



## FCR7F-1 SERIES

Tank top return filters

Return filter for mounting on the tank lid. Filtration from inside to outside.

Flow rates up to 400 l/min.



<b>HOUSING</b>	tested according to NFPA T3.10.5.1*, ISO 10771*, ISO 3968	
<b>PRESSURE:</b>	Max operating:	10 bar
	Burst:	20 bar
<b>CONNECTIONS:</b>	G 1" - G 1 1/4" - G 1 1/2"	
<b>MATERIALS:</b>	Head:	aluminium alloy
	Top cover:	PA6
	Element holder:	aluminium alloy
	Diffuser:	stainless steel
	Seal:	NBR (FKM on request)
<b>BYPASS VALVE:</b>	B version	1,7 bar
	C version	3 bar
<b>ELEMENT</b>	tested according to ISO 11170, 2941, 2942, 2943, 3724, 3968, 16889, 16908, 23181	
<b>FILTER MEDIA:</b>	Inorganic microfiber G03 - G06 - G10 - G15 - G25 - G40 Paper: C10 - C25 Wire mesh: T60 Synthetic: M05 - M10 - M15	
<b>BURST PRESSURE:</b>	10 bar	
<b>TEMPERATURE RANGE:</b>	-30°C +100°C	
<b>FLUID COMPATIBILITY:</b>	Full with HH-HL-HM-HV HETG-HEES (acc. to ISO 6743/4). For use with other fluid please contact Filtrac Customer Service (info@filtrac.it).	

\* as reference method only for verifying the pressure fatigue resistance and establishing the burst pressure ratings.

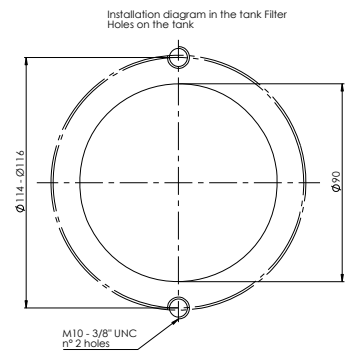
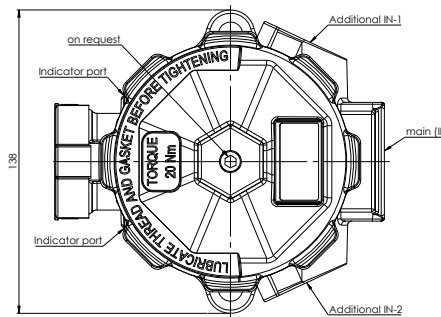
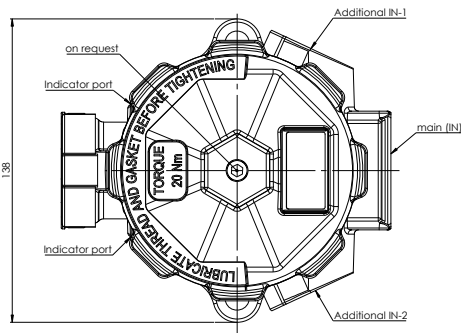
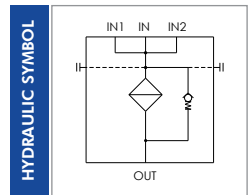
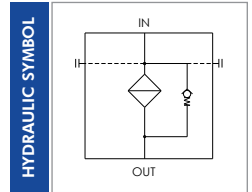
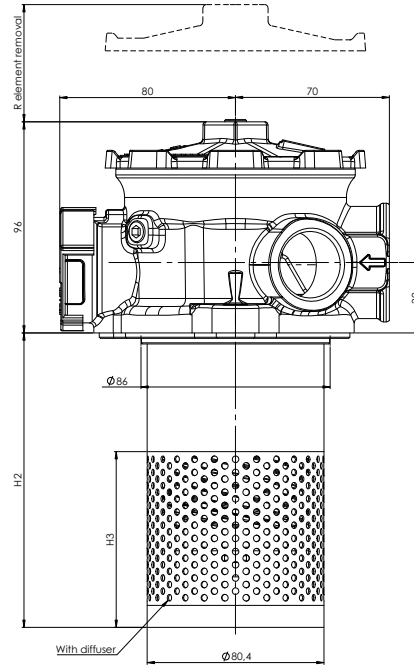
For more information:

WEB: FLTR.com.au PHONE: (+61) 1300 62 4020 EMAIL: info@FLTR.com.au

# FCR7F-1X-...-X-2A

## VERSION 0

## VERSION S



## NOMINAL SIZE

MODEL	IN	IN-1	IN-2	H1	H2	H3	R	WEIGHT*	
								Vers. 0	Vers. S
FCR7F-11				111	134		220	1,7 Kg	2 Kg
FCR7F-12	G 1"	not machined or G 1"		156	179	80	265	1,7 Kg	2 Kg
FCR7F-13	G 1 1/4"			206	229		315	1,8 Kg	2,2 Kg
FCR7F-14				306	329	100	415	1,8 Kg	2,3 Kg

\* Weight without element and magnets

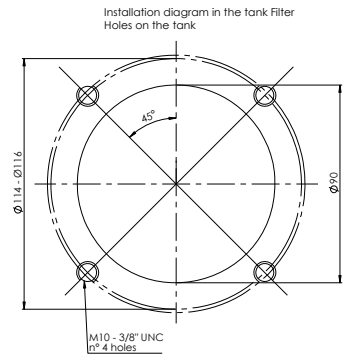
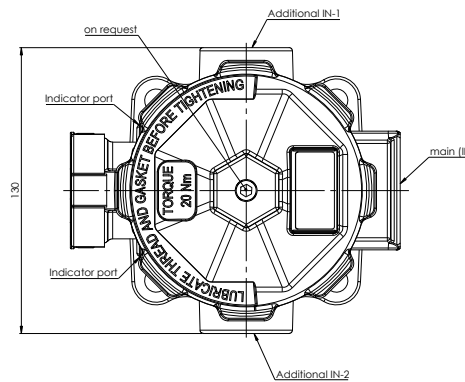
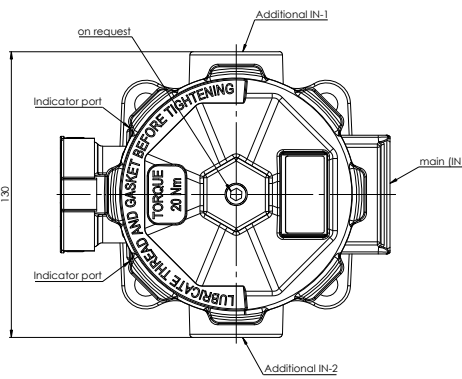
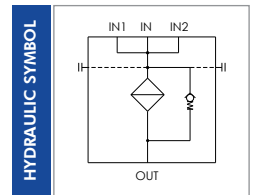
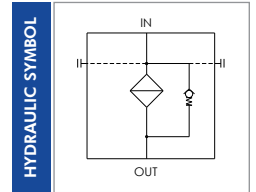
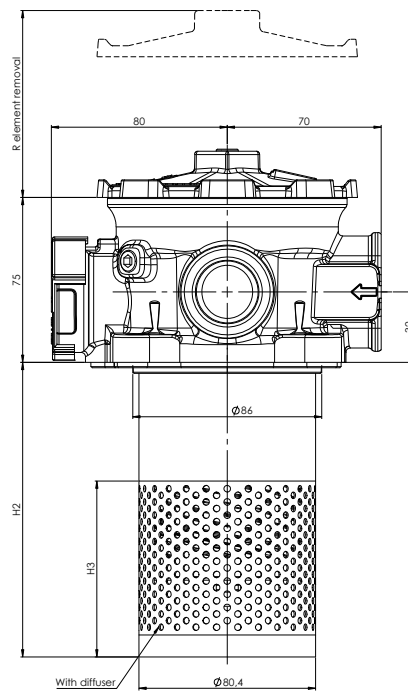
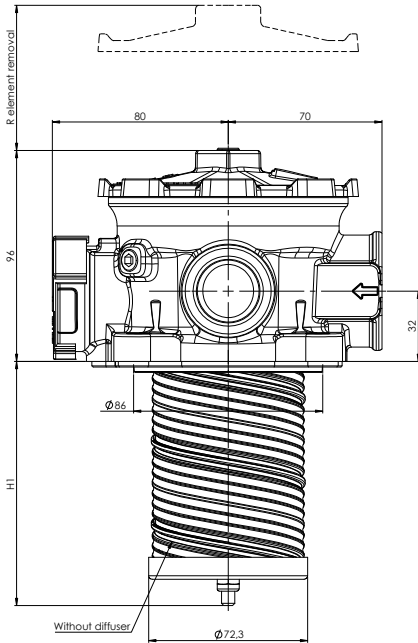
For more information:

WEB: [FLTR.com.au](http://FLTR.com.au) PHONE: (+61) 1300 62 4020 EMAIL: [info@FLTR.com.au](mailto:info@FLTR.com.au)

# FC-R7F-1X-...-X-4A

## VERSION 0

## VERSION S



## NOMINAL SIZE

MODEL	IN	IN-1	IN-2	H1	H2	H3	R	WEIGHT*	
								Vers. 0	Vers. S
FCR7F-11				111	134		220	1,8 Kg	2,1 Kg
FCR7F-12	G 1"	not machined or G 1"		156	179	80	265	1,8 Kg	2,2 Kg
FCR7F-13	G 1 1/4"			206	229	315	1,9 Kg	2,3 Kg	
FCR7F-14				306	329	415	1,9 Kg	2,4 Kg	

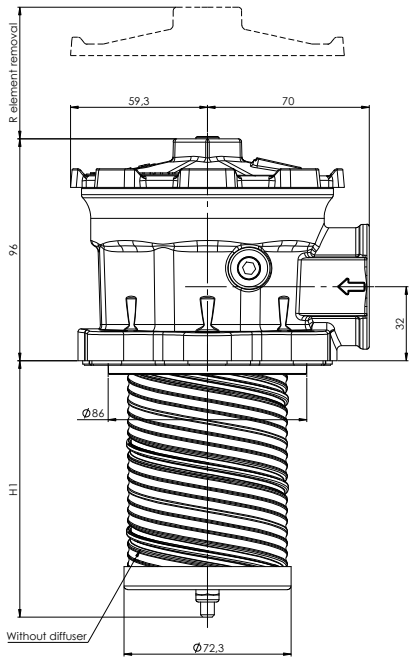
\* Weight without element and magnets

For more information:

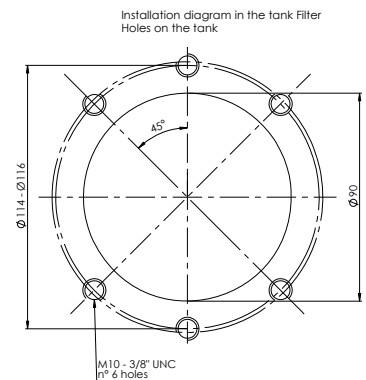
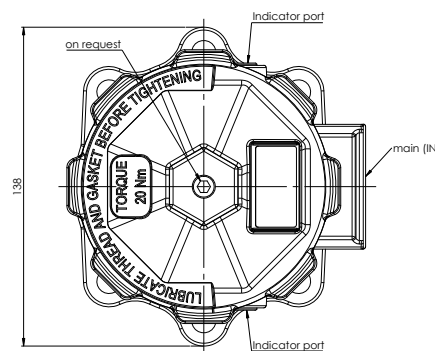
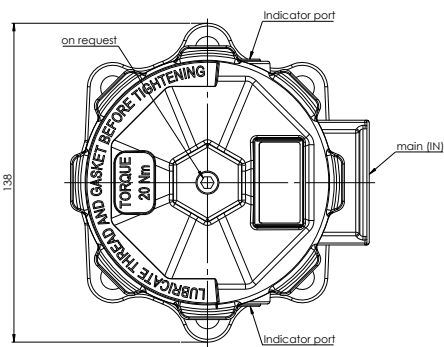
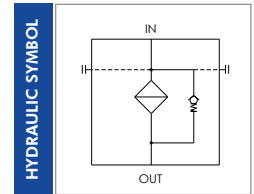
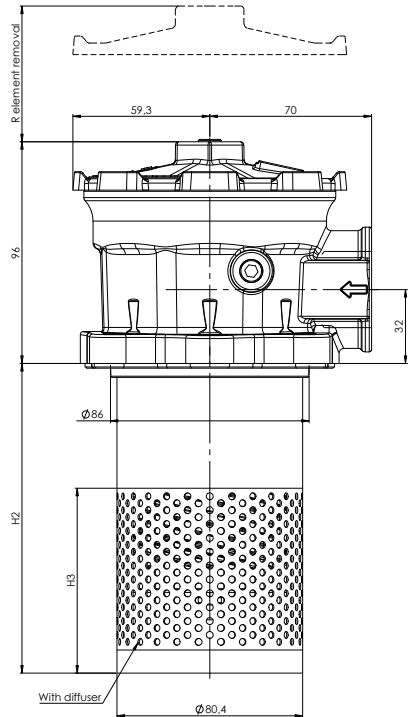
WEB: [FLTR.com.au](http://FLTR.com.au) PHONE: (+61) 1300 62 4020 EMAIL: [info@FLTR.com.au](mailto:info@FLTR.com.au)

# FC-R7F-1X-...-0-6A

## VERSION 0



## VERSION S



## NOMINAL SIZE

MODEL	IN	H1	H2	H3	R	WEIGHT*	
						Vers. 0	Vers. S
FCR7F-11	G 1" G 1 1/4"	111	134	80	220	1,5 Kg	1,8 Kg
FCR7F-12		156	179		265	1,5 Kg	1,9 Kg
FCR7F-13		206	229	315	1,6 Kg	2 Kg	
FCR7F-14		306	329	100	415	1,6 Kg	2,1 Kg

\* Weight without element and magnets

For more information:

WEB: [FLTR.com.au](http://FLTR.com.au) PHONE: (+61) 1300 62 4020 EMAIL: [info@FLTR.com.au](mailto:info@FLTR.com.au)

## ORDERING INFORMATION

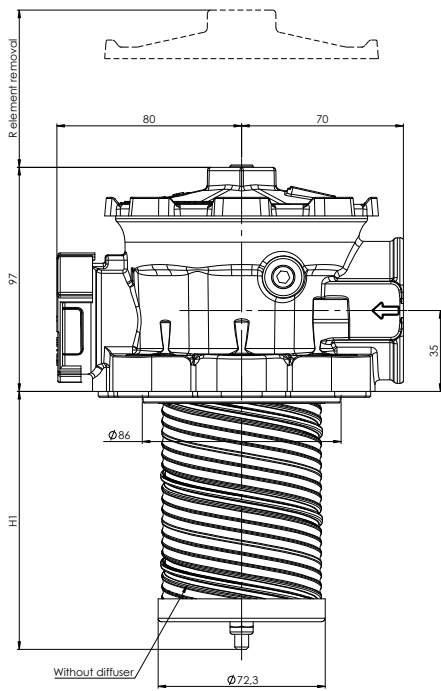
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.
	<b>FC</b>	<b>R7F</b>	<b>14</b>	<b>G40</b>	<b>B</b>	<b>B6</b>	<b>00</b>	<b>B</b>	<b>0</b>	<b>0</b>	<b>B</b>	<b>0</b>	<b>000</b>	<b>1</b>	<b>2A</b>
SPARE ELEMENT		<b>R7F</b>	<b>14</b>	<b>G40</b>	<b>B</b>										
1. FILTER SERIES			FC												
2. FILTER ELEMENT SERIES			R7F												
3. FILTER SIZE			11												
			12												
			13												
			14												
4. FILTER MEDIA			000		no element										
			G03		glassfiber $\beta_{5\mu m(c)} > 1.000$										
			G06		glassfiber $\beta_{7\mu m(c)} > 1.000$										
			G10		glassfiber $\beta_{12\mu m(c)} > 1.000$										
			G15		glassfiber $\beta_{17\mu m(c)} > 1.000$										
			G25		glassfiber $\beta_{22\mu m(c)} > 1.000$										
			G40		glassfiber $\beta_{35\mu m(c)} > 1.000$										
			C10		paper $\beta_{10\mu m(c)} > 2$										
			C25		paper $\beta_{25\mu m(c)} > 2$										
			T60		wire mesh 60 $\mu m$										
			M05		synthetic $\beta_{10\mu m(c)} > 1.000$										
			M10		synthetic $\beta_{15\mu m(c)} > 1.000$										
			M15		synthetic $\beta_{20\mu m(c)} > 1.000$										
5. SEALS			B		NBR										
			V		FKM (on request)										
6. MAIN PORT			B5		G 1"										
			B6		G 1 1/4"										
7. ADDITIONAL PORT			00		no additional port										
			B5		G 1"x 2										
					not available for 6A										
8. BYPASS VALVE			B		1,7 bar										
			C		3 bar										
9. MAGNETS			0		no magnets										
			M		with magnets										
10. DIFFUSER			0		no diffuser										
			S		with diffuser										
11. INDICATOR PORT OPTION			B		2x G 1/8"										
12. COVER OPTION			0		without										
13. COMPULSORY FIELD			000		Filtrec standard										
14. INBUILT AIR BREATHER			0		no airbreather										
			1		with airbreather										
					not available for 6A										
15. TANK MOUNTING HOLES			2A		2 holes - tank mounting pattern $\varnothing$ 114-116mm M10										
			4A		4 holes - tank mounting pattern $\varnothing$ 114-116mm M10										
			6A		2+4 holes - tank mounting pattern $\varnothing$ 114-116mm M10										
ACCESSORIES			B610F03		spare airbreather										
			DS350		dipstick										
The accessories must be ordered separately			MPB		pressure gauge rear connection										
			MRB		pressure gauge radial connection										
					with "B" bypass option										
			PDB		pressure switch										
			MPC		pressure gauge rear connection										
			MRC		pressure gauge radial connection										
					with "C" bypass option										
			PDC		pressure switch										
			LC24		LED connector for pressure switch										

For more information:

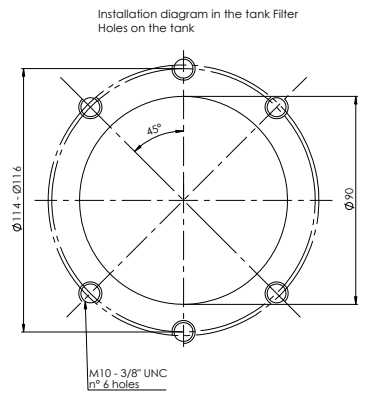
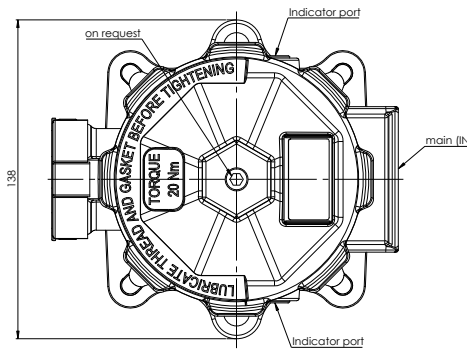
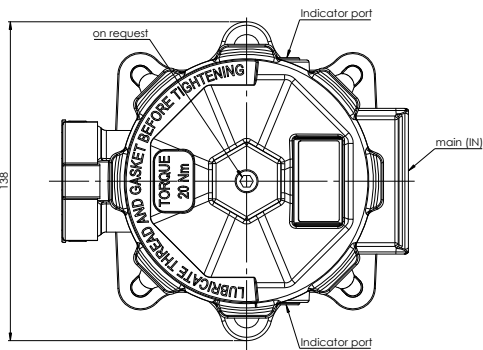
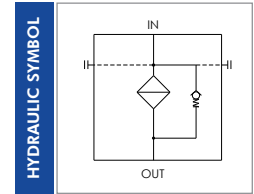
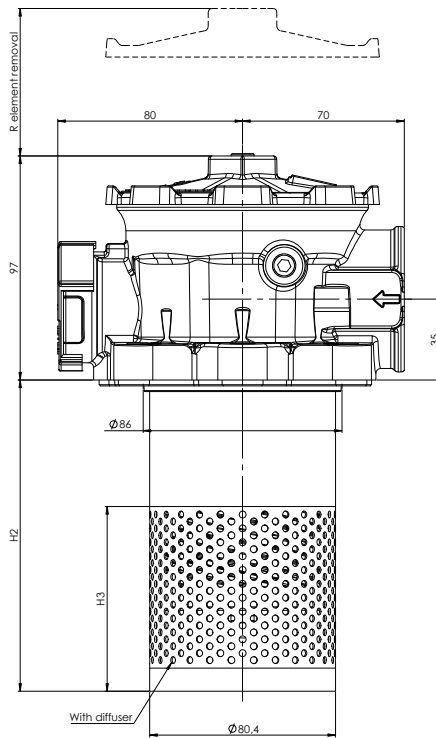
WEB: FLTR.com.au PHONE: (+61) 1300 62 4020 EMAIL: info@FLTR.com.au

# FC-R7F-1X-...-1-6A

**VERSION 0**



**VERSION S**



## NOMINAL SIZE

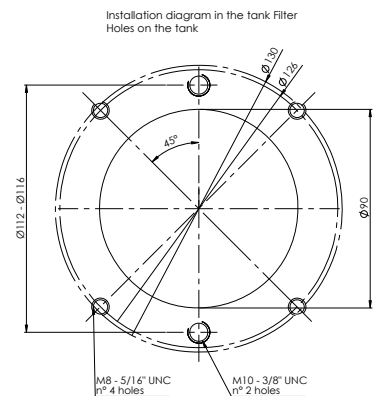
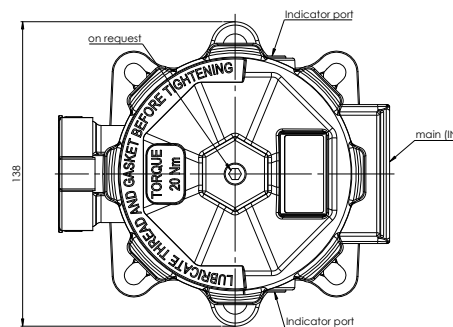
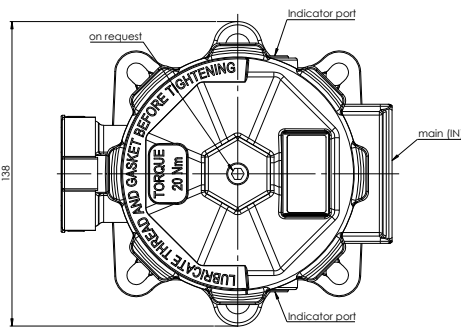
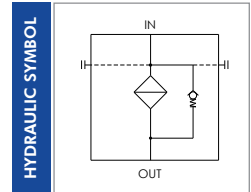
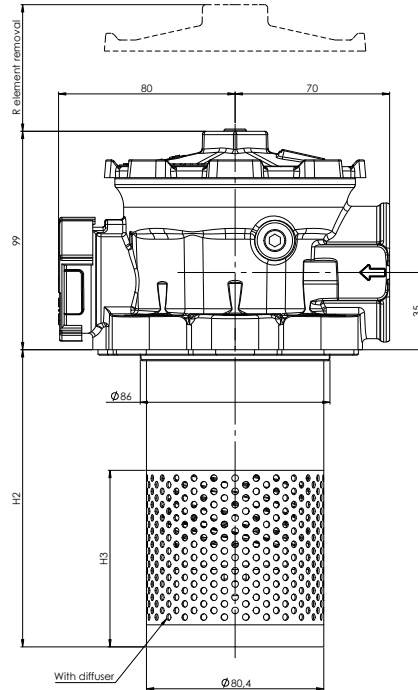
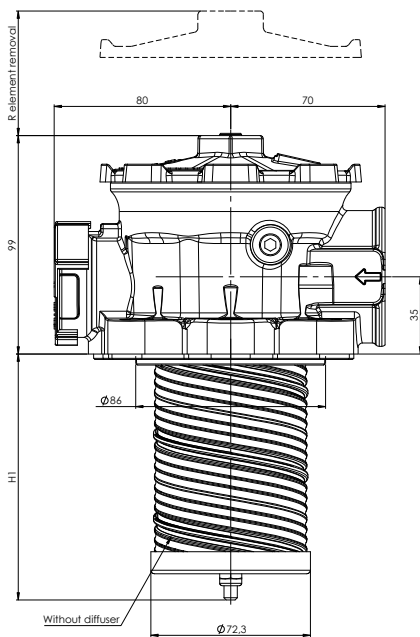
MODEL	IN	H1	H2	H3	R	WEIGHT*	
						Vers. 0	Vers. S
FCR7F-13	G 1 1/2"	206	229	80	315	1,7 Kg	2,1 Kg
FCR7F-14		306	329	100	415	1,8 Kg	2,3 Kg

\* Weight without element and magnets

For more information:

WEB: FLTR.com.au PHONE: (+61) 1300 62 4020 EMAIL: info@FLTR.com.au

# FC-R7F-1X-...-1-6B



## NOMINAL SIZE

MODEL	IN	H1	H2	H3	R	WEIGHT*	
						Vers. 0	Vers. S
FCR7F-13	G 1 1/2"	206	229	80	315	1,9 Kg	2,3 Kg
FCR7F-14		306	329	100	415	2 Kg	2,5 Kg

\* Weight without element and magnets

For more information:

WEB: FLTR.com.au PHONE: (+61) 1300 62 4020 EMAIL: info@FLTR.com.au

## ORDERING INFORMATION

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.
	<b>FC</b>	<b>R7F</b>	<b>14</b>	<b>G40</b>	<b>B</b>	<b>B7</b>	<b>00</b>	<b>B</b>	<b>0</b>	<b>0</b>	<b>B</b>	<b>0</b>	<b>000</b>	<b>1</b>	<b>6B</b>
SPARE ELEMENT		<b>R7F</b>	<b>14</b>	<b>G40</b>	<b>B</b>										

1. FILTER SERIES	FC	
2. FILTER ELEMENT SERIES	R7F	
3. FILTER SIZE	13	
	14	
4. FILTER MEDIA	000	no element
	G03	glassfiber $\beta_{5\mu m(c)} > 1.000$
	G06	glassfiber $\beta_{7\mu m(c)} > 1.000$
	G10	glassfiber $\beta_{12\mu m(c)} > 1.000$
	G15	glassfiber $\beta_{17\mu m(c)} > 1.000$
	G25	glassfiber $\beta_{22\mu m(c)} > 1.000$
	G40	glassfiber $\beta_{35\mu m(c)} > 1.000$
	C10	paper $\beta_{10\mu m(c)} > 2$
	C25	paper $\beta_{25\mu m(c)} > 2$
	T60	wire mesh 60 $\mu m$
	M05	synthetic $\beta_{10\mu m(c)} > 1.000$
	M10	synthetic $\beta_{15\mu m(c)} > 1.000$
	M15	synthetic $\beta_{20\mu m(c)} > 1.000$
5. SEALS	B	NBR
	V	FKM (on request)
6. MAIN PORT	B7	G 1 1/2"
7. ADDITIONAL PORT	00	no additional port
8. BYPASS VALVE	B	1,7 bar
	C	3 bar
9. MAGNETS	0	no magnets
	M	with magnets
10. DIFFUSER	0	no diffuser
	S	with diffuser
11. INDICATOR PORT OPTION	B	2x G 1/8"
12. COVER OPTION	0	without
13. COMPULSORY FIELD	000	Filtrec standard
14. INBUILT AIR BREATHER	1	with airbreather
15. TANK MOUNTING HOLES	6A	2+4 holes - tank mounting pattern $\varnothing$ 114-116mm M10
	6B	2+4 holes 2 hole tank mounting pattern $\varnothing$ 112-116mm M10 4 hole tank mounting pattern $\varnothing$ 126-130mm M8
ACCESSORIES	B610F03	spare airbreather
The accessories must be ordered separately	DS350	dipstick
	MPB	pressure gauge rear connection
	MRB	pressure gauge radial connection
	PDB	pressure switch
	MPC	pressure gauge rear connection
	MRC	pressure gauge radial connection
	PDC	pressure switch
	LC24	LED connector for pressure switch

For more information:

WEB: FLTR.com.au PHONE: (+61) 1300 62 4020 EMAIL: info@FLTR.com.au

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

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

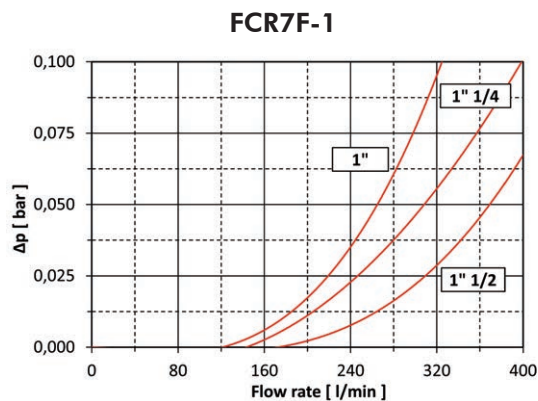
The max recommended total  $\Delta p$  for return filters is 0,4 – 0,6 bar with clean element.

For multiport versions, the housing  $\Delta p$  to be considered is the sum of the  $\Delta p$  through all the ports that can be used contemporarily.

N.B. All the reported data have been obtained at our laboratory, according to specification ISO3968 with mineral oil having 32 cSt viscosity at 40°C 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

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  $V_1$  different than 32 cSt a corrective factor  $V_1/32$  must be applied.

Example: 300 l/min with R7F14G40B and oil viscosity 46 cSt:  $300 \times 1,10/1000 \times 46/32 = 0,47$  bar

	G03	G06	G10	G15	G25	G40	M05	M10	M15	C10	C25	T60
<b>R7F11</b>	17,12	15,19	6,24	4,77	4,15	2,53	4,70	3,51	2,60	2,95	2,47	0,30
<b>R7F12</b>	10,51	9,73	3,89	3,10	2,79	2,49	3,02	2,70	2,54	2,68	2,38	0,28
<b>R7F13</b>	6,98	6,17	3,35	2,70	2,46	1,93	2,60	2,20	1,97	2,10	1,85	0,22
<b>R7F14</b>	4,97	4,46	2,14	1,96	1,56	1,10	1,66	1,34	1,20	1,22	1,00	0,20

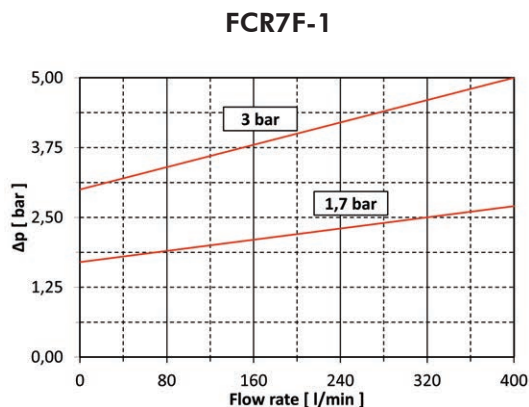
## EXAMPLE OF TOTAL $\Delta p$ CALCULATION

FCR7F14G40BB700B00B000016B with **300** l/min and oil **46** cSt:

Housing  $\Delta p$  0,02 bar + element  $\Delta p$  0,47 bar ( $300 \times 1,10/1000 \times 46/32$ ) = total assembly  $\Delta p$  0,49 bar

## BYPASS VALVE PRESSURE DROP

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



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>.

For more information:

WEB: [FLTR.com.au](http://FLTR.com.au) PHONE: (+61) 1300 62 4020 EMAIL: [info@FLTR.com.au](mailto:info@FLTR.com.au)

## ACCESSORIES

These accessories fit all our standard models and must be ordered separately.  
For clogging indicators see the catalogue.



### A DIPSTICK for oil level detection

When reduced space available, one of the tank fixing hole can be used for a dipstick to check the oil level; it is supplied with a M10 bolt support.

PART NR.	DESCRIPTION
DS350	dipstick 350 mm long



### B AIR BREATHER

PART NR.	FILTRATION	FLOW RATE	$\Delta p$
B610F03	3 $\mu m$	up to 300 NI/min	50 mbar

N.B. we recommend to replace the air breather when replacing the oil filter element.  
(when working in a very dirt environment, a more frequent air breather replacement could be necessary)



### C LED CONNECTOR

The LC24 connector can replace the standard black connector of the pressure switch indicators (N.B. supplied separately).

Fedded with 24V, it gives a visual indication of the filter element conditions: normally the GREEN light is on, the RED light switch on when the element is clogged.

PART NR.	DESCRIPTION
LC24	LED connector for pressure switch

## USER TIPS



- 1 COVER
- 2 SPRING
- 3 ELEMENT HOLDER
- 4 GASKETS
- 5 MAGNETS
- 6 FILTER ELEMENT
- 7 FIXING NUT
- 8 DIFFUSER
- 9 FILTER HEAD
- 10 AIR BREATHER  
(if included)

### SPARE SEALS KIT (4)

	NBR	FKM (on request)
FCR7F1-X-XX-X-2A	06.021.00341	06.021.00346
FCR7F1-X-XX-X-4A	06.021.00342	06.021.00347
FCR7F1-X-XX-0-6A	06.021.00343	06.021.00348
FCR7F1-X-XX-1-6A	06.021.00344	06.021.00349
FCR7F1-X-XX-1-6B	06.021.00345	06.021.00350

### INDICATOR TIGHTENING TORQUE

10 Nm

### COVER TIGHTENING TORQUE (1)

20 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. Make sure that all the filter components are properly mounted as per exploded view directions.
- 2. Enough space must be available for filter element replacement.
- 3. Keep in stock a spare FILTREC filter element for timely replacement when required.
- 4. 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.
- 3. If no clogging indicator is mounted, replace the element according to the system manufacturer's recommendations.

## MAINTENANCE

- ⚠ 1. Before removing the access cover (1), ensure that the system is switched off and there is no residual pressure in the filter.
- 2. Remove the access cover (1).
- 3. Remove the spring (2) and extract the filter element assembly.
- ⚠ 4. Warning: a certain quantity of oil can be retained within the filter element, provide to have a proper container available for it.
- 5. Unscrew the nut at the bottom of the insert and slip the dirty filter element carefully.
- 6. Clean the tie rod (and the magnets if present) and check the support gaskets/o-ring (4) conditions, replace them if necessary.
- 7. Fit a new FILTREC element, the spacer and the washer over the tie rod, then screw on it the fixing nut. To achieve the optimal element fitting, tighten the nut until it gets in touch with the washer and the element is stuck; then screw in the nut for one more turn.
- 8. Put the insert assembly into its seat within the tank, put the spring (2) in its position over the element holder(3), then mount the access cover (1) and secure it properly.
- ⚠ 9. The used filter elements cannot be cleaned and re-used.

For more information:

WEB: FLTR.com.au PHONE: (+61) 1300 62 4020 EMAIL: info@FLTR.com.au