Features and Benefits

- Spin-On with full ported die cast aluminum head for minimal pressure drop
- Offered in pipe and SAE straight thread porting
- Spin-On thread = 1.00-12UNF-2B
- Visual gauge or electrical switch dirt alarms
- Small profile for use in limited space
- Same day shipment model available

Flow Rating:

Up to 50 gpm (190 L/min) for 150 SUS (32 cSt) fluids

Max. Operating Pressure: 100 psi (7 bar)

Min. Yield Pressure: 200 psi (10 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: 30 psi (2 bar)
- Full Flow: 48 psi (3 bar)

Porting Head & Cap: Die Cast Aluminum
Element Case: Steel

Weight of MAF1-7M: 4.2 lbs. (1.9 kg)
Weight of MAF1-10M: 5.0 lbs. (2.3 kg)

Element Change Clearance: 2.50" (65 mm)

Filter Housing Specifications

Type Fluid | Appropriate Schroeder Media
--- | ---
Petroleum Based Fluids | All E media (cellulose) and Z-Media® (synthetic)
High Water Content | 3 and 10 µ Z-Media® (synthetic)
Invert Emulsions | 10 µ Z-Media® (synthetic)
Water Glycols | 3 and 10 µ Z-Media® (synthetic)

Accessories For Tank-Mounted Filters

PAF1
MAF1
MF2
Installation instructions included on element.

Metric dimensions in ( ).

<table>
<thead>
<tr>
<th>Element</th>
<th>Filtration Ratio Per ISO 4572/NFPA T3.10.8.8 Using automated particle counter (APC) calibrated per ISO 4402</th>
<th>Filtration Ratio per ISO 16889 Using APC calibrated per ISO 11171</th>
</tr>
</thead>
<tbody>
<tr>
<td>P10</td>
<td>$\beta_x \geq 75$</td>
<td>$\beta_x \geq 100$</td>
</tr>
<tr>
<td>PZ10</td>
<td>15.5</td>
<td>16.2</td>
</tr>
<tr>
<td>PZ25</td>
<td>7.4</td>
<td>8.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Element</th>
<th>DHC (gm)</th>
<th>Element</th>
<th>DHC (gm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>P10</td>
<td>37</td>
<td>PZ25</td>
<td>23.0</td>
</tr>
<tr>
<td>PZ10</td>
<td>16.8</td>
<td></td>
<td></td>
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</tbody>
</table>

Element Collapse Rating: 100 psid (7 bar)
Flow Direction: Outside In
Element Nominal Dimensions: 3.75" (95 mm) O.D. x 5.5" (140 mm) long
ΔP_{\text{housing}}

PAF1 ΔP_{\text{housing}} for fluids with sp gr (specific gravity) = 0.86:

$$\Delta P_{\text{housing}} = \Delta P_{\text{filter}} = \Delta P_{\text{housing}} + (\Delta P_{\text{element}} \times V_f)$$

**Exercise:**
Determine ΔP_{\text{filter}} at 10 gpm (37.9 L/min) for PAF16PZ25PY2 using 160 SUS (34 cSt) fluid.

Use the housing pressure curve to determine ΔP_{\text{housing}} at 10 gpm. In this case, ΔP_{\text{housing}} is 2 psi (.14 bar) on the graph for the PAF1 housing.

Use the element pressure curve to determine ΔP_{\text{element}} at 10 gpm. In this case, ΔP_{\text{element}} is 1.5 psi (.10 bar) according to the graph for the PZ25 element.

Because the viscosity in this sample is 160 SUS (34 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_{\text{filter}}, is calculated by adding ΔP_{\text{housing}} with the true element pressure differential, (ΔP_{\text{element}}*$V_f$). The ΔP_{\text{element}} from the graph has to be multiplied by the viscosity factor to get the true pressure differential across the element.

**Solution:**

ΔP_{\text{housing}} = 2 psi [.14 bar] | ΔP_{\text{element}} = 1.5 psi [.10 bar]

$V_f = 160 \text{ SUS (34 cSt)} / 150 \text{ SUS (32 cSt)} = 1.1$

ΔP_{\text{filter}} = 2 \text{ psi} + (1.5 \text{ psi} \times 1.1) = 3.7 \text{ psi}$

OR

ΔP_{\text{filter}} = 14 \text{ bar} + (.10 \text{ bar} \times 1.1) = .25 \text{ bar}$

**Note:**
If your element is not graphed, use the following equation:

$\Delta P_{\text{element}} = \text{Flow Rate} \times \Delta P_f$

Plug this variable into the overall pressure drop equation.

<table>
<thead>
<tr>
<th>Ele.</th>
<th>ΔP</th>
</tr>
</thead>
<tbody>
<tr>
<td>P10</td>
<td>0.17</td>
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</table>
### How to Build a Valid Model Number for a Schroeder PAF1:

<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>
</tr>
</thead>
<tbody>
<tr>
<td>PAF1</td>
<td>6</td>
<td>P10</td>
<td>P</td>
<td>Y2</td>
<td></td>
</tr>
</tbody>
</table>

Example: NOTE: One option per box

PAF1

Example: PAF16P10PY2

## Filter Model Number Selection

### Filter Series
- PAF1

### Element Length (in)
- 6

### Element Size and Media
- P10 = P size 10 µ E media (cellulose)
- PZ10 = P size 10 µ Excellement® Z-Media® (synthetic)
- PZ25 = P size 25 µ Excellement® Z-Media® (synthetic)

### Seal Material
- Omit = Buna N

### Inlet Porting
- P = ¾” NPTF
- S = SAE-12

### Dirt Alarm® Options
- Omit = None
- Visual Y2 = Back-mounted tri-color gauge
- Electrical ES = Electric switch

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**NOTE:**

Box 2. Replacement element part numbers are a combination of Boxes 3 and 4.

Example: P10