

## Return Line Filters ■ Type RFA



### Product Description

STAUFF RFA Return Line Filters are a one piece design and can be used as a tank top or an in-line filter. They are mounted in the return line and if 100% of the system oil is filtered, provide the optimum removal of contaminant for the systems. This provides the pump with clean oil, thus reducing contaminant generated wear. 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 or in-line mounting

#### Materials

- Filter housing: Aluminium
- Sealings: NBR (Buna-N®)  
FPM (Viton®)  
EPDM (Ethylene Propylene Diene Monomer Rubber)  
Other sealing materials on request

#### Port Connection

- SAE O-ring thread

#### Operating Pressure

- Max. 25 bar / 365 PSI

#### Temperature Range

- -10°C ... +100°C / +14°F ... +212°F

#### Filter Elements

- Specifications see page C76

#### Media Compatibility

- Mineral oils, other fluids on request

### Options and Accessories

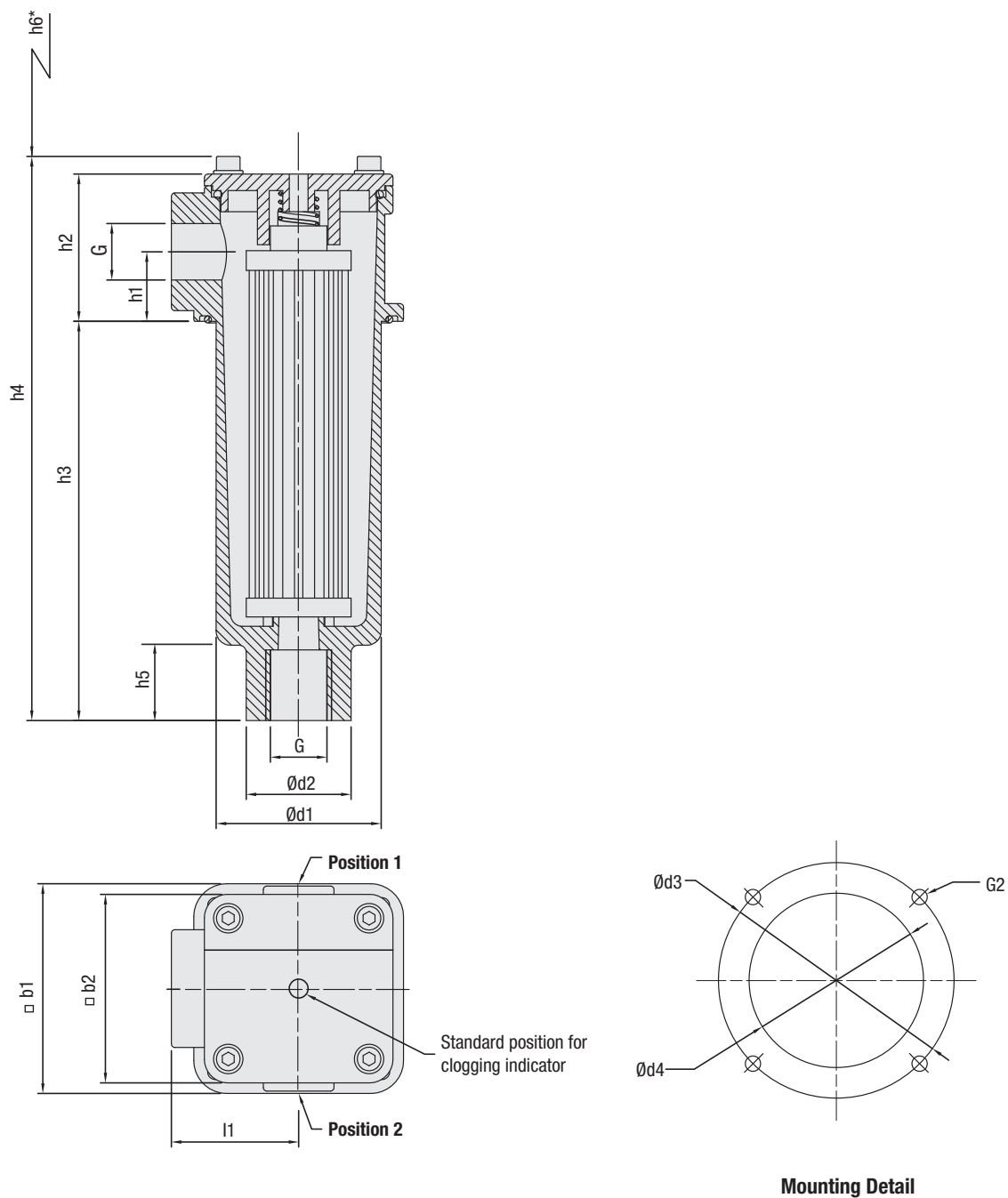
#### Valve

- Bypass valve (integrated in the filter element) Opening pressure 3 bar ± 0,3 bar / 43.5 PSI ± 4.35 PSI  
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 RFA030
SAE O-ring Thread U	1-1/16-12
SAE O-ring Thread U1	3/4-16

Dimensions (mm/in)	Filter Size RFA030
h1	25,5
	1.16
h2	62,5
	2.46
h3	169,5
	6.67
h4	239,5
	9.43
h5	32
	1.26
h6	210
	8.27
b1	89
	3.50
b2	80
	3.15
d1	70
	2.76
d2	44,5
	1.75
d3	100
	3.94
d4	74
	2.91
l1	54
	2.16
G2	M6 or 1/4 UNC

## Return Line Filter Housings / Complete Filters ■ Type RFA

**RFA** **030** ... **B** / **U** / **M** / **G** / **L1** / **X**

1 2 3 4 5 6 7 8 9 10

## 1 Type

Return Line Filter **RFA**

## 2 Group

**Flow** **Size**110 l/min / 30 US GPM **030**

Note: Exact flow will depend on filter element selected.

Consult technical data on pages C78.

## 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	<b>G</b>
Stainless fibre	30 bar / 435 PSI	10, 20	<b>A</b>
Filter paper	10 bar / 145 PSI	10, 20	<b>N</b>
Stainless mesh	30 bar / 435 PSI	25, 50, 100, 200	<b>S</b>

Note: \*Collapse/burst resistance as per ISO 2941.

Other materials on request.

## 4 Micron Rating

3 µm	<b>03</b>
5 µm	<b>05</b>
10 µm	<b>10</b>
20 µm	<b>20</b>
25 µm	<b>25</b>
50 µm	<b>50</b>
100 µm	<b>100</b>
200 µm	<b>200</b>

Note: Other micron ratings on request.

## 5 Sealing Material

NBR (Buna®)	<b>B</b>
FPM (Viton®)	<b>V</b>
EPDM	<b>E</b>

Note: Other sealing materials on request

## 6 Connection Style

Connection Style	Thread	Code
SAE-O-ring Thread	1-1/16-12	<b>U</b>
SAE-O-ring Thread	3/4-16	<b>U1</b>

## 7 Clogging Indicator

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

Note: \*Position of clogging indicator see page C74.

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

## 8 Outlet Style

Standard outlet (without thread)	<b>0</b>
Filter bowl with threaded outlet	<b>G</b>

## 9 Additional Features

	Position*	
Without leakage oil connection	-	<b>none</b>
Leakage oil connection	1 2	<b>L</b>

Note: \*Position of the leakage oil connection see page C74.

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

## 10 Design Code

Only for information	<b>X</b>
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## Filter Elements ■ Type RE

**RE** - **030** **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	<b>G</b>
Stainless fibre	30 bar / 435 PSI	10, 20	<b>A</b>
Filter paper	10 bar / 145 PSI	10, 20	<b>N</b>
Stainless mesh	30 bar / 435 PSI	25, 50, 100, 200	<b>B, S</b>

Note: \*Collapse/burst resistance as per ISO 2941.

Bold types identify preferred material.

Other materials on request.

## 4 Micron Rating

3 µm	<b>03</b>
5 µm	<b>05</b>
10 µm	<b>10</b>
20 µm	<b>20</b>
25 µm	<b>25</b>
50 µm	<b>50</b>
100 µm	<b>100</b>
200 µm	<b>200</b>

Note: Other micron ratings on request.

## 5 Sealing Material

NBR (Buna®)	<b>B</b>
FPM (Viton®)	<b>V</b>
EPDM	<b>E</b>

Note: Other sealing materials on request.

## 6 Design Code

Only for information	<b>X</b>
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## Return Line Filters ■ Type RFA

### 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

### 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. The one piece design also allows for inline applications.

### Leakage Oil Connection

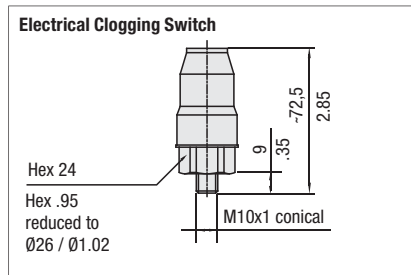
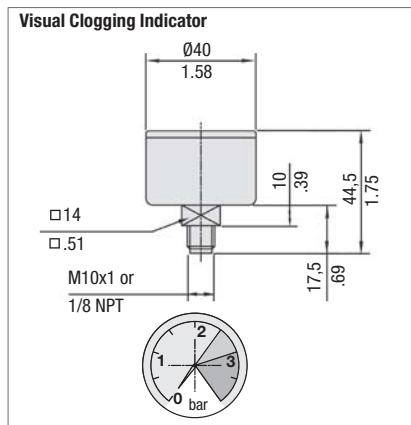
Seal or case drain lines can be connected to the filter through either of the clogging indicator ports providing that the leakage oil can accept a pressure of 3 bar / 43.5 PSI. It ensures that no unfiltered oil can return to the reservoir.

### Filter Bowl with Threaded Connection and Diffuser

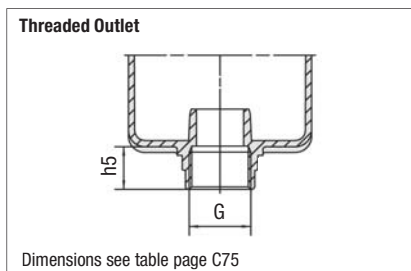
Diffusers mounted to the filter bowl minimise foaming and reduce noise of high return line flows. For further details on STAUFF Diffusers please refer to the "Hydraulic Accessories" section on page E36.

Attention: Connection pipe not included in scope of delivery!

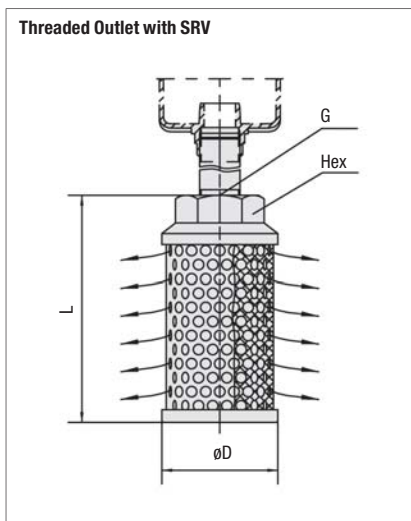
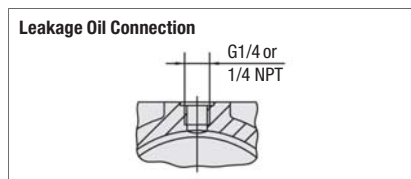
Size SRV	for Return Line Filter Size	Dimensions (mm/in)			
		øD	L	Thread G	Hex
SRV-114-B16	RFA030	60	139	G1	46
SRV-114-N16		2.36	5.47	1 NPT	1.81



Dimensions in mm/in



Dimensions see table page C75



## Return Line Filters ▪ Type RFA Flow Characteristics

The following characteristics are valid for mineral oils with a density of 0,85 kg/dm<sup>3</sup> and the kinematic viscosity of 30 mm<sup>2</sup>/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.

