Top-Ported Pressure Filter

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

Model No. of filter in photograph is CF601CCZ3SD5.

Filter Housing Specifications

<table>
<thead>
<tr>
<th>Fluid Compatibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOF30-05</td>
</tr>
<tr>
<td>NOF-50-760</td>
</tr>
<tr>
<td>FOF60-03</td>
</tr>
<tr>
<td>NMF30</td>
</tr>
<tr>
<td>RMF60</td>
</tr>
<tr>
<td>14-CRZX10</td>
</tr>
</tbody>
</table>

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) and 10 µ ASP® Media (synthetic)
Water Glycols | 3, 5, 10 and 25 µ Z-Media® 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)
Top-Ported Pressure Filter

Element Performance Information & Dirt Holding Capacity

<table>
<thead>
<tr>
<th>Element</th>
<th>Filtration Ratio Per ISO 4572/NFPA T3.10.8.8</th>
<th>Filtration Ratio per 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>CCZ1</td>
<td>( \beta_x \geq 75 )</td>
<td>( \beta_x \geq 100 )</td>
</tr>
<tr>
<td>CCZ3</td>
<td>( \beta_x \geq 75 )</td>
<td>( \beta_x \geq 100 )</td>
</tr>
<tr>
<td>CCZ5</td>
<td>2.5</td>
<td>3.0</td>
</tr>
<tr>
<td>CCZ10</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>( \beta_x \geq 75 )</td>
<td>( \beta_x \geq 100 )</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Element</th>
<th>DHC (gm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCZ1</td>
<td>57</td>
</tr>
<tr>
<td>CCZ3</td>
<td>58</td>
</tr>
<tr>
<td>CCZ5</td>
<td>63</td>
</tr>
<tr>
<td>CCZ10</td>
<td>62</td>
</tr>
<tr>
<td>CCZ25</td>
<td>63</td>
</tr>
<tr>
<td>CCZX3</td>
<td>26*</td>
</tr>
</tbody>
</table>

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

Metric dimensions in ( ), Dimensions shown are inches (millimeters) for general information and overall envelope size only. For complete dimensions please contact Schroeder Industries to request a certified print.
Exercise:
Determine $\Delta P_{\text{filter}}$ at 30 gpm (113.6 L/min) for CF601CCZ10SD5 using 175 SUS (37.2 cSt) fluid.

Use the housing pressure curve to determine $\Delta P_{\text{housing}}$ at 30 gpm. In this case, $\Delta P_{\text{housing}}$ is 4 psi (.28 bar) on the graph for the CF60 housing.

Use the element pressure curve to determine $\Delta P_{\text{element}}$ at 30 gpm. In this case, $\Delta P_{\text{element}}$ is 3 psi (.21 bar) according to the graph for the CCZ10 element.

Because the viscosity in this sample is 175 SUS (37.2 cSt), we determine the Viscosity Factor ($V_f$) by dividing the Operating Fluid Viscosity with the Standard Viscosity of 150 SUS (32 cSt). To best determine your Operating Fluid Viscosity, please reference the chart in Appendix D.

Finally, the overall filter pressure differential, $\Delta P_{\text{filter}}$, is calculated by adding $\Delta P_{\text{housing}}$ with the true element pressure differential, $(\Delta P_{\text{element}} \times V_f)$. The $\Delta P_{\text{element}}$ from the graph has to be multiplied by the viscosity factor to get the true pressure differential across the element.

Solution:

\[
\Delta P_{\text{filter}} = \Delta P_{\text{housing}} + (\Delta P_{\text{element}} \times V_f)
\]

\[
\Delta P_{\text{housing}} = 4 \text{ psi} \times .28 \text{ bar}
\]
\[
\Delta P_{\text{element}} = 3 \text{ psi} \times .21 \text{ bar}
\]
\[
V_f = \frac{175 \text{ SUS (37.2 cSt)}}{150 \text{ SUS (32 cSt)}} = 1.2
\]
\[
\Delta P_{\text{filter}} = 4 \text{ psi} + (3 \text{ psi} \times 1.2) = 7.6 \text{ psi
}\]
\[
\text{OR}
\]
\[
\Delta P_{\text{filter}} = .28 \text{ bar} + (.21 \text{ bar} \times 1.2) = .53 \text{ bar}
\]
### How to Build a Valid Model Number for a Schroeder CF60:

<table>
<thead>
<tr>
<th>Box 1</th>
<th>Box 2</th>
<th>Box 3</th>
<th>Box 4</th>
<th>Box 5</th>
<th>Box 6</th>
<th>Box 7</th>
<th>Box 8</th>
<th>Box 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>CF60</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
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</tbody>
</table>

- **Filter Series**: CF60
- **Number of Elements**: 1CC
- **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”
- **Bypass**: Omit = 40 PSI Bypass
  - X = Blocked Bypass
  - 30 = 30 psi bypass setting
  - 50 = 50 psi bypass setting
  (Omit box 7 if a CF6N60 is selected)
- **Dirt Alarm® Options**: Omit = None
  - Visual = D5 = Visual pop-up
  - Visual with Thermal Lockout = D8 = Visual w/ thermal lockout

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**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 7. When X is paired with a standard filter series, a standard bushing and spring plate will be used.
- Box 8. Standard indicator setting for non-bypassing model is 50 psi unless

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### Filter Model Number Selection

<table>
<thead>
<tr>
<th>Box 1</th>
<th>Box 2</th>
<th>Box 3</th>
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<th>Box 6</th>
<th>Box 7</th>
<th>Box 8</th>
<th>Box 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>CF60</td>
<td>1CC</td>
<td>Z</td>
<td>10</td>
<td>S</td>
<td>D5</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>

= CF601CCZ10SD5