Features and Benefits
■ Two patent-pending K9 filters supplied in series as a single filter assembly providing in-line single pass particulate and water filtration
■ Meets HF4 automotive standard
■ 900 psi rating covers almost all transfer line pressure specs including air driven transfer systems
■ Top loading for easy access for element changeout
■ Allows consolidation of inventoried elements by using K-size elements
■ Can be fitted with test points for oil sampling

Custom 2K9, contact factory for details.

Flow Rating:
Max. Operating Pressure: 900 psi (60 bar)
Min. Yield Pressure: 3200 psi (220 bar), per NFPA T2.6.1
Rated Fatigue Pressure: 750 psi (52 bar) per NFPA T2.6.1-R1-2005
Temp. Range: -20°F to 225°F (-29°C to 107°C)
Bypass Setting: Cracking: 40 psi (2.8 bar) each filter housing
Porting Base & Cap: Cast Aluminum
Element Case: Steel
Element Change Clearance: 8.50" (215 mm) for 1K; 17.5" (445 mm) for KK;
26.5" (673 mm) for 27K

Applications
INDUSTRIAL
AUTOMOTIVE MANUFACTURING
MACHINE TOOL
STEEL MAKING
MOBILE VEHICLES
AGRICULTURE
POWER GENERATION
PULP & PAPER

Filter Housing Specifications

100 gpm
380 L/min
900 psi
60 bar
### Single Pass Filter Kit

**Patent No. 7,604,738 for connecting end cap**

**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>KZ1/KKZ1/27KZ1</td>
<td>$\beta_x \geq 75$  $\beta_x \geq 100$  $\beta_x \geq 200$</td>
<td>$\beta_x(c) \geq 200$  $\beta_x(c) \geq 1000$</td>
</tr>
<tr>
<td>KZ3/KKZ3/27KZ3/KAS3/KKAS3/27KAS3</td>
<td>$&lt;1.0$  $&lt;1.0$  $&lt;2.0$</td>
<td>$&lt;4.0$  $4.8$</td>
</tr>
<tr>
<td>KZ5/KKZ5/27KZ5/KAS5/KKAS5/27KAS5</td>
<td>2.5  3.0  4.0</td>
<td>4.8  6.3</td>
</tr>
<tr>
<td>KZ10/KKZ10/27KZ10/KAS10/KKAS10/27KAS10</td>
<td>7.4  8.2  10.0</td>
<td>8.0  10.0</td>
</tr>
<tr>
<td>KZ25/KKZ25/27KZ25</td>
<td>18.0  20.0  22.5</td>
<td>19.0  24.0</td>
</tr>
<tr>
<td>KZW1</td>
<td>N/A  N/A  N/A</td>
<td>N/A  &lt;4.0</td>
</tr>
<tr>
<td>KZW3/KKZW3</td>
<td>N/A  N/A  N/A</td>
<td>N/A  4.8</td>
</tr>
<tr>
<td>KZW5/KKZW5</td>
<td>N/A  N/A  N/A</td>
<td>N/A  6.4</td>
</tr>
<tr>
<td>KZW10/KKZW10</td>
<td>N/A  N/A  N/A</td>
<td>N/A  6.9  8.6</td>
</tr>
<tr>
<td>KZW25/KKZW25</td>
<td>N/A  N/A  N/A</td>
<td>N/A  15.4  18.5</td>
</tr>
</tbody>
</table>

**Dirt Holding Capacity**

<table>
<thead>
<tr>
<th>Element</th>
<th>DHC (gm)</th>
<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>KZ1</td>
<td>112</td>
<td>KKZ1</td>
<td>224</td>
<td>27KZ1</td>
<td>336</td>
<td>KZW1</td>
<td>61</td>
</tr>
<tr>
<td>KZ3/KAS3</td>
<td>115</td>
<td>KKKZ3/KKAS3</td>
<td>230</td>
<td>27KKZ3/KKAS3</td>
<td>345</td>
<td>KZW3</td>
<td>64</td>
</tr>
<tr>
<td>KZ5/KAS5</td>
<td>119</td>
<td>KKZ5/KKAS5</td>
<td>238</td>
<td>27KKZ5/KKAS5</td>
<td>357</td>
<td>KKZW5</td>
<td>63</td>
</tr>
<tr>
<td>KZ10/KAS10</td>
<td>108</td>
<td>KKZ10/KKAS10</td>
<td>216</td>
<td>27KKZ10/KKAS10</td>
<td>324</td>
<td>KKZW10</td>
<td>57</td>
</tr>
<tr>
<td>KZ25</td>
<td>93</td>
<td>KKZ25</td>
<td>186</td>
<td>27KKZ25</td>
<td>279</td>
<td>KKZW25</td>
<td>79</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>KKZW25</td>
</tr>
</tbody>
</table>

Element Collapse Rating: 150 psid (10 bar) for standard elements

Flow Direction: Outside In

Element Nominal Dimensions:
- K: 3.9" (99 mm) O.D. x 9.0" (230 mm) long
- KK: 3.9" (99 mm) O.D. x 18.0" (460 mm) long
- 27K: 3.9" (99 mm) O.D. x 27.0" (690 mm) long
Single Pass Filter Kit

Fluid Compatibility

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

Fluid Drop Information

Pressure Drop Information

Based on Flow Rate

Element Selection Based on Flow Rate

<table>
<thead>
<tr>
<th>Pressure</th>
<th>Element</th>
<th>Part No.</th>
<th>Element selections are predicated on the use of 150 SUS (32 cSt) petroleum based fluid and a 40 psi (2.8 bar) bypass valve.</th>
</tr>
</thead>
<tbody>
<tr>
<td>To 900 psi (60 bar)</td>
<td>Z-Media®</td>
<td>KZ1</td>
<td>1KZ1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>KZ3</td>
<td>1KZ3/KAS3/KKAS3/27KAS3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>KZ5</td>
<td>1KZ5/KAS5/KKAS5/27KAS5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>KZ10</td>
<td>1KZ10/KAS10/KKAS10/27KAS10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>KZ25</td>
<td>1KZ25</td>
</tr>
<tr>
<td>Flow</td>
<td>gpm 0 20 40 60 80 100</td>
<td>(L/min) 0 50 150 250 380</td>
<td></td>
</tr>
</tbody>
</table>

Exercise:

Determine ∆P at 80 gpm (303 L/min) for 2K9209DBBP24P24 using 150 SUS (32 cSt) fluid.

Solution:

∆P\_housing = 12.0 psi [0.8 bar]

∆P\_element\_1 = 80 x .03 = 2.4 psi [0.2 bar]

∆P\_element\_2 = 80 x .05 = 4.0 psi [0.3 bar]

∆P\_total = 12.0 + 2.4 + 4.0 = 18.4 psi [1.3 bar]
# Single Pass Filter Kit

**Filter Model Number Selection**

## How to Build a Valid Model Number for a Schroeder 2K9:

<table>
<thead>
<tr>
<th>Filter Series</th>
<th>Number of Elements</th>
<th>Length of Elements</th>
<th>First Housing Element Micron Rating</th>
<th>Second Housing Element Micron Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>2K9</td>
<td>1</td>
<td>09 = K-size Element</td>
<td>A = 1 µ Z-Media®</td>
<td>A = 1 µ Z-Media®</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>18 = KK-size Element</td>
<td>B = 3 µ Z-Media®</td>
<td>B = 3 µ Z-Media®</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>27 = 2K-size Element</td>
<td>C = 5 µ Z-Media®</td>
<td>C = 5 µ Z-Media®</td>
</tr>
</tbody>
</table>

**Seal Material**

- B = Buna N
- V = Viton®
- H = EPR
- H.S = Skydrol® Compatible

**Ports**

- P16 = 1” NPTF
- P20 = 1” NPTF
- P24 = 1” NPTF
- B16 = ISO 228 G-1”
- B20 = ISO 228 G-1”
- B24 = ISO 228 G-1”
- F16 = 1” SAE 4-bolt flange Code 61
- F20 = 1” SAE 4-bolt flange Code 61
- F24 = 1” SAE 4-bolt flange Code 61
- S16 = SAE-16
- S20 = SAE-20
- S24 = SAE-24

## Dirt Alarm® Options

<table>
<thead>
<tr>
<th>Omit</th>
<th>Visual</th>
<th>Visual with Thermal Lockout</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>D5 = Visual pop-up</td>
<td>D5 in cap</td>
</tr>
<tr>
<td></td>
<td>DSC = Visual w/ thermal lockout</td>
<td>DBC = D8 in cap</td>
</tr>
</tbody>
</table>

## Options

- Omit = None
- U = Test point in cap (upstream and downstream)
- OO = Test points in block

## Notes:

- Box 2. Double and triple stacking of K-size elements can be replaced by KK and 27K elements, respectively. Number of elements must equal 1 when using KK or 27K elements. ZW media not available in 27K length.
- Box 4 & 5. Replacement element part numbers are identical to K9 replacement parts. Please reference page 172.
- Box 6. For options H, V, and H.S all aluminum parts are anodized. H.S seal designation includes the following: EPR seals, stainless steel wire mesh on elements, and light oil coating on housing exterior.
- Skydrol® is a registered trademark of DuPont Dow Elastomers.
- Viton® is a registered trademark of Solutia Inc.
- Box 10. Option UU not available in combination with indicator in block.