STAUFF Pressure Filters are designed for manifold mounting or in-line hydraulic applications, with a maximum operating pressure up to 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.

Product Description

Technical Data

Construction
- **SF**: Designed for in-line assembly, with threaded mounting holes on top of head.
- **SF-TM**: Designed for manifold mounting, with mounting holes and fluid ports on top of head.
- **SF-SM**: Designed for manifold mounting, with mounting holes and fluid ports on side of head.
- **SFZ**: Designed for sandwich plate mounting
- **SFA**: Designed for in-line assembly, with threaded mounting holes on top of head.

Materials
- **Filter head**: Spheroidal Graphite Cast Iron
  Free Cutting Steel (only SF-TM014-070)
  SFA: Aluminium
  SFZ: Free Cutting Steel
- **Filter bowl**: Cold Drawn Steel
  SFA: Aluminium
- **O-rings**: NBR (Buna-N®)
  PTFE (Polytetrafluoroethylene)
- **Support ring**: EPDM (Ethylene-Propylene-Diene-Monomer-Rubber)

Operating Pressure
- **SF**: max. 420 bar / 6000 PSI
- **SF-TM**: max. 315 bar / 4560 PSI
- **SF-SM**: max. 315 bar / 4560 PSI
- **SFZ**: max. 315 bar / 4560 PSI
- **SFA**: max. 160 bar / 2320 PSI

Temperature Range
- -10°C ... +100°C / -14°F ... +212°F

Filter Elements
- Specifications see page C41

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, a differential pressure of 6 * 0,5 bar / 87 * 7,25 PSI $\Delta p$ 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 Indicator
- **Standard actuating pressure**: 5 * 0,5 bar / 72,5 * 22 PSI $\Delta p$
- Other actuating pressure settings are available upon request.
- **Available indicators**: Visual
  Electrical
  Visual-electrical (24 V DC, 110 V AC, 230 V AC versions)
**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 head.

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

- **Port Connections**
  - BSP
  - NPT
  - SAE O-ring thread
  - SAE Code 61 flange
  - SAE Code 82 flange
  - Other port connections available on request.

- **Operating Pressure**
  - Max. 420 bar / 6000 PSI

- **Burst Pressure**
  - Min. 1260 bar / 18275 PSI

- **Temperature Range**
  - -10 °C ... +100 °C / +14 °F ... +212 °F

- **Filter Elements**
  - Specifications see page C22 / C41

- **Media Compatibility**
  - Mineral oils, other fluids on request

**Options and Accessories**

- **Valve**
  - **Bypass valve:** Allows unfettered oil to bypass the contaminated element once the opening pressure has been reached, a differential pressure of $6 \cdot 0,5$ bar / 87 + 2,25 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 + 2,25 PSI
    - Bypass, reverse flow capability and non-return valve combined in one valve.

- **Clogging Indicator**
  - **Standard actuating pressure:** $5 = 0,5$ bar / 72,5 + 2,25 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)
High Pressure Filters • Type SF

**High Pressure Filters Dimensions**

- **SF014...160**
  - Threaded connection

- **SF205...300**
  - Flange connection

**G2:** for BSP threads, GM / FM / F1M flange

**G3:** for NPT, SAE O-ring thread, GU / FU / F1U flange

- **Toploader SF014...300..TL**
  - Filter with filterbowl in two-part style for element change from the top

* recommended space for element change
## Dimensions

### Thread Connection G

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<th>Filter Size SF</th>
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<td>1-1/4</td>
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### Weight (kg/lbs)

| Weight (kg/lbs) incl. Elements with Filter Bowl in One-Part Style | 5.3 | 6.2 | 10.3 | 12 | 16.3 | 27 | 35.5 | - | - |
| Weight (kg/lbs) incl. Elements with Filter Bowl in Two-Part Style | 5.9 | 6.9 | 12.2 | 13.7 | 20 | 32 | 39.3 | 49 | 57.3 |

### Dimensions (mm/in)

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### Reference:

- **Rec.**: Recommended
- **Min.**: Minimum

## High Pressure Filters • Type SF

### Dimensions (mm/in)

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### Dimensions (inch)

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<th>045</th>
<th>070</th>
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<td>M14 x 20</td>
<td>M14 x 20</td>
<td>M14 x 20</td>
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<td>M14 x 20</td>
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<tr>
<td>G3</td>
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<td>M14 x 17</td>
<td>M14 x 20</td>
<td>M14 x 20</td>
<td>M14 x 20</td>
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<td>M14 x 20</td>
<td>M14 x 20</td>
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</tr>
</tbody>
</table>

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**C21**
# High Pressure Filter Housings / Complete Filters • Type SF

## SF 014 B / T B / P T 230 / TL / X

### 1. Type
- High Pressure Filter: SF

### 2. Group
- **Flow**
  - 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
  - 660 l/min / 160 US GPM: 160
  - 990 l/min / 250 US GPM: 250
  - 1320 l/min / 300 US GPM: 300

### 3. Filter Material
- **Material**
  - Without filter element: —
  - Inorganic glass fibre: 25 bar / 363 PSI
  - Inorganic glass fibre: 210 bar / 3045 PSI
  - Stainless mesh: 30 bar / 435 PSI
- **max. Δp-collapse**
  - Without filter element: —
  - 3, 5, 10, 20
- **Micron ratings available**: 2, 5, 10, 20, 50, 100, 200
- **Code**: G, H, A

### 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

### 5. Sealing Material
- **NBR (Buna-N®)**: B
- **FFM (Viton®)**: V
- **EPDM**: E

### 6. Connecting Flange
- **Type**: T

### 7. Connection Style
- **Connection Style**: T
- **Group**: 014 030 045 070 090 125 160 250 300
- **Thread Style**: 3/4, 1-1/4
- **Code**: metric B

### 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
- **Visual-electrical**: P

### 10. Thermostat
- **Without thermostat**: none
- **With thermostat**: T

### 11. Voltage (only for Code P)
- 24 V DC
- 110 V AC
- 230 V AC

### Design Code
- **Only for information**: X

---

## Filter Elements • Type SE

### 1. Type
- Filter Element Series: SE

### 2. Group
- According to filter housing

### 3. Filter Material
- **Material**
  - Inorganic glass fibre: 25 bar / 363 PSI
  - Inorganic glass fibre: 210 bar / 3045 PSI
  - Stainless fibre: 210 bar / 3045 PSI
  - Stainless mesh: 30 bar / 435 PSI
- **max. Δp-collapse**: 3, 5, 10, 20
- **Micron ratings available**: 2, 5, 10, 20, 50, 100, 200
- **Code**: G, H, A

### 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

### 5. Sealing Material
- **NBR (Buna-N®)**: B
- **FFM (Viton®)**: V
- **EPDM**: E

### 6. Design Code
- **Only for information**: X

---

Note: Exact flow will depend on filter element selected. Consult technical data on pages C41 / C44.

Note: * Collapse/burst resistance as per ISO 2941. Bold types identify preferred materials, other materials on request.

---

www.stauff.com
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 head.

Materials
- Filter head: SF-TM-014-070 Free Cutting Steel
- SF-TM-090-300 Spherical Graphite Cast Iron
- Filter bowl: Cold Drawn Steel
- O-rings: NBR (Buna-N®)
- EPDM (Ethylene-Propylene-Diene-Monomer-Rubber)
- FPM (Viton®)
- Support ring: PTFE (Polytetrafluoroethylene)

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 C26 / C41

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, a differential pressure of 6 +0.5 bar / 87 +12.5 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 +12.5 PSI Bypass, reverse flow capability and non-return valve combined in one valve.

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)

www.stauff.com
**High Pressure Filters • Type SF-TM**

- **SF-TM014...125**

- **SF-TM090...160**

- **SF-TM014...300-TL**

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

* recommended space for element change
<table>
<thead>
<tr>
<th>Dimensions (mm/in)</th>
<th>Filter Size SF - TM</th>
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Reference: Rec.* = Recommended  |  Min.* = Minimum

Dimensions

High Pressure Filters • Type SF-TM

www.stauff.com
# High Pressure Filter Housings / Complete Filters ▪ Type SF-TM

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Note: Exact flow will depend on filter element selected. Consult technical data on pages C43 / C44.

## Filter Material

<table>
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<tr>
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<th>max. Δp(^{\text{collapse}})</th>
<th>Micron ratings available</th>
<th>Code</th>
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<tr>
<td>Inorg. glass fibre</td>
<td>25 bar / 363 PSI</td>
<td>3, 5, 10, 20</td>
<td>G</td>
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<td>Inorg. glass fibre</td>
<td>210 bar / 3045 PSI</td>
<td>50, 100, 200</td>
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<tr>
<td>Stainless mesh</td>
<td>30 bar / 435 PSI</td>
<td>25, 50, 100, 200</td>
<td>A, S</td>
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Note: * Collapse/burst resistance as per ISO 2941. Bold type identify preferred materials, other materials on request.

## Micron Rating

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<tr>
<td>10 µm</td>
<td>10</td>
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<tr>
<td>20 µm</td>
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<td>100 µm</td>
<td>100</td>
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<tr>
<td>200 µm</td>
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Note: Other micron ratings on request.

## Sealing Material

<table>
<thead>
<tr>
<th>Material</th>
<th>Code</th>
</tr>
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<tbody>
<tr>
<td>NBR (Buna-N98)</td>
<td>B</td>
</tr>
<tr>
<td>FPM (Viton®)</td>
<td>V</td>
</tr>
<tr>
<td>EPDM</td>
<td>E</td>
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Note: Other sealing materials on request.

## Connection Size

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<th>Nominal Bore</th>
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<tr>
<td>1-1/4&quot; (22.4mm / 0.88in)</td>
<td>045, 070</td>
</tr>
<tr>
<td>1-1/2&quot; (32.0mm / 1.26in)</td>
<td>090, 125, 160, 250</td>
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## Valve

<table>
<thead>
<tr>
<th>Valve Type</th>
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<tr>
<td>Bypass valve</td>
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<tr>
<td>Reverse flow valve</td>
<td>R</td>
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<tr>
<td>Non-return valve</td>
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<tr>
<td>Multi-function valve</td>
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## Clogging Indicator

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<th>Indicator Type</th>
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<td>Without clogging indicator</td>
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<tr>
<td>Visual, with automatic reset</td>
<td>A</td>
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<tr>
<td>Visual, with manual reset</td>
<td>V</td>
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<tr>
<td>Electrical</td>
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<tr>
<td>Visual-electrical</td>
<td>R</td>
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## Thermostop

<table>
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<th>Thermostat Type</th>
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<td>Without thermostat</td>
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<tr>
<td>With thermostat</td>
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## Voltage (only for Code P)

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<tr>
<th>Voltage</th>
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<td>110 V AC</td>
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<td>230 V AC</td>
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## Design Code

<table>
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# Filter Elements ▪ Type SE

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<th>B</th>
<th>/</th>
<th>X</th>
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<tr>
<td><strong>2</strong> Group</td>
<td>According to filter housing</td>
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<tr>
<td><strong>3</strong> Filter Material</td>
<td>Material</td>
<td>max. Δp(^{\text{collapse}})</td>
<td>Micron ratings available</td>
<td>Code</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inorg. glass fibre</td>
<td>25 bar / 363 PSI</td>
<td>3, 5, 10, 20</td>
<td>G</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Inorg. glass fibre</td>
<td>210 bar / 3045 PSI</td>
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<td>H</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stainless mesh</td>
<td>30 bar / 435 PSI</td>
<td>25, 50, 100, 200</td>
<td>A, S</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Other micron ratings on request.

## Micron Rating

<table>
<thead>
<tr>
<th>Micron</th>
<th>Code</th>
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</thead>
<tbody>
<tr>
<td>3 µm</td>
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<tr>
<td>5 µm</td>
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<tr>
<td>10 µm</td>
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<td>20 µm</td>
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<td>25 µm</td>
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<td>50 µm</td>
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<tr>
<td>100 µm</td>
<td>100</td>
</tr>
<tr>
<td>200 µm</td>
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</tr>
</tbody>
</table>

Note: Other micron ratings on request.

## Sealing Material

<table>
<thead>
<tr>
<th>Material</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>NBR (Buna-N98)</td>
<td>B</td>
</tr>
<tr>
<td>FPM (Viton®)</td>
<td>V</td>
</tr>
<tr>
<td>EPDM</td>
<td>E</td>
</tr>
</tbody>
</table>

Other sealing materials on request

## Design Code

<table>
<thead>
<tr>
<th>Code</th>
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<tbody>
<tr>
<td>X</td>
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</tbody>
</table>

Note: * Collapse/burst resistance as per ISO 2941. Bold type identify preferred materials, other materials on request.
Product Description

STAUFF SF-SM 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 side of head.

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

Operating Pressure
- Max. 315 bar / 4560 PSI
- Min. 945 bar / 13705 PSI

Burst Pressure
- +0,5 bar / +7.25 PSI

Temperature Range
- -10 °C ... +100 °C / +14 °F ... +212 °F

Filter Elements
- Specifications see page C30 / C41

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, a differential pressure of 6 * 6.5 bar / 87 * 92 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 * 6.5 bar / 87 * 92 PSI Bypass, reverse flow capability and non-return valve combined in one valve.

Clogging Indicator
- Standard actuating pressure: 5 * 0.3 bar / 72.5 * 0.2 PSI Δp
- Available indicators: Visual
- Visual-electrical (24 V DC, 110 V AC, 230 V AC versions)
High Pressure Filters • Type SF-SM

SF-SM014...125

SF-SM090...160

SF-SM014...300-TL

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

* recommended space for element change

Dimensional drawings: All dimensions in mm/in.
<table>
<thead>
<tr>
<th>Dimensions (mm/in)</th>
<th>Filter Size SF - SM</th>
<th>014</th>
<th>030</th>
<th>045</th>
<th>045 OAI</th>
<th>070</th>
<th>070 OAI</th>
<th>125</th>
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<th>080</th>
<th>160</th>
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</tbody>
</table>

Reference: Rec.*: Recommended  | Min.*: Minimum

www.stauff.com C29
# High Pressure Filter Housings / Complete Filters • Type SF-SM

## SF-SM 014 • Type SE

<table>
<thead>
<tr>
<th>1 Type</th>
<th>2 Group</th>
<th>3 Filter Material</th>
<th>4 Micron Rating</th>
<th>5 Seal Material</th>
<th>6 Valve</th>
<th>7 Clogging Indicator</th>
<th>8 Thermostat</th>
<th>9 Voltage (only for Code P)</th>
<th>10 Style Filterbowl</th>
<th>11 Port Connection Location</th>
<th>12 Design Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Pressure Filter Side Mounted SF-SM</td>
<td>Flow</td>
<td>60 l/min / 14 US GPM 014</td>
<td>Microon ratings available</td>
<td>NBR (Buna-N®) B</td>
<td>Without valve 0</td>
<td>Without clogging indicator 0</td>
<td>Without thermostat none</td>
<td>24 V DC 24</td>
<td>With bowl in one-part style none</td>
<td>Inlet above outlet IAO</td>
<td></td>
</tr>
<tr>
<td>014</td>
<td>110 l/min / 30 US GPM 030</td>
<td>Inorganic glass fibre 25 bar / 383 PSI 2</td>
<td>NBR (Buna-N®) B</td>
<td>Bypass valve V</td>
<td>Visual, with automatic reset A</td>
<td>Without thermostat none</td>
<td>110 V AC 110</td>
<td>Toploader, with bowl in two-part style TL</td>
<td>Outlet above inlet OAI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>045</td>
<td>240 l/min / 70 US GPM 070</td>
<td>Inorganic glass fibre 210 bar / 3045 PSI 2</td>
<td>FPM (Viton®) V</td>
<td>Reverse flow valve R</td>
<td>Visual, with manual reset V</td>
<td>With thermostat T</td>
<td>230 V AC 230</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>090</td>
<td>330 l/min / 90 US GPM 090</td>
<td>Inorganic glass fibre 210 bar / 3045 PSI 2</td>
<td>EPDM E</td>
<td>Non-return valve N</td>
<td>Electrical E</td>
<td>With thermostat T</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>125</td>
<td>475 l/min / 125 US GPM 125</td>
<td>Stainless mesh 30 bar / 435 PSI 2</td>
<td>Note: Other sealing materials on request.</td>
<td>Multi-function valve M</td>
<td>Visual-electrical P</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>160</td>
<td>660 l/min / 160 US GPM 160</td>
<td>Note: Exact flow will depend on filter element selected.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>250</td>
<td>990 l/min / 250 US GPM 250</td>
<td>Consult technical data on pages C41 / C44.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>300</td>
<td>1320 l/min / 300 US GPM 300</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Filter Elements • Type SE

<table>
<thead>
<tr>
<th>SE</th>
<th>1 Type</th>
<th>2 Group</th>
<th>3 Filter Material</th>
<th>4 Micron Rating</th>
<th>5 Sealing Material</th>
<th>6 Design Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>SF-SM 014</td>
<td>Filter Element Series SE</td>
<td>According to filter housing</td>
<td>Sealing Material</td>
<td>Sealing Material</td>
<td>Only for information X</td>
<td></td>
</tr>
<tr>
<td>SE</td>
<td>Filter Element Series SE</td>
<td>According to filter housing</td>
<td>Sealing Material</td>
<td>Sealing Material</td>
<td>Only for information X</td>
<td></td>
</tr>
</tbody>
</table>

## Notes
- Bold type identify preferred materials, other materials on request.
- Note: Other micron ratings on request.
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®), FPM (Viton®), EPDM (Ethylene-Propylene-Diene-Monomer-Rubber)
- Support ring (bowl): PTFE (Polytetrafluoroethylene)

Connecting Port
- According to ISO 4401-03-02-0-05 N6 (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 C34 / C41

Media Compatibility
- Mineral oils, other fluids on request

O-Ring
- 9x1.7 (included in delivery)

Options and Accessories

Clogging Indicator
- Standard actuating pressure: 5 - 8.5 bar / 72.5 - 125 PSI Δp
- 8 - 16 bar / 116 - 232 PSI Δp
- Other actuating pressure settings are available upon request.

High Pressure Filters • Type SFZ

Version - right

Valve side

Manifold side

Version - left

Symbol for hydraulic systems
SFZ008

* recommended space for element change
<table>
<thead>
<tr>
<th>Dimensions (mm/in)</th>
<th>Filter Size SFZ</th>
</tr>
</thead>
<tbody>
<tr>
<td>SFZ008</td>
<td></td>
</tr>
<tr>
<td>b1</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>.55</td>
</tr>
<tr>
<td>b2</td>
<td>40.5</td>
</tr>
<tr>
<td></td>
<td>1.59</td>
</tr>
<tr>
<td>b3</td>
<td>30.2</td>
</tr>
<tr>
<td></td>
<td>1.19</td>
</tr>
<tr>
<td>b4</td>
<td>21.5</td>
</tr>
<tr>
<td></td>
<td>.85</td>
</tr>
<tr>
<td>b5</td>
<td>12.7</td>
</tr>
<tr>
<td></td>
<td>.50</td>
</tr>
<tr>
<td>b6</td>
<td>9</td>
</tr>
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<td></td>
<td>.35</td>
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<tr>
<td>b7</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>3.15</td>
</tr>
<tr>
<td>b8</td>
<td>140</td>
</tr>
<tr>
<td></td>
<td>5.51</td>
</tr>
<tr>
<td>b9</td>
<td>229</td>
</tr>
<tr>
<td></td>
<td>9.02</td>
</tr>
<tr>
<td>b10</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>1.97</td>
</tr>
<tr>
<td>d1</td>
<td>5.3</td>
</tr>
<tr>
<td></td>
<td>.21</td>
</tr>
<tr>
<td>d2</td>
<td>46</td>
</tr>
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<td></td>
<td>1.81</td>
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<tr>
<td>h1</td>
<td>31</td>
</tr>
<tr>
<td></td>
<td>1.22</td>
</tr>
<tr>
<td>h2</td>
<td>25.6</td>
</tr>
<tr>
<td></td>
<td>1.02</td>
</tr>
<tr>
<td>h3</td>
<td>15.5</td>
</tr>
<tr>
<td></td>
<td>.61</td>
</tr>
<tr>
<td>h4</td>
<td>5.1</td>
</tr>
<tr>
<td></td>
<td>.20</td>
</tr>
<tr>
<td>h5</td>
<td>32.5</td>
</tr>
<tr>
<td></td>
<td>1.28</td>
</tr>
<tr>
<td>h6</td>
<td>0.75</td>
</tr>
<tr>
<td></td>
<td>.03</td>
</tr>
<tr>
<td>Sq1</td>
<td>48</td>
</tr>
<tr>
<td></td>
<td>1.89</td>
</tr>
<tr>
<td>Sq2</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>1.06</td>
</tr>
</tbody>
</table>
### High Pressure Filter Housings / Complete Filters • Type SFZ

<table>
<thead>
<tr>
<th>SFZ</th>
<th>Order Code</th>
<th>B / B / P / T</th>
<th>Code</th>
<th>Clogging Indicator</th>
<th>Sealing Material</th>
<th>Actuating Pressure Clogging Indicator</th>
<th>Design Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>008</td>
<td>230 - 5.0</td>
<td>/ R / X</td>
<td></td>
<td></td>
<td></td>
<td>5.0 bar / 72.5 PSI</td>
<td></td>
</tr>
</tbody>
</table>

#### Filter Material
- Please note that the filter element is not protected by an internal bypass. Please be sure that the hydraulic systems is designed with the sufficient means to protect the element.

<table>
<thead>
<tr>
<th>Material</th>
<th>max. ( \Delta p ) collapse</th>
<th>Micron ratings available</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inorg. glass fibre</td>
<td>25 bar / 363 PSI</td>
<td>3, 5, 10, 20</td>
<td>G</td>
</tr>
<tr>
<td>Inorg. glass fibre</td>
<td>210 bar / 3045 PSI</td>
<td>3, 5, 10, 20</td>
<td>H</td>
</tr>
<tr>
<td>Stainless fibre</td>
<td>210 bar / 3045 PSI</td>
<td>3, 5, 10, 20</td>
<td>M</td>
</tr>
<tr>
<td>Stainless mesh</td>
<td>30 bar / 435 PSI</td>
<td>25, 50, 100, 200</td>
<td>S</td>
</tr>
</tbody>
</table>

#### 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.

### Filter Elements • Type SE

<table>
<thead>
<tr>
<th>SE</th>
<th>Order Code</th>
<th>E / B / X</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>008</td>
<td>10 - B</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Filter Material
- Please note that the filter element is not protected by an internal bypass. Please be sure that the hydraulic systems is designed with the sufficient means to protect the element.

<table>
<thead>
<tr>
<th>Material</th>
<th>max. ( \Delta p ) collapse</th>
<th>Micron ratings available</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inorg. glass fibre</td>
<td>25 bar / 363 PSI</td>
<td>3, 5, 10, 20</td>
<td>G</td>
</tr>
<tr>
<td>Inorg. glass fibre</td>
<td>210 bar / 3045 PSI</td>
<td>3, 5, 10, 20</td>
<td>H</td>
</tr>
<tr>
<td>Stainless fibre</td>
<td>210 bar / 3045 PSI</td>
<td>3, 5, 10, 20</td>
<td>M</td>
</tr>
<tr>
<td>Stainless mesh</td>
<td>30 bar / 435 PSI</td>
<td>25, 50, 100, 200</td>
<td>S</td>
</tr>
</tbody>
</table>

* Collapse/burst resistance as per ISO 2941. Bold types identify preferred materials, other materials on request.
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 head.

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

Port Connections
• BSP
• NPT
• SAE O-ring thread
• SAE Code 61 Flange

Operating Pressure
• SFA014/030: Max. 160 bar / 2320 PSI
  Max. 190 bar / 2755 PSI (according to ANSI T2.6.1. R2-2001)
• SFA045/070: 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
• -10°C ... +100°C / +14°F ... +212°F

Filter Elements
• Specifications see page C38 / C41

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, a differential pressure of 6 * 6.3 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 * 6.3 bar / 87 * 7.25 PSI Bypass, reverse flow capability and non-return valve combined in one valve.

Clogging Indicator
• Standard actuating pressure: 5 * 5.3 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)
Medium Pressure Filters • Type SFA

SFA014...070

Threaded connection

Flange connection

* recommended space for element change
### Medium Pressure Filters • Type SFA

#### Dimensions (mm/in)

<table>
<thead>
<tr>
<th>Filter Size SFA</th>
<th>014</th>
<th>030</th>
<th>045</th>
<th>070</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Thread Connection G</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BSP</td>
<td>3/4</td>
<td>1-1/4</td>
<td>1-1/4</td>
<td></td>
</tr>
<tr>
<td>NPT</td>
<td>3/4</td>
<td>1-1/4</td>
<td>1-1/4</td>
<td></td>
</tr>
<tr>
<td>SAE O-ring Thread</td>
<td>1-1/6–12</td>
<td>1-5/8–12</td>
<td>1-5/8–12</td>
<td></td>
</tr>
<tr>
<td>SAE Flange 3000 PSI</td>
<td>3/4</td>
<td>3/4</td>
<td>3/4</td>
<td>3/4</td>
</tr>
<tr>
<td>Weight (kg/lbs)</td>
<td>2.1</td>
<td>2.54</td>
<td>4.6</td>
<td>5.3</td>
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<tr>
<td></td>
<td>4.7</td>
<td>5.6</td>
<td>10.2</td>
<td>11.8</td>
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</table>

#### Dimensions (3000 PSI mm/in)

<table>
<thead>
<tr>
<th>Filter Size SFA</th>
<th>014</th>
<th>030</th>
<th>045</th>
<th>070</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Thread Connection G</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BSP</td>
<td>22.2</td>
<td>22.2</td>
<td>47.6</td>
<td>47.6</td>
</tr>
<tr>
<td>NPT</td>
<td>30.2</td>
<td>30.2</td>
<td>58.7</td>
<td>58.7</td>
</tr>
<tr>
<td>SAE O-ring Thread</td>
<td>M10 x 15</td>
<td>M10 x 15</td>
<td>M14 x 20</td>
<td>M14 x 20</td>
</tr>
<tr>
<td>SAE Flange 3000 PSI</td>
<td>3/8–16 UNC</td>
<td>3/8–16 UNC</td>
<td>7/8–14 UNC</td>
<td>7/8–14 UNC</td>
</tr>
</tbody>
</table>

Reference: Rec.*: Recommended | Min.*: Minimum
Medium Pressure Filter Housings / Complete Filters • Type SFA

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 filter element selected. Consult technical data on pages C43 / C44.

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

Note: * Collapse/burst resistance as per ISO 2941. Bold types identify preferred materials, other materials on request.

4 Micron Rating
3 μm 01
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
FPM (Viton®) V
EPDM E

Note: Other sealing materials on request.

6 Connection Flange
Type T

7 Connection Style
Connection Style Group Thread Code
BSP 014 3/4 metric B
BSP 030 1-1/4 metric B1
NPT 045 3/4 metric B1
SAE O-ring Thread 070 1-1/16-12 UNC N
SAE Flange 3000 PSI 3/4 1-5/8-12 UNC U
SAE Flange 3000 PSI 3/4 1-1/4 metric FM
SAE Flange 3000 PSI 1 1-1/4 metric FF
SAE Flange 3000 PSI 1 1-5/8-12 UNC U

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
Visual-electrical P

10 Thermostop
Without thermostop
With thermostop T

11 Voltage (only for Code P)
24 V DC 24
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 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 3, 5, 10, 20 H
Stainless fibre 210 bar / 3045 PSI 3, 5, 10, 20 A
Stainless mesh 30 bar / 435 PSI 25, 50, 100, 200 B, S

Note: Collapse/burst resistance as per ISO 2941. Bold types identify preferred materials, other materials on request.
Valves

Product Description

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.

HV-O  Non-bypass standard insert without any valve function. Element collapse rating should be higher than system pressure
HV-B  Bypass valve which allows oil to bypass the element when the differential pressure across the element reaches 6 MPa / 870 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.
HV-R  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.
HV-N  Non-return valve
HV-M  Multi-function valve

Order Code

HV - M 014 / 030 / X

1 Type
Valve for Pressure Filters

2 Valve Type
Non-bypass standard insert without any valve 0
Bypass valve B
Reverse flow valve R
Non-return valve N
Multi-function valve M

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 C42

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.

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 MPa / 870 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.
## 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 ($\Delta p$) 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 has to be at least +20°C / +68°F for the indicator to function. Special indicators with a temperature range down to -45°C / -49°F are available upon request.

### Technical Data

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

#### Thread
- **G 1/2**

#### Differential Pressure
- **5.0 bar / 72.5 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, both NO and NC contacts are available in the switch, rated capacity: see chart below

The visual clogging indicators are available in the following configurations:

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

Electrical and visual-electrical clogging indicators are only available with automatic reset.

### Order Code

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Indicator Type</td>
<td>Sealing Material</td>
<td>Voltage (only for Code P)</td>
<td>Differential Pressure Setting</td>
<td>Design Code</td>
<td></td>
</tr>
<tr>
<td>Clogging Indicator for Pressure Filters HI</td>
<td>Plug</td>
<td>NBR (Buna-N®)</td>
<td>24 V DC</td>
<td>1,72 bar / 25 PSI</td>
<td>Only for information X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Visual, automatic reset</td>
<td>FPM (Viton®)</td>
<td>110 V AC</td>
<td>2.0 bar / 29 PSI</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Visual, manual reset</td>
<td>EPDM</td>
<td>230 V AC</td>
<td>2.5 bar / 36.3 PSI (standard option)</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Electrical</td>
<td></td>
<td>29 P</td>
<td>3.0 bar / 43.5 PSI</td>
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<tr>
<td></td>
<td>Visual-electrical</td>
<td></td>
<td>72.5 P</td>
<td>5.0 bar / 72.5 PSI</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Without thermostat</td>
<td></td>
<td>2,5 B</td>
<td>7.0 bar / 101.5 PSI</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>With thermostat</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Dimensions

#### HI-O

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body</td>
<td>41</td>
</tr>
<tr>
<td>Slit</td>
<td>37</td>
</tr>
<tr>
<td>Body</td>
<td>105</td>
</tr>
<tr>
<td>Slit</td>
<td>75</td>
</tr>
</tbody>
</table>

#### HI-A

<table>
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<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Body</td>
<td>41</td>
</tr>
<tr>
<td>Slit</td>
<td>37</td>
</tr>
<tr>
<td>Body</td>
<td>105</td>
</tr>
<tr>
<td>Slit</td>
<td>75</td>
</tr>
</tbody>
</table>

#### HI-V

<table>
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<tbody>
<tr>
<td>Body</td>
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</tr>
<tr>
<td>Slit</td>
<td>37</td>
</tr>
<tr>
<td>Body</td>
<td>105</td>
</tr>
<tr>
<td>Slit</td>
<td>75</td>
</tr>
</tbody>
</table>

#### HI-E

<table>
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<tbody>
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</tr>
<tr>
<td>Slit</td>
<td>37</td>
</tr>
<tr>
<td>Body</td>
<td>105</td>
</tr>
<tr>
<td>Slit</td>
<td>75</td>
</tr>
</tbody>
</table>

#### HI-P

<table>
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<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Body</td>
<td>41</td>
</tr>
<tr>
<td>Slit</td>
<td>37</td>
</tr>
<tr>
<td>Body</td>
<td>105</td>
</tr>
<tr>
<td>Slit</td>
<td>75</td>
</tr>
</tbody>
</table>

### Rated Capacity HI-E and HI-P

**Alternating current:** 250 V AC 5 A

**Direct current:** see table below

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Resistive Load A</th>
<th>Inductive Load A</th>
</tr>
</thead>
<tbody>
<tr>
<td>24 V DC</td>
<td>8.00</td>
<td>7.00</td>
</tr>
<tr>
<td>110 V AC</td>
<td>0.50</td>
<td>0.20</td>
</tr>
<tr>
<td>230 V AC</td>
<td>0.25</td>
<td>0.10</td>
</tr>
</tbody>
</table>

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

Dimensional drawings: All dimensions in mm/in.
High and Medium Pressure Filters • Type SF / SF-TM / SF-SM / SFZ / SFA Filter Elements SE

Product Description

STAUFF SE series Replacement Filter Elements for SF / SF-TM / SF-SM / SFZ / SFA series filter housings are manufactured in the common filter materials such as Stainless Fibre, Stainless Mesh and Inorganic Glass Fibre. As standard, all Replacement Elements SE series for SF / SF-TM / SF-SM / SFZ / SFA, have tin-plated steel parts for use with aggressive media such as water glycol, other materials available on request. All STAUFF Replacement Elements comply with quality specifications in accordance with international standards.

Order Code

<table>
<thead>
<tr>
<th>Type</th>
<th>SE - 014 G 10 B / X</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Filter Element Series SE</td>
</tr>
<tr>
<td>2</td>
<td>Group</td>
</tr>
<tr>
<td>3</td>
<td>According to filter housing</td>
</tr>
<tr>
<td>4</td>
<td>Micron Rating</td>
</tr>
<tr>
<td>5</td>
<td>Sealing Material</td>
</tr>
<tr>
<td>6</td>
<td>Design Code</td>
</tr>
</tbody>
</table>

1. **Type**
   - Filter Element Series SE

2. **Group**
   - According to filter housing

3. **Filter Material**
   - Inorganic glass fibre: 25 bar / 363 PSI
   - Inorganic glass fibre: 210 bar / 3045 PSI
   - Stainless fibre: 210 bar / 3045 PSI
   - Stainless mesh: 30 bar / 435 PSI

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

5. **Sealing Material**
   - NBR (Buna-N®): B
   - FPM (Viton®): V
   - EPDM: E

   Note: Other sealing materials on request.

6. **Design Code**
   - Only for information: X

Note: Other micron ratings on request.

Note: * Collapse/burst resistance as per ISO 2941. Bold types identify preferred materials, other materials on request.
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. Consult STAUFF for details.

**Valve Configuration**

<table>
<thead>
<tr>
<th>Valve Type</th>
<th>Flow direction</th>
<th>Curve</th>
</tr>
</thead>
<tbody>
<tr>
<td>Housing with MV-D or MV-B</td>
<td>In → Out</td>
<td>A</td>
</tr>
<tr>
<td>HV-M, HV-R, HV-N</td>
<td>In → Out</td>
<td>B</td>
</tr>
<tr>
<td>• Element 100% blocked Bypass only</td>
<td>In → Out</td>
<td>C</td>
</tr>
<tr>
<td>• In reality always mixed mode</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HV-M-HV-R</td>
<td>Out → In</td>
<td>D</td>
</tr>
<tr>
<td>Reverse mode</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Housing & Valves**

**SF/SFA014/030**

**SF/SFA045/070/125**

**SF090/160/250/300**

**Flow Characteristics**

High and Medium Pressure Filters

Type SF / SF-TM / SF-SM / 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. Muffin filter ratings have been obtained in accordance to ISO 16889. Consult STAUFF for details.
High and Medium Pressure Filters

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. Consult STAUFF for details.