Tank-Mounted Filter

Model No. of filter in photograph is LRT18LZ10S24NP16Y2.

Features and Benefits
- Low pressure tank-mounted filter
- Multiple inlet/outlet porting options
- Top, side or bottom mounting
- Optional check valve prevents reservoir siphoning
- Can also be used in return line application (contact factory)
- Visual gauge or electrical switch dirt alarms
- Offered in pipe, SAE straight thread, flanged and ISO 228 porting
- Same day shipment model available
- Also available with DirtCatcher® elements (18LD)

Flow Rating: Up to 150 gpm (570 L/min) for 150 SUS (32 cSt) fluids
Max. Operating Pressure: 100 psi (7 bar)
Min. Yield Pressure: 400 psi (28 bar)
Rated Fatigue Pressure: 90 psi (6 bar), per NFPA T2.6.1-2005
Temp. Range: -20°F to 225°F (-29°C to 107°C)
Bypass Setting: Cracking: 25 psi (1.7 bar) Full Flow: 34 psi (2.3 bar)
Porting Head & Cap: Die Cast Aluminum
Element Case: Steel
Weight of LRT-18L: 14.6 lbs. (6.6 kg)
Element Change Clearance: 17.0" (432 mm)
## Tank-Mounted Filter

### 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>
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</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>$\beta_x \geq 75$</td>
<td>$\beta_x \geq 100$</td>
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<tr>
<td>18L3</td>
<td>6.8</td>
<td>7.5</td>
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<tr>
<td>18L10</td>
<td>15.5</td>
<td>16.2</td>
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<td>18LZ1</td>
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<td>&lt;1.0</td>
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<tr>
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<td>&lt;1.0</td>
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<td>3.0</td>
</tr>
<tr>
<td>18LZ10</td>
<td>7.4</td>
<td>8.2</td>
</tr>
<tr>
<td>18LZ25</td>
<td>18.0</td>
<td>20.0</td>
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</tbody>
</table>

### Dirt Holding Capacity

<table>
<thead>
<tr>
<th>Element</th>
<th>DHC (gm)</th>
<th>Element</th>
<th>DHC (gm)</th>
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</thead>
<tbody>
<tr>
<td>18L3</td>
<td>110</td>
<td>18LDZ1</td>
<td>194</td>
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<tr>
<td>18L10</td>
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<td>18LDZ25</td>
<td>169</td>
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<tr>
<td>18LZ10</td>
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<td></td>
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</tr>
<tr>
<td>18LZ25</td>
<td>217</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Element Collapse Rating: 150 psid (10 bar)
Flow Direction: Outside In
Element Nominal Dimensions: 4.0" (100 mm) O.D. x 18.5" (470 mm) long
Type Fluid | Appropriate Schroeder Media
---|---
Petroleum Based Fluids | All E media (cellulose) and Z-Media® (synthetic)
High Water Content | All Z-Media® (synthetic)
Invert Emulsions | 10 and 25 µ Z-Media® (synthetic)
Water Glycols | 3, 5, 10 and 25 µ Z-Media® (synthetic)
Phosphate Esters | All Z-Media® (synthetic) with H (EPR) seal designation
Skydrol® | 3, 5, 10 and 25 µ Z-Media® (synthetic) with H.5 seal designation (EPR seals and stainless steel wire mesh in element, and light oil coating on housing exterior)

**Pressure Drop Information**

**Element Selection Based on Flow Rate**

**Pressure Drop Information Based on Flow Rate and Viscosity**

**Exercise:**

Determine ΔP at 120 gpm (455 L/min) for LRT18LZ5P24Y2 using 200 SUS (44 cSt) fluid.

**Solution:**

\[\Delta P = \Delta P_{	ext{housing}} + \Delta P_{	ext{element}}\]

**Notes**
How to Build a Valid Model Number for a Schroeder LRT:

Filter Model Number Selection

**Same Day Shipment Model See inside back cover for details.**

**Box 1**
- LRT 18

**Box 2**
- LZ10

**Box 3**
- Y2S24 S24 N

**Box 4**
- Y2

**Box 5**
- Y2S24 S24 N

**Box 6**
- Y2

**Box 7**
- Y2S24 S24 N

**Box 8**
- Y2

**Example:** NOTE: Only box 8 may contain more than one option

- LRT 18 LZ10 S24 S24 NY2

**Filter Series** | **Element Length (in)**
--- | ---
LRT | 18

**Element Size and Media**
- L3 = L size 3 µ E media (cellulose)
- L10 = L size 10 µ E media (cellulose)
- LZ1 = L size 1 µ Excellement® Z-Media® (synthetic)
- LZ3 = L size 3 µ Excellement® Z-Media® (synthetic)
- LZ5 = L size 5 µ Excellement® Z-Media® (synthetic)
- LZ10 = L size 10 µ Excellement® Z-Media® (synthetic)
- LZ25 = L size 25 µ Excellement® Z-Media® (synthetic)
- LDZ1 = L size DirtCatcher® 1 µ Excellement® Z-Media®
- LDZ3 = L size DirtCatcher® 3 µ Excellement® Z-Media®
- LDZ5 = L size DirtCatcher® 5 µ Excellement® Z-Media®
- LDZ10 = L size DirtCatcher® 10 µ Excellement® Z-Media®
- LDZ25 = L size DirtCatcher® 25 µ Excellement® Z-Media®

**Outlet Porting Options**
- Omit = 2” NPT male
- C = Check valve
- D = Diffuser
- T = 12” Tube extension
- A = Non-threaded outlet

**Additional Options**
- G2293 = Cork gasket
- G547 = Two 1/8” gauge ports
- G820 = Stamped cap
- M = Metric thread for SAE 4-bolt flange mounting holes (specify after each P port designation)

**Inlet Porting Location**
- Located @ Port D
- Located in cap
- Located @ Port C

**Dirt Alarm Options**
- Located @ Port D
- Visual
- Electrical
- Y2 = Back-mounted tri-color gauge
- E5 = Electric switch
- ES1 = Heavy-duty electric switch with conduit connector

**Located in cap**
- Visual
- Y2C = Bottom-mounted tri-color gauge
- Y5 = Back-mounted gauge in cap

**Located @ Port C**
- Visual
- Y2R = Back-mounted gauge mounted on opposite side of standard location
- ESR = Electric switch mounted on opposite side of standard location
- ES1R = Heavy-duty electric switch with conduit connector

**NOTES:**

1. **Box 2.** Replacement element part numbers are a combination of Boxes 2, 3, and 4. Example: 18L3W

2. **Box 4.** For options H, W, and H.5, all aluminum parts are anodized. H.5 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 Solutia Inc.

3. **Box 5.** If using Port B, Port A & B must always be the same type and size. Example: (A) P20 (B) P20 (C) P16

4. **Box 6.** See also “Accessories for Tank-Mounted Filters,” page 267.