MiniMiser™ Tank-Mounted Filter

**Features and Benefits**
- Low pressure tank-mounted filter
- Compact size minimizes space requirements
- Minimizer is cost-effective alternative to spin-on filters
- Special filter element design provides aftermarket benefits

**Applications**
- Industrial
- Automotive Manufacturing
- Mobile Vehicles
- Pulp & Paper
- Agriculture

**Flow Rating:**
- Up to 15 gpm (55 L/min) for 150 SUS (32 cSt) fluids

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

**Min. Yield Pressure:**
- 269 psi (18 bar), per NFPA T2.6.1

**Rated Fatigue Pressure:**
- Contact factory

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

**Bypass Setting:**
- Cracking: 25 psi (2 bar)
- Full Flow: 48 psi (3.3 bar)

**Porting Head & Cap:**
- Die Cast Aluminum

**Element Case:**
- Glass Filled Nylon

**Weight of MTA-3:**
- 1.0 lbs. (0.5 kg)

**Element Change Clearance:**
- 3.0" (76 mm)

Model No. of filter in photograph is MTA3TAZ10P8.
MiniMiser™ 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>
</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></td>
<td></td>
<td>$eta_x \geq 75$</td>
</tr>
<tr>
<td>3TA10</td>
<td>15.5</td>
<td>16.2</td>
</tr>
<tr>
<td>3TAZ3</td>
<td>&lt;1.0</td>
<td>&lt;1.0</td>
</tr>
<tr>
<td>3TAZ5</td>
<td>2.5</td>
<td>3.0</td>
</tr>
<tr>
<td>3TAZ10</td>
<td>7.4</td>
<td>8.2</td>
</tr>
<tr>
<td>3TAZ25</td>
<td>18.0</td>
<td>20.0</td>
</tr>
</tbody>
</table>

Dirt Holding Capacity

<table>
<thead>
<tr>
<th>Element</th>
<th>DHC (gm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3TA10</td>
<td>N/A</td>
</tr>
<tr>
<td>3TAZ3</td>
<td>4</td>
</tr>
<tr>
<td>3TAZ5</td>
<td>6</td>
</tr>
<tr>
<td>3TAZ10</td>
<td>4</td>
</tr>
<tr>
<td>3TAZ25</td>
<td>4</td>
</tr>
</tbody>
</table>

Element Collapse Rating: 150 psid (10 bar)
Flow Direction: Outside In
Element Nominal Dimensions: 2.0" (51 mm) O.D. x 3.0" (76 mm) long

Metric dimensions in ( ).
**MiniMiser™ Tank-Mounted Filter**

**Type Fluid**  
Petroleum Based Fluids

**Appropriate Schroeder Media**  
All E media (cellulose) and Z-Media® (synthetic)

---

**Element Selection**  
Based on Flow Rate

<table>
<thead>
<tr>
<th>Pressure Series</th>
<th>Part No.</th>
<th>Element Selection</th>
</tr>
</thead>
<tbody>
<tr>
<td>E Media 10</td>
<td>3TA10</td>
<td>See MTB</td>
</tr>
<tr>
<td></td>
<td>25</td>
<td>3TA25</td>
</tr>
<tr>
<td>Z Media® 25</td>
<td>3TAZ3</td>
<td>See MTB</td>
</tr>
<tr>
<td>Z Media® 25</td>
<td>3TAZ10</td>
<td>See MTB</td>
</tr>
<tr>
<td>Z Media® 25</td>
<td>3TAZ25</td>
<td>See MTB</td>
</tr>
</tbody>
</table>

---

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

\[ \Delta P_{\text{element}} = \text{flow} \times \text{element } \Delta P \text{ factor} \times \text{viscosity factor} \]

**Ei. \( \Delta P \) factors @ 150 SUS (32 cSt):**

- 3TA10: 1.40
- 3TA25: .33
- 3TAZ1: 4.27
- 3TAZ3: 2.20
- 3TAZ5: 1.73
- 3TAZ10: 1.48
- 3TAZ25: .68

If working in units of bars & L/min, divide above factor by 54.9.

**Viscosity factor:** Divide viscosity by 150 SUS (32 cSt).

---

**Notes**

- \( \Delta P_{\text{housing}} \) for fluids with sp gr = 0.86:

\[ \Delta P_{\text{housing}} = \text{flow} \times \Delta P_{\text{housing}} \text{ factor} \]

<table>
<thead>
<tr>
<th>Flow (gpm)</th>
<th>(25)</th>
<th>(50)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>15</td>
<td>15</td>
<td>15</td>
</tr>
</tbody>
</table>

---

**Exercise:**

Determine \( \Delta P \) at 7 gpm (27 L/min) for MTA3TAZ10P8 using 150 SUS (32 cSt) fluid.

**Solution:**

\[ \Delta P_{\text{housing}} = 2.0 \text{ psi} \]  
\[ \Delta P_{\text{element}} = 7 \times 1.48 = 10.3 \text{ psi} \]  
\[ \Delta P_{\text{total}} = 2.0 + 10.3 = 12.3 \text{ psi} \]  

---

**Contact factory regarding use of E media in High Water Content, Invert Emulsion and Water Glycol Applications. For more information, refer to Fluid Compatibility: Fire Resistant Fluids, pages 19 and 20.
### How to Build a Valid Model Number for a Schroeder MTA:

**BOX 1** | **BOX 2** | **BOX 3** | **BOX 4** | **BOX 5**
---|---|---|---|---
MTA | 3 | TA25 | P8 | Y5

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

MTA | 3 | TA25 | P8 | Y5

= MTA3TA25P8Y5

### Element Size and Media

- **TA10** = TA size 10 µ E media (cellulose)
- **TA25** = TA size 25 µ E media (cellulose)
- **TAZ1** = TA size 1 µ Excellement® Z-Media® (synthetic)
- **TAZ3** = TA size 3 µ Excellement® Z-Media® (synthetic)
- **TAZ5** = TA size 5 µ Excellement® Z-Media® (synthetic)
- **TAZ10** = TA size 10 µ Excellement® Z-Media® (synthetic)
- **TAZ25** = TA size 25 µ Excellement® Z-Media® (synthetic)

### Porting Options

- **P8** = ½” NPTF
- **S8** = SAE-8

### Dirt Alarm® Options

- **Omit** = None
- **Visual**
  - Y2C = Bottom-mounted gauge in cap
  - Y5 = Back-mounted gauge in cap
- **Electrical**
  - ESC = Electric pressure switch (2 terminals)