

Return Line Filters ■ Type SRFL-S / D



Product Description

STAUFF Return Line Simplex Filters SRFL-S and Duplex Filters SRFL-D are designed for in-line hydraulic applications. With its compact construction and the easy to maintain assembly the SRFL-S and SRFL-D Filters are suitable for flow rates up to 7000 l/min / 1850 US GPM. The two housings of the Duplex Filter SRFL-D are connected with a special gate valve that is operated with a level or hand wheel. Therefore the filter may be serviced without shutting down the hydraulic system. A high efficiency of contaminant removal is assured by using STAUFF RE series 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

- In-line assembly, base mounted

Materials

- Filter housing: Carbon Steel
Stainless Steel (on request)
- Sealings: NBR (Buna-N®)
FPM (Viton®)
Other sealing materials on request

Port Connection

- DIN flange
- ANSI flange
- SAE flange

Operating Pressure

- Max. 14 bar / 200 PSI

Flow Rating

- Up to 7000 l/min / 1850 US GPM

Temperature Range

- 10°C ... +100°C / +14°F ... +212°F

Filter Elements

- Specifications see page C63

Media Compatibility

- Mineral oils, lubrication 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

- Differential pressure switch, setting 1,6 bar / 23 PSI
Other clogging indicators available on request

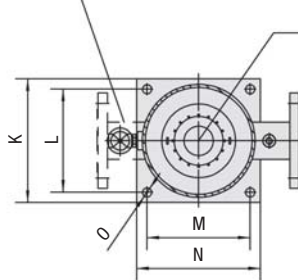
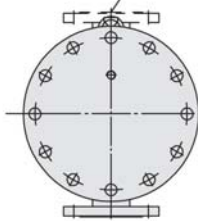
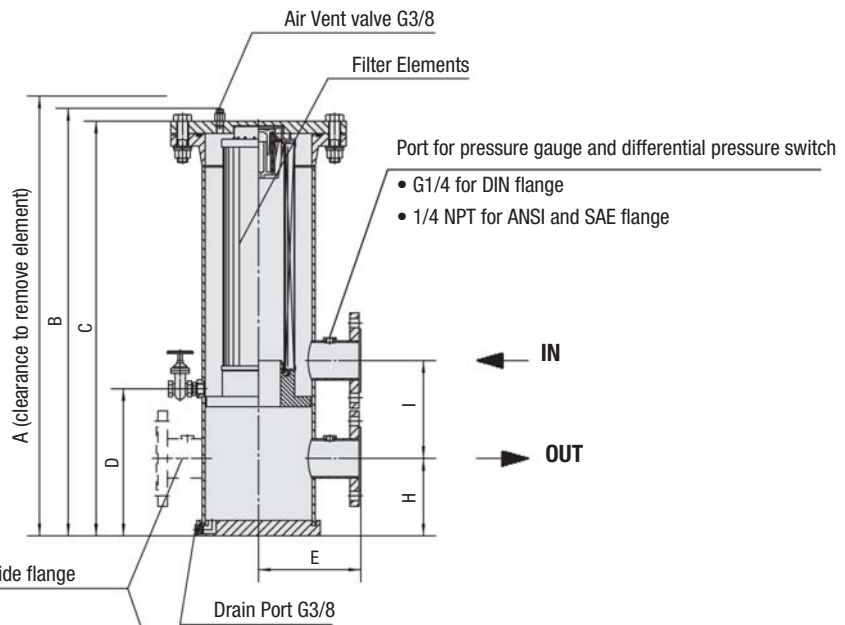
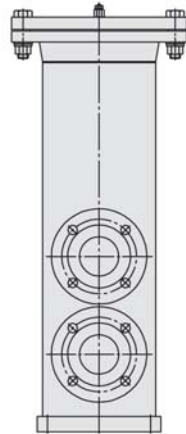
Filter Size	Flow l/min/ US GPM	Flange			Filter Element quantity		Arrangement of filter elements	Page
		DIN 2501	ANSI 16.5	SAE 3000 PSI	SRFL-S	SRFL-D		
SRFL-S/D-160	900/240	DN 40	1-1/2	1-1/2	1x RE-160	2x RE-160		C52/C56
SRFL-S/D-200	900/240	DN 50	2	2	1x RE-200	2x RE-200		
SRFL-S/D-300	1400/370	DN 65	2-1/2	2-1/2	1x RE-300	2x RE-300		
SRFL-S/D-600	1400/370	DN 80	3	3	1x RE-600	2x RE-600		
SRFL-S/D-1200	4000/1050	DN 100	4	4	2x RE-600	4x RE-600		C54/C58
SRFL-S/D-1800	4000/1050	DN 125	5	5	3x RE-600	6x RE-600		
SRFL-S/D-2400	6000/1580	DN 150	6	6	4x RE-600	8x RE-600		
SRFL-S/D-3600	7000/1850	DN 200	8	8	6x RE-600	12x RE-600		C54/C60

Return Line Filters ■ Type SRFL-S 160 / 200 / 300 / 600

Detail arrangement of filter elements



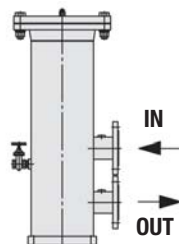
SRFL-S 160 / 200 / 300 / 600



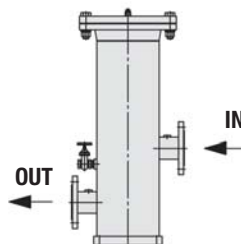
Arrangement of filter elements (see detail above)

Option: Connection location

S (same side)



O (opposite side)



Return Line Filters ■ Type SRFL-S 160 / 200 / 300 / 600

Flange Connection	Filter Size SRFL-S			
	160	200	300	600
DIN	DN 40	DN 50	DN 65	DN 80
ANSI	1-1/2	2	2-1/2	3
SAE	1-1/2	2	2-1/2	3

Dimensions (mm/in)	Filter Size SRFL-S			
	160	200	300	600
A	885,8	1045,8	1248,7	2126,7
	34.87	41.17	49.16	83.73
B	607,6	688,7	828,6	1267,6
	23.92	27.12	32.63	49.91
C	584	664	803,9	1242,9
	22.99	26.14	31.65	48.93
D	214	214	285	285
	8.43	8.43	11.22	11.22
E	148	148	198	198
	5.83	5.83	7.80	7.80
H	130	140	150	160
	5.12	5.51	5.91	6.30
I	155	190	190	220
	6.10	7.48	7.48	8.66
K	150	150	240	240
	5.91	5.91	9.45	9.45
L	125	125	200	200
	4.92	4.92	7.87	7.87
M	125	125	200	200
	4.92	4.92	7.87	7.87
N	150	150	240	240
	5.91	5.91	9.45	9.45
O	11	11	18	18
	.43	.43	.71	.71
Total Oil Capacity (l/gal)	6,0	7,1	22,2	37,1
	1.59	1.86	5.87	9.80
Weight (kg/lbs)	14,5	15,9	29	34,5
	32	35	64	76
Filter Elements	Designation	RE-160 ...	RE-200 ...	RE-300 ...
	Quantity	1 x 1	1 x 1	1 x 1

Return Line Filters ■ Type SRFL-S 1200 / 1800 / 2400 / 3600

Detail arrangement of filter elements



SRFL-S 1200



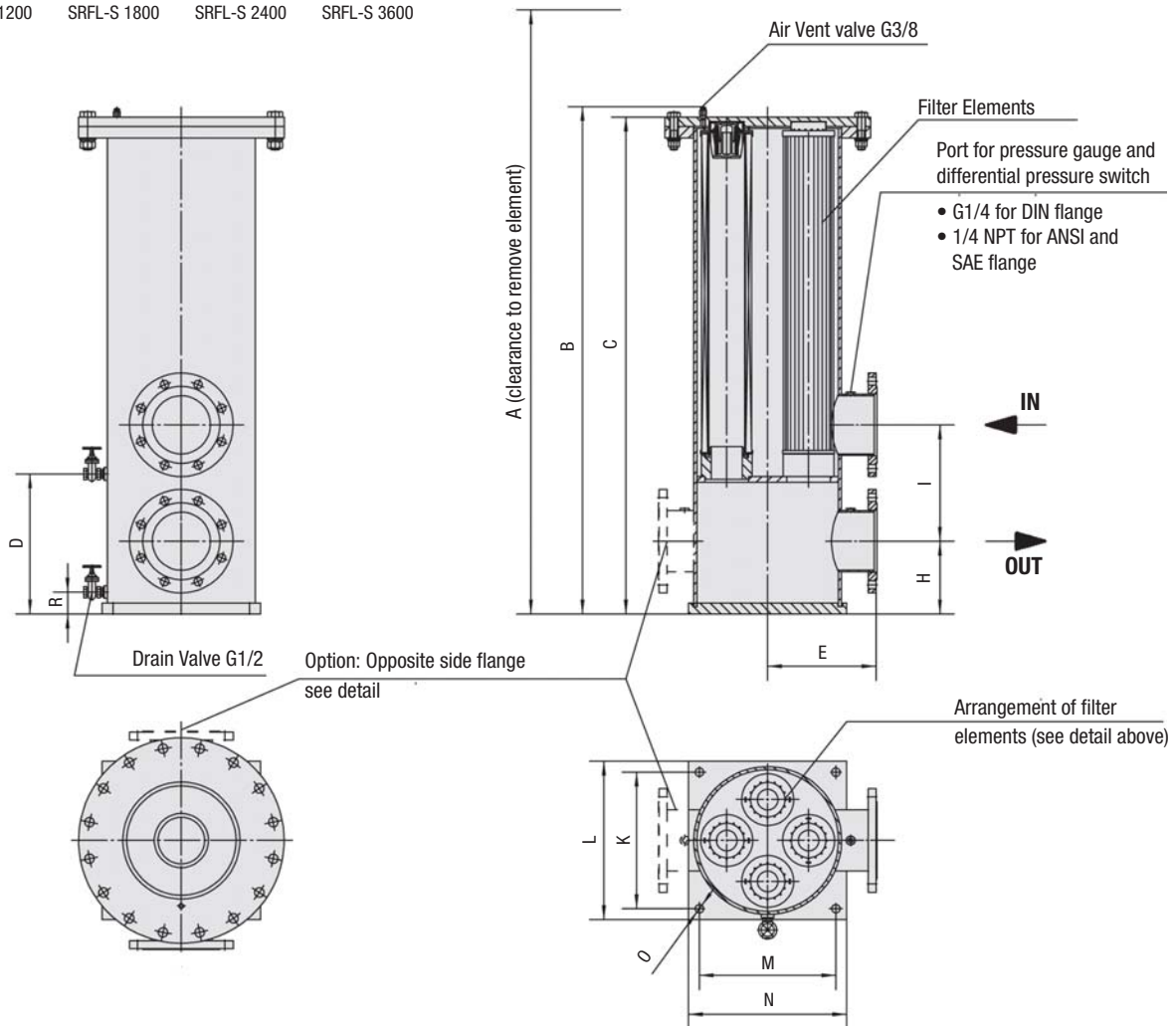
SRFL-S 1800



SRFL-S 2400

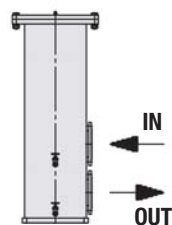


SRFL-S 3600

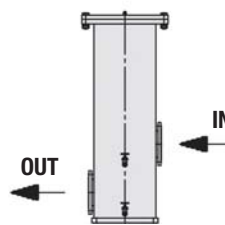


Option: Connection location

S (same side)



O (opposite side)



Return Line Filters ■ Type SRFL-S 1200 / 1800 / 2400 / 3600

Flange Connection	Filter Size SRFL-S			
	1200	1800	2400	3600
DIN	DN 100	DN 125	DN 150	DN 200
ANSI	4	5	6	8
SAE	4	5	6	8

Dimensions (mm/in)	Filter Size SRFL-S			
	1200	1800	2400	3600
A	2176,7	2176,7	2249,1	2249,1
	85.70	85.70	88.55	88.55
B	1319,6	1323,6	1394,8	1392,8
	51.96	52.11	54.92	54.84
C	1294,6	1294,9	1366,1	1368,1
	50.98	50.98	53.78	53.86
D	275	275	325	325
	10.83	10.83	12.80	12.80
E	273	273	298	398
	10.75	10.75	11.73	15.67
H	190	190	200	252
	7.48	7.48	7.87	9.92
I	250	280	320	425
	9.84	11.02	12.6	16.73
K	385	385	435	540
	15.16	15.16	17.13	21.26
L	325	325	375	480
	12.80	12.80	14.76	18.90
M	325	325	375	480
	12.80	12.80	14.76	18.90
N	385	385	435	540
	15.16	15.16	17.13	21.26
O	23	23	23	23
	.91	.91	.91	.91
R	60	60	60	60
	2.36	2.36	2.36	2.36
Total Oil Capacity (l/gal)	103	103	149	232
	27.21	27.21	39.37	61.30
Weight (kg/lbs)	86,2	90,7	105,2	154,2
	190	200	232	340
Filter Elements	Designation	RE-600 ...	RE-600 ...	RE-600 ...
	Quantity	1 x 2	1 x 3	1 x 4

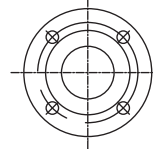
Return Line Filters ■ Type SRFL-D 160 / 200 / 300 / 600

Detail arrangement of filter elements

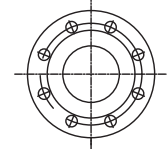


SRFL-D 160 / 200 / 300 / 600

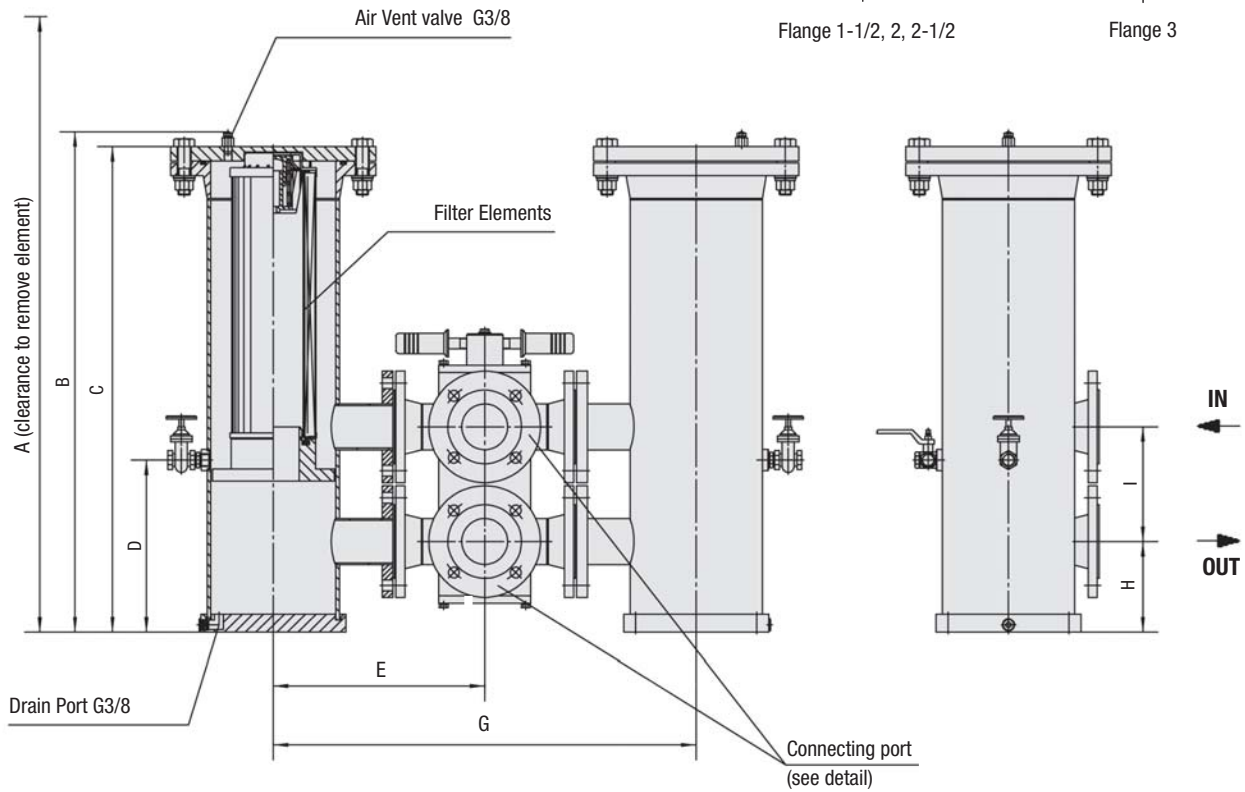
Detail connecting ports



Flange 1-1/2, 2, 2-1/2

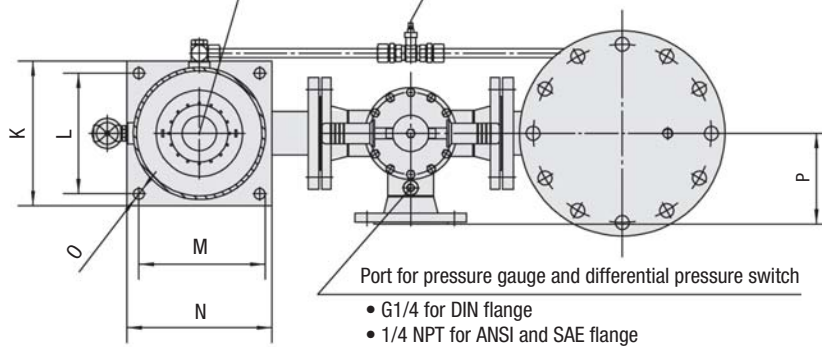


Flange 3



Arrangement of filter elements (see detail above)

Pressure tap
Balance line 1/2"



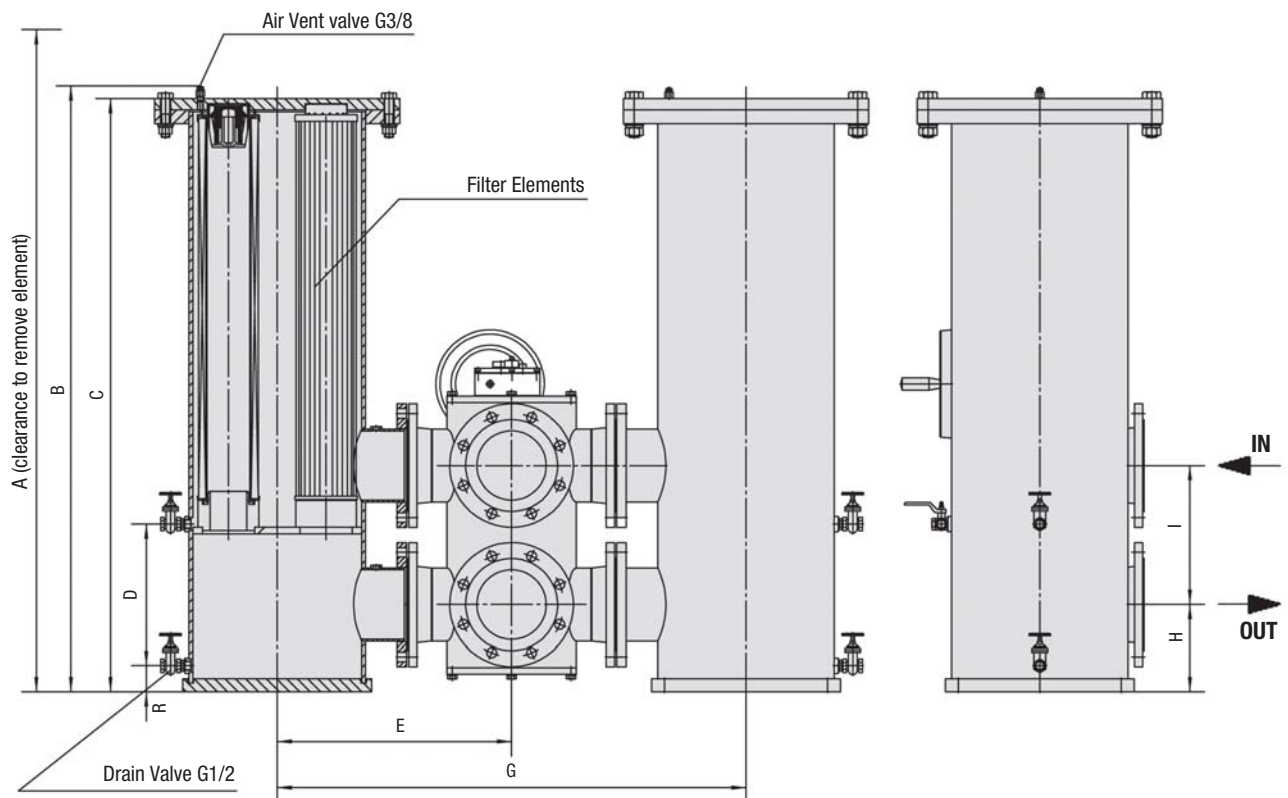
Return Line Filters ■ Type SRFL-D 160 / 200 / 300 / 600

Flange Connection	Filter Size SRFL-D			
	160	200	300	600
DIN	DN 40	DN 50	DN 65	DN 80
ANSI	1-1/2	2	2-1/2	3

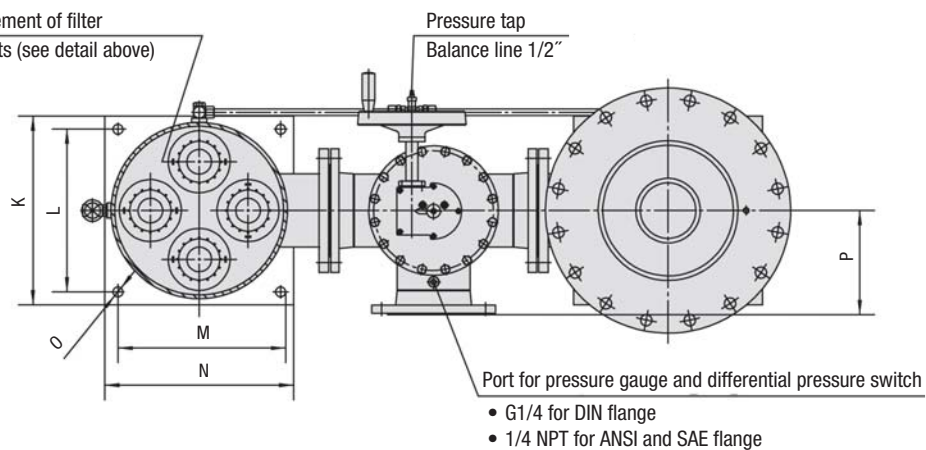
Dimensions (mm/in)		Filter Size SRFL-D			
		160	200	300	600
A		885,8	1045,8	1248,7	2126,7
		34.87	41.17	49.16	83.73
B		607,6	688,7	828,6	1267,6
		23.92	27.12	32.63	49.91
C		584	642	803,9	1242,9
		22.99	25.28	31.65	48.93
D		214	214	285	285
		8.43	8.43	11.22	11.22
E		260	300	350	375
		10.24	11.81	13.78	14.76
G		520	600	700	750
		20.47	23.62	27.56	29.53
H		130	140	150	160
		5.12	5.51	5.91	6.30
I		155	190	190	220
		6.10	7.48	7.48	8.66
K		150	150	240	240
		5.91	5.91	9.45	9.45
L		125	125	200	200
		4.92	4.92	7.87	7.87
M		125	125	200	200
		4.92	4.92	7.87	7.87
N		150	150	240	240
		5.91	5.91	9.45	9.45
O		11	11	18	18
		.43	.43	.71	.71
P		110	150	150	175
		4.33	5.91	5.91	6.89
Total Oil Capacity (l/gal)		6	7,1	22,2	37,1
		1.59	1.86	5.87	9.80
Weight (kg/lbs)		43	56,7	84	104
		95	125	185	230
Filter Elements	Designation	RE-160 ...	RE-200 ...	RE-300 ...	RE-600 ...
	Quantity	2 x 1	2 x 1	2 x 1	2 x 1

Return Line Filters ■ Type SRFL-D 1200 / 1800 / 2400

Detail arrangement of filter elements



Arrangement of filter elements (see detail above)



Return Line Filters ■ Type SRFL-D 1200 / 1800 / 2400

Flange Connection	Filter Size SRFL-D		
	1200	1800	2400
DIN	DN 100	DN 125	DN 150
ANSI	4	5	6

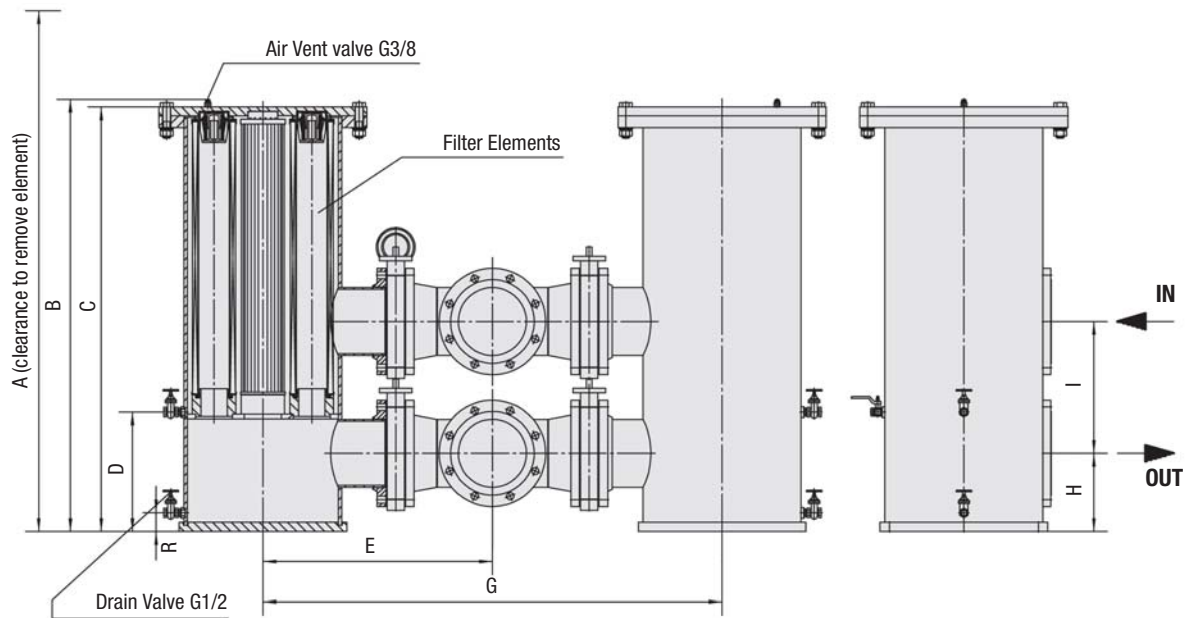
Dimensions (mm/in)	Filter Size SRFL-D		
	1200	1800	2400
A	2176,7	2176,7	2249,1
	85.70	85.70	88.55
B	1319,6	1323,6	1394,8
	51.96	52.11	54.92
C	1294,9	1294,9	1366,1
	50.98	50.98	53.78
D	275	275	325
	10.83	10.83	12.80
E	475	500	540
	18.70	19.69	21.26
G	950	1000	1080
	37.40	39.37	42.52
H	190	190	200
	7.48	7.48	7.87
I	250	280	320
	9.84	11.02	12.60
K	385	385	435
	15.16	15.16	17.13
L	325	325	375
	12.80	12.80	14.76
M	325	325	375
	12.80	12.80	14.76
N	385	385	435
	15.16	15.16	17.13
O	23	23	23
	.91	.91	.91
P	200	225	240
	7.87	8.86	9.45
R	60	60	60
	2.36	2.36	2.36
Total Oil Capacity (l/gal)	103	103	149
	27.20	27.20	39.30
Weight (kg/lbs)	215	233	263
	475	515	580
Filter Elements	Designation	RE-600 ...	RE-600 ...
	Quantity	2 x 2	2 x 4

Return Line Filters ■ Type SRFL-D 3600

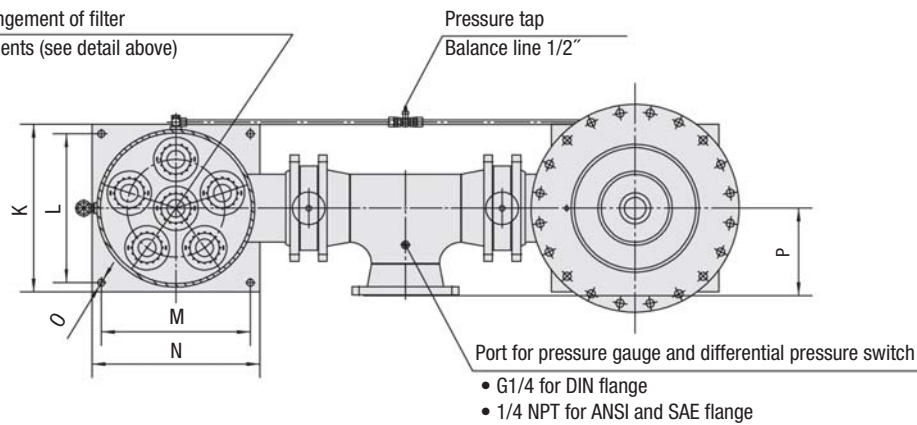
Detail arrangement of filter elements



SRFL-D 3600



Arrangement of filter elements (see detail above)



Return Line Filters ■ Type SRFL-D 3600

Flange Connection	Filter Size SRFL-D
	3600
DIN	DN 200
ANSI	8

Dimensions (mm/in)	Filter Size SRFL-D
	3600
A	2249,1 88.55
B	1392,8 54.84
C	1368,1 53.86
D	325 12.80
E	739 29.11
G	1479 58.22
H	252 9.92
I	425 16.73
K	540 21.26
L	480 18.90
M	480 18.90
N	540 21.26
O	23 .91
P	281,4 11.08
R	60 2.36
Total Oil Capacity (l/gal)	233 61.3
Weight (kg/lbs)	390 860
Filter Elements	Designation
	Quantity
	RE-600 ... 2 x 6

Return Line Filter Housings / Complete Filters ■ Type SRFL-S / D

SRFL - D - 160 B / A / 0 / CS / D / X

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1 Type

Return Line Simplex Housing	SRFL-S
Return Line Duplex Housing	SRFL-D

2 Group

Flow	Size
900 l/min / 240 US GPM	160
900 l/min / 240 US GPM	200
1400 l/min / 370 US GPM	300
1400 l/min / 370 US GPM	600
4000 l/min / 1050 US GPM	1200
4000 l/min / 1050 US GPM	1800
6000 l/min / 1580 US GPM	2400
7000 l/min / 1850 US GPM	3600

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	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

Note: Other sealing materials on request.

6 Connection Style

Connection Style	Group								Code
	160	200	300	600	1200	1800	2400	3600	
DIN Flange	DN 40	DN 50	DN 65	DN 80	DN 100	DN 125	DN 150	DN 200	D
ANSI Flange	1-1/2	2	2-1/2	3	4	5	6	8	A
SAE Flange	1-1/2	2	2-1/2	3	4	5	6	8	S

Note: SAE flange is not available for SRFL-D.

7 Connection Location

Opposite side*	0
Same side	S

* Note: Omit for SRFL-D series

8 Housing Material

Carbon Steel	CS
Stainless Steel	SS

9 Clogging Indicator

Without Clogging Indicator	0
Differential Pressure Switch with Visual Gauge Indicator	D

Note: Other indicators on request.

10 Design Code

Only for information	X
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Filter Elements ■ Type RE

RE - 160 G 10 B / X

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1 Type

Filter Element Series	RE
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2 Group

Designation	Filter Element Quantity		Size
	SRFL-S	SRFL-D	
RE-160	1x1	2x1	160
RE-200	1x1	2x1	200
RE-300	1x1	2x1	300
RE-600	1x1	2x1	600
RE-600	1x2	2x2	1200
RE-600	1x3	2x3	1800
RE-600	1x4	2x4	2400
RE-600	1x6	2x6	3600

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

Note: Other sealing materials on request

6 Design Code

Only for information	X
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Return Line Filters ■ Type SRFL-S / D

Filter Elements and Clogging Indicator

Product Description

STAUFF Replacement Filter Elements for SRFL-S and SRFL-D Series Filters are manufactured in the common filter materials such as Stainless Fibre, Stainless Mesh, Cellulose and Inorganic Glass Fibre. As standard all Replacement Elements series RE have tin plated steel parts for use with aggressive media such as water glycol, upon request you also can get other materials. All Replacement Elements made by STAUFF comply with quality specifications in accordance with international standards.



Order Code

RE - 160 G 10 B / X

1 2 3 4 5 6

1 Type

Filter Element Series **RE**

2 Group

According to filter housing

Note: See order code page C62.

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**

Note: Other sealing materials on request.

6 Design Code

Only for information **X**

Differential Pressure Switch with Visual Gauge Indicator

The switch is used to indicate when the elements need changing. The switch can turn on a light, shut down the machine or any further function controlled by an electrical signal. The gauge visually indicates the differential pressure across the filter elements.



Diameter

- 100 mm / 3.94 in

Scale

- 0 ... 1,6 kg/cm²

Connection Thread

- G1/4

Operating Pressure

- Max. 200 bar / 2900 PSI

Temperature Range

- 20 °C ... +80 °C / -4 °F ... +176 °F

Materials

- Body: Aluminium
- Lens: Glass
- Sealing Material: NBR (Buna-N®)
FPM (Viton®)

Protection Rating

- IP 65: Dust tight and protected against water jets.

Switch Voltage

- Max. 28 V AC/DC

Current On Contact

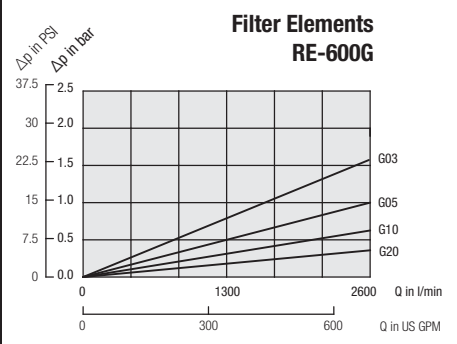
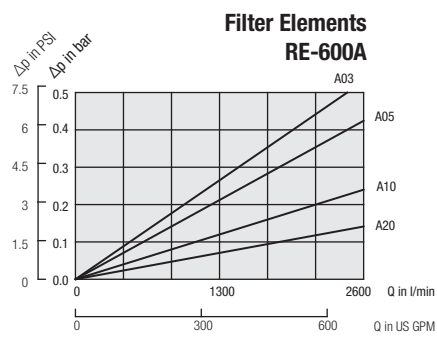
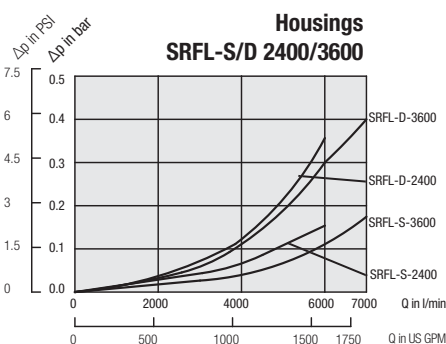
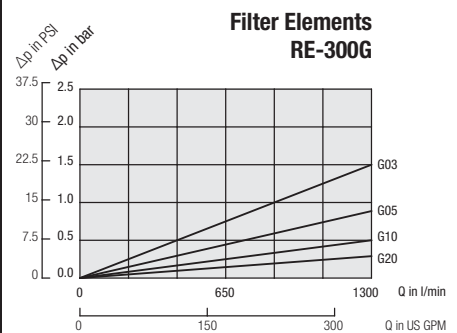
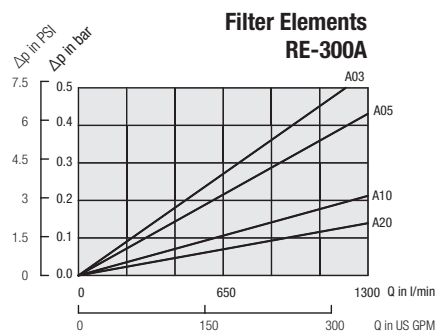
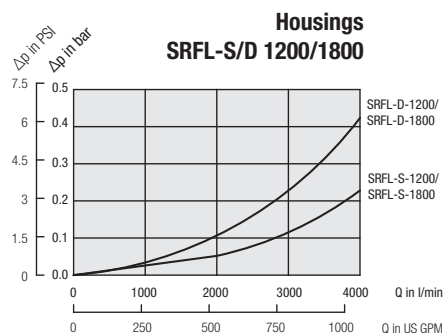
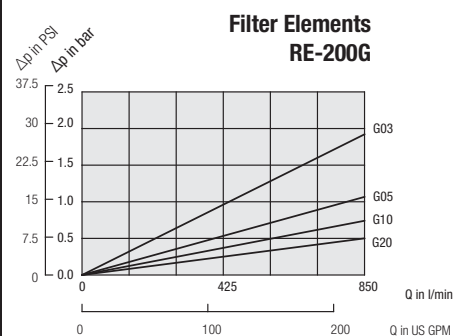
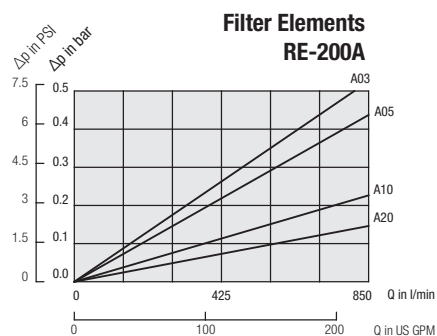
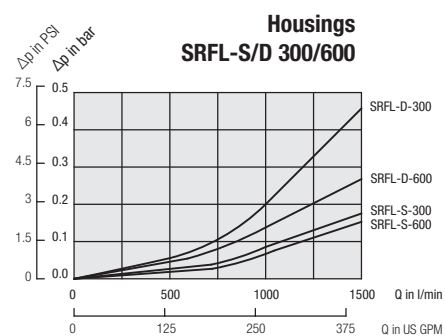
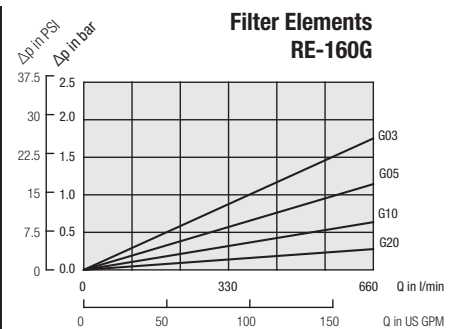
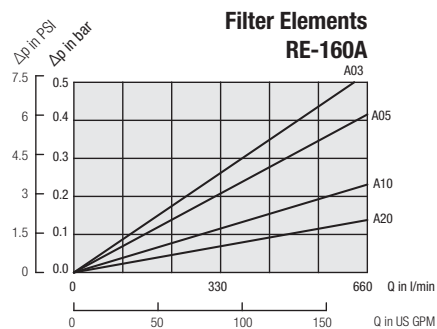
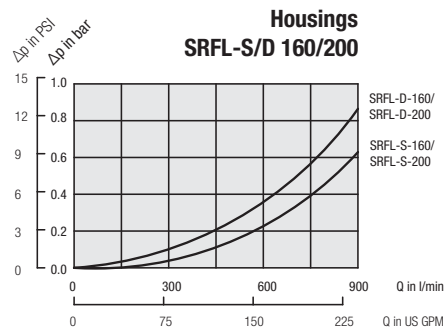
- Max. 0,25 A

Contact Rating

- 5 VA AC/DC

Return Line Filters ■ Type SRFL-S / D Flow Characteristics

The following characteristics are valid for mineral oils with a density of 0,85 kg/dm³ and the kinematic viscosity of 30 mm²/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.



Pressure drop of housing including filter elements

General: $\Delta p_{\text{total}} = \Delta p_{\text{housing}} + \Delta p_{\text{Elem}} \times (\text{operating viscosity [mm}^2\text{/s]} / 30\text{mm}^2\text{/s})$

with $\Delta p_{\text{housing}} =$ See diagrams above

$\Delta p_{\text{Elem}} =$ pressure drop of element at a flow Q/n (at a viscosity of 30 mm²/s and n = numbers of elements as listed in ordering code filter elements see page C58 and diagrams above.)

Example

Data given $Q_{\text{max}} = 6000 \text{ l/min} / 1585 \text{ US GPM}$, SRFL-D-2400 with filter elements RE-600S25B;
operating viscosity = 100 mm²/s
 $Q_{\text{max}} = 6000 \text{ l/min}$; n=4 elements (SRFL-D-2400) $Q/n = 1500 \text{ l/min} / 396 \text{ gal}$
 $\Delta p_{\text{housing}} = 0,35 \text{ bar} / 5.07 \text{ PSI}$, $\Delta p_{\text{Elem}} = 0,03 \text{ bar} / 0.44 \text{ PSI}$

Pressure drop: $\Delta p_{\text{total}} = 0,35 \text{ bar} + 0,03 \text{ bar} \times (100 \text{ mm}^2\text{/s} / 30\text{mm}^2\text{/s})$
 $= 0,45 \text{ bar} / 6.53 \text{ PSI}$

