



## ***Pleated Filter Cartridges Series***



[www.filterek.com](http://www.filterek.com)

***Filterek***

### COMPANY INTRODUCTION

*FILTEREK PRODUCTS TECH CO., LTD* as a member of *FILTEREK Group* , has been doing the filter products manufacturing, sales and technology supporting works for customers. We are the leading company in these fields owing to our many succeeded breakthroughs in the material development. We also built and run some integrated platforms such as melt blown fiber, polypropylene and polyester felts filter bags and nylon mesh bags. It makes us become the main vendors for industrial customers includes electronics, chemical, automobile, metallic and water treatment.

*FILTEREK* obey following principles in business operation: lay solid foundation for good faith, concern with customer demands, ensure yield of hi-quality products and unceasingly seek for new product innovation. *FILTEREK* will do our best to satisfy customer demands.



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### Pleated Cartridge Introduction:

FILTEREK polypropylene pleated filter cartridges is constructed of three polypropylene melt-blown superfine fiber membranes with differed fiber micron, hot spun-melt in the inner & outer polypropylene sheath after pleated and integrated. The filtration area is more than 10 times larger than normal standard depth filter cartridge. When liquid fluctuates, the membrane will cause no influence to removal rating. This is a fixed type of filter cartridge with better depth filtration stability.

Except PP pleated cartridges, Filterek also provide other materials includes Polyether-sulfone, PTFE and PVDF pleated cartridges. Generally, the material of inner & outer sheath is material of polypropylene. We also offer totally PTFE construction for some critical application.

### Available Products

P/N CODE	MICRO RATIO													
	0.1	0.2	0.45	0.5	0.65	1.0	1.2	2.5	5	10	20	50	75	100
CPPL		▲		▲			▲	▲	▲	▲	▲	▲	▲	▲
EPPL	▲	▲	▲				▲	▲	▲	▲	▲	▲	▲	▲
SPPL	▲	▲		▲	▲	▲	▲	▲	▲	▲				
CPES	▲	▲	▲		▲									
HPES	▲	▲	▲											
PTGA	▲	▲	▲			▲								
DPTA	▲	▲	▲			▲								
GHTA	▲	▲												
GHUE	▲	▲												

Remarks: ▲ : Available micron ratio

- All polypropylene pleated cartridges
- Polyethersulfone membrane filter cartridges
- Hydrophilic PTFE membrane filter cartridges
- Hydrophobic PTFE membrane

### Filter Cartridge Code Identification

- CPPL: Polypropylene pleated Filter Cartridges
- EPPL: Polypropylene high grades Filter cartridges
- SPPL: Slurry-mate Polypropylene Filter Cartridges
- CPES: Polyethersulfone Membrane Filter Cartridges
- HPES: High-Flux Polyethersulfone Membrane Filter Cartridges
- PTGA: PTFE Membrane Filter Cartridges
- DPTA: UHP Water Rinsed PTFE Membrane Filter Cartridges
- GHTA: Sterilizing grade Filter Cartridges
- GHUE: High-temperature Sterilizing grade Filter Cartridges

## CPPL Polypropylene Pleated Filter Cartridges Absolute Rated High Efficiency

CPPL Advantage Cartridges, made of pleated polypropylene microfiber, provide high efficiency and high purity filtration. The high submicron efficiency of the Advantage line makes it an ideal membrane pre-filter or cost-effective alternative to membrane cartridges in a wide range of applications. Advantage Pleated Cartridges are available in 0.2µm, 0.5µm, 1.2µm, 2.5µm, 5µm, 10µm, 20µm, 50µm, 75µm and 100µm absolute rated pore sizes (99.8% removal; β=500).

### Features

- ◆ All-polypropylene media and construction meet a broad range of performance requirements.
- ◆ One-piece fused construction is 100% bonded for maximum cartridge integrity.
- ◆ High surface area design provides superior flow rates and extended service life.
- ◆ All materials of construction are FDA listed as acceptable for potable and edible liquid contact according to CFR Title 21.
- ◆ Fixed pore construction provides ultimate particle retention efficiency.
- ◆ Major end seal options are available to fit most vessel requirements.
- ◆ Advantage cartridges are non-fiber releasing.

### Applications

- ◆ Chemicals
- ◆ Electronic
- ◆ Food & Beverage
- ◆ Magnetic Media
- ◆ Pharmaceuticals
- ◆ Cosmetics
- ◆ Medical
- ◆ Photographic
- ◆ Water treatment
- ◆ Restaurant water
- ◆ Trap filter for DI

### Specifications

#### Filtration Ratings:

- ◆ 99.8% at 0.2µm, 0.5µm, 1.2µm, 2.5µm, 5µm, 10µm, 20µm, 50µm, 75µm and 100µm pore sizes

#### Materials of Construction:

- ◆ Type of Construction: integrally sealed, all-polypropylene pleated media supported by all-polypropylene construction
- ◆ Filter Media: composite, spun bonded /melt blown continuous polypropylene microfiber matrix
- ◆ Pleat Support Layer (Upstream): polypropylene
- ◆ Pleat Drainage Layer (Downstream): polypropylene
- ◆ Media Support Core: high-strength polypropylene
- ◆ Media Protective Cage: molded polypropylene
- ◆ Pleat Pack Side Seal: fused polypropylene
- ◆ DOE Caps: polypropylene
- ◆ SOE Caps/O-Ring Adaptors: polypropylene



#### Length Factors

Length (in)	Length Factor
10	1.0
20	2.0
30	3.0
40	4.0

#### CPPL Cartridge Flow Factors (psid/gpm @ 1 cks)

Rating Flow (µm)	Factor
0.2	1.600
0.5	0.900
1.2	0.770
2.5	0.300
5.0	0.120
10	0.020
20	0.020
50	0.010
75	0.008
100	0.006

**Maximum Recommended Operating Conditions:**

- Temperature: 200°F (93°C)
- Temperature @ 35 psid: 160°F (71°C)
- Change Out Δ P: 35 psid (2.4 bar)
- Δ P @ Ambient 70°F (21°C): 70 psid (4.8 bar)
- Δ P @ 200°F (93°C): 20 psid (1.4 bar)
- Flow Rate: 10 gpm (38 lpm) per 10 in length

**Dimensions:**

- Cartridge Outside Diameter: 2-11/16 in(68mm)
- Cartridge Inside Diameter:1-5/32 in(30mm)

**Flow Rate and Pressure Drop Formulae:**

$$\text{Flow Rate (gpm)} = \frac{\text{Clean } \Delta P \times \text{Length Factor}}{\text{Viscosity} \times \text{Flow Factor}}$$

$$\text{Clean } \Delta P = \frac{\text{Flow Rate} \times \text{Viscosity} \times \text{Flow Factor}}{\text{Length Factor}}$$

**Notes:**

1. Clean Δ P is PSI differential at start.
2. Viscosity is centistokes.
3. Flow Factor is Δ P/GPM at 1 cks for 10 in (or single).
4. Length Factors convert flow or Δ P from 10 in (Single length) to required cartridge length.

**Order Information and Selection Guide:**

<b>CPPL</b>	-	<b>002</b>	-	<b>10</b>	-	<b>S</b>	-	<b>C</b>
/		/		/		/		/
<b>Industry</b> polypropylene pleated cartridges		<b>Micron Ratio:</b> 002-0.2μm 005-0.5μm 01.2-1.2μm 02.5-2.5μm 05.0-5.0μm 010-10μm 020-20μm 050-50μm 075-75μm 100-100μm		<b>Length:</b> 05—5" 10—10" 20—20" 30—30" 40—40"		<b>Gasket Material:</b> B-BUNA S-Silicon E-EPDM V-Viton		<b>Seal Model:</b> A-Double 226 O ring with Flat end B-Double 222 O ring with Flat end C-Double 222 O ring with Bayonet D-Double 226 O ring with Bayonet E-Double 222 O ring with Flat end 316L Stainless Steel inner supporter F-Double 222 O ring with Bayonet 316L Stainless Steel inner supporter G-Double 226 O ring with Bayonet 316L Stainless Steel inner supporter H-Double open end with flat O rings

### DPPL&EPPL Polypropylene high grades Filter cartridges Quality, Economical Filtration for Critical Applications

DPPL&EPPL all polypropylene filter cartridges incorporate a unique combination of polypropylene melt blown and spun bonded media to provide high surface area, finish-free and non-fiber releasing filtration. DPPL cartridges is designed for food and pharmaceutical process. EPPL filter cartridges are well suited for broad range of fine particle and prefiltration application where purity, economy and reliability are critical such as micro-electronics process. All-polypropylene construction maximizes chemical resistance to acids base, salts, and most organic solvents.

Poly-Mate Pleated Cartridges are available in 0.1µm 0.2µm, 0.45µm, 1.2µm, 2.5µm, 5µm, 10µm, 20µm, 50µm ,75µm and 100µm absolute rated pore sizes (99.98% removal; β=5000).

#### Features

- ◆ High efficiency rated for critical process applications (99.98% efficiency).
- ◆ High pleated surface area for extended service life, low pressure drop and high flow capacity.
- ◆ EPPL reinforced cartridge features 316L stainless steel core and polysulfone for high temperature and high pressure use with rigid outer cage supporting pleated media in backwash applications.
- ◆ Optional stainless steel O-ring adapter inserts provide added strength for in situ sterilization.
- ◆ EPPL filter cartridges are back-washable construction, reducing replacement maintenance and cartridge disposal costs.
- ◆ All materials of construction are FDA listed as acceptable for potable and edible liquid contact according to CFR Title 21.
- ◆ Rinsed with 15 megohm-cm UHP water for high purity. Non-fiber releasing.
- ◆ ISO9000 Certified Quality System.



#### Applications

- ◆ Food & Beverage
- ◆ Photographic
- ◆ High-Technology Coatings
- ◆ De-ionized Water
- ◆ R.O. Membrane Prefiltration
- ◆ Disposal Wells
- ◆ Process Water
- ◆ Fine Chemicals
- ◆ Amine
- ◆ Plating Chemicals
- ◆ Biologics
- ◆ Pharmaceuticals
- ◆ Fermentation
- ◆ Herbal Medicine
- ◆ Electronics

#### Specifications

##### Filtration Ratings:

- ◆ 99.98% removal; β=5000 at 0.1µm 0.2µm, 0.45µm, 1.2µm, 2.5µm, 5µm, 10µm, 20µm, 50µm ,75µm and 100µm absolute rated pore sizes.

##### Effective Filtration Area:

- ◆ Up to 6.0 ft<sup>2</sup>/10 in (0.6m<sup>2</sup>/254mm)

##### Materials of Construction:

- ◆ Filter Media and Support Layers: Polypropylene
- ◆ Bonding Polymer: none, completely fusion-sealed
- ◆ Surface Treatment: none chemically inert and neutral.
- ◆ Media Protection: polypropylene cage.
- ◆ Support Core: Polypropylene; Polypropylene with stainless steel
- ◆ Pleat Pack Side Seal: fused polypropylene
- ◆ End Caps: polypropylene
- ◆ Seal: Buna-N, EPR, silicone, Viton, PTFE encapsulated Viton, O-rings,

##### Length Factors

Length (in)	Length Factor
10	1.0
20	2.0
30	3.0
40	4.0

##### Flow Factors (psid/gpm @ 1 cks)

Rating Flow (µm)	Factor
0.1	2.200
0.2	1.600
0.45	0.900
1.2	0.770
2.5	0.300
5.0	0.120
10	0.020
20	0.020
50	0.010
75	0.008
100	0.006

**Recommended Operating Conditions:**

- ♦ Polypropylene and polysulfone Cartridges:
  - Change Out  $\Delta P$ : 35 psid (2.4 bar)
  - Maximum Temperature: 200°F (93°C)
  - Maximum Temperature @ 35 psid (2.4 bar): 125°F (52°C)
  - Maximum  $\Delta P$  @ 70°F (21°C): 60 psid (4.1 bar)
  - Maximum  $\Delta P$  @ 200°F (93°C): 10 psid (0.7 bar)
- ♦ Reinforced with stainless steel Cartridges:
  - Change Out  $\Delta P$ : 35 psid (2.4 bar)
  - Maximum Temperature: 200°F (93°C)
  - Maximum Temperature @ 35 psid (2.4 bar): 200°F (93°C)
  - Maximum  $\Delta P$  @ 70°F (21°C): 90 psid (6.1 bar)
  - Maximum  $\Delta P$  @ 200°F (93°C): 35 psid (2.4 bar)

**Dimensions:**

- ♦ Cartridge Outside Diameter: 2-11/16 in (68mm)
- ♦ Cartridge Inside Diameter: 1-5/32in (30mm);

**Recommended Maximum Flow Rate:**

- ♦ Maximum 10 gpm per 10 in length

**Designed Flow Rate (in water):**

- ♦ 2.5 gpm per 10 in length (9.5 lpm per 254mm)

**Flow Rate and Pressure Drop Formulae:**

$$\text{Flow Rate (gpm)} = \frac{\text{Clean } \Delta P \times \text{Length Factor}}{\text{Viscosity} \times \text{Flow Factor}}$$

$$\text{Clean } \Delta P = \frac{\text{Flow Rate} \times \text{Viscosity} \times \text{Flow Factor}}{\text{Length Factor}}$$

**Notes:**

1. Clean  $\Delta P$  is PSI differential at start.
2. Viscosity is centistokes.
3. Flow Factor is  $\Delta P/\text{GPM}$  at 1 cks for 10 in (or single).
4. Length Factors convert flow or  $\Delta P$  from 10 in (Single length) to required cartridge length.

**Order Information and Selection Guide:**

<b>EPPL</b>	-	<b>001</b>	-	<b>10</b>	-	<b>S</b>	-	<b>C</b>
/		/		/		/		/
<b>EPPL-High purity grade cartridges for electronics. DPPL- high removal efficiency cartridges</b>		<b>Micron Ratio:</b> 001-0.1 $\mu\text{m}$ 002-0.2 $\mu\text{m}$ 045-0.45 $\mu\text{m}$ 01.2-1.2 $\mu\text{m}$ 02.5-2.5 $\mu\text{m}$ 05.0-5.0 $\mu\text{m}$ 010-10 $\mu\text{m}$ 020-20 $\mu\text{m}$ 050-50 $\mu\text{m}$ 075-75 $\mu\text{m}$ 100-100 $\mu\text{m}$		<b>Length:</b> 05—5" 10—10" 20—20" 30—30" 40—40"		<b>Gasket Material:</b> B-BUNA S-Silicon E-EPDM V-Viton		<b>Seal Model:</b> A-Double 226 O ring with Flat end B-Double 222 O ring with Flat end C-Double 222 O ring with Bayonet D-Double 226 O ring with Bayonet E-Double 222 O ring with Flat end 316L Stainless Steel inner supporter F-Double 222 O ring with Bayonet 316L Stainless Steel inner supporter G-Double 226 O ring with Bayonet 316L Stainless Steel inner supporter H-Double open end with flat O rings



## SPPL Slurry-mate Polypropylene Filter Cartridges

SPPL CMP Slurry-Mate Filter Cartridges provide uniform slurry delivery while optimizing the chemical mechanical planarization of wafer interlayer dielectric (ILD) and tungsten and copper metal layers. A unique proprietary melt blown media provides a particle classification effect, which improves service life while maintaining optimum polishing characteristics of alumina and silica based slurries.

Several particle classification matrices are available to match the wide range of CMP oxide and metal polishing slurries in recirculation and distribution loops as well as point-of-use CMP tools.

### Features

- ◆ Classification matrix extends slurry life and maintains consistent slurry delivery.
- ◆ All polypropylene construction provides excellent compatibility for both acidic and basic slurries.
- ◆ Sieve-like filtration matrix provides sharp particle size cutoff to remove only agglomerated particles causing wafer surface damage.
- ◆ Heavy duty construction handles rigors of CMP process fluid conditions.
- ◆ Increase wafer yield by removing oversized, agglomerated or foreign particulate matter.
- ◆ Large Surface area provides high flux rate.
- ◆ Thermal bonding eliminates particle bypass.

#### Filterek's TQM system assures consistent performance.

- ◆ Several classification matrices are available to accommodate wide range of polishing slurry formulations.
- ◆ Fits standard and similar competitive filter vessels.



### Applications

- ◆ Oxide Polishing Slurries:
  - ◆ Point of Use
  - ◆ Distribution
  - ◆ Recirculation Loop
- ◆ Metal Polishing Slurries:
  - ◆ Point of Use
  - ◆ Distribution
  - ◆ Recirculation Loop

### Specifications

#### Particle Classification Codes:

- ◆ S01, S03, 05, 07, 09, 11, 13, 15

#### Materials of Construction:

- ◆ Filter Medium: Melt Blown Polypropylene
- ◆ Filter Medium Support: Polypropylene
- ◆ Structural Components: Natural polypropylene
- ◆ O-Ring Material: EPDM, Viton, PFA/Viton
- ◆ Gasket Material: Polyethylene Foam
- ◆ Sealing Method: Thermal bonding

Flow Factors (psid/gpm @ 1 cks per 10-inch cartridge)

Code	Flow Factors
01	1.00
03	0.75
05	0.50
07	0.13
09	0.03
11	0.02
13	0.01
15	0.01

+ P=Flow Rate X Viscosity (cks) X Flow Factor

#### Cartridge Selection Guide

Slurry Particle Size Range (micrometers)	Recommended Cartridge Code	Typical Application
0.05-0.1	01	Point of Use
0.10-0.2	03	
0.20-0.4	05	
0.50-1.0	07	Distribution
1.00-2.0	09	
2.00-4.0	11	Recirculation Loop
4.00-8.0	13	
7.00-14.0	15	

**Note:** Cartridge selection based on removing particles larger than the slurry particle size range specified.



**Maximum Recommended Operating Conditions:**

- Temperature: 200°F(93°C) @ 10ΔP (0.7 bar)
- Differential Pressure: 70 psi (4.8 bar) @ 77°F(25°C); 10 psi (0.7 bar) @ 200°F(93°C)
- Flow Rate: 10 gpm (38 lpm) per 10 in cartridge
- Changeout NetΔP: 10 psi (0.7 bar)

**Dimensions:**

- Diameter: 2.5 in (68mm)
- Lengths: 4-30 in (102-764mm)

**Order Information and Selection Guide:**

<b>SPPL</b>	-	<b>01</b>	-	<b>10</b>	-	<b>S</b>	-	<b>C</b>
/		/		/		/		/
<p><b>Slurry mate polypropylene Pleated cartridges</b></p>		<p><b>Micron Ratio:</b> 01-0.05~0.1μm 03-0.1~0.2μm 05-0.2~0.4μm 07-0.5~1.0μm 09-1.0~2.0μm 11-2.0~4.0μm 13-4.0~8.0μm 15-7.0~14.0μm</p>		<p><b>Length:</b> 05—5" 10—10" 20—20" 30—30" 40—40"</p>		<p><b>Gasket Material:</b> B-BUNA S-Silicon E-EPDM V-Viton VT-Viton with PTFE</p>		<p><b>Seal Model:</b> A-Double 226 O ring with Flat end B-Double 222 O ring with Flat end C-Double 222 O ring with Bayonet D-Double 226 O ring with Bayonet H-Double open end with flat O rings</p>

# CPES Polyethersulfone Membrane Filter Cartridges Pharmaceutical Grade Membrane Series

CPES Pharmaceutical Grade polyethersulfone membrane cartridges are validated, 0.1µm, 0.2µm, 0.45µm and 0.65µm sterilizing-grade filters with a unique construction features a high-surface area design that allows for excellent flow rates and high particle removal efficiency. Hydrophilic polyethersulfone membrane cartridges require no pre-wetting and are ready to use. The filters are suitable for sterile filtration of fluids including buffers, biological fluids, tissue culture media, ophthalmic products and many others. This Grade is also ideal for final filtration of water and aqueous solutions in chemical process, food and beverage and bulk pharmaceutical applications.

## Features

- ◆ Hydrophilic polyethersulfone membrane for low adsorption and wide chemical compatibility.
- ◆ High surface area design provides excellent flow rates and extended filter life while maintaining high particle removal efficiency.
- ◆ High-strength construction tolerates up to 1 bard (14.5psid) differential pressure during steam-in-place sterilization.
- ◆ High-strength design allows for multiple autoclave cycles and extended use.
- ◆ Non-Pyrogenic per USP Bacterial Endotoxins(<0.25EU/ml)

## Filterek's TQM System Assures Consistent Performance and Reliable Filtration

- ◆ Integrity-tested during manufacture.
- ◆ Identified by a lot number and a unique serial number for complete traceability of manufacturing history and for user's traceability system.
- ◆ Meets USP Biological Reactivity Test, in vivo , in accordance with USP Class VI-121°C Plastics Tests.
- ◆ Specifically designed to ensure cleanliness.
- ◆ Meets Total Organic Carbon and Water Conductivity per USP Purified Water, pH per USP Sterile Purified Water.



## Applications

### Pharmaceutical

- ◆ Buffers
- ◆ Biologicals
- ◆ Tissue culture media
- ◆ Ophthalmic products

### UHP Chemical

- ◆ Specialty Chemicals
- ◆ Bulk Photo-resists and Solvents

### UHP Water

- ◆ Central PAD
- ◆ Polishing Stations

### Food & Beverage

- ◆ Bottled Water
- ◆ Wine
- ◆ Beer
- ◆ Process Water
- ◆ Vinegar
- ◆ Aseptic Packaged Liquids
- ◆ Edible Oils

## Specifications

### Dimensions:

- ◆ Diameter: 2.70 in (6.8 cm)
- ◆ Lengths: 10-40 in (25-102cm)

### Surface Area (10 in cartridge):

- ◆ Minimum 6.5 ft<sup>2</sup> (0.6m<sup>2</sup>)

### Materials of Construction:

- ◆ Membrane: Hydrophilic polyethersulfone Membrane
- ◆ Support/Drainage: polypropylene
- ◆ Structural Components: polypropylene
- ◆ Seal Material: various
- ◆ Sealing Method: thermal welding

### Flow Factors:

Pore Size (µm)	GPM/1 PSID	LPM/1 BAR	PSID/ 1 GPM	Bar/ 1 LPM
<b>0.1</b>	<b>1.2</b>	<b>66</b>	<b>0.85</b>	<b>0.015</b>
<b>0.2</b>	<b>1.8</b>	<b>99</b>	<b>0.56</b>	<b>0.010</b>
<b>0.45</b>	<b>3.5</b>	<b>192</b>	<b>0.29</b>	<b>0.005</b>
<b>0.65</b>	<b>5.5</b>	<b>301</b>	<b>0.18</b>	<b>0.003</b>

**Installation Rinse-In:**

- Cartridges typically rinse to back ground resistivity in less than five minutes at 2 gpm /10" equivalent.

**Recommended Operating Conditions:**

- Maximum Temperature: 176°F (80°C) @ 30ΔP (2.1 bar)
- Maximum Differential Pressure.

**Forward:**

70psi (4.8bar) @77°F (25°C)  
30psi (2.1bar) @176°F (80°C)

**Reverse:**

50psi (3.4bar) @77°F (25°C)

**Sterilization/Sanitization Methods:**

- Isopropy Alcohol
- Sodium Hydroxide
- Hydrogen Peroxide
- Hot Water:190°F (88°C) @ 5 psid (0.3 bar)
- Autoclave: 250°F (121°C) for 30 minutes at 15 psi (1.0 bar)
- In Situ Steam: 284°F (140°C) for 60 minutes at 15 psi (1.0 bar)
- Chlorine
- Sodium Hypochlorite
- Sanitizing Agents (see Materials Selection Guide, Bulletin SCI-210)

**Order Information and Selection Guide:**

<b>CPES</b>	-	<b>001</b>	-	<b>S</b>	-	<b>10</b>	-	<b>S</b>	-	<b>C</b>
/		/		/		/		/		/
<b>Hydrophilic Polyethersulfone membrane</b>		<b>Micron Ratio:</b> 001-0.1µm 002-0.2µm 04.5-0.45µm 06.5-0.65µm		<b>Construction:</b> S-Single layer of membrane D-Double layer of membrane		<b>Length:</b> 05—5" 10—10" 20—20" 30—30"		<b>Gasket Material:</b> B-BUNA S-Silicon E-EPDM V-Viton		<b>Seal Model:</b> A-Double 226 O ring with Flat end B-Double 222 O ring with Flat end C-Double 222 O ring with Bayonet D-Double 226 O ring with Bayonet E-Double 222 O ring with Flat end 316L Stainless Steel inner supporter F-Double 222 O ring with Bayonet 316L Stainless Steel inner supporter G-Double 226 O ring with Bayonet 316L Stainless Steel inner supporter H-Double open end with flat O rings

## HPES High-Flux Polyethersulfone Membrane Filter Cartridges

HPES high flux polyethersulfone membrane cartridges provide superior flow rates over the competition. The unique construction features a high-surface area design that allows for excellent flow rates and high particle removal efficiency. Filterek's patented hydrophilic polyethersulfone membrane cartridges offer additional 40% flowrate capacity comparing with those competitions. HPES require no pre-wetting and are ready to use. The Ultra-Pure Polyethersulfone Membrane Series of filter cartridges meets or exceeds requirements for the filtration of UHP liquids used in the fabrication of state-of-the-art microelectronic devices. The Mega-Pure Polyethersulfone Membrane Series is available in 0.1µm, 0.2µm and 0.45µm pore sizes.

### Features

- ◆ High surface area design provides excellent flow rates and extended filter life while maintaining high particle removal efficiency.
- ◆ Rinsed to 18 megohm-cm resistivity with UHP water.
- ◆ Provides broad chemical compatibility.
- ◆ Manufactured in a clean room environment.
- ◆ Patented pore structure offer more than 40% flow rates. Extended life and save change out cost.
- ◆ 4 series products are available. They are accurate for application of Food & Beverages, Pharmaceuticals, Electronics, photovoltaics and Semiconductor

### Filterek's TQM System Assures Consistent Performance and Reliable Filtration

- ◆ Strict quality control measures include rigorous testing for rinse up, shedding, flow rate and extractable levels.
- ◆ Integrity-tested and testable in situ.
- ◆ Thermally welded, eliminating adhesive extractable.
- ◆ Biosafe in accordance with USP Class VI-121°C Plastics Tests.
- ◆ Specifically designed to ensure cleanliness.
- ◆ All materials of construction are FDA listed as acceptable for potable and edible liquid contact according to CFR Title 21.



### Applications

#### UHP Water

- ◆ Central PAD
- ◆ Polishing Stations
- ◆ Point-of-Use

#### UHP Chemical

- ◆ Specialty Chemicals
- ◆ Point-of-use
- ◆ Bulk Photoresists and Solvents

#### Electronics

- ◆ Semiconductor
- ◆ Optical Disks
- ◆ Printed Circuits
- ◆ Data storage
- ◆ Photovoltaics
- ◆ Display

### Specifications

#### Dimensions:

- ◆ Diameter: 2.70 in (6.8 cm)
- ◆ Lengths: 10-40 in (254-1020cm)

#### Surface Area (10 in cartridge):

- ◆ Minimum 6.5 ft<sup>2</sup> (0.6m<sup>2</sup>)

#### Flow Factors:

Pore Size (µm)	GPM/1 PSID	LPM/1 BAR	PSID/ 1 GPM	Bar/ 1 LPM
0.1	1.8	99	0.56	0.010
0.2	3.5	192	0.29	0.005
0.45	5.5	301	0.18	0.003

**Recommended Operating Condition:**

- Maximum Temperature: 176°F (80°C) @ 30ΔP (2.1 bar)
- Maximum Differential Pressure.

**Forward:**

70psi (4.8bar) @77°F (25°C)  
30psi (2.1bar) @176°F (80°C)

**Reverse:**

50psi (3.4bar) @77°F (25°C)

**PS & ES series Integrity Test:**

- Bubble Point (in UHP water):  
0.1µm>=70 psig (3.1 bar)  
0.2µm>=45 psig (2.8 bar)  
0.45µm>=24 psig (1.7 bar)
- Diffusion Rate (10 in cartridge):  
0.1µm<=33cc/min at 40 psig (2.7 bar)  
0.2µm<=33cc/min at 30 psig (2.0 bar)  
0.45µm<=33cc/min at 15 psig (1.0 bar)

**Materials of Construction:**

- Membrane: Hydrophilic polyethersulfone Membrane
- Support/Drainage: polypropylene
- Structural Components: polypropylene
- Seal Material: various
- Sealing Method: thermal welding

**PD & ED Integrity Test:**

- Bubble Point (in UHP water):  
0.1µm>=70 psig (3.4 bar)  
0.2µm>=45 psig (3.1 bar)  
0.45µm>=24 psig (2.1 bar)
- Diffusion Rate (10 in cartridge):  
0.1µm<=33cc/min at 40 psig (2.9bar)  
0.2µm<=33cc/min at 30 psig (2.3 bar)  
0.45µm<=33cc/min at 15 psig (1.2 bar)

**Order Information and Selection Guide:**

<b>HPES</b>	-	<b>001</b>	-	<b>PS</b>	-	<b>10</b>	-	<b>S</b>	-	<b>C</b>
/		/		/		/		/		/
<b>Hydrophilic Polyethersulfone membrane</b>		<b>Micron Ratio:</b> 001-0.1µm 002-0.2µm 04.5-0.45µm		<b>Grade:</b> PS-Single layer, Food and pharmaceuticals grade ES-Single layer, Electronics grade PD-Double layer, Food and pharmaceuticals grade ED-Double layer, Electronics grade		<b>Length:</b> 05—5" 10—10" 20—20" 30—30"		<b>Gasket Material:</b> B-BUNA S-Silicon E-EPDM V-Viton		<b>Seal Model:</b> A-Double 226 O ring with Flat end B-Double 222 O ring with Flat end C-Double 222 O ring with Bayonet D-Double 226 O ring with Bayonet E-Double 222 O ring with Flat end 316L Stainless Steel inner supporter F-Double 222 O ring with Bayonet 316L Stainless Steel inner supporter G-Double 226 O ring with Bayonet 316L Stainless Steel inner supporter H-Double open end with flat O rings

# PTGA PTFE Membrane Filter Cartridges

PTGA PTFE membrane filter cartridges perform at the highest flow rate to provide the cleanest fluids at the lowest possible cost. Filterek's unique PTFE membrane construction serves as a low-cost in less aggressive applications and maintains broad chemical compatibility with low extractable levels and high particle retention rates. The PTGA Series is available in 0.1µm, 0.2µm, 0.45µm and 1µm pore sizes.

## Features

### Superior PTFE Membrane Yields Maximum Filtration Results

- ◆ High flow rates and optimized surface area reduce processing time and filter consumption.
- ◆ Rinsed with 15 megohm-cm UHP water for high purity. Non-fiber releasing.
- ◆ All-polypropylene component construction complemented by a variety of O-ring seals withstands demanding operating parameters.
- ◆ Narrow pore size distribution ensures the ultimate in retention and flow rate.
- ◆ Naturally hydrophilic membrane maintains water based fluid pass with large flowrate.
- ◆ Available pre-wetted for immediate use in process

### Filterek's TQM System Assures Consistent Performance and Reliable Filtration

- ◆ Strict quality control measures include rigorous testing for rinse up, shedding, flow rate and extractable levels.
- ◆ Integrity-tested and testable in situ.
- ◆ Thermally welded, eliminating adhesive extractable.
- ◆ Bio safe in accordance with USP Class VI-121°C Plastics Tests.
- ◆ Specifically designed to ensure cleanliness.
- ◆ All materials of construction are FDA listed as acceptable for potable and edible liquid contact according to CFR Title 21.



## Applications

### Pharmaceutical

- ◆ Tank Vents
- ◆ Filtration of Compressed Gases
- ◆ Filtration of Solvents

### Process Gases

- ◆ Bulk and Point-of-use gases
- ◆ Compressed Air

### Food & Beverage

- ◆ Sterile Venting of Holding Tanks
- ◆ Sterile CO2 Filtration
- ◆ Microbial Control of Inlet Air for Bioprocessing of Foods

### Chemicals

- ◆ Solvents
- ◆ Bulk Filling
- ◆ Acids

## Specifications

### Dimensions:

- ◆ Diameter: 2.70 in (6.8 cm)
- ◆ Lengths: 10-40 in (25-102cm)

### Surface Area (10 in cartridge):

- ◆ Minimum 7.5 ft<sup>2</sup> (0.7m<sup>2</sup>)

### Endotoxins:

- ◆ <0.25 EU/ml

### Materials of Construction:

- ◆ Membrane: hydrophilic PTFE
- ◆ Membrane Support/Drainage: polypropylene
- ◆ Structural Components: polypropylene
- ◆ Seal Material: various
- ◆ Sealing Method: thermal welding

### Flow Factors:

Pore Size (µm)	GPM/1 PSID	LPM/1 BAR	PSID/ 1 GPM	Bar/ 1 LPM
0.1	3.0	164	0.33	0.006
0.2	4.5	247	0.22	0.004
0.45	6.5	356	0.15	0.003
1	7.5	411	0.13	0.002

**Integrity Test:**

- ◆ Bubble Point (100% IPA):
  - 0.1µm >= 24 psig (1.7 bar)
  - 0.2µm >= 16 psig (1.1 bar)
  - 0.45µm >= 6 psig (0.4 bar)
  - 1µm >= 3 psig (0.2 bar)

**Sterilization/Sanitization Methods:**

- ◆ Autoclave or in situ Steam: 250°F (121°C) for 30 minutes at 15 psi (1.0 bar)
- ◆ 70% IPA
- ◆ 10% Hydrogen Peroxide

**Recommended Operating Conditions:**

- ◆ Maximum Temperature: 176°F (80°C) @ 30 ΔP (2.1 bar)
- ◆ Maximum Differential Pressure.

**Forward:**

- 70psi (4.8bar) @77°F (25°C)
- 30psi (2.1bar) @176°F (80°C)

**Reverse:**

- 50psi (3.4bar) @77°F (25°C)

**Order Information and Selection Guide:**

<b>PTGA</b>	-	<b>001</b>	-	<b>10</b>	-	<b>S</b>	-	<b>C</b>
/		/		/		/		/
<b>Hydrophilic PTFE membrane</b>		<b>Micron Ratio:</b> 001-0.1µm 002-0.2µm 004-0.45µm 010-1.0µm		<b>Length:</b> 05—5" 10—10" 20—20" 30—30" 40—40"		<b>Gasket Material:</b> B-BUNA S-Silicon E-EPDM V-Viton		<b>Seal Model:</b> A-Double 226 O ring with Flat end B-Double 222 O ring with Flat end C-Double 222 O ring with Bayonet D-Double 226 O ring with Bayonet E-Double 222 O ring with Flat end 316L Stainless Steel inner supporter F-Double 222 O ring with Bayonet 316L Stainless Steel inner supporter G-Double 226 O ring with Bayonet 316L Stainless Steel inner supporter H-Double open end with flat O rings



# DPTA UHP Water Rinsed PTFE Membrane Filter Cartridges Ultra-Pure Membrane Series

DPTA PTFE membrane filter cartridges provide unsurpassed flow rate capability. DPTA is made of Ultra-Pure PTFE membrane and outperforms all competitive ones of the same rating at a ratio of 0.1 to 1µm, thus reducing the number of cartridges and housings required. The Ultra-Pure PTFE Membrane is hydrophilic products. DPTA filter cartridges meets or exceeds requirements for the filtration of UHP liquids used in the fabrication of state-of-the-art microelectronic devices. P series is single layer products and its retention efficiency is up to 99.99%. E series is made with double layers membrane and retention efficiency is near 99.9998%.

The Ultra-Pure PTFE Membrane Series is available in 0.1µm, 0.2µm, 0.45µm and 1µm pore sizes. The PTGA Series is available in 0.1µm,0.2µm,0.45µm and 1µm pore sizes.

## Features

### Superior PTFE Membrane Yields Maximum Filtration Results

- ◆ High flow rates and reduced pressure drops for improved filtration efficiency.
- ◆ Rinsed with 18 megohm-cm resistivity with UHP water.
- ◆ Large, high-purity filtration area for maximum yields.
- ◆ Narrow pore size distribution ensures the ultimate in retention and flow rate.
- ◆ Available prewetted for immediate use in process

### Filterek's TQM System Assures Consistent Performance and Reliable Filtration

- ◆ Strict quality control measures include rigorous testing for rinse up, shedding, flow rate and extractable levels.
- ◆ Integrity-tested and testable in situ.
- ◆ Thermally welded, eliminating adhesive extractables.
- ◆ Biosafe in accordance with USP Class VI-121°C Plastics Tests.
- ◆ Specifically designed to ensure cleanliness.
- ◆ All materials of construction are FDA listed as acceptable for potable and edible liquid contact according to CFR Title 21.
- ◆ Bio safe in accordance with USP Class VI-121°C Plastics Tests.
- ◆ Specifically designed to ensure cleanliness.
- ◆ All materials of construction are FDA listed as acceptable for potable and edible liquid contact according to CFR Title 21.



## Applications

### UHP Chemicals

- ◆ Acids
- ◆ Solvents
- ◆ Photoresists
- ◆ Tank Vents
- ◆ Etchants
- ◆ Alkali
- ◆ Developers
- ◆ Strippers
- ◆ Recirculation
- ◆ Wet-Etch Systems
- ◆ Rinse Baths
- ◆ Process Gases & Compressed Air
- ◆ Polymer Filtration

### Pharmaceutical

- ◆ Tank Vents
- ◆ Filtration of Compressed Gases
- ◆ Filtration of Solvents

## Specifications

### Dimensions:

- ◆ Diameter: 2.70 in (6.8 cm)
- ◆ Lengths: 10-40 in (25-102cm)

### Surface Area (10 in cartridge):

- ◆ Minimum 7.5 ft<sup>2</sup> (0.7m<sup>2</sup>)

### Endotoxins:

- ◆ <0.25 EU/ml

### Flow Factors:

Pore Size (µm)	GPM/1 PSID	LPM/1 BAR	PSID/ 1 GPM	Bar/ 1 LPM
0.1	2.9	166	0.34	0.006
0.2	4.7	251	0.21	0.004
0.45	6.4	352	0.16	0.003
1	7.8	408	0.13	0.002

**Materials of Construction:**

- ◆ Membrane: hydrophilic PTFE
- ◆ Membrane Support/Drainage: polypropylene
- ◆ Structural Components: polypropylene
- ◆ Seal Material: various
- ◆ Sealing Method: thermal welding

**Integrity Test:**

- ◆ Bubble Point (100% IPA):
  - 0.1µm>=24 psig (2.6 bar)
  - 0.2µm>=16 psig (2.1 bar)
  - 0.45µm>=6 psig (0.4 bar)
  - 1µm>=3 psig (0.2 bar)

**Recommended Operating Conditions:**

- ◆ Maximum Temperature: 176°F (80°C) @ 30ΔP (2.1 bar)
- ◆ Maximum Differential Pressure.

**Forward:**

- 70psi (4.8bar) @77°F (25°C)
- 30psi (2.1bar) @176°F (80°C)

**Reverse:**

- 50psi (3.4bar) @77°F (25°C)

**Order Information and Selection Guide:**

<b>DPGA</b>	-	<b>P</b>	-	<b>001</b>	-	<b>10</b>	-	<b>S</b>	-	<b>C</b>
/		/		/		/		/		/
<b>Hydrophilic PTFE membrane</b>		<b>P-Single layer E-Double layers</b>		<b>Micron Ratio:</b> 001-0.1µm 002-0.2µm 004-0.45µm 010-1.0µm		<b>Length:</b> 05—5" 10—10" 20—20" 30—30" 40—40"		<b>Gasket Material:</b> B-BUNA S-Silicon E-EPDM V-Viton		<b>Seal Model:</b> A-Double 226 O ring with Flat end B-Double 222 O ring with Flat end C-Double 222 O ring with Bayonet D-Double 226 O ring with Bayonet E-Double 222 O ring with Flat end 316L Stainless Steel inner supporter F-Double 222 O ring with Bayonet 316L Stainless Steel inner supporter G-Double 226 O ring with Bayonet 316L Stainless Steel inner supporter H-Double open end with flat O rings

### GHTA Sterilizing grade Filter Cartridges. Single layer and Double layers configuration offer flexible choice for users Hydrophobic Filters for Sterile Gas and Vent Applications

GHTA polytetrafluoroethylene (PTFE) membrane filter cartridges are designed to completely remove bacteria, viruses from air and gas streams, even in the presence of humidity and moisture. Unsurpassed flow rate capability membranes are pleated into sanitary single open-ended cartridges. GHTA filters are built to withstand adverse in situ steam conditions in either the forward or reverse direction. It is suitable for ferment tanks' inlet air and exhaust venting, sterile process air, sterile venting tanks, lyophilizers and autoclaves. Its ultra pure manufacturing process also guarantee it is widely used in the gas purifying process in microelectronics.

The Ultra-Pure PTFE Membrane Series is available in 0.1µm and 0.2µm pore sizes.

### Features

#### Superior PTFE Membrane Yields Maximum Filtration Results

- ◆ High flow rates and low pressure drops
- ◆ Rinsed with 18 megohm-cm resistivity with UHP water.
- ◆ 100% bacteria retentive in liquids. 100% virus retentive in gases.
- ◆ Narrow pore size distribution ensures the ultimate in retention and flow rate.
- ◆ Thermally welded, eliminating adhesive extractable.
- ◆ It is manufactured for use in conformance with CGMP

#### Filterek's TQM System Assures Consistent Performance and Reliable Filtration

- ◆ Non-Pyrogenic per USP Bacterial Endotoxins(<0.25EU/ml)
- ◆ Individually tested and serialized. Certificate of Test is provided.
- ◆ Thermally welded, eliminating adhesive extractables.
- ◆ Biosafe in accordance with USP Class VI-121°C Plastics Tests.
- ◆ Specifically designed to ensure cleanliness.
- ◆ All materials of construction are FDA listed as acceptable for potable and edible liquid contact according to CFR Title 21.

### Applications

#### Microelectronics

- ◆ Process Gases & Compressed Air
- ◆ Polymer Filtration

#### Pharmaceutical

- ◆ Equipments and Tanks' inlet and Vents
- ◆ Sterile process Gases and air

### Specifications

#### Dimensions:

- ◆ Diameter: 2.70 in (68 mm)
- ◆ Lengths: 5-40 in (127-1016mm)

#### Surface Area (10 in cartridge):

- ◆ Minimum 7.5 ft<sup>2</sup> (0.7m<sup>2</sup>)

#### Materials of Construction:

- ◆ Membrane: hydrophobic PTFE membrane
- ◆ Support/Drainage: polypropylene
- ◆ Structural Components: polypropylene
- ◆ Seal Material: various
- ◆ Sealing Method: thermal welding



GHTA

#### Removal Ratings:

Size	Air and Gases(Particles)	Liquids(Sterilizing)
00A	0.002µm	0.1µm
00B	0.003µm	0.2µm

#### Flow Factors(Vent):

Size (µm)	Nm <sup>3</sup> /hr@1 PSID	PSID @100Nm <sup>3</sup> /hr
0.1	65	1.2
0.2	80	1.5

#### Flow Factors(2.1bar):

Size (µm)	Nm <sup>3</sup> /hr@1 PSID	PSID @100Nm <sup>3</sup> /hr
0.1	120	0.8
0.2	180	0.5

**Typical Continuous Air Service life:**

- ◆ 12 month @166°F (60°C)
- ◆ In Air/N<sub>2</sub> service or other compatible gases.
- ◆ GHTA also can be operated at high temperature for shorter time periods.

**Typical Vent Service life:**

- ◆ 6 month @176°F (80°C)

**Recommended Operating Conditions:**

- ◆ Maximum Differential Pressure and Temperature:

**Forward:**

- 70psi (4.8bar) @77°F (25°C)
- 60psi (4.1bar) @176°F (80°C)

**Reverse:**

- 50psi (3.4bar) @77°F (25°C)

- ◆ Maximum Forwards steaming Conditions:

- 15psi (1.0bar) @257°F (125°C)
- 4.3psi (0.3bar) @287°F (142°C)

- ◆ Maximum Reverse steaming Conditions:

- 7.3psi (0.5bar) @257°F (125°C)
- 3.0psi (0.2bar) @287°F (142°C)

**Order Information and Selection Guide:**

<b>GHTA</b>	-	<b>P</b>	-	<b>00A</b>	-	<b>10</b>	-	<b>S</b>	-	<b>C</b>
/		/		/		/		/		/
<b>Hydrophilic</b> <b>PTFE membrane</b>		<b>P-Single layer</b> <b>E-Double layers</b>		<b>Micron Ratio:</b> 00A-0.1µm 00B-0.2µm		<b>Length:</b> 05—5" 10—10" 20—20" 30—30" 40—40"		<b>Gasket Material:</b> B-BUNA S-Silicon E-EPDM V-Viton		<b>Seal Model:</b> A-Double 226 O ring with Flat end B-Double 222 O ring with Flat end C-Double 222 O ring with Bayonet D-Double 226 O ring with Bayonet E-Double 222 O ring with Flat end 316L Stainless Steel inner supporter F-Double 222 O ring with Bayonet 316L Stainless Steel inner supporter G-Double 226 O ring with Bayonet 316L Stainless Steel inner supporter

### **GHUE High-temperature Sterilizing grade Filter Cartridges. Single layer and Double layers configuration offer flexible choice for users Hydrophobic Filters for Air, Gas and Vent service in Critical High Temperature Applications**

GHUE high temperature filter cartridges are developed from the long-life and high strength PTFE membrane products. They have been designed and liquid-validated as sterilizing filters for air, gas and vent service in critical high temperature applications in biopharmaceutical and bioprocess industry, like fermentation inlet air, aseptic packaging or hot WFI tank vents. The high-strength components allows extended use in air up to 176°F (80°C) and for shorter periods up to 248°F (120°C). The unique reinforced designing assure that GHUE also can withstand high differential pressures in forwarder or reverse direction during multiple steam-in-place sterilization cycles. The GHUE PTFE Membrane Series is available in 0.1µm and 0.2µm pore sizes.



### **Features**

#### **Superior PTFE Membrane Yields Maximum Filtration Results**

- ◆ The quality management system for manufacturing of GHUE occurs in conformance with Certified Quality System ISO9000.
- ◆ Rinsed with 18 megohm-cm resistivity with UHP water.
- ◆ Each filter is 100% integrity tested and fully traceable by individual marked lot and serial number.
- ◆ Lot tests for multi-cycle autoclave challenges. Repeat steamability in situ and robust construction optimized for air, gas and vent service with enhance life at high temperatures
- ◆ Thermally welded, eliminating adhesive extractable.
- ◆ It is manufactured for use in conformance with CGMP

#### **Filterek's TQM System Assures Consistent Performance and Reliable Filtration**

- ◆ Validated in accordance with *Brevundimonas diminuta* in liquid at 107 per cm<sup>2</sup> according to modified ASTM Standard Test Method F383-83 and FDA Guidelines on Sterile Drug Products Produced by Aseptic Processing.
- ◆ Non-Pyrogenic per USP Bacterial Endotoxins (<0.25EU/ml)
- ◆ Individually tested and serialized. Certificate of Test is provided.
- ◆ Thermally welded, eliminating adhesive extractables.
- ◆ Biosafe in accordance with USP Class VI-121°C Plastics Tests.
- ◆ All materials of construction are FDA listed as acceptable for potable and edible liquid contact according to CFR Title 21.

### **Applications**

#### **Microelectronics**

- ◆ Process Gases & Compressed Air
- ◆ Polymer Filtration

#### **Pharmaceutical**

- ◆ Fermentation tank inlet and Vents
- ◆ Aseptic packaging
- ◆ Hot WFI tank vents.
- ◆ Sterile process Gases and air

### **Specifications**

#### **Dimensions:**

- ◆ Diameter: 2.70 in (68 mm)
- ◆ Lengths: 5-40 in (127-1016mm)

#### **Surface Area (10 in cartridge):**

- ◆ Minimum 7.5 ft<sup>2</sup> (0.7m<sup>2</sup>)

#### **Materials of Construction:**

- ◆ Membrane: Proprietary hydrophobic PTFE membrane
- ◆ Support/Drainage/ Structural Components: Specially developed polypropylene
- ◆ Seal Material: various
- ◆ Sealing Method: thermal welding

#### **Removal Ratings:**

Size	Air and Gases(Particles)	Liquids(Sterilizing)
<b>00A</b>	<b>0.002µm</b>	<b>0.1µm</b>
<b>00B</b>	<b>0.003µm</b>	<b>0.2µm</b>

#### **Flow Factors(2.1bar):**

Size (µm)	Nm <sup>3</sup> /hr@1 PSID	PSID @100Nm <sup>3</sup> /hr
<b>0.1</b>	<b>110</b>	<b>2.2</b>
<b>0.2</b>	<b>130</b>	<b>1.7</b>

**Typical Continuous Air Service life:**

- ◆ 12 months @212°F (100°C)
- ◆ 6 months @230°F (110°C)
- ◆ 2 months @248°F (120°C)

**Typical Cumulative Steam Life:**

100 hours (1 hour cycles) @ 284°F (140°C)

The steam life and service life data were determined by testing under controlled laboratory conditions up to time indicated. Actual operating conditions may affect the filter's long-term resistance to steam sterilization and hot air service. Filter should be qualified for each process application.

**Recommended Operating Conditions:**

- ◆ Maximum Differential Pressure and Temperature.:

**Forward:**

70psi (4.8bar) @77°F (25°C)  
60psi (4.1bar) @176°F (80°C)

**Reverse:**

50psi (3.4bar) @77°F (25°C)

- ◆ Maximum Forwards steaming Conditions:

15psi (1.0bar) @257°F (125°C)  
4.3psi (0.3bar) @287°F (142°C)

- ◆ Maximum Reverse steaming Conditions:

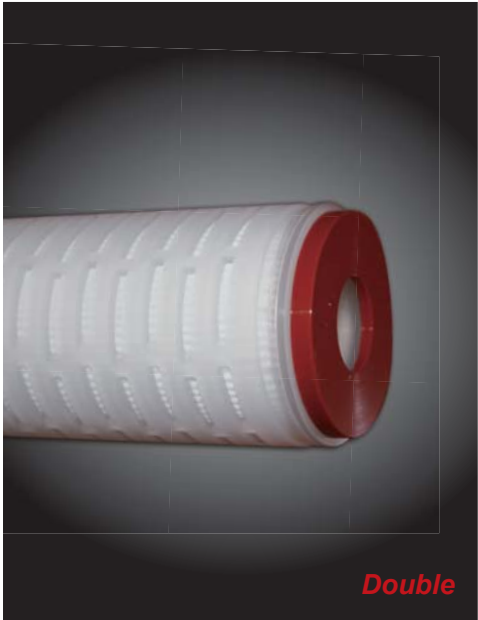
7.3psi (0.5bar) @257°F (125°C)  
3.0psi (0.2bar) @287°F (142°C)

**Order Information and Selection Guide:**

<b>GHUE</b>	-	<b>P</b>	-	<b>00A</b>	-	<b>10</b>	-	<b>S</b>	-	<b>C</b>
/		/		/		/		/		/
<b>Hydrophobic PTFE membrane</b>		<b>P-Single layer E-Double layers</b>		<b>Micron Ratio:</b> 00A-0.1µm 00B-0.2µm		<b>Length:</b> 05—5" 10—10" 20—20" 30—30" 40—40"		<b>Gasket Material:</b> B-BUNA S-Silicon E-EPDM V-Viton		<b>Seal Model:</b> A-Double 226 O ring with Flat end B-Double 222 O ring with Flat end C-Double 222 O ring with Bayonet D-Double 226 O ring with Bayonet E-Double 222 O ring with Flat end 316L Stainless Steel inner supporter F-Double 222 O ring with Bayonet 316L Stainless Steel inner supporter G-Double 226 O ring with Bayonet 316L Stainless Steel inner supporter

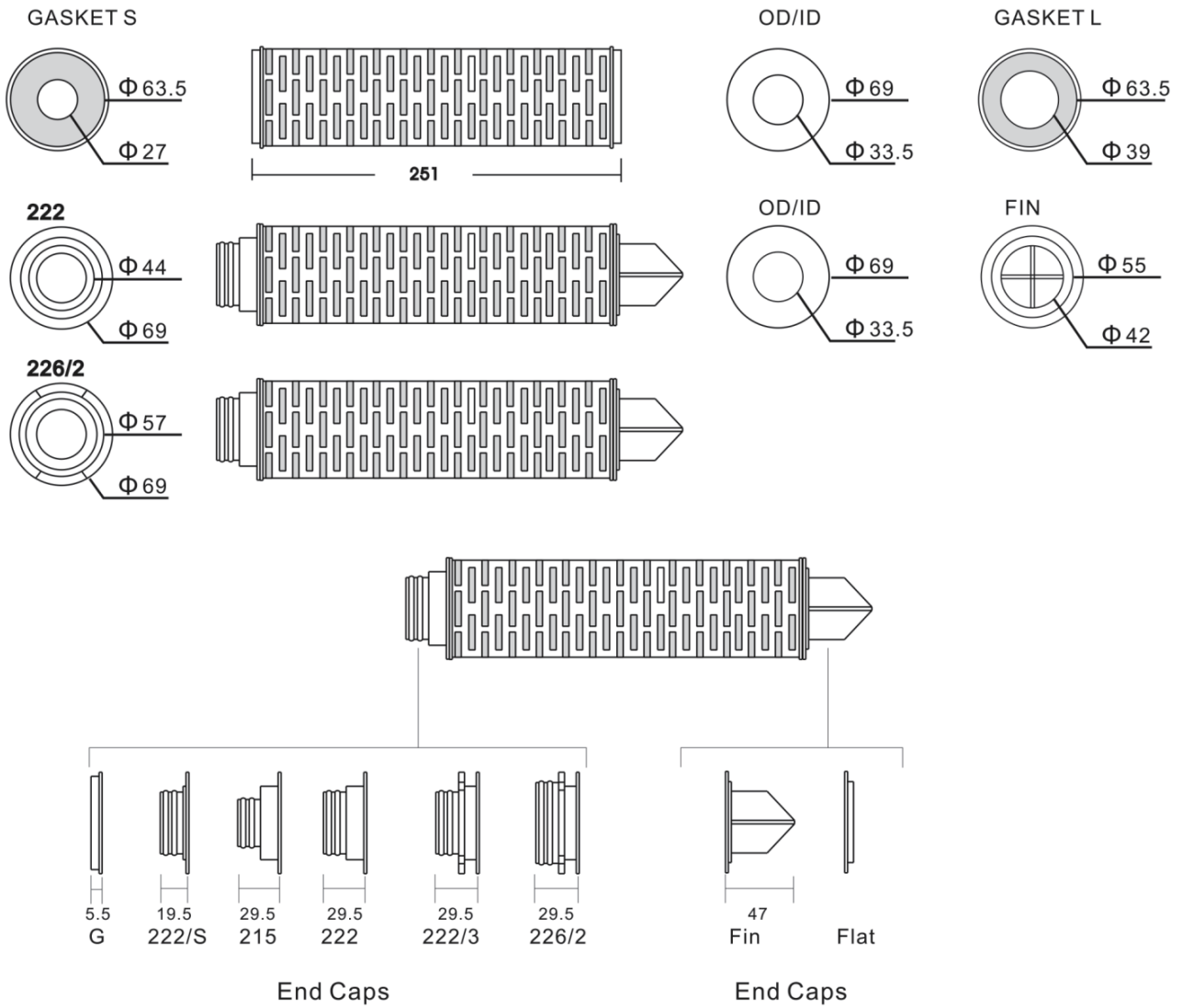


*Seal Model Type*





### Seal Model Type



## **WARNING!**

**FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.**

*This document and other information from Filteck, its subsidiaries and authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application and review the information concerning the product or system in the current product catalog. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection for the products and systems and assuring that all performance, safety and warning requirements of the application are met. The products described herein, including without limitation, product features, specifications, designs, availability and pricing, are subject to change by Filteck and its subsidiaries at any time without notice.*

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