Pleated Polyethersulfone (PES) Membrane for Final Filtration of Wine & Beverages

The polyethersulfone membrane provides high contaminant capacity, superior flow rates and consistent removal of particles and microorganisms. The cartridges are highly compatible with the most rigorous sanitizing methods in the beverage industry. Reliability is further assured with the LOFMEM-B’s integrity testable design.

Features and Benefits
- Manufactured in an ISO Class 7 cleanroom environment
- 100% flushed with 18 MΩ-cm DI water and integrity tested
- Meets USP Class VI Biological Test for Plastics
- All materials are FDA listed for food and beverage contact
- Repeatably steamable and sanitizable
- High retention (LVR>7) of yeast and other spoilage organisms
- Pore size, lot and serial number are stamped on each filter element for identification and traceability

Filter Specifications

<table>
<thead>
<tr>
<th>Media</th>
<th>Asymmetric polyethersulfone membrane</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inner core, end caps, cage</td>
<td>Polypropylene</td>
</tr>
<tr>
<td>Support layers</td>
<td>Spunbond Polypropylene</td>
</tr>
<tr>
<td>Gaskets/O-Rings</td>
<td>Buna-N, EPDM, Silicone, Viton, Teflon encapsulated Viton O-Rings</td>
</tr>
<tr>
<td>Micron ratings</td>
<td>0.2 µm, 0.45 µm, 0.65 µm</td>
</tr>
</tbody>
</table>

Dimensions / Parameters

<table>
<thead>
<tr>
<th>Nominal lengths</th>
<th>9.75”, 10”, 20”, 30”, 40” (24.7, 25.4, 50.8, 76.2, 101.6 cm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outside diameter</td>
<td>2.7” (6.9 cm)</td>
</tr>
<tr>
<td>Inside diameter</td>
<td>1.0” (2.54 cm)</td>
</tr>
<tr>
<td>Surface area</td>
<td>7.6 ft² (0.7m²) per 10 inch element</td>
</tr>
<tr>
<td>Max. sustained operating temperature</td>
<td>180°F (82°C) at 20 psid (1.38 bar)</td>
</tr>
<tr>
<td>Max. differential pressure</td>
<td>60 psid @ 80°F (4.14 bar @ 27°C)</td>
</tr>
<tr>
<td>Max. differential pressure</td>
<td>30 psid @ 160°F (2.07 bar @ 71°C)</td>
</tr>
<tr>
<td>Max. differential pressure</td>
<td>15 psid @ 200°F (1.03 bar @ 93°C)</td>
</tr>
<tr>
<td>Max. reverse differential pressure</td>
<td>40 psid @ 70°F (2.76 bar @ 21°C)</td>
</tr>
<tr>
<td>Recommended change-out pressure</td>
<td>35 psid (2.4 bar)</td>
</tr>
</tbody>
</table>

“LOFMEM-B cartridges from Eaton are inherently hydrophilic and contain no added surfactants or wetting agents that could alter beverage taste. Perfect for processing beer, wine, bottled water, soft drinks and other beverages.”

LOFMEM™ B Series
**Performance Specifications**

**Hot DI Water**
Filter cartridge will withstand temperatures of 185°F (85°C) for up to 30 consecutive minutes.

**Cleaning/Sanitization**
Compatible with most common chemical cleaning, sanitizing and sterilizing agents and with pH range from 1–14. Consult factory for specific compatibility information.

**Steam/Autoclave**
Cartridges may be steamed or autoclaved for at least 50 half-hour cycles @ 275˚F (135°C).

**Typical Bacterial Retention Performance**

<table>
<thead>
<tr>
<th>Pore Size</th>
<th>Retention</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.2 µm</td>
<td>LRV for <em>B. diminuta</em> ≥ 7.8</td>
</tr>
<tr>
<td>0.45 µm</td>
<td>LRV for <em>S. marcescens</em> ≥ 8.5</td>
</tr>
<tr>
<td>0.65 µm</td>
<td>LRV for <em>S. cerevisiae</em> ≥ 11, LRV for <em>L. brevis</em> ≥ 7.6</td>
</tr>
</tbody>
</table>

**Integrity Test Specifications**
Minimum Bubble Point values and maximum Diffusive Air Flow (per 10-inch cartridge) values for LOFMEM-B filters wet with water:

<table>
<thead>
<tr>
<th>Pore Size</th>
<th>Bubble Point</th>
<th>Diffusive Air Flow</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.2 µm</td>
<td>≥ 38psig (2.6 bar)</td>
<td>≤ 35cc/min @ 30psig (2.1 bar)</td>
</tr>
<tr>
<td>0.45 µm</td>
<td>≥ 25psig (1.7 bar)</td>
<td>≤ 35cc/min @ 20psig (1.4 bar)</td>
</tr>
<tr>
<td>0.65 µm</td>
<td>≥ 18psig (1.2 bar)</td>
<td>≤ 35cc/min @ 15psig (1.0 bar)</td>
</tr>
</tbody>
</table>

**FDA Listed Materials**
All materials comply with FDA title 21 of the Code of Federal Regulations Sections 174.5, as applicable for food and beverage contact.
Pleated Polyethersulfone (PES) Membrane for Final Filtration of Ultrapure Water

The LOFMEM-E cartridge represents the state of the art in ultrapure water filtration technology. The microelectronics-grade filters are inherently hydrophilic and contain no added surfactants or wetting agents. The polyethersulfone membrane offers superior flow characteristics, high contaminant capacity and consistent removal of submicron particles.

Features and Benefits

- Manufactured, flushed, tested and packaged in an ISO Class 7 cleanroom environment
- Filters are 100% flushed with 18 MΩ-cm DI water and integrity tested.
- Resistivity rinse-up to 18 MΩ-cm and single digit ppb TOC levels in less than 30 minutes at 3 gpm per 10-inch element.
- Available in a variety of end cap/adapter configurations to fit all industry-standard housings.
- Pore size, lot and serial number are stamped on each filter element for identification and traceability.

Filter Specifications

<table>
<thead>
<tr>
<th>Media</th>
<th>Asymmetric polyethersulfone membrane</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inner core, end caps, cage</td>
<td>Polypropylene</td>
</tr>
<tr>
<td>Support layers</td>
<td>Spunbond polypropylene</td>
</tr>
<tr>
<td>Gaskets/O-Rings</td>
<td>Buna-N, EPDM, Silicone, Viton®, Teflon® encapsulated Viton O-Rings</td>
</tr>
<tr>
<td>Micron ratings</td>
<td>0.03 µm, 0.1 µm, 0.2 µm, 0.45 µm</td>
</tr>
</tbody>
</table>

Dimensions / Parameters

| Nominal lengths          | 9.75” 10”, 20”, 30”, 40” (24.7, 25.4, 50.8, 76.2, 101.6 cm) |
| Outside diameter         | 2.7” (6.9 cm)                                               |
| Inside diameter          | 1.0” (2.54 cm)                                              |
| Surface area             | 7.6 ft² (0.72m²) per 10 inch element                       |
| Max. sustained operating temperature | 180°F (82°C) at 20 psid (1.38 bar)                        |
| Max. differential pressure | 60 psid @ 80°F (4.14bar @ 27°C)                              |
| Max. reverse differential pressure | 40 psid @ 70°F (2.76 bar @ 21°C)                             |
| Recommended change-out pressure | 35 psid (2.4 bar)                                      |

“We are specifically engineered for ultrapure water filtration. They are inherently hydrophilic and contain no added surfactants or wetting agents.”
Performance Specifications

Hot DI Water
Filter cartridge will withstand temperatures of 185°F (85°C) for up to 30 consecutive minutes.

Cleaning/Sanitization
Compatible with most common chemical cleaning, sanitizing and sterilizing agents and with pH range from 1–14. Consult factory for specific compatibility information.

Rinse-Up Volumes
• Resistivity rinse-up to 18 MΩ-cm: <30 minutes at a flow of 3 gpm per 10-inch element.
• Rinse-up to single digit ppb TOC in <120 minutes at a flow of 3 gpm per 10-inch element.

Integrity Test Specifications
Minimum Diffusive Air Flow (per 10-inch cartridge) values for LOFMEM-E filters wet with water:

- 0.03 µm: ≤ 50cc/min @ 45psig (3.1 bar)
- 0.1 µm: ≤ 50cc/min @ 40psig (2.8 bar)
- 0.2 µm: ≤ 35cc/min @ 30psig (2.1 bar)
- 0.45 µm: ≤ 35cc/min @ 20psig (1.4 bar)

LOFMEM-E Flow Rate (70°F/21°C per 10” cartridge)

Filter Specification Code

Gasket or O-Ring
- S Silicone
- B Buna-N
- E EPDM
- V Viton
- T FEP/Viton (O-Rings only)

End Configuration
- DOE Double Open End
- 226/Flat Single Open End
- 222/Fin Single Open End
- 226/Fin Single Open End
- 222/Flat Single Open End
- Double Open End, Internal O-Ring
- Single Open End, Internal O-Ring

Retention Rating
- 0.03 micron
- 0.1 micron
- 0.2 micron
- 0.45 micron

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Absolute Rated Polyethersulfone Membrane Pleated Filter Cartridges

The LOFMEM-G pleated, disposable cartridge is one of the industry’s most efficient and cost effective filters available. The absolute rated, hydrophilic, asymmetric polyethersulfone membrane features 7 square feet of surface area for a high system flow rate.

Features and Benefits
- Large membrane surface area for high throughput
- Longer on-line service reduces costly maintenance time
- Absolute rated membrane from 0.1 to 0.65 µm
- Manufactured in an ISO Class 7 cleanroom environment
- 100% flushed with 18 MΩ-cm DI water and bubblepoint tested
- Meets USP Class VI biological test for plastics
- Fixed pore construction eliminates dirt unloading as differential pressure increases
- Low extractables

Filter Specifications

<table>
<thead>
<tr>
<th>Media</th>
<th>Asymmetric polyethersulfone membrane</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inner core, end caps, cage</td>
<td>Polypropylene</td>
</tr>
<tr>
<td>Support layers</td>
<td>Spunbond polypropylene</td>
</tr>
<tr>
<td>Gaskets/O-Rings</td>
<td>Buna-N, EPDM, Silicone, Viton®, Teflon® encapsulated Viton O-Rings</td>
</tr>
<tr>
<td>Micron ratings</td>
<td>0.1, 0.2, 0.45, 0.65 µm</td>
</tr>
</tbody>
</table>

Dimensions / Parameters

| Nominal lengths | 9.75”, 10”, 20”, 30”, 40” (24.7, 25.4, 50.8, 76.2, 101.6 cm) |
| Outside diameter | 2.7” (6.9 cm) |
| Inside diameter | 1.0” (2.54 cm) |
| Surface area | 7.0 ft² (0.65m²) per 10 inch element |
| Max. sustained operating temperature | 180°F (82°C) at 20 psid (1.38 bar) |
| Max. differential pressure | 60 psid @ 80°F (4.14bar @ 27°C) |
| Max. reverse differential pressure | 40 psid @ 70°F (2.8 bar @ 21°C) |
| Recommended change-out pressure | 35 psid (2.4 bar) |

“LOFMEM-G cartridges from Eaton are inherently hydrophilic and are designed for a wide range of applications including: food & beverage, filtration of acids & bases, cosmetics, inks, chemicals, ultra-pure water and other aqueous solutions”
Performance Specifications

Hot DI water
Filter cartridge will withstand temperatures of 185°F (85°C) for up to 30 consecutive minutes.

Chemical compatibility
Filter cartridge resists most acids and bases, pH 1–14 and most oxidizing agents.

Sanitizing agents
Filter cartridge may be sanitized in place with common oxidizing agents.

Steam/Autoclave
Cartridges may be steamed or autoclaved for at least 5 one-hour cycles @ 275°F (135°C).

FDA Listed Materials
All polypropylene material used in manufacturing complies with the regulations of the Food and Drug Administration (FDA) title 21 of the Code of Federal Regulations Sections 174.5, as applicable for food and beverage contact.

The LOFMEM-G filter is available with a variety of gasket, O-ring and end cap configurations.

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The LOF MEM-T filter offers precision filtration—even under harsh, corrosive environments. They are made with a polytetrafluoroethylene (PTFE) membrane with additional polypropylene support layers and components. The HIMA retentive PTFE membrane offers superior hydrophobicity and water intrusion resistance compared to PVDF based media, and are more economical than all-fluorocarbon filters.

**Features and Benefits**
- High flow rates and high surface area minimize total system size requirements
- Integrity testing and 100% flushing with 18 MΩ-cm de-ionized water prior to shipment
- Validated to USP Class VI Biological Standards for Plastics
- Manufactured in ISO Class 7 Cleanroom Environment
- Full traceability marking

**Filter Specifications**
- **Media**
  - Gore-Tex® expanded PTFE membrane
- **Inner core, end caps, cage**
  - Polypropylene
- **Support layers**
  - Polypropylene
- **O-Rings**
  - Buna-N, EPDM, Silicone, Viton®, Teflon® encapsulated Viton
- **Micron ratings**
  - 0.05, 0.1, 0.2, 0.45, 1.0 μm

**Dimensions / Parameters**
- **Typical Nominal lengths**
  - 9.75”, 10”, 20”, 30”, 40” (24.8, 25.4, 50.8, 76.2, 101.6cm)
- **Outside diameter**
  - 2.7” (6.9 cm)
- **Inside diameter**
  - 1.0” (2.54 cm)
- **Surface area**
  - 8.5 ft² (0.79m²) – 10 inch element
- **Max. operating temp**
  - 203°F (95°C)
- **Max. operating pressure**
  - 75 psid @ 70°F (5.2 bar @ 21°C)
  - 40 psid @ 176°F (2.8 bar @ 80°C)
  - 15 psid @ 203°F (1.03 bar @ 95°C)
- **Maximum reverse differential pressure**
  - 40 psid @ 70°F (2.8 bar @ 21°C)

“LOF MEM-T cartridges from Eaton are ideal for gas/vent applications and the filtration of aggressive compounds. Specific uses include: strong acids/bases, compressed gases, photoresists, pharmaceutical intermediates, hot DI water and fermentation air.”

View Eaton’s complete line of quality filtration products at [www.filtration.eaton.com](http://www.filtration.eaton.com).
Performance Specifications

Steam/Autoclave
Cartridges will withstand at least 50 steam/autoclave cycles @ 275°F (135°C)

Integrity Test Values
Air Diffusion per 10 inch cartridge wet with 60/40 IPA/water. Contact Eaton for specific method.

Pore Size Specification

<table>
<thead>
<tr>
<th>Pore Size</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.05 µm:</td>
<td>≤ 50 cc/min @ 22 psig (1.5 bar)</td>
</tr>
<tr>
<td>0.1 µm:</td>
<td>≤ 50 cc/min @ 18 psig (1.2 bar)</td>
</tr>
<tr>
<td>0.2 µm:</td>
<td>≤ 20 cc/min @ 12 psig (0.8 bar)</td>
</tr>
<tr>
<td>0.45 µm:</td>
<td>≤ 15 cc/min @ 5 psig (0.34 bar)</td>
</tr>
<tr>
<td>1.0 µm:</td>
<td>≤ 15 cc/min @ 3 psig (0.2 bar)</td>
</tr>
</tbody>
</table>

Filter Specification Code

LMT -20 -0.2 -1 E

Gasket or O-Ring
S Silicone
B Buna-N
E EPDM
V Viton
T FEP/Viton
(0-Rings only)

Retention Rating
-0.05 micron
-0.1 micron
-0.2 micron
-0.45 micron
-1.0 micron

End Configuration
DOE Double Open End
-1 226/Flat Single Open End
-2 222/Fin Single Open End
-3 226/Fin Single Open End
-4 222/Flat Single Open End
-10 Double Open End, Internal O-Ring
-20 Single Open End, Internal O-Ring

LOFMEM-T Air Flow Rate
System pressure at < 10 psig (vent) 65°F/18°C, outlet open to atmosphere

LOFMEM-T Air Flow Rate
System pressure at 30 psig, 65°F/18°C

LOFMEM-T Water Flow Rate (per 10” cartridge)

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This disposable Eaton membrane filter cartridge is designed using absolute rated polypropylene and polyethersulfone components that are both hydrophilic and asymmetric. Engineered specifically for economic overall filtration, the LOFMEM-W offers superior flow rates and throughputs.

Features and Benefits
- High dirt holding provides long service life and reduced maintenance requirements
- Economic absolute filtration
- FDA listed (U.S. CFR, Title 21) materials of construction for food and beverage contact
- Available in multiple configurations
- All-thermal bonded construction, no adhesives
- Validated for USP, Class VI standards for plastics

Filter Specifications
- Media
  - Asymmetric polyethersulfone
- Inner core/end caps/cage
  - Polypropylene
- Support layers
  - Spunbond polypropylene
- Gaskets/O-Rings
  - Buna-N, EPDM, Silicone, Viton®, Teflon® encapsulated Viton (O-Rings Only)
- Compatibility
  - Compatible with most common chemical cleaning, sanitizing and sterilizing agents and with pH range from 1 to 4. For more information, call Eaton or your Eaton representative

Nominal lengths
- 9.75”, 10”, 20”, 30”, 40” (24.7, 25.4, 50.8, 76.2, 101.6 cm)

Operating Parameters
- Sustained maximum operating temperature
  - 180°F (82°C) at 20 psid (1.38 bar)
- Maximum differential pressure
  - 60 psid @ 80°F (4.14 bar @ 27°C)
  - 30 psid @ 160°F (2.07 bar @ 71°C)
  - 15 psid @ 200°F (1.03 bar @ 93.3°C)
- Recommended change-out pressure
  - 35 psid (2.4 bar)

Features and Benefits
- High dirt holding provides long service life and reduced maintenance requirements
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Filter Specifications
- Media
  - Asymmetric polyethersulfone
- Inner core/end caps/cage
  - Polypropylene
- Support layers
  - Spunbond polypropylene
- Gaskets/O-Rings
  - Buna-N, EPDM, Silicone, Viton®, Teflon® encapsulated Viton (O-Rings Only)
- Compatibility
  - Trace free releaseing
  - Non-fiber releasing
  - No wetting agents
  - Non-fiber releasing
  - No wetting agents

Compatibility
- Compatible with most common chemical cleaning, sanitizing and sterilizing agents and with pH range from 1 to 4. For more information, call Eaton or your Eaton representative

Nominal lengths
- 9.75”, 10”, 20”, 30”, 40” (24.7, 25.4, 50.8, 76.2, 101.6 cm)

Operating Parameters
- Sustained maximum operating temperature
  - 180°F (82°C) at 20 psid (1.38 bar)
- Maximum differential pressure
  - 60 psid @ 80°F (4.14 bar @ 27°C)
  - 30 psid @ 160°F (2.07 bar @ 71°C)
  - 15 psid @ 200°F (1.03 bar @ 93.3°C)
- Recommended change-out pressure
  - 35 psid (2.4 bar)

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**Filter Specification Code**

<table>
<thead>
<tr>
<th>Code</th>
<th>End Configuration</th>
</tr>
</thead>
<tbody>
<tr>
<td>LMW</td>
<td>DOE Double Open End</td>
</tr>
<tr>
<td>-10</td>
<td>-1 226/Flat Single Open End</td>
</tr>
<tr>
<td>-0.2</td>
<td>-2 222/Fin Single Open End</td>
</tr>
<tr>
<td>-1</td>
<td>-3 226/Fin Single Open End</td>
</tr>
<tr>
<td>E</td>
<td>-4 222/Flat Single Open End</td>
</tr>
<tr>
<td>-R</td>
<td>-20 Single Open End, Internal O-Ring</td>
</tr>
</tbody>
</table>

**Nominal Length**

-9 9.75”
-10 10.0”
-20 20.0”
-30 30.0”
-40 40.0”

**Retention Rating**

-0.05 micron
-0.1 micron
-0.2 micron
-0.45 micron
-0.65 micron

**Gasket or O-Ring**

- S Silicone
- B Buna-N
- E EPDM
- V Viton
- T FEP/Viton (O-Rings only)
- T FEP (Gaskets only)

**LOFMEM-W Flow Rate** (per 10” cartridge)

![Flow Rate Chart](chart.png)

Differential Pressure vs. Flow Rate

- Bar
- PSI
- 0.05 μm
- 0.1 μm
- 0.2 μm
- 0.45 μm
- 0.65 μm

Flow Rate

- USGPM
- LPM

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LOFPLEAT™ AG Series

Absolute Rated Pleated Filter Cartridges

Get absolute efficiency with this cost-effective all-polypropylene cartridge. The pleated design provides a large surface area for long-lasting filtration efficiency.

Features and Benefits

- Fits broad application range with 0.2 to 100 micron retention
- Acceptable for food and beverage applications
- Meets USP Class VI biological tests for plastics
- Beta rating of 5000, 99.98% efficiency
- High flow and long life for minimum maintenance
- Available in continuous lengths up to 40 inches
- Eliminates dirt unloading at high differential pressures due to fixed pore structure

Filter Specifications

<table>
<thead>
<tr>
<th>Media</th>
<th>Polypropylene</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inner core</td>
<td>Polypropylene</td>
</tr>
<tr>
<td>End caps</td>
<td>Polypropylene</td>
</tr>
<tr>
<td>Cage</td>
<td>Polypropylene</td>
</tr>
<tr>
<td>Gaskets/O-Rings options</td>
<td></td>
</tr>
<tr>
<td>Buna-N, EPDM, Silicone, Viton®, Teflon® encapsulated Viton (O-Rings only)</td>
<td></td>
</tr>
<tr>
<td>Micron ratings</td>
<td></td>
</tr>
<tr>
<td>0.2, 0.45, 1.0, 2.5, 5.0, 10, 25, 50, 100 µm</td>
<td></td>
</tr>
</tbody>
</table>

Dimensions / Parameters

<table>
<thead>
<tr>
<th>Nominal lengths</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.75&quot;, 10&quot;, 20&quot;, 30&quot;, 40&quot; (24.7, 25.4, 50.8, 76.2, 101.6 cm)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Outside diameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.7&quot; (6.9 cm)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Inside diameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1&quot; (2.79 cm)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Max. operating temp.</th>
</tr>
</thead>
<tbody>
<tr>
<td>176°F (80°C)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Differential pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>75 psid @ 70°F (5.2 bar @ 21°C)</td>
</tr>
<tr>
<td>40 psid @ 176°F (2.8 bar @ 80°C)</td>
</tr>
<tr>
<td>15 psid @ 190°F (1.03 bar @ 88°C)</td>
</tr>
</tbody>
</table>

Recommended change-out pressure for disposal
35 psid (2.4 bar)

FDA compliance

All polypropylene material used in manufacturing complies with the regulations of the FDA title 21 of the Code of Federal Regulations Sections 174.5, 177.1520, and 177.1630, as applicable for food and beverage contact.

“The broad range of absolute rated pore sizes makes the LOFPLEAT-AG from Eaton suitable for a wide range of critical process applications.”
Filter Removal Efficiency

<table>
<thead>
<tr>
<th>Micron</th>
<th>Beta 5000 99.98%</th>
<th>Beta 100 99%</th>
<th>Beta 50 98%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.2</td>
<td>0.20</td>
<td>0.10</td>
<td>0.05</td>
</tr>
<tr>
<td>0.45</td>
<td>0.45</td>
<td>0.30</td>
<td>0.20</td>
</tr>
<tr>
<td>1.0</td>
<td>1.0</td>
<td>0.60</td>
<td>0.30</td>
</tr>
<tr>
<td>2.5</td>
<td>2.5</td>
<td>2.0</td>
<td>1.5</td>
</tr>
<tr>
<td>5.0</td>
<td>5.0</td>
<td>4.0</td>
<td>3.0</td>
</tr>
<tr>
<td>10.0</td>
<td>10.0</td>
<td>8.0</td>
<td>7.0</td>
</tr>
<tr>
<td>25.0</td>
<td>25.0</td>
<td>19.0</td>
<td>15.0</td>
</tr>
<tr>
<td>50.0</td>
<td>45.0</td>
<td>35.0</td>
<td>28.0</td>
</tr>
<tr>
<td>100.0</td>
<td>–</td>
<td>100.0</td>
<td>85.0</td>
</tr>
</tbody>
</table>

Beta Ratio = \[
\frac{\text{Upstream particle counts}}{\text{Downstream particle counts}}
\]

The micron ratings shown at various efficiency and beta ratio value levels were determined through laboratory testing, and can be used as a guide for selecting cartridges and estimating their performance. Under actual field conditions, results may vary somewhat from the values shown due to the variability of filtration parameters. Testing was conducted using the single-pass test method, water at 3 gpm/10” cartridge. Contaminants included latex beads, coarse and fine test dust. Removal efficiencies were determined using dual laser source particle counters.

The LOFPLEAT-AG filter is available with a variety of gasket, O-ring and end cap configurations.

Filter Specification Code

<table>
<thead>
<tr>
<th>Nominal Length</th>
<th>Gasket or O-Ring</th>
</tr>
</thead>
<tbody>
<tr>
<td>-9</td>
<td>Silicone</td>
</tr>
<tr>
<td>-10</td>
<td>Buna-N</td>
</tr>
<tr>
<td>-20</td>
<td>EPDM</td>
</tr>
<tr>
<td>-30</td>
<td>Viton</td>
</tr>
<tr>
<td>-40</td>
<td>FEP/Viton (O-Rings only)</td>
</tr>
<tr>
<td>-5</td>
<td>Viton (gasket only)</td>
</tr>
<tr>
<td>-10</td>
<td>Teflon (gasket only)</td>
</tr>
</tbody>
</table>

LOFPLEAT-AG Flow Rate (70°F/21°C per 10” cartridge)

Flow Series: LOFPLEAT-AG

Retention Rating
-0.2 micron
-0.45 micron
-1.0 micron
-2.5 micron
-5.0 micron
-10 micron
-25 micron
-50 micron
-100 micron

End Configuration
DOE: Double Open End
226/Flat Single Open End
222/Fin Single Open End
226/Fin Single Open End
222/Flat Single Open End
Double Open End, Internal O-Ring
Single Open End, Internal O-Ring

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LOFPLEAT™ EE Series

Economically Efficient Pleated Filter Cartridges

This disposable filter element can be used for a wide range of applications. The pleated polypropylene filter media provides a high amount of filtration surface area which allows for maximized flow rate in the system.

Features and Benefits
- Filtration efficiency of 90%
- Retentions from 0.2 to 50 microns
- Meets USP Class VI biological tests for plastics
- Manufactured in lengths up to 40 inches
- Pore structure design resists dirt unloading
- Polypropylene construction and multiple gasket/O-Ring options for broad application

Filter Specifications

<table>
<thead>
<tr>
<th>Media</th>
<th>Polypropylene</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inner core</td>
<td>Polypropylene</td>
</tr>
<tr>
<td>End caps</td>
<td>Polypropylene</td>
</tr>
<tr>
<td>Cage</td>
<td>Polypropylene</td>
</tr>
<tr>
<td>Gaskets/O-Rings options</td>
<td>Buna-N, EPDM, Silicone, Viton®, Teflon® encapsulated Viton (O-Rings only)</td>
</tr>
<tr>
<td>Micron ratings</td>
<td>0.2, 0.25, 0.45, 0.5, 1.0, 2.0, 5.0, 10, 25, 50 µm *Other micron rated media available upon request</td>
</tr>
</tbody>
</table>

Dimensions / Parameters

<table>
<thead>
<tr>
<th>Nominal lengths</th>
<th>9.75&quot;, 10&quot;, 20&quot;, 30&quot;, 40&quot; (24.7, 25.4, 50.8, 76.2, 101.6 cm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outside diameter</td>
<td>2.7&quot; (6.9 cm)</td>
</tr>
<tr>
<td>Inside diameter</td>
<td>1.1&quot; (2.79 cm)</td>
</tr>
<tr>
<td>Max. operating temp.</td>
<td>176°F (80°C)</td>
</tr>
<tr>
<td>Differential pressure</td>
<td>75 psid @ 70°F (5.2 bar @ 21°C) 40 psid @ 176°F (2.8 bar @ 80°C) 15 psid @ 190°F (1.03 bar @ 88°C)</td>
</tr>
<tr>
<td>Recommended change-out pressure for disposal</td>
<td>35 psid (2.4 bar)</td>
</tr>
</tbody>
</table>

FDA compliance

All polypropylene material used in manufacturing complies with the regulations of the FDA title 21 of the Code of Federal Regulations Sections 174.5, 177.1520, and 177.1630, as applicable for food and beverage contact.

“LOFPLEAT-EE from Eaton is an all-polypropylene filter with an economically efficient design suitable for a wide range of process applications.”
Filter Removal Efficiency

<table>
<thead>
<tr>
<th>Beta Ratio Efficiency</th>
<th>Beta 50 98%</th>
<th>Beta 10 90%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.2 micron</td>
<td>0.28</td>
<td>0.20</td>
</tr>
<tr>
<td>0.25 micron</td>
<td>0.35</td>
<td>0.25</td>
</tr>
<tr>
<td>0.45 micron</td>
<td>0.6</td>
<td>0.45</td>
</tr>
<tr>
<td>0.5 micron</td>
<td>0.7</td>
<td>0.5</td>
</tr>
<tr>
<td>1.0 micron</td>
<td>1.5</td>
<td>1.0</td>
</tr>
<tr>
<td>2.0 micron</td>
<td>2.7</td>
<td>2.0</td>
</tr>
<tr>
<td>5.0 micron</td>
<td>7.0</td>
<td>5.0</td>
</tr>
<tr>
<td>10.0 micron</td>
<td>12.0</td>
<td>10.0</td>
</tr>
<tr>
<td>25.0 micron</td>
<td>32.0</td>
<td>25.0</td>
</tr>
<tr>
<td>50.0 micron</td>
<td>70.0</td>
<td>50.0</td>
</tr>
</tbody>
</table>

The micron ratings shown at various efficiency and beta ratio value levels were determined through laboratory testing, and can be used as a guide for selecting cartridges and estimating their performance. Under actual field conditions, results may vary somewhat from the values shown due to the variability of filtration parameters. Testing was conducted using the single-pass test method, water at 2.5 gpm/10” cartridge. Contaminants included latex beads, coarse and fine test dust. Removal efficiencies were determined using dual laser source particle counters.

Filter Specification Code

LOFPLEAT-EE Flow Rate (70°F/21°C per 10” cartridge)

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The Eaton Pleated Micro Fiberglass Filter is a disposable, high efficiency cartridge that can be effectively used in a variety of industrial applications. Featuring Borosilicate Micro Fiberglass media construction, this versatile cartridge offers a greater surface area for high surface flow rate.

Features and Benefits

- High adsorptive capacity and efficiency
- A broad range of applications, featuring micron ratings from 0.2 to 30 µm
- High efficiency cartridge offering standardized pore size
- High dirt holding and flow capability with increased surface area.
- Less changeouts means reduced labor costs
- Eliminates dirt unloading at maximum differential pressure due to stable pore construction

Filter Specifications

- **End caps**: Polypropylene
- **Media**: Borosilicate micro fiberglass with acrylic binder
- **Inner core**: Polypropylene
- **Gaskets/O-Rings**: Buna-N, EPDM, Silicone, Teflon® encapsulated Viton® O-Rings
- **Cage**: Polypropylene

Support layers

- **Polyester**

Nominal lengths

- 9.75", 10", 20", 30", 40" (24.7, 25.4, 50.8, 76.2, 101.6 cm)

Outside diameter

- 2.7" (6.9 cm)

Inside diameter

- 1.0" (2.54 cm)

Micron ratings

- 0.2, 0.45, 1.0, 3.0, 10, 30 µm

Operating Parameters

- **Max. operating temp.**: 176°F (80°C)
- **Max differential pressure**: 80 psid @ 70°F (5.5 bar @ 21°C)
  - 40 psid @ 150°F (2.8 bar @ 65°C)

“LOFPLEAT-GG from Eaton is ideal for use in the pre-filtration of wine, for magnetic tape coatings and as a blowdown post filter. It is also widely used in the chemical, ink, and oil & gas industries.”
**Filter Removal Efficiency**

<table>
<thead>
<tr>
<th>Beta Ratio Efficiency</th>
<th>Beta 10 90%</th>
<th>Beta 20 95%</th>
<th>Beta 100 99%</th>
<th>Beta 1000 99.9%</th>
<th>Beta 5000 99.98%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.2 micron</td>
<td>0.2</td>
<td>0.3</td>
<td>0.6</td>
<td>0.8</td>
<td>1.0</td>
</tr>
<tr>
<td>0.45 micron</td>
<td>0.45</td>
<td>0.6</td>
<td>0.8</td>
<td>1.8</td>
<td>2.0</td>
</tr>
<tr>
<td>1.0 micron</td>
<td>1.0</td>
<td>1.3</td>
<td>2.0</td>
<td>3.5</td>
<td>4.0</td>
</tr>
<tr>
<td>3.0 micron</td>
<td>3.0</td>
<td>4.0</td>
<td>5.5</td>
<td>9.0</td>
<td>10.0</td>
</tr>
<tr>
<td>10.0 micron</td>
<td>10.0</td>
<td>12.0</td>
<td>15.0</td>
<td>17.0</td>
<td>18.0</td>
</tr>
<tr>
<td>30.0 micron</td>
<td>30.0</td>
<td>35.0</td>
<td>38.0</td>
<td>42.0</td>
<td>45.0</td>
</tr>
</tbody>
</table>

**Beta Ratio** = \( \frac{\text{Upstream particle counts}}{\text{Downstream particle counts}} \)

The micron ratings shown at various efficiency and beta ratio value levels were determined through laboratory testing, and can be used as a guide for selecting cartridges and estimating their performance. Under actual field conditions, results may vary somewhat from the values shown due to the variability of filtration parameters. Testing was conducted using the single-pass test method, water at 2.5 gpm/10” cartridge. Contaminants included latex beads, coarse and fine test dust. Removal efficiencies were determined using dual laser source particle counters.

**LOFPLEAT-GG Flow Rate** (70°F/21°C per 10” cartridge)

*For liquids other than water, multiply pressure drop by fluid viscosity in centipoise*

**Filter Specification Code**

- **Nominal Length**
  - -9 9.75”
  - -10 10.0”
  - -20 20.0”
  - -30 30.0”
  - -40 40.0”

- **Gasket or O-Ring**
  - S Silicone
  - B Buna-N
  - E EPDM
  - V Viton
  - T FEP/Viton
  (O-Rings only)

- **Option**
  - End Cap
  - Insert for Steaming

- **Retention Rating**
  - -0.2 micron
  - -0.45 micron
  - -1 micron
  - -3 micron
  - -10 micron
  - -30 micron

- **End Configuration**
  - DOE Double Open End
    - -1 226/Flat Single Open End
    - -2 222/Fin Single Open End
    - -3 226/Fin Single Open End
    - -4 222/Flat Single Open End
    - -10 Double Open End, Internal O-Ring
    - -20 Single Open End, Internal O-Ring

The LOFPLEAT-GG filter is available with a variety of gasket, O-ring and end cap configurations.

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High Efficiency Polypropylene Filter Cartridge

“LOFPLEAT-HE from Eaton is suitable for a wide range of applications including food & beverage, RO prefilters, DE trap, aqueous solutions, chemicals, photoresists, pharmaceuticals, cosmetics, ultrapure water, ink and more.”

Multi-layer melt blown polypropylene media allows for high flow rates while maintaining low differential pressure. This unique design provides the ideal depth filtration characteristics for a wide range of applications.

Features and Benefits
- Retentions from 0.1 to 10 microns
- Acceptable for food and beverage applications
- Meets USP Class VI biological tests for plastics
- Filtration efficiency of 95%
- Eliminates dirt unloading at high differential pressure due to fixed pore structure
- High dirt holding capability with multi-layer, graded pore design
- Polypropylene construction compatible with broad range of system liquids

Filter Specifications
Construction material
Polypropylene

Gaskets/O-Rings options
Buna-N, EPDM, Silicone, Viton®, Teflon® encapsulated Viton (O-Rings only)

Micron ratings
0.1, 0.2, 0.4, 0.6, 1.0, 3.0, 5.0, 10 µm

Dimensions / Parameters
Nominal lengths
9.75", 10", 20", 30", 40" (24.7, 25.4, 50.8, 76.2, 101.6 cm)

Outside diameter
2.7" (6.9 cm)

Inside diameter
1.0" (2.54 cm)

Max. operating temp.
176°F (80°C)

Max. differential pressure
80 psid @ 70°F (5.5 bar @ 21°C)
40 psid @ 176°F (2.8 bar @ 80°C)

Max. reverse differential pressure
40 psid @ 70°F (2.8 bar @ 80°C)

Recommended change-out pressure for disposal
35 psid (2.4 bar)

Performance Specifications
Sanitization
Hot water at 176°F (80°C) at 5 psid (0.35 bar) for 30 min.
In-line steam at 257°F (125°C) at 1 psid (0.07 bar) for 30 min.
Autoclavable at 257°F (125°C) for 30 min.

FDA Listed Materials
All materials comply with FDA title 21 of the Code of Federal Regulations as applicable for food and beverage contact.
### Filter Removal Efficiency

<table>
<thead>
<tr>
<th>Beta Ratio Efficiency</th>
<th>Beta 100 99%</th>
<th>Beta 20 95%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.1 micron</td>
<td>0.8</td>
<td>0.1</td>
</tr>
<tr>
<td>0.2 micron</td>
<td>1.0</td>
<td>0.2</td>
</tr>
<tr>
<td>0.4 micron</td>
<td>2.0</td>
<td>0.4</td>
</tr>
<tr>
<td>0.6 micron</td>
<td>3.0</td>
<td>0.6</td>
</tr>
<tr>
<td>1.0 micron</td>
<td>6.0</td>
<td>1.0</td>
</tr>
<tr>
<td>3.0 micron</td>
<td>14</td>
<td>3.0</td>
</tr>
<tr>
<td>5.0 micron</td>
<td>17</td>
<td>5.0</td>
</tr>
<tr>
<td>10.0 micron</td>
<td>25</td>
<td>10.0</td>
</tr>
</tbody>
</table>

### Filter Specification Code

#### Nominal Length
- -9 9.75”
- -10 10.0”
- -20 20.0”
- -30 30.0”
- -40 40.0”

#### Gasket or O-Ring
- S Silicone
- B Buna-N
- E EPDM
- V Viton
- T FEP/Viton
  (O-Rings only)

#### Retention Rating
- -0.1 micron
- -0.2 micron
- -0.45 micron
- -0.6 micron
- -1 micron
- -3 micron
- -5 micron
- -10 micron

#### End Configuration
- DOE Double Open End
- -1 226/Flat Single Open End
- -2 222/Fin Single Open End
- -3 226/Fin Single Open End
- -4 222/Flat Single Open End
- -1X Extended Core
- -10 Double Open End, Internal O-Ring
- -20 Single Open End, Internal O-Ring

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LOFPLEAT™ HF Series

High Flow Capacity Filter Cartridge

LOFPLEAT-HF cartridges are designed with pleated media construction to provide high total surface area. A single LPHF cartridge can replace several standard cartridge elements. High-flow capacity in a single cartridge leads to quicker and easier change-outs. Unlike standard design cartridges, the flow is inside out. The result is higher debris holding capacity.

Features and Benefits
- Higher flow capacity reduces required number of cartridges
- Lower initial costs with smaller vessel
- Less labor required for changeouts

Available with absolute rated media at 1, 5, 10, 20 and 40 micron retention levels
- Inside-out flow for greater dirt holding capacity
- Capable of flow rates up to 500 GPM in a single 60” length
- Can be retrofitted in most competitive high-flow housings

Filter Specifications

<table>
<thead>
<tr>
<th>Media/support/cage</th>
<th>Polypropylene</th>
</tr>
</thead>
<tbody>
<tr>
<td>End caps</td>
<td>Glass-filled ABS</td>
</tr>
<tr>
<td>Gaskets/O-Rings</td>
<td>EPDM</td>
</tr>
<tr>
<td>Micron ratings</td>
<td>1, 5, 10, 20, 40 μm</td>
</tr>
</tbody>
</table>

Dimensions / Parameters

<table>
<thead>
<tr>
<th>Nominal lengths</th>
<th>20”, 40”, 60” (50.8, 101.6 152.4 cm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outside diameter</td>
<td>6” (15.24 cm)</td>
</tr>
<tr>
<td>Max. operating temp.</td>
<td>77°F @ 50 psid (25°C @ 3.44 bar)</td>
</tr>
<tr>
<td></td>
<td>160°F @ 30 psid (71°C @ 2.06 bar)</td>
</tr>
<tr>
<td>Recommended differential pressure for change-out</td>
<td>35 psid (2.43 bar)</td>
</tr>
</tbody>
</table>

“LOFPLEAT-HF from Eaton can be used in a variety of applications where high flow capacity is required including food & beverage, chemical and water systems”
**Flow Rates**

- **20” length**
  175 USGPM (666 LPM)

- **40” length**
  350 USGPM (1324 LPM)

- **60” length**
  500 USGPM (1892 LPM)

**Filter Specification Code**

- **Nominal Length**
  - -20 20.0’
  - -40 40.0’
  - -60 60.0’

- **Filter Series**
  LOFPLEAT-HF

- **Retention Rating**
  - -1 micron
  - -5 micron
  - -10 micron
  - -20 micron
  - -40 micron

- **Gasket or O-Ring**
  E EPDM

**Notes:**
Flow rates are based on water or water like viscosity service. For applications with higher viscosities, please consult the factory.

Please consult the factory with any questions on chemical compatibility.
Absolute Rated High Performance
Pleated Polypropylene Filter Cartridge

This high efficiency, high performance filter is constructed with a large surface area, melt blown polypropylene media for high dirt holding capacity with low initial pressure drop.

Features and Benefits
- Fits broad range of applications with 0.2 to 20 micron retention
- Acceptable for food and beverage applications
- Meets USP Class VI biological tests for plastics
- Beta rating of 5000, 99.98% efficiency
- High flow and long life for minimum maintenance
- Eliminates dirt unloading at high differential pressure due to fixed pore structure
- Heavy-duty molded cage for high structural strength

Dimensions / Parameters

<table>
<thead>
<tr>
<th>Nominal lengths</th>
<th>9.75”, 10”, 20”, 30”, 40” (24.7, 25.4, 50.8, 76.2, 101.6 cm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outside diameter</td>
<td>2.7” (6.9cm)</td>
</tr>
<tr>
<td>Inside diameter</td>
<td>1.0” (2.54 cm)</td>
</tr>
<tr>
<td>Surface area</td>
<td>Up to 7 ft² (0.65 m²) per 10 inch element</td>
</tr>
<tr>
<td>Max. operating temp.</td>
<td>176°F (80°C)</td>
</tr>
<tr>
<td>Max. differential pressure</td>
<td>75 psid @ 70°F (5.2 bar @ 21°C)</td>
</tr>
<tr>
<td></td>
<td>40 psid @ 176°F (2.8 bar @ 80°C)</td>
</tr>
<tr>
<td></td>
<td>15 psid @ 190°F (1.03 bar @ 88°C)</td>
</tr>
</tbody>
</table>

Filter Specifications

- Construction material: Polypropylene
- Gaskets/O-Rings: Buna-N, EPDM, Silicone, Viton®, Teflon® encapsulated Viton (O-Rings only)
- Micron ratings: 0.2, 0.45, 1, 2.5, 5, 10, 20 µm
- FDA & USP compliance: All polypropylene material used in manufacturing complies with the regulations of the Food and Drug Administration (FDA) title 21 of the Code of Federal Regulations Sections 174.5, 177.1520, and 177.1630, as applicable for food and beverage contact.

View Eaton’s complete line of quality filtration products at www.filtration.eaton.com.
Filter Removal Efficiency

<table>
<thead>
<tr>
<th>Beta Ratio</th>
<th>Beta 5000 99.98%</th>
<th>Beta 100 99%</th>
<th>Beta 50 98%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.2 micron</td>
<td>0.20</td>
<td>0.10</td>
<td>0.05</td>
</tr>
<tr>
<td>0.45 micron</td>
<td>0.45</td>
<td>0.30</td>
<td>0.20</td>
</tr>
<tr>
<td>1.0 micron</td>
<td>1.0</td>
<td>0.60</td>
<td>0.30</td>
</tr>
<tr>
<td>2.5 microns</td>
<td>2.5</td>
<td>2.0</td>
<td>1.5</td>
</tr>
<tr>
<td>5.0 microns</td>
<td>5.0</td>
<td>4.0</td>
<td>3.0</td>
</tr>
<tr>
<td>10.0 microns</td>
<td>10.0</td>
<td>8.0</td>
<td>7.0</td>
</tr>
<tr>
<td>20.0 microns</td>
<td>20.0</td>
<td>17.0</td>
<td>15.0</td>
</tr>
</tbody>
</table>

Beta Ratio = \( \frac{\text{Upstream particle counts}}{\text{Downstream particle counts}} \)

The micron ratings shown at various efficiency and beta ratio value levels were determined through laboratory testing, and can be used as a guide for selecting cartridges and estimating their performance. Under actual field conditions, results may vary somewhat from the values shown due to the variability of filtration parameters. Testing was conducted using the single-pass test method, water at 2.5 gpm/10" cartridge. Contaminants included latex beads, coarse and fine test dust. Removal efficiencies were determined using dual laser source particle counters.

Performance Specifications

Sanitization
Hot water at 176°F (80°C) at 5 psid (.35 bar) for 30 min.
In-line steam at 257°F (125°C) at 1 psid (.07 bar) for 30 min.
Autoclavable at 257°F (125°C) for 30 min.

Filter Specification Code

- LPHP
- Retention Rating
  - -0.2 micron
  - -0.45 micron
  - -1 micron
  - -2.5 micron
  - -5 micron
  - -10 micron
  - -20 micron
- End Configuration
  - DOE Double Open End
  - -1 226/Flat Single Open End
  - -2 222/Fin Single Open End
  - -3 226/Fin Single Open End
  - -4 222/Flat Single Open End
  - -1X Extended Core
  - -10 Double Open End, Internal O-Ring
  - -20 Single Open End, Internal O-Ring
- Gasket or O-Ring
  - S Silicone
  - B Buna-N
  - E EPDM
  - V Viton
  - T FEP/Viton
  - O-Rings only
  - T FEP (Gaskets only)
- Pre-Rinse Option
  - R Factory Pre-Rinse
  - -1 End cap insert for steaming

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High Temperature Micro Fiberglass Filter Cartridge

The Eaton High Temperature Micro Fiberglass Filter Cartridge offers the convenience of disposable, media with a high efficiency Borosilicate Micro Fiberglass media construction. This versatile cartridge offers a greater surface area and high system flow rate.

Features and Benefits
- High temperature filtration capability of 230°F (110°C)
- Consistent pore size for high efficiency removal of debris
- Polyester hardware offers increased range over those of standard polypropylene
- High surface area for increased flow and dirt holding capacity
- Long service life provides low cost changeout benefits

- Maximum differential pressure dirt unloading eliminated by fixed pore construction
- Broad application range with micron retentions from 0.2 µm to 30 µm

Filter Specifications

Media
Borosilicate micro fiberglass with acrylic binder

End caps
Polyester

Inner core
Polyester

Gaskets/O-Rings
Buna-N, EPDM, Silicone, Teflon® encapsulated Viton® O-Rings

Cage
Polyester

Support layers
Polyester

Nominal lengths
9.75”, 10”, 20”, 30”, 40” (24.7, 25.4, 50.8, 76.2, 101.6 cm)

Outside diameter
2.7” (6.9 cm)

Inside diameter
1.0” (2.54 cm)

Micron ratings
0.2, 0.45, 1.0, 3.0, 10, 30 µm

Operating Parameters
Max operating temp.
230°F (110°C)

Max differential pressure
75 psid @ 70°F (5.2 bar @ 21°C)
60 psid @ 200°F (4.1 bar @ 93°C)
50 psid @ 230°F (3.4 bar @ 110°C)

Recommended changeout pressure for disposal
35 psid (2.4 bar)

“LOFPLEAT-HT filter cartridge from Eaton is a popular choice in a variety of applications, including: petrochemicals, solvents, boiler water, lube oil, chemicals, inks and oil & gas.”
Filter Removal Efficiency

<table>
<thead>
<tr>
<th>Beta Ratio Efficiency</th>
<th>Beta 10 90%</th>
<th>Beta 20 95%</th>
<th>Beta 100 99%</th>
<th>Beta 1000 99.9%</th>
<th>Beta 5000 99.98%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.2 micron</td>
<td>0.2</td>
<td>0.3</td>
<td>0.6</td>
<td>0.8</td>
<td>1.0</td>
</tr>
<tr>
<td>0.45 micron</td>
<td>0.45</td>
<td>0.6</td>
<td>0.8</td>
<td>1.8</td>
<td>2.0</td>
</tr>
<tr>
<td>1.0 micron</td>
<td>1.0</td>
<td>1.3</td>
<td>2.0</td>
<td>3.5</td>
<td>4.0</td>
</tr>
<tr>
<td>3.0 microns</td>
<td>3.0</td>
<td>4.0</td>
<td>5.5</td>
<td>9.0</td>
<td>10.0</td>
</tr>
<tr>
<td>10.0 microns</td>
<td>10.0</td>
<td>12.0</td>
<td>15.0</td>
<td>17.0</td>
<td>18.0</td>
</tr>
<tr>
<td>30.0 microns</td>
<td>30.0</td>
<td>35.0</td>
<td>38.0</td>
<td>42.0</td>
<td>45.0</td>
</tr>
</tbody>
</table>

Beta Ratio = \( \frac{\text{Upstream particle counts}}{\text{Downstream particle counts}} \)

The micron ratings shown at various efficiency and beta ratio value levels were determined through laboratory testing, and can be used as a guide for selecting cartridges and estimating their performance. Under actual field conditions, results may vary somewhat from the values shown due to the variability of filtration parameters. Testing was conducted using the single-pass test method, water at 2.5 gpm/10" cartridge. Contaminants included latex beads, coarse and fine test dust. Removal efficiencies were determined using dual laser source particle counters.

**Filter Specification Code**

<table>
<thead>
<tr>
<th>Nominal Length</th>
<th>Gasket or O-Ring</th>
</tr>
</thead>
<tbody>
<tr>
<td>-9 9.75&quot;</td>
<td>S Silicone</td>
</tr>
<tr>
<td>-10 10.0&quot;</td>
<td>B Buna-N</td>
</tr>
<tr>
<td>-20 20.0&quot;</td>
<td>E EPDM</td>
</tr>
<tr>
<td>-30 30.0&quot;</td>
<td>V Viton</td>
</tr>
<tr>
<td>-40 40.0&quot;</td>
<td>T FEP/Viton</td>
</tr>
<tr>
<td>-10</td>
<td>(O-Rings only)</td>
</tr>
<tr>
<td>-3</td>
<td></td>
</tr>
<tr>
<td>-3</td>
<td></td>
</tr>
<tr>
<td>-B</td>
<td></td>
</tr>
</tbody>
</table>

**Flow Rate** (70°F/21°C per 10" cartridge)

* For liquids other than water, multiply pressure drop by fluid viscosity in centipoise

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LOFPLEAT-HV is designed for the filtration of compounds containing agglomerated particles and gels or with high viscosity. The extra-loft, extra-life depth filter configuration allows for absolute retention performance throughout the pleated, serialized microfiber matrix. The large surface area and optimized structure provides higher flow rates and throughputs than cylindrical melt blown filters.

Features and Benefits.
- High surface area and graduated pore structure
- Manufactured from all polypropylene construction for optimum compatibility with wide range of system liquids
- Pleated media offers best combination of retention, flow rate and throughput
- Superior agglomerated particle and gel retention
- Constructed from FDA approved materials that meets USP Class VI biological tests for plastics
- All common end configurations available to fit most filter housings

Filter Specifications
- Media
  - Polypropylene
- Core, cage, end caps
  - Polypropylene
- Gaskets/O-Rings options
  - Silicone, Viton®, EPDM, Buna, Teflon® encapsulated Viton
  - (O-Rings only)
- Micron ratings
  - 0.45, 0.5, 1, 3, 5, 10, 20, 40 μm

Dimensions / Parameters
- Nominal lengths:
  - 9.75", 10", 20", 30", 40" (24.7, 25.4, 50.8, 76.2, 101.6 cm)
- Outside diameter
  - 2.7" (6.9 cm)
- Inside diameter
  - 1.1" (2.79 cm)
- Max. operating temp.
  - 176°F (80°C)
- Max. differential pressure
  - 75 psid @ 70°F (5.2 bar @ 21°C)
  - 40 psid @ 176°F (2.8 bar @ 80°C)
  - 15 psid @ 190°F (1.03 bar @ 88°C)
- Max. reverse differential pressure
  - 35 psid @ 80°F (2.4 bar @ 27°C)
- Recommended change-out pressure for disposal
  - 35 psid (2.43 bar)
- Sterilization
  - Cartridges may be autoclaved for 30 minutes at 250°F (121°C) under no end load conditions. May be inline sanitized with 185°F (85°C) hot water—do not exceed 3 psid.

"LOFPLEAT-HV from Eaton is an all-polypropylene filter with unique characteristics that are ideal for: inks, CMP P-O-U and bulk slurries, adhesives, paints, beverages, coatings"
Filter Removal Efficiency

<table>
<thead>
<tr>
<th>Beta Ratio Efficiency</th>
<th>Beta 1000 99.9%</th>
<th>Beta 100 99%</th>
<th>Beta 50 98%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.45 micron</td>
<td>0.45</td>
<td>0.3</td>
<td>0.2</td>
</tr>
<tr>
<td>0.5 micron</td>
<td>0.65</td>
<td>0.45</td>
<td>0.3</td>
</tr>
<tr>
<td>1 micron</td>
<td>1.5</td>
<td>0.8</td>
<td>0.8</td>
</tr>
<tr>
<td>3 microns</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>5 microns</td>
<td>5</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>10 microns</td>
<td>10</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>20 microns</td>
<td>20</td>
<td>19</td>
<td>17</td>
</tr>
<tr>
<td>40 microns</td>
<td>40</td>
<td>35</td>
<td>25</td>
</tr>
</tbody>
</table>

Filter Specification Code

Nominal Length
-9 9.75”
-10 10.0”
-20 20.0”
-30 30.0”
-40 40.0”

Retention Rating
-0.45 micron*
-0.5 micron**
-1 micron
-3 micron
-5 micron
-10 micron
-20 micron
-40 micron

End Configuration
DOE Double Open End
-1 226/Flat Single Open End
-2 222/Fin Single Open End
-3 226/Fin Single Open End
-4 222/Flat Single Open End
-10 Double Open End, Internal O-Ring
-20 Single Open End, Internal O-Ring

Filter Series
LOFPLEAT-HV

Gasket or O-Ring
S Silicone
B Buna-N
E EPDM
V Viton
T FEP/Viton (O-Rings only)

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The Eaton Pleated Cyst Reduction Cartridge offers protection against parasitic cysts that cause water borne diseases. Resistant to chlorination in typical water treatment processes, these contaminants can lead to serious illness and even death if not removed.

The LOFPLEAT-RS cartridge provides an absolute filtration of 1 micron and is designed with filter media that exceeds the ANSI/NSF Standard 53 of 99.95% for the removal of cysts*.

Features and Benefits
- Polypropylene construction for use in a variety of fluids
- Superior flow rates, surface area and dirt capacity for extended on-line service
- Meets or exceeds NSF Standard 53 concerning cyst reduction
- Meets USP Class VI biological Test for plastics
- Available in a range of O-Ring materials and configurations for easy system retrofit

Filter Specifications
- Media: Polypropylene
- End caps: Polypropylene
- Inner core: Polypropylene
- Gaskets/O-Rings: Silicone, Viton, EPDM, Buna, Teflon® encapsulated Viton® (O-Rings only) Teflon gaskets
- Cage: Polypropylene

Nominal lengths: 9.75", 10", 20", 30", 40" (25.4, 50.8, 76.2, 101.6 cm)

Operating Parameters
- Operating temperature: up to 176°F (110°C) max
- Differential pressure: 75 psid @ 70°F (5.2 bar @ 21°C) max
- 40 psid @ 176°F (2.8 bar @ 80°C) max
- 15 psid @ 190°F (3.4 bar @ 103°C) max
- Recommended changeout pressure for disposal: 35 psid (2.4 bar)

FDA Listed Materials
All polypropylene material used in manufacturing complies with the regulations of the Food and Drug Administration (FDA) Title 21 of the Code of Federal regulation 174.5, 177.1520 and 177.1630, as applicable for food and beverage contact.

*Performance tested and verified by Independent Laboratory testing.
LOFPLEAT-RS Flow Rate (70°F/21°C per 10" cartridge)

DOE end configuration cartridges are not offered in the LOFPLEAT cartridge series. Cyst reduction claim is not applicable for DOE end configuration cartridges, based on NSF standard 53, for bottled water facilities.

(For liquids other than water, multiply pressure drop by fluid viscosity in centipoise.)
“Eaton’s LOFTREX Cartridge is the economical choice for a variety of applications, including chemicals, radioactive waste, ink, wastewater, aqueous solutions and food & beverage. Ideal for use as a blowdown post filter and prefiltration for reverse osmosis systems.”

Constructed of 100% polypropylene media, Eaton’s disposable LOFTREX cartridge is designed to be chemically compatible for use in a wide range of process fluids.

**FDA Listed Materials**
LOFTREX polypropylene materials comply with the regulations of the Food and Drug Administration (FDA) title 21 of the Code of Federal Regulations Sections 174.5, 177.1520 and 177.1630, as applicable for contact with food and beverage fluids.

**Features and Benefits**
- Available in nominal ratings between 1 and 75 microns
- Contains no binders, surfactants or adhesives
- Graded pore construction supports long service life
- Economical depth filtration
- Thermally bonded end caps available as option
- High dirt holding capability
- Resists dirt unloading at increased differential pressure
- Non-shedding performance

**Filter Specifications**

<table>
<thead>
<tr>
<th>Media</th>
<th>Polypropylene</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>End caps</strong></td>
<td>Polypropylene</td>
</tr>
<tr>
<td><strong>Gaskets/O-Rings</strong></td>
<td>Silicone, Viton®, EPDM, Buna-N</td>
</tr>
</tbody>
</table>

**Micron ratings**
1, 3, 5, 10, 20, 30, 50, 75 µm

**Outside diameter**
2.5” (6.35 cm), 2.75” (7 cm)

**Inside diameter**
1.0” (2.54 cm)

**Nominal lengths**
9.75”, 10”, 20”, 30”, 40” (24.8, 25.4, 50.8, 76.2, 101.6 cm)
Other lengths available upon request

**Operating Parameters**

<table>
<thead>
<tr>
<th>Recommended disposal changeout pressure</th>
<th>35 psid (2.4 bar)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max differential pressure</td>
<td>50 psid @ 70°F (3.45 bar @ 21°C)</td>
</tr>
<tr>
<td></td>
<td>25 psid @ 140°F (1.72 bar @ 60°C)</td>
</tr>
</tbody>
</table>
The LOFTREX filter is available with a variety of gasket, O-ring and end cap configurations.

**LOFTREX Flow Rate** (Water at 65°F/20°C)

![Graph showing LOFTREX Flow Rate](image)

**Filter Specification Code**

<table>
<thead>
<tr>
<th>Nominal Length</th>
<th>LX -20 -10 -4 E</th>
</tr>
</thead>
<tbody>
<tr>
<td>-9</td>
<td>9.75”</td>
</tr>
<tr>
<td>-10</td>
<td>10”</td>
</tr>
<tr>
<td>-19</td>
<td>19.5”</td>
</tr>
<tr>
<td>-20</td>
<td>20”</td>
</tr>
<tr>
<td>-29</td>
<td>29.25”</td>
</tr>
<tr>
<td>-30</td>
<td>30”</td>
</tr>
<tr>
<td>-39</td>
<td>39”</td>
</tr>
<tr>
<td>-40</td>
<td>40”</td>
</tr>
</tbody>
</table>

**Retention Rating**

-1 micron
-3 micron
-5 micron
-7 micron
-10 micron
-20 micron
-30 micron
-50 micron
-75 micron

**End Configuration**

- DOE Double Open End
- -1 226/Flat Single Open End
- -2 222/Fin Single Open End
- -3 226/Fin Single Open End
- -4 222/Flat Single Open End
- -P6 Self-Seal Spring on One End
- -N None (Cut End)
- -1X Extended Core
- -DBG Direct Bond Gaskets

**Filter Series**

- LOFTREX

**Gasket or O-Ring**

- S Silicone
- B Buna-N
- E EPDM
- V Viton
- T FEP/Viton (O-Rings only)
- N None

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LOFTREX™ A Series

Absolute Rated Melt Blown Filter Cartridges

Get 99.9% efficiency at stated micron retention levels with LX-A cartridges. Ultra-fine fibers and controlled thermal bonding allow this filter to capture contaminants even at higher pressure differentials.

Features and Benefits
- Absolute retention from 0.5 to 70 microns
- Maximum dirt holding capacity with multi-layers of graded pore structure
- Thermal bonding of fibers provide long life and high void volumes
- High quality control in manufacturing – traceability and certificate of performance available

- Meets USP Class VI criteria for use in pharmaceutical applications
- Higher temperature and pressure capability with molded center core design
- Contains no adhesives, binders or surfactants

Applications for Eaton’s LOFTREX-A filters include: chemicals, paint, ink, water, plating, pharmaceuticals, food & beverages, microelectronics and cosmetics

Filter Specifications

<table>
<thead>
<tr>
<th>Media</th>
<th>Polypropylene</th>
</tr>
</thead>
<tbody>
<tr>
<td>End caps/center core</td>
<td>Polypropylene</td>
</tr>
<tr>
<td>Gaskets/O-rings</td>
<td>Silicone, EPDM, Buna N, Santoprene®, Viton® and Teflon® encapsulated Viton (O-rings only)</td>
</tr>
<tr>
<td>Micron ratings</td>
<td>0.5, 1, 3, 5, 10, 20, 30, 50, 70 μm</td>
</tr>
</tbody>
</table>

Dimensions

<table>
<thead>
<tr>
<th>Nominal lengths</th>
<th>4, 5, 9.75, 10, 19.5, 20, 29.25, 30, 39, 40 inches (10.2, 12.7, 24.8, 25.4, 49.5, 76.2, 99.1, 101.6 cm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outside diameter</td>
<td>2.5” (6.35 cm)</td>
</tr>
<tr>
<td>Inside diameter</td>
<td>1” (2.54 cm)</td>
</tr>
</tbody>
</table>

Operating Conditions

| Maximum differential pressure | 150 psid @ 68°F (10.3 bar @ 20°C)  
90 psid @ 150°F (6.2 bar @ 66°C)  
35 psid @ 176°F (2.4 bar @ 80°C) |
| Recommended changeout differential pressure | 35 psid (2.4 bar) |

Steam Sterilization

LOFTREX single open end style filters may be autoclaved under no end load conditions for 30 minutes at 121°C. Filters should be cooled to normal operating temperatures prior to use.
LOFTREX-A Flow Rate  

**LOFTREX-A Flow Rate** (70°F/21°C per 10” cartridge)

<table>
<thead>
<tr>
<th>Micron Rating</th>
<th>Beta 1000</th>
<th>Beta 100</th>
<th>Beta 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5 micron</td>
<td>1.0</td>
<td>.8</td>
<td>.5</td>
</tr>
<tr>
<td>1 micron</td>
<td>3.0</td>
<td>2.3</td>
<td>1.4</td>
</tr>
<tr>
<td>3 micron</td>
<td>5.0</td>
<td>4.0</td>
<td>2.7</td>
</tr>
<tr>
<td>5 micron</td>
<td>10.0</td>
<td>7.4</td>
<td>4.0</td>
</tr>
<tr>
<td>10 micron</td>
<td>20.0</td>
<td>15.4</td>
<td>12.0</td>
</tr>
<tr>
<td>20 micron</td>
<td>30.0</td>
<td>20.4</td>
<td>14.0</td>
</tr>
<tr>
<td>30 micron</td>
<td>50.0</td>
<td>34.4</td>
<td>25.0</td>
</tr>
<tr>
<td>50 micron</td>
<td>70.0</td>
<td>50.0</td>
<td>39.0</td>
</tr>
</tbody>
</table>

**Filter Removal Efficiency**

- **Micron Rating**: 99.9%, 99%, 90%
- **Beta Ratio**: Beta 1000, Beta 100, Beta 10

<table>
<thead>
<tr>
<th>Differential Pressure</th>
<th>1 μm</th>
<th>3 μm</th>
<th>5 μm</th>
<th>10 μm</th>
<th>20 μm</th>
<th>30 μm, 50 μm, 70 μm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bar</td>
<td>.00</td>
<td>.01</td>
<td>.14</td>
<td>1.4</td>
<td>8.7</td>
<td>18.93</td>
</tr>
<tr>
<td>PSI</td>
<td>0</td>
<td>.28</td>
<td>.40</td>
<td>4.0</td>
<td>8.7</td>
<td>18.93</td>
</tr>
</tbody>
</table>

**Nominal Length**

- -4  4”
- -5  5”
- -9  9.75”
- -10 10”
- -19 19.5”
- -20 20”
- -29 29.25”
- -30 30”
- -39 39”
- -40 40”

**Filter Specification Code**

- LX-A
- -20
- -3
- -A
- -3
- V

**Gasket or O-Ring**

- S Silicone
- B Buna-N
- E EPDM
- V Viton
- T FEP/Viton
- N None

**Retention Rating**

- -0.5 micron
- -1 micron
- -3 micron
- -5 micron
- -10 micron
- -20 micron
- -30 micron
- -50 micron
- -70 micron

**End Configuration**

- DOE Double Open End
- 1 226/Flat Single Open End
- 2 222/Fin Single Open End
- 3 226/Fin Single Open End
- 4 222/Flat Single Open End
- P6 Self-Seal Spring on One End
- N None (Cut End)
- 1X Extended Core
- DBG Direct Bond Santoprene Gaskets
- -20 Single Open End, Internal O-Ring

Note: For chemical compatibility, flow rates and temperature requirements, please consult the factory or your Eaton distributor.

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Eaton’s LOFTREX-C cartridge is designed to handle coarse to fine filtration in a variety of applications, including: paint, CMP slurries, plating solutions, perfumes, magnetic slurries, pre R.O., cutting oils, corn syrup, coatings, and more.

Eaton’s LOFTREX-C cartridge features a bi-phase design that’s engineered to provide simultaneous coarse and fine filtration.

- Phase one starts with a nonwoven melt blown polypropylene media that traps larger particles.
- Phase two consists of a bi-component polypropylene and polyethylene fiber inner core that filters out fine particulates that make it through phase one.

This uniquely designed filter offers increased dirt holding capacity for decreased maintenance and operating costs. Plus, the cartridge’s stiff construction prevents media migration and particle unloading.

Features and Benefits
- Extended life and superior dirt holding capacity
- Depth filter design with engineered bi-phase graded density material
- Non-shedding media
- Compatible with broad range of chemicals
- Validated to USP Class VI standards for pharmaceutical, food & beverage applications
- Constructed from FDA listed materials
- Available in multiple lengths and configurations

Filter Specifications
- Media
  - Thermally bonded polypropylene/polyethylene fiber
- End caps
  - Polypropylene (when used)
- Gaskets/O-Rings
  - Silicone, Viton®, EPDM, Buna-N
- Micron ratings
  - 0.5, 1, 3, 5, 10, 25, 50, 100, 150 µm

Operating Parameters
- Operating temperature
  - up to 140°F (60°C) max
- Nominal lengths
  - 9.75”, 10”, 20”, 30”, 40” (24.8, 25.4, 50.8, 76.2, 101.6 cm)
- Outside diameter
  - 2.6” (6.6 cm)
- Inside diameter
  - 1.0” (2.54 cm)
- Max. operating pressure
  - 100 psid @ 70°F (7 bar @ 21°C)
  - 2 psid @ 176°F (0.14 bar @ 80°C)
Filter Specification Code

**Filter Series**
LOFTREX-C

**Nominal Length**
-10 10.0”
-20 20.0”
-30 30.0”
-40 40.0”

**Length Option**
Blank Standard Length
RL Reduced Length

**Retention Rating**
-0.5 micron
-1 micron
-3 micron
-5 micron
-10 micron
-25 micron
-50 micron
-100 micron
-150 micron

**End Configuration**
DOE Double Open End
-1 226/Flat Single Open End
-2 222/Fin Single Open End
-3 226/Fin Single Open End
-4 222/Flat Single Open End
-P6 Self-Seal Spring on one end
-N None (cut end)
-1X Extended Core
-20 Single Open End, Internal O-Ring

**Gasket or O-Ring**
S Silicone
B Buna-N
E EPDM
V Viton
T FEP/Viton
(N-0-Rings only)
N None

**LOFTREX-C Flow Rate**
(Water at ambient temperature)

<table>
<thead>
<tr>
<th>Differential Pressure</th>
<th>Flow Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>bar</td>
<td>psi</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>0.03</td>
<td>0</td>
</tr>
<tr>
<td>0.07</td>
<td>0</td>
</tr>
<tr>
<td>0.1</td>
<td>0</td>
</tr>
<tr>
<td>0.14</td>
<td>0</td>
</tr>
<tr>
<td>0.2</td>
<td>0</td>
</tr>
<tr>
<td>0.21</td>
<td>0</td>
</tr>
<tr>
<td>0.24</td>
<td>0</td>
</tr>
<tr>
<td>0.3</td>
<td>1</td>
</tr>
<tr>
<td>0.5</td>
<td>2</td>
</tr>
<tr>
<td>1.0</td>
<td>3</td>
</tr>
<tr>
<td>2.0</td>
<td>4</td>
</tr>
<tr>
<td>3.0</td>
<td>5</td>
</tr>
<tr>
<td>5.0</td>
<td>6</td>
</tr>
<tr>
<td>10.0</td>
<td>7</td>
</tr>
<tr>
<td>25 &amp; 50 µm</td>
<td>8</td>
</tr>
</tbody>
</table>

**LOFTREX-C**

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LOFTREX™ T Series

Melt Blown, High Performance Filter Cartridges

Where precision and repeatable depth filtration are required, the Eaton LX-T series melt blown filters deliver exceptional performance. Multi-zoned construction and true clarifying filtration is achieved with no unloading of captured contaminant.

Features and Benefits

- Retentions from 0.5 to 75 microns
- Melt blown depth filter with multiple zones and true graded pore structure
- Thermal bonding of fibers provide long life and high void volumes
- Meets USP Class VI criteria for use in pharmaceutical applications
- Higher temperature and pressure capability with molded center core design
- Contains no adhesives, binders or surfactants

Filter Specifications

<table>
<thead>
<tr>
<th>Media</th>
<th>Polypropylene</th>
</tr>
</thead>
<tbody>
<tr>
<td>End caps/center core</td>
<td>Polypropylene</td>
</tr>
<tr>
<td>Gaskets/O-rings</td>
<td>Silicone, EPDM, Buna N, Santoprene, Viton®, and Teflon® encapsulated Viton (O-rings only)</td>
</tr>
<tr>
<td>Micron ratings</td>
<td>0.5, 1, 3, 5, 10, 20, 50, 75 µm</td>
</tr>
</tbody>
</table>

Dimensions

<table>
<thead>
<tr>
<th>Nominal lengths</th>
<th>4, 5, 9.75, 10, 19.5, 20, 29.25, 30, 39, 40 inches (10.2, 12.7, 24.8, 25.4, 49.5, 50.8, 74.3, 76.2, 99.1, 101.6 cm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outside diameter</td>
<td>2.5” (6.35 cm)</td>
</tr>
<tr>
<td>Inside diameter</td>
<td>1” (2.54 cm)</td>
</tr>
</tbody>
</table>

Operating Conditions

<table>
<thead>
<tr>
<th>Maximum differential pressure</th>
<th>150 psid @ 68°F (10.3 bar @ 20°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>90 psid @ 150°F (6.2 bar @ 66°C)</td>
<td></td>
</tr>
<tr>
<td>35 psid @ 176°F (2.4 bar @ 80°C)</td>
<td></td>
</tr>
</tbody>
</table>

Recommended changeout differential pressure 35psid (2.4 bar)

Steaming Sterilization

LOFTREX single open end style filters may be autoclaved under no end load conditions for 30 minutes at 121°C. Filters should be cooled to normal operating temperatures prior to use.

“Eaton’s LOFTREX-T filters are the ideal medium for critical chemicals, paint & ink, water, plating, pharmaceuticals, food & beverages, microelectronics and cosmetics processing applications.”

Eaton

Powering Business Worldwide
The LOFTREX-T filter is available with a variety of gasket, O-ring and end cap configurations.

## LOFTREX-T Flow Rate (70°F/21°C per 10" cartridge)

<table>
<thead>
<tr>
<th>Differential Pressure</th>
<th>USGPM</th>
<th>LPM</th>
</tr>
</thead>
<tbody>
<tr>
<td>.00</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>.07</td>
<td>.28</td>
<td>1.04</td>
</tr>
<tr>
<td>.14</td>
<td>.55</td>
<td>2.10</td>
</tr>
<tr>
<td>.21</td>
<td>.87</td>
<td>3.32</td>
</tr>
<tr>
<td>.28</td>
<td>1.19</td>
<td>4.55</td>
</tr>
<tr>
<td>0.5 micron</td>
<td>4.81</td>
<td>18.93</td>
</tr>
<tr>
<td>1 micron</td>
<td>4.42</td>
<td>16.35</td>
</tr>
<tr>
<td>3 micron</td>
<td>3.52</td>
<td>13.39</td>
</tr>
<tr>
<td>5 micron</td>
<td>2.94</td>
<td>11.00</td>
</tr>
<tr>
<td>10 micron</td>
<td>2.44</td>
<td>9.14</td>
</tr>
<tr>
<td>20 micron</td>
<td>2.05</td>
<td>7.79</td>
</tr>
<tr>
<td>50 micron</td>
<td>1.46</td>
<td>5.43</td>
</tr>
<tr>
<td>70 micron</td>
<td>1.07</td>
<td>3.94</td>
</tr>
</tbody>
</table>

## Nominal Length
- 4" - 5" - 9.75" - 10" - 19" - 20" - 29" - 29.25" - 30" - 39" - 40"

## Filter Specification Code
- LX-T
- 20
- 3
- T
- 3
- V

### Filter Series
- LOFTREX-T

### Retention Rating
- 0.5 micron
- 1 micron
- 3 micron
- 5 micron
- 10 micron
- 20 micron
- 50 micron
- 70 micron

### Efficiency
- T 90%

### Gasket or O-Ring
- S Silicone
- B Buna-N
- E EPDM
- V Viton
- T FEP/Viton
- (O-Rings only)
- N None

### End Configuration
- DOE Double Open End
- 1 226/Flat Single Open End
- 2 222/Fin Single Open End
- 3 226/Fin Single Open End
- 4 222/Flat Single Open End
- 10 Double Open End, Internal O-Ring
- P6 Self-Seal Spring on One End
- N None (Cut End)
- 1X Extended Core
- DBG Direct Bond Santoprene Gaskets
- 20 Single Open End, Internal O-Ring

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The Eaton extruded block activated carbon filter cartridge offers exceptional performance in removing chlorine, taste, odor, organics, and color components from water and water-like liquids.

**Features & Benefits**
- Increased efficiency and high adsorptive capacity
- Independent laboratory validation of performance
- Minimal release of carbon fines
- No bypass
- Lower equivalent pressure drop than granular carbon
- Constructed from FDA-listed materials
- ANSI/NSF Standard 53 cyst removal validation

**Filter Specifications**
- **End caps**
  - Polypropylene
- **End caps adhesive**
  - Low density polyethylene
- **End configuration**
  - Double open end
- **Gaskets**
  - Santoprene
- **Binder**
  - Polyethylene
- **Outer wrap**
  - Melt blown polypropylene
- **Netting**
  - Polypropylene
- **Micron ratings**
  - 0.5 µm, 2 µm, 5 µm

**Operating Parameters**
- **Operating temperature**
  - up to 125°F (52°C)
- **Differential Pressure**
  - up to 100 psid (6.9 bar)
- **Operating Pressure**
  - up to 250 psig (17.2 bar)
- **Collapse Pressure**
  - 200 psid (13.8 bar)
- **Steam/Autoclave**
  - Do not steam or autoclave LOFSORB cartridge filters
- **Flush**
  - Filters should be flushed for a minimum of five (5) minutes prior to use.

*Performance tested and verified by Independent Laboratory Testing.*

---

“Eaton’s LOFSORB Cartridge Filter is ideal for use in drinking water, cyst reduction, chlorine removal, bottled water, color removal, soft drink production and flavor removal.”
**Product Information**

- Projected chlorine, taste and odor reduction capacity when tested in accordance with NSF/ANSI Standard 42 protocol.
- Nominal particulate rating is for >85% of a given size as determined from single pass particle counting results.
- Performance of a given LOFSORB carbon filter varies in direct proportion to the total weight of carbon in the filter. For example, a 2.5" OD x 20" long LOFSORB filter contains approximately two times as much activated carbon as a 2.5" OD x 9.75" long filter, and will therefore have two times the rated chlorine, taste and odor capacity when operated at two times the rated flow of the smaller cartridge. Hence, rated flow rate is based on maintaining identical contact/residence time for all filters.
- Use Eaton LOFSORB carbon filters only with microbiologically safe and adequately disinfected water.

---

**LOFSORB Specifications**

<table>
<thead>
<tr>
<th>LOFSORB</th>
<th>LOFSORB-CR</th>
<th>LOFSORB-CS</th>
<th>LOFSORB-CTO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal Filtration Rating</td>
<td>0.5 micron</td>
<td>2 micron</td>
<td>5 micron</td>
</tr>
<tr>
<td>Type</td>
<td>Carbon Bituminous (Coal)</td>
<td>Coconut Shell</td>
<td>Bituminous (Coal)</td>
</tr>
<tr>
<td>Sizes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall Diameter</td>
<td>2.7&quot; (6.9 cm)</td>
<td>2.7&quot; (6.9 cm)</td>
<td>2.7&quot; (6.9 cm)</td>
</tr>
<tr>
<td>Lengths</td>
<td>9.75&quot;, 20&quot; (24.8, 50.8 cm)</td>
<td>9.75&quot;, 20&quot; (24.8, 50.8 cm)</td>
<td>9.75&quot;, 20&quot; (24.8, 50.8 cm)</td>
</tr>
<tr>
<td>Cyst Reduction Capability</td>
<td>Yes*</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

*Performance Tested and Verified by Independent Laboratory Testing.

---

**LOFSORB Technical Data**

<table>
<thead>
<tr>
<th>LOFSORB</th>
<th>Block Dimensions</th>
<th>Chlorine, Taste, Odor Reduction @ Flow</th>
<th>Initial Delta P @ Flow</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOFSORB-CR</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LA-9-E _ -CR</td>
<td>2.5 x 9.75&quot;</td>
<td>10,000 gal @ 2.5 GPM</td>
<td>8 psid @ 1 GPM</td>
</tr>
<tr>
<td>LA-20-E _ -CR</td>
<td>2.5 x 20&quot;</td>
<td>20,000 gal @ 5 GPM</td>
<td>8 psid @ 2 GPM</td>
</tr>
<tr>
<td>LOFSORB-CS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LA-9-E _ -CS</td>
<td>2.5 x 9.75&quot;</td>
<td>6,000 gal @ 1 GPM</td>
<td>2.5 psid @ 1 GPM</td>
</tr>
<tr>
<td>LA-20-E _ -CS</td>
<td>2.5 x 20&quot;</td>
<td>15,000 gal @ 2.3 GPM</td>
<td>2.5 psid @ 2 GPM</td>
</tr>
<tr>
<td>LOFSORB-CTO</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LA-9-E _ -CTO</td>
<td>2.5 x 9.75&quot;</td>
<td>6,000 gal @ 1 GPM</td>
<td>2 psid @ 1 GPM</td>
</tr>
<tr>
<td>LA-20-E _ -CTO</td>
<td>2.5 x 20&quot;</td>
<td>12,000 gal @ 2 GPM</td>
<td>2 psid @ 2 GPM</td>
</tr>
</tbody>
</table>

---

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Rigid Resin Bonded Filters

LOFCLEAN™ Series acrylic fiber/phenolic resin filters have an extremely rigid pore structure which allows the filter to withstand extremes of viscosity and temperature without compression or collapse. The true-graded density design traps coarse particles in the outer zones while finer particles are captured near the core.

Features and Benefits
- Retentions from 1 to 100 microns
- Enhanced surface area for longer life
- No metal or plastic core

Features
- Phenolic resin/acrylic fiber construction resists dirt unloading at high differential pressure
- Optional end cap configuration for compatibility with most vessels

Filter Specifications
- Media
  - Acrylic Fiber/Phenolic Resin
- Optional End Caps
  - Polyester
- Multi-length bonding agent
  - Polyamide Hot Melt
- Gasket/O-Rings
  - Silicone, EPDM, Buna N, Viton® and Teflon® encapsulated Viton (O-rings only)
- Micron ratings
  - 1, 3, 5, 10, 25, 50, 75, 100 µm

Dimensions / Parameters
- Nominal lengths
- Outside diameter
  - 2.45" (6.22 cm)
- Inside diameter
  - 15/16" (2.38 cm)
- Max. operating temp.
  - 252°F (122°C) for 9.75" length in liquids
  - 212°F (100°C) for lengths longer than 9.75" in liquids
  - 176°F (80°C) in gas
- Differential pressure
  - 70 psid @ 70°F (4.8 bar)
- Recommended change-out pressure for disposal
  - 35 psid (2.4 bar)

“Eaton’s LOFCLEAN filters are ideally suited for paints, inks, sealants, adhesives, lacquers, varnishes, shellacs, fuel oils, crude oils, grease, machine coolants, silicones, antifreeze, plasticizers, animal oils and many other applications.”
**Flow Rate Nomograph**

To determine the flow rate and pressure drop for a specific application, first determine your required flow rate per single length cartridge, then refer to the nomograph on the right and proceed as follows:

1. Select the required micron grade from the “RATING” line.
2. Using a straightedge, draw a line from the grade mark, through the desired “DIFFERENTIAL PRESSURE”, to the “INDEX” line.
3. Choose the viscosity of the fluid to be filtered on the “VISCOSITY” line.
4. Using a straightedge, draw a line from the viscosity mark, intersecting the mark made previously on the “INDEX” line, to the “FLOW RATE” line. Ensure the resulting flow rate does not exceed that set out in the table on the nomograph.
5. Repeat the exercise at various differential pressures, to achieve an acceptable combination of flow rate and differential pressure to meet your specific requirement.

Note: For chemical compatibility, flow rates, and temperature requirements please consult the factory or your local Eaton distributor.

**Filter Specification Code**

<table>
<thead>
<tr>
<th>Filter Series</th>
<th>Acrylic Fibres</th>
<th>Nominal Length</th>
<th>Retention Rating</th>
<th>End Configuration</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOFCLEAN</td>
<td>-A</td>
<td>-9 9.75”</td>
<td>-1 micron</td>
<td>DOE Double Open End</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-10 10.0”</td>
<td>-3 micron</td>
<td>-1 226/Flat Single Open End</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-19 19.5”</td>
<td>-5 micron</td>
<td>-2 222/Fin Single Open End</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-20 20.0”</td>
<td>-10 micron</td>
<td>-3 226/Fin Single Open End</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-29 29.25”</td>
<td>-25 micron</td>
<td>-4 222/Flat Single Open End</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-30 30.0”</td>
<td>-50 micron</td>
<td>-N None</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-39 39.0”</td>
<td>-75 micron</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>-40 40.0”</td>
<td>-100 micron</td>
<td></td>
</tr>
</tbody>
</table>

**Gasket or O-Ring**

- S Silicone
- B Buna-N
- E EPDM
- V Viton
- T FEP/Viton
- N None

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Porous titanium filters are designed for applications involving extreme operating conditions and aggressive fluids and gases. The rugged, fixed pore structure is constructed from sintered titanium powder. The result is an element that can withstand heat, high pressures and repeated cleaning/backwash cycles. Mechanical strength and corrosion resistance are the results of a design with no longitudinal seams.

**Features and Benefits**
- High corrosion resistance
- All sintered titanium construction
- Backwashable for re-use and maximum economy
- Multiple end configurations and gasket/o-rings to fit most all vessels.

**Filter Specifications**

<table>
<thead>
<tr>
<th>Media</th>
<th>Titanium</th>
</tr>
</thead>
<tbody>
<tr>
<td>End caps</td>
<td>Titanium</td>
</tr>
</tbody>
</table>

**Gaskets/O-Rings options**
- EPDM, Buna-N, Viton®, Teflon®
- Encapsulated Viton (O-Rings only)

**Micron ratings**
- 0.5, 2, 5, 10, 15, 35 μm

**Dimensions / Parameters**

<table>
<thead>
<tr>
<th>Nominal lengths</th>
<th>10”, 20”, 30” (25.4, 50.8, 76.2 cm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>End Configuration</td>
<td>Double Open End, 226/Flat Single Open End, 222/Flat Single Open End, 3/4” Male NPT, 1” Male NPT</td>
</tr>
<tr>
<td>Outside diameter</td>
<td>2.75” (70 mm) or 2.36” (60 mm)</td>
</tr>
<tr>
<td>Max. operating temp.</td>
<td>700°F (371°C)*</td>
</tr>
<tr>
<td>Max. differential pressure</td>
<td>250 psid (17.4 bar) forward 50 psid (3.5 bar) reverse</td>
</tr>
</tbody>
</table>

*Max temperature applicable to NPT style filters only (No O-Rings or gaskets). Consult Eaton for guidance on specific chemical/temperature compatibility.

“Eaton’s LOFMET filters are designed for a variety of applications including: corrosive liquids & gases, cryogenic fluids, high viscosity solutions, process steam, high temperature liquids & gases and catalyst recovery.”
Filter Removal Efficiency

<table>
<thead>
<tr>
<th>Beta Ratio Efficiency</th>
<th>Beta 200 99.5%</th>
<th>Beta 20 95%</th>
<th>Beta 10 90%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5 micron</td>
<td>0.5 micron</td>
<td>0.3 micron</td>
<td>0.1 micron</td>
</tr>
<tr>
<td>2 microns</td>
<td>2 microns</td>
<td>0.8 micron</td>
<td>0.4 micron</td>
</tr>
<tr>
<td>5 microns</td>
<td>5 microns</td>
<td>3 microns</td>
<td>1 micron</td>
</tr>
<tr>
<td>10 microns</td>
<td>10 microns</td>
<td>8 microns</td>
<td>5 microns</td>
</tr>
<tr>
<td>15 microns</td>
<td>15 microns</td>
<td>12 microns</td>
<td>10 microns</td>
</tr>
<tr>
<td>35 microns</td>
<td>35 microns</td>
<td>32 microns</td>
<td>28 microns</td>
</tr>
</tbody>
</table>

\[
\text{Beta Ratio} = \frac{\text{Upstream particle counts}}{\text{Downstream particle counts}}
\]

Filter Specification Code

**Filter Series**
LOFMET

**Nominal Length (inches)**
-10 10"
-20 20"
-30 30"

**Diameter Option**
Blank 2.75" dia.
S (slim) 2.36" dia.

**Retention Rating**
-0.5 micron
-2 micron
-5 micron
-10 micron
-15 micron
-35 micron

**End Configuration**
DOE Double Open End
-1 226/Flat Single Open End
-4 222/Flat Single Open End
-M1 3/4" MNPT Threads
-M2 1" MNPT Threads

**Gasket or O-Ring**
S Silicone
B Buna-N
E EPDM
V Viton
T FEP/Viton (O-Rings only)
T FEP (Gaskets Only)
N None

LOFMET 2.36" (60mm) Water Flow Rate

<table>
<thead>
<tr>
<th>Differential Pressure</th>
<th>PSI</th>
<th>Bar</th>
<th>0.5 μm</th>
<th>5 μm</th>
<th>10 μm</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.07</td>
<td>1</td>
<td>0.5</td>
<td>2</td>
<td>5</td>
<td>10</td>
</tr>
</tbody>
</table>

LOFMET 2.75" (70mm) Water Flow Rate

<table>
<thead>
<tr>
<th>Differential Pressure</th>
<th>PSI</th>
<th>Bar</th>
<th>0.5 μm</th>
<th>5 μm</th>
<th>10 μm</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.07</td>
<td>1</td>
<td>0.5</td>
<td>2</td>
<td>5</td>
<td>10</td>
</tr>
</tbody>
</table>

The LOFMET filter is available with a variety of gasket and end cap configurations.

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