Industrial Process Filtration
A guide to products and services

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ENGINEERING YOUR SUCCESS.
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Parker domnick hunter specialises in the manufacture and supply of high quality products for the clarification, stabilisation and sterilisation of liquids and gases, providing full scalability from membrane flat stock to multi-element filter systems. Each filter has been specifically developed to meet industry applications and requirements.

As a company it is our goal to deliver innovative quality products on time whilst responding to the needs of the end user with premier customer service. We know our success is only possible through increasing our customers productivity and profitability.

Parker domnick hunter manufacture products in the most efficient, effective and environmentally conscious way building on a culture of continuous improvement.

With over 35 years filtration experience in markets such as pharmaceutical, beverage and water treatment we have developed innovative and cost effective solutions that will add value to your manufacturing process, providing reliable products and services that meet or exceed your expectations.

Our worldwide assistance extends to on-site evaluations, design, manufacture, validation, quality control and ongoing support long after the filters are installed.

With annual sales exceeding $10 billion, Parker Hannifin is the world’s leading diversified manufacturer of motion and control technologies and systems, providing precision-engineered solutions for a wide variety of commercial, mobile, industrial and aerospace markets. The company employs more than 52,000 people in 48 countries around the world, serving over 452,000 customers.

- Continued investment in research & technology
- Application driven approach to new products
- Market specific experience leading to tailored solutions
- Global network providing technical, service and sales support
- Excellent reputation gained through working with some of the world’s leading companies
- Highly skilled and trained employees
The Chemical industry employs processes, reactions and refining to produce a wide variety of solid, liquid and gaseous materials. Many are intermediates required for input into agricultural, rubber, plastics, textiles, petroleum and pulp & paper industries. Filtration is critical to ensure the long term life of equipment used in the manufacturing process.

The scope of filtration within the chemical sector is extremely diverse and many factors need consideration such as chemical compatibility, viscosity and operating temperatures. The varied applications can include products that are manufactured in ambient temperatures such as ethylene glycol, which makes the process ideally suited to our range of spunbonded & pleated polypropylene filters. Chemicals that are manufactured from more aggressive solvents will require a filter with componentry such as stainless steel like our Metallic & Prosteele range of filters, which can also withstand high temperature processes.

The flows of industrial process fluids such as water, solvents and chemicals can be subject to numerous filtration, separation and purification stages. Consequently each link in the filtration chain is critical to the strength of the next; the weakest link will break the chain and the process will collapse.

No matter what filtration challenges you may encounter in your chemical production process, Parker domnick hunter can supply products and expertise to help you meet the ever-increasing demand for greater purity, process efficiency and cost effective filtration.

<table>
<thead>
<tr>
<th>Chemical Filtration</th>
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<tbody>
<tr>
<td>Providing products to meet demanding applications</td>
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### Applications

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<th>Chemical</th>
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<tr>
<td>Aromatic derivatives</td>
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<tr>
<td>Bulk chemical filtration</td>
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<tr>
<td>Dyes and pigments</td>
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<tr>
<td>Hydrogen peroxide</td>
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<tr>
<td>Catalyst recovery</td>
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<td>DI water filtration</td>
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<td>Final product clarification</td>
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<td>Quench water</td>
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<td>Reactants</td>
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<table>
<thead>
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<th>Olefins and polyolefins</th>
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<table>
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<th>Feedstock filtration</th>
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<td>Polymer product recovery</td>
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<table>
<thead>
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<td>Melt polymer filtration</td>
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<td>Solvents</td>
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<tr>
<td>Feedstocks</td>
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<td>Pigment slurries</td>
</tr>
<tr>
<td>Intermediates</td>
</tr>
<tr>
<td>Spin pack protection</td>
</tr>
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</table>
Coatings Filtration
Allowing true colours to shine through

Parker can supply a wide range of filter cartridges suitable for the demands of the coatings industry. This industry produces high viscosity fluids, which are mixtures of resins, solvents, pigments and other additives that provide specific properties to the end product. The filtration of these fluids is essential to removing grit, agglomerates and other contaminants and to assure the desired properties for the coating, whilst having no affect on adhesion, colour and dispersion.

For many people, the word coatings is immediately associated with images of paint. However paint represents just one aspect of the incredibly diverse world of coatings that also includes highly viscous adhesives, high quality automotive coatings, inks, resins, photographic films, magnetic coatings etc, each application presents unique challenges when it comes to the type of filtration required.

There are several challenges to manufacturers of coatings, these include unnecessary recirculation of product, stripping of pigments & metallics, operator exposure to volatile organic compounds, contaminant fibres and the high viscosity of some of the products. High viscosities require a filter with the ability to withstand high differential pressures. Parker’s resin bonded depth filters achieve this through an outer spiral wrap that increases strength and also collects larger particulate and agglomerates allowing the inner layer to control particle size at the desired micron. Additionally these elements are manufactured silicone free, an essential attribute as it avoids adhesion problems associated with these compounds.

So whether your filtration requirements are for the removal of gels in adhesive, the classification of pigments in paint or the removal of contaminant in solvents, our diverse range of filtration solutions maximize operational performance in this most challenging of applications.
Water Filtration
Protecting a natural resource

In industrial applications water treatment is employed to optimise processes such as heating, cooling, processing, cleaning and rinsing. Typically filtration is required in areas where scaling and corrosion occur. In scaling, precipitated mineral salts build up on metal surfaces in layers, as these layers grow the efficiency of heat exchangers will reduce through the insulating effect of the scale and thus energy costs will increase. Corrosion can lead to similar problems, but can also compromise the integrity of systems.

In order to achieve the specific requirement for each application removal of material, undesirable chemicals and biological contaminants must be achieved. Parker offers the broadest range of filtration products for the water service industry. From sub micron filtration in water cutting technologies to scale and corrosion particulate removal in boiler feed and post turbine waters.

Process water is typically filtered in large volumes with filters primarily being used in desalination and municipal water plants. Due to the volume of water filtered in those applications there is a requirement for larger diameter cartridges such as the PARMAX and MAXGUARD elements which are ideal for general clarification. This is because every reverse osmosis plant and water municipality requires a good level of pre-filtration to avoid costly and time consuming replacement of fouled membrane filters. Our CARBOFLOW range of carbon filters, are highly effective in removing chlorine from process water, providing performance that exceeds industry requirements.

When it comes to industrial water filtration, Parker domnick hunter can provide cost effective filtration solutions to meet your every need.

<table>
<thead>
<tr>
<th>Applications</th>
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<tr>
<td>Water cutting</td>
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<tr>
<td>Desalination</td>
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<tr>
<td>RO membrane protection</td>
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<tr>
<td>Scale and rust removal</td>
</tr>
<tr>
<td>Boiler feed water</td>
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<tr>
<td>Post Turbine Water</td>
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</table>
Depth Filtration

Depth filtration is a process whereby a liquid is filtered through a depth of media. Two mechanisms are involved in the retention of particles, firstly mechanical retention, where the particle is restricted through interception with the media fibres. Secondly adsorptive forces adhere the particles to the media, characterised by hydrophobic and electrokinetic properties of the fibres.

Depth filters are manufactured using thick media that force the liquid through a tortuous path on its journey downstream. As the liquid progresses downstream particles are progressively trapped throughout the graduated density of fibres, the smaller particles in the more densely packed fibres towards the downstream surface.

TEXFLOW precision wound depth filters from Parker domnick hunter combine considerable dirt holding capacity with high flow rates and low pressure loss. Available in a wide range of materials they are suitable for either liquid or air applications.

SPUNFLOW filters from Parker domnick hunter are manufactured from thermally bonded polypropylene microfibres. Available in three grades they provide long life, low pressure loss and high dirt holding capacity.

BONDFLOW resin bonded filters provide disposable, low cost filtration ideal for viscous chemicals & solvents, allowing controlled depth filtration with uniform particle retention.
SPUNFLOW QA Filter Cartridges

- Liquid filters
- polypropylene, polyester / nylon

SPUNFLOW QA cartridges are a range of absolute rated, graded density filter elements, manufactured from thermally bonded microfibres layered onto a resilient centre core. The construction consists of numerous, distinctive filter zones with coarser outer layers acting as prefilters for the tighter, absolute rated central zone, this removal profile produces an element possessing high voids volume, which benefit the user through high flow rates, low pressure loss, high dirt holding capacity and long life.

The thermally bonded media also eliminates fibre migration and resists the tendency to unload during service. Available in two grades, polypropylene and polyester / nylon, the range offers extremely wide chemical compatibility.

Features and Benefits
- Absolute ratings from 0.5 to 120 micron
- Available in lengths up to 40" (1016 mm)
- Exhibits fast rinse up to 18 megohms in electronics duties
- 99.98% absolute efficiency

Performance Characteristics
- Absolute ratings from 0.5 to 120 micron
- Exhibits fast rinse up to 18 megohms in electronics duties
- 99.98% absolute efficiency

Specifications

Materials of Construction
- Filtration Media: Polypropylene
- End Caps: Polypropylene / Nylon

Recommended Operating Conditions
- Maximum Temperature: Polypropylene - 135°C (275°F), Polyester / Nylon - 135°C (275°F)
- Maximum Differential Pressure: 4 bar at 20°C (68°F)
- Maximum Recommended Differential Pressure: 2 bar (29 psid)

Cleaning and Sterilisation
- SPUNFLOW QA can be repeatedly steam sterilised in situ or autoclaved up to 130°C (266°F). They can be sanitized with hot water at up to 90°C and are compatible with a wide range of chemicals.

Dimensions
- Outside diameter: 64 mm (2.52")
- Inside diameter: 29 mm (1.14")
- Other lengths available upon request

Ordering Information

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<th>Material</th>
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<td>Polyester / Nylon</td>
<td>AT12</td>
<td>90 µm</td>
</tr>
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<td>31</td>
<td>Polyester / Nylon</td>
<td>AT13</td>
<td>120 µm</td>
</tr>
</tbody>
</table>

Cleaning and Sterilisation
- SPUNFLOW QA can be repeatedly steam sterilised in situ or autoclaved up to 130°C (266°F). They can be sanitized with hot water at up to 90°C and are compatible with a wide range of chemicals.

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Graded density, high porosity, SPUNFLOW QN filter elements are manufactured from thermally bonded polypropylene microfibres. Offering high throughputs, low pressure loss, high dirt-holding capacity and long onstream life, the bonded fibre construction minimises any possibility of fibre migration and is rugged enough to resist particle shedding, even under pulse conditions.

The SPUNFLOW construction process consists of controlled fibre diameter throughout the extrusion process and thermally bonds these micro-fibres into a complex filter matrix. These interlinked graded density layers offer maximum support and maximum void volume resulting in true depth filtration.

**Features and Benefits**
- Thermally bonded polypropylene
- 0.5 to 250 microns
- High throughputs
- Low pressure loss
- 90% nominal rated

**Performance Characteristics**

![Graph showing performance characteristics](image)

10" Size (250 mm) Cartridge

**Specifications**

**Materials of Construction**
- Filtration Media: Polypropylene
- End Caps: Polypropylene

**Dimensions**
- Standard Cartridge: Outside diameter: 42mm (1.64") x Inside diameter: 29mm (1.14")
- Endcapped Cartridge: Outside diameter: 46mm (1.81") x Inside diameter: 27mm (1.06")

**Recommended Operating Conditions**
- Maximum Temperature: Polypropylene - 65°C (149°F)
- Maximum Differential Pressure: 4 bar at 20°C (68°F)
- Maximum Recommended Differential Pressure: 2 bar (29psid)

**Applications**
- Solvents
- Resins
- High purity chemicals
- Industrial coatings
- Lubricants
- Bulk inks

**Ordering Information**

<table>
<thead>
<tr>
<th>Code</th>
<th>Length (Nominal)</th>
<th>Code</th>
<th>Material</th>
<th>Code</th>
<th>Micron</th>
</tr>
</thead>
<tbody>
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<td>9.75&quot; (247 mm)</td>
<td>30</td>
<td>DOE</td>
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**Minimum Box Quantity**
- 10": 40
- 20": 20
- 30": 20
- 40": 20

**Applications**
- Solvents
- Resins
- High purity chemicals
- Industrial coatings
- Lubricants
- Bulk inks

**Parker Domnick Hunter** has a continuous policy of product development and although the Company reserves the right to change specifications, it attempts to keep customers informed of any alterations. This publication is for general information only and customers are requested to contact our Process Filtration Sales Department for detailed information and advice on a product’s suitability for specific applications. All products are sold subject to the company’s Standard conditions of sale.
SPUNFLOW QE are the economical choice for applications where high removal efficiency and low filtration costs are important. Graded density, high porosity, SPUNFLOW QE filter elements are manufactured from thermally bonded Polypropylene microfibres. Offering high throughputs, low pressure loss, high dirt holding capacity and long onstream life, the bonded fibre construction minimises any possibility of fibre migration and is rugged enough to resist particle shedding, even under pulse conditions.

SPUNFLOW QE filters have excellent chemical resistance and contain no surfactants, resins, binders nor adhesives. The fibre matrix has been engineered to provide structural integrity throughout the long service life of the cartridge and finish free construction provides optimum fluid purity and eliminates foaming.

Features and Benefits

- Thermally bonded polypropylene
- 3 to 75 microns
- High dirt holding capacity
- High throughputs
- Low pressure loss
- 99% efficiency

Performance Characteristics

![Graph](Image)

 orderId=1250

Other lengths available upon request

Specifications

<table>
<thead>
<tr>
<th>Materials of Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filtration Media: Polypropylene</td>
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<td>End Caps: Polypropylene</td>
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Recommended Operating Conditions

- Maximum Temperature: Polypropylene - 65°C (149°F)
- Maximum Differential Pressure: 4 bar (58 psid) at 20°C (68°F)
- Maximum Recommended Differential Pressure: 2 bar (29 psid)

Cleaning and Sterilisation

Elements can be autoclaved at 121°C (250°F) for 30 minutes and are compatible with a wide range of chemicals.

Ordering Information

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<td>10¨ (254 mm)</td>
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<td>19.50¨ (500 mm)</td>
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<tr>
<td>20</td>
<td>20¨ (508 mm)</td>
</tr>
<tr>
<td>29</td>
<td>29.50¨ (750 mm)</td>
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<tr>
<td>30</td>
<td>30¨ (762 mm)</td>
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<td>39</td>
<td>39.25¨ (1000 mm)</td>
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<td>40¨ (1016 mm)</td>
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<table>
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<thead>
<tr>
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</thead>
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<td>DOE</td>
</tr>
<tr>
<td>2 F</td>
<td>Flat / 226</td>
</tr>
<tr>
<td>3 F</td>
<td>Flat / 222</td>
</tr>
<tr>
<td>6 F</td>
<td>Flat / 118 / 020</td>
</tr>
<tr>
<td>7 F</td>
<td>Fin / 226</td>
</tr>
<tr>
<td>8 F</td>
<td>Fin / 222</td>
</tr>
<tr>
<td>9 F</td>
<td>213</td>
</tr>
<tr>
<td>X E</td>
<td>Ext Core</td>
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<table>
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<tbody>
<tr>
<td>X</td>
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<tr>
<td>E</td>
<td>EPDM</td>
</tr>
<tr>
<td>N</td>
<td>Nitrile</td>
</tr>
<tr>
<td>P</td>
<td>PE</td>
</tr>
<tr>
<td>S</td>
<td>Silicone</td>
</tr>
<tr>
<td>V</td>
<td>Viton**</td>
</tr>
</tbody>
</table>

Applications

- Chemicals
- Water treatment
- Solvents
- Emulsions
- Pigment slurries
- Guard filtration

Parker domnick hunter has a continuous policy of product development and although the Company reserves the right to change specifications, it attempts to keep customers informed of any alterations. This publication is for general information only and customers are requested to contact our Process Filtration Sales Department for detailed information and advice on a product’s suitability for specific applications. All products are sold subject to the company’s Standard conditions of sale.

**Viton is a registered trademark of E.I. DuPont de Nemours & Co., Inc.
DURABOND Filter Cartridges

- thermally bonded
- polypropylene / polyethylene

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. Its fixed pore structure acts as a sieve-like particle ‘classification’ filter for pigmented coatings allowing pigments to pass while stopping large agglomerates.

Features and Benefits

- Fixed pore structure provides efficiency, integrity and optimum particle retention
- Thermally bonded bicomponent fibre matrix provides rigid dimensionally stable construction without fibre migration
- Rigid construction eliminated contaminant unloading and channeling
- Corrugated porous surface maximises dirt holding capacity
- Silicone free construction will not change coating properties

Performance Characteristics

<table>
<thead>
<tr>
<th>10¨ Size (250 mm) Cartridge</th>
<th></th>
</tr>
</thead>
</table>

Features and Benefits

- Fixed pore structure provides efficiency, integrity and optimum particle retention
- Thermally bonded bicomponent fibre matrix provides rigid dimensionally stable construction without fibre migration
- Rigid construction eliminated contaminant unloading and channeling
- Corrugated porous surface maximises dirt holding capacity
- Silicone free construction will not change coating properties

Ordering Information

- 1 1 µm | 3 3 µm | 5 5 µm | 10 10 µm | 15 15 µm | 25 25 µm | 50 50 µm | 75 75 µm | 100 100 µm

Applications

- Photographic chemicals
- Plating solutions
- Bleach
- Organic solvents
- Membrane prefiltration
- Industrial coatings
- Magnetic coatings
- Proteinase fluids

Retention Characteristics

The retention characteristics of DURABOND filter cartridges have been determined by a single-pass technique using suspensions of ISO 12103 Pt. 1 A2 Fine and A4 Course test dust in water.

Specifications

Materials of Construction

- Filtration Media: Thermal Bonded bicomponent matrix of polypropylene / polyethylene
- End Caps / Adapters: Polyolefin copolymer (optional)
- Seal Options: Refer to ordering information

Dimensions

1-1/16 in (27 mm) | 2-7/16 (62 mm) in OD

Recommended Operating Conditions

Maximum Temperature
80°C (175°F)

Maximum Differential Pressure
6.8 bar (100 psid) at 27°C (72°F)
3.4 bar (50 psid) at 80°C (175°F)

Maximum Flow Rate
18.9 lpm per 10¨ in length

Changeout dP
2.1 bar (30 psid)

Retention Characteristics

The retention characteristics of DURABOND filter cartridges have been determined by a single-pass technique using suspensions of ISO 12103 Pt. 1 A2 Fine and A4 Course test dust in water.

Performance Characteristics

<table>
<thead>
<tr>
<th>Differential Pressure (mbar)</th>
<th>0</th>
<th>2.5</th>
<th>5</th>
<th>7.5</th>
<th>10</th>
<th>15</th>
<th>20</th>
<th>30</th>
<th>40</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow (L / min) @ 20 °C</td>
<td>1</td>
<td>3</td>
<td>5</td>
<td>7.5</td>
<td>10</td>
<td>15</td>
<td>20</td>
<td>30</td>
<td>40</td>
</tr>
</tbody>
</table>

Micro Rating at Various Efficiencies
99.90% 99% 95% 90%

| 1000 | 100  | 20  | 10  |
| 10   | 3    | 5   | 4   |
| 25   | 10   | 20  | 15  |
| 50   | 25   | 50  | 30  |
| 75   | 50   | 75  | 50  |
| 100  | 50   | 100 | 75  |

Applications

- Photographic chemicals
- Plating solutions
- Bleach
- Organic solvents
- Membrane prefiltration
- Industrial coatings
- Magnetic coatings
- Proteinase fluids

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Contact Information

+44 (0)114 269 3999
dhtechnologies@parker.com
dwww.domnickhunter.com
Parker’s PROBOND cartridges have a unique proprietary two-stage filtration design to maximise particle removal and service life in viscous fluid applications.

An outer spiral prefilter wrap increases cartridge strength and eliminates residual debris associated with conventional, machined, resin bonded cartridges. This outer wrap collects large particles and agglomerates whilst the inner layers control the particle removal at the rated size. Construction utilizes a phenolic resin impregnation resulting in a cartridge strong enough for use with fluid viscosities up to 3000 centipoise.

PROBOND filter cartridges are available in eight differentiated removal ratings from 2 to 150 micron pore sizes to meet a wide range of performance requirements.

**Features and Benefits**
- Outer, spiral wrap collects large particles and agglomerates, while inner layers control particle size
- Silicone-free construction ensures no contamination to adversely affect adhesion properties of coatings
- Extra-long acrylic fibres provide added strength; resist breakage and migration common with short fibre cartridges
- One-piece construction eliminates bypass concerns with multi-length cartridges and eases change-out

**Performance Characteristics**

**Nomograph for Nominal 10” PROBOND Filter Cartridge**

**Recommended Operating Conditions**

**Environmental / Chemical Compatibility**
- Certified silicone free
- Suitable for weak acids and bases (pH 5-9)
- Not suitable for oxidising agents
- Not suitable for FDA applications

**Applications**
- Adhesive coatings
- Organic chemicals
- Polymers synthetic and natural
- Industrial coatings
- Pigment slurries

**Ordering Information**

*Viton is a registered trademark of E.I. DuPont de Nemours & Co., Inc.
Performance Characteristics

- Liquid filters
- Wound depth filters

TEXFLOW precision wound depth filter cartridges are manufactured to give a considerable dirt holding capacity coupled with high flow rates and low pressure loss. TEXFLOW elements consist of a perforated support core of plastic or metal onto which yarn is wound at a pre-set rate, providing each rating of element with its own distinctive winding pattern and performance.

During the winding process the yarn is usually brushed (or napped). This has the effect of increasing the working area of the elements thus providing a higher dirt holding capacity whilst maintaining the rigid structure. Although the cartridges are mainly for liquid filtration, they can also be employed for gases. Other fibres such as polyester, cotton, nylon can operate at higher temperatures and have differing chemical compatibility. For very high temperatures and for very strong oxidising agents, glass fibre elements are used. Glass fibre elements are fitted with voiles and stainless steel cores as standard, other baked glass fibre elements are used. Glass fibre elements are mainly for liquid filtration, they can also be employed for gases.

Features and Benefits

- Protection of absolute filters
- Wide chemical compatibility
- High dirt holding capacity
- Filter ratings from 0.5 to 100 microns

Recommended Operating Conditions

Max Temperature

- Polyester: 60°C (140°F)
- Polypropylene: 93°C (200°F)
- Glass Fibre: 121°C (250°F)
- Glass / Nylon: 149°C (300°F)
- Glass / Poly: 121°C (250°F)
- 316 Stainless Steel: 199°C (390°F)
- 304 Stainless Steel: 121°C (250°F)
- Polypropylene: 162°C (325°F)
- 304 Stainless Steel: 162°C (325°F)
- 316 Stainless Steel: 199°C (390°F)
- Cotton: 76°C (170°F)
- Nylon: 106°C (223°F)
- Glass / Poly: 149°C (300°F)
- Glass Fibre: 399°C (750°F)
- Tinned Steel: 76°C (170°F)
- 304 Stainless Steel: 149°C (300°F)
- 316 Stainless Steel: 199°C (390°F)
- 304 Stainless Steel: 199°C (390°F)
- 316 Stainless Steel: 249°C (480°F)
- Cotton: 76°C (170°F)
- Nylon: 106°C (223°F)
- Glass / Poly: 149°C (300°F)
- Glass Fibre: 399°C (750°F)
- Tinned Steel: 76°C (170°F)
- 304 Stainless Steel: 149°C (300°F)
- 316 Stainless Steel: 199°C (390°F)
- Polyester: 121°C (250°F)
- Glass Fibre: 399°C (750°F)

Maximum Operating Pressure

- 4 barg (58 psi)
- 2 barg (29 psi)

Applications

- Process water
- Plating baths
- Phosphate baths
- Multi polymer filtration
- Spin pack protection
- Polyester

Ordering Information

- Code
- Length (Nominal)
- Micron
- Core Type
- Diameter

Recommended Changeout Pressure

- Polyester: 60°C (140°F)
- Polypropylene: 93°C (200°F)
- Glass Fibre: 121°C (250°F)
- Glass / Nylon: 149°C (300°F)
- Glass / Poly: 121°C (250°F)
- 316 Stainless Steel: 199°C (390°F)
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- 316 Stainless Steel: 199°C (390°F)
- Polyester: 121°C (250°F)
- Glass Fibre: 399°C (750°F)
- Tinned Steel: 76°C (170°F)
- 304 Stainless Steel: 149°C (300°F)
- 316 Stainless Steel: 199°C (390°F)
- Polyester: 121°C (250°F)

Cleaning and Sterilisation

TEXFLOW filters can be back-washed for extended life, but generally are treated as "disposable filters".

Specifications

Materials of Construction

- Filtration Media: Polyester
- Inner Support Core: Polyester
- Outer Support Core: Polyester

Recommended Operating Conditions

Maximum Operating Pressure

- 4 barg (58 psi)
- 2 barg (29 psi)

Cleaning and Sterilisation

TEXFLOW filters can be back-washed for extended life, but generally are treated as "disposable filters".

Applications

- Process water
- Plating baths
- Phosphate baths
- Multi polymer filtration
- Spin pack protection
- Polyester

Ordering Information

- Code
- Length (Nominal)
- Micron
- Core Type
- Diameter

Recommended Changeout Pressure

- Polyester: 60°C (140°F)
- Polypropylene: 93°C (200°F)
- Glass Fibre: 121°C (250°F)
- Glass / Nylon: 149°C (300°F)
- Glass / Poly: 121°C (250°F)
- 316 Stainless Steel: 199°C (390°F)
- 304 Stainless Steel: 121°C (250°F)
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- 316 Stainless Steel: 199°C (390°F)
- Polyester: 121°C (250°F)
- Glass Fibre: 399°C (750°F)
- Tinned Steel: 76°C (170°F)
- 304 Stainless Steel: 149°C (300°F)
- 316 Stainless Steel: 199°C (390°F)
- Polyester: 121°C (250°F)
Pleated Filters

Pleated filters from Parker domnick hunter use a greater surface area over traditional wound and meltblown filters to give higher flow rates with excellent retention efficiency. Pleated chemical filters come with a wide range of micron ratings from 0.05 to 100. Specifically designed optimised pleating provides a filter that delivers excellent long term performance in the harshest of process environments.

POLYFLOW® II G filters are thermally bonded from 100% polypropylene to ensure clean filtrates and excellent thermal and chemical compatibility in the most demanding processing conditions. The random fibre polypropylene depth media provides consistent particle retention.

FLUOROFLOW filters feature an all-fluoropolymer construction that provides excellent chemical resistance when used to filter acids, bases & solvents. Available in a wide range of micron ratings, FLUOROFLOW filters are also available in a variety of lengths and different end cap styles, making them easy to retrofit existing products.
POLYFLOW II's random fibre 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 II has been engineered to meet exacting performance claims.

The all polypropylene construction ensures a broad range of chemical compatibility making POLYFLOW II cartridges particularly suitable for the filtration of aggressive and viscous chemicals and solvents. They do not suffer from hydrolysis in aggressive solutions which would result in the contamination of the process fluid.

Extensive research has resulted in filter media with continuously graded fibre density giving progressively finer particulate retention through the depth of the media. This combined with optimised media pleating density gives POLYFLOW II cartridges exceptional lifetime performance.

Features and Benefits

- Available in 0.6 to 30 micron
- Available in Disposable and Demi format
- Absolute rated beta 10,000

Performance Characteristics

**Differential Pressure (mbar)**

<table>
<thead>
<tr>
<th>Flow (L / min) @ 20°C</th>
<th>0</th>
<th>5</th>
<th>10</th>
<th>15</th>
<th>20</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.6 µm</td>
<td>100</td>
<td>120</td>
<td>140</td>
<td>160</td>
<td>180</td>
</tr>
<tr>
<td>1.2 µm</td>
<td>200</td>
<td>240</td>
<td>280</td>
<td>320</td>
<td>360</td>
</tr>
</tbody>
</table>

**Absolute rated beta 10,000**

- Flow (L / min) @ 20°C: 0.6 µm, 1.2 µm, 3.0 µm, 6.0 µm
- Differential Pressure (mbar): 0 to 360

**Applications**

- Solvent filtration
- Liquid clarification
- Recirculating liquid
- Steam sterilisation
- Reagent-grade chemicals
- Final product clarification
- Feedstock filtration

**Specifications**

**Materials of Construction**

- Fibre Media: Polypropylene
- Upstream Support: Polypropylene
- Downstream Support: Polypropylene
- Inner Support Core: Polypropylene
- Outer Protection Cage: Polypropylene
- End Caps: Polypropylene

**Standard gaskets**

- Polypropylene (if specified)

**Recommended Operating Conditions**

Up to 70 °C (158 °F) continuous operating temperature and higher short-term temperatures during CIP to the following limits:

<table>
<thead>
<tr>
<th>Temperature (°C)</th>
<th>Max. Forward D.P. (mbar)</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>2</td>
</tr>
<tr>
<td>40</td>
<td>4</td>
</tr>
<tr>
<td>60</td>
<td>6</td>
</tr>
<tr>
<td>80</td>
<td>8</td>
</tr>
<tr>
<td>100</td>
<td>10</td>
</tr>
</tbody>
</table>

**Recommended Rinse Volume**

Prior to use – 10 litres per 10¨ (250 mm) cartridge.

**Effective Filtration Area (EFA)**

- 10¨ (250 mm) cartridge: 0.5 m² (5.38 ft²)

**Steam Sterilisation**

POLYFLOW II cartridges can be repeatedly steam sterilised in situ or autoclaved at up to 130°C (266°F). They are all compatible with most sanitising agents.

**Retention Characteristics**

The retention characteristics of POLYFLOW II have been determined by a single-pass technique using suspensions of ISO 12103 Part 1 A2 Fin and A4 course test dust in water.

**Ordering Information**

**Cartridges**

- Code | Insert style | Code | Max. Flow (m³/hr) |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>224</td>
<td>224 Internal</td>
<td>220</td>
<td>0.50</td>
</tr>
<tr>
<td>226</td>
<td>226 Internal</td>
<td>223</td>
<td>1.00</td>
</tr>
<tr>
<td>228</td>
<td>228 Internal</td>
<td>222</td>
<td>2.00</td>
</tr>
</tbody>
</table>

**Capsules**

- Code | Style | 3mm (0.125¨) | 5mm (0.200¨) |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>22</td>
<td>B</td>
<td>5* FEP Viton</td>
<td>2* Silicone</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5* FEP Silicone</td>
<td>2* Silicone</td>
</tr>
</tbody>
</table>

**Demi Cartridges**

- Code | Style |
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>22</td>
<td>MDBMM</td>
</tr>
</tbody>
</table>

**Filtration Media**

- Polypropylene

**Inner Support Core**

- Polypropylene

**Outer Protection Cage**

- Polypropylene

**End Caps**

- Polypropylene

**Standard gaskets**

- Polypropylene (if specified)

**Performance Characteristics**

- Flow (L / min) @ 20°C
- Differential Pressure (mbar)

**Applications**

- Solvent filtration
- Liquid clarification
- Recirculating liquid
- Steam sterilisation
- Reagent-grade chemicals
- Final product clarification
- Feedstock filtration

**Contact Information**

- Filtration Sales Department
- +44 (0)114 269 3999

**POLYFLOW II Filter Cartridges**

- liquid filters
- polypropylene
POLYFLOW II 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-fibre polypropylene depth media provides consistent particle retention. POLYFLOW II G is thermally bonded from 100% polypropylene to ensure clean filtrates and excellent chemical and thermal compatibility in the most stringent of processing conditions. POLYFLOW II G leads in overall reduction of filtration costs when compared to spunbonded, stringwound, and nominally-rated pleated prefller cartridges. Its longer filtration life reduces downtime due to change-outs.

Features and Benefits

- High flow rate / long service life reduces processing
- Broad chemical compatibility allows use in most applications
- Available in 0.2 to 30 micron
- 80% efficiency

Performance Characteristics

Flow (L/min) vs Differential Pressure (mbar)

10" Size (250 mm) Cartridge

Specifications

Materials of Construction
- Filtration Media: Polypropylene
- Upstream Support: Polypropylene
- Downstream Support: Polypropylene
- Inner Support Core: Polypropylene
- Outer Protection Cage: Polypropylene
- End Caps: Polypropylene
- End Cap Insert: Polypropylene
- Standard o-rings/gaskets: Nitrile

Recommended Operating Conditions

Up to 70 °C (158 °F) continuous operating temperature and higher short-term temperatures during CIP to the following limits:

<table>
<thead>
<tr>
<th>Temperature °C</th>
<th>Max. Forward dP (bar)</th>
<th>Max. Forward dP (psid)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>~3.5</td>
<td>52.5</td>
</tr>
<tr>
<td>40</td>
<td>~2.5</td>
<td>35.7</td>
</tr>
<tr>
<td>60</td>
<td>~1.5</td>
<td>21.4</td>
</tr>
<tr>
<td>80</td>
<td>~1.0</td>
<td>14.5</td>
</tr>
<tr>
<td>&gt;100 (steam)</td>
<td>~0.3</td>
<td>4.0</td>
</tr>
</tbody>
</table>

Effective Filtration Area (EFA)

10" (250 mm) 0.33 m² (3.22 ft²)

Ordering Information

<table>
<thead>
<tr>
<th>Code</th>
<th>Insert style</th>
</tr>
</thead>
<tbody>
<tr>
<td>001</td>
<td>DOE (C)</td>
</tr>
<tr>
<td>003</td>
<td>DOE</td>
</tr>
<tr>
<td>004</td>
<td>Flat / 226</td>
</tr>
<tr>
<td>005</td>
<td>Flat / 222</td>
</tr>
<tr>
<td>006</td>
<td>Flat (1) 020 (2) / Internal</td>
</tr>
<tr>
<td>007</td>
<td>Fin / 226</td>
</tr>
<tr>
<td>008</td>
<td>Fin / 222</td>
</tr>
<tr>
<td>009</td>
<td>213 / Internal / O-ring DOE</td>
</tr>
<tr>
<td>010</td>
<td>213 / Internal / O-ring recessed blank</td>
</tr>
<tr>
<td>011</td>
<td>222 / Recessed Blank</td>
</tr>
</tbody>
</table>

Recommended Applications

- Solvent filtration
- Liquid clarification
- Reagent-grade chemicals
- Recirculating liquid
- Reagent-grade chemicals
GLAS-TECH II filter cartridges offer an economical prefiltration solution for both liquids and gases. Providing excellent flow rates and long service life with an exceptional ability to retain both deformable and non-deformable particles.

GLAS-TECH II is made using components of construction that provide optimal results in a wide variety of prefiltration applications. GLAS-TECH II cartridge is a nominally-rated borosilicate microfibre depth matrix that has an exceptionally high dirt-holding capacity. The natural, positive charge of the glass fibre also aids in the retention of negatively charged particulates such as colloidal materials.

Thermal bonding helps to ensure stability through multiple steam cycles. The pleat geometry for each micron rating has been individually optimised to ensure stability through long service life and maximum dirt-loading in the most stringent of processing conditions.

Features and Benefits
- High flow rate reduces processing time
- Long service life minimises change-out frequency
- Thermally resistant for use under aggressive conditions
- Natural positive charge enhances particle retention
- Thermally bonding helps to ensure stability through multiple steam cycles. The pleat geometry for each micron rating has been individually optimised to ensure stability through long service life and maximum dirt-loading in the most stringent of processing conditions.

Performance Characteristics

Features and Benefits

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- Thermally bonding helps to ensure stability through multiple steam cycles. The pleat geometry for each micron rating has been individually optimised to ensure stability through long service life and maximum dirt-loading in the most stringent of processing conditions.

Performance Characteristics

- High flow rate reduces processing time
- Long service life minimises change-out frequency
- Thermally resistant for use under aggressive conditions
- Natural positive charge enhances particle retention
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PLEATFLOW Filter Cartridges

- Liquid filters
- Polyester, glass fibre, polypropylene, cellulose

The PLEATFLOW range of filter cartridges offer the ideal solution for pre and final filtration of a wide variety of process liquids and gases, giving long service life at minimal cost. PLEATFLOW filter’s offer an absolute rated, cost effective, high surface area pleated process filters.

PLEATFLOW is manufactured utilising graded density media, and is available in a variety of materials, making the filter suitable for use in a wide range of process applications. The 100% polypropylene hardware construction of the filter cartridge ensures minimum extractable levels with a range of industrial solvents and gases, and guaranteed integrity when used in physically demanding applications.

### Features and Benefits
- Absolute rating from 1.0 to 75 microns
- Endcaps available to retrofit all standard industry housings
- Available in 4” to 40” formats
- Minimum extractables with industrial solvents and gases

### Performance Characteristics

- Flow (L/min) for liquid @ 20°C

![Graph showing flow characteristics](image)

### Effective Filtration Area

- Polyester up to 0.55 m² (5.9 ft²) per 250 mm (10” module)
- Glass fibre up to 0.48 m² (5.2 ft²) per 250 mm (10” module)

### Ordering Information

**Note:** PLEATFLOW GF and PP cartridges can be manufactured to meet the requirements of the food processing industry and are designed to operate at a maximum working temperature of 65°C (149°F) and maximum differential pressure of 4 barg. If applications require temperatures and pressures beyond these limits Parker domnick hunter can fit elements with stainless steel cores and end caps.

---

**Applications**
- Re-circulating liquids
- Reagent grade chemicals
- Make-up and wash waters
- Membrane prefiltration
- Oils and acids
- Alkalis
- Solvents
- Catalytic recovery

---

**Specifications**

**Materials of Construction**

- Filtration Media: Polyester
- Glass Fibre / Polyester
- Cellulose
- Polypropylene / Polyester
- Polypropylene

- Inner Support Core: Polypropylene / Stainless Steel
- Outer Protection Cage: Stainless Steel
- Endcaps: Polypropylene / Nylon

**Recommended Operating Conditions**

- Maximum Temperature: 65°C (149°F)
- Maximum Differential Pressure: 4 barg
- Recommended Changeout Pressure: 2.5 barg (36 psid)

**Differential Pressure (mbar)**

- 10 1.0
- 20 5.0
- 30 10.0
- 40 15.0
- 50 20.0

**Flow (L/min) for liquid @ 20°C**

- 0.0 µm 10.0
- 0.3 µm 20.0
- 1.0 µm 5.0
- 3.0 µm 1.0
- 10 µm 0.2

---

**Effective Filtration Area**

- Polyester up to 0.55 m² (5.9 ft²) per 250 mm (10” module)
- Glass fibre up to 0.48 m² (5.2 ft²) per 250 mm (10” module)

---

**Recommended Changeout Pressure**

- 2.5 barg (36 psid)

**Maximum Differential Pressure**

- 200 mbar

---

**Applications**

- Re-circulating liquids
- Reagent grade chemicals
- Make-up and wash waters
- Membrane prefiltration
- Oils and acids
- Alkalis
- Solvents
- Catalytic recovery

---

**Ordering Information**

**Code | Micron**

- 1 0.25
- 3 0.75
- 5 1.0
- 10 3.0
- 25 7.5
- 50 20.0
- 75 25.0
- 100 50.0
- 150 75.0
- 200 100.0

**Micron Rating | 90% Efficiency | Absolute Efficiency**

- 0.25 2.0 2.0
- 0.75 5.0 5.0
- 1.0 8.0 8.0
- 3.0 20.0 20.0
- 7.5 40.0 40.0
- 20.0 50.0 50.0
- 50.0 80.0 80.0
- 100.0 100.0 100.0

---

**Cartridge lengths and materials**

- Stainless steel cores and end caps.
- DOE type cartridge lengths are measured over end caps and shoulders. For DOE type cartridge lengths are measured over gaskets. Standard elements have diameter 2.7” (68mm).
- Nominal lengths of 10, 20, 30, 40 inches (250, 500, 750, 1000mm).
- Other dimensions available on request.

---

**Performance Characteristics**

- Flow (L/min) for liquid @ 20°C

![Graph showing pressure loss characteristics](image)

---

**Contact Information**

- Telephone: +44 (0)114 269 3939
- Fax: +44 (0)114 269 3949
- E-mail: info@domnick-hunter.com
- Website: www.domnick-hunter.com
PLEATFLOW II Filter Cartridges

- Liquid filters
- Glass fibre, polypropylene

PLEATFLOW II is an absolute rated filter cartridge employing either glass fibre or polypropylene filter media, thermally bonded into rugged polypropylene hardware and offers unsurpassed chemical compatibility and performance.

Pleatpack optimisation ensures higher throughputs, low pressure loss, high dirt capacity, long on stream life and lower filtration costs. Thermal bonding of the assembly not only guarantees the cartridge integrity but also benefits users by eliminating the need for glues or adhesives, thus minimizing levels of extractables. PLEATFLOW II can be employed in applications such as pharmaceutical preparations and levels of extractables. PLEATFLOW II can be employed in industrial housings.

Flow (L/min) for Liquid @ 20°C

<table>
<thead>
<tr>
<th>Micron</th>
<th>10¨ Size (250 mm) Cartridge</th>
<th>10¨ Size (250 mm) Cartridge</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0 µm</td>
<td>5.0</td>
<td>1.5</td>
</tr>
<tr>
<td>3.0 µm</td>
<td>10.0</td>
<td>3.0</td>
</tr>
<tr>
<td>5.0 µm</td>
<td>20.0</td>
<td>5.0</td>
</tr>
<tr>
<td>7.0 µm</td>
<td>30.0</td>
<td>7.0</td>
</tr>
<tr>
<td>10.0 µm</td>
<td>50.0</td>
<td>10.0</td>
</tr>
<tr>
<td>20.0 µm</td>
<td>100</td>
<td>20.0</td>
</tr>
</tbody>
</table>

Features and Benefits

- Absolute rating from 1 to 70 microns
- Wide chemical compatibility
- Available in 10¨ to 40¨ formats
- Glass fibre or polypropylene media
- 99.9% efficiency

Performance Characteristics

- Filtration media: Glass Fibre or Polypropylene
- Glass supports: Polypropylene
- Polypropylene support: Polypropylene
- Inner Support Core: Polypropylene
- Endcaps: Stainless Steel or Polysulphone
- Standard o-rings: EPDM, Silicone, Viton
- Glass Fibre up to 0.48 m² (4.5 ft²) per 250 mm (10¨ module)
- Polypropylene up to 0.55 m² (5.2 ft²) per 250 mm (10¨ module)

Specifications

- Efficiencies: 99.9% in liquids as established by standard OSU-F2 particle test
- Polypropylene Hardware: FDA approved
- Glass Fibre or Polyester: FDA approved

Recommended Operating Conditions

- Maximum Temperature: 85°C (60°F continuous)
- Maximum Differential Pressure: 5.5 barg (80 psid)
- Recommended Changeout Pressure: 2.5 barg (36 psid)

Applications

- Membrane pre-filtration
- Solvents
- Chemical filtration
- Resins and emulsions
- Inks and paints

Ordering Information

- Contact: +44 (0)114 269 3999
- Email: dhtechnologies@parker.com
- Website: www.domnickhunter.com
CLARIFLOW General Grade cartridges are designed for general purpose use in the filtration of high-purity liquids. 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.

Features and Benefits
- Broad chemical compatibility allows use in most applications
- Low differential pressure reduces system wear and tear
- Thermally bonded construction minimizes extractables for cleaner filtrates

Performance Characteristics

<table>
<thead>
<tr>
<th>Flow (L/min) for liquid @ 20 °C</th>
<th>Differential Pressure (mbar)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.04µm</td>
<td>0.04</td>
</tr>
<tr>
<td>0.1µm</td>
<td>0.1</td>
</tr>
<tr>
<td>0.2µm</td>
<td>0.2</td>
</tr>
<tr>
<td>0.45µm</td>
<td>0.45</td>
</tr>
<tr>
<td>0.65µm</td>
<td>0.65</td>
</tr>
<tr>
<td>0.8µm</td>
<td>0.8</td>
</tr>
</tbody>
</table>

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

Ordering Information

<table>
<thead>
<tr>
<th>Code</th>
<th>Length (Nominal)</th>
<th>Code</th>
<th>Filter Rating</th>
<th>Code</th>
<th>O-ring Material</th>
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<tbody>
<tr>
<td>25</td>
<td>125 mm</td>
<td>25</td>
<td>0.04</td>
<td>25</td>
<td>EPDM (standard)</td>
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<tr>
<td>25</td>
<td>225 mm</td>
<td>25</td>
<td>0.2</td>
<td>25</td>
<td>Silicone</td>
</tr>
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<td>150 mm</td>
<td>30</td>
<td>0.06</td>
<td>30</td>
<td>EPDM (standard)</td>
</tr>
<tr>
<td>30</td>
<td>225 mm</td>
<td>30</td>
<td>0.06</td>
<td>30</td>
<td>EPDM (standard)</td>
</tr>
<tr>
<td>40</td>
<td>150 mm</td>
<td>40</td>
<td>0.06</td>
<td>40</td>
<td>EPDM (standard)</td>
</tr>
<tr>
<td>40</td>
<td>225 mm</td>
<td>40</td>
<td>0.06</td>
<td>40</td>
<td>EPDM (standard)</td>
</tr>
</tbody>
</table>

Applications
- Water filtration
- High purity liquids
- Aqueous chemicals
- Deionized water systems

Parker Domnick Hunter has a continuous policy of product development and although the Company reserves the right to change specifications, it attempts to keep customers informed of any alterations. This publication is for general information only and customers are requested to contact our Process Filtration Sales Department for detailed information and advice on a product’s suitability for specific applications. All products are sold subject to the Company’s Standard conditions of sale.
Hydrophilic Polyethersulphone membrane for aqueous liquid filtration applications. CLARIFLOW WG are a cost effective alternative to the CLARIFLOW Electronics and General Grade cartridges.

CLARIFLOW WG water grade cartridges are designed for general purpose use in the filtration of high purity liquids and aqueous chemicals.

The mirrored anisotropic polyethersulphone 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 hardware are all polypropylene, the filter exhibits low extractables, broad chemical compatibility and good resistance to hydrolysis.

Features and 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

Performance Characteristics

- Differential Pressure (mbar)
- Temperature (°C)
- Max. Forward DP (mbar)
- Max. Reverse DP (mbar)

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

Specifications
- Materials of Construction
  - Filtration Membrane: Polyethersulfone (PESU)
  - Support Layers: Polypropylene
  - Inner Support Core: Polypropylene
  - Outer Protection Cage: Polypropylene

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

Recommended Operating Conditions

<table>
<thead>
<tr>
<th>Temperature</th>
<th>°C</th>
<th>Max. Forward DP</th>
<th>°F</th>
<th>(psid)</th>
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<td>25</td>
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<td>2</td>
<td>104</td>
<td>30</td>
</tr>
</tbody>
</table>

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

Applications
- Water filtration
- High purity liquids
- Aqueous chemicals
- Deionized water systems

Ordering Information

<table>
<thead>
<tr>
<th>Code</th>
<th>Style</th>
<th>Code</th>
<th>End Fitting</th>
<th>Code</th>
<th>Length (Nominal)</th>
<th>Code</th>
<th>Filter Rating</th>
<th>Code</th>
<th>Gasket Thickness</th>
<th>Code</th>
<th>Details</th>
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<td>10</td>
<td>DOE</td>
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<td>0.1 µm</td>
<td>NO5</td>
<td>0.2</td>
<td>NO6</td>
<td>0.125</td>
<td>NO6</td>
<td>FEP Encapsulated Viton®</td>
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<tr>
<td>2</td>
<td>Inserted</td>
<td>30</td>
<td>DOE</td>
<td>NO1</td>
<td>0.2 µm</td>
<td>NO5</td>
<td>0.2</td>
<td>NO6</td>
<td>0.125</td>
<td>NO6</td>
<td>FEP Encapsulated Silicone</td>
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<td>DOE</td>
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<td>0.2 µm</td>
<td>NO5</td>
<td>0.2</td>
<td>NO6</td>
<td>0.125</td>
<td>NO6</td>
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<td>4</td>
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<td>DOE</td>
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<td>NO6</td>
<td>0.125</td>
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<td>DOE</td>
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<td>NO6</td>
<td>0.125</td>
<td>NO6</td>
<td>FEP Encapsulated Silicone</td>
</tr>
</tbody>
</table>

Minimum Box Quantity
- 10¨: 28
- 20¨: 12
- 30¨: 12
- 40¨: 9
FLUOROFLOW pleated filter cartridges feature an all-Fluoropolymer construction that provides excellent chemical resistance in filtration of acids, bases and solvents. FLUOROFLOW filters fit in standard filter housings and are available in a variety of filter ratings, lengths and end fittings for maximum versatility. The all-fluoropolymer construction provides excellent chemical resistance for the most aggressive applications up to 150°C (302°F).

Features and Benefits
- Chemical resistance process capability and compatibility
- Wet-packed option eliminates lengthy wetting procedure and minimises equipment downtime
- All filters are 100% integrity tested to assure reliable product performance
- Available in 0.05 to 100 microns

Performance Characteristics

Specifications

Materials of Construction
- Filtration Membrane: Polytetrafluoroethylene (PTFE)
- Upstream Support: Polytetrafluoroethylene (PTFE)
- Downstream Support: Polytetrafluoroethylene (PTFE)
- Inner Support Core: PFA
- Outer Protection Cage: PFA
- End Caps: PFA
- Standard o-rings: FEP Encapsulated Silicone

Effective Filtration Area (EFA)
10¨ (250 mm) 0.63 m² (6.8 ft²)

Recommended Operating Conditions

Effective Filtration Area (EFA) at 1 gpm

Particle Shedding
- Wet-packed <2 particles / ml >0.2µm after 26.5L @ 3.8L / min
- Dry-packed <2 particles / ml >0.2µm after 26.5L @ 3.8L / min

Effective Filtration Area (EFA) at 1 gpm

Metals Extractables
<20ppb (total) in a 10% HNO₃ extraction of 1.5 litres for 24 hours at ambient temperatures.

Effective Filtration Area (EFA) at 1 gpm

Applications
- Aggressive acids, bases and solvents
- Photolithography chemicals
- Ozonated and / or hot UPW

Ordering Information

<table>
<thead>
<tr>
<th>Code</th>
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</tr>
</tbody>
</table>

Effective Filtration Area (EFA) at 1 gpm

Temperature | °C | °F | Duty | Bar | psid |
---|---|---|---|---|---|
75 | 167 | 3.8 | 55.0 |
125 | 257 | 2.0 | 30.0 |
150 | 302 | 1.0 | 15.0 |

Applications
- Aggressive acids, bases and solvents
- Photolithography chemicals
- Ozonated and / or hot UPW

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With FLUOROFLOW-SELECT filter cartridges, exceptional flow rates and on-stream life can be obtained in high temperature processes. The Select membrane pleat design results in higher flow rates and greater filter life and less down-time than a standard pleated configuration. The cartridge’s all-fluoropolymer construction offers excellent chemical resistance.

**Features and Benefits**

- All fluoropolymer construction
- High flow rate increases throughput
- Compatible with most standard filter housings
- High temperature available

**Performance Characteristics**

![Graph showing flow rate vs. differential pressure](image)

**Specifications**

**Materials of Construction**
- Filtration Membrane: Polytetrafluoroethylene (PTFE)
- Upstream Support: Polytetrafluoroethylene (PTFE)
- Downstream Support: Polytetrafluoroethylene (PTFE)
- Inner Support Core: PFA
- Outer Protection Cage: PFA
- Standard o-rings: FEP Encapsulated Silicone
- Select Pleating

**Effective Filtration Area (EFA)**
- 4¨ (100 mm): 0.56 m² (6.0 ft²)
- 10¨ (250 mm): 1.1 m² (12.2 ft²)

**Recommended Operating Conditions**

<table>
<thead>
<tr>
<th>Temperature</th>
<th>Flow Through</th>
<th>Power Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>24°C</td>
<td>25°C</td>
<td>35°C</td>
</tr>
<tr>
<td>0.5</td>
<td>0.7</td>
<td>1.0</td>
</tr>
<tr>
<td>0.5</td>
<td>0.7</td>
<td>1.0</td>
</tr>
<tr>
<td>0.5</td>
<td>0.7</td>
<td>1.0</td>
</tr>
<tr>
<td>0.5</td>
<td>0.7</td>
<td>1.0</td>
</tr>
</tbody>
</table>

**Particle Shedding**
- Wet-packed <2 particles / ml >0.2 µm after 26.5L @ 3.8L / min
- Dry-packed <2 particles / ml >0.2 µm after 26.5L @ 3.8L / min

**Metals Extractables**
- <20ppb (total) in a 10% HN03 extraction of 1.5 litres for 24 hours at ambient temperatures.

**Applications**
- Aggressive acids, bases and solvents
- Photolithography chemicals
- Ozonated and / or hot UPW

**Ordering Information**

<table>
<thead>
<tr>
<th>Code</th>
<th>Length (Nominal)</th>
<th>Micron</th>
<th>End Fitting</th>
<th>Gasket / O-rings</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>10&quot; (250 mm)</td>
<td>0.03 µm</td>
<td>2</td>
<td>Silicon</td>
</tr>
<tr>
<td>000</td>
<td>0.05 µm</td>
<td>226 / Flat</td>
<td></td>
<td></td>
</tr>
<tr>
<td>001</td>
<td>0.1 µm</td>
<td>222 / Flat</td>
<td></td>
<td></td>
</tr>
<tr>
<td>002</td>
<td>0.2 µm</td>
<td>226 / Fin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>004</td>
<td>0.45 µm</td>
<td>222 / Fin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>010</td>
<td>1.0 µm</td>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Code Options Treatment**
- Blank UPW Flush
- Ozone UPW Flush
- Wet Packed

*Viton is a registered trademark of E.I. DuPont de Nemours & Co, Inc

---

**Integration Test Values**

<table>
<thead>
<tr>
<th>Micron Rating</th>
<th>0.05</th>
<th>0.1</th>
<th>0.2</th>
<th>0.45</th>
<th>1.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow Through</td>
<td>2.8</td>
<td>1.5</td>
<td>0.9</td>
<td>0.5</td>
<td>0.2</td>
</tr>
</tbody>
</table>

**Recommended Test Pressure**

- ≥40 psig
- ≥21 psig
- ≥13 psig
- ≥7 psig
- ≥3 psig

Parker domnick hunter has a continuous policy of product development and although the Company reserves the right to change specifications, it attempts to keep customers informed of any alterations. This publication is for general information only and customers are requested to contact our Process Filtration Sales Department for detailed information and advice on a product's suitability for specific applications. All products are sold subject to the company's Standard conditions of sale.

Contact Information:

- Phone: +44 (0)114 269 3999
- Email: dhtechnologies@parker.com
- Website: www.domnickhunter.com
FLUOROCAP encapsulated filters feature an all-fluoropolymer pleated filter cartridge for excellent chemical resistance in aggressive chemical applications. The integral filter design maximises up-time by providing faster and easier change-out without laborious cleaning protocols. Because the replacement of filter elements is eliminated, the chance of introducing contamination into the process is minimised. FLUOROCAP increases the level of safety, and reduces the risk of exposure to hazardous materials.

The FLUOROCAP family of filters offers excellent resistance in aggressive chemical applications. FLUOROCAP filters are available in increasing flow rate and higher temperature capabilities. FLUOROCAP family are available flushed with ozonated UPW to further minimise extractables or wet-packed to eliminate on-site wetting for use in aqueous applications.

Features and Benefits

- Chemical resistance process capability and compatibility
- Wet-packed option eliminates lengthy wetting procedure and minimises equipment downtime
- Available in 0.03 to 1.0 microns
- All filters are 100% integrity tested to assure reliable product performance
- Capsules reduce downtime, chance of contamination and risk of exposure to hazardous materials during filter change

Performance Characteristics

![Graph showing performance characteristics](image)

10¨ Size (250 mm) Cartridge

Specifications

Materials of Construction

100% Fluoropolymer construction. All components are thermally bonded to ensure integrity and reduce extractables.

- O-rings: Silicone
- Viton
- FEP-Encapsulated Viton
- FEP-Encapsulated Silicone
- Chemraz
- Kalrez

Effective Filtration Area (EFA)

10¨ (250 mm) 0.9 m² (9.8 ft²)

Recommended Operating Conditions

<table>
<thead>
<tr>
<th>Temperature (°C)</th>
<th>Max. Min. Forward Pressure (bar)</th>
<th>Max. Reverse Pressure (bar)</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>15</td>
<td>6.5</td>
</tr>
<tr>
<td>35</td>
<td>15</td>
<td>6.5</td>
</tr>
<tr>
<td>45</td>
<td>15</td>
<td>6.5</td>
</tr>
</tbody>
</table>

Integrity Test Values

- Tested in 60/40 IPA/DI water @ 25°C (77°F)
- Particle Shedding
  - Wet packed <2 particles / ml >0.2µm after 26.5L @ 3.8L / min
  - Dry packed <2 particles / ml >0.2µm after 26.5L @ 3.8L / min
- Metals Extractables
  - <20ppb (total) in a 10% HN03 extraction of 1.5 litres for 24 hours at ambient temperature.

Ordering Information

- Code [1-3] = STYLE
- [C] = Dry Packed (STD)
- [W] = Ozonated UPW
- [P] = Wet Packed

Applications

- Aggressive acids, bases and solvents
- Photolithography chemicals
- Ozonated and / or hot UPW
- Micron Rating
- 0.05
- 0.1
- 0.2
- 0.45
- 1.0

Differential Pressure (bar) vs Flow (L / min) for liquid @ 20 °C

![Graph showing differential pressure vs flow](image)

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Contact Information

- +44 (0)114 269 3999
- dhtechnologies@parker.com
- www.domnickhunter.com

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FLO-PAC Filter Cartridges

- liquid filters
- phenolic impregnated cellulose

Features and Benefits

- Pleated cellulose media allow high flow capacity at low pressure drop
- Phenolic resin impregnated to provide strength, integrity and high contaminant capacity
- Suitable for operating temperatures to 121°C (250°F)
- Outer sleeve protects the media from damage
- ET P (Electro-tin-plated) steel metal components for both aqueous and oil-based applications
- Buna-N gaskets are standard, other materials are available

Specifications

- Materials of Construction
  - Filtration Media: Phenolic impregnated cellulose
  - Inner Support Core: ETP steel
  - Outer Protection Cage: Polypropylene
  - 600 & 700 Series: ETP steel
  - Adhesive: Thermosetting PVC
  - End Seals: Buna-N gaskets / grommets

- Dimensions
  - 300 Series
    - Outside diameter: 64 mm (21/2") x 25 mm (1")
    - Inside diameter: 245 mm (9 15/16")
    - Length: 502 mm (19 15/32")
    - 763 mm (29 13/32")
    - 500 Series
      - Outside diameter: 115 mm (4 1/2") x 44 mm (1 6/8")
      - Inside diameter: 77 mm (3 1/16")
      - Length: 457 mm (18")

Recommended Operating Conditions

- Maximum Temperature: 121°C (250°F)
- Maximum Differential Pressure: 4.8 barg (70 psid)
- Recommended Changeout Pressure: 121°C (250°F)

Recommended Flow Rates

- Per single length cartridge
  - 300 series: 27 L/min
  - 500 series: 194 L/min
  - 600 series (1-9/16 in ID): 135 L/min
  - 600 series (3-1/2 in ID): 194 L/min
  - 700 series: 194 L/min

Applications

- Water Soluble
- Coolants
- Garage Oil
- Fuels
- Lubricating Oil
- Hydraulic Oil
- ESM Dielectrics
- Rolling Mill Oils
- Processing Liquids
- Gasoline

Retention Characteristics

<table>
<thead>
<tr>
<th>Micron</th>
<th>10%</th>
<th>5%</th>
<th>1%</th>
<th>0.5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 µm</td>
<td>90%</td>
<td>70%</td>
<td>40%</td>
<td>20%</td>
</tr>
<tr>
<td>30 µm</td>
<td>90%</td>
<td>70%</td>
<td>40%</td>
<td>20%</td>
</tr>
<tr>
<td>60 µm</td>
<td>90%</td>
<td>70%</td>
<td>40%</td>
<td>20%</td>
</tr>
</tbody>
</table>

Ordering Information

- Code | Inside Diameter | Series
- Code | Length Measured | Series
- Code | Microns
- Code | Inside Diameter | Series
- Code | Core Material
- Code | Dia Material

Performance Characteristics

- Flow (L/min) for liquid @ 20 °C
  - 0.5 µm
  - 1 µm
  - 5 µm
  - 10 µm
  - 20 µm
  - 30 µm
  - 60 µm

10" Size (250 mm) Cartridge

Parker domnick hunter FLO-PAC filters are the perfect choice for many industrial filtration requirements. FLO-Pac pleated filters contain premium grade, phenolic impregnated cellulose filter media.

Parker domnick hunter’s line of pleated filters are designed for critical filtration applications, providing long service life, high flow rate and low pressure drop.

Flo-Pac Pleated filters are available in 0.5µm, 1µm, 5µm, 10µm, 20µm, 30µm, and 60µm pore sizes (95% removal; ß = 20).

Performance Characteristics

- Flow (L/min) for liquid @ 20 °C
  - 0.5 µm
  - 1 µm
  - 5 µm
  - 10 µm
  - 20 µm
  - 30 µm
  - 60 µm

10" Size (250 mm) Cartridge

*Viton is a registered trademark of E.I. du Pont de Nemours & Co, Inc.
FLO-PAC Plus Filter Cartridges

Features and Benefits

- Suitable for operating temperatures to 121°C (250°F)
- ETP (Electro-tin-plated) steel metal components for aqueous and oil-based applications
- Impregnated phenolic resin provides strength, integrity and high contaminant capacity

Specifications

- Filtering Media: Phenolic impregnated cellulose
- Inner Support Core: ETP steel
- Outer Protection Cage: ETP steel
- Adhesive: Epoxy
- End Seals: Viton®, cork

Recommended Flow Rates

Per single length cartridge
- 300 Series: 27L/min
- 600 Series (1-9/16 in ID): 135L/min
- 700 Series: 194L/min

Performance Characteristics

- Differential Pressure (mbar)
- Flow (L/min) for liquid @ 20 °C

Ordering Information

- FPE
- Code | Outside Diameter | Series
- Code | Length (Nominal) | Series
- Code | Micron
- Code | Inside Diameter | Series
- Code | Seal Material

Retention Characteristics

- Micro | Alkaline | Acidic | Organic Solvents

Applications

- Aromatic Hydrocarbons (toluene, xylene, benzene)
- Aliphatic Hydrocarbons (hexane, pentane, naphtha)
- Esters (EG, PEG, DEG)
- Ketones (acetone, isophorone, methylethyl ketone)
- Ethers (THF, dioxane)
- Alcohols (ethanol, isopropanol)
- Halogenated Hydrocarbons (methylene chloride, perchloroethylene)

Retention Curve

- Viton® is a registered trademark of E.I. DuPont de Nemours & Co., Inc.

*Viton® is a registered trademark of E.I. DuPont de Nemours & Co., Inc.
Parker domnick hunter’s new PB Series Pleated Bag is a high-capacity product line that provides a cost-effective alternative with higher removal efficiencies over standard bag media configurations.

Utilising Parker domnick hunter’s unique ‘Select’ pleat design along with our proprietary media configurations, we are able to optimise the pleat pack surface area to maximise the service life within each configuration. The PB series filters are available in several polypropylene formats: Poly-Mate Plus, Poly-Mate and Claripor. In addition, it is available with our Glass-Mate media.

This product is designed to fit within existing bag filter vessels, including our SB, PB, CB series without any hardware changes and incorporates an easy-to-grasp integrated handle for quick removal.

Features and Benefits

- High capacity reduces the number of filters required resulting in fewer changeouts and lower filtration costs.
- High capacity allows for smaller housings and less capital expenditure
- Inside/outside flow captures and retains contaminants to eliminate potential fouling downstream
- Range of sealing configurations meets the majority of housing requirements
- Several media types are available for a wide variety of applications
- Polypropylene cartridges listed as acceptable for portable and editable Title 21 contact according to CFR 820.52

PB Series Pleated Bag Filter Cartridges

- liquid filters

Performance Characteristics

Parker domnick hunter’s new PB Series Pleated Bag is a high-capacity product line that provides a cost-effective alternative with higher removal efficiencies over standard bag media configurations.

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- Several media types are available for a wide variety of applications
- Polypropylene cartridges listed as acceptable for portable and editable Title 21 contact according to CFR 820.52

PB Series Pleated Bag Filter Cartridges

- liquid filters

Performance Characteristics
**Pleated Bag Configuration Options**

**Claripor CPPB**
The PB Claripor offers the best of pleated and depth style technologies. The unique depth layer construction provides higher retention, longer service life, and excellent gel removal. These features, in addition to the PB Claripor’s high contaminant holding capacity and exceptional clarifying ability make it an ideal choice for a wide array of critical process applications.

**Poly-Mate PMPB**
The PB Poly-Mate incorporates a unique combination of polypropylene meltblown and spun-bonded media to provide a high surface area, finish-free and non-fibre releasing filtration.

**Glass-Mate GMPB**
The PB Glass-Mate offers an economical choice for applications requiring high quality filtration, and long service life. The laminated media / support layer maximises flow capacity and eliminates media migration.

**Applications**
- Intermediates and fine chemicals
- Commercial water
- Catalyst recovery
- Paints and inks

**Ordering Information**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Micron</th>
<th>Ring Style</th>
<th>Bag Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>P Polypropylene</td>
<td>'Q' Parker Top Sealing</td>
<td>010</td>
<td>CQ Plastic:  ‘Q’ Parker Top Sealing</td>
<td>1</td>
</tr>
<tr>
<td>E Elastometric: Parker</td>
<td>N Buna N</td>
<td>010</td>
<td>CA Elastometric: Parker</td>
<td>3</td>
</tr>
<tr>
<td>V Viton*</td>
<td>N Buna N</td>
<td>010</td>
<td>GQ Plastic: ‘Q’ Competitive Top Sealing</td>
<td>4.5</td>
</tr>
<tr>
<td>B Elastometric: GAF / FSI Side Entry Seal</td>
<td>E EPDM</td>
<td>010</td>
<td>GB Elastometric: GAF / FSI Side Entry Seal</td>
<td>10</td>
</tr>
<tr>
<td>F Elastometric: Pall / FTC</td>
<td>V Viton*</td>
<td>010</td>
<td>GC Elastometric: Pall / FTC</td>
<td>20</td>
</tr>
<tr>
<td>U Elastometric: FSI / Hayward Over the Top Seal</td>
<td>N Buna N</td>
<td>010</td>
<td>GD Elastometric: FSI / Hayward Over the Top Seal</td>
<td>30</td>
</tr>
</tbody>
</table>

Pleated Bag Series Filter Cartridges

PB Series Pleated Bag Series Filter Cartridges
The best of pleated and large diameter technologies are combined in Parker domnick hunter’s PARMAX high flow filter cartridges.

The unique layered construction provides excellent retention across a wide range of flux rates. One six inch diameter cartridge can handle up to 120 m³/hr flow (60” length). The inside-out flow allows for a high contaminant holding capacity and a long filter life which makes the PARMAX an ideal choice for a wide variety of critical process applications.

PARMAX cartridges are available with polypropylene and glass microfibre in absolute (99.98%) micro ratings from 1 to 90 microns.

### Features and Benefits
- Large diameter yields much higher flow rates compared to traditional filters.
- High flow capacity allows for fewer elements and less capital expenditure.
- Inside-out flow pattern ensures positive capture of contaminants.
- Absolute retention ratings for critical filtration.

### Performance Characteristics

**Water flow rate based on a 60” size cartridge (polypropylene)**

**Water flow rate based on a 60” size cartridge (glass fibre)**

### Specifications

#### Materials of Construction
- **Filtration Media:** Polypropylene
- **Support / Drainage:** Polypropylene
- **Hardware:** Polypropylene
- **Standard o-rings (SOE):** EPDM, Buna-N, Viton, Silicone

#### Recommended Flow Rate Conditions
- **20¨:** Up to 40 m³/hr
- **40¨:** Up to 80 m³/hr
- **60¨:** Up to 120 m³/hr

#### Recommended Change Out Pressure
- 2.41 bar (32 psi)

#### Retention Ratings (99.98%)
- 1, 3, 4.5, 10, 20, 40 and 90** µm
- **Only available in the RCP version**

#### Maximum Operating Temperature
- 80 ºC (176 ºF) @ 2.1 bar (30 psi)

#### Maximum Differential Pressure
- 2.1 bar (30 psi) @ 80 ºC (176 ºF)

### Ordering Information

- **Code | Micron**
  - 010 1.0 µm
  - 030 3.0 µm
  - 045 4.5 µm
  - 100 10.0 µm
  - 200 20.0 µm
  - 400 40.0 µm
  - 900* 90.0 µm

### Applications
- Process Water
- Power Generation
- Speciality Chemicals
- Water Treatment
- Photochemistry
Parker’s MAXGUARD high capacity cartridge product line provides a cost effective alternative to bag media or standard 2-1/2 inch cartridges for high flow applications. Each MAXGUARD cartridge has a 6” (152 mm) nominal outside diameter and can handle flows up to 20 cu m/hr, significantly reducing the number of cartridges required for large flow applications.

MAXGUARD cartridges are available in polypropylene, cellulose and Nomex media. All cartridges feature an industry standard 2-1/2 inch cartridges for high flow applications. Each provides a cost effective alternative to bag media or standard

Features and Benefits
• High flow capacity means fewer cartridges and reduced labour costs associated with change-out
• Integrated handle makes change-outs, fast easy and safe
• Positive 226 O-ring seal assures filtration integrity
• Heavy wall core ensures superior strength

Performance Characteristics

Filtration Characteristics

• Liquid filters
• Cellulose and polypropylene

Specifications

Materials of Construction
- Filtration Media: Polypropylene, Cellulose, Nomex
- Support Layers: Polypropylene [MXGP and MXGC]
- Support Core: Polypropylene [MXGP and MXGC]
- Stainless Steel (MEXGN)

Flow Characteristics
MAXGUARD filters are capable of filtering 360 L/min.

Recommended Operating Conditions
Change-out Pressure: 2.6 bar

Retention Characteristics

Filtration Rating
99.98% at specified micron rating

Maximum Operating Conditions
MXGP and MXGC
Max Temperature: 80°C at 2.1 bar
Max Pressure: 4.8 bar at 25°C
2.1 bar at 80°C

MXGN
Max Temperature: 220°C at 2.1 bar
Max Pressure: 4.8 bar at 25°C
2.1 bar at 80°C

Max Flow Rate: 350 L/min per 40¨

Ordering Information

Applications
• Amines
• Commercial water
• Industrial wash waters

Differential Pressure (mbar)
10 15 20 25 30 35 40

Differential Pressure (psid)
0 5 10 15 20 25 30

Flow (L / min) for liquid @ 23 °C and 1 cks
0 50 100 150 200 250 300

40¨ Size (1016 mm) Cartridge

*Viton is a registered trademark of E.I. DuPont de Nemours & Co., Inc
Parker’s MAXGUARD Select high capacity cartridge provides a cost-effective alternative to bag media or standard 2-1/2-inch cartridges for high flow applications.

Each MAXGUARD cartridge can handle flows up to 379 lpm, significantly reducing the number of cartridges required for large-flow applications.

The MAXGUARD Select contains up to 40% more dirt-holding capacity than the standard MAXGUARD. The MAXGUARD Select cartridge is available with polypropylene media.

All cartridges feature an industry standard 226 positive o-ring seal and easy-to-grasp integrated handle.

Features and Benefits
- High flow capacity means fewer cartridges and reduced labor costs associated with change-out
- Cartridge is 100% thermally welded
- Positive 226 o-ring seal assures filtration integrity
- Absolute retention ratings from 0.5 to 70 micron for critical filtration

Performance Characteristics

<table>
<thead>
<tr>
<th>Differential Pressure (mbar)</th>
<th>Flow (L/min) @ 23 °C and 1 cks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>60</td>
</tr>
<tr>
<td>0.1</td>
<td>65</td>
</tr>
<tr>
<td>0.2</td>
<td>70</td>
</tr>
<tr>
<td>0.3</td>
<td>75</td>
</tr>
<tr>
<td>0.4</td>
<td>80</td>
</tr>
<tr>
<td>0.5</td>
<td>85</td>
</tr>
<tr>
<td>0.6</td>
<td>90</td>
</tr>
</tbody>
</table>

Flow Characteristics
MAXGUARD Select filters are capable of filtering 378 l/min.

Specifications

Materials of Construction
- Filtration Media: Polypropylene
- Support / Drainage: Polypropylene
- Structural Components: Polypropylene
- Seal Material: Various

Retention Characteristics

<table>
<thead>
<tr>
<th>Micron Rating at Various Efficiencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absolute 99.99% 99.9% 99% 95% 15% 5%</td>
</tr>
<tr>
<td>0.5 µm 0.4 µm 0.2 µm &gt;0.2 µm &lt;0.1 µm</td>
</tr>
<tr>
<td>2.0 µm 1.4 µm 0.4 µm 0.2 µm &lt;0.1 µm</td>
</tr>
<tr>
<td>5.0 µm 3.8 µm 1.2 µm 0.3 µm &lt;0.1 µm</td>
</tr>
<tr>
<td>10.0 µm 7.0 µm 2.0 µm 0.9 µm &lt;0.2 µm</td>
</tr>
<tr>
<td>20.0 µm 18.0 µm 5.0 µm 2.0 µm &lt;0.2 µm</td>
</tr>
<tr>
<td>40.0 µm 23.0 µm 18.0 µm 8.0 µm &lt;0.7 µm</td>
</tr>
<tr>
<td>70.0 µm 91.0 µm 83.0 µm 64.0 µm 35.0 µm</td>
</tr>
</tbody>
</table>

Applications
- Amines
- Commercial water
- Industrial wash waters

Ordering Information

<table>
<thead>
<tr>
<th>Cartridge Series</th>
<th>Code</th>
<th>Micron</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAXGUARD Select</td>
<td>005</td>
<td>0.5 µm</td>
</tr>
<tr>
<td></td>
<td>020</td>
<td>2.0 µm</td>
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<td></td>
<td>050</td>
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</tr>
<tr>
<td></td>
<td>400</td>
<td>40.0 µm</td>
</tr>
<tr>
<td></td>
<td>700</td>
<td>70.0 µm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>750 mm</td>
</tr>
<tr>
<td>40</td>
<td>1016 mm</td>
</tr>
</tbody>
</table>

Cartridge Series: MAXGUARD Select

<table>
<thead>
<tr>
<th>Code</th>
<th>Seal Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>EPR</td>
</tr>
<tr>
<td>N</td>
<td>Buna-N</td>
</tr>
<tr>
<td>V</td>
<td>Viton*</td>
</tr>
<tr>
<td>S</td>
<td>Silicone</td>
</tr>
<tr>
<td>T</td>
<td>PFA / Viton</td>
</tr>
</tbody>
</table>

*Viton is a registered trademark of E.I. DuPont de Nemours & Co., Inc.
Activated carbon is a porous form of carbon which can be manufactured from a variety of carbonaceous raw materials.

The activation process involves treating the raw material with steam or chemicals, thereby developing a pore structure. Activated carbon is characterised by a vast system of pores of molecular size within the carbon particles resulting in the formation of a material with extensive internal surface area.

Activated carbon cartridges act in two ways, firstly the removal of chlorine, volatile organic compounds, chlorinated hydrocarbons and organic impurities and secondly the reduction of particulate using the cartridge structure. Applications are numerous and include the purification of plating solutions for the metal finishing industry.

CARBOFLOW
CARBOFLOW MX cartridges are offered in both high efficiency and general grades. They consist of bituminous coal sourced carbon, extruded together with an FDA listed thermoplastic binder, to produce an extremely porous yet rigid structure.
CARBOFLOW MX cartridges are offered in both high efficiency and general grades. They consist of bituminous coal sourced carbon, extruded together with an FDA listed thermoplastic binder, to produce an extremely porous yet rigid structure. The result is a filter offering unsurpassed adsorptive capacity, up to 20 times that of traditional granular carbon or carbon impregnated filters, and high particle removal efficiency.

The rigid structure of CARBOFLOW MX not only minimises any possibility of channeling, bypass or fluidising, but also the release of carbon fines during start up and operation. Such problems are common with more traditional carbon filters. CARBOFLOW MX is available in lengths up to 40¨ (1016 mm) together with end fittings to suit most industry standard housings.

Features and Benefits
• Available in lengths 5¨ to 60¨
• Ideal for chlorine and chloroform reduction
• Available in 2 grades
• FDA approved materials

Performance Characteristics

<table>
<thead>
<tr>
<th>Flow (L/min) for liquid @ 20 °C and 1 cp</th>
<th>0</th>
<th>50</th>
<th>100</th>
<th>150</th>
<th>200</th>
<th>250</th>
<th>300</th>
<th>350</th>
<th>400</th>
</tr>
</thead>
<tbody>
<tr>
<td>Differential Pressure (mbar)</td>
<td>0</td>
<td>20</td>
<td>40</td>
<td>60</td>
<td>80</td>
<td>100</td>
<td>120</td>
<td>140</td>
<td>160</td>
</tr>
</tbody>
</table>

Specifications

Materials of Construction
- Carbon: Bituminous Coal
- Carbon Type: Steam Activated, Acid Wash
- Carbon Weight (per 10¨): 350 g
- End Caps: Polypropylene
- Standard O-rings/gaskets: EPDM, Nitrile, PTFE, Silicone, Viton

Retention Characteristics

<table>
<thead>
<tr>
<th>Grade</th>
<th>Carbon Removal</th>
<th>Chlorine Removal **</th>
<th>Chloroform Removal *</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Efficiency</td>
<td>70%</td>
<td>22.7 cu.m @ 4 l/min</td>
<td>n/a</td>
</tr>
<tr>
<td>General</td>
<td>50%</td>
<td>n/a</td>
<td>n/a</td>
</tr>
</tbody>
</table>

Maximum Operating Temperature
60 °C (158 °F)

Maximum Differential Pressure
7 bar (101.52 psid)

Recommended Changeout Differential Pressure
2 bar (29.00 psid)

Ordering Information

- Code
- Length (Nominal)
- Grade
- End Fitting
- Seal Material

Applications
• Product rinse waters
• Plating solutions
• Decolourisation
• De-chlorination

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CARBOFLOW granular activated carbon cartridges contain a broad band adsorbent (typically 250g/10" length). When required the carbon can be impregnated with silver to reduce bacterial build up.

Radial flow elements consist of a bed of high grade activated carbon sandwiched between porous inner and outer sleeves which help prevent carbon migration. In the end flow version, the outer sleeve is porous only at the bottom, which forces the liquid to flow through the entire carbon bed (typically 350g/10" length) to exit at the top and results in the maximum contact time between liquid and carbon. CARBOFLOW shells can also be filled with ion exchange resins for use in ultra pure water systems and for precious metals recovery from plating solutions.

**Features and Benefits**
- Activated carbon filters
- Removal of taste and odour from process water
- Both radial and end flow variants available
- Filtration down to 5 micron

**Performance Characteristics**

![Graph showing performance characteristics](image)

For optimum life and performance we would recommend a maximum flow rate of 7 L/min for the radial flow cartridge and 5 L/min for the endflow.

**Ordering Information**

<table>
<thead>
<tr>
<th>Code</th>
<th>Flow Path</th>
<th>Code</th>
<th>Length (Nominal)</th>
<th>Code</th>
<th>Type</th>
<th>Code</th>
<th>Media</th>
<th>Code</th>
<th>Seal Material</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>End Flow</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>End Flow</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>End Flow</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>End Flow</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For maximum operating temperature 60 °C (158 °F)

**Applications**
- Chlorine reduction
- Plating solutions
- Waste water treatment
- Decolourisation

**Specifications**

- **Materials of Construction**
  - Filtration Media: Natural Carbon, Silvered Carbon, Anion Resin, Cation Resin, Mixed Bed Resin, Polypropylene, EPDM, Nitrile, PE, Silicone, Viton

- **Maximum Operating Temperature**
  - 60 °C (158 °F)

- **Recommended Changeout Differential Pressure**
  - 2 bar (29 psid)

- **Dimensions**
  - Outer diameter: 68 mm (2.7")
  - Inner diameter: 27 mm (1.1")

- **Recommended Maxflow**
  - For optimum life and performance we would recommend a maximum flow rate of 7 L/min for the radial flow cartridge and 5 L/min for the endflow.

- **Applications**
  - Chlorine reduction
  - Plating solutions
  - Waste water treatment
  - Decolourisation

- **Note**
  - These cartridges contain a small amount of carbon fines (very fine black powder). After installation, flush the system for a minimum of 5 minutes or remove all traces of the fines before using the water. In domestic situations the water should be run for 20 seconds prior to use in cooking or drinking.

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Traditional polymer constructed filters can sometimes have limitations, when filtering certain chemicals there can be issues with compatibility, exposure time of the chemical or a combination of high temperature and viscosity. Stainless steel chemical filters from Parker Domnick Hunter, allow you to achieve absolute retention ratings whilst overcoming these compatibility issues making them suitable for a wide range of demanding applications.

The stainless steel construction provides excellent regeneration opportunities for extended service life, making stainless steel filters a cost-effective filtration solution to chemical filtration.
PROSTEEL A filters provide the ideal solution in applications where traditional polymer based filters are limited by compatibility, exposure time or a combination of high temperature and viscosity.

They are ideally suited to filtration of the solvents. The Parker domnick hunter range of stainless steel filters provide a solution to compatibility issues while maintaining absolute retention ratings down to 3.0 micron. 316L stainless steel fibres are sintered together into a graded pore structure. This allows a cost-effective selection depending on flow rate and dirt holding requirements.

The efficiency of the media increases through the filtration bed resulting in excellent dirt holding capacity while maintaining high relative flow rates compared to alternative technology such as sintered powder tubes and metal membranes. The filters are available in two formats both using the same filtration media but one manufactured in a pleated construction and one in a cylindrical wrap. This allows a cost-effective selection depending on flow rate and dirt holding requirements.

Features and Benefits
- Absolute rated stainless steel liquid filters
- Ideal for aggressive solvents, viscous and hot solutions
- Removal rating 3, 5 and 10 microns
- Compatible with most solvents
- Graded density metal fibre technology provides exceptional dirt holding capacity while retaining excellent flow rates
- Available in two formats; pleated and wrapped, for complete system optimisation

Performance Characteristics

<table>
<thead>
<tr>
<th>Operating Temperature °C</th>
<th>Flow (L/min) for liquid @ 20 °C and 1 cp</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>100</td>
</tr>
<tr>
<td>30</td>
<td>120</td>
</tr>
<tr>
<td>40</td>
<td>150</td>
</tr>
<tr>
<td>50</td>
<td>200</td>
</tr>
</tbody>
</table>

Change Differential Pressure (dP) = 8 x initial dP.

Effective Filtration Area [EFA]
- ZCFF Cylindrical Wrap
  10" (250 mm) 0.05 m² (0.53 ft²)
- ZCMF Pleated
  10" (250 mm) 0.13 m² (1.39 ft²)

Detoxification of valuable particulate
- Recovery of valuable particulate
- High temperature processing
- Corrosive liquids
- High viscous liquids

Applications
- Accessories, filters, housings
- High pressure systems
- Maximum 250 psi

Ordering Information

<table>
<thead>
<tr>
<th>Code</th>
<th>Type</th>
<th>Flow Rating</th>
<th>Length (Nominal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>O01</td>
<td>Pleated</td>
<td>0.05 m²</td>
<td>3.0 µm</td>
</tr>
<tr>
<td>O02</td>
<td>Pleated</td>
<td>0.13 m²</td>
<td>5.0 µm</td>
</tr>
<tr>
<td>O03</td>
<td>Pleated</td>
<td>0.26 m²</td>
<td>10.0 µm</td>
</tr>
</tbody>
</table>

Materials of Construction
- Filtration Media: 316L Stainless Steel
- Inner Support Core: 316L Stainless Steel
- Outer Protection Cage: 316L Stainless Steel
- End Caps: 316L Stainless Steel
- Standard o-rings: Viton®
- Assembly Method: TIG Welded

Recommended Operating Conditions

<table>
<thead>
<tr>
<th>Temperature °C</th>
<th>Forward DP (psid)</th>
<th>Reverse DP (psid)</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
<td>350</td>
<td>400</td>
</tr>
<tr>
<td>250</td>
<td>300</td>
<td>350</td>
</tr>
<tr>
<td>300</td>
<td>250</td>
<td>300</td>
</tr>
<tr>
<td>350</td>
<td>200</td>
<td>250</td>
</tr>
</tbody>
</table>

Retention Characteristics
- The retention characteristics of the stainless steel filters are determined using ACFTD in accordance with the single pass test ASTM 795-88.

<table>
<thead>
<tr>
<th>Micron Rating</th>
<th>Effective Filtration Area (EFA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.0</td>
<td>0.05 m²</td>
</tr>
<tr>
<td>5.0</td>
<td>0.13 m²</td>
</tr>
<tr>
<td>10.0</td>
<td>0.26 m²</td>
</tr>
</tbody>
</table>

Specifications

<table>
<thead>
<tr>
<th>Micron Rating</th>
<th>Effective Filtration Area (EFA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.0</td>
<td>0.05 m²</td>
</tr>
<tr>
<td>5.0</td>
<td>0.13 m²</td>
</tr>
<tr>
<td>10.0</td>
<td>0.26 m²</td>
</tr>
</tbody>
</table>

Filtration Sales Department for detailed information and advice on a product’s suitability for specific applications. All products are sold subject to the company’s Standard conditions of sale.

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Parker domnick hunter has a continuous policy of product development and although the Company
PROSTEEL N filters provide the ideal solution in applications where traditional polymer based filters are limited by compatibility, exposure time or a combination of high temperature and viscosity.

The Parker domnick hunter range of stainless steel filters provides the solution to compatibility issues while maintaining excellent flow rates for clarifying duties. The filters are available in two formats both using the same filtration media but one manufactured in a pleated construction and one in a cylindrical wrap. This allows a cost-effective selection depending on flow rate and dirt holding requirements.

Features and Benefits

- Nominaly rated stainless steel liquid filters
- Ideal for aggressive solvents, viscous and hot solutions
- Removal rating from 5 to 100 microns
- Compatible with most solvents
- Stainless steel mesh ensures excellent regeneration characteristics for extended service life
- Available in two formats, pleated and wrapped, for complete system optimisation

Performance Characteristics

- Pleated cartridge flow rates
- 10¨ Size (250 mm) Cartridge
- Cylindrically wrapped cartridge flow rates
- 10¨ Size (250 mm) Cartridge

Specifications

Materials of Construction

- Filtration Media: 316L Stainless Steel
- Inner Support Core: 316L Stainless Steel
- Outer Protection Cage: 316L Stainless Steel
- End Caps: 316L Stainless Steel
- Standard o-rings/gaskets: EPDM
- Assembly Method: TIG Welded

Recommended Operating Conditions

<table>
<thead>
<tr>
<th>ZCMD Cylindrical Wrap</th>
<th>ZCPR Pleated</th>
</tr>
</thead>
<tbody>
<tr>
<td>10¨ (250 mm)</td>
<td>10¨ (250 mm)</td>
</tr>
<tr>
<td>0.05 m² (0.53 ft²)</td>
<td>0.13 m² (1.39 ft²)</td>
</tr>
</tbody>
</table>

Effective Filtration Area (EFA)

- ZCCM Cylindrical Wrap
  - 10¨ (250 mm): 0.05 m² (0.53 ft²)
- ZCPM Pleated
  - 10¨ (250 mm): 0.13 m² (1.39 ft²)

Recommended Micron Ratings

- 5.0 µm (0.005 micron)
- 10.0 µm (0.010 micron)
- 20.0 µm (0.020 micron)
- 40.0 µm (0.040 micron)
- 100.0 µm (0.100 micron)

Applications

- High viscous liquids
- Corrosive liquids
- High temperature processing
- Recovery of valuable particulate

Ordering Information

- Code | Length (Nominal) |
- B 2.5¨ (65 mm) |
- A 5¨ (125 mm) |
- 1 10¨ (250 mm) |
- 2 20¨ (500 mm) |
- 3 30¨ (750 mm) |

- Code | Endcap (10¨) |
- B dh DOE |
- C BF / 226 Bayonet |
- T TRUESEAL |
- Z Demi A & B Std |

- Code | O-rings |
- E EPDM |
- P PTFE |
- S Silicone |
- V Viton |
- Z Demi A & B Std |

- Code | Type |
- CM Wrapped |
- PM Pleated

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Metallic Filter Cartridges

Features and Benefits

- Temperature capability up to 220°C (430°F) with stainless steel cartridges
- Available in a cylindrical or pleated design, cleanable stainless steel cartridges
- Synthetic media cartridges cannot meet aggressive chemical requirements
- Available in 304 and 316 stainless steel for high temperature applications
- Fulflo® reusable 304 and 316 grade stainless steel cartridges are the logical choice when natural and synthetic media cartridges cannot meet aggressive process conditions.

Performance Characteristics

- Temperature capability up to 220°C (430°F) with stainless steel cartridges
- Available in a cylindrical or pleated design, cleanable stainless steel cartridges
- Synthetic media cartridges cannot meet aggressive chemical requirements
- Available in 304 and 316 stainless steel for high temperature applications
- Fulflo® reusable 304 and 316 grade stainless steel cartridges are the logical choice when natural and synthetic media cartridges cannot meet aggressive process conditions.

Maximum Recommended Operating Conditions

- Temperature: 81°C (179°F)
- Maximum Differential Pressure: 1.7 bar (25 psi)
- Effective Filtration Area: 64 mm² (1”²)
- Inside Diameter: 27 mm (1”)
- Flow Rates: Same for all ratings

Ordering Information

- Code: Metal | Length (Nominal) | Rating
- S 316 Stainless Steel
- G 304 Stainless Steel
- P No Seal Material
- E EPDM
- T PFA / Viton
- F PTFE
- V Viton
- N Buna N

Applications

- Viscous fluids
- Hot wax
- Aggressive gases
- Polymer filtration
- Catalyst recovery
- Caustic cleaning solutions

Contact Information

- +44 (0)114 269 3999
- www.domnickhunter.com
Bag Filters

Filtration systems using bags are one of the most popular filtration methods for liquid process applications. They provide a versatile, cost-effective, and consistent filtration system suitable for a broad range of applications from small batch operations to bulk processing. The filter media selection is determined by the size of particles to be removed, the type of particles to be removed (deformable and non-deformable), the required efficiency, and the temperature and chemical compatibility of the media and the process fluid.

Particulate is captured inside the filter bag thus allowing clean, easy disposal. This can be of particular advantage for applications that involve aggressive chemicals.

Parker domnick hunter’s range of bag filters are manufactured from a variety of filter media each specifically chosen for its compatibility with a wide range of process liquids. Parker domnick hunter bag filters are of a fully welded design rather than sewn. No process liquid can bypass through needle holes caused by the sewing process or around a sewn ring.
Bag Filters

- mixed media, mesh and felt

Performance Characteristics

- Low maintenance costs
- Quick change-out

Features and Benefits

- From 1 to 1100 microns
- Low maintenance costs
- Quick change-out

Specifications

Materials of Construction

- Polypropylene Felt
- Viscose Felt
- Nylon Felt
- Polyester Felt
- Nomex® Felt
- Nylon Mesh

- Electro Plated Steel
- Moulded Polypropylene
- Moulded Santoprene

Extended life bags

- Available in polypropylene, polyester and nylon from 1 to 1000µm.

Performance Characteristics

- Low maintenance costs
- Quick change-out

Flow rates and high dirt holding capacity, this combined with low maintenance cost and quick change-out makes bag filtration an extremely cost effective means of liquid filtration. Bags are available to suit most common filter housings.

Features and Benefits

- From 1 to 1100 microns
- Low maintenance costs
- Quick change-out

Flow rate is dependant upon media type, micron rating and the fluid being filtered.

<table>
<thead>
<tr>
<th>Bag Size</th>
<th>Diameter</th>
<th>Length</th>
<th>Surface Area</th>
<th>Volume</th>
<th>Max Flow Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>7&quot; (180 mm)</td>
<td>17¨ (435 mm)</td>
<td>0.25 m²</td>
<td>11.0 ltr</td>
<td>20 m³/hr</td>
</tr>
<tr>
<td>2</td>
<td>7&quot; (180 mm)</td>
<td>32¨ (810 mm)</td>
<td>0.5 m²</td>
<td>20.5 ltr</td>
<td>40 m³/hr</td>
</tr>
<tr>
<td>3 (mini)</td>
<td>4¨ (180 mm)</td>
<td>15¨ (380 mm)</td>
<td>0.12 m²</td>
<td>3.2 ltr</td>
<td>10 m³/hr</td>
</tr>
</tbody>
</table>

Differential Pressure (psid) vs Flow Rate (GPM)

Viscous Flow Correction Factors

<table>
<thead>
<tr>
<th>Fluid Viscosity (cps)</th>
<th>Flow rate (% water)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10000</td>
<td>2.1</td>
</tr>
<tr>
<td>8000</td>
<td>2.6</td>
</tr>
<tr>
<td>6000</td>
<td>3.5</td>
</tr>
<tr>
<td>4000</td>
<td>5</td>
</tr>
<tr>
<td>2000</td>
<td>8</td>
</tr>
<tr>
<td>1500</td>
<td>11</td>
</tr>
<tr>
<td>1000</td>
<td>16</td>
</tr>
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<td>800</td>
<td>25</td>
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<td>600</td>
<td>35</td>
</tr>
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<td>400</td>
<td>58</td>
</tr>
<tr>
<td>200</td>
<td>58</td>
</tr>
<tr>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Viscous Felt Rating

- 999 1000
- 800 800
- 500 500
- 250 250
- 150 150
- 45 45

Filtration Media: Polypropylene Felt

Viscosity Felt

Nylon Felt

Nomex® Felt

Polyester Felt

Nylon Mesh

Compatibility

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
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<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Polypropylene</td>
<td>190°C (374°F)</td>
<td>V. Good</td>
<td>V. Good</td>
<td>Good</td>
<td>V. Good</td>
<td>Good</td>
<td>Fair</td>
<td>Fair</td>
</tr>
<tr>
<td>Viscose</td>
<td>135°C (275°F)</td>
<td>V. Good</td>
<td>V. Good</td>
<td>Good</td>
<td>Good</td>
<td>Good</td>
<td>Good</td>
<td>Good</td>
</tr>
<tr>
<td>Nomex®</td>
<td>220°C (428°F)</td>
<td>V. Good</td>
<td>V. Good</td>
<td>Fair</td>
<td>Fair</td>
<td>Poor</td>
<td>Poor</td>
<td>Poor</td>
</tr>
<tr>
<td>Viscose</td>
<td>121°C (250°F)</td>
<td>V. Good</td>
<td>V. Good</td>
<td>Good</td>
<td>Good</td>
<td>Poor</td>
<td>Fair</td>
<td>Fair</td>
</tr>
<tr>
<td>Polypropylene</td>
<td>95°C (203°F)</td>
<td>Good</td>
<td>V. Good</td>
<td>Good</td>
<td>V. Good</td>
<td>Good</td>
<td>Fair</td>
<td>Fair</td>
</tr>
</tbody>
</table>

Applications

- Paints
- Pigments
- Lignosulphonates
- Varnishes
- Inks
- Waxes
- Coolants
- Cutting oils
- Process waters
- Acrylics

Ordering Information

Bag Filters Standard

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>X Plain</td>
<td>4 Mini</td>
<td>5 Standard</td>
<td>G PP Extra Life</td>
<td>100 100</td>
<td></td>
</tr>
<tr>
<td>Y Electro Plated</td>
<td>6 Standard</td>
<td>7 Standard</td>
<td>G PP Extra Life</td>
<td>100 100</td>
<td></td>
</tr>
<tr>
<td>Z Stainless Steel</td>
<td>8 Standard</td>
<td>9 Stainless Steel</td>
<td>G PP Extra Life</td>
<td>100 100</td>
<td></td>
</tr>
</tbody>
</table>

Extended Life Bag Filters

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>X Plain</td>
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<td>5 Standard</td>
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*Not viscose

Viscous Flow Correction Factors

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*Nomex is a registered trademark of E.I. du Pont de Nemours and Co Inc.
### Endcap Styles

- **[2]** BS226 and Flat
- **[7]** BS226 and Spear
- **[3]** BS222 and Flat
- **[8]** BS222 and Spear
- **[9]** BS213 and Flat
- **[SM]** 226 O-ring flat cap with handle

### A Dedicated Housing Range

- **HIL**
  - Industrial single-element liquid housing
  - BSPP inlet/outlet standard connections
  - Suitable replacement for plastic housings
  - Suitable for cartridge types DOE or 222

- **HIL PLUS**
  - Industrial single-element liquid housing
  - Available in 3 different classes: ATEX, CE and High Pressure
  - Industrial, beverage and pharmaceutical finishes available
  - Suitable for cartridge types DOE or 222

- **ZVP (PLASTIC)**
  - Single cartridge polypropylene/nylon housing
  - Accepts DOE filters with knife edge sealing
  - Accepts plug-in cartridges with positive o-ring seals

- **HEATER (JACKETS)**
  - Heating system for vent applications
  - Retrofittable to existing systems
  - Accurate temperature control
  - Easy installation

- **DEMI HIF**
  - Industrial single-element air/liquid housings
  - 1/2" BSPP or NPT inlet/outlet standard connection
  - Suitable replacement for plastic housings
  - Suitable for Parker domnick hunter ’Z’ style 116’ O’rings

- **DEMI HSV**
  - Direct connection to tank boss allows housing to be self-supportive
  - Corrosion resistant 316L stainless steel
  - Easy assembly and maintenance

- **ZVP (PLASTIC)**
  - Single bag and mini bag housings
  - Unsurpassed flow characteristics and economy
  - Wide range of housing types

### Endcap code equivalents used in this catalogue

| BS 226 / Flat | 7  | SC |
| BS 226 / Spear | 7  | SF | C |
| BS 222 / Flat  | 3  | TC | E |
| BS 222 / Spear  | 8  | TN | O |
| BS 213 / Flat  | 9  | PR |
| DOE O-ring     | 0  | DO | R, L |

### Cross reference endcap chart

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For more information on Parker domnick hunter’s complete housing range, please contact your local Parker domnick hunter representative for a copy of the latest technical literature.
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Note: For Bag Filter compatibilities please see page 57
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**Note:** For Bag Filter compatibility please see page 57

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The chemicals are arranged in alphabetical order using their most common or trade names. If the chemical in question does not appear to be listed, it may be found elsewhere in the table under a pseudonym, in particular its IUPAC name. With regard to compatibility:

- **Any product that has Limited Compatibility (LC) at ambient temperatures should not be used at a higher temperature.**
- The list of compatibilities does not take into account any synergistic effects of more than one chemical present in the solution to be filtered.
- **Test Conditions:** 72 hours at ambient temperature and pressure, unless otherwise stated.

Contact Parker for confirmation of compatibility with respect to operating conditions.
### Conversion Tables

#### Volume rate of flow

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#### Pressure (liquid column, atmospheric, etc.)

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#### Mass

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#### Volume and capacity

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#### Conversion Tables

#### Mass

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#### Volume and capacity

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#### Pressure (liquid column, atmospheric, etc.)

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Glossary of Terms Used in Filtration

A

Absolute Pressure
Associated with gas systems. The absolute pressure is the total pressure exerted on a system equal to atmospheric pressure plus gauge pressure, for example 2 bar = 3 bar absolute.

Absolute Rating
A default value given to a filter that represents the smallest particle size capable of being captured by the filter. Typically is refers to 100% retention at a particular micron rating. The assigning of micron ratings is however dependant on the test methodology used, e.g. a single grade absolute rated liquid filter is assigned a 0.2 micron rating if it retains all microorganisms of a predetermined size. The filter does not mean that the filter has 0.2 micron pores. When selecting a filter for a particular application always refer to the methods and assumptions made for assigning the micron rating.

Autosteam
A closed pressure vessel into which steam is introduced (typically at a temperature of 121 - 134 °C (250 - 273 °F)) to sterilise the contents.

B

Backwash
A reverse flow of liquid through a filter in order to flush out trapped solids.

Beta Rating
A measure of a filter's efficiency based on the number of particles present in the influent (upstream) to those in the effluent (downstream). Efficiency is expressed as a Beta ratio and is introduced (typically at a temperature of 121 - 134 °C (250 - 273 °F)) to sterilise the contents.

Cartridge
A filter characterised by the feed stream travelling parallel to instead of directly through the filtration medium. This has the advantage of minimising the blockage of the membrane as the system is to some extent 'self cleaning'.

Cross Flow Filtration
A filter characterized by the feed stream travelling parallel to instead of directly through the filtration medium. This has the advantage of minimizing the blockage of the membrane as the system is to some extent ‘self cleaning’.

D

Dead Leg
An area of pipe work where there is potentially no flow and therefore stagnant conditions exist. It is extremely important to eliminate those flow condition issues are to be minimized.

Depth Filter
A depth filter is characterised by the thickness of the filtration media as well as its structure. A depth filter is normally fibrous in nature and containment is retained through the depth of the filtration media rather than just the surface. Disposable Intercalation
This is the dominant removal mechanism for the smallest particles captured by a filter in the gas phase. Particles as small as 0.01 µm exhibit great diffusional movement (Brownian Motion) which has the effect of increasing its nominal mean diameter to the filter. The efficiency of this capture mechanism decreases as the particle size increases.

Diffusional Flow
A non-destructive integrity test method for membrane based filters. It involves washing out every pore in the membrane structure with water or the process fluid or a low surface tension liquid in case of hydrophobic membranes. Compressed air is applied to the upstream side of the filter and gas diffuses through the wetted pores. This flow rate is either measured directly by mass flow meters or indirectly via measuring the drop in pressure on the upstream side of the filter.

Differential Pressure
Differential Pressure (ΔP) is the difference in the pressure measured upstream (influent) and downstream (effluent) of a filter. Particularly in liquid applications differential pressure will increase to a point where either filter damage or insufficient flow will result. The higher the differential pressure the higher the energy cost so it is important to balance the pressure drop requirements with the installation size and required lifetime to blockage. Units of measurement are bar and so advised and expressed in psi and bar.

Effective Filtration Area (EFA)
This is the area of the filtration material available for filtration.

Filter
Any material that removes particles from a liquid or gas by passing it through a porous medium. It generally involves removing particles between the sizes of 10 and 1.0 micron in liquids and, down to 0.1 micron in gases.

Filter Efficiency
Filter efficiency is a measure of the percentage of particles that are removed from the fluid by the filter. Typically these are given in terms of the % removal for a certain size of particle. Filter efficiency may also be quoted across a range of particle sizes. For a number of gas applications the efficiency of a filter may be quoted in relation to the filters ability to remove particles at the most penetrating mean particle size (MPPS) of 0.2-0.3 micron. Always ensure filter efficiency is matched to the requirements of the process.

Filterability Indices (FI) and Vmax
This is an indication of a filters' capacity to process certain fluids. It generally refers to the rate of blockage of a filter as well as the theoretical maximum retention that can be achieved. The time required to flow two consecutive 200 ml fluid samples is recorded and the filterability indices are calculated from the result. The two formulas are as follows:

\[ \text{FI} = \left( \frac{T2 - T1}{T1} \right) \]

\[ V_{\text{max}} = \left( \frac{0.0007}{E} \right) \]

Fi = Time to filter first 200 ml
T1 = Time to filter second 200 ml
T2 = Time to filter second 200 ml

It should be noted that these methods give a general indication of performance and are often more useful in comparative performance measurement between different filter types.

Filtrate
Another name for effluent.

Flux
The rate of fluid flow (gas or liquid) when expressed in terms of flow of fluid per unit area of the filter that removes the contaminants from the fluid stream. It can apply to both depth and membrane media.

G

Gauge Pressure
The pressure of a system measured by a gauge, which excludes atmospheric pressure, for example 1 bar atmosphere (1 or 1 bar absolute) = 0 barg

H

Hydraulic Filter
An enclosure for a filter element, typically rated for pressure, that directs the fluid through the filter.

Hydrophobic
Hydrophobicity is the ability of a filtration media to wet out, that is, for the porous structure to be completely filled with the liquid being filtered. This is an important characteristic as incomplete wetting of the structure can lead to a reduction in flow capacity and/or problems with integrity testing. All liquid filters are ‘hydrophilic’ apart from those that may be selected for use with aggressive solvents. These filters are typically based on a fluoropolymer or their structure needs to be wetted with a low surface tension liquid such as isopropyl alcohol. Once the structure has been wet, the filter will process aqueous solutions without a problem.

I

Inertial Impaction
This is a removal mechanism for particles captured by a filter in the gas phase. The particles follow the streamlines of gas between the filter fibres and membrane pores. Due to their much higher inertia of the particle will cause it to move out of the streamlines and attach itself to a fibre or pore wall. The effect of this mechanism increases with particle size / mass.

N

Nominal Rating
Filtration that removes both particles and small dissolved molecules and ions. Fisher than Ultrafiltration, not as fine as Reverse Osmosis.

Nominal Diameter
A nanometer = 10^-9 meters

Nominal Rating
This rating is often quoted within the filtration industry but great care should be taken in ensuring the efficiency and test methodologies are completely understood. A 0.5 micron nominal rating could be 99% retentive at 5 micron, another could be 80%. It can be very misleading to compare the performance of filters on nominal ratings. When selecting a filter the filter duty required should be compared to the individual performance characteristics of filter. Parker demircr hutner has the experience to help select the most appropriate filter for the application.

M

Medium (Media)
This is the component of the filter that removes the contaminates from the fluid stream. They commonly referring to depth - type materials, in its more generic sense a filter medium / media can refer to either depth or membrane filter materials.

Micron (micrometer)
A measure of particle size / mass. Commonly referred to as a micron (µm), it is the length of a millionth of a meter. One micron = 0.001 millimeters. Micron size can be measured using a microscope.

Membrane
A membrane is a thin, porous film typically between 30 and 150 micron in thickness. It has vast of millions of pores / cm² through which the process fluid runs. The nature of the pore structure is determined by the manufacturing method. Solvent cast membranes such as Polyethersulfone (PES) and Mixed Ester of Cellulose (MEC) have a defined pore structure which can be asymmetrical whilst membrane such as Polyethyleneterephthlate (PETE) which is manufactured by ‘stretching’ have a fibrous appearance and a less defined pore structure.
Glossary of Terms Used in Filtration

O
Oleophobic
Oleophobic membranes and depth media have the capability to repel fluids such as oil and lubricants. This phenomena is used in some of the new generation oil coalescing filters.

Oxidation
This refers to the degradation of materials in the presence of oxygen and high temperature. It is normally associated with high temperature gas systems where the combination of steam sterilisation can lead to the onset of oxidation of polypropylene filtration components in as little as 3 months. For applications where continuous (1 year and above) exposure to high temperature is required the use of a special product with oxidation resistant filtration support materials such as the HIGH FLO 75 TETPOR T is recommended.

Oxidation can also occur on filters used in saturated water systems. In these instances careful selection of filter components is required.

P
Permeate
Synonymous with filtrate.

Pressure Decay
When a filter becomes blocked with protein based material it may be possible to regenerate, or clean the filter, so improving overall lifetime.

Reverse Jetting
The application of high pressure compressed gas to the inside of a filter to release powder collected on its surface.

Reverse Dosemosis
Forcing a liquid through a non-porous membrane, removing particles, along with dissolved molecules and ions. Reverse Dosemosis is the finest form of membrane separation and is used to desalinate water for drinking, and in the preparation of ultrapure water for various industries.

S
Sedimentation
The process by which suspended solid particles in a liquid phase gravitate downwards. Eventually they will settle on the bottom of the holding tank, pulpwork etc. The rate of sedimentation is governed by particle mass and fluid velocity.

Separation
Separation is the process of dividing a fluid stream (either liquid or gas) into separate components. This can include separation of two phases (liquid from gas), separation of soluble impurities (known as purification) or solids from a fluid (filtration).

Size Exclusion
This is a removal mechanism for particles captured by a filter in either the liquid or gas phase. It applies to particles that are physically too large to pass through the filter structure. The mechanism is not affected by flow rate unless pressure drop causes deformation of the particle.

Solute
A solid which is dissolved in a solvent. For instance, the salt in salt water is a solute.

Solvent
A liquid substrate capable of dissolving other substances. The solvent does not change its state in forming a solution.

Surfactant
Acronym for a surface active agent. In filtration it is also sometimes called a wetting agent. If a filter is being used to filter aqueous solutions and incomplete wetting of the membrane pore structure is encountered a ‘wetting agent’ may be added to the membrane surface by flowing a quantity of surfactant through the filter. The use of a wetting agent is, however, not desirable, especially in a pharmaceutical environment, as there is also the possibility of the surfactant leaching from the filter into the filtrate during processing or steam sterilisation, etc.

T
Thermal Stability
This is most important during sterilisation of the filter. The majority of cartridge and disposable type filters are manufactured from polymers such as polypropylene and nylon. During sterilisation the components of the filter expand and contract putting great strain on the device. The filter performance with respect to steam sterilisation should be matched closely to the requirements of the process. It should be noted that some filter configurations cannot be in situ steam sterilised but can only be autoclaved.

Viscosity
Viscosity is a measurement of the resistance to flow of a fluid. The more viscous the fluid, the greater the time required to filter. Viscosity will in general reduce with an increase in temperature. This is why very viscous solutions such as glucose are heated prior to filtration.

Unloading
The release of contaminants which had initially been captured by a filter. This is most likely to occur in filtration systems where are subjected to high pressure pulses such as high capacity filling lines.

Ultrafiltration
Filtration of a liquid that separates suspended or dissolved substances based on their molecular weight or size. Ultrafiltration generally refers to separating everything larger than a large molecule. Compare to microfiltration, nanofiltration, reverse osmosis.

V
Vesicles
This is a measurement of the amount of suspended particles in a fluid and is effectively a clarity index. It is measured in NTU (Nephelometric Turbidity Units).

Vmax
Vmax
The maximum allowable pressure decay for a filter is dependent on the upstream volume and therefore must be known.

Pressure Decay (mbar /min) =

\[
\text{Pressure Decay} = \frac{\text{Differential Flow (ml/min)}}{\text{Upstream Vol (l)}}
\]

Permeate
Synonymous with filtrate.
At Parker, we’re guided by a relentless drive to help our customers become more productive and achieve higher levels of profitability by engineering the best systems for their requirements. It means looking at applications from many angles to find new ways to create value. Whatever the motion or control technology need, Parker has the experience, breadth of product and global reach to consistently deliver. No company knows more about motion and control than Parker. For further information call 0800 27 27 5374
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