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/FPM (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
- -10 °C ... +100 °C / +14 °F ... +212 °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)

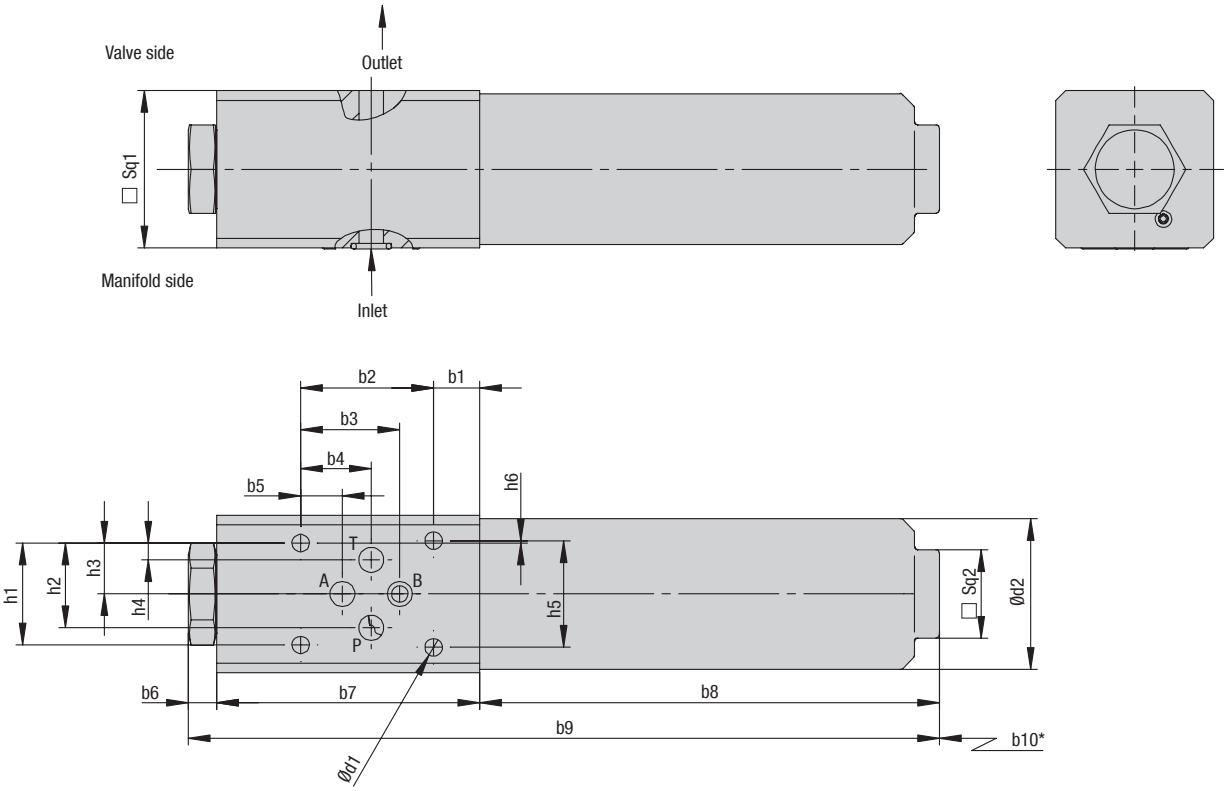
Options and Accessories

Clogging Indicator
- Standard actuating pressure: $5_{-0,5}$ 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)

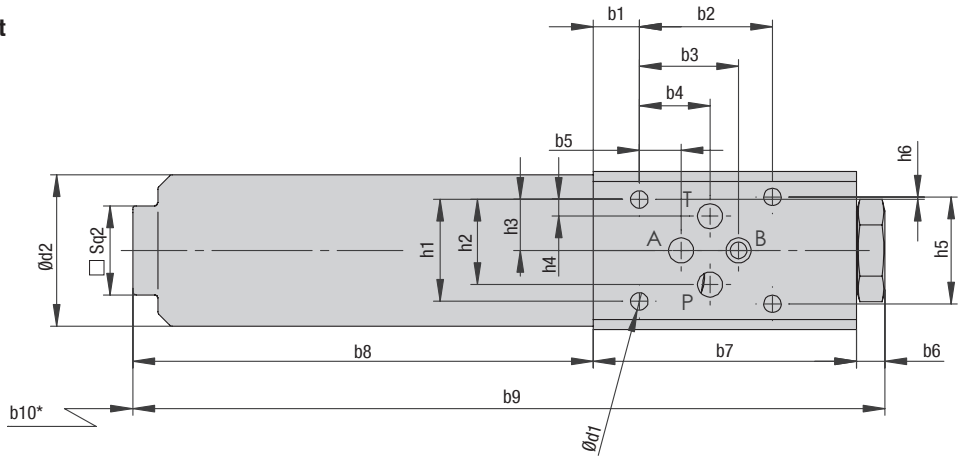
High Pressure Filters ▪ Type SFZ

C

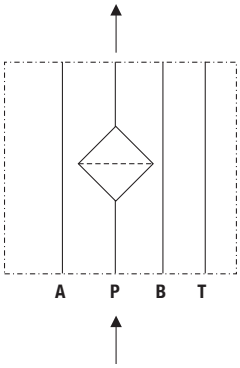
Version - right



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

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	-	-	**O**
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/FPM (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	**O**
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/FPM (Viton®)	**V**
EPDM	**E**

Note: Other sealing materials on request.

⑥ Design Code

Only for information	**X**

C

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.

Technical Data

Materials

- Body: Stainless Steel
- Sealings: NBR (Buna-N®)
  FKM/FPM (Viton®)
  EPDM (Ethylene-Propylene-Diene-Monomer-Rubber)

Thread

- G 1/2

Differential Pressure

- $5_{-0,5}$ bar / $72.5_{-7.25}$ PSI pressure setting (other settings on request)

Electrical

- Plug according to DIN-EN 175301-803 A (DIN 43650-A).
- Screwed cable gland PG11
- Protection rating (DIN 40050) IP65 e.g. IP67
- Both NO and NC contacts are available in the switch, rated capacity: see chart below
- Deutsch plug

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.

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

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

Plug	**O**
Visual, automatic reset	**A**
Visual, manual reset	**V**
Electrical	**E**
Electrical, Deutsch plug	**ED**
Visual-electrical	**P**
Double visual-electrical	**D024**

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/FPM (Viton®)	**V**
EPDM	**E**

Rated Capacity HI-E, HI-P and HI-D024

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	

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**
5,5 bar / 79.7 PSI (only for HI-D024)	B5.5
7,0 bar / 101.5 PSI	B7.0

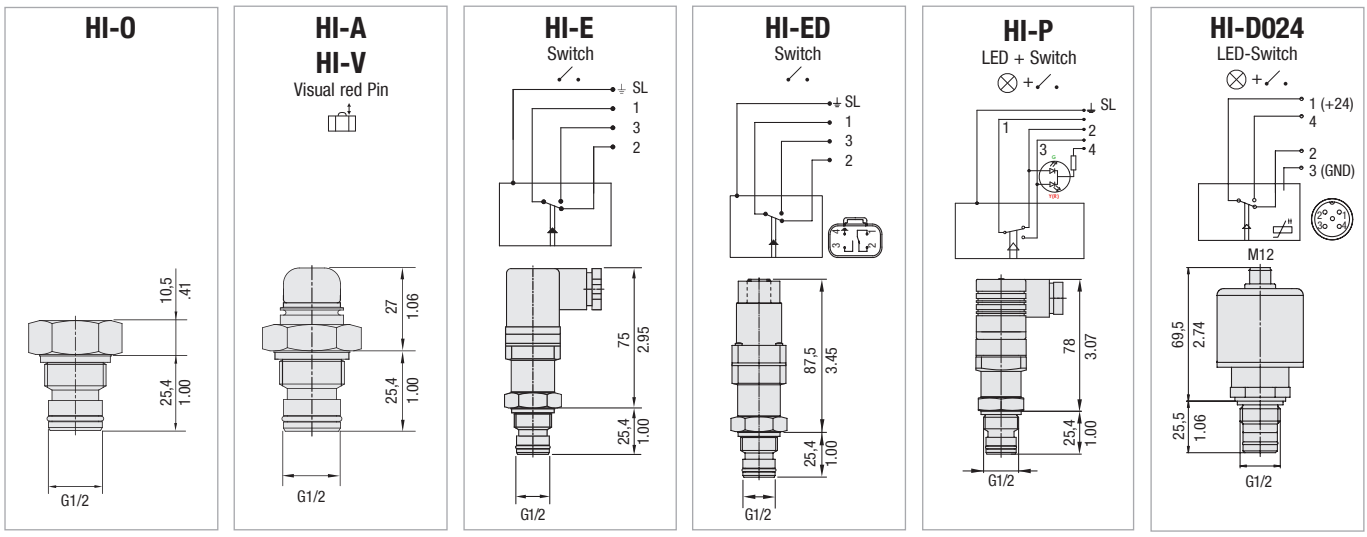
Note: Bold types identify standard option

⑦ Design Code

Only for information	**X**

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

Dimensions



Dimensional drawings: All dimensions in mm/in.

C

Double Visual-electrical Clogging Indicator

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. The unit is ready for operation if the temperature is > 30 °C / 86 °F.

Technical Data

Connection Thread
- G1/2

Operating Pressure
- Max. 400 bar / 5800 PSI

Temperature Range
- -20 °C ... +85 °C / -4 °F ... +185 °F
- ready for operation > 30 °C / 86 °F

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

Protection Rating
- IP 67

Switch Voltage
- Max. 1 A @ 24 V DC

Operating Voltage
- 24 V AC/DC

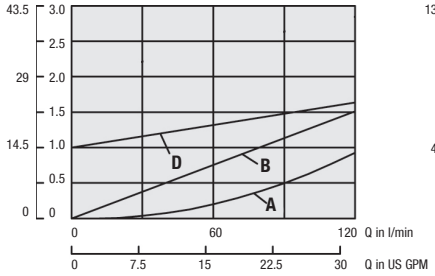
Alarm outputs
- $4{,}1^{+10\%}$ bar / $59.4^{+10\%}$ PSI Δp = 75% (Yellow LED lights up)
- $5{,}5^{+10\%}$ bar / $79.7^{+10\%}$ PSI Δp = 100% (Red LED appears additionally)

C

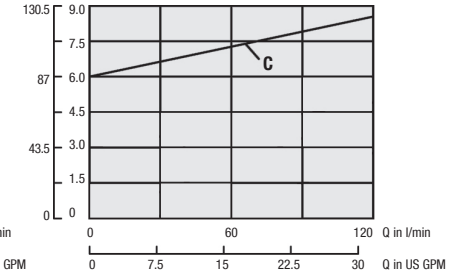
High and Medium Pressure Filters ▪ Type SF / SF-TM / SFZ / SFA

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.

Housing & Valves SF/SFA-014/030

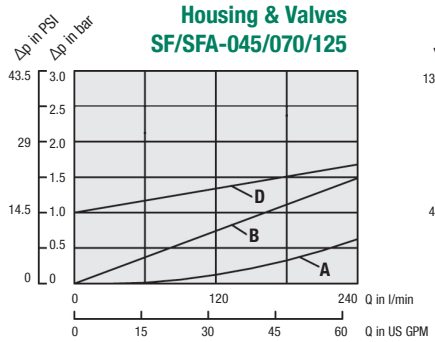


Housing & Valves SF/SFA-014/030

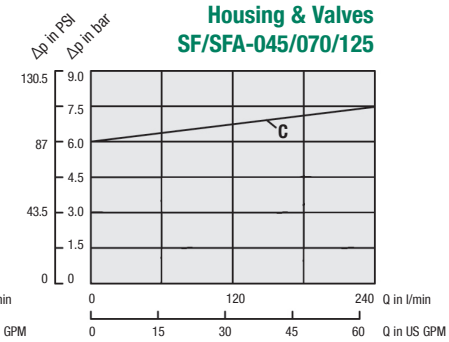


Valve Configuration	Flow direction	Curve
Housing with HVO or HVB	Inlet → Outlet	A
HVM, HVR, HVN	Inlet → Outlet	B
HVM, HVB ▪ Element 100% blocked Bypass only ▪ In reality always mixed mode	Inlet → Outlet	C
HVM,HVR Reverse mode	Outlet → Inlet	D

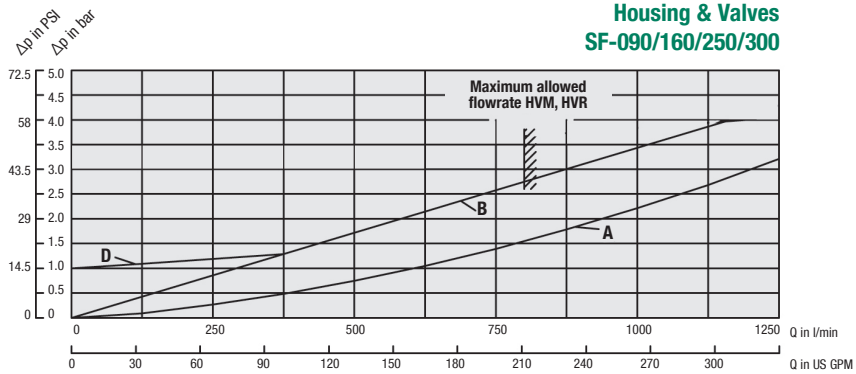
Housing & Valves SF/SFA-045/070/125



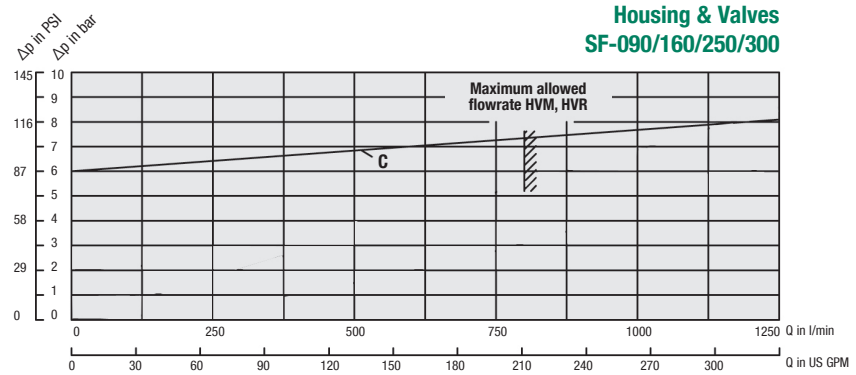
Housing & Valves SF/SFA-045/070/125



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



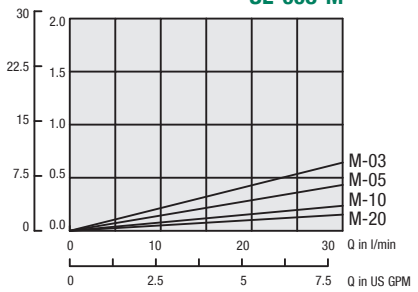
Housing & Valves SF-090/160/250/300



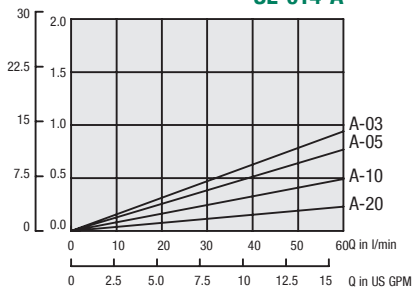
High and Medium Pressure Filters ▪ Type SF / SF-TM / SFZ / SFA

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.

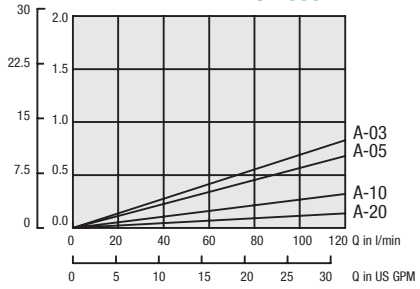
Filter Element SE-008-M



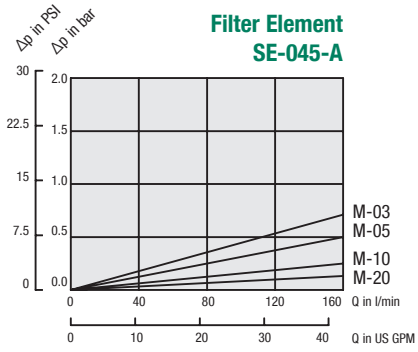
Filter Element SE-014-A



Filter Element SE-030-A



Filter Element SE-045-A



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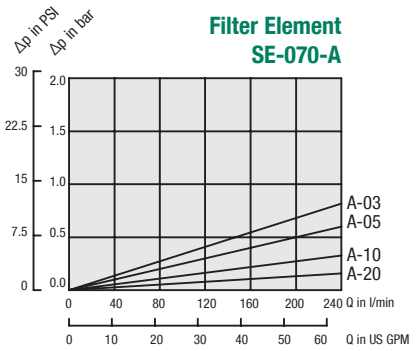
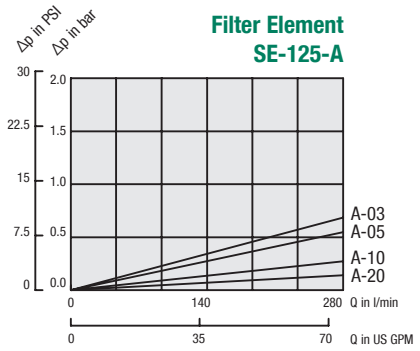
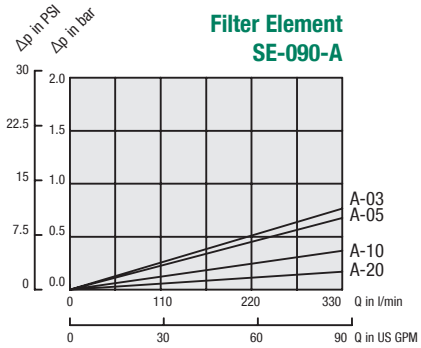


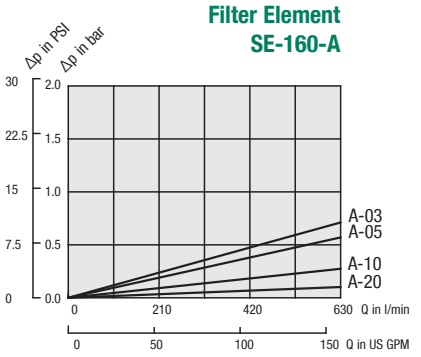
Filter Element SE-125-A



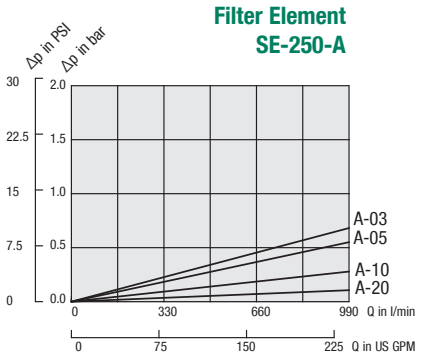
Filter Element SE-090-A



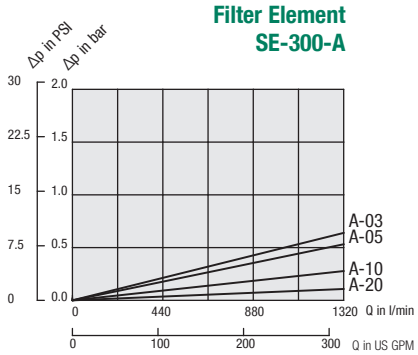
Filter Element SE-160-A



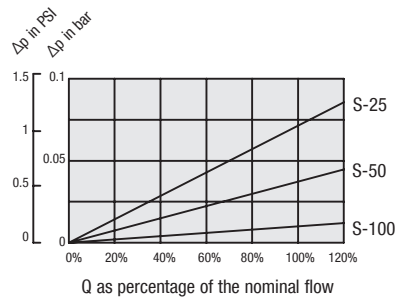
Filter Element SE-250-A



Filter Element SE-300-A



Filter Element SE-...S

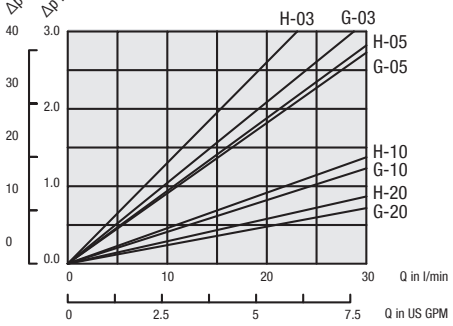


C

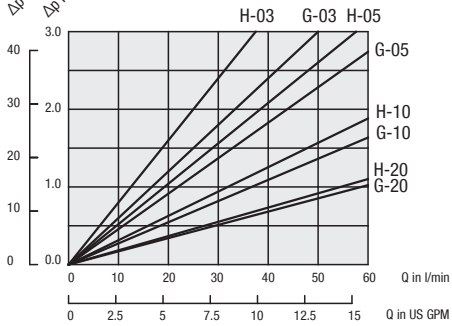
High and Medium Pressure Filters ▪ Type SF / SF-TM / SFZ / SFA

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.

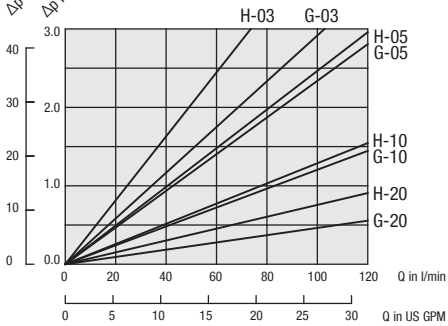
Filter Elements SE-008-G/H



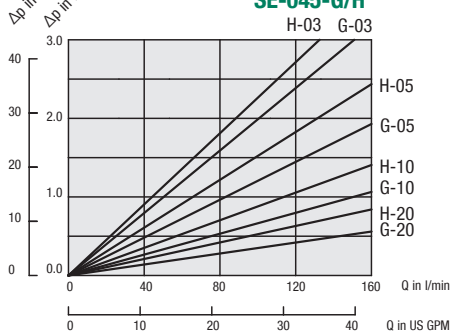
Filter Elements SE-014-G/H



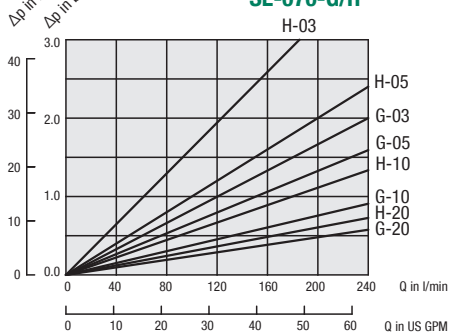
Filter Elements SE-030-G/H



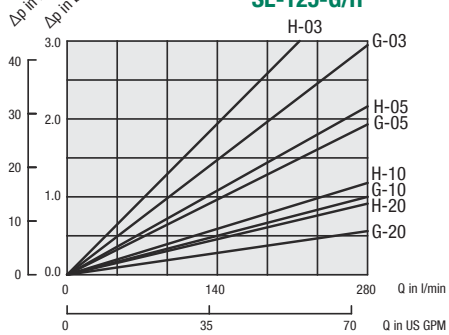
Filter Elements SE-045-G/H



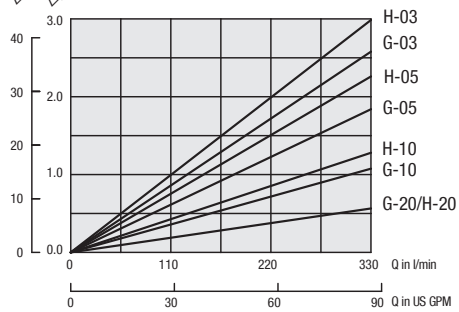
Filter Elements SE-070-G/H



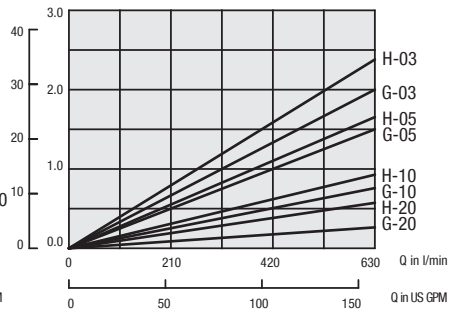
Filter Elements SE-125-G/H



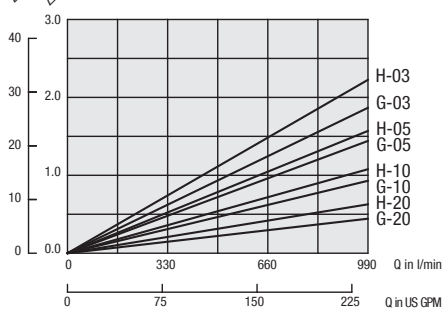
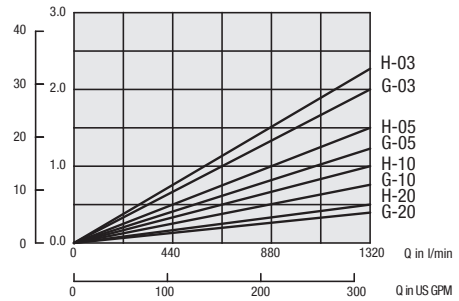
Filter Elements SE-090-G/H



Filter Elements SE-160-G/H



Filter Elements SE-250-G/H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