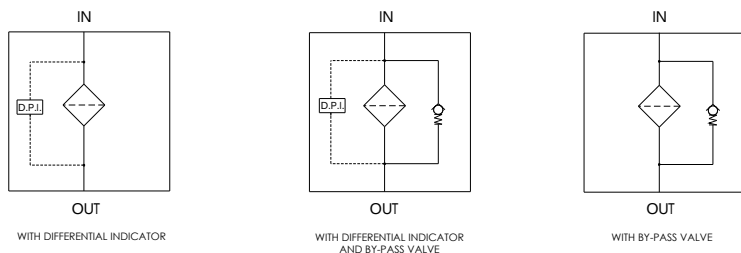
V02 (VF2)	differential visual 2,7 bar
E02 (EF2)	differential electric 2,7 bar
E02L (EF2L)	differential electric 2,7 bar + *LC24
V05 (VF5)	differential visual 5 bar
E05 (EF5)	differential electric 5 bar
E05L (EF5L)	differential electric 5 bar + *LC24
V08 (VF8)	differential visual 8 bar
E08 (EF8)	differential electric 8 bar
E08L (EF8L)	differential electric 8 bar + *LC24
LC24	LED connector for pressure switch

recommended for
no by-pass option

PLUG

P01	metal plug for indicator port - NBR
PF1	metal plug for indicator port - FKM

HYDRAULIC SYMBOLS

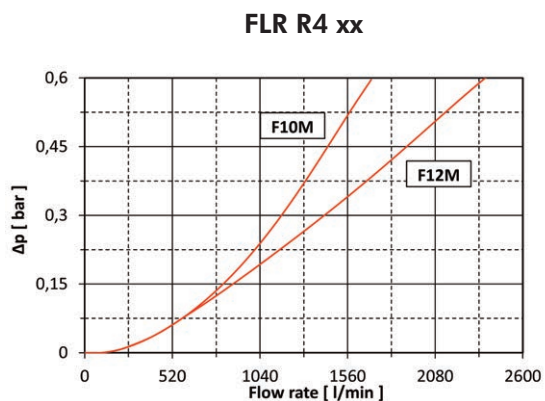


PRESSURE DROP (Δp) INFORMATION FOR FILTER SIZING

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.



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 V_x different than 32 cSt a corrective factor $V_x/32$ must be applied.

1000 l/min with R434G10 and oil viscosity 46 cSt: $(1000 \times 0.16) / 1000 \times (46 / 32) = 0,23$ bar

	G01	G03	G06	G10	G15	G25	G40	GW03	GW10	AW40
R432	1,41	0,6	0,48	0,33	0,26	0,22	0,11	2,31	1,09	0,43
R434	0,64	0,3	0,23	0,16	0,13	0,1	0,06	1	0,47	0,19

EXAMPLE OF TOTAL Δp CALCULATION

FLRR434G10B0F10MA1000A0 with 1000 l/min and oil 46 cSt:

Housing Δp + element Δp = 0,22 bar + $(1000 \times 0.16 / 1000 \times (46 / 32))$ bar = 0,45 bar

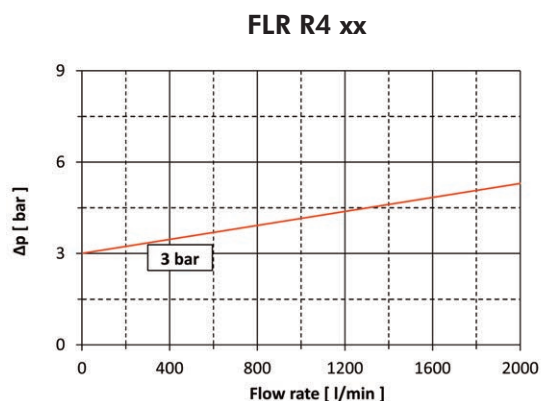
GW03, GW10 AND AW40 QUICK SIZE TABLE

	suggested flow rate [l/min]	GW03 and GW10 water capacity* [l]	AW40 water capacity* [l]
R432	48	0.85	0.97
R434	108	1.89	2.16

* at final Δp = 3 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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USER TIPS



INDICATOR TIGHTENING TORQUE

50 Nm

SPARE SEAL KIT PART NUMBER (5)

	NBR	FKM
FLR...	06.021.00389	06.021.00390

BOWL/BODY TIGHTENING TORQUE

screw up filter bowl/body till end

DRAIN/VENT TIGHTENING TORQUE

50 Nm

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) upward.
3. Secure to the frame the filter head (1) using the 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. Make sure that the system is switched off and there is no residual pressure in the filter.
2. Loosen vent screw (8).
3. Remove drain plug (9) in housing bottom and drain oil.
4. Unscrew the 3 grub screws (12) of the filter bowl (6).
5. Unscrew filter bowl counter-clockwise.
6. Pull out the bypass assembly (14) with the handle and separate it from the filter element.
7. Lift out filter element (4).
8. Check seal on filter bowl (5). We recommend replacement in any case.
9. 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, then push the element over the spigot in the filter head. Now remove plastic bag.
-  10. Push the element carefully over the spigot, insert the bypass assembly (14) into the filter element mount the filter bowl (6) and tighten the 3 grub screws (12).
11. Tighten drain plug (9) in housing bottom.
12. Tight vent screw (8).
13. The used filter elements can not be cleaned and re-use.

