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FILTER CARTRIDGES

Vorex® Filter Cartridges

Vorex® HP Filter Cartridges
Polywound String Wound Filter Cartridges
ClearPleat PC

VOREX® FILTER CARTRIDGES

The Vorex® is a nominally rated microfiber cartridge that works well as either a pre-filter or final filter in a wide range of applications including industrial, chemical process, food & beverage, cosmetics and water.

Our Vorex® filters are manufactured through an exclusive process that thermally bonds pure polypropylene microfibers. Lower density fibers are at the surface and sequentially higher density fibers are used toward the center. This process traps particles more evenly throughout the cross section.

Features

• Manufactured from 100% polypropylene microfibers eliminating extractables
• Adsorbs trace hydrocarbons for clearer results and faster rinse-in
• Provides high flow rates with lower pressure drops for longer life at a very economical price
• Singed finish eliminates fiber migration and produces a cleaner product
• Supports a wide range of chemical, industrial, food/beverage, cosmetics and water applications
• Available in 1-100 microns to meet a wide range of cleanliness applications
• Incinerates to non-volatile trace ash for easy disposal
• NSF 42 certified, FDA approved and rated USP Plastic Class VI to meet government regulations
• Silicone free material eliminates cratering to provide better surface results
• In-stock availability assures quick delivery and reduces your inventory costs
• Available with inner polypropylene core for additional support for high pressure applications
FILTER CARTRIDGES

Vorex® Filter Cartridges
Vorex® HP Filter Cartridges
Polywound String Wound Filter Cartridges
ClearPleat PC

Specifications

• Available Materials
  MF = Microfiber (standard no core)
  MC = Microfiber with polypropylene core

• Maximum Operating Temperature
  160°F max. – polypropylene

• Suggested Differential Pressure
  30 PSIG maximum — dirty
  10-15 PSIG optimum change out

• Micron Rating
  001, 005, 010, 025, 050, 075, 100

• Sizes
  9.75" (24.38 cm)
  10" (25 cm)
  19.5" (49.53 cm)
  19.75" (50.17 cm)
  20" (50.8 cm)
  29.25" (74.3 cm)
  29.5" (74.93 cm)
  29.75" (75.44 cm)
  30" (76.2 cm)
  39" (99.06 cm)
  39.5" (100.33 cm)
  39.75" (100.97 cm)
  40" (101.6 cm)

• FSI's polypropylene microfiber media complies with the appropriate U.S. Food and Drug Administration guidelines, as outlined in the Code of Federal regulations, Title 21, Sections 177.1520 (a), (1) and Section 177.1520 (c), (1.1).

• Vorex® filter cartridges are certified by NSF International under ANSI/NSF Standard 42.

• Vorex® filter cartridges meet the requirements of a USP Plastic Class VI as demonstrated by USP Biological Reactivity Tests, in Vivo.

Vorex® Filter Cartridges

<table>
<thead>
<tr>
<th>Item # CMMF02520</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of Filter</td>
</tr>
</tbody>
</table>
| Material         | MF = Microfiber (standard no core)
|                  | MC = Microfiber with polypropylene core |
| Micron Rating    | See specifications |
| Length*          | See specifications |

* STANDARD LENGTHS LISTED. CUSTOM LENGTHS AVAILABLE.

This chart show the Vorex® filter cartridge pressure drop as related to flow-rate per 10 inch cartridge length. Results may vary in actual service.
VOREX® HP FILTER CARTRIDGES

The absolute-rated Vorex® HP cartridge provides superior flow, increased dirt holding capacity and a lower pressure drop. The HP cartridge is manufactured with 100 percent polypropylene microfibers and core. Thermal bonding eliminates the need for bonding resins and adhesives, which may be contaminants themselves. The innovative core provides stability, which allows for the use of very fine microfibers to greatly improve the filtration efficiency. The microfibers vary in diameter throughout the depth of the cartridge to attain an optimal gradient density with a much larger void area. The benefit is substantially longer on-stream life, increased dirt holding, and a lower pressure drop. The Vorex® HP cartridge delivers a highly cost effective filtration solution.

The Vorex® HP is excellent for many high purity and standard industrial applications including chemical process industry, pure water filtration, metal finishing, metal working, magnetic media, photographic, petrochemicals and potable water.

Features

- Long on-stream life, superior dirt-holding capacity, and low pressure drop provide excellent cost savings
- Manufactured from 100% polypropylene for purity
- Silicone-free material prevents cratering and provides a better surface finish
- Foaming is eliminated with pure polypropylene microfibers that have no extrusion oils, surfactants or antistatic chemicals assuring better performance and faster rinse-in
- Thermally bonded end-cap configurations fit a variety of standard filter cartridge housings to reduce costs
- Polypropylene core is resistant to collapse, temperature effect, channeling and bypass
- Filter medium will not compress and unload trapped contaminants for improved efficiency and cleaner product
- Singed finish eliminates fiber migration producing clearer results
- FDA compliant for food and beverage applications and USP Plastic Class VI rated to meet government requirements
## Specifications

- **Available Materials**
  Polypropylene Microfiber with Polypropylene Core
- **Maximum Operating Temperature**
  160°F max. – polypropylene
- **Suggested Differential Pressure**
  30 PSIG maximum — dirty
  15 PSIG optimum change out
  1-3 PSIG initial
- **Absolute (99%) Micron Rating**
  0005 (0.5), 001, 003, 005, 010, 025, 035, 050, 075, 100
- **Length**
  9.75” (24.38 cm)
  10” (25 cm)
  19.5” (49.53 cm)
  19.75” (50.17 cm)
  20” (50.8 cm)
  29.25” (74.3 cm)
  29.75” (75.44 cm)
  30” (76.2 cm)
  40” (101.6 cm)
- **Rings**
  N = Neoprene
  P = Polyethylene Foam
  R = EPR
  S = Silicone (FDA)
  V = Viton®
  VT = Viton Teflon Encapsulated
  Z = Buna-N
- FSI’s polypropylene microfiber media complies with the appropriate U.S. Food and Drug Administration guidelines, as outlined in the Code of Federal regulations, Title 21, Sections 177.1520 (a), (1) and Section 177.1520 ©
- Vorex® microfiber cartridges meet the requirements of a USP Plastic Class VI as demonstrated by USP Biological Reactivity Tests, in Vivo.

### Vorex® HP Filter Cartridges

<table>
<thead>
<tr>
<th>Item #</th>
<th>CMHP02520BZ</th>
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</thead>
<tbody>
<tr>
<td>Type of Filter</td>
<td>CM = Meltblown cartridge</td>
</tr>
<tr>
<td>Material</td>
<td>HP = Microfiber, Vorex HP</td>
</tr>
<tr>
<td>Micron Rating</td>
<td>See specifications</td>
</tr>
<tr>
<td>Length</td>
<td>See specifications</td>
</tr>
<tr>
<td>End Fitting Options</td>
<td>A = SOE 222 “O” Ring/Solid End Cap (Code3)</td>
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<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B = SOE 222 “O” Ring/Bayonet (Code 8)</td>
</tr>
<tr>
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<td></td>
</tr>
<tr>
<td></td>
<td>C = SOE 226 “O” Ring/Bayonet (Code 7)</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>D = DOE-Flat Gasket/Flat Gasket, Polypropylene End Cap w/Gasket</td>
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<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>E = DOE Polyfoam Flat Gasket</td>
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<tr>
<td></td>
<td>F = Self Sealing Spring</td>
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</table>

**Gasket and “O” Ring Material**

See specifications

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## Clear Water Pressure Drop

![Clear Water Pressure Drop Graph]

- **Vorex® HP 001, 003, 005 & 010**

![Graph showing differential pressure vs. flow rate for Vorex® HP 001, 003, 005 & 010]

- **Vorex®HP 025 to Vorex® HP 100**

![Graph showing differential pressure vs. flow rate for Vorex®HP 025 to 100]

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**Locate Your Sales Representative**

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POLYWOUNDED STRING WOUND FILTER CARTRIDGES

FSI Polywound filter cartridges are the result of years of experience, as well as extensive research and development, and state-of-the-art manufacturing technology. The Polywound nominally rated cartridges are available in a wide array of yarn and core materials, and are designed to meet a variety of industrial processing needs. This cartridge provides an exceptional quality media filter option.

Features

- Available in polypropylene, polyester, cotton and baked glass for broad chemical compatibility and to meet a wide variety of applications
- Baked glass has high temperature compatibility of 750°F for greater versatility
- Single-strand, continuous winding process offers consistent quality, high particulate retention and reduced bypass for clearer results and long life
- FDA compliant polypropylene cartridges are available for food and beverage applications to meet government standards
- 2.5” OD is offered in standard lengths and 4.5” OD is available in 10” and 20” lengths to fit existing housings and replace most brands
- Micron ratings from 1-150 microns meet required cleanliness levels
- Well suited for applications such as paints, coatings and high-viscosity chemicals that need large particle filtration
## Specifications

### Available Materials
- **PO** = Polypropylene
- **PE** = Polyester
- **BC** = Bleached cotton
- **BG** = Baked glass

### Dimensions
- **1.06” ID x 2.5” OD**
- Special dimension of **1.06” ID x 4.5” OD** available for polypropylene material only (available in 10” and 20” lengths)

### Micron Rating
- **001, 005, 010, 025, 050, 075, 100, 150**

### Core
- **P** = Polypropylene
- **S** = 304 SS
- **T** = Tinned steel
- **X** = 316 SS

### Length
- **9.75” (24.77 cm)**
- **10” (25.4 cm)**
- **19.5” (49.53 cm)**
- **20” (50.8 cm)**
- **30” (76.2 cm)**
- **39” (99.06 cm)**
- **40” (101.6 cm)**
When you want the highest-performance and greatest impact to the bottom-line possible, the solution is our new ClearPleat PC. Unique construction, longer service life, and greater product quality consistency are just a few reasons why the ClearPleat PC is the clear choice for critical applications requiring a “performance grade” cartridge.

Features

- Absolute-rated (99.98%) provides consistent and repeatable filtration
- Pleated media provides longer service life (higher surface area) and less product loss (fewer changeouts)
- Thermal bonded construction improves cleanliness. Ultrasonic bonding of side seal eliminates debris.
- Fits BFNP 13 & 14, FSPN 20 & 35 filters with no retrofit costs
- Inside to Outside Flow allows contamination to be captured inside the element
- No crater-causing contaminants make it safe for use in all paint applications
- Dual cage is one-piece polypropylene with polypropylene end caps
- Available in nylon monofilament mesh and polypropylene microfiber
FILTER CARTRIDGES

Specifications

- **Available Materials**
  - MF = Microfiber
  - NM = Nylon monofilament mesh

- **Suggested Differential Pressure**
  - 35 PSIG maximum – dirty
  - 10-15 PSIG optimum change out

- **Absolute (99.98%) Micron Rating**
  - MF: 1, 5, 10, 20, 35, 50
  - NM: 40, 60, 85, 110, 140, 165

- **Length**
  - MF & NM:
    - #3: 6”
    - #4: 12”

ClearPleat PC

<table>
<thead>
<tr>
<th>Type of Filter</th>
<th>PC = Pleated cartridge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material</td>
<td>MF = Microfiber</td>
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<tr>
<td></td>
<td>NM = Nylon monofilament mesh</td>
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<tr>
<td>Micron Rating</td>
<td>See specifications</td>
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<td>Length</td>
<td>See specifications</td>
</tr>
<tr>
<td>End Cap</td>
<td>P = Polypropylene</td>
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## ClearPleat Efficiency Ratings

### Microfiber

<table>
<thead>
<tr>
<th>Micron Ratings</th>
<th>Flow Rates</th>
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<tbody>
<tr>
<td>99.98% Size</td>
<td>GPM@1psid</td>
</tr>
<tr>
<td>1 3</td>
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<td>5 3</td>
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<tr>
<td>35 4</td>
<td>12</td>
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<tr>
<td>50 4</td>
<td>15</td>
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### Mesh

<table>
<thead>
<tr>
<th>Micron Ratings</th>
<th>Flow Rates</th>
</tr>
</thead>
<tbody>
<tr>
<td>99.98% Size</td>
<td>GPM@1psid</td>
</tr>
<tr>
<td>11</td>
<td>11</td>
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<tr>
<td>12</td>
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<td>17</td>
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</tbody>
</table>
Flow Rates of Filter Cartridges

For Cartridge applications with Water-Like Viscosities the following rules of thumb can be followed for 10" equivalent length. These flow rates should keep the CLEAN Pressure Drop under 3 PSID.

<table>
<thead>
<tr>
<th>Material Used</th>
<th>Micron Rating</th>
<th>Flow Rate (10&quot; Equivalent)</th>
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</thead>
<tbody>
<tr>
<td>CWPO/PE</td>
<td>1 &amp; 3</td>
<td>3 GPM/10&quot;</td>
</tr>
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<td>CWPO/PE</td>
<td>5 THRU 50</td>
<td>4 GPM/10&quot;</td>
</tr>
<tr>
<td>CWPO/PE</td>
<td>75 THRU 100</td>
<td>5 GPM/10&quot;</td>
</tr>
<tr>
<td>CMMF</td>
<td>1, 3, &amp; 5</td>
<td>3 GPM/10&quot;</td>
</tr>
<tr>
<td>CMMF</td>
<td>10, 25 &amp; 50</td>
<td>4 GPM/10&quot;</td>
</tr>
<tr>
<td>CMMF</td>
<td>75, 100 &amp; 150</td>
<td>5 GPM/10&quot;</td>
</tr>
<tr>
<td>CMHP</td>
<td>1 &amp; 3</td>
<td>2 GPM/10&quot;</td>
</tr>
<tr>
<td>CMHP</td>
<td>5, 10, 25, 35 &amp; 50</td>
<td>3 GPM/10&quot;</td>
</tr>
<tr>
<td>CMHP</td>
<td>75 &amp; 100</td>
<td>4 GPM/10&quot;</td>
</tr>
</tbody>
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