## Features and Benefits
- In-line version also available
- Element changeout from the top minimizes oil spillage
- Available with optional core assembly to accommodate coreless elements
- Offered with standard Q, QPML deep-pleated and QCLQF coreless elements in 16” and 39” lengths with Viton® seals as the standard
- Offered in pipe, SAE straight thread, and flange porting
- Integral inlet and outlet test points are standard on all models
- Various Dirt Alarm® options

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### Filter Housing Specifications

<table>
<thead>
<tr>
<th>Model No. of filter in photograph is QLF1539QZ5F4850D5.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Flow Rating:</strong> Up to 500 gpm (1900 L/min) for 150 SUS (32 cSt) fluids</td>
</tr>
<tr>
<td><strong>Max. Operating Pressure:</strong> 1500 psi (100 bar)</td>
</tr>
<tr>
<td><strong>Min. Yield Pressure:</strong> 4900 psi (340 bar), per NFPA T2.6.1</td>
</tr>
<tr>
<td><strong>Rated Fatigue Pressure:</strong> 800 psi (55 bar), per NFPA T2.6.1-R1-2005</td>
</tr>
<tr>
<td><strong>Temp. Range:</strong> -20°F to 225°F (-29°C to 107°C)</td>
</tr>
</tbody>
</table>
| **Bypass Setting:** Cracking: 30 psi (2 bar)  
Full Flow: 55 psi (4 bar) |
| **Porting Base & Cap:** Ductile Iron |
| **Element Case:** Steel |
| **Weight of QLF15-16Q:** 121.0 lbs. (55.0 kg) |
| **Weight of QLF15-39Q:** 180.0 lbs. (82.0 kg) |
| **Element Change Clearance:** 16Q: 12.00” (305 mm)  
39Q: 33.80” (859 mm) |

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### Fluid Compatibility

<table>
<thead>
<tr>
<th>Type Fluid</th>
<th>Appropriate Schroeder Media</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum Based Fluids</td>
<td>All E media (cellulose), Z-Media® and ASP® media (synthetic)</td>
</tr>
<tr>
<td>High Water Content</td>
<td>All Z-Media® and ASP® media (synthetic)</td>
</tr>
<tr>
<td>Invert Emulsions</td>
<td>10 µ and 25 µ Z-Media® and 10 µ ASP® media (synthetic)</td>
</tr>
<tr>
<td>Water Glycols</td>
<td>3, 5, 10, and 25 µ Z-Media® and all ASP® media (synthetic)</td>
</tr>
<tr>
<td>Phosphate Esters</td>
<td>All Z-Media® with H (EPR) seal designation and all ASP® media (synthetic)</td>
</tr>
</tbody>
</table>
**Element Performance Information & Dirt Holding Capacity**

<table>
<thead>
<tr>
<th>Element</th>
<th>Performance Information &amp; Dirt Holding Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>16Q Z1/CLQFZ1/PMLZ1</td>
<td>( \beta_x \geq 75 ) &lt;1.0  ( \beta_x \geq 100 ) &lt;1.0  ( \beta_x \geq 200 ) &lt;1.0 &lt;4.0 4.2</td>
</tr>
<tr>
<td>16Q Z3/CLQFZ3/PMLZ3</td>
<td>( \beta_x \geq 75 ) &lt;1.0  ( \beta_x \geq 100 ) &lt;1.0  ( \beta_x \geq 200 ) &lt;2.0 &lt;4.0 4.8</td>
</tr>
<tr>
<td>16Q Z5/CLQFZ5/PMLZ5</td>
<td>( \beta_x \geq 75 ) 2.5  ( \beta_x \geq 100 ) 3.0  ( \beta_x \geq 200 ) 4.0 4.8 6.3</td>
</tr>
<tr>
<td>16Q Z10/CLQFZ10/PMLZ10</td>
<td>( \beta_x \geq 75 ) 7.4  ( \beta_x \geq 100 ) 8.2  ( \beta_x \geq 200 ) 10.0 8.0 10.0</td>
</tr>
<tr>
<td>16Q Z25/CLQFZ25/PMLZ25</td>
<td>( \beta_x \geq 75 ) 18.0  ( \beta_x \geq 100 ) 20.0  ( \beta_x \geq 200 ) 22.5 19.0 24.0</td>
</tr>
<tr>
<td>39Q Z1/CLQFZ1/PMLZ1</td>
<td>( \beta_x \geq 75 ) &lt;1.0  ( \beta_x \geq 100 ) &lt;1.0  ( \beta_x \geq 200 ) &lt;4.0 4.2</td>
</tr>
<tr>
<td>39Q Z3/CLQFZ3/PMLZ3</td>
<td>( \beta_x \geq 75 ) &lt;1.0  ( \beta_x \geq 100 ) &lt;1.0  ( \beta_x \geq 200 ) &lt;2.0 &lt;4.0 4.8</td>
</tr>
<tr>
<td>39Q Z5/CLQFZ5/PMLZ5</td>
<td>( \beta_x \geq 75 ) 2.5  ( \beta_x \geq 100 ) 3.0  ( \beta_x \geq 200 ) 4.0 4.8 6.3</td>
</tr>
<tr>
<td>39Q Z10/CLQFZ10/PMLZ10</td>
<td>( \beta_x \geq 75 ) 7.4  ( \beta_x \geq 100 ) 8.2  ( \beta_x \geq 200 ) 10.0 8.0 10.0</td>
</tr>
<tr>
<td>39Q Z25/CLQFZ25/PMLZ25</td>
<td>( \beta_x \geq 75 ) 18.0  ( \beta_x \geq 100 ) 20.0  ( \beta_x \geq 200 ) 22.5 19.0 24.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Element</th>
<th>DHC (gm)</th>
<th>Element</th>
<th>DHC (gm)</th>
<th>Element</th>
<th>DHC (gm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>16Q Z1</td>
<td>276</td>
<td>CLQFZ1</td>
<td>307</td>
<td>PMLZ1</td>
<td>307</td>
</tr>
<tr>
<td>16Q Z3</td>
<td>283</td>
<td>CLQFZ3</td>
<td>315</td>
<td>PMLZ3</td>
<td>315</td>
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<tr>
<td>16Q Z5</td>
<td>351</td>
<td>CLQFZ5</td>
<td>364</td>
<td>PMLZ5</td>
<td>364</td>
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<tr>
<td>16Q Z10</td>
<td>280</td>
<td>CLQFZ10</td>
<td>306</td>
<td>PMLZ10</td>
<td>330</td>
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<tr>
<td>16Q Z25</td>
<td>254</td>
<td>CLQFZ25</td>
<td>278</td>
<td>PMLZ25</td>
<td>299</td>
</tr>
<tr>
<td>39Q Z1</td>
<td>974</td>
<td>CLQFZ1</td>
<td>1259</td>
<td>PMLZ1</td>
<td>1485</td>
</tr>
<tr>
<td>39Q Z3</td>
<td>1001</td>
<td>CLQFZ3</td>
<td>1293</td>
<td>PMLZ3</td>
<td>1525</td>
</tr>
<tr>
<td>39Q Z5</td>
<td>954</td>
<td>CLQFZ5</td>
<td>1302</td>
<td>PMLZ5</td>
<td>1235</td>
</tr>
<tr>
<td>39Q Z10</td>
<td>940</td>
<td>CLQFZ10</td>
<td>1214</td>
<td>PMLZ10</td>
<td>1432</td>
</tr>
<tr>
<td>39Q Z25</td>
<td>853</td>
<td>CLQFZ25</td>
<td>1102</td>
<td>PMLZ25</td>
<td>1299</td>
</tr>
</tbody>
</table>

**Element Collapse Rating:** Q and QPML: 150 psid (10 bar), QCLQF: 100 psid (7 bar)  
**Flow Direction:** Outside In  
**Element Nominal Dimensions:**  
16Q: 6.0" (150 mm) O.D. x 16.85" (430 mm) long  
16QCLQF: 6.0" (150 mm) O.D. x 18.21" (463 mm) long  
16QPML: 6.0" (150 mm) O.D. x 16.00" (405 mm) long  
39Q: 6.0" (150 mm) O.D. x 38.70" (985 mm) long  
39QCLQF: 6.0" (150 mm) O.D. x 40.01" (1016 mm) long  
39QPML: 6.0" (150 mm) O.D. x 37.80" (960 mm) long
Exercise:
Determine ΔP_{filter} at 200 gpm (758 L/min) for QLF1516QZ3D5C using 100 SUS (21.3 cSt) fluid.

Use the housing pressure curve to determine ΔP_{housing} at 200 gpm. In this case, ΔP_{housing} is 2 psi (.14 bar) on the graph for the QLF15 housing.

Use the element pressure curve to determine ΔP_{element} at 200 gpm. In this case, ΔP_{element} is 7 psi (.48 bar) according to the graph for the 16Q23 element.

Because the viscosity in this sample is 100 SUS (21.3 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, ΔP_{filter}, is calculated by adding ΔP_{housing} with the true element pressure differential, (ΔP_{element} \ast V_f). The ΔP_{element} from the graph has to be multiplied by the viscosity factor to get the true pressure differential across the element.

Solution:
ΔP_{housing} = 2 psi (.14 bar)  \mid  ΔP_{element} = 7 psi (.48 bar)

\[ V_f = \frac{100 \text{ SUS (21.3 cSt)}}{150 \text{ SUS (32 cSt)}} = .67 \]

ΔP_{filter} = 2 psi + (7 psi \ast .67) = 6.7 psi

OR
ΔP_{filter} = 14 bar + (.48 bar \ast .67) = .46 bar

Note:
If your element is not graphed, use the following equation:
ΔP_{element} = Flow Rate \times ΔP_f. Plug this variable into the overall pressure drop equation.
### How to Build a Valid Model Number for a Schroeder QF15:

<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>QF15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Q</td>
<td>Z</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>D5C</td>
</tr>
</tbody>
</table>

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

**QF15 16 Q Z 3 = Q516QZ3D5C**

### Filter Model Number Selection

<table>
<thead>
<tr>
<th>Filter Series</th>
<th>Element Length (in)</th>
<th>Element Style</th>
<th>Media Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>QLF15</td>
<td>16</td>
<td>Q</td>
<td>Z = Excellemt® Z-Media® (synthetic)</td>
</tr>
<tr>
<td>WQLF5 (Water)</td>
<td>39</td>
<td>QCLQF</td>
<td>AS = Anti-Stat Pleat media (synthetic)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>QPML</td>
<td>W = W media (water removal)</td>
</tr>
</tbody>
</table>

**Water System Element Options**

- QM60 = Q size 60 µ M media (reusable metal)
- QM150 = Q size 150 µ M media (reusable metal)

### Housing Seal Material

- Omit = Buna N
- V = Viton®

### Micron Rating

- 1 = 1 µ Z-Media®
- 3 = 3 µ AS and Z-Media®
- 5 = 5 µ AS and Z-Media®
- 10 = 10 µ AS and Z-Media®
- 25 = 25 µ Z-Media®

### Bypass Setting

- Omit = 30 psi cracking
- 15 = 15 psi cracking
- 40 = 40 psi cracking
- 50 = 50 psi cracking
- X = Blocked bypass

### Porting

- P24 = 1 1/8” NPTF
- P32 = 2” NPTF
- P40 = 2 1/8” NPTF
- P48 = 3” NPTF
- S32 = SAEM-32
- B24 = ISO 228 G-1 1/8”
- B32 = ISO 228 G-2
- B40 = ISO 228 G-2 1/4”
- B48 = ISO 228 G-3 1/4”
- F24 = 1 1/8” SAEM 4-bolt flange
- F32 = 2” SAEM 4-bolt flange
- F40 = 2 1/8” SAEM 4-bolt flange
- F48 = 3” SAEM 4-bolt flange
- Code 61

### Dirt Alarm® Options

- Omit = None
- Visual
  - DPG = Standard differential pressure gauge
  - DS = Visual pop-up
  - D5C = D5 in cap
- Visual with Thermal Lockout
  - D8 = Visual with thermal lockout
  - D8C = D8 in cap
- Electrical
  - M5S = 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-packaged sealed connector
  - MS16LC = Low current MS16
  - MS17LC = Electrical w/ 4 pin Brad Harrison male connector
- Electrical with Thermal Lockout
  - M5ST = M5S (see above) w/ thermal lockout
  - MSSLCT = Low current M5ST
  - MS10T = MS10 (see above) w/ thermal lockout
  - MS10LCT = Low current MS10T
  - MS12T = MS12 (see above) w/ thermal lockout
  - MS12LCT = Low current MS12T
  - MS16T = MS16 (see above) w/ thermal lockout
  - MS16LCT = Low current MS16T
  - MS17LCT = Low current MS17T
- Electrical Visual
  - MS13 = Supplied w/ threaded connector & light
  - MS14 = Supplied w/ 5 pin Brad Harrison connector & light (male end)
- Electrical with Thermal Lockout
  - MS13DCT = MS13 (see above), direct current, w/ thermal lockout
  - MS13DCLCT = Low current MS13DCT
  - MS14DCT = MS14 (see above), direct current, w/ thermal lockout
  - MS14DCLCT = Low current MS14DCT

### Notes:

- Box 2. Replacement element part numbers are a combination of Boxes 2, 3, 4, and 5 plus the letter V. Example: 16QZ1V
- Box 3. QCLQF are CoreCentric® coreless elements – housing includes rigid metal core. QPML are deep-pleated elements with more media and higher dirt holding capacity.
- Box 4. For option W, Box 3 must equal Q.
- Box 6. All elements for this filter are supplied with Viton® seals. Seal designation in Box 6 applies to housing only. Viton® is a registered trademark of DuPont Dow Elastomers.
- Box 7. B24, B32 and B40 are supplied with metric mounting holes. F24M, F32M, F40M and F48M are supplied with metric flange mounting holes.
- Integral inlet and outlet test points are standard on all models.