**Tank-Mounted Filter**

**BFT**

**Features and Benefits**
- Low pressure tank-mounted filter
- Designed for high return line flows
- Dual inlet porting
- Top, side or bottom mounting
- Optional check valve prevents reservoir siphoning
- Special filter element design provides aftermarket benefits
- Also available with DirtCatcher® element (BBD)

Model No. of filter in photograph is BFT1BBZ5F.

**Applications**

- INDUSTRIAL
- MOBILE VEHICLES
- PULP & PAPER
- STEEL MAKING
- CONSTRUCTION
- AGRICULTURE

**Flow Rating:**
- Up to 300 gpm (1135 L/min) for 150 SUS (32 cSt) fluids

**Max. Operating Pressure:**
- 100 psi (7 bar)

**Min. Yield Pressure:**
- 250 psi (17 bar), per NFPA T2.6.1

**Rated Fatigue Pressure:**
- Contact factory, per NFPA T2.6.1

**Temp. Range:**
- -20°F to 225°F (-29°C to 107°C)

**Bypass Setting:**
- Cracking: 25 psi (1.7 bar)
- Full Flow: 52 psi (3.6 bar)

**Porting Head & Cap:**
- Aluminum

**Element Case:**
- Steel

**Weight of BFT-1BB:**
- 36.7 lbs. (16.6 kg)

**Element Change Clearance:**
- 14.75" (375 mm)

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**300 gpm**

**1135 L/min**

**100 psi**

**7 bar**

**Accessories for Tank-Mounted Filters**

- PAF1
- MAF1
- MF2

**Filter Housing Specifications**

- SCHROEDER INDUSTRIES 275
## Tank-Mounted Filter

### Element Performance Information

<table>
<thead>
<tr>
<th>Element</th>
<th>$\beta_n \geq 75$</th>
<th>$\beta_n \geq 100$</th>
<th>$\beta_n \geq 200$</th>
<th>$\beta_{(d)} \geq 200$</th>
<th>$\beta_{(d)} \geq 1000$</th>
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<tbody>
<tr>
<td>BB/BL10</td>
<td>15.5</td>
<td>16.2</td>
<td>18.0</td>
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<td>N/A</td>
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<td>BB/BLZ1</td>
<td>&lt;1.0</td>
<td>&lt;1.0</td>
<td>&lt;1.0</td>
<td>&lt;4.0</td>
<td>4.2</td>
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<tr>
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<td>&lt;1.0</td>
<td>&lt;2.0</td>
<td>&lt;4.0</td>
<td>4.8</td>
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<tr>
<td>BB/BLZ5</td>
<td>2.5</td>
<td>3.0</td>
<td>4.0</td>
<td>4.8</td>
<td>6.3</td>
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<tr>
<td>BB/BLZ10</td>
<td>7.4</td>
<td>8.2</td>
<td>10.0</td>
<td>8.0</td>
<td>10.0</td>
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<tr>
<td>BB/BLZ25</td>
<td>18.0</td>
<td>20.0</td>
<td>22.5</td>
<td>19.0</td>
<td>24.0</td>
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</table>

### Filtration Ratio Per ISO 4572/NFPA T3.10.8.8

Using automated particle counter (APC) calibrated per ISO 4402

### Filtration Ratio wrt ISO 16889

Using APC calibrated per ISO 11171

### 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>
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</thead>
<tbody>
<tr>
<td>BB10</td>
<td>132</td>
<td>BBDZ1</td>
<td>205</td>
<td>BL10</td>
<td>264</td>
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<tr>
<td>BB21</td>
<td>268</td>
<td>BBDZ3</td>
<td>163</td>
<td>BLZ1</td>
<td>536</td>
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<td>BBDZ5</td>
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<td>BLZ3</td>
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<td>BB5</td>
<td>301</td>
<td>BBDZ10</td>
<td>183</td>
<td>BLZ5</td>
<td>550</td>
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<tr>
<td>BB10</td>
<td>272</td>
<td>BBDZ25</td>
<td>186</td>
<td>BLZ10</td>
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</tr>
<tr>
<td>BBZ5</td>
<td>246</td>
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<td></td>
<td>BLZ25</td>
<td>550</td>
</tr>
</tbody>
</table>

- **Element Collapse Rating:** 150 psid (10 bar)
- **Flow Direction:** Outside In
- **Element Nominal Dimensions:**
  - BB: 5.0” (125 mm) O.D. x 18.0” (460 mm) long
  - BL: 5.0” (125 mm) O.D. x 36.0” (920 mm) long

Metric dimensions in ( ).
**Accessories for Tank-Mounted Filters**

**PAF1**
**MAF1**
**MF2**

**Tank-Mounted Filter**

**BFT**

**Type Fluid**
- 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

**Fluid Compatibility**

**Skydrol®** is a registered trademark of Solutia Inc.

**Element Selection**
Based on Flow Rate

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

**Exercise**
Determine ΔP at 160 gpm (600 L/min) for BFT1BBZ3PCY2 using 200 SUS (44 cSt) fluid.

**Solution**

\[
\Delta P_{\text{filter}} = \Delta P_{\text{housing}} + \Delta P_{\text{element}}
\]

**Notes**

Sizing of elements should be based on element flow information provided in the Element Selection chart above.

**Profile Picture**

**SCHROEDER INDUSTRIES 277**
Tank-Mounted Filter

How to Build a Valid Model Number for a Schroeder KF3:

<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>
<th>BOX 10</th>
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<tbody>
<tr>
<td>BFT</td>
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<td></td>
<td></td>
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<td></td>
<td></td>
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</tr>
</tbody>
</table>

Example: NOTE: Only box 10 may contain more than one option

BFT 1 BB10 P Y2 = BFT1BB10PY2

Notes:

Box 3. Replacement element part numbers are identical to contents of Boxes 3 and 4. E media elements are only available with Buna N seals.

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.

Box 8. See also “Accessories for Tank-Mounted Filters,” page 295.

NOTES:

PORTING

P = 2½” NPTF
PP = Dual 2½” NPTF
S = SAE-32
SS = Dual SAE-32
F = 2½” SAE 4-bolt flange Code 61
FF = Dual 2½” SAE 4-bolt flange Code 61

BYPASS SETTING

Omit = 25 psi cracking
40 = 40 psi cracking

OUTLET PORTING

Omit = 3” NPT male
T = 13” Tube extension

OPTIONAL CHECK VALVE

Omit = None
C = Check valve

DIRT ALARM® OPTIONS

Omit = None

Visual

Y2 = Back-mounted tri-color gauge
Y2R = Back-mounted gauge mounted on opposite side of standard location

Electrical

ES = Electric switch
ESR = Electric switch mounted on opposite side of standard location
ES1 = Heavy-duty electric switch with conduit connector
ES1R = Heavy-duty electric switch with conduit connector mounted on opposite side of standard location