## Features and Benefits
- Top-ported high pressure filter
- Available with non-bypass option with high collapse element
- Offered in pipe, SAE straight thread, flange and ISO 228 porting
- No-Element indicator option available

## Applications
- Industrial
- Automotive Manufacturing
- Machine Tool
- Mining Technology
- Steel Making
- Pulp & Paper
- Agriculture
- Mobile Vehicles

## Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow Rating</td>
<td>Up to 50 gpm (190 L/min) for 150 SUS (32 cSt) fluids</td>
</tr>
<tr>
<td>Max. Operating Pressure</td>
<td>6000 psi (415 bar)</td>
</tr>
<tr>
<td>Min. Yield Pressure</td>
<td>15,500 psi (1070 bar), per NFPA T2.6.1</td>
</tr>
<tr>
<td>Rated Fatigue Pressure</td>
<td>4000 psi (276 bar), per NFPA T2.6.1-R1-2005</td>
</tr>
<tr>
<td>Temp. Range</td>
<td>-20°F to 225°F (-29°C to 107°C)</td>
</tr>
<tr>
<td>Bypass Setting</td>
<td>Cracking: 40 psi (2.8 bar) Full Flow: 75 psi (5.2 bar) Non-bypassing model has a blocked bypass.</td>
</tr>
<tr>
<td>Porting Head</td>
<td>Ductile Iron</td>
</tr>
<tr>
<td>Element Case</td>
<td>Steel</td>
</tr>
<tr>
<td>Weight of CF60-9C</td>
<td>24.0 lbs. (10.9 kg)</td>
</tr>
<tr>
<td>Element Change Clearance</td>
<td>4.0&quot; (103 mm)</td>
</tr>
</tbody>
</table>
## CF60 Top-Ported Pressure Filter

### Metric dimensions in ( ).

#### Element Performance Information

<table>
<thead>
<tr>
<th>Element</th>
<th>Filtration Ratio Per ISO 4572/NFPA T3.10.8.8</th>
<th>Filtration Ratio wrt ISO 16889</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Using automated particle counter (APC) calibrated per ISO 4402</td>
<td>Using APC calibrated per ISO 11171</td>
</tr>
<tr>
<td></td>
<td>$\beta_1 \geq 75$</td>
<td>$\beta_5 \geq 100$</td>
</tr>
<tr>
<td>CC3</td>
<td>6.8</td>
<td>7.5</td>
</tr>
<tr>
<td>CC10</td>
<td>15.5</td>
<td>16.2</td>
</tr>
<tr>
<td>CCZ1</td>
<td>&lt;1.0</td>
<td>&lt;1.0</td>
</tr>
<tr>
<td>CCZ3/CAS3/CCAS3</td>
<td>&lt;1.0</td>
<td>&lt;1.0</td>
</tr>
<tr>
<td>CCZ5/CAS5/CCAS5</td>
<td>2.5</td>
<td>3.0</td>
</tr>
<tr>
<td>CCZ10/CAS10/CCAS10</td>
<td>7.4</td>
<td>8.2</td>
</tr>
<tr>
<td>CCZ25</td>
<td>18.0</td>
<td>20.0</td>
</tr>
<tr>
<td>CCZX3</td>
<td>&lt;1.0</td>
<td>&lt;1.0</td>
</tr>
</tbody>
</table>

#### Dirt Holding Capacity

<table>
<thead>
<tr>
<th>Element</th>
<th>DHC (gm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC3</td>
<td>30</td>
</tr>
<tr>
<td>CC10</td>
<td>25</td>
</tr>
<tr>
<td>CCZ1</td>
<td>57</td>
</tr>
<tr>
<td>CCZ3/CAS3/CCAS3</td>
<td>58</td>
</tr>
<tr>
<td>CCZ5/CAS5/CCAS5</td>
<td>63</td>
</tr>
<tr>
<td>CCZ10/CAS10/CCAS10</td>
<td>62</td>
</tr>
<tr>
<td>CCZ25</td>
<td>63</td>
</tr>
<tr>
<td>CCZX3</td>
<td>26*</td>
</tr>
</tbody>
</table>

*Based on 100 psi terminal pressure

**Element Collapse Rating:**
- 150 psid (10 bar) for standard elements
- 3000 psid (210 bar) for high collapse (ZX) versions

**Flow Direction:** Outside In

**Element Nominal Dimensions:**
- CC: 3.0" (75 mm) O.D. x 9.5" (240 mm) long

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82 SCHROEDER INDUSTRIES
Top-Ported Pressure Filter

Type Fluid | Appropriate Schroeder Media
---|---
Petroleum Based Fluids | All E media (cellulose), Z-Media® and ASP Media (synthetic)
High Water Content | All Z-Media® and ASP Media (synthetic)
Invert Emulsions | 10 and 25 µ Z-Media® (synthetic), 10 µ ASP Media
Water Glycols | 3, 5, 10 and 25 µ Z-Media® (synthetic) and all ASP Media (synthetic)
Phosphate Esters | All Z-Media® and ASP Media (synthetic) with H (EPR) seal designation
Skydrol® | 3, 5, 10 and 25 µ Z-Media® and all ASP Media (synthetic) with H.5 seal designation (EPR seals and stainless steel wire mesh in element, and light oil coating on housing exterior)

Element Selection Based on Flow Rate

<table>
<thead>
<tr>
<th>Pressure</th>
<th>E Media</th>
<th>Z-Media®</th>
</tr>
</thead>
<tbody>
<tr>
<td>To 6000 psi (415 bar)</td>
<td>CC3</td>
<td>CCZ1</td>
</tr>
<tr>
<td></td>
<td>CC10</td>
<td>CCZ3</td>
</tr>
<tr>
<td></td>
<td>CC25</td>
<td>CCZ5</td>
</tr>
<tr>
<td></td>
<td>CCZ10</td>
<td>CCZ10</td>
</tr>
<tr>
<td></td>
<td>CCZ25</td>
<td>CCZ25</td>
</tr>
</tbody>
</table>

Flow gpm (L/min) | 0 | 10 | 20 | 30 | 40 | 50
Viscosity factor: Divide viscosity by 150 SUS (32 cSt).

Pressure Drop Information Based on Flow Rate and Viscosity

\[ \Delta P_{\text{housing}} = \text{Flow} \times \text{Element } \Delta P \text{ factor} \times \text{Viscosity factor} \]

Exercise:
Determine \( \Delta P \) at 30 gpm (115 L/min) for CF601CC23SD5 using 200 SUS (44 cSt) fluid.

Solution:
\[
\Delta P_{\text{housing}} = 4.0 \text{ psi} \quad \Delta P_{\text{element}} = 8.0 \text{ psi}
\]

Notes

sp gr = specific gravity

Sizing of elements should be based on element flow information provided in the Element Selection chart above.
### How to Build a Valid Model Number for a Schroeder CF40:

- **BOX 1**: Filter Series
- **BOX 2**: Number of Elements
- **BOX 3**: Media Type
- **BOX 4**: Micron Rating
- **BOX 5**: Seal Material
- **BOX 6**: Porting
- **BOX 7**: Options
- **BOX 8**: Dirt Alarm® Options
- **BOX 9**: Additional Options

**Example**: NOTE: One option per box

```
CF60 | 1C | Z | 10 | S | D5 | = CF601CCZ5SD5
```

### NOTES:
- Box 2: Replacement element part numbers are identical to contents of Boxes 2, 3, 4 and 5. E media (cellulose) elements are only available with Buna N seals.
- Box 5: H.5 seal designation includes the following: EPR seals, stainless steel wire mesh on elements, and light oil coating on housing exterior. Viton® is a registered trademark of DuPont Dow Elastomers. Skydrol® is a registered trademark of Solutia Inc.
- Box 6: B porting option supplied with metric mounting holes.
- Box 8: Standard indicator setting for non-bypassing model is 50 psi unless otherwise specified.
- Box 9: N option should be used in conjunction with dirt alarm.

### Filter Series

| CF60 | CFN60 (Non-bypassing: requires ZX high collapse elements) |

### Number of Elements

| 1 | CC |

### Media Type

- Omit = E Media (cellulose)
- Z = Excellement® Z-Media® (synthetic)
- ZX = Excellement® Z-Media® (high collapse center tube)
- AS = Anti-Stat Media (synthetic)

### Micron Rating

| 1 | = 1 Micron (Z media) |
| 3 | = 3 Micron (AS, E, Z, and ZX media) |
| 5 | = 5 Micron (AS, Z, and ZX media) |
| 10 | = 10 Micron (AS, E, Z, and ZX media) |
| 25 | = 25 Micron (E, Z, and ZX media) |

### Seal Material

- Omit = Buna N
- V = Viton®
- H = EPR
- H.5 = Skydrol® compatibility

### Porting

- S = SAE-20
- P = 1¼” NPTF
- F = 1¼” SAE 4-bolt flange code 62
- B = ISO 228 G-1¼”

### Options

- Omit = None
- 50 = 50 psi bypass setting

### Dirt Alarm® Options

- Omit = None
- D5 = Visual pop-up
- D8 = Visual w/ thermal lockout

### Electrical with Thermal Lockout

- MSS = Electrical w/ 12 in. 18 gauge 4-conductor cable
- MSSLC = Low current MSS
- MS10 = Electrical w/ DIN connector (male end only)
- MS10LC = Low current MS10
- MS11 = Electrical w/ 12 ft. 4-conductor wire
- MS12 = Electrical w/ 5 pin Brad Harrison connector (male end only)
- MS12LC = Low current MS12
- MS16 = Electrical w/weather-packed sealed connector
- MS16LC = Low current MS16
- MS17 = Electrical w/ 4 pin Brad Harrison male connector

- M5ST = Electrical w/ 12 in. 18 gauge 4-conductor cable with thermal lockout
- MS5LC = Low current MSS
- MS10T = Electrical w/ 12 in. 18 gauge 4-conductor cable with thermal lockout
- MS10LC = Low current MS10
- MS12T = Electrical w/ 5 pin Brad Harrison connector (male end only) with thermal lockout
- MS12LC = Low current MS12
- MS16T = Electrical w/ 12 in. 18 gauge 4-conductor cable with thermal lockout
- MS16LC = Low current MS16
- MS17LC = Electrical w/ 4 pin Brad Harrison male connector with thermal lockout

- MS13 = Supplied w/ threaded connector & light
- MS14 = Supplied w/ 5 pin Brad Harrison connector & light (male end)

### Electrical Visual with Thermal Lockout

- MS13DCT = MS13 (see above), direct current, w/ thermal lockout
- MS13CLCT = Low current MS13DCT
- MS14DCT = MS14 (see above), direct current, w/ thermal lockout
- MS14DCLCT = Low current MS14DCT