

Return Line Filters ■ Type RFB



Product Description

STAUFF RFB Return Line Filters are designed as tank top filters. They are mounted directly on the tank top and if 100% of the system oil is filtered they provide the optimum removal of contaminant from the system. This provides the pump with clean oil thus reducing contaminant generated wear. Because of its low weight and compact design, the STAUFF RFB Filters are ideally suited for mobile hydraulic applications. A high efficiency of contaminant removal is assured by using STAUFF RE Replacement Filter Elements. The high dirt-hold capacity of STAUFF Elements ensures a long service life and as a result reduced maintenance costs.

Technical Data

Construction

- Tank Top flange mounting

Materials

- Filter head: Aluminium
- Filter bowl & cap: Glass Fibre Reinforced Polyamide
- Sealings: NBR (Buna-N®)
FPM (Viton®)
EPDM (Ethylene Propylene Diene Monomer Rubber)
Other sealing materials on request

Port Connection

- BSP
- NPT
- SAE O-ring thread

Operating Pressure

- Max. 10 bar / 145 PSI

Temperature Range

- -10°C ... +100°C / +14°F ... +212°F

Filter Elements

- Specifications see page C82

Media Compatibility

- Mineral oils, other fluids on request

Options and Accessories

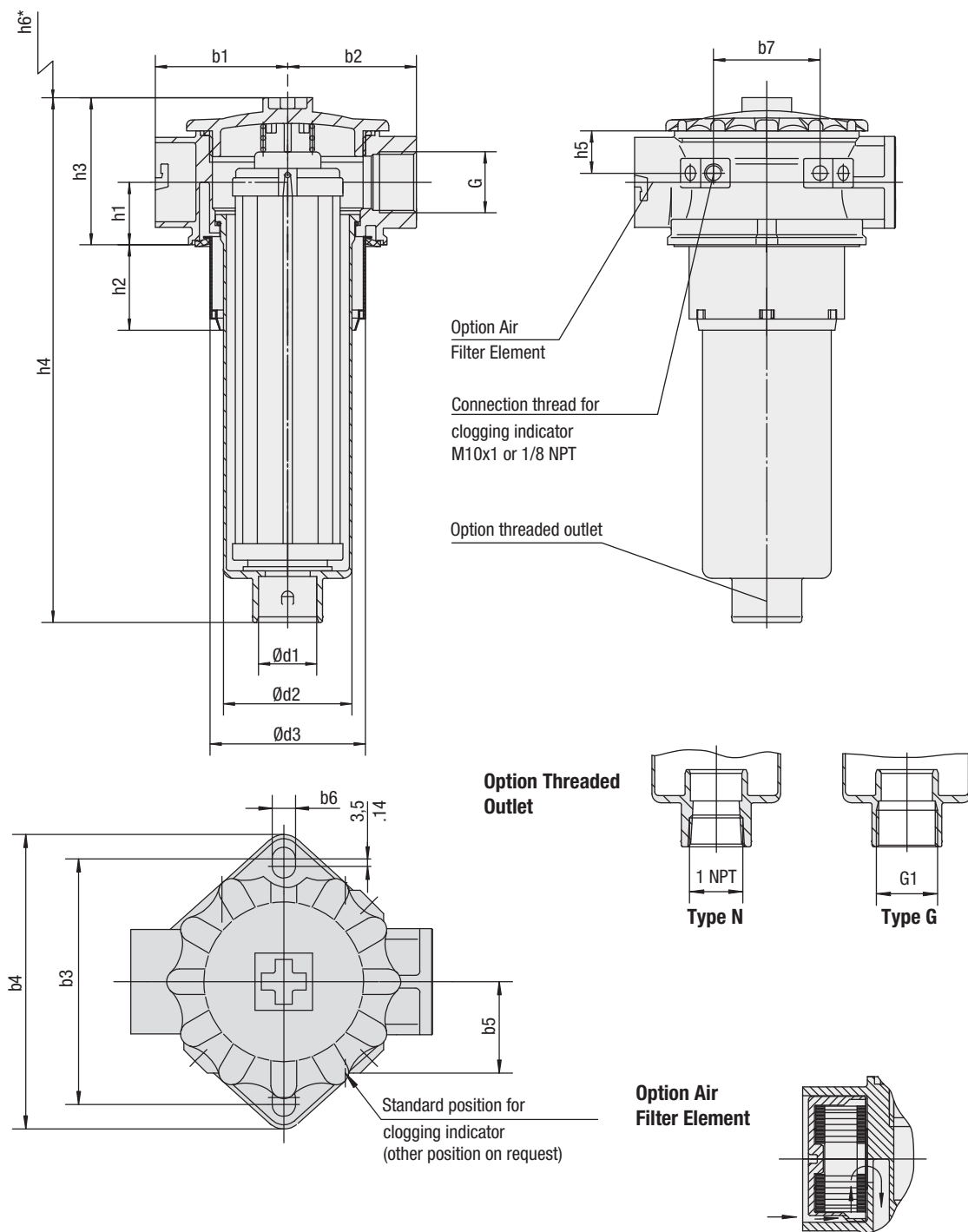
Valve

- Bypass valve Opening pressure 3 bar ± 0,3 bar / 43.5 PSI ± 4.35 PSI
(integrated in the filter element) Other settings available on request

Clogging Indicators

- Visual clogging indicator 0 ... 4 bar / 0 ... 58 PSI coloured segments
- Electrical clogging switch, setting 2,5 bar / 36.25 PSI
Other clogging indicators available on request

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* recommended space for element change

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Thread Connection G	Filter Size RFB					
	022		046		052	
BSP	3/4	1	3/4	1	3/4	1
NPT	3/4	1	3/4	1	3/4	1
SAE O-ring Thread	1-5/16-12					

Dimensions (mm/in)	Filter Size RFB					
	022		046		052	
h1	34		34		34	
	1.34		1.34		1.34	
h2	46,5		46,5		46,5	
	1.83		1.83		1.83	
h3	80		80		80	
	3.15		3.15		3.15	
h4	205,5		285,5		351,5	
	8.09		11.24		13.84	
h5	23		23		23	
	.91		.91		.91	
h6	154		239		305	
	6.26		9.41		12.01	
d1	32		32		32	
	1.26		1.26		1.26	
d2	70		70		70	
	2.76		2.76		2.76	
d3	84,5		84,5		84,5	
	3.33		3.33		3.33	
b1	72		72		72	
	2.84		2.84		2.84	
b2	70		70		70	
	2.76		2.76		2.76	
b3	115,5		115,5		115,5	
	4.55		4.55		4.55	
b4	138,5		138,5		138,5	
	5.45		5.45		5.45	
b5	43		43		43	
	1.69		1.69		1.69	
b6	11		11		11	
	.43		.43		.43	
b7	58		58		58	
	2.28		2.28		2.28	

Return Line Filter Housings / Complete Filters ■ Type RFB

RFB **022** ... **B** / **B** / **M** / **G** / **L10** / **X**

1 2 3 4 5 6 7 8 9 10

1 Type

Return Line Filter **RFB**

2 Group

Flow	Size
75 l/min / 22 US GPM	022
165 l/min / 46 US GPM	046
185 l/min / 52 US GPM	052

Note: Exact flow will depend on filter element selected.
Consult technical data on pages C84.

3 Filter Material

Material	Max. Δp *collapse	Micron ratings available	Code
Without filter element	-	-	...
Inorg. glass fibre	25 bar / 363 PSI	3, 5, 10, 20	G
Stainless fibre	30 bar / 435 PSI		A
Filter paper	10 bar / 145 PSI	10, 20	N
Stainless mesh	30 bar / 435 PSI	10, 25, 50, 100, 200	S

Note: *Collapse/burst resistance as per ISO 2941.
Other materials on request.

4 Micron Rating

3 µm	03
5 µm	05
10 µm	10
20 µm	20
25 µm	25
50 µm	50
100 µm	100
200 µm	200

Note: Other micron ratings on request.

5 Sealing Material

NBR (Buna®)	B
FPM (Viton®)	V
EPDM	E

Note: Other sealing materials on request.

6 Connection Style

Connection Style	Group			Code
	022	046	052	
BSP	1			B
BSP	3/4			B1
NPT	1			N
NPT	3/4			N1
SAE-O-ring Thread	1-5/16-12			U

Note: Bold types identify preferred connection style.

7 Clogging Indicator

	Position*		Code
Without Clogging Indicator	-		0
Visual Clogging Indicator	1	2	M
Electrical Clogging Switch 42 V, NO			G42NO
Electrical Clogging Switch 42 V, NC			G42NC
Electrical Clogging Switch 110 V, two-way contact			G110
Electrical Clogging Switch 230 V, two-way contact			G230

Note: *Position of clogging indicator see page C80.

Without any code: assembly in the middle of the filter cover.

8 Outlet Style

Standard outlet (without thread)	0
With thread G1	G
With thread 1 NPT	N

9 Air Filter Element

Without Air Filter Element	0
Filter paper 10 micron	L10

Note: Other materials and micron ratings on request.

10 Design Code

Only for information	X
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Filter Elements ■ Type RE

RE - **022** **G** **10** **B** / **X**

1 2 3 4 5 6

1 Type

Filter Element Series **RE**

2 Group

According to filter housing

3 Filter Material

Material	Max. Δp *collapse	Micron ratings available	Code
Inorg. glass fibre	25 bar / 363 PSI	3, 5, 10, 20	G
Stainless fibre	30 bar / 435 PSI		A
Filter paper	10 bar / 145 PSI	10, 20	N
Stainless mesh	30 bar / 435 PSI	25, 50, 100, 200	S

Note: *Collapse/burst resistance as per ISO 2941.
Other materials on request.

4 Micron Rating

3 µm	03
5 µm	05
10 µm	10
20 µm	20
25 µm	25
50 µm	50
100 µm	100
200 µm	200

Note: Other micron ratings on request.

5 Sealing Material

NBR (Buna®)	B
FPM (Viton®)	V
EPDM	E

Note: Other sealing material on request.

6 Design Code

Only for information	X
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Air Filter Elements

REA - **046** **L** **10** **B** / **X**

1 2 3 4 5 6

1 Type

Air Filter Element **REA**

2 Group

Air filter for RFB 022/046/052 **046**

3 Filter Material

Filter Paper	L
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Note: Other materials on request.

4 Micron Rating

10µm	10
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Note: Other micron ratings on request.

5 Sealing Material

NBR (Buna®)	B
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Note: Other sealing materials on request.

6 Design Code

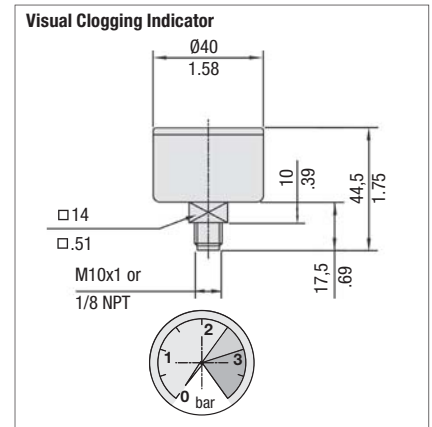
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Visual Clogging Indicator

The gauge visually displays the degree of contamination of the element.
The colored segments allow quick visual checking.

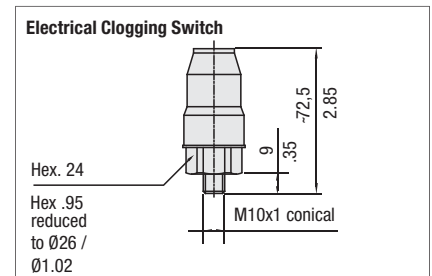
green	0 ... 2,5 bar / 0 ... 36.25 PSI	Element has service life left
yellow	2,5 ... 3,0 bar / 36.25 ... 43.5 PSI	Element is contaminated and should be changed
red	>3,0 bar / >43.5 PSI	Bypass valve open, unfiltered oil passing to tank



Electrical Clogging Switch

The switch is used where an electrical signal is needed to indicate when the element needs changing. The switch can turn on a light, or shut the machine down, or any further function controlled by an electric signal. The switching pressure is 2,5 bar / 36.25 PSI and this allows the element to be changed before the bypass setting of 3 bar / 43.5 PSI is reached.

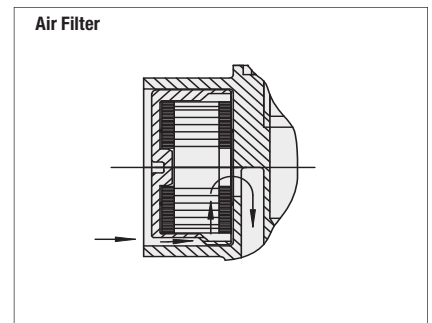
Maximum Voltage	Switch Type
42 V (normally open)	G42NO
42 V (normally closed)	G42NC
110 V (two-way contact)	G110
230 V (two-way contact)	G230



Dimensions in mm / in

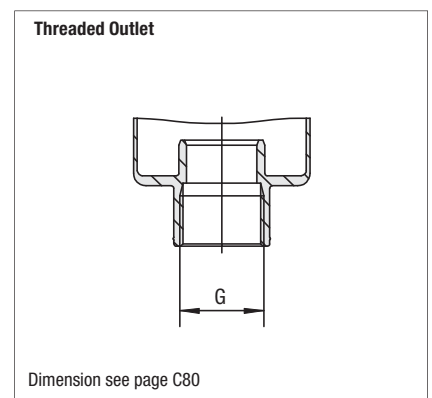
Air Filter Element

Allows an effective filtration of the incoming air which avoids the infiltration of dirt particles into the hydraulic system. The standard air filter element is a 10 micron cellulose; other materials and micron ratings on request.



Filter Bowl with Threaded Connection

Under some circumstances such as a tall reservoir or one with oil levels which vary greatly during operation, it is necessary to extend the filter bowl so that the returning oil returns beneath the surface and does not entrain air in the process. The optional bowl with a female thread allows an extension to be fitted quite simply.



Return Line Filters ■ Type RFB Flow Characteristics

The following characteristics are valid for mineral oils with a density of $0,85 \text{ kg/dm}^3$ and the kinematic viscosity of $30 \text{ mm}^2/\text{s}$ (30cSt). The characteristics have been determined in accordance to ISO 3968. Multipass filter ratings have been obtained in accordance to ISO 16889. The housing pressure drop is directly proportional to the oil density. Consult STAUFF for details.

