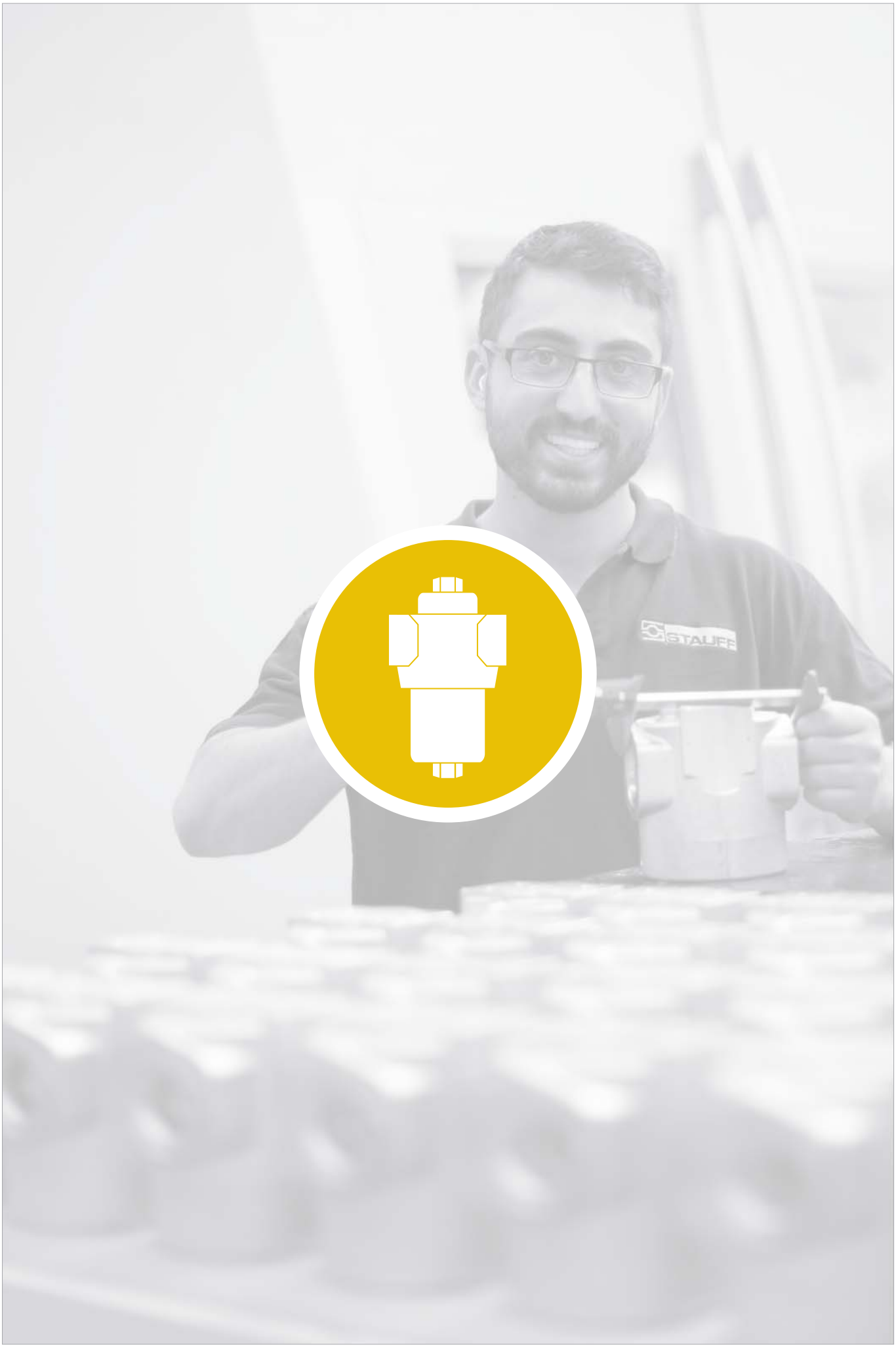


Overview Pressure Filters 36

SF / SF-TM / SFA / SFZ / SMPF



High Pressure Filters (Inline) **SF** 37 - 40
Max. 420 bar / 6000 PSI
Max. 1135 l/min / 300 US GPM

Technical Data / Dimensions 38 - 39

Order Code - High Pressure Filter 40

Order Code - Filter Elements 40



High Pressure Filters (Top-mounted) **SF-TM** 41 - 44
Max. 315 bar / 4560 PSI
Max. 1135 l/min / 300 US GPM

Technical Data / Dimensions 42 - 43

Order Code - High Pressure Filter 44

Order Code - Filter Elements 44



High Pressure Filters (Sandwich) **SFZ** 45 - 48
Max. 315 bar / 4560 PSI
Max. 30 l/min / 8 US GPM

Technical Data / Dimensions 46 - 47

Order Code - High Pressure Filter 48

Order Code - Filter Elements 48



Medium Pressure Filters (Inline) **SFA** 49 - 52
Max. 160 bar / 2320 PSI
Max. 240 l/min / 70 US GPM

Technical Data / Dimensions 50 - 51

Order Code - Medium Pressure Filter 52

Order Code - Filter Elements 52

Valves (for SF / SF-TM / SFA / SFZ) 53

HV

Clogging Indicators (for SF / SF-TM / SFA / SFZ) 54 - 55

HI

Flow Characteristics 56 - 58

SF / SF-TM / SFA / SFZ



Medium Pressure Filters (Inline) **SMPF** 59 - 62
Max. 110 bar / 1600 PSI
Max. 90 l/min / 25 US GPM

Technical Data / Dimensions 60 - 61

Order Code - Medium Pressure Filter 62

Order Code - Filter Elements 62

Clogging Indicators 63

HIM

Flow Characteristics 64

SMPF

Checklist for the selection of filter housings 65

C

C

Description

STAUFF Pressure Filters were designed for in-line mounting in hydraulic and lubrication systems. They are placed behind the pump and clean the hydraulic oil before it flows through down-stream components like valves, cylinders and so on. The main reason for pressure filtration is the protection of downstream, sensitive components. Eroded particles from the pump are immediately filtered out of the hydraulic oil. Besides working as a protection filter, Pressure Filters also help to maintain the required purity class.

Because it is placed right behind the pump, a Pressure Filter has to withstand the maximum system pressure. The filter element in the Pressure Filter also has to withstand the loads and is more intricately constructed, for example as a Return-Line filters element.

STAUFF Pressure Filters are available in many different sizes, connections and configurations.

Media Compatibility

- Mineral oils, other fluids on request

Options and Accessories

Valve

- Also available with bypass, reverse flow, non-return or multi-function valve

Clogging Indicator

- On request with visual, electrical or visual-electrical differential pressure indicator



Type SF

- High Pressure Filter designed for in-line assembly
- Threaded mounting holes on top and fluid ports on side of head
- Also available as toploader, with bowl in two-part style

- Operating pressure: max. 420 bar / 6000 PSI
- Nominal flow rate: max. 1135 l/min / 300 US GPM
- Materials: Filter head: Spheroidal Graphite Cast Iron, Filter bowl: Cold Drawn Steel
- Connections: option of BSP, NPT, SAE thread or SAE flange (ISO 6162-1/2)



Type SFA

- Medium Pressure Filter designed for in-line assembly
- Threaded mounting holes on top and fluid ports on side of head
- Low weight and compact design

- Operating pressure: max. 160 bar / 2320 PSI
- Nominal flow rate: max. 240 l/min / 70 US GPM
- Materials: Filter head: Cast Aluminium, Filter bowl: Aluminium
- Connections: option of BSP, NPT, SAE-thread or SAE flange (ISO 6162-1)



Type SF-TM

- High Pressure Filter designed for manifold mounting
- Mounting holes and fluid ports on top of head
- Also available as toploader, with bowl in two-part style

- Operating pressure: max. 315 bar / 4560 PSI
- Nominal flow rate: max. 1135 l/min / 300 US GPM
- Materials: Filter head: Spheroidal Graphite Cast Iron or rather Free Cutting Steel, Filter bowl: Cold Drawn Steel



Type SMPF

- Medium Pressure Filter designed for in-line assembly

- Operating pressure: max. 110 bar / 1600 PSI
- Nominal flow rate: max. 90 l/min / 25 US GPM
- Materials: Filter head and bowl: Aluminium
- Connections: BSP, SAE-thread

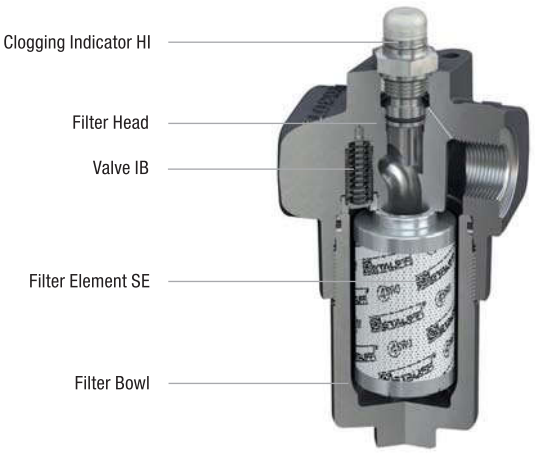


Type SFZ

- High Pressure Filter designed for sandwich plate mounting
- Available as right or left version

- Operating pressure: max. 315 bar / 4560 PSI
- Nominal flow rate: max. 30 l/min / 8 US GPM
- Materials: Filter head: Free Cutting Steel, Filter bowl: Cold Drawn Steel

High Pressure Filters ▪ Type SF



C

Product Description

STAUFF SF series High Pressure Filters are designed for in-line hydraulic applications, with a maximum operating pressure of 420 bar / 6000 PSI. Used together with STAUFF SE series Filter Elements, a high efficiency of contaminant removal is assured. The high dirt-hold capacity of the elements ensures long service life and, as a result, reduced maintenance costs.

Technical Data

Construction
- Designed for in-line assembly, with threaded mounting holes on top of the head.

Materials
- Filter head: Spheroidal Graphite Cast Iron
- Filter bowl: Cold Drawn Steel
- O-rings: NBR (Buna-N®)
  FKM (Viton®)
  EPDM (Ethylene-Propylene-Diene-Monomer-Rubber)
- Support ring: PTFE (Polytetrafluoroethylene)

Port Connections
- BSP
- NPT
- SAE O-ring thread
- SAE 3000 PSI (Code 61) flange
- SAE 6000 PSI (Code 62) flange

Other port connections available on request.

Operating Pressure
- Max. 420 bar / 6000 PSI

Burst Pressure
- Min. 1260 bar / 18275 PSI

Temperature Range
- -20 °C ... +100 °C / -44 °F ... +212 °F
  (Short term up to +110°C / +230 °F)

Filter Elements
- Specifications see page 40

Media Compatibility
- Mineral oils, other fluids on request

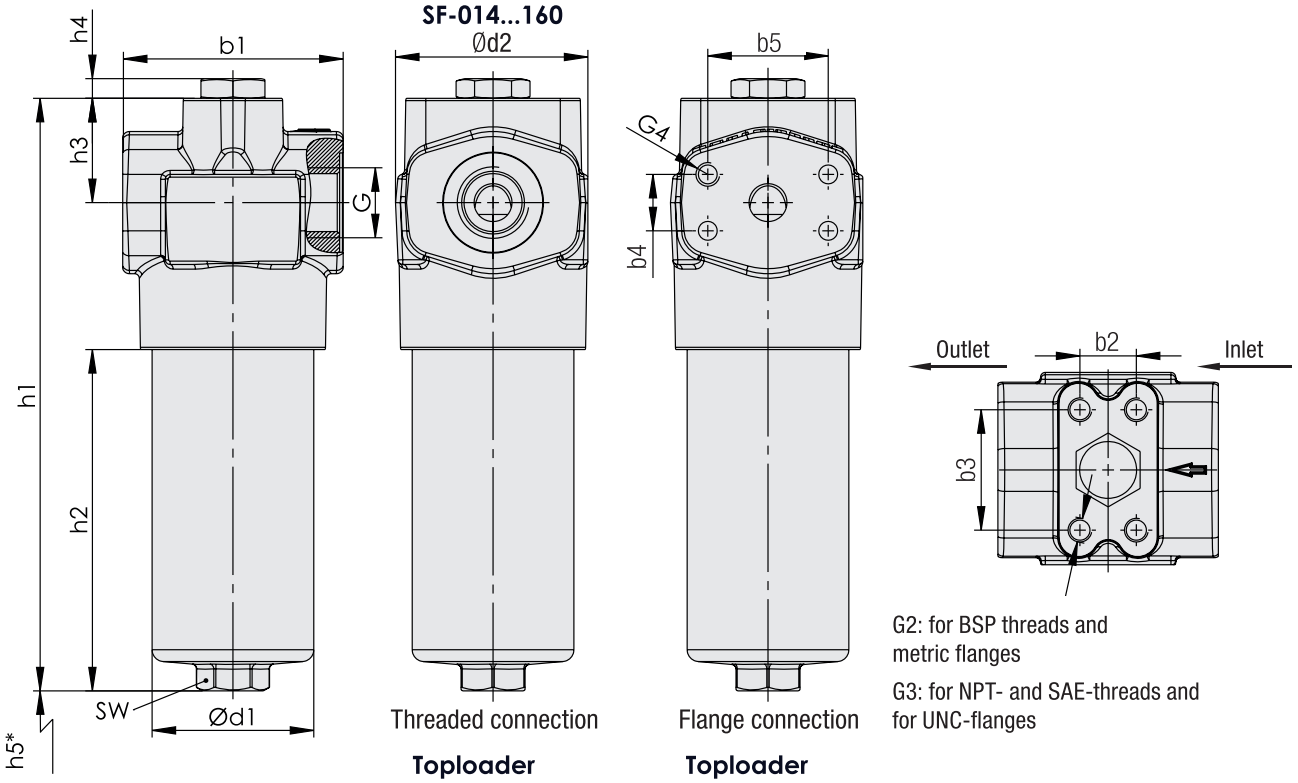
Options and Accessories

Valves
- Bypass valve: Allows unfiltered oil to bypass the contaminated element once the opening pressure has been reached, a differential pressure of $6^{+0,5}$ bar / $87^{+7.25}$ PSI Δp is the standard setting. Other settings available upon request.
- Reverse flow valve: Allows reverse flow through the filter head without backflushing the element.
- Non-return valve: Prevents draining of the delivery line during element change.
- Multi-function valve: Opening pressure $6^{+0,5}$ bar / $87^{+7.25}$ PSI
  Bypass, reverse flow capability and non-return valve combined in one valve.

Clogging Indicators
- Standard actuating pressure: $5_{-0,5}$ bar / $72.5_{-7.25}$ PSI Δp
  Other actuating pressure settings are available upon request.
- Available indicators: Visual
  Electrical
  Visual-electrical (24 V DC, 110 V AC, 230 V AC versions)
  Double Visual-electrical (24 V DC)

High Pressure Filters ▪ Type SF

C



* recommended space for element change

High Pressure Filters ▪ Type SF

Thread Connection G	Filter Size SF									
	014	030	045	070	125	090	130	160	250	300
BSP	3/4	3/4	1-1/4	1-1/4	1-1/4	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2
NPT	3/4	3/4	1-1/4	1-1/4	1-1/4	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2
SAE O-ring Thread	1-1/16–12	1-1/16–12	1-5/8–12	1-5/8–12	1-5/8–12	1-7/8–12	1-7/8–12	1-7/8–12	1-7/8–12	1-7/8–12
SAE Flange 3000 PSI	3/4	3/4	1-1/4	1-1/4	1-1/4	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2
SAE Flange 6000 PSI	3/4	3/4	1-1/4	1-1/4	1-1/4	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2
Weight (kg/lbs) incl. Elements with Filter Bowl in One-Part Style	5	5,9	10,3	12	-	26,4	30,2	34,9	-	-
	11	13	22.7	26.5	-	58.2	66.6	76,9	-	-
Weight (kg/lbs) incl. Elements with Filter Bowl in Two-Part Style	5,6	6,6	12,2	13,7	20	31,4	-	38,7	48,4	56,7
	12.3	14.6	26.9	30.2	44.1	69.2	-	85.3	106.7	125

Dimensions (mm/in)		Filter Size SF									
		014	030	045	070	125	090	130	160	250	300
b1		93	93	126	126	126	160	160	160	160	160
		3.66	3.66	4.96	4.96	4.96	6.29	6.29	6.29	6.29	6.29
d2		81	81	120	120	120	156	156	156	156	156
		3.19	3.19	4.72	4.72	4.72	6.14	6.14	6.14	6.14	6.14
h3		44	44	44,5	44,5	44,5	66,5	66,5	66,5	66,5	66,5
		1.73	1.73	1.75	1.75	1.75	2.62	2.62	2.62	2.62	2.62
h4		12,5	12,5	12,5	12,5	12,5	12,5	12,5	12,5	12,5	12,5
		.49	.49	.49	.49	.49	.49	.49	.49	.49	.49
with Filter Bowl in One-Part Style Type SF	d1	68	68	95	95	-	130	130	130	130	130
		2.68	2.68	3.74	3.74	-	5.12	5.12	5.12	5.12	5.12
	h1	184	250	233,5	292	-	317,5	411	488,5	-	-
		7.24	9.84	9.19	11.51	-	12.5	16.18	19.23	-	-
	h2	78	144	102,5	161,5	-	148	241,5	319	-	-
		3.07	5.67	4.03	6.35	-	5.83	9.5	12.56	-	-
	h5 rec.*	100	170	140	200	-	190	290	360	-	-
		3.94	6.69	5.51	7.87	-	7.48	11,42	14.17	-	-
	h5 min.*	85	85	120	120	-	150	150	150	-	-
		3.35	3.35	4.72	4.72	-	5.91	5.91	5.91	-	-
	Hex	27	27	32	32	-	36	36	36	36	36
		1.06	1.06	1.26	1.26	-	1.42	1.42	1.42	1.42	1.42
with Filter Bowl in Two-Part Style Type SF...TL	d1	70	70	101,6	101,6	101,6	133	-	133	133	133
		2.76	2.76	4	4	4	5.24	-	5.24	5.24	5.24
	d3	84	84	115	115	115	155	-	155	155	155
		3.31	3.31	4.53	4.53	4.53	6.10	-	6.10	6.10	6.10
	h5	65	130	100	160	340	120	-	290	425	590
		2.56	5.12	3.94	6.30	13.39	4.72	-	11.42	16.73	23.23
	h6	184	250	234	294	475	332	-	503	659	824
		7.27	9.84	9.21	11.57	18.7	13.1	-	19.8	25.9	32.4
	h7	78	144	103	163	344	154,5	-	325,5	481,5	646,5
		3.07	5.67	4.06	6.42	13.54	6.08	-	12.82	18.96	25.45
	Hex	27	27	32	32	32	36	-	36	36	36
		1.06	1.06	1.26	1.26	1.26	1.42	-	1.42	1.42	1.42
Dimensions SAE Flange 3000 PSI	b4	22,3	22,3	30,2	30,2	30,2	35,7	35,7	35,7	35,7	35,7
		.88	.88	1.19	1.19	1.19	1.41	1.41	1.41	1.41	1.41
	b5	47,6	47,6	58,7	58,7	58,7	69,9	69,9	69,9	69,9	69,9
		1.19	1.19	2.32	2.32	2.32	2.75	2.75	2.75	2.75	2.75
	G4	M10 x 15	M10 x 15	M10 x 18			M12 x 20				
		3/8–16 UNC	3/8–16 UNC	7/16–14 UNC			1/2–13 UNC				
Dimensions SAE Flange 6000 PSI	b4	23,8	23,8	31,8	31,8	31,8	36,5	36,5	36,7	36,7	36,7
		.94	.94	1.25	1.25	1.25	1.44	1.44	1.45	1.45	1.45
	b5	50,8	50,8	66,6	66,6	66,6	79,3	79,3	79,4	79,4	79,4
		2.00	2.00	2.62	2.62	2.62	3.12	3.12	3.13	3.13	3.13
	G4	M10 x 15		M14 x 17			M16 x 20				
		3/8–16 UNC		1/2–13 UNC			5/8–11 UNC				

Reference: rec.*: Recommended | min.*: Minimum

Dimensions (mm/in)		Filter Size SF									
		014	030	045	070	125	090	130	160	250	300
T	b2	23,8	23,8	31,6	31,6	31,6	36,7	36,7	36,7	36,7	36,7
		.94	.94	1.24	1.24	1.24	1.45	1.45	1.45	1.45	1.45
	b3	50,8	50,8	66,7	66,7	66,7	79,4	79,4	79,4	79,4	79,4
		2.00	2.00	2.63	2.63	2.63	3.13	3.13	3.13	3.13	3.13
	G2	M10 x 15		M14 x 17			M16 x 20				
	G3	3/8–16 UNC x .59		1/2–13 UNC x .79			5/8–11 UNC x .79				
TH (optional)	b2	32	32	35	35	35	60	60	60	60	60
		1.26	1.26	1.38	1.38	1.38	2.36	2.36	2.36	2.36	2.36
	b3	56	56	85	85	85	115	115	115	115	115
		2.20	2.20	3.35	3.35	3.35	4.53	4.53	4.53	4.53	4.53
	G2	M6 x 9		M10 x 15			M12 x 20				
	G3	1/2–28 UNF x .35		3/8–24 UNF x .59			1/2–20 UNF x .79				

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High Pressure Filter Housings / Complete Filters ▪ Type SF

SF	-	014	-	G	-	10	-	B	-	T	-	G12	-	IB	-	P	T	230	-	TL	/	X
①		②		③		④		⑤		⑥		⑦		⑧		⑨	⑩	⑪		⑫		⑬

① Type

High Pressure Filter	**SF**

② Group

Flow	Size
60 l/min / 14 US GPM	**014**
110 l/min / 30 US GPM	**030**
160 l/min / 45 US GPM	**045**
240 l/min / 70 US GPM	**070**
330 l/min / 90 US GPM	**090**
475 l/min / 125 US GPM	**125**
500 l/min / 132 US GPM	**130**
660 l/min / 160 US GPM	**160**
990 l/min / 250 US GPM	**250**
1135 l/min / 300 US GPM	**300**

Note: Exact flow will depend on the selected filter element. For technical data please see pages 57 / 58.

③ Filter Material

Material	max. Δp*collapse	Micron ratings available	Code
Without filter element	-	-	**0**
Inorg. glass fibre	25 bar / 363 PSI	3, 5, 10, 20	**G**
Inorg. glass fibre	210 bar / 3045 PSI		**H**
Stainless fibre	210 bar / 3045 PSI		**A**
Stainless mesh	30 bar / 435 PSI	25, 50, 100, 200	**S**

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

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-N®)	**B**
FKM (Viton®)	**V**
EPDM	**E**

Note: Other sealing materials on request.

⑥ Connecting Flange

Type T	**T**
Type TH (optional)	TH

⑦ Connection Style

Connection Style	Thread Style	Group 014 030	Code	Group 045 070 125	Code	Group 090 130 160 250 300	Code
BSP	-	3/4	**G12**	1-1/4	**G20**	1-1/2	**G24**
BSP	-	1	G16	1-1/2	G24	-	-
NPT	-	3/4	**N12**	1-1/4	**N20**	1-1/2	**N24**
SAE O-ring Thread	-	1-1/16–12	**U12**	1-5/8–12	**U20**	1-7/8–12	**U24**
SAE Flange 6000 PSI	metric	3/4	C612M	1-1/4	C620M	1-1/2	C624M
SAE Flange 6000 PSI	UNC	3/4	**C612U**	1-1/4	**C620U**	1-1/2	**C624U**
SAE Flange 3000 PSI	metric	3/4	C312M	1-1/4	C320M	1-1/2	C324M
SAE Flange 3000 PSI	UNC	3/4	C312U	1-1/4	C320U	1-1/2	C324U
SAE Flange 3000 PSI	metric	1	C316M	-	-	2	C332M
SAE Flange 3000 PSI	UNC	1	C316U	-	-	2	C332U
SAE-Flange 6000 PSI	metric	-	-	-	-	2	C632M
SAE-Flange 6000 PSI	UNC	-	-	-	-	2	C632U

Note: Other port connections on request. Bold types identify preferred connection styles.

⑧ Valve

Without integrated Bypass valve	**I0**
Without valve	**0**
Integrated Bypass valve	**IB**
Bypass valve	**B**
Reverse flow valve	**R**
Non-return valve	**N**
Multi-function valve	**M**

⑨ Clogging Indicator

Without clogging indicator	**0**
Visual, with automatic reset	**A**
Visual, with manual reset	**V**
Electrical	**E**
Electrical, Deutsch plug	**ED**
Visual-electrical	**P**
Double Visual-electrical	**D024**

⑩ Thermostop

Without thermostop	**none**
With thermostop	**T**

⑪ Voltage (only for Code P)

24 V DC	**024**
110 V AC	**110**
230 V AC	**230**

⑫ Style Filter Bowl

With bowl in one-part style	**none**
Toploader, with bowl in two-part style	**TL**

Note: Group size SF-250 and SF-300 only available in TL-version.
With drain plug available on request.
Group size SF-130 only available in one-part style.
Group size SF-125 only available in two-part style.

⑬ Design Code

Only for information	**X**

Filter Elements ▪ Type SE

SE	-	014	-	G	-	10	-	B	/	X
①		②		③		④		⑤		⑥

① Type

Filter Element Series	**SE**

② Group

According to filter housing

③ Filter Material

Material	max. Δp*collapse	Micron ratings available	Code
Inorganic glass fibre	25 bar / 363 PSI	3, 5, 10, 20	**G**
Inorganic glass fibre	210 bar / 3045 PSI		**H**
Stainless fibre	210 bar / 3045 PSI		**A**
Stainless mesh	30 bar / 435 PSI	25, 50, 100, 200	**S**

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

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-N®)	**B**
FKM (Viton®)	**V**
EPDM	**E**

Note: Other sealing materials on request.

⑥ Design Code

Only for information	**X**

High Pressure Filters ▪ Type SF-TM



Product Description

STAUFF SF-TM series High Pressure Filters are designed for manifold block mounting hydraulic applications, with a maximum operating pressure of 315 bar / 4560 PSI.
Used together with STAUFF SE series Filter Elements, a high efficiency of contaminant removal is assured. The high dirt-hold capacity of the elements ensures long service life and, as a result, reduced maintenance costs.

Technical Data

Construction
- Designed for manifold mounting, with mounting holes and fluid ports on top of the head.

Materials
- Filter head: SF-TM-014 ... 125 Free Cutting Steel
  SF-TM-090 ... 300 Spheroidal Graphite Cast Iron
- Filter bowl: Cold Drawn Steel
- O-rings: NBR (Buna-N®)
  FKM (Viton®)
  EPDM (Ethylene-Propylene-Diene-Monomer-Rubber)
- Support ring: PTFE (Polytetrafluoroethylene)

Operating Pressure
- Max. 315 bar / 4560 PSI

Burst Pressure
- Min. 945 bar / 13705 PSI

Temperature Range
- -20 °C ... +100 °C / -44 °F ... +212 °F
  (Short term up to +110°C / +230 °F)

Filter Elements
- Specifications see page 44

Media Compatibility
- Mineral oils, other fluids on request

Options and Accessories

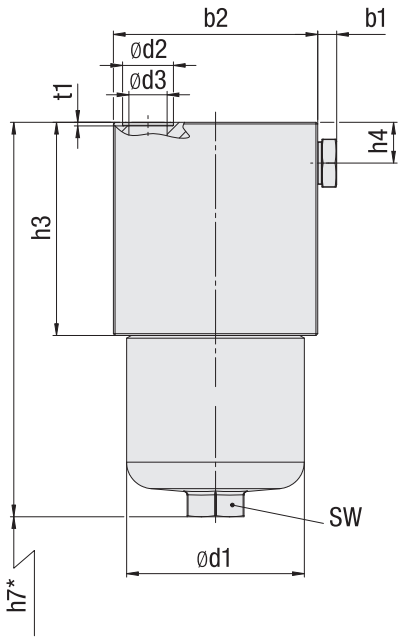
Valves
- Bypass valve: Allows unfiltered oil to bypass the contaminated element once the opening pressure has been reached, a differential pressure of $6^{+0,5}$ bar / $87^{+7.25}$ PSI Δp is the standard setting. Other settings available upon request.
- Reverse flow valve: Allows reverse flow through the filter head without backflushing the element.
- Non-return valve: Prevents draining of the delivery line during element change.
- Multi-function valve: Opening pressure $6^{+0,5}$ bar / $87^{+7.25}$ PSI
  Bypass, reverse flow capability and non-return valve combined in one valve.

Clogging Indicators
- Standard actuating pressure: $5_{-0,5}$ bar / $72.5_{-7.25}$ PSI Δp
  Other actuating pressure settings are available upon request.
- Available indicators: Visual
  Electrical
  Visual-electrical (24 V DC, 110 V AC, 230 V AC versions)
  Double Visual-electrical (24 V DC)

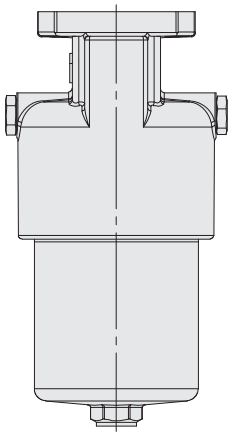
High Pressure Filters ▪ Type SF-TM

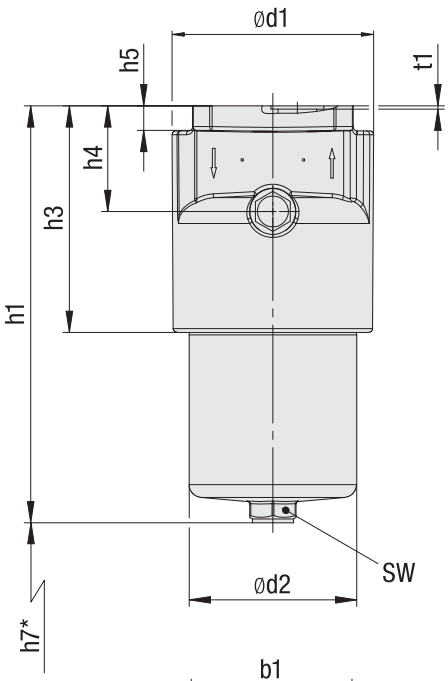
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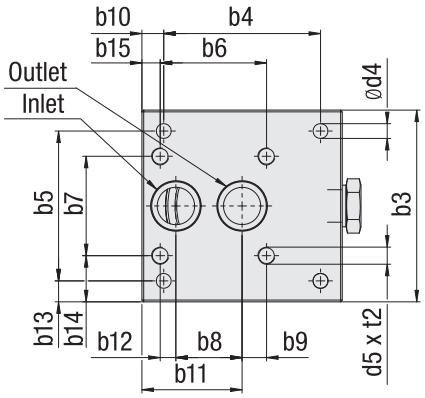
SF-TM-014...125

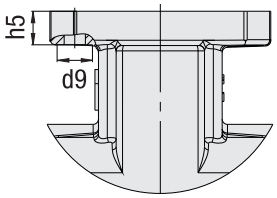


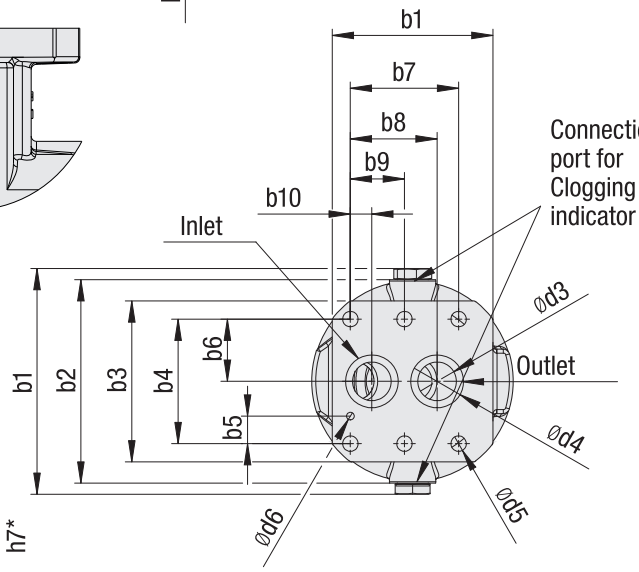
SF-TM-090...160





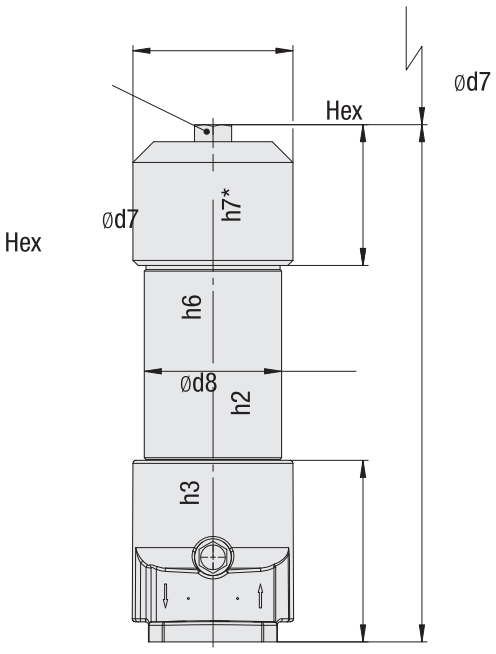






SF-TM-014…125-TL

SF-TM-090…300-TL



vent-ing screw G1/4

h6

ød8

h2

h3

Filter with filterbowl in two-part style for element change from the top

* recommended space for element change

High Pressure Filters ▪ Type SF-TM

Dimensions (mm/in)			Filter Size SF-TM									
			014	030	045	070	125	090	130	160	250	300
b1			6	6	6	6	6	175,6	175,6	175,6	175,6	175,6
			.24	.24	.24	.24	.24	6.91	6.91	6.91	6.91	6.91
b2			104	104	115	115	115	158	158	158	158	158
			4.09	4.09	4.53	4.53	4.53	6.22	6.22	6.22	6.22	6.22
b3			80	80	110	110	110	125	125	125	125	125
			3.35	3.35	4.33	4.33	4.33	4.92	4.92	4.92	4.92	4.92
b4			89	89	90	90	90	96,8	96,8	96,8	96,8	96,8
			3.50	3.50	3.54	3.54	3.54	3.81	3.81	3.81	3.81	3.81
b5			31,8	31,8	86	86	86	21,4	21,4	21,4	21,4	21,4
			1.25	1.25	3.39	3.39	3.39	.84	.84	.84	.84	.84
b6			-	-	61	61	61	48,4	48,4	48,4	48,4	48,4
					2.40	2.40	2.40	1.91	1.91	1.91	1.91	1.91
b7			-	-	57	57	57	84,1	84,1	84,1	84,1	84,1
					2.24	2.24	2.24	3.31	3.31	3.31	3.31	3.31
b8			31,6	31,6	38	38	38	67,4	67,4	67,4	67,4	67,4
			1.24	1.24	1.50	1.50	1.50	2.65	2.65	2.65	2.65	2.65
b9			-	-	14	14	14	42,05	42,05	42,05	42,05	42,05
					.55	.55	.55	1.66	1.66	1.66	1.66	1.66
b10			7,5	7,5	12,5	12,5	12,5	16,7	16,7	16,7	16,7	16,7
			.30	.30	.49	.49	.49	.66	.66	.66	.66	.66
b11			55,9	55,9	57,5	57,5	57,5	-	-	-	-	-
			2.20	2.20	2.26	2.26	2.26					
b12			-	-	9	9	9	-	-	-	-	-
					.35	.35	.35					
b13			24,1	24,1	12	12	12	-	-	-	-	-
			.95	.95	.47	.47	.47					
b14			-	-	26,5	26,5	26,5	-	-	-	-	-
					1.04	1.04	1.04					
b15			-	-	10,5	10,5	10,5	-	-	-	-	-
					.41	.41	.41					
d1			68,2	68,2	95,2	95,2	95,2	156	156	156	156	156
			2.69	2.69	3.75	3.75	3.75	6.14	6.14	6.14	6.14	6.14
d2			25,3	25,3	28,6	28,6	28,6	130,2	130,2	130,2	130,2	130,2
			1.00	1.00	1.13	1.13	1.13	5.13	5.13	5.13	5.13	5.13
d3			17,5	17,5	21,4	21,4	21,4	30	30	30	30	30
			.69	.69	.84	.84	.84	1.18	1.18	1.18	1.18	1.18
d4			8,5	8,5	9	9	9	41	41	41	41	41
			.33	.33	.35	.35	.35	1.61	1.61	1.61	1.61	1.61
d5			-	-	7/16–14 UNC	7/16–14 UNC	7/16–14 UNC	12	12	12	12	12
								.47	.47	.47	.47	.47
d6			-	-	-	-	-	6	6	6	6	6
								.24	.24	.24	.24	.24
d7			84	84	115	115	115	155	-	155	155	155
			3.31	3.31	4.53	4.53	4.53	6.10		6.10	6.10	6.10
d8			70	70	101,6	101,6	101,6	133	-	133	133	133
			2.76	2.76	4.00	4.00	4.00	5.24		5.24	5.24	5.24
d9			-	-	-	-	-	20	20	20	20	20
								.79	.79	.79	.79	.79
h1			162	228	206	264	446	324	417,5	495	-	-
			6.38	8.97	8.11	10.39	17.56	12.76	16.44	19.49		
h2			164	230	206	266	447	338,5	-	509,5	665,5	830,5
			6.46	9.06	8.11	10.47	17.60	13.3		20.1	26.2	32.7
h3			76	76	93	93	93	178	178	178	178	178
			2.99	2.99	3.66	3.66	3.66	7.01	7.01	7.01	7.01	7.01
h4			25	25	25	25	25	82	82	82	82	82
			.98	.98	.98	.98	.98	3.23	3.23	3.23	3.23	3.23
h5			-	-	-	-	-	19	19	19	19	19
								.75	.75	.75	.75	.75
h6			64	64	82,5	82,5	82,5	136	-	136	136	136
			2.52	2.52	3.25	3.25	3.25	5.35		5.35	5.35	5.35
h7	One-Part Style	rec.*	100	170	140	200	380	190	285	360	-	-
			3.94	6.69	5.51	7.87	14.96	7.48	14.17	14.17		
		min.*	85	85	120	120	120	150	150	150	-	-
			3.35	3.35	4.72	4.72	4.72	5.91	5.91	5.91		
	Two-Part Style		65	130	100	160	340	120	-	290	425	590
			2.56	5.12	3.94	6.30	13.39	4.72		11.42	16.73	23.23
t1			2	2	2	2	2	3	3	3	3	3
			.08	.08	.08	.08	.08	.12	.12	.12	.12	.12
t2			-	-	13	13	13	-	-	-	-	-
					.51	.51	.51					
Hex			27	27	32	32	32	36	36	36	36	36
			1.06	1.06	1.26	1.26	1.26	1.42	1.42	1.42	1.42	1.42
Weight (kg/lbs)	One-Part Style		5,7	6,3	11	12,5	17	21,6	25,7	28,8	-	-
			12.5	13.9	24.2	27.8	37.8	48.0	56,7	64.0		
	Two-Part Style		6,6	7,3	13,1	14,6	21	26,5	-	33,8	43,2	54,6
			14.7	16.2	29.1	32.4	46.7	58.9		75.1	96	121.3

Reference: rec.*: Recommended | min.*: Minimum

C

High Pressure Filter Housings / Complete Filters ▪ Type SF-TM

SF-TM	-	014	-	G	-	10	-	B	-	B	-	B	-	P	T	230	-	TL	/	X
①		②		③		④		⑤		⑥		⑦		⑧	⑨	⑩		⑪		⑫

① Type

High Pressure Filter Top Mounted	SF-TM

② Group

Flow	Size
60 l/min / 14 US GPM	014
110 l/min / 30 US GPM	030
160 l/min / 45 US GPM	045
240 l/min / 70 US GPM	070
330 l/min / 90 US GPM	090
475 l/min / 125 US GPM	125
500 l/min / 132 US GPM	130
660 l/min / 160 US GPM	160
990 l/min / 250 US GPM	250
1135 l/min / 300 US GPM	300

Note: Exact flow will depend on the selected filter element. For technical data please see pages 57 / 58.

③ Filter Material

Material	max. Δp*collapse	Micron ratings available	Code
Without filter element	-	-	0
Inorg. glass fibre	25 bar / 363 PSI	3, 5, 10, 20	G
Inorg. glass fibre	210 bar / 3045 PSI		H
Stainless fibre	210 bar / 3045 PSI		A
Stainless mesh	30 bar / 435 PSI	25, 50, 100, 200	S

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

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-N®)	B
FKM (Viton®)	V
EPDM	E

Note: Other sealing materials on request.

⑥ Connection Size

Connection Size	Group 014	Group 030	Code	Group 045	Group 070	Group 125	Code	Group 090	Group 160	Group 250	Group 300	Code
Special Flange	Ø17,5mm / Ø.69in		B	Ø21,4mm / Ø .85in			B	Ø30mm / Ø1.18in				B

⑦ Valve

Without valve	0
Bypass valve	B
Reverse flow valve	R
Non-return valve	N
Multi-function valve	M

⑧ Clogging Indicator

Without clogging indicator	0
Visual, with automatic reset	A
Visual, with manual reset	V
Electrical	E
Electrical, Deutsch plug	ED
Visual-electrical	P
Double Visual-electrical	D024

⑨ Thermostop

Without thermostop	none
With thermostop	T

⑩ Voltage (only for Code P)

24 V DC	024
110 V AC	110
230 V AC	230

⑪ Style Filter Bowl

With bowl in one-part style	none
Toploader, with bowl in two-part style	TL

Note: Group size SF-TM-250 and SF-TM-300 only available in TL-version.

⑫ Design Code

Only for information	X

Filter Elements ▪ Type SE

SE	-	014	-	G	-	10	-	B	/	X
①		②		③		④		⑤		⑥

① Type

Filter Element Series	SE

② Group

According to filter housing

③ Filter Material

Material	max. Δp*collapse	Micron ratings available	Code
Inorganic glass fibre	25 bar / 363 PSI	3, 5, 10, 20	G
Inorganic glass fibre	210 bar / 3045 PSI		H
Stainless fibre	210 bar / 3045 PSI		A
Stainless mesh	30 bar / 435 PSI	25, 50, 100, 200	S

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

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-N®)	B
FKM (Viton®)	V
EPDM	E

Note: Other sealing materials on request

⑥ Design Code

Only for information	X

High Pressure Filters ▪ Type SFZ



Product Description

STAUFF SFZ series High Pressure Filters are designed for sandwich plate mounting in manifold block mounting hydraulic applications, with a maximum operating pressure of 315 bar / 4560 PSI. Used together with STAUFF SE series Filter Elements, a high efficiency of contaminant removal is assured. The high dirt-hold capacity of the elements ensures long service life and, as a result, reduced maintenance costs.

Technical Data

Construction
- Designed for sandwich plate mounting

Materials
- Filter head: Free Cutting Steel
- Filter bowl: Cold Drawn Steel
- O-rings: NBR (Buna-N®)
  FKM (Viton®)
  EPDM (Ethylene-Propylene-Diene-Monomer-Rubber)
- Support ring (bowl): PTFE (Polytetrafluoroethylene)

Connecting Port
- According to ISO 4401-03-02-0-05 NG6 / DIN24340-A6 / Cetop R 35 H (Ref.: NFPA/ANSI D03)

Operating Pressure
- Max. 315 bar / 4560 PSI

Burst Pressure
- Min. 945 bar / 13705 PSI

Temperature Range
- -20 °C ... +100 °C / -44 °F ... +212 °F (Short term up to +110°C / +230 °F)

Filter Elements
- Specifications see page 44

Media Compatibility
- Mineral oils, other fluids on request

O-ring for connection ports
- 9x1,7 (4x included in delivery)

Options and Accessories

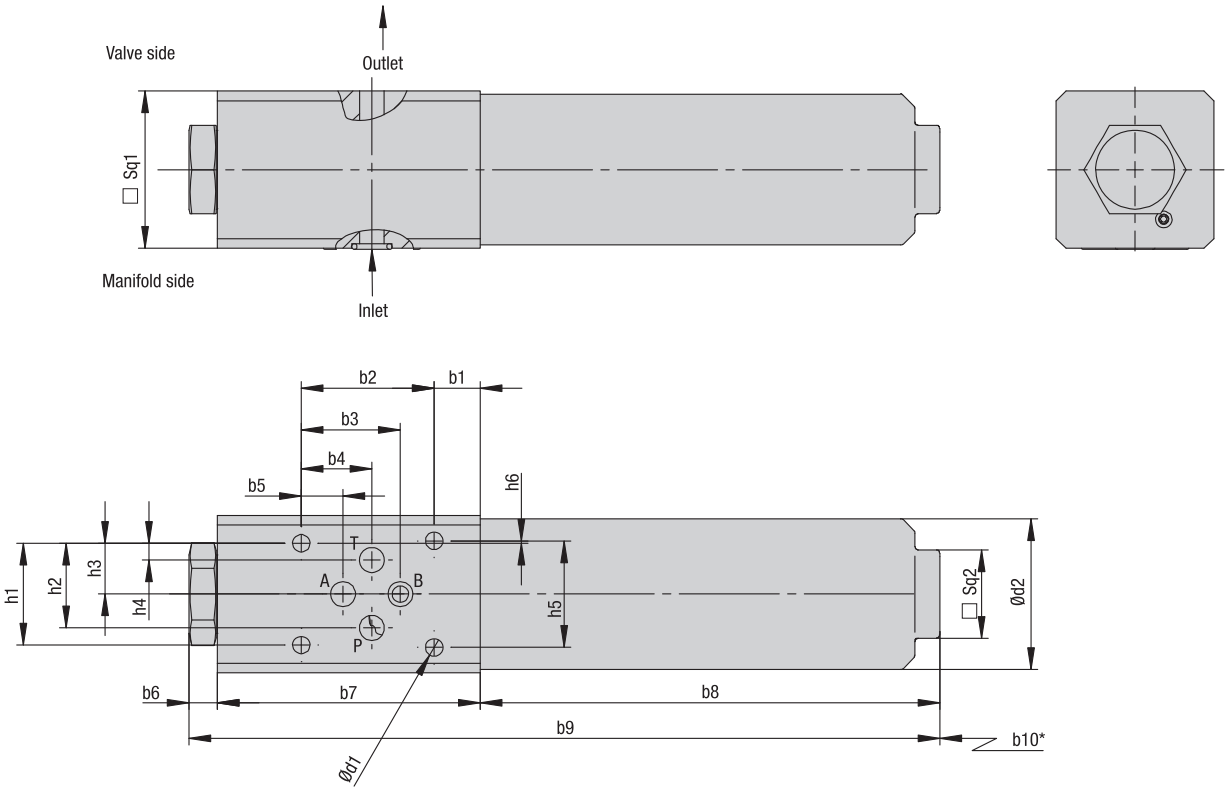
Clogging Indicator
- Standard actuating pressure: $5\ ^{0}_{-0,5}$ bar / $72.5\ ^{0}_{-7.25}$ PSI Δp
  Other actuating pressure settings are available upon request.

- Available indicators: Visual
  Electrical
  Visual-electrical (24 V DC, 110 V AC, 230 V AC versions)
  Double Visual-electrical (24 V DC)

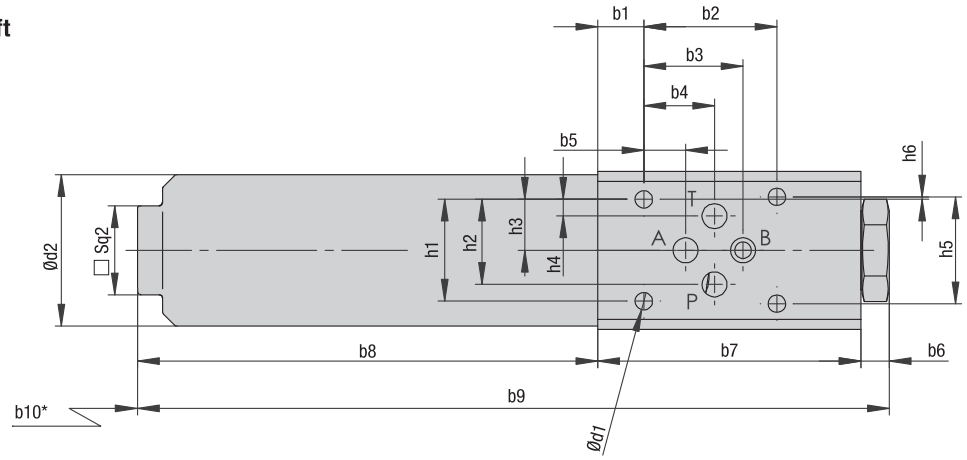
High Pressure Filters ▪ Type SFZ

C

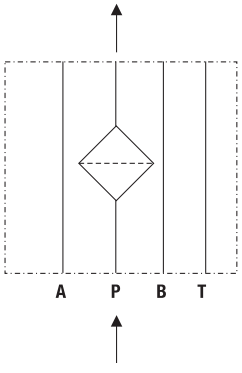
Version - right



Version - left



Symbol for hydraulic systems
SFZ-008



* recommended space for element change

High Pressure Filters ▪ Type SFZ

Dimensions (mm/in)	Filter Size SFZ
	SFZ-008
b1	14
	.55
b2	40,5
	1.59
b3	30,2
	1.19
b4	21,5
	.85
b5	12,7
	.50
b6	9
	.35
b7	80
	3.15
b8	140
	5.51
b9	229
	9.02
b10	50
	1.97
d1	5,3
	.21
d2	46
	1.81
h1	31
	1.22
h2	25,8
	1.02
h3	15,5
	.61
h4	5,1
	.20
h5	32,5
	1.28
h6	0,75
	.03
Sq1	48
	1.89
Sq2	27
	1.06

C

High Pressure Filter Housings / Complete Filters ▪ Type SFZ

SFZ - 008 - G - 10 - B - B - P T 230 - R / X

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪

① Type

High Pressure Filter for sandwich plate mounting	SFZ

② Group

Flow	Size
30 l/min / 8 US GPM	008

Note: Exact flow will depend on the selected filter element.

③ Filter Material

Please note that the filter element is not protected by an internal bypass. Please be sure that the hydraulic system is designed with the sufficient means to protect the element.

Material	max. Δp*collapse	Micron ratings available	Code
Without filter element	-	-	0
Inorg. glass fibre	25 bar / 363 PSI	3, 5, 10, 20	G
Inorg. glass fibre	210 bar / 3045 PSI		H
Stainless fibre	210 bar / 3045 PSI		M
Stainless mesh	30 bar / 435 PSI	25, 50, 100, 200	S

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

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-N®)	B
FKM (Viton®)	V
EPDM	E

Note: Other sealing materials on request.

⑥ Connection Size

Connection Size	Group 008	Code
Nominal Bore	NG6* (Ref.: D03)	B

* ISO 4401-03-02-0-05 / DIN 24340-A6 / Cetop R 35 H

⑦ Clogging Indicator

Without clogging indicator	0
Visual, with automatic reset	A
Visual, with manual reset	V
Electrical	E
Electrical, Deutsch plug	ED
Visual-electrical	P
Double Visual-electrical	D024

⑧ Thermostop

Without thermostop	none
With thermostop	T

⑨ Voltage (only for Code P)

24 V DC	024
110 V AC	110
230 V AC	230

⑩ Design

Version right	R
Version left	L

⑪ Design Code

Only for information	X

Filter Elements ▪ Type SE

SE - 008 - G - 10 - B / X

① ② ③ ④ ⑤ ⑥

① Type

Filter Element Series	SE

② Group

According to filter housing

③ Filter Material

Please note that the filter element is not protected by an internal bypass. Please be sure that the hydraulic system is designed with the sufficient means to protect the element.

Material	max. Δp*collapse	Micron ratings available	Code
Inorg. glass fibre	25 bar / 363 PSI	3, 5, 10, 20	G
Inorg. glass fibre	210 bar / 3045 PSI		H
Stainless fibre	210 bar / 3045 PSI		M
Stainless mesh	30 bar / 435 PSI	25, 50, 100, 200	S

* Collapse/burst resistance as per ISO 2941.

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

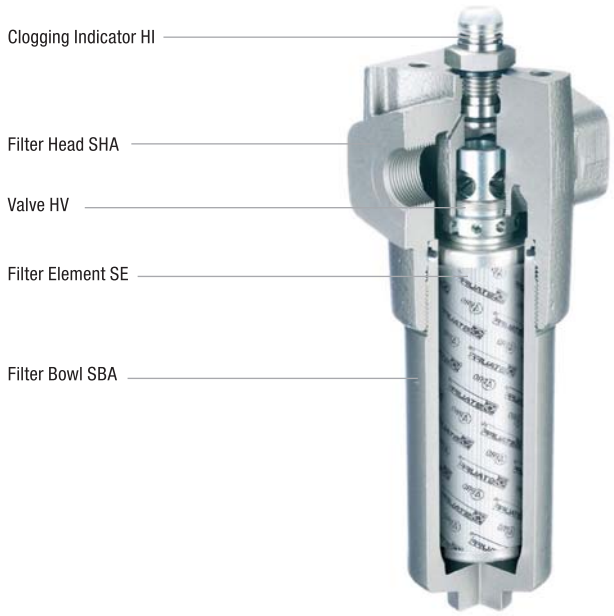
NBR (Buna-N®)	B
FKM (Viton®)	V
EPDM	E

Note: Other sealing materials on request.

⑥ Design Code

Only for information	X

Medium Pressure Filters ▪ Type SFA



C

Product Description

STAUFF SFA series Medium Pressure Filters are designed for in-line hydraulic applications with a maximum operating pressure of 160 bar / 2320 PSI. Used together with STAUFF SE series Filter Elements, a high efficiency of contamination removal is assured. The dirt-hold capacity of the elements ensures long service life, and as a result, reduced maintenance costs.

Technical Data

Construction
- Designed for in-line assembly, with threaded mounting holes on top of the head.

Materials
- Filter head: Cast Aluminium
- Filter bowl: Aluminium
- O-rings: NBR (Buna-N®)
  FKM (Viton®)
  EPDM (Ethylene-Propylene-Diene-Monomer-Rubber)
- Support ring: PTFE (Polytetrafluoroethylene)

Port Connections
- BSP
- NPT
- SAE O-ring thread
- SAE 3000 PSI (Code 61) flange

Operating Pressure
- SFA-014/030: Max. 160 bar / 2320 PSI
  Max. 190 bar / 2755 PSI (according to ANSI T2.6.1. R2-2001)
- SFA-045/070: Max. 150 bar / 2175 PSI
  Max. 171 bar / 2480 PSI (according to ANSI T2.6.1. R2-2001)

Burst Pressure
- Min. 480 bar / 6960 PSI

Temperature Range
- -20 °C ... +100 °C / -44 °F ... +212 °F
  (Short term up to +110°C / +230 °F)

Filter Elements
- Specifications see page 52

Media Compatibility
- Mineral oils, other fluids on request

Options and Accessories

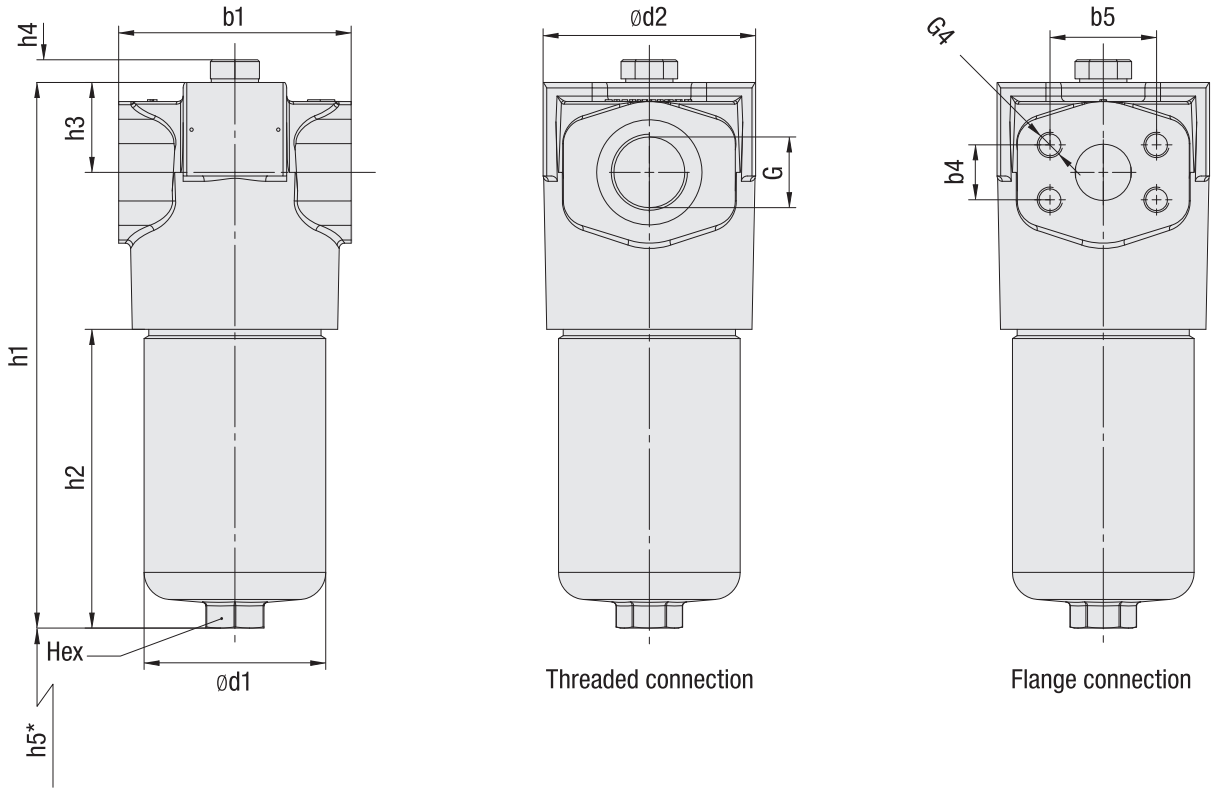
Valves
- Bypass valve: Allows unfiltered oil to bypass the contaminated element once the opening pressure has been reached, a differential pressure of $6^{+0,5}$ bar / $87^{+7.25}$ PSI Δp is the standard setting.
  Other settings available upon request.
- Reverse flow valve: Allows reverse flow through the filter head without backflushing the element.
- Non-return valve: Prevents draining of the delivery line during element change.
- Multi-function valve: Opening pressure $6^{+0,5}$ bar / $87^{+7.25}$ PSI
  Bypass, reverse flow capability and non-return valve combined in one valve.

Clogging Indicators
- Standard actuating pressure: $5_{-0,5}$ bar / $72.5_{-7.25}$ PSI Δp
  Other actuating pressure settings are available upon request.
- Available indicators: Visual
  Electrical
  Visual-electrical (24 V DC, 110 V AC, 230 V AC versions)
  Double Visual-electrical (24 V DC)

Medium Pressure Filters ▪ Type SFA

C

SFA-014...070



* recommended space for element change

Medium Pressure Filters ▪ Type SFA

Thread Connection G	Filter Size SFA			
	014	030	045	070
BSP	3/4	3/4	1-1/4	1-1/4
NPT	3/4	3/4	1-1/4	1-1/4
SAE O-ring Thread	1-1/6–12	1-1/6–12	1-5/8–12	1-5/8–12
SAE Flange 3000 PSI	3/4	3/4	1-1/4	1-1/4
Weight (kg/lbs)	2,1	2,54	4,6	5,3
	4.7	5.6	10.2	11.8

Dimensions (mm/in)		Filter Size SFA			
		014	030	045	070
b1		92	92	128	128
		3.62	3.62	5.04	5.04
d1		72	72	100	100
		2.83	2.83	3.93	3.93
d2		86	86	117	117
		3.39	3.39	4.61	4.61
h1		187,5	255	241,5	301
		7.38	10.04	9.51	11.85
h2		78	145,5	105	164,5
		3.07	5.73	4.13	6.46
h3		40	40	49,5	49,5
		1.58	1.58	1.95	1.95
h4		12,5	12,5	12,5	12,5
		.49	.49	.49	.49
h5	rec.*	100	170	140	200
		3.94	6.69	5.51	7.87
	min.*	85	85	120	120
		3.35	3.35	4.72	4.72
Hex		27	27	32	32
		1.05	1.05	1.25	1.25
Dimensions SAE Flange 3000 PSI	b4	22,3	22,3	30,2	30,2
		.88	.88	1.19	1.19
	b5	47,6	47,6	58,7	58,7
		1.87	1.87	2.32	2.32
	G4	M10 x 15 or	M10 x 15 or	M10 x 18 or	M10 x 18 or
		3/8–16 UNC	3/8–16 UNC	7/16–14 UNC	7/16–14 UNC

Reference: rec.*: Recommended | min.*: Minimum

Dimensions (mm/in)		Filter Size SFA			
		014	030	045	070
T	b2	23,8	23,8	31,6	31,6
		.94	.94	1.24	1.24
	b3	50,8	50,8	66,7	66,7
		2.00	2.00	2.63	2.63
	G2	M10 x 15	M10 x 15	M14 x 17	M14 x 17
	G3	3/8–16 UNC x .59	3/8–16 UNC x .59	1/2–13 UNC x .59	1/2–13 UNC x .59

C

Medium Pressure Filter Housings / Complete Filters ▪ Type SFA

SFA	-	014	-	G	-	10	-	V	-	T	-	G12	-	B	-	P	T	230	/	X
①		②		③		④		⑤		⑥		⑦		⑧		⑨	⑩	⑪		⑫

① Type

Medium Pressure Filter	**SFA**

② Group

Flow	Size
60 l/min / 14 US GPM	**014**
110 l/min / 30 US GPM	**030**
160 l/min / 45 US GPM	**045**
240 l/min / 70 US GPM	**070**

Note: Exact flow will depend on the selected filter element. For technical data please see pages 57 / 58.

③ Filter Material

Material	max. Δp*collapse	Micron ratings available	Code
Without filter element	-	-	**0**
Inorg. glass fibre	25 bar / 363 PSI	3, 5, 10, 20	**G**
Inorg. glass fibre	210 bar / 3045 PSI		**H**
Stainless fibre	210 bar / 3045 PSI		**A**
Stainless mesh	30 bar / 435 PSI	25, 50, 100, 200	**S**

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

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-N®)	**B**
FKM (Viton®)	**V**
EPDM	**E**

Note: Other sealing materials on request.

⑥ Connection Flange

Type T	**T**

⑦ Connection Style

Connection Style	Thread Style	Group 014	Group 030	Code	Group 045	Group 070	Code
BSP	-	3/4		**G12**	1-1/4		**G20**
BSP	-	1		G16	1-1/2		G24
NPT	-	3/4		N12	1-1/4		N20
SAE O-ring Thread	-	1-1/16-12		U12	1-5/8-12		U20
SAE Flange 3000 PSI	metric	3/4		C312M	1-1/4		C320M
SAE Flange 3000 PSI	UNC	3/4		C312U	1-1/4		C320U
SAE Flange 3000 PSI	metric	1		C316M	-		-
SAE Flange 3000 PSI	UNC	1		C316U	-		-

Note: Other port connections on request. Bold types identify preferred connection styles.

⑧ Valve

Without valve	**0**
Bypass valve	**B**
Reverse flow valve	**R**
Non-return valve	**N**
Multi-function valve	**M**

⑨ Clogging Indicator

Without clogging indicator	**0**
Visual, with automatic reset	**A**
Visual, with manual reset	**V**
Electrical	**E**
Electrical, Deutsch plug	**ED**
Visual-electrical	**P**
Double Visual-electrical	**D024**

⑩ Thermostop

Without thermostop	**none**
With thermostop	**T**

⑪ Voltage (only for Code P)

24 V DC	**024**
110 V AC	**110**
230 V AC	**230**

⑫ Design Code

Only for information	**X**

Filter Elements ▪ Type SE

SE	-	014	-	G	-	10	-	B	/	X
①		②		③		④		⑤		⑥

① Type

Filter Element Series	**SE**

② Group

According to filter housing

③ Filter Material

Material	max. Δp*collapse	Micron ratings available	Code
Inorganic glass fibre	25 bar / 363 PSI	3, 5, 10, 20	**G**
Inorganic glass fibre	210 bar / 3045 PSI		**H**
Stainless fibre	210 bar / 3045 PSI		**A**
Stainless mesh	30 bar / 435 PSI	25, 50, 100, 200	**S**

Note: Collapse/burst resistance as per ISO 2941.

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-N®)	**B**
FKM (Viton®)	**V**
EPDM	**E**

Note: Other sealing materials on request.

⑥ Design Code

Only for information	**X**

Product Description (not available for SFZ)

The optional valves are fitted as an insert in the filter head and incorporate the spigot on which the element seals. The valve is selected to suit the filter application.

HVO **Non-bypass standard insert** without any valve function. Element collapse rating should be higher than the system pressure

HVB **Bypass valve** which allows oil to bypass the element when the differential pressure across the element reaches $6^{+0,5}$ bar / $87^{+7.25}$ PSI. (Other pressure settings available on request). The opening pressure should be higher than the Δp setting of an optional clogging indicator. Low collapse 30 bar / 435 PSI Δp elements are normally used with this valve.

HVR **Reverse flow valve** is used in systems where there is flow in reverse through the filter. It allows reverse flow without backflushing the element but does not filter in the reverse direction. Element collapse rating should be higher than the system pressure.

HVN **Non-return valve**
This valve prevents the oil in the delivery line from draining out while the filter is being serviced. Because there is no bypass, the element collapse rating should be higher than system pressure.

HVM **Multi-function valve**
This valve combines the bypass, the reverse flow and the non-return functions in one unit. The by-pass opening pressure is $6^{+0,5}$ bar / $87^{+7.25}$ PSI Δp with other opening pressures available on request. The opening pressure should be higher than the Δp setting of an optional clogging indicator. Low collapse 30 bar / 435 PSI Δp elements are normally used with this valve.

C

Order Code

VALVE - **HVB** - **014/030** / **X**

① ② ③ ④

① Type

Valve for Pressure Filters	**VALVE**

② Valve Type

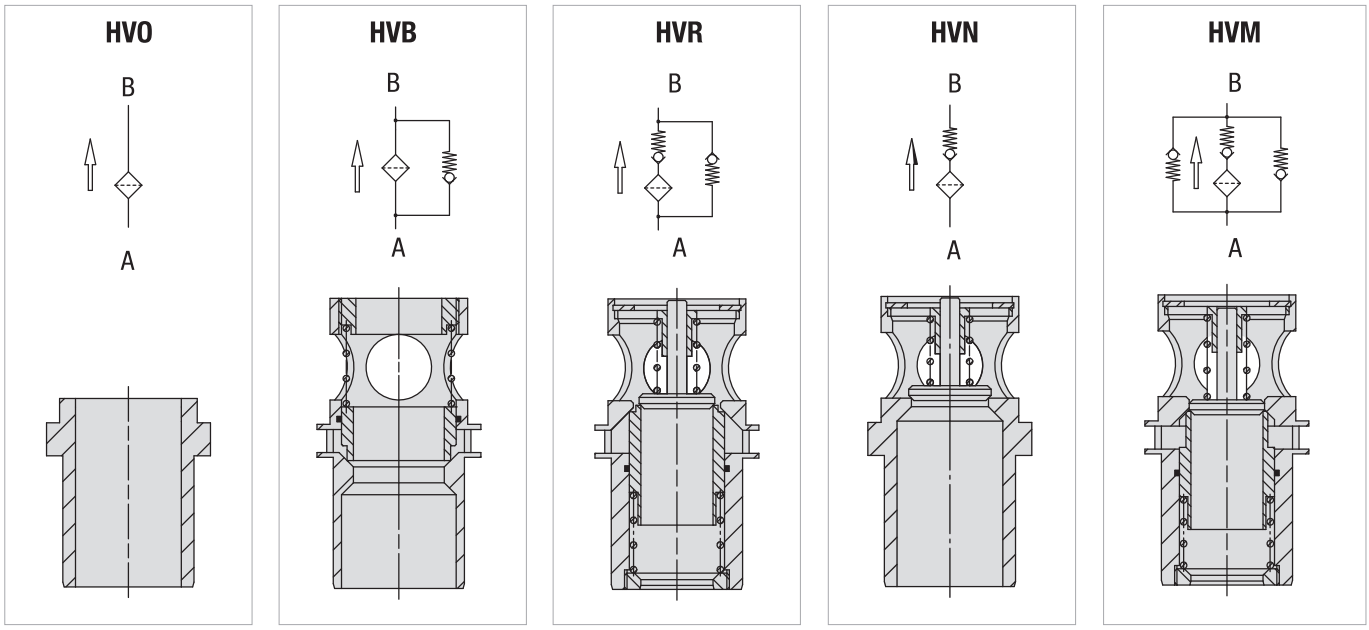
Non-bypass standard insert without any valve	**HVO**
Bypass valve	**HVB**
Reverse flow valve	**HVR**
Non-return valve	**HVN**
Multi-function valve	**HVM**

③ Filter Group

For filter size 014/030	**014/030**
For filter size 045/070/125	**045/070**
For filter size 090/160/250/300	**090/160**

④ Design Code

Only for information	**X**



Flow characteristics of the valves see page 56.

Note:
For high dynamic applications and applications with very high cycle numbers (pressure and volume flow) please contact STAUFF.

The service life of HVM, HVR valves may be affected by high flows or fast/frequent load changes.
For more information, please contact STAUFF.

Clogging Indicators

Product Description

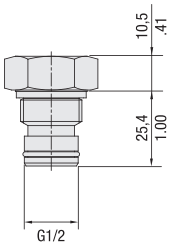
STAUFF Pressure Filters have a wide range of clogging indicators available. If no indicator is specified, the port is sealed by a plug (HI-O). The clogging indicators are actuated by the differential pressure (Δp) across the element. The special piston design minimizes the effects of peak pressures in the system. An optional thermal lockout (thermo-stop) is available to prevent false indication under cold start conditions. Fluid temperature have to be at least +20 °C / +68 °F for the indicator to function.

C

Plug Type HI-O and visual Clogging Indicators Type HI-A and HI-V

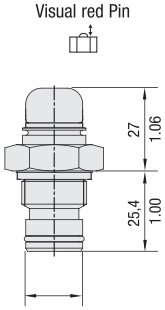
HI-O





HI-A / HI-V





Technical Data

Materials

- Body: Stainless Steel

The visual clogging indicators are available in the following configurations:

- Manual reset:
  The indicator continues to display the clogged signal even through the Δp may have fallen. Pressing the plastic cover down will reset the indicator.
- Automatic reset:
  The clogged signal will disappear when the Δp drops below the setting for the indicator.

Order Code

HI	-	A	-	T	-	B	-	B5.0	/	X
①		②		③		④		⑤		⑥

① Type

Clogging Indicator for Pressure Filters	**HI**

② Indicator Type

Plug	**O**
Visual, automatic reset	**A**
Visual, manual reset	**V**

③ Thermostop

Without thermostop	**none**
With thermostop	**T**

③ Sealing Material

NBR (Buna-N®)	**B**
FKM (Viton®)	**V**
EPDM	**E**

④ Differential Pressure Setting (only HI-A and HI-V)

1,72 bar / 25 PSI	B1.7
2,0 bar / 29 PSI	B2.0
2,5 bar / 36.3 PSI	B2.5
3,0 bar / 43.5 PSI	B3.0
5,0 bar / 72.5 PSI (standard option)	**B5.0**
7,0 bar / 101.5 PSI	B7.0

Note: Bold types identify standard option

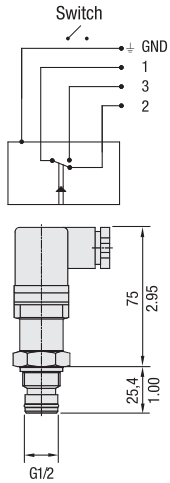
⑤ Design Code

Only for information	**X**

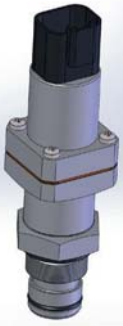
Electrical and Visual-electrical Clogging Indicators Type HI-E, HI-ED and HI-P

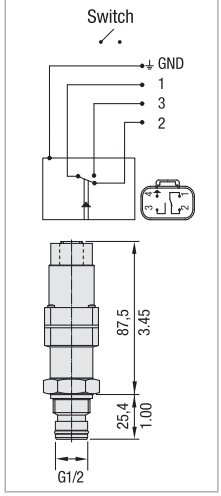
HI-E



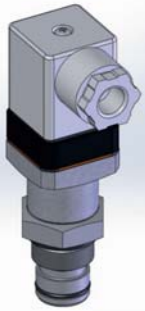


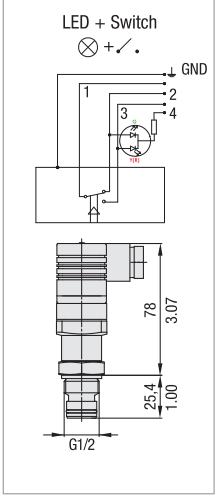
HI-ED





HI-P





Continued on page 55.

Dimensional drawings: All dimensions in mm/in.

Clogging Indicators

Technical Data

Materials
- Body: Stainless Steel

Alarm outputs
- HI-E: electrical
- HI-ED: electrical
- HI-P: visual-electrical (LED red and green)

Electrical
- Plug according to DIN-EN 175301-803 A (DIN 43650-A).
- Screwed cable gland PG11
- Protection rating (DIN 40050) IP65
- Both NO and NC contacts are available in the switch, rated capacity: see chart below
- Deutsch plug

Note: The customer / user carries the responsibility for the electrical connection.

Rated Capacity

Voltage V	Resistive Load A	Inductive Load A
110 V AC	5A	3A
230 V AC	3A	2A
24 V DC	4A	3A
	Max. Load	
24 V AC ± 10%	1A	

High voltage peaks occur when inductive loads are switched off. Protective circuitry should be employed to reduce contact burnout.

Order Code

HI - P T 230 - B - B5.0 / X

① ② ③ ④ ⑤ ⑥ ⑦

① Type

Clogging Indicator for Pressure Filters	**HI**

② Indicator Type

electrical	**E**
Electrical, Deutsch plug	**ED**
Visual-electrical	**P**

③ Thermostop

Without thermostop	**none**
With thermostop	**T**

④ Voltage (only for Code P)

24 V DC	**024**
110 V AC	**110**
230 V AC	**230**

⑤ Sealing Material

NBR (Buna-N®)	**B**
FKM (Viton®)	**V**
EPDM	**E**

⑥ Differential Pressure Setting

1,72 bar / 25 PSI	B1.7
2,0 bar / 29 PSI	B2.0
2,5 bar / 36.3 PSI	B2.5
3,0 bar / 43.5 PSI	B3.0
5,0 bar / 72.5 PSI (standard option)	**B5.0**
7,0 bar / 101.5 PSI	B7.0

Note: Bold types identify standard option

⑦ Design Code

Only for information	**X**

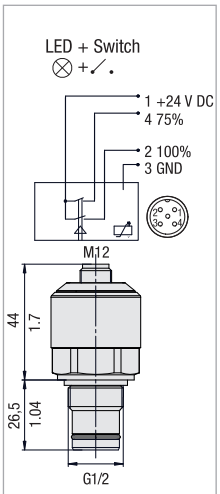
Double Visual-electrical Clogging Indicator

Product Description

The differential pressure indicator HI-D024 is a microprocessor controlled pressure switch with two alarm outputs for pre-alarm and shut-off. It is used to monitor the capacity of oil filters in oil-circulating systems. For this purpose, a microprocessor-controlled pressure sensor observes the dynamic pressure in front of the filter element or the differential pressure at the filter element. The pressure increases depending on the cumulative clogging of the filter. To avoid false alarms due to high viscosity during start-up, the device is equipped with a temperature control and time delay function.

HI-D024





Technical Data

Connection Thread
- G1/2

Operating Pressure
- Max. 420 bar / 6000 PSI

Temperature Range
- -20 °C ... +80 °C / -4 °F ... +176 °F
- ready for operation > 20 °C / 68 °F

Materials
- Body: Brass
- Sealing Material: NBR (Buna-N®)

Protection Rating
- IP 67

Rated Capacity
- Max. 0,2 A, 24 V DC

Operating Voltage
- 24 V DC

Alarm outputs (electrical)
- 3,8 $^{+ 10\%}$ bar / 55.1 $^{+/- 10\%}$ PSI
  Δp = 75% (Pin 4)
- 5 $^{+ 10\%}$ bar / 72.5 $^{+/- 10\%}$ PSI
  Δp = 100% (Pin 2)

Alarm outputs (visual)

Range (%FS)	Color T>T* (Thermo-stop)
0-50	green
50-75	yellow
75-100	orange
100	red (flashing)
	T<T* (Thermo-stop)
0-100	blue

T= Temperature
T*= 20 °C / 68 °F

Order Code

HI-D-024-B-B5.0

①

① Type

Clogging Indicator for Pressure Filters	**HI-D-024-B-B5.0**

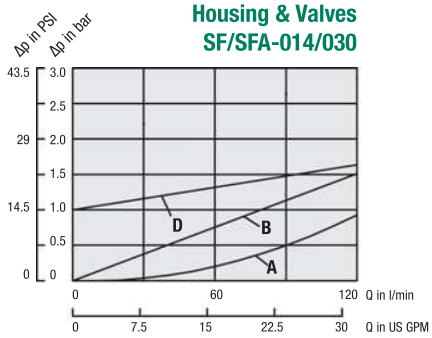
Dimensional drawings: All dimensions in mm/in.

High and Medium Pressure Filters ▪ Type SF / SF-TM / SFZ / SFA

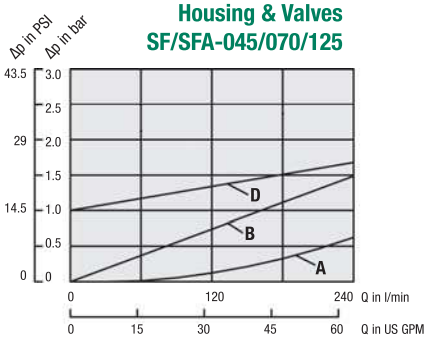
The following characteristics are valid for mineral oils with a density of 0,85 kg/dm³ and the kinematic viscosity of 30 mm²/s (30 cSt). The characteristics have been determined in accordance to ISO 3968. Multipass filter ratings have been obtained in accordance to ISO 16889. Contact STAUFF for details.

C

Housing & Valves SF/SFA-014/030

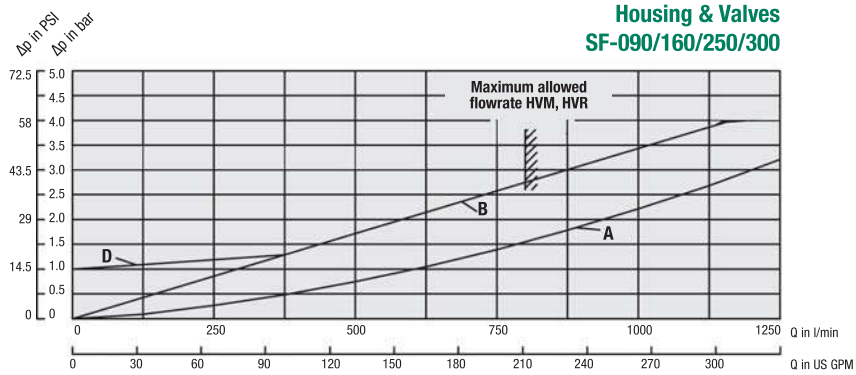


Housing & Valves SF/SFA-045/070/125



Valve Configuration	Flow direction	Curve
Housing with HVO/IO or HVB/IB	Inlet → Outlet	A
HVM, HVR, HVN	Inlet → Outlet	B
HVM,HVR Reverse mode	Outlet → Inlet	D

Housing & Valves SF-090/160/250/300



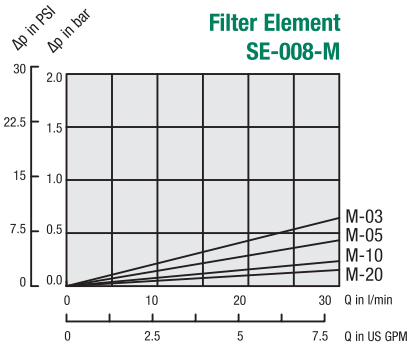
Note:
For high dynamic applications and applications with very high cycle numbers (pressure and volume flow) please contact STAUFF.

The service life of HVM, HVR valves may be affected by high flows or fast/frequent load changes.
For more information, please contact STAUFF.

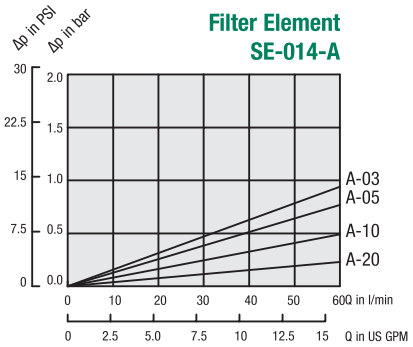
High and Medium Pressure Filters ▪ Type SF / SF-TM / SFZ / SFA

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

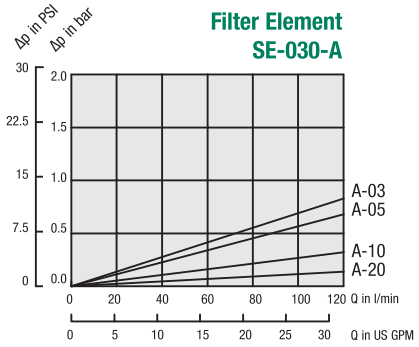
Filter Element SE-008-M



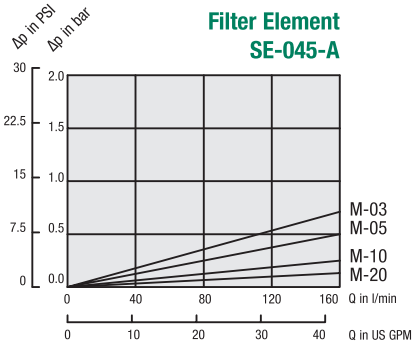
Filter Element SE-014-A



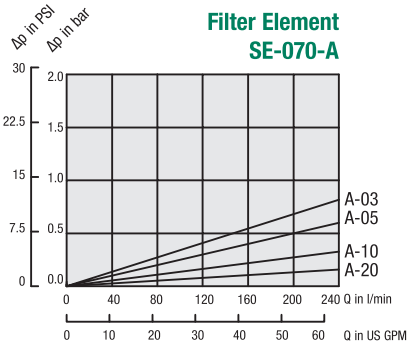
Filter Element SE-030-A



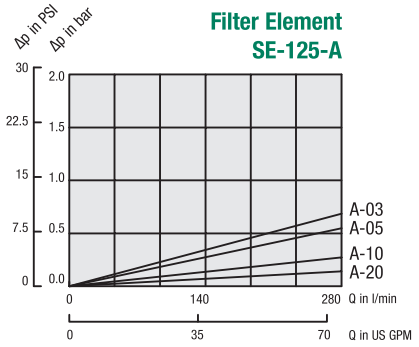
Filter Element SE-045-A



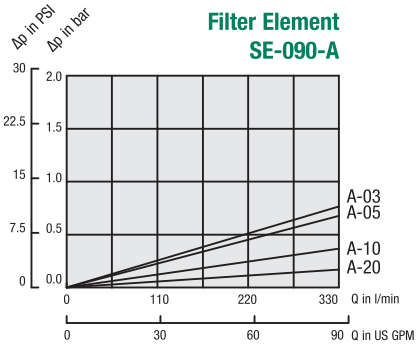
Filter Element SE-070-A



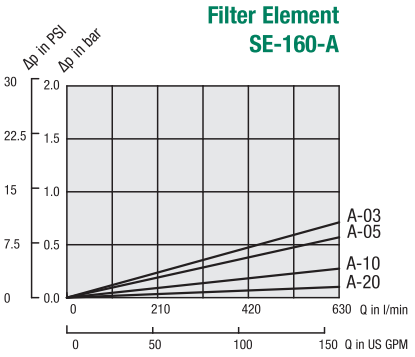
Filter Element SE-125-A



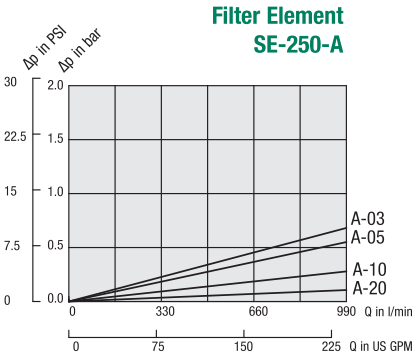
Filter Element SE-090-A



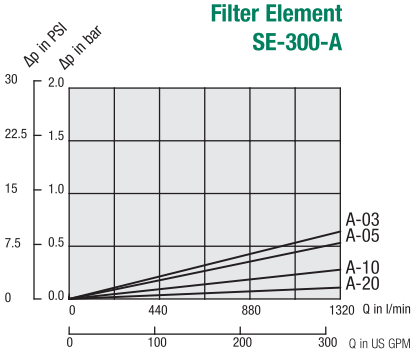
Filter Element SE-160-A



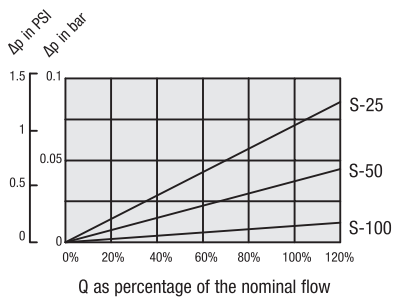
Filter Element SE-250-A



Filter Element SE-300-A



Filter Element SE-...S

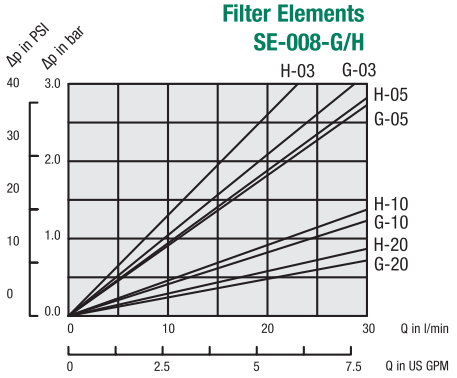


C

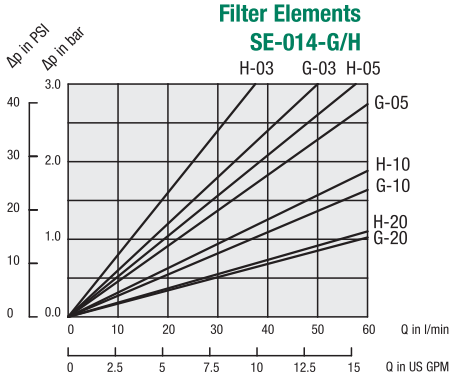
High and Medium Pressure Filters ▪ Type SF / SF-TM / SFZ / SFA

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

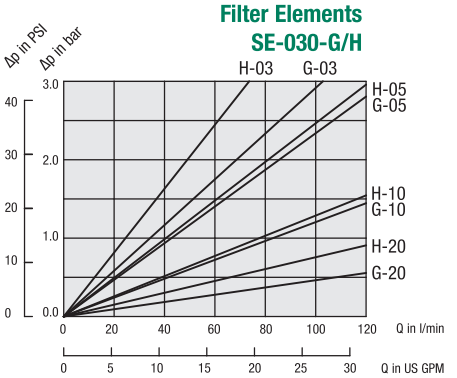
Filter Elements SE-008-G/H



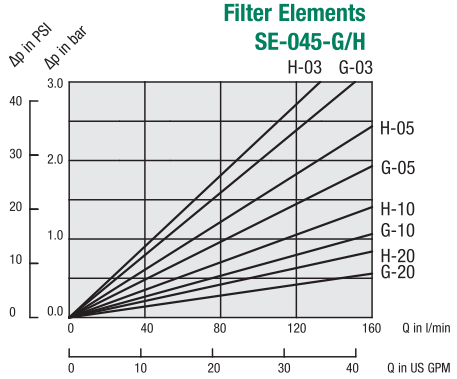
Filter Elements SE-014-G/H



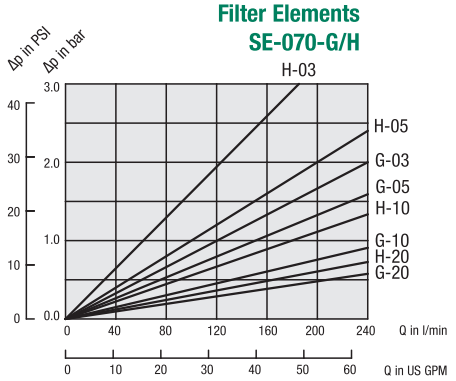
Filter Elements SE-030-G/H



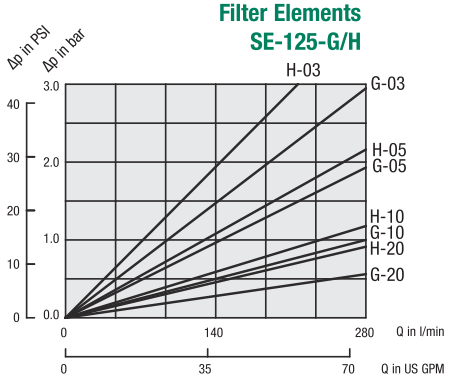
Filter Elements SE-045-G/H



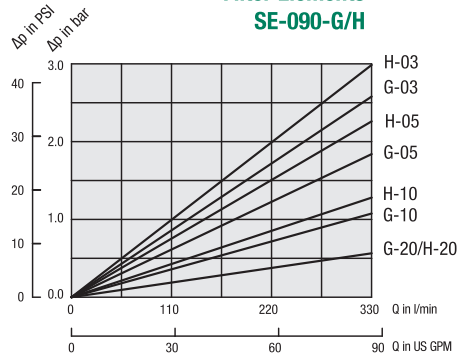
Filter Elements SE-070-G/H



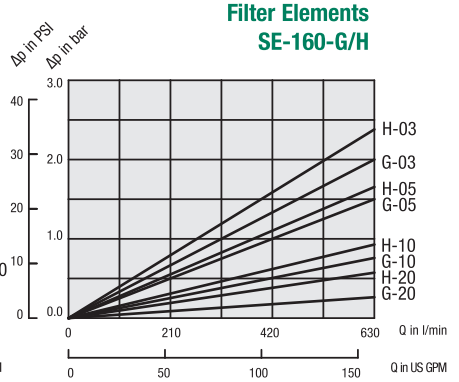
Filter Elements SE-125-G/H



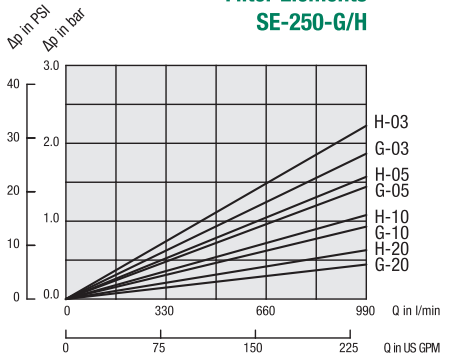
Filter Elements SE-090-G/H



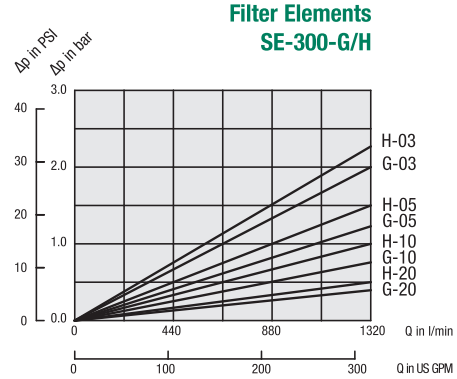
Filter Elements SE-160-G/H



Filter Elements SE-250-G/H



Filter Elements SE-300-G/H



Medium Pressure Filters ▪ Type SMPF



Product Description

STAUFF SMPF Medium Pressure Filters are designed for in-line hydraulic applications with a maximum operating pressure of 110 bar / 1600 PSI.
Used together with STAUFF Filter Elements, a high efficiency of contamination removal is assured.

Technical Data

Construction
- In-line assembly

Materials
- Filter head: Aluminium Alloy
- Filter bowl: Aluminium Alloy
- Sealings: NBR (Buna-N®)

Port Connections
- BSP
- SAE O-ring thread

Flow Rating
- Up to 90 l/min / 25 US GPM

Operating Pressure
- Max. 110 bar / 1600 PSI

Burst Pressure
- 300 bar / 4350 PSI

Temperature Range
- -25 °C ... +110 °C / -13 °F ... +230 °F

Filter Elements
- Specifications see page 62

Media Compatibility
- Mineral oils, other fluids on request

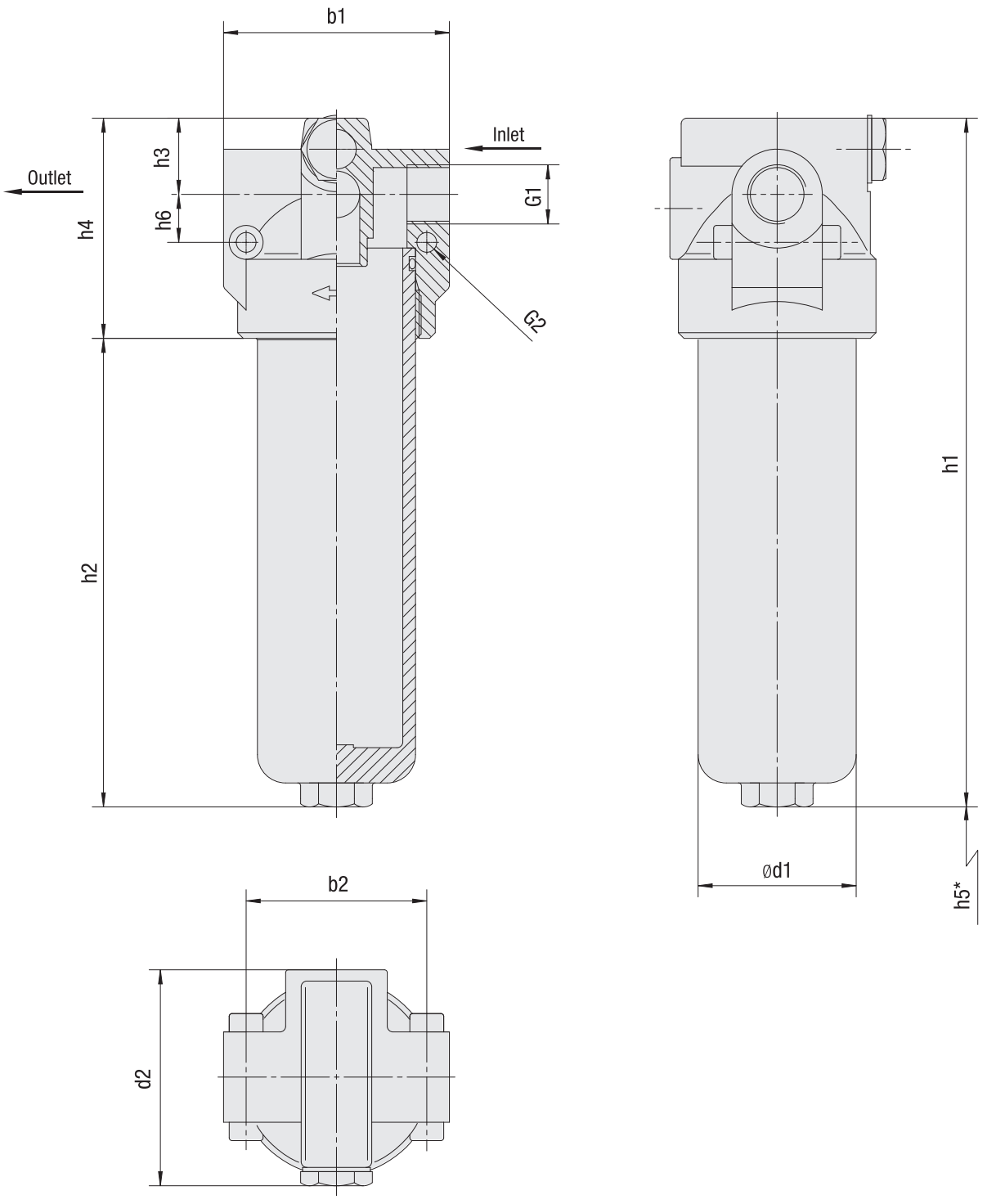
Options and Accessories

Valve
- Bypass valve: Allows unfiltered oil to bypass the contaminated element once the opening pressure has been reached 6 bar / 87 PSI ±10% is the standard actuating pressure

Clogging Indicators
- Standard actuating pressure: 5 bar / 72.5 PSI ±10%
- Available indicators: Visual
  Visual-electrical

Medium Pressure Filters ▪ Type SMPF

C



* recommended space for element change

Thread Connection G1	Filter Size SMPF	
	015	025
Nominal Flow (l/min / US GPM)	60	90
	15	25
BSP	1/2	1/2
SAE O-ring thread	3/4–16	3/4–16
Weight (kg/lb)	0,95	1,25
	2.09	2.76

Dimensions (mm/in)	Filter Size SMPF	
	015	025
b1	80	80
	3.15	3.15
b2	64	64
	2.52	2.52
d1	56	56
	2.20	2.20
d2	76,5	76,5
	3.01	3.01
h1	157	244
	6.18	9.61
h2	79	166
	3.11	6.54
h3	27	27
	1.06	1.06
h4	78	78
	3.07	3.07
h5	60	60
	2.36	2.36
h6	17	17
	.67	.67
G2	7	7
	.28	.28

C

Medium Pressure Filter Housings / Complete Filters ▪ Type SMPF

SMPF	-	015	-	E	-	03	-	B	-	T	-	G08	-	B	-	VE	/	X
①		②		③		④		⑤		⑥		⑦		⑧		⑨		⑩

① Type

Medium Pressure Filter	**SMPF**

② Group

Flow	Size
60 l/min / 15 US GPM	**015**
90 l/min / 25 US GPM	**025**

Note: Exact flow will depend on filter element selected
For technical data please see page 64.

③ Filter Material

Material	Max. Δp*collapse	Micron ratings available	Code
Without filter element	-	-	**0**
Inorg. glass fibre	20 bar / 290 PSI	03,05,10,20	**E**
Stainless mesh	20 bar / 290 PSI	60	**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**
60 µm	**60**

Note: Other micron ratings on request.

⑤ Sealing Material

NBR (Buna®)	**B**

Note: Other sealing materials on request.

⑥ Mounting Style

In-line	**T**

⑦ Connection Style

BSP	1/2	**G08**
SAE O-ring thread	3/4–16	**U08**

⑧ Valve

Without valve	**0**
Bypass valve	**B**

⑨ Clogging Indicator

Without Clogging Indicator	**0**
Visual	**V**
Visual-electrical	**VE**

⑩ Design Code

Only for information	**X**

Filter Elements ▪ Type SME

SME	-	015	-	E	-	03	-	B	/	X
①		②		③		④		⑤		⑥

① Type

Filter Element Series	**SME**

② Group

According to filter housing

③ Filter Material

Material	Max. Δp*collapse	Micron ratings available	Code
Inorg. glass fibre	20 bar / 290 PSI	03,05,10,20	**E**
Stainless mesh	20 bar / 290 PSI	60	**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**
60 µm	**60**

Note: Other micron ratings on request.

⑤ Sealing Material

NBR (Buna®)	**B**

Note: Other sealing materials on request.

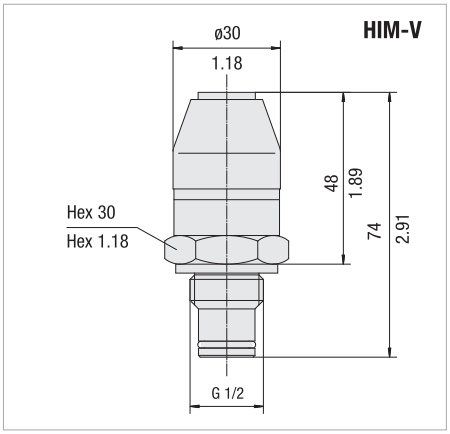
⑥ Design Code

Only for information	**X**

Medium Pressure Filters ▪ Type SMPF

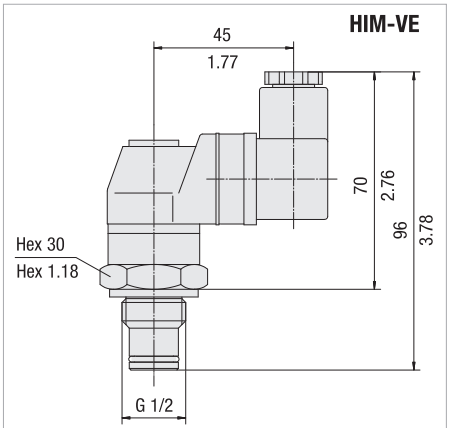
Visual Clogging Indicator

Part number **HIM-V** is a clogging indicator actuated by the differential pressure across the filter element. The actuating pressure of 5 bar / 72.5 PSI allows the clogged element to be changed before the bypass setting of 6 bar / 87 PSI is reached.



Visual-Electrical Clogging Indicator

Part number **HIM-VE** is used when an electrical signal is needed to indicate when the element needs changing. It is actuated by the differential pressure across the filter element. The actuating pressure of 5 bar / 72.5 PSI allows the clogged element to be changed before the bypass setting of 6 bar / 87 PSI is reached.

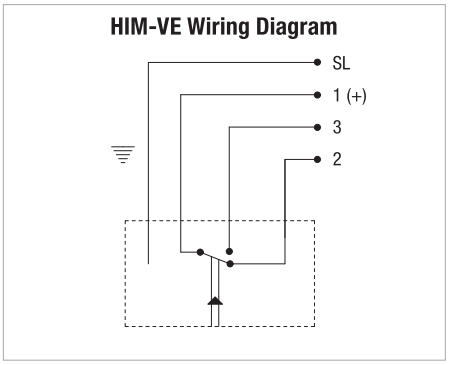


Dimensions in mm / in

HIM-VE Rated Capacity

Voltage V	Resistive Load A	Inductive Load A
125 V AC	5	5
250 V AC	5	5
15 V AC	10	10
30 V DC	5	5
50 V DC	1	1
125 V DC	0.50	0.06

Note: The customer / user carries the responsibility for the electrical connection.



Order Code

HIM - **V** - **B** - **B5.0** / **X**

① ② ③ ④ ⑤

① Type

Clogging Indicator SMPF Series	**HIM**

② Indicator Type

Visual	**V**
Visual-electrical	**VE**

③ Sealing Material

NBR (Buna®)	**B**

④ Differential Pressure Setting

5,0 bar / 72.5 PSI	**B5.0**

⑤ Design Code

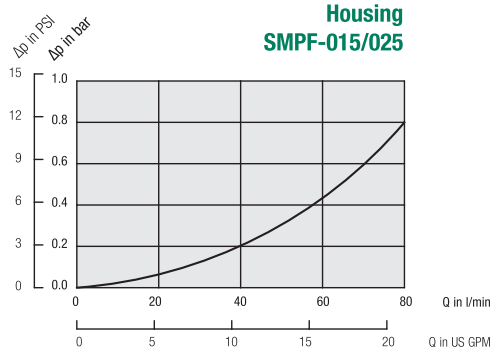
Only for information	**X**

C

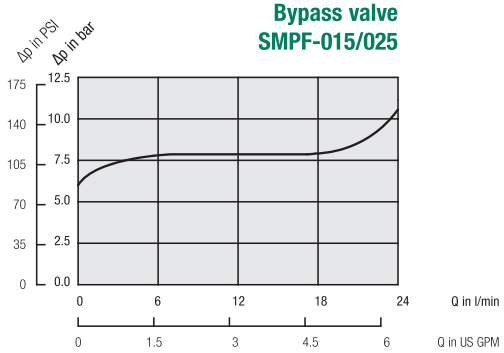
Medium Pressure Filters ▪ Type SMPF Flow Characteristics

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

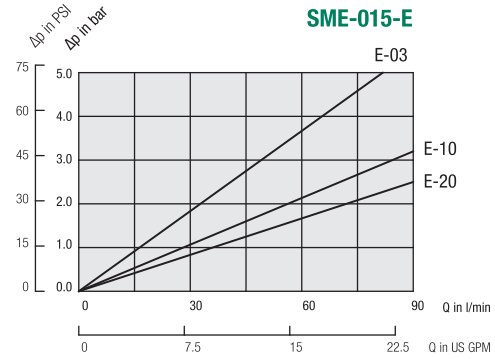
Housing SMPF-015/025



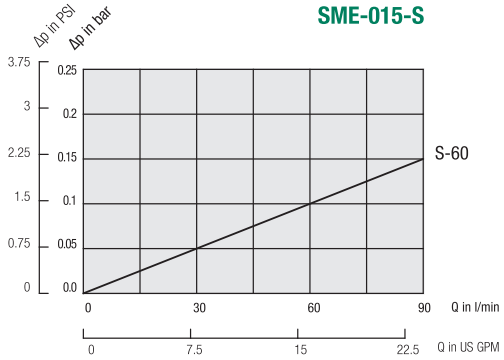
Bypass valve SMPF-015/025



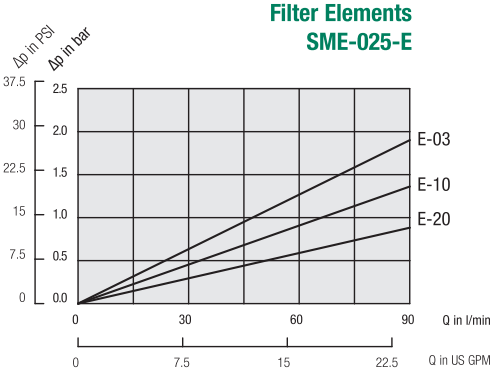
Filter Elements SME-015-E



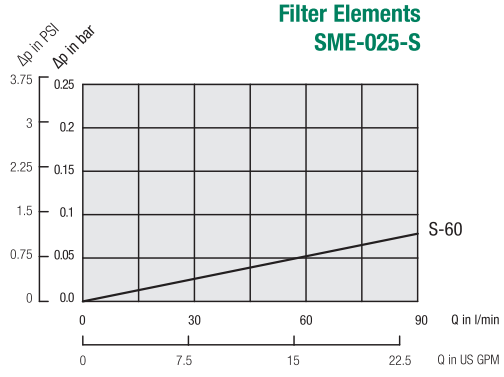
Filter Elements SME-015-S



Filter Elements SME-025-E



Filter Elements SME-025-S



Checklist for the selection of filter housings

Please use the following Checklist as a guideline when preparing an enquiry for the selection of filter housings. Scan or copy the page from the catalogue, print and complete it with as much information as possible, before sending it by email or fax to the closest STAUFF branch office. If possible, please also let us know the quantities required, and if the enquiry is for a one-time or recurring demand. We look forward to hearing from you, and are always available for consultation, when required.

Information on the fluid in use

Type of fluid ☐ Brand ☐ ISO designation

Fluid viscosity ☐ mm²/sec ☐ cSt

Fluid temperature ☐ °C ☐ °F ☐ In cold condition ☐ In warm condition

Information on the filter housing

Position in the hydraulic system ☐ Suction line ☐ Pressure line ☐ Return line

Operating pressure ☐ bar ☐ PSI

Nominal flow ☐ l/min ☐ US GPM

Valve ☐ No, not required

☐ Yes, the following type: ☐ Bypass valve ☐ Non-return valve ☐ Reverse flow valve ☐ Multi-function valve

Clogging indicator ☐ No, not required

☐ Yes, the following type: ☐ Visual ☐ Electrical ☐ Visual-electrical

Connection type and size ☐

Sealing material ☐ NBR (Buna®) ☐ FKM (Viton®) ☐ Other

Information on the filter element

Filter media ☐ Inorganic Glass Fibre ☐ Polyester Fibre ☐ Cellulose Fibre ☐ Stainless Fibre ☐ Stainless Mesh

Micron rating ☐ µm

Cleanliness level ☐ (to ISO 4406)

Information on the application ☐

Information on the ambient conditions ☐

Additional information and requirements ☐