Nitrogen Generation
- Generate your own gas
- Consistent flow, pressure and purity
- Cost saving of up to 90%
- Improves safety
- Increases efficiency
- Applications include:
  - Pressure transfer
  - Blanketing
  - Purging
  - Sparging
  - Filting

Purecare Extended service and after-sales support packages are available for both compressed air and CO2 purification. Purecare ensures confidence that your long-term supply operates at maximum efficiency and minimum cost.

- Extended warranty programs
- Preventive maintenance kits
- Factory trained and certified service technicians
- Local training
- Global support network

Remote Monitoring
- Monitor system parameters
- Highlights problems & unexpected changes
- Both customer and Parker Dornick Hunter support team monitor performance

Nitrogen Generation
- Generate your own gas
- Consistent flow, pressure and purity
- Cost saving of up to 90%
- Improves safety
- Increases efficiency
- Applications include:
  - Pressure transfer
  - Blanketing
  - Purging
  - Sparging
  - Filting

CO2 Polishing
The PCO2 system is designed as a quality incident protection unit acting as a point of use vapour ‘polisher’ and is proven to be effective at removing a wide range of potential CO2 impurities, such as Benzene, Acetaldehyde & Hydrogen Sulphide.

Under HACCP principles, the quality of CO2 used at the point of carbonation is defined as a Critical Control Point (CCP) and the installation of PCO2 system at this point will form part of a complete CO2 quality approach.

Silt Density Index (SDI) Testing
An evaluation of suspended particles and colloids in the water, based on the rate of blockage of a test membrane. Samples are taken over a given period of time to provide an indication of the performance of various treatment stages and the effect on water quality due to seasonal variation.

- Disc trial carried out over 15 minutes
- Multiple samples taken
- Periodic testing to monitor seasonal trends

Remote Monitoring Assessment
- Monitor system parameters
- Highlights problems & unexpected changes
- Both customer and Parker Dornick Hunter support team monitor performance

Final Filtration
- BEVPOR & PESFXY range of final filters
- PES membrane
- Removal of colloids
- Bioburden stability

Steam
- Culinary grade steam
- Steam to meet (3A Standard 609-03)
- Protects pipe-work, equipment and downstream filters

Chlorine Reduction
- CARBOFLOW activated carbon media
- Chlorine and chloroform reduction

Particle Size Analysis (PSA) Testing
An evaluation of suspended particles and colloids in the water, based on the size distribution in water samples using a laser particle counter either on-site or in a laboratory environment. PSA can give an indication of the expected workload of a filter system.

- Helps identify the need for more effective prefiltration protecting downstream membranes

Clarification
- PREPOR & PESFXY range of pre-filters
- Polypropylene & glass fiber media
- Bioburden reduction & particulate removal
- Available in large format diameters
- Extend life of membrane filters

Final Filtration
- BEVPOR range of final filters
- PES membrane
- Removal of colloids
- Bioburden stability
INDEX

INTRODUCTION

PRODUCT LINE OVERVIEW

PLEATED MEMBRANE FILTERS
• Clearflow™
• Clariflow® General
• Clariflow® Water
• Clariflow® Wine
• Proflow® II - ABR
• Proflow® II - ABR Mini Capsules
• Proflow® II - ABR Mini Cartridges
• Fulflo® II Crypto
• Fulflo® II Crypto Capsule

PLEATED DEPTH FILTERS
• Poly-Mate™ PM/PXD
• Glass-Mate™ PMG
• Abso-Mate® PAB
• Parmax™
• Polyflow®
• Polyflow® G
• Polyflow® Mini Capsules
• Polyflow® Mini Cartridges

WOUND FILTERS
• Fulflo® SWC
• Honeycomb™ HFT
• Honeycomb™ Ultrafine

MELTBLOWN FILTERS
• MegaBond Plus™
• DuraBond™
• Avasan™

METALLIC MEDIA FILTERS
• Fulflo® Metallic

BAG FILTERS
• Fulflo® Filter Bags
• XLH Filter Bags

FILTER VESSELS
• Fulflo® “LT” Series
• Advantage™ Sanitary Vessels
PARKER
Leader in process filtration, separation and purification

Parker microfiltration products set the highest standards for filtrate quality, product reliability and cost-effective use. Parker products provide optimal solutions for food and beverage applications. Parker products are available in lengths from 4 to 40 inches and configurations to retrofit all commonly installed filter housings. Products are offered in membrane and depth media with a full range of cartridges, mini-cartridges and capsules to meet production-, pilot- and laboratory-scale requirements. Removal ratings from 0.02 to >800 µm are available. All Parker products are backed by in-depth Technical Support, fast order turnaround and factory-trained local Distributors.

APPLICATIONS

Parker food and beverage products are optimized for filtration:

- Wine
- Beer
- Bottled Water
- New Age Beverages
- Distilled Spirits
- Cultured Food Products
- Sweeteners
- Flavors and Colors
- Product Makeup and Rinse Water
- Carbonation
- Bacteria Removal
- Prefiltration
- Venting
- Steam Filtration
- Gel Removal
- Haze Removal
- Sediment Removal
- Clarification
- Sterile Filtration

QUALITY MANAGEMENT AND ISO 9001

Quality is of paramount importance to Parker. All products are manufactured under controlled environmental conditions and are subjected to demanding programs of quality assurance.

Parker is ISO 9001 Certified.
MICROFILTRATION:
A Core expertise

The Food and Beverage industry is a rapidly growing world market that draws upon core areas of our filtration expertise. Included within this market the broad range of products that require highly effective filtration in their manufacturing processes.

These products include:
- Water Filtration
- Air/Gas Filtration
- Steam Filtration
- Liquid Filtration
- Filter housings
- Mini sized cartridges and capsules

Through our Technical, R&D and Customer Service Teams we offer a wide range of services to ensure total customer satisfaction.

TECHNICAL CAPABILITIES

Our Technical Support Services team is dedicated to the needs of the Food and Beverage industry. We have an extensive range of state-of-the-art analytical instrumentation and a highly qualified team of scientists and engineers generating innovative solutions to a wide variety of filtration needs. We strive to optimize our customers’ filtration applications by offering full technical support that includes:

- process failure analyses
- contamination analyses
- process and cost improvement audits
- on-site testing services

RESEARCH AND DEVELOPMENT

Our R&D teams are constantly working to innovate new products and discover technologies that will enhance the performance of process filtration, and thus keep us at the forefront of process filtration technology.

CUSTOMER SERVICE

An experienced team of professionals dedicated to respond quickly and comprehensively to orders – both for standard and customized products – and ensure their on-time delivery worldwide.
MICROFILTRATION PRODUCTS
Tailored to food and beverage applications

Parker microfiltration products set the highest standards for filtrate quality, product reliability and cost-effective use. Parker products are available to provide optimal solutions for food and beverage applications. Parker products are available in lengths from 4 to 40 inches and configurations to retrofit all commonly installed filter housings. Products are offered in membrane and depth media with a full range of cartridges, mini-cartridges and capsules to meet production-, pilot- and laboratory-scale requirements. Removal ratings from 0.02 to >800 µm are available.

All Parker products are backed by in-depth Technical Support, fast order turnaround and factory-trained local Distributors.

Integrity tester and a wide variety of Filter Housings are available. Ask your Parker Sales Representative for details.

Filtration applications:
- Wine
- Beer
- Bottled Water
- Distilled Spirits
- Cultured food products
- Sweeteners
- Flavors and Colors
- Product Makeup Water
- Rinse Water
- Carbonation
- Bacteria Removal
- Prefiltration
- Venting
- Steam Filtration
- Gel removal
- Haze removal
- Sediment removal
- Clarification
- Sterile Filtration
MICROFILTRATION PRODUCTS
Tailored to food and beverage applications

**PLEATED MEMBRANE FILTERS**

CLEARFLOW™
Glass media or polypropylene prefilter on polyethersulfone (PES) membrane/polypropylene hardware

CLARIFLOW® WINE
Polyethersulfone (PES) membrane/polypropylene hardware

CLARIFLOW® GENERAL
Polyethersulfone (PES) membrane/polypropylene hardware

CLARIFLOW® WATER
Polyethersulfone (PES) membrane/polypropylene hardware

PROFLOW® II - ABR
PTFE membrane/polypropylene hardware

FULFLO® II CRYPTO PES
PES membrane/polypropylene hardware

**MELT-BLOWN FILTERS**

MEGABOND PLUS
Absolute-rated meltblown polypropylene media

DURABOND
Polyolefin media

AVASAN™
Polypropylene media

**METALLIC MEDIA FILTERS**

FULFLO® METALLIC
Pleated and cylindrical 304 stainless steel & 316 stainless steel

**PLEATED DEPTH FILTERS**

POLY-MATE PM/PXD
Nominally-rated polypropylene

GLASS-MATE PMG
Microfiberglass media/polypropylene or polyester hardware

ABSO-MATE PAB
Absolute rated polypropylene media
Polyproplene hardware

PARMAX™
Large-diameter high flow
Glass media or polypropylene hardware

POLYFLOW™
Absolute-rated polypropylene depth media/polypropylene hardware

POLYFLOW™ GENERAL
Nominally-rated polypropylene depth media/polypropylene hardware

**WOUND FILTERS**

HONEYCOMB HFT
Various materials

FULFLO® SWC
Various materials

**BAG FILTERS**

FULFLO® FILTER BAGS
Various fibers bag filter

XLH
High efficiency, high capacity polypropylene bag filter
## MICROFILTRATION PRODUCTS
Tailored to food and beverage applications

<table>
<thead>
<tr>
<th>Product Line</th>
<th>Filter Ratings (microns)</th>
<th>Leading Features and Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PLEATED MEMBRANE FILTERS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CLEARFLOW™ Polyethersulfone (PES) membrane</td>
<td>0.2, 0.5, 0.8</td>
<td>• Pre- and final filtration of wine, beer and juices • Prefiltration of DI water</td>
</tr>
<tr>
<td>CLARIFLOW™ WINE Polyethersulfone (PES) membrane</td>
<td>0.45, 0.65</td>
<td>• Final filtration of wine, beer, spirits and mineral water</td>
</tr>
<tr>
<td>CLARIFLOW™ GENERAL Polyethersulfone (PES) membrane</td>
<td>0.04, 0.1, 0.2, 0.45, 0.65, 0.8</td>
<td>• Pre- and final filtration of wine, beer and juices • Liquid clarification and recirculation of fluids • General use water filtration</td>
</tr>
<tr>
<td>CLARIFLOW™ WATER Polyethersulfone (PES) membrane</td>
<td>0.04, 0.1, 0.2, 0.45</td>
<td>• Prefiltration and final filtration formulation waters</td>
</tr>
<tr>
<td>PROFLOW™ II-ABR Pleated PTFE membrane cartridges</td>
<td>0.1, 0.2</td>
<td>• Sterile venting • Sterile gas</td>
</tr>
<tr>
<td>FULFLO® II Crypto Polyethersulfone media/polypropylene structure</td>
<td>1.0</td>
<td>• Specifically developed for the removal of Cryptosporidium parvum oocysts</td>
</tr>
<tr>
<td><strong>PLEATED DEPTH FILTERS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>POLY-MATE PM/PXD Polypropylene</td>
<td>0.5 to 60</td>
<td>• Prefiltration of beers, wines and potable water • NSF 61 certified</td>
</tr>
<tr>
<td>GLASS-MATE PMG Microfiberglass</td>
<td>0.45 to 40</td>
<td>• Prefiltration of beers and wines</td>
</tr>
<tr>
<td>ABSO-MATE PAB Polypropylene</td>
<td>0.2 to 70</td>
<td>• Prefiltration of beers, wines and potable water • NSF 61 certified</td>
</tr>
<tr>
<td>PARMAX™ Polypropylene/microfiberglass large diameter</td>
<td>1, 3, 4.5, 10, 20, 30, 40, 90</td>
<td>• High containment-holding capacity for food and beverage applications</td>
</tr>
<tr>
<td>POLYFLOW™ Polypropylene</td>
<td>0.6, 1.2, 2.5, 5, 10, 20, 40</td>
<td>• DI water filtration, wine and beer prefiltration • Gas prefiltration</td>
</tr>
<tr>
<td>POLYFLOW™ G Polypropylene</td>
<td>0.5, 1, 3, 5, 10, 30</td>
<td>• Prefiltration of DI water and beverages</td>
</tr>
<tr>
<td><strong>WOUND FILTERS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HONEYCOMB HFT Various materials</td>
<td>0.5 to 150</td>
<td>• Prefilter for water and food packaging • NSF 61 certified (poly only)</td>
</tr>
<tr>
<td>FULFLO® SWC Various materials</td>
<td>1.0 to 100</td>
<td>• Prefilter for membranes, water, food and packaging • NSF 61 certified (poly only)</td>
</tr>
<tr>
<td>Product Line</td>
<td>Filter ratings (microns)</td>
<td>Leading Features and Applications</td>
</tr>
<tr>
<td>------------------------------</td>
<td>--------------------------</td>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>MELTBLOWN FILTERS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MEGABOND PLUS</td>
<td>1.0 to 120</td>
<td>• Final filtration</td>
</tr>
<tr>
<td>Polypropylene</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DURABOND</td>
<td>1.0 to 100</td>
<td>• Potable water</td>
</tr>
<tr>
<td>Polyolefin</td>
<td></td>
<td>• Pre- and final filtration of juices and other drinks</td>
</tr>
<tr>
<td>AVASAN™ AVS</td>
<td>1.0 to 75</td>
<td>• Potable water</td>
</tr>
<tr>
<td>Polypropylene</td>
<td></td>
<td>• Pre- and final filtration of juices and other drinks</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• NSF certified</td>
</tr>
<tr>
<td><strong>METALLIC MEDIA FILTERS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FULFLO® METALLIC</td>
<td>2.0 to 840</td>
<td>• High temperature or high viscosity applications</td>
</tr>
<tr>
<td>Stainless steel - 304 &amp; 316</td>
<td></td>
<td>• Steam applications</td>
</tr>
<tr>
<td><strong>BAG MEDIA FILTERS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FULFLO® FILTER BAGS</td>
<td>1.0 to 800</td>
<td>• Bulk food packaging</td>
</tr>
<tr>
<td>Various fibers bag filter</td>
<td></td>
<td>• Prefiltration</td>
</tr>
<tr>
<td>FULFLO® XLH</td>
<td>0.5 to 25</td>
<td>• Bulk food packaging</td>
</tr>
<tr>
<td>Polypropylene bag filter</td>
<td></td>
<td>• Prefiltration</td>
</tr>
<tr>
<td><strong>FILTER HOUSINGS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SINGLE-CARTRIDGE FILTER VESSEL SERIES</td>
<td>Carbon steel, brass stainless steel, 316 stainless steel, SAN/ polypropylene and natural polypropylene</td>
<td></td>
</tr>
<tr>
<td>MULTI-CARTRIDGE FILTER VESSEL SERIES</td>
<td>304 and 316L stainless steel; iron, carbon and stainless steel</td>
<td></td>
</tr>
<tr>
<td>BAG FILTER VESSEL SERIES</td>
<td>Carbon, 304, 304L and 316 stainless steel</td>
<td></td>
</tr>
</tbody>
</table>

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Cuno is a registered trademark of Cuno Inc.

F&B LC Rev B 9/07
CLEARFLOW™
Serial layers of depth media and membrane provide long lasting protection of final filters

Extended life and high retention efficiency make Clearflow™ an ideal filter for the clarification of particulate-laden solutions as commonly found in food and beverage production.

At the heart of the Clearflow™ design is a serial layer matrix of depth media and polyethersulfone (PES) membrane. This combination offers superior flow and long-lasting protection for downstream final filters. Clearflow™ cartridges are also non-fiber-releasing and will not unload contaminants, even under pulsing conditions.

Clearflow™ cartridges are available in 0.2, 0.5, or 0.8 μm nominal ratings, and with your choice of glass fiber or polypropylene prefiltration media. They are manufactured in a certified cleanroom environment. The Biological Grade version provides qualitative microbial retention. General Grade cartridges are for prefiltration applications, and are bulk packaged and economically priced.

**BENEFITS**
- Excellent particle retention provides for excellent protection of downstream filters
- High flow rate reduces processing time
- Long service life minimizes changeout frequency
- Integrity testable
- Steam Sterilizable

**APPLICATIONS**
- Prefiltration/clarification of:
  - Syrups
  - Sweeteners
  - Wine/beer/bottled water
  - Viscous liquids

**SPECIFICATIONS**

**Materials of Construction:**
Either glass fiber or polypropylene depth media over with a PES membrane layer. Media support layers and cartridge structure are polypropylene.

All components meet USP-XXIV Class VI-121°C criteria and are thermally bonded to assure integrity and purity.

**Maximum Operating Conditions:**
- Forward: 60 psid (4.1 bar) @ 75°F (24°C)
- Reverse: 30 psid (2.0 bar) @ 75°F (24°C)

**Steam Sterilizable and Sanitizable:**
Cartridges can be steamed or autoclaved for at least 10 one-hour cycles @ 121°C (250°F). Cartridges can also be hot water or chemically sanitized in place using common sanitizing agents. Please contact Parker for detailed procedures.

**Integrity Tested:**
All biological grade elements are integrity tested by a diffusive flow method during manufacturing

**Integrity Test Values:**

<table>
<thead>
<tr>
<th>FILTER RATING</th>
<th>BUBBLE POINT*</th>
<th>DIFFUSIONAL FLOW*</th>
</tr>
</thead>
<tbody>
<tr>
<td>μm</td>
<td>psig</td>
<td>bar</td>
</tr>
<tr>
<td>0.2</td>
<td>30</td>
<td>21</td>
</tr>
<tr>
<td>0.5</td>
<td>17</td>
<td>1.2</td>
</tr>
<tr>
<td>0.8</td>
<td>14</td>
<td>1.0</td>
</tr>
</tbody>
</table>

*Tested in deionized water
CLARIFLOW® GENERAL GRADE
Hydrophilic polyethersulfone (PES) membrane for aqueous liquid filtration applications

ClariFlow® General Grade cartridges are designed for general purpose use in the filtration of high-purity liquids and aqueous chemicals.

The mirrored-anisotropic Polyethersulfone (PES) membrane is inherently hydrophilic and has a pore morphology that delivers exceptionally high flow rates.

Because there are no added surfactants or wetting agents, and the support layers and structure are all-polypropylene, the filter exhibits low extractables, broad chemical compatibility and good resistance to hydrolysis.

**BENEFITS**

- Absolute Rated Membrane
- High flow rate reduces processing time
- Broad chemical compatibility allows use in most applications
- Low differential pressure reduces system wear and tear

**APPLICATIONS**

- Beverage clarification
- Ingredients and Process liquids
- Water filtration
- Deionized water systems

**SPECIFICATIONS**

**Materials of Construction:**
- Membrane: Polyethersulfone
- Support layers: Polypropylene
- Structure: Polypropylene

**Maximum Differential Pressure/Temperature:**
- Forward: 80 psid (5.5 bar) @ 75ºF (24ºC)
- 40 psid (2.8 bar) @ 180ºF (82ºC)
- Reverse: 50 psid (3.4 bar) @ 75ºF (24ºC)

**Effective Filtration Area:**
6.8 ft² (0.63 m²) per 10 inch (250 mm) cartridge

**Bulk Packaging:**
- Bulk packaged in case quantities to reduce material disposal.
- 10” - 28 per carton
- 20” - 12 per carton
- 30” - 12 per carton
- 40” - 9 per carton

Clariflow® General Grade cartridges are designed for general purpose use in the filtration of high-purity liquids and aqueous chemicals.
CLARIFLOW® WATER SERVICE GRADE
Hydrophilic polyethersulfone (PES) membrane for cost-effective purification

Clariflow® Water Service Grade cartridges are cost-effective alternatives to Clariflow E and G Grade cartridges for the filtration of a variety of aqueous liquids.

The Water Service cartridge is built around a unique polyethersulfone (PES) membrane that is inherently hydrophilic, and contains no added surfactants or wetting agents. It delivers clean filtrates, flow rates, extended service life and excellent resistance to hydrolysis.

Water Service cartridges are fabricated under cleanroom conditions.

**SPECIFICATIONS**

**Materials of Construction:**
- Membrane: Polyethersulfone
- Support layers: Polypropylene
- Structure: Polypropylene

All components meet USP-XXIV Class VI-121°C criteria and are thermally bonded to assure integrity and purity.

**Maximum Differential Pressure:**
- Forward: 80 psid (5.5 bar) @ 75°F (24°C)
  40 psid (2.8 bar) @ 180°F (82°C)
- Reverse: 50 psid (3.4 bar) @ 75°F (24°C)

**Effective Filtration Area:**
5.4 ft² (0.50 m²) per 10 inch (250 mm) cartridge

**Bulk Packaging:**
- Bulk packaged in case quantities to reduce material disposal
  10” - 28 per carton
  20” - 12 per carton
  30” - 12 per carton
  40” - 9 per carton

**APPLICATIONS**
- Deionized water filtration
- Liquid clarification
- Recirculating liquids
- Wine and beer clarification
- Juices
- Bottled water
- Process water

**BENEFITS**
- Absolute rated membrane
- Reliable and cost-effective
- Broad chemical compatibility allows use in aqueous applications
- Resistance to hydrolysis allows extended use in UPW systems
- High flow rate/low differential pressure reduces system wear and tear
CLARIFLOW® WINE

Pleated polyethersulfone (PES) membrane for final filtration of wine and beverages

**SPECIFICATIONS**

**Materials of Construction:**
- Membrane: Polyethersulfone
- Support Layers: Polypropylene
- Structure: Polypropylene

**Operating Differential Pressure:**
- **Forward**
  - 80 psid (5.4 bar) @ 75°F (24°C)
  - 40 psid (2.8 bar) @ 180ºF (82ºC)

- **Reverse**
  - 50 psid (3.4 bar) @ 75°F (24°C)

**Steam Sterilizable and Sanitizable:**
Cartridges may be steamed or autoclaved for at least 50 one-hour cycles @ 135°C (275°F). Cartridges may also be hot water and chemically sanitized in place using common sanitizing agents.

**Bacteria Retention:**
- 0.65 µm cartridges have been tested to retain *S. cerevisae* and *P. damnosus*
- 0.45 µm cartridges have been tested to retain *L. oenii* and *L. brevis* under conditions typical of those found in the wine industry.

**Integrity Test Values:** (per 10” cartridges)

<table>
<thead>
<tr>
<th>FILTER RATING</th>
<th>BUBBLE POINT*</th>
<th>DIFFUSIONAL FLOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>µm</td>
<td>psig</td>
<td>bar</td>
</tr>
<tr>
<td>0.45</td>
<td>22</td>
<td>1.4</td>
</tr>
<tr>
<td>0.65</td>
<td>16</td>
<td>1.1</td>
</tr>
</tbody>
</table>

Tested in deionized water

Extended life and absolute retention efficiency make the Clariflow® Wine product an ideal filter for the clarification of wine. At the heart of this design is a special membrane composed of polyethersulfone (PES). Choosing either the 0.65 or 0.45 µm pore sizes for red and white wines, PES membrane offers superior flow, extended on-stream life, and the consistent removal of microorganisms and particulates.

Clariflow® Wine cartridges are inherently hydrophilic, and contain no added surfactants or wetting agents. The PES membrane also exhibits low color-binding characteristics. Ensures that the filter will not affect the taste of the wine being processed. Each cartridge is manufactured in a certified clean-room environment in accordance with a quality system consistent with the requirements of ISO 9001 certification and guidelines.

**BENEFITS**
- Extended on-stream life minimizes changeout frequency
- High retention efficiency of yeast and other wine spoilage organisms
- Steam sterilizable/sanitizable for cleaning and reuse
- Integrity testable to ensure complete reliability

**APPLICATIONS**
- Prefiltration/Clarification of:
  - Wine
  - Beer
  - Spirits
  - Mineral water
PROFLOW™ II ABR
Pleated PTFE membrane cartridge for sterile venting and gas delivery

The Proflow™ II Aerosol Bacterial Retentive (ABR) cartridge (0.2 μm) is validated to produce sterile air utilizing a bacterial aerosol challenge (See the Validation Guide for the test protocol). This methodology best emulates the actual bacterial removal action of the filter in use as a hydrophobic vent. Proflow™ II ABR exhibits some of the highest air flow rates for sterilizing grade air filters built of pleated expanded PTFE membrane. Users who require the ultimate in flow rate for tank venting and sterile air supply will find the Proflow™ II ABR to be their filter of choice.

This cartridge is fabricated, 100% integrity tested, and packaged utilizing a certified cleanroom to guarantee consistent performance and quality.

**APPLICATIONS**
- Fermenter
- Formulation tank
- RO and WFI storage tank
- Starter culture vessels
- Air Supply
- Fermentor air
- Container purge air
- Aseptic packaging air

**SPECIFICATIONS**

**Materials of Construction:**
- Membrane: PTFE
- Support layers: Polypropylene
- Structure: Polypropylene

All components meet USP XXIII class VI -121°C criteria and are thermally bonded to assure integrity.

**Maximum Differential Pressure:**
- Forward: 80 psid (5.5 bar) @ 75ºF (24ºC)
- Reverse: 50 psid (3.4 bar) @ 75ºF (24ºC)

**Effective Filtration Area:**
- 10-inch (250 mm) cartridges: 9.3 ft² (0.86 m²)
- 5-inch (127 mm) cartridges: 4.6 ft² (0.43 m²)

**Bacterial Retention:**
Proflow™ II ABR 0.2 μm will provide a sterile effluent when challenged with up to 10⁷/cm² CFU of Brevundimonas diminuta per element using an Aerosolized Bacteria Challenge. The 0.2 μm version has also been shown to be > 99.99 percent efficient for the removal of phiX-174 bacteriophage virus when challenged with at least 10⁸ virus/10” length. In both cases cartridges were challenged after 100 one-hour steam cycles at 145°C.

**Steam and Sterilization:**
Cartridges have been validated to withstand over 100 one-hour steam cycles at 145°C

**Integrity Test Values:**
(in 60/90 IPA/water) Flow per 10” cartridge

<table>
<thead>
<tr>
<th>FILTER RATING</th>
<th>BUBBLE POINT*</th>
<th>DIFFUSIONAL FLOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>μm</td>
<td>psig</td>
<td>bar</td>
</tr>
<tr>
<td>0.1</td>
<td>≥ 21</td>
<td>1.5</td>
</tr>
<tr>
<td>0.2 - 10 inch</td>
<td>≥ 13</td>
<td>0.9</td>
</tr>
<tr>
<td>0.2 - 5 inch</td>
<td>≥ 13</td>
<td>0.9</td>
</tr>
<tr>
<td>0.45</td>
<td>≥ 5</td>
<td>0.3</td>
</tr>
<tr>
<td>1.0**</td>
<td>≥ 1</td>
<td>0.07</td>
</tr>
</tbody>
</table>

*Tested in 60/40 IPA/DI water
PROFLOW®II ABR MINI-CARTRIDGES

Pleated PTFE membrane cartridge for sterile venting and gas delivery

**SPECIFICATIONS**

**Materials of Construction:**
- Membrane: PTFE
- Support Layers: Polypropylene
- Structure: Polypropylene

All components meet current USP criteria, and are thermally bonded to assure integrity.

**Maximum Operating Differential Pressure:**
- Forward: 70 psid (4.8 bar) @ 75°F (24°C)
- 35 psid (2.4 bar) @ 140°F (60°C)
- 20 psid (1.4 bar) @ 167°F (75°C)
- Reverse: 30 psid (2.1 bar) @ 75°F (24°C)

**Bacteria Retention:**
Proflow® II ABR mini-cartridges will provide a sterile effluent when challenged with up to $10^7$/cm$^2$ CFU of *Brevundimonas diminuta* per filter using an Aerosolized Bacteria Challenge methodology.

**Autoclavable and Sanitizable:**
Mini-cartridges can be autoclaved up to 50 times (60 minutes) at 275°F (135°C), or chemically sanitized in place using common sanitizing agents.

**Integrity Test Values:**

<table>
<thead>
<tr>
<th>EFA</th>
<th>MINIMUM BUBBLE POINT*</th>
</tr>
</thead>
<tbody>
<tr>
<td>ft$^2$ (cm$^2$)</td>
<td>psig</td>
</tr>
<tr>
<td>3.1 (2880)</td>
<td>13</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TEST PRESSURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>psig</td>
</tr>
<tr>
<td>4</td>
</tr>
</tbody>
</table>

*In 60/40 IPA/DI Water

Proflow® II Aerosol Bacterial Retentive (ABR) mini-cartridges are validated to produce sterile air for tank venting and air supply applications. These filters exhibit some of the highest air flow rates of any mini-cartridges of, and are offered in a choice of three sizes to meet specific gas delivery requirements.

Proflow II mini-cartridges provide a secure seal and available with a choice of material to fulfil a range of application demands.

**BENEFITS**

- High air flow rates for effective venting
- Qualitative retention of aerosolized bacteria offers high titre reduction
- Long service life minimizes changeout frequency
- 100% integrity tested for reliable product performance
- End fittings provide a secure O-ring seal (-116) that is available with a number of material choices

**APPLICATIONS**

Sterile Venting
- Bioreactors/Fermenters
- Formulation tanks
- RO water storage tanks
- Finished product liquid tanks

Sterile Air/Gas Feed
- Aseptic packaging
- Sparging

**Materials of Construction:**

<table>
<thead>
<tr>
<th>Membrane</th>
<th>PTFE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Support Layers</td>
<td>Polypropylene</td>
</tr>
<tr>
<td>Structure</td>
<td>Polypropylene</td>
</tr>
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**Maximum Operating Differential Pressure:**

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**APPLICATIONS**

Sterile Venting
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- RO water storage tanks
- Finished product liquid tanks

Sterile Air/Gas Feed
- Aseptic packaging
- Sparging

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<td>Polypropylene</td>
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- 20 psid (1.4 bar) @ 167°F (75°C)
- Reverse: 30 psid (2.1 bar) @ 75°F (24°C)

**Bacteria Retention:**
Proflow® II ABR mini-cartridges will provide a sterile effluent when challenged with up to $10^7$/cm$^2$ CFU of *Brevundimonas diminuta* per filter using an Aerosolized Bacteria Challenge methodology.

**Autoclavable and Sanitizable:**
Mini-cartridges can be autoclaved up to 50 times (60 minutes) at 275°F (135°C), or chemically sanitized in place using common sanitizing agents.

**Integrity Test Values:**

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<tr>
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<th>MINIMUM BUBBLE POINT*</th>
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<tbody>
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<td>psig</td>
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</table>

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</tr>
</thead>
<tbody>
<tr>
<td>psig</td>
</tr>
<tr>
<td>4</td>
</tr>
</tbody>
</table>

*In 60/40 IPA/DI Water
**PROFLOW™ II ABR MINI-CAPSULES**

Pleated PTFE membrane capsules for sterile venting & gas delivery

Proflow® II Aerosol Bacterial Retentive (ABR) capsules are validated to produce sterile air for tank venting and air supply applications. These capsules exhibit some of the highest air flow rates of any sterilizing-grade filters, and are offered in a choice of three sizes to meet specific gas delivery requirements.

The encapsulated design maximizes efficiency by providing faster, easier changeout without laborious cleaning procedures. Eliminating the need to open reusable housings minimizes the chance of introducing contamination into the process.

**SPECIFICATIONS**

**Materials of Construction:**
- Membrane: PTFE
- Support Layers: Polypropylene
- Structure: Polypropylene
- Housing: Polypropylene

All components meet current USP criteria, and are thermally bonded to assure integrity.

**Operating Differential Pressure:**
- Forward:
  - 70 psid (4.8 bar) @ 75°F (24°C)
  - 35 psid (2.4 bar) @ 140°F (60°C)
  - 20 psid (1.4 bar) @ 167°F (75°C)
- Reverse:
  - 30 psid (2.1 bar) @ 75°F (24°C)

**Autoclavable and Sanitizable:**
Capsules can be autoclaved up to 50 times (60 minutes) at 275°F (135°C), or chemically sanitized in place using common sanitizing agents.

**Bacteria Retention:**
Proflow® II ABR capsules will provide a sterile effluent when challenged with up to $10^7$/cm$^2$ CFU of *Brevundimonas diminuta* per filter using an Aerosolized Bacteria Challenge methodology.

**Standard Packaging Option:**
- Non-sterile
- Pre-sterilized

**Integrity Test Values:**

<table>
<thead>
<tr>
<th>EFA (ft$^3$/min)</th>
<th>MINIMUM BUBBLE POINT*</th>
<th>MAXIMUM DIFFUSIONAL FLOW*</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1 (2880)</td>
<td>21 psig (1.4 bar)</td>
<td>4 cc/min (17 psig, 1.2 bar)</td>
</tr>
</tbody>
</table>

*In a 60/40 IPA/DI Water

**APPLICATIONS**

- Sterile Venting
  - Bioreactors/fermenters
  - Formulation tanks
  - RO water storage tanks
- Sterile Air/Gas Feed
  - Aseptic packaging
  - Head space blanketing
  - Blow/fill/seal

**BENEFITS**

- High air flow rates for effective venting
- 100% integrity tested for reliable product performance
- Wide variety of filter sizes and fittings to meet most system requirements
- Custom ordering option allows different inlet/outlet fittings for specific needs
- Improved vent design eliminates the risk of vent caps breaking free under pressure
FULFLO® II CRYPTO PES
Pleated PES cartridges for cryptosporidium removal from water

SPECIFICATIONS

Materials of Construction:
- Filtration Membrane: Polyethersulfone
- Prefilter Support and Layer: Polyester
- Outer Protection Cage: Polypropylene

Recommended Operating Conditions:
Up to 158°F (70°C) continuous operating temperature and higher short-term temperatures during CIP to the following limits: Capsules may be operated up to a temperature of 104°F (40°C) at line pressure up to 5.0 bar (73 psig) for gas applications.

Effective Filtration Area:
0.8 m² (8.4 ft²) per 250 mm (10 inch module)

Food and Biological Safety:
Materials conform to the relevant requirements of 21CFR Part 177 and current USP Plastics Class VI – 121°C and ISO10993 equivalents. Cryptoclear PLUS is listed in the Water Fittings and Materials Directive Part II as a WRAS* Approved Product.

Cleaning and Sterilization:
Fulflo II Crypto PES cartridges can be repeatedly steam sterilized in situ or autoclaved at up to 266°F (130°C). They can be sanitized with hot water at up to 194°F (90°C) and are compatible with a wide range of chemicals.

For detailed operational procedures and advice on cleaning and sterilization, please contact the Technical Support Group through your usual Parker contact.

Integrity Test Data:
All filters are flushed with purified water prior to shipment. They are integrity testable to the following limits.

<table>
<thead>
<tr>
<th>Micron Rating</th>
<th>Diffusional Flow Test Pressure</th>
<th>Max. Diffusional Flow (ml/min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>barg</td>
<td>psig</td>
</tr>
<tr>
<td>0.8</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Fulflo II Crypto PES utilizes the unique properties of a microbially retentive polyethersulfone membrane that provides absolute retention of Cryptosporidium parvum oocysts to meet the specific needs of the food and beverage and potable water industries.

The PES membrane has an asymmetrical pore structure with a high voids volume which offers unrivaled retention capacity, higher throughputs and higher flow rates than conventional membranes.

The microporous membrane is inherently hydrophilic and can be repeatedly integrity tested, providing a valuable quality assurance tool that fits well into a HACCP framework.

**APPLICATIONS**
- Potable water
- Foods requiring Cryptosporidium removal
- Beverages requiring Cryptosporidium removal

**BENEFITS**
- Specifically developed for the removal of Cryptosporidium parvum oocysts
- 1.0-micron absolute-rated polyethersulfone (PES) membrane
- High throughputs and flow rates
- Integrity testable
- Can be repeatedly steam sterilized or chemically sanitized
- 100% retention of cryptosporidium oocysts

*BWRAS – Water Regulations Advisory Scheme BS6920 Test of Effect on Water Quality.*
FULFLO® II CRYPTO CAPSULE

Pleated PES capsules for cryptosporidium removal from water

Fulflo II Crypto PES provides absolute retention of Cryptosporidium parvum oocysts to meet the specific needs of the food and beverage and potable water industries.

Its membrane has an asymmetrical pore structure with a high voids volume which offers greater retention capacity higher throughputs and higher flow rates than conventional membranes.

The microporous membrane is inherently hydrophilic and can be integrity tested repeatedly, providing a valuable quality assurance tool that fits well into a HACCP framework.

**SPECIFICATIONS**

**Materials of Construction:**
- Filtration Membrane: Polyethersulfone
- Prefilter and Support Layer: Polyester
- Protection Core: Polypropylene

**Food and Biological Safety:**
Materials conform to the relevant requirements of 21CFR Part 177 and current USP Plastics Class VI – 121°C and ISO10993 equivalents. Cryptoclear PLUS is listed in the Water Fittings and Materials Directive Part II as a WRAS* Approved Product.

* WRAS – Water Regulations Advisory Scheme BS6920 Test of Effect on Water Quality.

**Retention Characteristics:**
The removal efficiencies of Fulflo II Crypto PES cartridges have been determined from tests conducted by Thames Water Utilities Limited on live Cryptosporidium oocysts.

**Recommended Operating Conditions:**
Up to 158°F (70°C) continuous operating temperature and higher short-term temperatures during CIP to the following limits: Capsules may be operated up to a temperature of 104°F (40°C) at line pressure up to 5.0 bar (73 psig) for gas applications.

**Cleaning and Sterilization:**
Capsules can be repeatedly autoclaved up to 266°F (130°C). They can be sanitized with hot water at up to 194°F (90°C) and are compatible with a wide range of chemicals.

For detailed operational procedures and advice on cleaning and sterilization, please contact Technical Services.

**Integrity Test Data:**
All filters are flushed with purified water prior to shipment. They are integrity testable to the following limits.

**APPLICATIONS**
- Food and beverage
- Potable water

**BENEFITS**
- Specifically developed for the removal of Cryptosporidium parvum oocysts
- 1.0-micron absolute-rated polyethersulfone membrane
- High throughputs and flow rates
- Repeatedly integrity testable
- Can be repeatedly steam sterilized or chemically sanitized
- 100% retention of cryptosporidium oocysts

**TABLE: Diffusional Flow Characteristics**

<table>
<thead>
<tr>
<th>Micron Rating</th>
<th>Test Pressure barg</th>
<th>Max. Diffusional Flow (ml/min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>0.6</td>
<td>10&quot; 9</td>
</tr>
<tr>
<td></td>
<td>K</td>
<td>9.8</td>
</tr>
<tr>
<td></td>
<td>A</td>
<td>8.0</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>3.9</td>
</tr>
<tr>
<td></td>
<td>E</td>
<td>1.8</td>
</tr>
</tbody>
</table>

**APPLICATIONS**
- Food and beverage
- Potable water
POLY-MATE™ PM/PXD
Quality and economical filtration for food and beverage applications

Parker’s Poly-Mate™ cartridges incorporate a unique combination of polypropylene meltblown and spunbonded media to provide high surface area, finish-free and non-fiber-releasing filtration. All-polypropylene construction maximizes chemical resistance to acids, bases, salts, and most organic solvents.

**BENEFITS**
- High efficiency rated for critical food and beverage applications (99% efficiency)
- High pleated surface area for extended service life, low pressure drop and high flow capacity
- Optional stainless steel O-ring adapter inserts provide added strength for in situ sterilization. Poly-Mate™ Xtra Duty cartridges are available with backwashable construction, reducing replacement maintenance and cartridge disposal costs
- Poly-Mate™ Xtra Duty (PXD) cartridge features glass-filled polypropylene core for high temperature and high pressure use with rigid outer cage supporting pleated media in backwash applications
- All materials of construction are FDA listed as acceptable for potable and edible liquid contact according to CFR Title 21.
- One-piece, continuous to 40 in length, integrally sealed, pleated filter media

**APPLICATIONS**
- Food & Beverage
- Deionized water
- R.O. membrane prefiltration
- Process water

**SPECIFICATIONS**

**Materials of Construction:**
- Filter Media and Support Layers: Polypropylene
- Cage: PM - polypropylene netting
  - PXD - polypropylene cage
- Support Core: PM - polypropylene
  - PXD - glass-filled polypropylene

**Recommended Operating Conditions:**

**Poly-Mate™ Cartridges**
- Changeout ∆P: 35 psid (2.4 bar)
- Maximum Temperature: 200°F (93°C)
- Maximum ∆P @ 70°F (21°C): 60 psid (4.1 bar)
- Maximum ∆P @ 200°F (93°C): 10 psid (0.7 bar)

**Poly-Mate Xtra-Duty™ Cartridges**
- Maximum Temperature: 200°F (93°C) @ 35 psid (2.4 bar) Changeout ∆P: 35 psid (2.4 bar)
- Maximum ∆P @ 70°F (21°C): 90 psid (6.1 bar)
- Maximum ∆P @ 200°F (93°C): 35 psid (2.4 bar)

**Effective Filtration Area:**
Up to 6.0 ft²/10 in (0.6 m²/254 mm)

**Filtration Ratings:**
99% at 0.5 µm, 1 µm, 5 µm, 10 µm, 30 µm, and 60 µm pore sizes

**Recommended Maximum Flow Rate:**
Maximum 10 gpm per 10 in length
GLASS-MATE™ PMG FILTER CARTRIDGE

Absolute and economical filtration with pleated microfiberglass cartridges

Parker’s Glass-Mate™ cartridges offer an economical choice for absolute-rated efficiency, high flow rate capability and long service life. A wide variety of construction components, end fittings and seal options make this product line ideal for prefiltration and point-of-use filtration for many food and beverage applications.

**SPECIFICATIONS**

**Materials of Construction:**
- Filter Medium: Borosilicate microfiberglass with acrylic binder
- Support/Drainage Layers: Spunbonded polyester; laminated on the downstream side

**Recommended Operating Conditions:**
- Maximum Temperatures:
  - Glass Filled Polypropylene: 200°F @ 35∆P (93°C/2.4 bar)
  - Polyester: 140°F @ 35∆P (60°C/2.4 bar)
  - Stainless Steel: 275°F @ 35∆P (135°C/2.4 bar)
- Changeout Differential Pressure: 35 psi (2.4 bar)
- Maximum Flow Rate: 10 gpm per 10 in length (38 lpm/254 mm)
- Design Flow Rate: 2.5 gpm per 10 in length (9.5 lpm/254 mm)

**Effective Filtration Area:**
5 ft²/10 in (0.46 m²/254 mm) minimum

**Maximum Differential Pressure:**
- Glass-Filled Polypropylene: 90 psi @ 75°F (6.2 bar/24°C)
- Polyester: 70 psi @ 75°F (4.8 bar/24°C)

**Biological Safety/Product Purity:**
- Meets USP XXIV Class VI safety requirements for plastics
- All components FDA listed per CFR, Title 21
- Non-fiber releasing per FDA

**Sterilization/Sanitization:**
- Hot water (“F” construction): 180°F (82°C) for 30 minutes at maximum 15 psid (1 bar).
- In-Line Steam/Autoclave (“F” construction with stainless steel sleeve) 60 minutes at 255°F (140°C) at 2 psid (0.14 bar) maximum pressure.

**APPLICATIONS**
- Beer stabilization
- Wine clarification
- Food & Beverage
- R.O. prefiltration
- Coatings
- Sterile air
- Corn syrup
Parker’s Abso-Mate® cartridges provide the ultimate in economical filtration for even the most critical process fluids. The proprietary melt-blown media is rigidly controlled for reliable results time after time. Abso-Mate® cartridges are produced without adhesives that could contaminate fluids.

**Benefits**

- Absolute ratings for consistent and reliable performance (99.98%; β = 5000)
- Backwashable media reduces replacement maintenance and cartridge disposal costs.
- Abso-Mate® cartridges are non-fiber releasing and contain minimal extractables
- All materials of construction are FDA listed as acceptable for potable and edible liquid contact according to CFR Title 21
- One-piece construction eliminates bypass concerns on multi-length cartridges
- All-polypropylene construction provides wide compatibility with most chemicals, acids, bases and solvents

**Applications**

- Membrane prefilter
- Food & beverage
- Water
- Waste water

**Specifications**

- **Materials of Construction:**
  - Filter Media and Support Layers: Polypropylene
  - Bonding Polymer: None, completely fusion-sealed
  - Media Protection: Polypropylene cage
  - Support Core: Glass filled polypropylene

- **Maximum Recommended Operating Conditions:**
  - Temperature: 200°F (93°C)
  - Changeout ΔP: 35 psi (2.4 bar)
  - ΔP @ 70°F (21°C): 90 psid (6 bar)
  - ΔP @ 200°F (93°C): 35 psid (2.4 bar)
  - Flow Rate: 10 gpm (38 lpm) per 10 in length

- **Cartridge Dimensions:**
  - Outside Diameter: 2-1/2 in (63.5 mm)
  - Inside Diameter: DOE - 1-1/16 in (27 mm), SOE - 1 in (25.4 mm)

- **Effective Filtration Area:**
  - Up to 7.2 ft²/10 in (0.7 m²/254 mm)

- **Biological Safety:**
  - Meets USP XXI Class VI requirements for plastics
  - Nontoxic per WI-38 Human Cell Cytotoxicity Test

- **Sterilization Parameters:**
  - Maximum 10 cycles @ 250°F (121°C) for 15 minutes @ 15 psi (1.3 bar)
  - Hot water @ 180°F (82°C) for 30 minutes
The best of pleated and large diameter technologies are combined in Parker’s ParMax™ high flow filter cartridges. ParMax™ cartridges are available with polypropylene and microfiberglass media in absolute (99.98%) ratings from 1 to 90 micron. The unique layered construction provides excellent retention across a wide range of flux rates. One-six inch diameter cartridge can handle up to 500 gpm flow (60” length). The inside-to-outside flow allows for a high contaminant holding capacity. High flow and a long filter life make the ParMax™ an ideal choice for a wide variety of critical process applications.

**SPECIFICATIONS**

**Materials of Construction:**
- Media: RCP - polypropylene
- RMG - microfiberglass
- Support/Drainage: Polypropylene
- Hardware: Polypropylene
- O-rings: EPR, Buna-N, Viton®, silicone

**Retention Ratings (99.98%):**
- 1, 3, 4.5, 10, 20, 30, 40 and 90 µm

**Maximum Operating Conditions:**
- Maximum Temperature
  - 176°F (80°C) @ 30 psid (2.1 bar)
- Maximum Differential Pressure:
  - 70 psi (4.8 bar) @ 77°F (25°C)
  - 30 psi (2.1 bar) @ 176°F (80°C)

**Recommended Operating Conditions:**
- Flow Rate
  - Up to 175 gpm (662 lpm)/20” element
  - Up to 350 gpm (1325 lpm)/40” element
  - Up to 500 gpm (1892 lpm)/60” element
- Changeout Pressure: 35 psid (2.41 bar)

**APPLICATIONS**

- Process water
- Water
- Spirits
- Food and beverage

**BENEFITS**

- Large diameter yields much higher flow rates compared to traditional 2.5” filters
- High flow capacity permits use of fewer elements and cuts capital expenditure
- Inside-out flow pattern ensures positive capture of contaminants
- Absolute retention ratings for critical filtration
- All materials listed as acceptable for potable and edible contact according to CFR Title 21
- Manufactured with strict quality control
- Parker is an ISO9001:2000 Certified Division
Polyflow®’s random fiber polypropylene depth media provides long on-stream life and high retention efficiencies. While many polypropylene depth media are nominally rated and cannot meet their actual claimed retention efficiency, Polyflow® is engineered to meet exacting performance claims.

Parker’s innovative research team developed an exclusive calendering process that produces media with unsurpassed dirt-loading capacity. Before each lot of media is fabricated, the best calendering conditions are determined to ensure minimal lot-to-lot variability and peak product performance. The number of pleats for each filter rating has also been optimized to ensure maximum dirt-loading capacity and on-stream life.

Polyflow® is thermally bonded from 100% virgin polypropylene to ensure superior cleanliness and excellent chemical and thermal compatibility under harsh processing conditions.

**Benefits**
- Low extractables
- Absolute particle retention provides excellent protection for downstream filters
- Broad chemical compatibility allows use in most applications
- High flow rate, long service life reduces processing time

**Applications**
- General water filtration
- Beverage/wine clarification
- RO/DI prefiltration
- Waste water

**Specifications**

**Materials of Construction:**
- Depth media: Polypropylene
- Support layers: Polypropylene
- Structure: Polypropylene

**Maximum Differential Pressure/Temperature:**
- **Forward:** 80 psid (5.5 bar) @ 75°F (24°C)
- **Reverse:** 40 psid (2.8 bar) @ 75°F (24°C)
- 15 psid (1.0 bar) @ 140°F (60°C)

**Effective Filtration Area:**
- 2.4 ft² (0.22 m²) 5” (130 mm) cartridge
- 4.9 ft² (0.46 m²) 10” (250 mm) cartridge

**Filtration Ratings:**
- The 0.6 µm offers typical retention up to 99% efficiency.
- 1.2 µm, 2.5 µm, 5 µm, 10 µm, 20 µm, and 40 µm are up to 99.9% efficient at specified pore size

**Filtration Cleanliness:**
- Cartridge extractables
  - NVR < 35 mg per 10 inch (250 mm) cartridge

**Maximum Operating Temperature:**
- 160°F (71°C)

**Steam Sterilizable and Sanitizable:**
- Cartridges can be steam sterilized for multiple cycles at 266°F (130°C) or sanitized for at least ten 30-minute cycles with 176°F (80°C) water. They are compatible with most sanitizing agents.
Polyflow\textsuperscript{®}-G depth media has been developed for a wide variety of general process applications from fluid clarification to general prefiltration. Its high dirt-loading, random fiber polypropylene depth media provides consistent particle retention. Polyflow\textsuperscript{®}-G is thermally bonded from 100% virgin polypropylene to ensure clean filtrates and excellent chemical and thermal compatibility in the most demanding processing conditions.

Polyflow\textsuperscript{®}-G leads in overall reduction of filtration costs when compared to spunbonded, stringwound, and nominally rated pleated prefilter cartridges. Its longer filtration life reduces downtime due to fewer changeouts.

**Benefits**
- High flow rate and long service life reduce processing time
- Broad chemical compatibility allows use in most applications
- Thermally bonded construction minimizes extractables for cleaner filtrates

**Applications**
- Liquid clarification
- General water filtration
- Beverage/wine clarification
- RO/DI prefiltration

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**Specifications**

**Materials of Construction:**
- Depth media: Polypropylene
- Support layers: Polypropylene
- Structure: Polypropylene

All components are thermally bonded to ensure integrity and reduce extractables.

**Maximum Differential Pressure/Temperature:**
- **Forward**
  - 80 psid (5.5 bar) @ 75\(^\circ\)F (24\(^\circ\)C)
- **Reverse**
  - 40 psid (2.8 bar) @ 75\(^\circ\)F (24\(^\circ\)C)
  - 15 psid (1.0 bar) @ 140\(^\circ\)F (60\(^\circ\)C)

**Nominal Filter Ratings:**
- 0.2 µm, 0.5 µm, 1 µm, 3 µm, 10 µm, and 30 µm

**Effective Filtration Area:**
- 3.6 ft\(^2\) (0.33 m\(^2\)) per 10 inch (250 mm) cartridge

**Cartridge Extractables:**
- NVR < 35 mg per 10 inch (250 mm) cartridge

**Biological Safety:**
All components meet USP specifications for Class VI-121\(^\circ\)C Plastics criteria.

**Maximum Operating Temperature:**
- 160\(^\circ\)F (71\(^\circ\)C)

**Bulk Packaging:**
- 5' 12 per carton
- 10' 28 per carton
- 20' 12 per carton
- 30' 12 per carton
- 40' 9 per carton
Polyflow® Capsules feature a random fiber polypropylene depth matrix that provides superior retention efficiencies. In addition, the unique calendering process produces depth media with unsurpassed dirt-holding capacity that extends filter service life. Longer life leads to increased savings by requiring fewer filter Changeouts.

Polyflow® capsules are available in three sizes, enabling users to match the filters to actual batch sizes and minimize system hold-up volume. Cost savings result from the reduction of lost product, and by scaling the process properly to avoid excess filter capacity.

The encapsulated design maximizes efficiency by providing faster, easier Changeout without laborious cleaning procedures. Eliminating the need to open reusable housings for cartridge replacement minimizes the chance of introducing contamination into the process.

**SPECIFICATIONS**

**Materials of Construction:**
- Depth media: Polypropylene
- Support layers: Polypropylene
- Structure: Polypropylene
- Housing: Polypropylene

All components meet USP-XXIV Class VI-121°C criteria, and are thermally bonded to ensure integrity and reduce extractables.

**Maximum Differential Pressure/Temperature:**
- Forward: 70 psid (4.8 bar) @ 75°F (24°C)
- 35 psid (2.4 bar) @ 140°F (60°C)
- 20 psid (1.4 bar) @ 167°F (75°C)
- Reverse: 30 psid (2.1 bar) @ 75°F (24°C)

**Effective Filtration Areas:**
See reverse side for details

**Filtration Efficiency:**
1.2 µm, 2.5 µm, 5.0 µm, and 10.0 µm are 99.9% efficient at the specified pore size. The 0.6 µm capsule offers typical retention efficiency of up to 99%

**Cartridge Extractables:**
NVR < 3 mg per 10 inch (250 mm) capsule

**Autoclavable and Sanitizable:**
Can be autoclaved for up to 25 cycles at 275°F (135°C), or sanitized using most common cleaning agents

**BENEFITS**
- High flow rate reduces processing time
- Long service life minimizes Changeout frequency
- Broad chemical compatibility enables use in most applications
- High retention efficiency provides excellent protection for downstream filters
- Non-pyrogenic (per LAL test) for use in critical applications
- Custom ordering option allows different inlet/outlet fittings for specific needs

**APPLICATIONS**
- General water filtration
- Vent filtration
Polyflow® mini-cartridges feature a random fiber polypropylene depth matrix that provides superior retention efficiencies. In addition, the unique calendering process produces depth media with unsurpassed dirt-holding capacity extending service life. Longer product life brings to increased savings by requiring fewer filter Changeouts.

Polyflow® mini-cartridges match popular batch sizes and minimize hold-up volume. Cost savings result from reduction of lost product and by scaling the process properly to avoid wasting excess filter capacity.

**BENEFITS**
- High flow rate reduces processing time
- Long service life minimizes Changeout frequency
- Broad chemical compatibility enables use in a range of applications
- High retention efficiency provides excellent protection for downstream filters
- Non-pyrogenic (per LAL test) for use in critical applications
- End fitting provides a secure O-ring seal (-116) available in a number of materials
- Low hold-up volume

**APPLICATIONS**
- Small scale prefiltration
- General water filtration
- Vent filtration

**SPECIFICATIONS**

**Materials of Construction:**
- Depth Media: Polypropylene
- Support Layers: Polypropylene
- Structure: Polypropylene

**Maximum Differential Pressure/Temperature:**
- **Forward**
  - 70 psid (4.8 bar) @ 75°F (24°C)
  - 35 psid (2.4 bar) @ 140°F (60°C)
  - 20 psid (1.4 bar) @ 167°F (75°C)
- **Reverse**
  - 30 psid (2.1 bar) @ 75°F (24°C)

**Filtration Efficiency:**
- The 0.6 µm offers typical retention efficiency of up to 97-99%
- 1.2 µm, 2.5 µm, 5.0 µm, and 10.0 µm are 99.9% efficient at the specified pore size.

**Cartridge Extractables:**
- NVR < 3 mg per double size mini-cartridge
Fulflo® SWC Filter Cartridges

Economical filtration solutions with string-wound depth cartridges

Parker’s SWC Filter cartridge offers a wide range of fibers and core materials. Roving is wound onto a center core for strength. The diagonal pattern of the media forms a tight, interlocking weave. Parker has one of the world’s largest manufacturing plants for wound cartridges, offering superior quality with technical, engineering and marketing support.

**Benefits**

- Multiple length cartridges minimize changeout time, eliminate spacers and are available to fit competitive filter vessels
- Cotton and polypropylene materials are FDA listed as acceptable for potable and edible liquid contact according to CFR Title 21
- Continuous-strand roving geometry provides performance consistency
- Extended center core option eliminates the need for cartridge guides in competitive and Fulflo multi-cartridge vessels
- One-piece extended length center cores are available in tinned steel, 316 stainless steel and 304 stainless steel
- A special snap-in extender is available for polypropylene cores
- FDA grade polypropylene (DOE only) certified to ANSI/NSF61 standard for contact with drinking water components

**Applications**

- Water
- Potable liquids
- Prefilter for R.O. membranes
- Vegetable oils

**Specifications**

**Materials of Construction:**
- Polypropylene
- Cotton

**Maximum Recommended Operating Conditions:**

<table>
<thead>
<tr>
<th>Temperature</th>
<th>Polypropylene</th>
<th>Cotton</th>
</tr>
</thead>
<tbody>
<tr>
<td>200°F (93°C) with tinned steel or stainless steel cores</td>
<td>120°F (49°C) with polypropylene cores</td>
<td></td>
</tr>
<tr>
<td>250°F (121°C) with tinned steel or stainless steel cores; 120°F (49°C) with polypropylene cores</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Changeout ΔP</td>
<td>30 psi (2.1 bar)</td>
<td></td>
</tr>
<tr>
<td>ΔP @ Ambient Temperature</td>
<td>60 psi (4.1 bar)</td>
<td></td>
</tr>
<tr>
<td>Flow Rate</td>
<td>10 gpm (38 lpm) per 10-in length</td>
<td></td>
</tr>
</tbody>
</table>

**Nominal Removal Ratings:**

90% efficiency from 100 µm to 1 µm
Parker has been a leader in filter media innovation and performance since we invented the Honeycomb™ Filter tube over 65 years ago. Parker has the world’s largest manufacturing capacity for wound cartridges, offering superior quality with technical, engineering and marketing support.

Effective removal ratings at nominal 90% efficiency from 0.5 µm to 150 µm range.

**SPECIFICATIONS**

**Nominal Removal Ratings:**
@ 90% efficiency from 0.5 µm to 150 µm

**Maximum Recommended Operating Conditions:**
- Changeout ∆P: 35 psi (2.1 bar)
- ∆P @ Ambient Temperature: 60 psi (4.1 bar)
- Flow Rate: 10 gpm (38 lpm) per 10-in length
- Temperature: (See table on next page)

**Dimensions:**
- 1 in ID x 2-7/16 OD
- 3 in to 50-in lengths

**Wound Depth Cartridge Design and Function**
Wound cartridges provide true depth filtration utilizing thousands of tapered filtering passages of controlled size and shape. Each layer of roving contributes to true depth filtration by trapping its share of particles. Wound cartridges offer a gradual pressure increase during cartridge life versus surface-type media that have an abrupt flow cutoff when loaded. In addition, the irregular outer layer reduces surface blinding, assuring longer cartridge life and full cartridge dirt-holding capacity utilization.

**APPLICATIONS**
- Photo solutions
- Potable liquids
- Vegetable oils
- Amines
- Organic acids & solvents
- Prefilter for membranes
- Water
Parker has been a leader in filter media innovation and performance since we first invented the Honeycomb™ Filter tube over 65 years ago. Parker has the world's largest manufacturing capacity for wound cartridges, offering superior quality with technical, engineering and marketing support.

Effective removal ratings at nominal 90% efficiency at 0.5 µm.

**SPECIFICATIONS**

**Nominal Removal Ratings:**
@ 90% efficiency 0.5 µm

**Maximum Recommended Operating Conditions:**
- Changeout ∆P: 30 psi (2.1 bar)
- ∆P @ Ambient Temperature: 60 psi (4.1 bar)
- Flow Rate: 10 gpm (38 lpm) per 10 in length
- Temperature: (See table on next page)

**Dimensions:**
- 1 in ID x 2-7/16 OD
- 3 in to 50 in lengths

**Wound Depth Cartridge Design and Function**
Wound cartridges provide true depth filtration utilizing thousands of tapered filtering passages of controlled size and shape. Each layer of roving contributes to true depth filtration by trapping its share of particles. Wound cartridges offer a gradual pressure increase during cartridge life versus surface-type media that have an abrupt flow cutoff when loaded. In addition, the irregular outer layer reduces surface blinding, assuring both longer cartridge life and full cartridge dirt-holding capacity utilization.

**Ultrafine Wound Depth Cartridges for Critical Filtration Applications**
Ultrafine cartridges are a unique member of the Honeycomb™ wound depth cartridge family. They are specifically designed for critical filtration applications in the 0.5 µm range. When absolute 0.5 µm filtration is required, the nominal ultrafine cartridge can be used as a prefilter, significantly extending membrane life. Ultrafine cartridges remove 90% of particles larger than 0.5 µm in size. This type of filtration provides excellent protection for equipment or processes that must be protected from fine particles.

**APPLICATIONS**
- Prefilter for membranes
- Rinse water in semiconductor manufacturing
- Fine filtration for ultrasonic parts, washer solvents and other high-purity solvents
- Prefilter for industrial reverse osmosis equipment
MEGABOND PLUS™
Fixed-pore structure depth cartridges with high dirt-holding capacity & absolute rated filtration efficiency

Parker’s MegaBond Plus™ are absolute-rated depth cartridges. Using a new, innovative manufacturing process, the MBP has higher Dirt-holding capacities offering long service life and virtually no contaminant migration. The MBP has a fixed core inner structure of thermally-bonded, continuous microfine polypropylene fibers. The outer layer fixed pore structure has been modified to maximize the graded density surface area and enhance dirt-holding capacity.

**Benefits**
- Fixed pore structure provides absolute-rated filtration, consistent production yields and absolute particle retention
- Microfine, thermally-bonded fiber construction provides superior filtration and often eliminates the need for circulation to achieve product clarity
- Non-fiber-releasing, continuous fiber matrix prevents media migration and ensures consistent production yields and overall quality filtration performance
- No surfactants or binders are present to interrupt product quality or cause foaming
- DOE cartridges have polyolefin gaskets thermally bonded to both ends, eliminating fluid bypass between the cartridge and the vessel seal
- Superior inter-layer bonding eliminates contaminant unloading and channeling
- Unique outer graded density structure increases dirt-holding capacity
- Polypropylene fiber provides broad chemical compatibility for a variety of applications
- All materials of construction are FDA listed as acceptable for potable and edible liquid contact according to CFR Title 21
- Pore size differentiation is achieved using fibers of differing diameters and maintaining uniform density throughout the cartridge
- Pore sizes do not change as ∆P increases during service, providing consistent particle retention

**Applications**
- Membrane prefiltration
- DI water
- Food & Beverages
- Drinking water

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**Specifications**

<table>
<thead>
<tr>
<th>Materials of Construction:</th>
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<tbody>
<tr>
<td>Media</td>
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<tr>
<td>Center Support Core/End Caps</td>
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<tr>
<td>Thermally Bonded Gaskets</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Maximum Recommended Operating Conditions:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature</td>
</tr>
<tr>
<td>@ 60 psid (4.1 bar)</td>
</tr>
<tr>
<td>@ 35 psid (2.4 bar)</td>
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<tr>
<td>@ 15 psid (1.0 bar)</td>
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<tr>
<td>Flow Rate</td>
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<td></td>
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<td>Changeout ∆P</td>
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<tr>
<td>Operating Pressure</td>
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<tr>
<td>@ Ambient Temperature</td>
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<td></td>
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</tbody>
</table>
Parker’s DuraBond™ cartridges are the most economical high-strength filter cartridges available. Featuring an integral rigid, thermally-bonded construction, the DuraBond™ provides consistent filtration for a wide variety of fluids. Fulflo Durabond cartridges are available in nominal ratings (90%) of 1, 3, 5, 10, 25, 50, 75 and 100 microns.

**Benefits**
- Fixed pore structure provides efficiency, integrity and optimum particle retention
- Thermally-bonded bicomponent fiber matrix provides rigid, dimensionally stable construction without fiber migration
- Rigid construction eliminates contaminant unloading and channeling
- Corrugated porous surface maximizes dirt-holding capacity
- Silicone-free construction will not change coating properties
- FDA grade polypropylene (DOE only) certified to ANSI/NSF61 standard for contact with drinking water
- Polyolefin construction provides broad chemical compatibility for a variety of applications
- All materials of construction are FDA listed as acceptable for potable and edible liquid contact according to CFR Title 21
- DuraBond™ cartridges can be easily disposed by shredding, incinerating or crushing
- Double-open-end style is self-sealing without separate gasket material

**Applications**
- Potable water
- DI water
- R.O. prefiltration
- Membrane prefiltration
- Food & beverages

**Specifications**

**Materials of Construction:**
- Filter Medium: Thermal bonded bi-component matrix of polypropylene/polyethylene
- End Caps/Adapters (optional): Polyolefin copolymer

**Dimensions:**
- 1-1/16 in (27 mm) ID x 2-7/16 (62 mm) in OD
- 10, 20, 30, 40, and 50 in continuous nominal lengths.

**Maximum Recommended Operating Conditions:**
- Temperature: 175°F (80°C)
- Pressure: 100 psid (6.8 bar)@72°F (27°C)
  - 50 psid (3.4 bar)@175°F (80°C)
- Flow rate: 10 gpm (38 lpm) per 10-inch length
- Changeout ΔP: 30 psi (2.1 bar)
AVASAN™ FILTER CARTRIDGES
High purity melt-blown depth cartridges

Avasan™ (AVS) cartridges are manufactured by a proprietary melt-blown manufacturing process using a specially formulated polypropylene. This formulation provides a uniquely graded-density filter cartridge designed for high purity applications. The fiber matrix of the cartridge has been engineered to provide structural integrity throughout the filter’s long service life. The finish-free construction provides optimum fluid purity and eliminates foaming. Avasan’s broad fluid compatibility and graded density pore matrix make it the economical filter choice for high clarity requirements.

**SPECIFICATIONS**

**Materials of Construction**
- **Filter Medium**: 100% melt-blown polypropylene
- **End Caps/Adapters (optional)**: polyolefin copolymer
- **Seal Options**: Various; refer to Ordering Information

- All materials of construction are FDA listed as acceptable for potable and edible liquid contact according to CFR Title 21.
- Pending Certifications: NSF - Materials only

**Maximum Recommended Operating Conditions**
- **Temperature**
  - @ 50 psid (3.45 bar) 80°F (27°C)
  - @ 25 psid (1.7 bar) 140°F (60°C)
- **Changeout ∆P**: 35 psi (2.1 bar)

**APPLICATIONS**
- DI water
- R.O. prefiltration
- Food & beverages
- Potable water

**BENEFITS**
- Graded density construction provides consistent filtrate quality and excellent particle retention
- Continuous bonding of fibers throughout the filter matrix ensures non-fiber-releasing construction
- Superior inter-layer bonding provides true three-dimensional filtration and a construction that does not compress with increasing pressure
- All-polypropylene construction
- Finish-free construction provides optimum fluid purity and eliminates foaming
- All materials are biosafe in accordance with USP Class VI-121°C Plastic Test
- All materials listed as acceptable for potable and edible according to CFR Title 21
- Parker Division is ISO9000:2000 Certified
METALLIC FILTERS
Fulflo® Metallic Filter Cartridges

Optimize process filtration with high-integrity metallic cartridges

**SPECIFICATIONS**

**Materials of Construction:**
- Filter: Medium stainless steel wire cloth
- Structural Components: 100% stainless steel
- Construction Method: Welded and crimped (no adhesives)

Meets FDA guidelines with optional seal materials ("F" Code)

**Maximum Recommended Operating Conditions:**

- **Temperature**
  - 1500°F (816°C) NPTF and NPTM styles
  - 500°F (260°C) Any cartridge style with PTFE grommet
  - 400°F (204°C) Any cartridge style with Viton® or PFA encapsulated Viton® seal material
  - 300°F (149°C) Any cartridge style with EPDM seal material
  - 250°F (121°C) Any cartridge style with Buna N seal material

- **Differential Pressure**
  - Standard core: 60 psi (4.1 bar)
  - High pressure core: 300 psi (20.7 bar)

- **Flow Rate**
  - 10 gpm (38 lpm) per 10-inch cartridge
  - Changeout ∆P: 35 psi (2.4 bar)

- **Effective Filtration Area**
  - Cylindrical: 0.5 ft²/10-in length (465 cm²/254 mm)
  - Pleated: 1.7 ft²/10-in length (1580 cm²/254 mm)

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Parker’s Fulflo® stainless steel cartridges provide the optimum filtration solution for liquids and gases in high temperature and high flow rate applications.

Available in cylindrical or pleated designs, cleanable stainless steel cartridges are the logical choice when natural and synthetic media cartridges cannot meet aggressive process conditions.

Fulflo® reusable 304 and 316 stainless steel cartridges offer versatility of choice with fourteen nominal removal ratings, six standard lengths and a variety of end configurations and seal materials.

**BENEFITS**

- Dimensional integrity of stainless steel media accommodates high flow rate and high temperature systems
- Cartridges can be cleaned and reused
- Variety of seal configurations allow retrofit in many filter vessel designs
- Welded and crimped construction eliminates the need for adhesives which can be a contaminant source and limit temperature range
- Pleated surface maximizes filtration area for longer service life
- Plain (cylindrical) surface provides ease of cleaning
- Optional perforated stainless steel pleat protective sleeves minimize handling damage
- Meets FDA guidelines for use with potable liquids

**APPLICATIONS**

- Process steam
- Viscous fluids
- High temperature processes
BAG FILTERS
**FULFLO® FILTER BAGS**

Fulflo® Filter Bags provide high quality and consistent filtration performance

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**SPECIFICATIONS**

**Materials of Construction:**
- 316 stainless steel

**Maximum Recommended Operating Conditions:**
- Temperature
  - Polyester: 275°F (136°C)
  - Polypropylene: 200°F (94°C)
  - Monofilament Nylon Mesh: 275°F (136°C)
  - Multifilament Polyester Mesh: 275°F (136°C)

**Effective Removal Ratings:**
- 0.5 µm to 800 µm
- Flow Rate (Per single length)
  - Standard Bag: 80 gpm (303 lpm)
  - Changeout ∆P: 35 psi (2.4 bar)
- Pressure
  - 70 psid (4.8 bar)

**Bag Size:**
- C1: 7.5” X 17.5”
- C2: 7.5” X 31.5”
- G1: 7” X 17.5”
- G2: 7” X 31.5”

**Bag Media Selection:**
- **Felt:** Synthetic needled fabric offers cost-effective depth filtration. Particle retention ratings from 1 µm to 200 µm
- **Monofilament Mesh:** Single strand nylon with retention ratings from 100 µm to 600 µm
- **Glazed:** In polypropylene or polyester felts, the surface fibers are melt bonded to one another, reducing the possibility of fiber migration
- **Multifilament Mesh:** Strong fabric woven from twisted strands. Particle retention ratings from 150 µm to 800 µm

**Seal Options:**
- C: Plastic Quik-Seal™ Ring (polypropylene for P felt and polyester for PE felt)
- G: Steel Snap Ring

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**Fulflo® Filter Bags**

Fulflo® Filter Bags are ideal for virtually any process filtration application requiring the removal of solids. Parker’s Fulflo® Filter Bags are manufactured and tested under the strictest quality control standards to assure consistent performance. Parker’s Fulflo® Filter Bags perform at high flow rates and viscosities to 10,000 cps or higher.

**BENEFITS**

- Standard filter bags fit Fulflo® vessels and most major competitive models
- The “C” Style Fulflo® bag features a polypropylene Quik-Seal™ ring which effectively seals the bag into standard Parker bag vessels
- The “G” Style Fulflo® bag features a carbon steel snap ring for positive sealing in competitive vessels
- Fulflo® Quik-Seal™ option is available for all “G” style Fulflo® Filter Bag media
- Felt bags come standard with glazed surface treatment to effectively control migration of fibers into the filtered product
- Polypropylene felt (P) bags are suitable for incidental food contact per CFR Title 21

**APPLICATIONS**

- Beverages
- Prefilters for finer cartridges
- Edible oils
- Water
XLH FILTER BAGS

XLH high efficiency filter bags provide high quality filtration performance

**SPECIFICATIONS**

**Materials of Construction:**
- Microfiber: FDA grade polypropylene microfiber used in the XLH bag series assures high efficiency performance and is oil absorbent.

**Maximum Recommended Operating Conditions:**
- Temperature: 200°F (94°C)
- Flow Rate: 25 gpm (95 lpm)
- XLH Changeout ∆P: 35 psi (2.4 bar)
- Maximum Pressure: 70 psid (4.8 bar)

**Bag Media Selection:**
- Microfiber: FDA grade polypropylene microfiber used in the XLH bag series assures high-efficiency performance and is oil absorbent from 0.5 µm to 25 µm.

XLH Filter Bags are ideal for virtually any process filtration application requiring the removal of solids. Parker’s XLH filter bags are manufactured and tested under the strictest quality control standards to assure consistent performance. Parker’s XLH filter bags perform at high flow rates and viscosities to 10,000 cps or higher.

XLH high efficiency filter bags perform at efficiencies similar to depth cartridges. XLH bags are available in 0.5 µm, 1 µm, 2.5 µm, 10 µm and 25 µm particle retention ratings.

**BENEFITS**
- Parker’s XLH all-polypropylene high efficiency filter bags provide twice the dirt-holding capacity at a lower cost than many competitive bags and cartridges of the same micrometer rating.
- XLH bags require less frequent Changeout, less storage and disposal space, and are easy to install and remove.
- Each bag is incinerable (with Quik-Seal™ option), reducing filter disposal costs.
- All materials of construction are FDA listed as acceptable for potable and edible liquid contact according to CFR Title 21.

**APPLICATIONS**
- Water
- Beverages
- Prefilters for finer cartridges
- Edible oils
FULFLO® “LT” SERIES

Parker Fulflo® LT Series Polymeric Vessels are an ideal economical choice for low flow industrial and potable water applications. Standard and large diameter vessels accommodate 2-1/2 and 4-1/2 inch O.D. double-open-end Fulflo cartridges and meet FDA requirements for use with potable fluids. Both 10-in and 20-in vessels, with or without pressure relief vent, are available. Installation wrenches and brackets are optional.

**BENEFITS**

- Fulflo® polymeric vessels are available in two diameters and lengths, with or without relief vent
- The all polymeric, corrosion-resistant LT series vessels are economical alternatives to stainless steel vessels when high temperature and high pressure are not specified
- All models are made of materials that meet FDA requirements
- The LT model vessels provide both 1 in and 1-1/2 in NPT connection in same head
- Positive head-to-shell "stop" prevents over tightening
- Unique O-ring design ensures effective sealing by positive tangential contact and eliminates accidental misplacement
- LT model vessels are ideal for Fulflo® bonded, pleated and wound cartridges, as well as activated carbon core models MMCT-10, MC10-2, MC20-2 and MC30-2
- LTG model vessels are ideal for Fulflo® TruBind® 400 series cartridges and 4-1/2 in O.D. wound cartridges in double-open-end style
- Optional installation wrenches accommodate faster cartridge Changeout
- Mounting brackets are available for pipe and wall installation
- LT series vessels are tested to industry standards of Water Quality Association for burst pressure, seal integrity, and fatigue resistance

**APPLICATIONS**

- Potable water
- Beverages
- Bottled water
- DI water
- Food products
- Process water
- Post oil/water separator polishing
- Leisure/commercial shipping bilge water
- Industrial discharge water
- Compressor condensate
- Alkaline parts washing

**SPECIFICATIONS**

**Materials of Construction:**
White talc-reinforced polypropylene head with clear styrene Acrylonitrile (SAN) shell.

**Recommended Operating Conditions:**
- Maximum operating temperature: 125°F (52°C) @ 100 psi (6.9 bar)
- Maximum operating pressure: LT:150 psi (10.3 bar) @ 75OF (22OC)
- LTG: 125 psi. (8.6 bar) @75OF (22OC)

**Maximum Recommended Flow Rate:**
- LT10 6 gpm (23 lpm)
- LT20 12 gpm (45 lpm)
- LTG10 10 gpm (38 lpm)
- LTG20 20 gpm (76 lpm)

**Connection Dimensions**
- LT 3/4 in NPTF
- LTG 1 and 1 1/2 in NPTF (dual connection)

**Head-to-shell O-ring:**
- LT model 2-240 Buna N
- LTG model 2-358 Buna N

**Accepts Industry Standard Cartridge Sizes (Nominal):**

- **Lengths**
  - 9 13/16 in (249 mm)
  - 20 in (508 mm)
- **I.D.**
  - 1 1/16 in (27 mm)
- **O.D.**
  - 2 1/2 in (64 mm) - LT
  - 4 1/2 in (114 mm) - LTG

**Benefits**

- Potable water
- Post oil/water separator polishing
- Leisure/commercial shipping bilge water
- Industrial discharge water
- Compressor condensate
- Alkaline parts washing

- Beverages
- Process water
ADVANTAGE™ SANITARY VESSELS

Achieve sterile filtration of aqueous solutions, air and gas

SPECIFICATIONS

Design Features:
- All vessels have T-style inlet and outlet connection.
- Multiple element vessels have legs.
- Single element vessel is supported by piping only.
- Single element vessel design is non-code.
- Multiple element design vessels are ASME code design without stamp.
- Code stamp is optional.

Operating Conditions:
- Multiple element design pressure and temperature
  150 psig (10.3 bar) at 200°F (93°C) and full vacuum

- Hydrostatic Testing Conditions
  225 psig (15.5 bar)

- Single element design pressure and temperature
  250 psi (liquid), 125°F psi (gas) at 100°F (38°)

Parker’s Advantage sanitary electropolished filter vessels for sanitary applications provide the ultimate in vessel performance and durability for the most demanding, high purity liquid filtration requirements.

BENEFITS

- 316L stainless steel provides lasting durability, thermal, mechanical and chemical compatibility
- Exteriors are electropolished to 32 Ra for fast and easy surface cleaning
- Interiors are electropolished to a maximum of 25 Ra for fine, mirror-like finish which minimizes the risk of contamination, improves cleanability and enhances corrosion resistance
- Sanitary vents and drains facilitate sampling, integrity testing, venting, and safe and easy draining
- Machined filter cup ensures reduced holdup volume and proper O-ring seal for 222 or 226 single-open-end element seals
- Cast clamp closure for 1 round and swing bolt closure for multiple round vessels
- T-Style designs provide easy cartridge replacement without disconnecting lines
- Optional sanitary drain and vent valves enable complete drain age of liquids after filtration and simplify filter removal
- Triclamp flange inlets and outlets allow easy dismantling of parts for fast and simple cleaning
- Standard design is ASME code without stamp. Stamp is optional.

APPLICATIONS

- Pharmaceutical
- Veterinary
- Food & beverage
- Laboratory
- Medical & medical device
- Biotechnology