HLP Filters
High Loft Pleated Polypropylene Depth Media

HLP cartridge and capsule filters are made using high-loft Polypropylene depth media. They are designed to efficiently filter liquids with a high particle burden including water, CMP slurries, chemicals and solvents. Pore sizes range from 0.10 to 10 µm and available filter devices scale from laboratory to full production using identical materials to ensure consistent results.

HLP filters have superior retention of oversize particles for final product filtration or as a prefilter to protect downstream filters. With the capacity to remove large amounts of particulate and other contaminants, HLP filters provide long life and high throughput. Materials of construction have been specifically selected to minimize extractables.

Critical Process provides unrivaled delivery times, technical consulting before purchasing, and very competitively priced high-performance products. Our comprehensive testing & analysis and validation services support your team whenever they need it. Your process experts partnering with our filtration experts is how we deliver your company’s solution right the first time.

HLP filters are recommended for clarification & prefiltration in:
- CMP Slurries
- Resists
- Acids & Bases
- Plating Solutions
- Fermentation Broths
- Buffers & Other Fluids
- Solvents
- Process Water

Clarification & Prefiltration

CARTRIDGES – Nominal Dimensions
Length: 5 to 40 in. (12.7 to 101.6 cm)
Outside Diameter: 2.75 in. (7.0 cm)

CAPSULES – Nominal Dimensions
Length: 2 to 30 in. (5.1 to 76.2 cm)
Outside Diameter: 3.50 in. (8.9 cm)
Critical Process Filtration, Inc.

Extractables
HLP filters typically exhibit low levels of non-volatile residues.

TOC and Conductivity
HLP filters conform with TOC and water conductivity standards for SEMI Standard F75-1102, with TOC standards of USP <643> and the water conductivity standards of USP <645> after an appropriate flush with purified water.

Non-Fiber Releasing
HLP filters comply with Title 21 CFR sections 210.3 (b)(6) and 211.72, for non-fiber releasing filters.

FDA and EC Compliance
Materials meet the requirements listed by the FDA as appropriate for use in articles intended for repeated food contact as specified in Title 21 CFR sections 174.5, 177.1500, 177.1520, 177.1630, 177.2440, and 177.2600 as applicable. All materials used to make the filters are listed in European Commission Regulation EU/10/2011, Annex 1.
Flow Rates for HLP Cartridges by Pore Size

Flow rates for Cartridge filters are per 10-inch length. The test fluid is water at ambient temperature.

Flow Rates for HLP Capsules by Pore Size

Flow rates for Capsule filters are tested using a 2” capsule filter with 1” sanitary inlet and outlet ports. The test fluid is water at ambient temperature. Flow rates for larger capsules will scale with filtration area. Rates will vary based on end configuration of the capsule.
HLP Filters Ordering Information

Fill in the corresponding codes in the boxes below to build your Part Number.

To consult with one of our technical team members, request a quote or place an order:
call (603) 880-4420 or [contact us here](#).

### Cartridge Filters

<table>
<thead>
<tr>
<th>Pore Size Code</th>
<th>SS Ring</th>
<th>Length</th>
<th>O-Ring/Gasket Code</th>
<th>End Cap Code*</th>
</tr>
</thead>
<tbody>
<tr>
<td>-10 = 0.10 μm</td>
<td>S = Ring</td>
<td>05 = 5 in. (12.7 cm)</td>
<td>S = Silicone</td>
<td>0 = Flat Gasket, DOE</td>
</tr>
<tr>
<td>-20 = 0.22 μm</td>
<td>N = No Ring</td>
<td>97 = 9.75 in. (24.8 cm)</td>
<td>B = Buna</td>
<td>1 = Flat Gasket/Plug</td>
</tr>
<tr>
<td>-40 = 0.45 μm</td>
<td></td>
<td>01 = 10 in. (25.4 cm)</td>
<td>V = Viton (or FKM)</td>
<td>2 = 2-222 O-ring/Plug</td>
</tr>
<tr>
<td>-60 = 0.65 μm</td>
<td></td>
<td>02 = 20 in. (50.8 cm)</td>
<td>T = FEP Encapsulated Viton (or FKM)</td>
<td>3 = 213/119 Internal O-ring DOE</td>
</tr>
<tr>
<td>1-0 = 1.0 μm</td>
<td></td>
<td>03 = 30 in. (76.2 cm)</td>
<td>E = EP</td>
<td>4 = 213/119 Internal O-ring/Plug</td>
</tr>
<tr>
<td>3-0 = 3.0 μm</td>
<td></td>
<td>04 = 40 in. (101.6 cm)</td>
<td>R = FEP Encapsulated Silicone</td>
<td>5 = 2-222 O-ring/Flat</td>
</tr>
<tr>
<td>5-0 = 5.0 μm</td>
<td></td>
<td></td>
<td></td>
<td>6 = 2-226 O-ring/Flat</td>
</tr>
<tr>
<td>10- = 10 μm</td>
<td></td>
<td></td>
<td></td>
<td>7 = 020 O-ring/Plug</td>
</tr>
</tbody>
</table>

SS Ring:
- S = Ring
- N = No Ring

Length:
- 05 = 5 in. (12.7 cm)
- 97 = 9.75 in. (24.8 cm)
- 01 = 10 in. (25.4 cm)
- 02 = 20 in. (50.8 cm)
- 03 = 30 in. (76.2 cm)
- 04 = 40 in. (101.6 cm)

O-Ring/Gasket Code:
- S = Silicone
- B = Buna
- V = Viton (or FKM)
- T = FEP Encapsulated Viton (or FKM)
- E = EP
- R = FEP Encapsulated Silicone

End Cap Code*:
- 0 = Flat Gasket, DOE
- 1 = Flat Gasket/Plug
- 2 = 2-222 O-ring/Plug
- 3 = 213/119 Internal O-ring DOE
- 4 = 213/119 Internal O-ring/Plug
- 5 = 2-222 O-ring/Flat
- 6 = 2-226 O-ring/Flat
- 7 = 020 O-ring/Plug
- 8 = 2-222 O-ring/Spear
- 9 = 2-226 O-ring/Spear
- 21 = 2-223 O-ring/Flat
- 22 = 2-223 O-ring/Spear
- 23 = 2-222 O-ring 3 Tab/Flat
- 24 = 2-222 O-ring 3 Tab/Spear
- 25 = Short 2-222/Plug

*Additional End Configurations are available

### Capsule Filters

<table>
<thead>
<tr>
<th>Pore Size Code</th>
<th>Pre-Sterilized or Not</th>
<th>Length</th>
<th>Inlet</th>
<th>Outlet</th>
<th>Side Vent Options</th>
<th>O-Rings (Bleed Valves Only)</th>
</tr>
</thead>
<tbody>
<tr>
<td>-10 = 0.10 μm</td>
<td>S = Pre-Sterilized</td>
<td>A = 2”</td>
<td>A = 1/4” Female NPT</td>
<td>A = 1/4” Female NPT</td>
<td>1 = Luer Lock</td>
<td>S = Silicone</td>
</tr>
<tr>
<td>-20 = 0.22 μm</td>
<td>G = Gamma Stable</td>
<td>B = 5”</td>
<td>B = 1/4” Male NPT</td>
<td>B = 1/4” Male NPT</td>
<td>2 = Bleed Valve</td>
<td>E = EP</td>
</tr>
<tr>
<td>-40 = 0.45 μm</td>
<td>N = Not Sterilized</td>
<td>1 = 10”</td>
<td>C = 3/8” Female NPT</td>
<td>C = 3/8” Female NPT</td>
<td></td>
<td>V = Viton</td>
</tr>
<tr>
<td>-60 = 0.65 μm</td>
<td></td>
<td>2 = 20”</td>
<td>D = 1/2” Female NPT</td>
<td>D = 1/2” Female NPT</td>
<td></td>
<td>B = Buna</td>
</tr>
<tr>
<td>1-0 = 1.0 μm</td>
<td></td>
<td>3 = 30”</td>
<td>E = 1/2” Male NPT</td>
<td>E = 1/2” Male NPT</td>
<td></td>
<td>K = FFKM</td>
</tr>
<tr>
<td>3-0 = 3.0 μm</td>
<td></td>
<td></td>
<td>F = 1” Sanitary</td>
<td>F = 1” Sanitary</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5-0 = 5.0 μm</td>
<td></td>
<td></td>
<td>G = Hose Barb*</td>
<td>G = Hose Barb*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10- = 10 μm</td>
<td></td>
<td></td>
<td>H = 1 ½” Sanitary with side vent</td>
<td>H = 1 ½” Sanitary with side vent</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>I = ½” Single Stepped Barb with side vent</td>
<td>I = ½” Single Stepped Barb with side vent</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Inlet:
- A = 1/4” Female NPT
- B = 1/4” Male NPT
- C = 3/8” Female NPT
- D = 1/2” Female NPT
- E = 1/2” Male NPT
- F = 1” Sanitary
- G = Hose Barb*
- H = 1 ½” Sanitary with side vent
- I = ½” Single Stepped Barb with side vent

Outlet:
- A = 1/4” Female NPT
- B = 1/4” Male NPT
- C = 3/8” Female NPT
- D = 1/2” Female NPT
- E = 1/2” Male NPT
- F = 1” Sanitary
- G = Hose Barb*
- H = 1 ½” Sanitary with side vent
- I = ½” Single Stepped Barb with side vent
- IB = ½” Single Stepped Barb with filling bell and side vent

*Fits hoses/tubes with inner diameter 11/32 to 9/16 inches

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