The Most Extensively Used Backflushable Pleated Filter in Power Plant Condensate

- Backflushable Pleated Filter Designed Specifically for Use in Power Plants
- The Hydro-Guard PPB is Used in Condensate With or Without Resin Precoat
- Constructed With the Highest Purity Materials (no fillers, talcs, TiO₂ or surfactants) for Minimal Rinse-up Time
- Surface Area Exceeds That of Conventional Condensate Filters by a 20:1 ratio for Lower Pressure Drops, Increased Filter Life and Longer Backflush Cycles
- Eliminates Costs Associated with Use and Disposal of Powdered Resins
- Iron Oxide and Suspended Copper are Typically Reduced by 98%
- Absolute Construction and Surface Retention for Efficient Backflushing and Particle Removal

Performance Specifications

Maximum Operating Temperature:
180°F (82.2°C)

Maximum Differential Pressure:
40 psid (2.8 bar) @ 150°F (65°C)

<table>
<thead>
<tr>
<th>Product Feature</th>
<th>Product Benefit</th>
<th>Customer Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Backflushable filter element</td>
<td>Longer on stream life&lt;br&gt;Reduced number of filter changeouts</td>
<td>Lower disposal costs&lt;br&gt;Reduced personnel exposure to radiation during filter changeouts</td>
</tr>
<tr>
<td>High surface area</td>
<td>Longer run times&lt;br&gt;Higher dirt holding capacity</td>
<td>Lower operating costs&lt;br&gt;Fewer backflushes for reduced disposal costs</td>
</tr>
<tr>
<td>All Polypropylene</td>
<td>Virtually no extractables&lt;br&gt;Incinerable&lt;br&gt;Radiation Resistant&lt;br&gt;No rinse-up required</td>
<td>Concerns eliminated with regard to chemistry changes&lt;br&gt;Reduced startup costs (i.e. downtime rinse-up water, etc.)</td>
</tr>
<tr>
<td>Modular design</td>
<td>High structural integrity</td>
<td>Easy retrofit into existing pressure vessels</td>
</tr>
<tr>
<td>Absolute Construction</td>
<td>Highly efficient particle removal</td>
<td>Less damage from iron and copper in boiler and turbine&lt;br&gt;Quicker plant startups&lt;br&gt;Fewer boiler cleanings</td>
</tr>
</tbody>
</table>
### Product Specifications

**Materials of Construction**

- **Filter Media:** Polypropylene
- **Support Material:** Polypropylene
- **Hardware:** Polypropylene
- **Sealing:** Thermal Bond
- **Gasket/O-ring Materials:** EPDM (standard), Others available

### Pressure Drop/Flow Data

<table>
<thead>
<tr>
<th>Model</th>
<th>Delta Pressure</th>
<th>( \Delta P = (k) \text{ (Flow Rate)} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>HGPPB1</td>
<td>( \Delta = (0.50) ) Flow Rate</td>
<td></td>
</tr>
<tr>
<td>HGPPB2</td>
<td>( \Delta = (0.40) ) Flow Rate</td>
<td></td>
</tr>
<tr>
<td>HGPPB4</td>
<td>( \Delta = (0.05) ) Flow Rate</td>
<td></td>
</tr>
<tr>
<td>HGPPB10</td>
<td>( \Delta = (0.03) ) Flow Rate</td>
<td></td>
</tr>
<tr>
<td>HGPPB18</td>
<td>( \Delta = (0.01) ) Flow Rate</td>
<td></td>
</tr>
<tr>
<td>HGPPB42</td>
<td>( \Delta = (0.01) ) Flow Rate</td>
<td></td>
</tr>
</tbody>
</table>

This information is with water at ambient temperatures. Differential pressures are in PSID based on flow in GPM through a 10″ (25.4 cm) element.

### Part Numbers/Ordering Information

**HGPPB - ▲ - 0 - P - ○ - ▼** (e.g. HGPPB-2-70-P-E-DOE)

<table>
<thead>
<tr>
<th>Code</th>
<th>Filter Grades*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1 µm</td>
</tr>
<tr>
<td>2</td>
<td>2 µm</td>
</tr>
<tr>
<td>4</td>
<td>4 µm</td>
</tr>
<tr>
<td>10</td>
<td>10 µm</td>
</tr>
<tr>
<td>18</td>
<td>18 µm</td>
</tr>
<tr>
<td>42</td>
<td>42 µm</td>
</tr>
</tbody>
</table>

*Based on typical application usage.

**Code**

- **S**: Silicone
- **N**: Buna N
- **V**: Viton¹ A
- **E**: EPDM

**Part Numbers/Ordering Information**

**Code**

- **DOE**: DOE with elastomer gasket seal and endcaps
- **M3**: SOE flat closed end, external 222 O-rings (retrofits other manufacturers’ Code 0)**
- **M6**: SOE flat closed end, external 226 O-rings (retrofits other manufacturers’ Code 6)**
- **M7**: SOE fin end, external 226 O-rings (retrofits other manufacturers’ Code 7)**
- **M8**: SOE fin end, external 222 O-rings (retrofits other manufacturers’ Code 5)**
- **COOP**: Fine thread direct screw in
- **TVO**: Extended neck for better sealing
- **PAK**: Easy installation and removal; double seals for high integrity
- **PEA**: Retrofit for 2" (5.1 cm) seat cups
- **AERO**: Connects directly to tube sheet without additional hardware

**End Configurations**

- **DOE**: DOE with elastomer gasket seal and endcaps
- **M3**: SOE flat closed end, external 222 O-rings (retrofits other manufacturers’ Code 0)**
- **M6**: SOE flat closed end, external 226 O-rings (retrofits other manufacturers’ Code 6)**
- **M7**: SOE fin end, external 226 O-rings (retrofits other manufacturers’ Code 7)**
- **M8**: SOE fin end, external 222 O-rings (retrofits other manufacturers’ Code 5)**
- **COOP**: Fine thread direct screw in
- **TVO**: Extended neck for better sealing
- **PAK**: Easy installation and removal; double seals for high integrity
- **PEA**: Retrofit for 2" (5.1 cm) seat cups
- **AERO**: Connects directly to tube sheet without additional hardware

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