Compact Cartridge Filters and Housings

For laboratory and pre-production evaluation of inks, resists, developers, slurries and other industrial fluids
Compact Cartridge Filters for Filtration Evaluation

Optimized filters for laboratory testing, process development and small-scale evaluations

Since research and development laboratories often work with small volumes of liquid, Pall has developed a series of one-inch test filters for rapid sample evaluation, with minimum hold-up of valuable product. Inks, resists and developers including many other liquids from the semiconductor, microelectronics and general chemical industries can be tested with these compact filter cartridges. These 25.4 mm (1-inch) cartridge filters are smaller versions of Pall's standard-size 254 mm (10-inch) filters which have a long history in various industrial fields. They are ideal for selecting the best filter medium and micron removal rating for the application. They also enable users to easily optimize operating conditions for scale-up.

- Available in 25.4 mm (1 inch) or 35.5 mm (1.4 inch) lengths (nominal)
- Selection of filter media configurations to optimize performance
- Available in four filter media for compatibility with a wide range of liquids
- Designed for direct and accurate scale-up to full-size filters
- Enables quick, easy and accurate filter evaluations

Cross-section of filter media configurations

Profile® II Filters
- Filter medium: Polypropylene
- Cartridge length: 25.4 mm (1 inch)
- Gasket: EPDM (standard)
- Reference data sheet: E11, L1770
- Minimum order quantity: 6 pieces

Nexis® A Filters
- Filter medium: Polypropylene
- Cartridge length: 35.5 mm (1.4 inch)
- Gasket: EPDM (standard)
- Reference data sheet: 1664-9
- Minimum order quantity: 5 pieces

Profile® UP Filters
- Filter medium: Polypropylene
- Cartridge length: 25.4 mm (1 inch)
- Gasket: EPDM (standard)
- Reference data sheet: E81
- Minimum order quantity: 6 pieces

Profile® Star Filters
- Filter medium: Polypropylene
- Cartridge length: 35.5 mm (1.4 inch)
- Gasket: EPDM (standard)
- Reference data sheet: E64-J1769
- Minimum order quantity: 6 pieces

Poly-Fine® XLD Filters
- Filter medium: Polypropylene
- Cartridge length: 35.5 mm (1.4 inch)
- Gasket: EPDM (standard)
- Reference data sheet: E64-J1766
- Minimum order quantity: 5 pieces

Water Fine Filters
- Filter medium: Polyethylene
- Cartridge length: 35.5 mm (1.4 inch)
- Gasket: EPDM (standard)
- Reference data sheet: E64-J1764
- Minimum order quantity: 5 pieces

Ultipor® GF-HV Filters
- Filter medium: Glass Fiber
- Cartridge length: 25.4 mm (1 inch)
- Gasket: EPDM (standard)
- Reference data sheet: M9467-68
- Minimum order quantity: 6 pieces

Ultipor® N66 Filters
- Filter medium: Nylon 66
- Cartridge length: 25.4 mm (1 inch)
- Gasket: EPDM (standard)
- Reference data sheet: M0967-68
- Minimum order quantity: 6 pieces

Please refer to the relevant data sheets or Pall.com for filter specifications.
Please contact your local Pall office or www.Pall.com for more detail on filterability test protocols, process evaluation and filter housings.
Compact Cartridge Filters for Filtration Evaluation

Optimized filters for laboratory testing, process development and small-scale evaluations

Since research and development laboratories often work with small volumes of liquid, Pall has developed a series of one-inch test filters for rapid sample evaluation, with minimum hold-up of valuable product. Inks, resists and developers including many other liquids from the semiconductor, macroelectronics and general chemical industries can be tested with these compact filter cartridges. These 25.4 mm (1-inch) cartridge filters are smaller versions of Pall’s standard-size 254 mm (10-inch) filters which have a long history in various industrial fields. They are ideal for selecting the best filter medium and micron removal rating for the application. They also enable users to easily optimize operating conditions for scale-up.

- Available in 25.4 mm (1 in) or 35.5 mm (1.4 in) lengths (nominal)
- Selection of filter media configurations to optimize performance
- Available in four filter media for compatibility with a wide range of liquids
- Designed for direct and accurate scale-up to full-size filters
- Enables quick, easy and accurate filter evaluations

Cross-section of filter media configurations

Please refer to the relevant data sheets or Pall.com for filter specifications.

Please contact your local Pall office or www.Pall.com for more detail on filterability test protocols, process evaluation and filter housings.
Low Volume Test Filter Housing for the Laboratory

Part Number: SVFH-1

- Self-supporting on a flat surface; does not require a stand
- Inlet, outlet and vent ports are conveniently located on top of filter housing
- Heavy duty closure clamp allows for quick and easy filter change-outs

Materials

- Head: 316 stainless steel
- Bowl: 316 stainless steel
- Clamp: 304 stainless steel
- O-ring: FEP encapsulated fluororubber
- Surface finish: Electropolished

Specifications

- Operating pressure: 0.09 MPa / 71 psi
- Operating temperature: 40 °C / 104 °F
- Weight: 2.4 kg
- Volume: 360 cm³

Connections*

- Inlet/Outlet: Rc 1/4
- Vent/Drain: Rc 1/4

* Contact for other options

Example of Test Equipment Set-up

Recommendations for Filterability Testing

- Install a pressure gauge and vent valve on one of the two inlet ports on the filter housing.
- Place a flow meter between the pump and filter housing when testing under constant flow conditions.
- Select a pump having minimal pulsation.
- Ensure that the filter housing is located on the discharge side of the pump.
- For constant pressure applications, use a pressurized tank to feed the liquid to the filter housing.
- Use agitation with dispersions prone to settling out.
- Fully vent air through the vent valve prior to closing it.
- Monitor connections for leaks, especially when the differential pressure increases. Follow fitting suppliers recommendations.
Low Volume Test Filter Housing for the Laboratory

Part Number: SVFH-1

- Self-supporting on a flat surface; does not require a stand
- Inlet, outlet and vent ports are conveniently located on top of filter housing
- Heavy duty closure clamp allows for quick and easy filter change-outs

Materials
- Head: 316 stainless steel
- Bowl: 316 stainless steel
- Clamp: 304 stainless steel
- O-ring: EPDM encapsulated fluorosilicone
- Surface finish: Electropolished

Specifications
- Operating pressure: 0.69 MPa / 71 psid
- Operating temperature: 40°C / 104°F
- Weight: 2.8 kg
- Volume: 360 cm³

Connections
- Inlet/Outlet: Rc 1/4
- Vent/Drain: Rc 1/4

* For other options:

Example of Test Equipment Set-up

Recommendations for Filterability Testing
- Install a pressure gauge and vent valve on one of the two inlet ports on the filter housing.
- Place a flow meter between the pump and filter housing when testing under constant flow conditions.
- Select a pump having minimal pulsation.
- Ensure that the filter housing is located on the discharge side of the pump.
- For constant pressure applications, use a pressurized tank to feed the liquid to the filter housing.
- Use agitation with dispersions prone to settling out.
- Fully vent air through the vent valve prior to closing it.
- Monitor connections for leaks, especially when the differential pressure increases. Follow fitting suppliers recommendations.
Low Volume Test Filter Housing for Evaluation on Manufacturing Lines

Part Number: SVFH-2

- Housing design enables filter testing during process operations
- Filter bowl can be mounted in any orientation
- Housing accommodates test filters configured for direct and accurate scale-up to full-sized filter cartridges

Materials
- Head: 316 stainless steel
- Bowl: 316 stainless steel
- Clamp: 304 stainless steel
- O-ring: FEP encapsulated fluororubber
- Surface finish: Electropolished

Specifications
- Operating pressure: 0.49 MPa / 71 psid
- Operating temperature: 40 °C / 104 °F
- Weight: 2.3 kg
- Volume: 500 cm³

Connections
- Inlet/Outlet: Rc 1
- Vent/Drain: Rc 1/4

Low Volume Test Filter Housing with Inline Sanitary Connections

Part Number: SVFH-3

- Housing design enables filter testing during process operations
- Sanitary clamp (flange type) and sanitary ferrule connections

Materials
- Head: 316 stainless steel
- Bowl: 316 stainless steel
- Clamp: 304 stainless steel
- O-ring: FEP encapsulated fluororubber
- Surface finish: Electropolished

Specifications
- Operating pressure: 0.49 MPa / 71 psid
- Operating temperature: 40 °C / 104 °F
- Weight: 3.7 kg
- Volume: 410 cm³

Connections
- Inlet/Outlet: IDF 1/8 (1 in sanitary)
- Vent/Drain: Rc 1/4

Note: Liquid flow is from the bottom of the housing to the top. To replace a filter, drain the housing, remove it from the piping, and then open it to change-out the cartridge.
Low Volume Test Filter Housing for Evaluation on Manufacturing Lines

Part Number: SVFH-2

- Housing design enables filter testing during process operations
- Filter bowl can be mounted in any orientation
- Housing accommodates test filters configured for direct and accurate scale-up to full-sized filter cartridges

<table>
<thead>
<tr>
<th>Materials</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head</td>
<td>316 stainless steel</td>
</tr>
<tr>
<td>Bowl</td>
<td>316 stainless steel</td>
</tr>
<tr>
<td>Clamp</td>
<td>304 stainless steel</td>
</tr>
<tr>
<td>O-ring</td>
<td>FEP encapsulated fluorocarbons</td>
</tr>
<tr>
<td>Surface finish</td>
<td>Electroplated</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Specifications</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating pressure</td>
<td>0.49 MPa / 71 psid</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>40°C / 104°F</td>
</tr>
<tr>
<td>Weight</td>
<td>3.3 kg</td>
</tr>
<tr>
<td>Volume</td>
<td>500 cm³</td>
</tr>
</tbody>
</table>

Materials

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating pressure</td>
<td>0.49 MPa / 71 psid</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>40°C / 104°F</td>
</tr>
<tr>
<td>Weight</td>
<td>3.7 kg</td>
</tr>
<tr>
<td>Volume</td>
<td>410 cm³</td>
</tr>
</tbody>
</table>

Connections

<table>
<thead>
<tr>
<th>Connections</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inlet/Outlet</td>
<td>Rc 1</td>
</tr>
<tr>
<td>Vent/Drain</td>
<td>Rc 1/4</td>
</tr>
</tbody>
</table>

Note: Liquid flow is from the bottom of the housing to the top. To replace a filter, drain the housing, remove it from the piping and then open it to change-out the cartridge.
Compact Cartridge Filters and Housings

For laboratory and pre-production evaluation of inks, resists, developers, slurries and other industrial fluids