

Technical Data

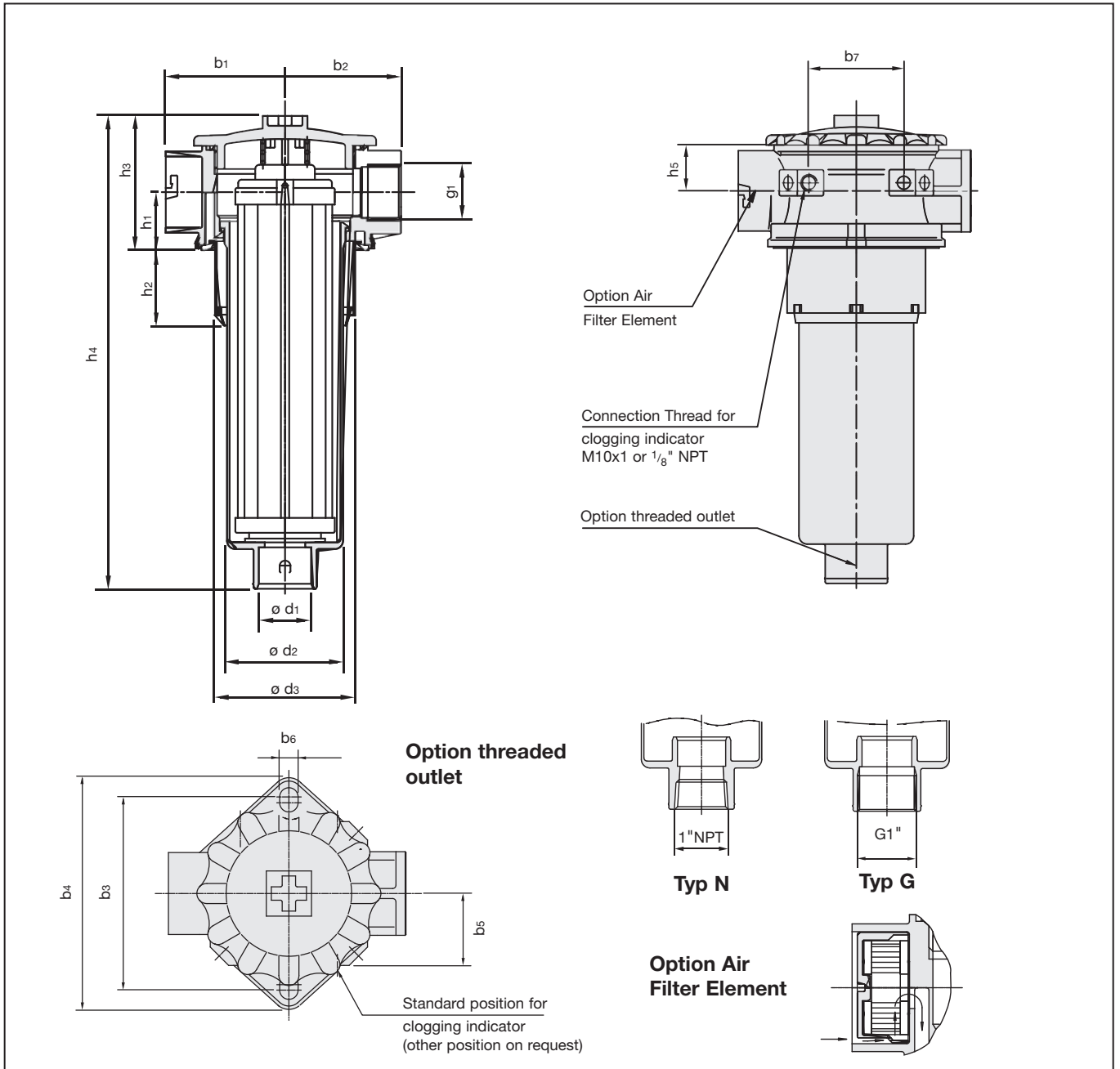
STAUFF RFB return line filters are designed as tank top filters. They are mounted directly on the tank top and if 100% of the system oil is filtered they provide the optimum removal of contaminant from the system. This provides the pump with clean oil thus reducing contaminant generated wear. Because of its low weight and compact design, the STAUFF RFB filters are ideally suited for mobile hydraulic applications.



Technical Specification

Construction	Tank Top flange mounting	By-pass valve (integrated in the filter element)	Opening pressure 3 bar \pm 0.3 bar (43.5 PSI \pm 4.35 PSI) other pressures on request
Filter head	Aluminium	Clogging indicator	Gauge type indicator 0...4 bar (0...58 PSI) colored segments; Electrical switch, setting 2.5 bar (36,25 PSI)
Filter bowl & cap	Glass fiber reinforced polyamide	Filter elements	Specification see page F62
Seals	NBR (Buna-N®), FPM (Viton®) or EPDM (Ethylene-Propylene)	Media	Mineral oils, other fluids on request
Threaded connection	BSP, NPT- and SAE-"O"-Ring thread		
Operating pressure	max 10 bar (145 PSI)		
Proof pressure	24 bar (350 PSI)		
Temperature range	-10° up to +100°C (14° up to 212°F)		

Dimensions RFB022-052



FILTRATION

Dimensions Return Line Filter RFB022/046/052

Dimensions in mm (inch)

Filter Size	Thread connection G			h ₁	h ₂	h ₃	h ₄	h ₅	d ₁	d ₂	d ₃	b ₁	b ₂	b ₃	b ₄	b ₅	b ₆	b ₇
	BSP	NPT	SAE-“O”-Ring thread															
RFB022	G 3/4	3/4"	1-5/16-12 UN	34 (1.34)	46,5 (1.83)	80 (3.15)	205,5 (8.09)	23 (0.91)	32 (1.26)	70 (2.76)	84,5 (3.33)	72 (2.84)	70 (2.76)	115,5 (4.55)	138,5 (5.45)	43 (1.69)	11 (0.43)	58 (2.28)
	G1	1"																
RFB046	G 3/4	3/4"																
	G1	1"																
RFB052	G 3/4	3/4"					351,5 (13.84)											
	G1	1"																

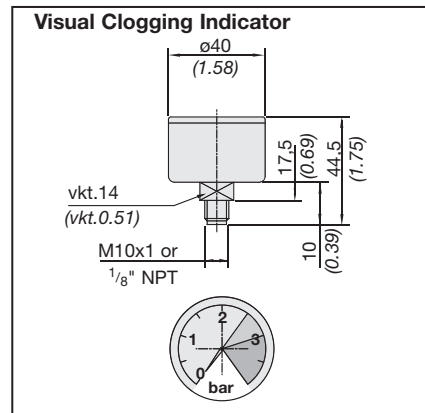
Options

1. Visual clogging indicator **HI-M**

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

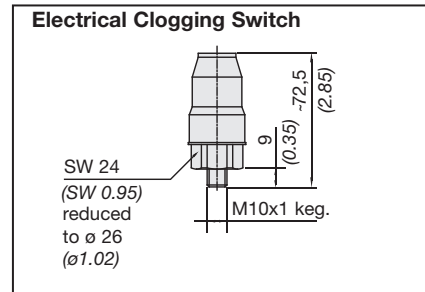
green	0...2.5	bar (0...36.25 PSI)	Element has service life left
yellow	2.5...3.0	bar (36.25 ...43.5 PSI)	Element is contaminated and should be changed
red	>3,0	bar (43.5 PSI)	By-pass valve open, unfiltered oil passing to tank

Dimensions in mm (inch)



2. Electrical clogging switch **HI-G**

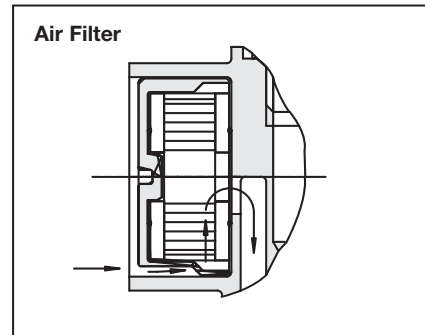
The switch is used where an electrical signal is needed to indicate when the element needs changing. The switch can turn on a light, or shut the machine down, or any further function controlled by an electric signal. The switching pressure is 2.5 bar (36.25 PSI) and this allows the element to be changed before the by-pass setting of 3 bar (43.5 PSI) is reached.



Maximum Voltage	Switch Type
42 V	HI-G 42
110 V	HI-G 110
220 V	HI-G 220

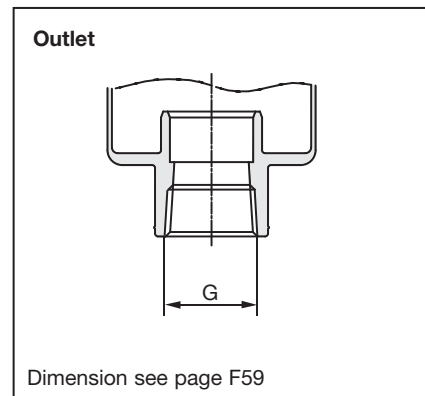
3. Air Filter Element

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.



4. 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.



Ordering Code Filter Housings

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

Filter Type	RFB									
Group										
Size	Flow									
	l/min	GPM								
022	75	22								
046	165	46								
052	185	52								
Exact flow will depend on filter element selected, consult technical data on page F62										
For Complete Filters:	identification filter material + micron rating code (see ordering code filter elements below)									
Seal Material	<table border="1"> <tr> <td>B</td> <td>NBR (Buna®)</td> </tr> <tr> <td>V</td> <td>FPM (Viton®)</td> </tr> <tr> <td>E</td> <td>EPDM</td> </tr> </table> other seal material on request		B	NBR (Buna®)	V	FPM (Viton®)	E	EPDM		
B	NBR (Buna®)									
V	FPM (Viton®)									
E	EPDM									
Design Code	only for information									
Air Filter Element	<table border="1"> <tr> <td></td> <td>without air filter element</td> </tr> <tr> <td>L 10</td> <td>10 micron filter paper</td> </tr> </table> other materials and micron ratings on request			without air filter element	L 10	10 micron filter paper				
	without air filter element									
L 10	10 micron filter paper									
Outlet	<table border="1"> <tr> <td>O</td> <td>without thread (standard)</td> </tr> <tr> <td>N</td> <td>with thread 1" NPT</td> </tr> <tr> <td>G</td> <td>with thread 1" BSP</td> </tr> </table>		O	without thread (standard)	N	with thread 1" NPT	G	with thread 1" BSP		
O	without thread (standard)									
N	with thread 1" NPT									
G	with thread 1" BSP									
Clogging Indicator	<table border="1"> <tr> <td>M</td> <td>Pressure gauge</td> </tr> <tr> <td>G 42</td> <td>Electrical switch 42 V</td> </tr> <tr> <td>G 110</td> <td>Electrical switch 110 V</td> </tr> <tr> <td>G 220</td> <td>Electrical switch 220 V</td> </tr> </table>		M	Pressure gauge	G 42	Electrical switch 42 V	G 110	Electrical switch 110 V	G 220	Electrical switch 220 V
M	Pressure gauge									
G 42	Electrical switch 42 V									
G 110	Electrical switch 110 V									
G 220	Electrical switch 220 V									
Connection Style	Group									
Code	Connection Style	022 046 052								
B	BSP	G 1								
B1	BSP	G 3/4								
N	NPT	1"								
N1	NPT	3/4"								
U	SAE - "O"-Ring Thread	1-5/16-12 UN								

Ordering Code Filter Elements

RE 046 G 10 V /X

Series	RE																					
Group	according to filter housing																					
Design Code	only for information																					
Seal Material	<table border="1"> <tr> <td>B</td> <td>NBR (Buna®)</td> </tr> <tr> <td>V</td> <td>FPM (Viton®)</td> </tr> <tr> <td>E</td> <td>EPDM</td> </tr> </table> other seal materials on request		B	NBR (Buna®)	V	FPM (Viton®)	E	EPDM														
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V	FPM (Viton®)																					
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Micron Rating	<table border="1"> <tr> <td>03</td> <td>3 µm</td> </tr> <tr> <td>05</td> <td>5 µm</td> </tr> <tr> <td>10</td> <td>10 µm</td> </tr> <tr> <td>20</td> <td>20 µm</td> </tr> <tr> <td>10</td> <td>10 µm</td> </tr> <tr> <td>25</td> <td>25 µm</td> </tr> <tr> <td>50</td> <td>50 µm</td> </tr> <tr> <td>100</td> <td>100 µm</td> </tr> <tr> <td>200</td> <td>200 µm</td> </tr> <tr> <td>500</td> <td>500 µm</td> </tr> </table> other micron ratings on request		03	3 µm	05	5 µm	10	10 µm	20	20 µm	10	10 µm	25	25 µm	50	50 µm	100	100 µm	200	200 µm	500	500 µm
03	3 µm																					
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Micron Rating	<table border="1"> <tr> <td>10</td> <td>10 µm</td> </tr> </table> other micron ratings on request		10	10 µm																		
10	10 µm																					
Code	Material	max Δp*_{collapse}	Micron ratings available																			
A	Stainless fiber	30 bar (435 PSI)	03, 05, 10, 20																			
N	Filter paper	16 bar (232 PSI)																				
G	Inorganic glass fiber	30 bar (435 PSI)																				
S	Stainless mesh	30 bar (435 PSI)	10, 25, 50, 100, 200, 500																			
*collapse / burst resistance as per ISO 2941																						
Other filter materials or micron ratings on request																						

Ordering Code Air Filter Element

REA 046 L 10 B /X

Series	REA			
Group	046 air filter for RFB 022/046/052			
Filter Material	<table border="1"> <tr> <td>L</td> <td>Filter paper</td> </tr> </table> other micron ratings on request		L	Filter paper
L	Filter paper			
Design Code	only for information			
Micron Rating	<table border="1"> <tr> <td>10</td> <td>10 µm</td> </tr> </table> other micron ratings on request		10	10 µm
10	10 µm			

Flow Characteristics of Return Line Filters RFB022-052

The following characteristics are valid for mineral oils with a density of 0,85 kg/dm³ and the kinematic viscosity of 30 mm²/s. The characteristics have been determined in accordance to ISO 3968. Multipass filter ratings have been obtained in accordance to ISO 16889. Consult factory for details.

