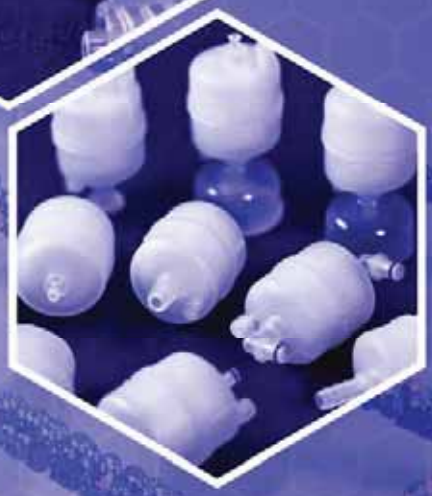
ZenPure®

Product Catalog 2014



Innovation, Speed, Flexibility, and Reliability

The Unique Provider of Filtration, Purification and Membrane Device Solutions

ISO9001/14001/13485 and OHSMS18000 Certified

Our Capabilities and Services

ZenPure is a vertically integrated developer and manufacturer of filtration and purification products, and specialty membrane devices.

ZenPure capabilities include:
Custom product design and development, tooling, process and equipment engineering, OEM and private label services.

We focus on speed and extreme flexibility to meet customers' challenging needs in performance and fast time to market.

Industries served

With our technical and applications know-how in filter performances, coupled with all in-house design and development, engineering, and manufacturing capabilities, we have been able to serve diversified industries worldwide, including:

- Medical and Medical equipment
- Pharmaceuticals
- Chemical and Industrial
- Food and Beverages
- Electronics
- Energy

Specializing in Custom Products

ZenPure works with both small and large companies to design, develop, and produce custom products. We provide service from concept and prototype through to production:
• Rapid product turn around
• Reliable processes and quality control
• Design for optimum efficiency and cost
• Dependable service and technical support

The success and satisfaction of our customers is our highest priority.

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ZenPure Media Options

A = Cellulose Acetate

C = Carbon Fiber

C** = Cellulose Media

CN = Charged Nylon Membrane 6,6

DP = Depth Polypropylene Media

UE = Polyethylene Membrane

F = PTFE

G = Glass Fiber

HF = Philic PTFE

HP = High Performance Polypropylene Media

M = Polypropylene Membrane

N = Nylon Membrane 6,6

NG = Natural Glass Fiber

NN = Nylon Non-Woben

NS = Nylon Screen

P = Polypropylene Media

PS = Polypropylene Screen

RP = Wrapped PP Media

S = Polyethersulfone

SS = Stainless Steel

TS = Polyester Screen

ZS = Extended Life Polyethersulfone Life

Pore size (Micron)											
Cellulose Acetate (A)	**Carbon Fiber (C)**	**Charged Nylon (CN)**	**Depth PP (DP)**	**Polyethylene (UE)**	**PTFE (F)**	**Glass Fiber (G)**	**Philic PTFE (HF)**	**High Performance PP Media (HP)**	**PP Membrane (M)**	**Nylon (N)**	**Natural Glass Fiber (NG)**
020 = 0.20 **045** = 0.45 **065** = 0.65 **080** = 0.80 **120** = 1.20	**Leave pore size blank for Carbon Fiber**	**005** = 0.05 **010** = 0.10 **020** = 0.20 **045** = 0.45 **065** = 0.65 **080** = 0.80 **120** = 1.20	**002** = 0.2 **005** = 0.5 **010** = 1.0 **015** = 1.5 **025** = 2.5 **045** = 4.5 **100** = 10 **200** = 20	**010** = 0.1 **020** = 0.20 **045** = 0.45 **100** = 1.0	**010** = 0.1 **020** = 0.2 **045** = 0.45 **100** = 1.0 **300** = 3.0 **500** = 5.0 **999** = 10.0	**U** = ULPA **H** = HEPA **002** = 0.2 **004** = 0.45 **005** = 0.5 **010** = 1.0 **030** = 3.0 **050** = 5.0 **100** = 10 **200** = 20 **300** = 30 **Best for Gas Applications**	**010** = 0.1 **020** = 0.2 **045** = 0.45 **100** = 1.0 **300** = 3.0 **500** = 5.0 **999** = 10.0	**001** = 0.1 **002** = 0.2 **003** = 0.3 **006** = 0.6 **010** = 1.0 **030** = 3.0 **050** = 5.0 **100** = 10.0	**010** = 0.1 **020** = 0.2	**005** = 0.05 **010** = 0.10 **020** = 0.20 **045** = 0.45 **065** = 0.65 **080** = 0.80 **120** = 1.20	**005** = 0.5 **010** = 1.0 **030** = 3.0 **050** = 5.0 **Best for Liquid Applications**

Pore size (Micron)									
Nylon Non-Woven Media (NN)	**Nylon Screen (NS)**	**PP Media (P)**	**Polypro Screen (PS)**	**Wrapped PP Media (RP)**	**PES (S)**	**Stainless Steel Screen (SS)**	**Polyester Screen (TS)**	**Extended Life Polyethersul-fone (ZS)**	**Cellulose Media (C**)**
010 = 1 **030** = 3 **050** = 5 **100**= 10 **200**= 20 **400**= 40	**070** = 7 **100** = 10 **200** = 20 **400** = 40 **600** = 60 **10X** = 100 **20X** = 200 **25X** = 250 **30X** = 300	**003** = 0.3 **006** = 0.6 **010** = 1.0 **030** = 3.0 **050** = 5.0 **070** = 7.0 **100** = 10.0 **200** = 20.0 **300** = 30.0 **400** = 40.0 **500** = 50.0 **700** = 70.0 **10X** = 100 **15X** = 150	**10X** = 100 **15X** = 150 **20X** = 200 **30X** = 300 **50X** = 500	**003** = 0.3 **005** = 0.6 **010** = 1.0 **030** = 3.0 **050** = 5.0 **070** = 7.0 **100** = 10.0 **200** = 20.0	**004** = 0.04 **010** = 0.1 **020** = 0.2 **045** = 0.45 **065** = 0.65 **080** = 0.8 **120** =1.2	**180** = 18 **200** = 20 **250** = 25 **370** = 37 **460** = 46 **530** = 53 **610** = 61 **740** = 74 **10X** = 105 **15X** = 150 **20X** = 200 **25X** = 250	**050** = 5 **070** = 7 **100** = 10 **200** = 20 **300** = 30 **400** = 40 **550** = 55 **730** = 73	**010** = 0.10 **020** = 0.20 **045** = 0.45	XL Series Media: **CE1** = 15, **CE2** = 10, **CE3** = 5, **CE4** = 2.5, **CE5** = 1, **CE6** = 0.8, **CE7** = 0.45, **CE8** = 0.3, **CE9** = 0.2 MicroMedia®: **CM7** = 0.45, **CM8** = 0.3, **CM9** = 0.2 Carbon Type MicroClear®: **CC4** = 1um General, **CC5** = 1um Chemical Activated, **CC6** = 1um Steam activated

PureFlo® Filtration Discs

Filter Test Media

PureFlo® Filtration Discs can be used for simple, quick, and efficient filtration of fluids and gases used in laboratory, pilot, and small-scale applications. These discs can be used for clarification of acids, bases and solvents. The same filtration media is used in the larger PureFlo® family of filters to allow for consistent scale-up of the product.

PureFlo® Membrane Discs are available in a variety of different materials and diameter sizes to meet your applications and test equipment requirements. They are available in pore sizes ranging from 0.05µm to 200µm.

Applications	
Pharmaceutical Products Analysis	Combinatorial Chemistry
Sample and Small Batch Clarification and Filtration	Sample and Small Batch Preparation and Clean-Up
Media compatibility testing	Filter Media selection
Laboratory	Small scale Filtration testing

Specifications

Materials of Construction:	Media/ Membrane: 15 options (See ordering table)
Available Diameters (mm):	13, 25, 47, 90, 142
Effective Filtration Area:	13mm = 0.2in^2 filter area 25mm = 0.76in^2 filter area 47mm = 2.69in^2 filter area 90mm = 9.86in^2 filter area 142mm = 24.5in^2 filter area
Available Ratings:	0.05– 150um (See ordering guide)
Operating Conditions:	Max. Differential Pressure: 30 psid (2 bar) Maximum Operating Pressure Liquid: 60 psig @ 72° F (4 Bar @ 22° C) Maximum Operating Pressure Gas: 30 psig @ 72° F (2 Bar @ 22° C) Maximum Operating Temperature: 60° C
Regulatory Compliance:	The discs are manufactured from materials that conform to the requirements of 21CFR Part 177 of the U.S. Code of Federal Regulations. Nylon PES, PTFE, and PP Membrane are also in compliance with the USP Class VI Biological Test for Plastics.

PureFlo® Filtration Discs

PureFlo Membrane Discs Ordering Guide

Filter Media	Filter Diameter (mm)	Pore Sizes (Micron)	Quantity (Per Pack)
A = Cellulose Acetate Membrane CN = Charged Nylon Membrane F = PTFE (Hydrophobic) Membrane G = Glass Fiber HF = PTFE (Hydrophilic) Membrane HP = Hi Performance Polypropylene Media M = PP Membrane N = Nylon Membrane NN = Nylon Non-Woven Media NS = Nylon Screen P = PP Media PS = PP Screen S = PES Membrane TS = Polyester Screen UE = Polyethylene Membrane	013 = 13mm 025 = 25mm 047 = 47mm 090 = 90mm 142 = 142mm	Pick from Pore Size Tables	15 = 15 per pack for Medias and Screens 25 = 25 per pack for Membranes **Grade** Blank = Standard -PH = Pharma grade
Example – A pack of 25 discs, 47mm, 1.2 Micron Nylon Membrane Disc is N04712025			

Pore Sizes (Micron)							
Cellulose Acetate (A)	**Charged Nylon (CN)**	**PTFE (Hydrophobic) (F)**	**Glass Fiber (G)**	**PTFE (Hydrophilic) (HF)**	**Hi Performance PP Media (HP)**	**Polypro Membrane (M)**	**Nylon (N)**
020 = 0.20 **045** = 0.45 **065** = 0.65 **080** = 0.80 **120** = 1.20	**005** = 0.05 **010** = 0.10 **020** = 0.20 **045** = 0.45 **065** = 0.65 **080** = 0.80 **120** = 1.20	**010** = 0.10 **020** = 0.20 **045** = 0.45 **100** = 1.0 **300** = 3.0 **500** = 5.0 **999** = 10	**002** = 0.2 **004** = 0.45 **005** = 0.5 **010** = 1.0 **030** = 3.0 **050** = 5.0 **100** = 10 **200** = 20 **300** = 30	**020** = 0.20 **045** = 0.45 **100** = 1.0 **300** = 3.0 **500** = 5.0	**001** = 0.1 **002** = 0.2 **003** = 0.3 **006** = 0.6 **010** = 1.0 **030** = 3.0 **050** = 5.0 **100** = 10.0	**010** = 0.1 **020** = 0.2	**005** = 0.05 **010** = 0.10 **020** = 0.20 **045** = 0.45 **065** = 0.65 **080** = 0.80 **120** = 1.20

Pore Sizes (Micron)						
Nylon Non-Woven* (NN)	**Nylon Screen (NS)**	**Polypro Media (P)**	**Polypro Screen (PS)**	**PES (S)**	**Polyester Screen (TS)**	**Polyethylene (UE)**
010 = 1 **030** = 3 **050** = 5 **100** = 10 **200** = 20 **400** = 40	**070** = 7 **100** = 10 **200** = 20 **400** = 40 **600** = 60 **10X** = 100 **20X** = 200 **25X** = 250 **30X** = 300	**003** = 0.3 **006** = 0.6 **010** = 1.0 **030** = 3.0 **050** = 5.0 **070** = 7.0 **100** = 10.0 **200** = 20.0 **300** = 30.0 **400** = 40.0 **500** = 50.0 **700** = 70.0	**10X** = 100 **15X** = 150 **20X** = 200 **30X** = 300 **50X** = 500	**005** = 0.05 **010** = 0.10 **020** = 0.20 **045** = 0.45 **065** = 0.65 **080** = 0.80 **120** = 1.20	**050** = 5 **070** = 7 **100** = 10 **200** = 20 **300** = 30 **400** = 40 **550** = 55 **730** = 73	**010** = 0.1 **020** = 0.20 **045** = 0.45 **100** = 1.0

ZenPure

Your Local Distributor:

ZenPure

North & South Americas:
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+86 571 2288 6800

ISO Certified 9001 14001

TÜV MANAGEMENT SERVICE ISO 13485

PureFlo® Filter Cup
(Table Top Filtration)

Vacuum Filter Cups: Multi-stack, Single pass.

PureFlo® Filter Cups are a convenient disposable solution for quick and easy bench top filtration of liquids. The filter cups are available in two sizes and in 16 different filtration media for use in a wide variety of applications. The filter cups are ideal for clarifying or sterilizing small volumes of tissue culture media, buffers, dilute acids and bases, alcohols, and solvent solutions.

The tapered walls and compact profile allow multiple filter cups to be stacked in order to perform multiple filtration steps at once. This also allows for compact storage saving valuable lab space.

The filter cup base can supplied with a variety of stoppers to fit standard size flask openings and can be supplied with or without a vacuum port for use with standard Erlenmeyer or Büchner flasks. When using vacuum, the vacuum should be applied gradually to no more than 16" Hg (and no more than the vacuum rating of the flask).

Filtration media is thermally bonded to the filter cup creating an integral seal. The cups and base are constructed of polypropylene for broad chemical compatibility or other common plastics. To determine the most appropriate materials of construction for your application, consult a chemical resistance guide or contact your local ZenPure representative before use.

Glass Flask not included

Applications	
Pharmaceutical Products Analysis	Combinatorial Chemistry
Sample and Small Batch Clarification and Filtration	Sample and Small Batch Preparation and Clean-Up
Purification and Concentration	Filtration of Aqueous and Organic Solutions
Environmental Monitoring and Analysis	Sterile Filtration
Laboratory	Food and Beverage

Specifications

Materials of Construction:	Cup Material: PP (standard), Polyethylene, Gamma Stabilized PP Membrane: 15 options (See ordering guide)
Fitting Connections:	Vacuum Inlet: 3/8" Hose Barb Vacuum Inlet or none Stopper Sizes : 5, 6, 7, 8, 9, 10
Nominal Dimensions:	Diameter: A size :79 mm, Top B size: 106 mm, Top Capacity: A size :175 mL B size: 350 mL
Effective Filtration Area:	A size: 63 mm in diameter, 31 cm^2 filter area B size: 90 mm in diameter, 60 cm^2 filter area
Available Ratings:	0.05– 150um (See ordering guide)
Operating Conditions: (No Reverse direction)	Maximum Operating Vacuum Pressure: -16" Hg (-7.8 PSI) Maximum Operating Temperature: PP & Gamma PP 80°C/176°F, HDPE 60°C/140°F
Autoclavable & Sanitizable:	Cups can be autoclaved 1 time at 123°C for 60 minutes or chemically sanitized by soaking common sanitizing agents or hot water at 80°C (no reverse pressure should be applied).
Regulatory Compliance:	The cups are constructed with polypropylene resins and filtration media in compliance with 21CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastics.

PureFlo® Filter Cup
(Table Top Filtration)

PureFlo Filter Cup Ordering Guide

PureFlo Filter Cup	Filter Media	Pore Sizes (Micron)	Cup Size	Cup Material	Options
FC = Filter Cup	**A =** Cellulose Acetate **CN =** Charged Nylon **UE** = Polyethylene **G** =Glass Fiber **F** = PTFE Hydrophobic **HF** = Hydrophilic PTFE **HP** = Hi Performance PP Media **M** = PP Membrane **N** = Nylon **NN** = Nylon Non-Woven **NS** = Nylon Screen **P** = PP Media **PS** = PP Screen **S** = PES **SS** = Stainless Steel Screen **TS** = Polyester Screen	**Pick From Pore Size Table**	**A** = 175ml **B** = 350ml	**P** = Polypropylene (standard) **E** = Polyethylene (UE Media Only) **GP** = Gamma stabilized PP	**Grade** **Blank** = Standard **-PH** = Pharma grade **A Size Options** **Blank =** 25ea/Box **-12** = Individually bagged (12 **-6-ETO** = Individually bagged Ethylene oxide sterilization (6 /box) **B Size Options** **Blank =** 15ea/Box **-10** = Individually bagged (10 **-6-ETO** = Individually bagged Ethylene oxide sterilization (6 /box)
Example – 25 Filter Cups with 1.0 Micron Polypro Media Filter, 175ml size Cup, PP material would be **FCP010AP**					

Pore Sizes (Micron)

Cellulose Acetate (A)	Charged Nylon (CN)	Polyethylene (UE)	Glass Fiber (G)	PTFE (F) Hydrophobic	PTFE (HF) Hydrophilic	Hi Performance PP Media (HP)	Polypro Membrane (M)
010 = 0.10 **020** = 0.20 **045** = 0.45 **065** = 0.65 **080** = 0.80 **120** = 1.20	**005** = 0.05 **010** = 0.10 **020** = 0.20 **045** = 0.45 **065** = 0.65 **080** = 0.80 **120** = 1.20	**010** = 0.1 **020** = 0.20 **045** = 0.45 **100** = 1.0	**002** = 0.2 **045** = 0.45 **005** = 0.5 **010** = 1.0 **030** = 3.0 **050** = 5.0 **100** = 10 **200** = 20 **300** = 30 **Best for Gas Applications**	**010** = 0.10 **020** = 0.20 **045** = 0.45 **100** = 1.0 **300** = 3.0 **500** = 5.0 **999** = 10	**010** = 0.10 **020** = 0.20 **045** = 0.45 **100** = 1.0 **300** = 3.0 **500** = 5.0 **999** = 10	**001** = 0.1 **002** = 0.2 **003** = 0.3 **006** = 0.6 **010** = 1.0 **030** = 3.0 **050** = 5.0 **100** = 10.0	**010** = 0.1 **020** = 0.2

Pore Sizes (Micron)

Nylon (N)	Nylon Non-Woven Media (NN)	Nylon Screen (NS)	Polypro Media (P)	Polypro Screen (PS)	PES (S)	Stainless Steel Screen (SS)	Polyester Screen (TS)
005 = 0.05 **010** = 0.10 **020** = 0.20 **045** = 0.45 **065** = 0.65 **080** = 0.80 **120** = 1.20	**010** = 1 **030** = 3 **050** = 5 **100**= 10 **200**= 20 **400**= 40	**070** = 7 **100** = 10 **200** = 20 **400** = 40 **600** = 60 **10X** = 100 **20X** = 200 **25X** = 250 **30X** = 300	**003** = 0.3 **006** = 0.6 **010** = 1.0 **030** = 3.0 **050** = 5.0 **070** = 7.0 **100** = 10 **200** = 20 **300** = 30 **400** = 40 **500** = 50 **700** = 70	**10X** = 100 **15X** = 150 **20X** = 200 **30X** = 300 **50X** = 500	**005** = 0.05 **010** = 0.10 **020** = 0.20 **045** = 0.45 **065** = 0.65 **080** = 0.80 **120** = 1.20	**180** = 18 **200** = 20 **250** = 25 **370** = 37 **460** = 46 **530** = 53 **610** = 61 **740** = 74 **10X** = 105 **15X** = 150 **20X** = 200 **25X** = 250	**050** = 5 **070** = 7 **100** = 10 **200** = 20 **300** = 30 **400** = 40 **550** = 55 **730** = 73

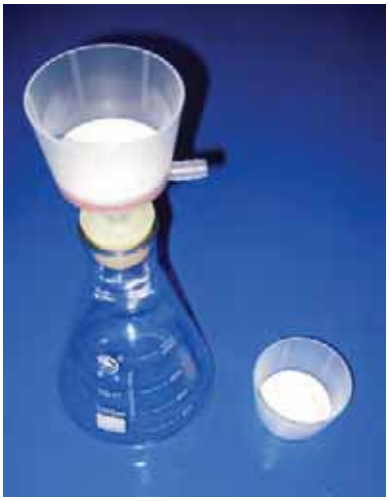
ZenPure

PureFlo® Filter Cup

PureFlo Filter Base Ordering Guide

Filter Cup Base	Base Type	Cup Material	Stopper Size	Stopper Materials	O-Ring Materials
FS = Filter Cup Base	**0 =** Without hose barb **1 =** With hose barb	**P** = Polypropylene (standard) **BP** = Black PP **GP** = Gamma stabilized PP **E** = Polyethylene **N** = Nylon	**0** = No Stopper **5** = Size 5 **6** = Size 6 **7** = Size 7 **8** = Size 8 **9** = Size 9 **10** = Size 10	**0** = No Stopper **S** = Silicone (Standard) **N** = Buna N **E** = EPDM **V** = Viton	**0** = No O-ring **S** = Silicone (Standard) **N** = Buna N **E** = EPDM **V** = Viton
Example – Filter Cup base without hose barb, with PP material, Size 5 SIL stopper, SIL O-Ring would be **FS0P5SS**					

Stopper Sizes
Size 5: 23mm at bottom/26mm at top
Size 6: 26mm at bottom/32mm at top
Size 7: 30mm at bottom/37mm at top
Size 8: 33mm at bottom/40mm at top
Size 9: 37mm at bottom/45mm at top
Size 10: 42mm at bottom/50mm at top
Base O-Ring Size: AS-140



Filter Base Spare Parts

Filter Cup Base Spart Part Order		
Type	**Size**	**Material**
FS-RS = for rubber stopper	**5** = Size 5 **6** = Size 6 **7** = Size 7 **8** = Size 8 **9** = Size 9 **10** = Size 10	**S** = Silicone (Standard) **N** = Buna N **E** = EPDM **V** = Viton
FS-OR = for O-Ring on the Stem		
Example: FS-RS-5-S = Filter cup base rubber stopper, Silicone material		
Example: FS-OR-S = Filter cup base O-Rings, Silicone material		

Your Local Distributor:

ZenPure

North & South Americas:
ZenPure Americas, Inc
www.zenpure.com
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PureFlo® D4 Filter Capsules

PureFlo® D4 Filter Capsules have been designed for simple, quick, and efficient filtration of fluids used in laboratory and analytical small-scale applications. Fourteen different media options can be placed in an all-polypropylene construction for excellent chemical compatibility. The small compact design of the filter capsule also reduces hold-up volume and exposure to hazardous liquids. No adhesives or binders are used in the encapsulation process. The filters are thermally sealed to insure integrity.

Applications	
Point of use, low flow filtration	Syringe filter
Sample and Small Batch Clarification and Filtration	Sample and Small Batch Preparation and Clean-Up
Low hold up volume required application	Filter Media selection
Laboratory	Small scale Filtration testing

Materials of Construction

Media: Cellulose Acetate, Nylon, Polyethylene, PES, Polypropylene, and PTFE

Capsule Body: PP, Nylon, HDPE or PVC

Fitting Connections

Male & Female Luer Lock

Effective Filtration Area - 0.005in^2 (0.03 cm^2)

Autoclave Cycles - 10 times @ 257°F/125°C for 30 minutes. Capsules must not be in situ steam-sterilized. Polyethylene material can not be autoclaved.

Regulatory Compliance

The discs are manufactured from materials that conform to the requirements of 21CFR Part 177 of the U.S. Code of Federal Regulations. Medias and Membranes are also in compliance with the USP Class VI Biological Test for Plastics. (Except Black PP and PVC.)

Bacterial Endotoxin

Effluent is non-pyrogenic per USP Bacterial Endotoxin (0.25 EU/ml), determined using Limulus Amebocyte Lysate (LAL) Test.

Operating Conditions		PP Shell/ Nylon Shell	Gamma Stablized PP Shell	HDPE Shell	PVC Shell
Maximum working pressure @ 72°F/22°C:	Liquid:	80 psi (5.5 bar)	45 psi (3.1 bar)	80 psi (5.5 bar)	80 psi (5.5 bar)
	Gas:	60 psi (4.1 bar)	45 psi (3.1 bar)	60 psi (4.1 bar)	60 psi (4.1 bar)
Minimum burst pressure @ 72°F/22°C:		120 psi (8.3 bar)	60 psi (4.1 bar)	120 psi (8.3 bar)	120 psi (8.3 bar)
Maximum working temp:		176°F (80°C)	176°F (80°C)	140°F (60°C)	122°F (50°C)
Maximum forward differential pressure @ 72°F/22°C:		60 psid (4.1 bar)	45 psid (3.1 bar)	60 psid (4.1 bar)	60 psid (4.1 bar)
Maximum reverse differential pressure @ 72°F/22°C:		30 psid (2.1 bar)	30 psid (2.1 bar)	30 psid (2.1 bar)	30 psid (2.1 bar)
Maximum gamma irradiation resistance:			50 kGy	50 kGy	

PureFlo® D4 Filter Capsules

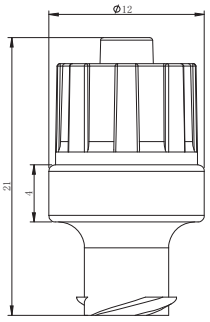
PureFlo D4 Filter Capsules Ordering Guide

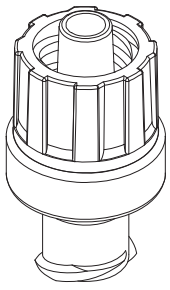
PureFlo D4 Filter Capsules	Filter Media	Pore Sizes (Micron)	Inlet Fitting	Outlet Fitting	Options
D4 = 4mm Disc Filter	**A** = Cellulose Acetate **CN** = Charged Nylon **F** = PTFE Phobic **HF** = PTFE Phillic **HP** = High Performance PP Media **M** = PP Membrane **N** = Nylon **NN** = Nylon Non-Woven **NS** = Nylon Screen **P** = PP Media **PS** = PP Screen **S** = PES **TS** = Polyester Screen **UE** = Polyethylene **Single layer only**	**Pick From Pore Size Table**	**LF** = Luer Lock Female **LM** = Luer Lock Male	**LM** = Luer Lock Male **LF** = Luer Lock Female	**-1** = Single Bagged **-PH** = Pharma Grade **Shell Material** **-E** = Polyethylene Shell (for Gamma Stability) **-GP** = Gamma stable Polypropylene Shell **-NY** = Nylon Shell **-V** = PVC Shell **-BLK** = Black PP Shell **Sterilization** -ETO = Ethylene Oxide Sterilization
			Other options are possible please inquire		

Example – 1.2 Micron Nylon Filter Media with Luer Lock by Male Luer Lock fittings would be D4N120LFLM

Pore Sizes (Micron)						
Cellulose Acetate (A)	**Charged Nylon (CN)**	**PTFE (Hydrophobic) (F)**	**PTFE (Hydrophilic) (HF)**	**High Performance PP Media (HP)**	**Polypro Membrane (M)**	**Nylon (N)**
020 = 0.20	**005** = 0.05	**010** = 0.10	**020** = 0.20	**001** = 0.1	**010** = 0.1	**005** = 0.05
045 = 0.45	**010** = 0.10	**020** = 0.20	**045** = 0.45	**002** = 0.2	**020** = 0.2	**010** = 0.10
065 = 0.65	**020** = 0.20	**045** = 0.45	**100** = 1.0	**003** = 0.3		**020** = 0.20
080 = 0.80	**045** = 0.45	**100** = 1.0	**300** = 3.0	**006** = 0.6		**045** = 0.45
120 = 1.20	**065** = 0.65	**300** = 3.0	**500** = 5.0	**010** = 1.0		**065** = 0.65
	080 = 0.80	**500** = 5.0		**030** = 3.0		**080** = 0.80
	120 = 1.20	**999** = 10		**050** = 5.0		**120** = 1.20
				100 = 10.0		

Pore Sizes (Micron)						
Nylon Non-Woven (NN)	**Nylon Screen (NS)**	**Polypro Media (P)**	**Polypro Screen (PS)**	**PES (S)**	**Polyester Screen (TS)**	**Polyethylene (UE)**
010 = 1	**070** = 7	**003** = 0.3	**15X** = 150	**005** = 0.05	**050** = 5	**010** = 0.1
030 = 3	**100** = 10	**006** = 0.6	**25X** = 250	**010** = 0.10	**070** = 7	**020** = 0.20
050 = 5	**200** = 20	**010** = 1.0	**50X** = 500	**020** = 0.20	**100** = 10	**045** = 0.45
100 = 10	**400** = 40	**030** = 3.0		**045** = 0.45	**200** = 20	**100** = 1.0
200 = 20	**600** = 60	**050** = 5.0		**065** = 0.65	**300** = 30	
400 = 40	**10X** = 100	**070** = 7.0		**080** = 0.80	**400** = 40	
	20X = 200	**100** = 10.0		**120** = 1.20	**550** = 55	
	25X = 250	**200** = 20.0			**730** = 73	
	30X = 300	**300** = 30.0				
		400 = 40.0				
		500 = 50.0				
		700 = 70.0				
		10X = 100				
		15X = 150				





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PureFlo® D13R Filter Capsules

PureFlo® D13R Filter Capsules have been designed for simple, quick, and efficient filtration of fluids used in laboratory and analytical small-scale applications. Fifteen different media options can be placed in an all-polypropylene construction for excellent chemical compatibility. The small compact design of the filter capsule also reduces hold-up volume and exposure to hazardous liquids. No adhesives or binders are used in the encapsulation process. The filters are thermally sealed using an overmold process to insure integrity and higher pressures.

Applications	
Point of use, low flow filtration	Syringe filter
Sample and Small Batch Clarification and Filtration	Sample and Small Batch Preparation and Clean-Up
Low hold up volume required applicaiton	Filter Media selection
Laboratory	Small scale Filtration testing

Materials of Construction

Media: Cellulose Acetate, Nylon, Polyethylene, PES, Polypropylene, Glass Fiber, and PTFE

Capsule Body: PP, Nylon, HDPE, PVC

Fitting Connections

Male & Female Luer Lock, Luer Slip, 1/16”,3/32”,1/8” Hose barb

Effective Filtration Area - 0.124in^2 (0.8 cm^2)

Autoclave Cycles - 10 times @ 257°F/125°C for 30 minutes. Capsules must not be in situ steam-sterilized. Polyethylene material can not be autoclaved.

Regulatory Compliance

The discs are manufactured from materials that conform to the requirements of 21CFR Part 177 of the U.S. Code of Federal Regulations. Medias and Membranes are also in compliance with the USP Class VI Biological Test for Plastics. (Except Black PP and PVC.)

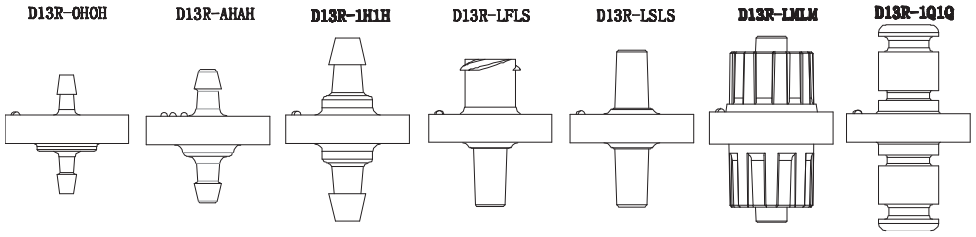
Bacterial Endotoxin

Effluent is non-pyrogenic per USP Bacterial Endotoxin (0.25 EU/ml), determined using Limulus Amebocyte Lysate (LAL) Test.

Operating Conditions

		PP Shell/ Nylon Shell	Gamma Stablized PP Shell	HDPE Shell	PVC Shell
Maximum working pressure @ 72°F/22°C:	Liquid:	80 psi (5.5 bar)	45 psi (3.1 bar)	80 psi (5.5 bar)	80 psi (5.5 bar)
	Gas:	60 psi (4.1 bar)	45 psi (3.1 bar)	60 psi (4.1 bar)	60 psi (4.1 bar)
Minimum burst pressure @ 72°F/22°C:		120 psi (8.3 bar)	60 psi (4.1 bar)	120 psi (8.3 bar)	120 psi (8.3 bar)
Maximum working temp:		176°F (80°C)	176°F (80°C)	140°F (60°C)	122°F (50°C)
Maximum forward differential pressure @ 72°F/22°C:		60 psid (4.1 bar)	45 psid (3.1 bar)	60 psid (4.1 bar)	60 psid (4.1 bar)
Maximum reverse differential pressure @ 72°F/22°C:		30 psid (2.1 bar)	30 psid (2.1 bar)	30 psid (2.1 bar)	30 psid (2.1 bar)
Maximum gamma irradiation resistance:			50 kGy	50 kGy	

PureFlo® D13R Filter Capsules



PureFlo D13R Filter Capsules Ordering Guide

PureFlo D13R Filter Capsules	Filter Media	Pore Sizes (Micron)	Inlet Fitting	Outlet Fitting	Options
D13R = 13mm Disc Filter	**A** = Cellulose Acetate **CN** = Charged Nylon **F** = PTFE Phobic **G** = Glass Fiber **HF** = PTFE Phillic **HP** = High Performance PP Media **M** = PP Membrane **N** = Nylon **NG** = Natural Glass Fiber **NN** = Nylon Non-Woven **NS** = Nylon Screen **P** = PP Media **PS** = PP Screen **S** = PES **TS** = Polyester Screen **UE** = Polyethylene	**Pick From Pore Size Table**	**0H** = 1/16" Hose Barb **AH** = 3/32" Hose Barb **1H** = 1/8" Hose Barb **1Q** = 1/8" Male Quick Coupling **LF** = Luer Lock Female **LM** = Luer Lock Male **LS** = Luer Lock Male Slip	**0H** = 1/16" Hose Barb **AH** = 3/32" Hose Barb **1H** = 1/8" Hose Barb **1Q** = 1/8" Male Quick Coupling **LF** = Luer Lock Female **LM** = Luer Lock Male **LS** = Luer Lock Male Slip	**-1** = Single Bagged **-PH** = Pharma Grade **Shell Material** **-E** = Polyethylene Shell (for Gamma Stability) **-GP** = Gamma stable Polypropylene Shell **-NY** = Nylon Shell **-V** = PVC Shell **-BLK** = Black PP Shell **Sterilization** -ETO = Ethylene Oxide Sterilization
Example – 1.0 Micron Nylon Filter Media with Luer Lock by luer Slip fittings would be **D13RN100LFLS**					

Pore Sizes (Micron)

Cellulose Acetate (A)	Charged Nylon (CN)	PTFE (Hydrophobic) (F)	Glass Fiber (G)	PTFE (Hydrophilic) (HF)	High Performance PP Media (HP)	Polypro Membrane (M)	Nylon (N)
020 = 0.20	**005** = 0.05	**010** = 0.10	**U** = ULPA	**020** = 0.20	**001** = 0.1	**010** = 0.1	**005** = 0.05
045 = 0.45	**010** = 0.10	**020** = 0.20	**H** = HEPA	**045** = 0.45	**002** = 0.2	**020** = 0.2	**010** = 0.10
065 = 0.65	**020** = 0.20	**045** = 0.45	**002** = 0.2	**100** = 1.0	**003** = 0.3		**020** = 0.20
080 = 0.80	**045** = 0.45	**100** = 1.0	**045** = 0.45	**300** = 3.0	**006** = 0.6		**045** = 0.45
120 = 1.20	**065** = 0.65	**300** = 3.0	**005** = 0.5	**500** = 5.0	**010** = 1.0		**065** = 0.65
	080 = 0.80	**500** = 5.0	**010** = 1.0		**030** = 3.0		**080** = 0.80
	120 = 1.20	**999** = 10	**030** = 3.0		**050** = 5.0		**120** = 1.20
			050 = 5.0		**100** = 10.0		
			100 = 10				
			200 = 20				
			300 = 30				
			Best for Gas Applications				

Pore Sizes (Micron)

Natural Glass Fiber (NG)	Nylon Non-Woven (NN)	Nylon Screen (NS)	Polypro Media (P)	Polypro Screen (PS)	PES (S)	Polyester Screen (TS)	Polyethylene (UE)
005 = 0.5	**010** = 1	**070** = 7	**003** = 0.3	**15X** = 150	**005** = 0.05	**050** = 5	**010** = 0.1
010 = 1.0	**030** = 3	**100** = 10	**006** = 0.6	**25X** = 250	**010** = 0.10	**070** = 7	**020** = 0.20
030 = 3.0	**050** = 5	**200** = 20	**010** = 1.0	**50X** = 500	**020** = 0.20	**100** = 10	**045** = 0.45
050 = 5.0	**100**= 10	**400** = 40	**030** = 3.0		**045** = 0.45	**200** = 20	**100** = 1.0
	200= 20	**600** = 60	**050** = 5.0		**065** = 0.65	**300** = 30	
	400= 40	**10X** = 100	**070** = 7.0		**080** = 0.80	**400** = 40	
		20X = 200	**100** = 10.0		**120** = 1.20	**550** = 55	
		25X = 250	**200** = 20.0			**730** = 73	
		30X = 300	**300** = 30.0				
			400 = 40.0				
			500 = 50.0				
			700 = 70.0				
			10X = 100				
Best for Liquid Applications			**15X** = 150				

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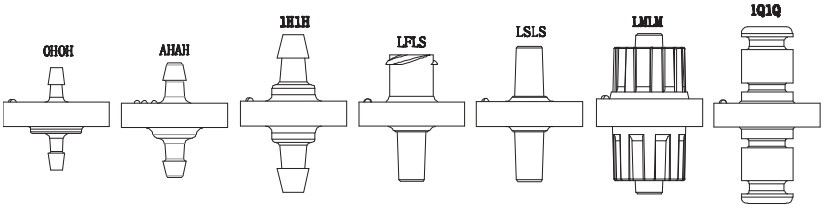
PureFlo® D13U Filter Capsules

PureFlo® D13U Filter Capsules have been designed for simple, quick, and efficient filtration of fluids used in laboratory and analytical small-scale applications. Eight different media options can be placed in an all-polypropylene construction for excellent chemical compatibility. The small compact design of the filter capsule also reduces hold-up volume and exposure to hazardous liquids. No adhesives or binders are used in the encapsulation process. The filters are **ultrasonically sealed** to insure integrity. It is an excellent low cost option for low pressure applications.

Operating Conditions

		PP Shell/ Nylon Shell	Gamma Stablized PP Shell	HDPE Shell	PVC Shell
Maximum working pressure @ 72°F/22°C:	Liquid:	30 psi (2.1 bar)	30 psi (2.1 bar)	45 psi (3.1 bar)	60 psi (4.1 bar)
	Gas:	30 psi (2.1 bar)	30 psi (2.1 bar)	30psi (2.1 bar)	44 psi (3.0 bar)
Minimum burst pressure @ 72°F/22°C:		45 psi (3.1 bar)	45 psi (3.1 bar)	60 psi (4.1bar)	80 psi (5.5 bar)
Maximum working temp:		176°F (80°C)	176°F (80°C)	140°F (60°C)	122°F (50°C)
Maximum forward differential pressure @ 72°F/22°C:		30 psid (2.1 bar)	30 psid (2.1 bar)	30 psid (2.1 bar)	30 psid (2.1 bar)
Maximum reverse differential pressure @ 72°F/22°C:		30 psid (2.1 bar)	30 psid (2.1 bar)	30 psid (2.1 bar)	30 psid (2.1 bar)
Maximum gamma irradiation resistance:			50 kGy	50 kGy	



Materials of Construction
Membrane: Nylon Screen, Glass Fiber, Polypropylene Media/ Screen, and Polyester Screen

Fitting Connections - Male & Female Luer Lock, Luer Slip, 1/16",3/32", 1/8" Hose barb

Effective Filtration Area - 0.124in^2 (0.8 cm^2)

Autoclave Cycles - 3 times @ 257°F/125°C for 30 minutes. Capsules must not be in situ steam-sterilized. Polyethylene material can not be autoclaved.

Regulatory Compliance - The discs are manufactured from materials that conform to the requirements of 21CFR Part 177 of the U.S. Code of Federal Regulations. Medias and Membranes are also in compliance with the USP Class VI Biological Test for Plastics. (Except Blk PP and PVC.)

Bacterial Endotoxin - Effluent is non-pyrogenic per USP Bacterial Endotoxin (0.25 EU/ml), determined using Limulus Amebocyte Lysate (LAL) Test.

PureFlo D13U Filter Capsules Ordering Guide

PureFlo D13U Filter Capsules	Filter Media	Pore Sizes (Micron)						Inlet Fitting	Outlet Fitting	Options
		Glass Fiber (G)	Nylon Non-Woven Media (NN)	Nylon Screen (NS)	Polypro Media (P)	Polypro Screen (PS)	Polyester Screen (TS)			
D13U = 13mm Disc Filter	**G** = Glass Fiber	**U** = ULPA	**010** = 1	**070** = 7	**003** = 0.3	**15X** = 150	**050** = 5	**0H** = 1/16" Hose Barb	**0H**	**-1** = Single Bagged
	HP = High Performance PP Media	**H** = HEPA	**030** = 3	**100** = 10	**006** = 0.6	**25X** = 250	**070** = 7			
	NG = Natural Glass Fiber	**002** = 0.2	**050** = 5	**200** = 20	**010** = 1.0	**50X** = 500	**100** = 10	**AH** = 3/32" Hose Barb	**AH**	**Shell Material**
(Ultrasonically Welded)	**NN** = Nylon Non-Woven Media	**045** = 0.45	**100**= 10	**400** = 40	**030** = 3.0	**High Performance PP Media (HP)**	**200** = 20			**-E** = Polyethylene Shell (for Gamma Stability)
	NS = Nylon Screen	**005** = 0.5	**200**= 20	**600** = 60	**050** = 5.0		**300** = 30	**1H** = 1/8" Hose Barb	**1H**	
	P = PP Media	**010** = 1.0	**400**= 40	**10X** = 100	**070** = 7.0		**400** = 40			
	PS = PP Screen	**030** = 3.0		**20X** = 200	**100** = 10	**001** = 0.1	**550** = 55	**1Q** = 1/8" Male Quick Coupling	**1Q**	**-GP** = Gamma stable Polypropylene Shell
	TS = Polyester Screen	**050** = 5.0	**Natural Glass Fiber (NG)**	**25X** = 250	**200** = 20	**002** = 0.2	**730** = 73			
		100 = 10		**30X** = 300	**300** = 30	**003** = 0.3		**LF** = Luer Lock Female	**LF**	**-NY** = Nylon Shell
For Low Pressure Applications		**200** = 20			**400** = 40	**006** = 0.6				
		300 = 30	**005** = 0.5		**500** = 50	**010** = 1.0		**LM** = Luer Lock Male	**LM**	**Sterilization**
		Best for Gas Applications	**010** = 1.0		**700** = 70	**030** = 3.0				**-ETO** = Ethylene Oxide Sterilization
			030 = 3.0		**10X** = 100	**050** = 5.0		**LS** = Luer Lock Male Slip	**LS**	
			050 = 5.0		**15X** = 150	**100** = 10.0				

Example – 10 Micron Nylon Screen with Luer Lock Inlet & Luer Slip Outlet fittings would be **D13UNS100LFLS**

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PureFlo® D25C Filter Capsules

PureFlo® D25C Filter Capsules (25mm diameter) have been designed for simple, quick, and efficient filtration of fluids and gases used in laboratory, pilot, and small scale applications. Twelve different media options can be placed in an all-polypropylene construction for excellent chemical compatibility with 10 different fittings. The small compact design of the filter capsule also reduces hold-up volume and exposure to hazardous chemicals. No adhesives or binders are used in the encapsulation process. The unit is thermally-sealed to ensure integrity.

Applications	
Point of use, low flow filtration	Syringe filter
Sample and Small Batch Clarification and Filtration	Sample and Small Batch Preparation and Clean-Up
Low hold up volume required application	Filter Media selection
Laboratory	Small scale Filtration testing

Regulatory Compliance

The discs are manufactured from materials that conform to the requirements of 21CFR Part 177 of the U.S. Code of Federal Regulations. Medias and Membranes are also in compliance with the USP Class VI Biological Test for Plastics. (Except Black PP and PVC)

Bacterial Endotoxin - Effluent is non-pyrogenic per USP Bacterial Endotoxin (0.25 EU/ml), determined using Limulus Amebocyte Lysate (LAL) Test.

Materials of Construction

Membrane: Nylon 6,6, Nylon Screen Polyethylene, PES, Polypropylene Membrane, Polypropylene Media, and Hydrophobic PTFE, Stainless steel
Membrane Supports: Media Dependent
Capsule Body: PP, Nylon, HDPE, and PVC

Fitting Connections

Luer Lock, Luer Slip, Hose Barb, Compression , NPT, Quick Coupling

Effective Filtration Area - 0.7in^2 (4.6 cm^2)

Autoclave Cycles - 10 times @ 257°F/125°C for 30 minutes capsules must not be in situ steam-sterilized. Polyethylene material can not be autoclaved.

Operating Conditions

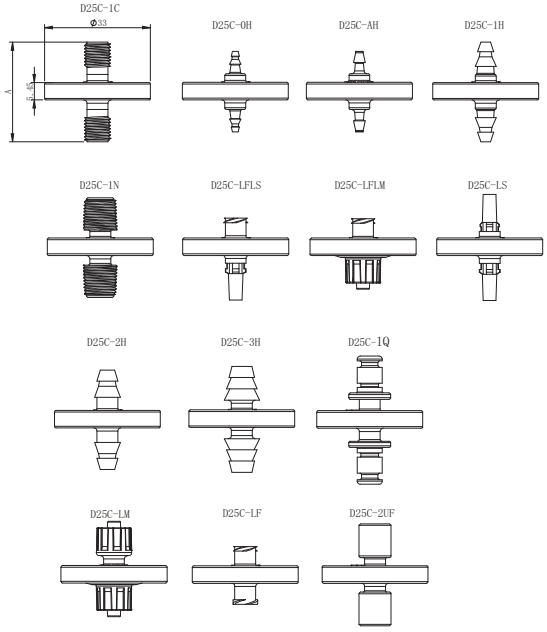
		PP Shell/ Nylon Shell	Gamma Stablized PP Shell	HDPE Shell	PVC Shell
Maximum working pressure @ 72°F/22°C:	Liquid:	80 psi (5.5 bar)	45 psi (3.1 bar)	80 psi (5.5 bar)	80 psi (5.5 bar)
	Gas:	60 psi (4.1 bar)	45 psi (3.1 bar)	60 psi (4.1 bar)	60 psi (4.1 bar)
Minimum burst pressure @ 72°F/22°C:		120 psi (8.3 bar)	60 psi (4.1 bar)	120 psi (8.3 bar)	120 psi (8.3 bar)
Maximum working temp:		176°F (80°C)	176°F (80°C)	140°F (60°C)	122°F (50°C)
Maximum forward differential pressure @ 72°F/22°C:		60 psid (4.1 bar)	45 psid (3.1 bar)	60 psid (4.1 bar)	60 psid (4.1 bar)
Maximum reverse differential pressure @ 72°F/22°C:		30 psid (2.1 bar)	30 psid (2.1 bar)	30 psid (2.1 bar)	30 psid (2.1 bar)
Maximum gamma irradiation resistance:			50 kGy	50 kGy	

PureFlo® D25C Filter Capsules

PureFlo D25C Filter Capsules Ordering Guide

PureFlo D25C Capsule Filters	Filter Media	Pore Sizes (Micron)	Inlet Fitting	Outlet Fitting	Options	Options
D25C = 25mm Capsule Filter	**A** = Cellulose Acetate **CN** = Charged Nylon **F** = PTFE Phobic **G** = Glass Fiber **HF** = PTFE Phillic **HP** = Hi Performance PP Media **M** = PP Membrane **N** = Nylon **NG** = Natural Glass Fiber **NN** = Nylon Non-Woven **NS** = Nylon Screen **P** = PP Media **PS** = PP Screen **S** = PES **SS** = Stainless Steel Screen **TS** = Polyester Screen **UE** = Polyethylene	**Pick From Pore Size Table**	**0H** = 1/16-3/32" Hose Barb **AH** = 3/32" Compression **1C** = 1/8" Compression (JACO compatible) **1H** = 1/8-3/16" Hose Barb **1N** = 1/8" NPTM **1Q** = 1/8" Male Quick **2H** = 3/16-1/4" Hose Barb **2UF** = 1/4-28 thread Female **3H** = 1/4-3/8" Hose Barb **LF** = Luer Lock Female **LM** = Luer Lock Male **LS** = Luer Lock Male Slip	**0H** = 1/16-3/32" Hose Barb **AH** = 3/32" Compression **1C** = 1/8" Compression (JACO compatible) **1H** = 1/8-3/16" Hose Barb **1N** = 1/8" NPTM **1Q** = 1/8" Male Quick **2H** = 3/16-1/4" Hose Barb **2UF** = 1/4-28 thread Female **3H** = 1/4-3/8" Hose Barb **LF** = Luer Lock Female **LM** = Luer Lock Male **LS** = Luer Lock Male Slip	**Shell Material** **Blank** = Polypropylene **-E** = Polyethylene Shell **-BLK** = Black PP shell **-GP** = Gamma stable Polypropylene Shell **-NY** = Nylon Shell **-V** = PVC Shell **Packaging** **-1** = Single Bagged **O-Ring for Quick Connect** **Blank** = O-ring Silicon (Standard) **-OE** = O-ring EPDM **-ON** = O-ring Nitrile **-OV** = O-ring Viton	**Pharma Grade** **-PH = Pharma Grade** **Sterilization** **-ETO** = Ethylene Oxide Sterilization **Prefilter (add before Filter Media** **G(pore Size)**= Glass Fiber PreFilter **P(pore Size)**= PolyPro Media PreFilter **S(pore Size)** = PES PreFilter
Example – 1.0 Micron Nylon Filter Media with 1/4-3/8" hose barb fitting inlet and outlet would be **D25CN1003H3H**						

Fitting options



Pore size options

Pore Sizes (Micron)								
Cellulose Acetate (A)	Charged Nylon (CN)	PTFE (Hydrophobic) (F)	Glass Fiber (G)	PTFE (Hydrophilic) (HF)	Hi Performance PP Media (HP)	Polypro Membrane (M)	Nylon (N)	Natural Glass Fiber (NG)
020 = 0.20	**005** = 0.05	**010** = 0.10	**U** = ULPA	**020** = 0.20	**001** = 0.1	**010** = 0.1	**005** = 0.05	**005** = 0.5
045 = 0.45	**010** = 0.10	**020** = 0.20	**H** = HEPA	**045** = 0.45	**002** = 0.2	**020** = 0.2	**010** = 0.10	**010** = 1.0
065 = 0.65	**020** = 0.20	**045** = 0.45	**002** = 0.2	**100** = 1.0	**003** = 0.3		**020** = 0.20	**030** = 3.0
080 = 0.80	**045** = 0.45	**100** = 1.0	**004** = 0.45	**300** = 3.0	**006** = 0.6		**045** = 0.45	**050** = 5.0
120 = 1.20	**065** = 0.65	**300** = 3.0	**005** = 0.5	**500** = 5.0	**010** = 1.0		**065** = 0.65	
	080 = 0.80	**500** = 5.0	**010** = 1.0		**030** = 3.0		**080** = 0.80	
	120 = 1.20	**999** = 10	**030** = 3.0		**050** = 5.0		**120** = 1.20	
			050 = 5.0		**100** = 10.0			
			100 = 10					
			200 = 20					
			300 = 30					
			Best for Gas Applicatio					**Best for Liquid Applications**

Pore Sizes (Micron)							
Nylon Non-Woven (NN)	Nylon Screen (NS)	Polypro Media (P)	Polypro Screen (PS)	PES (S)	Stainless Steel Screen (SS)	Polyester Screen (TS)	Polyethylene (UE)
010 = 1	**070** = 7	**003** = 0.3	**10X** = 100	**005** = 0.05	**180** = 18	**050** = 5	**010** = 0.1
030 = 3	**100** = 10	**006** = 0.6	**15X** = 150	**010** = 0.10	**200** = 20	**070** = 7	**020** = 0.20
050 = 5	**200** = 20	**010** = 1.0	**20X** = 200	**020** = 0.20	**250** = 25	**100** = 10	**045** = 0.45
100= 10	**400** = 40	**030** = 3.0	**30X** = 300	**045** = 0.45	**370** = 37	**200** = 20	**100** = 1.0
200= 20	**600** = 60	**050** = 5.0	**50X** = 500	**065** = 0.65	**460** = 46	**300** = 30	
400= 40	**10X** = 100	**070** = 7.0		**080** = 0.80	**530** = 53	**400** = 40	
	20X = 200	**100** = 10.0		**120** = 1.20	**610** = 61	**550** = 55	
	25X = 250	**200** = 20.0			**740** = 74	**730** = 73	
	30X = 300	**300** = 30.0			**10X** = 105		
		400 = 40.0			**15X** = 150		
		500 = 50.0			**20X** = 200		
		700 = 70.0			**25X** = 250		
		10X = 100					
		15X = 150					

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PureFlo® D25U Filter Capsules

PureFlo® D25U Filter Capsules (25mm diameter) have been designed for simple, quick, and efficient filtration of fluids and gases used in laboratory, pilot, and small scale applications. Eight different media options can be placed in an all-polypropylene construction for excellent chemical compatibility with 12 different fittings. The small compact design of the filter capsule also reduces hold-up volume and exposure to hazardous chemicals. No adhesives or binders are used in the encapsulation process. The unit is **ultrasonically-sealed** to ensure integrity for **low pressure** applications.

Materials of Construction

Membrane: Nylon Media and Screen, Polypropylene Media, Stainless Steel Screen, Polyester Screen, Glass Fiber

Capsule Body: PP, Nylon, PVC, PE

Fitting Connections - Luer Lock, Luer Slip, Hose Barb, Compression, NPT, Quick Coupling

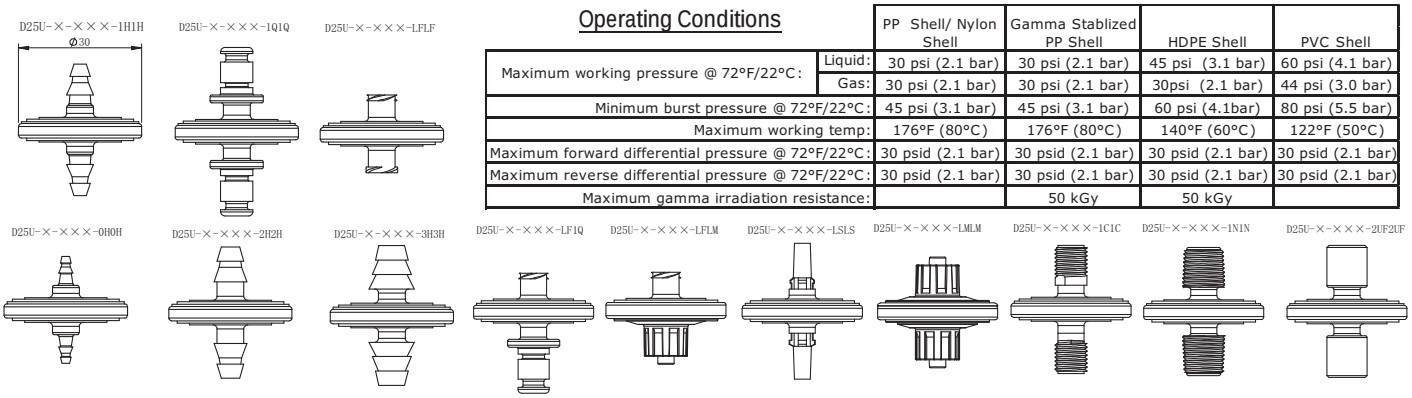
Autoclave Cycles - 3 times @ 257°F/125°C for 30 minutes. Capsules must not be in situ steam-sterilized. Polyethylene material can not be autoclaved.

Effective Filtration Area - 0.7in^2 (4.6 cm^2)

Regulatory Compliance

The discs are manufactured from materials that conform to the requirements of 21CFR Part 177 of the U.S. Code of Federal Regulations. Medias and Membranes are also in compliance with the USP Class VI Biological Test for Plastics. (Except Blk PP and PVC.)

Bacterial Endotoxin - Effluent is non-pyrogenic per USP Bacterial Endotoxin (0.25 EU/ml), determined using Limulus Amebocyte Lysate (LAL) Test.



Operating Conditions

		PP Shell/ Nylon Shell	Gamma Stablized PP Shell	HDPE Shell	PVC Shell
Maximum working pressure @ 72°F/22°C:	Liquid:	30 psi (2.1 bar)	30 psi (2.1 bar)	45 psi (3.1 bar)	60 psi (4.1 bar)
	Gas:	30 psi (2.1 bar)	30 psi (2.1 bar)	30psi (2.1 bar)	44 psi (3.0 bar)
Minimum burst pressure @ 72°F/22°C:		45 psi (3.1 bar)	45 psi (3.1 bar)	60 psi (4.1bar)	80 psi (5.5 bar)
Maximum working temp:		176°F (80°C)	176°F (80°C)	140°F (60°C)	122°F (50°C)
Maximum forward differential pressure @ 72°F/22°C:		30 psid (2.1 bar)	30 psid (2.1 bar)	30 psid (2.1 bar)	30 psid (2.1 bar)
Maximum reverse differential pressure @ 72°F/22°C:		30 psid (2.1 bar)	30 psid (2.1 bar)	30 psid (2.1 bar)	30 psid (2.1 bar)
Maximum gamma irradiation resistance:			50 kGy	50 kGy	

PureFlo D25U Filter Capsules Ordering Guide

PureFlo D25U Capsule Filters	Filter Media	Pore Sizes (Micron)						Inlet Fitting	Outlet Fitting	Options	
		Glass Fiber (G)	Nylon Screen (NS)	Polypro Media (P)	Polypro Screen (PS)	Stainless Steel Screen (SS)	Polyester Screen (TS)				
D25U = 25mm Capsule Filter (Ultrasonically Welded)	**G** = Glass Fiber **HP** = Hi Performance PP Media **NG** = Natural Glass **NN** = Nylon Non-Woven Media **NS** = Nylon Screen **P** = PP Media **PS** = PP Screen **SS** = Stainless Steel Screen **TS** = Polyester Screen	**U** = ULPA **H** = HEPA **002** = 0.2 **045** = 0.45 **005** = 0.5 **010** = 1.0 **030** = 3.0 **050** = 5.0 **100** = 10 **200** = 20 **300** = 30 **Nylon Non-Woven Media (NN)** **010** = 1 **030** = 3 **050** = 5 **100**= 10 **200**= 20 **400**= 40	**070** = 7 **100** = 10 **200** = 20 **400** = 40 **600** = 60 **10X** = 100 **20X** = 200 **25X** = 250 **30X** = 300	**003** = 0.3 **006** = 0.6 **010** = 1.0 **030** = 3.0 **050** = 5.0 **070** = 7.0 **100** = 10 **200** = 20 **300** = 30 **400** = 40 **500** = 50 **700** = 70 **10X** = 100 **15X** = 150	**10X** = 100 **15X** = 150 **20X** = 200 **30X** = 300 **50X** = 500 **Natural Glass Fiber (NG)** **005** = 0.5 **010** = 1.0 **030** = 3.0 **050** = 5.0	**180** = 18 **200** = 20 **250** = 25 **370** = 37 **460** = 46 **530** = 53 **610** = 61 **740** = 74 **10X** = 105 **15X** = 150 **20X** = 200 **25X** = 250	**050** = 5 **070** = 7 **100** = 10 **200** = 20 **300** = 30 **400** = 40 **550** = 55 **730** = 73 **Hi Performance PP Media (HP)** **001** = 0.1 **002** = 0.2 **003** = 0.3 **006** = 0.6 **010** = 1.0 **030** = 3.0 **050** = 5.0 **100** = 10.0	**0H** = 1/16-3/32" Hose Barb **AH** = 3/32" Compression **1C** = 1/8" Compression (JACO compatible) **1H** = 1/8-3/16" Hose Barb **1N** = 1/8" NPTM **1Q** = 1/8" Male Quick Coupling **2H** = 3/16-1/4" Hose Barb **2UF** = 1/4-28 thread Female **3H** = 1/4-3/8" Hose Barb **LF** = Luer Lock Female **LM** = Luer Lock Male **LS** = Luer Lock Male Slip	**0H** **AH** **1C** **1H** **1N** **1Q** **2H** **2UF** **3H** **LF** **LM** **LS**	**Shell Material** **Blank** = -**E** = Polyethylene -**BLK** = Black PP -**GP** = Gamma stable -**NY** = Nylon Shell -**V** = PVC Shell **O-Ring for Quick Connect** **Blank** = O-ring Silicon (Standard) -**OE** = O-ring EPDM -**ON** = O-ring Nitrile -**OV** = O-ring Viton **Packaging** -**1** = Single Bagged	**Pharma Grade** -**PH** = **Pharma** **Sterilization** -**ETO** = Ethylene Oxide Sterilization **Prefilter (add before Filter Media in** **G(pore Size)**= Glass Fiber PreFilter **P(pore Size)**= PolyPro Media PreFilter **S(pore Size)** = PES PreFilter

Example – 10.0 Micron Nylon Screen Filter Media with 1/4-3/8" hose barb fitting inlet and outlet would be D25UNS1003H3H

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+86 571 2288 6800

ISO 9001 14001 Certified

TÜV ISO 13485

PureFlo® D40C Filter Capsule

40mm Disc Capsule filter

PureFlo® D40C Filter Capsules have been specially designed for simple, quick, and efficient filtration of fluids and gases used in laboratory, pilot, and small-scale applications. Sixteen different media options can be placed in an all-polypropylene construction for excellent chemical compatibility. The small compact design of the filter capsule reduces hold-up volume and exposure to hazardous chemicals. No adhesives or binders are used in the encapsulation process. The unit is thermally-sealed to ensure integrity.

Applications	
Point of use, low flow filtration	Syringe filter
Sample and Small Batch Clarification and Filtration	Sample and Small Batch Preparation and Clean-Up
Low hold up volume required application	Filter Media selection
Laboratory	Small scale Filtration testing

Specifications

Materials of Construction

Membrane: Cellulose Acetate, PE, PTFE, GF, PP, Nylon, PES, SS, Polyester
Membrane Supports: Media Dependent
Capsule Body: PP, Nylon, HDPE
Fitting Connections: See Ordering Guide

Effective Filtration Area - 10.5 cm2

Autoclave Cycles - 10 times @ 257°F/125°C for 30 minutes Capsules must not be in situ steam-sterilized. Polyethylene material can not be autoclaved.

Regulatory Compliance

The discs are manufactured from materials that conform to the requirements of 21CFR Part 177 of the U.S. Code of Federal Regulations. Medias and Membranes are also in compliance with the USP Class VI Biological Test for Plastics. (Except Black PP, Hydrophilic PTFE [untested])

Bacterial Endotoxin - Effluent is non-pyrogenic per USP Bacterial Endotoxin (0.25 EU/ml), determined using Limulus Amebocyte Lysate (LAL) Test.

Operating Conditions

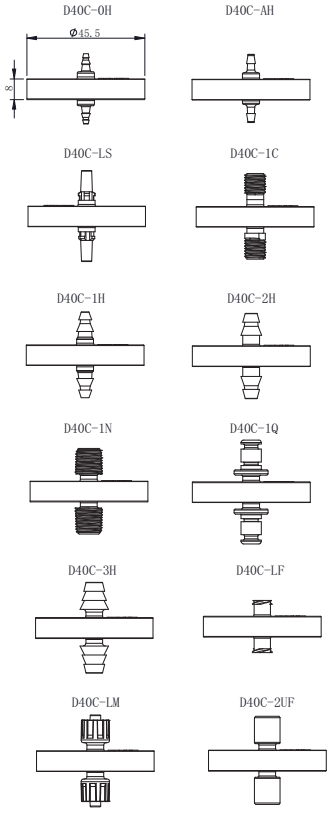
		PP Shell/ Nylon Shell	Gamma Stablized PP Shell	HDPE Shell
Maximum working pressure @ 72°F/22°C:	Liquid:	80 psi (5.5 bar)	45 psi (3.1 bar)	80 psi (5.5 bar)
	Gas:	60 psi (4.1 bar)	45 psi (3.1 bar)	60 psi (4.1 bar)
Minimum burst pressure @ 72°F/22°C:		120 psi (8.3 bar)	60 psi (4.1 bar)	120 psi (8.3 bar)
Maximum working temp:		176°F (80°C)	176°F (80°C)	140°F (60°C)
Maximum forward differential pressure @ 72°F/22°C:		60 psid (4.1 bar)	45 psid (3.1 bar)	60 psid (4.1 bar)
Maximum reverse differential pressure @ 72°F/22°C:		30 psid (2.1 bar)	30 psid (2.1 bar)	30 psid (2.1 bar)
Maximum gamma irradiation resistance:			50 kGy	50 kGy

PureFlo® D40C Filter Capsule

PureFlo D40C Filter Capsules Ordering Guide

PureFlo D40C Filter Capsules	Filter Media	Pore Sizes (Micron)	Inlet Fitting	Outlet Fitting	Options	Options
D40C = 40mm Capsule filter	**A** = Cellulose Acetate **CN** = Charged Nylon **F** = PTFE Phobic **G** = Glass Fiber **HF** = PTFE Phillic **HP** = Hi Performance PP Media **M** = PP Membrane **N** = Nylon **NG** = Natural Glass Fiber **NN** = Nylon Non-Woven **NS** = Nylon Screen **P** = PP Media **PS** = PP Screen **S** = PES **SS** = Stainless Steel Screen **TS** = Polyester Screen **UE** = Polyethylene	**Pick From Pore Size Table**	**0H** = 1/16-3/32" Hose Barb **AH** = 3/32" Hose Barb **1H** = 1/8-3/16" Hose Barb **1C** = 1/8" Compression **1N** = 1/8" NPTM **1Q** = 1/8" Male Quick Coupling* **2H** = 3/16-1/4" Hose Barb **2UF** = 1/4-28 thread Female **3H** = 1/4-3/8" Hose Barb **LF** = Luer Lock Female **LM** = Luer Lock Male **LS** = Luer Lock Male Slip	**0H** = 1/16-3/32" Hose Barb **AH** = 3/32" Hose Barb **1H** = 1/8-3/16" Hose Barb **1C** = 1/8" Compression **1N** = 1/8" NPTM **1Q** = 1/8" Male Quick Coupling* **2H** = 3/16-1/4" Hose Barb **2UF** = 1/4-28 thread Female **3H** = 1/4-3/8" Hose Barb **LF** = Luer Lock Female **LM** = Luer Lock Male **LS** = Luer Lock Male Slip	**Shell Material** **Blank** = Polypropylene **-E** = Polyethylene Shell **-BLK** = Black PP shell **-GP** = Gamma stable Polypropylene Shell **-NY** = Nylon Shell **O-Ring for Quick Connect*** **Blank** = O-ring Silicon (Standard) **-OE** = O-ring EPDM **-ON** = O-ring Nitrile **-OV** = O-ring Viton	**Pharma Grade** **-PH = Pharma Grade** **Sterilization** **-ETO** = Ethylene Oxide Sterilization **Packaging** **-1** = Single Bagged **Prefilter (add before Filter Media in part#)** **G(pore Size)**= Glass Fiber PreFilter **P(pore Size)**= PolyPro Media PreFilter **S(pore Size)** = PES PreFilter
Example – 1.0 Micron Nylon Filter Media and Female Luer Lock fittings I/O would be D40CN100LFLF						
* Note : Units with Orings are not Validated to be ETO sterilized.						

Fitting Options



Pore Size Options

Pore Sizes (Micron)								
Cellulose Acetate (A)	**Charged Nylon (CN)**	**PTFE** (Hydrophobic) (F)	**Glass Fiber (G)**	**PTFE (Hydrophilic) (HF)**	**Hi Performance PP Media (HP)**	**Polypro Membrane (M)**	**Nylon (N)**	**Natural Glass Fiber (NG)**
020 = 0.20 **045** = 0.45 **065** = 0.65 **080** = 0.80 **120** = 1.20	**005** = 0.05 **010** = 0.10 **020** = 0.20 **045** = 0.45 **065** = 0.65 **080** = 0.80 **120** = 1.20	**010** = 0.10 **020** = 0.20 **045** = 0.45 **100** = 1.0 **300** = 3.0 **500** = 5.0 **999** = 10	**U** = ULPA **H** = HEPA **002** = 0.2 **045** = 0.45 **005** = 0.5 **010** = 1.0 **030** = 3.0 **050** = 5.0 **100** = 10 **200** = 20 **300** = 30 **Best for Gas Application**	**020** = 0.20 **045** = 0.45 **100** = 1.0 **300** = 3.0 **500** = 5.0	**001** = 0.1 **002** = 0.2 **003** = 0.3 **006** = 0.6 **010** = 1.0 **030** = 3.0 **050** = 5.0 **100** = 10.0	**010** = 0.1 **020** = 0.2	**005** = 0.05 **010** = 0.10 **020** = 0.20 **045** = 0.45 **065** = 0.65 **080** = 0.80 **120** = 1.20	**005** = 0.5 **010** = 1.0 **030** = 3.0 **050** = 5.0 **Best for Liquid Applications**

Pore Sizes (Micron)							
Nylon Non-Woven* (NN)	**Nylon Screen* (NS)**	**Polypro Media* (P)**	**Polypro Screen (PS)**	**PES (S)**	**Stainless Steel Screen (SS)**	**Polyester Screen (TS)**	**Polyethylene (UE)**
010 = 1 **030** = 3 **050** = 5 **100**= 10 **200**= 20 **400**= 40	**070** = 7 **100** = 10 **200** = 20 **400** = 40 **600** = 60 **10X** = 100 **20X** = 200 **25X** = 250 **30X** = 300	**003** = 0.3 **006** = 0.6 **010** = 1.0 **030** = 3.0 **050** = 5.0 **070** = 7.0 **100** = 10.0 **200** = 20.0 **300** = 30.0 **400** = 40.0 **500** = 50.0 **700** = 70.0 **10X** = 100 **15X** = 150	**10X** = 100 **15X** = 150 **20X** = 200 **30X** = 300 **50X** = 500	**005** = 0.05 **010** = 0.10 **020** = 0.20 **045** = 0.45 **065** = 0.65 **080** = 0.80 **120** = 1.20	**180** = 18 **200** = 20 **250** = 25 **370** = 37 **460** = 46 **530** = 53 **610** = 61 **740** = 74 **10X** = 105 **15X** = 150 **20X** = 200 **25X** = 250	**070** = 7 **100** = 10 **200** = 20 **300** = 30 **400** = 40 **550** = 55 **730** = 73	**010** = 0.1 **020** = 0.20 **045** = 0.45 **100** = 1.0

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Your Local Distributor:

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www.zenpure.com
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703-335-9910

All Other Regions:
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info@zenpure.com
+86 571 2288 6800

PureFlo® D50C Filter Capsules

50mm Disc filter

PureFlo® D50C Filter Capsules (50mm diameter) have been specially designed for simple, quick, and efficient filtration of liquids and gases used in laboratory, pilot, and small-scale applications. There are 14 different media options with 20 fitting options that can be placed in an all-polypropylene or polyethylene shell construction for excellent chemical compatibility. The small, compact design of the filter capsule also reduces hold-up volume and exposure to hazardous chemicals. No adhesives or binders are used in the encapsulation process. The unit is thermally-sealed to ensure integrity.

Specifications:

Materials of Construction

Membrane: Nylon, Nylon Screen, Polyethylene, PES, Polypropylene Membrane, Polypropylene Media, Hydrophobic and Hydrophilic PTFE
Membrane Supports: Media dependent
Capsule Body: PP, Nylon, HDPE

Fitting Connections

Luer Lock, Luer Slip, Hose Barb, Compression, NPT, Quick Couplings

Effective Filtration Area - 2.5in^2 (15.9 cm^2)

Autoclave Cycles - 10 times @ 257°F/125°C for 30 minutes Capsules must not be in situ steam-sterilized. Polyethylene material can not be autoclaved.

Regulatory Compliance

The discs are manufactured from materials that conform to the requirements of 21CFR Part 177 of the U.S. Code of Federal Regulations. Medias and Membranes are also in compliance with the USP Class VI Biological Test for Plastics. (Except Black PP)

Bacterial Endotoxin - Effluent is non-pyrogenic per USP Bacterial Endotoxin (0.25 EU/ml), determined using Limulus Amebocyte Lysate (LAL) Test.

Operating Conditions

		PP Shell/ Nylon Shell	Gamma Stablized PP Shell	HDPE Shell
Maximum working pressure @ 72°F/22°C:	Liquid:	80 psi (5.5 bar)	45 psi (3.1 bar)	80 psi (5.5 bar)
	Gas:	60 psi (4.1 bar)	45 psi (3.1 bar)	60 psi (4.1 bar)
Minimum burst pressure @ 72°F/22°C:		120 psi (8.3 bar)	60 psi (4.1 bar)	120 psi (8.3 bar)
Maximum working temp:		176°F (80°C)	176°F (80°C)	140°F (60°C)
Maximum forward differential pressure @ 72°F/22°C:		60 psid (4.1 bar)	45 psid (3.1 bar)	60 psid (4.1 bar)
Maximum reverse differential pressure @ 72°F/22°C:		30 psid (2.1 bar)	30 psid (2.1 bar)	30 psid (2.1 bar)
Maximum gamma irradiation resistance:			50 kGy	50 kGy

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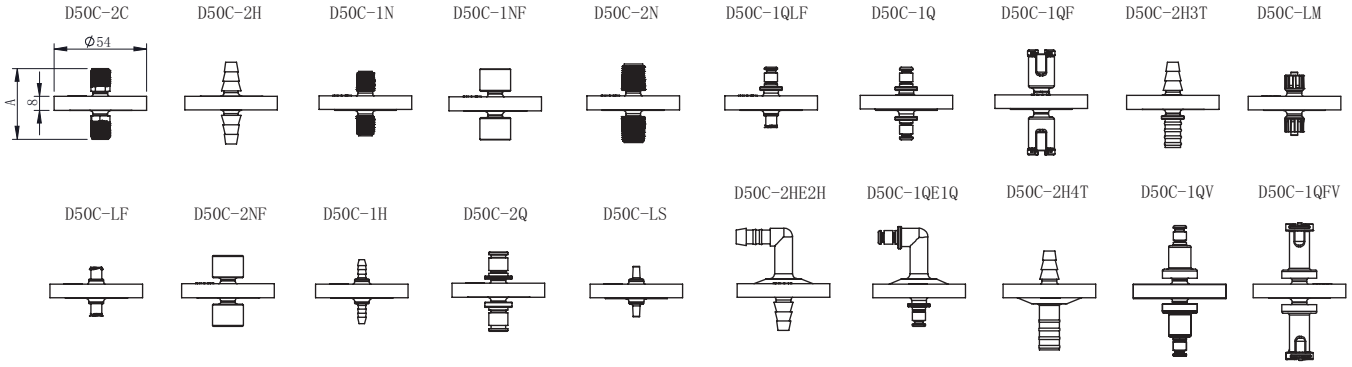
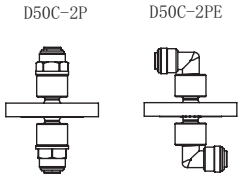
PureFlo® D50C Filter Capsules



Fitting Options



PureFlo D50C Filter Capsules Ordering Guide

PureFlo D50C Capsule	Filter Media	Pore Sizes (Micron)	Input Fitting	Output Fitting	Options	
D50C = 50mm Capsule	**A** = Cellulose Acetate **CN** = Charged Nylon **F** = PTFE Phobic **G** = Glass Fiber **HF** = PTFE Phillic **HP** = Hi Performance PP Media **M** = PP Membrane **N** = Nylon **NG** = Natural Glass Fiber **NN** = Nylon Non-Woven **NS** = Nylon Screen **P** = PP Media **PS** = PP Screen **S** = PES **SS** = Stainless Steel Screen **TS** = Polyester Screen **UE** = Polyethylene	**Pick From Pore Size Table**	**1H** = 1/8"Hose Barb **1N** = 1/8" MNPT **1NF** = 1/8" FNPT **1Q** = 1/8" Male Quick Coupling **1QE** = 1/8" Male Quick Coupling Elbow **1QF** = 1/8" Female Quick Coupling **1QV** = 1/8" Male Quick Valved Coupling **1QVF** = 1/8" Female Quick Valved Coupling **2C** = 1/4" Compression **2H** = 1/4"-3/8" Hose Barb **2HE** = 1/4" Hose Barb Elbow **2N** = 1/4" MNPT **2NF** = 1/4" FNPT **2P** = 1/4" Push to connect **2PE** = 1/4" Push to connect Elbow **2Q** = 1/4" Male Quick Coupling for Metal latch **3T** = 3/8" Tube Seal (9.8mm) **4T** = 11.8mm Tube Seal **LF** = Luer Lock Female **LM** = Luer Lock Male **LS** = Luer lock slip	**1H** **1N** **1NF** **1Q** **1QE** **1QF** **1QV** **1QVF** **2C** **2H** **2HE** **2N** **2NF** **2P** **2PE** **2Q** **3T** **4T** **LF** **LM** **LS**	**Shell Material** **Blank** = Polypropylene **-E** = Polyethylene Shell **-BLK** = Black PP shell **-GP** = Gamma stable Polypropylene Shell **-NY** = Nylon Shell **O-Ring for Quick Connect** **Blank** = O-ring Silicon (Standard) **-OE** = O-ring EPDM **-ON** = O-ring Nitrile **-OV** = O-ring Viton	**Pharma Grade** **-PH** = Pharma Grade **Sterilization** **-ETO** = Ethylene Oxide Sterilization **Packaging** **Blank** = Bulk **-1** = Single Bagged **Prefilter (add before Filter Media in part#)** **G(pore Size)**= Glass Fiber PreFilter **P(pore Size)**= PolyPro Media PreFilter **S(pore Size)** = PES PreFilter

Example – 1.0 Micron Nylon Filter Media with 1/4" hose barb fittings would be **D50CN1002H2H**

Pore Sizes (Micron)

Cellulose Acetate (A)	Charged Nylon (CN)	PTFE (Hydrophobic) (F)	Glass Fiber (G)	PTFE (Hydrophilic) (HF)	Hi Performance PP Media (HP)	Polypro Membrane (M)	Nylon (N)	Natural Glass Fiber (NG)	Nylon Non Woven (NN)	Nylon Screen (NS)	Polypro Media (P)	Polypro Screen (PS)	PES (S)	Stainless Steel Screen (SS)	Polyester Screen (TS)	Polyethylene (UE)
020 = 0.20	**005** = 0.05	**010** = 0.10	**U** = ULPA	**020** = 0.20	**001** = 0.1	**010** = 0.1	**005** = 0.05	**005** = 0.5	**010** = 1	**070** = 7	**003** = 0.3	**10X** = 100	**005** = 0.05	**180** = 18	**050** = 5	**010** = 0.1
045 = 0.45	**010** = 0.10	**020** = 0.20	**H** = HEPA	**045** = 0.45	**002** = 0.2	**020** = 0.2	**010** = 0.10	**010** = 1.0	**030** = 3	**100** = 10	**006** = 0.6	**15X** = 150	**010** = 0.10	**200** = 20	**070** = 7	**020** = 0.20
065 = 0.65	**020** = 0.20	**045** = 0.45	**002** = 0.2	**100** = 1.0	**003** = 0.3		**020** = 0.20	**030** = 3.0	**050** = 5	**200** = 20	**010** = 1.0	**20X** = 200	**020** = 0.20	**250** = 25	**100** = 10	**045** = 0.45
080 = 0.80	**045** = 0.45	**100** = 1.0	**045** = 0.45	**300** = 3.0	**006** = 0.6		**045** = 0.45	**050** = 5.0	**100**= 10	**400** = 40	**030** = 3.0	**30X** = 300	**045** = 0.45	**370** = 37	**200** = 20	**100** = 1.0
120 = 1.20	**065** = 0.65	**300** = 3.0	**005** = 0.5	**500** = 5.0	**010** = 1.0		**065** = 0.65		**200**= 20	**600** = 60	**050** = 5.0	**50X** = 500	**065** = 0.65	**460** = 46	**300** = 30	
	080 = 0.80	**500** = 5.0	**010** = 1.0		**030** = 3.0		**080** = 0.80		**400**= 40	**10X** = 100	**070** = 7.0		**080** = 0.80	**530** = 53	**400** = 40	
	120 = 1.20	**999** = 10	**030** = 3.0		**050** = 5.0		**120** = 1.20			**20X** = 200	**100** = 10.0		**120** = 1.20	**610** = 61	**550** = 55	
			050 = 5.0		**100** = 10.0					**25X** = 250	**200** = 20.0			**740** = 74	**730** = 73	
			100 = 10							**30X** = 300	**300** = 30.0			**10X** = 105		
			200 = 20								**400** = 40.0			**15X** = 150		
			300 = 30								**500** = 50.0			**20X** = 200		
			Best for Gas Applications					**Best for Liquid Applications**			**700** = 70.0			**25X** = 250		
											10X = 100					
											15X = 150					

Your Local Distributor:

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PureFlo® G50C Gas Filter Capsules
(Gas Capsule)

Designed for vacuum/ Vent applications

PureFlo® G50C Disc Capsules (50mm diameter) have been specially designed for simple, quick, and efficient filtration of gases. Nine different media options can be placed in an all-polypropylene or polyethylene shell construction for excellent chemical, gas compatibility. The small, compact design of the filter capsule allows for superior air flow rate and low backpressure. Ideal for vacuum pump protection from contamination. A hydrophobic 1um or smaller micron size should be used for the application.

It can be used as a hydrophobic barrier to protect from viral and bacterial contamination. PTFE 0.2um and PE 0.2um rated filters can be used in sterile vent applications with extremely low resistance. Provides an ideal effective barrier for vacuum/vent protection from bio-hazardous contamination. The filter assists in meeting the 29CFR1910.1030 OSHA Blood borne Pathogen Standard by serving as an "Engineering Control" to reduce human exposure. It can be used as a hydrophobic barrier to protect from viral and bacterial contamination.

Gamma sterilization resistant options are available with PE membrane and PE shell.

Materials of Construction
- Membrane: Nylon, Nylon Screen Polyethylene, PES, Polypropylene Membrane, Polypropylene Media, Hydrophobic and Hydrophilic PTFE
- Membrane Supports: Media dependent
- Capsule Body: PP, HDPE, Nylon

Fitting Connections
- Luer Lock, Luer Slip, Hose Barb, Compression, NPT, Quick Couplings, and more

Effective Filtration Area - 2.5in^2 (15.9 cm^2)

Autoclave Cycles - 10 times @ 257°F/125°C for 30 minutes Capsules must not be in situ steam-sterilized

Specifications:

Bacterial Retention - 0.2um (PTFE or PE)
- Complete retention of *Brevundimonas diminuta* in accordance with the current HIMA challenge methodology (ASTM F838-05).

Viral Retention - 0.2um (PTFE or PE
- 99.9999% retention with fX174 Bacteriophage (25-27nm (Nanometers), method adapted from ASTM F2101

HEPA rated with – 1.0um and smaller media
- Ensures particulate-free air 99.97% retention of 0.3 µm

ULPA rated with – ULPA Glass Fiber media
- Ensures particulate-free air 99.999% retention of 0.12 µm

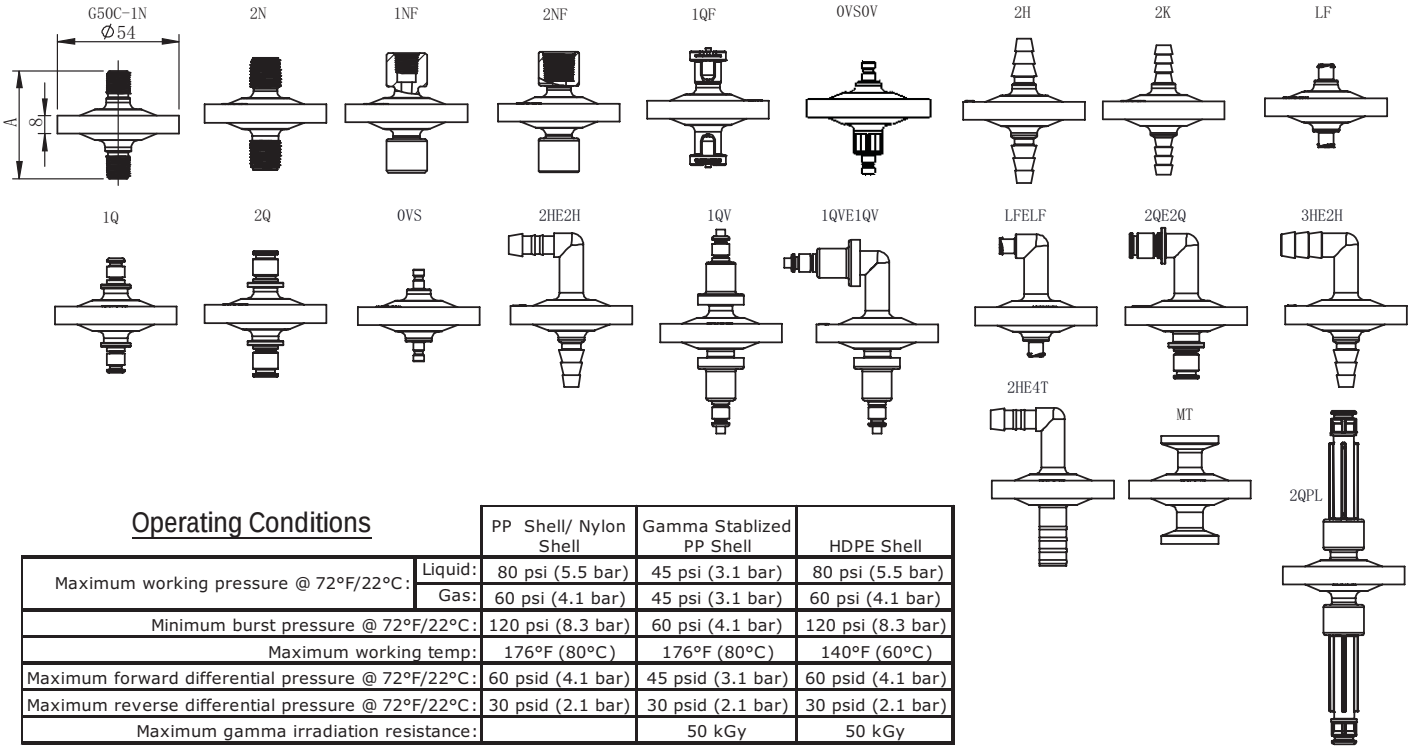
Pyrogenicity
- <0.25 EU/ml using the LAL test method

Autoclave Cycles - 10 times @ 257°F/125°C for 30 minutes, Polyethylene material can not be autoclaved.
- Note: Capsules must not be in situ steam-sterilized

Regulatory Compliance
- The discs are manufactured from materials that conform to the requirements of 21CFR Part 177 of the U.S. Code of Federal Regulations. Medias and Membranes are also in compliance with the USP Class VI Biological Test for Plastics. (Except Black PP and PVC)

Bacterial Endotoxin - Effluent is non-pyrogenic per USP Bacterial Endotoxin (0.25 EU/ml), determined using Limulus Amebocyte Lysate (LAL) Test.

PureFlo® G50C Gas Filter Capsules



Operating Conditions

		PP Shell/ Nylon Shell	Gamma Stablized PP Shell	HDPE Shell
Maximum working pressure @ 72°F/22°C:	Liquid:	80 psi (5.5 bar)	45 psi (3.1 bar)	80 psi (5.5 bar)
	Gas:	60 psi (4.1 bar)	45 psi (3.1 bar)	60 psi (4.1 bar)
Minimum burst pressure @ 72°F/22°C:		120 psi (8.3 bar)	60 psi (4.1 bar)	120 psi (8.3 bar)
Maximum working temp:		176°F (80°C)	176°F (80°C)	140°F (60°C)
Maximum forward differential pressure @ 72°F/22°C:		60 psid (4.1 bar)	45 psid (3.1 bar)	60 psid (4.1 bar)
Maximum reverse differential pressure @ 72°F/22°C:		30 psid (2.1 bar)	30 psid (2.1 bar)	30 psid (2.1 bar)
Maximum gamma irradiation resistance:			50 kGy	50 kGy

PureFlo G50C Filter Capsules Ordering Guide

PureFlo G50C Capsule Filters	Filter Media	Pore Sizes (Micron)					Input Fitting	Output Fitting	Options
		PTFE (F)	Glass Fiber (G)	Polypro Membrane (M)	Nylon (N)	Polypro Media (P)			
G50C = 50mm Capsule filter	**F** = PTFE	**H** = HEPA	**U** = ULPA	**010** = 0.1	**005** = 0.05	**H** = HEPA	**1N** = 1/8" MNPT	**1N**	**Shell Material**
	G = Glass Fiber	**010** = 0.10	**H** = HEPA	**020** = 0.2	**010** = 0.10	**003** = 0.3	**1NF** = 1/8" FNPT	**1NF**	**Blank** = Polypropylene
	HP = Hi Performance PP	**020** = 0.20	**002** = 0.2		**020** = 0.20	**006** = 0.6	**1Q** = 1/8" Male Quick Coupling	**1Q**	**-E** = Polyethylene Shell
	M = PP Membrane	**045** = 0.45	**045** = 0.45	**Polyester Screen (TS)**	**045** = 0.45	**010** = 1.0	**1QE** = 1/8" Male Quick Coupling Elbow	**1QE**	**-BLK** = Black PP shell
	N = Nylon	**100** = 1.0	**005** = 0.5		**065** = 0.65	**030** = 3.0	**1QF** = 1/8" Female Quick Coupling	**1QF**	**-GP** = Gamma stable Polypropylene Shell
	NN = Nylon Non-Woven	**300** = 3.0	**010** = 1.0	**050** = 5	**080** = 0.80	**050** = 5.0	**1QV** = 1/8" Male Valved Quick Coupling	**1QV**	
	NS = Nylon Screen	**500** = 5.0	**030** = 3.0	**070** = 7	**120** = 1.20	**070** = 7.0	**1QVE** = 1/8" Male Valved Quick Coupling elbow	**1QVE**	**-NY** = Nylon Shell
	P = PP Media	**999** = 10	**050** = 5.0	**100** = 10		**100** = 10	**2H** = 1/4"-3/8" Hose Barb	**2H**	**Sterilization**
	PS = PP Screen	**Polyester Screen (TS)**	**100** = 10	**200** = 20	**Nylon Screen (NS)**	**200** = 20	**2HE** = 1/4"Hose Barb Elbow	**2HE**	**-ETO** = Ethylene Oxide Sterilization
	TS = Polyester Screen		**200** = 20	**300** = 30		**300** = 30	**2K** = 1/4" Hose Barb	**2K**	
	UE = Polyethylene	**10X** = 100	**300** = 30	**400** = 40	**070** = 7	**400** = 40	**2N** = 1/4" MNPT	**2N**	**Packaging**
		15X = 150	**Polyethylene (UE)**	**550** = 55	**100** = 10	**500** = 50	**2NF** = 1/4" FNPT	**2NF**	**Blank** = Bulk
		20X = 200		**730** = 73	**200** = 20	**700** = 70	**2Q** = 1/4" Male Quick Coupling for Metal latch	**2Q**	**-1** = Single Bagged
		30X = 300	**H** = HEPA		**400** = 40	**10X** = 100	**2QE**= 1/4" Male Quick Coupling for Metal latch elbow	**2QE**	**O-Ring for Quick Connect**
		50X = 500	**010** = 0.1	**Hi Performance PP Media (HP)**	**600** = 60	**15X** = 150	**2QF** = 1/4" Female Quick Coupling	**2QF**	**Blank** = O-ring Silicone (Standard)
		Nylon Non-Woven Media (NN)	**020** = 0.20		**10X** = 100		**2QP** = 1/4" Male Quick Coupling for Plastic latch	**2QP**	
			045 = 0.45		**20X** = 200		**2QPL** = Long 1/4" Male Quick Coupling for Plastic latch	**2QPL**	**-OE** = O-ring EPDM
			100 = 1.0	**001** = 0.1	**25X** = 250		**3H** = 3/8" Hose Barb	**3H**	**-ON** = O-ring Nitrile
		010 = 1	**Polypro Screen (PS)**	**002** = 0.2	**30X** = 300		**3HE** = 3/8" Hose Barb Elbow	**3HE**	**-OV** = O-ring Viton
		030 = 3		**003** = 0.3			**4T** = 11.8mm Tube Seal	**4T**	**Prefilter (add before Filter Media in part#)**
		050 = 5	**10X** = 100	**006** = 0.6			**LF** = Luer Lock Female	**LF**	
		100= 10	**15X** = 150	**010** = 1.0			**MT** = 1/2" Tri-clamp	**MT**	**G(pore Size)**= Glass Fiber PreFilter
		200= 20	**20X** = 200	**030** = 3.0			**OV** = Male Medical Coupling Regular	**OV**	
		400= 40	**30X** = 300	**050** = 5.0			**OVS** = Male Medical Coupling Short	**OVS**	**P(pore Size)**= PolyPro Media PreFilter
			50X = 500	**100** = 10.0					

Example – 1.0 Micron PTFE Filter Media with 1/4" hose barb fittings would be **G50CF1002H2H**

OVS is compatible with -Parker/RECTUS 91 and 20, Walther 06-003, and Value Plastics -Bayonet Style Quick Connect

Your Local Distributor:

ZenPure

North & South Americas:
ZenPure Americas, Inc
www.zenpure.com
Info-us@zenpure.com
703-335-9910

All Other Regions:
ZenPure Corporation
www.zenpure.com
info@zenpure.com
+86 571 2288 6800

PureFlo D65R Filter Capsules
(Disc Capsule)

Versatile Disc Capsule filter

PureFlo® D65R Filter Capsules (65mm diameter) have been designed for simple, quick, and efficient filtration of fluids and gases used in laboratory, pilot, and small-scale applications. The family of products is particularly suitable for scale up testing. Nineteen different media options can be placed in an all-polypropylene construction for excellent chemical compatibility. There are 31 different fitting options that can be mixed and matched for the inlet and outlet fittings.

The compact design of the filter capsule also reduces hold-up volume and exposure to hazardous chemicals. No adhesives or binders are used in the encapsulation process. The unit is thermally-sealed to ensure integrity.

Applications	
Low flow	Ink
Lab scale testing	Beverages
Bio Bags	Pharmaceuticals
Fine Chemicals	Biologics
Vent Filter	Scale up processing
Water	Small volume

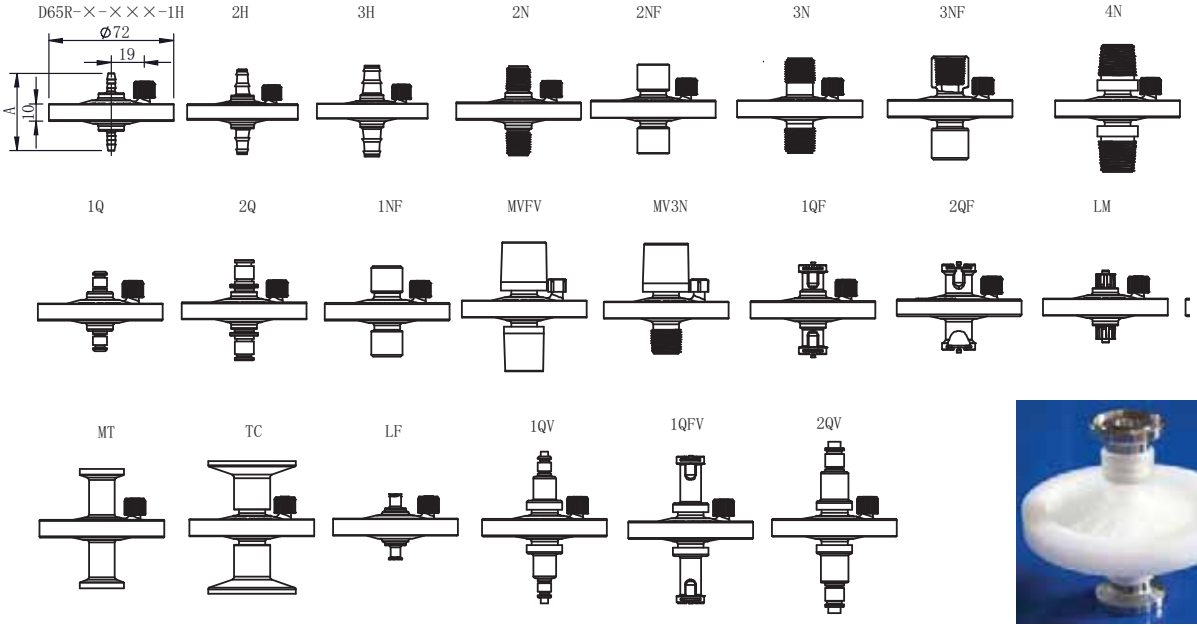
Specifications

Materials of Construction:	Media: Polypropylene, Nylon, PTFE, Polyethylene, Glass Fiber, and PES Media Supports: Media Dependent Shell: Polypropylene, Nylon or Polyethylene Sealing: Thermally-welded
Fitting Connections:	See ordering guide for the availability. Any inlet/outlet combinations. (Custom adaptors available upon request)
Effective Filtration Area:	4in^2 (26cm^2)
Dimensions:	65mm (2.87in)
Available Ratings:	0.04um to 70um (see Ordering Guide)
Autoclave Cycles:	The filters can be sterilized by autoclaving for 10 cycles at 257°F/125°C for 30 minutes. Polyethylene material can not be autoclaved. Note: Capsules must not be in situ steam-sterilized.

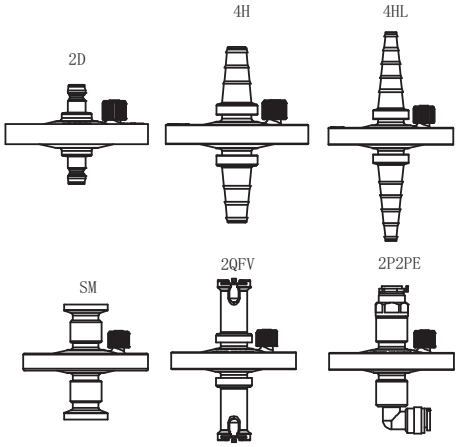
Operating Conditions		PP Shell/ Nylon Shell	Gamma Stablized PP Shell	HDPE Shell
Maximum working pressure @ 72°F/22°C:	Liquid:	80 psi (5.5 bar)	45 psi (3.1 bar)	80 psi (5.5 bar)
	Gas:	60 psi (4.1 bar)	45 psi (3.1 bar)	60 psi (4.1 bar)
Minimum burst pressure @ 72°F/22°C:		120 psi (8.3 bar)	60 psi (4.1 bar)	120 psi (8.3 bar)
Maximum working temp:		176°F (80°C)	176°F (80°C)	140°F (60°C)
Maximum forward differential pressure @ 72°F/22°C:		60 psid (4.1 bar)	45 psid (3.1 bar)	60 psid (4.1 bar)
Maximum reverse differential pressure @ 72°F/22°C:		30 psid (2.1 bar)	30 psid (2.1 bar)	30 psid (2.1 bar)
Maximum gamma irradiation resistance:			50 kGy	50 kGy

PureFlo D65R Filter Capsules

Dimensions (mm)



Code name	Inlet Fitting	Outlet Fitting	Size(±1)
			A
D65R-×-×××-1H	1/8″ Hose Barb	1/8″ Hose Barb	45
D65R-×-×××-2H	1/4″ Hose Barb	1/4″ Hose Barb	55
D65R-×-×××-3H	5/16″-3/8″ Hose Barb	5/16″-3/8″ Hose Barb	59
D65R-×-×××-2N	1/4″ MNPT	1/4″ MNPT	51
D65R-×-×××-2NF	1/4″FNPT	1/4″FNPT	51.5
D65R-×-×××-3N	3/8″ MNPT	3/8″ MNPT	55
D65R-×-×××-3NF	3/8″ Female	3/8″ Female	60
D65R-×-×××-4N	1/2″Male	1/2″Male	74
D65R-×-×××-MT	1/2″ Tri Clamp	1/2″ Tri Clamp	69
D65R-×-×××-TC	1.5″ Tri Clamp	1.5″ Tri Clamp	76
D65R-×-×××-LF	Luer Lock Female	Luer Lock Female	38
D65R-×-×××-1Q	1/8″ Male Quick Coupling	1/8″ Male Quick Coupling	45
D65R-×-×××-2Q	1/4″ Male Quick Coupling	1/4″ Male Quick Coupling	58
D65R-×-×××-1NF	1/8″FNPT	1/8″FNPT	52
D65R-×-×××-MVFV	Male Ventilator	Female Ventilator	75
D65R-×-×××-MF3N	Male Ventilator	3/8″MNPT	64
D65R-×-×××-1QF	1/8″ Female Quick Coupling	1/8″Female Quick Coupling	52
D65R-×-×××-2QF	1/4″ Female Quick Coupling	1/4″ Female Quick Coupling	50
D65R-×-×××-LM	Luer Lock Male	Luer Lock Male	42
D65R-×-×××-1QV	1/8″ Male Quick Coupling	1/8″ Male Quick Coupling	88
D65R-×-×××-1QFV	1/8″ Female Quick Coupling	1/8″Female Quick Coupling	85
D65R-×-×××-2QV	1/4″ Male Quick Coupling	1/4″ Male Quick Coupling	99
D65R-×-×××-2QFV	1/4″ Female Quick Coupling	1/4″ Female Quick Coupling	93
D65R-×-×××-2P2PE	1/4″-1/8″ NPT	1/4″-1/8″ NPT Shell 90	85
D65R-×-×××-4H	3/8″-1/2″ Hose Barb	3/8″-1/2″ Hose Barb	89
D65R-×-×××-4HL	1/4″-1/2″ Hose Barb	1/4″-1/2″ Hose Barb	121
D65R-×-×××-2D	LUDECKE DN5 Male Fitting	LUDECKE DN5 Male Fitting	50
D65R-×-×××-SM	Stainless Steel1/2″ Tri Clamp	Stainless Steel1/2″ Tri Clamp	66



PureFlo D65R Filter Capsules

Regulatory Compliance:

The filters are constructed with polypropylene resins and filtration media in compliance with 21CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastic. (Except Black PP)

PureFlo D65R Filter Capsule Ordering Guide

PureFlo D65R Capsule Filters	Filter Media	Pore Sizes (Micron)							Input Fitting	Output Fitting	Options
		Cellulose Acetate (A)	Charged Nylon (CN)	PTFE Phillic (HF) & Phobic (F)	Polypro Membrane (M)	Natural Glass Fiber (NG)	Polypro Media (P)	PES (S)			
D65R = 65mm Capsule filter	A = Cellulose Acetate C = Carbon Fiber CN = Charged Nylon DP = Depth PP F = PTFE Phobic G = Glass Fiber HF = PTFE Phillic HP = Hi Performance PP Media M = PP Membrane N = Nylon NG = Natural Glass NN = Nylon Non-Woven NS = Nylon Screen P = PP Media PS = PP Screen S = PES SS = SS Screen TS = Polyester Screen UE = Polyethylene	010 = 0.10 020 = 0.20 045 = 0.45 065 = 0.65 080 = 0.80 120 = 1.20	005= 0.05 010 = 0.10 020 = 0.20 045 = 0.45 065 = 0.65 080 = 0.80 120 = 1.20	010 = 0.10 020 = 0.20 045 = 0.45 100 = 1.0 300 = 3.0 500 = 5.0 999 = 10	010 = 0.1 020 = 0.2	005 = 0.5 010 = 1.0 030 = 3.0 050 = 5.0 Best for Liquid Applications	003 = 0.3 006 = 0.6 010 = 1.0 030 = 3.0 050 = 5.0 070 = 7.0 100 = 10 200 = 20 300 = 30 400 = 40 500 = 50 700 = 70 10X = 100 15X = 150	005 = 0.05 010 = 0.10 020 = 0.20 045 = 0.45 065 = 0.65 080 = 0.80 120 = 1.20	1H = 1/8" Hose Barb 1NF = 1/8" FNPT 1Q = 1/8" Male Quick Coupling 1QF = 1/8" Female Quick Coupling 1QFV = 1/8" Female Valved Quick Coupling 1QV = 1/8" Male Valved Quick Coupling 2D = DN5 Lundecke fitting 2H = 1/4"-5/16" Hose Barb 2N = 1/4" MNPT 2NF = 1/4" FNPT 2P = 1/4" Push to connect 2PE = 1/4" Push to connect Elbow 2Q = 1/4" Male Quick Coupling for Metal latch 2QF = 1/4" Female Quick Coupling with Metal latch 2QFV = 1/4" Female Valved Quick Coupling for Metal latch 2QP = 1/4" Male Valved Quick Coupling for Plastic latch 2QV = 1/4" Male Valved Quick Coupling for Metal latch 3H = 5/16-3/8" Hose Barb 3HE = 3/8" Hose Barb Elbow 3N = 3/8" MNPT 3NF = 3/8" FNPT 4H = 3/8"-1/2" Hose Barb 4HL = 1/4"-1/2" Hose Barb 4N = 1/2" MNPT FV = Female Ventilator LF = Female Luer Lock LM = Male Luer Lock MT = 1/2" Tri Clamp MV = Male Ventilator RM = 1/2" Tri Clamp with SS insert Ring TC = 1.5" Tri Clamp	1H 1NF 1Q 1QF 1QFV 1QV 2D 2H 2N 2NF 2P 2PE 2Q 2QF 2QFV 2QP 2QV 3H 3HE 3N 3NF 4H 4HL 4N FV LF LM MT MV RM TC	Shell Material Blank = Polypropylene -E = Polyethylene Shell -BLK = Black PP shell -GP = Gamma stable Polypropylene Shell -NY = Nylon Shell Sterilization -ETO = Ethylene Oxide Sterilization Other -1 = Single Bagged -NV= No vent fitting -FB = Filling Bell (2H only) -FC = Filling Bell w/ Cap (2H only) O-Ring for Quick Coupling Blank = O-ring Silicon (Standard) -OE = O-ring EPDM -ON = O-ring Nitrile -OV = O-ring Viton
		Carbon Fiber (C) Leave Pore Size Blank for Carbon Fiber Polypro Screen (PS) 10X = 100 15X = 150 20X = 200 30X = 300 50X = 500	Depth PP (DP) 002 = 0.2um 005 = 0.5um 010 = 1.0um 015 = 1.5um 025 = 2.5um 045 = 4.5um 100 = 10um 200 = 20um	Glass Fiber (G) U = ULPA H = HEPA 002 = 0.2 004 = 0.45 005 = 0.5 010 = 1.0 030 = 3.0 050 = 5.0 100 = 10 200 = 20 300 = 30 Best for Gas Applications	Nylon (N) 005= 0.05 010 = 0.10 020 = 0.20 045 = 0.45 065 = 0.65 080 = 0.80 120 = 1.20 Hi Performance PP Media (HP) 001 = 0.1 002 = 0.2 003 = 0.3 006 = 0.6 010 = 1.0 030 = 3.0 050 = 5.0 100 = 10.0	Nylon Non-Woven Media (NN) 010 = 1 030 = 3 050 = 5 100= 10 200= 20 Nylon Screen (NS) 100 = 10 200 = 20 400 = 40 600 = 60 10X = 100 20X = 200 25X = 250	Stainless Steel Screen (SS) 180 = 18 200 = 20 250 = 25 370 = 37 460 = 46 530 = 53 610 = 61 740 = 74 10X = 105 15X = 150 20X = 200 25X = 250	Polyester Screen (TS) 050 = 5 070 = 7 100 = 10 200 = 20 300 = 30 400 = 40 550 = 55 730 = 73 Polyethylene (UE) 005 = 0.05 010 = 0.1 020 = 0.20 045 = 0.45 100 = 1.0			

Example – 1.2 Micron Nylon Filter Media with 1/2" tri clamp fittings would be D65RN120MTMT, For Same filter with Carbon Fiber D65RCMTMT

Your Local Distributor:

ZenPure

North & South Americas:
ZenPure Americas, Inc
www.zenpure.com
Info-us@zenpure.com
703-335-9910

All Other Regions:
ZenPure Corporation
www.zenpure.com
info@zenpure.com
+86 571 2288 6800

PureFlo D65U Filter Capsules
(Disc Capsule)

Versatile Disc Capsule filter

PureFlo® D65U Filter Capsules (65mm diameter) have been designed for simple, quick, and efficient filtration of fluids and gases used in laboratory, pilot, and small-scale applications. The family of products is particularly suitable for scale up testing. Ten different media options can be placed in an all-polypropylene construction for excellent chemical compatibility. There are 31 different fitting options that can be mixed and matched for the inlet and outlet fittings.

The compact design of the filter capsule also reduces hold-up volume and exposure to hazardous chemicals. No adhesives or binders are used in the encapsulation process. The unit is **ultrasonically sealed** to ensure integrity for **low pressure** applications.

Applications	
Low flow	Low Pressure
Vent Applicatons	Gas Filtration
Bio Bags	Pharmaceuticals
Scale up processing	Biologics

Specifications

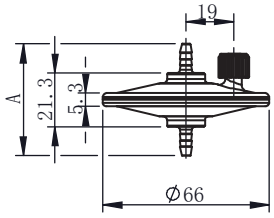
Materials of Construction:	Media: Polypropylene, Nylon, PTFE, Polyethylene, Glass Fiber, and PES Media Supports: Media Dependent Shell: Polypropylene, Nylon or Polyethylene Sealing: Ultrasonically Welded
Fitting Connections:	See ordering guide for the availability. Any inlet/outlet combinations. (Custom adaptors available upon request)
Effective Filtration Area:	4in^2 (26cm^2)
Dimensions:	65mm (2.87in)
Available Ratings:	0.1um to 70um (see Ordering Guide)
Autoclave Cycles:	The filters can be sterilized by autoclaving for 3 cycles at 257°F/125°C for 30 minutes. Polyethylene material can not be autoclaved. Note: Capsules must not be in situ steam-sterilized.

Operating Conditions		PP Shell/ Nylon Shell	Gamma Stablized PP Shell	HDPE Shell
Maximum working pressure @ 72°F/22°C:	Liquid:	30 psi (2.1 bar)	30 psi (2.1 bar)	45 psi (3.1 bar)
	Gas:	30 psi (2.1 bar)	30 psi (2.1 bar)	30psi (2.1 bar)
Minimum burst pressure @ 72°F/22°C:		45 psi (3.1 bar)	45 psi (3.1 bar)	60 psi (4.1bar)
Maximum working temp:		176°F (80°C)	176°F (80°C)	140°F (60°C)
Maximum forward differential pressure @ 72°F/22°C:		30 psid (2.1 bar)	30 psid (2.1 bar)	30 psid (2.1 bar)
Maximum reverse differential pressure @ 72°F/22°C:		30 psid (2.1 bar)	30 psid (2.1 bar)	30 psid (2.1 bar)
Maximum gamma irradiation resistance:			50 kGy	50 kGy

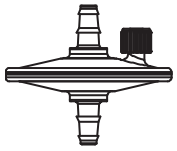
PureFlo D65U Filter Capsules

Dimensions (mm)

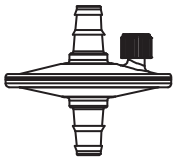
D65U-1H



D65U-2H

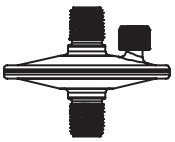


D65U-3H

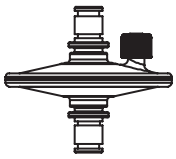


D65U-1NF

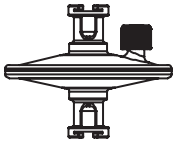
D65U-2N



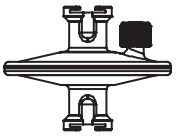
D65U-2Q



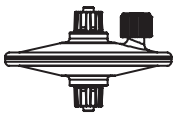
D65U-1QF



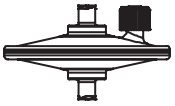
D65U-2QF



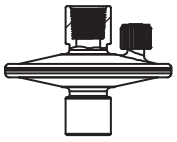
D65U-LM



D65U-LF



D65U-2NF



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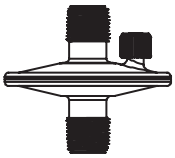

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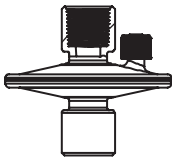
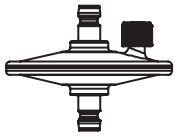


D65U-1Q

D65U-TC

D65U-2D



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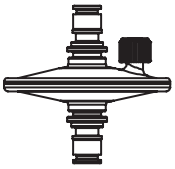

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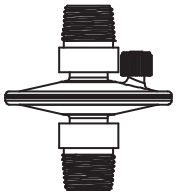
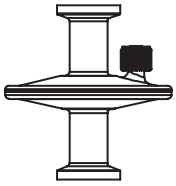


D65U-MT



Code name	Inlet Fitting	Outlet Fitting	Size(±1)
			A
D65U-1H	1/8″ Hose Barb	1/8″ Hose Barb	45
D65U-2H	1/4″-3/8″ Hose Barb	1/4″-3/8″ Hose Barb	55
D65U-3H	5/16″-3/8″ Hose Barb	5/16″-3/8″ Hose Barb	59
D65U-1NF	1/8″FNPT	1/8″FNPT	52
D65U-2N	1/4″NPT	1/4″NPT	51
D65U-2NF	1/4″FNPT	1/4″FNPT	51
D65U-3N	3/8″NPT	3/8″NPT	58
D65U-3NF	3/8″FNPT	3/8″FNPT	59
D65U-1Q	1/8″ Male Quick Compling	1/8″ Male Quick Compling	45
D65U-2Q	1/4″ Male Quick Compling	1/4″ Male Quick Compling	58
D65U-1QF	1/8″ Female Quick Compling	1/8″ Female Quick Compling	53
D65U-2QF	1/4″ Female Quick Compling	1/4″ Female Quick Compling	49
D65U-LM	Luer Lock Male	Luer Lock Male	41
D65U-LF	Luer Lock Female	Luer Lock Female	37
D65U-2D	Ludecke DN5 Male Fitting	Ludecke DN5 Male Fitting	50
D65U-2QP	1/4″ Male Quick Compling Plastics	1/4″ Male Quick Compling Plastics	63
D65U-4N	1/2″NPT	1/2″NPT	73
D65U-MT	1/2″Tri Clamp	1/2″Tri Clamp	69
D65U-TC	1.5″Tri Clamp	1.5″Tri Clamp	76

PureFlo D65U Filter Capsules

Regulatory Compliance:
The filters are constructed with polypropylene resins and filtration media in compliance with 21CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastic. (Except Black PP)

PureFlo D65U Filter Capsule Ordering Guide

PureFlo D65U Capsule Filters	Filter Media	Pore Sizes (Micron)				Input Fitting	Output Fitting	Options
		Carbon Fiber (C)	Glass Fiber (G)	Polypro Media (P)	Stainless Steel Screen (SS)			
D65U = 65mm Capsule filter	C = Carbon Fiber G = Glass Fiber HP = Hi Performance PP NG = Natural Glass NN = Nylon Non-Woven NS = Nylon Screen P = PP Media PS = PP Screen SS = SS Screen TS = Polyester Screen	Leave Pore Size Blank for Carbon Fiber	U = ULPA H = HEPA 002 = 0.2 004 = 0.45 005 = 0.5 010 = 1.0 030 = 3.0 050 = 5.0 100 = 10 200 = 20 300 = 30 Best for Gas Applications	003 = 0.3 006 = 0.6 010 = 1.0 030 = 3.0 050 = 5.0 070 = 7.0 100 = 10 200 = 20 300 = 30 400 = 40 500 = 50 700 = 70 10X = 100 15X = 150	180 = 18 200 = 20 250 = 25 370 = 37 460 = 46 530 = 53 610 = 61 740 = 74 10X = 105 15X = 150 20X = 200 25X = 250	1H = 1/8" Hose Barb 1NF = 1/8" FNPT 1Q = 1/8" Male Quick Coupling 1QF = 1/8" Female Quick Coupling 1QFV = 1/8" Female Valved Quick Coupling 1QV = 1/8" Male Valved Quick Coupling 2D = DN5 Lundecke fitting 2H = 1/4"-5/16" Hose Barb 2N = 1/4" MNPT 2NF = 1/4" FNPT 2P = 1/4" Push to connect 2PE = 1/4" Push to connect Elbow 2Q = 1/4" Male Quick Coupling for Metal latch 2QF = 1/4" Female Quick Coupling with Metal latch 2QP = 1/4" Male Quick Coupling for Plastic latch 2QFV = 1/4" Female Valved Quick Coupling for Metal latch 2QV = 1/4" Male Valved Quick Coupling for Metal latch 3H = 5/16-3/8" Hose Barb 3HE = 3/8" Hose Barb Elbow 3N = 3/8" MNPT 3NF = 3/8" FNPT 4H = 3/8"-1/2" Hose Barb 4HL = 1/4"-1/2" Hose Barb 4N = 1/2" MNPT FV = Female Ventilator LF = Female Luer Lock LM = Male Luer Lock MT = 1/2" Tri Clamp MV = Male Ventilator TC = 1.5" Tri Clamp	1H 1NF 1Q 1QF 1QFV 1QV 2D 2H 2N 2NF 2P 2PE 2Q 2QF 2QP 2QFV 2QV 3H 3HE 3N 3NF 4H 4HL 4N FV LF LM MT MV TC	Shell Material Blank = Polypropylene -E = Polyethylene Shell -BLK = Black PP shell -GP = Gamma stable Polypropylene Shell -NY = Nylon Shell Sterilization -ETO = Ethylene Oxide Sterilization Other -1 = Single Bagged -NV= No vent fitting -FB = Filling Bell (2H only) -FC = Filling Bell w/ Cap (2H only) O-Ring for Quick Coupling Blank = O-ring Silicon (Standard) -OE = O-ring EPDM -ON = O-ring Nitrile -OV = O-ring Viton
		Nylon Non-Woven Media (NN)						
		010 = 1 030 = 3 050 = 5 100= 10 200= 20						
		Polyester Screen (TS)	Hi Performance PP Media (HP)	Nylon Screen (NS)	Natural Glass Fiber (NG)			
		050 = 5 070 = 7 100 = 10 200 = 20 300 = 30 400 = 40 550 = 55 730 = 73	**001** = 0.1 **002** = 0.2 **003** = 0.3 **006** = 0.6 **010** = 1.0 **030** = 3.0 **050** = 5.0 **100** = 10.0	100 = 10 200 = 20 400 = 40 600 = 60 10X = 100 20X = 200 25X = 250	005 = 0.5 010 = 1.0 030 = 3.0 050 = 5.0 Best for Liquid Applications Polypro Screen (PS) 10X = 100 15X = 150 20X = 200 30X = 300 50X = 500			
Example – 40 Micron Nylon Screen with 1/2" tri clamp fittings would be D65UNS400MTMT, For Same filter with Carbon Fiber D65UCMTMT								

Your Local Distributor:

ZenPure

North & South Americas:
ZenPure Americas, Inc
www.zenpure.com
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703-335-9910

All Other Regions:
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info@zenpure.com
+86 571 2288 6800

RD65 Series Filter Capsules
(Vent/Gas Capsule)

Protective Capsule filter

PureFlo® RD65 Series capsules were designed for venting, gas filtration and pump protection applications in the pharmaceutical, biotechnology, food and beverage, medical, chemical and water industries. They are specifically suitable for disposable bio-bag venting applications to allow gas to escape the bag while providing a sterile barrier.

The RD65 capsules have a compact design that was developed to fit standard biocontainers, tools and applications in the pharmaceutical industry. The different possible materials of construction provide excellent compatibility with a wide-range of applications. No adhesives are used in the encapsulation process. All units are thermally-sealed and 100% integrity tested.

Applications	
Bio Bags	Gas Vent
Gas Filtration	Vent Filter
Insufflation	Pharmaceuticals
Vacuum Pump Protection	Smoke evacuation
Biologic protection	Scale up processing

Specifications

Materials of Construction:	Media Options:	Polypropylene, PTFE, Polyethylene, Glass Fiber, Carbon Fiber, Polyester & Nylon Screen
	Media Supports:	Media Dependent
	Construction Materials:	Polypropylene, Polyethylene, or Polyester
	Sealing:	Thermally-welded
Fitting Connections:	See ordering guide for the availability. Any inlet/outlet combinations. (Custom adaptors available upon request)	
Nominal Dimensions:	Length: 2.7 in. (69.5mm) Width: 1.7 in. (42.5 mm)	
Effective Filtration Area:	3.4 in^2 (22 cm^2)	
Available Ratings:	0.05um to 70um (see Ordering Guide)	
Operating Conditions:	Maximum Operating Pressure:	2.0 bar (29 psi) at 72°F/22°C
	Maximum Forward Differential Pressure:	1.0 bar (14.5 psid) at 72°F/22°C
	Maximum Reverse Differential Pressure:	1.0 bar (14.5 psid) at 72°F/22°C
	Maximum Operating Temperature:	140°F/60°C
	Minimum Burst Pressure:	4.0 bar (58 psi) at 72°F/22°C
Sterilization Methods:	Polyethylene and Gamma stabilized PP shell capsules can be gamma sterilized up to 50kGy. Polypropylene shell capsules can be autoclaved 2 times at 257°F/125°C for 30 minutes or chemically sanitized in situ using common sanitizing agents or hot water at 194°F/90°C for a limited time (dependent on time and temperature). Capsules must not be in situ steam-sterilized. Polyethylene shell capsules can not be autoclaved.	

RD65 Series Filter Capsules

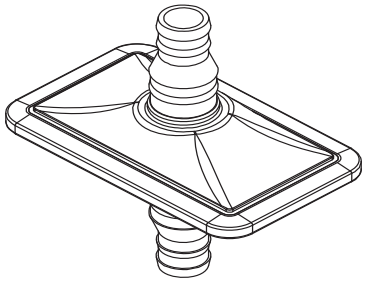
Specifications (Cont.)

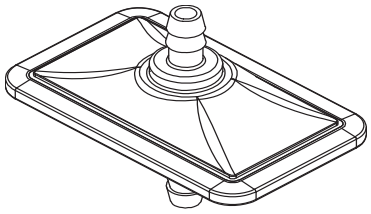
Regulatory Compliance:

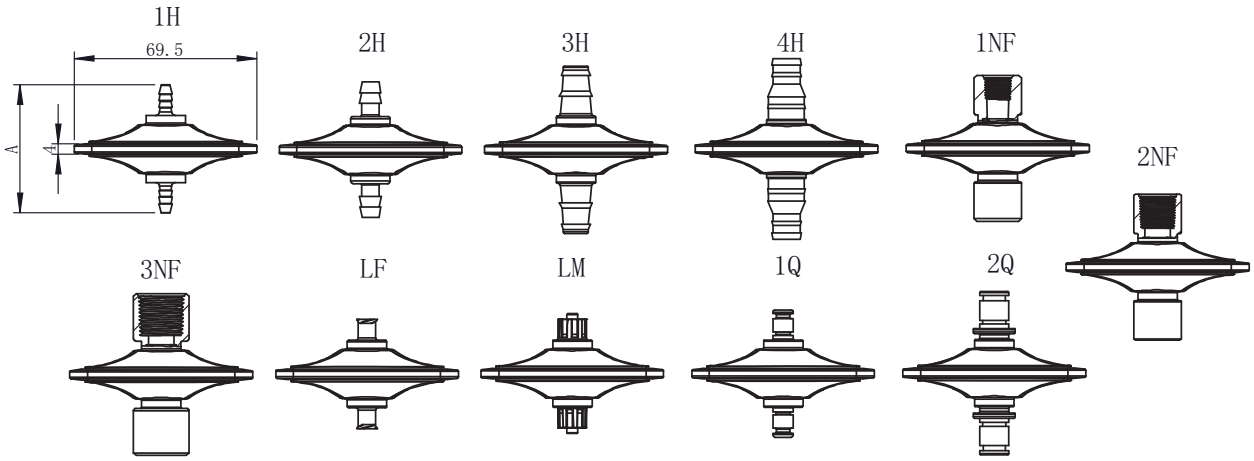
The discs are manufactured from materials that conform to the requirements of 21CFR Part 177 of the U.S. Code of Federal Regulations. Medias and Membranes are also in compliance with the USP Class VI Biological Test for Plastics.

Bacterial Endotoxin:

Effluent is non-pyrogenic per USP Bacterial Endotoxin (0.25 EU/ml), determined using Limulus Amebocyte Lysate (LAL) Test.







Code name	Inlet Fitting	Outlet Fitting	Size(±1)
			A
RD65-×-×××-1H	1/8″ Hose Barb	1/8″ Hose Barb	49
RD65-×-×××-2H	1/4″ Hose Barb	1/4″ Hose Barb	52
RD65-×-×××-3H	5/16″-3/8″ Hose Barb	5/16″-3/8″ Hose Barb	64
RD65-×-×××-4H	3/8″-1/2″ Hose Barb	3/8″-1/2″ Hose Barb	69
RD65-×-×××-1NF	1/8″FNPT	1/8″FNPT	56
RD65-×-×××-2NF	1/4″ FNPT	1/4″ FNPT	56
RD65-×-×××-3NF	3/8″ FNPT	3/8″ FNPT	62
RD65-×-×××-LF	Luer Lock Female	Luer Lock Female	42
RD65-×-×××-LM	Luer Lock Male	Luer Lock Male	46
RD65-×-×××-1Q	1/8″ Male Quick Coupling	1/8″ Male Quick Coupling	49
RD65-×-×××-2Q	1/4″ Male Quick Coupling	1/4″ Male Quick Coupling	62

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RD65 Series Filter Capsules

PureFlo RD65 Series Filter Capsule Ordering Guide

PureFlo Capsule Filters	Filter Media	Pore Sizes (Micron)	Input Fitting	Output Fitting	Options	
RD65 = 65mm Square Capsule filter	**C** = Carbon Fiber **F** = PTFE Phobic **G** = Glass Fiber **HP** = Hi Performance PP **M** = PP Membrane **NN** = Nylon Non-Woven **NS** = Nylon Screen **P** = PP Media **PS** = PP Screen **TS** = Polyester Screen **UE** = Polyethylene	**Pick From Pore Size Table**	**1H** = 1/8" Hose Barb **1NF** = 1/8" FNPT **1Q** = 1/8" Male Quick Coupling **2H** = 1/4" Hose Barb **2N** = 1/4" MNPT **2NF** = 1/4" FNPT **2Q** = 1/4" Male Quick Coupling for Metal latch **3H** = 5/16-3/8" Hose Barb **3NF** = 3/8" FNPT **4H** = 3/8-1/2" Hose Barb **LF** = Female Luer Lock **LM** = Male Luer Lock	**1H** = 1/8" Hose Barb **1NF** = 1/8" FNPT **1Q** = 1/8" Male Quick Coupling **2H** = 1/4" Hose Barb **2N** = 1/4" MNPT **2NF** = 1/4" FNPT **2Q** = 1/4" Male Quick Coupling for Metal latch **3H** = 5/16-3/8" Hose Barb **3NF** = 3/8" FNPT **4H** = 3/8-1/2" Hose Barb **LF** = Female Luer Lock **LM** = Male Luer Lock	**Shell Material** **Blank** = Polypropylene **-E** = Polyethylene **-GP** = Gamma stable Polypropylene Shell **Sterilization** **-ETO** = Ethylene Oxide Sterilization **Other** **-1** = Single Bagged	**Prefilter (add before Filter Media** **G(pore Size)**= Glass Fiber PreFilter **P(pore Size)**= PolyPro Media PreFilter **S(pore Size)** = PES PreFilter **O-Ring for Quick** **Blank** = O-ring Silicon (Standard) **-OE** = O-ring EPDM **-ON** = O-ring Nitrile **-OV** = O-ring Viton
Example – PureFlo RD65 vent filter, PE, 0.2um, 1/4" hose barb I/O, PE shell RD65UE0202H2H-E						

Carbon Fiber (C)	PTFE Phobic (F)	Glass Fiber (G)	Hi Performance PP Media (HP)	Polypro Membrane (M)	Nylon Non-Woven Media (NN)	Nylon Screen (NS)	Polypro Media (P)	Polypro Screen (PS)	Polyester Screen (TS)	Polyethylene (UE)
Leave Pore Size Blank for Carbon Fiber	**H** = HEPA **010** = 0.10 **020** = 0.20 **045** = 0.45 **100** = 1.0 **300** = 3.0 **500** = 5.0 **999** = 10	**U** = ULPA **H** = HEPA **002** = 0.2 **004** = 0.45 **005** = 0.5 **010** = 1.0 **030** = 3.0 **050** = 5.0 **100** = 10 **200** = 20 **300** = 30	**001** = 0.1 **002** = 0.2 **003** = 0.3 **006** = 0.6 **010** = 1.0 **030** = 3.0 **050** = 5.0 **100** = 10.0	**010** = 0.1 **020** = 0.2	**010** = 1 **030** = 3 **050** = 5 **100**= 10 **200**= 20	**070** = 7 **100** = 10 **200** = 20 **400** = 40 **600** = 60 **10X** = 100 **20X** = 200 **25X** = 250 **30X** = 300	**H** = HEPA **003** = 0.3 **006** = 0.6 **010** = 1.0 **030** = 3.0 **050** = 5.0 **070** = 7.0 **100** = 10 **200** = 20 **300** = 30 **400** = 40 **500** = 50 **700** = 70	**10X** = 100 **15X** = 150 **20X** = 200 **30X** = 300 **50X** = 500	**050** = 5 **070** = 7 **100** = 10 **200** = 20 **300** = 30 **400** = 40 **550** = 55 **730** = 73	**H** = HEPA **010** = 0.1 **020** = 0.20 **045** = 0.45 **100** = 1.0

Your Local Distributor:

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www.zenpure.com
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+86 571 2288 6800

PureFlo D90R Filter Capsules
(Disc Capsule)

Versatile Disc Capsule filter

PureFlo® D90R Filter Capsules (90mm diameter) have been designed for simple, quick, and efficient filtration of fluids and gases used in laboratory, pilot, and small-scale applications. The family of products is particularly suitable for scale up testing. Nineteen different media options can be placed in an all-polypropylene construction for excellent chemical compatibility. There are 30 different fitting options that can be mixed and matched for the inlet and outlet fittings.

The compact design of the filter capsule also reduces hold-up volume and exposure to hazardous chemicals. No adhesives or binders are used in the encapsulation process. The unit is thermally-sealed to ensure integrity.

Applications	
Low flow	Ink
Lab scale testing	Beverages
Bio Bags	Pharmaceuticals
Fine Chemicals	Biologics
Vent Filter	Scale up processing
Water	Small volume

Specifications

Materials of Construction:	Media: Polypropylene, Nylon, PTFE, Polyethylene, Glass Fiber, and PES Media Supports: Media Dependent Shell: Polypropylene, Nylon or Polyethylene Sealing: Thermally-welded
Fitting Connections:	See ordering guide for the availability. Any inlet/outlet combinations. (Custom adaptors available upon request)
Effective Filtration Area:	9.3 in^2 (60 cm^2)
Dimensions:	90 mm (3.5 in)
Available Ratings:	0.04 µm to 70 um (see Ordering Guide)
Autoclave Cycles:	The filters can be sterilized by autoclaving for 10 cycles at 257°F/125°C for 30 minutes. Polyethylene material can not be autoclaved. Note: Capsules must not be in situ steam-sterilized.

Operating Conditions		PP Shell/ Nylon Shell	Gamma Stablized PP Shell	HDPE Shell
Maximum working pressure @ 72°F/22°C:	Liquid:	80 psi (5.5 bar)	45 psi (3.1 bar)	80 psi (5.5 bar)
	Gas:	60 psi (4.1 bar)	45 psi (3.1 bar)	60 psi (4.1 bar)
Minimum burst pressure @ 72°F/22°C:		120 psi (8.3 bar)	60 psi (4.1 bar)	120 psi (8.3 bar)
Maximum working temp:		176°F (80°C)	176°F (80°C)	140°F (60°C)
Maximum forward differential pressure @ 72°F/22°C:		60 psid (4.1 bar)	45 psid (3.1 bar)	60 psid (4.1 bar)
Maximum reverse differential pressure @ 72°F/22°C:		30 psid (2.1 bar)	30 psid (2.1 bar)	30 psid (2.1 bar)
Maximum gamma irradiation resistance:			50 kGy	50 kGy

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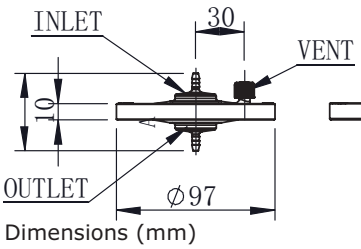
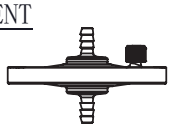
PureFlo D90R Filter Capsules

D90R-1H



D90R-2H



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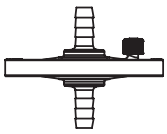

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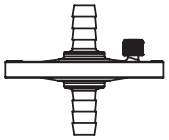
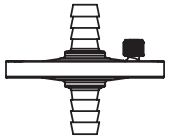


D90R-5H



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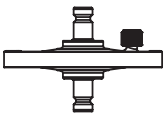
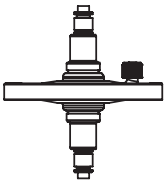
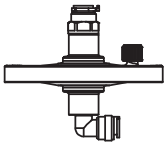


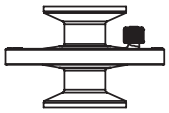
D90R-2QV



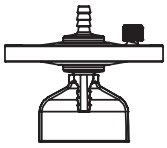
D90R-2P2PE



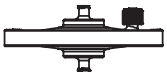
D90R-ST
D90R-TC



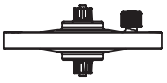
D90R-2H-2HFB



D90R-LF



D90R-LM



D90R-1NF

D90R-SM
D90R-MT

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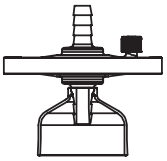

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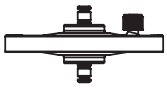

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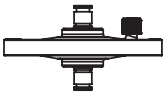
D90R-2Q



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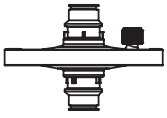

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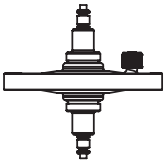
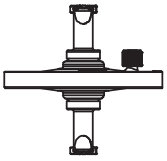
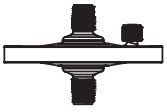


D90R-1QFV
D90R-1QF

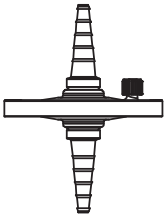


Code name	Inlet Fitting	Outlet Fitting	Size(±1)
			A
D90R-1H	1/8″ Hose Barb		47
D90R-2H	1/4″ Hose Barb	1/4″ Hose Barb	58
D90R-3H	3/8″ Hose Barb	3/8″ Hose Barb	73
D90R-4H	1/2″ Hose Barb	1/2″ Hose Barb	79
D90R-5H	5/8″ Hose Barb	5/8″ Hose Barb	79
D90R-2H-2HFB	1/4″ Hose Barb	1/4″ Hose Barb Filling Bell	83
D90R-3H-3HFB	3/8″ Hose Barb	3/8″ Hose Barb Filling Bell	91
D90R-D9	DN9 LUDECKE Male Plugs compatible	DN9 LUDECKE Male Plugs compatible	50
D90R-2V	1/4″ Walther Quick Conne	1/4″ Walther Quick Conne	63
D90R-2N	1/4″ NPT	1/4″ NPT	60
D90R-2HL	1/4″-1/2” Hose Barb	1/4″-1/2” Hose Barb	126
D90R-2P2PE	1/4″ Push To Connect	1/4″ Push To Connect-Elbow	82
D90R-1Q	1/8″ Male Quick Compling	1/8″ Male Quick Compling	46
D90R-2Q	1/4″ Male Quick Compling	1/4″ Male Quick Compling	51
D90R-4Q	1/2″ Male Quick Compling	1/2″ Male Quick Compling	64
D90R-LF	Luer Lock Female	Luer Lock Female	39
D90R-LM	Luer Lock Male	Luer Lock Male	43
D90R-1NF	1/8″ FNPT	1/8″ FNPT	49
D90R-1QV	1/8″ Male Quick Compling	1/8″ Male Quick Compling	93
D90R-1QFV/1QF	1/8″ Female Quick Compling	1/8″ Female Quick Compling	90
D90R-2QV	1/4″ Male Quick Compling	1/4″ Male Quick Compling	105
D90R-2QFV/2QF	1/4″ Female Quick Compling	1/4″ Female Quick Compling	98
D90R-MT	1/2″Tri Clamp	1/2″Tri Clamp	50
D90R-TC	1.5″Tri Clamp	1.5″Tri Clamp	61

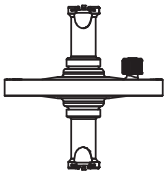
D90R-2N



D90R-2HL



D90R-2QFV
D90R-2QF



D90R-D9

PureFlo D90R Filter Capsules

Regulatory Compliance:
The filters are constructed with polypropylene resins and filtration media in compliance with 21CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastic. (Except Black PP)

PureFlo D90R Filter Capsule Ordering Guide

PureFlo D90R Capsule Filters	Filter Media	Pore Sizes (Micron)							Input Fitting	Output Fitting	Options
		Cellulose Acetate (A)	Charged Nylon (CN)	PTFE Phillic (HF) & Phobic (F)	Polypro Membrane (M)	Natural Glass Fiber (NG)	Polypro Media (P)	PES (S)			
D90R = 90mm Capsule filter	A = Cellulose Acetate C = Carbon Fiber CN = Charged Nylon DP = Depth PP F = PTFE Phobic G = Glass Fiber HF = PTFE Phillic HP = Hi Performance PP Media M = PP Membrane N = Nylon NG = Natural Glass NN = Nylon Non-Woven NS = Nylon Screen P = PP Media PS = PP Screen S = PES SS = SS Screen TS = Polyester Screen UE = Polyethylene	020 = 0.20 045 = 0.45 065 = 0.65 080 = 0.80 120 = 1.20	005= 0.05 010 = 0.10 020 = 0.20 045 = 0.45 065 = 0.65 080 = 0.80 120 = 1.20	010 = 0.10 020 = 0.20 045 = 0.45 100 = 1.0 300 = 3.0 500 = 5.0 999 = 10	010 = 0.1 020 = 0.2	005 = 0.5 010 = 1.0 030 = 3.0 050 = 5.0 Best for Liquid Applications	003 = 0.3 006 = 0.6 010 = 1.0 030 = 3.0 050 = 5.0 070 = 7.0 100 = 10 200 = 20 300 = 30 400 = 40 500 = 50 700 = 70 10X = 100 15X = 150	005 = 0.05 010 = 0.10 020 = 0.20 045 = 0.45 065 = 0.65 080 = 0.80 120 = 1.20	1H 1NF 1Q 1QF 1QFV 1QV 2H 2HL 2N 2P 2PE 2Q 2QF 2QFV 2QP 2QV 2V 3H 4H 4Q 5H D9 LF LM MT SM ST TC	1H = 1/8" Hose Barb 1NF = 1/8" FNPT 1Q = 1/8" Male Quick Coupling 1QF = 1/8" Female Quick Coupling 1QFV = 1/8" Female Valved Quick Coupling 1QV = 1/8" Male Valved Quick Coupling 2H = 1/4" Hose Barb 2H-FB = 1/4" Hose Barb with filling bell -FC with Cap 2HL = 1/4" to 1/2" Hose barbs 2N = 1/4" MNPT 2P = 1/4" Push to Connect 2PE = 1/4" Push to Connect Elbow 2Q = 1/4" Male Quick Coupling for Metal latch 2QF = 1/4" Female Quick Coupling with Metal latch 2QFV = 1/4" Female Valved Quick Coupling for Metal latch 2QP = 1/4" Male Quick Coupling for Plastic latch 2QV = 1/4" Male Valved Quick Coupling for Metal latch 2V = 1/4" Walther Quick Connect 3H = 3/8" Hose Barb 3H-FB = 3/8" Hose Barb with filling bell or -FC with Cap 4H = 1/2" Hose Barb 4Q = 1/1" Male Quick Coupling 5H = 5/8" Hose Barb D9 = DN9 LUDECKE Male Plugs compatible fitting LF = Female Luer Lock LM = Male Luer Lock MT = 1/2" Tri Clamp SM = ½" Tri Clamp with SS insert *R* ing ST = 1 ½" Tri Clamp with SS insert *R* ing TC = 1.5" Tri Clamp	Shell Material Blank = Polypropylene -E = Polyethylene Shell -BLK = Black PP shell -GP = Gamma stable Polypropylene Shell Sterilization -ETO = Ethylene Oxide Sterilization Other -NV= No vent fitting O-Ring for Quick Coupling Blank = O-ring Silicone (Standard) -OE = O-ring EPDM -ON = O-ring Nitrile -OV = O-ring Viton
		Carbon Fiber (C) Leave Pore Size Blank for Carbon Fiber	Depth PP (DP) 002 = 0.2um 005 = 0.5um 010 = 1.0um 015 = 1.5um 025 = 2.5um 045 = 4.5um 100 = 10um 200 = 20um	Glass Fiber (G) U = ULPA H = HEPA 002 = 0.2 004 = 0.45 005 = 0.5 010 = 1.0 030 = 3.0 050 = 5.0 100 = 10 200 = 20 300 = 30 Best for Gas Applications	Nylon (N) 005= 0.05 010 = 0.10 020 = 0.20 045 = 0.45 065 = 0.65 080 = 0.80 120 = 1.20 Hi Performance PP Media (HP) 001 = 0.1 002 = 0.2 003 = 0.3 006 = 0.6 010 = 1.0 030 = 3.0 050 = 5.0 100 = 10.0	Nylon Non-Woven Media (NN) 010 = 1 030 = 3 050 = 5 100= 10 200= 20 Nylon Screen (NS) 100 = 10 200 = 20 400 = 40 600 = 60 10X = 100 20X = 200 25X = 250	Stainless Steel Screen (SS) 180 = 18 200 = 20 250 = 25 370 = 37 460 = 46 530 = 53 610 = 61 740 = 74 10X = 105 15X = 150 20X = 200 25X = 250	Polyester Screen (TS) 050 = 5 070 = 7 100 = 10 200 = 20 300 = 30 400 = 40 550 = 55 730 = 73 Polyethylene (UE) 010 = 0.1 020 = 0.20 045 = 0.45 100 = 1.0			
		Polypro Screen (PS) 10X = 100 15X = 150 20X = 200 30X = 300 50X = 500									

Example – 1.2 Micron Nylon Filter Media with 1/2" tri clamp fittings would be D90RN120MTMT, For Same filter with Carbon Fiber D90RCMTMT

Your Local Distributor:

ZenPure

North & South Americas:
ZenPure Americas, Inc
www.zenpure.com
Info-us@zenpure.com
703-335-9910

All Other Regions:
ZenPure Corporation
www.zenpure.com
info@zenpure.com
+86 571 2288 6800

PureFlo® JZP Junior Capsules

Compact Filtration

Small Disposable Process Filtration

PureFlo® JZP Junior capsule filter assemblies are ready-to-use filters that offer easy to integrity testing pre and post filtration. This is for stringent pharmaceutical applications where quick integrity validation is critical to move the product along. This unit provides high throughputs, high strength, all with the convenience and cleanliness of a disposable and easy-to-install filter assembly in a small package. Designed for small final filtration applications, in pharmaceutical, biotechnology, food and beverage, medical, chemical, and DI water applications.

PureFlo® JZP Junior capsule assemblies are available with hydrophilic PES, Nylon and Charged Nylon and hydrophilic PTFE filter medias and pore sizes for liquid, gas, and venting applications. Process engineers can choose from 4 filtration medias to create any combination of ***integrated*** filtration. These will allow the disposable processing to become truly flexible, clean, and optimal. Also available with no media.

They can be built with several configurations, with 13 inlet and 15 outlet fitting connections that can be mixed and matched. The filtration shell is of Nylon construction that provides excellent chemical compatibility with low extractables. No adhesives or binders are used in the encapsulation process.

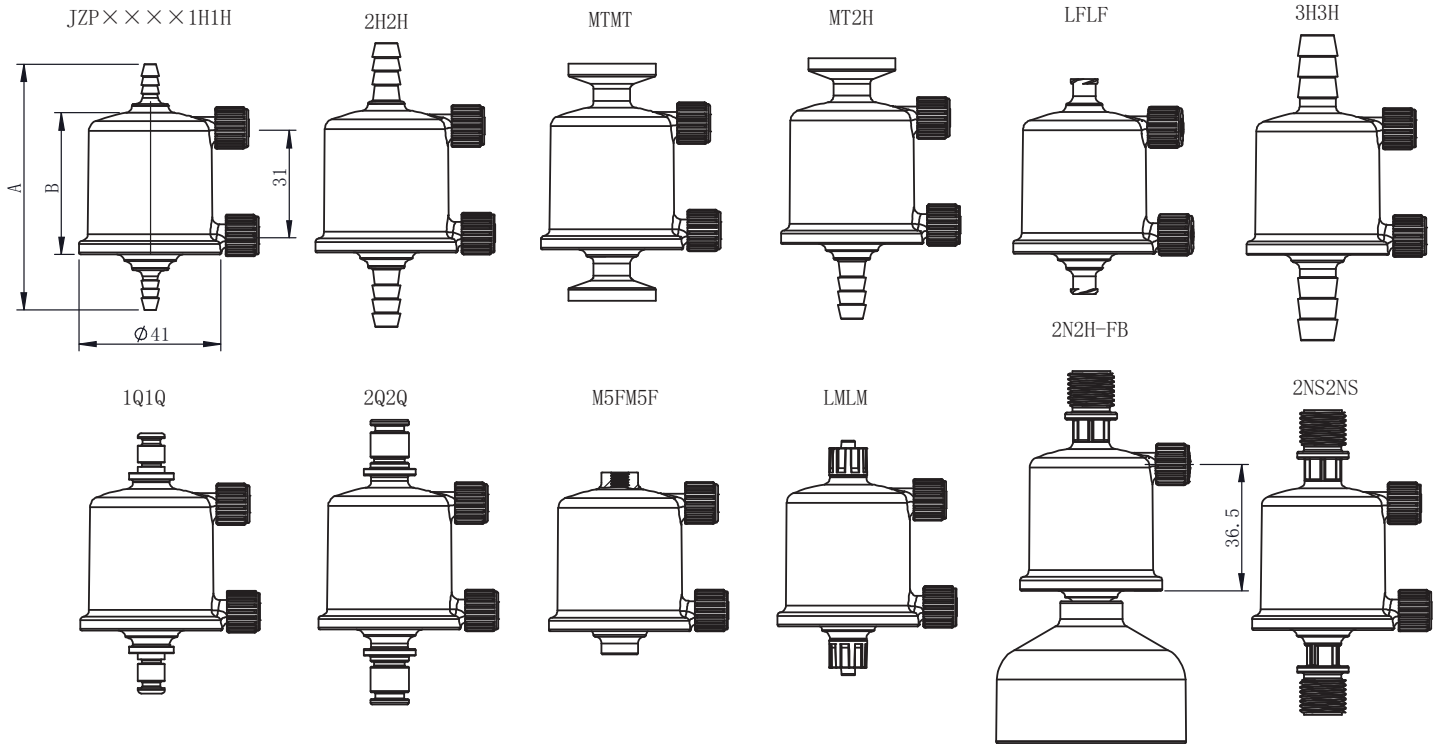
Applications	
Diagnostics	Water & Wine
Hard Particle	Food & Beverages
Cell Removal	Pharmaceuticals
Chemicals	Biologics

Specifications

Materials of Construction:	Media: Charged Nylon, Phillic PTFE, Nylon, PES Media Supports: Polyester Shell, End Caps: Nylon Cage, Core : Gamma stable Polypropylene Sealing: Thermally bonded
Fitting Connections:	Five Fittings - See Ordering Guide for availability. (Custom adaptors available upon request)
Nominal Dimensions:	Lengths: 1.6” (41mm) without fittings Diameter: 1.6” (41mm)
Effective Filtration Area:	260cm^2 for single layer membrane, 230cm^2 for double layer membrane
Available Ratings:	0.04um - 10.0um (Dependent on Media)
Operating Conditions:	Maximum Operating pressure: Liquid: 5.5 bar (80psi) at 72°F/22°C Minimum Burst Pressure: 8.3 bar (120psi) at 72°F/22°C Maximum Forward Differential Pressure: 5 bar (72psi) at 72°F/22°C Maximum Reverse Differential Pressure: 2.1 bar (30psi) at 72°F/22°C Maximum Operating Temperature: 176°F/80°C
Regulatory Compliance:	The filters are constructed with nylon resins and filtration media in compliance with 21CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastics.

PureFlo® JZP Junior Capsules

Compact Filtration



Code name	Inlet/Outlet	Vent/Drain	Size(±1.5mm)	
			A	B
JZP×××1H1H	1/8″ Hose barbs	Female Luer Lock	71	41
JZP×××2H2H	1/4″ Hose barbs	Female Luer Lock	82	41
JZP×××MTMT	0.5″ Tri clamps	Female Luer Lock	69	41
JZP×××MT2H	0.5″ Tri clamps/1/4″ Hose barbs	Female Luer Lock	75	41
JZP×××LFLF	Luer Lock Female	Female Luer Lock	62	41
JZP×××3H3H	3/8″ Hose barbs	Female Luer Lock	88	41
JZP×××1Q1Q	1/4″ Male Quick Coupling	Female Luer Lock	75	41
JZP×××2Q2Q	1/8″ Male Quick Coupling	Female Luer Lock	82	41
JZP×××M5FM5F	M5	Female Luer Lock	53	41
JZP×××LMLM	Luer Lock Male	Female Luer Lock	68	41
JZP×××2N2HFB	1/4″NPT MAIL/1/4″ Hose barbs	Female Luer Lock	108	41
JZP×××2N2N	1/4″NPT MAIL/1/4″ NPT MAIL	Female Luer Lock	88	41

Specifications (cont.)

Autoclavable & Sanitizable:	Capsules can be autoclaved 25 times at 257°F/125°C for 30 minutes (5 times for Nylon) or chemically sanitized in situ using common sanitizing agents or hot water at 194°F/90°C for a limited time (dependent on time and temperature). Capsules must not be in situ steam-sterilized.
Bacterial Endotoxin:	Effluent is non-pyrogenic per USP Bacterial Endotoxin (0.25 EU/ml), determined using Limulus Amebocyte Lysate (LAL) Test.

PureFlo® JZP Junior Capsules

PureFlo® JZP Junior Filter Capsule Ordering

PureFlo Junior Capsule Filters	Filter Media	Pore Size (Micron)	Effective Filtration Area	Inlet Fitting	Outlet Fitting	Options	
JZP = Capsule Filter Pharma grade	**CN** = Charged Nylon **HF** = Hydrophilic PTFE **N** = Nylon **S** = PES	**Pick From Pore Size Table**	**Blank** = Standard - 200-260cm2 Media Dependent **B** = 150cm2	**1H** **1Q** **2H** **2N** **2NS** **2NO** **2Q** **2QP** **3H** **M5F** **LF** **LM** **MT**	**1H** = 1/8" Hose Barb **1Q** = 1/8" Male Quick Coupling **2H** = 1/4" Hose barbs **2H -FB**= 1/4" Hose barbs with Filling Bell **2H -FC**= 1/4" Hose barbs with Filling Bell with Cap **2N** = 1/4" MNPT **2N** = 1/4" straight thread **2NO** = 1/4" straight thread with o-ring **2Q** = 1/4" Male Quick Coupling for Metal latch **2QP**= 1/4" Male Quick Coupling for plastic latch **3H =** 3/8" Hose Barb **M5F** = M5 Female thread **LF** = Female Luer Lock **LM** = Male Luer Lock **MT** = 1/2" Tri clamps	**Sterilization** **-ETO =** Ethylene oxide sterilization **Vent & Drain** **-N**= No vent or drain fittings **-NI** = No vent or drain inlet fitting **-NO** = No vent or drain Outlet fitting	**O-Rings** **-OE** = O-ring EPDM **-ON** = O-ring Nitrile **-OV** = O-ring Viton **Blank** = O-ring Silicon (Standard) **Prefilter (add before Filter Media in part#)** **G(pore Size)**= Glass Fiber PreFilter **P(pore Size)**= PolyPro Media PreFilter **S(pore Size)** = PES PreFilter
Example - JZP Series, PTFE, 1.0um, no prefilter, 1/4" Hose Barb I/O is **JZPLF1002H2H**							
Example - JZP Series, Pharma Grade, PES 0.8um prefilter, PES 0.2um, 1/4" Hose Barb I/O is **JZPS0800202H2H**							

Pore size (Micron)			
Charged Nylon (CN)	**PTFE Phillic (HF)**	**Nylon (N)**	**PES (S)**
005= 0.05	**010** = 0.10	**005**= 0.05	**004** = 0.04
010 = 0.10	**020** = 0.20	**010** = 0.10	**010** = 0.1
020 = 0.20	**045** = 0.45	**020** = 0.20	**020** = 0.2
045 = 0.45	**100** = 1.0	**045** = 0.45	**045** = 0.45
065 = 0.65	**300** = 3.0	**065** = 0.65	**065** = 0.65
080 = 0.80	**500** = 5.0	**080** = 0.80	**080** = 0.8
120 = 1.20	**999** = 10	**120** = 1.20	**120** = 1.2

Your Local Distributor:

ZenPure

North & South Americas:
ZenPure Americas, Inc
www.zenpure.com
Info-us@zenpure.com
703-335-9910

All Other Regions:
ZenPure Corporation
www.zenpure.com
info@zenpure.com
+86 571 2288 6800

ISO Certified 9001 14001

TÜV

PureFlo® Junior Capsules

Compact Filtration

Small Disposable Process Filtration

PureFlo® Junior capsule filter assemblies are ready-to-use filters that offer high flows, increased throughputs, high strength, all with the convenience and cleanliness of a disposable and easy-to-install filter assembly in a small package. Designed for small pre-filtration, clarification, and final filtration, in pharmaceutical, biotechnology, food and beverage, medical, chemical, and DI water applications.

PureFlo® Junior capsule assemblies are available with a wide range of hydrophilic and hydrophobic filter medias and pore sizes for liquid, gas, and venting applications. Process engineers can choose from 14 filtration medias to create any combination of ***integrated*** filtration. These will allow the disposable processing to become truly flexible, clean, and optimal. Also available with no media.

They can be built with several configurations, with 13 inlet and 15 outlet fitting connections that can be mixed and matched. The filtration shell is an all-polypropylene construction that provides excellent chemical compatibility with low extractables. The shell and supports can also be constructed in nylon, polyethylene, or gamma stabilized PP shells for additional compatibility. No adhesives or binders are used in the encapsulation process.

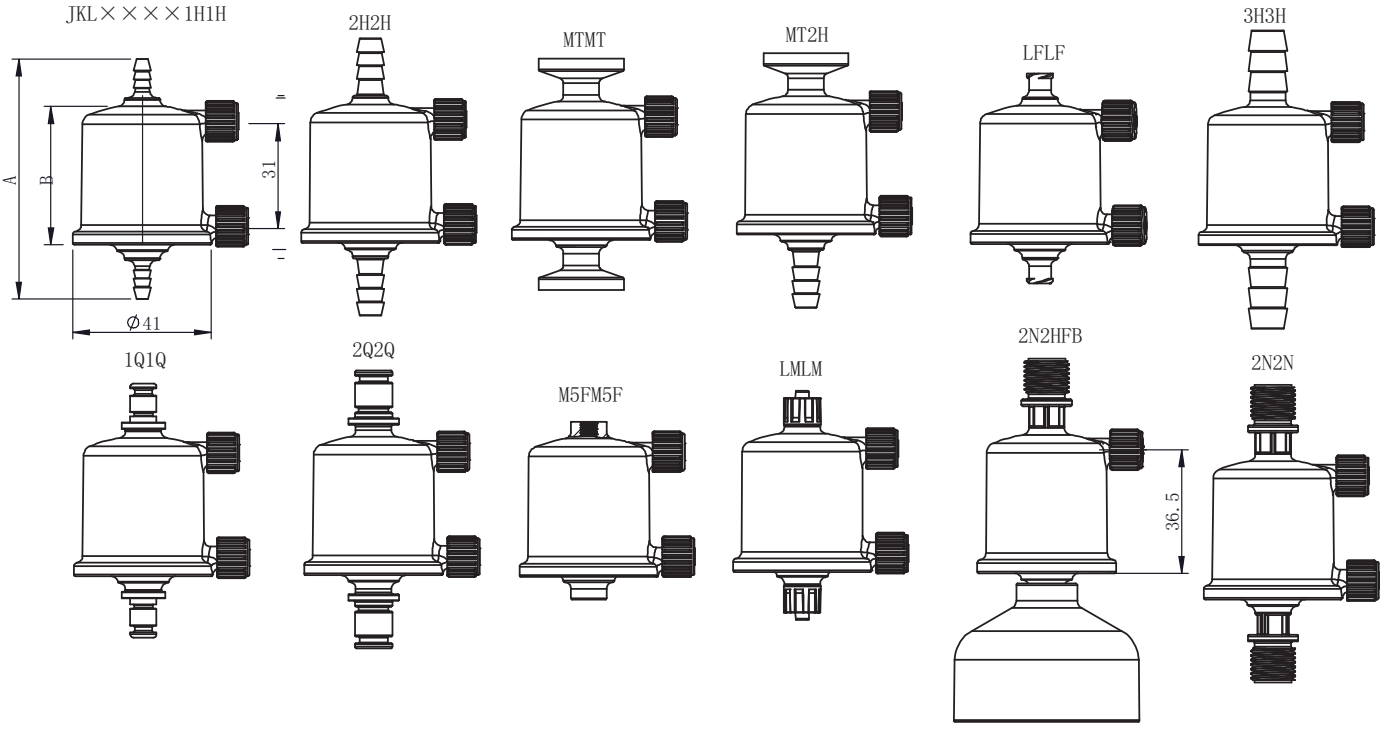
Applications	
Clarification	Water & Wine
Hard Particle	Food & Beverages
Cell Removal	Pharmaceuticals
Chemicals	Biologics
Inks, Dyes	Oils, Waters
Cosmetics	Diagnostics

Specifications

Materials of Construction:	Media: Charged Nylon, Depth PP, Polyethylene, PTFE, Glass Fiber, PP Membrane, Nylon, Nylon Screen, PP media, PES, and Polyester Screen Media Supports: Media Dependant Shell, Cage, Core, End Caps: Polypropylene, Nylon, or HDPE Sealing: Thermally bonded
Fitting Connections:	Five Fittings - See Ordering Guide for availability. (Custom adaptors available upon request)
Nominal Dimensions:	Lengths: 1.6" (41mm) without fittings Diameter: 1.6" (41mm)
Effective Filtration Area:	260cm^2 for single layer membrane, 230cm^2 for double layer membrane 200cm^2 for Depth and Screen Media
Available Ratings:	0.04um - 200.0um (Dependent on Media)
Operating Conditions:	Maximum Operating pressure: Liquid: 5.5 bar (80psi) at 72°F/22°C Gas: 4.1 bar (60psi) at 72°F/22°C Minimum Burst Pressure: 8.3 bar (120psi) at 72°F/22°C Maximum Forward Differential Pressure: 5 bar (72psi) at 72°F/22°C Maximum Reverse Differential Pressure: 2.1 bar (30psi) at 72°F/22°C Maximum Operating Temperature: PP & Gamma PP: 176°F/80°C HDPE: 140°F/60°C
Regulatory Compliance:	The filters are constructed with polypropylene resins and filtration media in compliance with 21CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastics. (Except Black PP)

PureFlo® Junior Capsules

Compact Filtration



Code name	Inlet/Outlet	Vent/Drain	Size(±1.5mm)	
			A	B
JKL××××1H1H	1/8″ Hose barbs	Female Luer Lock	71	41
JKL××××2H2H	1/4″ Hose barbs	Female Luer Lock	82	41
JKL××××MTMT	0.5″ Tri clamps	Female Luer Lock	69	41
JKL××××MT2H	0.5″ Tri clamps/1/4″ Hose barbs	Female Luer Lock	75	41
JKL××××LFLF	Luer Lock Female	Female Luer Lock	62	41
JKL××××3H3H	3/8″ Hose barbs	Female Luer Lock	88	41
JKL××××1Q1Q	1/4″ Male Quick Coupling	Female Luer Lock	75	41
JKL××××2Q2Q	1/8″ Male Quick Coupling	Female Luer Lock	82	41
JKL××××M5FM5F	M5	Female Luer Lock	53	41
JKL××××LMLM	Luer Lock Male	Female Luer Lock	68	41
JKL××××2N2HFB	1/4″NPT MAIL/1/4″ Hose barbs	Female Luer Lock	108	41
JKL××××2N2N	1/4″NPT MAIL/1/4″ NPT MAIL	Female Luer Lock	88	41

Specifications (cont.)

Autoclavable & Sanitizable: Polypropylene and Nylon shell capsules can be autoclaved 25 times at 257°F/125°C for 30 minutes or chemically sanitized in situ using common sanitizing agents or hot water at 194°F/90°C for a limited time (dependent on time and temperature). Capsules must not be in situ steam-sterilized. Polyethylene shell capsules can not be autoclaved.

Bacterial Endotoxin:
Effluent is non-pyrogenic per USP Bacterial Endotoxin (0.25 EU/ml), determined using Limulus Amebocyte Lysate (LAL) Test.

PureFlo® Junior Capsules

PureFlo® Junior Filter Capsule Ordering Guide

PureFlo Junior Capsule Filters	Filter Media	Pore Size (Micron)	Effective Filtration Area	Inlet Fitting	Outlet Fitting	Options	
	*=Empty Shell		**Blank** = Standard - 200-260cm2 Media Dependent **B** = 150cm2	**1H**	**1H** = 1/8" Hose Barb	**Shell Material**	**O-Rings**
	C = Carbon Fiber	**Pick From Pore Size Table**		**1Q**	**1Q** = 1/8" Male Quick Coupling	**Blank** = Polypro	**-OE** = O-ring EPDM
JKL = Capsule filter PP parts Standard grade	**CN** = Charged Nylon			**2H**	**2H** = 1/4" Hose barbs	**-E** = Polyethylene shell	**-ON** = O-ring Nitrile
	F = PTFE				**2H -FB**= 1/4" Hose barbs with Filling Bell	**-GP** = Gamma stable polypropylene shell	**-OV** = O-ring Viton
	G = Glass Fiber				**2H -FC**= 1/4" Hose barbs with Filling Bell with Cap	**-NY** = Nylon Shell	**Blank** = O-ring Silicon (Standard)
JNL = Capsule filter Nylon parts	**HF** = Hydrophilic PTFE			**2N**	**2N** = 1/4" MNPT	**-BLK** = Black PP Shell	**Prefilter (add before Filter Media in part#)**
	HP = Hi Performance PP Media			**2NS**	**2N** = 1/4" straight thread	**Sterilization**	
				2NO	**2NO** = 1/4" straight thread with o-ring	**-ETO =** Ethylene oxide sterilization	**G(pore Size)**= Glass Fiber PreFilter
JKP = Capsule Filter Pharma grade	**N** = Nylon			**2Q**	**2Q** = 1/4" Male Quick Coupling for Metal latch	**Vent & Drain**	**P(pore Size)**= PolyPro Media PreFilter
(JKP For PTFE, PE and PES Media only)	**NG** = Natural Glass			**2QP**	**2QP**= 1/4" Male Quick Coupling for plastic latch	**-N**= No vent or drain	**S(pore Size)** = PES PreFilter
	NS = Nylon Screen			**3H**	**3H =** 3/8" Hose Barb	**-NI** = No vent or drain inlet fitting	
	P = PolyPro Media			**M5F**	**M5F** = M5 Female thread	**-NO** = No vent or drain Outlet fitting	
	PS = PolyPro Screen			**LF**	**LF** = Female Luer Lock		
	S = PES			**LM**	**LM** = Male Luer Lock		
	TS = Polyester Screen			**MT**	**MT** = 1/2" Tri clamps		
	UE = Polyethylene						

Example - JKL Series, PTFE, 1.0um, no prefilter, 1/4" Hose Barb I/O is **JKLF1002H2H**

Example - JKP Series, Pharma Grade, PES 0.8um prefilter, PES 0.2um, 1/4" Hose Barb I/O is **JKPS0800202H2H**

Pore size (Micron)													
Carbon Fiber (C)	**Charged Nylon (CN)**	**PTFE Phillic (HF) & Phobic (F)**	**Glass Fiber (G)**	**Hi Performance PP Media (HP)**	**Polypro Membrane (M)**	**Nylon (N)**	**Natural Glass Fiber (NG)**	**Nylon Screen (NS)**	**Polypro Media (P)**	**Polypro Screen (PS)**	**PES (S)**	**Polyester Screen (TS)**	**Polyethylene (UE)**
Leave Pore Size Blank	**005**= 0.05	**H** = HEPA	**U** = ULPA	**001** = 0.1	**010** = 0.1	**005**= 0.05	**005** = 0.5	**070** = 7	**H** = HEPA	**10X** = 100	**005** = 0.05	**050** = 5	**H** = HEPA
	010 = 0.10	**010** = 0.10	**H** = HEPA	**002** = 0.2	**020** = 0.2	**010** = 0.10	**010** = 1.0	**100** = 10	**003** = 0.3	**15X** = 150	**010** = 0.1	**070** = 7	**010** = 0.1
	020 = 0.20	**020** = 0.20	**002** = 0.2	**003** = 0.3		**020** = 0.20	**030** = 3.0	**200** = 20	**006** = 0.6	**20X** = 200	**020** = 0.2	**100** = 10	**020** = 0.20
	045 = 0.45	**045** = 0.45	**004** = 0.45	**006** = 0.6		**045** = 0.45	**050** = 5.0	**400** = 40	**010** = 1.0	**30X** = 300	**045** = 0.45	**200** = 20	**045** = 0.45
	065 = 0.65	**100** = 1.0	**005** = 0.5	**010** = 1.0		**065** = 0.65		**600** = 60	**030** = 3.0	**50X** = 500	**065** = 0.65	**300** = 30	**100** = 1.0
	080 = 0.80	**300** = 3.0	**010** = 1.0	**030** = 3.0		**080** = 0.80		**10X** = 100	**050** = 5.0		**080** = 0.8	**400** = 40	
	120 = 1.20	**500** = 5.0	**030** = 3.0	**050** = 5.0		**120** = 1.20		**20X** = 200	**070** = 7.0		**120** = 1.2	**550** = 55	
		999 = 10	**050** = 5.0	**100** = 10.0				**25X** = 250	**100** = 10			**730** = 73	
			100 = 10					**30X** = 300	**200** = 20				
			200 = 20						**300** = 30				
			300 = 30						**400** = 40				
							Best for Liquid Applications		**500** = 50				**No "B" Size**
			Best for Gas Applications						**700** = 70				
									10X = 100				
									15X = 150				

Your Local Distributor:

ZenPure

North & South Americas:
ZenPure Americas, Inc
www.zenpure.com
Info-us@zenpure.com
703-335-9910

All Other Regions:
ZenPure Corporation
www.zenpure.com
info@zenpure.com
+86 571 2288 6800

MZP Series Capsules
(Mini Capsule)

Versatile Small Capsule

PureFlo® MZP (part of the MKL Series) capsule filter assemblies are ready-to-use filters, ideally suited for disposable Bio-bag applications. They offer mid-scale filtration with the convenience and cleanliness of an easy-to-install disposable filter assembly for the pharmaceutical, biotechnology, food and beverage, medical, chemical, water industries worldwide. The main benefit is ease of pre and post integrity testing for the validation of filtered product.

The MZP capsules have a compact design that can incorporate 200, 300, 400 or 500 cm^2 of filtration material to meet the needs of different applications. Process engineers can choose from 4 different filtration medias with 27 different fitting options to create any *integrated* filtration product. This will allow the post integrity testing process to become truly quick and easy.

No adhesives or binders are used in the encapsulation process. All units are thermally-sealed and 100% integrity tested.

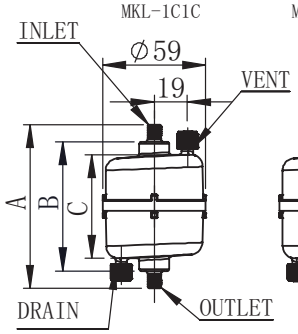
Applications	
Low Flow	Pharmaceuticals
Lab Scale Testing	Biologics
BioBags	Scale-up Processing
Water	Small volume

Specifications

Materials of Construction:	Media: Nylon, PTFE, and PES Media Supports: Polyester Shell, Cage, Core: Polypropylene ; Internal End Caps: Nylon Sealing: Thermally-welded/ O-rings
Fitting Connections:	See ordering guide for the availability. Any inlet/outlet combinations. (Custom adaptors available upon request)
Nominal Dimensions:	Length: 3.6 -5.1 in (91-129 mm) Diameter: 2.3 in. (60 mm)
Available Ratings:	0.04 µm to 10 µm (see Ordering Guide)
Operating Conditions:	Maximum Operating Pressure: Liquid: 5.5 bar (80 psi) at 72 °F/22 °C Maximum Forward Differential Pressure: 5.0 bar (72 psid) at 72 °F/22 °C Maximum Reverse Differential Pressure: 2.1 bar (30 psid) at 72 °F/22 °C Minimum Burst Pressure: 8.3 bar (120 psid) at 72 °F/22 °C Maximum Operating Temperature: PP, Gamma PP & Nylon: 80 °C
Autoclavable & Sanitizable:	Polypropylene and Nylon shell capsules can be autoclaved 25 times at 125 °C (257 °F) for 30 minutes or chemically sanitized in situ using common sanitizing agents or hot water at 90 °C (194 °F) for a limited time (dependent on time and temperature). Capsules must not be in situ steam-sterilized. Polyethylene Shelled Capsules can not be autoclaved.
Regulatory Compliance:	The filters are constructed with resins and filtration media in compliance with 21 CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastic. Flammability rating for the PP shell material is UL94HB.

MZP (MKL Series Fitting options and Sizes)

MKL-1C1C



MKL-2C2C

MKL-2N2N

MKL-2NS2NS

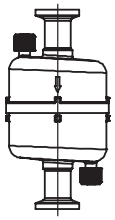
MKL-3NF3NF

MKL-1H1H

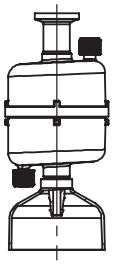
MKL-BH

MKL-2H2H

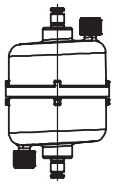
MKL-MTMT



MKL-MT2HFB



MKL-1Q1Q



MKL-2Q2Q

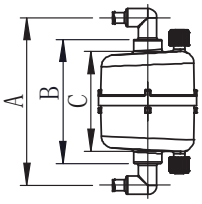
MKL-2QP2QP

MKL-1QV1QV

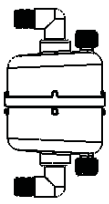
MKL-1QFV1QFV
(MKL-1QF1QF)

MKL-2QV2QV

MKL-LFELFE



MKL-2CE2CE



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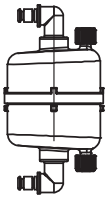

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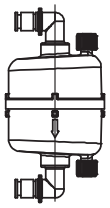
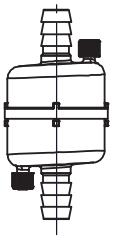
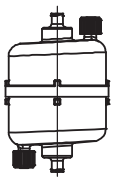


MKL-3H3H

MKL-5H5H



MKL-LFLF



Code name	Inlet/Outlet	Vent/Drain	Size(±1.5)		
			A	B	C
MKL-1C1C	1/8″ Commpression	Female Luer Lock	94	74	60
MKL-2C2C	1/4″ Commpression	Female Luer Lock	99	74	60
MKL-2N2N	1/4″ MNPT	Female Luer Lock	100	74	60
MKL-2NS2NS	1/4″ NPTS	Female Luer Lock	92	74	60
MKL-3NF3NF	3/8″ FNPT	Female Luer Lock	106	74	60
MKL-1H1H	1/8″ Hose barbs	Female Luer Lock	96	74	60
MKL-BHBH	3/16″ Hose Barbs	Female Luer Lock	102	74	60
MKL-2H2H	1/4″ Hose barbs	Female Luer Lock	98	74	60
MKL-3H3H	3/8″ Hose barbs	Female Luer Lock	124	74	60
MKL-5H5H	5/8″ Hose barbs	Female Luer Lock	120	74	60
MKL-LFLF	Female Luer Lock	Female Luer Lock	90	74	60
MKL-MTMT	0.5″ Tri clamps	Female Luer Lock	114	74	60
MKL-MT2HFB	0.5″ Tri clamps/1/4Hose barbs	Female Luer Lock	135	74	60
MKL-1Q1Q	1/8″ Male Quick Coupling	Female Luer Lock	97	74	60
MKL-2Q2Q	1/4″ Male Quick Coupling	Female Luer Lock	102	74	60
MKL-2QP2QP	1/4″ Male Quick Compling Plastics	Female Luer Lock	107	74	60
MKL-1QV1QV	1/8″ Male Quick Coupling	Female Luer Lock	133	74	60
MKL-1QFV1QFV	1/8″ Female Quick Connect	Female Luer Lock	120	74	60
MKL-2QV2QV	1/4″ Male Quick Coupling	Female Luer Lock	145	74	60
MKL-2QFV2QFV	1/4″ Female Quick Connect	Female Luer Lock	109	74	60
MKL-2QF2QF	1/4″ Female Quick Connect	Female Luer Lock	100	74	60
MKL-LMLM	Luer Lock Male	Female Luer Lock	94	74	60
MKL-LFELFE	Female Luer Lock	Female Luer Lock	100	74	60
MKL-2CE2CE	1/4″ Commpression	Female Luer Lock	100	74	60
MKL-1QE1QE	1/8″ Male Quick Coupling	Female Luer Lock	100	74	60
MKL-2QE2QE	1/4″ Male Quick Coupling	Female Luer Lock	100	74	60

MKL-2QFV2QFV

MKL-2QF2QF

MKL-LMLM

Dimensions (mm)

MZP Series Capsules

PureFlo MZP Series Capsule Ordering Guide

PureFlo Capsule Filters	Filter Media	Pore size (Micron)	Surface Area	Inlet Fitting	Outlet Fitting	Options
MZP = Pharma grade	**CN** = Charged Nylon **HF** = Hydrophilic PTFE **N** = Nylon **S** = PES	**Pick From Pore Size Table**	**A** = 200cm2 **B** = 300cm2 **C** = 400cm2 **D** = 500cm2	**1C** **1H** **1Q** **1QF** **1QE** **1QFV** **1QV** **2C** **2CE** **2H** **2N** **2NO** **2NS** **2Q** **2QE** **2QF** **2QP** **2QFV** **2QV** **3H** **3NF** **5H** **BH** **LF** **LFE** **LM** **MT**	**1C** = 1/8" Compression **1H** = 1/8" Hose Barb **1Q** = 1/8" Male Quick Coupling **1QF** = 1/8" Female Quick Coupling **1QE** = 1/8" Male Quick Coupling Elbow **1QFV** = 1/8" Female Quick Connect w/Valve **1QV** = 1/8" Male Quick Connect w/Valve **2C** = 1/4" Compression **2CE** = 1/4" Compression Elbow **2H** = 1/4" Hose barbs **2N** = 1/4" MNPT **2NO** = 1/4" Straight taper thread+EP O-Ring **2NS** = 1/4" Straight taper thread **2Q** = 1/4" Male Quick Coupling for Metal latch **2QE** = 1/4" Male Quick Coupling for Metal latch Elbow **2QF** = 1/4" Female Quick Coupling with Metal latch **2QP** = 1/4" Male Quick Connect for Plastic latch **2QFV** = 1/4" Female Quick Connect w/Valve **2QV** = 1/4" Male Quick Connect w/Valve **3H** = 3/8" Hose Barb **3NF** = 3/8" Female NPT **5H** = 5/8" Hose Barb **BH** = 3/16" Hose Barb **LF** = Female Luer Lock **LFE** = Female Luer Lock Elbow **LM** = Male Luer Lock **MT** = 1/2" Tri clamps **2H -FB** = 1/4" Hose barbs with Filling Bell **2H -FC** = 1/4" Hose barbs with Filling Bell w/ Cap	**Shell Material** **Blank** = Gamma stable polypropylene shell (standard) **-E** = Polyethylene shell and HDPE media support **-NY** = Nylon Shell **Vent & Drain** **-N** = No vent or drain fittings **-NI** = No vent or drain inlet fitting **-NO** = NO vent or drain outlet fitting **O-Ring for Quick Coupling** **Blank** = O-ring Silicone (Standard) **-OE** = O-ring EPDM **-ON** = O-ring Nitrile **-OV** = O-ring Viton **Prefilter (add before Filter Media in part#)** **G(pore Size)**= Glass Fiber PreFilter **P(pore Size)**= PolyPro Media PreFilter **S(pore Size)** = PES PreFilter
Example - MZP Series, PES, 0.2um, 500cm2, 1/4" Hose Barb I/O is **MZPS020D2H2H**						

PureFlo MZP Series Media & Pore Size options

Pore size (Micron)			
Charged Nylon (CN)	**Philic PTFE (HF)**	**Nylon (N)**	**PES (S)**
005= 0.05	**010** = 0.1	**005**= 0.05	**004** = 0.04
010 = 0.10	**020** = 0.2	**010** = 0.10	**010** = 0.1
020 = 0.20	**045** = 0.45	**020** = 0.20	**020** = 0.2
045 = 0.45	**100** = 1.0	**045** = 0.45	**045** = 0.45
065 = 0.65	**300** = 3.0	**065** = 0.65	**065** = 0.65
080 = 0.80	**500** = 5.0	**080** = 0.80	**080** = 0.8
120 = 1.20	**999** = 10.0	**120** = 1.20	**120** = 1.2

Your Local Distributor:

ZenPure

North & South Americas:
ZenPure Americas, Inc
www.zenpure.com
Info-us@zenpure.com
703-335-9910

All Other Regions:
ZenPure Corporation
www.zenpure.com
info@zenpure.com
+86 571 2288 6800

MKL Series Filter Capsules
(Mini Capsule)

Versatile Small Capsule filter

PureFlo® MKL Series capsules were designed for small-scale filtration, clarification, and filling applications in the pharmaceutical, biotechnology, food and beverage, medical, chemical, water industries worldwide. This family of products is particularly suitable for scale-up testing where a full size capsule or cartridge would be excessive. They are also very suitable for disposable Bio-bag applications.

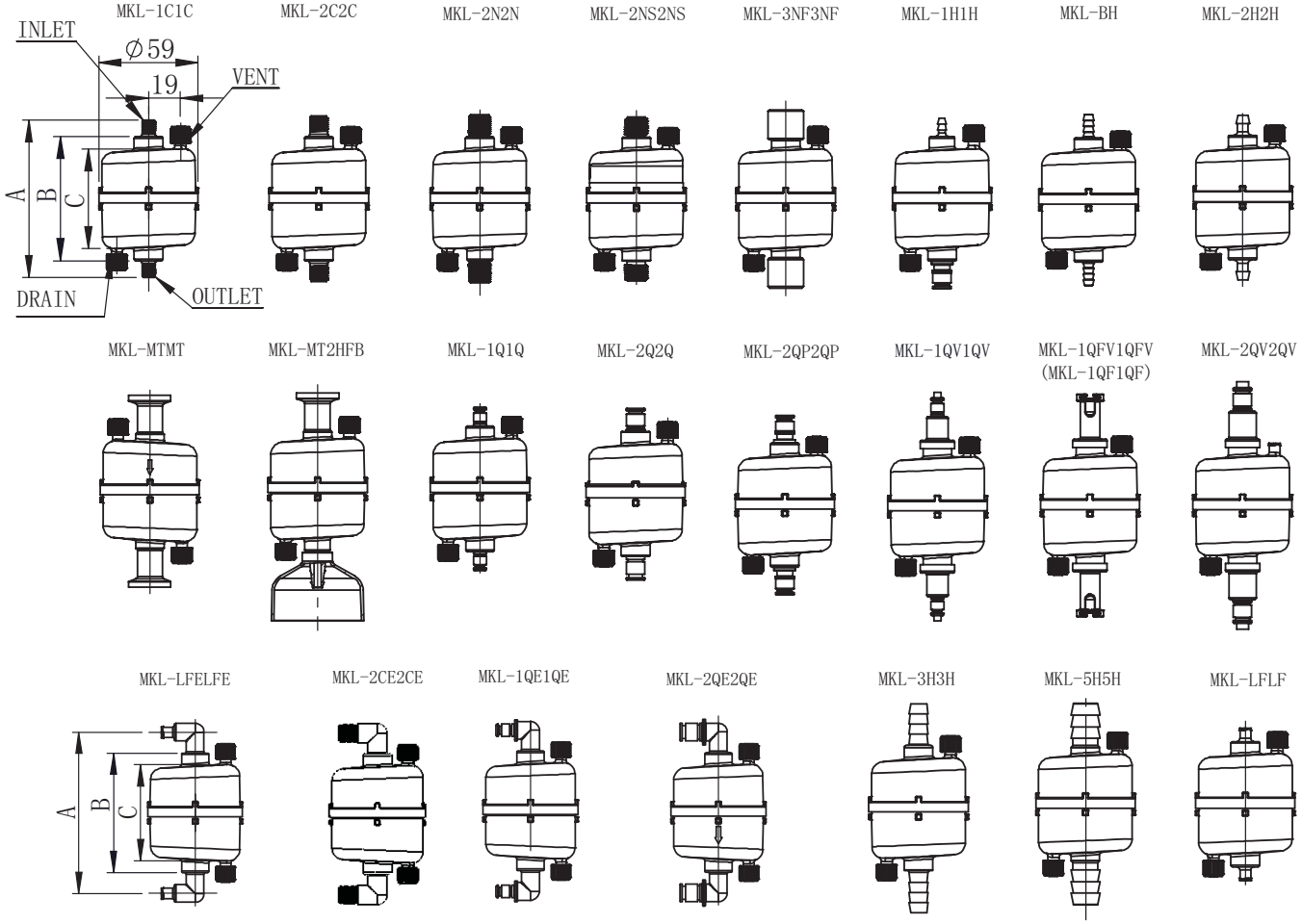
The MKL capsules have a compact design that can incorporate 200, 300, 400 or 500 cm^2 of filtration material to meet the needs of different applications. We are currently offering 16 different media options with 28 different fitting options. The different possible materials of construction provide excellent compatibility with a wide-range of chemicals such as acids, bases and solvents. No adhesives or binders are used in the encapsulation process. All units are thermally-sealed.

Applications	
Low flow	Ink
Lab scale testing	Beverages
Bio-Bags	Pharmaceuticals
Fine Chemicals	Biologics
Vent Filter	Scale up processing
Water	Small volume

Specifications

Materials of Construction:	Media: Polypropylene, Nylon, PTFE, Polyethylene, Glass Fiber, and PES Media Supports: Polypropylene, Polyester or Nylon Cage, Core, End Caps: Polypropylene, Polyethylene, or Nylon Sealing: Thermally-welded
Fitting Connections:	See ordering guide for the availability. Any inlet/outlet combinations. (Custom adaptors available upon request)
Nominal Dimensions:	Length: 3.6 -5.1 in (91-129 mm) Diameter: 2.3 in. (60 mm)
Available Ratings:	0.04um to 70um (see Ordering Guide)
Operating Conditions:	Maximum Operating Pressure: Liquid: 5.5 bar (80 psi) at 72 °F/22 °C Gas: 4.1 bar (60psi) at 72°F/22°C Maximum Forward Differential Pressure: 5.0 bar (72 psid) at 72°F/20°C Maximum Reverse Differential Pressure: 2.1 bar (30 psid) at 72°F/22°C Maximum Operating Temperature: PP, Gamma PP & Nylon: 176°F/80°C HDPE: 140°F/60°C Minimum Burst Pressure: 8.3 bar (120 psid) at 72°F/22°C
Autoclavable & Sanitizable:	Polypropylene and Nylon shell capsules can be autoclaved 25 times at 257°F/125°C for 30 minutes or chemically sanitized in situ using common sanitizing agents or hot water at 194°F/90°C for a limited time (dependent on time and temperature). Capsules must not be in situ steam-sterilized. Polyethylene Shelled Capsules can not be autoclaved.
Regulatory Compliance:	The filters are constructed with resins and filtration media in compliance with 21CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastic. (Except Black PP). Flammability rating for the PP shell material is UL94HB.

MKL Series Fitting options and Sizes



Code name	Inlet/Outlet	Vent/Drain	A	B	C
MKL-1C1C	1/8″ Commpression	Female Luer Lock	94	74	60
MKL-2C2C	1/4″ Commpression	Female Luer Lock	99	74	60
MKL-2N2N	1/4″ MNPT	Female Luer Lock	100	74	60
MKL-2NS2NS	1/4″ NPTS	Female Luer Lock	92	74	60
MKL-3NF3NF	3/8″ FNPT	Female Luer Lock	106	74	60
MKL-1H1H	1/8″ Hose barbs	Female Luer Lock	96	74	60
MKL-BHBH	3/16″ Hose Barbs	Female Luer Lock	102	74	60
MKL-2H2H	1/4″ Hose barbs	Female Luer Lock	98	74	60
MKL-3H3H	3/8″ Hose barbs	Female Luer Lock	124	74	60
MKL-5H5H	5/8″ Hose barbs	Female Luer Lock	120	74	60
MKL-LFLF	Female Luer Lock	Female Luer Lock	90	74	60
MKL-MTMT	0.5″ Tri clamps	Female Luer Lock	114	74	60
MKL-MT2HFB	0.5″ Tri clamps/1/4Hose barbs	Female Luer Lock	135	74	60
MKL-1Q1Q	1/8″ Male Quick Coupling	Female Luer Lock	97	74	60
MKL-2Q2Q	1/4″ Male Quick Coupling	Female Luer Lock	102	74	60
MKL-2QP2QP	1/4″ Male Quick Compling Plastics	Female Luer Lock	107	74	60
MKL-1QV1QV	1/8″ Male Quick Coupling	Female Luer Lock	133	74	60
MKL-1QFV1QFV	1/8″ Female Quick Connect	Female Luer Lock	120	74	60
MKL-2QV2QV	1/4″ Male Quick Coupling	Female Luer Lock	145	74	60
MKL-2QFV2QFV	1/4″ Female Quick Connect	Female Luer Lock	109	74	60
MKL-2QF2QF	1/4″ Female Quick Connect	Female Luer Lock	100	74	60
MKL-LMLM	Luer Lock Male	Female Luer Lock	94	74	60
MKL-LFELFE	Female Luer Lock	Female Luer Lock	100	74	60
MKL-2CE2CE	1/4″ Commpression	Female Luer Lock	100	74	60
MKL-1QE1QE	1/8″ Male Quick Coupling	Female Luer Lock	100	74	60
MKL-2QE2QE	1/4″ Male Quick Coupling	Female Luer Lock	100	74	60

Dimensions (mm)

MKL Series Filter Capsules

PureFlo MKL Series Filter Capsule Ordering Guide

PureFlo Capsule Filters	Filter Media	Pore size (Micron)	Effective Filtration Area	Inlet Fitting	Outlet Fitting	Options
MKL = Standard Grade **MKP**= Pharma grade grade (For PTFE, PES and PE Media only)	**A** = Cellulose Acetate **CN** = Charged Nylon **DP** = Depth PolyPro **UE** = Polyethylene **F** = PTFE Phobic **G** = Glass Fiber **HF** = Hydrophilic PTFE **HP** = Hi Performance PP Media **M** = PolyPro Mem **N** = Nylon **NG** = Natural Glass Fiber **NS** = Nylon Screen **P** = PolyPro Media **RP** = Wrapped PP Media **S** = PES **TS** = Polyester Screen * =Empty Shell	**Pick From Pore Size Table**	**A** = 200cm² **B** = 300cm² **C** = 400cm² **D** = 500cm²	**1C** **1H** **1Q** **1QF** **1QE** **1QFV** **1QV** **2C** **2CE** **2H** **2N** **2NO** **2NS** **2Q** **2QE** **2QF** **2QP** **2QFV** **2QV** **3H** **3NF** **5H** **LF** **LM** **LFE** **MT**	**1C** = 1/8" Compression **1H** = 1/8" Hose Barb **1Q** = 1/8" Male Quick Coupling **1QF** = 1/8" Female Quick Coupling **1QE** = 1/8" Male Quick Coupling Elbow **1QFV** = 1/8" Female Quick Connect w/Valve **1QV** = 1/8" Male Quick Connect w/Valve **2C** = 1/4" Compression **2CE** = 1/4" Compression Elbow **2H** = 1/4" Hose barbs **2N** = 1/4" MNPT **2NO** = 1/4" Straight taper thread+EP O-Ring **2NS** = 1/4" Straight taper thread **2Q** = 1/4" Male Quick Coupling for Metal latch **2QE** = 1/4" Male Quick Coupling for Metal latch Elbow **2QF** = 1/4" Female Quick Coupling with Metal latch **2QP** = 1/4" Male Quick Coupling for Plastic Latch **2QFV** = 1/4" Female Quick Connect w/Valve **2QV** = 1/4" Male Quick Connect w/Valve **3H** = 3/8" Hose Barb **3NF** = 3/8" Female NPT **5H** = 5/8" Hose Barb **LF** = Female Luer Lock **LM** = Male Luer Lock **LFE** = Female Luer Lock Elbow **MT** = 1/2" Tri clamps **2H -FB** = 1/4" Hose barbs with Filling Bell **2H -FC** = 1/4" Hose barbs with Filling Bell w/ Cap	**Shell Material** **Blank** = Polypro construction **-E** = Polyethylene shell and HDPE media support for gamma sterilization **-BLK** = Black PP Shell **-GP** = Gamma stable polypropylene shell **-NY** = Nylon Shell **Vent & Drain** **-N** = No vent or drain fittings **-NI** = No vent or drain inlet fitting **-NO** = NO vent or drain outlet fitting **Sterilization** **-ETO =** Ethylene oxide sterilization **O-Ring for Quick Coupling** **Blank** = O-ring Silicone (Standard) **-OE** = O-ring EPDM **-ON** = O-ring Nitrile **-OV** = O-ring Viton **Prefilter (add before Filter Media in part#)** **G(pore Size)**= Glass Fiber PreFilter **P(pore Size)**= PolyPro Media PreFilter **S(pore Size)** = PES PreFilter
Example - MKL Series, PTFE, 1.0um, 500cm2, 1/4" Hose Barb I/O is **MKLF100D2H2H**						
Example with Pre-Filter - MKL Series, Glass Fiber 3.0um prefilters, PTFE 1.0um final filter, 500cm2, 1/4" Hose Barb I/O is **MKLG030F100D2H2H**						

PureFlo MKL Series Media & Pore Size options

Pore size (Micron)							
Cellulose Acetate (A)	**Charged Nylon (CN)**	**Depth PP (DP)**	**Polyethylene (UE)**	**PTFE Phillic (HF) & Phobic (F)**	**Glass Fiber (G)**	**Hi Performance PP Media (HP)**	**Polypro Membrane (M)**
020 = 0.20 **045** = 0.45 **065** = 0.65 **080** = 0.80 **120** = 1.20	**005**= 0.05 **010** = 0.10 **020** = 0.20 **045** = 0.45 **065** = 0.65 **080** = 0.80 **120** = 1.20	**002** = 0.2 **005** = 0.5 **010** = 1.0 **015** = 1.5 **025** = 2.5 **045** = 4.5 **100** = 10.0 **200** = 20.0 **Only available in Surface Area A (<200cm²)**	**010** = 0.1 **020** = 0.20 **045** = 0.45 **100** = 1.0 **Only available in Surface Area C (400cm²)**	**010** = 0.1 **020** = 0.2 **045** = 0.45 **100** = 1.0 **300** = 3.0 **500** = 5.0 **999** = 10.0	**U** = ULPA **H** = HEPA **002** = 0.2 **045** = 0.45 **005** = 0.5 **010** = 1.0 **030** = 3.0 **050** = 5.0 **100** = 10 **200** = 20 **300** = 30 **Best for Gas Applications** **Only available in Surface Area C (400cm²)**	**001** = 0.1 **002** = 0.2 **003** = 0.3 **006** = 0.6 **010** = 1.0 **030** = 3.0 **050** = 5.0 **100** = 10.0	**010** = 0.1 **020** = 0.2

Pore size (Micron)							
Nylon (N)	**Natural Glass Fiber (NG)**	**Nylon Screen (NS)**	**PP Media (P)**	**Wrapped PP Media (RP)**	**PES (S)**	**Polyester Screen (TS)**	**Polypro Screen (PS)**
005= 0.05 **010** = 0.10 **020** = 0.20 **045** = 0.45 **065** = 0.65 **080** = 0.80 **120** = 1.20	**005** = 0.5 **010** = 1.0 **030** = 3.0 **050** = 5.0 **Best for Liquid Applications** **Only available in Surface Area C (400cm²)**	**070** = 7 **100** = 10 **200** = 20 **400** = 40 **600** = 60 **10X** = 100 **20X** = 200 **25X** = 250 **30X** = 300 **Only available in Surface Area C (400cm²)**	**003** = 0.3 **006** = 0.6 **010** = 1.0 **030** = 3.0 **050** = 5.0 **100** = 10.0 **200** = 20.0 **300** = 30.0 **500** = 50.0 **700** = 70.0 **Only available in Surface Area C (400cm²)**	**003** = 0.3 **006** = 0.6 **010** = 1.0 **030** = 3.0 **050** = 5.0 **100** = 10.0 **200** = 20.0 **300** = 30.0 **500** = 50.0 **700** = 70.0	**005** = 0.05 **010** = 0.1 **020** = 0.2 **045** = 0.45 **065** = 0.65 **080** = 0.8 **120** = 1.2	**050** = 5 **070** = 7 **100** = 10 **200** = 20 **300** = 30 **400** = 40 **550** = 55 **730** = 73 **Only available in Surface Area C (400cm²)**	**10X** = 100 **15X** = 150 **20X** = 200 **30X** = 300 **50X** = 500

Your Local Distributor:

ZenPure

North & South Americas:
ZenPure Americas, Inc
www.zenpure.com
Info-us@zenpure.com
703-335-9910

All Other Regions:
ZenPure Corporation
www.zenpure.com
info@zenpure.com
+86 571 2288 6800

MKP Series Polyethylene Filter Capsules
(PE/PE Construction)

Versatile Small Capsule filter

PureFlo® MKP Series Polyethylene (PE) capsules were designed for small to medium-scale filtration, clarification, and venting applications in the pharmaceutical, biotechnology, food and beverage, medical and water industries worldwide. This family of products is particularly suitable for venting applications where the units need to be gamma sterilized with other disposable units for venting. The hydrophobic PE membrane is ideally suited for air, gas and liquid sterilizing applications.

The hydrophobic membrane provides superior flow and pressure-drop characteristics for small tank and bio-bag venting applications. The MKP capsules have a compact design that can incorporate 400 cm^2 of filtration material to meet the needs of a wide variety of processes. We are currently offering four different polyethylene media sizes with 28 different fitting options. The units are thermally-sealed. No adhesives or binders are used in the encapsulation process. The units are rinsed with pyrogen-free water to reduce extractables and downtime. All filter capsules are 100% integrity-tested to ensure filter performance each and every time out of the package.

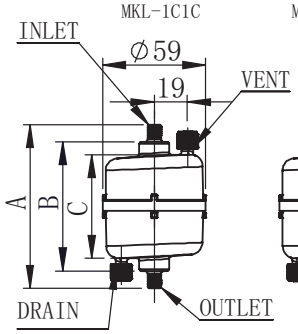
Applications	
Buffers and Media	Fermentation Tank
Product Sterilization	Venting
Bio Bags	Pharmaceuticals
Vaccines	Biologics
Gas Filtration	Scale up processing

Specification

Materials of Construction:	Membrane: Polyethylene Media Supports: High Density Polyethylene (HDPE) Cage, Core, End Caps: HDPE Valve O-Rings: Silicon (Standard) Sealing: Thermally welded
Fitting Connections:	See Ordering Guide for the availability. Any inlet/outlet combinations. (Custom adaptors available upon request)
Nominal Dimensions:	Length: 3.6 -5.1 in (91-129 mm) Diameter: 2.3 in. (60 mm)
Available Ratings:	0.2um to 2.5um (see Ordering Guide)
Operating Conditions:	Maximum Operating Pressure: Liquid: 5.5 bar (80 psi) at 72 °F/22 °C Gas: 4.1 bar (60psi) at 72°F/22°C Maximum Forward Differential Pressure: 5.0 bar (72 psid) at 72°F/20°C Maximum Reverse Differential Pressure: 2.1 bar (30 psid) at 72°F/22°C Maximum Operating Temperature: 140°F/60°C Minimum Burst Pressure: 8.3 bar (120 psid) at 72°F/22°C
Regulatory Compliance:	The filters are constructed with polypropylene resins and filtration media in compliance with 21CFR Part 177 of the U.S. Code of Federal Regulations and USP Class VI Biological Test for Plastics.

MKP (MKL Series Fitting Options and Sizes)

MKL-1C1C



MKL-2C2C

MKL-2N2N

MKL-2NS2NS

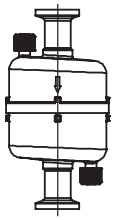
MKL-3NF3NF

MKL-1H1H

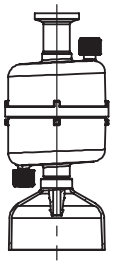
MKL-BH

MKL-2H2H

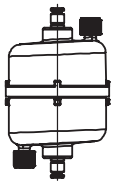
MKL-MTMT



MKL-MT2HFB



MKL-1Q1Q



MKL-2Q2Q

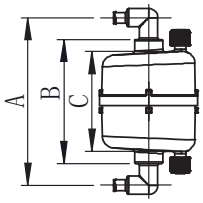
MKL-2QP2QP

MKL-1QV1QV

MKL-1QFV1QFV
(MKL-1QF1QF)

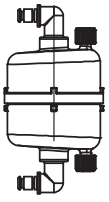
MKL-2QV2QV

MKL-LFELFE

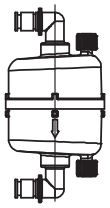


MKL-2CE2CE

MKL-1QE1QE



MKL-2QE2QE



MKL-3H3H

MKL-5H5H

MKL-LFLF

Code name	Inlet/Outlet	Vent/Drain	A	B	C
MKL-1C1C	1/8″ Commpression	Female Luer Lock	94	74	60
MKL-2C2C	1/4″ Commpression	Female Luer Lock	99	74	60
MKL-2N2N	1/4″ MNPT	Female Luer Lock	100	74	60
MKL-2NS2NS	1/4″ NPTS	Female Luer Lock	92	74	60
MKL-3NF3NF	3/8″ FNPT	Female Luer Lock	106	74	60
MKL-1H1H	1/8″ Hose barbs	Female Luer Lock	96	74	60
MKL-BHBH	3/16″ Hose Barbs	Female Luer Lock	102	74	60
MKL-2H2H	1/4″ Hose barbs	Female Luer Lock	98	74	60
MKL-3H3H	3/8″ Hose barbs	Female Luer Lock	124	74	60
MKL-5H5H	5/8″ Hose barbs	Female Luer Lock	120	74	60
MKL-LFLF	Female Luer Lock	Female Luer Lock	90	74	60
MKL-MTMT	0.5″ Tri clamps	Female Luer Lock	114	74	60
MKL-MT2HFB	0.5″ Tri clamps/1/4Hose barbs	Female Luer Lock	135	74	60
MKL-1Q1Q	1/8″ Male Quick Coupling	Female Luer Lock	97	74	60
MKL-2Q2Q	1/4″ Male Quick Coupling	Female Luer Lock	102	74	60
MKL-2QP2QP	1/4″ Male Quick Compling Plastics	Female Luer Lock	107	74	60
MKL-1QV1QV	1/8″ Male Quick Coupling	Female Luer Lock	133	74	60
MKL-1QFV1QFV	1/8″ Female Quick Connect	Female Luer Lock	120	74	60
MKL-2QV2QV	1/4″ Male Quick Coupling	Female Luer Lock	145	74	60
MKL-2QFV2QFV	1/4″ Female Quick Connect	Female Luer Lock	109	74	60
MKL-2QF2QF	1/4″ Female Quick Connect	Female Luer Lock	100	74	60
MKL-LMLM	Luer Lock Male	Female Luer Lock	94	74	60
MKL-LFELFE	Female Luer Lock	Female Luer Lock	100	74	60
MKL-2CE2CE	1/4″ Commpression	Female Luer Lock	100	74	60
MKL-1QE1QE	1/8″ Male Quick Coupling	Female Luer Lock	100	74	60
MKL-2QE2QE	1/4″ Male Quick Coupling	Female Luer Lock	100	74	60

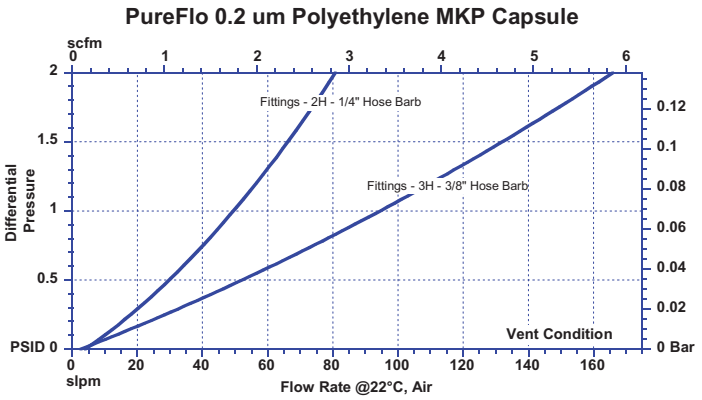
MKL-2QFV2QFV

MKL-2QF2QF

MKL-LMLM

Dimensions (mm)

MKP Series PE Filter Capsules



Specifications (cont.)

Bacterial Retention (for 0.2um membrane):

Complete retention of > 10^7organisms/cm^2 of *Brevundimonas diminuta* in accordance with the current HIMA challenge methodology (ASTM F838-05). Validation Guide upon request.

Sanitizable:

The filters can be gamma sterilized up to 50kGy. Not Autoclavable.

Bacterial Endotoxin:

Effluent is non-pyrogenic per USP Bacterial Endotoxin (0.25 EU/ml), determined using Limulus Amebocyte Lysate (LAL) Test.

PureFlo MKP Series PE Filter Capsule (Pharmaceutical grade) Ordering Guide

PureFlo Capsule Filters	Filter Media	Pore size (Micron)	Effective Filtration Area	Inlet Fitting	Outlet Fitting	Options
		010 = 0.1		**1C**	**1C** = 1/8" Compression	**Shell Material**
MKP = Pharma grade grade	**UE** = Polyethylene	**020** = 0.20	**C** = 400cm^2	**1H**	**1H** = 1/8" Hose Barb	
		045 = 0.45		**1Q**	**1Q** = 1/8" Male Quick Coupling	**-E** = Polyethylene shell and HDPE media support
		100 = 1.0		**1QF**	**1QF** = 1/8" Female Quick Coupling	
				1QE	**1QE** = 1/8" Male Quick Coupling Elbow	
				1QFV	**1QFV** = 1/8" Female Quick Connect w/Valve	
				1QV	**1QV** = 1/8" Male Quick Connect w/Valve	
				2C	**2C** = 1/4" Compression	**Vent & Drain**
				2CE	**2CE** = 1/4" Compression Elbow	**-N** = No vent or drain fittings
				2H	**2H** = 1/4" Hose barbs	**-NI** = No vent or drain inlet fitting
				2N	**2N** = 1/4" MNPT	**-NO** = NO vent or drain outlet fitting
				2NO	**2NO** = 1/4" Straight taper thread+EP O-Ring	**Sterilization**
				2NS	**2NS** = 1/4" Straight taper thread	**-ETO =** Ethylene oxide sterilization
				2Q	**2Q** = 1/4" Male Quick Coupling for Metal latch	**O-Ring for Quick Coupling**
				2QE	**2QE** = 1/4" Male Quick Coupling for Metal latch Elbow	**Blank** = O-ring Silicone (Standard)
				2QF	**2QF** = 1/4" Female Quick Coupling with Metal latch	**-OE** = O-ring EPDM
				2QP	**2QP** = 1/4" Male Quick Coupling for Plastic Latch	**-ON** = O-ring Nitrile
				2QFV	**2QFV** = 1/4" Female Quick Connect w/Valve	**-OV** = O-ring Viton
				2QV	**2QV** = 1/4" Male Quick Connect w/Valve	**Prefilter (add before Filter Media in part#)**
				3H	**3H** = 3/8" Hose Barb	
				3NF	**3NF** = 3/8" Female NPT	**G(pore Size)**= Glass Fiber PreFilter
				5H	**5H** = 5/8" Hose Barb	**P(pore Size)**= PolyPro Media
				LF	**LF** = Female Luer Lock	**S(pore Size)** = PES PreFilter
				LM	**LM** = Male Luer Lock	
				LFE	**LFE** = Female Luer Lock Elbow	
				MT	**MT** = 1/2" Tri clamps	
					2H -FB = 1/4" Hose barbs with Filling Bell	
					2H -FC = 1/4" Hose barbs with Filling Bell w/ Cap	

Example - MKL Series, PE, 1.0um, 500cm2, 1/4" Hose Barb I/O is **MKLUE100D2H2H**

Example with Pre-Filter - MKL Series, Glass Fiber 3.0um prefilters, PE 1.0um final filter, 500cm2, 1/4" Hose Barb I/O is **MKLG030UE100D2H2H**

Your Local Distributor:

ZenPure

North & South Americas:
ZenPure Americas, Inc
www.zenpure.com
Info-us@zenpure.com
703-335-9910

All Other Regions:
ZenPure Corporation
www.zenpure.com
info@zenpure.com
+86 571 2288 6800

ISO Certified 9001 14001

SZS Series Filter Capsules
(Push to Connect Capsule)

Quick Connection on Capsule Filter

PureFlo® SZS Series capsules are designed for quick wetting of the membrane and easy integrity testing. The ease to use quick connection allows for simple change outs to keep your process running. The filter was designed with click and lock connect installations that is easy to use and leak free utilizing quick connect couplings. This click and lock capsule filter connects to a system, machine, instrument, with one simple action: push and fit.

The filter includes an inlet port that directs the fluid to the bottom of the capsule through a down tube in the capsule, outlet port from the center filter core or filtered side , and upstream vent ports for gas removal, that all run in parallel at the top of the filter capsule. The filter has three male quick couplers that mate with three female receptors attached to the process tool of the assembly. The SZS filter modifies the flow geometry from traditional 'T-Line' or Inline to a 'E' configuration. This makes capsule assembly and disassembly smooth and easy in one plug-and-play movement. The E configuration allows for valuable space savings in equipment.

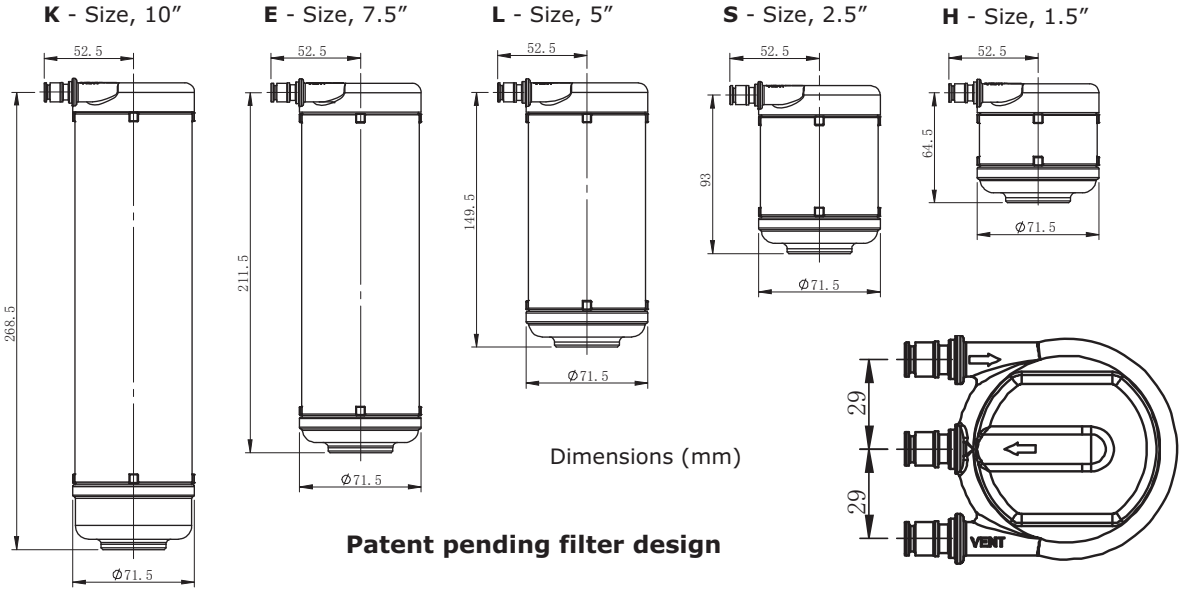
Applications	
Lab scale testing	Beverages
Bio Bags	Pharmaceuticals
Fine Chemicals	Biologics
Water	Scale up processing

On the upstream side of the capsule, a down tube connected to the inlet fitting leads the fluids entering the capsule towards the bottom, ensuring the full displacement of the fluids by the fresh fluids from bottom up. This design enables extremely fast thermal dispersion and temperature uniformity for hot water sanitization of the entire filter. This design prevents preferential flow through an area nearest to the inlet. Filters can also be equipped with a RFID for recording installation, usage cycles, integrity test or traceability for production batch records.

The SZS is offered in 3 different media options in different pore sizes for each media. The main benefit of the SZS is the ease of pre and post integrity testing for the validation of filtered product. The SZS capsule is simple to use, reduces change out times and is leak-free. They make connecting filter capsules easy, reliable and fast with fewer accessories. All units are 100% integrity tested. No adhesives or binders are used in the encapsulation process.

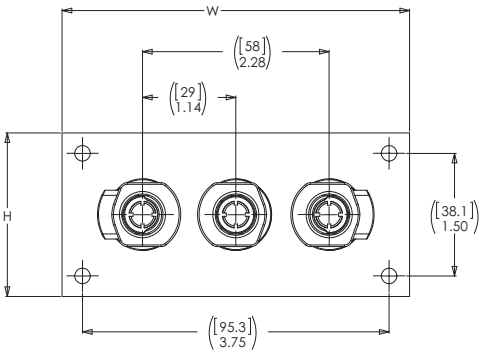
Specifications

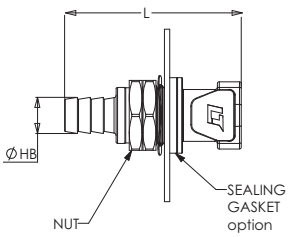
Materials of Construction:	Media:	Charged Nylon, Nylon, and PES
	Media Supports:	Polyester
	Cage, Core:	Polypropylene,
	End Caps:	Nylon
	Sealing:	Thermally-welded, o-ring
Fitting Connections:	1/4" Male Quick couplings (Custom adaptors available upon request)	
Nominal Dimensions:	Length: 10", 7.5", 5", 2.5", 1.5" internal filter cartridge (See drawing for actual length) Diameter: 2.8 in. (71.5 mm)	
Available Ratings:	0.04um to 10um (see Ordering Guide)	
Operating Conditions:	Maximum Operating Pressure: Liquid: 5.5 bar (80psi) at 72°F/22°C Gas: 4.1 bar (60 psi) at 72°F/22°C Maximum Forward Differential Pressure: 5.0 bar (72 psid) at 72°F/22°C Maximum Reverse Differential Pressure: 2.1 bar (30 psid) at 176°F/80°C Maximum Operating Temperature: PP, Gamma PP & Nylon: 176°F/80°C Minimum Burst Pressure: 8.3 bar (120 psid) at 72°F/22°C	
Autoclavable & Sanitizable:	Polypropylene capsules can be autoclaved 25 times at 257°F/125°C for 30 minutes or chemically sanitized in situ using common sanitizing agents or hot water at 194°F/90°C for a limited time (dependent on time and temperature). Capsules must not be in situ steam-sterilized.	
Regulatory Compliance:	The filters are constructed with resins and filtration media in compliance with 21CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastic. Flammability rating for the PP shell material is UL94HB.	

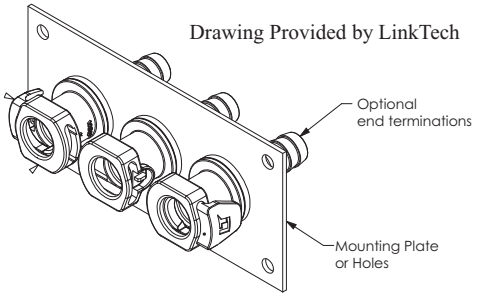


Dimensions (mm)

Patent pending filter design







Note: Socket (Female) fittings are compatible with LinkTech 50AC and 50GP series fitting as well as several other coupling manufactures. You can buy the assembly or individual fittings through ZenPure or LinkTech.

SZS Series Filter Capsules

PureFlo SZS Series Filter Capsule Ordering Guide

PureFlo Capsule Filters	Filter Media	Pore size (Micron)	Length	Inlet Fitting	Outlet Fitting	Options	
SZS = Capsule filter "E" configuration Quick Connect	**CN** = Charged Nylon **N** = Nylon **S** = PES	**Pick From Pore Size Table**	**H** = 1.5" **S** = 2.5" **L** = 5" **E** = 7.5" **K** = 10" Internal filter length	**2QP** = 1/4" Male Quick Coupling for Plastic latch	**2QP**	**Grades** **Blank** = Pharma Grade **Shell Material** **Blank** = Gamma stabilized PP **-E** = Polyethylene shell and HDPE media support **-NY** = Nylon Shell **Vent** **-N** = No vent fitting **RFID CHIP** **-RI** = RFID Chip	**Prefilter (add before Filter Media in part#)** **G(pore Size)**= Glass Fiber PreFilter **P(pore Size)**= PolyPro Media PreFilter **S(pore Size)** = PES PreFilter **O-Ring for Quick Coupling** **Blank** = O-ring Silicon (Standard) **-OE** = O-ring EPDM **-ON** = O-ring Nitrile **-OV** = O-ring Viton
Example - SZS Series, PES, 0.2um, 2.5" internal filter, 1/4" Male Quick Coupling for Plastic Lach I/O, with Gamma stabilized PP shell is **SZSS020S2QP2QP**							
Example with Pre-Filter - SZS Series, PES 0.8um prefilter, PES 0.2um, 2.5" internal filter, 1/4" Male Quick Coupling for Plastic Lach I/O is **SZSS080S020S2QP2QP**							

PureFlo SZS Series Media & Pore Size options

Pore size (Micron)		
Charged Nylon (CN)	**Nylon (N)**	**PES (S)**
005= 0.05	**005**= 0.05	**005** = 0.05
010 = 0.10	**010** = 0.10	**010** = 0.1
020 = 0.20	**020** = 0.20	**020** = 0.2
045 = 0.45	**045** = 0.45	**045** = 0.45
065 = 0.65	**065** = 0.65	**065** = 0.65
080 = 0.80	**080** = 0.80	**080** = 0.8
120 = 1.20	**120** = 1.20	**120** = 1.2

Your Local Distributor:

ZenPure

North & South Americas:
ZenPure Americas, Inc
www.zenpure.com
Info-us@zenpure.com
703-335-9910

All Other Regions:
ZenPure Corporation
www.zenpure.com
info@zenpure.com
+86 571 2288 6800

SKS Series Filter Capsules
(Push to Connect Capsule)

Quick Connection on Capsule Filter

PureFlo® SKS Series capsules are designed for ease of use, quick connection, and simple change outs to keep your process running. The filter was designed with click and lock connect installations that is easy to use and leak free utilizing quick connect couplings. This click and lock capsule filter connects to a disposable system, machine, instrument, tube set, bio-container – even a bioreactor, with one simple action: push and fit.

The filter includes an inlet port that directs the fluid to the bottom of the capsule through a down tube in the capsule, outlet port from the center filter core or filtered side , and upstream vent ports for gas removal, that all run in parallel at the top of the filter capsule. The filter has three male quick couplers that mate with three female receptors attached to the process tool of the assembly. The SKS filter modifies the flow geometry from traditional 'T-Line' or Inline to a 'E' configuration. This makes capsule assembly and disassembly smooth and easy in one plug -and-play movement. The E configuration allows for valuable space savings in equipment.

Applications	
Low flow	Ink
Lab scale testing	Beverages
Bio Bags	Pharmaceuticals
Fine Chemicals	Biologics
Vent Filter	Scale up processing
Water	Small volume

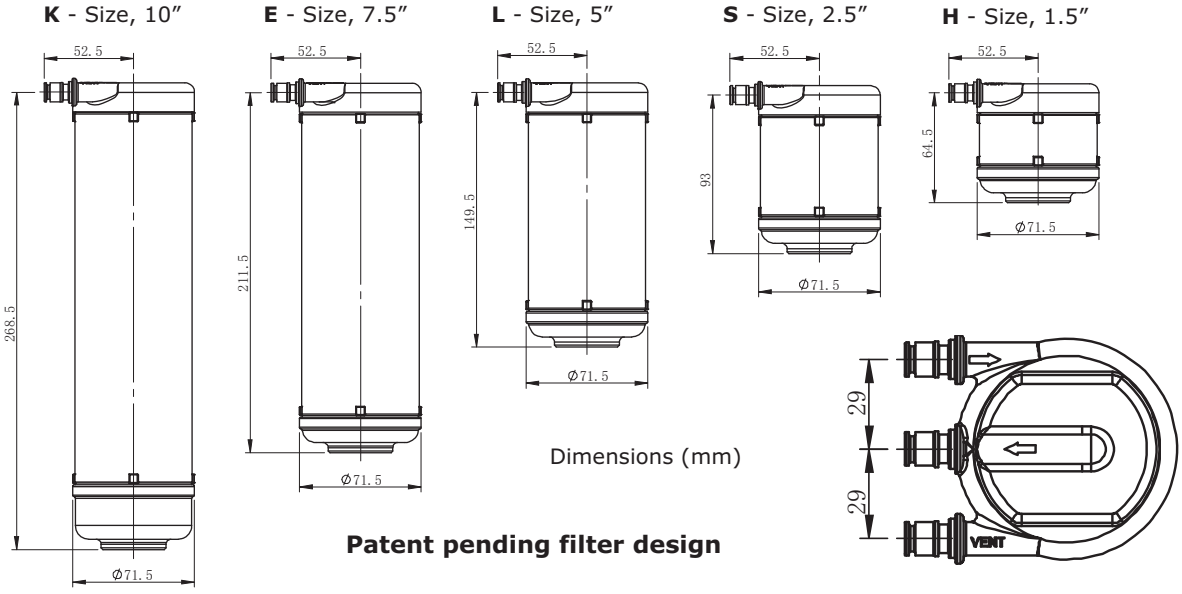
On the upstream side of the capsule, a down tube connected to the inlet fitting leads the fluids entering the capsule towards the bottom, ensuring the full displacement of the fluids by the fresh fluids from bottom up. This design enables extremely fast thermal dispersion and temperature uniformity for hot water sanitization of the entire filter. This design prevents preferential flow through an area nearest to the inlet. Filters can also be equipped with a RFID for recording installation, usage cycles, integrity test or traceability for production batch records.

The SKS is offered in 15 different media options in different pore sizes for each media. We also offer various materials of construction to provide excellent compatibility with a wide-range of chemicals such as acids, bases and solvents, and the ability to be Gamma sterilized.

The SKS capsule is simple to use, reduces change out times and is leak-free. They make connecting filter capsules easy, reliable and fast with fewer accessories. All units are thermally-sealed and 100% integrity tested. No adhesives or binders are used in the encapsulation process.

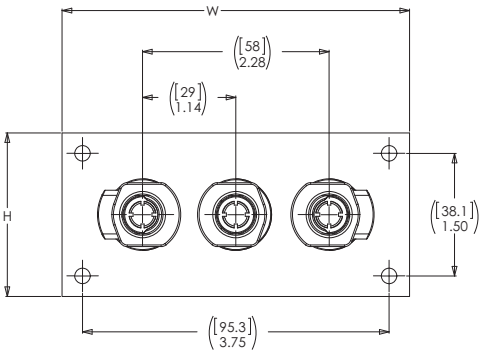
Specifications

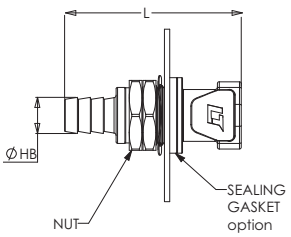
Materials of Construction:	Media:	Carbon fiber, Polypropylene, Nylon, PTFE, Polyethylene, Glass Fiber, and PES, Polyester
	Media Supports:	Polypropylene, Polyester or Nylon
	Cage, Core, End Caps:	Polypropylene, Polyethylene, or Nylon
	Sealing:	Thermally-welded
Fitting Connections:	1/4" Male Quick couplings (Custom adaptors available upon request)	
Nominal Dimensions:	Length: 10", 7.5", 5", 2.5", 1.5" internal filter cartridge (See drawing for actual length) Diameter: 2.8 in. (71.5 mm)	
Available Ratings:	0.04um to 70um (see Ordering Guide)	
Operating Conditions:	Maximum Operating Pressure: Liquid: 5.5 bar (80psi) at 72°F/22°C Gas: 4.1 bar (60psi) at 72°F/22°C Maximum Forward Differential Pressure: 5.0 bar (72 psid) at 72°F/22°C Maximum Reverse Differential Pressure: 2.1 bar (30 psid) at 176°F/80°C Maximum Operating Temperature: PP, Gamma PP & Nylon: 176°F/80°C HDPE: 140°F/60°C Minimum Burst Pressure: 8.3 bar (120 psid) at 72°F/22°C	
Autoclavable & Sanitizable:	Polypropylene and Nylon shell capsules can be autoclaved 25 times at 257°F/125°C for 30 minutes or chemically sanitized in situ using common sanitizing agents or hot water at 194°F/90°C for a limited time (dependent on time and temperature). Capsules must not be in situ steam-sterilized. Polyethylene Shelled Capsules can not be autoclaved.	
Regulatory Compliance:	The filters are constructed with resins and filtration media in compliance with 21CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastic. (Except Black PP). Flammability rating for the PP shell material is UL94HB.	

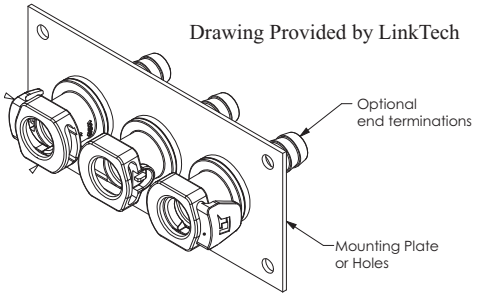


Dimensions (mm)

Patent pending filter design







Note: Socket (Female) fittings are compatible with LinkTech 50AC and 50GP series fitting as well as several other coupling manufactures. You can buy the assembly or individual fittings through ZenPure or LinkTech.

SKS Series Filter Capsules

PureFlo SKS Series Filter Capsule Ordering Guide

PureFlo Capsule Filters	Filter Media	Pore size (Micron)	Length	Inlet Fitting	Outlet Fitting	Options	
SKS = Capsule filter "E" configuration Quick Connect	**C** = Carbon **CN** = Charged Nylon **DP** = Depth Pleated PP **UE** = Polyethylene **F** = PTFE Phobic **G** = Glass Fiber **HF** = Hydrophilic PTFE **HP** = Hi Performance PP Media **M** = PolyPro Membrane **N** = Nylon **NG** = Natural Glass Fiber **NS** = Nylon Screen **P** = PolyPro Media **PS** = PP Screen **RP** = Wrapped PP Media **S** = PES **TS** = Polyester Screen ***** =Empty Shell	**Pick From Pore Size Table**	**H** = 1.5" **S** = 2.5" **L** = 5" **E** = 7.5" **K** = 10" Internal filter length	**2QP** = 1/4" Male Quick Coupling for Plastic latch	**2QP**	**Grades** **Blank** = Standard Grade **-B** = Biological Reduction Grade **-PH** = Pharma Grade **Shell Material** **Blank** = Polypropylene **-NY** = Nylon Shell **-E** = Polyethylene shell and HDPE media support **-GP** = Gamma stabilized PP Shell **-BLK** = Black PP Shell **Vent** **-N** = No vent fitting **Sterilization** **-ETO** = Ethylene Oxide Sterilization	**Prefilter (add before Filter Media in part#)** **G(pore Size)**= Glass Fiber PreFilter **P(pore Size)**= PolyPro Media PreFilter **S(pore Size)** = PES PreFilter **O-Ring for Quick Coupling** **Blank** = O-ring Silicon (Standard) **-OE** = O-ring EPDM **-ON** = O-ring Nitrile **-OV** = O-ring Viton **RFID CHIP** **-RI** = RFID Chip
Example - SKS Series, PES, 0.2um, 2.5" internal filter, 1/4" Male Quick Coupling for Plastic Lach I/O, with Gamma stabilized PP shell is **SKSS020S2QP2QP-GP**							
Example with Pre-Filter - SKS Series, PES 0.8um prefilter, PES 0.2um, 2.5" internal filter, 1/4" Male Quick Coupling for Plastic Lach I/O is **SKSS080S020S2QP2QP**							

PureFlo SKS Series Media & Pore Size options

Pore size (Micron)							
Carbon Fiber (C)	**Charged Nylon (CN)**	**Depth Pleated PP (DP)**	**Polyethylene (UE)**	**PTFE Phillic (HF) & Phobic (F)**	**Glass Fiber (G)**	**Hi Performance PP Media**	**Polypro Membrane (M)**
020 = 0.20 **045** = 0.45 **065** = 0.65 **080** = 0.80 **120** = 1.20	**005**= 0.05 **010** = 0.10 **020** = 0.20 **045** = 0.45 **065** = 0.65 **080** = 0.80 **120** = 1.20	**002** = 0.2 **005** = 0.5 **010** = 1.0 **015** = 1.5 **025** = 2.5 **045** = 4.5 **100** = 10.0 **200** = 20.0	**010** = 0.1 **020** = 0.20 **045** = 0.45 **100** = 1.0	**010** = 0.1 **020** = 0.2 **045** = 0.45 **100** = 1.0 **300** = 3.0 **500** = 5.0 **999** = 10.0	**U** = ULPA **H** = HEPA **002** = 0.2 **004** = 0.45 **005** = 0.5 **010** = 1.0 **030** = 3.0 **050** = 5.0 **100** = 10 **200** = 20 **300** = 30 **Best for Gas Applications**	**001** = 0.1 **002** = 0.2 **003** = 0.3 **006** = 0.6 **010** = 1.0 **030** = 3.0 **050** = 5.0 **100** = 10.0	**010** = 0.1 **020** = 0.2

Nylon (N)	Natural Glass Fiber	Nylon Screen (NS)	PP Media (P)	Polypro Screen (PS)	Wrapped PP Media (RP)	PES (S)	Polyester Screen (TS)
005= 0.05 **010** = 0.10 **020** = 0.20 **045** = 0.45 **065** = 0.65 **080** = 0.80 **120** = 1.20	**005** = 0.5 **010** = 1.0 **030** = 3.0 **050** = 5.0 **Best for Liquid Applications**	**070** = 7 **100** = 10 **200** = 20 **400** = 40 **600** = 60 **10X** = 100 **20X** = 200 **25X** = 250 **30X** = 300	**003** = 0.3 **006** = 0.6 **010** = 1.0 **030** = 3.0 **050** = 5.0 **100** = 10.0 **200** = 20.0 **300** = 30.0 **500** = 50.0 **700** = 70.0	**10X** = 100 **15X** = 150 **20X** = 200 **30X** = 300 **50X** = 500	**003** = 0.3 **006** = 0.6 **010** = 1.0 **030** = 3.0 **050** = 5.0 **100** = 10.0 **200** = 20.0 **300** = 30.0 **500** = 50.0 **700** = 70.0	**005** = 0.05 **010** = 0.1 **020** = 0.2 **045** = 0.45 **065** = 0.65 **080** = 0.8 **120** = 1.2	**050** = 5 **070** = 7 **100** = 10 **200** = 20 **300** = 30 **400** = 40 **550** = 55 **730** = 73

Your Local Distributor:

ZenPure

North & South Americas:
ZenPure Americas, Inc
www.zenpure.com
Info-us@zenpure.com
703-335-9910

All Other Regions:
ZenPure Corporation
www.zenpure.com
info@zenpure.com
+86 571 2288 6800

SK/SZ Capsule Series Vent Options

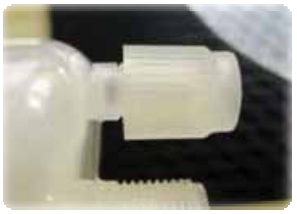
Note—Not all fittings are available on every series

SKP

SKL/SZL

SKV/SZV

SKP



M8 Plug

Luer Lock

Bleed valve

Compression

SK/SZ Capsule Vent and Drain options

Inlet/Outlet Fittings	Vent/ Drain			
	Luer Lock (SKL/SZL)	Bleed Valve (SKV/SZV)	M8 Plug (SKP)	Compression (SKP)
1H = 1/8" Hose barbs	X	X	X	
1N = 1/8" MNPT	X			
1NF = 1/8" FNPT	X			
1Q = 1/8" Male Quick Coupling with Metal latch	X	X		
1QF = 1/8" Female Quick Coupling with Metal latch	X	X		
1QFV = 1/8" Female Valved Quick Coupling with Metal latch	X	X		
1QV = 1/8" Male Valved Quick Coupling with Metal latch	X	X		
2C = 1/4" Compression				X
2H = 1/4" to 1/2" Hose barbs	X		X	
2H = 1/4" Hose barb		X		
2H-FB = 1/4" Hose Barb with filling bell		X		
2HS = 1/4" to 3/8" Hose barbs	X		X	
2LF = Large Female Luer Lock fitting	X			
2N = 1/4" MNPT	X	X	X	
2NF = 1/4" FNPT	X		X	
2P = 1/4" Push to Connect	X	X	X	
2PE = 1/4" Push to Connect Elbow	X	X		
2Q = 1/4" Male Quick Coupling for Metal latch	X	X		
2QF = 1/4" Female Quick Coupling with Metal latch	X	X		
2QFP = 1/4" Female Quick Coupling with Plastic latch	X			
2QFV = 1/4" Female Valved Quick Coupling with Metal latch	X	X		
2QP = 1/4" Male Quick Coupling for Plastic latch	X	X		
2QV = 1/4" Male Valved Quick Coupling with Metal latch	X	X		
2V = 1/4" Walther Quick Connect	X	X		
3C = 3/8" Compression				X
3H = 3/8" Hose Barb	X	X		
3HE = 3/8" Hose Barb Elbow	X		X	
3H-FB = 3/8" Hose Barb with filling bell	X	X		
3NF = 3/8" FNPT	X		X	
4C = 1/2" Compression				X
4H = 1/2" Hose Barb	X	X		
4N = 1/2" MNPT	X		X	
4Q = 1/2" Male Quick Coupling for Plastic latch	X	X		
5H = 5/8" Hose Barb		X		
MT = 1/2" Tri clamps	X	X	X	
TC = 1-1/2" Tri clamp	X	X	X	
TS = Shower Head	X	X		
Option: No Vent and/or Drains				

SZV Series PES Filter Capsules

Pharmaceutical Capsule filter

The PureFlo® SZV Series PES filter capsule have been designed for easy wetability in processes which require critical integrity validation testing. The unit provides excellent compatibility and superior flow per unit area as compared to other membrane capsules. The PureFlo® PES filter capsules have been specially designed for sterilizing in biopharmaceutical applications where bacterial retention is required. The hydrophilic PES membrane does not require pre-wetting agents, thereby eliminating a potential source of contamination. The PES membrane is a low protein-binding media to improve your process.

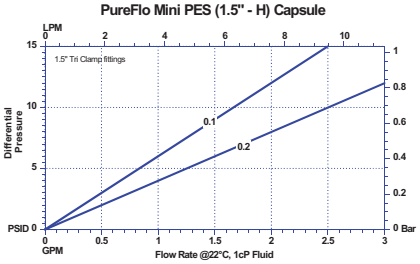
The capsules were specifically designed with easy to wet out structure of PES membrane, PET support and internal Nylon end caps. The units have built-in bleed valves for simple and efficient evacuation of air and liquid. The units are used for filtration of small to medium volumes used for fluid processing in production, laboratory and pilot runs. No adhesives, binders, or surfactants are used in the manufacturing process of these capsules. They are rinsed with pyrogen-free water to reduce extractables and speed production. All filter capsules are 100% integrity-tested to ensure filter performance each and every time out of the package. The capsule can be ordered pre-sterilized.

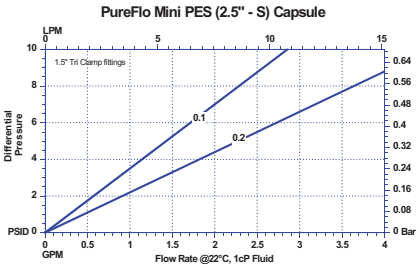
Applications	
Buffers and Media	Fermentation Broths
Product Sterilization	SVP (Small Volume Parenterals)
Bio Bags	Pharmaceuticals
Vaccines	Biologics
Antibiotics	Scale up processing
Water	Serums

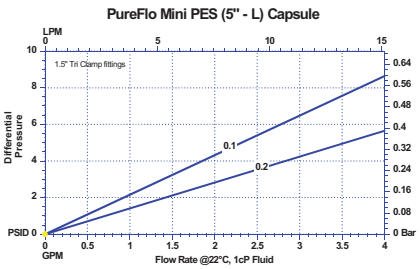
Specifications

Materials of Construction:	Membrane: PES (Polyethersulfone) Membrane Supports: PET (Polyester) Shell, Cage, Core: Gamma stabilized Polypropylene ; End Caps: Nylon O-Rings: Silicon (Standard) Push to Connect Fitting: Acetal-body, EPDM-O-Ring, 304 SS Grip Ring
Fitting Connections:	See ordering guide for the availability. Any inlet/outlet combinations. (Custom adaptors available upon request)
Nominal Dimensions:	Lengths: 1.5 in (51 mm), 2.5 in (80 mm), 5.0 in (136mm), 7.5 in (210mm), 10 in (265mm) Diameter: 2.88 in (73 mm)
Effective Filtration Area:	1.5in: 0.74 ft^2 (690 cm^2), 2.5in: 1.5 ft^2 (1400 cm^2), 5.0in: 2.8 ft^2 (2600 cm^2), 7.5in: 4.3ft^2 (4000cm^2), 10in: 5.6 ft^2 (5200 cm^2)
Operating Conditions:	Maximum Working Pressure: Liquid: 5.5 bar (80psi) at 72°F/22°C Minimum Burst Pressure: 8.3 bar (120psi) at 72°F/22°C Maximum Forward Differential Pressure: 5 bar (72psi) at 72°F/22°C Maximum Reverse Differential Pressure: 3.0 bar (44psi) at 72°F/22°C Maximum Operating Temperature: 176°F/80°C
Regulatory Compliance:	The filters are constructed with polypropylene resins and filtration media in compliance with 21CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastic.

SZV Series PES Filter Capsules







Note - Graphs based on Sanitary fittings.

SPECIFICATIONS (cont.)

Bacterial Retention:

Complete retention of > 10^7organisms/cm^2 of *Brevundimonas diminuta* in accordance with the current HIMA challenge methodology (ASTM F838-05). Validation Guide upon request.

Autoclavable & Sanitizable:

- Autoclaved 25 times at 257°F/125°C for 30 minutes
- Chemically sanitized in situ using common sanitizing agents or hot water at 194° F/90°C for a limited time (dependent on time and temperature).
- Gamma Sterilized up to 50kGy
- Capsules must not be in situ steam-sterilized.

Water Bubble Point Specification:

0.1um: 23psi, 0.16 MPa (IPA)
0.2um: 50psi, 0.35 MPa

Bacterial Endotoxin:

Effluent is non-pyrogenic per USP Bacterial Endotoxin (0.25 EU/ml), determined using Limulus Amebocyte Lysate (LAL) Test.

PureFlo SZV Series PES Filter Capsule (Pharmaceutical grade) Ordering Guide

PureFlo Capsule Filters	Filter Media	Pore size (Micron)	Internal Filter Length	Input Fitting	Output Fitting	Options
SZV	**S** = Polyethersulfone	**004** = 0.04um	**H** = 1.5"	**1H**	**1H** = 1/8" Hose barbs	**Shell Material**
		010 = 0.1um	**S** = 2.5"	**1Q**	**1Q** = 1/8" Male Quick Coupling with Metal latch	**Blank** = Gamma stable polypropylene shell - Standard
		020 = 0.2um	**L** = 5"	**1QF**	**1QF** = 1/8" Female Quick Coupling with Metal latch	
		045= 0.45um	**E** = 7.5"	**1QFV**	**1QFV** = 1/8" Female Valved Quick Coupling with Metal latch	
		065 = 0.65um	**K** = 10"	**1QV**	**1QV** = 1/8" Male Valved Quick Coupling with Metal latch	
		080 = 0.8um		**2H**	**2H** = 1/4" Hose barb	**Vent & Drain**
70mm Diameter Capsule with Bleed Valve		**120** =1.2um			**2H-FB** = 1/4" Hose Barb with filling bell or **-FC** with Cap	**-N**= No vent or drain fittings
				2N	**2N** = 1/4" MNPT	**-NI** = No vent or drain inlet fitting
				2P	**2P** = 1/4" Push to Connect	**-NO** = No vent or drain Outlet fitting
				2PE	**2PE** = 1/4" Push to Connect Elbow	
				2Q	**2Q** = 1/4" Male Quick Coupling for Metal latch	**O-Rings**
				2QF	**2QF** = 1/4" Female Quick Coupling with Metal latch	**Blank** = O-ring Silicone (Standard)
				2QFV	**2QFV** = 1/4" Female Valved Quick Coupling with Metal latch	**-OE** = O-ring EPDM
				2QP	**2QP** = 1/4" Male Quick Coupling for Plastic latch	**-ON** = O-ring Nitrile
				2QV	**2QV** = 1/4" Male Valved Quick Coupling with Metal latch	**-OV** = O-ring Viton
				2V	**2V** = 1/4" Walther Quick Connect	**Prefilter (add before Filter Media in part#)**
				3H	**3H** = 3/8" Hose Barb	
					3H-FB = 3/8" Hose Barb with filling bell or **-FC** with Cap	**G(pore Size)**= Glass Fiber PreFilter
				4H	**4H** = 1/2" Hose Barb	
				4Q	**4Q** = 1/2" Male Quick Coupling for Plastic latch	**P(pore Size)**= PolyPro Media PreFilter
				5H	**5H** = 5/8" Hose Barb	
				MT	**MT** = 1/2" Tri clamps	**S(pore Size)** = PES PreFilter
				TC	**TC** = 1-1/2" Tri clamp	
					TS = Shower Head	

Example - PureFlo SZV Series Capsule, PES , 2.5" internal filter, 0.2 micron, with 1.5" Tri-Clamp fittings I/O, would be **SZVS020STCTC**

Quick Couplings are molded on. Female Quick Coupling with Plastic latch will be threaded on. Compatible with CPC (Colder), LinkTech and others. * - 2H or 3H with filling bell only

Your Local Distributor:

ZenPure

North & South Americas:
ZenPure Americas, Inc
www.zenpure.com
Info-us@zenpure.com
703-335-9910

All Other Regions:
ZenPure Corporation
www.zenpure.com
info@zenpure.com
+86 571 2288 6800

SKV Series PES Capsules
(PES/PP Construction)

Pharmaceutical Grade Capsule

The PureFlo® SKV Series PES filter capsule with all-polypropylene construction provides excellent chemical compatibility and superior flow per unit area as compared to other membrane capsules. The PureFlo® PES filter capsules have been specially designed for sterilizing in biopharmaceutical applications. The hydrophilic PES membrane does not require pre-wetting agents, thereby eliminating a potential source of contamination. The PES membrane is a low protein-binding media.

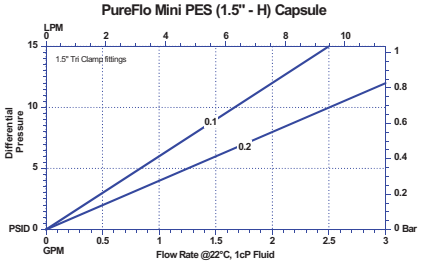
The capsules were designed with built-in bleed valves for simple and efficient evacuation of air and liquid. The units are used for filtration of small to medium volumes used in production, laboratory and pilot runs. No adhesives, binders, or surfactants are used in the manufacturing process of these capsules. They are rinsed with pyrogen-free water to reduce extractables and downtime. All filter capsules are 100% integrity-tested to ensure filter performance each and every time out of the package. PureFlo SKV Series PES filter capsules are well-suited for pharmaceutical applications where superior flow and bacterial retention is required. The capsule can be ordered pre-sterilized.

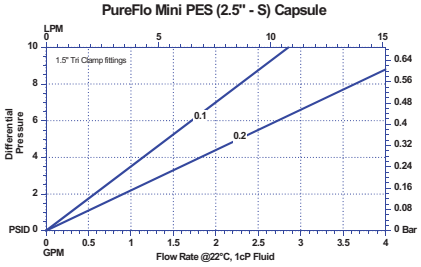
Applications	
Buffers and Media	Fermentation Broths
Product Sterilization	SVP (Small Volume Parenterals)
BioBags	Pharmaceuticals
Vaccines	Biologics
Antibiotics	Scale-up Processing
Water	Serums

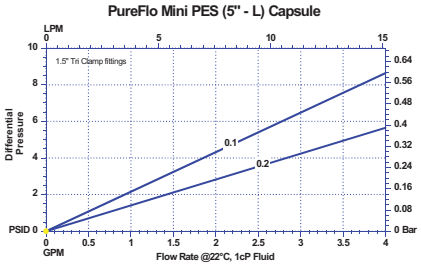
Specifications

Materials of Construction:	Media: PES (Polyethersulfone) Media Supports: Polypropylene Cage, Core, End Caps: Polypropylene Valve O-Rings: Silicon (standard); Sealing: Thermally welded Push to Connect Fitting: Acetel-body, EPDM-O-Ring, 304 SS Grip Ring
Fitting Connections:	See ordering guide for the availability. Any inlet/outlet combinations. (Custom adaptors available upon request)
Nominal Dimensions:	Lengths: 1.5 in (51 mm), 2.5 in (80 mm), 5.0 in (136 mm), 7.5 in (210 mm), 10 in (265 mm) Diameter: 2.88 in (73 mm)
Effective Filtration Area:	1.5in: 0.7 ft^2 (650 cm^2), 2.5in: 1.4 ft^2 (1300 cm^2), 5.0in: 2.8 ft^2 (2600 cm^2), 7.5in: 4.2ft^2 (3900 cm^2), 10in: 5.6 ft^2 (5200 cm^2)
Operating Conditions:	Maximum Forward Differential Pressure: Liquid: 5.5 bar (80 psi) at 22 °C Gas: 4.1 bar (59.5 psi) at 22 °C Minimum Burst Pressure: 8.3 bar (120 psid) at 22 °C Maximum Forward Differential Pressure: 5 bar (72.5 psid) at 22 °C Maximum Reverse Differential Pressure: 3.0 bar (43.5 psid) at 22 °C Maximum Operating Temperature: PP & Gamma PP: 80 °C HDPE: 60 °C
Regulatory Compliance:	The filters are constructed with polypropylene resins and filtration media in compliance with 21 CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastic.

SKV Series PES Capsules







Note - Graphs based on Sanitary fittings.

SPECIFICATIONS (cont.)

Bacterial Retention:

Complete retention of > 10^7 organisms/cm^2 of *Brevundimonas diminuta* in accordance with the current HIMA challenge methodology (ASTM F838-05). Validation Guide upon request.

Autoclavable & Sanitizable:

Capsules can be autoclaved 25 times at 125 °C (257°F) for 30 minutes or chemically sanitized in situ using common sanitizing agents or hot water at 90 °C (194°F) for a limited time (dependent on time and temperature). Capsules must not be in situ steam-sterilized.

Water Bubble Point Specification:

0.1 µm: 23 psi (0.16 MPa) in IPA
0.2 µm: 50 psi (0.34 MPa)

Bacterial Endotoxin:

Effluent is non-pyrogenic per USP Bacterial Endotoxin (0.25 EU/ml), determined using Limulus Amebocyte Lysate (LAL) Test.

PureFlo SKV Series PES Capsule (Pharmaceutical grade) Ordering Guide

PureFlo Capsule Filters	Filter Media	Pore size (Micron)	Internal Filter Length	Input Fitting	Output Fitting	Options	
SKV 70mm Diameter Capsule with Bleed Valve	**S** = PES	**004** = 0.04 **010** = 0.1 **020** = 0.2 **045**= 0.45 **065** = 0.65 **080** = 0.8 **120** =1.2	**H** = 1.5" **S** = 2.5" **L** = 5" **E** = 7.5" **K** = 10"	**1H** = 1/8" Hose barbs **1Q** = 1/8" Male Quick Coupling with Metal latch **1QF** = 1/8" Female Quick Coupling with Metal latch **1QFV** = 1/8" Female Valved Quick Coupling with Metal latch **1QV** = 1/8" Male Valved Quick Coupling with Metal latch **2H** = 1/4" to 1/2" Hose barbs, or 1/4" Hose barb **2N** = 1/4" MNPT **2P** = 1/4" Push to Connect **2PE** = 1/4" Push to Connect Elbow **2Q** = 1/4" Male Quick Coupling for Metal latch **2QF** = 1/4" Female Quick Coupling with Metal latch **2QFV** = 1/4" Female Valved Quick Coupling with Metal latch **2QP** = 1/4" Male Quick Coupling for Plastic latch **2QV** = 1/4" Male Valved Quick Coupling with Metal latch **2V** = 1/4" Walther Quick Connect **3H** = 3/8" Hose Barb **4H** = 1/2" Hose Barb **4Q** = 1/2" Male Quick Coupling for Plastic latch **5H** = 5/8" Hose Barb **MT** = 1/2" Tri clamps **TC** = 1-1/2" Tri clamp	**1H** = 1/8" Hose barbs **1Q** = 1/8" Male Quick Coupling with Metal latch **1QF** = 1/8" Female Quick Coupling with Metal latch **1QFV** = 1/8" Female Valved Quick Coupling with Metal latch **1QV** = 1/8" Male Valved Quick Coupling with Metal latch **2H** = 1/4" to 1/2" Hose barbs, or 1/4" Hose barb **2H-FB** = 1/4" Hose Barb with filling bell **2N** = 1/4" MNPT **2P** = 1/4" Push to Connect **2PE** = 1/4" Push to Connect Elbow **2Q** = 1/4" Male Quick Coupling for Metal latch **2QF** = 1/4" Female Quick Coupling with Metal latch **2QFV** = 1/4" Female Valved Quick Coupling with Metal latch **2QP** = 1/4" Male Quick Coupling for Plastic latch **2QV** = 1/4" Male Valved Quick Coupling with Metal latch **2V** = 1/4" Walther Quick Connect **3H** = 3/8" Hose Barb **3H-FB** = 3/8" Hose Barb with filling bell **4H** = 1/2" Hose Barb **4Q** = 1/2" Male Quick Coupling for Plastic latch **5H** = 5/8" Hose Barb **MT** = 1/2" Tri clamps **TC** = 1-1/2" Tri clamp **TS** = Shower Head	**Shell Material** **Blank** = Polypro construction **-E** = Polyethylene shell and HDPE media support for gamma sterilization **-GP** = Gamma stable polypropylene shell **-NY** = Nylon Shell **Sterilization** **-ETO =** Ethylene oxide sterilization **Vent & Drain** **-N**= No vent or drain fittings **-NI** = No vent or drain inlet fitting **-NO** = No vent or drain Outlet fitting	**O-Ring for Quick Coupling** **-OE** = O-ring EPDM **-ON** = O-ring Nitrile **-OV** = O-ring Viton **Blank** = O-ring Silicon (Standard) **Prefilters** **-G(pore Size)**= Glass Fiber PreFilter **-P(pore Size)**= PolyPro Media PreFilter **-S(pore Size)** = PES PreFilter **Filling Bells** **-FB** = Filling Bell* **-FC** = Filling Bell w/Cap* Silicone O-Rings for Bleed Valve and Quick Coupling fittings
Example - PureFlo SKV Series Capsule, PES , 2.5" internal filter, 0.2 micron, with 1.5" Tri-Clamp fittings I/O, would be SKVS020STCTC							

Note: Quick Couplings are molded on. Female Quick Coupling with Plastic latch will be threaded on. Compatible with CPC (Colder), LinkTech and others. * - 2H or 3H with filling bell only

Your Local Distributor:

ZenPure

North & South Americas:
ZenPure Americas, Inc
www.zenpure.com
Info-us@zenpure.com
703-335-9910

All Other Regions:
ZenPure Corporation
www.zenpure.com
info@zenpure.com
+86 571 2288 6800

ISO Certified 9001 14001

TÜV MANAGEMENT SERVICE ISO 13485

PureFlo® PES Capsules
(SZL) Pharmaceutical Grade PES Filter

The PureFlo® SZL Series PES filter capsule have been designed for improved wetability in processes which require critical integrity validation testing. The filter capsule in its all-polypropylene construction provides excellent chemical compatibility and superior flow per unit area as compared to other membrane capsules. PureFlo® PES Filter Capsules have been specially designed for sterilizing in biopharmaceutical applications. Its hydrophilic PES membrane does not require pre-wetting agents, thereby eliminating a potential source of contamination. The PES membrane is low protein-binding.

The capsules were specially designed with an easy-to-wet-out structure of PES membrane, PET support and internal Nylon end caps. The capsules were designed for simple and efficient filtration of small volumes used in low-flow application, laboratory, and pilot runs. No adhesives, binders, or surfactants are used in the manufacturing process of these capsules. They are rinsed with pyrogen-free water to reduce extractables and downtime. All filter capsules are 100% integrity-tested to ensure filter performance each and every time out of the package. The capsule can be ordered pre-sterilized.

Specifications:

Regulatory Compliance:
Manufactured from materials that conform to the requirements of 21 CFR Part 177 of the U.S. Code of Federal Regulations and USP Class VI Biological test for Plastics

Bacterial Retention:
0.2 µm Pore Size achieves complete retention of > 10^7 CFU/cm^2 of *Brevundimonas diminuta* in accordance with ASTM F838-05. Validation Guide upon request.

Autoclavable & Sanitizable:
- Autoclaved 25 times at 257 °F/125 °C for 30 minutes
- Chemically sanitized in situ using common sanitizing agents or hot water at 194 °F/90 °C for a limited time (dependent on time and temperature).
- Gamma Sterilizable up to 50 kGy
- Capsules must not be in situ steam-sterilized.

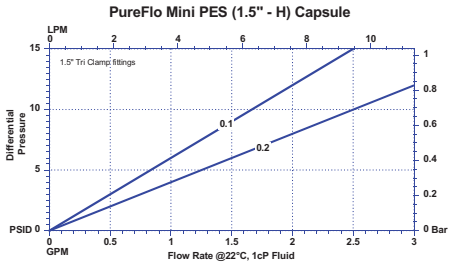
Water Bubble Point Specification:
0.1 µm : 23 psi (0.16 MPa) in IPA
0.2 µm : 50 psi (0.35 MPa)

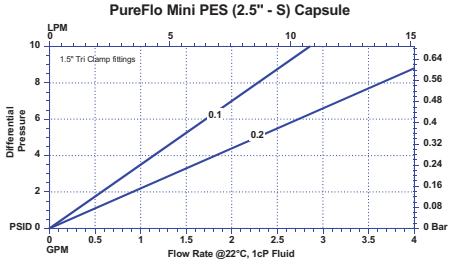
Bacterial Endotoxin:
Effluent is non-Pyrogenic per USP Bacterial Endotoxin (0.25 EU/ml), determined using Limulus Amebocyte Lysate (LAL) test.

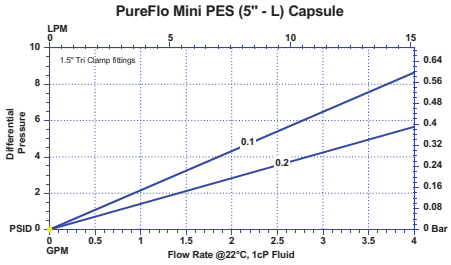
Applications	
Culture Media	Fermentation Broths
Serums	SVP (Small volume parenterals)
Vaccines	Product Sterilization
Reagents & Buffers	Biologics
Antibiotics	Beverages
WFI-POU	Scale-up processes

Features	Benefits
■ Hydrophilic PES Membrane	■ Inherently hydrophilic for easy wet-ability for integrity testing ■ High flow rate reduces processing time ■ Low protein-binding membrane maximizing yields ■ Biologically inert membrane ■ Bacterially retentive to produce sterile solutions
■ Small, Compact Design	■ Simple, quick, and efficient filtration ■ Low hold-up volume reduces product waste
■ Low Levels of Filter Extractables	■ No adhesives, binders, or surfactants are used during manufacturing resulting in superior downstream cleanliness ■ All capsules are rinsed with pyrogen-free water

PureFlo® PES Filter Capsules







Note - Graphs based on Sanitary

Materials of Construction

Membrane: Hydrophilic Polyethersulfone
Membrane Supports: PET
End Caps: Nylon
Cage, Core, Shell: Polypropylene

Fitting Connections

NPT, Sanitary Flange, Hose Barb, Coupling
Vent/Drain - Luer Lock, Plug, Bleed Valve

Dimensions (Nominal)

Length: 1.5 in (38 mm) Length: 2.5 in (63.5 mm)
Length: 5.0 in (127 mm) Length: 7.5 in (191 mm)
Length: 10 in (254 mm)
Diameter: 2.88 in (73 mm)

Effective Filtration Area

1.5 in - 0.74 ft^2 (690 cm^2) 2.5 in - 1.5 ft^2 (1400 cm^2)
5.0 in - 2.8 ft^2 (2600 cm^2) 7.5 in - 4.3 ft^2 (4000 cm^2)
10 in - 5.6 ft^2 (5200 cm^2)

Operating Conditions

Maximum Operating Pressure:
Liquid: 5.5 bar (80 psi) at 22 °C
Gas: 4.1 bar (59.5 psi) at 22 °C
Minimum Burst Pressure:
8.3 bar (120 psi) at 22 °C
Maximum Forward Differential Pressure:
5 bar (72.5 psi) at 22 °C
Maximum Reverse Differential Pressure:
2.1 bar (30.5 psi) at 22 °C
Maximum Operating Temperature:
PP & Gamma PP: 80 °C
HDPE: 60 °C

PureFlo PES Capsule (Pharmaceutical grade) Ordering Guide

PureFlo Capsule Filters	Vent & Drain Fitting	Filter Media	Pore size (Micron)	Length	Input Fitting	Output Fitting	Options
SZ Pharma grade PP Shell & Nylon end-caps Polyester support Polypropylene Cage & Core Internal Silicone O-ring 70mm Diameter Capsule with Bleed Valve	**L** = Female Luer Lock **P** = M8 Threaded Plug - Limited options	**S** = PES	**004** = 0.04 **010** = 0.1 **020** = 0.2 **045** = 0.45 **065** = 0.65 **080** = 0.8 **120** =1.2	**H** = 1.5" **S** = 2.5" **L** = 5" **E** = 7.5" **K** = 10"	**1C** **1H** **1N** **1NF** **1Q** **1QF** **1QFV** **1QV** **2H** **2HS** **2LF** **2N** **2NF** **2P** **2PE** **2Q** **2QF** **2QFP** **2QFV** **2QP** **2QV** **2V** **3H** **3HE** **3NF** **4H** **4N** **4Q** **MT** **TC** **TS**	**1C** = 1/8" Compression **1H** = 1/8" Hose barbs **1N** = 1/8" MNPT **1NF** = 1/8" FNPT **1Q** = 1/8" Male Quick Coupling with Metal latch **1QF** = 1/8" Female Quick Coupling with Metal latch **1QFV** = 1/8" Female Valved Quick Coupling with Metal latch **1QV** = 1/8" Male Valved Quick Coupling with Metal latch **2H** = 1/4" to 1/2" Hose barbs **2HS** = 1/4" to 3/8" Hose barbs **2LF** = Large Female Luer Lock fitting **2N** = 1/4" MNPT **2NF** = 1/4" FNPT **2P** = 1/4" Push to Connect **2PE** = 1/4" Push to Connect Elbow **2Q** = 1/4" Male Quick Coupling for Metal latch **2QF** = 1/4" Female Quick Coupling with Metal latch **2QFP** = 1/4" Female Quick Coupling with Plastic latch **2QFV** = 1/4" Female Valved Quick Coupling with Metal latch **2QP** = 1/4" Male Quick Coupling for Plastic latch **2QV** = 1/4" Male Valved Quick Coupling with Metal latch **2V** = 1/4" Walther Quick Connect **3H** = 3/8" Hose Barb **3HE** = 3/8" Hose Barb Elbow **3H-FB** = 3/8" Hose Barb with filling bell or **-FC** with Cap **3NF** = 3/8" FNPT **4H** = 1/2" Hose Barb **4N** = 1/2" MNPT **4Q** = 1/2" Male Quick Coupling for Plastic latch **MT** = 1/2" Tri clamps **TC** = 1-1/2" Tri clamp **TS** = Shower Head	**Shell Material** **Blank** = Gamma stable polypropylene shell Standard **-NY** = Nylon Construction **-E** = Polyethylene shell and HDPE media support for gamma sterilization **Vent & Drain** **-NI** = No vent or drain Inlet fitting **-NO** = NO vent or drain Outlet fitting **-N** = No vent or drain fittings **O-Ring for Quick Coupling** **-OE** = O-ring EPDM **-ON** = O-ring Nitrile **-OV** = O-ring Viton **Blank** = O-ring Silicon (Standard) **Prefilter (add before Filter Media in part#)** **G(pore Size)**= Glass Fiber PreFilter **P(pore Size)**= PolyPro Media PreFilter **S(pore Size)** = PES PreFilter
Example - 0.2um PES Pharma Grade, Luer Lock Vent/Drain, 1.5" internal filter, 1/4" MNPT I/O is **SZLS020H2N2N**							

Quick Couplings are molded. Female Quick Coupling with Plastic latch will be threaded on, compatible with CPC (Colder), LinkTech and others.

Your Local Distributor:

ZenPure

North & South Americas:
ZenPure Americas, Inc
www.zenpure.com
Info-us@zenpure.com
703-335-9910

All Other Regions:
ZenPure Corporation
www.zenpure.com
info@zenpure.com
+86 571 2288 6800

ISO Certified 9001 14001

TÜV MANAGEMENT SERVICE ISO 13485

PureFlo® PES Capsules

(High Performance Encapsulated Pharmaceutical Grade PES Filter)

The PureFlo® PES filter capsule in its all-polypropylene construction provides excellent chemical compatibility and superior flow per unit area as compared to other membrane capsules. PureFlo® PES Filter Capsules have been specially designed for sterilizing in biopharmaceutical applications. Its hydrophilic PES membrane does not require pre-wetting agents, thereby eliminating a potential source of contamination. The PES membrane is low protein-binding.

The capsules were designed for simple and efficient filtration of small volumes used in low-flow application, laboratory, and pilot runs. No adhesives, binders, or surfactants are used in the manufacturing process of these capsules. They are rinsed with pyrogen-free water to reduce extractables and downtime. All filter capsules are 100% integrity-tested to ensure filter performance each and every time out of the package. PureFlo® PES filter capsules are well-suited for pharmaceutical applications where superior flow and bacterial retention is required. The capsule can be ordered pre-sterilized.

Specifications:

Regulatory Compliance:

Manufactured from materials that conform to the requirements of 21 CFR Part 177 of the U.S. Code of Federal Regulations and USP Class VI Biological test for Plastics

Bacterial Retention:

0.2 µm Pore Size achieves complete retention of > 10^7 CFU/cm^2 of *Brevundimonas diminuta* in accordance with ASTM F838-05. Validation Guide upon request.

Autoclavable & Sanitizable:

- Autoclaved 25 times at 257 °F/125 °C for 30 minutes
- Chemically sanitized in situ using common sanitizing agents or hot water at 194 °F/90 °C for a limited time (dependent on time and temperature).
- Gamma Sterilizable up to 50 kGy
- Capsules must not be in situ steam-sterilized.

Water Bubble Point Specification:

0.1 µm : 23 psi (0.16 MPa) in IPA
0.2 µm : 50 psi (0.35 MPa)

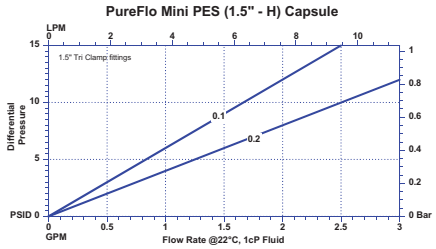
Bacterial Endotoxin:

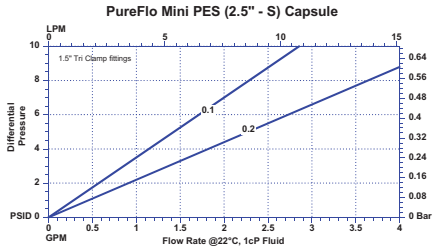
Effluent is non-Pyrogenic per USP Bacterial Endotoxin (0.25 EU/ml), determined using Limulus Amebocyte Lysate (LAL) test.

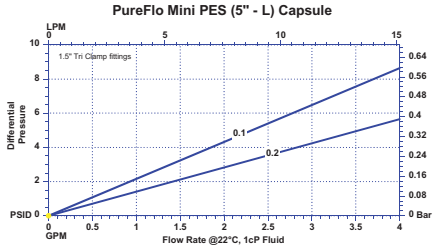
Applications	
Culture Media	Fermentation Broths
Serums	SVP (Small Volume Parenterals)
Vaccines	Product Sterilization
Reagents & Buffers	Biologics
Antibiotics	Beverages
WFI-POU	Scale-up Processes

Features	Benefits
■ Hydrophilic PES Membrane	■ Inherently hydrophilic for cleaner filtrates ■ High flow rate reduces processing time ■ Low protein-binding membrane maximizing yields ■ Biologically inert membrane ■ Bacterial retentive to produce sterile solutions
■ Small, Compact Design	■ Simple, quick, and efficient filtration ■ Low hold-up volume reduces product waste
■ Low Filter Extractables	■ No adhesives, binders, or surfactants are used during manufacturing resulting in superior downstream cleanliness ■ All capsules are rinsed with pyrogen-free water

PureFlo® PES Capsules







Note - Graphs based on Sanitary fittings.

Materials of Construction

Membrane: Hydrophilic Polyethersulfone
Membrane Supports: Polypropylene
Cage, Core, End Caps: Polypropylene

Fitting Connections

NPT, Sanitary Flange, Hose Barb, Coupling
Vent/Drain - Luer Lock, Plug, Bleed Valve

Dimensions (Nominal)

Length: 1.5 in (38 mm), 2.5 in (63.5 mm)
5.0 in (127 mm), 7.5 in (191 mm), 10 in (254 mm)
Diameter: 2.88 in (73 mm)

Effective Filtration Area

1.5 in - 0.7 ft^2 (650 cm^2) 2.5 in - 1.4 ft^2 (1300 cm^2)
5.0 in - 2.8 ft^2 (2600 cm^2) 7.5 in - 4.2 ft^2 (3900 cm^2)
10 in - 5.6 ft^2 (5200 cm^2)

Operating Conditions

Maximum Operating Pressure:
Liquid: 5.5 bar (80 psi) at 22 °C
Gas: 4.1 bar (59.5 psi) at 22 °C
Minimum Burst Pressure:
8.3 bar (120 psi) at 22 °C
Maximum Forward Differential Pressure:
5 bar (72.5 psi) at 22 °C
Maximum Reverse Differential Pressure:
2.1 bar (30.5 psi) at 22 °C
Maximum Operating Temperature:
PP & Gamma PP: 80 °C
HDPE: 60 °C

PureFlo® PES Capsule (Pharmaceutical grade) Ordering Guide

PureFlo Capsule Filters	Vent & Drain Fitting	Filter Media	Pore size (Micron)	Length	Input Fitting	Output Fitting	Options	
SK 70mm Diameter Capsule	**L** = Female Luer Lock **P** = M8 Threaded Plug - Limited options	**S** = PES	**004** = 0.04um **010** = 0.1um **020** = 0.2um **050**= 0.45um **065** = 0.65um **080** = 0.8um **120** =1.2um	**H** = 1.5" **S** = 2.5" **L** = 5" **E** = 7.5" **K** = 10"	**1C** **1H** **1N** **1NF** **1Q** **1QF** **1QFV** **1QV** **2H** **2HS** **2LF** **2N** **2NF** **2P** **2PE** **2Q** **2QF** **2QFP** **2QFV** **2QP** **2QV** **2V** **3H** **3HE** **3NF** **4H** **4N** **4Q** **MT** **TC**	**1C** = 1/8" Compression **1H** = 1/8" Hose barbs **1N** = 1/8" MNPT **1NF** = 1/8" FNPT **1Q** = 1/8" Male Quick Coupling with Metal latch **1QF** = 1/8" Female Quick Coupling with Metal latch **1QFV** = 1/8" Female Valved Quick Coupling with Metal latch **1QV** = 1/8" Male Valved Quick Coupling with Metal latch **2H** = 1/4" to 1/2" Hose barbs **2HS** = 1/4" to 3/8" Hose barbs **2LF** = Large Female Luer Lock fitting **2N** = 1/4" MNPT **2NF** = 1/4" FNPT **2P** = 1/4" Push to Connect **2PE** = 1/4" Push to Connect Elbow **2Q** = 1/4" Male Quick Coupling for Metal latch **2QF** = 1/4" Female Quick Coupling with Metal latch **2QFP** = 1/4" Female Quick Coupling with Plastic latch **2QFV** = 1/4" Female Valved Quick Coupling with Metal latch **2QP** = 1/4" Male Quick Coupling for Plastic latch **2QV** = 1/4" Male Valved Quick Coupling with Metal latch **2V** = 1/4" Walther Quick Connect **3H** = 3/8" Hose Barb **3HE** = 3/8" Hose Barb Elbow **3H-FB** = 3/8" Hose Barb with filling bell or **-FC** with Cap **3NF** = 3/8" FNPT **4H** = 1/2" Hose Barb **4N** = 1/2" MNPT **4Q** = 1/2" Male Quick Coupling for Plastic latch **MT** = 1/2" Tri clamps **TC** = 1-1/2" Tri clamp **TS** = Shower Head	**Grade** **-PH** = Pharma Grade **Shell Material** **Blank** = Polypropylene **-GP** = Gamma stable polypropylene shell **-NY** = Nylon Construction **-E** = Polyethylene shell and HDPE media support for gamma sterilization **Vent & Drain** **-NI** = No vent or drain Inlet fitting **-NO** = NO vent or drain Outlet fitting **-N** = No vent or drain fittings **Sterilizaion** **-ETO =** Ethylene oxide sterilization	**O-Ring for Quick Coupling** **-OE** = O-ring EPDM **-ON** = O-ring Nitrile **-OV** = O-ring Viton **Blank** = O-ring Silicon (Standard) **Prefilters** **-G(pore Size)**= Glass Fiber PreFilter **-P(pore Size)**= PolyPro Media PreFilter **-S(pore Size)** = PES PreFilter

Example - Capsule, Luer Lock V/D, 2.5" Internal filter, 0.2 micron PES Capsule, Pharma Grade, with 1.5" Tri-Clamp fittings would be **SKLS020STCTC-PH**

Quick Couplings are molded, Female Quick Coupling with Plastic latch will be threaded on, compatible with CPC (Colder), LinkTech and others.

Your Local Distributor:

ZenPure

North & South Americas:
ZenPure Americas, Inc
www.zenpure.com
Info-us@zenpure.com
703-335-9910

All Other Regions:
ZenPure Corporation
www.zenpure.com
info@zenpure.com
+86 571 2288 6800

PureFlo® Biological Reduction Grade Capsules

A High performance encapsulated PES membrane filter

The PureFlo® Biological Reduction Grade filter capsule in its all-polypropylene construction provides excellent chemical compatibility and superior flow per unit area as compared to other membrane capsules. PureFlo® Biological grade capsules have been designed for bioreduction in pharmaceutical applications. Its hydrophilic PES membrane does not require pre-wetting agents, thereby eliminating a potential source of contamination. The PES membrane is low protein-binding.

The capsules were designed for simple and efficient filtration of small volumes used in low-flow application, laboratory, and pilot runs. No adhesives, binders, or surfactants are used in the manufacturing process of these capsules. They are rinsed with pyrogen-free water to reduce extractables and downtime. All filter capsules are 100% integrity tested to ensure filter performance each and every time out of the package. PureFlo PES filter capsules are well-suited for pharmaceutical applications where superior flow and bacterial retention is required.

Applications	
Culture media	Fermentation Broths
Serums	SVP (Small volume parenterals)
Vaccines	Bio Reduction
Reagents & Buffers	Biologics
Antibiotics	Beverages
WFI-POU	Scale-up processes

Specifications:

Regulatory Compliance:

Manufactured from materials that conform to the requirements of 21 CFR Part 177 of the U.S. Code of Federal Regulations and USP Class VI Biological test for Plastics

Autoclavable & Sanitizable:

- Autoclaved 25 times at 257 °F/125 °C for 30 minutes
- Chemically sanitized in situ using common sanitizing agents or hot water at 194 °F/90 °C for a limited time (dependent on time and temperature).
- Capsules must not be in situ steam-sterilized.

Water Bubble Point Specification:

0.1 µm : 23 psi (0.16 MPa) in IPA
0.2 µm : 50 psi (0.35 MPa)
0.45µm : 33 psi (0.23 MPa)

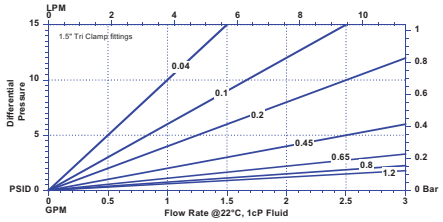
Bacterial Endotoxin:

Effluent is non-Pyrogenic per USP Bacterial Endotoxin (0.25 EU/ml), determined using Limulus Amebocyte Lysate (LAL) test.

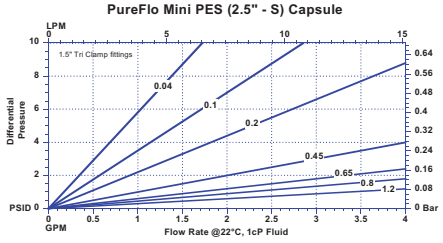
Features	Benefits
■ Hydrophilic PES Membrane	■ Inherently hydrophilic for cleaner filtrates ■ High flow rate reduces processing time ■ Low protein-binding membrane maximizing yields ■ Biologically inert membrane ■ Bacterial retentive to produce sterile solutions
■ Small Compact Design	■ Simple, quick, and efficient filtration ■ Low hold-up volume reduces product waste
■ Low Filter Extractables	■ No adhesives, binders, or surfactants are used during manufacturing resulting in superior downstream cleanliness ■ All capsules are rinsed with pyrogen-free water

PureFlo® Biological Reduction Grade Capsules

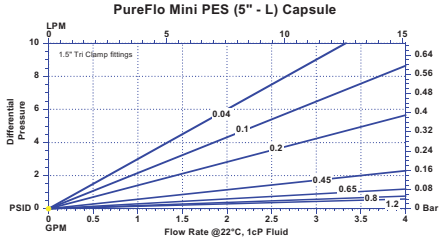
PureFlo Mini PES (1.5" - H) Capsule



PureFlo Mini PES (2.5" - S) Capsule



PureFlo Mini PES (5" - L) Capsule



Note - Graphs based on Sanitary

Materials of Construction

Membrane: Hydrophilic Polyethersulfone
Membrane Supports: Polypropylene
Cage, Core, End Caps: Polypropylene

Fitting Connections

NPT, Sanitary Flange, Hose Barb, Couplings
Vent/Drain - Luer Lock with Cap

Dimensions (nominal)

Length: 1.5 in (68 mm) Length: 2.5 in (98 mm)
Length: 5.0 in (153 mm) Length: 7.5 in (221 mm)
Length: 10 in (276mm)
Diameter: 2.88 in (73 mm)

Effective Filtration Area

1.5 in - 0.7 ft^2 (650 cm^2) 2.5 in - 1.4 ft^2 (1300 cm^2)
5.0 in - 2.8 ft^2 (2600 cm^2) 7.5 in - 4.2 ft^2 (3900 cm^2)
10 in - 5.6 ft^2 (5200 cm^2)

Operating Conditions

Maximum Operating Pressure:
Liquid: 5.5 bar (80psi) at 72°F/22°C
Gas: 4.1 bar (60psi) at 72°F/22°C
Minimum Burst Pressure:
8.3 bar (120psi) at 72°F/22°C
Maximum Forward Differential Pressure:
4.11 bar (60psi) at 72°F/22°C
Maximum Reverse Differential Pressure:
2.1 bar (30psi) at 72°F/22°C
Maximum Operating Temperature:
PP & Gamma PP: 176°F/80°C

PureFlo PES Filter Capsule (Biological Grade) Ordering Guide

PureFlo Capsule Filters	Filter Media	Pore size (Micron)	Length	Inlet Fitting	Outlet Fitting	Options
		004 = 0.04	**H** = 1.5"	**1C**	**1C** = 1/8" Compression	**Grade**
SKL = Capsule filter Standard grade Luer Lock Vent/Drain	**S** = PES	**010** = 0.1	**S** = 2.5"	**1H**	**1H** = 1/8" Hose barbs	**Blank** = Standard Grade
		020 = 0.2	**L** = 5"	**1N**	**1N** = 1/8" MNPT	**-B** = Biological Reduction Grade
SKP= Capsule filter Standard grade M8 Plug vent/ Drain Limited Options		**045** = 0.45	**E** = 7.5"	**1NF**	**1NF** = 1/8" FNPT	**Shell Material**
		065 = 0.65	**K** = 10"	**1Q**	**1Q** = 1/8" Male Quick Coupling with Metal latch	**Blank** = Polypropylene
		080 = 0.8		**1QF**	**1QF** = 1/8" Female Quick Coupling with Metal latch	**-GP** = Gamma stable polypropylene shell
		120 = 1.2		**1QFV**	**1QFV** = 1/8" Female Valved Quick Coupling with Metal latch	**-NY** = Nylon Construction
				1QV	**1QV** = 1/8" Male Valved Quick Coupling with Metal latch	**-E** = Polyethylene shell and HDPE media support for gamma sterilization
				2C	**2C** = 1/4" Compression	**Vent & Drain**
				2H	**2H** = 1/4" to 1/2" Hose barbs	**-N** = No vent or Drain
				2HS	**2HS** = 1/4" to 3/8" Hose barbs	**-NI** = No vent or Drain
				2LF	**2LF** = Large Female Luer Lock fitting	**-NO** = No vent or Drain
				2N	**2N** = 1/4" MNPT	**Sterilization**
				2NF	**2NF** = 1/4" FNPT	**-ETO** = Ethylene Oxide
				2P	**2P** = 1/4" Push to Connect	
				2PE	**2PE** = 1/4" Push to Connect Elbow	
				2Q	**2Q** = 1/4" Male Quick Coupling for Metal latch	
				2QF	**2QF** = 1/4" Female Quick Coupling with Metal latch	
				2QFP	**2QFP** = 1/4" Female Quick Coupling with Plastic latch	
				2QFV	**2QFV** = 1/4" Female Valved Quick Coupling with Metal latch	
				2QP	**2QP** = 1/4" Male Quick Coupling for Plastic latch	
				2QV	**2QV** = 1/4" Male Valved Quick Coupling with Metal latch	
				2V	**2V** = 1/4" Walther Quick Connect	
				3C	**3C** = 3/8" Compression	
				3H	**3H** = 3/8" Hose Barb	
				3HE	**3HE** = 3/8" Hose Barb Elbow	
					3H-FB = 3/8" Hose Barb with filling bell or **-FC** with Cap	
				3NF	**3NF** = 3/8" FNPT	
				4C	**4C** = 1/2" Compression	
				4H	**4H** = 1/2" Hose Barb	
				4N	**4N** = 1/2" MNPT	
				4Q	**4Q** = 1/2" Male Quick Coupling for Plastic latch	
				8C	**8C** = 5/16" Compression	
				MT	**MT** = 1/2" Tri clamps	
				TC	**TC** = 1-1/2" Tri clamp	
				TS	**TS** = Shower Head	

Options	
O-Ring for Quick Coupling	
Blank = O-ring Silicone	
-OE = O-ring EPDM	
-ON = O-ring Nitrile	
-OV = O-ring Viton	
Prefilter (add before Filter Media in part#)	
G(pore Size)= Glass Fiber PreFilter	
P(pore Size)= PolyPro Media PreFilter	
S(pore Size) = PES PreFilter	

Example - Capsule, Luer Lock V/D, 2.5" Internal filter, 0.2 micron PES Capsule, Biological reduction Grade, with 1.5" Tri-Clamp fittings would be **SKLS020STCTC-B**

Quick Couplings are molded, Female Quick Coupling with Plastic latch will be threaded on, compatible with CPC (Colder), LinkTech and others.

Your Local Distributor:

ZenPure

North & South Americas:
ZenPure Americas, Inc
www.zenpure.com
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703-335-9910

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+86 571 2288 6800

ISO Certified 9001 14001

PureFlo® PES Filter Capsules

PureFlo® PES Filter Capsules have been specially designed for simple, quick, and efficient filtration of fluids and gases used in laboratory, pilot, and small-scale applications. The PES membrane in an all-polypropylene construction provides excellent chemical compatibility and superior flow per unit area as compared to other membrane cartridges. No adhesives, binders, or surfactants are used in the manufacturing process and all capsules are rinsed with high-purity water to reduce extractables and downtime.

The hydrophilic PES membrane does not require pre-wetting with IPA and flushing with DI water, thereby eliminating a potential source of contamination and hazardous waste. In addition, unlike hydrophobic filters such as PTFE the hydrophilic membrane reduces the potential for bubble formation by not de-wetting in out-gassing fluids.. All filter capsules are 100% integrity tested to ensure filter performance each and every time out of the package. PureFlo PES filter capsules are well-suited for applications where superior flow and particle removal efficiency at 0.04, 0.1, 0.2, 0.45, 0.65, 0.80 and 1.2 micron is required.

Materials of Construction

Membrane: Hydrophilic Polyethersulfone
Membrane Supports: Polypropylene
Cage, Core, End Caps: Polypropylene
Fitting Connections: NPT, Compression, Sanitary Flange, Hose Barb

Nominal Dimensions

Length: 1.5 in (68 mm) Length: 2.5 in (98 mm)
Length: 5.0 in (153 mm) Length: 7.5 in (221 mm)
Length: 10 in (276mm)
Diameter: 2.88 in (73 mm)

Effective Filtration Area

1.5 in 0.7 ft^2 (650 cm^2) 2.5 in 1.4 ft^2 (1300 cm^2)
5.0 in 2.8 ft^2 (2600 cm^2) 7.5 in 4.2 ft^2 (3900 cm^2)
10 in - 5.6 ft^2 (5200 cm^2)

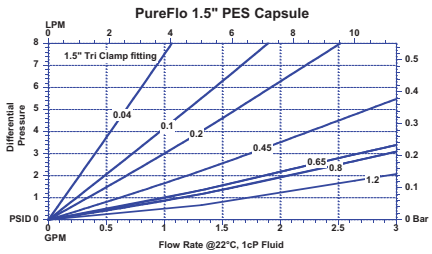
Operating Conditions

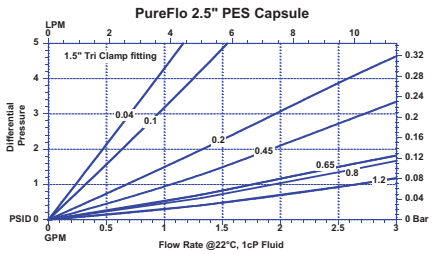
Maximum Operating Pressure:
Liquid: 5.5 bar (80psi) at 72°F/22°C
Gas: 4.11 bar (60psi) at 72°F/22°C
Minimum Burst Pressure:
8.3 bar (120psi) at 72°F/22°C
Maximum Forward Differential Pressure:
5 bar (72psi) at 72°F/22°C
Maximum Reverse Differential Pressure:
2.1 bar (30psi) at 72°F/22°C
Maximum Operating Temperature:
PP & Gamma PP: 176°F/80°C
HDPE: 140°F/60°C

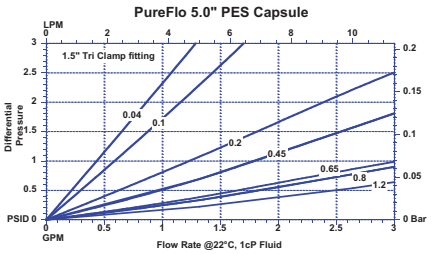
Applications	
Acids	Ink Jets
Bases	Beverages
Solvents	Pharmaceuticals
Fine Chemicals	Biologics
Plating Solutions	Dyes
Process Water	Lacquers

Features	Benefits
■ Hydrophilic PES Membrane	■ IPA pre-wetting not required – thereby eliminating a potential source of contamination and disposal waste ■ Economic alternative to PTFE
■ Fully Disposable Capsule	■ Rapid installation ■ Reduced downtime ■ Reduced handling of hazardous chemicals
■ Small Compact Design	■ Simple, quick, and efficient filtration ■ Low hold-up volume reduces the chemical waste ■ Reduced chemical handling and hazardous waste disposal
■ Low Filter Extractables	■ No adhesives, binders, or surfactants used ■ Capsules are rinsed with high-purity water

PureFlo® PES Filter Capsules







Note - Graphs based on Sanitary fittings.

Regulatory Compliance

Manufactured from materials that conform to the requirements of 21CFR Part 177 of the U.S. Code of Federal Regulations and USP Class VI Biological Test for Plastics.

Autoclavable & Sanitizable

Capsules can be autoclaved 25 times at 257°F/125°C for 30 minutes or chemically sanitized in situ using common sanitizing agents or hot water at 194°F/90°C for a limited time (dependent on time and temperature). Capsules must not be in situ steam-sterilized.

PureFlo PES Filter Capsule Ordering Guide

PureFlo Capsule Filters	Filter Media	Pore size (Micron)	Length	Inlet Fitting	Outlet Fitting	Options
SKL = Capsule filter Standard grade Luer Lock Vent/Drain **SKP**= Capsule filter Standard grade M8 Plug vent/ Drain Limited Options	**S** = PES	**004** = 0.04 **010** = 0.1 **020** = 0.2 **045** = 0.45 **065** = 0.65 **080** = 0.8 **120** = 1.2	**H** = 1.5" **S** = 2.5" **L** = 5" **E** = 7.5" **K** = 10"	**1C** **1H** **1N** **1NF** **1Q** **1QF** **1QFV** **1QV** **2C** **2H** **2HS** **2LF** **2N** **2NF** **2P** **2PE** **2Q** **2QF** **2QFP** **2QFV** **2QP** **2QV** **2V** **3C** **3H** **3HE** **3NF** **4C** **4H** **4N** **4Q** **8C** **MT** **TC**	**1C** = 1/8" Compression **1H** = 1/8" Hose barbs **1N** = 1/8" MNPT **1NF** = 1/8" FNPT **1Q** = 1/8" Male Quick Coupling with Metal latch **1QF** = 1/8" Female Quick Coupling with Metal latch **1QFV** = 1/8" Female Valved Quick Coupling with Metal latch **1QV** = 1/8" Male Valved Quick Coupling with Metal latch **2C** = 1/4" Compression **2H** = 1/4" to 1/2" Hose barbs **2HS** = 1/4" to 3/8" Hose barbs **2LF** = Large Female Luer Lock fitting **2N** = 1/4" MNPT **2NF** = 1/4" FNPT **2P** = 1/4" Push to Connect **2PE** = 1/4" Push to Connect Elbow **2Q** = 1/4" Male Quick Coupling for Metal latch **2QF** = 1/4" Female Quick Coupling with Metal latch **2QFP** = 1/4" Female Quick Coupling with Plastic latch **2QFV** = 1/4" Female Valved Quick Coupling with Metal latch **2QP** = 1/4" Male Quick Coupling for Plastic latch **2QV** = 1/4" Male Valved Quick Coupling with Metal latch **2V** = 1/4" Walther Quick Connect **3C** = 3/8" Compression **3H** = 3/8" Hose Barb **3HE** = 3/8" Hose Barb Elbow **3H-FB** = 3/8" Hose Barb with filling bell or **-FC** with Cap **3NF** = 3/8" FNPT **4C** = 1/2" Compression **4H** = 1/2" Hose Barb **4N** = 1/2" MNPT **4Q** = 1/2" Male Quick Coupling for Plastic latch **8C** = 5/16" Compression **MT** = 1/2" Tri clamps **TC** = 1-1/2" Tri clamp **TS** = Shower Head	**Grade** **Blank** = Standard Grade **-B** = Biological Reduction Grade **Shell Material** **Blank** = Polypropylene **-GP** = Gamma stable polypropylene shell **-NY** = Nylon Construction **-E** = Polyethylene shell and HDPE media support for gamma sterilization **Vent & Drain** **-N** = No vent or Drain **-NI** = No vent or Drain **-NO** = No vent or Drain **Sterilization** **-ETO** = Ethylene Oxide	**O-Ring for Quick Coupling** **Blank** = O-ring Silicone **-OE** = O-ring EPDM **-ON** = O-ring Nitrile **-OV** = O-ring Viton **Prefilter (add before Filter Media in part#)** **G(pore Size)**= Glass Fiber PreFilter **P(pore Size)**= PolyPro Media PreFilter **S(pore Size)** = PES PreFilter

Example - Capsule, Luer Lock V/D, 2.5" Internal filter, 0.2 micron PES Capsule, Pharma Grade, with 1.5" Tri-Clamp fittings would be **SKLS020STCTC**

Quick Couplings are molded, Female Quick Coupling with Plastic latch will be threaded on, compatible with CPC (Colder), LinkTech and others.

Your Local Distributor:

ZenPure

North & South Americas:
ZenPure Americas, Inc
www.zenpure.com
Info-us@zenpure.com
703-335-9910

All Other Regions:
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www.zenpure.com
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+86 571 2288 6800

ISO Certified 9001 14001

TÜV MANAGEMENT SERVICE ISO 13485

SKV Series PTFE Filter Capsules
(PTFE/ PP Construction)

Pharmaceutical Capsule filter

The PureFlo® SKV Series PTFE filter capsule with all-polypropylene construction provides a excellent compatibility and superior flow per unit area. The SKV capsules were designed with built-in bleed valves for simple and efficient evacuation of air and liquid from the upstream side.

The hydrophobic PTFE membrane is ideally suited for sterilizing gas in biopharmaceutical applications in aggressive chemicals. In addition, the hydrophobic membrane provides superior flow and pressure-drop characteristics for tank venting applications. PureFlo PTFE filter capsules are well-suited for critical applications where superior flow and bacterial retention is required.

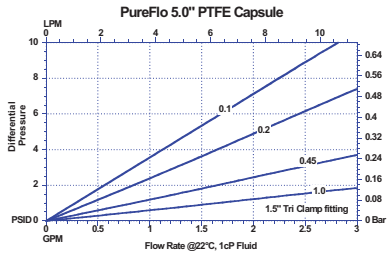
The units are used for filtration of small to medium volumes used in production, laboratory and pilot runs. No adhesives, binders, or surfactants are used in the manufacturing process of these capsules. They are rinsed with pyrogen-free water to reduce extractables and downtime. All filter capsules are 100% integrity-tested to ensure filter performance each and every time out of the package. The capsule can be ordered pre-sterilized.

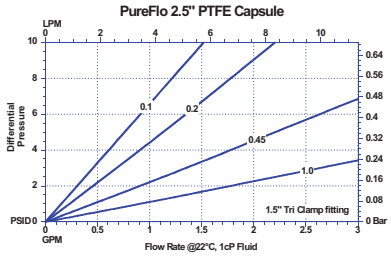
Applications	
Buffer and Media	Fermentation Tanks
Product Sterilization	SVP (Small Volume Parenterals)
Bio Bags	Pharmaceuticals
Gas filtration	Biologics
Antibiotics	Venting
Water	Serums

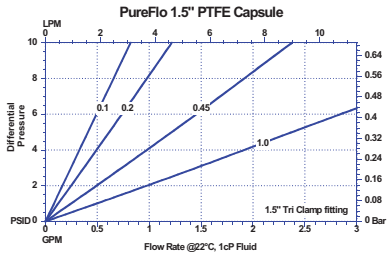
Specifications

Materials of Construction:	Media: Hydrophobic PTFE (polytetrafluoroethylene) Media Supports: Polypropylene Cage, Core, End Caps: Polypropylene Valve O-Rings: Silicon (Standard); Sealing: Thermally welded
Fitting Connections:	See ordering guide for the availability. Any inlet/outlet combinations. (Custom adaptors available upon request)
Nominal Dimensions:	Lengths: 1.5 in (51 mm), 2.5 in (80 mm),5.0 in (136mm), 7.5 in (210 mm), 10 in (265mm) Diameter: 2.88 in (73 mm)
Effective Filtration Area:	1.5 in - 0.70 ft^2 (650 cm^2), 2.5 in - 1.34 ft^2 (1250 cm^2), 5.0 in - 2.6 ft^2 (2400 cm^2), 7.5 in - 4.3ft^2 (3980 cm^2), 10 in - 5.2 ft^2 (4800 cm^2)
Operating Conditions:	Maximum Operating Pressure: Liquid: 5.5 bar (80psi) at 72°F/22°C Gas: 4.1 bar (60psi) at 72°F/22°C Maximum Forward Differential Pressure: 5.0 bar (72psi) at 72°F/22°C Maximum Reverse Differential Pressure: 3.0 bar (44 psi) at 72°F/22°C Minimum Burst Pressure: 8.3 bar (120psi) at 72°F/22°C Maximum Operating Temperature: PP & Gamma PP: 176°F/80°C HDPE: 140°F/60°C
Regulatory Compliance:	The filters are constructed with polypropylene resins and filtration media in compliance with 21CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastic.

SKV Series PTFE Filter Capsules







Note - Graphs based on Sanitary fittings.

Specifications(continued)

Regulatory Compliance:

Manufactured from materials that conform to the requirements of 21 CFR Part 177 of the U.S. Code of Federal Regulations and USP Class VI Biological test for Plastics

Bacterial Retention (for 0.2um membrane):

0.2 µm Pore Size achieves complete retention of > 10^7 CFU/cm^2 of *Brevundimonas diminuta* in accordance with ASTM F838-05. Validation Guide upon request.

Autoclavable & Sanitizable:

- Autoclaved 25 times at 257 °F/125 °C for 30 minutes
- Chemically sanitized in situ using common sanitizing agents or hot water at 194 °F/90 °C for a limited time (dependent on time and temperature).
- Capsules must not be in situ steam-sterilized.

Bacterial Endotoxin:

Effluent is non-pyrogenic per USP Bacterial Endotoxin (0.25 EU/ml), determined using Limulus Amebocyte Lysate (LAL) Test.

PureFlo SKV Series PTFE Filter Capsule Pharmaceutical grade) Ordering Guide

PureFlo Capsule Filters	Filter Media	Pore size (Micron)	Internal Filter Length	Input Fitting	Output Fitting	Options	
SKV 70mm Diameter Capsule with Bleed Valve	**F** = PTFE	**010** = 0.1 **020** = 0.2 **045** = 0.45 **100** = 1.0 **300** = 3.0 **500** = 5.0 **999** = 10.0	**H** = 1.5" **S** = 2.5" **L** = 5" **E** = 7.5" **K** = 10"	**1H** **1Q** **1QF** **1QFV** **1QV** **2H** **2HL** **2N** **2P** **2PE** **2Q** **2QF** **2QFV** **2QP** **2QV** **2V** **3H** **4H** **4Q** **5H** **MT** **TC**	**1H** = 1/8" Hose barbs **1Q** = 1/8" Male Quick Coupling with Metal latch **1QF** = 1/8" Female Quick Coupling with Metal latch **1QFV** = 1/8" Female Valved Quick Coupling with Metal latch **1QV** = 1/8" Male Valved Quick Coupling with Metal latch **2H** = 1/4" Hose barb **2HL** = 1/4" to 1/2" Hose barbs **2H-FB** = 1/4" Hose Barb with filling bell **-FC** with Cap **2N** = 1/4" MNPT **2P** = 1/4" Push to Connect **2PE** = 1/4" Push to Connect Elbow **2Q** = 1/4" Male Quick Coupling for Metal latch **2QF** = 1/4" Female Quick Coupling with Metal latch **2QFV** = 1/4" Female Valved Quick Coupling with Metal latch **2QP** = 1/4" Male Quick Coupling for Plastic latch **2QV** = 1/4" Male Valved Quick Coupling with Metal latch **2V** = 1/4" Walther Quick Connect **3H** = 3/8" Hose Barb **3H-FB** = 3/8" Hose Barb with filling bell or **-FC** with Cap **4H** = 1/2" Hose Barb **4Q** = 1/2" Male Quick Coupling for Plastic latch **5H** = 5/8" Hose Barb **MT** = 1/2" Tri clamps **TC** = 1-1/2" Tri clamp **TS** = Shower Head	**Shell Material** **Blank** = Polypro construction **-E** = Polyethylene shell and HDPE media support for gamma sterilization **-GP** = Gamma stable polypropylene shell **-NY** = Nylon Shell **Sterilization** **-ETO =** Ethylene oxide sterilization **Vent & Drain** **-N**= No vent or drain fittings **-NI** = No vent or drain inlet fitting **-NO** = No vent or drain Outlet fitting	**O-Ring for Quick Coupling** **-OE** = O-ring EPDM **-ON** = O-ring Nitrile **-OV** = O-ring Viton **Blank** = O-ring Silicon **Prefilter (add before Filter Media in part#)** **G(pore Size)**= Glass Fiber PreFilter **P(pore Size)**= PolyPro Media PreFilter **S(pore Size)** = PES PreFilter Silicone O-Rings for Bleed Valve and Quick Coupling fittings
Example - PureFlo SKV Series Capsule, PTFE , 2.5" internal filter, 0.2 micron, with 1.5" Tri-Clamp fittings I/O, would be SKVF020STCTC							
Note: Quick Couplings are molded on. Female Quick Coupling with Plastic latch will be threaded on. Compatible with CPC (Colder), LinkTech and others.							

Your Local Distributor:

ZenPure

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www.zenpure.com
Info-us@zenpure.com
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TÜV MANAGEMENT SERVICE ISO 13485

PureFlo® PTFE Filter Capsules

PureFlo® PTFE filter capsules are highly retentive hydrophobic PTFE membrane filters that have been specially designed for critical applications. The PTFE membrane in an all-polypropylene construction provides excellent chemical compatibility and superior flow per unit area as compared to other membrane capsules. No adhesives, binders, or surfactants are used in the manufacturing process.

The hydrophobic PTFE membrane is ideally suited for aggressive chemicals such as acids, bases, and solvents. In addition, the hydrophobic membrane provides superior flow and pressure-drop characteristics per unit area for gas filtration and tank venting applications. All filter capsules are 100% integrity tested to ensure filter performance each and every time out of the package. PureFlo PTFE filter capsules are well-suited for critical applications where superior flow and particle removal efficiency at 0.1 to 10.0 micron is required.

Applications	
Acids	Ink Jets
Bases	Electronics
Solvents	Pharmaceuticals
Fine Chemicals	Venting
Plating Solutions	Dyes
Process Water	Lacquers

Materials of Construction

Membrane: Hydrophobic PTFE
Membrane Supports: Polypropylene
Cage, Core, End Caps, Capsule: Polypropylene
Fitting Connections: MNPT, FNPT, Quick Couplings, Compression, Hose Barb, Sanitary Flange

Dimensions (Nominal)

Length: 1.5 in (68 mm) Length: 2.5 in (98 mm)
Length: 5.0 in (153 mm) Length 7.5 in (221 mm)
Length: 10 in (276mm)
Diameter: 2.88 in (73 mm)

Effective Filtration Area

1.5 in - 0.70 ft^2 (650 cm^2) 2.5 in - 1.34 ft^2 (1250 cm^2)
5.0 in - 2.6 ft^2 (2400 cm^2) 7.5 in - 4.3ft^2 (3980 cm^2)
10 in - 5.2 ft^2 (4800 cm^2)

Operating Conditions

Maximum Operating Pressure:
Liquid: 5.5 bar (80psi) at 72°F/22°C
Gas: 4.1 bar (60psi) at 72°F/22°C
Minimum Burst Pressure: 8.3 bar (120psi) at 72°F/22°C
Maximum Forward Differential Pressure:
4.11 bar (60psi) at 72°F/22°C
Maximum Reverse Differential Pressure:
2.1 bar (30psi) at 72°F/22°C
Maximum Operating Temperature:
PP & Gamma PP: 176°F/80°C
HDPE: 140°F/60°C

Features	Benefits
■ Naturally Hydrophobic PTFE Membrane	■ High flow rates with low pressure drop per unit area as compared to other filter materials ■ Superior filter lifetime and process throughputs
■ Wide Chemical & Thermal Compatibility	■ Provides excellent compatibility with a wide-range of chemicals such as acids, bases, and solvents ■ No media migration into the process fluid
■ Low Filter Extractables	■ No adhesives, binders, or surfactants are used during the manufacturing process resulting in superior downstream cleanliness ■ All cartridges are rinsed with high-purity water to reduce extractables and downtime
■ Quality Manufacturing	■ Consistent and reproducible particulate removal

PureFlo® PTFE Filter Capsules

Regulatory Compliance

Manufactured from materials that conform to the requirements of 21 CFR Part 177 of the U.S. Code of Federal Regulations and USP Class VI Biological test for Plastics

Bacterial Retention:

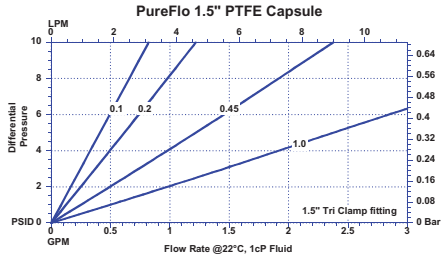
0.2 µm Pore Size achieves complete retention of > 10^7 CFU/cm^2 of *Brevundimonas diminuta* in accordance with ASTM F838-05. Validation Guide upon request.

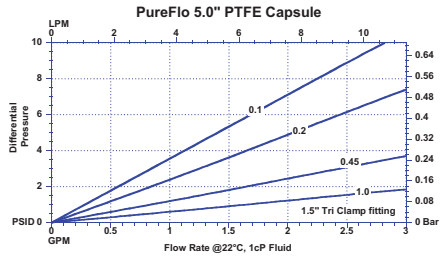
Autoclavable & Sanitizable:

- Autoclaved 25 times at 257 °F/125 °C for 30 minutes
- Chemically sanitized in situ using common sanitizing agents or hot water at 194 °F/90 °C for a limited time (dependent on time and temperature).
- Capsules must not be in situ steam-sterilized.

Bacterial Endotoxin:

Effluent is non-Pyrogenic per USP Bacterial Endotoxin (0.25 EU/ml), determined using Limulus Amebocyte Lysate (LAL) test.





PureFlo PTFE Filter Cartridge Ordering Guide

PureFlo Capsule Filters	Filter Media	Pore size (Micron)	Length	Inlet Fitting	Outlet Fitting	Options: Grade	Options: O-Ring for Quick Coupling
SKL = Capsule filter Standard grade Luer Lock Vent/Drain **SKP**= Capsule filter Standard grade M8 Plug vent/ Drain Limited Options	**F = PTFE**	**010** = 0.1 **020** = 0.2 **045** = 0.45 **100** = 1.0 **300** = 3.0 **500** = 5.0 **999** = 10.0	**H** = 1.5" **S** = 2.5" **L** = 5" **E** = 7.5" **K** = 10"	**1C** **1H** **1N** **1NF** **1Q** **1QF** **1QFV** **1QV** **2C** **2H** **2HS** **2LF** **2N** **2NF** **2P** **2PE** **2Q** **2QF** **2QFP** **2QFV** **2QP** **2QV** **2V** **3C** **3H** **3HE** **3NF** **4C** **4H** **4N** **4Q** **8C** **MT** **TC**	**1C** = 1/8" Compression **1H** = 1/8" Hose barbs **1N** = 1/8" MNPT **1NF** = 1/8" FNPT **1Q** = 1/8" Male Quick Coupling with Metal latch **1QF** = 1/8" Female Quick Coupling with Metal latch **1QFV** = 1/8" Female Valved Quick Coupling with Metal latch **1QV** = 1/8" Male Valved Quick Coupling with Metal latch **2C** = 1/4" Compression **2H** = 1/4" to 1/2" Hose barbs **2HS** = 1/4" to 3/8" Hose barbs **2LF** = Large Female Luer Lock fitting **2N** = 1/4" MNPT **2NF** = 1/4" FNPT **2P** = 1/4" Push to Connect **2PE** = 1/4" Push to Connect Elbow **2Q** = 1/4" Male Quick Coupling for Metal latch **2QF** = 1/4" Female Quick Coupling with Metal latch **2QFP** = 1/4" Female Quick Coupling with Plastic latch **2QFV** = 1/4" Female Valved Quick Coupling with Metal latch **2QP** = 1/4" Male Quick Coupling for Plastic latch **2QV** = 1/4" Male Valved Quick Coupling with Metal latch **2V** = 1/4" Walther Quick Connect **3C** = 3/8" Compression **3H** = 3/8" Hose Barb **3HE** = 3/8" Hose Barb Elbow **3H-FB** = 3/8" Hose Barb with filling bell or **-FC** with Cap **3NF** = 3/8" FNPT **4C** = 1/2" Compression **4H** = 1/2" Hose Barb **4N** = 1/2" MNPT **4Q** = 1/2" Male Quick Coupling for Plastic latch **8C** = 5/16" Compression **MT** = 1/2" Tri clamps **TC** = 1-1/2" Tri clamp **TS** = Shower Head	**Blank** = Standard Grade **-B** = Biological Reduction Grade **-PH** = Pharma Grade **Shell Material** **Blank** = Polypropylene **-GP** = Gamma stable polypropylene shell **-NY** = Nylon Construction **-E** = Polyethylene shell and HDPE media support for gamma sterilization **Vent & Drain** **-N** = No vent or Drain **-NI** = No vent or Drain **-NO** = No vent or Drain **Sterilization** **-ETO** = Ethylene Oxide	**Blank** = O-ring Silicone **-OE** = O-ring EPDM **-ON** = O-ring Nitrile **-OV** = O-ring Viton **Prefilter (add before Filter Media in part#)** **G(pore Size)**= Glass Fiber PreFilter **P(pore Size)**= PolyPro Media PreFilter **S(pore Size)** = PES PreFilter

Example - Capsule, Luer Lock V/D, 2.5" Internal filter, 0.45 micron PTFE Membrane Capsule, with 1.5" Tri-Clamp fittings would be **SKLF045STCTC**

Quick Couplings are molded, Female Quick Coupling with Plastic latch will be threaded on, compatible with CPC (Colder), LinkTech and others.

Your Local Distributor:

ZenPure

North & South Americas:
ZenPure Americas, Inc
www.zenpure.com
Info-us@zenpure.com
703-335-9910

All Other Regions:
ZenPure Corporation
www.zenpure.com
info@zenpure.com
+86 571 2288 6800

SZV Series Nylon Capsules

Pharmaceutical Grade

The PureFlo® SZV Series Nylon filter capsule is designed for improved wetability in processes which require critical integrity validation testing. The unit provides excellent compatibility and superior flow per unit area as compared to other membrane capsules. The PureFlo® Nylon filter capsules have been specially designed for sterilizing in biopharmaceutical applications where bacterial retention is required. The hydrophilic nylon membrane does not require pre-wetting agents, thereby eliminating a potential source of contamination. The nylon membrane is a low protein-binding media to improve your process.

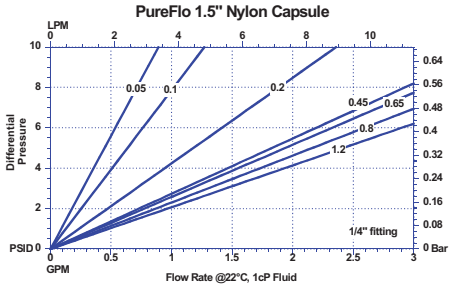
The capsules were specifically designed with an easy-to-wet-out structure of nylon membrane, polyester (PET) support and internal nylon end caps. The units have built-in bleed valves for simple and efficient evacuation of air and liquid. The units are used for filtration of small to medium volumes of fluid for processing in production, laboratory and pilot runs. No adhesives, binders, or surfactants are used in the manufacturing process of these capsules. They are rinsed with pyrogen-free water to reduce extractables and speed production. All filter capsules are 100% integrity-tested to ensure filter performance each and every time out of the package. The capsule can be ordered pre-sterilized.

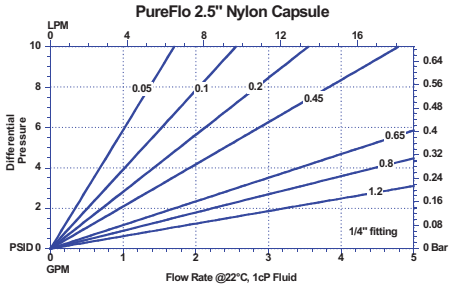
Applications	
Buffers and Media	Fermentation Broths
Product Sterilization	SVP (Small Volume Parenterals)
BioBags	Pharmaceuticals
Vaccines	Biologics
Antibiotics	Scale-up Processing
Water	Serums

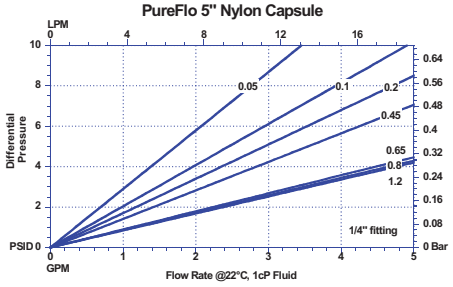
Specifications

Materials of Construction:	Membrane: Nylon 6,6 Membrane Supports: PET (Polyester) Shell, Cage, Core: Polypropylene ; End Caps: Nylon O-Rings: Silicon (Standard) Push to Connect Fitting: Acetal-body, EPDM-O-Ring, 304 SS Grip Ring
Fitting Connections:	See ordering guide for the availability. Any inlet/outlet combinations. (Custom adaptors available upon request)
Nominal Dimensions:	Lengths: 1.5 in (51 mm), 2.5 in (80 mm), 5.0 in (136 mm), 7.5 in (210 mm), 10 in (265 mm) Diameter: 2.88 in (73 mm)
Effective Filtration Area:	1.5 in: 0.74 ft^2 (690 cm^2), 2.5 in: 1.5 ft^2 (1400 cm^2), 5.0 in: 2.8 ft^2 (2600 cm^2), 7.5 in: 4.3 ft^2 (4000 cm^2), 10 in: 5.6 ft^2 (5200 cm^2)
Operating Conditions:	Maximum Working Pressure: Liquid: 5.5 bar (80 psi) at 22 °C Gas: 4.1 bar (59.5 psi) at 22 °C Minimum Burst Pressure: 8.3 bar (120 psi) at 22 °C Maximum Forward Differential Pressure: 5 bar (72.5 psi) at 22 °C Maximum Reverse Differential Pressure: 3.0 bar (43.5 psi) at 22°C Maximum Operating Temperature: PP & Gamma PP: 80 °C HDPE: 60 °C

SZV Series Nylon Capsules







Specifications (cont.)

Bacterial Retention:
Complete retention of > 10^7 organisms/cm^2 of *Brevundimonas diminuta* in accordance with the current HIMA challenge methodology (ASTM F838-05). Validation guide available upon request.

Autoclavable & Sanitizable:
Capsules can be autoclaved 5 times at 125 °C (257 °F) for 30 minutes or chemically sanitized in situ using common sanitizing agents or hot water at 90 °C (194 °F)for a limited time (dependent on time and temperature). Capsules must not be in situ steam-sterilized.

Water Bubble Point Specification:
0.1 µm: 60 psi (4.1 bar) in IPA
0.2 µm: 47 psi (3.2 bar)

Bacterial Endotoxin:
Effluent is non-pyrogenic per USP Bacterial Endotoxin (0.25 EU/ml), determined using Limulus Amebocyte Lysate (LAL) Test.

Regulatory Compliance: The filters are constructed with polypropylene resins and filtration media in compliance with 21 CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastic.

PureFlo SZV Series Nylon Capsule (Pharmaceutical grade) Ordering Guide

PureFlo Capsule Filters	Filter Media	Pore size (Micron)	Internal Filter Length	Input Fitting	Output Fitting	Options
SZV		**005** = 0.05	**H** = 1.5"	**1H**	**1H** = 1/8" Hose barbs	**Shell Material**
		010 = 0.10	**S** = 2.5"	**1Q**	**1Q** = 1/8" Male Quick Coupling with Metal latch	**Blank** = Gamma stable polypropylene shell - Standard
	N = Nylon	**020** = 0.20	**L** = 5"	**1QF**	**1QF** = 1/8" Female Quick Coupling with Metal latch	
		045 = 0.45	**E** = 7.5"	**1QFV**	**1QFV** = 1/8" Female Valved Quick Coupling with Metal latch	
		065 = 0.65	**K** = 10"	**1QV**	**1QV** = 1/8" Male Valved Quick Coupling with Metal latch	
		080 = 0.80		**2H**	**2H** = 1/4" Hose barb	**Vent & Drain**
70mm Diameter Capsule with Bleed Valve		**120** = 1.20			**2H-FB** = 1/4" Hose Barb with filling bell or **-FC** with Cap	**-N**= No vent or drain fittings
				2N	**2N** = 1/4" MNPT	**-NI** = No vent or drain inlet fitting
				2P	**2P** = 1/4" Push to Connect	**-NO** = No vent or drain Outlet fitting
				2PE	**2PE** = 1/4" Push to Connect Elbow	
				2Q	**2Q** = 1/4" Male Quick Coupling for Metal latch	**O-Rings**
				2QF	**2QF** = 1/4" Female Quick Coupling with Metal latch	**Blank** = O-ring Silicone (Standard)
				2QFV	**2QFV** = 1/4" Female Valved Quick Coupling with Metal latch	**-OE** = O-ring EPDM
				2QP	**2QP** = 1/4" Male Quick Coupling for Plastic latch	**-ON** = O-ring Nitrile
				2QV	**2QV** = 1/4" Male Valved Quick Coupling with Metal latch	**-OV** = O-ring Viton
				2V	**2V** = 1/4" Walther Quick Connect	**Prefilter (add before Filter Media in part#)**
				3H	**3H** = 3/8" Hose Barb	
					3H-FB = 3/8" Hose Barb with filling bell or **-FC** with Cap	**G(pore Size)**= Glass Fiber PreFilter
				4H	**4H** = 1/2" Hose Barb	
				4Q	**4Q** = 1/2" Male Quick Coupling for Plastic latch	**P(pore Size)**= PolyPro Media PreFilter
				5H	**5H** = 5/8" Hose Barb	
				MT	**MT** = 1/2" Tri clamps	**S(pore Size)** = PES PreFilter
				TC	**TC** = 1-1/2" Tri clamp	
					TS = Shower Head	

Example - PureFlo SZV Series Capsule, Nylon , 2.5" internal filter, 0.2 micron, with 1.5" Tri-Clamp fittings I/O, would be **SZVN020STCTC**

Your Local Distributor:

ZenPure

North & South Americas:
ZenPure Americas, Inc
www.zenpure.com
Info-us@zenpure.com
703-335-9910

All Other Regions:
ZenPure Corporation
www.zenpure.com
info@zenpure.com
+86 571 2288 6800

SZV Series Charged Nylon Capsules
(Endotoxin Reduction)

Pharmaceutical Grade

The PureFlo® SZV Series Charged Nylon Capsules have been designed for improved wetability in processes which require critical integrity validation testing. The unit provides excellent compatibility and superior flow per unit to reduce endotoxins. The PureFlo® Charged Nylon filter capsules have been specially designed for sterilizing in biopharmaceutical applications where bacterial retention is required. The hydrophilic charged nylon membrane does not require pre-wetting agents, thereby eliminating a potential source of contamination. The nylon membrane is a low protein-binding media to improve your process.

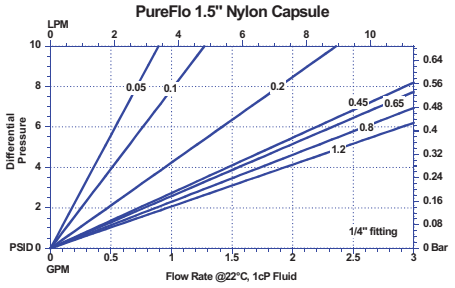
The capsules were specifically designed with an easy to wet out structure of charged nylon membrane, PET support and internal nylon end caps. The units have built-in bleed valves for simple and efficient evacuation of air and liquid. The units are used for filtration of small to medium volumes of fluid for processing in production, laboratory and pilot runs. No adhesives, binders, or surfactants are used in the manufacturing process of these capsules. They are rinsed with pyrogen-free water to reduce extractables and speed production. All filter capsules are 100% integrity-tested to ensure filter performance each and every time out of the package. The capsule can be ordered pre-sterilized.

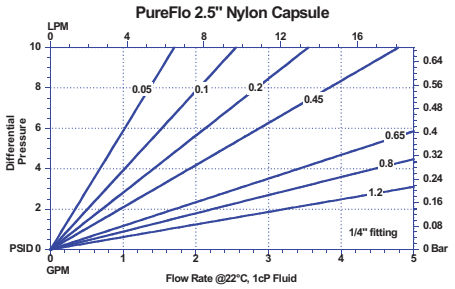
Applications	
Buffers and Media	Fermentation Broths
Product Sterilization	SVP (Small Volume Parenterals)
BioBags	Pharmaceuticals
Vaccines	Biologics
Endotoxin Reduction	Scale-up Processing
Water	Serums

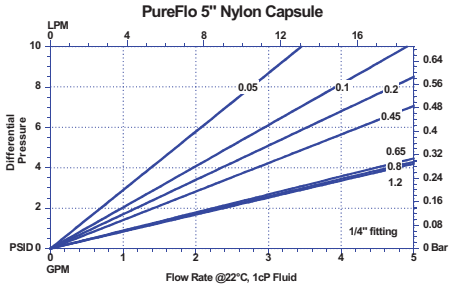
Specifications

Materials of Construction:	Membrane: Charged Nylon 6,6 Membrane Supports: PET (Polyester) Shell, Cage, Core: Polypropylene ; End Caps: Nylon O-Rings: Silicon (Standard) Push to Connect Fitting: Acetal-body, EPDM-O-Ring, 304 SS Grip Ring
Fitting Connections:	See ordering guide for the availability. Any inlet/outlet combinations. (Custom adaptors available upon request)
Nominal Dimensions:	Lengths: 1.5 in (51 mm), 2.5 in (80 mm), 5.0 in (136 mm), 7.5 in (210 mm), 10 in (265 mm) Diameter: 2.88 in (73 mm)
Effective Filtration Area:	1.5 in: 0.74 ft^2 (690 cm^2), 2.5 in: 1.5 ft^2 (1400 cm^2), 5.0 in: 2.8 ft^2 (2600 cm^2), 7.5 in: 4.3 ft^2 (4000 cm^2), 10in: 5.6 ft^2 (5000 cm^2)
Operating Conditions:	Maximum Working Pressure: Liquid: 5.5 bar (80 psi) at 22 °C Gas: 4.1 bar (59.5 psi) at 22 °C Minimum Burst Pressure: 8.3 bar (120 psi) at 22 °C Maximum Forward Differential Pressure: 5 bar (72.5 psi) at 22 °C Maximum Reverse Differential Pressure: 3.0 bar (43.5 psi) at 22 °C Maximum Operating Temperature: PP & Gamma PP: 80 °C HDPE: 60 °C

SZV Series Charged Nylon Capsules







SPECIFICATIONS (cont.)

Bacterial Retention:

Complete retention of > 10^7 organisms/cm^2 of *Brevundimonas diminuta* in accordance with the current HIMA challenge methodology (ASTM F838-05) for medias 0.2 micron and lower. Validation guide available upon request.

Autoclavable & Sanitizable:

Capsules can be autoclaved 5 times at 125 °C (257 °F) for 30 minutes or chemically sanitized in situ using common sanitizing agents or hot water at 90 °C (194 °F) for a limited time (dependent on time and temperature). Capsules must not be in situ steam-sterilized.

Water Bubble Point Specification:

0.1 µm: 60 psi (4.1 bar) in IPA
0.2 µm: 47 psi (3.2 bar)

Bacterial Endotoxin:

Effluent is non-pyrogenic per USP Bacterial Endotoxin (0.25 EU/ml), determined using Limulus Amebocyte Lysate (LAL) Test.

Regulatory Compliance:

The filters are constructed with polypropylene resins and filtration media in compliance with 21 CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastic.

PureFlo SZV Series Charged Nylon Capsule (Pharmaceutical grade) Ordering Guide

PureFlo Capsule Filters	Filter Media	Pore size (Micron)	Internal Filter Length	Input Fitting	Output Fitting	Options
SZV	**CN** = Charged Nylon	**005** = 0.05	**H** = 1.5"	**1H**	**1H** = 1/8" Hose barbs	**Shell Material**
		010 = 0.10	**S** = 2.5"	**1Q**	**1Q** = 1/8" Male Quick Coupling with Metal latch	**Blank** = Gamma stable polypropylene shell - Standard
		020 = 0.20	**L** = 5"	**1QF**	**1QF** = 1/8" Female Quick Coupling with Metal latch	
		045 = 0.45	**E** = 7.5"	**1QFV**	**1QFV** = 1/8" Female Valved Quick Coupling with Metal latch	
		065 = 0.65	**K** = 10"	**1QV**	**1QV** = 1/8" Male Valved Quick Coupling with Metal latch	
		080 = 0.80		**2H**	**2H** = 1/4" Hose barb	**Vent & Drain**
70mm Diameter Capsule with Bleed Valve		**120** = 1.20		**2H-FB**	**2H-FB** = 1/4" Hose Barb with filling bell or **-FC** with Cap	**-N**= No vent or drain fittings
				2N	**2N** = 1/4" MNPT	**-NI** = No vent or drain inlet fitting
				2P	**2P** = 1/4" Push to Connect	**-NO** = No vent or drain Outlet fitting
				2PE	**2PE** = 1/4" Push to Connect Elbow	
				2Q	**2Q** = 1/4" Male Quick Coupling for Metal latch	**O-Rings**
				2QF	**2QF** = 1/4" Female Quick Coupling with Metal latch	**Blank** = O-ring Silicone (Standard)
				2QFV	**2QFV** = 1/4" Female Valved Quick Coupling with Metal latch	**-OE** = O-ring EPDM
				2QP	**2QP** = 1/4" Male Quick Coupling for Plastic latch	**-ON** = O-ring Nitrile
				2QV	**2QV** = 1/4" Male Valved Quick Coupling with Metal latch	**-OV** = O-ring Viton
				2V	**2V** = 1/4" Walther Quick Connect	**Prefilter (add before Filter Media in part#)**
				3H	**3H** = 3/8" Hose Barb	
					3H-FB = 3/8" Hose Barb with filling bell or **-FC** with Cap	**G(pore Size)**= Glass Fiber PreFilter
				4H	**4H** = 1/2" Hose Barb	
				4Q	**4Q** = 1/2" Male Quick Coupling for Plastic latch	**P(pore Size)**= PolyPro Media PreFilter
				5H	**5H** = 5/8" Hose Barb	
				MT	**MT** = 1/2" Tri clamps	**S(pore Size)** = PES PreFilter
				TC	**TC** = 1-1/2" Tri clamp	
					TS = Shower Head	

Example - PureFlo SZV Series Capsule, Charged Nylon , 2.5" internal filter, 0.2 micron, with 1.5" Tri-Clamp fittings I/O, would be **SZVCN020STCTC**

Quick Couplings are molded on. Female Quick Coupling with Plastic latch will be threaded on. Compatible with CPC (Colder), LinkTech and others. *- 2H or 3H with filling bell only

Your Local Distributor:

ZenPure

North & South Americas:
ZenPure Americas, Inc
www.zenpure.com
Info-us@zenpure.com
703-335-9910

All Other Regions:
ZenPure Corporation
www.zenpure.com
info@zenpure.com
+86 571 2288 6800

ISO 9001 14001 Certified

TÜV MANAGEMENT SERVICE ISO 13485

SZL Series Nylon Capsules

Pharmaceutical Grade

The PureFlo® SZL Series Nylon filter capsule is designed for improved wetability in processes which require critical integrity validation testing. The unit provides excellent compatibility and superior flow per unit area as compared to other membrane capsules. The PureFlo® Nylon filter capsules have been specially designed for sterilizing in biopharmaceutical applications where bacterial retention is required. The hydrophilic nylon membrane does not require pre-wetting agents, thereby eliminating a potential source of contamination. The nylon membrane is a low protein-binding media to improve your process.

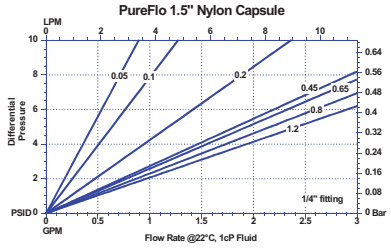
The capsules were specifically designed with an easy-to-wet-out structure of nylon membrane, polyester (PET) support and internal nylon end caps. The units have luer lock plugs for the vent & drain for simple and efficient evacuation of air and liquid. The units are used for filtration of small to medium volumes of fluid for processing in production, laboratory and pilot runs. No adhesives, binders, or surfactants are used in the manufacturing process of these capsules. They are rinsed with pyrogen-free water to reduce extractables and speed production. All filter capsules are 100% integrity-tested to ensure filter performance each and every time out of the package. The capsule can be ordered pre-sterilized.

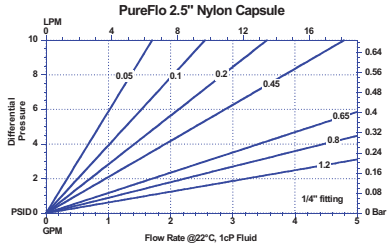
Applications	
Buffers and Media	Fermentation Broths
Product Sterilization	SVP (Small Volume Parenterals)
BioBags	Pharmaceuticals
Vaccines	Biologics
Antibiotics	Scale-up Processing
Water	Serums

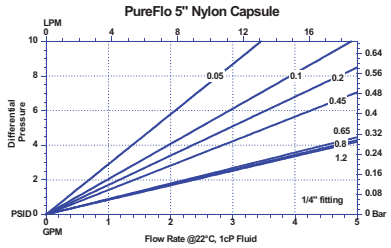
Specifications

Materials of Construction:	Membrane: Nylon 6,6 Membrane Supports: PET (Polyester) Shell, Cage, Core: Polypropylene ; End Caps: Nylon Push to Connect Fitting: Acetal-body, EPDM-O-Ring, 304 SS Grip Ring
Fitting Connections:	See ordering guide for the availability. Any inlet/outlet combinations. (Custom adaptors available upon request)
Nominal Dimensions:	Lengths: 1.5 in (68 mm), 2.5 in (98 mm), 5.0 in (153 mm), 7.5 in (121 mm), 10 in (276 mm) Diameter: 2.88 in (73 mm)
Effective Filtration Area:	1.5 in: 0.74 ft^2 (690 cm^2), 2.5 in: 1.5 ft^2 (1400 cm^2), 5.0 in: 2.8 ft^2 (2600 cm^2), 7.5 in: 4.3 ft^2 (4000 cm^2), 10 in: 5.6 ft^2 (5200 cm^2)
Operating Conditions:	Maximum Working Pressure: Liquid: 5.5 bar (80 psi) at 22 °C Gas: 4.1 bar (59.5 psi) at 22 °C Minimum Burst Pressure: 8.3 bar (120 psi) at 22 °C Maximum Forward Differential Pressure: 5 bar (72.5 psi) at 22 °C Maximum Reverse Differential Pressure: 3.0 bar (43.5 psi) at 22°C Maximum Operating Temperature: PP & Gamma PP: 80 °C HDPE: 60 °C

SZL Series Nylon Capsules







Specifications (cont.)

Bacterial Retention:

Complete retention of > 10^7 organisms/cm^2 of *Brevundimonas diminuta* in accordance with the current HIMA challenge methodology (ASTM F838-83). Validation guide available upon request.

Autoclavable & Sanitizable:

Capsules can be autoclaved 5 times at 125 °C (257 °F) for 30 minutes or chemically sanitized in situ using common sanitizing agents or hot water at 90 °C (194 °F)for a limited time (dependent on time and temperature). Capsules must not be in situ steam-sterilized.

Water Bubble Point Specification:

0.1 µm: 23 psi (4.1 bar) in IPA
0.2 µm: 50 psi (3.2 bar)

Bacterial Endotoxin:

Effluent is non-pyrogenic per USP Bacterial Endotoxin (0.25 EU/ml), determined using Limulus Amebocyte Lysate (LAL) Test.

Regulatory Compliance:

The filters are constructed with polypropylene resins and filtration media in compliance with 21 CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastic.

PureFlo SZL Series Nylon Capsule (Pharmaceutical grade) Ordering Guide

PureFlo Capsule Filters	Vent & Drain Fitting	Filter Media	Pore size (Micron)	Length	Input Fitting	Output Fitting	Options
SZ Pharma grade PP Shell & Nylon end-caps Polyester support Polypropylene Cage & Core Internal Silicone O-ring 70mm Diameter Capsule with Bleed Valve	**L** = Female Luer Lock **P** = M8 Threaded Plug - Limited options	**N** = Nylon	**005**= 0.05 **010** = 0.10 **020** = 0.20 **045** = 0.45 **065** = 0.65 **080** = 0.80 **120** = 1.20	**H** = 1.5" **S** = 2.5" **L** = 5" **E** = 7.5" **K** = 10"	**1C** **1H** **1N** **1NF** **1Q** **1QF** **1QFV** **1QV** **2H** **2HS** **2LF** **2N** **2NF** **2P** **2PE** **2Q** **2QF** **2QFP** **2QFV** **2QP** **2QV** **2V** **3H** **3HE** **3NF** **4H** **4N** **4Q** **MT** **TC**	**1C** = 1/8" Compression **1H** = 1/8" Hose barbs **1N** = 1/8" MNPT **1NF** = 1/8" FNPT **1Q** = 1/8" Male Quick Coupling with Metal latch **1QF** = 1/8" Female Quick Coupling with Metal latch **1QFV** = 1/8" Female Valved Quick Coupling with Metal latch **1QV** = 1/8" Male Valved Quick Coupling with Metal latch **2H** = 1/4" to 1/2" Hose barbs **2HS** = 1/4" to 3/8" Hose barbs **2LF** = Large Female Luer Lock fitting **2N** = 1/4" MNPT **2NF** = 1/4" FNPT **2P** = 1/4" Push to Connect **2PE** = 1/4" Push to Connect Elbow **2Q** = 1/4" Male Quick Coupling for Metal latch **2QF** = 1/4" Female Quick Coupling with Metal latch **2QFP** = 1/4" Female Quick Coupling with Plastic latch **2QFV** = 1/4" Female Valved Quick Coupling with Metal latch **2QP** = 1/4" Male Quick Coupling for Plastic latch **2QV** = 1/4" Male Valved Quick Coupling with Metal latch **2V** = 1/4" Walther Quick Connect **3H** = 3/8" Hose Barb **3HE** = 3/8" Hose Barb Elbow **3H-FB** = 3/8" Hose Barb with filling bell or **-FC** with Cap **3NF** = 3/8" FNPT **4H** = 1/2" Hose Barb **4N** = 1/2" MNPT **4Q** = 1/2" Male Quick Coupling for Plastic latch **MT** = 1/2" Tri clamps **TC** = 1-1/2" Tri clamp **TS** = Shower Head	**Shell Material** **Blank** = Gamma stable polypropylene shell Standard **-NY** = Nylon Construction **-E** = Polyethylene shell and HDPE media support for gamma sterilization **Vent & Drain** **-NI** = No vent or drain Inlet fitting **-NO** = NO vent or drain Outlet fitting **-N** = No vent or drain fittings **O-Ring for Quick Coupling** **-OE** = O-ring EPDM **-ON** = O-ring Nitrile **-OV** = O-ring Viton **Blank** = O-ring Silicon (Standard) **Prefilter (add before Filter Media in part#)** **G(pore Size)**= Glass Fiber PreFilter **P(pore Size)**= PolyPro Media PreFilter **S(pore Size)** = PES PreFilter
Example - 0.2um Nylon Pharma Grade, Luer Lock Vent/Drain, 1.5" internal filter, 1/4" MNPT I/O is **SZLN020H2N2N**							

Quick Couplings are molded, Female Quick Coupling with Plastic latch will be threaded on, compatible with CPC (Colder), LinkTech and others.

Your Local Distributor:

ZenPure

North & South Americas:
ZenPure Americas, Inc
www.zenpure.com
Info-us@zenpure.com
703-335-9910

All Other Regions:
ZenPure Corporation
www.zenpure.com
info@zenpure.com
+86 571 2288 6800

ISO Certified 9001 14001

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PureFlo® Nylon Filter Capsules

(Nylon Membrane on PP Construction)

PureFlo® Nylon filter capsules are highly retentive, naturally hydrophilic nylon membrane filters that have been specially designed for liquid applications. The nylon membrane in an all-polypropylene construction provides excellent chemical compatibility and superior flow per unit area as compared to other membrane capsules. No adhesives, binders, or surfactants are used in the manufacturing process. All capsules are rinsed with high-purity water to reduce extractables and downtime.

The naturally hydrophilic nylon membrane does not require pre-wetting with IPA and flushing with DI water, thereby eliminating a potential source of contamination and hazardous waste.

All filter capsules are 100% integrity tested to ensure filter performance each and every time out of the package. PureFlo nylon filter capsules are well-suited for critical applications where superior flow and particle removal efficiency at 0.05, 0.1, 0.2, 0.45, 0.65, 0.8, and 1.2 micron is required.

Applications	
Solvents	Parts Cleaning
Fine Chemicals	Cosmetics
Ink Jets	Pharmaceuticals
Process Water	Biologics
Beverages	Dyes

Regulatory Compliance

Manufactured from materials that conform to the requirements of 21CFR Part 177 of the U.S. Code of Federal Regulations and USP Class VI Biological Test for Plastics.

Autoclave Cycles

5 times @ 257°F/125°C for 30 minutes
Capsules must not be in situ steam-sterilized

Materials of Construction

Membrane: Naturally Hydrophilic Nylon 6,6
Membrane Supports: Polypropylene
Cage, Core, End Caps: Polypropylene
Fitting Connections: MNPT, FNPT, Compression, Sanitary Flange, Hose Barb, Quick Coupling

Dimensions (Nominal)

Length: 1.5 in (68 mm) Length: 2.5 in (98 mm)
Length: 5.0 in (153 mm) Length 7.5 in (221 mm)
Length: 10 in (276mm)
Diameter: 2.88 in (73 mm)

Effective Filtration Area

1.5 in - 0.74 ft^2 (650 cm^2) 2.5 in - 1.4 ft^2 (1300 cm^2)
5.0 in - 2.6ft^2 (2600 cm^2) 7.5 in - 4.0ft^2 (3900 cm^2)
10 in - 5.3 ft^2 (5200 cm^2)

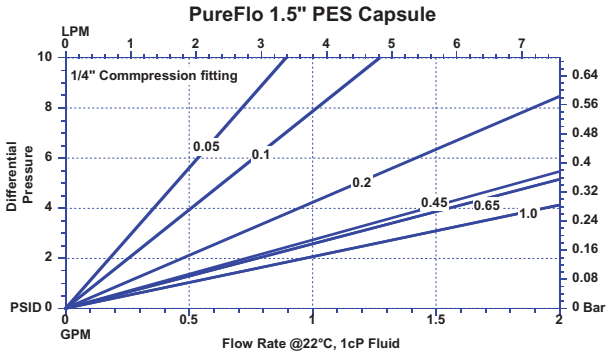
Operating Conditions

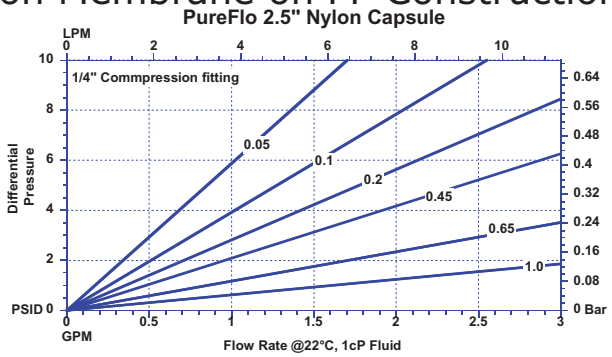
Maximum Operating Pressure:
Liquid: 5.5 bar (80psi) at 72°F/22°C
Gas: 4.1 bar (60psi) at 72°F/22°C
Minimum Burst Pressure:
8.3 bar (120psi) at 72°F/22°C
Maximum Forward Differential Pressure:
4.1 bar (60psi) at 72°F/22°C
Maximum Reverse Differential Pressure:
2.1 bar (30psi) at 72°F/22°C
Maximum Operating Temperature: 140°F/60°C

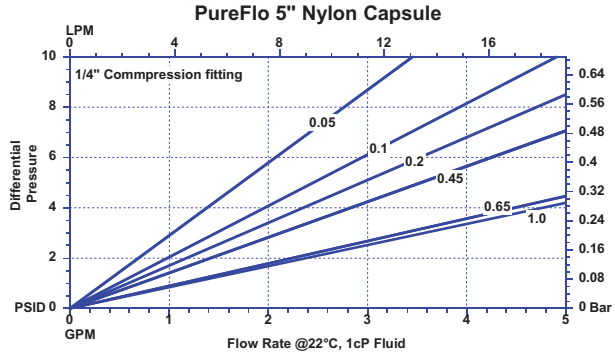
Features	Benefits
■ Naturally Hydrophilic Nylon Membrane (Absolute Rated)	■ IPA pre-wetting not required – thereby eliminating a potential source of contamination and disposal waste ■ Reduces downtime and improves throughput ■ Economic alternative to PTFE and PVDF ■ Unlike hydrophobic filters there is no de-wetting in outgassing fluids
■ Small Disposable Capsule	■ Rapid installation reduces downtime ■ Low hold-up volume reduces chemical waste ■ Reduced handling of hazardous chemicals
■ Ease of Scale-Up	■ Consistent filtration from laboratory to full production testing
■ Low Filter Extractables	■ No adhesives, binders, or surfactants used ■ Capsules are rinsed with high-purity water

PureFlo® Nylon Filter Capsules

(Nylon Membrane on PP Construction)







PureFlo Nylon Filter Cartridge Ordering Guide

PureFlo Capsule Filters	Filter Media	Pore size (Micron)	Length	Inlet Fitting	Outlet Fitting	Options
		005 = 0.05	**H** = 1.5"	**1C**	**1C** = 1/8" Compression	**Grade**
SKL = Capsule filter Standard grade Luer Lock Vent/Drain	**N** = Nylon	**010** = 0.10	**S** = 2.5"	**1H**	**1H** = 1/8" Hose barbs	**Blank** = Standard Grade
		020 = 0.20	**L** = 5"	**1N**	**1N** = 1/8" MNPT	**-B** = Biological Reduction Grade
		045 = 0.45	**E** = 7.5"	**1NF**	**1NF** = 1/8" FNPT	
		065 = 0.65	**K** = 10"	**1Q**	**1Q** = 1/8" Male Quick Coupling with Metal latch	**-PH** = Pharma Grade
SKP= Capsule filter Standard grade M8 Plug vent/ Drain Limited Options		**080** = 0.80		**1QF**	**1QF** = 1/8" Female Quick Coupling with Metal latch	**Shell Material**
		120 = 1.20		**1QFV**	**1QFV** = 1/8" Female Valved Quick Coupling with Metal latch	**Blank** = Polypropylene
				1QV	**1QV** = 1/8" Male Valved Quick Coupling with Metal latch	**-GP** = Gamma stable polypropylene shell
				2C	**2C** = 1/4" Compression	**-NY** = Nylon Construction
				2H	**2H** = 1/4" to 1/2" Hose barbs	**-E** = Polyethylene shell and HDPE media support for gamma sterilization
				2HS	**2HS** = 1/4" to 3/8" Hose barbs	**-BLK** = Black polypropylene shell
				2LF	**2LF** = Large Female Luer Lock fitting	**Vent & Drain**
				2N	**2N** = 1/4" MNPT	**-N** = No vent or Drain fittings
				2NF	**2NF** = 1/4" FNPT	**-NI** = No vent or Drain inlet fitting
				2P	**2P** = 1/4" Push to Connect	**-NO** = No vent or Drain Outlet fitting
				2PE	**2PE** = 1/4" Push to Connect Elbow	**Sterilization**
				2Q	**2Q** = 1/4" Male Quick Coupling for Metal latch	**-ETO** = Ethylene Oxide Sterilization
				2QF	**2QF** = 1/4" Female Quick Coupling with Metal latch	
				2QFP	**2QFP** = 1/4" Female Quick Coupling with Plastic latch	
				2QFV	**2QFV** = 1/4" Female Valved Quick Coupling with Metal latch	
				2QP	**2QP** = 1/4" Male Quick Coupling for Plastic latch	
				2QV	**2QV** = 1/4" Male Valved Quick Coupling with Metal latch	
				2V	**2V** = 1/4" Walther Quick Connect	
				3C	**3C** = 3/8" Compression	
				3H	**3H** = 3/8" Hose Barb	
				3HE	**3HE** = 3/8" Hose Barb Elbow	
					3H-FB = 3/8" Hose Barb with filling bell or **-FC** with Cap	
				3NF	**3NF** = 3/8" FNPT	
				4C	**4C** = 1/2" Compression	
				4H	**4H** = 1/2" Hose Barb	
				4N	**4N** = 1/2" MNPT	
				4Q	**4Q** = 1/2" Male Quick Coupling for Plastic latch	
				8C	**8C** = 5/16" Compression	
				MT	**MT** = 1/2" Tri clamps	
				TC	**TC** = 1-1/2" Tri clamp	
					TS = Shower Head	

O-Ring for Quick Coupling
Blank = O-ring Silicone (Standard)
-OE = O-ring EPDM
-ON = O-ring Nitrile
-OV = O-ring Viton

Prefilter (add before Filter Media in part#)
G(pore Size)= Glass Fiber PreFilter
P(pore Size)= PolyPro Media PreFilter
S(pore Size) = PES PreFilter

Example - Capsule, Luer Lock V/D, 2.5" Internal filter, 0.45 micron Nylon Membrane Capsule, with 1.5" Tri-Clamp fittings would be **SKLN045STCTC**

Quick Couplings are molded, Female Quick Coupling with Plastic latch will be threaded on, compatible with CPC (Colder), LinkTech and others.

Your Local Distributor:

ZenPure

North & South Americas:
ZenPure Americas, Inc
www.zenpure.com
Info-us@zenpure.com
703-335-9910

All Other Regions:
ZenPure Corporation
www.zenpure.com
info@zenpure.com
+86 571 2288 6800

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TÜV MANAGEMENT SERVICE ISO 13485

PureFlo Nylon Capsules
(SKV Series)

Nylon Capsule

PureFlo® SKV Series Nylon filter capsules are highly retentive, naturally hydrophilic nylon membrane filters that have been specially designed for liquid applications. The nylon membrane in an all-polypropylene construction provides excellent chemical compatibility and superior flow per unit area as compared to other membrane capsules. No adhesives, binders, or surfactants are used in the manufacturing process. All capsules are rinsed with high-purity water to reduce extractables and downtime.

The naturally hydrophilic nylon membrane does not require pre-wetting with IPA and flushing with DI water, thereby eliminating a potential source of contamination and hazardous waste.

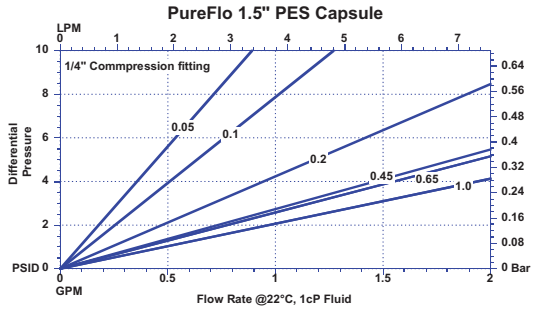
All filter capsules are 100% integrity tested to ensure filter performance each and every time out of the package. PureFlo nylon filter capsules are well-suited for critical applications where superior flow and particle removal efficiency at 0.05, 0.1, 0.2, 0.45, 0.65, 0.8 and 1.2 micron is required.

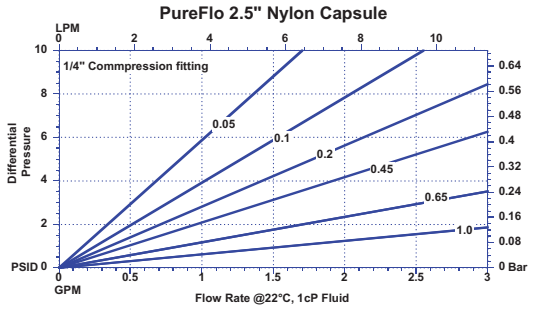
Applications	
Solvents	Water
Hard Particle	Beverages
Cell Removal	Pharmaceuticals
Chemicals	Biologics

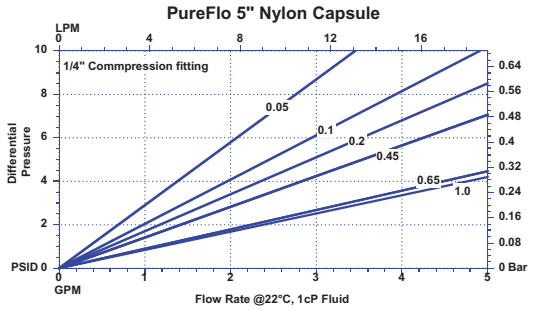
Specifications

Materials of Construction:	Media: Naturally Hydrophilic Nylon 6,6 Media Supports: Polypropylene Cage, Core, End Caps: Polypropylene Sealing: Thermally bonded
Fitting Connections:	See ordering guide for the availability. (Custom adaptors available upon request)
Nominal Dimensions:	Length: 1.5 in. (51 mm), 2.5 in. (80 mm), 5 in. (136 mm), 7.5 in. (210 mm), and 10 in. (265 mm) Diameter: 2.88 in. (73 mm)
Effective Filtration Area:	1.5 in - 0.74 ft^2 (690 cm^2), 2.5 in - 1.4 ft^2 (1300 cm^2), 5.0 in - 2.64 ft^2 (2600 cm^2), 7.5 in - 4.0ft^2 (3900 cm^2), 10 in - 5.3 ft^2 (5200 cm^2)
Operating Conditions:	Maximum Operating Pressure: Liquid: 5.5 bar (80 psi) at 22 °C Gas: 4.1 bar (60 psi) at 22 °C Maximum Forward Differential Pressure: 4.1 bar (60 psi) at 22 °C Maximum Reverse Differential Pressure: 2.1 bar (30.5 psi) at 22 °C Minimum Burst Pressure: 8.3 bar (120 psi) at 22 °C Maximum Operating Temperature: 60 °C

PureFlo Nylon Capsules







Specifications (cont.)

Autoclavable & Sanitizable:

Capsules can be autoclaved 5 times at 125 °C (257 °F) for 30 minutes or chemically sanitized in situ using common sanitizing agents or hot water at 90 °C (194 °F) for a limited time (dependent on time and temperature). Capsules must not be in situ steam-sterilized.

Regulatory Compliance:

The filters are constructed with polypropylene resins and filtration media in compliance with 21 CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastic.

PureFlo SKV Series Nylon Capsule Ordering Guide

PureFlo Capsule Filters	Filter Media	Pore size (Micron)	Internal Filter Length	Input Fitting	Output Fitting	Options	
						Shell Material	**O-Ring for Quick Coupling**
SKV 70mm Diameter Capsule with Bleed Valve	**N** = Nylon	**005**= 0.05 **010** = 0.10 **020** = 0.20 **045** = 0.45 **065** = 0.65 **080** = 0.80 **120** = 1.20	**H** = 1.5" **S** = 2.5" **L** = 5" **E** = 7.5" **K** = 10"	**1H** **1Q** **1QF** **1QFV** **1QV** **2H** **2HL** **2N** **2P** **2PE** **2Q** **2QF** **2QFV** **2QP** **2QV** **2V** **3H** **4H** **4Q** **5H** **MT** **TC**	**1H** = 1/8" Hose barbs **1Q** = 1/8" Male Quick Coupling with Metal latch **1QF** = 1/8" Female Quick Coupling with Metal latch **1QFV** = 1/8" Female Valved Quick Coupling with Metal latch **1QV** = 1/8" Male Valved Quick Coupling with Metal latch **2H** = 1/4" Hose barb **2HL** = 1/4" to 1/2" Hose barbs **2H-FB** = 1/4" Hose Barb with filling bell **-FC** with Cap **2N** = 1/4" MNPT **2P** = 1/4" Push to Connect **2PE** = 1/4" Push to Connect Elbow **2Q** = 1/4" Male Quick Coupling for Metal latch **2QF** = 1/4" Female Quick Coupling with Metal latch **2QFV** = 1/4" Female Valved Quick Coupling with Metal latch **2QP** = 1/4" Male Quick Coupling for Plastic latch **2QV** = 1/4" Male Valved Quick Coupling with Metal latch **2V** = 1/4" Walther Quick Connect **3H** = 3/8" Hose Barb **3H-FB** = 3/8" Hose Barb with filling bell or **-FC** with Cap **4H** = 1/2" Hose Barb **4Q** = 1/2" Male Quick Coupling for Plastic latch **5H** = 5/8" Hose Barb **MT** = 1/2" Tri clamps **TC** = 1-1/2" Tri clamp **TS** = Shower Head	**Blank** = Polypro construction **-E** = Polyethylene shell and HDPE media support for gamma sterilization **-GP** = Gamma stable polypropylene shell **-NY** = Nylon Shell **Sterilization** **-ETO =** Ethylene oxide sterilization **Vent & Drain** **-N**= No vent or drain fittings **-NI** = No vent or drain inlet fitting **-NO** = No vent or drain Outlet fitting	**-OE** = O-ring EPDM **-ON** = O-ring Nitrile **-OV** = O-ring Viton **Blank** = O-ring Silicon **Prefilters** **-G(pore Size)**= Glass Fiber PreFilter **-P(pore Size)**= PolyPro Media PreFilter **-S(pore Size)** = PES PreFilter Silicone O-Rings for Bleed Valve and Quick Coupling fittings
Example - PureFlo SKV Series Capsule, Nylon , 2.5" internal filter, 0.2 micron, with 1.5" Tri-Clamp fittings I/O, would be SKVN020STCTC							
Note: Quick Couplings are molded on. Female Quick Coupling with Plastic latch will be threaded on. Compatible with CPC (Colder), LinkTech and others.							

Your Local Distributor:

ZenPure

North & South Americas:
ZenPure Americas, Inc
www.zenpure.com
Info-us@zenpure.com
703-335-9910

All Other Regions:
ZenPure Corporation
www.zenpure.com
info@zenpure.com
+86 571 2288 6800

PureFlo Charged Nylon Capsules
(SKV Series)

Charged Nylon Capsule

PureFlo® SKV Series Charged Nylon filter capsules are highly retentive, naturally hydrophilic nylon membrane filters that have been specially designed for liquid applications to reduce endotoxins. The charged nylon membrane in an all-polypropylene construction provides excellent chemical compatibility and superior flow per unit area as compared to other membrane capsules. No adhesives, binders, or surfactants are used in the manufacturing process. All capsules are rinsed with high-purity water to reduce extractables and downtime.

The naturally hydrophilic charged nylon membrane does not require pre-wetting with IPA and flushing with DI water, thereby eliminating a potential source of contamination and hazardous waste.

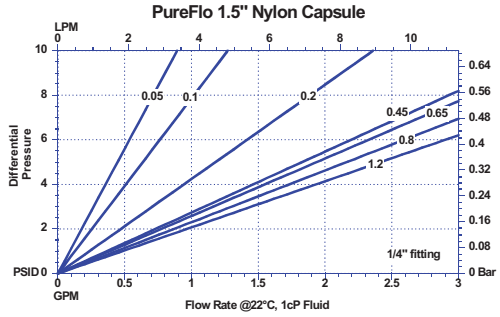
All filter capsules are 100% integrity tested to ensure filter performance each and every time out of the package. PureFlo® charged nylon filter capsules are well-suited for critical applications where superior flow and particle removal efficiency at 0.05, 0.1, 0.2, 0.45, 0.65, 0.8 and 1.2 micron is required.

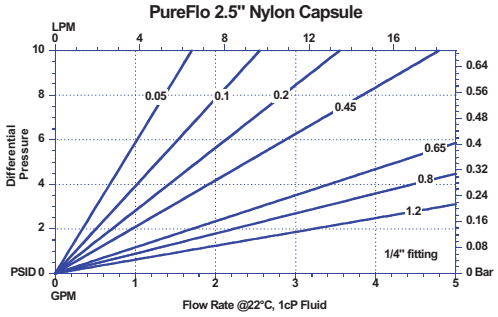
Applications	
Solvents	Water
Hard Particle	Beverages
Cell Removal	Pharmaceuticals
Endotoxin Reduction	Biologics

Specifications

Materials of Construction:	Media: Naturally Hydrophilic Charged Nylon Media Supports: None Cage, Core, End Caps: Polypropylene Sealing: Thermally bonded
Fitting Connections:	See ordering guide for the availability. (Custom adaptors available upon request)
Nominal Dimensions:	Length: 1.5 in. (51 mm), 2.5 in. (80 mm), 5in. (136 mm), 7.5 in. (210 mm), and 10 in. (265 mm) Diameter: 2.88 in. (73 mm)
Effective Filtration Area:	1.5 in - 0.74 ft^2 (690 cm^2), 2.5 in - 1.4 ft^2 (1300 cm^2), 5.0 in - 2.64 ft^2 (2600 cm^2), 7.5 in - 4.0 ft^2 (3900 cm^2), 10 in - 5.3 ft^2 (5200 cm^2)
Operating Conditions:	Maximum Operating Pressure: Liquid: 5.5 bar (80 psi) at 22 °C Gas: 4.1 bar (59.5 psi) at 22 °C Maximum Forward Differential Pressure: 4.1 bar (60 psi) at 22 °C Maximum Reverse Differential Pressure: 2.1 bar (30.5 psi) at 22 °C Minimum Burst Pressure: 8.3 bar (120 psi) at 22 °C Maximum Operating Temperature: 60 °C

PureFlo Charged Nylon Capsules
(SKV Series)





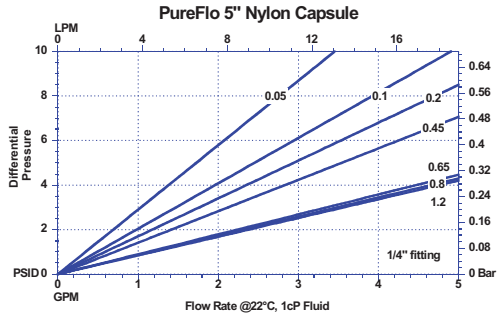
Specifications (cont.)

Autoclavable & Sanitizable:

Capsules can be autoclaved 5 times at 125 °C (257 °F) for 30 minutes or chemically sanitized in situ using common sanitizing agents or hot water at 90 °C (194 °F) for a limited time (dependent on time and temperature). Capsules must not be in situ steam-sterilized.

Regulatory Compliance:

The filters are constructed with polypropylene resins and filtration media in compliance with 21 CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastic.



PureFlo SKV Series Charged Nylon Capsule Ordering Guide

PureFlo Capsule Filters	Filter Media	Pore size (Micron)	Internal Filter Length	Input Fitting	Output Fitting	Options	
		005= 0.05	**H** = 1.5"	**1H**	**1H** = 1/8" Hose barbs	**Shell Material**	**O-Ring for Quick Coupling**
SKV	**CN** = Charged Nylon	**010** = 0.10	**S** = 2.5"	**1Q**	**1Q** = 1/8" Male Quick Coupling with Metal latch	**Blank** = Polypro construction	**-OE** = O-ring EPDM
		020 = 0.20	**L** = 5"	**1QF**	**1QF** = 1/8" Female Quick Coupling with Metal latch		**-ON** = O-ring Nitrile
70mm Diameter Capsule with Bleed Valve		**045** = 0.45	**E** = 7.5"	**1QFV**	**1QFV** = 1/8" Female Valved Quick Coupling with Metal latch	**-E** = Polyethylene shell and HDPE media support for gamma sterilization	**-OV** = O-ring Viton
		065 = 0.65	**K** = 10"	**1QV**	**1QV** = 1/8" Male Valved Quick Coupling with Metal latch		**Blank** = O-ring Silicon
		080 = 0.80		**2H**	**2H** = 1/4" Hose barb		**Prefilters**
		120 = 1.20		**2HL**	**2HL** = 1/4" to 1/2" Hose barbs	**-GP** = Gamma stable polypropylene shell	**-G(pore Size)**= Glass Fiber PreFilter
					2H-FB = 1/4" Hose Barb with filling bell **-FC** with Cap		**-P(pore Size)**= PolyPro Media PreFilter
				2N	**2N** = 1/4" MNPT	**-NY** = Nylon Shell	
				2P	**2P** = 1/4" Push to Connect	**Sterilization**	
				2PE	**2PE** = 1/4" Push to Connect Elbow		**-S(pore Size)** = PES PreFilter
				2Q	**2Q** = 1/4" Male Quick Coupling for Metal latch	**-ETO =** Ethylene oxide sterilization	
				2QF	**2QF** = 1/4" Female Quick Coupling with Metal latch		
				2QFV	**2QFV** = 1/4" Female Valved Quick Coupling with Metal latch	**Vent & Drain**	
				2QP	**2QP** = 1/4" Male Quick Coupling for Plastic latch	**-N**= No vent or drain fittings	
				2QV	**2QV** = 1/4" Male Valved Quick Coupling with Metal latch	**-NI** = No vent or drain inlet fitting	
				2V	**2V** = 1/4" Walther Quick Connect	**-NO** = No vent or drain Outlet fitting	
				3H	**3H** = 3/8" Hose Barb		
					3H-FB = 3/8" Hose Barb with filling bell or **-FC** with Cap		Silicone O-Rings for Bleed Valve and Quick Coupling fittings
				4H	**4H** = 1/2" Hose Barb		
				4Q	**4Q** = 1/2" Male Quick Coupling for Plastic latch		
				5H	**5H** = 5/8" Hose Barb		
				MT	**MT** = 1/2" Tri clamps		
				TC	**TC** = 1-1/2" Tri clamp		
					TS = Shower Head		

Example - PureFlo SKV Series Capsule, Charged Nylon , 2.5" internal filter, 0.2 micron, with 1.5" Tri-Clamp fittings I/O, would be SKVCN020STCTC

Note: Quick Couplings are molded on. Female Quick Coupling with Plastic latch will be threaded on. Compatible with CPC (Colder), LinkTech and others.

Your Local Distributor:

ZenPure

North & South Americas:
ZenPure Americas, Inc
www.zenpure.com
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703-335-9910

All Other Regions:
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ISO Certified 9001 14001

TÜV MANAGEMENT SERVICE ISO 13485

PureFlo All Nylon Filter Capsules
(SNL Series)

All Nylon Capsule

PureFlo® All Nylon filter capsules are highly retentive, naturally hydrophilic nylon membrane filters that have been specially designed for liquid applications. The nylon membrane in an all-nylon construction provides excellent chemical compatibility and superior flow per unit area as compared to other membrane capsules. No adhesives, binders, or surfactants are used in the manufacturing process. All capsules are rinsed with high -purity water to reduce extractables and downtime.

The naturally hydrophilic nylon membrane does not require pre-wetting with IPA and flushing with DI water, thereby eliminating a potential source of contamination and hazardous waste.

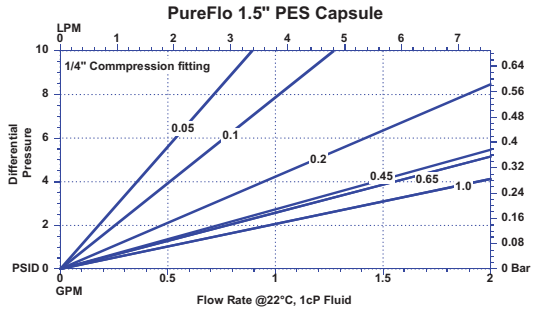
All filter capsules are 100% integrity tested to ensure filter performance each and every time out of the package. PureFlo nylon filter capsules are well-suited for critical applications where superior flow and particle removal efficiency at 0.05, 0.1, 0.2, 0.45, 0.65, 0.8, and 1.2 micron is required.

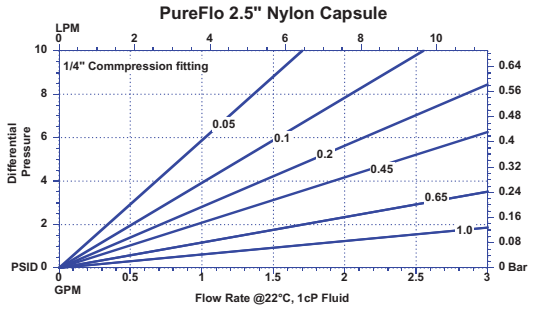
Applications	
Solvents	Water
Hard Particle	Beverages
Cell Removal	Pharmaceuticals
Chemicals	Biologics

Specifications

Materials of Construction:	Media: Naturally Hydrophilic Nylon 6,6 Media Supports: None Cage, Core, End Caps: Nylon Sealing: Thermally bonded
Fitting Connections:	See ordering guide for the availability. (Custom adaptors available upon request)
Nominal Dimensions:	Lengths: 1.5in. (68mm), 2.5in. (98mm), 5in. (153mm), 7.5in. (221mm), and 10in. (276mm) Diameter: 2.88 in. (73mm)
Effective Filtration Area:	1.5 in - 0.74 ft^2 (600 cm^2), 2.5 in - 1.4 ft^2 (1200 cm^2), 5.0 in - 2.64 ft^2 (2300 cm^2), 7.5 in - 4.0ft^2 (3500 cm^2), 10 in - 5.3 ft^2 (4600 cm^2)
Operating Conditions:	Maximum Operating Pressure: Liquid: 5.5 bar (80psi) at 72°F/22°C Liquid: 3.0 bar (43.5psi) at 203°F/95°C Gas: 4.1 bar (60psi) at 72°F/22°C Maximum Forward Differential Pressure: 4.1 bar (60psi) at 72°F/22°C 1.5 bar (21.75psi) at 203°F/95°C Maximum Reverse Differential Pressure: 2.1 bar (30 psi) at 72°F/22°C Minimum Burst Pressure: 8.3 bar (120psi) at 72°F/22°C Maximum Operating Temperature: : 203°F/95°C

PureFlo All Nylon Filter Capsules
(SNL Series)





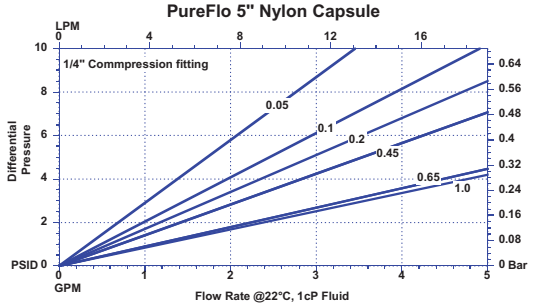
Specifications (cont.)

Autoclavable & Sanitizable:

Capsules can be autoclaved 5 times at 257°F/125°C for 30 minutes or chemically sanitized in situ using common sanitizing agents or hot water at 194°F/90°C for a limited time (dependent on time and temperature).
Capsules must not be in situ steam-sterilized.

Regulatory Compliance:

The filters are constructed with polypropylene resins and filtration media in compliance with 21CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastic.



PureFlo All Nylon Filter Capsule Ordering Guide

PureFlo Capsule Filters	Vent & Drain Fitting	Filter Media	Pore size (Micron)	Length	Input Fitting	Output Fitting	Options
SN Media on All Nylon Construction 70mm Diameter	**L** = Female Luer Lock **P** = M8 Threaded Plug - Limited options	**N** = Nylon	**005**= 0.05 **010** = 0.10 **020** = 0.20 **045** = 0.45 **065** = 0.65 **080** = 0.80 **120** = 1.20	**H** = 1.5" **S** = 2.5" **L** = 5" **E** = 7.5" **K** = 10"	**1C** **1H** **1N** **1NF** **1Q** **1QF** **1QFV** **1QV** **2H** **2HS** **2LF** **2N** **2NF** **2P** **2PE** **2Q** **2QF** **2QFP** **2QFV** **2QP** **2QV** **2V** **3H** **3HE** **3NF** **4H** **4N** **4Q** **MT** **TC**	**1C** = 1/8" Compression **1H** = 1/8" Hose barbs **1N** = 1/8" MNPT **1NF** = 1/8" FNPT **1Q** = 1/8" Male Quick Coupling with Metal latch **1QF** = 1/8" Female Quick Coupling with Metal latch **1QFV** = 1/8" Female Valved Quick Coupling with Metal latch **1QV** = 1/8" Male Valved Quick Coupling with Metal latch **2H** = 1/4" to 1/2" Hose barbs **2HS** = 1/4" to 3/8" Hose barbs **2LF** = Large Female Luer Lock fitting **2N** = 1/4" MNPT **2NF** = 1/4" FNPT **2P** = 1/4" Push to Connect **2PE** = 1/4" Push to Connect Elbow **2Q** = 1/4" Male Quick Coupling for Metal latch **2QF** = 1/4" Female Quick Coupling with Metal latch **2QFP** = 1/4" Female Quick Coupling with Plastic latch **2QFV** = 1/4" Female Valved Quick Coupling with Metal latch **2QP** = 1/4" Male Quick Coupling for Plastic latch **2QV** = 1/4" Male Valved Quick Coupling with Metal latch **2V** = 1/4" Walther Quick Connect **3H** = 3/8" Hose Barb **3HE** = 3/8" Hose Barb Elbow **3H-FB** = 3/8" Hose Barb with filling bell or **-FC** with Cap **3NF** = 3/8" FNPT **4H** = 1/2" Hose Barb **4N** = 1/2" MNPT **4Q** = 1/2" Male Quick Coupling for Plastic latch **MT** = 1/2" Tri clamps **TC** = 1-1/2" Tri clamp **TS** = Shower Head	**Shell Material** **Blank** = Nylon construction **Sterilization** **-ETO** = Ethylene Oxide Sterilization **Vent & Drain** **-N** = No vent or Drain fittings **-NI** = No vent or drain inlet fitting **-NO** = NO vent or drain Outlet fitting **O-Ring for Quick Coupling** **Blank** = O-ring Silicon (Standard) **-OE** = O-ring EPDM **-ON** = O-ring Nitrile **-OV** = O-ring Viton

Example - 0.2um Nylon with Nylon Construction, Luer Lock V/D, 1.5" internal filter, 1/4" MNPT I/O is **SNLN020H2N2N**

Quick Couplings are molded, Female Quick Coupling with Plastic latch will be threaded on, compatible with CPC (Colder), LinkTech and others.

Your Local Distributor:

ZenPure

North & South Americas:
ZenPure Americas, Inc
www.zenpure.com
Info-us@zenpure.com
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All Other Regions:
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PureFlo All Nylon Filter Capsules
(SNV Series)

All Nylon Capsule

PureFlo® SNV Series All Nylon filter capsules are highly retentive, naturally hydrophilic nylon membrane filters that have been specially designed for liquid applications. The nylon membrane in an all-nylon construction provides excellent chemical compatibility and superior flow per unit area as compared to other membrane capsules. No adhesives, binders, or surfactants are used in the manufacturing process. All capsules are rinsed with high-purity water to reduce extractables and downtime.

The SNV capsules were designed with built-in bleed valves for simple and efficient evacuation of air and liquid from the upstream side. The naturally hydrophilic nylon membrane does not require pre-wetting with IPA and flushing with DI water, thereby eliminating a potential source of contamination and hazardous waste.

All filter capsules are 100% integrity tested to ensure filter performance each and every time out of the package. PureFlo nylon filter capsules are well-suited for critical applications where superior flow and particle removal efficiency at 0.05, 0.1, 0.2, 0.45, 0.65, 0.8, and 1.2 micron is required.

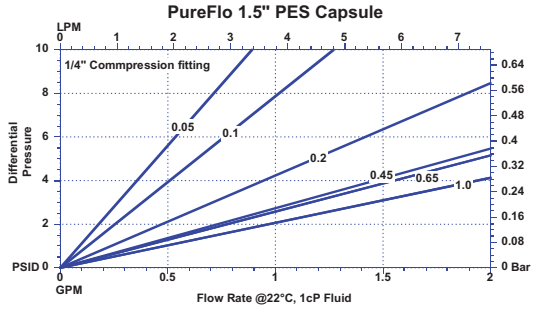
Applications	
Solvents	Water
Hard Particle	Beverages
Cell Removal	Pharmaceuticals
Chemicals	Biologics

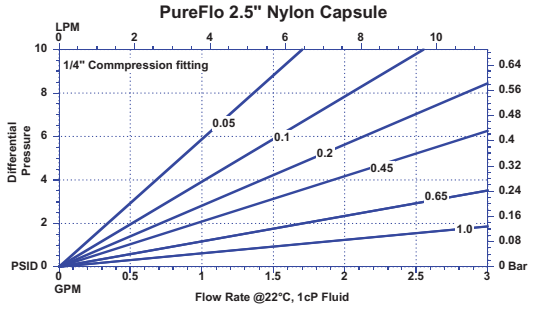
Specifications

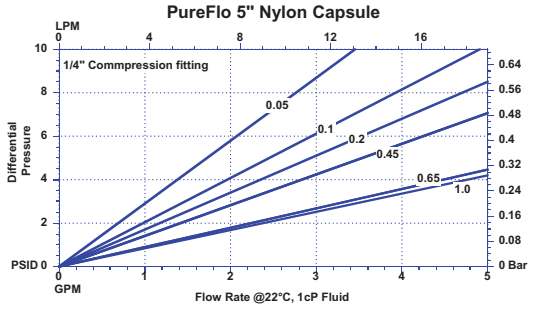
Materials of Construction:	Media: Naturally Hydrophilic Nylon 6,6 Media Supports: Nylon Cage, Core, End Caps: Nylon Sealing: Thermally bonded
Fitting Connections:	See ordering guide for the availability. (Custom adaptors available upon request)
Nominal Dimensions:	Length: 1.5in. (68mm), 2.5in. (98mm), 5in. (153mm), 7.5in. (251mm), and 10in. (281mm) Diameter: 2.88 in. (73mm)
Effective Filtration Area:	1.5 in - 0.64 ft^2 (600 cm^2), 2.5 in - 1.3 ft^2 (1200 cm^2), 5.0 in - 2.5 ft^2 (2300 cm^2), 7.5 in - 3.8ft^2 (3500 cm^2), 10 in - 5.0 ft^2 (4600 cm^2)
Operating Conditions:	Maximum Operating Pressure: Liquid: 5.5 bar (80psi) at 72°F/22°C Gas: 4.1 bar (60psi) at 72°F/22°C Maximum Forward Differential Pressure: 4.1 bar (60psi) at 72°F/22°C Maximum Reverse Differential Pressure: 2.1 bar (30 psi) at 72°F/22°C Minimum Burst Pressure: 8.3 bar (120psi) at 72°F/22°C Maximum Operating Temperature: 203°F/95°C

PureFlo All Nylon Filter Capsules

(SNV Series)







Specifications (cont.)

Autoclavable & Sanitizable:

Capsules can be autoclaved 5 times at 257°F/125°C for 30 minutes or chemically sanitized in situ using common sanitizing agents or hot water at 194°F/90°C for a limited time (dependent on time and temperature). Capsules must not be in situ steam-sterilized.

Regulatory Compliance:

The filters are constructed with polypropylene resins and filtration media in compliance with 21CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastic.

PureFlo All Nylon Filter Capsule Ordering Guide

PureFlo Capsule Filters	Filter Media	Pore size (Micron)	Internal Filter Length	Input Fitting	Output Fitting	Options
		005 = 0.05	**H** = 1.5"	**1H**	**1H** = 1/8" Hose barbs	**Shell Material**
SNV	**N** = Nylon	**010** = 0.10	**S** = 2.5"	**1Q**	**1Q** = 1/8" Male Quick Coupling with Metal latch	**Blank** = Nylon construction
		020 = 0.20	**L** = 5"	**1QF**	**1QF** = 1/8" Female Quick Coupling with Metal latch	**Sterilization**
Nylon Construction		**045** = 0.45	**E** = 7.5"	**1QFV**	**1QFV** = 1/8" Female Valved Quick Coupling with Metal latch	**-ETO** = Ethylene Oxide Sterilization
70mm Diameter Capsule with Bleed Valve		**065** = 0.65	**K** = 10"	**1QV**	**1QV** = 1/8" Male Valved Quick Coupling with Metal latch	**Vent & Drain**
		080 = 0.80		**2H**	**2H** = 1/4" Hose barb	**-N** = No vent or Drain fittings
		120 = 1.20		**2HL**	**2HL** = 1/4" to 1/2" Hose barbs	**-NI** = No vent or drain inlet fitting
					2H-FB = 1/4" Hose Barb with filling bell or **-FC** with Cap	**-NO** = NO vent or drain Outlet fitting
				2N	**2N** = 1/4" MNPT	
				2P	**2P** = 1/4" Push to Connect	
				2PE	**2PE** = 1/4" Push to Connect Elbow	
				2Q	**2Q** = 1/4" Male Quick Coupling for Metal latch	
				2QF	**2QF** = 1/4" Female Quick Coupling with Metal latch	
				2QFV	**2QFV** = 1/4" Female Valved Quick Coupling with Metal latch	
				2QP	**2QP** = 1/4" Male Quick Coupling for Plastic latch	
				2QV	**2QV** = 1/4" Male Valved Quick Coupling with Metal latch	**O-Ring for Quick Coupling**
				2V	**2V** = 1/4" Walther Quick Connect	
				3H	**3H** = 3/8" Hose Barb	**-OE** = O-ring EPDM
					3H-FB = 3/8" Hose Barb with filling bell or **-FC** with Cap	**-ON** = O-ring Nitrile
				4H	**4H** = 1/2" Hose Barb	**-OV** = O-ring Viton
				4Q	**4Q** = 1/2" Male Quick Coupling for Plastic latch	**Blank** = O-ring Silicon (Standard)
				5H	**5H** = 5/8" Hose Barb	
				MT	**MT** = 1/2" Tri clamps	
				TC	**TC** = 1-1/2" Tri clamp	
					TS = Shower Head	

Example - PureFlo SNV Series Capsule, Nylon , 2.5" internal filter, 0.2 micron, with 1.5" Tri-Clamp fittings I/O, would be SNVN020STCTC

Quick Couplings are molded on. Female Quick Coupling with Plastic latch will be threaded on. Compatible with CPC (Colder), LinkTech and others.

Your Local Distributor:

ZenPure

North & South Americas:
ZenPure Americas, Inc
www.zenpure.com
Info-us@zenpure.com
703-335-9910

All Other Regions:
ZenPure Corporation
www.zenpure.com
info@zenpure.com
+86 571 2288 6800

PureFlo Nylon Screen Filter Capsules
(Nylon Screen on PP Construction)

Screen Filtration

PureFlo® nylon screen capsule filters are designed for filtration and clarification applications in the pharmaceutical, biotechnology, food and beverage, medical, chemical, and water worldwide. This family of products is particularly suitable for the fluids with large sizes particles. The nylon screen removes particles by a sieving. Hard particles can be easily removed by the use of these units.

The nylon screen in an all-polypropylene construction provides excellent chemical compatibility. It can also be constructed in Nylon, Polyethylene and Gamma stabilized PP shells. PureFlo nylon screen filter capsules are well-suited for cellular clarification applications. No adhesives, binders, or surfactants are used in the manufacturing process. All capsules are rinsed with high-purity water to reduce extractables and downtime in a clean room environment to ensure filter performance each and every time out of the package.

Applications	
Clarification	Water
Hard Particle	Beverages
Cell Removal	Pharmaceuticals
Chemicals	Biologics

Specifications

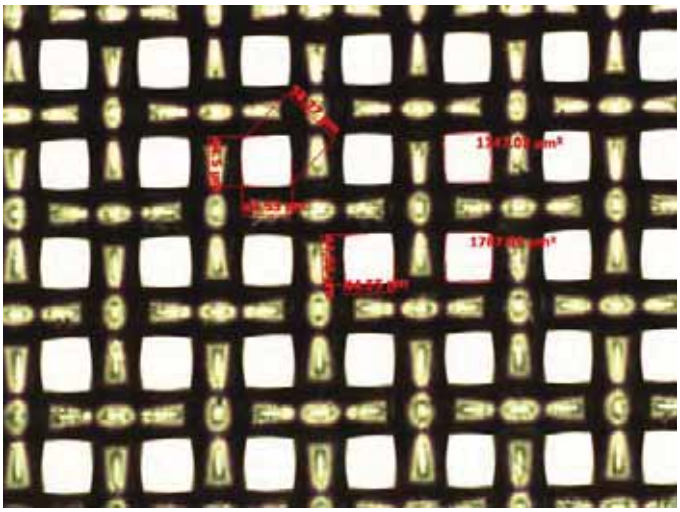
Materials of Construction:	Media: Nylon Screen Media Supports: None Cage, Core, End Caps: Polypropylene, Gamma Stabilized PP, Nylon Sealing: Thermally bonded
Fitting Connections:	See ordering guide for the availability. (Custom adaptors available upon request)
Effective Filtration Area:	Lengths: 1.5”:0.54ft^2 (500cm^2), 2.5”: 1.1ft^2 (1000cm^2), 5”: 2.1ft^2 (2000cm^2), 7.5”: 3.2ft^2 (3000cm^2) and 10”: 4.3ft^2 (4000cm^2) Diameter: 2.75 in. (70mm)
Available Ratings:	7um, 10um, 20um, 40um, 60um, 100um, and 200um
Operating Conditions:	Maximum Operating Pressure: Liquid: 5.5 bar (80psi) at 72°F/22°C Gas: 4.1 bar (60psi) at 72°F/22°C Maximum Forward Differential Pressure: 4.1 bar (60psi) at 72°F/22°C Maximum Reverse Differential Pressure: 2.1 bar (30 psi) at 72°F/22°C Minimum Burst Pressure: 8.3 bar (120psi) at 72°F/22°C Maximum Operating Temperature: 176°F/80°C
Regulatory Compliance:	The filters are constructed with polypropylene resins and filtration media in compliance with 21CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastic.

PureFlo Nylon Screen Filter Capsules

Specifications (cont.)

Autoclavable & Sanitizable:

Capsules can be autoclaved 25 times at 257°F/125°C for 30 minutes or chemically sanitized in situ using common sanitizing agents or hot water at 194°F/90°C for a limited time (dependent on time and temperature). Capsules must not be in situ steam-sterilized.



60um Nylon Screen

PureFlo Nylon Screen Filter Capsule Ordering Guide

PureFlo Capsule Filters	Filter Media	Pore size (Micron)	Length	Inlet Fitting	Outlet Fitting	Options	
						Grade	**O-Ring for Quick Coupling**
SKL = Capsule filter Standard grade Luer Lock Vent/Drain	**NS** = Nylon Screen	**070** = 7	**H** = 1.5"	**1C**	**1C** = 1/8" Compression	**Blank** = Standard Grade	**Blank** = O-ring Silicone
		100 = 10	**S** = 2.5"	**1H**	**1H** = 1/8" Hose barbs	**-B** = Biological Reduction Grade	**-OE** = O-ring EPDM
		200 = 20	**L** = 5"	**1N**	**1N** = 1/8" MNPT	**-PH** = Pharma Grade	**-ON** = O-ring Nitrile
		400 = 40	**E** = 7.5"	**1NF**	**1NF** = 1/8" FNPT		**-OV** = O-ring Viton
SKP= Capsule filter Standard grade M8 Plug vent/ Drain Limited Options		**600** = 60	**K** = 10"	**1Q**	**1Q** = 1/8" Male Quick Coupling with Metal latch	**Shell Material**	
		10X = 100		**1QF**	**1QF** = 1/8" Female Quick Coupling with Metal latch	**Blank** = Polypropylene	
		20X = 200		**1QFV**	**1QFV** = 1/8" Female Valved Quick Coupling with Metal latch	**-GP** = Gamma stable polypropylene shell	**Prefilter (add before Filter Media in part#)**
		25X = 250		**1QV**	**1QV** = 1/8" Male Valved Quick Coupling with Metal latch	**-NY** = Nylon Construction	**G(pore Size)**= Glass Fiber PreFilter
		30X = 300		**2C**	**2C** = 1/4" Compression	**-E** = Polyethylene shell and HDPE media support for gamma sterilization	**P(pore Size)**= PolyPro Media PreFilter
				2H	**2H** = 1/4" to 1/2" Hose barbs		**S(pore Size)** = PES PreFilter
				2HS	**2HS** = 1/4" to 3/8" Hose barbs	**Vent & Drain**	
				2LF	**2LF** = Large Female Luer Lock fitting	**-N** = No vent or Drain	
				2N	**2N** = 1/4" MNPT	**-NI** = No vent or Drain	
				2NF	**2NF** = 1/4" FNPT	**-NO** = No vent or Drain	
				2P	**2P** = 1/4" Push to Connect		
				2PE	**2PE** = 1/4" Push to Connect Elbow	**Sterilization**	
				2Q	**2Q** = 1/4" Male Quick Coupling for Metal latch	**-ETO** = Ethylene Oxide	
				2QF	**2QF** = 1/4" Female Quick Coupling with Metal latch		
				2QFP	**2QFP** = 1/4" Female Quick Coupling with Plastic latch		
				2QFV	**2QFV** = 1/4" Female Valved Quick Coupling with Metal latch		
				2QP	**2QP** = 1/4" Male Quick Coupling for Plastic latch		
				2QV	**2QV** = 1/4" Male Valved Quick Coupling with Metal latch		
				2V	**2V** = 1/4" Walther Quick Connect		
				3C	**3C** = 3/8" Compression		
				3H	**3H** = 3/8" Hose Barb		
				3HE	**3HE** = 3/8" Hose Barb Elbow		
					3H-FB = 3/8" Hose Barb with filling bell or **-FC** with Cap		
				3NF	**3NF** = 3/8" FNPT		
				4C	**4C** = 1/2" Compression		
				4H	**4H** = 1/2" Hose Barb		
				4N	**4N** = 1/2" MNPT		
				4Q	**4Q** = 1/2" Male Quick Coupling for Plastic latch		
				8C	**8C** = 5/16" Compression		
				MT	**MT** = 1/2" Tri clamps		
				TC	**TC** = 1-1/2" Tri clamp		
					TS = Shower Head		

Example - Capsule, Luer Lock V/D, 2.5" Internal filter, 0.45 micron Cellulose Acetate Membrane Capsule, with 1.5" Tri-Clamp fittings would be **SKLA045STCTC**

Quick Couplings are molded, Female Quick Coupling with Plastic latch will be threaded on, compatible with CPC (Colder), LinkTech and others.

Your Local Distributor:

ZenPure

North & South Americas:
ZenPure Americas, Inc
www.zenpure.com
Info-us@zenpure.com
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All Other Regions:
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PureFlo SKV Series PE Filter Capsules

Pharmaceutical Capsule filter

The PureFlo® SKV Series Polyethylene (PE) Capsules with all-polypropylene or polyethylene construction for gamma stability provides excellent compatibility and superior flow per unit area. The SKV capsules were designed with built-in bleed valves for simple and efficient evacuation of air and/or liquid from the upstream side.

The hydrophobic polyethylene membrane is ideally suited to provide sterile air and gas in biopharmaceutical applications. In addition, the hydrophobic membrane provides superior flow and pressure-drop characteristics for venting applications. PureFlo® PE filter capsules are well-suited for critical applications where superior flow and bacterial retention is required.

The units are used for filtration of gas of small to medium volumes used in production, laboratory. No adhesives, binders, or surfactants are used in the manufacturing process of these capsules. They are rinsed with pyrogen-free water to reduce extractables and downtime. All filter capsules are 100% integrity-tested to ensure filter performance each and every time out of the package. The capsule can be ordered pre-sterilized.

Applications	
Gamma stable gas filtration	Fermentation Tanks
Product Sterilization	Venting
Bio Bags	Pharmaceuticals
Gas filtration	Biologics
Liquid Barrier	Bio Reactor

Specifications

Materials of Construction:	Media: Hydrophobic Polyethylene Media Supports: Polyethylene Cage, Core, End Caps: Polypropylene, HDPE Valve O-Rings: Silicon (Standard) Sealing: Thermally welded
Fitting Connections:	See ordering guide for the availability. Any inlet/outlet combinations. (Custom adaptors available upon request)
Nominal Dimensions:	Lengths: 1.5 in (68 mm), 2.5 in (98 mm),5.0 in (153mm), 7.5 in (221 mm), 10 in (276mm) Diameter: 2.88 in (73 mm)
Effective Filtration Area:	1.5 in - 0.54 ft^2 (500 cm^2), 2.5 in - 1.1ft^2 (1000 cm^2), 5.0 in - 2.0 ft^2 (1900 cm^2), 7.5 in - 3.1ft^2 (2900 cm^2), 10 in - 4.1 ft^2 (3800 cm^2)
Operating Conditions:	Maximum Operating Pressure: Liquid: 5.5 bar (80psi) at 72°F/22°C Gas: 4.1 bar (60psi) at 72°F/22°C Maximum Forward Differential Pressure: 5.0 bar (72psi) at 72°F/22°C Maximum Reverse Differential Pressure: 3.0 bar (44 psi) at 72°F/22°C Minimum Burst Pressure: 8.3 bar (120psi) at 72°F/22°C Maximum Operating Temperature: 140°F/60°C
Regulatory Compliance:	The filters are constructed with polypropylene resins and filtration media in compliance with 21CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastic.

PureFlo SKV Series PE Filter Capsules

Specifications(continued)

Bacterial Retention (for 0.2um membrane):

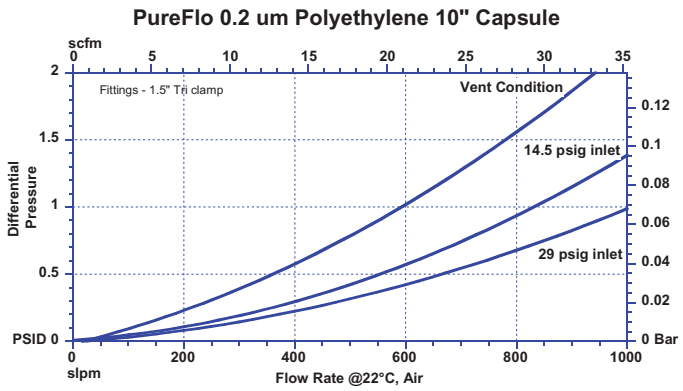
Complete retention of ≥ 10^7organisms/cm^2 of *Brevundimonas diminuta* in accordance with the current HIMA challenge methodology (ASTM F838-05). Validation Guide upon request.

Sanitizable:

Capsules can gamma sterilized up to 50kGy. No autoclaving

Bacterial Endotoxin:

Effluent is non-pyrogenic per USP Bacterial Endotoxin (0.25 EU/ml), determined using Limulus Amebocyte Lysate (LAL) Test.



PureFlo SKV Series PE Filter Capsule (Pharmaceutical grade) Ordering Guide

PureFlo Capsule Filters	Filter Media	Pore size (Micron)	Internal Filter Length	Input Fitting	Output Fitting	Options	
						Shell Material	**O-Ring for Quick Coupling**
SKV 70mm Diameter Capsule with Bleed Valve	**UE** = Polyethylene	**010** = 0.1 **020** = 0.20 (0.003um for gas) **045** = 0.45 **100** = 1.0	**H** = 1.5" **S** = 2.5" **L** = 5" **E** = 7.5" **K** = 10"	**1H** **1Q** **1QF** **1QFV** **1QV** **2H** **2HL** **2H-FB** **2N** **2P** **2PE** **2Q** **2QF** **2QFV** **2QP** **2QV** **2V** **3H** **3H-FB** **4H** **4Q** **5H** **MT** **TC**	**1H** = 1/8" Hose barbs **1Q** = 1/8" Male Quick Coupling with Metal latch **1QF** = 1/8" Female Quick Coupling with Metal latch **1QFV** = 1/8" Female Valved Quick Coupling with Metal latch **1QV** = 1/8" Male Valved Quick Coupling with Metal latch **2H** = 1/4" Hose barb **2HL** = 1/4" to 1/2" Hose barbs **2H-FB** = 1/4" Hose Barb with filling bell **-FC** with Cap **2N** = 1/4" MNPT **2P** = 1/4" Push to Connect **2PE** = 1/4" Push to Connect Elbow **2Q** = 1/4" Male Quick Coupling for Metal latch **2QF** = 1/4" Female Quick Coupling with Metal latch **2QFV** = 1/4" Female Valved Quick Coupling with Metal latch **2QP** = 1/4" Male Quick Coupling for Plastic latch **2QV** = 1/4" Male Valved Quick Coupling with Metal latch **2V** = 1/4" Walther Quick Connect **3H** = 3/8" Hose Barb **3H-FB** = 3/8" Hose Barb with filling bell or **-FC** with Cap **4H** = 1/2" Hose Barb **4Q** = 1/2" Male Quick Coupling for Plastic latch **5H** = 5/8" Hose Barb **MT** = 1/2" Tri clamps **TC** = 1-1/2" Tri clamp **TS** = Shower Head	**Blank** = Polypro construction **-E** = Polyethylene shell and HDPE media support for gamma sterilization **-GP** = Gamma stable polypropylene shell **-NY** = Nylon Shell **Sterilization** **-ETO =** Ethylene oxide sterilization **Vent & Drain** **-N**= No vent or drain fittings **-NI** = No vent or drain inlet fitting **-NO** = No vent or drain Outlet fitting	**-OE** = O-ring EPDM **-ON** = O-ring Nitrile **-OV** = O-ring Viton **Blank** = O-ring Silicon **Prefilter (add before Filter Media in part#)** **G(pore Size)**= Glass Fiber PreFilter **P(pore Size)**= PolyPro Media PreFilter **S(pore Size)** = PES PreFilter Silicone O-Rings for Bleed Valve and Quick Coupling fittings
Example - PureFlo SKV Series Capsule, PE , 2.5" internal filter, 0.2 micron(0.003um for gas), with 1.5" Tri-Clamp fittings I/O, would be **SKVUE020STCTC**							
Note: Quick Couplings are molded on. Female Quick Coupling with Plastic latch will be threaded on. Compatible with CPC (Colder), LinkTech and others.							

Your Local Distributor:

ZenPure

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PureFlo® SKL Polyethylene Filter Capsules

PureFlo® Polyethylene filter capsules are highly retentive hydrophobic membrane filters that have been specially designed for critical applications. The PE membrane in an all-polypropylene construction provides excellent chemical compatibility and superior flow per unit area as compared to other membrane capsules. No adhesives, binders, or surfactants are used in the manufacturing process and all cartridges are rinsed with high-purity water to reduce extractables and downtime.

The hydrophobic PE membrane is gamma stable and ideally suited for sterile vent applications. In addition, the hydrophobic membrane provides superior flow and pressure drop characteristics per surface area for gas filtration and tank venting applications. All filter capsules are 100% integrity tested to ensure filter performance each and every time out of the package. PureFlo PE filter capsules are well-suited for critical applications where superior flow and particle removal efficiency at 0.1 to 1.0 micron is required.

Materials of Construction

Membrane: Hydrophobic Polyethylene
Membrane Supports: Polyethylene
Cage, Core, End Caps, Capsule: Polyethylene
Fitting Connections: MNPT, FNPT, Quick Couplings, Compression, Hose Barb, Sanitary Flange

Dimensions (Nominal)

Length: 1.5 in (68 mm) Length: 2.5 in (98 mm)
Length: 5.0 in (153 mm) Length: 7.5 in (221mm)
Length: 10 in (276mm)
Diameter: 2.88 in (73 mm)

Effective Filtration Area

1.5 in - 0.54 ft^2 (500 cm^2) 2.5 in - 1.1 ft^2 (1000 cm^2)
5.0 in - 2.0 ft^2 (1900 cm^2) 7.5 in - 3.1 ft^2 (2900 cm^2)
10 in - 4.1 ft^2 (3800 cm^2)

Operating Conditions

Maximum Operating Pressure:
Liquid: 5.5 bar (80psi) at 72°F/22°C
Gas: 4.1 bar (60psi) at 72°F/22°C
Minimum Burst Pressure: 8.3 bar (120psi) at 72F/22°C
Maximum Forward Differential Pressure:
5 bar (72psi) at 72°F/22°C
Maximum Reverse Differential Pressure:
3.0 bar (44psi) at 72°F/22°C
Maximum Operating Temperature: 140°F/60°C

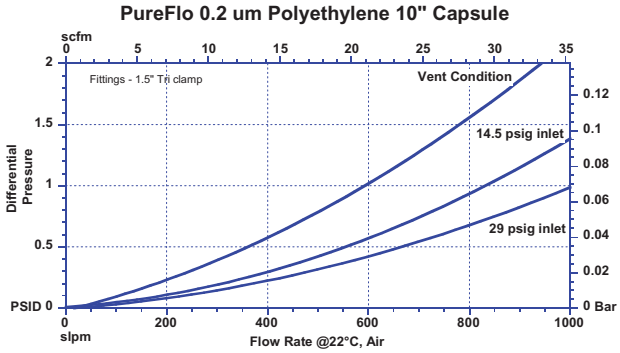
Regulatory Compliance

Manufactured from materials that conform to the requirements of 21CFR Part 177 of the U.S. Code of Federal Regs and USP Class VI Biological Test for Plastics

Applications	
Sterile gasses and liquids	Ink Jets
Bases	Beverages
Solvents	Pharmaceuticals
Fine Chemicals	Biologics
Plating Solutions	Dyes
Process Water	Lacquers

Features	Benefits
■ Naturally Hydrophobic PE Membrane	■ High flow rates with low pressure drop per surface area as compared to other filter materials ■ Superior filter lifetime and process throughputs
■ Wide Chemical & Thermal Compatibility	■ Provides excellent compatibility with a wide-range of chemicals such as acids, bases, and solvents ■ No media migration into the process fluid
■ Low Filter Extractables	■ No adhesives, binders, or surfactants are used during the manufacturing process resulting in superior downstream cleanliness ■ All cartridges are rinsed with high-purity water to reduce extractables and downtime
■ Quality Manufacturing	■ Consistent and reproducible particulate removal

PureFlo® SKL Polyethylene Filter Capsules



Specifications(continued)

Bacterial Retention (for 0.2um membrane):

Complete retention of ≥ 10^7organisms/cm^2 of *Brevundimonas diminuta* in accordance with the current HIMA challenge methodology (ASTM F838-05). Validation Guide upon request.

Sanitizable:

Capsules can be gamma sterilized up to 50kGy. No Autoclaving.

Bacterial Endotoxin:

Effluent is non-pyrogenic per USP Bacterial Endotoxin (0.25 EU/ml), determined using Limulus Amebocyte Lysate (LAL) Test.

PureFlo Polyethylene Filter Cartridge Ordering Guide

PureFlo Capsule Filters	Filter Media	Pore size (Micron)	Length	Inlet Fitting	Outlet Fitting	Options	
						Grade	**O-Ring for Quick Coupling**
SKL = Capsule filter Standard grade Luer Lock Vent/Drain	**UE** = Polyethylene	**010** = 0.1	**H** = 1.5"	**1C**	**1C** = 1/8" Compression	**Blank** = Standard Grade	**Blank** = O-ring Silicone
		020 = 0.20 (0.003um for gas)	**S** = 2.5"	**1H**	**1H** = 1/8" Hose barbs	**-B** = Biological Reduction Grade	**-OE** = O-ring EPDM
			L = 5"	**1N**	**1N** = 1/8" MNPT		**-ON** = O-ring Nitrile
			E = 7.5"	**1NF**	**1NF** = 1/8" FNPT	**-PH** = Pharma Grade	**-OV** = O-ring Viton
SKP= Capsule filter Standard grade M8 Plug vent/ Drain Limited Options		**045** = 0.45	**K** = 10"	**1Q**	**1Q** = 1/8" Male Quick Coupling with Metal latch	**Shell Material**	
		100 = 1.0		**1QF**	**1QF** = 1/8" Female Quick Coupling with Metal latch	**Blank** = Polypropylene	**Prefilter (add before Filter Media in part#)**
				1QFV	**1QFV** = 1/8" Female Valved Quick Coupling with Metal latch	**-GP** = Gamma stable polypropylene shell	**G(pore Size)**= Glass Fiber PreFilter
				1QV	**1QV** = 1/8" Male Valved Quick Coupling with Metal latch	**-NY** = Nylon Construction	**P(pore Size)**= PolyPro Media PreFilter
				2C	**2C** = 1/4" Compression	**-E** = Polyethylene shell and HDPE media support for gamma sterilization	**S(pore Size)** = PES PreFilter
				2H	**2H** = 1/4" to 1/2" Hose barbs		
				2HS	**2HS** = 1/4" to 3/8" Hose barbs		
				2LF	**2LF** = Large Female Luer Lock fitting		
				2N	**2N** = 1/4" MNPT		
				2NF	**2NF** = 1/4" FNPT		
				2P	**2P** = 1/4" Push to Connect	**Vent & Drain**	
				2PE	**2PE** = 1/4" Push to Connect Elbow	**-N** = No vent or Drain	
				2Q	**2Q** = 1/4" Male Quick Coupling for Metal latch	**-NI** = No vent or Drain	
				2QF	**2QF** = 1/4" Female Quick Coupling with Metal latch	**-NO** = No vent or Drain	
				2QFP	**2QFP** = 1/4" Female Quick Coupling with Plastic latch		
				2QFV	**2QFV** = 1/4" Female Valved Quick Coupling with Metal latch	**Sterilization**	
				2QP	**2QP** = 1/4" Male Quick Coupling for Plastic latch	**-ETO** = Ethylene Oxide	
				2QV	**2QV** = 1/4" Male Valved Quick Coupling with Metal latch		
				2V	**2V** = 1/4" Walther Quick Connect		
				3C	**3C** = 3/8" Compression		
				3H	**3H** = 3/8" Hose Barb		
				3HE	**3HE** = 3/8" Hose Barb Elbow		
					3H-FB = 3/8" Hose Barb with filling bell or **-FC** with Cap		
				3NF	**3NF** = 3/8" FNPT		
				4C	**4C** = 1/2" Compression		
				4H	**4H** = 1/2" Hose Barb		
				4N	**4N** = 1/2" MNPT		
				4Q	**4Q** = 1/2" Male Quick Coupling for Plastic latch		
				8C	**8C** = 5/16" Compression		
				MT	**MT** = 1/2" Tri clamps		
				TC	**TC** = 1-1/2" Tri clamp		
					TS = Shower Head		

Example - Capsule, Luer Lock V/D, 2.5" Internal filter, 20 micron Nylon Screen Capsule, with 1.5" Tri-Clamp fittings would be **SKLNS200STCTC**

Quick Couplings are molded, Female Quick Coupling with Plastic latch will be threaded on, compatible with CPC (Colder), LinkTech and others.

Your Local Distributor:

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PureFlo® CA Filter Capsules

PureFlo® CA Filter Capsules have been specially designed for quick and efficient filtration of fluids used in laboratory, pilot, and small-scale applications. The Cellulose Acetate membrane in an all-polypropylene construction provides excellent chemical compatibility for use in a wide range of applications. No adhesives or binders are used in the encapsulation process and all capsules are rinsed with high-purity water to reduce extractables and downtime.

The hydrophilic Cellulose Acetate membrane does not require pre-wetting with IPA and flushing with DI water, thereby eliminating a potential source of contamination and hazardous waste.

All filter capsules are 100% integrity tested to ensure filter performance each and every time out of the package. PureFlo CA filter capsules are well-suited for applications where low protein binding and high particle removal efficiency at 0.2, 0.45, 0.65, 0.80, and 1.2 micron is required.

Materials of Construction

Membrane: Hydrophilic Cellulose Acetate
Membrane Supports: Polypropylene
Cage, Core, End Caps: Polypropylene
Fitting Connections: NPT, Compression, Sanitary Flange, Hose Barb

Nominal Dimensions

Length: 1.5 in (68 mm) Length: 2.5 in (98 mm)
Length: 5.0 in (153 mm) Length: 7.5 in (251 mm)
Length: 10 in (281mm)
Diameter: 2.88 in (73 mm)

Effective Filtration Area

1.5 in 0.77 ft^2 (720 cm^2) 2.5 in 1.48 ft^2 (1380 cm^2)
5.0 in 2.8 ft^2 (2600 cm^2) 7.5 in 4.3 ft^2 (3980 cm^2)
10 in - 5.6 ft^2 (5200 cm^2)

Operating Conditions

Maximum Operating Pressure:
Liquid: 5.5 bar (80psi) at 72°F/22°C
Gas: 4.1 bar (60psi) at 72°F/22°C
Minimum Burst Pressure:
8.3 bar (120psi) at 72°F/22°C
Maximum Forward Differential Pressure:
5 bar (72psi) at 72°F/22°C
Maximum Reverse Differential Pressure:
2.1 bar (30psi) at 72°F/22°C
Maximum Operating Temperature:
PP & Gamma PP: 176°F/80°C
HDPE: 140°F/60°C

Applications	
Acids	Ink Jets
Bases	Beverages
Solvents	Pharmaceuticals
Fine Chemicals	Biologics
Plating Solutions	Dyes
Process Water	Lacquers

Features	Benefits
■ Hydrophilic Cellulose Acetate Membrane	■ IPA pre-wetting not required – thereby eliminating a potential source of contamination and disposal waste ■ Economic alternative to PTFE
■ Fully Disposable Capsule	■ Rapid installation ■ Reduced downtime ■ Reduced handling of hazardous chemicals
■ Small Compact Design	■ Simple, quick, and efficient filtration ■ Low hold-up volume reduces the chemical waste ■ Reduced chemical handling and hazardous waste disposal
■ Low Filter Extractables	■ No adhesives, binders, or surfactants used ■ Capsules are rinsed with high-purity water

PureFlo® CA Filter Capsules

Regulatory Compliance

Manufactured from materials that conform to the requirements of 21CFR Part 177 of the U.S. Code of Federal Regulations and USP Class VI Biological Test for Plastics.

Autoclavable & Sanitizable

Capsules can be autoclaved 25 times at 257°F/125°C for 30 minutes or chemically sanitized in situ using common sanitizing agents or hot water at 194°F/90°C for a limited time (dependent on time and temperature). Capsules must not be in situ steam-sterilized.

PureFlo CA Filter Capsule Ordering Guide

PureFlo Capsule Filters	Filter Media	Pore size (Micron)	Length	Inlet Fitting	Outlet Fitting	Options
SKL = Capsule filter Standard grade Luer Lock Vent/Drain **SKP**= Capsule filter Standard grade M8 Plug vent/ Drain Limited Options	**A** = Cellulose Acetate	**020** = 0.20 **045** = 0.45 **065** = 0.65 **080** = 0.80 **120** = 1.20	**H** = 1.5" **S** = 2.5" **L** = 5" **E** = 7.5" **K** = 10"	**1C** **1H** **1N** **1NF** **1Q** **1QF** **1QFV** **1QV** **2C** **2H** **2HS** **2LF** **2N** **2NF** **2P** **2PE** **2Q** **2QF** **2QFP** **2QFV** **2QP** **2QV** **2V** **3C** **3H** **3HE** **3NF** **4C** **4H** **4N** **4Q** **8C** **MT** **TC** 	**1C** = 1/8" Compression **1H** = 1/8" Hose barbs **1N** = 1/8" MNPT **1NF** = 1/8" FNPT **1Q** = 1/8" Male Quick Coupling with Metal latch **1QF** = 1/8" Female Quick Coupling with Metal latch **1QFV** = 1/8" Female Valved Quick Coupling with Metal latch **1QV** = 1/8" Male Valved Quick Coupling with Metal latch **2C** = 1/4" Compression **2H** = 1/4" to 1/2" Hose barbs **2HS** = 1/4" to 3/8" Hose barbs **2LF** = Large Female Luer Lock fitting **2N** = 1/4" MNPT **2NF** = 1/4" FNPT **2P** = 1/4" Push to Connect **2PE** = 1/4" Push to Connect Elbow **2Q** = 1/4" Male Quick Coupling for Metal latch **2QF** = 1/4" Female Quick Coupling with Metal latch **2QFP** = 1/4" Female Quick Coupling with Plastic latch **2QFV** = 1/4" Female Valved Quick Coupling with Metal latch **2QP** = 1/4" Male Quick Coupling for Plastic latch **2QV** = 1/4" Male Valved Quick Coupling with Metal latch **2V** = 1/4" Walther Quick Connect **3C** = 3/8" Compression **3H** = 3/8" Hose Barb **3HE** = 3/8" Hose Barb Elbow **3H-FB** = 3/8" Hose Barb with filling bell or **-FC** with Cap **3NF** = 3/8" FNPT **4C** = 1/2" Compression **4H** = 1/2" Hose Barb **4N** = 1/2" MNPT **4Q** = 1/2" Male Quick Coupling for Plastic latch **8C** = 5/16" Compression **MT** = 1/2" Tri clamps **TC** = 1-1/2" Tri clamp **TS** = Shower Head	**Grade** **Blank** = Standard Grade **-B** = Biological Reduction Grade **-PH** = Pharma Grade **Shell Material** **Blank** = Polypropylene **-GP** = Gamma stable polypropylene shell **-NY** = Nylon Construction **-E** = Polyethylene shell and HDPE media support for gamma sterilization **Vent & Drain** **-N** = No vent or Drain **-NI** = No vent or Drain **-NO** = No vent or Drain **Sterilization** **-ETO** = Ethylene Oxide	**O-Ring for Quick Coupling** **Blank** = O-ring Silicone **-OE** = O-ring EPDM **-ON** = O-ring Nitrile **-OV** = O-ring Viton **Prefilter (add before Filter Media in part#)** **G(pore Size)**= Glass Fiber PreFilter **P(pore Size)**= PolyPro Media PreFilter **S(pore Size)** = PES PreFilter

Example - Capsule, Luer Lock V/D, 2.5" Internal filter, 0.45 micron Cellulose Acetate Membrane Capsule, with 1.5" Tri-Clamp fittings would be **SKLA045STCTC**

Quick Couplings are molded, Female Quick Coupling with Plastic latch will be threaded on, compatible with CPC (Colder), LinkTech and others.

Your Local Distributor:

ZenPure

North & South Americas:
ZenPure Americas, Inc
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ISO Certified 9001 14001

TÜV

PureFlo® Glass Microfiber Filter Capsules

PureFlo® Borosilicate Microfiber filter cartridges are highly retentive filters that have a pleated design to maximize surface area. The borosilicate microfiber media in an all-polypropylene construction provides excellent chemical compatibility and superior flow per unit area. No adhesives or surfactants are used in the manufacturing process. The borosilicate microfiber is "non-fiber releasing."

The borosilicate microfiber is ideally-suited for aggressive microbial retention. In addition, the media provides superior flow and pressure drop characteristics per unit area. PureFlo Microfiber filter cartridges are well-suited for critical applications where superior flow and particle retention for deformable and non-deformable particle removal is required.

Materials of Construction

Media: Non-Woven Borosilicate Microfiber
Pleate Supports: Polypropylene
Cage, Core, End Caps: Polypropylene
Fitting Connections: NPT, Couplings
Compression, Hose Barb, Sanitary Flange

Dimensions (Nominal)

Length: 1.5 in (68 mm) Length: 2.5 in (98 mm)
Length: 5.0 in (153 mm) Length: 7.5 in (221 mm)
Length: 10 in (276mm)
Diameter: 2.88 in (73 mm)

Effective Filtration Area

1.5 in - 0.48 ft^2 (450 cm^2) 2.5 in - 1.0 ft^2 (950 cm^2)
5.0 in - 1.8 ft^2 (1700 cm^2) 7.5 in - 2.8 ft^2 (2650 cm^2)
10 in - 3.66 ft^2 (3400 cm^2)

Operating Conditions

Maximum Operating Pressure:
Liquid: 5.5 bar (80psi) at 72°F/22°C
Gas: 4.1 bar (60psi) at 72°F/22°C
Minimum Burst Pressure:
8.3 bar (120psi) at 72°F/22°C
Maximum Forward Differential Pressure:
4.1 bar (60psi) at 72°F/22°C
Maximum Reverse Differential Pressure:
2.1 bar (30psi) at 72°F/22°C
Maximum Operating Temperature:
PP & Gamma PP: 176°F/80°C
HDPE: 140°F/60°C

Applications	
Prefiltration	Biologics
Serums	Bio-burden reduction
Pharmaceuticals	Retention of deformable particles
Wine Clarification	Inks
Food & Beverage	Cosmetics

Features	Benefits
■ Borosilicate Microfiber Media (Absolute Rated)	■ High dirt-loading capacity ■ Natural positive charge ■ Superior process throughputs
■ Wide Chemical & Thermal Compatibility	■ Provides excellent compatibility ■ No media migration
■ Quality Construction	■ No adhesives or surfactants ■ Thermally welded construction

PureFlo® Glass Microfiber Filter Capsules

Specifications(continued)

Autoclavable & Sanitizable:

Capsules can be autoclaved 25 times at 257°F/125°C for 30 minutes or chemically sanitized in situ using common sanitizing agents or hot water at 194°F/90°C for a limited time (dependent on time and temperature). Capsules must not be in situ steam-sterilized.

Bacterial Endotoxin:

Effluent is non-pyrogenic per USP Bacterial Endotoxin (0.25 EU/ml), determined using Limulus Amebocyte Lysate (LAL) Test.

Regulatory Compliance:

Manufactured from materials that conform to the requirements of USP Class VI Biological Test for Plastics.

PureFlo Glass Fiber Filter Cartridge Ordering Guide

PureFlo Capsule Filters	Filter Media	Pore size (Micron)	Length	Inlet Fitting	Outlet Fitting	Options: Grade	Options: O-Ring for Quick Coupling
SKL = Capsule filter Standard grade Luer Lock Vent/Drain **SKP**= Capsule filter Standard grade M8 Plug vent/ Drain Limited Options	**G** = Glass Fiber	**002** = 0.2 **004** = 0.45 **005** = 0.5 **010** = 1.0 **030** = 3.0 **050** = 5.0 **100** = 10.0 **200** = 20.0 **300** = 30.0 **Best for Gas Applications**	**H** = 1.5" **S** = 2.5" **L** = 5" **E** = 7.5" **K** = 10"	**1C** **1H** **1N** **1NF** **1Q** **1QF** **1QFV** **1QV** **2C** **2H** **2HS** **2LF** **2N** **2NF** **2P** **2PE** **2Q** **2QF** **2QFP** **2QFV** **2QP** **2QV** **2V** **3C** **3H** **3HE** **3NF** **4C** **4H** **4N** **4Q** **8C** **MT** **TC**	**1C** = 1/8" Compression **1H** = 1/8" Hose barbs **1N** = 1/8" MNPT **1NF** = 1/8" FNPT **1Q** = 1/8" Male Quick Coupling with Metal latch **1QF** = 1/8" Female Quick Coupling with Metal latch **1QFV** = 1/8" Female Valved Quick Coupling with Metal latch **1QV** = 1/8" Male Valved Quick Coupling with Metal latch **2C** = 1/4" Compression **2H** = 1/4" to 1/2" Hose barbs **2HS** = 1/4" to 3/8" Hose barbs **2LF** = Large Female Luer Lock fitting **2N** = 1/4" MNPT **2NF** = 1/4" FNPT **2P** = 1/4" Push to Connect **2PE** = 1/4" Push to Connect Elbow **2Q** = 1/4" Male Quick Coupling for Metal latch **2QF** = 1/4" Female Quick Coupling with Metal latch **2QFP** = 1/4" Female Quick Coupling with Plastic latch **2QFV** = 1/4" Female Valved Quick Coupling with Metal latch **2QP** = 1/4" Male Quick Coupling for Plastic latch **2QV** = 1/4" Male Valved Quick Coupling with Metal latch **2V** = 1/4" Walther Quick Connect **3C** = 3/8" Compression **3H** = 3/8" Hose Barb **3HE** = 3/8" Hose Barb Elbow **3H-FB** = 3/8" Hose Barb with filling bell or **-FC** with Cap **3NF** = 3/8" FNPT **4C** = 1/2" Compression **4H** = 1/2" Hose Barb **4N** = 1/2" MNPT **4Q** = 1/2" Male Quick Coupling for Plastic latch **8C** = 5/16" Compression **MT** = 1/2" Tri clamps **TC** = 1-1/2" Tri clamp **TS** = Shower Head	**Blank** = Standard Grade **-B** = Biological Reduction Grade **-PH** = Pharma Grade **Shell Material** **Blank** = Polypropylene **-GP** = Gamma stable polypropylene shell **-NY** = Nylon Construction **-E** = Polyethylene shell and HDPE media support for gamma sterilization **Vent & Drain** **-N** = No vent or Drain **-NI** = No vent or Drain **-NO** = No vent or Drain **Sterilization** **-ETO** = Ethylene Oxide	**Blank** = O-ring Silicone **-OE** = O-ring EPDM **-ON** = O-ring Nitrile **-OV** = O-ring Viton **Prefilter (add before Filter Media in part#)** **G(pore Size)**= Glass Fiber PreFilter **P(pore Size)**= PolyPro Media PreFilter **S(pore Size)** = PES PreFilter

Example - Capsule, Luer Lock V/D, 2.5" Internal filter, 20 micron Glass Fiber Capsule, with 1.5" Tri-Clamp fittings would be **SKLG200STCTC**

Quick Couplings are molded, Female Quick Coupling with Plastic latch will be threaded on, compatible with CPC (Colder), LinkTech and others.

Your Local Distributor:

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+86 571 2288 6800

PureFlo® Natural Glass Microfiber Capsules

PureFlo® Natural Borosilicate Microfiber Capsules are highly retentive filters that have a pleated design to maximize surface area. The hydrophilic borosilicate microfiber media in an all-polypropylene construction provides excellent chemical compatibility and superior liquid flow per unit area. No adhesives or surfactants are used in the manufacturing process. The borosilicate microfiber is "non-fiber releasing."

The borosilicate microfiber is ideally-suited for aggressive microbial retention in liquid applications for its wet-ability. PureFlo® Natural Glass Microfiber Capsules are well-suited for critical applications where retention / removal of deformable and non-deformable particles is required.

Applications	
Prefiltration	Biologics
Serums	Bio-burden Reduction
Pharmaceuticals	Retention of Deformable Particles
Wine Clarification	Inks
Food & Beverage	Cosmetics

Materials of Construction

Media: Non-Woven Natural Borosilicate Microfiber
Pleat Supports: Polyester
Cage, Core, End Caps: Polypropylene
Fitting Connections: NPT, Couplings
Compression, Hose Barb, Sanitary Flange

Dimensions (Nominal)

Length: 1.5 in (38 mm) Length: 2.5 in (63.5 mm)
Length: 5.0 in (127 mm) Length: 7.5 in (191 mm)
Length: 10 in (254 mm)
Diameter: 2.88 in (73 mm)

Effective Filtration Area

1.5 in - 0.48 ft^2 (450 cm^2)
2.5 in - 1.0 ft^2 (930 cm^2)
5.0 in - 1.8 ft^2 (1700 cm^2)
7.5 in - 2.8 ft^2 (2650 cm^2)
10 in - 3.66 ft^2 (3400 cm^2)

Features	Benefits
■ Natural Borosilicate Microfiber Media (Best for Liquid Applications)	■ High dirt-loading capacity ■ Binder free ■ Hydrophilic for aqueous applications
■ Wide Chemical & Thermal Compatibility	■ Provides excellent compatibility ■ No media migration
■ Quality Construction	■ No adhesives or surfactants ■ Thermally welded construction

PureFlo® Natural Glass Microfiber Capsules

Regulatory Compliance

Manufactured from materials that conform to the requirements of USP Class VI Biological Test for Plastics.

Autoclave Cycles

25 times @ 125 °C (257 °F) for 30 minutes
Capsules must not be in situ steam-sterilized

Operating Conditions

Maximum Operating Pressure:
Liquid: 5.5 bar (80 psi) at 22 °C
Minimum Burst Pressure:
8.3 bar (120 psi) at 22 °C
Maximum Forward Differential Pressure:
4.1 bar (60 psi) at 22 °C
Maximum Reverse Differential Pressure:
2.1 bar (30.5 psi) at 22 °C
Maximum Operating Temperature:
PP & Gamma PP: 80 °C
HDPE: 60 °C

PureFlo Natural Glass Microfiber Capsule Ordering Guide

PureFlo Capsule Filters	Filter Media	Pore size (Micron)	Length	Inlet Fitting	Outlet Fitting	Options	
		005 = 0.5	**H** = 1.5"	**1C**	**1C** = 1/8" Compression	**Grade**	**O-Ring for Quick Coupling**
SKL = Capsule filter Standard grade Luer Lock Vent/Drain	**NG** = Natural Glass Fiber	**010** = 1.0	**S** = 2.5"	**1H**	**1H** = 1/8" Hose barbs	**Blank** = Standard Grade	**Blank** = O-ring Silicone
		030 = 3.0	**L** = 5"	**1N**	**1N** = 1/8" MNPT	**-B** = Biological Reduction Grade	**-OE** = O-ring EPDM
		050 = 5.0	**E** = 7.5"	**1NF**	**1NF** = 1/8" FNPT	**-PH** = Pharma Grade	**-ON** = O-ring Nitrile
			K = 10"	**1Q**	**1Q** = 1/8" Male Quick Coupling with Metal latch	**Shell Material**	**-OV** = O-ring Viton
SKP= Capsule filter Standard grade M8 Plug vent/ Drain Limited Options				**1QF**	**1QF** = 1/8" Female Quick Coupling with Metal latch	**Blank** = Polypropylene	
				1QFV	**1QFV** = 1/8" Female Valved Quick Coupling with Metal latch	**-GP** = Gamma stable polypropylene shell	**Prefilter (add before Filter Media in part#)**
				1QV	**1QV** = 1/8" Male Valved Quick Coupling with Metal latch	**-NY** = Nylon Construction	**G(pore Size)**= Glass Fiber PreFilter
				2C	**2C** = 1/4" Compression	**-E** = Polyethylene shell and HDPE media support for gamma sterilization	**P(pore Size)**= PolyPro Media PreFilter
		Best for Liquid Applications		**2H**	**2H** = 1/4" to 1/2" Hose barbs	**Vent & Drain**	**S(pore Size)** = PES PreFilter
				2HS	**2HS** = 1/4" to 3/8" Hose barbs	**-N** = No vent or Drain	
				2LF	**2LF** = Large Female Luer Lock fitting	**-NI** = No vent or Drain	
				2N	**2N** = 1/4" MNPT	**-NO** = No vent or Drain	
				2NF	**2NF** = 1/4" FNPT	**Sterilization**	
				2P	**2P** = 1/4" Push to Connect	**-ETO** = Ethylene Oxide	
				2PE	**2PE** = 1/4" Push to Connect Elbow		
				2Q	**2Q** = 1/4" Male Quick Coupling for Metal latch		
				2QF	**2QF** = 1/4" Female Quick Coupling with Metal latch		
				2QFP	**2QFP** = 1/4" Female Quick Coupling with Plastic latch		
				2QFV	**2QFV** = 1/4" Female Valved Quick Coupling with Metal latch		
				2QP	**2QP** = 1/4" Male Quick Coupling for Plastic latch		
				2QV	**2QV** = 1/4" Male Valved Quick Coupling with Metal latch		
				2V	**2V** = 1/4" Walther Quick Connect		
				3C	**3C** = 3/8" Compression		
				3H	**3H** = 3/8" Hose Barb		
				3HE	**3HE** = 3/8" Hose Barb Elbow		
					3H-FB = 3/8" Hose Barb with filling bell or **-FC** with Cap		
				3NF	**3NF** = 3/8" FNPT		
				4C	**4C** = 1/2" Compression		
				4H	**4H** = 1/2" Hose Barb		
				4N	**4N** = 1/2" MNPT		
				4Q	**4Q** = 1/2" Male Quick Coupling for Plastic latch		
				8C	**8C** = 5/16" Compression		
				MT	**MT** = 1/2" Tri clamps		
				TC	**TC** = 1-1/2" Tri clamp		
					TS = Shower Head		

Example - Capsule, Luer Lock V/D, 2.5" Internal filter, 5 micron Natural Glass Fiber Capsule, with 1.5" Tri-Clamp fittings would be **SKLNG050STCTC**

Quick Couplings are molded, Female Quick Coupling with Plastic latch will be threaded on, compatible with CPC (Colder), LinkTech and others.

Your Local Distributor:

ZenPure

North & South Americas:
ZenPure Americas, Inc
www.zenpure.com
Info-us@zenpure.com
703-335-9910

All Other Regions:
ZenPure Corporation
www.zenpure.com
info@zenpure.com
+86 571 2288 6800

PureFlo® Polypropylene Membrane Filter Capsules

PureFlo® polypropylene membrane filter capsules are highly retentive and naturally hydrophobic filters. Polypropylene membrane is a reliable choice for the purification of aggressive chemicals, compressed gases, and vent applications. The all-polypropylene construction is an excellent economic alternative to the more expensive fluoropolymer based medias.

No adhesives, binders, or surfactants are used in the manufacturing process. The membrane does not allow for migration of particle into the process fluid, thereby reducing the potential for contamination and downtime. Furthermore, the all-polypropylene construction provides excellent thermal and chemical compatibility with low and high pH chemicals.

PureFlo polypropylene membrane filter capsules are absolute rated to ensure consistent filter performance each and every time. All filter capsules are 100% integrity tested to ensure filter performance.

Materials of Construction

Membrane: Polypropylene (hydrophobic)
Membrane Supports: Polypropylene
Cage, Core, End Caps: Polypropylene
Fitting Connections: MNPT, FNPT, Flare Compression, Hose Barb, Sanitary Flange

Dimensions (Nominal)

Length: 1.5 in (68 mm) Length: 2.5 in (98 mm)
Length: 5.0 in (153 mm) Length: 7.5 in (221 mm)
Length: 10 in (276mm)
Diameter: 2.88 in (73 mm)

Effective Filtration Area

1.5 in: 0.7 ft^2 (650 cm^2) 2.5 in: 1.4 ft^2 (1300 cm^2)
5.0 in: 2.7 ft^2 (2500 cm^2) 7.5 in: 4.0 ft^2 (3800 cm^2)
10 in: 5.4 ft^2 (5000 cm^2)

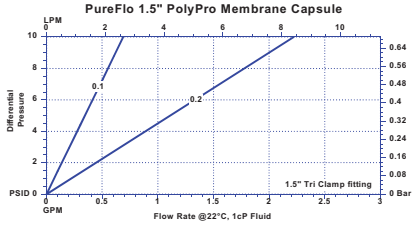
Operating Conditions

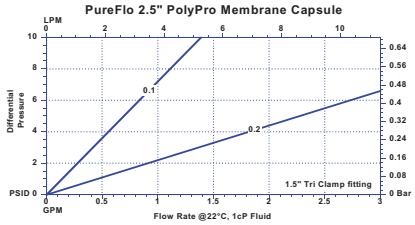
Maximum Operating Pressure:
Liquid: 5.5 bar (80psi) at 72°F/22°C
Gas: 4.1 bar (60psi) at 72°F/22°C
Minimum Burst Pressure:
8.3 bar (120psi) at 72°F/22°C
Maximum Forward Differential Pressure:
4.1 bar (60psi) at 72°F/22°C
Maximum Reverse Differential Pressure:
2.1 bar (30psi) at 72°F/22°C
Maximum Operating Temperature:
PP & Gamma PP: 176°F/80°C
HDPE: 140°F/60°C

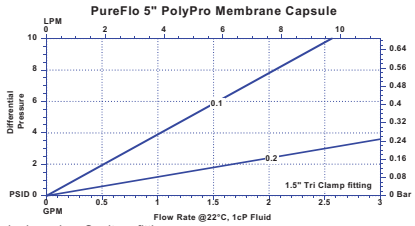
Applications	
Acids	Ink Jets
Bases	Tank vents
Solvents	Lacquers
Fine Chemicals	Dyes

Features	Benefits
■ Absolute Rated Polypropylene Membrane	■ Consistent and reproducible particulate removal ■ High flow rates and low pressure drops ■ Superior filter lifetime and process throughputs ■ Consistent and reproducible particulate removal
■ 100% Polypropylene Disposable Capsule	■ Excellent thermal and chemical compatibility ■ Rapid installation and reduced downtime ■ Reduced chemical handling and hazardous waste disposal
■ Low Filter Extractables	■ No adhesives, binders, or surfactants are used during manufacturing resulting in superior downstream cleanliness

PureFlo® Polypropylene Membrane Filter Capsules







Note - Graphs based on Sanitary fittings.

Regulatory Compliance

Manufactured from materials that conform to the requirements of 21CFR Part 177 of the U.S. Code of Federal Regulations and USP Class VI Biological Test for Plastics.

Autoclavable & Sanitizable

Capsules can be autoclaved 25 times at 257°F/125°C for 30 minutes or chemically sanitized in situ using common sanitizing agents or hot water at 194°F/90°C for a limited time (dependent on time and temperature). Capsules must not be in situ steam-sterilized.

PureFlo Polypropylene membrane capsule

PureFlo Capsule Filters	Filter Media	Pore size (Micron)	Length	Inlet Fitting	Outlet Fitting	Options: Grade	Options: O-Ring for Quick Coupling
SKL = Capsule filter Standard grade Luer Lock Vent/Drain **SKP**= Capsule filter Standard grade M8 Plug vent/ Drain Limited Options	**M** = PolyPro Membrane	**010** = 0.1 **020** = 0.2 (0.003um for gas)	**H** = 1.5" **S** = 2.5" **L** = 5" **E** = 7.5" **K** = 10"	**1C** **1H** **1N** **1NF** **1Q** **1QF** **1QFV** **1QV** **2C** **2H** **2HS** **2LF** **2N** **2NF** **2P** **2PE** **2Q** **2QF** **2QFP** **2QFV** **2QP** **2QV** **2V** **3C** **3H** **3HE** **3NF** **4C** **4H** **4N** **4Q** **8C** **MT** **TC** **TS**	**1C** = 1/8" Compression **1H** = 1/8" Hose barbs **1N** = 1/8" MNPT **1NF** = 1/8" FNPT **1Q** = 1/8" Male Quick Coupling with Metal latch **1QF** = 1/8" Female Quick Coupling with Metal latch **1QFV** = 1/8" Female Valved Quick Coupling with Metal latch **1QV** = 1/8" Male Valved Quick Coupling with Metal latch **2C** = 1/4" Compression **2H** = 1/4" to 1/2" Hose barbs **2HS** = 1/4" to 3/8" Hose barbs **2LF** = Large Female Luer Lock fitting **2N** = 1/4" MNPT **2NF** = 1/4" FNPT **2P** = 1/4" Push to Connect **2PE** = 1/4" Push to Connect Elbow **2Q** = 1/4" Male Quick Coupling for Metal latch **2QF** = 1/4" Female Quick Coupling with Metal latch **2QFP** = 1/4" Female Quick Coupling with Plastic latch **2QFV** = 1/4" Female Valved Quick Coupling with Metal latch **2QP** = 1/4" Male Quick Coupling for Plastic latch **2QV** = 1/4" Male Valved Quick Coupling with Metal latch **2V** = 1/4" Walther Quick Connect **3C** = 3/8" Compression **3H** = 3/8" Hose Barb **3HE** = 3/8" Hose Barb Elbow **3H-FB** = 3/8" Hose Barb with filling bell or **-FC** with Cap **3NF** = 3/8" FNPT **4C** = 1/2" Compression **4H** = 1/2" Hose Barb **4N** = 1/2" MNPT **4Q** = 1/2" Male Quick Coupling for Plastic latch **8C** = 5/16" Compression **MT** = 1/2" Tri clamps **TC** = 1-1/2" Tri clamp **TS** = Shower Head	**Blank** = Standard Grade **-B** = Biological Reduction Grade **-PH** = Pharma Grade **Shell Material** **Blank** = Polypropylene **-GP** = Gamma stable polypropylene shell **-NY** = Nylon Construction **-E** = Polyethylene shell and HDPE media support for gamma sterilization **Vent & Drain** **-N** = No vent or Drain **-NI** = No vent or Drain **-NO** = No vent or Drain **Sterilization** **-ETO** = Ethylene Oxide	**Blank** = O-ring Silicone **-OE** = O-ring EPDM **-ON** = O-ring Nitrile **-OV** = O-ring Viton **Prefilter (add before Filter Media in part#)** **G(pore Size)**= Glass Fiber PreFilter **P(pore Size)**= PolyPro Media PreFilter **S(pore Size)** = PES PreFilter

Example - Capsule, Luer Lock V/D, 2.5" Internal filter, 0.2 micron Polypropylene Membrane Capsule, with 1.5" Tri-Clamp fittings would be **SKLM020STCTC**

Quick Couplings are molded, Female Quick Coupling with Plastic latch will be threaded on, compatible with CPC (Colder), LinkTech and others.

Your Local Distributor:

ZenPure

North & South Americas:
ZenPure Americas, Inc
www.zenpure.com
Info-us@zenpure.com
703-335-9910

All Other Regions:
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ISO Certified 9001 14001

TÜV MANAGEMENT SERVICE ISO 13485

PureFlo® Hi Performance PP Media Filter Capsules

PureFlo® Hi Performance Polypropylene Media filter capsules are >98% retentive. The media is made up of small diameter fibers that removes particles with limited flow or pressure drop loss. The fine fibers are only 1-5um in diameter allowing for increased efficiency with a lower pressure drop. They are pleated to provide maximum filtration area for higher throughput. The design has been optimized for clarification and pre-filtration applications.

No adhesives, binders, or surfactants are used in the manufacturing process. The fine fiber non-woven media does not allow for migration into the process fluid, thereby reducing the potential for extractables and downtime. Furthermore, the all-polypropylene construction provides excellent thermal and chemical compatibility with low and high pH chemicals.

PureFlo Hi Performance Polypropylene filter capsules are 98% rated to ensure consistent filter performance each and every time out of the package. Available in a wide-variety of micron sizes.

Materials of Construction

Media: Fine Fiber Non-Woven Polypropylene Media
Media Supports: Polypropylene
Cage, Core, End Caps: Polypropylene
Fitting Connections: MNPT, FNPT,
Compression, Hose Barb, Sanitary Flange

Dimensions (Nominal)

Length: 1.5 in (68 mm) Length: 2.5 in (98 mm)
Length: 5.0 in (153 mm) Length: 7.5 in (221 mm)
Length: 10 in (276mm)
Diameter: 2.88 in (73 mm)

Effective Filtration Area

0.54-0.59 ft^2 (500-550 cm^2) per 1.5" cartridge
1.1-1.2 ft^2 (1000-1100 cm^2) per 2.5" cartridge
1.9-2.2 ft^2 (1800-2050 cm^2) per 5.0" cartridge
3.0-3.4 ft^2 (2800-3150 cm^2) per 7.5" cartridge
3.8-4.4 ft^2 (3600-4100 cm^2) per 10" cartridge

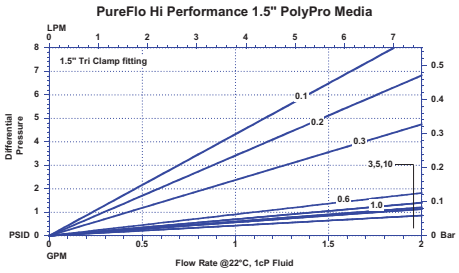
Operating Conditions

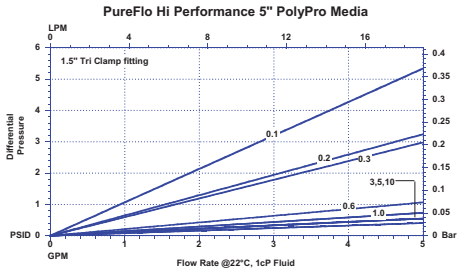
Maximum Operating Pressure:
Liquid: 5.5 bar (80psi) at 72°F/22°C
Gas: 4.1 bar (60psi) at 72°F/22°C
Minimum Burst Pressure:
8.3 bar (120psi) at 72°F/22°C
Maximum Forward Differential Pressure:
4.1 bar (60psi) at 72°F/22°C
Maximum Reverse Differential Pressure:
2.1 bar (30psi) at 72°F/22°C
Maximum Operating Temperature: 176°F/80°C

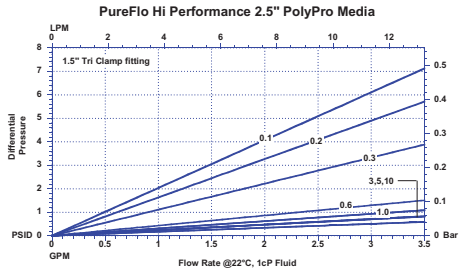
Applications	
Acids	Ink Jets
Bases	Beverages
Solvents	Pharmaceuticals
Fine Chemicals	Biologics
Plating Solutions	Dyes
Process Water	Lacquers

Features	Benefits
■ >98% Rated Pleated Polypropylene Media	■ The fine fiber media matrix removes particles with a high efficiency ■ High flow rates and low pressure drops ■ Superior filter lifetime and process throughputs ■ Consistent and reproducible particulate removal
■ 100% Polypropylene Disposable Capsule	■ Excellent thermal and chemical compatibility ■ No media migration ■ Rapid installation and reduced downtime ■ Reduced chemical handling and hazardous waste disposal
■ Low Filter Extractables	■ No adhesives, binders, or surfactants are used during manufacturing, resulting in superior downstream cleanliness ■ Capsules are rinsed with high-purity water

PureFlo® Hi Performance PP Media Filter Capsules







Autoclavable & Sanitizable

Capsules can be autoclaved 25 times at 257°F/125°C for 30 minutes or chemically sanitized in situ using common sanitizing agents or hot water at 194°F/90°C for a limited time (dependent on time and temperature). Capsules must not be in situ steam-sterilized.

Regulatory Compliance

Manufactured from materials that conform to the requirements of 21CFR Part 177 of the U.S. Code of Federal Regulations and USP Class VI Biological Test for Plastics.

PureFlo Hi Performance Polypropylene media capsule Ordering Guide

PureFlo Capsule Filters	Filter Media	Pore size (Micron)	Length	Inlet Fitting	Outlet Fitting	Options	
						Grade	**O-Ring for Quick Coupling**
SKL = Capsule filter Standard grade Luer Lock Vent/Drain	**HP** = Hi Performance PP Media	**001** = 0.1	**H** = 1.5"	**1C**	**1C** = 1/8" Compression	**Blank** = Standard Grade	**Blank** = O-ring Silicone
		002 = 0.2	**S** = 2.5"	**1H**	**1H** = 1/8" Hose barbs	**-B** = Biological Reduction Grade	**-OE** = O-ring EPDM
		003 = 0.3	**L** = 5"	**1N**	**1N** = 1/8" MNPT	**-PH** = Pharma Grade	**-ON** = O-ring Nitrile
		006 = 0.6	**E** = 7.5"	**1NF**	**1NF** = 1/8" FNPT	**Shell Material**	**-OV** = O-ring Viton
SKP= Capsule filter Standard grade M8 Plug vent/ Drain Limited Options		**010** = 1.0	**K** = 10"	**1Q**	**1Q** = 1/8" Male Quick Coupling with Metal latch	**Blank** = Polypropylene	
		030 = 3.0		**1QF**	**1QF** = 1/8" Female Quick Coupling with Metal latch	**-BLK** = Black polypropylene shell	**Prefilter (add before Filter Media in part#)**
		050 = 5.0		**1QFV**	**1QFV** = 1/8" Female Valved Quick Coupling with Metal latch		**G(pore Size)**= Glass Fiber PreFilter
		100 = 10.0		**1QV**	**1QV** = 1/8" Male Valved Quick Coupling with Metal latch		**P(pore Size)**= PolyPro Media PreFilter
				2C	**2C** = 1/4" Compression		**S(pore Size)** = PES PreFilter
				2H	**2H** = 1/4" to 1/2" Hose barbs		
				2HS	**2HS** = 1/4" to 3/8" Hose barbs		
				2LF	**2LF** = Large Female Luer Lock fitting		
				2N	**2N** = 1/4" MNPT		
				2NF	**2NF** = 1/4" FNPT		
				2P	**2P** = 1/4" Push to Connect	**Vent & Drain**	
				2PE	**2PE** = 1/4" Push to Connect Elbow	**-N** = No vent or Drain	
				2Q	**2Q** = 1/4" Male Quick Coupling for Metal latch	**-NI** = No vent or Drain	
				2QF	**2QF** = 1/4" Female Quick Coupling with Metal latch	**-NO** = No vent or Drain	
				2QFP	**2QFP** = 1/4" Female Quick Coupling with Plastic latch		
				2QFV	**2QFV** = 1/4" Female Valved Quick Coupling with Metal latch	**Sterilization**	
				2QP	**2QP** = 1/4" Male Quick Coupling for Plastic latch	**-ETO** = Ethylene Oxide	
				2QV	**2QV** = 1/4" Male Valved Quick Coupling with Metal latch		
				2V	**2V** = 1/4" Walther Quick Connect		
				3C	**3C** = 3/8" Compression		
				3H	**3H** = 3/8" Hose Barb		
				3HE	**3HE** = 3/8" Hose Barb Elbow		
					3H-FB = 3/8" Hose Barb with filling bell or **-FC** with Cap		
				3NF	**3NF** = 3/8" FNPT		
				4C	**4C** = 1/2" Compression		
				4H	**4H** = 1/2" Hose Barb		
				4N	**4N** = 1/2" MNPT		
				4Q	**4Q** = 1/2" Male Quick Coupling for Plastic latch		
				8C	**8C** = 5/16" Compression		
				MT	**MT** = 1/2" Tri clamps		
				TC	**TC** = 1-1/2" Tri clamp		
					TS = Shower Head		

Example - Capsule, Luer Lock V/D, 2.5" Internal filter, 5 micron Hi Performance PP Media Capsule, with 1.5" Tri-Clamp fittings would be **SKLHP050STCTC**

Quick Couplings are molded, Female Quick Coupling with Plastic latch will be threaded on, compatible with CPC (Colder), LinkTech and others.

Your Local Distributor:

ZenPure

North & South Americas:
ZenPure Americas, Inc
www.zenpure.com
Info-us@zenpure.com
703-335-9910

All Other Regions:
ZenPure Corporation
www.zenpure.com
info@zenpure.com
+86 571 2288 6800

PureFlo® SKV Hi Performance PP Media Capsules

PureFlo® SKV Hi Performance Polypropylene Media filter capsules are >98% retentive at rated pore size. The media is made up of small diameter fibers that removes particles with limited flow or pressure drop loss. The fine fibers are only 1-5um in diameter allowing for increased efficiency with a lower pressure drop. They are pleated to provide maximum filtration area for higher throughput. The design has been optimized for clarification and pre-filtration applications with a bleed valve.

No adhesives, binders, or surfactants are used in the manufacturing process. The fine fiber non-woven media does not allow for migration into the process fluid, thereby reducing the potential for extractables and downtime. Furthermore, the all-polypropylene construction provides excellent thermal and chemical compatibility with low and high pH chemicals.

PureFlo Hi Performance Polypropylene filter capsules are >98% rated to ensure consistent filter performance each and every time out of the package. Available in a wide-variety of micron sizes.

Applications	
Acids	Ink Jets
Bases	Beverages
Solvents	Pharmaceuticals
Fine Chemicals	Biologics
Plating Solutions	Dyes
Process Water	Lacquers

Materials of Construction

Media: Fine Fiber Non-Woven Polypropylene Media
Media Supports: Polypropylene
Cage, Core, End Caps: Polypropylene
Fitting Connections: (See ordering guide)

Dimensions (Nominal)

Length: 1.5 in (68 mm) Length: 2.5 in (98 mm)
Length: 5.0 in (153 mm) Length: 7.5 in (221 mm)
Length: 10 in (276mm)
Diameter: 2.88 in (73 mm)

Effective Filtration Area

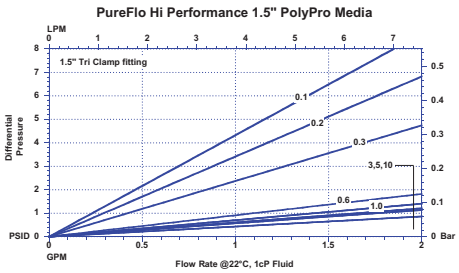
0.54-0.59 ft^2 (500-550 cm^2) per 1.5" cartridge
1.1-1.2 ft^2 (1000-1100 cm^2) per 2.5" cartridge
1.9-2.2 ft^2 (1800-2050 cm^2) per 5.0" cartridge
3.0-3.4 ft^2 (2800-3150 cm^2) per 7.5" cartridge
3.8-4.4 ft^2 (3600-4100 cm^2) per 10" cartridge

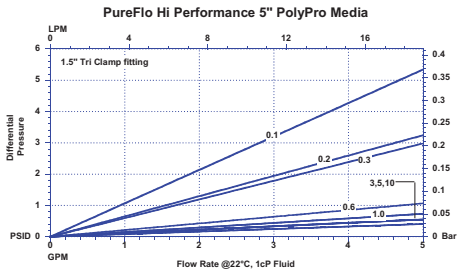
Operating Conditions

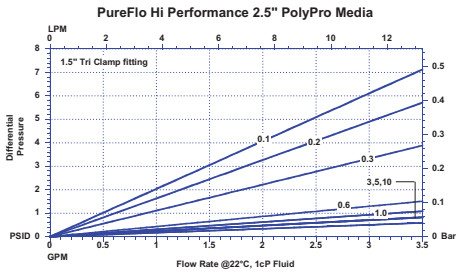
Maximum Operating Pressure:
Liquid: 5.5 bar (80psi) at 72°F/22°C
Gas: 4.1 bar (60psi) at 72°F/22°C
Minimum Burst Pressure:
8.3 bar (120psi) at 72°F/22°C
Maximum Forward Differential Pressure:
4.1 bar (60psi) at 72°F/22°C
Maximum Reverse Differential Pressure:
2.1 bar (30psi) at 72°F/22°C
Maximum Operating Temperature: 176°F/80°C

Features	Benefits
■ >98% Rated Pleated Polypropylene Media	■ The fine fiber media matrix removes particles with a high efficiency ■ High flow rates and low pressure drops ■ Superior filter lifetime and process throughputs ■ Consistent and reproducible particulate removal
■ 100% Polypropylene Disposable Capsule	■ Excellent thermal and chemical compatibility ■ No media migration ■ Rapid installation and reduced downtime ■ Reduced chemical handling and hazardous waste disposal
■ Low Filter Extractables	■ No adhesives, binders, or surfactants are used during manufacturing, resulting in superior downstream cleanliness ■ Capsules are rinsed with high-purity water

PureFlo® SKV Hi Performance PP Media Capsules







Autoclavable & Sanitizable

Capsules can be autoclaved 25 times at 257°F/125°C for 30 minutes or chemically sanitized in situ using common sanitizing agents or hot water at 194°F/90°C for a limited time (dependent on time and temperature). Capsules must not be in situ steam-sterilized.

Regulatory Compliance

Manufactured from materials that conform to the requirements of 21CFR Part 177 of the U.S. Code of Federal Regulations and USP Class VI Biological Test for Plastics.

PureFlo SKV Hi Performance Polypropylene media capsule Ordering Guide

PureFlo Capsule Filters	Filter Media	Pore size (Micron)	Internal Filter Length	Input Fitting	Output Fitting	Options	
SKV 70mm Diameter Capsule with Bleed Valve	**HP** = Hi Performance PP Media	**001** = 0.1 **002** = 0.2 **003** = 0.3 **006** = 0.6 **010** = 1.0 **030** = 3.0 **050** = 5.0 **100** = 10.0	**H** = 1.5" **S** = 2.5" **L** = 5" **E** = 7.5" **K** = 10"	**1H** **1Q** **1QF** **1QFV** **1QV** **2H** **2HL** **2N** **2P** **2PE** **2Q** **2QF** **2QFV** **2QP** **2QV** **2V** **3H** **4H** **4Q** **5H** **MT** **TC**	**1H** = 1/8" Hose barbs **1Q** = 1/8" Male Quick Coupling with Metal latch **1QF** = 1/8" Female Quick Coupling with Metal latch **1QFV** = 1/8" Female Valved Quick Coupling with Metal latch **1QV** = 1/8" Male Valved Quick Coupling with Metal latch **2H** = 1/4" Hose barb **2HL** = 1/4" to 1/2" Hose barbs **2H-FB** = 1/4" Hose Barb with filling bell **-FC** with Cap **2N** = 1/4" MNPT **2P** = 1/4" Push to Connect **2PE** = 1/4" Push to Connect Elbow **2Q** = 1/4" Male Quick Coupling for Metal latch **2QF** = 1/4" Female Quick Coupling with Metal latch **2QFV** = 1/4" Female Valved Quick Coupling with Metal latch **2QP** = 1/4" Male Quick Coupling for Plastic latch **2QV** = 1/4" Male Valved Quick Coupling with Metal latch **2V** = 1/4" Walther Quick Connect **3H** = 3/8" Hose Barb **3H-FB** = 3/8" Hose Barb with filling bell or **-FC** with Cap **4H** = 1/2" Hose Barb **4Q** = 1/2" Male Quick Coupling for Plastic latch **5H** = 5/8" Hose Barb **SM** = ½" Tri Clamp with SS insert *R*ing & High temp PP **MT** = ½" Tri Clamp **ST** = 1 ½" Tri Clamp with SS insert *R*ing & High temp PP **TC** = 1 ½" Tri Clamp **TS** = Shower Head	**Shell Material** **Blank** = Polypro construction **-E** = Polyethylene shell and HDPE media support for gamma sterilization **-GP** = Gamma stable polypropylene shell **-NY** = Nylon Shell **Sterilization** **-ETO =** Ethylene oxide sterilization **Vent & Drain** **-N**= No vent or drain fittings **-NI** = No vent or drain inlet fitting **-NO** = No vent or drain Outlet fitting	**O-Ring for Quick Coupling** **-OE** = O-ring EPDM **-ON** = O-ring Nitrile **-OV** = O-ring Viton **Blank** = O-ring Silicon (Standard) **Prefilter (add before Filter Media in part#)** **G(pore Size)**= Glass Fiber PreFilter **P(pore Size)**= PolyPro Media PreFilter **S(pore Size)** = PES PreFilter
Example - PureFlo SKV Series Capsule, Hi Performance PP media , 2.5" internal filter, 0.6 micron, with 1.5" Tri-Clamp fittings I/O, would be **SKVHP006STCTC**							
Note: Quick Couplings are molded on. Female Quick Coupling with Plastic latch will be threaded on. Compatible with CPC (Colder), LinkTech and others.							

Your Local Distributor:

ZenPure

North & South Americas:
ZenPure Americas, Inc
www.zenpure.com
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703-335-9910

All Other Regions:
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+86 571 2288 6800

PureFlo® Polypropylene Media Filter Capsules

PureFlo® Polypropylene Media filter capsules are highly retentive, graded porosity, pleated polypropylene media filters that have been specially designed for clarification and pre-filtration applications.

The graded porosity design removes particles in sequence by size – larger particles by the more open outer layers and smaller particles by the tighter inner layers. The outer layers act as a pre-filter while the inner layers provide the absolute rating at the specified pore size. This efficiently spreads the contaminants throughout the media matrix resulting in superior contaminant holding capacity, lifetime, and pressure drop as compared to other media cartridges.

No adhesives, binders, or surfactants are used in the manufacturing process The non-woven media does not allow for migration into the process fluid, thereby reducing the potential for extractables and downtime. Furthermore, the all-polypropylene construction provides excellent thermal and chemical compatibility with low and high pH chemicals.

PureFlo Polypropylene filter capsules are absolute rated to ensure consistent filter performance each and every time out of the package. Available in a wide-variety of micron sizes.

Materials of Construction

Media: Non-Woven Polypropylene Media
Meda Supports: Polypropylene
Cage, Core, End Caps: Polypropylene
Fitting Connections: MNPT, FNPT,
Compression, Hose Barb, Sanitary Flange

Dimensions (Nominal)

Length: 1.5 in (68 mm) Length: 2.5 in (98 mm)
Length: 5.0 in (153 mm) Length: 7.5 in (221 mm)
Length: 10 in (276mm)
Diameter: 2.88 in (73 mm)

Effective Filtration Area

1.5 in - 0.65 ft^2 (600 cm^2) 2.5 in - 1.3 ft^2 (1200 cm^2)
5.0 in - 2.7 ft^2 (2400 cm^2) 7.5 in - 4.3 ft^2 (3980 cm^2)
10 in - 5.2 ft^2 (4800 cm^2)

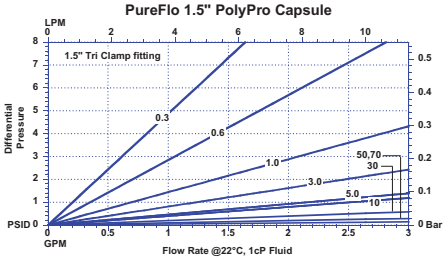
Operating Conditions

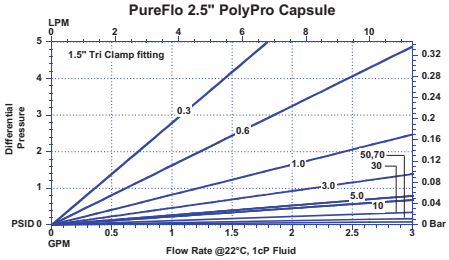
Maximum Operating Pressure:
Liquid: 5.5 bar (80psi) at 72°F/22°C
Gas: 4.1 bar (60psi) at 72°F/22°C
Minimum Burst Pressure:
8.3 bar (120psi) at 72°F/22°C
Maximum Forward Differential Pressure:
4.1 bar (60psi) at 72°F/22°C
Maximum Reverse Differential Pressure:
2.1 bar (30psi) at 72°F/22°C
Maximum Operating Temperature: 176°F/80°C

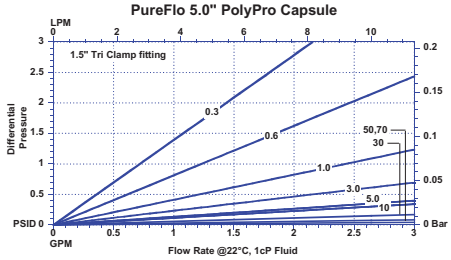
Applications	
Acids	Ink Jets
Bases	Beverages
Solvents	Pharmaceuticals
Fine Chemicals	Biologics
Plating Solutions	Dyes
Process Water	Lacquers

Features	Benefits
■ Absolute Rated Pleated Polypropylene Media (Graded Porosity Design)	■ Media matrix removes particles in sequence by size – larger particles by the more open outer layers and smaller particles by the tighter inner layers ■ High flow rates and low pressure drops ■ Superior filter lifetime and process throughputs ■ Consistent and reproducible particulate removal
■ 100% Polypropylene Disposable Capsule	■ Excellent thermal and chemical compatibility ■ No media migration ■ Rapid installation and reduced downtime ■ Reduced chemical handling and hazardous waste disposal
■ Low Filter Extractables	■ No adhesives, binders, or surfactants are used during manufacturing, resulting in superior downstream cleanliness ■ Capsules are rinsed with high-purity water

PureFlo® Polypropylene Media Filter Capsules







Autoclavable & Sanitizable

Capsules can be autoclaved 25 times at 257°F/125°C for 30 minutes or chemically sanitized in situ using common sanitizing agents or hot water at 194°F/90°C for a limited time (dependent on time and temperature). Capsules must not be in situ steam-sterilized.

Regulatory Compliance

Manufactured from materials that conform to the requirements of 21CFR Part 177 of the U.S. Code of Federal Regulations and USP Class VI Biological Test for Plastics.

PureFlo Polypropylene Media Filter Cartridge Ordering Guide

PureFlo Capsule Filters	Filter Media	Pore size (Micron)	Length	Inlet Fitting	Outlet Fitting	Options	
						Grade	**O-Ring for Quick Coupling**
SKL = Capsule filter Standard grade Luer Lock Vent/Drain	**P** = PolyPro Media	**003** = 0.3	**H** = 1.5"	**1C**	**1C** = 1/8" Compression	**Blank** = Standard Grade	**Blank** = O-ring Silicone
		006 = 0.6	**S** = 2.5"	**1H**	**1H** = 1/8" Hose barbs	**-B** = Biological Reduction Grade	**-OE** = O-ring EPDM
		010 = 1.0	**L** = 5"	**1N**	**1N** = 1/8" MNPT	**-PH** = Pharma Grade	**-ON** = O-ring Nitrile
		030 = 3.0	**E** = 7.5"	**1NF**	**1NF** = 1/8" FNPT	**Shell Material**	**-OV** = O-ring Viton
SKP= Capsule filter Standard grade		**050** = 5.0	**K** = 10"	**1Q**	**1Q** = 1/8" Male Quick Coupling with Metal latch	**Blank** = Polypropylene	
M8 Plug vent/ Drain Limited Options		**070** = 7.0		**1QF**	**1QF** = 1/8" Female Quick Coupling with Metal latch	**-BLK** = Black polypropylene shell	**Prefilter (add before Filter Media in part#)**
		100 = 10.0		**1QFV**	**1QFV** = 1/8" Female Valved Quick Coupling with Metal latch		**G(pore Size)**= Glass Fiber PreFilter
		200 = 20.0		**1QV**	**1QV** = 1/8" Male Valved Quick Coupling with Metal latch		**P(pore Size)**= PolyPro Media PreFilter
		300 = 30.0		**2C**	**2C** = 1/4" Compression		
		400 = 40.0		**2H**	**2H** = 1/4" to 1/2" Hose barbs		**S(pore Size)** = PES PreFilter
		500 = 50.0		**2HS**	**2HS** = 1/4" to 3/8" Hose barbs		
		700 = 70.0		**2LF**	**2LF** = Large Female Luer Lock fitting		
		10X = 100		**2N**	**2N** = 1/4" MNPT		
				2NF	**2NF** = 1/4" FNPT		
				2P	**2P** = 1/4" Push to Connect		
				2PE	**2PE** = 1/4" Push to Connect Elbow	**Vent & Drain**	
				2Q	**2Q** = 1/4" Male Quick Coupling for Metal latch	**-N** = No vent or Drain	
				2QF	**2QF** = 1/4" Female Quick Coupling with Metal latch	**-NI** = No vent or Drain	
				2QFP	**2QFP** = 1/4" Female Quick Coupling with Plastic latch	**-NO** = No vent or Drain	
				2QFV	**2QFV** = 1/4" Female Valved Quick Coupling with Metal latch	**Sterilization**	
				2QP	**2QP** = 1/4" Male Quick Coupling for Plastic latch	**-ETO** = Ethylene Oxide	
				2QV	**2QV** = 1/4" Male Valved Quick Coupling with Metal latch		
				2V	**2V** = 1/4" Walther Quick Connect		
				3C	**3C** = 3/8" Compression		
				3H	**3H** = 3/8" Hose Barb		
				3HE	**3HE** = 3/8" Hose Barb Elbow		
					3H-FB = 3/8" Hose Barb with filling bell or **-FC** with Cap		
				3NF	**3NF** = 3/8" FNPT		
				4C	**4C** = 1/2" Compression		
				4H	**4H** = 1/2" Hose Barb		
				4N	**4N** = 1/2" MNPT		
				4Q	**4Q** = 1/2" Male Quick Coupling for Plastic latch		
				8C	**8C** = 5/16" Compression		
				MT	**MT** = 1/2" Tri clamps		
				TC	**TC** = 1-1/2" Tri clamp		
					TS = Shower Head		

Example - Capsule, Luer Lock V/D, 2.5" Internal filter, 5 micron PP Media Capsule, with 1.5" Tri-Clamp fittings would be **SKLP050STCTC**

Quick Couplings are molded, Female Quick Coupling with Plastic latch will be threaded on, compatible with CPC (Colder), LinkTech and others.

Your Local Distributor:

ZenPure

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www.zenpure.com
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All Other Regions:
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+86 571 2288 6800

Polypropylene Depth Pleated PP Capsules
(Depth PP Media on PP Construction)

High Contaminant Holding Filtration

PureFlo® Pleated Depth capsule filters are designed for filtration and clarification applications in the pharmaceutical, biotechnology, food and beverage, medical, chemical, and water worldwide. This family of products is particularly suitable for the fluids that contain gels, colloidal suspensions, or high suspended solids.

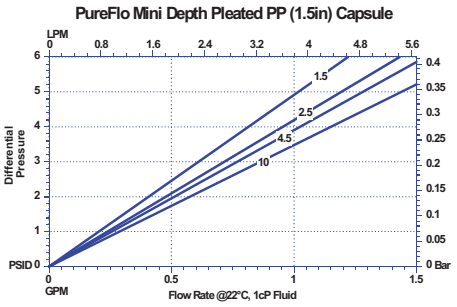
Highly retentive graded porosity design removes particles by size – larger particles by the more open outer layers and smaller particles by the tighter inner layers. The outer layers act as a pre-filter while the inner layers provide the absolute rating at the specified pore size. This efficiently spreads the contaminants throughout the media matrix, thereby, resulting in superior contaminant holding capacity, lifetime, and lower pressure drop as compared to other depth media cartridges.

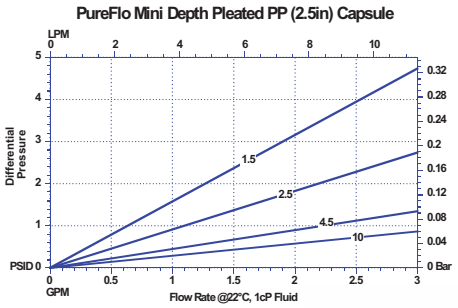
Applications	
Clarification	Ink
Gel Removal	Beverages
Yeast Removal	Pharmaceuticals
Fine Chemicals	Biologics
Plating Solutions	Wine
Beer	Water

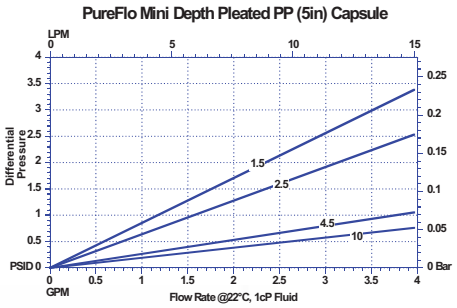
Specifications

Materials of Construction:	Media: Non-Woven Polypropylene Media Supports: Polypropylene Cage, Core, End Caps: Polypropylene Sealing: Thermally bonded
Fitting Connections:	See ordering guide for the availability. (Custom adaptors available upon request)
Nominal Dimensions:	Lengths: 1.5”, 2.5”, 5”, 7.5” and 10” Diameter: 2.75 in. (70mm)
Available Ratings:	0.2, 0.5, 1.0, 1.5, 2.5, 4.5, 10, and 20µm
Operating Conditions:	Maximum Operating Pressure: Liquid: 5.5 bar (80psi) at 72°F/22°C Gas: 4.1 bar (60psi) at 72°F/22°C Maximum Forward Differential Pressure: 4.1 bar (60psi) at 72°F/22°C Maximum Reverse Differential Pressure: 2.1 bar (30 psi) at 72°F/22°C Minimum Burst Pressure: 8.3 bar (120psi) at 72°F/22°C Maximum Operating Temperature: 176°F (80°C)
Regulatory Compliance:	The filters are constructed with polypropylene resins and filtration media in compliance with 21CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastic.

Polypropylene Depth Pleated PP Capsules







Specifications (cont.)

Autoclavable & Sanitizable:

Capsules can be autoclaved 25 times at 257°F/125° C for 30 minutes or chemically sanitized in situ using common sanitizing agents or hot water at 194°F/90° C for a limited time (dependent on time and temperature).

Capsules must not be in situ steam-sterilized.

Internal Cross Section

PureFlo Mini Depth Pleated PP Filter Capsule Ordering Guide

PureFlo Capsule Filters	Filter Media	Pore size (Micron)	Length	Input Fitting	Output Fitting	Options
		002 = 0.2um	**H** = 1.5"	**1C**	**1C** = 1/8" Compression	**Shell Material**
SKL = Capsule filter Standard grade Luer Lock Vent/Drain	**DP** = Depth Polypropylene	**005** = 0.5um	**S** = 2.5"	**1H**	**1H** = 1/8" Hose barbs	**Blank** = Polypropylene
		010 = 1.0um	**L** = 5"	**1N**	**1N** = 1/8" MNPT	**Blk** = Black Polypropylene
		015 = 1.5um	**E** = 7.5"	**1NF**	**1NF** = 1/8" FNPT	**Sterilization**
SKP= Capsule filter Standard grade M8 Plug vent/ Drain Limited Options		**025** = 2.5um	**K** = 10"	**1Q**	**1Q** = 1/8" Male Quick Coupling with Metal latch	**-ETO** = Ethylene Oxide Sterilization
		045 = 4.5um		**1QF**	**1QF** = 1/8" Female Quick Coupling with Metal latch	
		100 = 10um		**1QFV**	**1QFV** = 1/8" Female Valved Quick Coupling with Metal latch	**Vent & Drain**
		200 = 20um		**1QV**	**1QV** = 1/8" Male Valved Quick Coupling with Metal latch	**-N** = No vent or Drain fittings
				2C	**2C** = 1/4" Compression	**-NI** = No vent or drain inlet fitting
				2H	**2H** = 1/4" to 1/2" Hose barbs	**-NO** = NO vent or drain Outlet fitting
				2HS	**2HS** = 1/4" to 3/8" Hose barbs	
				2LF	**2LF** = Large Female Luer Lock fitting	**O-Ring for Quick Coupling**
				2N	**2N** = 1/4" MNPT	
				2NF	**2NF** = 1/4" FNPT	**-OE** = O-ring EPDM
				2P	**2P** = 1/4" Push to Connect	**-ON** = O-ring Nitrile
				2PE	**2PE** = 1/4" Push to Connect Elbow	**-OV** = O-ring Viton
				2Q	**2Q** = 1/4" Male Quick Coupling for Metal latch	**Blank** = O-ring Silicon (Standard)
				2QF	**2QF** = 1/4" Female Quick Coupling with Metal latch	
				2QFP	**2QFP** = 1/4" Female Quick Coupling with Plastic latch	
				2QFV	**2QFV** = 1/4" Female Valved Quick Coupling with Metal latch	
				2QP	**2QP** = 1/4" Male Quick Coupling for Plastic latch	
				2QV	**2QV** = 1/4" Male Valved Quick Coupling with Metal latch	
				2V	**2V** = 1/4" Walther Quick Connect	
				3C	**3C** = 3/8" Compression	
				3H	**3H** = 3/8" Hose Barb	
				3HE	**3HE** = 3/8" Hose Barb Elbow	
					3H-FB = 3/8" Hose Barb with filling bell or **-FC** with Cap	
				3NF	**3NF** = 3/8" FNPT	
				4C	**4C** = 1/2" Compression	
				4H	**4H** = 1/2" Hose Barb	
				4N	**4N** = 1/2" MNPT	
				4Q	**4Q** = 1/2" Male Quick Coupling for Plastic latch	
				8C	**8C** = 5/16" Compression	
				MT	**MT** = 1/2" Tri clamps	
				TC	**TC** = 1-1/2" Tri clamp	
					TS = Shower Head	

Example - 2.5", 0.5 micron Depth PP Capsule, with 1/2" Hose Barb fittings would be SKLDP005S2H2H

Male Quick Couplings are molded, Female Quick Coupling with Plastic latch will be threaded on, compatible with CPC (Colder), LinkTech and other compatible couplings.

Your Local Distributor:

ZenPure

North & South Americas:
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All Other Regions:
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PureFlo SKV Polypropylene Depth Pleated Capsules

High Contaminant Holding Filtration

PureFlo® SKV Pleated Depth capsule filters are designed for filtration and clarification applications in the pharmaceutical, biotechnology, food and beverage, medical, chemical, and water worldwide. This family of products is particularly suitable for the fluids that contain gels, colloidal suspensions, or high suspended solids. The SKV series provides a bleed valve for the vent and drain.

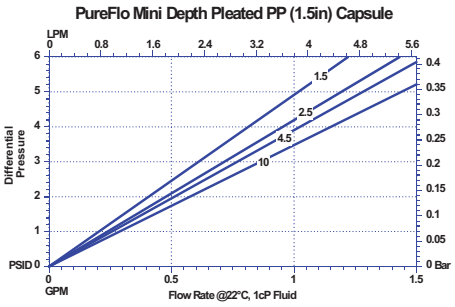
Highly retentive graded porosity design removes particles by size – larger particles by the more open outer layers and smaller particles by the tighter inner layers. The outer layers act as a pre-filter while the inner layers provide the absolute rating at the specified pore size. This efficiently spreads the contaminants throughout the media matrix, thereby, resulting in superior contaminant holding capacity, lifetime, and lower pressure drop as compared to other depth media cartridges.

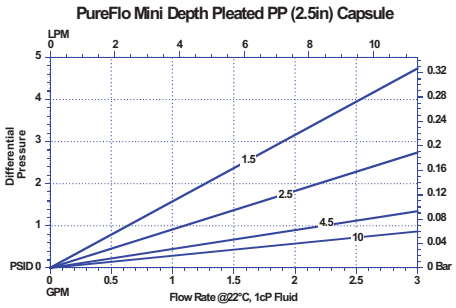
Applications	
Clarification	Ink
Gel Removal	Beverages
Yeast Removal	Pharmaceuticals
Fine Chemicals	Biologics
Plating Solutions	Wine
Beer	Water

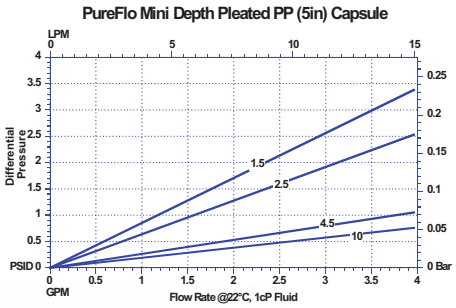
Specifications

Materials of Construction:	Media: Non-Woven Polypropylene Media Supports: Polypropylene Cage, Core, End Caps: Polypropylene Sealing: Thermally bonded
Fitting Connections:	See ordering guide for the availability. (Custom adaptors available upon request)
Nominal Dimensions:	Lengths: 1.5”, 2.5”, 5”, 7.5” and 10” Diameter: 2.75 in. (70mm)
Available Ratings:	0.2, 0.5, 1.0, 1.5, 2.5, 4.5, 10, and 20µm
Operating Conditions:	Maximum Operating Pressure: Liquid: 5.5 bar (80psi) at 72°F/22°C Gas: 4.1 bar (60psi) at 72°F/22°C Maximum Forward Differential Pressure: 4.1 bar (60psi) at 72°F/22°C Maximum Reverse Differential Pressure: 2.1 bar (30 psi) at 72°F/22°C Minimum Burst Pressure: 8.3 bar (120psi) at 72°F/22°C Maximum Operating Temperature: 176°F (80°C)
Regulatory Compliance:	The filters are constructed with polypropylene resins and filtration media in compliance with 21CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastic.

PureFlo SKV Polypropylene Depth







Specifications (cont.)

Autoclavable & Sanitizable:

Capsules can be autoclaved 25 times at 257°F/125° C for 30 minutes or chemically sanitized in situ using common sanitizing agents or hot water at 194°F/90° C for a limited time (dependent on time and temperature).

Capsules must not be in situ steam-sterilized.

Internal Cross Section

PureFlo SKV Depth Pleated PP Filter Capsule Ordering Guide

PureFlo Capsule Filters	Filter Media	Pore size (Micron)	Internal Filter Length	Input Fitting	Output Fitting	Options
SKV 70mm Diameter Capsule with Bleed Valve	**DP** = Depth Polypropylene	**002** = 0.2um **005** = 0.5um **010** = 1.0um **015** = 1.5um **025** = 2.5um **045** = 4.5um **100** = 10um **200** = 20um	**H** = 1.5" **S** = 2.5" **L** = 5" **E** = 7.5" **K** = 10"	**1H** **1Q** **1QF** **1QFV** **1QV** **2H** **2HL** **2N** **2P** **2PE** **2Q** **2QF** **2QFV** **2QP** **2QV** **2V** **3H** **4H** **4Q** **5H** **MT** **TC**	**1H** = 1/8" Hose barbs **1Q** = 1/8" Male Quick Coupling with Metal latch **1QF** = 1/8" Female Quick Coupling with Metal latch **1QFV** = 1/8" Female Valved Quick Coupling with Metal latch **1QV** = 1/8" Male Valved Quick Coupling with Metal latch **2H** = 1/4" Hose barb **2HL** = 1/4" to 1/2" Hose barbs **2H-FB** = 1/4" Hose Barb with filling bell **-FC** with Cap **2N** = 1/4" MNPT **2P** = 1/4" Push to Connect **2PE** = 1/4" Push to Connect Elbow **2Q** = 1/4" Male Quick Coupling for Metal latch **2QF** = 1/4" Female Quick Coupling with Metal latch **2QFV** = 1/4" Female Valved Quick Coupling with Metal latch **2QP** = 1/4" Male Quick Coupling for Plastic latch **2QV** = 1/4" Male Valved Quick Coupling with Metal latch **2V** = 1/4" Walther Quick Connect **3H** = 3/8" Hose Barb **3H-FB** = 3/8" Hose Barb with filling bell or **-FC** with Cap **4H** = 1/2" Hose Barb **4Q** = 1/2" Male Quick Coupling for Plastic latch **5H** = 5/8" Hose Barb **MT** = 1/2" Tri clamps **TC** = 1-1/2" Tri clamp **TS** = Shower Head	**Shell Material** **Blank** = Polypro construction **-BLK** = Black Polypropylene **Sterilization** **-ETO =** Ethylene oxide **Vent & Drain** **-N**= No vent or drain fittings **-NI** = No vent or drain inlet fitting **-NO** = No vent or drain Outlet fitting **O-Ring for Quick Coupling** **-OE** = O-ring EPDM **-ON** = O-ring Nitrile **-OV** = O-ring Viton **Blank** = O-ring Silicon Silicone O-Rings for Bleed Valve and Quick Coupling fittings

Internal cartridge

Example - PureFlo SKV Series Depth PP Capsule, 2.5" internal filter, 0.5 micron, with 1.5" Tri-Clamp fittings I/O, would be SKVDP005STCTC

Note: Quick Couplings are molded on. Female Quick Coupling with Plastic latch will be threaded on. Compatible with CPC (Colder), LinkTech and others.

Your Local Distributor:

ZenPure

North & South Americas:
ZenPure Americas, Inc
www.zenpure.com
Info-us@zenpure.com
703-335-9910

All Other Regions:
ZenPure Corporation
www.zenpure.com
info@zenpure.com
+86 571 2288 6800

HEPA Filter Capsules
(99.97% efficiency at 0.3µm)

High-Efficiency Particulate Air and Gas Filter

PureFlo® HEPA Capsules are designed for high retention and particle holding capacity for air and gas in the pharmaceutical, biotechnology, medical, chemical, food and beverage applications worldwide. This family of products is particularly suitable for a variety of gases with four different filtration media to choose from.

They are designed to provide bacteria, algae, fungal-free air for sterile applications such as fermentors or incubators. The capsules have a durable polypropylene housings. The media allows for high flow rates and low pressure drops.

Applications	
Tank Vent	Air Filter
Vacuum pump	Beverages
Fermentor	Pharmaceuticals
Fine Chemicals	Biologics
Incubator	Wine
Beer	Water

Specifications

Materials of Construction:	Media: Non-Woven Polypropylene, Micro-Glass fiber, PTFE, Polyethylene Media Supports: Polypropylene Shell, Cage, Core, and End Caps: Polypropylene
Fitting Connections:	Hose Barb, NPT, Compression Quick Couplings, and Sanitary. Any inlet/outlet combinations. (Custom adaptors available upon request)
Nominal Dimensions:	Length: 1.5 in (68 mm), Length: 2.5 in (98 mm), Length: 5.0 in (153 mm), Length: 7.5 in (221mm), Length: 10 in (276mm), Diameter: 2.88 in (73 mm), MKL Size:2.3in (60mm)
Effective Filtration Area:	1.5 in: 180-600 cm^2, 2.5 in: 360-1300 cm^2, 5.0 in 700-2500 cm^2 7.5 in:1060-3800, 10 in:2600-5000 cm^2, MKL Size: 200-500cm^2
Operating Conditions:	Maximum Operating Pressure: Liquid: 5.5 bar (80psi) at 72°F/22°C Gas: 4.1 bar (60psi) at 72°F/22°C Maximum Forward Differential Pressure: 4.1 bar (60psi) at 72°F/22°C Maximum Reverse Differential Pressure: 2.1 bar (30 psi) at 72°F/22°C Minimum Burst Pressure: 8.3 bar (120psi) at 72°F/22°C Maximum Operating Temperature: 140°F/60°C
HEPA Rated: Pyrogenicity:	Ensures particulate-free air 99.97% retention of 0.3 µm DOP aerosol <0.25 EU/ml using the LAL test method
Autoclavable & Sanitizable:	Capsules can be autoclaved 25 times at 257°F/125°C for 30 minutes or chemically sanitized in situ using common sanitizing agents or hot water at 194°F/90°C for a limited time (dependent on time and temperature). Capsules must not be in situ steam-sterilized.
Regulatory Compliance:	The filters are constructed with polypropylene resins and filtration media in compliance with 21CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastic.

HEPA Filter Capsules

PureFlo MK Series HEPA Filter Capsule Ordering Guide

PureFlo Capsule Filters	Filter Media	Pore size (Micron)	Surface Area	Inlet Fitting	Outlet Fitting	Options
MKL 60mm Diameter	**UE** = Polyethylene **F** = PTFE Phobic **G** = Glass Fiber **P** = Polypropylene Media	**H** = HEPA	**A** = 200cm2 **B** = 300cm2 **C** = 400cm2 **D** = 500cm2 **UE, G and P Media are only available in Surface Area "C" (400cm2)**	**1C** **1H** **1Q** **1QF** **1QE** **1QFV** **1QV** **2C** **2CE** **2H** **2N** **2NO** **2NS** **2Q** **2QE** **2QF** **2QFV** **2QV** **3H** **3NF** **5H** **LF** **LFE** **MT**	**1C** = 1/8" Compression **1H** = 1/8" Hose Barb **1Q** = 1/8" Male Quick Coupling **1QF** = 1/8" Female Quick Coupling **1QE** = 1/8" Male Quick Coupling Elbow **1QFV** = 1/8" Female Quick Connect w/Valve **1QV** = 1/8" Male Quick Connect w/Valve **2C** = 1/4" Compression **2CE** = 1/4" Compression Elbow **2H** = 1/4" Hose barbs **2N** = 1/4" MNPT **2NO** = Short 1/4" MNPT+EP O-Ring **2NS** = Short 1/4" MNPT **2Q** = 1/4" Male Quick Coupling for Metal latch **2QE** = 1/4" Male Quick Coupling for Metal latch **2QF** = 1/4" Female Quick Coupling with Metal **2QFV** = 1/4" Female Quick Connect w/Valve **2QV** = 1/4" Male Quick Connect w/Valve **3H** = 3/8" Hose Barb **3NF** = 3/8" Female NPT **5H** = 5/8" Hose Barb **LF** = Female Luer Lock **LFE** = Female Luer Lock Elbow **MT** = 1/2" Tri clamps	**Shell Material** **Blank** = Polypro **-E** = Polyethylene shell and HDPE media support **-BLK** = Black PP Shell **-GP** = Gamma stable polypropylene shell **-NY** = Nylon Shell **Vent & Drain** **-N** = No vent or drain **-NI** = No vent or drain **-NO** = NO vent or drain **Sterilization** **-ETO =** Ethylene oxide sterilization **O-Ring for Quick** **Blank** = O-ring Silicone (Standard) **-OE** = O-ring EPDM **-ON** = O-ring Nitrile **-OV** = O-ring Viton
Example - MKL Series, PTFE, HEPA, 500cm2, 1/4" Hose Barb I/O is **MKLFHD2H2H**						

MK Series Filter

SKL Series Filter

PureFlo SK Series HEPA Filter Capsule Ordering Guide

PureFlo Capsule Filters	Filter Media	Pore size (Micron)	Length	Input Fitting	Output Fitting	Options
SKL 70mm Diameter Capsule	**UE** = Polyethylene **F** = PTFE Phobic **G** = Glass Fiber **P** = Polypropylene Media	**H** = HEPA	**H** = 1.5" **S** = 2.5" **L** = 5" **E** = 7.5" **K** = 10"	**1C** **1H** **1N** **1NF** **1Q** **1QF** **1QFV** **1QV** **2C** **2H** **2HS** **2LF** **2N** **2NF** **2P** **2PE** **2Q** **2QF** **2QFP** **2QFV** **2QP** **2QV** **2V** **3C** **3H** **3HE** **3NF** **4C** **4H** **4N** **4Q** **8C** **MT** **TC**	**1C** = 1/8" Compression **1H** = 1/8" Hose barbs **1N** = 1/8" MNPT **1NF** = 1/8" FNPT **1Q** = 1/8" Male Quick Coupling with Metal latch **1QF** = 1/8" Female Quick Coupling with Metal latch **1QFV** = 1/8" Female Valved Quick Coupling with Metal latch **1QV** = 1/8" Male Valved Quick Coupling with Metal latch **2C** = 1/4" Compression **2H** = 1/4" to 1/2" Hose barbs **2HS** = 1/4" to 3/8" Hose barbs **2LF** = Large Female Luer Lock fitting **2N** = 1/4" MNPT **2NF** = 1/4" FNPT **2P** = 1/4" Push to Connect **2PE** = 1/4" Push to Connect Elbow **2Q** = 1/4" Male Quick Coupling for Metal latch **2QF** = 1/4" Female Quick Coupling with Metal latch **2QFP** = 1/4" Female Quick Coupling with Plastic latch **2QFV** = 1/4" Female Valved Quick Coupling with Metal latch **2QP** = 1/4" Male Quick Coupling for Plastic latch **2QV** = 1/4" Male Valved Quick Coupling with Metal latch **2V** = 1/4" Walther Quick Connect **3C** = 3/8" Compression **3H** = 3/8" Hose Barb **3HE** = 3/8" Hose Barb Elbow **3NF** = 3/8" FNPT **4C** = 1/2" Compression **4H** = 1/2" Hose Barb **4N** = 1/2" MNPT **4Q** = 1/2" Male Quick Coupling for Plastic latch **8C** = 5/16" Compression **MT** = 1/2" Tri clamps **TC** = 1-1/2" Tri clamp	**Shell Material** **Blank** = Polypro **-E** = Polyethylene shell and HDPE media support **-BLK** = Black PP Shell **-GP** = Gamma stable polypropylene shell **-NY** = Nylon Shell **Vent & Drain** **-N** = No vent or drain **-NI** = No vent or drain **-NO** = NO vent or drain **Sterilization** **-ETO =** Ethylene oxide **O-Ring for Quick** **Blank** = O-ring Silicone (Standard) **-OE** = O-ring EPDM **-ON** = O-ring Nitrile **-OV** = O-ring Viton
Example - 2.5", Glass Fiber, HEPA rated Capsule, with 1/2" Hose Barb fittings would be **SKLGHS4H4H**						

Male Quick Couplings are molded, Female Quick Coupling with Plastic latch will be threaded on, compatible with CPC (Colder), LinkTech and other compatible couplings.

Your Local Distributor:

ZenPure

North & South Americas:
ZenPure Americas, Inc
www.zenpure.com
Info-us@zenpure.com
703-335-9910

All Other Regions:
ZenPure Corporation
www.zenpure.com
info@zenpure.com
+86 571 2288 6800

ULPA Filter Capsules
(99.999% efficiency at 0.12µm)

Ultra Low Particulate Air and Gas Filter

PureFlo® ULPA (**U**ltra **L**ow **P**articulate **A**ir) capsules are designed for high retention and particle holding capacity for air and gas in the pharmaceutical, biotechnology, medical, chemical, food and beverage applications worldwide. This family of products is particularly suitable for a variety of gases with four different filtration media to choose from.

They are designed to provide bacteria, algae, fungal-free air for sterile applications such as fermentors or incubators. The capsules have a durable polypropylene housings. The media allows for high flow rates and low pressure drops.

Applications	
Tank Vent	Air Filter
Vacuum pump	Beverages
Fermentor	Pharmaceuticals
Fine Chemicals	Biologics
Incubator	Wine
Beer	Water

Specifications

Materials of Construction:	Media: Non-Woven Borosilicate Microfiber Media Supports: Polypropylene Shell, Cage, Core, and End Caps: Polypropylene
Fitting Connections:	Hose Barb, NPT, Compression Quick Couplings, and Sanitary. Any inlet/outlet combinations. (Custom adaptors available upon request)
Nominal Dimensions:	Length: 1.5 in (68 mm), Length: 2.5 in (98 mm), Length: 5.0 in (153 mm), Length: 7.5 in (221mm), Length: 10 in (276mm), Diameter: 2.88 in (73 mm), MK Size:2.3in (60mm)
Effective Filtration Area:	1.5 in: 260cm^2, 2.5 in: 500cm^2, 5.0 in 1000cm^2 7.5 in:1500, 10 in:2000 cm^2, MKL Size: 300cm^2
Operating Conditions:	Maximum Operating Pressure: Liquid: 5.5 bar (80psi) at 72°F/22°C Gas: 4.1 bar (60psi) at 72°F/22°C Maximum Forward Differential Pressure: 4.1 bar (60psi) at 72°F/22°C Maximum Reverse Differential Pressure: 2.1 bar (30 psi) at 72°F/22°C Minimum Burst Pressure: 8.3 bar (120psi) at 72°F/22°C Maximum Operating Temperature: 140°F/60°C
ULPA Rated: Pyrogenicity:	Ensures particulate-free air 99.999% retention of 0.12 µm DOP aerosol <0.25 EU/ml using the LAL test method
Autoclavable & Sanitizable:	Capsules can be autoclaved 25 times at 257°F/125°C for 30 minutes or chemically sanitized in situ using common sanitizing agents or hot water at 194°F/90°C for a limited time (dependent on time and temperature). Capsules must not be in situ steam-sterilized.
Regulatory Compliance:	The filters are constructed with polypropylene resins and filtration media in compliance with 21CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastic.

ULPA Filter Capsules

PureFlo MK Series ULPA Filter Capsule Ordering Guide

PureFlo Capsule Filters	Filter Media	Pore size (Micron)	Surface Area	Inlet Fitting	Outlet Fitting	Options
MKL 60mm Diameter	**G** = Glass Fiber	**U** = ULPA	**B** = 300cm2 **G Media is only available in Surface Area "B" (300cm2)**	**1C** **1H** **1Q** **1QF** **1QE** **1QFV** **1QV** **2C** **2CE** **2H** **2N** **2NO** **2NS** **2Q** **2QE** **2QF** **2QFV** **2QV** **3H** **3NF** **5H** **LF** **LFE** **MT**	**1C** = 1/8" Compression **1H** = 1/8" Hose Barb **1Q** = 1/8" Male Quick Coupling **1QF** = 1/8" Female Quick Coupling **1QE** = 1/8" Male Quick Coupling Elbow **1QFV** = 1/8" Female Quick Connect w/Valve **1QV** = 1/8" Male Quick Connect w/Valve **2C** = 1/4" Compression **2CE** = 1/4" Compression Elbow **2H** = 1/4" Hose barbs **2N** = 1/4" MNPT **2NO** = Short 1/4" MNPT+EP O-Ring **2NS** = Short 1/4" MNPT **2Q** = 1/4" Male Quick Coupling for Metal latch **2QE** = 1/4" Male Quick Coupling for Metal latch Elbow **2QF** = 1/4" Female Quick Coupling with Metal latch **2QFV** = 1/4" Female Quick Connect w/Valve **2QV** = 1/4" Male Quick Connect w/Valve **3H** = 3/8" Hose Barb **3NF** = 3/8" Female NPT **5H** = 5/8" Hose Barb **LF** = Female Luer Lock **LFE** = Female Luer Lock Elbow **MT** = 1/2" Tri clamps	**Shell Material** **Blank** = Polypro construction **-E** = Polyethylene shell and HDPE media support **-BLK** = Black PP Shell **-GP** = Gamma stable polypropylene shell **-NY** = Nylon Shell **Vent & Drain** **-N** = No vent or drain fittings **-NI** = No vent or drain inlet **-NO** = NO vent or drain outlet **Sterilization** **-ETO =** Ethylene oxide sterilization **O-Ring for Quick Coupling** **Blank** = O-ring Silicone (Standard) **-OE** = O-ring EPDM **-ON** = O-ring Nitrile **-OV** = O-ring Viton
Example - MKL Series, Glass Fiber, ULPA, 300cm2, 1/4" Hose Barb I/O is **MKLGUB2H2H**						

Male Quick Couplings are molded, Female Quick Coupling with Plastic latch will be threaded on, compatible with CPC (Colder), LinkTech and other compatible couplings.

MK Series Filter

SK Series Filter

PureFlo SK Series ULPA Filter Capsule Ordering Guide

PureFlo Capsule Filters	Filter Media	Pore size (Micron)	Length	Input Fitting	Output Fitting	Options
SKL 70mm Diameter Capsule	**G** = Glass Fiber	**U** = ULPA	**H** = 1.5" **S** = 2.5" **L** = 5" **E** = 7.5" **K** = 10"	**1C** **1H** **1N** **1NF** **1Q** **1QF** **1QFV** **1QV** **2C** **2H** **2HS** **2LF** **2N** **2NF** **2P** **2PE** **2Q** **2QF** **2QFP** **2QFV** **2QP** **2QV** **2V** **3C** **3H** **3HE** **3NF** **4C** **4H** **4N** **4Q** **8C** **MT** **TC**	**1C** = 1/8" Compression **1H** = 1/8" Hose barbs **1N** = 1/8" MNPT **1NF** = 1/8" FNPT **1Q** = 1/8" Male Quick Coupling with Metal latch **1QF** = 1/8" Female Quick Coupling with Metal latch **1QFV** = 1/8" Female Valved Quick Coupling with Metal latch **1QV** = 1/8" Male Valved Quick Coupling with Metal latch **2C** = 1/4" Compression **2H** = 1/4" to 1/2" Hose barbs **2HS** = 1/4" to 3/8" Hose barbs **2LF** = Large Female Luer Lock fitting **2N** = 1/4" MNPT **2NF** = 1/4" FNPT **2P** = 1/4" Push to Connect **2PE** = 1/4" Push to Connect Elbow **2Q** = 1/4" Male Quick Coupling for Metal latch **2QF** = 1/4" Female Quick Coupling with Metal latch **2QFP** = 1/4" Female Quick Coupling with Plastic latch **2QFV** = 1/4" Female Valved Quick Coupling with Metal latch **2QP** = 1/4" Male Quick Coupling for Plastic latch **2QV** = 1/4" Male Valved Quick Coupling with Metal latch **2V** = 1/4" Walther Quick Connect **3C** = 3/8" Compression **3H** = 3/8" Hose Barb **3HE** = 3/8" Hose Barb Elbow **3NF** = 3/8" FNPT **4C** = 1/2" Compression **4H** = 1/2" Hose Barb **4N** = 1/2" MNPT **4Q** = 1/2" Male Quick Coupling for Plastic latch **8C** = 5/16" Compression **MT** = 1/2" Tri clamps **TC** = 1-1/2" Tri clamp	**Shell Material** **Blank** = Polypro **-E** = Polyethylene shell and HDPE media support **-BLK** = Black PP Shell **-GP** = Gamma stable polypropylene shell **-NY** = Nylon Shell **Vent & Drain** **-N** = No vent or drain **-NI** = No vent or drain **-NO** = NO vent or drain **Sterilization** **-ETO =** Ethylene oxide **O-Ring for Quick** **Blank** = O-ring Silicone (Standard) **-OE** = O-ring EPDM **-ON** = O-ring Nitrile **-OV** = O-ring Viton
Example - 2.5", Glass Fiber, ULPA rated Capsule, with 1/2" Hose Barb fittings would be **SKLGUS4H4H**						

Male Quick Couplings are molded, Female Quick Coupling with Plastic latch will be threaded on, compatible with CPC (Colder), LinkTech and other compatible couplings.

Your Local Distributor:

ZenPure

North & South Americas:
ZenPure Americas, Inc
www.zenpure.com
Info-us@zenpure.com
703-335-9910

All Other Regions:
ZenPure Corporation
www.zenpure.com
info@zenpure.com
+86 571 2288 6800

PureFlo® Carbon Fiber / HEPA Capsules

PureFlo® Carbon Fiber / HEPA capsules are designed to remove volatile organic compounds, hydrocarbons, chlorine, color, and odors from gases and aqueous or organic liquids. This fibrous carbon media is designed for maximum flow and contaminant removal to eliminate potential health hazards. The carbon fiber can be followed by HEPA rated media to also filter the gas while purifying it. The carbon fiber allows for highly efficient contact time and adsorption capacity. Designed with clean, durable polypropylene support structure to provide superior down stream cleanliness.

No adhesives, binders, or surfactants are used in the manufacturing process. Each capsule is manufactured under tight process control to give you a uniform product with every filter. These activated carbon filters are available in a range of lengths and connections to suit your individual purification and filtration needs.

Applications	
Gas Purification	Liquid Purification
Fine Chemicals	Water
Reagent Purification	Pharmaceuticals
Odor Removal	Biologics
Vacuum Pumps	Outlet Exhaust

Autoclavable & Sanitizable

Capsules can be autoclaved 25 times at 125 °C (257 °F) for 30 minutes or chemically sanitized in situ using common sanitizing agents or hot water at 90 °C (194 °F) for a limited time (dependent on time and temperature). Capsules must not be in situ steam-sterilized.

Materials of Construction

Media: Fibrous Activated Carbon and HEPA media
Membrane Supports: Polypropylene
Cage, Core, End Caps: Polypropylene
Fitting Connections: MNPT, FNPT, Compression, Sanitary Flange, Hose Barb

Dimensions (TC fittings)

Length: 1.5 in (68 mm) Length: 2.5 in (98 mm)
Length: 5.0 in (153 mm) Length: 7.5 in (221 mm)
Length: 10 in (276 mm)
Diameter: 2.88 in (73 mm) MK: 2.3in (60mm)

Effective Purification volume (Carbon only)

1.5 in: 0.65 grams 2.5 in: 1.3 grams
5.0 in: 2.7 grams 7.5 in: 4.0 grams
10.0 in: 5.2 grams MK size: 0.4 grams

Operating Conditions

Maximum Operating Pressure:
Liquid: 5.5 bar (80 psi) at 22°C
Gas: 4.1 bar (59.5 psi) at 22°C
Minimum Burst Pressure:
8.3 bar (120 psi) at 22°C
Maximum Forward Differential Pressure:
4.1 bar (60 psi) at 22°C
Maximum Reverse Differential Pressure:
2.1 bar (30.5 psi) at 22°C
Maximum Operating Temperature: 60°C

Features	Benefits
■ Carbon Fiber	■ Greater surface area to trap VOC's than granular carbon ■ Faster kinetics for VOC absorption since the VOCs do not need to travel as far in the structure as in granular carbon ■ Light weight and high surface area, for lower pressure drop ■ More porous, increasing accessibility of VOCs to be 100 times greater than with granular activated carbon
■ HEPA filtration	■ Removes 0.3 µm in size with an efficiency rating of 99.97%. ■ Low hold-up volume reduces chemical waste ■ Reduced handling of hazardous chemicals
■ Compact	■ Disposable unit to easily change out ■ Several fittings to choose from

PureFlo® Carbon Fiber / HEPA Capsules

PureFlo MK Carbon Fiber Capsule Ordering Guide

PureFlo Capsule Filters	Filter Media	Inlet Fitting	Outlet Fitting	Options
MKL 60mm Diameter Capsule	**C** = Activated Carbon Fiber	**1C**	**1C** = 1/8" Compression	**Shell Material**
		1H	**1H** = 1/8" Hose Barb	**Blank** = Polypro construction
		1Q	**1Q** = 1/8"	**-E** = Polyethylene shell and HDPE media support
		1QF	**1QF** = 1/8"	**-BLK** = Black PP Shell
		1QE	**1QE** = 1/8"	**-GP** = Gamma stable polypropylene shell
		1QFV	**1QFV** = 1/8"	**-NY** = Nylon Shell
		1QV	**1QV** = 1/8"	**Vent & Drain**
		2C	**2C** = 1/4" Compression	**-N** = No vent or drain fittings
		2CE	**2CE** = 1/4" Compression Elbow	**-NI** = No vent or drain inlet fitting
		2H	**2H** = 1/4" Hose barbs	**-NO** = NO vent or drain outlet
		2N	**2N** = 1/4" MNPT	**Sterilization**
		2NO	**2NO** = Short 1/4" MNPT+EP O-Ring	**-ETO =** Ethylene oxide sterilization
		2NS	**2NS** = Short 1/4" MNPT	**O-Ring for Quick Coupling**
		2Q	**2Q** = 1/4"	**Blank** = O-ring Silicone (Standard)
		2QE	**2QE** = 1/4"	**-OE** = O-ring EPDM
		2QF	**2QF** = 1/4"	**-ON** = O-ring Nitrile
		2QFV	**2QFV** = 1/4"	**-OV** = O-ring Viton
		2QV	**2QV** = 1/4"	
		3H	**3H** = 3/8" Hose Barb	
		3NF	**3NF** = 3/8" Female NPT	
		5H	**5H** = 5/8" Hose Barb	
		LF	**LF** = Female Luer Lock	
		LFE	**LFE** = Female Luer Lock Elbow	
		MT	**MT** = 1/2" Tri clamps	
Example - MKL Series Capsule, Carbon Fiber Capsule, with 1/4" Hose Barb fittings would be **MKLC2H2H**				

Regulatory Compliance

Manufactured from materials that conform to the requirements of 21 CFR Part 177 of the U.S. Code of Federal Regulations and USP Class VI Biological test for Plastic

PureFlo SK Carbon Fiber Capsule Ordering Guide

PureFlo Capsule Filters	Filter Media	HEPA Filter Media	Internal HEPA Filter	Capsule Length	Input Fitting	Output Fitting	Options
SKL = Capsule filter Standard grade Luer Lock Vent/Drain	**CH** = Activated Carbon Fiber with HEPA Filter	**UE** = Polyethylene	**H** = 1.5"	**H** = 1.5"*	**1C**	**1C** = 1/8" Compression	**Shell Material**
		F = PTFE	**S** = 2.5"	**S** = 2.5"	**1H**	**1H** = 1/8" Hose barbs	**Blank** = Polypro construction
SKP= Capsule filter Standard grade M8 Plug vent/ Drain	**CU** = Activated Carbon Fiber with ULPA Filter	**G** = Glass Fiber	**L** = 5"	**L** = 5"	**1N**	**1N** = 1/8" MNPT	**-E** = Polyethylene shell and HDPE media support
		P = Polypropylene Media	**E**= 7.5"	**E**= 7.5"	**1NF**	**1NF** = 1/8" FNPT	**-BLK** = Black PP Shell
Limited Options		**Blank** = for Carbon only	**Blank** = for Carbon only	**K** = 10"	**1Q**	**1Q** = 1/8" Male Quick Coupling with Metal latch	**-GP** = Gamma stable polypropylene shell
	C = Activated Carbon Fiber only				**1QF**	**1QF** = 1/8" Female Quick Coupling with Metal latch	**-NY** = Nylon Shell
					1QFV	**1QFV** = 1/8" Female Valved Quick Coupling with Metal latch	**Vent & Drain**
					1QV	**1QV** = 1/8" Male Valved Quick Coupling with Metal latch	**-N** = No vent or drain fittings
					2C	**2C** = 1/4" Compression	**-NI** = No vent or drain inlet fitting
					2H	**2H** = 1/4" to 1/2" Hose barbs	**-NO** = NO vent or drain outlet
					2HS	**2HS** = 1/4" to 3/8" Hose barbs	**Sterilization**
					2LF	**2LF** = Large Female Luer Lock fitting	**-ETO =** Ethylene oxide sterilization
					2N	**2N** = 1/4" MNPT	**O-Ring for Quick Coupling**
					2NF	**2NF** = 1/4" FNPT	**Blank** = O-ring Silicone (Standard)
					2P	**2P** = 1/4" Push to Connect	**-OE** = O-ring EPDM
					2PE	**2PE** = 1/4" Push to Connect Elbow	**-ON** = O-ring Nitrile
				*** - Size H for Carbon Fiber only**	**2Q**	**2Q** = 1/4" Male Quick Coupling for Metal latch	**-OV** = O-ring Viton
					2QF	**2QF** = 1/4" Female Quick Coupling with Metal latch	
					2QFP	**2QFP** = 1/4" Female Quick Coupling with Plastic latch	
					2QFV	**2QFV** = 1/4" Female Valved Quick Coupling with Metal latch	
					2QP	**2QP** = 1/4" Male Quick Coupling for Plastic latch	
					2QV	**2QV** = 1/4" Male Valved Quick Coupling with Metal latch	
					2V	**2V** = 1/4" Walther Quick Connect	
					3C	**3C** = 3/8" Compression	
					3H	**3H** = 3/8" Hose Barb	
					3HE	**3HE** = 3/8" Hose Barb Elbow	
					3NF	**3NF** = 3/8" FNPT	
					4C	**4C** = 1/2" Compression	
					4H	**4H** = 1/2" Hose Barb	
					4N	**4N** = 1/2" MNPT	
					4Q	**4Q** = 1/2" Male Quick Coupling for Plastic latch	
					8C	**8C** = 5/16" Compression	
					MT	**MT** = 1/2" Tri clamps	
					TC	**TC** = 1-1/2" Tri clamp	
Example - 5", Carbon/HEPA capsule with a Glass Fiber HEPA 1.5" internal filter, with 1/2" Hose Barb fittings I/O would be **SKLCHGHL4H4H**							

Male Quick Couplings are molded, Female Quick Coupling with Plastic latch will be threaded on, compatible with CPC (Colder), LinkTech and other compatible couplings.

Your Local Distributor:

ZenPure

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www.zenpure.com
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PureFlo® Carbon/Membrane Capsules

PureFlo® Carbon Fiber / Membrane capsules are designed to purify and filters in one combined unit. It remove volatile organic compounds, hydrocarbons, chlorine, color, and odors from gases and aqueous or organic liquids while filtering particulates out of the fluid path. This fibrous carbon media is designed for maximum flow and contaminant removal to eliminate potential health hazards. The membrane can filter down to sub micron levels sterilizing the media. The carbon fiber allows for highly efficient contact time and adsorption capacity. Designed with clean, durable polypropylene support structure to provide superior down stream cleanliness.

No adhesives, binders, or surfactants are used in the manufacturing process. Each capsule is manufactured under tight process control to give you a uniform product with every filter. These activated carbon /membrane filters are available in a range of lengths and connections to suit your individual purification and filtration needs.

Materials of Construction

Media: Fibrous Activated Carbon
Membrane: Charged Nylon, Nylon 6,6, PES
Membrane Supports: Polypropylene
Cage, Core, End Caps: Polypropylene
Fitting Connections: MNPT, FNPT, Compression, Sanitary Flange, Hose Barb

Dimensions (TC fittings)

Length: 1.5 in(68 mm) Length: 2.5 in(98 mm)
Length: 5.0 in(153 mm) Length: 7.5 in(221 mm)
Length: 10 in (276mm)
Diameter: 2.75 in(70 mm)

Effective Purification volume

1.5 in 0.65 grams 2.5 in 1.3 grams
5.0 in 2.7 grams 7.5 in 4.0 grams
10.0 in 5.2 grams

Operating Conditions

Maximum Operating Pressure:
Liquid: 5.5 bar (80psi) at 72°F/22°C
Gas: 4.1 bar (60psi) at 72°F/22°C
Minimum Burst Pressure:
8.3 bar (120psi) at 72F/22°C
Maximum Forward Differential Pressure:
4.1 bar (60psi) at 72°F/22°C
Maximum Reverse Differential Pressure:
2.1 bar (30psi) at 68°F/20°C
Maximum Operating Temperature: 140°F/60°C

Applications	
Gas purification	Liquid purification
Fine Chemicals	Water
Reagent Purification	Pharmaceuticals
Odor removal	Biologics
Vacuum pumps	Outlet exhaust

Features	Benefits
■ Carbon Fiber	■ Greater surface area to trap VOC's than granular carbon ■ Faster kinetics for VOC absorption since the VOCs do not need to travel as far in the structure as granular carbon ■ Light weight and high surface area, for lower pressure drop ■ more porous for 100 times more accessible for VOC than granular activated carbon
■ Membrane filtration	■ Removes particulates from fluid media ■ Can sterilize media for 0.2um or lower ■ combines two filters into one
■ Compact	■ Disposable unit to easily change out ■ Several fittings to choose from

PureFlo® Carbon/Membrane Capsules

Capsule with Insulation to keep the temperature constant as the fluid media passes through the Purification of the Carbon and filtration of the membrane.

Autoclavable & Sanitizable

Capsules can be autoclaved 25 times (Nylon 5 times) at 257° F/125°C for 30 minutes or chemically sanitized in situ using common sanitizing agents or hot water at 194°F/90°C for a limited time (dependent on time and temperature).
Capsules must not be in situ steam-sterilized.

Regulatory Compliance

Manufactured from materials that conform to the requirements of 21CFR Part 177 of the U.S. Code of Federal Regulations and USP Class VI Biological test for Plastic

PureFlo Carbon/Membrane Capsule Ordering Guide

PureFlo Capsule Filters	Filter Media	Filter Media	Pore Size in Microns			Internal Filter Size	Capsule Length	Input Fitting	Output Fitting	Options
			Charged Nylon	Nylon (N)	PES (S)					**Special**
SKL = Capsule filter Standard grade Luer Lock Vent/Drain	**C** = Activated Carbon Fiber Media	**CN** = Nylon	**005** = 0.05	**005** = 0.05	**004** = 0.04	**H** = 1.5"	**S** = 2.5"	**1C**	**1C** = 1/8" Compression	**-I** = Insulation
		N = Nylon	**010** = 0.10	**010** = 0.10	**010** = 0.10	**S** = 2.5"	**L** = 5"	**1H**	**1H** = 1/8" Hose barbs	**Vent & Drain**
		S = PES	**020** = 0.20	**020** = 0.20	**020** = 0.20	**L** = 5"	**E**= 7.5"	**1N**	**1N** = 1/8" MNPT	**-N**= No vent or Drain fittings
SKP= Capsule filter Standard grade M8 Plug vent/ Drain Limited Options			**045** = 0.45	**045** = 0.45	**045**= 0.45	**E** = 7.5"	**K** = 10"	**1NF**	**1NF** = 1/8" FNPT	**-NI** = No vent or Drain inlet fitting
			065 = 0.65	**065** = 0.65	**065** = 0.65			**1Q**	**1Q** = 1/8" Male Quick Coupling with Metal latch	**-NO** = No vent or Drain Outlet fitting
			080 = 0.80	**080** = 0.80	**080** = 0.80			**1QF**	**1QF** = 1/8" Female Quick Coupling with Metal latch	**Shell Material**
			120 = 1.20	**120** = 1.20	**120** =1.20			**1QFV**	**1QFV** = 1/8" Female Valved Quick Coupling with Metal latch	**Blank** = Polypropylene
								1QV	**1QV** = 1/8" Male Valved Quick Coupling with Metal latch	**-GP** = Gamma stable polypropylene shell
								2C	**2C** = 1/4" Compression	**-NY** = Nylon Construction
								2H	**2H** = 1/4" to 1/2" Hose barbs	**-E** = Polyethylene shell and HDPE media support for gamma sterilization
								2HS	**2HS** = 1/4" to 3/8" Hose barbs	**O-Ring for Quick Coupling**
								2LF	**2LF** = Large Female Luer Lock fitting	**Blank** = O-ring Silicone
								2N	**2N** = 1/4" MNPT	**-OE** = O-ring EPDM
								2NF	**2NF** = 1/4" FNPT	**-ON** = O-ring Nitrile
								2P	**2P** = 1/4" Push to Connect	**-OV** = O-ring Viton
								2PE	**2PE** = 1/4" Push to Connect Elbow	**Sterilization**
								2Q	**2Q** = 1/4" Male Quick Coupling for Metal latch	**-ETO** = Ethylene Oxide Sterilization
								2QF	**2QF** = 1/4" Female Quick Coupling with Metal latch	**Grade**
								2QFP	**2QFP** = 1/4" Female Quick Coupling with Plastic latch	**-PH** = Pharma Grade
								2QFV	**2QFV** = 1/4" Female Valved Quick Coupling with Metal latch	
								2QP	**2QP** = 1/4" Male Quick Coupling for Plastic latch	
								2QV	**2QV** = 1/4" Male Valved Quick Coupling with Metal latch	
								2V	**2V** = 1/4" Walther Quick Connect	
								3C	**3C** = 3/8" Compression	
								3H	**3H** = 3/8" Hose Barb	
								3HE	**3HE** = 3/8" Hose Barb Elbow	
									3H-FB = 3/8" Hose Barb with filling bell or **-FC** with Cap	
								3NF	**3NF** = 3/8" FNPT	
								4C	**4C** = 1/2" Compression	
								4H	**4H** = 1/2" Hose Barb	
								4N	**4N** = 1/2" MNPT	
								4Q	**4Q** = 1/2" Male Quick Coupling for Plastic latch	
								8C	**8C** = 5/16" Compression	
								MT	**MT** = 1/2" Tri clamps	
								TC	**TC** = 1-1/2" Tri clamp	
									TS = Shower Head	

Example - 5", Carbon/PES capsule with a 1.5" PES 0.2um internal filter, with 1/2" Hose Barb fittings I/O would be **SKLCS020HL4H4H**

Male Quick Couplings are molded, Female Quick Coupling with Plastic latch will be threaded on, compatible with CPC (Colder), LinkTech and other compatible couplings.

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ZenCap® HEPA Full Size Capsules
(99.97% efficiency at 0.3 µm)

High Efficiency Particulate Air and Gas Filter

ZenCap® HEPA Capsule assemblies are ready-to-use, full size filters that offer high flows, increased throughputs, high strength, all with the convenience and cleanliness of a disposable and easy-to-install filter assembly. Designed for high retention and particle holding capacity for air and gas in the pharmaceutical, biotechnology, medical, chemical, food and beverage applications worldwide. This family of products is particularly suitable for a variety of gases with four different filtration media to choose from. They are designed to provide bacteria, algae, fungal-free air for sterile applications such as fermentors or incubators.

The capsules have durable polypropylene housings. ZenCap® capsule assemblies are available with a wide range of hydrophilic and hydrophobic filter media for gas, and venting applications. Process engineers can choose from 4 filtration medias in order to meet the requirements of the application.

They can be built in a T, C, L, S and In-line configuration with nine inlet and outlet fitting connections that can be mixed and matched. No adhesives or surfactants are used in the manufacturing process.

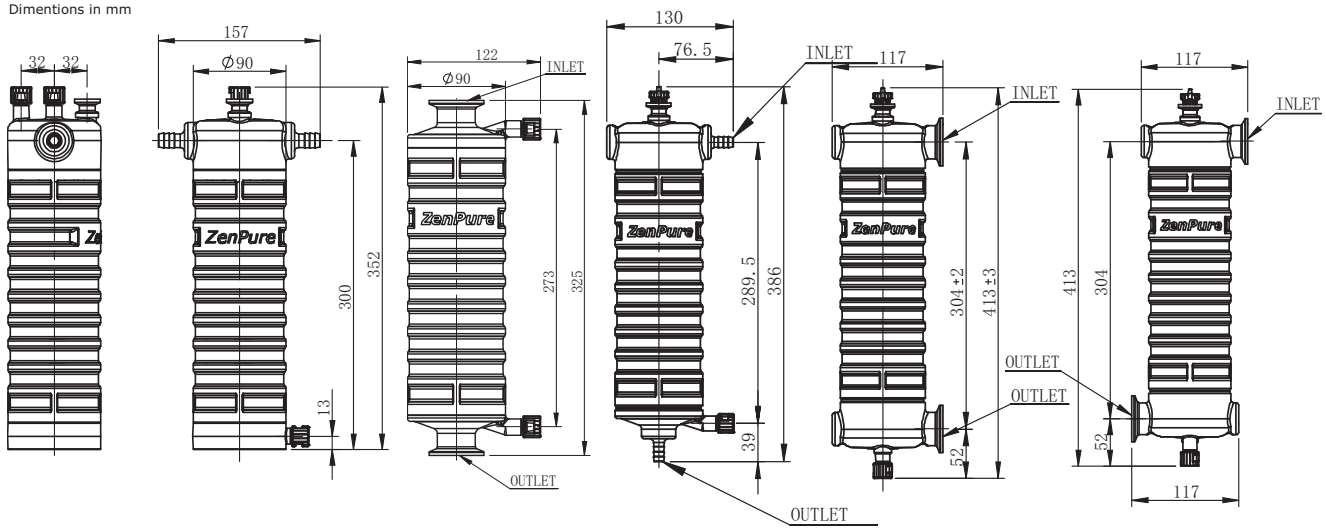
Applications	
Tank Vent	Air Filter
Vacuum Pump	Beverages
Fermentor	Pharmaceuticals
Fine Chemicals	Biologics
Incubator	Wine
Beer	Water

Specifications

Materials of Construction:	Media: Polyethylene, PTFE, Glass Fiber, PP Membrane Media Supports: Polypropylene Shell, Cage, Core, End Caps: Polypropylene Sealing: Thermally bonded	
Fitting Connections:	Eleven Fittings - See ordering guide for availability. (Custom adaptors available upon request)	
Nominal Dimensions:	Lengths: 10”, 20”, 30”, 40” Diameter: 3.54” (90 mm)	
Effective Filtration Area:	See cartridge datasheet for more information (dependent on media).	
Operating Conditions:	Maximum Operating Pressure: Minimum Burst Pressure: Maximum Forward Differential Pressure: Maximum Reverse Differential Pressure: Maximum Operating Temperature:	Gas: 4.1 bar (60 psi) at 72°F/22°C 8.3 bar (120 psi) at 72°F/22°C 5.0 bar (72 psi) at 72°F/22°C 2.1 bar (30 psi)at 72°F/22°C PP & Gamma PP: 80°C HDPE: 60°C
Regulatory Compliance:	The filters are constructed with polypropylene resins and filtration media in compliance with 21 CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastics.	

ZenCap® HEPA Full Size Capsules

Dimentions in mm



T-Line **I-Line** **L-Line** **C-Line** **S-Line**

Specifications (cont.)

Autoclavable & Sanitizable:

Capsules can be autoclaved 25 times at 125 °C (257 °F) for 30 minutes or chemically sanitized in situ using common sanitizing agents or hot water at 90 °C (194 °F) for a limited time (dependent on time and temperature). Capsules must not be in situ steam-sterilized.

Bacterial Endotoxin:

Effluent is non-pyrogenic per USP Bacterial Endotoxin (0.25 EU/ml), determined using Limulus Amebocyte Lysate (LAL) Test.

ZenCap® HEPA Full Size Capsule Ordering Guide

Capsule Series	Configuration	Length	Filter Media	Pore Size	Vents*	Input Fitting	Output Fitting	Options
L 90mm Diameter Capsule with Bleed Valves	I = In-Line T = T-Line S = S-Line L = L-Line C = C-Line	1 - 10" 2 - 20" 3 - 30" 4 - 40"	E = Polyethylene F = PTFE G = Glass Fiber P = Polypropylene Media	H = HEPA Rating	A = No vents B = 1/2" Sanitary vent C = 1/2" Sanitary vent, with upstream and down stream 1/4" Bleed Valve D = 1/2" Sanitary vent, with upstream 1/4" Bleed Valve E = 1/2" Sanitary vent, with down stream 1/4" Bleed Valve F = Upstream and down stream 1/4" Bleed Valve G = Upstream 1/4" Bleed Valve H = Downstream 1/4" Bleed Valve N = No vent or Drains Note: Option B,C, D &E not for In-Line	1QFV = 1/8" Female Quick connect w/Valve for Metal latch 1QV = 1/8" Male Quick connect w/Valve for Metal latch 2QFV = 1/4" Female Quick connect w/Valve for Metal latch 2QV = 1/4" Male Quick connect w/Valve for Metal latch 3H = 3/8" Hose Barb 4H = 1/2" Hose Barb 4Q = 1/2" Male Quick connect 5H = 9/16" Hose Barb 6H = 3/4" (19mm) Hose Barb 8H = 1" (25mm) Hose Barb TC = 1-1/2" Tri-Clamp T2 = 2" Tri-Clamp	1QFV 1QV 2QFV 2QV 3H 4H 4Q 5H 6H 8H TC T2	Shell Material** Blank = Polypropylene -E = Polyethylene -GP = Gamma Stable Polypropylene -NY = Nylon Sterilization -ETO = Ethylene Oxide Sterilization O-Rings Blank = O-Ring Silicon (Standard) -OE = O-Ring EPDM -ON = O-Ring Nitrile -OV = O-Ring Viton
Example 1 - ZenCAP L Series Capsule, T-Line, HEPA Rated, PTFE Media, 20" filter, with all vent and drains, 1.5" Tri-Clamp fittings I/O, would be LT2HFCTCTC								
Example 2 - ZenCAP L Series Capsule, T-Line, HEPA Rated, Glass Fiber, 10" filter, with all vent and drains, 1.5" Tri-Clamp fittings I/O, would be LT1HGCTCTC								
Note **: For -E or -GP options, the standard pleat support will be PET for gamma stability								

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ISO Certified 9001 14001 TÜV ISO 13485

ZenCap® ULPA Full Size Capsules
(99.999% efficiency at 0.12 µm)

Ultra Low Particulate Air and Gas Filter

ZenCap® ULPA (**U**ltra **L**ow **P**articulate **A**ir) Capsule assemblies are ready-to-use, full size filters that offer high flows, increased throughputs, high strength, all with the convenience and cleanliness of a disposable and easy-to-install filter assembly. Designed for high retention and particle holding capacity for air and gas in the pharmaceutical, biotechnology, medical, chemical, food and beverage applications worldwide. This family of products is particularly suitable for a variety of gases with four different filtration media to choose from. They are designed to provide bacteria, algae, fungal-free air for sterile applications such as fermentors or incubators.

The capsules have durable polypropylene housings. ZenCap® capsule assemblies are available with a wide range of hydrophilic and hydrophobic filter media for gas, and venting applications. Process engineers can choose from 4 filtration medias in order to meet the requirements of the application.

They can be built in a T, C, L, S-Line and In-line configuration with nine inlet and outlet fitting connections that can be mixed and matched. No adhesives or surfactants are used in the manufacturing process.

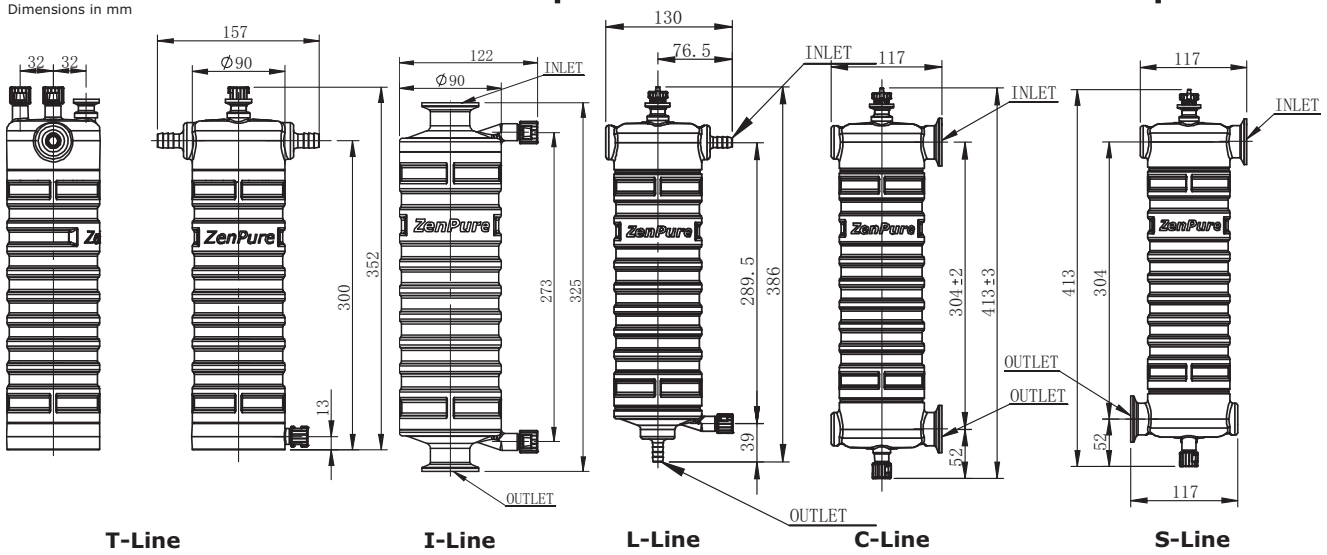
Applications	
Tank Vent	Air Filter
Vacuum Pump	Beverages
Fermentor	Pharmaceuticals
Fine Chemicals	Biologics
Incubator	Wine
Beer	Water

Specifications

Materials of Construction:	Media: Polyethylene, PTFE, Glass Fiber, PP Membrane Media Supports: Polypropylene Shell, Cage, Core, End Caps: Polypropylene Sealing: Thermally bonded	
Fitting Connections:	Eleven Fittings - See ordering guide for availability. (Custom adaptors available upon request)	
Nominal Dimensions:	Lengths: 10”, 20”, 30”, 40” Diameter: 3.54” (90 mm)	
Effective Filtration Area:	See cartridge datasheet for more information (dependent on media).	
Operating Conditions:	Maximum Operating Pressure: Minimum Burst Pressure: Maximum Forward Differential Pressure: Maximum Reverse Differential Pressure: Maximum Operating Temperature:	Gas: 4.1 bar (60 psi) at 72°F/22°C 8.3 bar (120 psi) at 72°F/22°C 5 bar (72 psi) at 72°F/22°C 2.1 bar(30 psi) at 72°F/22°C PP & Gamma PP: 80°C HDPE: 60°C
Regulatory Compliance:	The filters are constructed with polypropylene resins and filtration media in compliance with 21 CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastics.	

ZenCap® ULPA Full Size Capsules

Dimensions in mm



T-Line **I-Line** **L-Line** **C-Line** **S-Line**

Specifications (cont.)

Autoclavable & Sanitizable:

Capsules can be autoclaved 25 times at 125 °C (257 °F) for 30 minutes or chemically sanitized in situ using common sanitizing agents or hot water at 90 °C (194 °F) for a limited time (dependent on time and temperature). Capsules must not be in situ steam-sterilized.

Bacterial Endotoxin:

Effluent is non-pyrogenic per USP Bacterial Endotoxin (0.25 EU/ml), determined using Limulus Amebocyte Lysate (LAL) Test.

ZenCap® ULPA Full Size Capsule Ordering Guide

Capsule Series	Configuration	Length	Filter Media	Pore Size	Vents*	Input Fitting	Output Fitting	Options
L 90mm Diameter Capsule with Bleed Valves	I = In-Line T = T-Line S = S-Line L = L-Line C = C-Line	1 - 10" 2 - 20" 3 - 30" 4 - 40"	G = Glass Fiber	U = ULPA Rating	A = No vents B = 1/2" Sanitary vent C = 1/2" Sanitary vent, with upstream and down stream 1/4" Bleed Valve D = 1/2" Sanitary vent, with upstream 1/4" Bleed Valve E = 1/2" Sanitary vent, with down stream 1/4" Bleed Valve F = Upstream and down stream 1/4" Bleed Valve G = Upstream 1/4" Bleed Valve H = Downstream 1/4" Bleed Valve N = No vent or Drains Note: Option B,C, D &E not for In-Line	1QFV = 1/8" Female Quick connect w/Valve for Metal latch 1QV = 1/8" Male Quick connect w/Valve for Metal latch 2QFV = 1/4" Female Quick connect w/Valve for Metal latch 2QV = 1/4" Male Quick connect w/Valve for Metal latch 3H = 3/8" Hose Barb 4H = 1/2" Hose Barb 4Q = 1/2" Male Quick connect 5H = 9/16" Hose Barb 6H = 3/4" (19mm) Hose Barb 8H = 1" (25mm) Hose Barb TC = 1-1/2" Tri-Clamp T2 = 2" Tri-Clamp	1QFV 1QV 2QFV 2QV 3H 4H 4Q 5H 6H 8H TC T2	Shell Material** Blank = Polypropylene -E = Polyethylene -GP = Gamma Stable Polypropylene -NY = Nylon Sterilization -ETO = Ethylene Oxide Sterilization O-Rings Blank = O-Ring Silicon (Standard) -OE = O-Ring EPDM -ON = O-Ring Nitrile -OV = O-Ring Viton
Example 1 - ZenCAP L Series Capsule, T-Line, ULPA Rated, Glass Fiber Media, 20" filter, with no vent and drains, 1.5" Tri-Clamp fittings I/O, would be LT2GUNTCTC								
Example 2 - ZenCAP L Series Capsule, T-Line, ULPA Rated, Glass Fiber, 10" filter, with no vent and drains, 1.5" Tri-Clamp fittings I/O, would be LT1GUNTCTC								
Note **: For -E or -GP options, the standard pleat support will be PET for gamma stability								

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Cellulosic Depth Filters
(Stacked Disc Cellulosic Media)

Unique Depth Filtration

PureFlo® Cellulosic Depth Filters for Pharmaceutical applications have been designed for simple, quick, and efficient filtration of fluids used in laboratory, pilot, and small-scale applications. The family of products is particularly suitable for high loading liquid applications including biopharmaceutical fluid clarification. The compact design of the filters with respect to the filtration area reduces hold-up volume and optimizes performance. Several different pore size options can be placed in an all-polypropylene construction for excellent chemical compatibility. There are numerous different fitting options for each of the different filters.

The cellulose depth media is structured in a stacked disc format to provide optimal flow. The unit is thermally-sealed to ensure integrity.

There are several filter options available from laboratory testing, through scale up to production :

- D25D (Disc Capsules)
- D65 (Disc Capsule)
- SKL/ SKV (Capsule)
- Mini Cartridge
- ZenCap (Full Size Capsule)
- Full Size Cartridge

Cartridges ZenCaps

Applications	
Vaccines	Blood Fractions
Lab scale testing	Purified Protein
Bio Bags	Pharmaceuticals
Beverages	Biologics
Sera	Flavors & Fragrances
Large and Small Volume Parenterals	Cell Separation

SKL/SKV Capsule

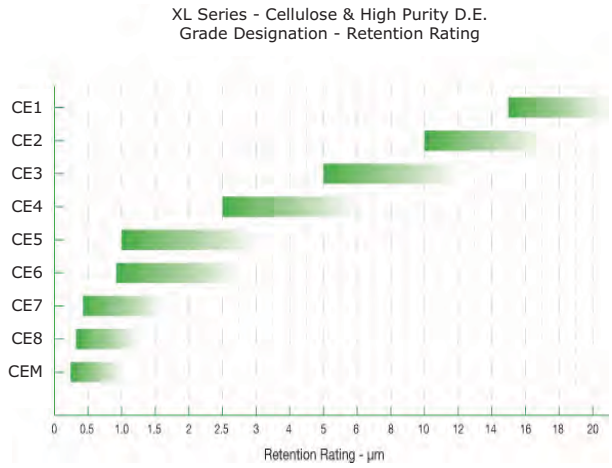
Mini Cartridge

D65 Capsule

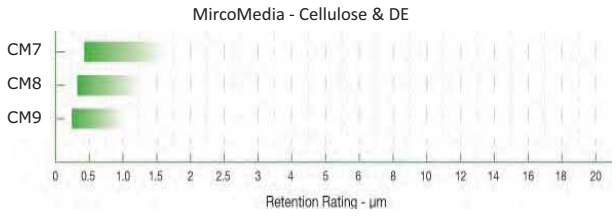
Cellulosic Depth Filters

These ZenPure cellulosic depth filters utilize pharmaceutical grade filter sheets formulated with cellulose, wet strength resin and diatomite specifically designed for use in critical pharmaceutical and biotech applications. Three media grades were specifically chosen to meet the need of the pharmaceutical industry.

XL Series – The XL series incorporates High performance DE for greatly enhanced filter performance. In addition, its high purity, low extractables and rigorous QC make it the leading product for depth filtration in critical applications such as pharmaceuticals and biologicals. The increased permeability as compared to conventional diatomaceous earth (DE) contribute to its purity and usability as a filter for products that must meet the highest standards.



MicroMedia® – High-performance filter media containing cellulose, filter aid, and a wet strength resin. The Micro-Media uses diatomaceous earth (DE) in the filter matrix. Diatomaceous earth is derived from marine diatoms. Its varied shapes offer improved efficiency for the removal of fines and hazes.



MicroClear® – Activated Carbon impregnated media that utilizes the filtration capacity of cellulose and DE, while providing the adsorbing capability of carbon. Certain organics and colors that are not desired in the final product can be removed by this filter combination. Some halogenated compounds are also removed. This media avoids the problems associated with loose powder.

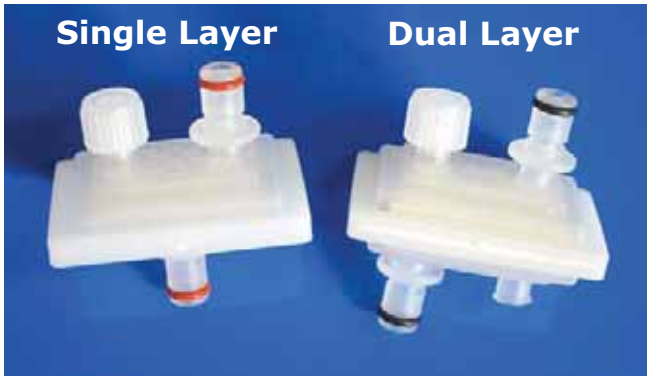
3 types are available

- **CC4** - 1um retention, Steam activated for general applications
- **CC5** - 1um retention, Chemically activated for decolorization in the food/ beverage and pharmaceutical industries
- **CC6** - 1um retention, Steam activated for treating fine chemical and pharmaceutical intermediates

PureFlo Cellulosic Depth Filters

D25D Disc Capsule

PureFlo® D25D Cellulosic Depth capsules with cellulosic media are available in multiple filtration pore sizes, dual and single layer. The small size of the D25 allows for laboratory and small scale testing for proof of filtration. The inlet and outlet ports are available with 9 fittings options, eliminating the need for transition connectors. This self contained disposable filter can be supplied with your choice of pore sizes to optimize your filtration process.



Specifications

Materials of Construction: Media: Cellulose
Media Supports: Polypropylene
Shell: Polypropylene
Sealing: Compression & Thermally-welded

Effective Filtration Area : 0.93in^2 (6cm^2)

Dimensions: 38mm x 48mm

Available Ratings: 0. 2um to 15um

Regulatory Compliance:
The filters are constructed with polypropylene resins and filtration media in compliance with 21CFR of the US Code of Federal Regulations and USP Class VI Biological Test for Plastic. (Except Black PP)

Operating Conditions:
Max. Working Pressure:
PP/HDPE 80 PSID @ 72°F/22°C (5.5 bar)
Minimum burst pressure:
PP/HDPE: 120 PSID @ 72° F/22°C (8.3 bar)
Maximum forward differential pressure:
60 PSID (4.1 bar) at 72°F (22°C)
30 PSID (2.1 bar) at 176°F (80°C)
Maximum reverse differential pressure:
30 PSIG (2.1 bar) at 72°F (22°C)
Maximum Operating Temperature:
PP : 176°F/80°C
HDPE: 140°F/60°C

Autoclavable & Sanitizable:
Capsules can be autoclaved 3 times at 257°F/125°C for 30 minutes or chemically sanitized in situ using common sanitizing agents or hot water at 194°F/90°C for a limited time (dependent on time and temperature). Capsules must not be in situ steam-sterilized.

PureFlo D25D Cellulosic Depth Filter Capsule Ordering Guide

PureFlo D25D Capsule Filters	Filter Media Nominal Pore size (Micron)	Inlet Fitting	Outlet Fitting	Options
D25D = 25mm Cellulosic Media Capsule Filter	XL Series Media **CE1** = 15 **CE2** = 10 **CE3** = 5 **CE4** = 2.5 **CE5** = 1 **CE6** = 0.8 **CE7** = 0.45 **CE8** = 0.3 **CE9** = 0.2	**1C** = 1/8" Compression (JACO compatible) **1H** = 1/8-3/16" Hose Barb **1N** = 1/8" NPTM **1Q** = 1/8" Male Quick Coupling **2H** = 3/16-1/4" Hose Barb **3H** = 1/4-3/8" Hose Barb **LF** = Luer Lock Female **LM** = Luer Lock Male **LS** = Luer Lock Male Slip	**1C** = 1/8" Compression (JACO compatible) **1H** = 1/8-3/16" Hose Barb **1N** = 1/8" NPTM **1Q** = 1/8" Male Quick Coupling **2H** = 3/16-1/4" Hose Barb **3H** = 1/4-3/8" Hose Barb **LF** = Luer Lock Female **LM** = Luer Lock Male **LS** = Luer Lock Male Slip	**Shell Material** **Blank** = Polypropylene **-BLK** = Black PP shell **-NY** = Nylon Shell **Sterilization** **-ETO** = Ethylene Oxide Sterilization **Packaging** **-1** = Single Bagged **O-Ring for Quick Connect** **Blank** = O-ring Silicon (Standard) **-OE** = O-ring EPDM **-ON** = O-ring Nitrile **-OV** = O-ring Viton
	MicroMedia® **CM7** = 0.45 **CM8** = 0.3 **CM9** = 0.2			
	Carbon Type MicroClear® **CC4** = 1um General **CC5** = 1um Chemical Activated **CC6** = 1um Steam activated			
	Prefilter (add before final filter Media in part#)			
Example – D25D, 1.0 Cellulosic Media with 1/4-3/8" hose barb fitting inlet and outlet would be **D25DCE53H3H**				
Example – D25D, Dual layer 1.0/0.3um Cellulosic Media with 1/4-3/8" hose barb fitting inlet and outlet would be **D25DCE5CE83H3H**				

PureFlo Cellulosic Depth Filters

D65 Disc Capsule

PureFlo® D65 Cellulosic Depth capsules with cellulosic media are available in multiple filtration pore sizes. The small size of the D65 allows for laboratory and small scale testing for proof of filtration. The inlet and outlet ports are available with 30 fittings options, eliminating the need for transition connectors. This self contained disposable filter can be supplied with your choice of pore sizes to optimize your filtration process.

Specifications

Materials of Construction: Media: Cellulose
Media Supports: Polypropylene
Shell: Polypropylene
Sealing: Compression & Thermally-welded

Effective Filtration Area : 4in^2 (26cm^2)

Dimensions: 65mm (2.87in)

Available Ratings: 0.2um to 15um

Regulatory Compliance:
The filters are constructed with polypropylene resins and filtration media in compliance with 21CFR of the US Code of Federal Regulations and USP Class VI Biological Test for Plastic. (Except Black PP)

Operating Conditions:
Max. Working Pressure:
PP/HDPE 80 PSID @ 72°F/22°C (5.5 bar)
Minimum burst pressure:
PP/HDPE: 120 PSID @ 72° F/22°C (8.3 bar)
Maximum forward differential pressure:
60 PSID (4.1 bar) at 72°F (22°C)
30 PSID (2.1 bar) at 176°F (80°C)
Maximum reverse differential pressure:
30 PSIG (2.1 bar) at 72°F (22°C)
Maximum Operating Temperature:
PP : 176°F/80°C
HDPE: 140°F/60°C

Autoclavable & Sanitizable:
Capsules can be autoclaved 3 times at 257°F/125°C for 30 minutes or chemically sanitized in situ using common sanitizing agents or hot water at 194°F/90°C for a limited time (dependent on time and temperature). Capsules must not be in situ steam-sterilized.

PureFlo D65 Cellulosic Depth Filter Capsule Ordering Guide

PureFlo D65 Cellulosic Depth Disc Filters	Filter Media	Nominal Pore size (Micron)	Input Fitting	Output Fitting	Options
D65 = 65mm Cellulosic Depth Disc filter	XL Series Media	CE1 = 15	**1H** = 1/8" Hose Barb	1H	**Shell Material**
		CE2 = 10	**1NF** = 1/8" FNPT	1NF	**Blank** = Polypropylene
		CE3 = 5	**1Q** = 1/8" Male Quick Coupling	1Q	**-BLK** = Black PP shell
		CE4 = 2.5	**1QF** = 1/8" Female Quick Coupling	1QF	**-NY** = Nylon Shell
		CE5 = 1	**1QFV** = 1/8" Female Valved Quick Coupling	1QFV	
		CE6 = 0.8	**1QV** = 1/8" Male Valved Quick Coupling	1QV	**Vent & Drain**
		CE7 = 0.45	**2D** = DN5 Lundecke fitting	2D	**-N** = No vent or drain fittings
		CE8 = 0.3	**2H** = 1/4"-5/16" Hose Barb	2H	
		CE9 = 0.2	**2H-FB** = 1/4" Hose Barb with filling bell or **-FC** with Cap		**Sterilization**
			2N = 1/4" MNPT	2N	**-ETO** = Ethylene Oxide
	MicroMedia®	CM7 = 0.45	**2NF** = 1/4" FNPT	2NF	
		CM8 = 0.3	**2P** = 1/4" Push to connect	2P	**O-Ring for Quick Coupling**
		CM9 = 0.2	**2PE** = 1/4" Push to connect Elbow	2PE	**Blank** = O-ring Silicon (Standard)
			2Q = 1/4" Male Quick Coupling for Metal latch	2Q	
			2QF = 1/4" Female Quick Coupling with Metal latch	2QF	**-OE** = O-ring EPDM
	Carbon Type		**2QFV** = 1/4" Female Valved Quick Coupling for Metal latch	2QFV	**-ON** = O-ring Nitrile
	MicroClear®	CC4 = 1um General	**2QV** = 1/4" Male Valved Quick Coupling for Metal latch	2QV	**-OV** = O-ring Viton
		CC5 = 1um Chemical Activated	**3H** = 5/16-3/8" Hose Barb	3H	**Packaging**
		CC6 = 1um Steam activated	**3HE** = 3/8" Hose Barb Elbow	3HE	**Blank** = Bulk
			3N = 3/8" MNPT	3N	**-1** = Single Bagged
			3NF = 3/8" FNPT	3NF	
			4H = 3/8"-1/2" Hose Barb	4H	
			4HL = 1/4"-1/2" Hose Barb	4HL	
			4N = 1/2" MNPT	4N	
			FV = Female Ventilator	FV	
			LF = Female Luer Lock	LF	
			LM = Male Luer Lock	LM	
			MT = 1/2" Tri Clamp	MT	
			MV = Male Ventilator	MV	
			SM = Stainless Steel, 1/2" Tric clamp	SM	
			TC = 1.5" Tri Clamp	TC	

Example – 15 Micron Cellulose Filter Media with 1/2" tri clamp fittings would be D65CE1MTMT

PureFlo Cellulosic Depth Filters

SKV Series Capsule

PureFlo® SKV Cellulosic Depth capsules with cellulosic media are the next size up with 5 capsule sizes to choose ranging from 110-660 cm^2 effective filter area. This medium size capsule allows for pilot to medium scale production. The inlet and outlet ports are available with 24 fittings options, eliminating the need for transition connectors. The SKV series capsule has an adjustable, easy to turn upstream bleed values with an o-ring seal and 1/4" hose barb connections allowing for easy process control. These capsules eliminate the time and expense associated with assembling and cleaning stainless steel housings.

Specifications

Materials of Construction: Media: Cellulose
Media Supports: Polypropylene
Shell: Polypropylene
Sealing: Compression & Thermally-welded

Effective Filtration Area : 17-102in^2 (110-660cm^2)

Dimensions: 2.75 in (70mm)

Available Ratings: 0.2um to 15um

Regulatory Compliance: The filters are constructed with polypropylene resins and filtration media in compliance with 21CFR of the US Code of Federal Regulations and USP Class VI Biological Test for Plastic.

Operating Conditions:
Maximum Operating Pressure:
Liquid: 5.5 bar (80psi) at 72°F/22°C
Gas: 4.1 bar (60psi) at 72°F/22°C
Minimum Burst Pressure: 8.3 bar (120psi) at 72°F/22°C
Maximum Forward Differential Pressure:
5 bar (72psi) at 72°F/22°C
Maximum Reverse Differential Pressure:
2.1 bar (30psi) at 72°F/22°C
Maximum Operating Temperature: 140°F/60°C

Autoclavable & Sanitizable:
Capsules can be autoclaved 3 times at 257°F/125°C for 30 minutes or chemically sanitized in situ using common sanitizing agents or hot water at 194°F/90°C for a limited time (dependent on time and temperature). Capsules must not be in situ steam-sterilized.

PureFlo SKV Cellulosic Depth Filter Capsule Ordering Guide

PureFlo Capsule Filters	Filter Media		Effective Media Area	Input Fitting	Output Fitting	Option
SKV 70mm Diameter Capsule w/Bleed valve	Nominal Pore size (Micron)		**H** = 110cm2	**1H**	**1H** = 1/8" Hose barbs	**Shell Material**
	XL Series Media	CE1 = 15	**S** = 170cm2	**1Q**	**1Q** = 1/8" Male Quick Coupling with Metal latch	**Blank** = Polypro construction
		CE2 = 10	**L** = 330cm2	**1QF**	**1QF** = 1/8" Female Quick Coupling with Metal latch	**-E** = Polyethylene Shell
		CE3 = 5	**E** = 500cm2	**1QFV**	**1QFV** = 1/8" Female Valved Quick Coupling with Metal latch	**-NY** = Nylon Shell
		CE4 = 2.5	**K** = 660cm2	**1QV**	**1QV** = 1/8" Male Valved Quick Coupling with Metal latch	
		CE5 = 1		**2H**	**2H** = 1/4" Hose barb	
		CE6 = 0.8		**2HL**	**2HL** = 1/4" to 1/2" Hose barbs	**Sterilized**
		CE7 = 0.45			**2H-FB** = 1/4" Hose Barb with filling bell or **-FC** with Cap	**-ETO =** Ethylene oxide sterilization
		CE8 = 0.3		**2N**	**2N** = 1/4" MNPT	
		CE9 = 0.2		**2P**	**2P** = 1/4" Push to Connect	**Vent & Drain**
				2PE	**2PE** = 1/4" Push to Connect Elbow	**-N**= No vent or drain fittings
	MicroMedia®	CM7 = 0.45		**2Q**	**2Q** = 1/4" Male Quick Coupling for Metal latch	**-NI** = No vent or drain inlet fitting
		CM8 = 0.3		**2QF**	**2QF** = 1/4" Female Quick Coupling with Metal latch	
		CM9 = 0.2		**2QFV**	**2QFV** = 1/4" Female Valved Quick Coupling with Metal latch	**-NO** = No vent or drain Outlet fitting
				2QP	**2QP** = 1/4" Male Quick Coupling for Plastic latch	
				2QV	**2QV** = 1/4" Male Valved Quick Coupling with Metal latch	**O-Ring for Quick Coupling**
	Carbon Type			**2V**	**2V** = 1/4" Walther Quick Connect	
	MicroClear®	CC4 = 1um General		**3H**	**3H** = 3/8" Hose Barb	**Blank** = O-ring Silicon (Standard)
		CC5 = 1um Chemical Activated			**3H-FB** = 3/8" Hose Barb with filling bell or **-FC** with Cap	
		CC6 = 1um Steam activated		**4H**	**4H** = 1/2" Hose Barb	**-OE** = O-ring EPDM
	For Dual layer put both Medias in the part number		**H** = 50cm2	**4Q**	**4Q** = 1/2" Male Quick Coupling for Plastic latch	**-ON** = O-ring Nitrile
			S = 80cm2	**5H**	**5H** = 5/8" Hose Barb	**-OV** = O-ring Viton
			L = 170cm2	**MT**	**MT** = 1/2" Tri clamps	
			E = 250cm2	**TC**	**TC** = 1-1/2" Tri clamp	
			K = 340cm2		**TS** = Shower Head	

Example - PureFlo SKV Lenticular Series Capsule, Micro-Media XL Celulose , 0.45/0.2um, 250cm2, 3/8" Hose barb I/O would be **SKVCE7CE9S3H3H**

Quick Couplings are molded on. Female Quick Coupling with Plastic latch will be threaded on. Compatible with CPC (Colder), LinkTech and others.

PureFlo Cellulosic Depth Filters

SKL Series Capsule

PureFlo® SKL Cellulosic Depth capsules with cellulosic media has 5 capsule sizes to choose from. This is a wide range of filtration area from 110-660 cm^2 effective filter area. This medium size capsule allows for pilot to medium scale production. The inlet and outlet ports are available with multiple fittings options, eliminating the need for transition connectors. The SKL series capsule has luer lock upstream vent and drain connections, allowing for easy process control. These capsules eliminate the time and expense associated with assembling and cleaning stainless steel housings.

Specifications

Materials of Construction:
- Media: Cellulose
- Media Supports: Polypropylene
- Shell: Polypropylene
- Sealing: Compression & Thermally-welded

Effective Filtration Area : 17-102in^2 (110-660cm^2)
Dimensions: 2.75 in (70mm)
Available Ratings: 0.2um to 15um

Regulatory Compliance: The filters are constructed with polypropylene resins and filtration media in compliance with 21CFR of the US Code of Federal Regulations and USP Class VI Biological Test for Plastic.

Operating Conditions:
- Maximum Operating Pressure:
  - Liquid: 5.5 bar (80psi) at 72°F/22°C
  - Gas: 4.1 bar (60psi) at 72°F/22°C
- Minimum Burst Pressure: 8.3 bar (120psi) at 72°F/22°C
- Maximum Forward Differential Pressure: 4.1 bar (60psi) at 72°F/22°C
- Maximum Reverse Differential Pressure: 2.1 bar (30psi) at 72°F/22°C
- Maximum Operating Temperature: 140°F/60°C

Autoclavable & Sanitizable:
Capsules can be autoclaved 3 times at 257°F/125°C for 30 minutes or chemically sanitized in situ using common sanitizing agents or hot water at 194°F/90°C for a limited time (dependent on time and temperature).
Capsules must not be in situ steam-sterilized

PureFlo SKL Cellulosic Depth Filter Capsule Ordering Guide

PureFlo Capsule Filters	Capsule Version	Filter Media	Effective Media Area	Input Fitting	Output Fitting	Options
SK 70mm Diameter Capsule	**L** = Luer Lock Vent/Drain **P** = M8 Plug or 1/4" Compression fitting Vent/Drain (not all fittings avalible in all options)	**Nominal Pore size (Micron)** XL Series Media: CE1 = 15; CE2 = 10; CE3 = 5; CE4 = 2.5; CE5 = 1; CE6 = 0.8; CE7 = 0.45; CE8 = 0.3; CE9 = 0.2 MicroMedia®: CM7 = 0.45; CM8 = 0.3; CM9 = 0.2 Carbon Type MicroClear®: CC4 = 1um General; CC5 = 1um Chemical Activated; CC6 = 1um Steam activated **For Dual layer put both Medias in the part number**	**H** = 110cm2 **S** = 170cm2 **L** = 330cm2 **E** = 500cm2 **K** = 660cm2 **H** = 50cm2 **S** = 80cm2 **L** = 170cm2 **E** = 250cm2 **K** = 340cm2	**1C** **1H** **1N** **1NF** **1Q** **1QF** **1QFV** **1QV** **2C** **2H** **2HS** **2LF** **2N** **2NF** **2P** **2PE** **2Q** **2QF** **2QFP** **2QFV** **2QP** **2QV** **2V** **3C** **3H** **3HE** **3NF** **4C** **4H** **4N** **4Q** **8C** **MT** **TC**	**1C** = 1/8" Compression **1H** = 1/8" Hose barbs **1N** = 1/8" MNPT **1NF** = 1/8" FNPT **1Q** = 1/8" Male Quick Coupling with Metal latch **1QF** = 1/8" Female Quick Coupling with Metal latch **1QFV** = 1/8" Female Valved Quick Coupling with Metal latch **1QV** = 1/8" Male Valved Quick Coupling with Metal latch **2C** = 1/4" Compression **2H** = 1/4" to 1/2" Hose barbs **2HS** = 1/4" to 3/8" Hose barbs **2LF** = Large Female Luer Lock fitting **2N** = 1/4" MNPT **2NF** = 1/4" FNPT **2P** = 1/4" Push to Connect **2PE** = 1/4" Push to Connect Elbow **2Q** = 1/4" Male Quick Coupling for Metal latch **2QF** = 1/4" Female Quick Coupling with Metal latch **2QFP** = 1/4" Female Quick Coupling with Plastic latch **2QFV** = 1/4" Female Valved Quick Coupling with Metal latch **2QP** = 1/4" Male Quick Coupling for Plastic latch **2QV** = 1/4" Male Valved Quick Coupling with Metal latch **2V** = 1/4" Walther Quick Connect **3C** = 3/8" Compression **3H** = 3/8" Hose Barb **3HE** = 3/8" Hose Barb Elbow **3H-FB** = 3/8" Hose Barb with filling bell or **-FC** with Cap **3NF** = 3/8" FNPT **4C** = 1/2" Compression **4H** = 1/2" Hose Barb **4N** = 1/2" MNPT **4Q** = 1/2" Male Quick Coupling for Plastic latch **8C** = 5/16" Compression **MT** = 1/2" Tri clamps **TC** = 1-1/2" Tri clamp **TS** = Shower Head	**Shell Material** **Blank** = Polypro construction **-E** = Polyethylene Shell **-NY** = **Nylon Shell** **Sterilization** **-ETO** = Ethylene oxide sterilization **Vent & Drain** **-N**= No vent or drain fittings **-NI** = No vent or drain inlet fitting **-NO** = No vent or drain Outlet fitting **O-Ring for Quick Coupling** **Blank** = O-ring Silicon (Standard) **-OE** = O-ring EPDM **-ON** = O-ring Nitrile **-OV** = O-ring Viton

Example - PureFlo SKL Cellulosic Depth Series Capsule, Micro Media XL with DE, 0.45um, 330cm2, 3/8" Hose barb I/O would be **SKLCE4L3H3H**

Quick Couplings are molded on. Female Quick Coupling with Plastic latch will be threaded on. Compatible with CPC (Colder), LinkTech and others.

PureFlo Cellulosic Depth Filters

Mini-Cartridge Series

PureFlo® Cellulosic Depth Mini-cartridges with cellulosic media have 3 filter sizes to choose ranging from 110-330cm^2 effective filter area. This size cartridge allows for pilot to medium scale production. These filters are available with the 11 most common configuration options for your housings. These cartridges can be quickly and easily installed.

The PureFlo Cellulosic Depth Mini-cartridges are highly retentive, designed for high loading applications. The filter is made using cellulose media with an all polypropylene construction. They are well suited for critical applications where superior flow, lifetime, and holding capacity are required.

Specifications

Materials of Construction: Media: Cellulose
Media Supports: Polypropylene
Shell: Polypropylene
Sealing: Compression & Thermally-welded

Effective Filtration Area : 17– 51in^2 (110-330cm^2)
Dimensions: 2.2 in (56mm)
Available Ratings: 0.2um to 15um

Operating Conditions:
Maximum Forward Differential Pressure: 3 bar (43.5 psid) at 22°C
Maximum Reverse Differential Pressure: 2.1 bar (30 psid) at 22°C
Maximum Operating Temperature: 140°F/60°C

Autoclavable & Sanitizable:
Capsules can be autoclaved 3 times at 257°F/ 125°C for 30 minutes or chemically sanitized in situ using common sanitizing agents or hot water at 194°F/90°C for a limited time (dependent on time and temperature).

Regulatory Compliance:
The filters are constructed with polypropylene resins and filtration media in compliance with 21CFR of the US Code of Federal Regulations and USP Class VI Biological Test for Plastic.

PureFlo Mini Cellulosic Depth Filter Cartridge Ordering Guide

PureFlo Mini Cellulosic Depth Filter Cartridges	Filter Media & Removal Rating (micron)		End Modifications	Length	O-Ring / Gasket Materials	Package Qty
MCEP = Mini Cellulosic Depth Media	XL Series Media	CE1 = 15 CE2 = 10 CE3 = 5 CE4 = 2.5 CE5 = 1 CE6 = 0.8 CE7 = 0.45 CE8 = 0.3 CE9 = 0.2	**0** = 222 O-Ring Flat **6** = 226 O-Ring Flat **A** = 116 Inner O-Ring **C** = 015 O-Ring **D** = 1/2" MNPT **E** = 118 O-Rings **F** = Flange* **M** = 123 O-Rings with hold down tabs** **N** = 116 Inner Housing Seal **S** = 116 Inner O-Ring with locking groove **T** = 126 O-Rings with locking tabs***	**H** = 1.5" **S** = 2.5" **L**= 5"	**E** = EPDM **N** = Buna N **S** = Silicone **U** = TES **V** = Fluro-Elastomer **O** = O-Ringless	**2P** = 2pc/ pack (5") **3P** = 3pc/ pack (1.5" **Option** **- 5** = SS Insert
	MicroMedia®	CM7 = 0.45 CM8 = 0.3 CM9 = 0.2				
	Carbon Type					
	MicroClear®	CC4 = 1um General CC5 = 1um Chemical Activated CC6 = 1um Steam activated				

Example - A 3 pack of 2.5", 2.5 micron XL Seriesfilters with 116 Internal EPDM o-ring would be ***MCEPCE4ASE3P***

* - F end modification is compatible to fit in a PALL SealKleen™ Housing, **- M end modification is compatible to fit in a Millipore OptiSeal™ Housing,
***-T end modification is compatible to fit a Parker Trueseal™ Housing

ZenCap Cellulosic Depth Filters

ZenCap 10-40 inch Disposable

PureFlo® ZenCap Cellulosic Depth capsule with cellulosic media is a full size capsule. Sizes range from 10-40 inches in length. This full size capsule allows for manufacturing production. The inlet and outlet ports are available with 12 fittings options that can be mixed and matched, eliminating the need for transition connectors. The ZenCap series capsule has an adjustable, easy to turn up and downstream bleed value with an o-ring seal and hose barb connections allowing for easy process control. These capsules eliminate the time and expense associated with assembling and cleaning stainless steel housings.

They can be built in a T-style or In-line configuration. The filtration shell is an all polypropylene construction that provides excellent chemical compatibility with low extractables.

Specifications

Materials of Construction: Media: Cellulose
Media Supports: Polypropylene
Shell: Polypropylene
Sealing: Compression & Thermally-welded

Effective Filtration Area : 145-595in^2 (960-3840cm^2)

Dimensions: 3.54 in (90mm)

Available Ratings: 0.2um to 15um

Regulatory Compliance: The filters are constructed with polypropylene resins and filtration media in compliance with 21CFR of the US Code of Federal Regulations and USP Class VI Biological Test for Plastic.

Operating Conditions:
Maximum Operating Pressure:
Liquid: 5.5 bar (80psi) at 72°F/22°C
Gas: 4.1 bar (60psi) at 72°F/22°C
Minimum Burst Pressure: 8.3 bar (120psi) at 72°F/22°C
Maximum Forward Differential Pressure:
5 bar (72psi) at 72°F/22°C
Maximum Reverse Differential Pressure:
2.1 bar (30psi) at 72°F/22°C
Maximum Operating Temperature: 140°F/60°C

Autoclavable & Sanitizable:
Capsules can be autoclaved 3 times at 257°F/125°C for 30 minutes or chemically sanitized in situ using common sanitizing agents or hot water at 194°F/90°C for a limited time (dependent on time and temperature).
Capsules must not be in situ steam-sterilized

ZenCap Cellulosic Depth Filter Capsule Ordering Guide

ZenCap Capsule Series	Configuration	Length	Filter media Nominal Pore size (Micron)	Vents *	Input Fitting	Output Fitting	Options
L	I = In-Line*	1 = 10" = 960cm^2	XL Series Media: CE1 = 15	A = No vents	1QFV = 1/8" Female Quick connect w/Valve for Metal latch	1QFV	**Shell Material**
	T = T-Line	2 = 20"= 1920cm^2	CE2 = 10	B = 1/2" Sanitary vent	1QV = 1/8" Male Quick connect w/Valve for Metal latch	1QV	Blank = Polypropylene (Standard)
		3 = 30" = 2880cm^2	CE3 = 5	C = 1/2" Sanitary vent, with Inlet and Outlet 1/4" Bleed Valve	2QFV = 1/4" Female Quick connect w/Valve for Metal latch	2QFV	
		4 = 40"= 3840cm^2	CE4 = 2.5		2QV = 1/4" Male Quick connect w/Valve for Metal latch	2QV	-GP = Gamma Stable Polypropylene
90mm Diameter			CE5 = 1		3H = 3/8" Hose Barb	3H	-NY = Nylon
	Other configurations avalible		CE6 = 0.8	D = 1/2" Sanitary vent, with Inlet 1/4" Bleed Valve	4H = 1/2" Hose Barb	4H	**Sterilization**
			CE7 = 0.45		4Q = 1/2" Male Quick connect	4Q	
			CE8 = 0.3	E = 1/2" Sanitary vent, with down stream 1/4" Bleed Valve	5H = 9/16" Hose Barb	5H	-ETO = Ethylene Oxide Sterilization
	C = C-Line		CE9 = 0.2		6H = 3/4" (19mm) Hose Barb	6H	
	S = S-Line	**For Dual layer put both Medias in the part number**		F = Inlet and Outlet 1/4" Bleed Valve	8H = 1" (25mm) Hose Barb	8H	**O-Rings**
	L = L-Line		MicroMedia®: CM7 = 0.45		TC = 1-1/2" Tri-Clamp	TC	Blank = O-Ring Silicon (Standard)
			CM8 = 0.3	G = Inlet 1/4" Bleed Valve	T2 = 2" Tri-Clamp	T2	
			CM9 = 0.2	H = Outlet 1/4" Bleed Valve			-OE = O-Ring EPDM
		1 = 10" = 500cm^2	Carbon Type	N = No vent or Drains			-ON = O-Ring Nitrile
		2 = 20"= 1000cm^2	MicroClear®: CC4 = 1um General				-OV = O-Ring Viton
		3 = 30" = 1500cm^2	CC5 = 1um Chemical Activated				
		4 = 40"= 2000cm^2	CC6 = 1um Steam activated				

Example - ZenCAP Series Capsule, T-Line, Cellulose 1um XL Series, 10" filter, with all vent and drains, 1.5" Tri-Clamp fittings I/O, would be LT1CE5CTCTC

Example#2 - ZenCAP Series Capsule, T-Line, Cellulose 0.8/0.2um XL Series, 10" filter, with all vent and drains, 1.5" Tri-Clamp fittings I/O, would be LT1CE6CE9CTCTC

*Note: 1/4" Drain bleed Valve standard on all filters Except for option N

*Note: Option B,C, D &E not for In-Line

PureFlo Cellulosic Depth Filters

Cellulosic Depth Cartridge Series

PureFlo® Cellulosic Depth cartridges with cellulosic media can be made from 5-40 inches. This full size cartridge allows for manufacturing production. This filter can be incorporated in a standard housing. **A special housing is not required for this filter**. They can also be incorporated into multi-round housings for additional filtration area.

The PureFlo Cellulosic Depth cartridges are highly retentive, designed for high loading applications. The filter is made using cellulose media with an all polypropylene construction. They are well suited for critical applications where superior flow, lifetime, and holding capacity are required.

Operating Conditions:
Maximum Forward Differential Pressure:
5 bar (72psi) at 72°F/22°C
Maximum Reverse Differential Pressure:
2.1 bar (30psi) at 72°F/22°C
Maximum Operating Temperature: 140°F/60°C

Autoclavable & Sanitizable:
Capsules can be autoclaved 3 times at 257°F/ 125°C for 30 minutes or chemically sanitized in situ using common sanitizing agents or hot water at 194°F/90°C for a limited time (dependent on time and temperature).

Regulatory Compliance: The filters are constructed with polypropylene resins and filtration media in compliance with 21CFR of the US Code of Federal Regulations and USP Class VI Biological Test for Plastic.

Specifications

Materials of Construction:	Media: Cellulose Media Supports: Polypropylene Shell: Polypropylene Sealing: Compression & Thermally-welded
Effective Filtration Area:	75-595in^2 (480-3840cm^2)
Dimensions:	2.75 in (70mm)
Available Ratings:	0.2um to 15um

Cellulosic Depth Filter Cartridge Ordering Guide

PureFlo Cellulosic Depth Filter Cartridges	Filter Media & Removal Rating (micron)		End Modifications	Length	O-Ring / Gasket Materials	Package Qty	Inserts
CEP = Cellulosic Media Cartridge	XL Series Media	CE1 = 15	0 = 222 O-Ring Flat	1 = 10"	E = EPDM	1 = 1pc/ pack	Blank = Standard
		CE2 = 10	3 = 222 O-Ring w/tabs Spear	2 = 20"	N = Buna N		- 5 = SS Insert
		CE3 = 5	5 = 222 O-Ring Spear	3 = 30"	S = Silicone		
		CE4 = 2.5	6 = 226 O-Ring Flat	4 = 40"	T = TEV or FEP Gasket		
		CE5 = 1	7 = 226 O-Ring Spear	5 = 5"	U = TES*		
		CE6 = 0.8	8 = 223 O-Ring Flat	9 = 9.75"	V = Fluoroelastomer		
		CE7 = 0.45	F = DOE Flat Gasket				
		CE8 = 0.3	S = SOE Flat Gasket				
		CE9 = 0.2	Z = SOE Internal O-ring Flat **				
	MicroMedia®	CM7 = 0.45					
		CM8 = 0.3					
		CM9 = 0.2					
	Carbon Type						
	MicroClear®	CC4 = 1um General					
		CC5 = 1um Chemical Activated					
		CC6 = 1um Steam activated					

Example - Cellulosic Media Cartridge, 10", 2.5 micron XL series cartridge, with 2-222 Silicone o-ring, Flat end cap, and no insert would be *CEPCE401S1*

* - not available in Code Z ** - only available in 5", 9.75", 10" and 20", retrofit for DOE housings

Cellulosic Depth Filters

Your Local Distributor:

ZenPure

North & South Americas:
ZenPure Americas, Inc
www.zenpure.com
Info-us@zenpure.com
703-335-9910

All Other Regions:
ZenPure Corporation
www.zenpure.com
info@zenpure.com
+86 571 2288 6800

ZenCap® Zero Capsules

PES membrane

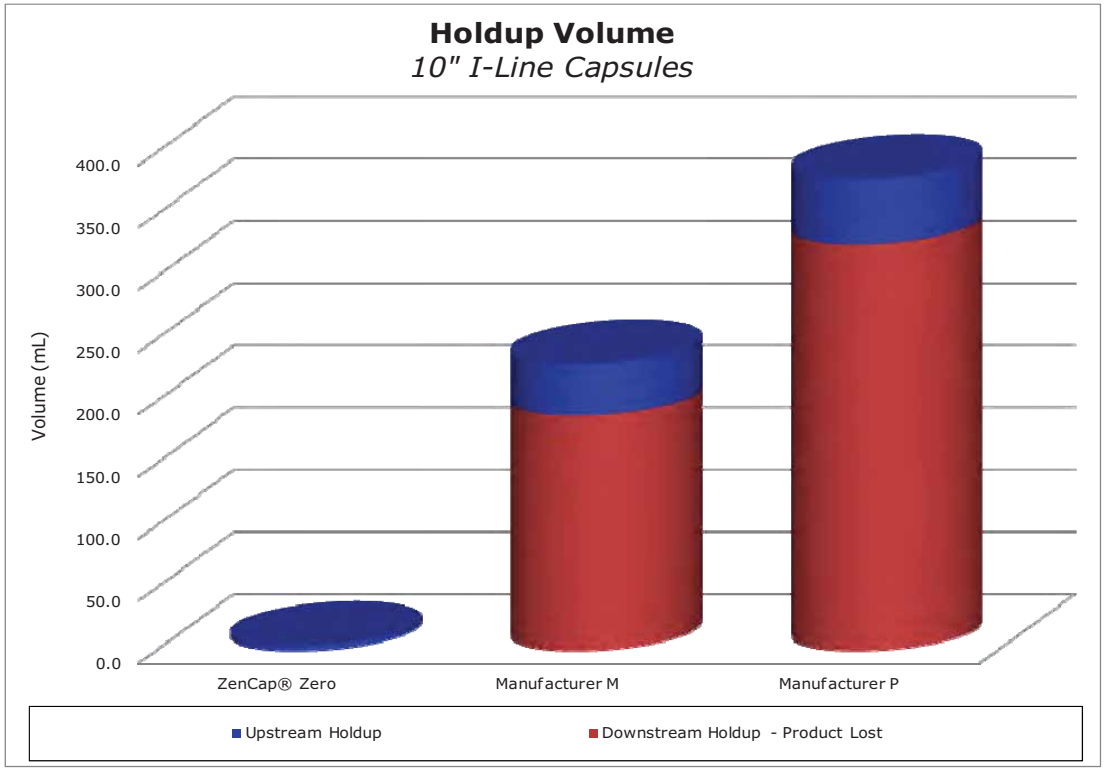
ZenCap® Zero can be used to minimize valuable fluid loss without dilution, contamination, or over-pressurization.

ZenCap® Zero is a Patent Pending technology that eliminates the significant economic loss caused by the upstream and downstream volume of fluid retained in traditional capsule filters. Fluid holdup in the Zero capsule's downstream space is reduced to zero.

On Zero's upstream side, the filter cartridge is specially recessed and the mold has been optimized to permit the maximum amount of liquid to pass through the filter to the downstream side. On the downstream side Zero's aseptic recovery mechanism removes all the liquid from the filter's internal space allowing it to flow to the downstream process. Only the smallest volume of liquid is retained after filtration.

ZenCap® Zero aseptically extracts the maximum volume of valuable fluids without dilution. The entire downstream recovery of liquid is achieved without over pressurizing the membrane to its bubble point. Bubble pointing a capsule attached to a single use system is difficult to perform and risks contamination or catastrophic failure of the downstream system. The water bubble point of membranes 0.1 µm or less is usually higher than the capsule's burst-point pressure.

When every milliliter of fluid must be recovered, ZenCap® Zero gives a reliable, aseptic method to maximize yield and minimize loss.



ZenCap® Zero Capsules

PES membrane

ZenCap® Zero Capsules are ready-to-use full size filter assemblies that have been specially designed for maximizing process efficiency. The patented downstream sterile gas port allows for the aseptic injection of gas to recover the liquid downstream of the filter membrane that may be otherwise inaccessible. ZenCap® Zero Capsules are intended for prefiltration, clarification, and final filtration of medium to large scale (100 - 5000 L) processes involving valuable downstream products.

ZenCap® Zero Capsules are available with different membrane pore sizes, dual layers, and/or prefilter layers pleated together in the same capsule. Process engineers can choose 5 different flow geometries and 8 fitting options to create any combination of integrated filtration sequence. This allows single use processing to become truly flexible, clean and optimal.

Applications	
Biotechnology	Pharmaceuticals
High Value Fluid Recovery	

Specifications

Membrane:	Polyethersulfone (more membrane options available upon request) Downstream Sterile Gas Port: Sterilizing grade hydrophobic PE or PTFE
Materials of Construction:	High density polyethylene or polypropylene
Sealing:	Thermally bonded
Fitting Connections:	3/8”, 1/2”, 9/16”, 3/4”, 1” Hose barbs 1/2”, 1.5”, and 2 “ Tri-Clamp (Can mix and match and custom adaptors available upon request)
Nominal Dimensions:	Length: 10”, 20”, 30”, or 40” Diameter: 3.54” (90 mm)
Effective Filtration Area:	See Cartridge Datasheet for more information. (Dependent on Media)
Available Ratings:	0.04 µm - 1.2 µm
Operating Conditions:	Maximum Operational Pressure (Liquid): 5.5 bar (80 psi) at 72°F/22°C Minimum Burst Pressure: 8.3 bar (120 psi) at 72°F/22°C Maximum Forward Differential Pressure: 5.0 bar (72 psid) at 72°F/22°C Maximum Reverse Differential Pressure: 2.1 bar (30 psid) at 72°F/22°C Maximum Operating Temperature: PP: 176°F/80°C, HDPE: 140°F/60°C
Regulatory Compliance:	The filters are constructed with resins and filtration media in compliance with 21 CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastics.

ZenCap® Zero Capsules

PES membrane

Specifications (cont.)

Autoclavable, Sanitizable, and Sterilizable by gamma or ETO:

Polypropylene-constructed capsules can be autoclaved 5 times at 125 °C (257 °F) for 30 minutes, chemically sanitized in situ using common sanitizing agents compatible with the materials of construction, or hot water sanitized at 90 °C (194 °F) for a limited time (dependent on time and temperature).

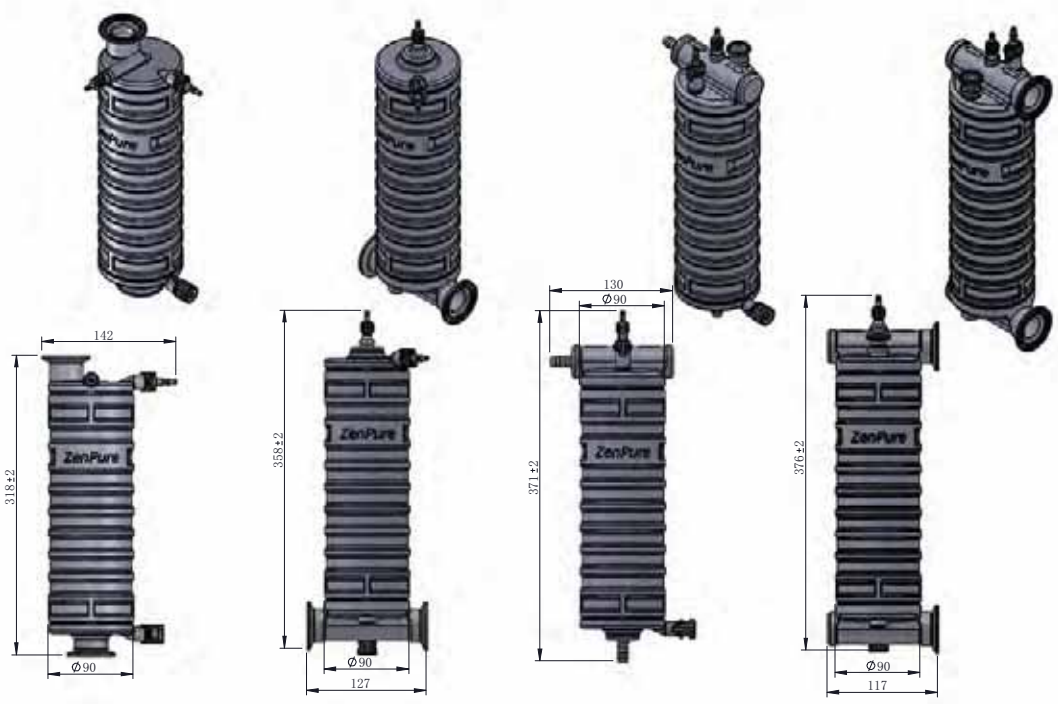
Polyethylene-constructed capsules can be Gamma sterilized up to 50 kGy or chemically sanitized in situ using common sanitizing agents compatible with the materials of construction.

All capsules must not be in situ steam-sterilized.

Bacterial Endotoxin:

Effluent is non-pyrogenic per USP Bacterial Endotoxin (0.25 EU/ml), determined using Limulus Amebocyte Lysate (LAL) Test.

Nominal Dimensions (mm)



ZI 10″ TC FILTER ZT 10″ TC FILTER ZL 10″ 3H FILTER ZC 10″ TC FILTER

ZenCap® Zero Capsules are available in a variety of configurations including 'C', 'I', 'L', 'S', and 'T'-Line that have been specially designed to maximize your final product yield. They are available as 10", 20", 30", and 40" capsules.

Hose barb and sanitary tri-clamp fittings can be mixed and matched to meet your specific needs.

ZenCap Zero Filter Capsules Ordering Guide

ZenCap Capsule Series	Configuration	Length	Filter Media	Pore size (Micron)	Vents **	DownStream Sterile Gas Port	Input Fitting	Output Fitting	Options	
	I = In-Line	1 - 10"		004 = 0.04	B = 1/2" Sanitary vent	H = 1/8" Hose Barb	3H = 3/8" Hose Barb	3H	Shell Material	Prefilter (add before
Z = Pharma Grade	T = T-Line	2 - 20"	S = PES	010 = 0.1	C = 1/2" Sanitary vent, with inlet and	V = Male Medical Coupling	4H = 1/2" Hose Barb	4H	Blank = Polypropylene	Filter Media in part#)
Zero Filter	S = S-Line	3 - 30"		020 = 0.2	outlet 1/4" Bleed Valve		4Q = 1/2" Male Quick connect	4Q	for autoclaving with 0.2	NG(pore Size)= Natural
	L = L-Line	4 - 40"		045 = 0.45	F = Inlet and Outlet 1/4" Bleed Valve		5H = 9/16" Hose Barb	5H	µm PTFE for gas filter	Glass Fiber PreFilter
	C = C-Line			065 = 0.65	G = Inlet 1/4" Bleed Valve		6H = 3/4" (19mm) Hose Barb	6H	-E = Polyethylene for	P(pore Size)= PolyPro
				080 = 0.8	H = Outlet 1/4" Bleed Valve		8H = 1" (25mm) Hose Barb	8H	Gamma Sterilization with	Media PreFilter
				120 = 1.2	U = 1/2" Sanitary vent, with inlet side		SM = ½" Tri Clamp with SS insert *R* ing	SM	PE 0.2 µm gas filter	S(pore Size) = PES
					1/4" Bleed Valve	Note: V is compatible with -	MT = ½" Tri Clamp	MT	O-Rings	PreFilter
					O = 1/2" Sanitary vent, with outlet side	Parker/RECTUS 91 and 20,	ST = 1 ½" Tri Clamp with SS insert *R* ing	ST	Blank = O-Ring Silicon	Sterilization
					1/4" Bleed Valve	Walther 06-003, and Value	TC = 1 ½" Tri Clamp	TC	(Standard)	-ETO = Ethylene Oxide
90mm Diameter					N = No vent or Drains	Plastics -Bayonet Style Quick	S2 = 2" Tri Clamp with SS insert *R* ing	S2	-OE = O-Ring EPDM	Sterilization
Capsule for full size						Connect P/N BPF220-001	T2 = 2" Tri Clamp	T2	-ON = O-Ring Nitrile	
cartridges					Note: Option A,B,& C not for In-Line	through BPF250-001			-OV = O-Ring Viton	
Example 1 - Zero Capsule for Gamma Sterilization, T-Line, 20", PES 0.45um/0.2um, with all vent and drains,1/8" Hose barb gas port, 1.5" Tri-Clamp fittings I/O, would be ZT2S045020CHTCTC-E										
Example 2 - Zero Capsule for autoclaving, In-Line, 10", Glass Fiber 0.5um/PES 0.2um, with all vent and drains, Male coupling gas port, 1.5" Tri-Clamp fittings I/O, would be ZI1NG005S020CVTCTC										

ZenCap® Zero Capsules

PES membrane

Process Issue

When liquid is filtered through a filter capsule, a volume of liquid is retained upstream of the filter within the membrane and inside the core of the filter. This residual fluid is known as the holdup volume. For processes that are run frequently or have high value, the holdup volume can result in significant economic loss.

Solution

ZenCap® Zero can be used to minimize valuable fluid loss without dilution, contamination, or over-pressurization. As the quantity of downstream filters and tubing increases, so will the savings potential with ZenCap Zero.

Easy to use

When all of the liquid has been filtered, the upstream side of the filter is slowly pressurized, clearing the upstream side of the filter. The inlet valve is then closed to ensure that the upstream side will remain empty during liquid retrieval. Next, an inert gas source is connected to the Downstream Sterile Gas Port. Inside the downstream sterile gas port is a gas sterilizing grade membrane. Gas flows through the sterilizing grade membrane at 1 or 2 psi directly into the filter core, pushing liquid out of the capsule and downstream to the next stage of the process or for recovery.

Economic Impact

The value of the recovered fluids, the increase in yield, the saved costs of labor and unused buffers, and the quality of the overall liquid collectively result in great economic improvement with the use of ZenCap® Zero Capsules.

Example: Compared with a traditional 10" filter capsule, ZenCap® Zero releases an extra 300 milliliters to the down stream process per run.

- **300 ml recovered fluid per run.**
- **250 filtration runs a year.**
- **$100 value per ml.**

Gives $7,500,000 valuable savings per year

Your Local Distributor:

ZenPure

North & South Americas, EMEA:
ZenPure Americas, Inc
www.zenpure.com
Info-us@zenpure.com
703-335-9910

All Other Regions:
ZenPure Corporation
www.zenpure.com
info@zenpure.com
+86 571 2288 6800

ZenCap® Full Size Capsules

Pharma Grade

10”-40” Disposable Process Filtration

ZenCap® capsule filter assemblies are ready-to-use, full size filters that offer high flows, increased throughputs, high strength, all with the convenience and cleanliness of a disposable and easy-to-install filter assembly. Designed for pre-filtration, clarification, and final filtration of medium to large scale batches (100L to 5000L), in the pharmaceutical, biotechnology, food and beverage, medical, chemical, and DI water.

ZenCap® capsule assemblies are available with a wide range of hydrophilic and hydrophobic filter media and pore sizes for liquid, gas, and venting applications. Process engineers can choose from 15 filtration medias to create any combination of ***integrated*** filtration train. These will allow the disposable processing to become truly flexible, clean, and optimal.

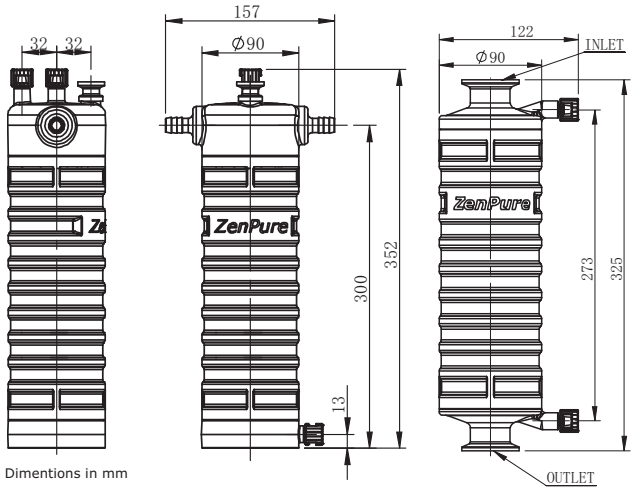
They can be built in a T-style or In-line configuration with nine inlet and outlet fitting connections that can be mixed and matched. The filtration shell is an all-polypropylene construction that provides excellent chemical compatibility with low extractables. The shell and supports can also be constructed in nylon, polyethylene or gamma stabilized PP shells for additional compatibility. No adhesives are used in the encapsulation process.

Applications	
Clarification	Water & Wine
Hard Particle	Food & Beverages
Cell Removal	Pharmaceuticals
Chemicals	Biologics
Inks, Dyes	Oils, Waters
Cosmetics	Diagnostics

Specifications

Materials of Construction:	Media: Charged Nylon, Depth PP, Polyethylene, PTFE, Glass Fiber, PP Membrane, Nylon, Nylon Screen, PP media, PES, and Polyester Screen Media Supports: Polypropylene, PET, Nylon, or HDPE Shell, Cage, Core, End Caps: Polypropylene, Nylon, or HDPE Sealing: Thermally bonded
Fitting Connections:	12 Fittings - See Ordering Guide for availability. (Custom adaptors available upon request)
Nominal Dimensions:	Lengths: 10”, 20”, 30”, 40” Diameter: 3.54” (90mm)
Effective Filtration Area:	See Cartridge Datasheet for more information (Dependent on Media)
Available Ratings:	0.04um - 200.0um (Dependent on Media)
Operating Conditions:	Maximum Operating Pressure: Liquid: 5.5 bar (80psi) at 72°F/22°C Gas: 4.1 bar (60psi) at 72°F/22°C Minimum Burst Pressure: 8.3 bar (120psi) at 72°F/22°C Maximum Forward Differential Pressure: 5.0 bar (72psid) at 72°F/22°C Maximum Reverse Differential Pressure: 3.0 bar (44psid) at 72°F/22°C Maximum Operating Temperature: PP & Gamma PP: 176°F/80°C HDPE: 140°F/60°C
Regulatory Compliance:	The filters are constructed with polypropylene resins and filtration media in compliance with 21CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastics.

ZenCap® Full Size Capsules



Dimentions in mm

Specifications (cont.)

Autoclavable & Sanitizable:

Capsules can be autoclaved 25 times at 257° F/125°C for 30 minutes (5 times for Nylon, none for Polyethylene) or chemically sanitized in situ using common sanitizing agents or hot water at 194°F/90°C for a limited time (dependent on time and temperature). Capsules must not be in situ steam-sterilized.

Bacterial Endotoxin:

Effluent is non-pyrogenic per USP Bacterial Endotoxin (0.25 EU/ml), determined using Limulus Amebocyte Lysate (LAL) Test.

ZenCap Filter Capsule Ordering Guide

ZenCap Capsule Series	Configuration	Length	Filter Media	Pore size (Micron)	Vents **	Input Fitting	Output Fitting	Options	
		1 - 10"	C = Carbon Fiber		A = No vents	1QFV = 1/8" Female Quick connect w/Valve for Metal latch	1QFV	Shell Material	Prefilter
L = Pharma Grade	I = In-Line	2 - 20"	CN = Charged Nylon	Pick From	B = 1/2" Sanitary	1QV = 1/8" Male Quick connect w/Valve for Metal latch	1QV	Blank = Polypropylene	(add before
	T = T-Line	3 - 30"	DP = Depth PolyPro	Pore Size	C = 1/2"	2QFV = 1/4" Female Quick connect w/Valve for Metal latch	2QFV	-E = Polyethylene	G(pore
	C = C-Line	4 - 40"	F = PTFE	Table	Sanitary vent,	2QV = 1/4" Male Quick connect w/Valve for Metal latch	2QV	-GP = Gamma Stable	Size)= Glass
	S = S-Line		G = Glass Fiber		with upstream	3H = 3/8" Hose Barb	3H	Polypropylene	P(pore
	L = L-Line		HF = Hydrophobic PTFE		D = 1/2" Sanitary	4H = 1/2" Hose Barb	4H	-NY = Nylon	Size)=
			HP = Hi Performance PP Media		vent, with	4Q = 1/2" Male Quick connect	4Q	Sterilization	S(pore Size)
90mm Diameter			N = Nylon		E = 1/2" Sanitary	5H = 9/16" Hose Barb	5H	-ETO = Ethylene Oxide	= PES
Capsule for full size			NG = Natural Glass Fiber		vent, with down	6H = 3/4" (19mm) Hose Barb	6H	Sterilization	
cartridges			NN = Nylon Non-Woven Media		F = Inlet and	8H = 1" (25mm) Hose Barb	8H	O-Rings	
			NS = Nylon Screen		Outlet 1/4" Bleed	TC = 1-1/2" Tri-Clamp	TC	Blank = O-Ring Silicon	
			P = PolyPro Media		G = Inlet 1/4"	T2 = 2" Tri-Clamp	T2	(Standard)	
			PS = PolyPro Screen		H = Outlet 1/4"			-OE = O-Ring EPDM	
			RP = Wrapped PolyPro Media		N = No vent or			-ON = O-Ring Nitrile	
			S = PES						
			TS = Polyester Screen						
			UE = Polyethylene		Note: Option			-OV = O-Ring Viton	

Example 1 - ZenCap L Series Capsule, T-Line, PES 0.45um/0.2um, 20" filter, with all vent and drains, 1.5" Tri-Clamp fittings I/O, would be LT2S045020CTCTC

Example 2 - ZenCap L Series Capsule, In-Line, GF0.5um/PES 0.2um, 10" filter, with all vent and drains, 1.5" Tri-Clamp fittings I/O, would be LI1G050S020CTCTC

Notes: For -E or -GP options, the standard pleat support will be PET for gamma stability

** 1/4" Drain bleed Valve standard on all T-Line filters Except for option **N**

Pore size (Micron)															
Carbon Fiber (C)	Charged Nylon (CN)	Depth PP (DP)	PTFE Phobic (F)	Glass Fiber (G)	Hi Performance PP Media (HP)	Nylon (N)	Natural Glass Fiber (NG)	Nylon Non-Woven Media (NN)	Nylon Screen (NS)	PP Media (P)	Polypro Screen (PS)	Wrapped PP Media (RP)	PES (S)	Polyester Screen (TS)	Polyethylene (UE)
	005 = 0.05	002 = 0.2	010 = 0.1	002 = 0.2	001 = 0.1	005 = 0.05	005 = 0.5	010 = 1	070 = 7	003 = 0.3	10X = 100	003 = 0.3	004 = 0.04	050 = 5	010 = 0.1
Leave Blank	010 = 0.10	005 = 0.5	020 = 0.2	004 = 0.45	002 = 0.2	010 = 0.10	010 = 1.0	030 = 3	100 = 10	006 = 0.6	15X = 150	005 = 0.6	010 = 0.1	070 = 7	020 = 0.20
	020 = 0.20	010 = 1.0	045 = 0.45	005 = 0.5	003 = 0.3	020 = 0.20	030 = 3.0	050 = 5	200 = 20	010 = 1.0	20X = 200	010 = 1.0	020 = 0.2	100 = 10	045 = 0.45
	045 = 0.45	015 = 1.5	100 = 1.0	010 = 1.0	006 = 0.6	045 = 0.45	050 = 5.0	100= 10	400 = 40	030 = 3.0	30X = 300	010 = 1.0	045= 0.45	200 = 20	100 = 1.0
	065 = 0.65	025 = 2.5	300 = 3.0	030 = 3.0	010 = 1.0	065 = 0.65		200= 20	600 = 60	050 = 5.0	50X = 500	030 = 3.0	065 = 0.65	300 = 30	
	080 = 0.80	045 = 4.5	500 = 5.0	050 = 5.0	030 = 3.0	080 = 0.80		400= 40	10X = 100	070 = 7.0		050 = 5.0	080 = 0.8	400 = 40	
	120 = 1.20	100 = 10	999 = 10.0	100 = 10.0	050 = 5.0	120 = 1.20			20X = 200	100 = 10.0		070 = 7.0	120 =1.2	550 = 55	
		200 = 20		200 = 20.0	100 = 10.0				25X = 250	200 = 20.0		100 = 10.0		730 = 73	
				300 = 30.0					30X = 300	300 = 30.0		200 = 20.0			
				Best for Gas Applications			Best for Liquid Applications			400 = 40.0					
										500 = 50.0					
										700 = 70.0					
										10X = 100					
										15X = 150					

Your Local Distributor:

ZenPure

North & South Americas:
ZenPure Americas, Inc
www.zenpure.com
Info-us@zenpure.com
703-335-9910

All Other Regions:
ZenPure Corporation
www.zenpure.com
info@zenpure.com
+86 571 2288 6800

ISO Certified 9001 14001 TÜV ISO 13485

ZenCap® PTFE Full Size Capsules

10”-40” Disposable Process Filtration

ZenCap® PTFE capsule filter assemblies are ready-to-use, full size filters that offer high flows, increased throughputs, high strength, all with the convenience and cleanliness of a disposable and easy-to-install filter assembly. Designed for pre-filtration, clarification, and final filtration of medium to large scale batches (100L to 5000L), in pharmaceutical, biotechnology, food and beverage, chemical, DI water and venting applications.

ZenCap® PTFE capsule assemblies are available with a range of hydrophobic filter pore sizes for liquid, gas, and venting applications. Process engineers can choose from 7 filtration pore sizes to suit the needs of the application. These will allow the disposable processing to become truly flexible, clean, and optimal.

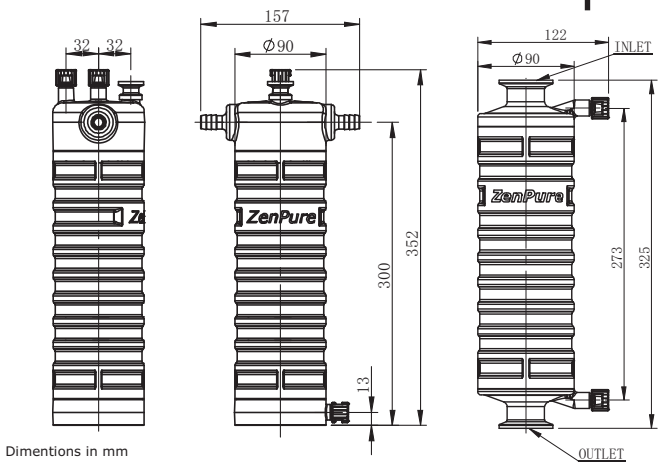
They can be built in a T-style or In-line configuration with 12 inlet and outlet fitting connections that can be mixed and matched. The filtration shell is an all-polypropylene construction that provides excellent chemical compatibility with low extractables. The shell and supports can also be constructed in nylon or polyethylene for additional compatibility. No adhesives, binders, or surfactants are used in the manufacturing process.

Applications	
Clarification	Chemicals
Pharmaceuticals	Solvents
Venting	API
WFI	Oils

Specifications

Materials of Construction:	Media: PTFE Media Supports: Polypropylene Shell, Cage, Core, End Caps: Polypropylene, or Nylon Sealing: Thermally bonded
Fitting Connections:	12 Fittings - See Ordering Guide for availability. (Custom adaptors available upon request)
Nominal Dimensions:	Lengths: 10”, 20”, 30”, 40” Diameter: 3.54” (90mm)
Effective Filtration Area:	0.65 m2 (7.0 ft^2) per 10" cartridge elements
Available Ratings:	0.1um - 10.0um
Operating Conditions:	Maximum Operating Pressure: Liquid: 5.5 bar (80psi) at 72°F/22°C Gas: 4.1 bar (60psi) at 72°F/22°C Minimum Burst Pressure: 8.3 bar (120psi) at 72°F/22°C Maximum Forward Differential Pressure: 5.0 bar (72psid) at 72°F/22°C Maximum Reverse Differential Pressure: 3.0 bar (44psid) at 72°F/22°C Maximum Operating Temperature: PP : 176°F/80°C
Regulatory Compliance:	The filters are constructed with polypropylene resins and filtration media in compliance with 21CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastics.

ZenCap®PTFE Full Size Capsules



Dimentions in mm

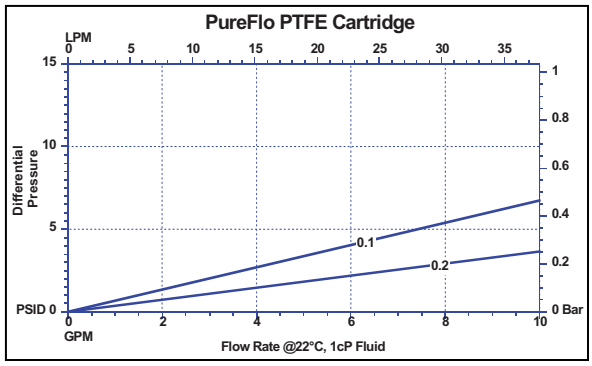
Specifications (cont.)

Autoclavable & Sanitizable:

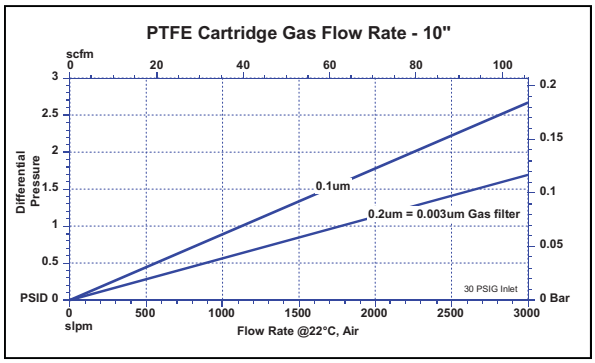
Capsules can be autoclaved 25 times at 257°F/125°C for 30 minutes or chemically sanitized in situ using common sanitizing agents or hot water at 194°F/90°C for a limited time (dependent on time and temperature). Capsules must not be in situ steam-sterilized.

Bacterial Endotoxin:

Effluent is non-pyrogenic per USP Bacterial Endotoxin (0.25 EU/ml), determined using Limulus Amebocyte Lysate (LAL) Test.



Liquid



Gas

ZenCap PTFE Filter Capsule Ordering Guide

ZenCap Capsule Series	Configuration	Length	Filter Media	Pore size (Micron)	Vents **	Input Fitting	Output Fitting	Options	
		1 - 10"		010 = 0.1	A = No vents	1QFV = 1/8" Female Quick connect w/Valve for Metal latch	1QFV	Shell Material	Prefilters
L = Pharma Grade	I = In-Line	2 - 20"	F = PTFE	020 = 0.2	B = 1/2" Sanitary vent	1QV = 1/8" Male Quick connect w/Valve for Metal latch	1QV	Blank = Polypropylene	-G(pore Size)= Glass
	T = T-Line	3 - 30"		045 = 0.45	C = 1/2" Sanitary vent, with upstream and down stream 1/4" Bleed Valve	2QFV = 1/4" Female Quick connect w/Valve for Metal latch	2QFV	-E = Polyethylene	Fiber PreFilter
		4 - 40"		100 = 1.0		2QV = 1/4" Male Quick connect w/Valve for Metal latch	2QV	-GP = Gamma Stable	-P(pore Size)= PolyPro
				300 = 3.0		3H = 3/8" Hose Barb	3H	Polypropylene	Media PreFilter
				500 = 5.0	D = 1/2" Sanitary vent, with upstream	4H = 1/2" Hose Barb	4H	-NY = Nylon	-S(pore Size) = PES
				999 = 10.0	1/4" Bleed Valve	4Q = 1/2" Male Quick connect	4Q	Sterilization	PreFilter
					E = 1/2" Sanitary vent, with down	5H = 9/16" Hose Barb	5H	-ETO = Ethylene Oxide	
90mm Diameter Capsule for full size cartridges	Other configurations avalible				stream 1/4" Bleed Valve	6H = 3/4" (19mm) Hose Barb	6H	Sterilization	
	C = C-Line				F = Inlet and Outlet 1/4" Bleed Valve	8H = 1" (25mm) Hose Barb	8H	O-Rings	
	S = S-Line					TC = 1-1/2" Tri-Clamp	TC	Blank = O-Ring Silicon	
	L = L-Line				G = Inlet 1/4" Bleed Valve	T2 = 2" Tri-Clamp	T2	(Standard)	
					H = Outlet 1/4" Bleed Valve			-OE = O-Ring EPDM	
					N = No vent or Drains			-ON = O-Ring Nitrile	
					Note: Option B,C, D &E not for In-Line			-OV = O-Ring Viton	

Example 1 - ZenCap L Series Capsule, T-Line, PTFE 0.2um, 20" filter, with all vent and drains, 1.5" Tri-Clamp fittings I/O, would be LT2F020CTCTC

Example 2 - ZenCap L Series Capsule, In-Line, GF0.5um/PTFE 0.2um, 10" filter, with all vent and drains, 1.5" Tri-Clamp fittings I/O, would be LI1G050F020CTCTC

Notes: For -E or -GP options, the standard pleat support will be PET for gamma stability

** 1/4" Drain bleed Valve standard on all T-Line filters Except for option **N**

Your Local Distributor:

ZenPure

North & South Americas:
ZenPure Americas, Inc
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ISO Certified 9001 14001

ZenCap® PE Full Size Capsules
For Sterilizing Air / Gas

10”- 40” Single Use Process Filters

ZenCap® 0.2 µm PE capsule filter assemblies are constructed for gamma stability in be incorporated in a system that will be sterilized. They provides excellent compatibility and superior flow per unit area. The hydrophobic polyethylene membrane is ideally suited to provide sterile air and gas in biopharmaceutical applications. PureFlo® PE filter capsules are well-suited for critical applications where superior flow and bacterial retention is required. Designed for sterilizing air and other gases plus liquid sterilization or clarification in pharmaceutical, biotechnology, food and beverage, chemical and venting applications.

ZenCap® capsules have optional vent, drain and pressure gauge fittings with 13 different inlet / outlet connections that can be specified in any combination to allow single use processes to become truly flexible, sanitary, and optimal.

Full sized ZenCaps are manufactured with alternative flow path geometries in T, C, L, S-style or In-line inlet / outlet configurations. The capsule shell is either polypropylene construction or the shell and supports can be constructed in nylon or polyethylene for additional compatibility with the gas or environment. No adhesives, binders, or surfactants are used in the manufacturing process. Validation Document is available on request.

Applications	
Clarification	Chemicals
Pharmaceuticals	Solvents
Venting	API
WFI	Oils

Specifications

Materials of Construction:	Media: Polyethylene Media Supports: Polyethylene Shell, Cage, Core, End Caps: Polypropylene, HDPE or Nylon Sealing: Thermally bonded Valve O-Rings: Silicon (Standard)
Fitting Connections:	13 Fittings - See Ordering Guide for availability. (Custom adaptors available upon request)
Nominal Dimensions:	Lengths: 10”, 20”, 30”, 40” Diameter: 3.54” (90mm)
Effective Filtration Area:	0.65 m2 (7.0 ft^2) per 10" cartridge elements
Available Ratings:	0.2 um rated in liquid applications (other ratings available—see selection guide)
Operating Conditions:	Maximum Operating Pressure: Liquid: 5.5 bar (80 psi) at 72 °F /22 °C Gas: 4.1 bar (60 psi) at 72 °F /22 °C Minimum Burst Pressure: 8.3 bar (120 psi) at 72 °F /22 °C Maximum Forward Differential Pressure: 5.0 bar (72 psid) at 72 °F / 22 °C Maximum Reverse Differential Pressure: 3.0 bar (44 psid) at 72 °F / 22 °C Maximum Operating Temperature: 140 °F / 60 °C
Regulatory Compliance:	The filters are constructed with polypropylene resins and filtration media in compliance with 21CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastics. Complete retention of $\geq 10^7$organisms/cm^2 of *Brevundimonas diminuta* in accordance with ASTM F838-05.

ZenCap® PE Full Size Capsules
For Sterilizing Air / Gas

Performance Criteria:

Pharmaceutical grade products are manufactured by ZenPure in a class 10,000 clean-room manufacturing facility that adheres to **Good Manufacturing Practices**. Quality controls are in place to assure consistent conformance to all specifications listed herein. Adherence to these specifications is ensured through lot-release, validation, and qualification testing.

This product was designed, manufactured, and qualified to meet the following specifications.

Bacterial and Virus Retention
This product is quantitatively retentive towards *Brevundimonas diminuta* (ATCC #19146) at a minimum challenge level of 10^7 CFU per cm^2 of filtration area, consistent with ASTM F838-05. This product is quantitatively retentive towards airborne viruses.

Sterilization
- Capsules can gamma sterilized up to 50kGy.
- Chemically sanitized in situ using common sanitizing agents or hot water at 194 °F / 90 °C for a limited time (dependent on time and temperature and compatibility).
  Warning: This product cannot be sterilized by steam-in-place (SIP) or autoclaved

Materials of Construction
All components or raw materials used in this product conform to the requirements of 21CFR Part 177 and USP Class VI Biological Reactivity Tests for Plastics.

USP Oxidizable Substances
Effluent from this product meets the requirements for USP Sterile Water for Injection for oxidizable substances.

ISO 10993-5 Cytotoxicity
Extract from this product is non-Cytotoxic.

ASTM Hemolysis
Extract from this product is non-Hemolytic.

Lot Release Criteria:

This product is lot sampled and tested for conformity to the following criteria.

Filter Integrity
100% of pharmaceutical grade filters are integrity tested during the manufacturing process.

Capsule Integrity
Representative samples are shown to meet the Minimum Burst Pressure of 8.3 bar (120 psi) at 22 °C (72 °F).

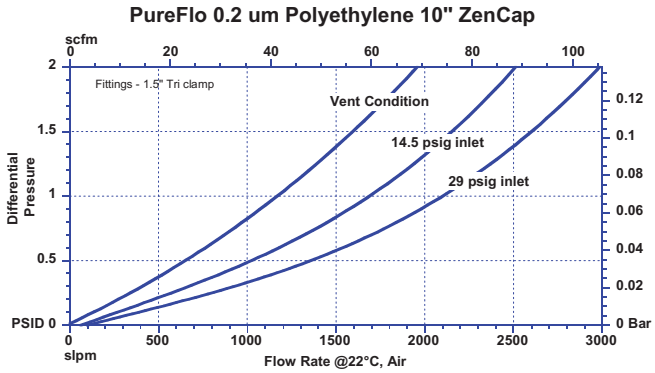
Flow Rate and Pressure Drop
Representative samples are tested and determined to meet published values.

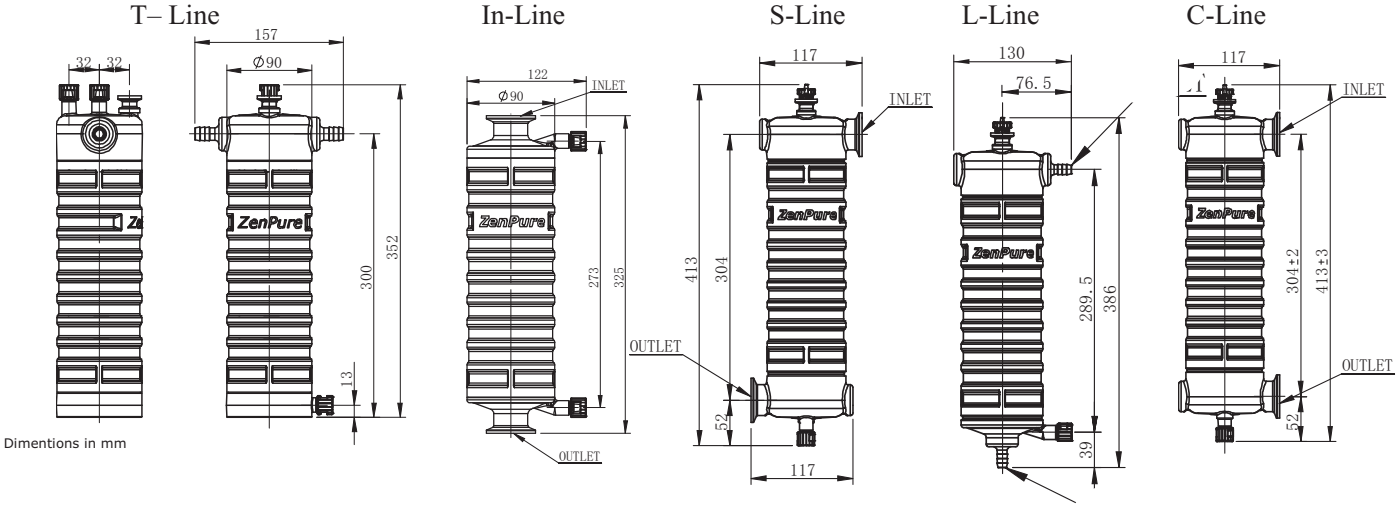
USP Bacterial Endotoxins
Representative samples are tested to confirm that an aqueous extraction of this product contains <0.25 EU/ml as determined by the Limulus Amebocyte Lysate (LAL) Test.

USP Conductivity
Effluent is tested during the manufacturing process and shown to meet the requirements for USP Sterile Water for Injection for conductivity.

ZenPure

ZenCap®PE Full Size Capsules





Dimentions in mm

ZenCap PE Filter Capsule Ordering Guide

ZenCap Capsule Series	Configuration	Length	Filter Media	Pore size (Micron)	Vents **	Input Fitting	Output Fitting	Options	
		1 - 10"			A = No vents	1QFV = 1/8" Female Quick connect w/Valve for Metal latch	1QFV	Shell Material	Prefilter (add before
L = Pharma Grade	I = In-Line	2 - 20"	UE = Polyethylene	020 = 0.2	B = 1/2" Sanitary vent	1QV = 1/8" Male Quick connect w/Valve for Metal latch	1QV	Blank = Polypropylene	Filter Media in part#)
	T = T-Line	3 - 30"			C = 1/2" Sanitary vent, with upstream and down stream 1/4" Bleed Valve	2QFV = 1/4" Female Quick connect w/Valve for Metal latch	2QFV	-E = Polyethylene	G(pore Size)= Glass
	C = C-Line	4 - 40"				2QV = 1/4" Male Quick connect w/Valve for Metal latch	2QV	-GP = Gamma Stable	Fiber PreFilter
	S = S-Line					3H = 3/8" Hose Barb	3H	Polypropylene	P(pore Size)= Poly Pro
	L = L-Line				D = 1/2" Sanitary vent, with upstream 1/4" Bleed Valve	4H = 1/2" Hose Barb	4H	-NY = Nylon	Media PreFilter
						4Q = 1/2" Male Quick connect	4Q	Sterilization	S(pore Size) = PES
90mm Diameter Capsule for full size cartridges					E = 1/2" Sanitary vent, with down stream 1/4" Bleed Valve	5H = 9/16" Hose Barb	5H	-ETO = Ethylene Oxide Sterilization	PreFilter
						6H = 3/4" (19mm) Hose Barb	6H		
					F = Inlet and Outlet 1/4" Bleed Valve	8H = 1" (25mm) Hose Barb	8H	O-Rings	
						SM = ½" Tri Clamp with SS insert *R* ing & High temp PP	SM	Blank = O-Ring Silicon	
					G = Inlet 1/4" Bleed Valve	MT = ½" Tri Clamp	MT	(Standard)	
					H = Outlet 1/4" Bleed Valve	ST = 1 ½" Tri Clamp with SS insert *R* ing & High temp PP	ST	-OE = O-Ring EPDM	
					N = No vent or Drains	TC = 1 ½" Tri Clamp	TC	-ON = O-Ring Nitrile	
						S2 = 2" Tri Clamp with SS insert *R* ing & High temp PP	S2		
					Note: Option B,C, D &E not for In-Line	T2 = 2" Tri Clamp	T2	-OV = O-Ring Viton	

Example 1 - ZenCap L Series Capsule, T-Line, PE 0.2um, 20" filter, with all vent and drains, 1.5" Tri-Clamp fittings I/O, would be LT2UE020CTCTC

Example 2 - ZenCap L Series Capsule, In-Line, GF0.5um/PTFE 0.2um, 10" filter, with all vent and drains, 1.5" Tri-Clamp fittings I/O, would be LI1G050UE020CTCTC

Notes: For -E or -GP options, the standard pleat support will be PET for gamma stability

** ¼" Drain bleed Valve standard on all T-Line filters Except for option **N**

Your Local Distributor:

ZenPure

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ISO Certified 9001 14001 TÜV ISO 13485

ZenCap® Z Series Full Size Capsules

10”-40” Disposable Process Filtration

ZenCap® Z style capsule filter assemblies are ready-to-use, full size filters that offer high flows, increased throughputs, high strength, all with the convenience and cleanliness of a disposable and easy-to-install filter assembly. Designed for pre-filtration, clarification, and final filtration of medium to large scale batches (100L to 5000L), in the pharmaceutical, biotechnology, food and beverage, medical, chemical, and DI water.

ZenCap® Z Style capsule assemblies are available with a wide range of hydrophilic and hydrophobic filter media and pore sizes for liquid, gas, and venting applications. Process engineers can choose from 4 filtration medias to create any combination of ***integrated*** filtration train. These will allow the disposable processing to become truly flexible, clean, and optimal.

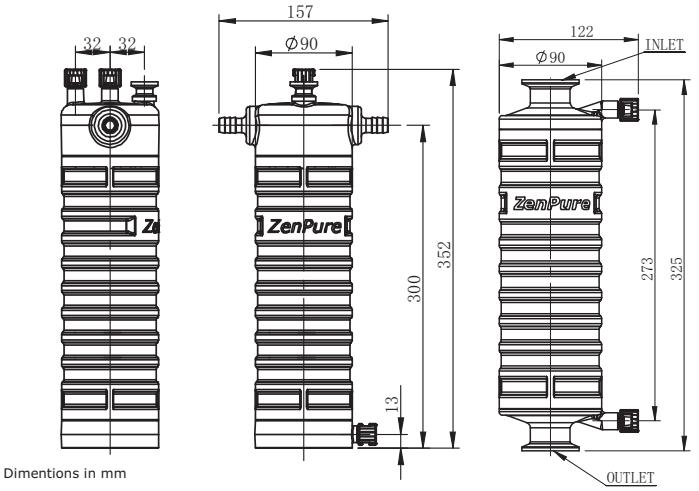
They can be built in a T-style or In-line configuration with 12 inlet and outlet fitting connections that can be mixed and matched. The filtration shell is an all-polypropylene construction that provides excellent chemical compatibility with low extractables. The shell and supports can also be constructed in nylon, polyethylene or gamma stabilized PP shells for additional compatibility. No adhesives, binders, or surfactants are used in the manufacturing process.

Applications	
Clarification	Water & Wine
Hard Particle	Food & Beverages
Cell Removal	Pharmaceuticals
Chemicals	Biologics
Inks, Dyes	Oils, Waters
Cosmetics	Diagnostics

Specifications

Materials of Construction:	Media: Charged Nylon, Hydrophilic PTFE, Nylon, and PES Media Supports: Polyester Shell, Cage, Core: Polypropylene End Caps: Nylon Sealing: Thermally bonded
Fitting Connections:	12 Fittings - See Ordering Guide for availability. (Custom adaptors available upon request)
Nominal Dimensions:	Lengths: 10”, 20”, 30”, 40” Diameter: 3.54” (90mm)
Effective Filtration Area:	See Cartridge Datasheet for more information (Dependent on Media)
Available Ratings:	0.04um - 10.0um (Dependent on Media)
Operating Conditions:	Maximum Operational Pressure: Liquid: 5.5 bar (80psi) at 72°F/22°C Minimum Burst Pressure: 8.3 bar (120psi) at 72°F/22°C Maximum Forward Differential Pressure: 5.0 bar (72psid) at 72°F/22°C Maximum Reverse Differential Pressure: 2.1 bar (30psid) at 72°F/22°C Maximum Operating Temperature: PP, Gamma PP & Nylon: 176°F/80°C
Regulatory Compliance:	The filters are constructed with polypropylene resins and filtration media in compliance with 21CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastics.

ZenCap® Z Series Full Size Capsules



Dimentions in mm

Specifications (cont.)

Autoclavable & Sanitizable:

Capsules can be autoclaved 25 times at 257°F/125°C for 30 minutes (5 times for Nylon) or chemically sanitized in situ using common sanitizing agents or hot water at 194°F/90°C for a limited time (dependent on time and temperature). Capsules must not be in situ steam-sterilized.

Bacterial Endotoxin:

Effluent is non-pyrogenic per USP Bacterial Endotoxin (0.25 EU/ml), determined using Limulus Amebocyte Lysate (LAL) Test.

ZenCap Z Style Filter Capsule Ordering Guide

ZenCap Capsule Series	Configuration	Length	Filter Media	Pore size (Micron)	Vents **	Input Fitting	Output Fitting	Options	
LZ = Pharma Grade 90mm Diameter Capsule for full size cartridges	I = In-Line T = T-Line S = S-Line L = L-Line C = C-Line	1 - 10" 2 - 20" 3 - 30" 4 - 40"	CN = Charged Nylon HF = Hydrophilic PTFE N = Nylon S = PES	Pick From Pore Size Table	A = No vents B = 1/2" Sanitary vent C = 1/2" Sanitary vent, with upstream and down stream 1/4" Bleed Valve D = 1/2" Sanitary vent, with upstream 1/4" Bleed Valve E = 1/2" Sanitary vent, with down stream 1/4" Bleed Valve F = Inlet and Outlet 1/4" Bleed Valve G = Inlet 1/4" Bleed Valve H = Outlet 1/4" Bleed Valve N = No vent or Drains Note: Option A,B,C,D &E not for In-Line	1QFV = 1/8" Female Quick connect w/Valve for Metal latch 1QV = 1/8" Male Quick connect w/Valve for Metal latch 2QFV = 1/4" Female Quick connect w/Valve for Metal latch 2QV = 1/4" Male Quick connect w/Valve for Metal latch 3H = 3/8" Hose Barb 4H = 1/2" Hose Barb 4Q = 1/2" Male Quick connect 5H = 9/16" Hose Barb 6H = 3/4" (19mm) Hose Barb 8H = 1" (25mm) Hose Barb TC = 1-1/2" Tri-Clamp T2 = 2" Tri-Clamp	1QFV 1QV 2QFV 2QV 3H 4H 4Q 5H 6H 8H TC T2	Shell Material Blank = Gamma Stable Polypropylene -NY = Nylon O-Rings Blank = O-Ring Silicon (Standard) -OE = O-Ring EPDM -ON = O-Ring Nitrile -OV = O-Ring Viton	Prefilter (add before Filter Media in part#) G(pore Size)= Glass Fiber PreFilter P(pore Size)= PolyPro Media PreFilter S(pore Size) = PES PreFilter
Example 1 - ZenCap LZ Series Capsule, T-Line, PES 0.45um/0.2um, 20" filter, with all vent and drains, 1.5" Tri-Clamp fittings I/O, would be LZT2S045020CTCTC									
Example 2 - ZenCap LZ Series Capsule, In-Line, GF0.5um/PES 0.2um, 10" filter, with all vent and drains, 1.5" Tri-Clamp fittings I/O, would be LZI1G050S020CTCTC									
** 1/4" Drain bleed Valve standard on all T-Line filters Except for option N									

Pore size (Micron)			
Charged Nylon (CN)	Philic PTFE (HF)	Nylon (N)	PES (S)
005 = 0.05	010 = 0.1	005 = 0.05	004 = 0.04
010 = 0.10	020 = 0.2	010 = 0.10	010 = 0.1
020 = 0.20	045 = 0.45	020 = 0.20	020 = 0.2
045 = 0.45	100 = 1.0	045 = 0.45	045= 0.45
065 = 0.65	300 = 3.0	065 = 0.65	065 = 0.65
080 = 0.80	500 = 5.0	080 = 0.80	080 = 0.8
120 = 1.20	999 = 10.0	120 = 1.20	120 =1.2

Your Local Distributor:

ZenPure

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All Other Regions:
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ZenCap® Full Size Standard Grade Capsules

10”-40” Disposable Process Filtration

ZenCap® standard grade capsule filter assemblies are ready-to-use, full size filters that offer high flows, increased throughputs, high strength, all with the convenience and cleanliness of a disposable and easy-to-install filter assembly. Designed for pre-filtration, clarification, and final filtration in the food and beverage, chemical, DI water and other industries.

ZenCap® capsule assemblies are available with a wide range of hydrophilic and hydrophobic filter media and pore sizes for liquid, gas, and venting applications. Engineers can choose from 17 filtration medias to create any combination of ***integrated*** filtration train. These will allow for a disposable process to become truly flexible, clean, and optimal.

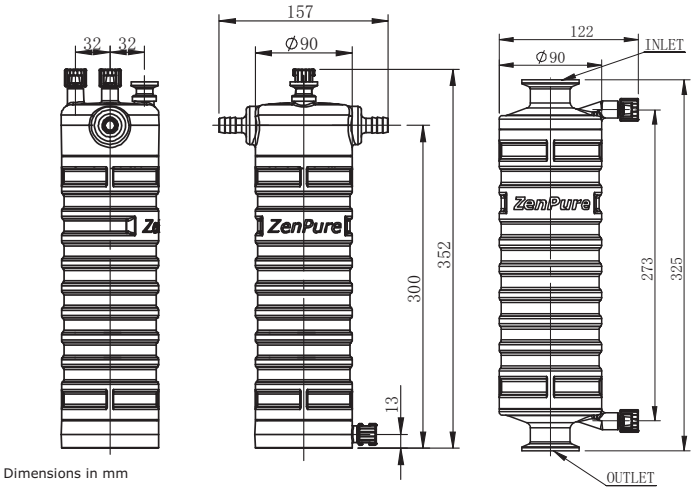
They can be built in a T-style or In-line configuration with 12 inlet and outlet fitting connections that can be mixed and matched. The filtration shell is an all-polypropylene construction that provides excellent chemical compatibility with low extractables. The shell and supports can also be constructed in nylon, polyethylene or gamma stabilized PP shells for additional compatibility. No adhesives or binders are used in the encapsulation process.

Applications	
Clarification	Water & Wine
Hard Particle	Food & Beverages
Cell Removal	Industrial
Chemicals	Biologic reduction
Inks, Dyes	Oils, Waters
Cosmetics	Diagnostics

Specifications

Materials of Construction:	Media: Charged Nylon, Depth PP, Polyethylene, PTFE, Glass Fiber, PP Membrane, Cellulose, Nylon, Nylon Screen, PP media, PES, and Polyester Screen Media Supports: Polypropylene, PET, Nylon, or HDPE Shell, Cage, Core, End Caps: Polypropylene, Nylon, or HDPE Sealing: Thermally bonded
Fitting Connections:	12 Fittings - See Ordering Guide for availability. (Custom adaptors available upon request)
Nominal Dimensions:	Lengths: 10”, 20”, 30”, 40” Diameter: 3.54” (90mm)
Effective Filtration Area:	See Cartridge Datasheet for more information (Dependent on Media)
Available Ratings:	0.04um - 200.0um (Dependent on Media)
Operating Conditions:	Maximum Operating Pressure: Liquid: 5.5 bar (80psi) at 72°F/22°C Gas: 4.1 bar (60psi) at 72F/22°C Minimum Burst Pressure: 8.3 bar (120psi) at 72°F/22°C Maximum Forward Differential Pressure: 5.0 bar (72psid) at 72°F/22°C Maximum Reverse Differential Pressure: 3.0 bar (44psid) at 72°F/22°C Maximum Operating Temperature: PP & Gamma PP: 176°F/80°C HDPE: 140°F/60°C
Regulatory Compliance:	The filters are constructed with polypropylene resins and filtration media in compliance with 21CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastics.

ZenCap® Full Size Standard Grade Capsules



Dimensions in mm

Specifications (cont.)

Autoclavable & Sanitizable:

- Capsules can be autoclaved 25 times at 257°F/125°C for 30 minutes (Nylon 5 times, None for Polyethylene)
- Chemically sanitized in situ using common sanitizing agents or hot water at 194°F/90°C for a limited time (dependent on time and temperature).
- Capsules must not be in situ steam-sterilized.

ZenCap Standard Grade Capsule Ordering Guide

ZenCap Capsule Series	Configuration	Length	Filter Media	Pore size (Micron)	Vents **	Input Fitting	Output Fitting	Options	
		1 - 10"	A = Cellulosic Acetate		A = No vents	1QFV = 1/8" Female Quick connect w/Valve for Metal latch	1QFV	Shell Material	Prefilters
	I = In-Line	2 - 20"	C = Carbon Fiber	Pick From Pore Size Table	B = 1/2" Sanitary vent	1QV = 1/8" Male Quick connect w/Valve for Metal latch	1QV	Blank =	-G(pore Size)= Glass Fiber PreFilter
R = Standard Grade	T = T-Line	3 - 30"	CN = Charged Nylon		C = 1/2" Sanitary vent, with upstream and down stream 1/4" Bleed Valve	2QFV = 1/4" Female Quick connect w/Valve for Metal latch	2QFV	-E = Polyethylene	-P(pore Size)= PolyPro Media
		4 - 40"	DP = Depth PolyPro			2QV = 1/4" Male Quick connect w/Valve for Metal latch	2QV	-GP = Gamma Stable	-S(pore Size) = PES PreFilter
			F = PTFE		D = 1/2" Sanitary vent, with upstream 1/4" Bleed Valve	3H = 3/8" Hose Barb	3H	-NY = Nylon	
			G = Glass Fiber		E = 1/2" Sanitary vent, with down stream 1/4" Bleed Valve	4H = 1/2" Hose Barb	4H	Sterilization	
90mm Diameter Capsule for full size cartridges	Other configurations avalible		M = PolyPro Membrane		F = Inlet and Outlet 1/4" Bleed Valve	4Q = 1/2" Male Quick connect	4Q	-ETO = Ethylene Oxide Sterilization	
	C = C-Line		N = Nylon		G = Inlet 1/4" Bleed Valve	5H = 9/16" Hose Barb	5H		
	S = S-Line		NG = Natural Glass Fiber		H = Outlet 1/4" Bleed Valve	6H = 3/4" (19mm) Hose Barb	6H	O-Rings	
	L = L-Line		NN = Nylon Non-Woven Media		N = No vent or Drains	8H = 1" (25mm) Hose Barb	8H	Blank = O-Ring	
			NS = Nylon Screen		Note: Option B,C, D &E not for In-Line	TC = 1-1/2" Tri-Clamp	TC	Silicon (Standard)	
			P = PolyPro Media			T2 = 2" Tri-Clamp	T2	-OE = O-Ring	
			PS = PolyPro Screen					-ON = O-Ring Nitrile	
			RP = Wrapped PolyPro Media					-OV = O-Ring Viton	
			S = PES						
			TS = Polyester Screen						
			UE = Polyethylene						
			* = Empty Shell						

Example 1 - ZenCap R Series Capsule, T-Line, PES 0.45um/0.2um, 20" filter, with all vent and drains, 1.5" Tri-Clamp fittings I/O, would be RT2S045020CTCTC

Example 2 - ZenCap R Series Capsule, In-Line, GF0.5um/PES 0.2um, 10" filter, with all vent and drains, 1.5" Tri-Clamp fittings I/O, would be RI1G050S020CTCTC

Notes: For -E or -GP options, the standard pleat support will be PET for gamma stability ** 1/4" Drain bleed Valve standard on all T-Line filters Except for option N

Pore size (Micron)																
Cellulose Acetate (A)	Carbon Fiber (C)	Charged Nylon (CN)	Depth PP (DP)	PTFE (F)	Glass Fiber (G)	Hi Performance PP Media (HP)	PP Membrane (M)	Nylon (N)	Natural Glass Fiber (NG)	Nylon Non-Woven Media (NN)	Nylon Screen (NS)	PP Media (P)	Polypro Screen (PS)	Wrapped PP Media (RP)	PES (S)	Polyester Screen (TS)	Polyethylene (UE)
020 = 0.20	Leave pore size blank for Carbon Fiber	005 = 0.05	002 = 0.2	010 = 0.1	002 = 0.2	001 = 0.1	010 = 0.1	005 = 0.05	005 = 0.5	010 = 1	070 = 7	003 = 0.3	10X = 100	003 = 0.3	004 = 0.04	050 = 5	010 = 0.1
045 = 0.45		010 = 0.10	005 = 0.5	020 = 0.2	004 = 0.45	002 = 0.2	020 = 0.2	010 = 0.10	010 = 1.0	030 = 3	100 = 10	006 = 0.6	15X = 150	005 = 0.6	010 = 0.1	070 = 7	020 = 0.20
065 = 0.65		020 = 0.20	010 = 1.0	045 = 0.45	005 = 0.5	003 = 0.3		020 = 0.20	030 = 3.0	050 = 5	200 = 20	010 = 1.0	20X = 200	010 = 1.0	020 = 0.2	100 = 10	045 = 0.45
080 = 0.80		045 = 0.45	015 = 1.5	100 = 1.0	010 = 1.0	006 = 0.6		045 = 0.45	050 = 5.0	100= 10	400 = 40	030 = 3.0	30X = 300	030 = 3.0	045 = 0.45	200 = 20	100 = 1.0
120 = 1.20		065 = 0.65	025 = 2.5	300 = 3.0	030 = 3.0	010 = 1.0		065 = 0.65		200= 20	600 = 60	050 = 5.0	50X = 500	050 = 5.0	065 = 0.65	300 = 30	
		080 = 0.80	045 = 4.5	500 = 5.0	050 = 5.0	030 = 3.0		080 = 0.80		400= 40	10X = 100	070 = 7.0		070 = 7.0	080 = 0.8	400 = 40	
		120 = 1.20	100 = 10	999 = 10.0	100 = 10.0	050 = 5.0		120 = 1.20			20X = 200	100 = 10.0		100 = 10.0	120 =1.2	550 = 55	
			200 = 20		200 = 20.0	100 = 10.0					25X = 250	200 = 20.0		200 = 20.0		730 = 73	
					300 = 30.0						30X = 300	300 = 30.0					
												400 = 40.0					
					Best for Gas Application				Best for Liquid Applications			500 = 50.0					
												700 = 70.0					
												10X = 100					
												15X = 150					

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ISO Certified 9001 14001 TÜV ISO 13485

ZenCap® Full Size General Grade Capsules

10”-40” Disposable Filtration

ZenCap® General grade capsule filter assemblies are full size filters that offer high flows, increased throughputs, high strength, all with the convenience and cleanliness of a disposable and easy-to-install filter assembly. Designed for pre-filtration, clarification in chemical, water and other industries applications.

ZenCap® capsule assemblies are available with a wide range of hydrophilic and hydrophobic filter media and pore sizes for liquid, gas, and venting applications. Engineers can choose from 17 filtration medias to create a filtration setup. These will allow for a disposable process to become truly flexible, clean, and optimal. The filter are made and bagged in a clean room environment

They can be built in a T-style or In-line configuration with 12 inlet and outlet fitting connections that can be mixed and matched. The filtration shell is an all-polypropylene construction that provides excellent chemical compatibility. The shell and supports can also be constructed in nylon, polyethylene or gamma stabilized PP shells for additional compatibility. No adhesives or binders are used in the encapsulation process.

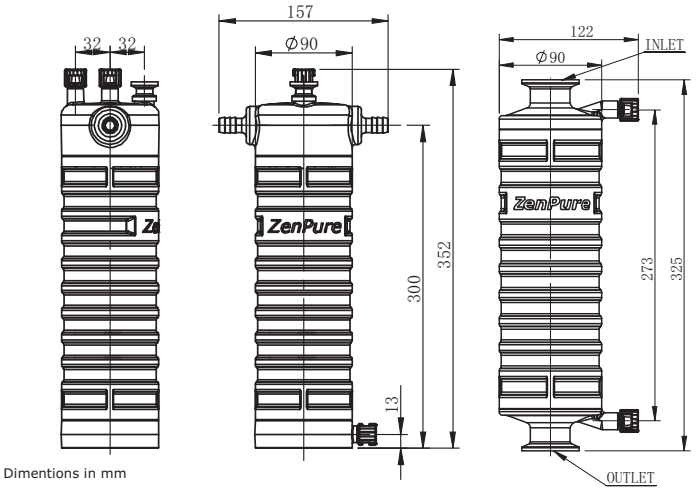
For integrity tested and flushed filters you need to upgrade to Standard or Pharmaceutical grade filter. General grade are only manufactured and bagged.

Applications	
Clarification	Industrial
Hard Particle	Oils, Waters
Inks, Dyes	Industrial
Chemicals	Disposable

Specifications

Materials of Construction:	Media: Charged Nylon, Depth PP, Polyethylene, PTFE, Glass Fiber, PP Membrane, Cellulose, Nylon, Nylon Screen, PP media, PES, and Polyester Screen Media Supports: Polypropylene, PET, Nylon, or HDPE Shell, Cage, Core, End Caps: Polypropylene, Nylon, or HDPE Sealing: Thermally bonded
Fitting Connections:	12 Fittings - See Ordering Guide for availability. (Custom adaptors available upon request)
Nominal Dimensions:	Lengths: 10”, 20”, 30”, 40” Diameter: 3.54” (90mm)
Effective Filtration Area:	See Cartridge Datasheet for more information (Dependent on Media)
Available Ratings:	0.04um - 200.0um (Dependent on Media)
Operating Conditions:	Maximum Operating Pressure: Liquid: 5.5 bar (80psi) at 72°F/22°C Gas: 4.1 bar (60psi) at 72F/22°C Minimum Burst Pressure: 8.3 bar (120psi) at 72°F/22°C Maximum Forward Differential Pressure: 5.0 bar (72psid) at 72°F/22°C Maximum Reverse Differential Pressure: 3.0 bar (44psid) at 72°F/22°C Maximum Operating Temperature: PP & Gamma PP: 176°F/80°C HDPE: 140°F/60°C
Regulatory Compliance:	The filters are constructed with polypropylene resins and filtration media in compliance with 21CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastics.

ZenCap® Full Size General Grade Capsules



Dimentions in mm

Specifications (cont.)

Autoclavable & Sanitizable:

- Capsules can be autoclaved 25 times at 257°F/125°C for 30 minutes (Nylon 5 times, none for Polyethylene)
- Chemically sanitized in situ using common sanitizing agents or hot water at 194°F/90°C for a limited time (dependent on time and temperature).
- Capsules must not be in situ steam-sterilized.

ZenCap General Grade Capsule Ordering Guide

ZenCap Capsule Series	Configuration	Length	Filter Media	Pore size (Micron)	Vents **	Input Fitting	Output Fitting	Options	
G = General Grade 90mm Diameter Capsule for full size cartridges	I = In-Line T = T-Line Other configurations avalible C = C-Line S = S-Line L = L-Line	1 - 10" 2 - 20" 3 - 30" 4 - 40"	A = Cellulosic Acetate CN = Charged Nylon C = Carbon Fiber CN = Charged Nylon DP = Depth PolyPro UE = Polyethylene F = PTFE G = Glass Fiber M = PolyPro Membrane N = Nylon NS = Nylon Screen P = PolyPro Media S = PES TS = Polyester Screen * = Empty Shell	Pick From Pore Size Table	A = No vents B = 1/2" Sanitary vent C = 1/2" Sanitary vent, with upstream and down stream 1/4" Bleed Valve D = 1/2" Sanitary vent, with upstream 1/4" Bleed Valve E = 1/2" Sanitary vent, with down stream 1/4" Bleed Valve F = Inlet and Outlet 1/4" Bleed Valve G = Inlet 1/4" Bleed Valve H = Outlet 1/4" Bleed Valve N = No vent or Drains Note: Option B,C, D &E not for In-Line	1QFV = 1/8" Female Quick connect w/Valve for Metal latch 1QV = 1/8" Male Quick connect w/Valve for Metal latch 2QFV = 1/4" Female Quick connect w/Valve for Metal latch 2QV = 1/4" Male Quick connect w/Valve for Metal latch 3H = 3/8" Hose Barb 4H = 1/2" Hose Barb 4Q = 1/2" Male Quick connect 5H = 9/16" Hose Barb 6H = 3/4" (19mm) Hose Barb 8H = 1" (25mm) Hose Barb TC = 1-1/2" Tri-Clamp T2 = 2" Tri-Clamp	1QFV 1QV 2QFV 2QV 3H 4H 4Q 5H 6H 8H TC T2	Shell Material Blank = Polypropylene -E = Polyethylene -GP = Gamma Stable Polypropylene -NY = Nylon Sterilization -ETO = Ethylene Oxide Sterilization O-Rings Blank = O-Ring Silicon (Standard) -OE = O-Ring EPDM -ON = O-Ring Nitrile -OV = O-Ring Viton	Prefilter (add before Filter Media in part#) G(pore Size)= Glass Fiber PreFilter P(pore Size)= PolyPro Media PreFilter S(pore Size) = PES PreFilter
Example 1 - ZenCap G Series Capsule, T-Line, PES 0.45um/0.2um, 20" filter, with all vent and drains, 1.5" Tri-Clamp fittings I/O, would be GT2S045020CTCTC									
Example 2 - ZenCap G Series Capsule, In-Line, GF0.5um/PES 0.2um, 10" filter, with all vent and drains, 1.5" Tri-Clamp fittings I/O, would be GI1G050S020CTCTC									
Notes: For -E or -GP options, the standard pleat support will be PET for gamma stability					** 1/4" Drain bleed Valve standard on all T-Line filters Except for option N				

Pore size (Micron)																
Cellulose Acetate (A)	Carbon Fiber (C)	Charged Nylon (CN)	Depth PP (DP)	PTFE (F)	Glass Fiber (G)	Hi Performance PP Media (HP)	PP Membrane (M)	Nylon (N)	Natural Glass Fiber (NG)	Nylon Non-Woven Media (NN)	Nylon Screen (NS)	PP Media (P)	Polypro Screen (PS)	Wrapped PP Media (RP)	PES (S)	Polyester Screen (TS)	Polyethylene (UE)
020 = 0.20 045 = 0.45 065 = 0.65 080 = 0.80 120 = 1.20	Leave pore size blank for Carbon Fiber	005 = 0.05 010 = 0.10 020 = 0.20 045 = 0.45 065 = 0.65 080 = 0.80 120 = 1.20	002 = 0.2 005 = 0.5 010 = 1.0 015 = 1.5 025 = 2.5 045 = 4.5 100 = 10 200 = 20	010 = 0.1 020 = 0.2 045 = 0.45 100 = 1.0 300 = 3.0 500 = 5.0 999 = 10.0	002 = 0.2 004 = 0.45 005 = 0.5 010 = 1.0 030 = 3.0 050 = 5.0 100 = 10.0 200 = 20.0 300 = 30.0 Best for Gas Application	001 = 0.1 002 = 0.2 003 = 0.3 006 = 0.6 010 = 1.0 030 = 3.0 050 = 5.0 100 = 10.0	010 = 0.1 020 = 0.2	005 = 0.05 010 = 0.10 020 = 0.20 045 = 0.45 065 = 0.65 080 = 0.80 120 = 1.20	005 = 0.5 010 = 1.0 030 = 3.0 050 = 5.0 Best for Liquid Applications	010 = 1 030 = 3 050 = 5 100= 10 200= 20 400= 40	070 = 7 100 = 10 200 = 20 400 = 40 600 = 60 10X = 100 20X = 200 25X = 250 30X = 300	003 = 0.3 006 = 0.6 010 = 1.0 030 = 3.0 050 = 5.0 070 = 7.0 100 = 10.0 200 = 20.0 300 = 30.0 400 = 40.0 500 = 50.0 700 = 70.0 10X = 100 15X = 150	10X = 100 15X = 150 20X = 200 30X = 300 50X = 500	003 = 0.3 005 = 0.6 010 = 1.0 030 = 3.0 050 = 5.0 070 = 7.0 100 = 10.0 200 = 20.0	004 = 0.04 010 = 0.1 020 = 0.2 045 = 0.45 065 = 0.65 080 = 0.8 120 =1.2	050 = 5 070 = 7 100 = 10 200 = 20 300 = 30 400 = 40 550 = 55 730 = 73	010 = 0.1 020 = 0.20 045 = 0.45 100 = 1.0

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ISO Certified 9001 14001

PureFlo® Ink Filter Capsules

High Performance Ink Filter

PureFlo® Ink Filter Capsules were designed for filtration of standard and UV sensitive inks. This filter is designed to protect print-heads and commercial printing machines. They come in a standard Polypropylene shell as well as a black PP shell to protect light sensitive inks.

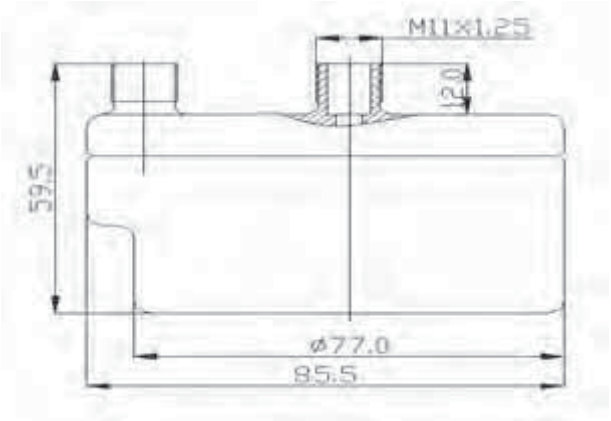
The ink capsules have a compact design that can incorporate various polypropylene structures to meet the needs of the different ink applications. We are currently offering five different media pore size options. The polypropylene construction provides excellent compatibility with a wide-range of inks and their components. No adhesives, binders, or surfactants are used in the manufacturing process. All units are thermally-sealed and flushed, dried and packaged to provide a quality product straight out of the box.

Applications	
UV Sensitive Ink	Ink
Lab scale testing	Chemicals
Vent Filter	Small volume
Water	Digital Inkjet Printer

Specifications

Materials of Construction:	Media: Polypropylene Media Shell, Cage, Core, End Caps: Polypropylene Sealing: Thermally bonded
Fitting Connections:	1/4” Compression (JACO), No Vent
Nominal Dimensions:	Lengths: 2.0” (50mm) without fittings Diameter: 3” (77.5mm) Outer Diameter: 3.37” (85.5mm)
Effective Filtration Area:	18.6 in^2 (120cm^2)
Available Ratings:	1um - 20.0um (Dependent on Media)
Operating Conditions:	Maximum Operating Pressure: Liquid: 5.5 bar (80psi) at 72°F/22°C Gas: 4.1 bar (60psi) at 72°F/22°C Maximum Forward Differential Pressure: 4.1 bar (60psid) at 72°F/22°C Maximum Reverse Differential Pressure: 2.1 bar (30 psid) at 72°F/22°C Minimum Burst Pressure: 8.3 bar (120psi) at 72°F/22°C Maximum Operating Temperature: 122°F (50°C)

PureFlo® Ink Filter Capsules



Dimensional Drawing

PureFlo Ink Filter Capsule Ordering Guide

PureFlo Capsule Filters	Filter Media	Pore size (Micron)	Inlet Fitting	Outlet Fitting	Vent Fitting	Options
IFC = Ink Filter Capsule	**P** = PolyPro Media	**010** = 1.0 **030** = 3.0 **050** = 5.0 **100** = 10.0 **200** = 20.0	**2C** = 1/4" Compression	**2C** = 1/4" Compression	**NV** = No Vent	**Blank** = Standard PP Shell
Example - Ink Series,PP Media, 3.0um, 1/4" Compression I/O is **IFCP0302C2CNV**						

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PureFlo Tank Vent Purifier Capsules
(Removal of VOC and CO_2)

Air Purification Filter

PureFlo® Tank Vent Purifier capsules are designed to protect your process tanks from many common contaminants:

- Particulate contamination is removed by the **HEPA Filtration Media**.
- Volatile organic compounds, chlorine, and odors, which can increase TOC, are removed by the **Activated Carbon Media**.
- Carbon dioxide, which can increase the resistivity of Purified Water, is removed by the **Soda Lime**.

The capsule filter is optimized to provide maximum flow rates and highly efficient contaminant removal through improved contact time and adsorptive capacity. The filtration and purification media are encapsulated and supported by a clean and durable polypropylene structure to provide superior down stream cleanliness. No adhesives, binders, or surfactants are used in the manufacturing process. Each capsule is manufactured under tight process control to give you a uniform product with every filter. A wide range of lengths and connections are available to suit your individual purification needs.

Applications	
Tank Vent	Air Filter
Vacuum pump	Beverages
Fermentor	Pharmaceuticals
Fine Chemicals	Biologics
Incubator	Wine
Beer	Water

Specifications

Materials of Construction:	Media: Polypropylene HEPA Media, Granular Soda Lime, and Activated Carbon Fiber Media Supports: Polypropylene Shell, Cage, Core, and End Caps: Polypropylene
Fitting Connections:	Hose Barb, NPT, Compression Quick Couplings, and Sanitary, Tube Stub. Any inlet/outlet combinations. (Custom adaptors available upon request) No Vent or Drain fittings
Nominal Dimensions:	Length: 1.5 in (128 mm), Length: 2.5 in (155 mm), Length: 5.0 in (210 mm), Length: 7.5 in (270mm), Length: 10 in (340mm), Diameter: 2.75 in (70 mm)
Operating Conditions:	Maximum Operating Pressure: Liquid: 5.5 bar (80psi) at 72°F/22°C Gas: 4.1 bar (60psi) at 72°F/22°C Minimum Burst Pressure: 8.3 bar (120psi) at 72°F/22°C Maximum Forward Differential Pressure: 4.1 bar (60psid) at 72°F/22°C Maximum Reverse Differential Pressure: 2.1 bar (30psid) at 72°F/22°C Maximum Operating Temperature: 140°F/60°C
Regulatory Compliance:	The filters are constructed with polypropylene resins and filtration media in compliance with 21CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastic.

PureFlo Tank Vent Purifier Capsules
(Removal of VOC and CO_2)

PureFlo Tank Vent Capsule Ordering Guide

PureFlo Capsule Filters	Filter Media	Capsule Length	Input Fitting	Output Fitting	Options
SKV 70mm Diameter Capsule	**CL** = Activated Carbon Fiber w/Lime Soda	**H** = 1.5"	**1H**	**1H** = 1/8" Hose barbs	**Shell Material**
		S = 2.5"	**1Q**	**1Q** = 1/8" Male Quick Coupling with Metal latch	**Blank** = Polypropylene
		L = 5"	**1QF**	**1QF** = 1/8" Female Quick Coupling with Metal latch	**-GP** = Gamma stable polypropylene shell
		E = 7.5"	**1QFV**	**1QFV** = 1/8" Female Valved Quick Coupling with Metal latch	**-NY** = Nylon Construction
		K = 10"	**1QV**	**1QV** = 1/8" Male Valved Quick Coupling with Metal latch	**-E** = Polyethylene shell and HDPE media support for gamma sterilization
			2H	**2H** = 1/4" Hose barb	
			2HL	**2HL** = 1/4" to 1/2" Hose barbs	
			2N	**2N** = 1/4" MNPT	
			2P	**2P** = 1/4" Push to Connect	
			2PE	**2PE** = 1/4" Push to Connect Elbow	
			2Q	**2Q** = 1/4" Male Quick Coupling for Metal latch	
			2QF	**2QF** = 1/4" Female Quick Coupling with Metal latch	**Sterilization**
			2QFV	**2QFV** = 1/4" Female Valved Quick Coupling with Metal latch	**-ETO** = Ethylene Oxide Sterilization
			2QP	**2QP** = 1/4" Male Quick Coupling for Plastic latch	
			2QV	**2QV** = 1/4" Male Valved Quick Coupling with Metal latch	
			2V	**2V** = 1/4" Walther Quick Connect	**O-Ring for Quick Coupling**
			3H	**3H** = 3/8" Hose Barb	
			4H	**4H** = 1/2" Hose Barb	**-OE** = O-ring EPDM
			4Q	**4Q** = 1/2" Male Quick Coupling for Plastic latch	**-ON** = O-ring Nitrile
			5H	**5H** = 5/8" Hose Barb	**-OV** = O-ring Viton
			MT	**MT** = 1/2" Tri clamps	**Blank** = O-ring Silicon (Standard)
			TC	**TC** = 1-1/2" Tri clamp	
			4T	**4T** = 1/2" Tube Stub	

Example - 5", Tank Vent capsule, with 1/2" Tri-clamp fittings I/O would be **SKVCLLMTMT**

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ZenCap CO_2 Tank Vent Purifier Capsules
(Removal of CO_2 From Air)

Air Purification Filter

ZenCap® CO_2 Tank Vent Purifier capsules are designed to protect your process tanks from many common contaminants:

- Particulate contamination is removed by the **HEPA Filtration Media**.
- Volatile organic compounds, chlorine, and odors, which can increase TOC, are removed by the **Activated Carbon Media**.
- Carbon dioxide, which can increase the conductivity of Purified Water, is removed by the **Soda Lime**.

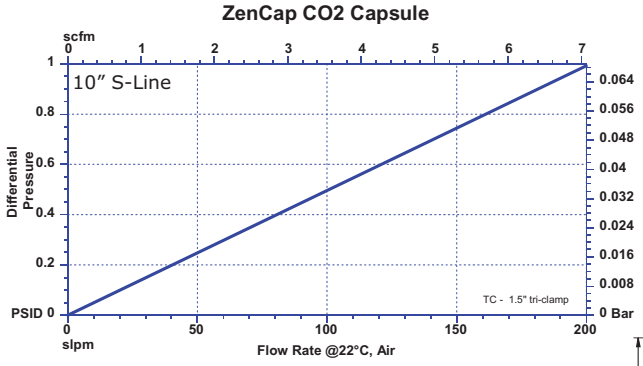
The capsule filter is optimized to provide maximum flow rates and highly efficient contaminant removal through improved contact time and adsorptive capacity. The filtration and purification media are encapsulated and supported by a clean and durable polypropylene structure to provide superior down stream cleanliness. No adhesives, binders, or surfactants are used in the manufacturing process. Each capsule is manufactured under tight process control to give you a uniform product with every filter. A wide range of lengths and connections are available to suit your individual purification needs.

Applications	
Tank Vent	Air Filter
Vacuum pump	Beverages
Fermentor	Pharmaceuticals
Fine Chemicals	Biologics

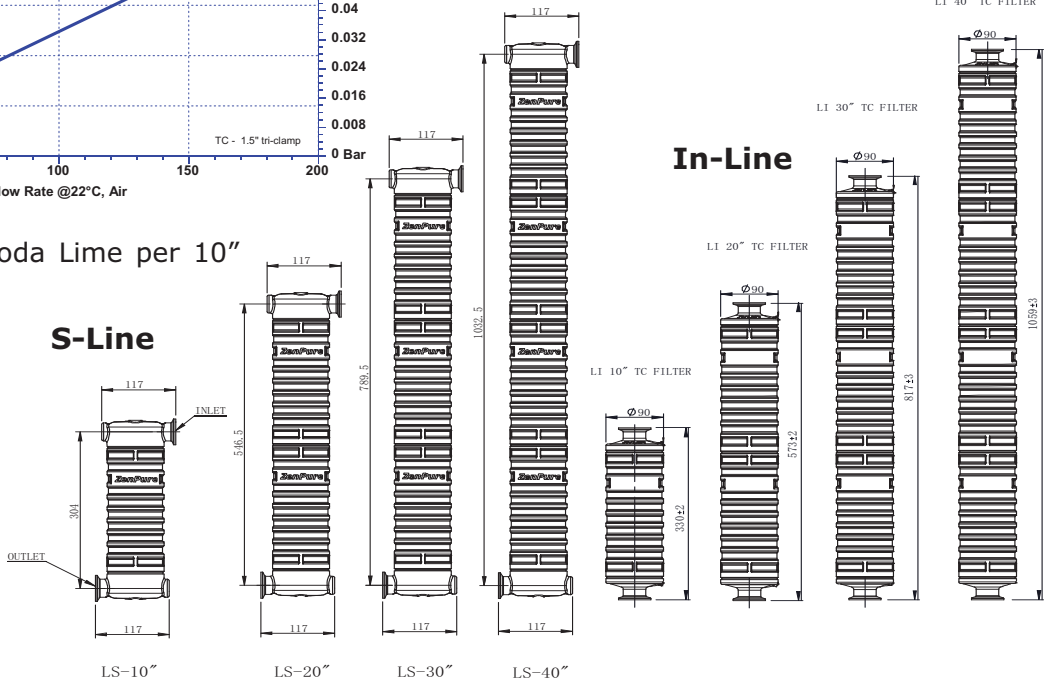
Specifications

Materials of Construction:	Media: Polypropylene or Glass Fiber HEPA Media, Granular Soda Lime, and Activated Carbon Fiber Media Supports: Polypropylene Shell, Cage, Core, and End Caps: Polypropylene Sealing: Thermally bonded
Fitting Connections:	Hose Barb, Quick Couplings, and Sanitary tri-clamp. No Vent or Drain fittings
Nominal Dimensions:	Lengths: 10”, 20”, 30”, 40” Diameter: 3.54” (90mm)
Operating Conditions:	Maximum Operating Pressure: Liquid: 5.5 bar (80psi) at 72°F/22°C Gas: 4.1 bar (60psi) at 72°F/22°C Minimum Burst Pressure: 8.3 bar (120psi) at 72°F/22°C Maximum Forward Differential Pressure: 4.1 bar (60psid) at 72°F/22°C Maximum Reverse Differential Pressure: 2.1 bar (30psid) at 72°F/22°C Maximum Operating Temperature: 140°F/60°C
Regulatory Compliance:	The filters are constructed with polypropylene resins and filtration media in compliance with 21CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastic.

ZenCap CO^2 Tank Vent Purifier Capsules
(Removal of CO_2 From Air)



855 Grams of Soda Lime per 10″



ZenCap Tank Vent Capsule Ordering Guide

ZenCap CO2 Capsule Series	Configuration	Length	Filter Media	Vents	Input Fitting	Output Fitting
L = ZenCap housing Standard Grade	I = In-Line	1 - 10"	SLCPH = Soda Lime with a Carbon and Poly propy lene HEPA filter	N = No vent or Drains	3H = 3/8" Hose Barb	3H = 3/8" Hose Barb
	C = C-Line	2 - 20"			4H = 1/2" Hose Barb	4H = 1/2" Hose Barb
	S = S-Line	3 - 30"			4Q = 1/2" Male Quick connect	4Q = 1/2" Male Quick connect
	L = L-Line	4 - 40"	SLCGH = Soda Lime with a Carbon and Glass Fiber HEPA filter		5H = 9/16" Hose Barb	5H = 9/16" Hose Barb
90mm Diameter Capsule for full size cartridges					6H = 3/4" (19mm) Hose Barb	6H = 3/4" (19mm) Hose Barb
					8H = 1" (25mm) Hose Barb	8H = 1" (25mm) Hose Barb
					TC = 1-1/2" Tri-Clamp	TC = 1-1/2" Tri-Clamp
					T2 = 2" Tri-Clamp	T2 = 2" Tri-Clamp
Example 1 - ZenCap CO2 Capsule, S-Line, Soda Lime with Carbon with PP HEPA filter, no vents, 1.5" Tri clamp I/O is LS1SLCPHNTCTC						

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PureFlo Shower Capsule Filter

Shower Filter

PureFlo® Shower capsule filters are designed to remove particles and bacteria from municipal water sources. These filters can help improve hospital environments where patients have weakened immune systems. This filter can help with *pseudomonas*, *legionella* and other pathogens for washing, showering, and bathing applications.

The ZenPure PureFlo shower capsule can help meet the strict protocols that hospitals need for high risk patients such as burn or immune deficiency victims. This filter provides point of use sterile filtered, potable water directly to the patient. Micro organisms from contaminated water are trapped in the filter.

These filters come with a variety of inlet and outlet fittings for easy installation. The PES membrane allows for low pressure drops so the patient gets the proper flow. The 0.2 micron membrane used complies with international HIMA guidelines for sterilizing filters, delivering a sterile filtrate after challenges with 10^7 *Brevundimonas diminuta* per capsule.

Applications	
Hospitals	Water
Showers	Sinks
Bathrooms	Wash Stations
ICU	Endoscopy
Neonatal Care Unit	Birthing Centers

Specifications

Materials of Construction:	Media: PES (ployethersulfone) PreFilter Media: Polypropylene or Glass Fiber Media Supports: Polypropylene Shell, Cage, Core, and End Caps: Polypropylene O-Rings: Silicone
Fitting Connections:	Shower Head, Hose Barb, NPT, Compression, Quick Couplings, Sanitary Any inlet/outlet combinations. (Custom adaptors available upon request) Vent or Drain fittings: M10 Bleed Valve
Nominal Dimensions:	Length: 1.5 in (128 mm), Length: 2.5 in (155 mm), Length: 5.0 in (210 mm), Diameter: 2.75 in (70 mm)
Effective Filtration Area:	1.5 in - 0.77 ft^2 (650 cm^2) 2.5 in - 1.48 ft^2 (1200 cm^2) 5.0 in - 2.8 ft^2 (2400 cm^2)
Operating Conditions:	Maximum Operating Pressure: Liquid: 5.5 bar (80psi) at 72°F/22°C Minimum Burst Pressure: 8.3 bar (120psi) at 72°F/22°C Maximum Forward Differential Pressure: 4.1 bar (60psid) at 72°F/22°C Maximum Reverse Differential Pressure: 2.1 bar (30psid) at 72°F/22°C Maximum Operating Temperature: 176°F/80°C
Regulatory Compliance:	The filters are constructed with polypropylene resins and filtration media in compliance with 21CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastic.

PureFlo Shower Capsule Filter

No adhesives, binders, or surfactants are used in the manufacturing process. Each capsule is manufactured under tight process control to give you a uniform product with every filter.

SPECIFICATIONS

Bacterial Retention

Complete retention of $\geq 10^7$organisms/cm^2 of *Brevundimonas diminuta* in accordance with the current HIMA challenge methodology (ASTM F838-05). Validation Guide upon request.

Autoclavable & Sanitizable

Recommended to sterilize and verify integrity twice a week to minimize risk of contamination. Capsules can be autoclaved 25 times at 257°F/125°C for 30 minutes or chemically sanitized in situ using common sanitizing agents or hot water at 194°F/90°C for a limited time (dependent on time and temperature). Capsules must not be in situ steam-sterilized.

Water Bubble Point Specification

0.1um : 23psi,0.16 MPA (IPA)
0.2um : 47psi,0.32 MPa

Bacterial Endotoxin

Effluent is non-Pyrogenic per USP Bacterial Endotoxin (0.25 EU/ml), determined using Limulus Amebocyte Lysate (LAL) test.

PureFlo Shower Capsule Ordering Guide

PureFlo Capsule Filters	Shower Filter Media	Pore size (Micron)	Internal Filter Length	Input Fitting	Output Fitting	Options
SKV 70mm Diameter Capsule	**YS** = Polypropylene pre filter/PES final filter **WS** = Glass Fiber pre filter/PES final filter	**004** = PreFilter Media/0.04 PES **010** = PreFilter Media/0.1 PES **020** = PreFilter Media/0.2um PES	**H** = 1.5" **S** = 2.5" **L** = 5"	**2H** = 1/4" Hose Barbs **2N** = 1/4" MNPT **2NF** = 1/4" FNPT **2Q** = 1/4" Male Quick Coupling for Metal Latch **2QF** = 1/4" Female Quick Coupling with Metal Latch **2QFP** = 1/4" Female Quick Coupling w/Plastic Latch **2QP** = 1/4" Male Quick Coupling for Plastic Latch **2P**= 1/4" Push to Connect **2V** = 1/4" Walther Male Quick Connect (**as shown**) **3H** = 3/8" Hose Barb **3NF** = 3/8" FNPT **4H** = 1/2" Hose Barb **4N** = 1/2" MNPT **4Q**= 1/2" Male Quick Coupling for Plastic latch **MT** = 1/2" Tri-clamps **TC** = 1-1/2" Tri-clamp	**2H** = 1/4" Hose Barbs **2N** = 1/4" MNPT **2NF** = 1/4" FNPT **2Q** = 1/4" Male Quick Coupling for Metal Latch **2QF** = 1/4" Female Quick Coupling with Metal Latch **2QFP** = 1/4" Female Quick Coupling w/Plastic Latch **2QP** = 1/4" Male Quick Coupling for Plastic Latch **2P**= 1/4" Push to Connect **2V** = 1/4" Walther Male Quick Connect **3H** = 3/8" Hose Barb **3NF** = 3/8" FNPT **4H** = 1/2" Hose Barb **4N** = 1/2" MNPT **4Q** = 1/2" Male Quick Coupling for Plastic latch **MT** = 1/2" Tri-clamps **TC** = 1-1/2" Tri-clamp **TS** = Shower Head (**as shown**)	**Shell Material** **Blank** = Polypropylene **-GP** = Gamma stable polypropylene shell **Sterilization** **-ETO** = Ethylene Oxide Sterilization **O-Ring for Quick Coupling** **-OE** = O-ring EPDM **-ON** = O-ring Nitrile **-OV** = O-ring Viton **Blank** = O-ring Silicon (Standard)
Example - PureFlo Shower Capsule, PP Media/PES , 2.5" internal filter, PreFilter/0.2 micron, with 1/4" Walther Coupling Inlet, Shower Head Outlet, would be SKVYS020S2VTS						

Note: Quick Couplings are molded on. Compatible with CPC (Colder), LinkTech and others.

Your Local Distributor:

ZenPure

North & South Americas:
ZenPure Americas, Inc
www.zenpure.com
Info-us@zenpure.com
703-335-9910

All Other Regions:
ZenPure Corporation
www.zenpure.com
info@zenpure.com
+86 571 2288 6800

PureFlo Void Capsules

High Hold-up Area Capsules

The PureFlo® Void Capsule has been designed for capture of media inside the body of the capsule for easy disposal. The filter can be tailored to specific applications and needs. No filter or a smaller than standard is placed in the capsule to allow for a internal void area. This empty space is utilized for media entrapment. All the different PureFlo Media can be incorporated in this unique design. There are numerous different fitting options for each of the different capsule styles.

The design of the unit can be used as a liquid trap, settling chamber, media capture, or surge suppression. No adhesives, binders, or surfactants are used in the construction process.

Applications	
Bead Capture	Particle Capture
Surge Suppression	Media Hold-up
Liquid Trap	Settling Chamber
DE Capture Filter	Pharmaceutical

Specifications

Materials of Construction:	Media: Any ZenPure PureFlo Media Media Supports: Media Dependent Shell, Cage, Core, and End Caps: Polypropylene, Gamma-stabilized Polypropylene, Polyethylene, Nylon
Fitting Connections:	Hose Barb, NPT, Compression Quick Couplings, and Sanitary. Any inlet/outlet combinations. (Custom adaptors available upon request)
Capsule Series:	SVL Series: Capsule w/Luer Lock Vent & Drain SVV Series: Capsule w/Bleed Valve Vent & Drain ZenCap Void Series: T-line & I-Line Full Size Capsule
Sterilization:	The filters can be sterilized by autoclaving, ETO, and gamma sterilization depending on the construction. Capsules can be autoclaved 25 times at 257°F/125°C for 30 minutes (5 times for Nylon, none or Polyethylene) or chemically sanitized in situ using common sanitizing agents or hot water at 194°F/90°C for a limited time (dependent on time and temperature). Capsules must not be in situ steam-sterilized.
Regulatory Compliance:	The filters are constructed with polypropylene resins and filtration media in compliance with 21CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastic.

PureFlo SVV Void Capsule

SVV Series Capsule

PureFlo® SVV Void capsules can come with a short or no internal filter to allow for greater hold-up capacity. This can be utilized for hard media particle retention. The inlet and outlet ports are available with 25 fittings options, eliminating the need for transition connectors. The SVV series capsule has two adjustable, easy to turn upstream bleed valves with an o-ring seal and hose barb connections allowing for easy process control and/or sampling.

PureFlo SVV Void Capsule Ordering Guide

PureFlo Void Capsule	Filter Media	Pore size (Micron)	Internal Filter	Capsule Length	Input Fitting	Output Fitting	Option
SVV 70mm Diameter Capsule with Bleed Valve	**A** = Cellulosic Acetate **C** = Carbon Fiber **CN** = Charged Nylon **DP** = Depth PolyPro **F** = PTFE **G** = Glass Fiber **M** = PolyPro Membrane **N** = Nylon **NG** = Natural Glass Fiber **NN** = Nylon Non-Woven Media **NS** = Nylon Screen **P** = PolyPro Media **PS** = PolyPro Screen **RP** = Wrapped PolyPro Media **S** = PES **TS** = Polyester Screen **UE** = Polyethylene * = Empty Shell	**Blank = No Filter** **Pick From Pore Size Table**	* = No Filter **H** = 1.5" **S** = 2.5" **L** = 5" **E** = 7.5"	**H**= 1.5" **S** = 2.5" **L** = 5" **E** = 7.5" **K** = 10"	**1H** **1Q** **1QF** **1QFV** **1QV** **2H** **2HL** **2N** **2P** **2PE** **2Q** **2QF** **2QFV** **2QP** **2QV** **2V** **3H** **4H** **4Q** **5H** **MT** **TC** **TS**	**1H** = 1/8" Hose barbs **1Q** = 1/8" Male Quick Coupling with Metal latch **1QF** = 1/8" Female Quick Coupling with Metal latch **1QFV** = 1/8" Female Valved Quick Coupling with Metal latch **1QV** = 1/8" Male Valved Quick Coupling with Metal latch **2H** = 1/4" Hose barb **2HL** = 1/4" to 1/2" Hose barbs **2H-FB** = 1/4" Hose Barb with filling bell or **-FC** with Cap **2N** = 1/4" MNPT **2P** = 1/4" Push to Connect **2PE** = 1/4" Push to Connect Elbow **2Q** = 1/4" Male Quick Coupling for Metal latch **2QF** = 1/4" Female Quick Coupling with Metal latch **2QFV** = 1/4" Female Valved Quick Coupling with Metal latch **2QP** = 1/4" Male Quick Coupling for Plastic latch **2QV** = 1/4" Male Valved Quick Coupling with Metal latch **2V** = 1/4" Walther Quick Connect **3H** = 3/8" Hose Barb **3H-FB** = 3/8" Hose Barb with filling bell or **-FC** with Cap **4H** = 1/2" Hose Barb **4Q** = 1/2" Male Quick Coupling for Plastic latch **5H** = 5/8" Hose Barb **MT** = 1/2" Tri clamps **TC** = 1-1/2" Tri clamp **TS** = Shower Head	**Shell Material** **Blank** = Polypro construction **-E** = Polyethylene shell **-GP** = Gamma stable polypropylene shell **-NY** = Nylon Shell **Sterilization** **-ETO =** Ethylene oxide sterilization **Vent & Drain** **-N**= No vent or drain **-NI** = No vent or drain inlet fitting **-NO** = No vent or drain Outlet fitting **O-Rings** **-OE** = O-ring EPDM **-ON** = O-ring Nitrile **-OV** = O-ring Viton **Blank** = O-ring Silicon (Standard) **Prefilter (add before Filter Media in part#)** **G(pore Size)**= Glass Fiber PreFilter **P(pore Size)**= PolyPro Media PreFilter **S(pore Size)** = PES PreFilter
Example - PureFlo SVV Void Capsule, Polyester Screen, 30um , 1.5" internal filter, 5" shell, with 1.5" Tri-Clamp fittings I/O, would be SVVTS300HLTCTC							

Note: Quick Couplings are molded on. Female Quick Coupling with Plastic latch will be threaded on. Compatible with CPC (Colder), LinkTech and others. * - 2H or 3H with filling bell only

Pore size (Micron)																
Cellulose Acetate (A)	Carbon Fiber (C)	Charged Nylon (CN)	Depth PP (DP)	PTFE (F)	Glass Fiber (G)	Polypro Membrane (M)	Nylon (N)	Natural Glass Fiber (NG)	Nylon Non-Woven Media (NN)	Nylon Screen (NS)	PP Media (P)	Polypro Screen (PS)	Wrapped PP Media (RP)	PES (S)	Polyester Screen (TS)	Polyethylene (UE)
020 = 0.20 **045** = 0.45 **065** = 0.65 **080** = 0.80 **120** = 1.20	**Leave pore size blank for Carbon Fiber**	**005** = 0.05 **010** = 0.10 **020** = 0.20 **045** = 0.45 **065** = 0.65 **080** = 0.80 **120** = 1.20	**002** = 0.2 **005** = 0.5 **010** = 1.0 **015** = 1.5 **025** = 2.5 **045** = 4.5 **100** = 10 **200** = 20	**010** = 0.1 **020** = 0.2 **045** = 0.45 **100** = 1.0 **300** = 3.0 **500** = 5.0 **999** = 10.0	**005** = 0.5 **010** = 1.0 **030** = 3.0 **050** = 5.0 **100** = 10.0 **200** = 20.0 **300** = 30.0 **Best for Liquid Applications**	**010** = 0.1 **020** = 0.2	**010** = 0.10 **020** = 0.20 **045** = 0.45 **065** = 0.65 **080** = 0.80 **120** = 1.20	**005** = 0.5 **010** = 1.0 **030** = 3.0 **050** = 5.0 **Best for Liquid Applications**	**010** = 1 **030** = 3 **050** = 5 **100**= 10 **200**= 20 **400**= 40	**070** = 7 **100** = 10 **200** = 20 **400** = 40 **600** = 60 **10X** = 100 **20X** = 200 **25X** = 250 **30X** = 300	**003** = 0.3 **006** = 0.6 **010** = 1.0 **030** = 3.0 **050** = 5.0 **100** = 10.0 **200** = 20.0 **300** = 30.0 **500** = 50.0 **700** = 70.0 **10X** = 100.0 **15X** = 150.0	**10X** = 100 **15X** = 150 **20X** = 200 **30X** = 300 **50X** = 500	**003** = 0.3 **005** = 0.6 **010** = 1.0 **030** = 3.0 **050** = 5.0 **070** = 7.0 **100** = 10.0 **200** = 20.0	**005** = 0.05 **010** = 0.1 **020** = 0.2 **045** = 0.45 **065** = 0.65 **080** = 0.8 **120** = 1.2	**050** = 5 **070** = 7 **100** = 10 **200** = 20 **300** = 30 **400** = 40 **550** = 55 **730** = 73	**010** = 0.1 **020** = 0.20 **045** = 0.45 **100** = 1.0

PureFlo SVL Void Capsule

SVL Void Capsule

PureFlo® SVL Void capsules has 5 capsule sizes to choose from. These units have internal void areas that can be utilized for several purposes. These can range from diatomaceous earth collection and filtration to pressure surge minimization. The inlet and outlet ports are available with 36 fittings options, eliminating the need for transition connectors. The SVL series capsule has luer lock upstream vent and drain connections, allowing for easy process control. These capsules eliminate the time and expense associated with assembling and cleaning stainless steel housings.

PureFlo SVL Void Filter Capsule Ordering Guide

PureFlo Capsule Filters	Filter Media	Pore size (Micron)	Internal Filter	Capsule Length	Input Fitting	Output Fitting	Option	
SVL **Void Filter capsule** 70mm Diameter Capsule	**A** = Cellulosic Acetate **C** = Carbon Fiber **CN** = Charged Nylon **DP** = Depth PolyPro **F** = PTFE **G** = Glass Fiber **M** = PolyPro Membrane **N** = Nylon **NG** = Natural Glass Fiber **NN** = Nylon Non-Woven Media **NS** = Nylon Screen **P** = PolyPro Media **PS** = PolyPro Screen **RP** = Wrapped PolyPro Media **S** = PES **TS** = Polyester Screen **UE** = Polyethylene * = Empty Shell	**Blank = No Filter** **Pick From Pore Size Table**	* = No Filter **H** = 1.5" **S** = 2.5" **L** = 5" **E** = 7.5"	**H**= 1.5" **S** = 2.5" **L** = 5" **E** = 7.5" **K** = 10"	**1C** **1H** **1N** **1NF** **1Q** **1QF** **1QFV** **1QV** **2C** **2H** **2HS** **2LF** **2N** **2NF** **2P** **2PE** **2Q** **2QF** **2QFP** **2QFV** **2QP** **2QV** **2V** **3C** **3H** **3HE** **3NF** **4C** **4H** **4N** **4Q** **8C** **MT** **TC**	**1C** = 1/8" Compression **1H** = 1/8" Hose barbs **1N** = 1/8" MNPT **1NF** = 1/8" FNPT **1Q** = 1/8" Male Quick Coupling with Metal latch **1QF** = 1/8" Female Quick Coupling with Metal latch **1QFV** = 1/8" Female Valved Quick Coupling with Metal latch **1QV** = 1/8" Male Valved Quick Coupling with Metal latch **2C** = 1/4" Compression **2H** = 1/4" to 1/2" Hose barbs **2HS** = 1/4" to 3/8" Hose barbs **2LF** = Large Female Luer Lock fitting **2N** = 1/4" MNPT **2NF** = 1/4" FNPT **2P** = 1/4" Push to Connect **2PE** = 1/4" Push to Connect Elbow **2Q** = 1/4" Male Quick Coupling for Metal latch **2QF** = 1/4" Female Quick Coupling with Metal latch **2QFP** = 1/4" Female Quick Coupling with Plastic latch **2QFV** = 1/4" Female Valved Quick Coupling with Metal latch **2QP** = 1/4" Male Quick Coupling for Plastic latch **2QV** = 1/4" Male Valved Quick Coupling with Metal latch **2V** = 1/4" Walther Quick Connect **3C** = 3/8" Compression **3H** = 3/8" Hose Barb **3HE** = 3/8" Hose Barb Elbow **3H-FB** = 3/8" Hose Barb with filling bell or **-FC** with Cap **3NF** = 3/8" FNPT **4C** = 1/2" Compression **4H** = 1/2" Hose Barb **4N** = 1/2" MNPT **4Q** = 1/2" Male Quick Coupling for Plastic latch **8C** = 5/16" Compression **MT** = 1/2" Tri clamps **TC** = 1-1/2" Tri clamp **TS** = Shower Head	**Shell Material** **Blank** = Polypro construction **-E** = Polyethylene **-GP** = Gamma stable polypropylene shell **-NY** = Nylon Shell **Sterilized** **-ETO =** Ethylene oxide sterilization **Vent & Drain** **-N**= No vent or drain **-NI** = No vent or drain inlet fitting **-NO** = No vent or drain Outlet fitting	**O-Rings** **-OE** = O-ring EPDM **-ON** = O-ring Nitrile **-OV** = O-ring Viton **Blank** = O-ring Silicon (Standard) **Prefilter (add before Filter Media** **G(pore Size)**= Glass Fiber PreFilter **P(pore Size)**= PolyPro Media PreFilter **S(pore Size)** = PES PreFilter

Example - 5", Void Filter capsule with a 60um Nylon screen 1.5" internal filter, with 1.5" Tri Clamp Fittings I/O would be **SVLNS600HLTCTC**

Male Quick Couplings are molded, Female Quick Coupling with Plastic latch will be threaded on, compatible with CPC (Colder), LinkTech and other compatible couplings.

Pore size (Micron)

Cellulose Acetate (A)	Carbon Fiber (C)	Charged Nylon (CN)	Depth PP (DP)	PTFE (F)	Glass Fiber (G)	Polypro Membrane (M)	Nylon (N)	Natural Glass Fiber (NG)	Nylon Non-Woven Media (NN)	Nylon Screen (NS)	PP Media (P)	Polypro Screen (PS)	Wrapped PP Media (RP)	PES (S)	Polyester Screen (TS)	Polyethylene (UE)
020 = 0.20 **045** = 0.45 **065** = 0.65 **080** = 0.80 **120** = 1.20	Leave pore size blank for Carbon Fiber	**005** = 0.05 **010** = 0.10 **020** = 0.20 **045** = 0.45 **065** = 0.65 **080** = 0.80 **120** = 1.20	**002** = 0.2 **005** = 0.5 **010** = 1.0 **015** = 1.5 **025** = 2.5 **045** = 4.5 **100** = 10 **200** = 20	**010** = 0.1 **020** = 0.2 **045** = 0.45 **100** = 1.0 **300** = 3.0 **500** = 5.0 **999** = 10.0	**005** = 0.5 **010** = 1.0 **030** = 3.0 **050** = 5.0 **100** = 10.0 **200** = 20.0 **300** = 30.0 **Best for Liquid Applications**	**010** = 0.1 **020** = 0.2	**010** = 0.10 **020** = 0.20 **045** = 0.45 **065** = 0.65 **080** = 0.80 **120** = 1.20	**005** = 0.5 **010** = 1.0 **030** = 3.0 **050** = 5.0 **Best for Liquid Applications**	**010** = 1 **030** = 3 **050** = 5 **100**= 10 **200**= 20 **400**= 40	**070** = 7 **100** = 10 **200** = 20 **400** = 40 **600** = 60 **10X** = 100 **20X** = 200 **25X** = 250 **30X** = 300	**003** = 0.3 **006** = 0.6 **010** = 1.0 **030** = 3.0 **050** = 5.0 **100** = 10.0 **200** = 20.0 **300** = 30.0 **500** = 50.0 **700** = 70.0 **10X** = 100.0 **15X** = 150.0	**10X** = 100 **15X** = 150 **20X** = 200 **30X** = 300 **50X** = 500	**003** = 0.3 **005** = 0.6 **010** = 1.0 **030** = 3.0 **050** = 5.0 **070** = 7.0 **100** = 10.0 **200** = 20.0	**005** = 0.05 **010** = 0.1 **020** = 0.2 **045** = 0.45 **065** = 0.65 **080** = 0.8 **120** = 1.2	**050** = 5 **070** = 7 **100** = 10 **200** = 20 **300** = 30 **400** = 40 **550** = 55 **730** = 73	**010** = 0.1 **020** = 0.20 **045** = 0.45 **100** = 1.0

ZenCap Void Capsule

ZenCap 10-40 inch Void Capsule

ZenCap Void capsules provides a full size container for filtering and capturing settling materials. Sizes range from 10-40 inches in length with options to put up to a 30 inch internal filter or no filter. The inlet and outlet ports are available with 8 fittings options that can be mixed and matched, eliminating the need for transition connectors. The ZenCap void capsule has two adjustable, easy to turn up and down stream bleed values with an o-ring seal and hose barb connections allowing for easy process control. These capsules eliminate the time and expense associated with assembling and cleaning stainless steel housings.

They can be built in a T-style or In-line configuration. The filtration shell is an all polypropylene construction that provides excellent chemical compatibility with low extractables. No adhesives or binders are used in the encapsulation process.

ZenCap Void Capsule Ordering Guide

ZenCap Void	Configuration	Capsule Length	Internal Filter	Filter Media	Pore size (Micron)	Vents	Input Fitting	Output Fitting	Options	
LV 90mm Diameter Capsule with Bleed Valve	I = In-Line T = T-Line Other configurations avalible C = C-Line S = S-Line L = L-Line	1 = 10" 2 = 20" 3 = 30" 4 = 40"	* = No Filter 5 = 5" 1 = 10" 2 =20" 3 = 30"	A = Cellulosic Acetate C = Carbon Fiber CN = Charged Nylon DP = Depth Poly Pro F = PTFE G = Glass Fiber M = PolyPro Membrane N = Nylon NG = Natural Glass Fiber NN = Nylon Non-Woven Media NS = Nylon Screen P = PolyPro Media PS = PolyPro Screen RP = Wrapped PolyPro Media S = PES TS = Polyester Screen UE = Polyethylene * = Empty Shell	Blank=No Filter Pick From Pore Size Table	A = No vents B = 1/2" Sanitary vent C = 1/2" Sanitary vent, with upstream and down stream 1/4" Bleed Valve D = 1/2" Sanitary vent, with upstream 1/4" Bleed Valve E = 1/2" Sanitary vent, with down stream 1/4" Bleed Valve F = Inlet and Outlet 1/4" Bleed Valve G = Inlet 1/4" Bleed Valve H = Outlet 1/4" Bleed Valve N = No vent or Drains Note: Option B,C, D &E not for In-Line	1QFV = 1/8" Female Quick connect w/Valve for Metal latch 1QV = 1/8" Male Quick connect w/Valve for Metal latch 2QFV = 1/4" Female Quick connect w/Valve for Metal latch 2QV = 1/4" Male Quick connect w/Valve for Metal latch 3H = 3/8" Hose Barb 4H = 1/2" Hose Barb 4Q = 1/2" Male Quick connect 5H = 9/16" Hose Barb 6H = 3/4" (19mm) Hose Barb 8H = 1" (25mm) Hose Barb TC = 1-1/2" Tri-Clamp 2T = 2" Tri-Clamp	1QFV 1QV 2QFV 2QV 3H 4H 4Q 5H 6H 8H TC 2T	Shell Material Blank = Polypropylene -E = Polyethylene -GP = Gamma Stable Polypropylene -N = Nylon Sterilization -ETO = Ethylene Oxide Sterilization O-Rings Blank = O-Ring Silicon (Standard) -OE = O-Ring EPDM -ON = O-Ring Nitrile -OV = O-Ring Viton	Prefilters -G(pore Size)= Glass Fiber PreFilter -P(pore Size)= PolyPro Media PreFilter -S(pore Size) = PES PreFilter

Example - ZenCAP Void Series Capsule, T-Line, 10" Capsule Nylon Screen 60um, 5" filter, with all vent and drains, 1.5" Tri-Clamp fittings I/O, would be LVT15NS600CTCTC

Notes: For -E or -GP options, the standard pleat support will be PET for gamma stability ** ¼" Drain bleed Valve standard on all T-Line filters Except for option N

Pore size (Micron)

Cellulose Acetate (A)	Carbon Fiber (C)	Charged Nylon (CN)	Depth PP (DP)	PTFE (F)	Glass Fiber (G)	Polypro Membrane (M)	Nylon (N)	Natural Glass Fiber (NG)	Nylon Non-Woven Media (NN)	Nylon Screen (NS)	PP Media (P)	Polypro Screen (PS)	Wrapped PP Media (RP)	PES (S)	Polyester Screen (TS)	Polyethylene (UE)
020 = 0.20 **045** = 0.45 **065** = 0.65 **080** = 0.80 **120** = 1.20	Leave pore size blank for Carbon Fiber	**005** = 0.05 **010** = 0.10 **020** = 0.20 **045** = 0.45 **065** = 0.65 **080** = 0.80 **120** = 1.20	**002** = 0.2 **005** = 0.5 **010** = 1.0 **015** = 1.5 **025** = 2.5 **045** = 4.5 **100** = 10 **200** = 20	**010** = 0.1 **020** = 0.2 **045** = 0.45 **100** = 1.0 **300** = 3.0 **500** = 5.0 **999** = 10.0	**005** = 0.5 **010** = 1.0 **030** = 3.0 **050** = 5.0 **100** = 10.0 **200** = 20.0 **300** = 30.0 **Best for Liquid Applications**	**010** = 0.1 **020** = 0.2	**010** = 0.10 **020** = 0.20 **045** = 0.45 **065** = 0.65 **080** = 0.80 **120** = 1.20	**005** = 0.5 **010** = 1.0 **030** = 3.0 **050** = 5.0 **Best for Liquid Applications**	**010** = 1 **030** = 3 **050** = 5 **100**= 10 **200**= 20 **400**= 40	**070** = 7 **100** = 10 **200** = 20 **400** = 40 **600** = 60 **10X** = 100 **20X** = 200 **25X** = 250 **30X** = 300	**003** = 0.3 **006** = 0.6 **010** = 1.0 **030** = 3.0 **050** = 5.0 **100** = 10.0 **200** = 20.0 **300** = 30.0 **500** = 50.0 **700** = 70.0 **10X** = 100.0 **15X** = 150.0	**10X** = 100 **15X** = 150 **20X** = 200 **30X** = 300 **50X** = 500	**003** = 0.3 **005** = 0.6 **010** = 1.0 **030** = 3.0 **050** = 5.0 **070** = 7.0 **100** = 10.0 **200** = 20.0	**005** = 0.05 **010** = 0.1 **020** = 0.2 **045** = 0.45 **065** = 0.65 **080** = 0.8 **120** = 1.2	**050** = 5 **070** = 7 **100** = 10 **200** = 20 **300** = 30 **400** = 40 **550** = 55 **730** = 73	**010** = 0.1 **020** = 0.20 **045** = 0.45 **100** = 1.0

Your Local Distributor:

ZenPure

North & South Americas:
ZenPure Americas, Inc
www.zenpure.com
Info-us@zenpure.com
703-335-9910

All Other Regions:
ZenPure Corporation
www.zenpure.com
info@zenpure.com
+86 571 2288 6800

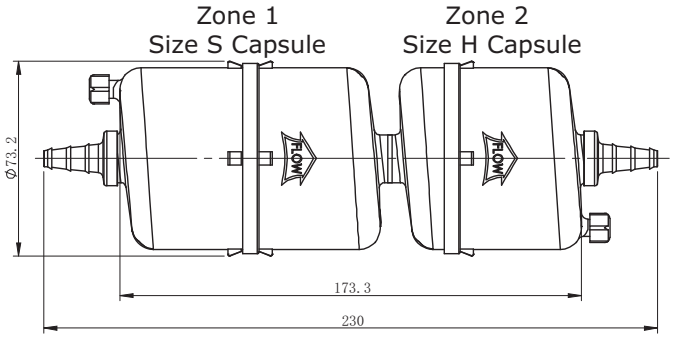
PureFlo SKML Multi-Zone Capsule Filter

Multi-Zone Filter

PureFlo® SKML capsule filters are designed to filter product in a two stage process. Two separate filters are permanently joined together to capture agglomerates, large cell fragments or gels and different size particles in separate stages to avoid premature plugging and increase filter lifetime. The filters can be tailored to specific applications that have multiple size inclusions and particles. The first filter acts as a pre-filter, protecting the tighter final filter. All the different PureFlo® Media can be incorporated in this unique design. This double filter allows for ease of use, minimizing space and potential connection issues. There are numerous different fitting options available for the inlet and outlet. The fittings can me mixed and matched for greater flexibility to minimize or eliminate needed connection adapters. The inlet and outlet ports are available with 23 fitting options.

These capsules eliminate the time and expense of cleaning multiple stainless steel housings or setting up sequential filter capsules aseptically. The capsule shell is an all polypropylene construction that provides excellent chemical compatibility with low extractables. No adhesives or binders are used in the encapsulation process. Each capsule is manufactured under tight process control to give you a uniform product with every filter.

Applications	
Fermentor	Water
Biologics	Pharmaceuticals
Clarification	Bio-Bags
Fine Chemicals	Food & Beverage
Gel Removal	High Loading Processes



Specifications

Materials of Construction:	Media: Any ZenPure PureFlo Media Media Supports: Media Dependent Shell, Cage, Core, and End Caps: Polypropylene, Gamma-stabilized, Polypropylene, Polyethylene, Nylon
Fitting Connections:	Hose Barb, NPT, Compression Quick Couplings, and Sanitary. Any inlet/outlet combinations. (Custom adaptors available upon request)
Sterilization:	The filters can be sterilized by autoclaving, ETO, and gamma sterilization depending on the construction. Capsules can be autoclaved 25 times at 257°F/125°C for 30 minutes or chemically sanitized in situ using common sanitizing agents or hot water at 194°F/90°C for a limited time (dependent on time and temperature). Capsules must not be in situ steam-sterilized.
Regulatory Compliance:	The filters are constructed with polypropylene resins and filtration media in compliance with 21CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastic.

For more specific information please see individual Datasheets for each filter zone.

PureFlo SKML Multi-Zone Capsule Filter

PureFlo SKML Capsule Ordering Guide—Pick 1-10

Example of Part number: SKMLLDP010SS020TCTC

PureFlo SKML Capsule, 5” 1st Filter with 1um Depth PP, 2.5” 2nd Filter with 0.2um PES, 1-1/2” Tri-clamp Inlet and Outlet

1	2	3	4	5	6	7
PureFlo Capsule Filters	**1st Filter Length**	**1st Filter Media**	**1st Filter Pore size (Micron)**	**2nd Filter Length**	**2nd Filter Media**	**2nd Filter Pore size (Micron)**
SKML = Capsule filter Multi-Zone Luer Lock Vent/Drain	**H** = 1.5" **S** = 2.5" **L** = 5" **E** = 7.5" **K** = 10"	A = Cellulosic Acetate C = Carbon Fiber CN = Charged Nylon DP = Depth PolyPro F = PTFE G = Glass Fiber M = PolyPro Membrane N = Nylon NG = Natural Glass Fiber NN = Nylon Non-Woven Media NS = Nylon Screen P = PolyPro Media PS = PolyPro Screen RP = Wrapped PolyPro Media S = PES TS = Polyester Screen UE = Polyethylene	**Pick From Pore Size Table**	**H** = 1.5" **S** = 2.5" **L** = 5" **E** = 7.5" **K** = 10"	A = Cellulosic Acetate C = Carbon Fiber CN = Charged Nylon DP = Depth PolyPro F = PTFE G = Glass Fiber M = PolyPro Membrane N = Nylon NG = Natural Glass Fiber NN = Nylon Non-Woven Media NS = Nylon Screen P = PolyPro Media PS = PolyPro Screen RP = Wrapped PolyPro Media S = PES TS = Polyester Screen UE = Polyethylene	**Pick From Pore Size Table**

8	9	10
Inlet Fitting	**Outlet Fitting**	**Options**
1C	**1C** = 1/8" Compression	**Grade**
1H	**1H** = 1/8" Hose barbs	**Blank** = Standard Grade
1N	**1N** = 1/8" MNPT	**-B** = Biological Reduction Grade
1NF	**1NF** = 1/8" FNPT	**-PH** = Pharmacuetical Grade
1Q	**1Q** = 1/8" Male Quick Coupling with Metal latch	
1QF	**1QF** = 1/8" Female Quick Coupling with Metal latch	**Shell Material**
1QFV	**1QFV** = 1/8" Female Valved Quick Coupling with Metal latch	**Blank** = Polypropylene
1QV	**1QV** = 1/8" Male Valved Quick Coupling with Metal latch	**-GP** = Gamma Stablized PP
2C	**2C** = 1/4" Compression	**-NY** = Nylon Shell
2H	**2H** = 1/4" to 1/2" Hose barbs	**-E** = Polyethylene Shell
2HS	**2HS** = 1/4" to 3/8" Hose barbs	
2LF	**2LF** = Large Female Luer Lock fitting	**Vent & Drain**
2N	**2N** = 1/4" MNPT	**-N** = No vent or Drain fittings
2NF	**2NF** = 1/4" FNPT	**-NI** = No vent or Drain Inlet
2P	**2P** = 1/4" Push to Connect	**-NO** = No vent or Drain Outlet
2PE	**2PE** = 1/4" Push to Connect Elbow	
2Q	**2Q** = 1/4" Male Quick Coupling for Metal latch	
2QF	**2QF** = 1/4" Female Quick Coupling with Metal latch	**Sterilization**
2QFP	**2QFP** = 1/4" Female Quick Coupling with Plastic latch	**-ETO** = Ethylene Oxide
2QFV	**2QFV** = 1/4" Female Valved Quick Coupling with Metal latch	
2QP	**2QP** = 1/4" Male Quick Coupling for Plastic latch	
2QV	**2QV** = 1/4" Male Valved Quick Coupling with Metal latch	**O-Ring for Quick Coupling**
2V	**2V** = 1/4" Walther Quick Connect	**Blank** = O-ring Silicon
3C	**3C** = 3/8" Compression	**-OE** = O-ring EPDM
3H	**3H** = 3/8" Hose Barb	**-ON** = O-ring Nitrile
3HE	**3HE** = 3/8" Hose Barb Elbow	**-OV** = O-ring Viton
	3H-FB = 3/8" Hose Barb with filling bell or **-FC** with Cap	
3NF	**3NF** = 3/8" FNPT	
4C	**4C** = 1/2" Compression	
4H	**4H** = 1/2" Hose Barb	
4N	**4N** = 1/2" MNPT	
4Q	**4Q** = 1/2" Male Quick Coupling for Plastic latch	
8C	**8C** = 5/16" Compression	
MT	**MT** = 1/2" Tri clamps	
TC	**TC** = 1-1/2" Tri clamp	
	TS = Shower Head	

Pore size (Micron)

Cellulose Acetate (A)	Carbon Fiber (C)	Charged Nylon (CN)	Depth PP (DP)	PTFE (F)	Glass Fiber (G)	Polypro Membrane (M)	Nylon (N)	Natural Glass Fiber (NG)
020 = 0.20	Leave pore size blank for Carbon Fiber	**005** = 0.05	**002** = 0.2	**010** = 0.1	**005** = 0.5	**010** = 0.1	**010** = 0.10	**005** = 0.5
045 = 0.45		**010** = 0.10	**005** = 0.5	**020** = 0.2	**010** = 1.0	**020** = 0.2	**020** = 0.20	**010** = 1.0
065 = 0.65		**020** = 0.20	**010** = 1.0	**045** = 0.45	**030** = 3.0		**045** = 0.45	**030** = 3.0
080 = 0.80		**045** = 0.45	**015** = 1.5	**100** = 1.0	**050** = 5.0		**065** = 0.65	**050** = 5.0
120 = 1.20		**065** = 0.65	**025** = 2.5	**300** = 3.0	**100** = 10.0		**080** = 0.80	
		080 = 0.80	**045** = 4.5	**500** = 5.0	**200** = 20.0		**120** = 1.20	
		120 = 1.20	**100** = 10	**999** = 10.0	**300** = 30.0			
			200 = 20		**Best for Liquid Applications**			**Best for Liquid Applications**

Pore size (Micron)

Nylon Non-Woven Media (NN)	Nylon Screen (NS)	PP Media (P)	Polypro Screen (PS)	Wrapped PP Media (RP)	PES (S)	Polyester Screen (TS)	Polyethylene (UE)
010 = 1	**070** = 7	**003** = 0.3	**10X** = 100	**003** = 0.3	**005** = 0.05	**050** = 5	**010** = 0.1
030 = 3	**100** = 10	**006** = 0.6	**15X** = 150	**005** = 0.6	**010** = 0.1	**070** = 7	**020** = 0.20
050 = 5	**200** = 20	**010** = 1.0	**20X** = 200	**010** = 1.0	**020** = 0.2	**100** = 10	**045** = 0.45
100= 10	**400** = 40	**030** = 3.0	**30X** = 300	**030** = 3.0	**045** = 0.45	**200** = 20	**100** = 1.0
200= 20	**600** = 60	**050** = 5.0	**50X** = 500	**050** = 5.0	**065** = 0.65	**300** = 30	
400= 40	**10X** = 100	**100** = 10.0		**070** = 7.0	**080** = 0.8	**400** = 40	
	20X = 200	**200** = 20.0		**100** = 10.0	**120** = 1.2	**550** = 55	
	25X = 250	**300** = 30.0		**200** = 20.0		**730** = 73	
	30X = 300	**500** = 50.0					
		700 = 70.0					
		10X = 100.0					
		15X = 150.0					

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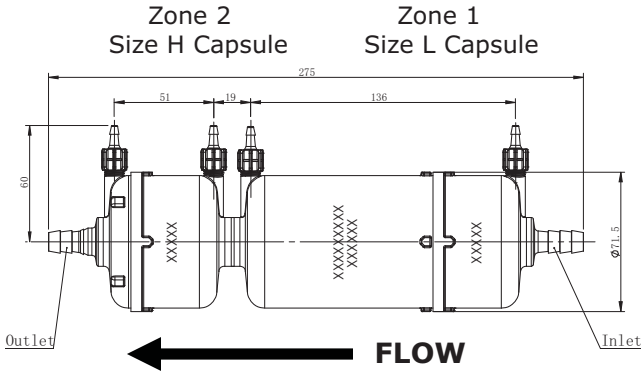
PureFlo SKMV Multi-Zone Capsule Filter

Multi-Zone Filter

PureFlo® SKMV capsule filters are designed to filter product in a two stage process. Two separate filters are permanently joined together to capture agglomerates, large cell fragments, gels and different size particles in separate stages to avoid premature plugging and increase filter lifetime. The filters can be tailored to specific applications that have multiple size inclusions and particles. The first filter acts as a pre-filter, protecting the tighter final filter. All the different PureFlo® Media can be incorporated in this unique design. This double filter allows for ease of use, minimizing space and potential connection issues. There are numerous different fitting options available for the inlet and outlet. The fittings can me mixed and matched for greater flexibility to minimize or eliminate needed connection adapters. The inlet and outlet ports are available with 20 fitting options. The vent and drain are convenient multi-turn bleed valves to allow for sampling or evacuation of air.

These capsules eliminate the time and expense of cleaning multiple stainless steel housings or setting up sequential filter capsules aseptically. The capsule shell is an all polypropylene construction that provides excellent chemical compatibility with low extractables. No adhesives or binders are used in the encapsulation process. Each capsule is manufactured under tight process control to give you a uniform product with every filter.

Applications	
Fermentor	Water
Biologics	Pharmaceuticals
Clarification	Bio-Bags
Fine Chemicals	Food & Beverage
Gel Removal	High Loading Processes



Specifications

Materials of Construction:	Media: Any ZenPure PureFlo Media Media Supports: Media Dependent Shell, Cage, Core, and End Caps: Polypropylene, Gamma-stabilized, Polypropylene, Polyethylene, Nylon
Fitting Connections:	Hose Barb, NPT, Compression Quick Couplings, and Sanitary. Vent & Drain: 1/4" Hose Barb Bleed Valves Any inlet/outlet combinations. (Custom adaptors available upon request)
Sterilization:	The filters can be sterilized by autoclaving, ETO, and gamma sterilization depending on the construction. Capsules can be autoclaved 25 times at 257°F/125°C for 30 minutes or chemically sanitized in situ using common sanitizing agents or hot water at 194°F/90°C for a limited time (dependent on time and temperature). Capsules must not be in situ steam-sterilized.
Regulatory Compliance:	The filters are constructed with polypropylene resins and filtration media in compliance with 21CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastic.

For more specific information please see individual datasheets for each filter zone.

PureFlo SKMV Multi-Zone Capsule Filter

PureFlo SKMV Capsule Ordering Guide—Pick 1-10

Example of Part number: SKMVLDP010SS020TCTC

PureFlo SKMV Capsule, 5" 1st Filter with 1um Depth PP, 2.5" 2nd Filter with 0.2um PES, 1-1/2" Tri-clamp Inlet and Outlet

1	2	3	4	5	6	7	8	9	10
PureFlo Capsule Filters	1st Filter Length	1st Filter Media	1st Filter Pore size (Micron)	2nd Filter Length	2nd Filter Media	2nd Filter Pore size (Micron)	Inlet Fitting	Outlet Fitting	Options
	H = 1.5"	A = Cellulosic Acetate		H = 1.5"	A = Cellulosic Acetate		1H	1H = 1/8" Hose barbs	Grade
SKMV = Capsule filter	S = 2.5"	C = Carbon Fiber	Pick From Pore Size Table	S = 2.5"	C = Carbon Fiber	Pick From Pore Size Table	1Q	1Q = 1/8" Male Quick Coupling with Metal latch	Blank = Standard Grade
Multi-Zone	L = 5"	CN = Charged Nylon		L = 5"	CN = Charged Nylon		1QF	1QF = 1/8" Female Quick Coupling with Metal latch	-B = Biological Reduction Grade
Bleed Valve Vents	E = 7.5"	DP = Depth Poly Pro		E = 7.5"	DP = Depth Poly Pro		1QFV	1QFV = 1/8" Female Valved Quick Coupling with Metal latch	-PH = Pharmacuetical Grade
	K = 10"	F = PTFE		K = 10"	F = PTFE		1QV	1QV = 1/8" Male Valved Quick Coupling with Metal latch	
		G = Glass Fiber			G = Glass Fiber		2H	2H = 1/4" Hose barb	Shell Material
		M = Poly Pro Membrane			M = Poly Pro Membrane		2HL	2HL = 1/4" to 1/2" Hose barbs	Blank = Polypropylene
		N = Nylon			N = Nylon			2H-FB = 1/4" Hose Barb with filling bell or -FC with Cap	-GP = Gamma Stablized PP Shell
		NG = Natural Glass Fiber			NG = Natural Glass Fiber		2N	2N = 1/4" MNPT	-NY = Nylon Shell
		NN = Nylon Non-Woven Media			NN = Nylon Non-Woven Media		2P	2P = 1/4" Push to Connect	-E = Polyethylene Shell
		NS = Nylon Screen			NS = Nylon Screen		2PE	2PE = 1/4" Push to Connect Elbow	
		P = Poly Pro Media			P = Poly Pro Media		2Q	2Q = 1/4" Male Quick Coupling for Metal latch	Vent & Drain
		PS = Poly Pro Screen			PS = Poly Pro Screen		2QF	2QF = 1/4" Female Quick Coupling with Metal latch	-N = No vent or Drain fittings
		RP = Wrapped Poly Pro Media			RP = Wrapped Poly Pro Media		2QFV	2QFV = 1/4" Female Valved Quick Coupling with Metal latch	-NI = No vent or Drain inlet fitting
		S = PES			S = PES		2QP	2QP = 1/4" Male Quick Coupling for Plastic latch	
		TS = Polyester Screen			TS = Polyester Screen		2QV	2QV = 1/4" Male Valved Quick Coupling with Metal latch	-NO = No vent or Drain Outlet fitting
		UE = Polyethylene			UE = Polyethylene		2V	2V = 1/4" Walther Quick Connect	
							3H	3H = 3/8" Hose Barb	Sterilization
								3H-FB = 3/8" Hose Barb with filling bell or -FC with Cap	-ETO = Ethylene Oxide Sterilization
							4H	4H = 1/2" Hose Barb	
							4Q	4Q = 1/2" Male Quick Coupling for Plastic latch	O-Ring for Quick Coupling
							5H	5H = 5/8" Hose Barb	Blank = O-ring Silicon (Standard)
							MT	MT = 1/2" Tri clamps	-OE = O-ring EPDM
							TC	TC = 1-1/2" Tri clamp	-ON = O-ring Nitrile
								TS = Shower Head	**-OV** = O-ring Viton

Pore size (Micron)

Cellulose Acetate (A)	Carbon Fiber (C)	Charged Nylon (CN)	Depth PP (DP)	PTFE (F)	Glass Fiber (G)	Polypro Membrane (M)	Nylon (N)	Natural Glass Fiber (NG)
020 = 0.20	Leave pore size blank for Carbon Fiber	**005** = 0.05	**002** = 0.2	**010** = 0.1	**005** = 0.5	**010** = 0.1	**010** = 0.10	**005** = 0.5
045 = 0.45		**010** = 0.10	**005** = 0.5	**020** = 0.2	**010** = 1.0	**020** = 0.2	**020** = 0.20	**010** = 1.0
065 = 0.65		**020** = 0.20	**010** = 1.0	**045** = 0.45	**030** = 3.0		**045** = 0.45	**030** = 3.0
080 = 0.80		**045** = 0.45	**015** = 1.5	**100** = 1.0	**050** = 5.0		**065** = 0.65	**050** = 5.0
120 = 1.20		**065** = 0.65	**025** = 2.5	**300** = 3.0	**100** = 10.0		**080** = 0.80	
		080 = 0.80	**045** = 4.5	**500** = 5.0	**200** = 20.0		**120** = 1.20	
		120 = 1.20	**100** = 10	**999** = 10.0	**300** = 30.0			
			200 = 20		**Best for Liquid Applications**			**Best for Liquid Applications**

Pore size (Micron)

Nylon Non-Woven Media (NN)	Nylon Screen (NS)	PP Media (P)	Polypro Screen (PS)	Wrapped PP Media (RP)	PES (S)	Polyester Screen (TS)	Polyethylene (UE)
010 = 1	**070** = 7	**003** = 0.3	**10X** = 100	**003** = 0.3	**005** = 0.05	**050** = 5	**010** = 0.1
030 = 3	**100** = 10	**006** = 0.6	**15X** = 150	**005** = 0.6	**010** = 0.1	**070** = 7	**020** = 0.20
050 = 5	**200** = 20	**010** = 1.0	**20X** = 200	**010** = 1.0	**020** = 0.2	**100** = 10	**045** = 0.45
100= 10	**400** = 40	**030** = 3.0	**30X** = 300	**030** = 3.0	**045** = 0.45	**200** = 20	**100** = 1.0
200= 20	**600** = 60	**050** = 5.0	**50X** = 500	**050** = 5.0	**065** = 0.65	**300** = 30	
400= 40	**10X** = 100	**100** = 10.0		**070** = 7.0	**080** = 0.8	**400** = 40	
	20X = 200	**200** = 20.0		**100** = 10.0	**120** = 1.2	**550** = 55	
	25X = 250	**300** = 30.0		**200** = 20.0		**730** = 73	
	30X = 300	**500** = 50.0					
		700 = 70.0					
		10X = 100.0					
		15X = 150.0					

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PureFlo® EDF Capsule

Endoscope Disinfectant Filter

PureFlo® Endoscope Disinfectant Filter is designed for quick and easy connection to endoscope wash machines' disinfectant and air lines.

The polypropylene construction provides excellent compatibility with a wide-range of disinfectants. No adhesives, binders, or surfactants are used in the manufacturing process. All units are thermally-sealed and flushed, dried and packaged to provide a quality product straight out of the box.

Replacement for #MF-01-0011 is ZenPure #EDFNS600L2Q2QP

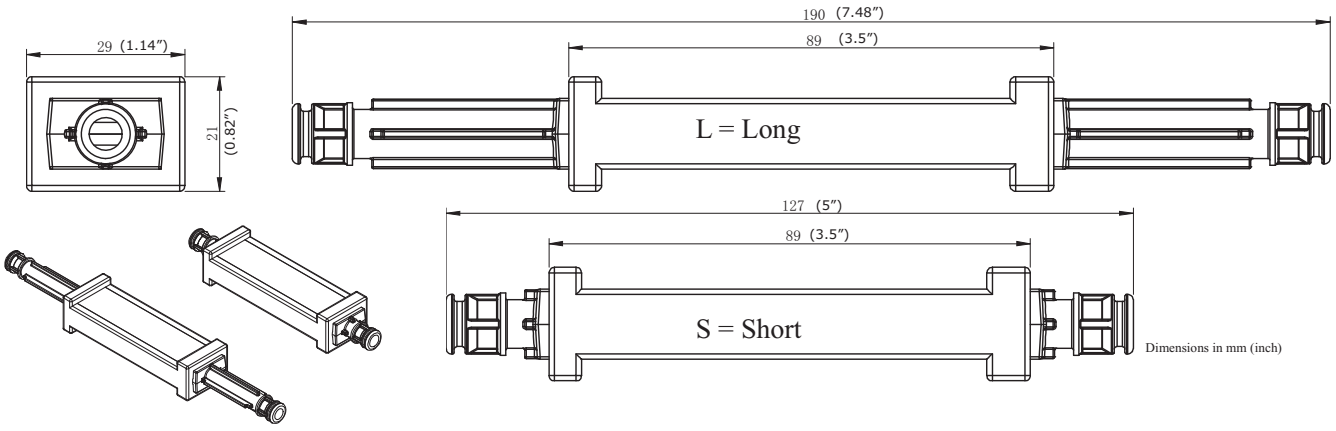
Replacement for #MF01-0028 is ZenPure #G50CF0202QPL2QPL

Applications	
Endoscopes	Chemicals
Lab scale testing	Water
Scale up Processing	Clarification

Specifications

Materials of Construction:	Media: Polypropylene Media, PTFE, Nylon Screen, PES, Polyester Screen Shell, Cage, Core, End Caps: Polypropylene , PE, Nylon Sealing: Thermally bonded
Fitting Connections:	Male Quick Connect, Hose Barb
Nominal Dimensions:	Lengths: Long - 190mm (7.48") , Short - 127mm (5") Dimensions : 21mm (0.82") x 29mm (1.14")
Effective Filtration Area:	4 in^2 (26cm^2)
Available Ratings:	0.04um - 70.0um (Dependent on Media)
Operating Conditions:	Maximum Operating Pressure: Liquid: 5.5 bar (80psi) at 72°F/22°C Maximum Forward Differential Pressure: 4.21 bar (60psi) at 72°F/22°C Maximum Reverse Differential Pressure: 2.1 bar (30 psi) at 72°F/22°C Minimum Burst Pressure: 8.3 bar (120psi) at 72°F/22°C Maximum Operating Temperature: 176°F (80°C)
Autoclave Cycles:	The filters can be sterilized by autoclaving for 10 cycles at 257°F/125°C for 30 minutes, except for PE membrane. Capsules must not be in situ steam-sterilized.

PureFlo® EDF Capsule



PureFlo Endoscope Disinfectant Filter Ordering Guide

PureFlo Capsule Filters	Filter Media	Pore size (Micron)	Length	Input Fitting	Output Fitting	Options
EDF PureFlo Endoscope Disinfectant Filter Capsule	**NS** = Nylon Screen **P** = PP Media **PS** = Polypropylene Screen **TS** = Polyester Screen	**Pick From Pore Size Table**	**S** = Short **L** = Long	**1Q** = 1/8" Male Quick Coupling for Metal latch **1QP** = 1/8" Male Quick Coupling for Plastic latch **2H** = 1/4" to 1/2" Hose barbs **2Q** = 1/4" Male Quick Coupling for Metal latch **2QP** = 1/4" Male Quick Coupling for Plastic latch	**1Q** = 1/8" Male Quick Coupling for Metal latch **1QP** = 1/8" Male Quick Coupling for Plastic latch **2H** = 1/4" to 1/2" Hose barbs **2Q** = 1/4" Male Quick Coupling for Metal latch **2QP** = 1/4" Male Quick Coupling for Plastic latch	**Grade** **Blank** = Standard Grade **Shell Material** **Blank** = Polypropylene **-GP** = Gamma Stablized PP Shell **-NY** = Nylon Shell **-E** = Polyethylene Shell **Sterilization** **-ETO** = Ethylene Oxide Sterilization **O-Ring for Quick Coupling** **Blank** = O-ring Silicon (Standard) **Inlet = Red O-Ring** **Outlet = Black O-Ring** **-OE** = O-ring EPDM **-ON** = O-ring Nitrile **-OV** = O-ring Viton
Example - Block Capsule, Nylon Screen, 20 micron,Long version, 1/4" Male Quick Connect for Metal Latch Inlet, 1/4" Male Quick Connect for Plastic latch would be EDFNS200L2Q2QP						
Quick Couplings are molded, compatible with CPC (Colder), LinkTech and others.						

Pore size (Micron)			
Nylon Screen (NS)	**PP Media (P)**	**Polyester Screen (TS)**	**Polypro Screen (PS)**
070 = 7	**003** = 0.3	**050** = 5	**10X** = 100
100 = 10	**006** = 0.6	**070** = 7	**15X** = 150
200 = 20	**010** = 1.0	**100** = 10	**20X** = 200
400 = 40	**030** = 3.0	**200** = 20	**30X** = 300
600 = 60	**050** = 5.0	**300** = 30	**50X** = 500
10X = 100	**100** = 10.0	**400** = 40	
20X = 200	**200** = 20.0	**550** = 55	
25X = 250	**300** = 30.0	**730** = 73	
30X = 300	**500** = 50.0		
	700 = 70.0		

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ZenPure Cartridge Media Options

A = Cellulose Acetate

C = Carbon Fiber

C** = Cellulose Media

CN = Charged Nylon Membrane 6,6

DP = Depth Polypropylene Media

UE = Polyethylene Membrane

F = PTFE

G = Glass Fiber

HF = Philic PTFE

HP = High Performance Polypropylene Media

M = Polypropylene Membrane

N = Nylon Membrane 6,6

NG = Natural Glass Fiber

NN = Nylon Non-Woben

NS = Nylon Screen

P = Polypropylene Media

PS = Polypropylene Screen

RP = Wrapped PP Media

S = Polyethersulfone

SS = Stainless Steel

TS = Polyester Screen

ZS = Extended Life Polyethersulfone Life

Pore size (Micron)

Cellulose Acetate (A)	Carbon Fiber (C)	Charged Nylon (CN)	Depth PP (DP)	Polyethylene (UE)	PTFE (F)	Glass Fiber (G)	Philic PTFE (HF)	High Performance PP Media (HP)	PP Membrane (M)	Nylon (N)	Natural Glass Fiber (NG)
20 = 0.20 **45** = 0.45 **65** = 0.65 **80** = 0.80 **1X** = 1.20	**Leave pore size blank for Carbon Fiber**	**05** = 0.05 **10** = 0.10 **20** = 0.20 **45** = 0.45 **65** = 0.65 **80** = 0.80 **1X** = 1.20	**02** = 0.2 **05** = 0.5 **10** = 1.0 **15** = 1.5 **25** = 2.5 **45** = 4.5 **1X** = 10 **2X** = 20	**10** = 0.1 **20** = 0.20 **45** = 0.45 **1X** = 1.0	**10** = 0.1 **20** = 0.2 **45** = 0.45 **1X** = 1.0 **3X** = 3.0 **5X** = 5.0 **9X** = 10.0	**U** = ULPA **H** = HEPA **02** = 0.2 **04** = 0.45 **05** = 0.5 **10** = 1.0 **30** = 3.0 **50** = 5.0 **1X** = 10 **2X** = 20 **3X** = 30 **Best for Gas Applications**	**10** = 0.1 **20** = 0.2 **45** = 0.45 **1X** = 1.0 **3X** = 3.0 **5X** = 5.0 **9X** = 10.0	**01** = 0.1 **02** = 0.2 **03** = 0.3 **06** = 0.6 **10** = 1.0 **30** = 3.0 **50** = 5.0 **1X** = 10.0	**10** = 0.1 **20** = 0.2	**05** = 0.05 **10** = 0.10 **20** = 0.20 **45** = 0.45 **65** = 0.65 **80** = 0.80 **1X** = 1.20	**05** = 0.5 **10** = 1.0 **30** = 3.0 **50** = 5.0 **Best for Liquid Applications**

Pore size (Micron)

Nylon Non-Woven Media (NN)	Nylon Screen (NS)	PP Media (P)	Polypro Screen (PS)	Wrapped PP Media (RP)	PES (S)	Stainless Steel Screen (SS)	Polyester Screen (TS)	Extended Life Polyethersul-fone (ZS)	Cellulose Media (C**)	
10 = 1 **30** = 3 **50** = 5 **1X** = 10 **2X** = 20 **4X** = 40	**70** = 7 **10** = 10 **20** = 20 **40** = 40 **60** = 60 **1X** = 100 **2X** = 200 **25X** = 250 **3X** = 300	**03** = 0.3 **06** = 0.6 **10** = 1.0 **30** = 3.0 **50** = 5.0 **70** = 7.0 **1X** = 10.0 **2X** = 20.0 **3X** = 30.0 **4X** = 40.0 **5X** = 50.0 **7X** = 70.0 **10X** = 100 **15X** = 150	**10X** = 100 **15X** = 150 **20X** = 200 **30X** = 300 **50X** = 500	**03** = 0.3 **05** = 0.5 **10** = 1.0 **30** = 3.0 **50** = 5.0 **70** = 7.0 **1X** = 10.0 **2X** = 20.0	**04** = 0.04 **10** = 0.1 **20** = 0.2 **45** = 0.45 **65** = 0.65 **80** = 0.8 **1X** =1.2	**180** = 18 **200** = 20 **250** = 25 **370** = 37 **460** = 46 **530** = 53 **610** = 61 **740** = 74 **10X** = 105 **15X** = 150 **20X** = 200 **25X** = 250	**05** = 5 **07** = 7 **10** = 10 **20** = 20 **30** = 30 **40** = 40 **55** = 55 **73** = 73	**10** = 0.10 **20** = 0.20 **45** = 0.45	XL Series Media	**CE1** = 15 **CE2** = 10 **CE3** = 5 **CE4** = 2.5 **CE5** = 1 **CE6** = 0.8 **CE7** = 0.45 **CE8** = 0.3 **CE9** = 0.2
									MicroMedia®	**CM7** = 0.45 **CM8** = 0.3 **CM9** = 0.2
									Carbon Type	
									MicroClear®	**CC4** = 1um General **CC5** = 1um Chemical Activated **CC6** = 1um Steam activated

PureFlo® Junior Cartridges
Compact Filtration

Multi-Use Junior Cartridge

PureFlo® Junior Cartridges are ready-to-use filters that offer high flows, increased throughputs, and high strength, all with the convenience of a small package. Designed for small applications in pharmaceutical, biotechnology, food and beverage, medical, chemical, and DI water industries.

PureFlo® Junior Cartridges are available with a wide range of hydrophilic and hydrophobic filter medias and pore sizes for liquid, gas, and venting applications. Process engineers can choose from 18 filtration medias to meet their needs.

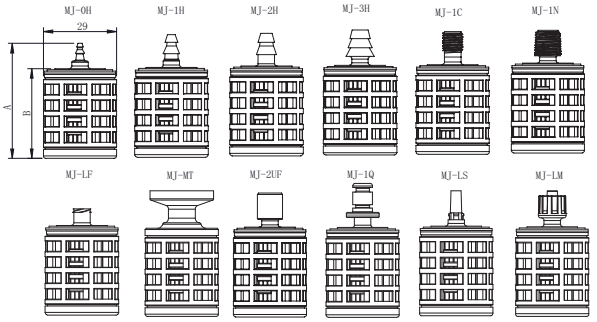
They can be built with several configurations, and used without a housing. The cage, core, and fitting are part of an all-polypropylene construction that provides excellent chemical compatibility with low levels of extractables. The supports can also be constructed in nylon, polyethylene, or gamma-stabilized polypropylene (PP) for additional compatibility. The filter is manufactured by thermal bonding. No adhesives are used in the bonding process.

Applications	
Clarification	Water & Wine
Hard Particle	Food & Beverages
Vacuum Pump	Pharmaceuticals
Chemicals	Biologics
Inks, Dyes	Tank Vent
Aerator	Vent

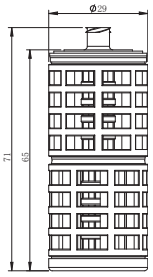
Specifications

Materials of Construction:	Media: Charged Nylon, Depth PP, Polyethylene, PTFE, Glass Fiber, PP Membrane, Nylon, Nylon Screen, PP media, PES, and Polyester Screen Media Supports: Polypropylene, Polyester, Nylon, or HDPE Shell, Cage, Core, End Caps: Polypropylene, Nylon, or HDPE Sealing: Thermally bonded
Fitting Connections:	12 Fittings - see ordering guide for availability. (Custom adaptors available upon request)
Nominal Dimensions:	Lengths: 1.5” (38 mm) without fittings, 2.5” (63.5 mm) without fittings Diameter: 1.14” (29 mm)
Effective Filtration Area:	260 cm^2 for single layer membrane, 230 cm^2 for double layer membrane 200 cm^2 for Depth and Screen Media
Available Ratings:	0.04 µm - 200.0 µm (Dependent on Media)
Operating Conditions:	Maximum Operating pressure: 5 bar (72.5 psi) at 22°C Maximum Operating Temperature: 80° C
Regulatory Compliance:	The filters are constructed with polypropylene resins and filtration media in compliance with 21 CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastics.

PureFlo® Junior Cartridges



Length H



Length S

Code name	Outlet Fitting	H Size(1.5″±1)			S Size(2.5″±1)		
		A	B	C	A	B	C
MJ-0H	1/16″-3/32″ Hose Barb	45.5	35.5	Ø29	74.5	64.5	Ø29
MJ-1H	1/8″-3/16″ Hose Barb	48.5	35.5	Ø29	77.5	64.5	Ø29
MJ-2H	3/16″-1/4″ Hose Barb	48.5	35.5	Ø29	77.5	64.5	Ø29
MJ-3H	1/4″-3/8″ Hose Barb	49.5	35.5	Ø29	78.5	64.5	Ø29
MJ-1C	1/8″ Compression	48.5	35.5	Ø29	77.5	64.5	Ø29
MJ-1N	1/8″ MNPT	48.5	35.5	Ø29	77.5	64.5	Ø29
MJ-LF	Luer Lock Female	42	35.5	Ø29	71	64.5	Ø29
MJ-MT	1/2″ Tri clamps	50	35.5	Ø29	79	64.5	Ø29
MJ-2UF	1/4″-28 UNF 2B	49	35.5	Ø29	78	64.5	Ø29
MJ-1Q	1/8″ Male Quick Coupling	53	35.5	Ø29	82	64.5	Ø29
MJ-LS	Luer Lock Male Slip	49.5	35.5	Ø29	78.5	64.5	Ø29
MJ-LM	Luer Lock Male	50	35.5	Ø29	79	64.5	Ø29

PureFlo® Junior Cartridge Ordering Guide

PureFlo Junior Cartridge	Final Filter Media	Pore Size (Micron)	Length	End Modification	Options	
MJ = Junior Cartridge Filter, PP parts standard Grade	**A** = Cellulose Acetate **C** = Carbon Fiber **CN** = Charged Nylon **DP** = Depth Polypropylene **F** = PTFE **G** = Glass Fiber **HF** = Philic PTFE **HP** = High Performance Polypropylene Media **M** = Polypropylene Membrane **N** = Nylon Membane **NG** = Natural Glass Fiber Media **NN** = Nylon Non-Woven Media **NS** = Nylon Screen **P** = Polypropylene Media **S** = Polyethersulfone **TS** = Polyester Screen **UE** = Polyethylene **ZS** = Extended Life Polyethersulfone	**Pick From Pore Size Table**	**H** = 1.5" **S** = 2.5"	**0H** = 1/16-3/32" Hose Barb **1C** = 1/8" Compression **1H** = 1/8-3/16" Hose Barb **1N** = 1/8" NPTM **1Q** = 1/8" Male Quick Coupling **2H** = 3/16-1/4" Hose Barb **2UF** = 1/4-28 thread Female **3H** = 1/4-3/8" Hose Barb **LF** = Luer Lock Female **LM** = Luer Lock Male **LS** = Male Luer Slip **MT** = 1/2" Tri Clamp	**Grade** **Blank =** Standard Grade **-PH** = Pharma Grade **Core/ Cage Material** **Blank** = Polypro construction **-E** = Polyethylene construction **-GP** = Gamma stable polypropylene construction **-NY** = Nylon construction **Sterilization** **-ETO =** Ethylene oxide sterilization	**O-Rings** **Blank** = O-ring Silicone (Standard) **-OE** = O-ring EPDM **-ON** = O-ring Nitrile **-OV** = O-ring Viton **Prefilter (add before Filter Media in part#)** **G(pore Size)**= Glass Fiber PreFilter **P(pore Size)**= PolyPro Media PreFilter **S(pore Size)** = PES PreFilter
Example - MJ Series, PTFE, 1.0um, no prefilter, 1/4" Hose Barb I/O is **MJF100H2H**						
Quick Couplings are molded, compatible with CPC (Colder), LinkTech and others.						

Cellulose Acetate (A)	Carbon Fiber (C)	Charged Nylon (CN)	Depth PP (DP)	PTFE (F)	Glass Fiber (G) Best for Gas Applications	Philic PTFE (HF)	High Performance Polypropylene Media (HP)	Polypro Membrane (M)	Nylon (N)	Natural Glass Fiber (NG)	Nylon Non Woven Media (NN)	Nylon Screen (NS)	Polypro Media (P)	PES (S)	Polyester Screen (TS)	Polyethylene (UE)	Extended Life PES (ZS)
020 = 0.20 **045** = 0.45 **065** = 0.65 **080** = 0.80 **120** = 1.20	**Leave Pore Size Blank for Carbon Fiber**	**005**= 0.05 **010** = 0.10 **020** = 0.20 **045** = 0.45 **065** = 0.65 **080** = 0.80 **120** = 1.20	**002** = 0.2 **005** = 0.5 **010** = 1.0 **015** = 1.5 **025** = 2.5 **045** = 4.5 **100** = 10.0 **200** = 20.0	**010** = 0.1 **020** = 0.2 **045** = 0.45 **100** = 1.0 **300** = 3.0 **500** = 5.0 **999** = 10.0	**U** = ULPA **H** = HEPA **002** = 0.2 **004** = 0.45 **005** = 0.5 **010** = 1.0 **030** = 3.0 **050** = 5.0 **100** = 10 **200** = 20 **300** = 30	**010** = 0.1 **020** = 0.2 **045** = 0.45 **100** = 1.0 **300** = 3.0 **500** = 5.0 **999** = 10.0	**001**= 0.1 **002**= 0.2 **003**= 0.3 **006**= 0.6 **010**= 1.0 **050** = 5.0 **100** = 10.0	**010** = 0.1 **020** = 0.2	**005**= 0.05 **010** = 0.10 **020** = 0.20 **045** = 0.45 **065** = 0.65 **080** = 0.80 **120** = 1.20	**005** = 0.5 **010** = 1.0 **030** = 3.0 **050** = 5.0 Best for Liquid Applications	**010** = 1 **030** = 3.0 **050** = 5.0 **100** = 10 **200** = 20 **200** = 20	**070** = 7 **100** = 10 **200** = 20 **400** = 40 **600** = 60 **10X** = 100 **20X** = 200	**003** = 0.3 **006** = 0.6 **010** = 1.0 **030** = 3.0 **050** = 5.0 **070** = 7.0 **100** = 10.0 **200** = 20.0 **300** = 30.0 **500** = 50.0 **700** = 70.0	**005** = 0.05 **010** = 0.1 **020** = 0.2 **045** = 0.45 **065** = 0.65 **080** = 0.8 **120** = 1.2	**050** = 5 **100** = 10 **200** = 20 **300** = 30 **400** = 40 **550** = 55 **730** = 73	**010** = 0.1 **020** = 0.20 **045** = 0.45 **100** = 1.0	**010** = 0.10 **020** = 0.20 **045** = 0.45

Your Local Distributor:

ZenPure

North & South Americas:
ZenPure Americas, Inc
www.zenpure.com
Info-us@zenpure.com
703-335-9910

All Other Regions:
ZenPure Corporation
www.zenpure.com
info@zenpure.com
+86 571 2288 6800

ZenFlo Series Filter Capsules

ZenFlo Series Filters are designed for increased throughput and easy integrity testing. The filter's built-in highly asymmetric prefilter significantly improves throughput in the most challenging filtration applications. Specifically optimized for the filtration of serum-based cell culture media, ZenFlo provides extended throughput compared to most single and dual-layered filters. The capsule's optimized design makes the filter very easy to wet, preventing false integrity test failures when using a suitable pre-wetting procedure.

The hydrophilic PES membrane is low protein-binding allowing optimum performance in biopharmaceutical processes. To provide the greatest possible process flexibility, the filter capsules are both autoclavable and gamma-irradiatable and are available with a wide range of configurations.

No adhesives, binders, or surfactants are used in the manufacturing process of these filters. They are flushed with pyrogen-free water to reduce extractables and speed production startup. 100% of the filter capsules are integrity tested during the manufacturing process.

Applications	
Buffers and Media	Fermentation Broths
Product Sterilization	Serums
Biologics	Antibiotics
Vaccines	Water

Specifications

Materials of Construction:	Media: PES (Polyethersulfone) Media Supports: PET (Polyester) Shell, Cage, Core: Gamma-Stable Polypropylene (JKP: Nylon Shell) End Caps: Nylon O-Rings: Silicone (standard)
Configurations:	See ordering guide for availability. Any inlet/outlet combinations. (Custom adaptors available upon request)
Available Ratings:	0.1 µm - 0.45 µm
Water Bubble Point Specification:	0.1 µm: 23 psi, 0.16 MPa (60% IPA/40% Water) 0.2 µm: 50 psi, 0.35 MPa (Water)
Bacterial Endotoxin:	Effluent is non-pyrogenic per USP Bacterial Endotoxin (0.25 EU/ml), determined using Limulus Amebocyte Lysate (LAL) Test.
Bacterial Retention:	0.2 µm pore size achieves complete retention of $>10^7$ CFU/cm^2 of *Brevundimonas diminuta* in accordance with ASTM F838-05. Validation Guide available upon request.
Regulatory Compliance:	The filters are constructed with polypropylene resins and filtration media in compliance with 21CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastics.

JZP ZenFlo Junior Capsules

Small Disposable Process Filtration

ZenFlo Junior capsule filters offer the smallest available footprint of all ZenPure pleated filter capsules. The small footprint allows for the filter to be used in tight spaces, reduces holdup volume, and is well suited for lab-scale applications where a disc filter is too small. Junior capsule filters are typically used in biopharmaceutical applications where the desired filtration volume is between 5 L and 20 L.

Specifications (continued for JZP Junior Capsules)

Materials of Construction:	Shell, End Caps: Nylon Sealing: Thermally bonded
Fitting Connections:	Fittings - See Ordering Guide for availability. (Custom adaptors available upon request)
Nominal Dimensions:	Lengths: 1.6" (41 mm) without fittings Diameter: 1.6" (41 mm)
Effective Filtration Area:	200 cm^2
Operating Conditions:	Maximum Operating pressure: Liquid: 5.5 bar (80 psi) at 72°F/22°C Minimum Burst Pressure: 8.3 bar (120psi) at 72 °F/22 °C Maximum Forward Differential Pressure: 5 bar (72psi) at 72 °F/22 °C Maximum Reverse Differential Pressure: 2.1 bar (30psi) at 72 °F/22 °C Maximum Operating Temperature: 176 °F/80 °C
Autoclavable & Sanitizable:	• Autoclave up to 25 times at 257 °F/125 °C for 30 minutes • Chemically sanitize *in situ* using common sanitizing agents or hot water at 194 °F/90 °C for a limited time (dependent on time and temperature) • Gamma Sterilize up to 50 kGy

JZP ZenFlo Junior Size Capsule Ordering Guide

PureFlo Junior Capsule Filters	Filter Media	Pore Size (Micron)	Effective Filtration Area	Inlet Fitting	Outlet Fitting	Options
JZP = Capsule Filter Pharma grade	**ZS** = Extended Life Polyethersulfone	**010** = 0.1 **020** = 0.2 **045**= 0.45	**Blank** = Standard - 200 cm^2 Media Dependent	**1H** **1Q** **2H** **2N** **2NS** **2NO** **2Q** **2QP** **3H** **M5F** **LF** **LM** **MT**	**1H** = 1/8" Hose Barb **1Q** = 1/8" Male Quick Coupling **2H** = 1/4" Hose barbs **2H -FB**= 1/4" Hose barbs with Filling Bell **2H -FC**= 1/4" Hose barbs with Filling Bell with Cap **2N** = 1/4" MNPT **2N** = 1/4" straight thread **2NO** = 1/4" straight thread with o-ring **2Q** = 1/4" Male Quick Coupling for Metal latch **2QP**= 1/4" Male Quick Coupling for plastic latch **3H =** 3/8" Hose Barb **M5F** = M5 Female thread **LF** = Female Luer Lock **LM** = Male Luer Lock **MT** = 1/2" Tri clamps	**Vent & Drain** **-N**= No vent or drain **-NI** = No vent or drain **-NO** = No vent or drain **O-Rings** **-OE** = O-ring EPDM **-ON** = O-ring Nitrile **-OV** = O-ring Viton **Blank** = O-ring Silicon (Standard)
Example - JZP Series, Extended Life PES, 0.2um, Female Luer Lock I/O is **JZPZS020LFLF**						

MZP ZenFlo Capsules

Versatile Small Capsule

ZenFlo Mini capsule filters bridge the gap scaling between Junior capsules and standard-sized capsules. The small footprint is very well suited for use with smaller (5-50 L) cell culture bags. Mini capsule filters are typically used in biopharmaceutical applications where the desired filtration volume is between 5 L and 50 L.

Specifications (continued for MZP Capsules)

Nominal Dimensions:	Length: 3.6 -5.1" (91-129 mm) Diameter: 2.3" (60 mm)
Effective Filtration Area:	200-300 cm^2
Operating Conditions:	Maximum Operational Pressure: Liquid: 5.5 bar (80 psi) at 72 °F/22 °C Minimum Burst Pressure: 8.3 bar (120 psi) at 72 °F/22 °C Maximum Forward Differential Pressure: 5.0 bar 72 psi) at 72 °F/22 °C Maximum Reverse Differential Pressure: 2.1 bar (30 psi) at 72 °F/22 °C Maximum Operating Temperature: PP, Gamma PP & Nylon: 176 °F/80 °C
Autoclavable & Sanitizable:	• Autoclave up to 25 times at 257 °F/125 °C for 30 minutes • Chemically sanitize *in situ* using common sanitizing agents or hot water at 194 °F/90 °C for a limited time (dependent on time and temperature). • Gamma Sterilize up to 50 kGy • Capsules must not be in situ steam-sterilized.

MZP ZenFlo Size Capsule Ordering Guide

PureFlo Capsule Filters	Filter Media	Pore size (Micron)	Surface Area	Inlet Fitting	Outlet Fitting	Options
MZP = Pharma grade	**ZS** = Extended Life Polyethersulfone	**010** = 0.1 **020** = 0.2 **045**= 0.45	**A** = 200 cm^2 **B** = 300 cm^2 **C** = 400 cm^2 **D** = 500 cm^2	**1C** **1H** **1Q** **1QF** **1QE** **1QFV** **1QV** **2C** **2CE** **2H** **2N** **2NO** **2NS** **2Q** **2QE** **2QF** **2QP** **2QFV** **2QV** **3H** **3NF** **5H** **BH** **LF** **LFE** **LM** **MT**	**1C** = 1/8" Compression **1H** = 1/8" Hose Barb **1Q** = 1/8" Male Quick Coupling **1QE** = 1/8" Male Quick Coupling Elbow **1QF** = 1/8" Female Quick Coupling **1QFV** = 1/8" Female Quick Connect w/Valve **1QV** = 1/8" Male Quick Connect w/Valve **2C** = 1/4" Compression **2CE** = 1/4" Compression Elbow **2H** = 1/4" Hose barbs **2H -FB** = 1/4" Hose barbs with Filling Bell **2H -FC** = 1/4" Hose barbs with Filling Bell w/ Cap **2N** = 1/4" MNPT **2NO** = 1/4" Straight taper thread+EP O-Ring **2NS** = 1/4" Straight taper thread **2Q** = 1/4" Male Quick Coupling for Metal latch **2QE** = 1/4" Male Quick Coupling for Metal latch Elbow **2QF** = 1/4" Female Quick Coupling with Metal latch **2QP** = 1/4" Female Quick Connect w/Valve **2QFV** = 1/4" Female Quick Connect for Plastic latch **2QV** = 1/4" Male Quick Connect w/Valve **3H** = 3/8" Hose Barb **3NF** = 3/8" Female NPT **5H** = 5/8" Hose Barb **BH** = 3/16" Hose Barb **LF** = Female Luer Lock **LFE** = Female Luer Lock Elbow **LM** = Male Luer Lock **MT** = 1/2" Tri clamps	**Shell Material** **Blank** = Gamma stable polypropylene shell (standard) **Vent & Drain** **-N** = No vent or drain fittings **-NI** = No vent or drain inlet **-NO** = NO vent or drain outlet **O-Ring for Quick Coupling** **Blank** = O-ring Silicone **-OE** = O-ring EPDM **-ON** = O-ring Nitrile **-OV** = O-ring Viton
Example - MZP Series, Extended Life PES, 0.2um, 500cm2, 1/4" Hose Barb I/O is **MZPZS020D2H2H**						

SZV Series ZenFlo Filter Capsules

Pharmaceutical Capsule filter

ZenFlo Standard capsule filters are suitable for most small to mid-scale biopharmaceutical processes. The wide range of available inlet and outlet connections significantly reduce the need for adapters, simplifying single use systems and thereby reducing the risk of breaching asepsis. Standard capsules are typically used in biopharmaceutical applications where the desired filtration volume is between 20 L and 500 L.

Specifications (continued for SZV Capsules)

Materials of Construction:	Push to Connect Fitting: Acetal-body, EPDM-O-Ring, 304 SS Grip Ring
Fitting Connections:	See ordering guide for the availability. Any inlet/outlet combinations. (Custom adaptors available upon request)
Nominal Dimensions:	Lengths: 1.5" (51 mm), 2.5" (80 mm), 5.0" (136 mm), 7.5" (210 mm), 10 in (265 mm) Diameter: 2.88" (73 mm)
Nominal Effective Filtration Area:	1.5": 0.58 ft^2 (540 cm^2), 2.5": 1.2 ft^2 (1100 cm^2), 5.0": 2.2 ft^2 (2100 cm^2), 7.5": 3.3 ft^2 (3100 cm^2), 10 in: 4.4 ft^2 (4100 cm^2)
Operating Conditions:	Maximum Working Pressure: Liquid: 5.5 bar (80 psi) at 72 °F/22 °C Minimum Burst Pressure: 8.3 bar (120 psi) at 72 °F/22 °C Maximum Forward Differential Pressure: 5 bar (72 psi) at 72 °F/22 °C Maximum Reverse Differential Pressure: 3.0 bar (44 psi) at 72 °F/22 °C Maximum Operating Temperature: 176 °F/80 °C
Autoclavable & Sanitizable:	● Autoclave up to 25 times at 257 °F/125 °C for 30 minutes ● Chemically sanitize *in situ* using common sanitizing agents or hot water at 194 °F/90 °C for a limited time (dependent on time and temperature) ● Gamma Sterilize up to 50 kGy ● Capsules must not be in situ steam-sterilized

PureFlo SZV Series PES Filter Capsule (Pharmaceutical grade) Ordering Guide

PureFlo Capsule Filters	Filter Media	Pore size (Micron)	Internal Filter Length	Input Fitting	Output Fitting	Options
SZV 70mm Diameter Capsule with Bleed Valve	**ZS** = Extended Life Polyethersulfone	**010** = 0.1um **020** = 0.2um **045**= 0.45um	**H** = 1.5" **S** = 2.5" **L** = 5" **E** = 7.5" **K** = 10"	**1H** **1Q** **1QF** **1QFV** **1QV** **2H** **2N** **2P** **2PE** **2Q** **2QF** **2QFV** **2QP** **2QV** **2V** **3H** **4H** **4Q** **5H** **MT** **TC**	**1H** = 1/8" Hose barbs **1Q** = 1/8" Male Quick Coupling with Metal latch **1QF** = 1/8" Female Quick Coupling with Metal latch **1QFV** = 1/8" Female Valved Quick Coupling with Metal latch **1QV** = 1/8" Male Valved Quick Coupling with Metal latch **2H** = 1/4" Hose barb **2H-FB** = 1/4" Hose Barb with filling bell or **-FC** with Cap **2N** = 1/4" MNPT **2P** = 1/4" Push to Connect **2PE** = 1/4" Push to Connect Elbow **2Q** = 1/4" Male Quick Coupling for Metal latch **2QF** = 1/4" Female Quick Coupling with Metal latch **2QFV** = 1/4" Female Valved Quick Coupling with Metal latch **2QP** = 1/4" Male Quick Coupling for Plastic latch **2QV** = 1/4" Male Valved Quick Coupling with Metal latch **2V** = 1/4" Walther Quick Connect **3H** = 3/8" Hose Barb **3H-FB** = 3/8" Hose Barb with filling bell or **-FC** with Cap **4H** = 1/2" Hose Barb **4Q** = 1/2" Male Quick Coupling for Plastic latch **5H** = 5/8" Hose Barb **MT** = 1/2" Tri clamps **TC** = 1-1/2" Tri clamp **TS** = Shower Head	**Shell Material** **Blank** = Gamma stable polypropylene shell - Standard **Vent & Drain** **-N**= No vent or drain fittings **-NI** = No vent or drain inlet fitting **-NO** = No vent or drain Outlet fitting **O-Rings** **Blank** = O-ring Silicone (Standard) **-OE** = O-ring EPDM **-ON** = O-ring Nitrile **-OV** = O-ring Viton
Example - PureFlo SZV Series Capsule, Extemded Life PES , 2.5" internal filter, 0.2 micron, with 1.5" Tri-Clamp fittings I/O, would be **SZVZS020STCTC**						

Quick Coupings are molded on. Female Quick Coupling with Plastic latch will be threaded on. Compatible with CPC (Colder), LinkTech and others. * - 2H or 3H with filling bell only

ZenCap® ZenFlo Full Size Capsules

10”-40” Disposable Process Filtration

ZenFlo ZenCap, full-size capsule filters are suitable for full scale single-use biopharmaceutical production processes. The capsules house full-size cartridges which are available in standard lengths from 10 to 40 inches. The wide range of configuration options include standard I-line and T-line Inlet/ Outlet configurations as well as C, S, and L configurations allowing the filter to be easily connected with fewer adapters to a wide range of system configurations. ZenCap capsule filters are typically used in biopharmaceutical applications where the desired filtration volume is greater than 200 L.

Specifications (continued for ZenCap Capsules)

Nominal Dimensions:	Lengths: 10”, 20”, 30”, 40” Diameter: 3.54” (90 mm)
Effective Filtration Area:	0.54 m^2 per 10” capsule
Operating Conditions:	Maximum Operational Pressure: Liquid: 5.5 bar (80 psi) at 72 °F/22 °C Minimum Burst Pressure: 8.3 bar (120 psi) at 72 °F/22 °C Maximum Forward Differential Pressure: 5.0 bar (72 psi) at 72 °F/22 °C Maximum Reverse Differential Pressure: 2.1 bar (30 psi) at 72 °F/22 °C Maximum Operating Temperature: PP, Gamma PP & Nylon: 176 °F/80 °C

Autoclavable & Sanitizable:

- Autoclave up to 25 times at 257 °F/125 °C for 30 minutes
- Chemically sanitize *in situ* using common sanitizing agents or hot water at 194 °F/90 °C for a limited time (dependent on time and temperature)
- Gamma Sterilize up to 50 kGy

ZenCap ZenFlo Full Size Capsule Ordering Guide

ZenCap Capsule Series	Configuration	Length	Filter Media	Pore size (Micron)	Vents **	Input Fitting	Output Fitting	Options
LZ = Pharma Grade 90mm Diameter Capsule for full size cartridges	I = In-Line T = T-Line S = S-Line L = L-Line C = C-Line	1 - 10” 2 - 20” 3 - 30” 4 - 40”	ZS = Extended Life Polyethersulfone	010 = 0.1um 020 = 0.2um 045= 0.45um	A = No vents B = 1/2” Sanitary vent C = 1/2” Sanitary vent, with upstream and down stream 1/4” Bleed Valve D = 1/2” Sanitary vent, with upstream 1/4” Bleed Valve E = 1/2” Sanitary vent, with down stream 1/4” Bleed Valve F = Inlet and Outlet 1/4” Bleed Valve G = Inlet 1/4” Bleed Valve H = Outlet 1/4” Bleed Valve N = No vent or Drains Note: Option A,B,C,D &E not for In-Line	1QFV 1QV 2QFV 2QV 3H 4H 4Q 5H 6H 8H TC T2	1QFV = 1/8” Female Quick connect w/Valve for Metal latch 1QV = 1/8” Male Quick connect w/Valve for Metal latch 2QFV = 1/4” Female Quick connect w/Valve for Metal latch 2QV = 1/4” Male Quick connect w/Valve for Metal latch 3H = 3/8” Hose Barb 4H = 1/2” Hose Barb 4Q = 1/2” Male Quick connect 5H = 9/16” Hose Barb 6H = 3/4” (19mm) Hose Barb 8H = 1” (25mm) Hose Barb TC = 1-1/2” Tri-Clamp T2 = 2” Tri-Clamp	Shell Material Blank = Gamma Stable Polypropylene -NY = Nylon O-Rings Blank = O-Ring Silicon (Standard) -OE = O-Ring EPDM -ON = O-Ring Nitrile -OV = O-Ring Viton
Example - ZenCap LZ Series Capsule, T-Line, Extended Life PES 0.2µm, 20” filter, with all vent and drains, 1.5” Tri-Clamp fittings I/O, would be LZT2ZS020CTCTC								

** 1/4” Drain bleed Valve standard on all T-Line filters Except for option N

Your Local Distributor:

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PureFlo® Junior Z Cartridges
Compact Filtration

Multi-Use Junior Z Cartridge

PureFlo® Junior Z Cartridges are ready-to-use filters that offer high flows, increased throughputs, and high strength, all with the convenience of a small package. The Z-style construction allows for easy pre– and post-use integrity testing. It is designed for small applications in pharmaceutical, biotechnology, food and beverage, medical, chemical, and DI water industries.

PureFlo® Junior Z Cartridges are available with a variety of hydrophilic and hydrophobic filter medias and pore sizes for liquid, gas, and venting applications. Process engineers can choose from 5 filtration medias to meet their needs.

The PureFlo® Junior Z Cartridges can be built with several configurations and used without a housing. The cage and core are constructed of gamma stable polypropylene and the endcap/fitting is nylon, providing excellent chemical compatibility with low levels of extractables.

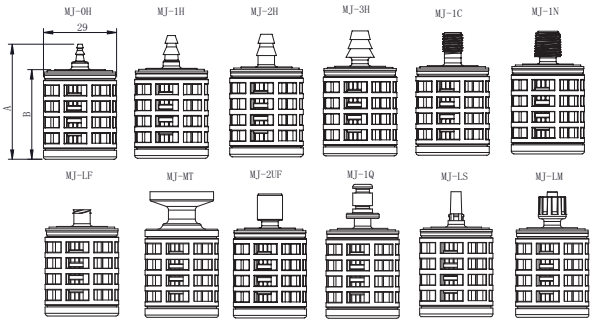
The filter is manufactured by thermal bonding. No adhesives or binders are used in the bonding process.

Applications	
Clarification	Water & Wine
Hard Particle	Food & Beverages
Vacuum Pump	Pharmaceuticals
Chemicals	Biologics
Inks, Dyes	Tank Vent
Aerator	Vent

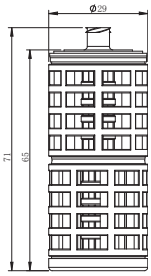
Specifications

Materials of Construction:	Media: Charged Nylon, PTFE (hydrophilic), Nylon, PES Media Supports: Polyester Cage, Core, End Caps: Nylon Sealing: Thermally bonded
Fitting Connections:	12 Fittings - see ordering guide for availability. (Custom adaptors available upon request)
Nominal Dimensions:	Lengths: 1.5” (38 mm) without fittings, 2.5” (63.5 mm) without fittings Diameter: 1.14” (29 mm)
Effective Filtration Area:	260 cm^2 for single layer membrane, 230 cm^2 for double layer membrane 200 cm^2 for Depth and Screen Media
Available Ratings:	0.04 µm - 200.0 µm (Dependent on Media)
Operating Conditions:	Maximum Operating pressure: 5 bar (72.5 psi) at 22°C Maximum Operating Temperature: 80° C
Regulatory Compliance:	The filters are constructed with polypropylene resins and filtration media in compliance with 21 CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastics.

PureFlo® Junior Z Cartridges



Length H



Length S

Code name	Outlet Fitting	H Size(1.5″±1)			S Size(2.5″±1)		
		A	B	C	A	B	C
MJ-0H	1/16″-3/32″ Hose Barb	45.5	35.5	Ø29	74.5	64.5	Ø29
MJ-1H	1/8″-3/16″ Hose Barb	48.5	35.5	Ø29	77.5	64.5	Ø29
MJ-2H	3/16″-1/4″ Hose Barb	48.5	35.5	Ø29	77.5	64.5	Ø29
MJ-3H	1/4″-3/8″ Hose Barb	49.5	35.5	Ø29	78.5	64.5	Ø29
MJ-1C	1/8″ Compression	48.5	35.5	Ø29	77.5	64.5	Ø29
MJ-1N	1/8″ MNPT	48.5	35.5	Ø29	77.5	64.5	Ø29
MJ-LF	Luer Lock Female	42	35.5	Ø29	71	64.5	Ø29
MJ-MT	1/2″ Tri clamps	50	35.5	Ø29	79	64.5	Ø29
MJ-2UF	1/4″-28 UNF 2B	49	35.5	Ø29	78	64.5	Ø29
MJ-1Q	1/8″ Male Quick Coupling	53	35.5	Ø29	82	64.5	Ø29
MJ-LS	Luer Lock Male Slip	49.5	35.5	Ø29	78.5	64.5	Ø29
MJ-LM	Luer Lock Male	50	35.5	Ø29	79	64.5	Ø29

PureFlo® Junior Z Cartridge Ordering Guide

PureFlo Junior Cartridge	Filter Media	Pore Size (Micron)	Length	End Modification	Options	
					Core/ Cage Material	**O-Rings**
MJZ Junior Cartridge Nylon construction, Polyester pleat supports	**CN** = Charged Nylon **HF** = Philic PTFE **N** = Nylon **S** = PES **ZS** = Extended Life Polyethersulfone	**Pick From Pore Size Table**	**H** = 1.5" **S** = 2.5"	**0H** = 1/16-3/32" Hose Barb **1C** = 1/8" Compression **1H** = 1/8-3/16" Hose Barb **1N** = 1/8" NPTM **1Q** = 1/8" Male Quick Coupling **2H** = 3/16-1/4" Hose Barb **2UF** = 1/4-28 thread Female **3H** = 1/4-3/8" Hose Barb **LF** = Luer Lock Female **LM** = Luer Lock Male **LS** = Male Luer Slip **MT** = 1/2" Tri Clamp	**Blank** = Nylon construction	**Blank** = O-ring Silicone (Standard) **-OE** = O-ring EPDM **-ON** = O-ring Nitrile **-OV** = O-ring Viton
						Prefilter (add before Filter Media in part#)
					Sterilization	**G(pore Size)**= Glass Fiber PreFilter **P(pore Size)**= PolyPro Media PreFilter **S(pore Size)** = PES PreFilter
					-ETO = Ethylene oxide sterilization	
Example - MJZ Series, PES, 0.2um, no prefilter, 1/4" Hose Barb I/O is **MJZS020H2H**						
Quick Couplings are molded, compatible with CPC (Colder), LinkTech and others.						

Charged Nylon (CN)	Philic PTFE (HF)	Nylon (N)	PES (S)	Extended Life PES (ZS)
005= 0.05	**010** = 0.1	**005**= 0.05	**005** = 0.05	**010** = 0.10
010 = 0.10	**020** = 0.2	**010** = 0.10	**010** = 0.1	**020** = 0.20
020 = 0.20	**045** = 0.45	**020** = 0.20	**020** = 0.2	**045** = 0.45
045 = 0.45	**100** = 1.0	**045** = 0.45	**045** = 0.45	
065 = 0.65	**300** = 3.0	**065** = 0.65	**065** = 0.65	
080 = 0.80	**500** = 5.0	**080** = 0.80	**080** = 0.8	
120 = 1.20	**999** = 10.0	**120** = 1.20	**120** = 1.2	

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PureFlo® Polypropylene Membrane Cartridges

PureFlo® Polypropylene Membrane Cartridges are highly retentive and naturally hydrophobic filters. The polypropylene membrane is a reliable choice for the purification of aggressive chemicals, compressed gases, and vent applications. The all-polypropylene construction is an excellent economic alternative to more expensive fluoropolymer-based cartridges

No adhesives, binders, or surfactants are used in the manufacturing process. Furthermore, the all-polypropylene construction provides excellent thermal and chemical compatibility with low and high pH chemicals.

PureFlo® Polypropylene Membrane Cartridges are absolute rated to ensure consistent filter performance each and every time out of the package. All filter cartridges are 100% integrity tested to ensure filter performance.

Materials of Construction:
Media: Polypropylene Membrane (hydrophobic)
Media Supports: Polypropylene
Cage, Core, End Caps: Polypropylene
O-Rings: Silicone, EPDM, Fluoroelastomer, Buna N, TES, TEV

Dimensions (nominal):
Lengths: 5 in. (13 cm), 10 in. (25 cm), 20 in. (51 cm), 30 in. (76 cm), 40 in. (102 cm)
Diameter: 2.75 in. (70 mm)

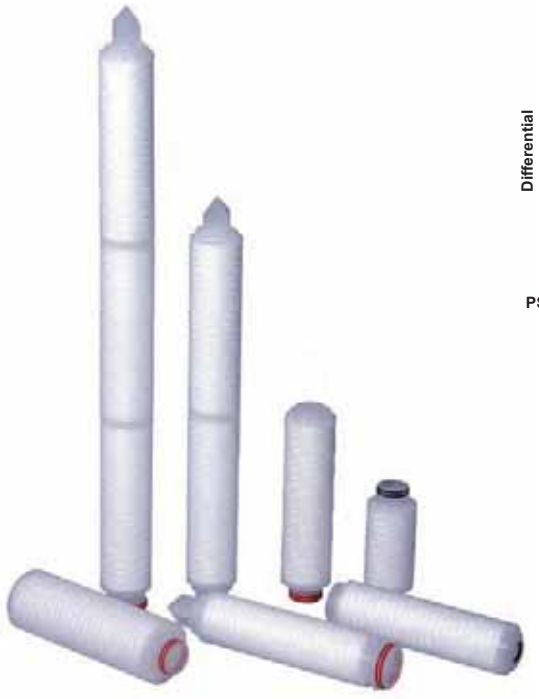
Effective Filtration Area:
0.65 m^2 (7 ft^2) per 10" cartridge element

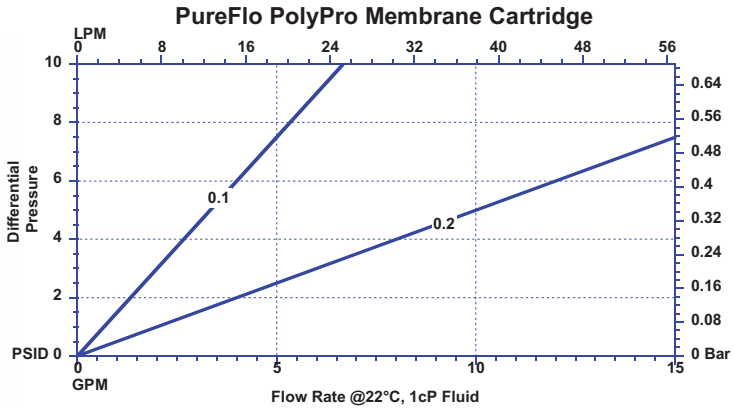
Operating Conditions:
Maximum Forward Differential Pressure:
5.0 bar (72.5 psid) at 22 °C
2.0 bar (29 psid) at 80 °C
Maximum Reverse Differential Pressure:
3.0 bar (43.5 psid) at 22 °C
1.0 bar (14.5 psid) at 80 °C
Maximum Operating Temperature: 80 °C

Applications	
Acids	Ink
Bases	Parts Cleaning
Solvents	Pharmaceuticals
Fine Chemicals	Biologics
Plating Solutions	Vent

Features	Benefits
■ Polypropylene Pleated Membrane Media (Absolute Rated)	■ Consistent and reproducible particulate removal ■ High flow rates and low pressure drops ■ Superior filter lifetime and process throughputs
■ 100% Polypropylene Construction	■ Provides excellent compatibility with a wide range of chemicals such as acids, bases, and solvents ■ No media migration into the process fluid
■ Low Levels of Filter Extractables	■ No adhesives, binders, or surfactants are used during manufacturing resulting in superior downstream cleanliness ■ All cartridges are rinsed with high-purity water to reduce extractables and downtime

PureFlo® Polypropylene Membrane Cartridges





Regulatory Compliance:

Manufactured from materials that conform to the requirements of 21 CFR Part 177 of the U.S. Code of Federal Regulations and USP Class VI Biological Test for Plastics.

Sterilization & Autoclaving:

The filters can be sterilized by autoclaving for up to 25 cycles at 125 °C (257 °F) for 30 minutes. The filters can also be sterilized by steam-in-place procedure up to 5 cycles at 135 ° C (275 °F) for 30 minutes at less than 0.3 bar (4.35 psi) differential pressure. The filters can also sanitized by hot water or common chemicals that are compatible with filter components.

PureFlo Polypropylene Membrane Cartridge Ordering Guide

Polypropylene Membrane Filter Cartridges	Removal Rating (micron)	Connections	Length	O-Ring / Gasket Materials	Package Quantity	Options
MCP = Polypropylene Membrane	10 = 0.10 20 = 0.20	0 = 222 O-Ring Flat 3 = 222 O-Ring w/tabs Spear 5 = 222 O-Ring Spear 6 = 226 O-Ring Flat 7 = 226 O-Ring Spear 8 = 223 O-Ring Flat B = 1.5" Tri-Clamp Flat F = DOE Flat Gasket S = SOE Flat Gasket Z = SOE Internal O-ring Flat **	1 = 10" 2 = 20" 3 = 30" 4 = 40" 5 = 5" 9 = 9.75"	E = EPDM N = Buna N P = Peroxide Cured EPDM Q = Platinum Cured Silicon S = Silicone T = TEV or FEP Gasket U = TES* V = Fluoroelastomer O = No O-ring	1 = 1 per pack	- RI = RFID Chip - 5 = Stainless Steel Insert
Example - PP Membrane filter, 10", 0.2 micron cartridge, with 2-222 Silicone o-ring, Flat end cap, and no insert would be MCP2001S1						
* - not available in Code Z		** - only available in 5", 9.75", 10" and 20", retrofit for DOE housings				

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PureFlo® Hi Performance Polypro Media Cartridges

PureFlo® Hi Performance Polypro Media Cartridges are highly retentive at >98% at rated pore size. The polypropylene media filters that have been specially designed for clarification, pre and final filtration applications. The smaller fiber diameter size of 1-5µm allows for lower pressure drop and higher retention. This design efficiently spreads the contaminants throughout the fine fibrous media matrix resulting in superior contaminant holding capacity, lifetime, and pressure drop as compared to other polypropylene media cartridges.

No adhesives, binders, or surfactants are used in the manufacturing process. The non-woven media does not allow migration into the process fluid, thereby reducing the potential for extractables and downtime. Furthermore, the all-polypropylene construction provides excellent thermal and chemical compatibility with low and high pH chemicals.

Materials of Construction:

Media: Fine Non-Woven Polypropylene Media
Media Supports: Polypropylene
Cage, Core, End Caps: Polypropylene
O-Rings: Silicone, EPDM, Viton, Buna N, TES, TEV

Dimensions (nominal):

Lengths: 5 in. (13 cm), 10 in. (25 cm), 20 in. (51 cm), 30 in. (76 cm), 40 in. (102 cm)
Diameter: 2.75 in. (70 mm)

Effective Filtration Area:

0.5 m^2 (5.4 ft^2) per 10" cartridge element

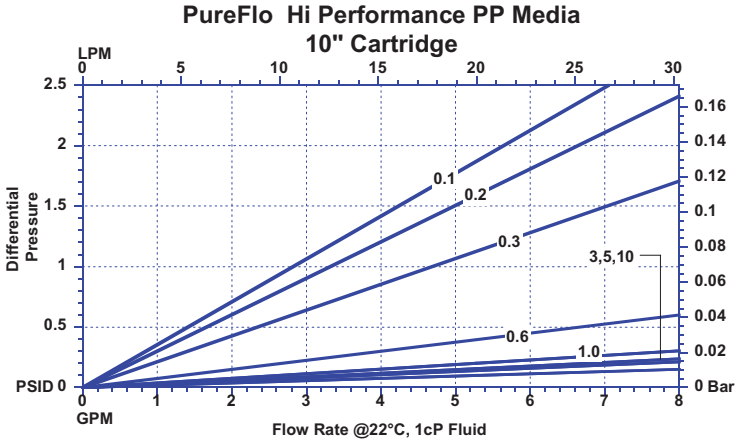
Operating Conditions:

Maximum Forward Differential Pressure:
5.0 bar (72.5 psid) at 22° C
2.0 bar (29 psid) at 80° C
Maximum Reverse Differential Pressure:
3.0 bar (43.5 psid) at 22 °C
1.0 bar (14.5 psid) at 80 °C
Maximum Operating Temperature: 80 °C

Applications	
Acids	Ink Jets
Bases	Pre Filtration
Solvents	Pharmaceuticals
Fine Chemicals	Biologics
Plating Solutions	Dyes

Features	Benefits
■ Fine Non-Woven Fiber	■ Media matrix removes particles with >98% efficency ■ High flow rates and low pressure drops ■ Superior filter lifetime and process throughputs
■ 100% Polypropylene Construction	■ Provides excellent compatibility with a wide-range of chemicals such as acids, bases and solvents ■ No media migration into the process fluid
■ Low levels of Filter Extractables	■ No adhesives, binders, or surfactants are used during manufacturing resulting in superior downstream cleanliness ■ All cartridges are rinsed with high-purity water to reduce extractables and downtime
■ High Performance Filtration	■ Consistent and reproducible particulate removal

PureFlo® Hi Performance Polypro Media Cartridges



Regulatory Compliance:

Manufactured from materials that conform to the requirements of 21 CFR Part 177 of the U.S. Code of Federal Regulations and USP Class VI Biological Test for Plastics.

Sterilization & Autoclaving:

The filters can be sterilized by autoclaving for up to 25 cycles at 125 °C (257 °F) for 30min. The filters can also be sterilized by steam-in-place procedure up to 5 cycles at 135 °C (275 °F) for 30 minutes at less than 0.3 bar (4.35 psi) differential pressure. The filters can also sanitized by hot water or common chemicals that are compatible with filter components.

PureFlo® High Performance Polypro Cartridge Ordering

PureFlo Polypropylene Filter Cartridges	Removal Rating	End Modifications	Length	O-Ring / Gasket Materials	Package Qty	Inserts
NHP = Hi Performance Polypropylene	01 = 0.10 micron 02 = 0.20 micron 03 = 0.30 micron 06 = 0.60 micron 10 = 1 micron 30 = 3 micron 50 = 5 micron 1X = 10 micron	0 = 222 O-Ring Flat 3 = 222 O-Ring w/tabs Spear 5 = 222 O-Ring Spear 6 = 226 O-Ring Flat 7 = 226 O-Ring Spear 8 = 223 O-Ring Flat B = 1.5" Tri-Clamp Flat F = DOE Flat Gasket S = SOE Flat Gasket Y = DOE Internal O-ring Flat ** Z = SOE Internal O-ring Flat **	1 - 10" 2 - 20" 3 - 30" 4 - 40" 5 = 5" 9 = 9.75"	E = EPDM N = Buna N P = Peroxide Cured EPDM Q = Platinum Cured Silicon S = Silicone T = TEV or FEP Gasket U = TES* V = Fluoroelastomer O = No O-ring	1 = 1pc/ pack 6 = 6pc/ pack (for10" and 20" only)	Blank = Standard -5 = Stainless Steel Insert
Example - Hi Performance PP Media filter, 10", 3 micron cartridge, with 2-222 Silicone o-ring, Flat end cap, and no insert would be NHP3001S1						
* - not available in Code Z		** - only available in 5", 9.75", 10" and 20", retrofit for DOE housings				

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PureFlo® Polypro Media Cartridges

PureFlo® Polypro Media Cartridges are highly retentive, graded porosity polypropylene media filters that have been specially designed for clarification and pre-filtration applications. The graded porosity design removes particles in sequence by size – larger particles by the more open outer layers and smaller particles by the tighter inner layers. The outer layers act as a pre-filter while the inner layers provide the absolute rating at the specified pore size. This design efficiently spreads the contaminants throughout the media matrix resulting in superior contaminant holding capacity, lifetime, and pressure drop as compared to other media cartridges.

No adhesives, binders, or surfactants are used in the manufacturing process. The non-woven media does not allow migration into the process fluid, thereby reducing the potential for extractables and downtime. Furthermore, the all-polypropylene construction provides excellent thermal and chemical compatibility with low and high pH chemicals.

Applications	
Acids	Ink Jets
Bases	Electronics
Solvents	Pharmaceuticals
Fine Chemicals	Biologics
Plating Solutions	Dyes
Parts Cleaning	Lacquers

Materials of Construction:

Media: Polypropylene Media (non-woven)
Media Supports: Polypropylene
Cage, Core, End Caps: Polypropylene
O-Rings: Silicone, EPDM, Viton, Buna N, TES, TEV

Dimensions (nominal):

Lengths: 5 in. (13 cm), 10 in. (25 cm), 20 in. (51 cm), 30 in. (76 cm), 40 in. (102 cm)
Diameter: 2.75 in. (70 mm)

Effective Filtration Area:

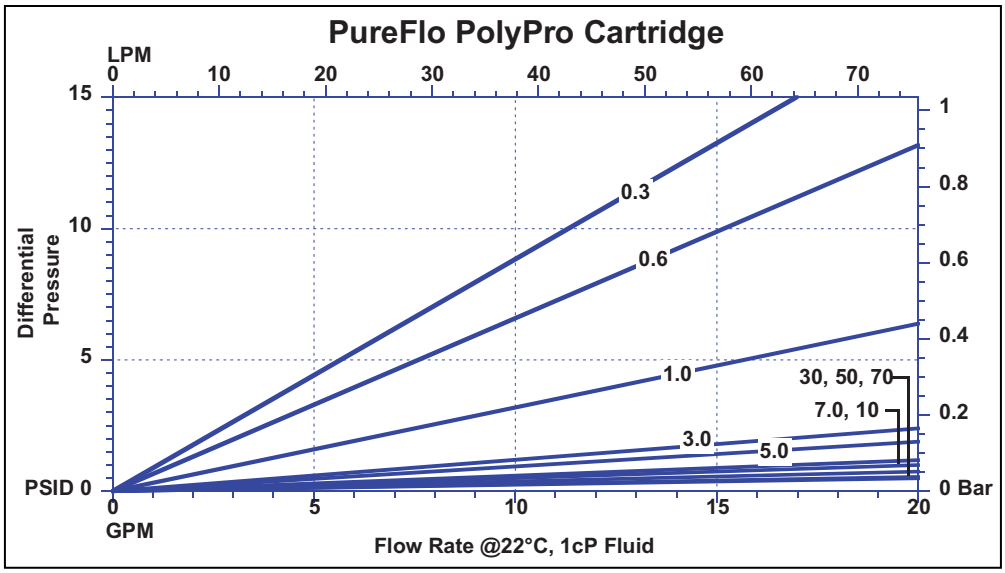
0.5 m^2 (5.4 ft^2) per 10" cartridge element

Operating Conditions:

Maximum Forward Differential Pressure:
5.0 bar (72.5 psid) at 22° C
2.0 bar (29 psid) at 80° C
Maximum Reverse Differential Pressure:
3.0 bar (43.5 psid) at 22 °C
1.0 bar (14.5 psid) at 80 °C
Maximum Operating Temperature: 80 °C

Features	Benefits
■ Graded Porosity Pleated Polypro Media	■ Media matrix removes particles in sequence by size – larger particles by the more open outer layers and smaller particles by the tighter inner layers ■ High flow rates and low pressure drops ■ Superior filter lifetime and process throughputs
■ 100% Polypropylene Construction	■ Provides excellent compatibility with a wide-range of chemicals such as acids, bases and solvents ■ No media migration into the process fluid
■ Low levels of Filter Extractables	■ No adhesives, binders, or surfactants are used during manufacturing resulting in superior downstream cleanliness ■ All cartridges are rinsed with high-purity water to reduce extractables and downtime
■ High Performance Filtration	■ Consistent and reproducible particulate removal

PureFlo® Polypro Media Cartridges



Regulatory Compliance:

Manufactured from materials that conform to the requirements of 21 CFR Part 177 of the U.S. Code of Federal Regulations and USP Class VI Biological Test for Plastics.

Sterilization & Autoclaving:

The filters can be sterilized by autoclaving for up to 25 cycles at 125 °C (257 °F) for 30min. The filters can also be sterilized by steam-in-place procedure up to 5 cycles at 135 °C (275 °F) for 30 minutes at less than 0.3 bar (4.35 psi) differential pressure. The filters can also sanitized by hot water or common chemicals that are compatible with filter components.

PureFlo® Polypro Cartridge Ordering Guide

PureFlo Polypropylene Filter Cartridges	Removal Rating	End Modifications	Length	O-Ring / Gasket Materials	Package Qty	Inserts
NCP = Polypropylene	03 = 0.30 micron 06 = 0.60 micron 10 = 1 micron 30 = 3 micron 50 = 5 micron 70 = 7 micron 1X = 10 micron 2X = 20 micron 3X = 30 micron 5X = 50 micron 7X = 70 micron 10X = 100 micron 15X = 150 micron	0 = 222 O-Ring Flat 3 = 222 O-Ring w/tabs Spear 5 = 222 O-Ring Spear 6 = 226 O-Ring Flat 7 = 226 O-Ring Spear 8 = 223 O-Ring Flat B = 1.5" Tri-Clamp Flat F = DOE Flat Gasket S = SOE Flat Gasket Y = DOE Internal O-ring Flat ** Z = SOE Internal O-ring Flat **	1 - 10" 2 - 20" 3 - 30" 4 - 40" 5 = 5" 9 = 9.75"	E = EPDM N = Buna N P = Peroxide Cured EPDM Q = Platinum Cured Silicon S = Silicone T = TEV or FEP Gasket U = TES* V = Fluoroelastomer O = No O-ring	1 = 1pc/ pack 6 = 6pc/ pack (for10" and 20" only)	Blank = Standard -5 = Stainless Steel Insert
Example - PP Mediae filter, 10", 3 micron cartridge, with 2-222 Silicone o-ring, Flat end cap, and no insert would be NCP3001S1						
* - not available in Code Z		** - only available in 5", 9.75", 10" and 20", retrofit for DOE housings				

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ISO Certified 9001 14001

TÜV ISO 13485

PureFlo® Depth Pleated Polypro Cartridges
(Thick pleated depth media)

High Bio-Burden Efficient Filtration

PureFlo® Depth Pleated Polypro Cartridges are designed for large scale filtration and clarification applications in the pharmaceutical, biotechnology, food and beverage, medical, chemical, water, and power generation industries worldwide. This family of products is particularly suitable for the fluids that contain high bio-burdens or suspended solids.

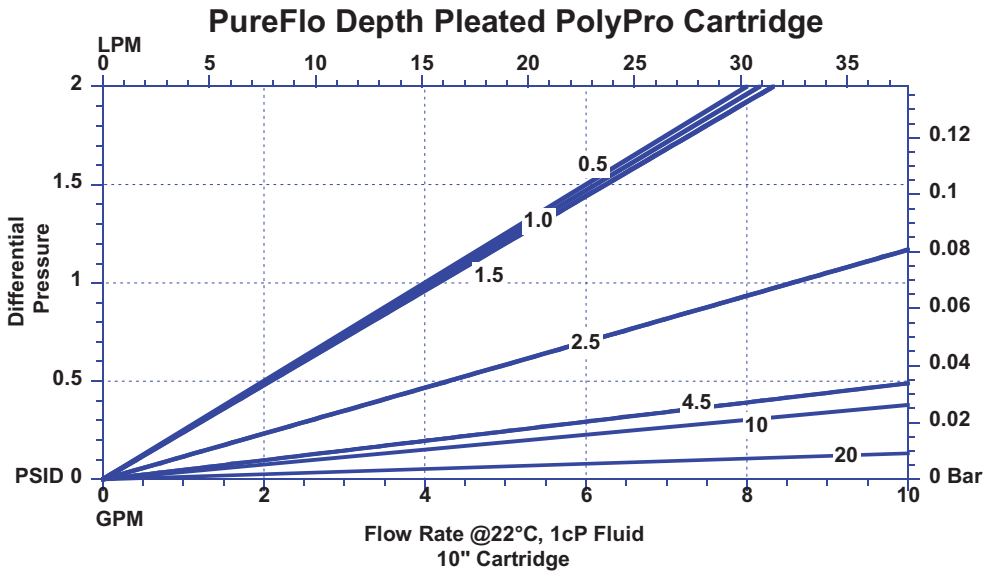
The highly retentive, graded porosity design removes particles in sequence by size – larger particles by the more open outer layers and smaller particles by the tighter inner layers. The outer layers act as a pre-filter while the inner layers provide the absolute rating at a specified pore size. This design efficiently spreads the contaminants throughout the media matrix resulting in superior contaminant holding capacity, lifetime, and pressure drop as compared to other media cartridges.

Applications	
Clarification	Ink
Bio-Burden	Beverages
Yeast Removal	Pharmaceuticals
Fine Chemicals	Biologics
Plating Solutions	Wine
Beer	Water

Specifications

Materials of Construction:	Media: Polypropylene (non-woven) Media Supports: Polypropylene Cage, Core, End Caps: Polypropylene O-Rings: Silicone, EPDM, Fluoro-Elastomer, Buna N, TES, TEV
Fitting Connections:	See ordering guide for the availability. Custom adaptors available upon request.
Nominal Dimensions:	Lengths: 5 in. (13 cm), 10 in. (25 cm), 20 in. (51 cm), 30 in. (76 cm), 40 in. (102 cm) Diameter: 2.75 in. (70 mm)
Available Ratings:	0.2, 0.5, 1.0, 1.5, 2.5, 4.5, 10, and 20 µm
Operating Conditions:	Maximum Forward Differential Pressure: 5.0 bar (72.5 psid) at 22 °C, 2.0 bar (29 psid) at 80 °C Maximum Reverse Differential Pressure: 3.0 bar (43.5 psid) at 22 °C, 1.0 bar (14.5 psid) at 80 °C Maximum Operating Temperature: 80 °C
Regulatory Compliance:	The filters are constructed with polypropylene resins and filtration media in compliance with 21 CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastic.

PureFlo® Depth Pleated Polypro Cartridges



Specifications (cont.)

Sterilization & Autoclaving:

The filters can be sterilized by autoclaving for up to 25 cycles at 125 °C (257 °F) for 30minutes. The filters can also be sterilized by steam-in-place procedure up to 5 cycles at 135 °C (275 °F) for 30 minutes at less than 0.3 bar (4.35 psi) differential pressure. The filters can also sanitized by hot water or common chemicals that are compatible with filter components.

PureFlo® Depth Pleated Polypro Cartridge Ordering Guide

PureFlo Polypropylene Filter Cartridges	Removal Rating	End Modifications	Length	O-Ring / Gasket Materials	Package Qty	Inserts
NDP = Depth Pleated Polypropylene	02 = 0.2 micron 05 = 0.5 micron 10 = 1.0 micron 15 = 1.5 micron 25 = 2.5 micron 45 = 4.5 micron 1X = 10 micron 2X = 20 micron	0 = 222 O-Ring Flat 3 = 222 O-Ring w/tabs Spear 5 = 222 O-Ring Spear 6 = 226 O-Ring Flat 7 = 226 O-Ring Spear 8 = 223 O-Ring Flat B = 1.5" Tri-Clamp Flat F = DOE Flat Gasket S = SOE Flat Gasket Y = DOE Internal O-ring Flat ** Z = SOE Internal O-ring Flat **	1 - 10" 2 - 20" 3 - 30" 4 - 40" 5 = 5" 9 = 9.75"	E = EPDM N = Buna N P = Peroxide Cured EPDM Q = Platinum Cured Silicon S = Silicone T = TEV or FEP Gasket U = TES* V = Fluoroelastomer O = No O-ring	1 = 1pc/ pack 6 = 6pc/ pack (for 10" and 20" only)	Blank = Standard -5 = Stainless Steel Insert

Example - Depth Pleated PP Media filter, 10", 2.5 micron cartridge, with 2-222 Silicone o-ring, Flat end cap, and no insert would be NDP2501S1

* - not available in Code Y,Z ** - only available in 5", 9.75", 10" and 20", retrofit for DOE housings

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PureFlo® Wrapped Polypro Cartridges
(High Dirt-holding Capacity)

PureFlo® Wrapped Polypro Cartridges are designed for large-scale filtration and clarification applications in the pharmaceutical, biotechnology, food and beverage, medical, chemical, water, and power generation industries. This family of products is particularly suitable for fluids that contain bio-burden or suspended solids with a wide particle size distribution.

The filter is constructed of multiple layers to achieve an optimized graded density structure resulting in superior dirt holding capacity and high retention efficiency. The graded-density design protects downstream layers by retaining larger particles in the more open outer layers. In this way, the outer layers act as a built-in pre-filter while the inner layers provide absolute rating at the specified pore size. This design efficiently spreads the contaminants throughout the depth media matrix providing superior lifetime and maintaining lower pressure drops as compared to standard PP media cartridges.

Applications	
Clarification	Ink
Bio-Burden	Beverages
Yeast Removal	Pharmaceuticals
Fine Chemicals	Biologics
Plating Solutions	Wine
Beer	Water

Specifications

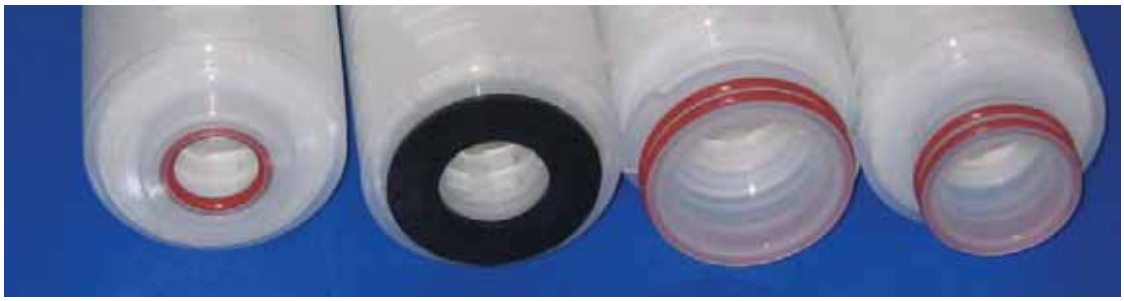
Materials of Construction:	Media: Polypropylene (non-woven) Media Supports: Polypropylene Cage, Core, End Caps: Polypropylene O-Rings: Silicone, EPDM, Fluoro-Elastomer, Buna N, TES, TEV
Fitting Connections:	See ordering guide for the availability Custom adaptors available upon request
Nominal Dimensions:	Lengths: 5 in. (13 cm), 10 in. (25 cm), 20 in. (51 cm), 30 in. (76 cm), 40 in. (102 cm) Diameter: 2.75 in. (70 mm)
Available Ratings:	0.2, 0.5, 1.0, 1.5, 2.5, 4.5, 10, and 20 µm
Operating Conditions:	Maximum Forward Differential Pressure: 5.0 bar (72.5 psid) at 22 °C, 2.0 bar (29 psid) at 80 °C Maximum Reverse Differential Pressure: 3.0 bar (43.5 psid) at 22 °C, 1.0 bar (14.5 psid) at 80 °C Maximum Operating Temperature: 80 °C
Regulatory Compliance:	The filters are constructed with polypropylene resins and filtration media in compliance with 21 CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastic.

PureFlo® Wrapped Polypro Cartridges

Specifications (cont.)

Sterilization & Autoclaving

The filters can be sterilized by autoclaving for up to 25 cycles at 125°C (257°F) for 30minutes. The filters can also be sterilized by steam-in-place procedure up to 5 cycles at 135°C (275°F) for 30 minutes at less than 0.3 bar (4.35 psi) differential pressure. The filters can also be sanitized by hot water or common chemicals that are compatible with filter components.



PureFlo Wrapped Polypro Cartridge Ordering Guide

PureFlo Polypropylene Filter Cartridges	Removal Rating	End Modifications	Length	O-Ring / Gasket Materials	Package Qty	Inserts
NRP = Wrapped Polypropylene Media	03 = 0.30 micron 05 = 0.50 micron 10 = 1 micron 30 = 3 micron 50 = 5 micron 70 = 7 micron 1X = 10 micron 2X = 20 micron	0 = 222 O-Ring Flat 3 = 222 O-Ring w/tabs Spear 5 = 222 O-Ring Spear 6 = 226 O-Ring Flat 7 = 226 O-Ring Spear 8 = 223 O-Ring Flat B = 1.5" Tri-Clamp Flat F = DOE Flat Gasket S = SOE Flat Gasket Y = DOE Internal O-ring Flat ** Z = SOE Internal O-ring Flat **	1 - 10" 2 - 20" 3 - 30" 4 - 40" 5 = 5" 9 = 9.75"	E = EPDM N = Buna N P = Peroxide Cured EPDM Q = Platinum Cured Silicon S = Silicone T = TEV or FEP Gasket U = TES* V = Fluoroelastomer O = No O-ring	1 = 1pc/ pack 6 = 6pc/ pack (for10" and 20" only)	Blank = Standard -5 = Stainless Steel Insert
Example - PP Wrapped Media filter, 10", 3 micron cartridge, with 2-222 Silicone o-ring, Flat end cap, and no insert would be NRP3001S1						

* - not available in Code Z ** - only available in 5", 9.75", 10" and 20", retrofit for DOE housings

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PureFlo® Industrial PP Cartridges

PureFlo® Industrial Polypropylene (PP) Cartridges are graded porosity polypropylene media filters that have been designed for general clarification and pre-filtration applications. The graded porosity design removes particles in sequence by size – larger particles by the more open outer layers and smaller particles by the tighter inner layers. The outer layers act as a pre-filter while the inner layers provide the smaller particle retention. The media spreads the contaminants throughout the matrix resulting in a high contaminant holding capacity, long lifetime, and low pressure drop.

No adhesives, binders, or surfactants are used in the manufacturing process and the non-woven media does not allow for migration into the process fluid, thereby reducing the potential for extractables and downtime. The all-polypropylene construction provides thermal and chemical compatibility with low and high pH chemicals.

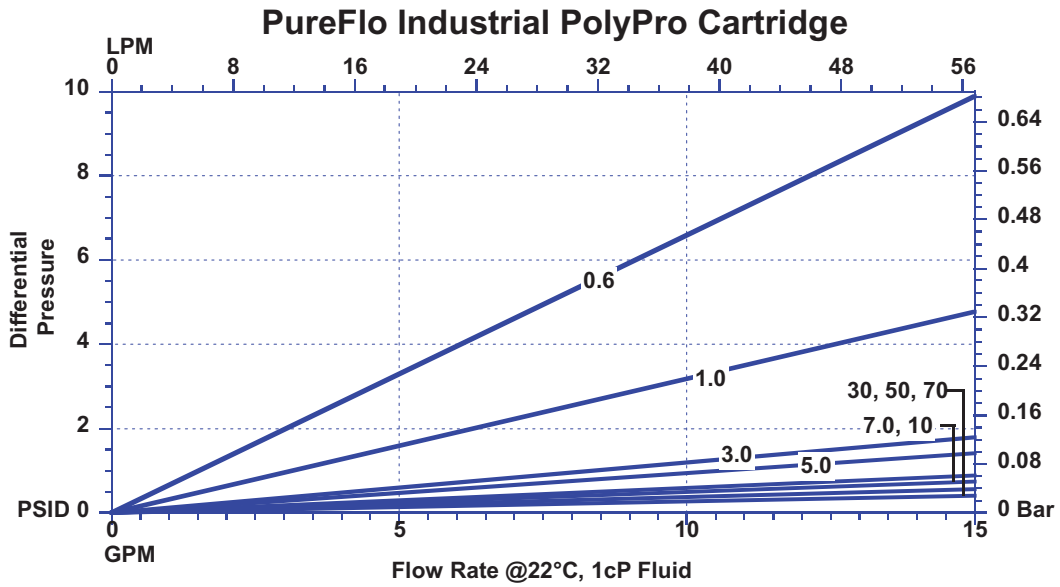
Pleated polypropylene filter cartridges are manufactured to ensure consistent filter performance each and every time out of the package.

Applications	
Acids	Ink Jets
Bases	Parts Cleaning
Solvents	Lacquers
Fine Chemicals	Plating Solutions
Industrial	Dyes

Specifications

Materials of Construction:	Media: Non-Woven Polypropylene Media Supports: Polypropylene Cage, Core, End Caps: Polypropylene O-Rings: Silicone, EPDM, Viton, Buna N, TES, TEV Sealing: Thermally bonded
Dimensions (nominal)	Lengths: 5 in. (13 cm), 10 in. (25 cm), 20 in. (51 cm), 30 in. (76 cm) 40 in. (102 cm) up to 70” Diameter: 2.75 in. (70 mm)
Effective Filtration Area:	0.5 m^2 (5.4 ft^2) per 10" cartridge element
Available Ratings:	0.6 µm - 150.0 µm
Operating Conditions:	Maximum Forward Differential Pressure: 5.0 bar (72.5 psid) at 22 °C 2.0 bar (29 psid) at 80 °C Maximum Reverse Differential Pressure: 3.0 bar (43.5 psid) at 22 °C 1.0 bar (14.5 psid) at 80 °C Maximum Operating Temperature: 80 °C

PureFlo® Industrial PP Cartridges



PureFlo Industrial PP Cartridge Ordering Guide

PureFlo Industrial PP Filter Cartridges	Removal Rating (nominal rating)	End Modifications	Length	O-Ring / Gasket Materials	Inserts
NIP = Polypropylene	03 = 0.30 micron	0 = 222 O-Ring Flat	1 - 10"	E = EPDM	Blank = Standard
	06 = 0.60 micron	3 = 222 O-Ring w/tabs Spear	2 - 20"	N = Buna N	-5 = Stainless Steel Insert
	10 = 1 micron	5 = 222 O-Ring Spear	3 - 30"	P = Peroxide Cured EPDM	
	30 = 3 micron	6 = 226 O-Ring Flat	4 - 40"	Q = Platinum Cured Silicon	
	50 = 5 micron	7 = 226 O-Ring Spear	5 = 5"	S = Silicone	
	70 = 7 micron	8 = 223 O-Ring Flat	9 = 9.75"	T = TEV or FEP Gasket	
	1X = 10 micron	B = 1.5" Tri-Clamp Flat		U = TES*	
	2X = 20 micron	F = DOE Flat Gasket		V = Fluoroelastomer	
	3X = 30 micron	S = SOE Flat Gasket		O = No O-ring	
	5X = 50 micron	Y = DOE Internal O-ring Flat **			
Bulk packaged only, no individual boxes	7X = 70 micron	Z = SOE Internal O-ring Flat **			
	10X = 100 micron				
	15X = 150 micron				

Example - Industrial PP Media filter, 10", 3 micron cartridge, with 2-222 Silicone o-ring, Flat end cap, and no insert would be NIP3001S (Bulk packed)

* - not available in Code Z ** - only available in 5", 9.75", 10" and 20", retrofit for DOE housings

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PureFlo® PTFE Cartridges

PureFlo® PTFE Cartridges are highly retentive hydrophobic PTFE membrane filters that have been specially designed for critical applications. The PTFE membrane in an all-polypropylene construction provides excellent chemical compatibility and superior flow per unit area as compared to other membrane cartridges. No adhesives, binders, or surfactants are used in the manufacturing process and all cartridges are rinsed with high-purity water to reduce extractables and downtime.

The naturally hydrophobic PTFE membrane is ideally suited for gas filtration and aggressive chemicals such as acids, bases, and solvents. In addition, the hydrophobic membrane provides superior flow and pressure drop characteristics per unit area for gas filtration and tank venting applications. All filter cartridges are 100% integrity tested to ensure filter performance each and every time out of the package. PureFlo® PTFE Cartridges are well-suited for critical applications where superior flow and particle removal efficiency at 0.1 and 0.2 micron is required.

Materials of Construction

Membrane: Hydrophobic PTFE
Membrane Supports: Polypropylene
Cage, Core, End Caps: Polypropylene
O-Rings: Silicone, EPDM, Viton, Buna N, TES, and TEV

Dimensions (nominal)

Lengths: 5 in. (13 cm), 10 in. (25 cm), 20 in. (51 cm), 30 in. (76 cm), 40 in. (102 cm)
Diameter: 2.75 in. (70 mm)

Effective Filtration Area

0.65 m^2 (7.0 ft^2) per 10" cartridge element

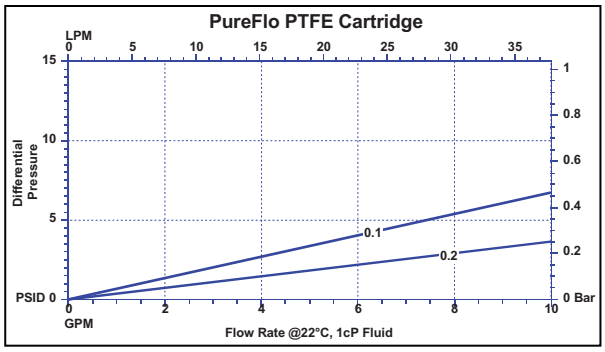
Operating Conditions

Maximum Forward Differential Pressure:
6.0 bar (87 psid) at 22 °C
2.0 bar (29 psid) at 80 °C
Maximum Reverse Differential Pressure:
3.0 bar (43.5 psid) at 22 °C
1.0 bar (14.5 psid) at 80 °C
Maximum Operating Temperature: 80 °C

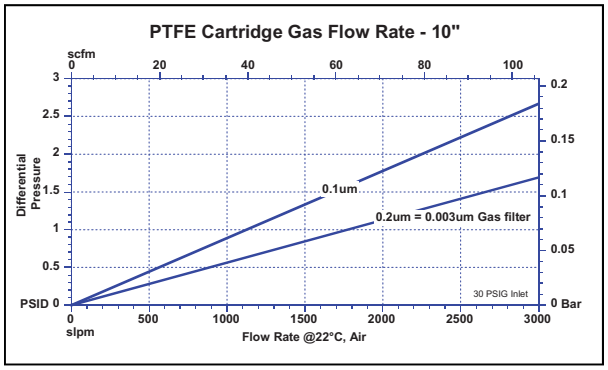
Applications	
Acids	Ink Jets
Bases	Electronics
Solvents	Pharmaceuticals
Fine Chemicals	Biologics
Plating Solutions	Dyes
Parts Cleaning	Lacquers

Features	Benefits
■ Hydrophobic PTFE Membrane (Absolute Rated)	■ Consistent and reproducible particulate removal ■ High flow rates and low pressure drops ■ Superior filter lifetime and process throughputs
■ Wide Chemical & Thermal Compatibility	■ Provides excellent compatibility with a wide range of chemicals such as acids, bases, and solvents ■ No media migration into the process fluid
■ Low Levels of Filter Extractables	■ No adhesives, binders, or surfactants are used during the manufacturing process resulting in superior downstream cleanliness ■ All cartridges are rinsed with high-purity water to reduce downtime

PureFlo® PTFE Cartridges



Liquid



Gas

Specifications (cont.)

Regulatory Compliance

Manufactured from materials that conform to the requirements of 21 CFR Part 177 of the U.S. Code of Federal Regulations and USP Class VI Biological Test for Plastics

Bacterial Retention

Complete retention of $\geq 10^7$ organisms/cm^2 of *Brevundimonas diminuta* in accordance with the current HIMA challenge methodology (ASTM F838-05). Validation Guide available upon request.

Sterilization & Autoclaving

The filters can be sterilized by autoclaving for up to 50 cycles at 125 °C (257 °F) for 30 minutes. The filters can also be sterilized by steam-in-place procedure up to 50 cycles at 135 °C (275 °F) for 30 minutes at less than 0.3 bar (4.35 psi) differential pressure. The filters can also sanitized by hot water or common chemicals that are compatible with filter components.

Bio-Safety

Filter effluent is non-pyrogenic per USP bacterial endotoxin (<0.25 EU/ml)

PureFlo PTFE Cartridge Ordering Guide

PureFlo PTFE Filter Cartridges	Removal Rating	End Modifications	Length	O-Ring / Gasket Materials	Package Qty	Inserts
	10 - 0.10 micron	0 = 222 O-Ring Flat	1 - 10"	E = EPDM	1 = 1pc/ pack	Blank = Standard
MCF = Hydrophobic	20 - 0.20 micron	3 = 222 O-Ring w/tabs Spear	2 - 20"	N = Buna N		-5 = Stainless
PTFE	(0.003um for gas)	5 = 222 O-Ring Spear	3 - 30"	P = Peroxide Cured EPDM		Steel Insert
W/ PP Construction	45 - 0.45 micron	6 = 226 O-Ring Flat	4 - 40"	Q = Platinum Cured Silicon		
	1X - 1.0 micron	7 = 226 O-Ring Spear	5 = 5"	S = Silicone		
	3X - 3.0 micron	8 = 223 O-Ring w/tabs Flat	9 = 9.75"	T = TEV or FEP Gasket		
	5X - 5.0 micron	B = 1.5" Tri-Clamp Flat		U = TES*		
	9X - 10 micron	F = DOE Flat Gasket		V = Fluoroelastomer		
		S = SOE Flat Gasket		O = No O-ring		
		Z = SOE Internal O-ring Flat **				

Example - PureFlo PTFE Cartridge, 10", 1.0 micron cartridge, with 2-222 Silicone o-ring, Flat end cap, and no insert would be MCF1X01S1

* - not available in Code Z ** - only available in 5", 9.75", 10" and 20", retrofit for DOE housings

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PureFlo Hi Temp PTFE Cartridges
(PTFE Membrane w/Hi Temp Nylon construction)

PureFlo® Hi Temp PTFE filter cartridges are highly retentive hydrophobic PTFE membrane filters with Nylon components that have been specially designed for critical liquid and gas sterilization applications as a possible alternative to all Teflon® filters. The PTFE membrane with nylon construction provides excellent chemical compatibility and superior flow per unit area for steam-in -place and hot gas applications. No adhesives, binders, or surfactants are used in the manufacturing process and all cartridges are rinsed with high-purity water to reduce extractables and downtime.

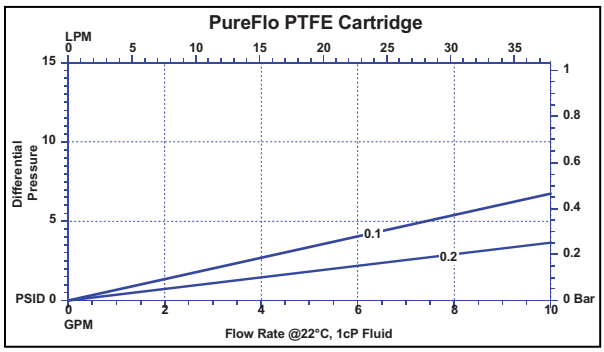
The naturally hydrophobic PTFE membrane with nylon construction is ideally suited for aggressive chemicals and gas filtration. In addition, the hydrophobic membrane provides superior flow and pressure drop characteristics per unit area for higher temperature venting applications. All filter cartridges are 100% integrity tested to ensure filter performance each and every time out of the package. PureFlo® Hi Temp PTFE filter cartridges are well-suited for critical applications where superior microorganism removal efficiency is required in a high temperature or aggressive environments.

Applications	
High temp Chemicals	Hot Water
Solvent filtration	Hot Gas filtration
Tank vent	Gas Sterilization
Fine Chemicals	Fermentation

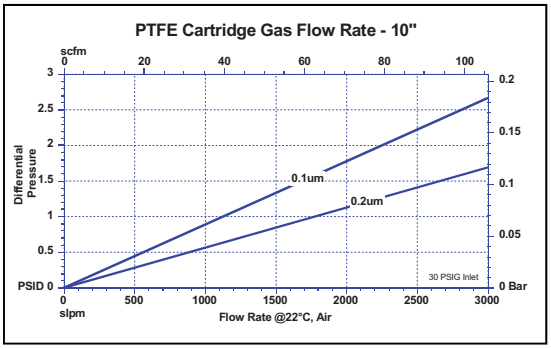
Specifications

Materials of Construction:	Media: PTFE membrane (hydrophobic) Media Supports: Nylon O-ring insert: Stainless steel 316L option Cage, Core, End Caps: Nylon O-Rings: Silicone, EPDM, Fluoroelastomer, Buna N
Effective Filtration Area:	0.65 m^2 (7.0 ft^2) per 10" cartridge element
Nominal Dimensions:	Lengths: 5 in. (13 cm), 10 in. (25 cm), 20 in. (51 cm), 30 in. (76 cm), 40 in. (102 cm) Diameter: 2.75 in. (70 mm)
Available Ratings:	0.1 µm, 0.2 µm (0.003 µm in gas), 0.45 µm, 0.65 µm, 1.0 µm, 3.0 µm, 5.0 µm, and 10.0 µm
Operating Conditions:	Maximum Forward Differential Pressure: 6.0 bar (87 psid) at 22 °C 3.0 bar (43.5 psid) at 80 °C Maximum Reverse Differential Pressure: 3.0 bar (43.5 psid) at 22 °C 1.0 bar (14.5 psid) at 80 °C Maximum Operating Temperature: 95 °C
Regulatory Compliance:	The filters are constructed with polypropylene resins and filtration media in compliance with 21 CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastic.

PureFlo Hi Temp PTFE Cartridges



Liquid



Gas

Specifications (cont.)

Sterilization & Autoclaving:

The filters can be sterilized by autoclaving for up to 100 cycles at 135 °C (275 °F) for 30 min. The filters can also be sterilized by steam-in-place procedure up to 100 cycles at 142 °C (287.6 °F) for 30 minutes at less than 0.3 bar (4.35 psi) differential pressure. The filters can also sanitized by hot water or common chemicals that are compatible with filter components.

Retention: For 0.2 µm (0.003 µm in Gas)

Liquid: Complete retention of $\geq 10^7$ organisms/cm^2 of *Brevundimonas diminuta* in accordance with the current HIMA challenge methodology (ASTM F838-05).

Gas: Validated by aerosol bacterial (*Staphylococcus aureus*) and Viral (ϕX174 Bacteriophage) challenge testing.

Integrity tested: All cartridges are 100% integrity tested — validation guide available upon request.

PureFlo Hi Temp PTFE Cartridge with Nylon Construction Ordering Guide

PureFlo Filter Cartridges	Removal Rating	End Modifications	Length	O-Ring / Gasket Materials	Package Qty	Options
MNF = Hydrophobic PTFE W/ Nylon Construction	10 - 0.10 micron 20 - 0.20 micron 45 - 0.45 micron 1X - 1.0 micron 3X - 3.0 micron 5X - 5.0 micron 9X - 10 micron	0 = 222 O-Ring Flat 3 = 222 O-Ring w/tabs Spear 5 = 222 O-Ring Spear 6 = 226 O-Ring Flat 7 = 226 O-Ring Spear 8 = 223 O-Ring Flat F = DOE Flat Gasket S = SOE Flat Gasket Z = SOE Internal O-ring Flat **	1 - 10" 2 - 20" 3 - 30" 4 - 40" 5 = 5" 9 = 9.75"	E = EPDM N = Buna N P = Peroxide Cured EPDM Q = Platinum Cured Silicon S = Silicone T = TEV or FEP Gasket U = TES* V = Fluoroelastomer	1 = 1pc/ pack	Blank = Standard -5 = Stainless Steel Insert -SC = Stainless Steel Core
Example - PTFE w/ Nylon Construction filter, 10", 0.2 micron cartridge, with 2-222 Silicone o-ring, Flat end cap, and SS insert would be MNF2001S1-5						

* - not available in Code Z ** - only available in 5", 9.75", 10" and 20", retrofit for DOE housings

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TÜV

PureFlo Hi Temp PTFE Cartridges
(PTFE Membrane w/ Hi Temp PP and SS core)

High Compatibility Level

PureFlo® Hi Temp PTFE Cartridges are highly retentive hydrophobic PTFE membrane filters with high temperature polypropylene components that have been specially designed for critical liquid and gas sterilization applications. The PTFE membrane with high temperature construction provides excellent chemical compatibility and superior flow per unit area for steam-in-place and hot gas applications. No adhesives, binders, or surfactants are used in the manufacturing process and all cartridges are rinsed with high-purity water to reduce extractables and downtime.

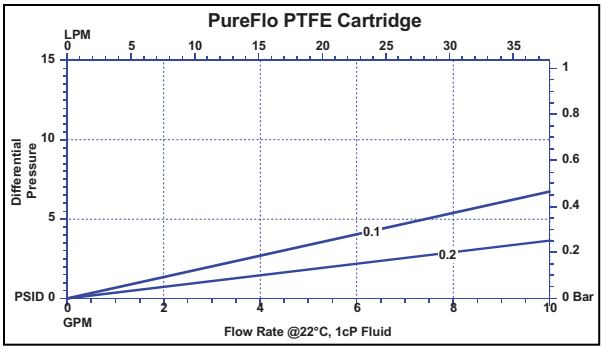
The naturally hydrophobic PTFE membrane is ideally suited for aggressive chemicals and gas filtration. In addition, the hydrophobic membrane provides superior flow and pressure drop characteristics per unit area for higher temperature venting applications. All filter cartridges are 100% integrity tested to ensure filter performance each and every time out of the package. PureFlo® Hi Temp PTFE filter cartridges are well-suited for critical applications where superior flow and particle or microorganism removal efficiency is required in a high temperature environment.

Applications	
High Temp Chemicals	Hot Water
Solvent Filtration	Hot Gas filtration
Tank Vent	Gas Sterilization
Fine Chemicals	Fermentation

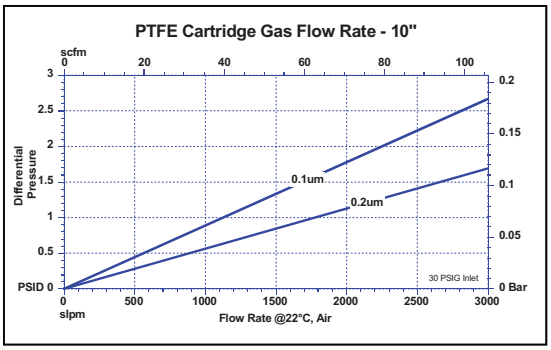
Specification

Materials of Construction:	Media: PTFE membrane (hydrophobic) Media Supports: Polypropylene media Core, O-ring insert: Stainless steel 316L Cage, End Caps: High Temperature tolerant polypropylene O-Rings: Silicone, EPDM, Fluoroelastomer, Buna N,
Effective Filtration Area:	7.0 ft^2 (0.65 m^2) per 10" cartridge element
Nominal Dimensions:	Lengths: 5 in. (13 cm), 10 in. (25 cm), 20 in. (51 cm), 30 in. (76 cm), 40 in. (102 cm) Diameter: 2.75 in. (70 mm)
Available Ratings:	0.1 µm, 0.2 µm (0.01 µm in gas), 0.45 µm, 0.65 µm, 1.0 µm, 3.0 µm, 5.0 µm, and 10.0 µm
Operating Conditions:	Maximum Forward Differential Pressure: 6.0 bar (87 psid) at 22 °C 4.0 bar (58 psid) at 80 °C Maximum Reverse Differential Pressure: 3.0 bar (43.5 psid) at 22 °C 1.0 bar (14.5 psid) at 80 °C Maximum Operating Temperature: 80 °C
Regulatory Compliance:	The filters are constructed with polypropylene resins and filtration media in compliance with 21 CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastic.

PureFlo Hi Temp PTFE Cartridges



Liquid



Gas

Specifications (cont.)

Sterilization & Autoclaving:

The filters can be sterilized by autoclaving for up to 150 cycles at 135 °C (275 °F) for 30 minutes. The filters can also be sterilized by steam-in-place procedure up to 150 cycles at 142 °C (287.6 °F) for 30 minutes at less than 0.3 bar (4.35 psi) differential pressure. The filters can also sanitized by hot water or common chemicals that are compatible with filter components.

Retention: For 0.2 µm (0.003 µm in gas)

Liquid: Complete retention of $\geq 10^7$ organisms/cm^2 of *Brevundimonas diminuta* in accordance with the current HIMA challenge methodology (ASTM F838-05).

Gas: Validated by aerosol bacterial (*Staphylococcus aureus* and Viral (ϕX174 Bacteriophage) challenge testing.

Integrity tested: All cartridges are 100% integrity tested — Validation guide available upon request

PureFlo Hi Temp PTFE w/ SS Core Cartridge Ordering Guide

PureFlo PTFE Filter Cartridges	Removal Rating	End Modifications	Length	O-Ring / Gasket Materials	Package Qty	Options
MSF = Hydrophobic PTFE w/ High Temp PP construction Stainless steel core and SS O-ring insert	10 - 0.10 micron 20 - 0.20 micron 45 - 0.45 micron 1X - 1.0 micron 3X - 3.0 micron 5X - 5.0 micron 9X - 10 micron	0 = 222 O-Ring Flat 3 = 222 O-Ring w/tabs Spear 5 = 222 O-Ring Spear 6 = 226 O-Ring Flat 7 = 226 O-Ring Spear 8 = 223 O-Ring Flat F = DOE Flat Gasket S = SOE Flat Gasket Z = SOE Internal O-ring Flat **	1 - 10" 2 - 20" 3 - 30" 4 - 40" 5 = 5" 9 = 9.75"	E = EPDM N = Buna N P = Peroxide Cured EPDM Q = Platinum Cured Silicon S = Silicone T = TEV or FEP Gasket U = TES* V = Fluoroelastomer	1 = 1pc/ pack	-5 = Stainless Steel Insert (standard)
Example - PureFlo Hi Temp PTFE Cartridge, 10", 1.0 micron cartridge, with 2-226 Silicone o-ring, Fin end cap, and SS insert would be MSF1X71S1-5						
* - not available in Code Z ** - only available in 5", 9.75", 10" and 20", retrofit for DOE housings						

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TÜV

PureFlo Hi Temp PTFE Cartridges
(PTFE Membrane w/ Hi Temp PP construction)

High Compatibility Level

PureFlo® Hi Temp PTFE Cartridges are highly retentive, hydrophobic PTFE membrane filters with high-temperature polypropylene components that have been specially designed for critical liquid and gas sterilization applications. The PTFE membrane with high-temperature construction provides excellent chemical compatibility and superior flow per unit area for steam-in-place and hot gas applications. No adhesives, binders, or surfactants are used in the manufacturing process and all cartridges are rinsed with high-purity water to reduce extractables and downtime.

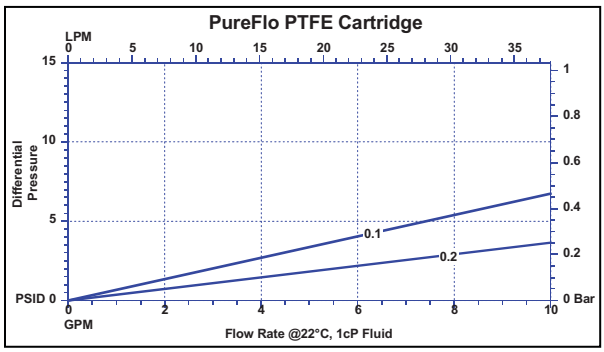
The naturally hydrophobic PTFE membrane is ideally suited for aggressive chemicals and gas filtration. In addition, the hydrophobic membrane provides superior flow and pressure drop characteristics per unit area for higher temperature venting applications. All filter cartridges are 100% integrity tested to ensure filter performance each and every time out of the package. PureFlo Hi Temp PTFE filter cartridges are well-suited for critical applications where superior flow and particle or microorganism removal efficiency is required in a high temperature environment.

Applications	
High temp Chemicals	Hot Water
Solvent filtration	Hot Gas filtration
Tank vent	Gas Sterilization
Fine Chemicals	Fermentation

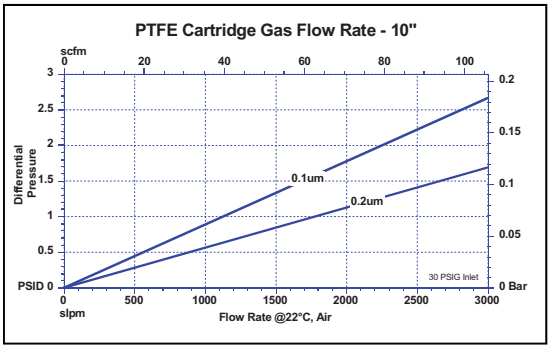
Specifications

Materials of Construction:	Media: PTFE membrane (hydrophobic) Media Supports: Polypropylene media O-ring insert: Stainless steel 316L Cage, Core, End Caps: High Temperature Tolerant Polypropylene O-Rings: Silicone, EPDM, Fluoroelastomer, Buna N,
Effective Filtration Area:	7.0 ft^2 (0.65 m^2) per 10" cartridge element
Nominal Dimensions:	Lengths: 5 in. (13 cm), 10 in. (25 cm), 20 in. (51 cm), 30 in. (76 cm), 40 in. (102 cm) Diameter: 2.75 in. (70 mm)
Available Ratings:	0.1 µm, 0.2 µm (0.01 µm in Gas), 0.45 µm, 0.65 µm, 1.0 µm, 3.0 µm, 5.0 µm, & 10.0 µm
Operating Conditions:	Maximum Forward Differential Pressure: 6.0 bar (87 psid) at 20 °C 3.0 bar (43.5 psid) at 80 °C Maximum Reverse Differential Pressure: 3.0 bar (43.5 psid) at 20 °C 1.0 bar (14.5 psid) at 80 °C Maximum Operating Temperature: 80° C
Regulatory Compliance:	The filters are constructed with polypropylene resins and filtration media in compliance with 21 CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastic.

PureFlo Hi Temp PTFE Cartridges



Liquid



Gas

Specifications (cont.)

Sterilization & Autoclaving:

The filters can be sterilized by autoclaving for up to 100 cycles at 135°C (275°F) for 30 minutes. The filters can also be sterilized by steam-in-place procedure up to 100 cycles at 142°C (287.6°F) for 30 minutes at less than 0.3 bar (4.35 psi) differential pressure. The filters can also sanitized by hot water or common chemicals that are compatible with filter components.

Retention: For 0.2 µm (0.003 µm in Gas)

Liquid: Complete retention of $\geq 10^7$ organisms/cm^2 of *Brevundimonas diminuta* in accordance with the current HIMA challenge methodology (ASTM F838-05).

Gas: Validated by aerosol bacterial (*Staphylococcus aureus*) and Viral (ϕX174 Bacteriophage) challenge testing.

Integrity tested: All cartridges are 100% integrity tested — validation guide available upon request.

PureFlo Hi Temp PTFE Cartridges Ordering Guide

PureFlo PTFE Filter Cartridges	Removal Rating	End Modifications	Length	O-Ring / Gasket Materials	Package Qty	Inserts
MBF = Hydrophobic PTFE w/ High Temp PP Construction	10 - 0.10 micron 20 - 0.20 micron 45 - 0.45 micron 1X - 1.0 micron 3X - 3.0 micron 5X - 5.0 micron 9X - 10 micron	0 = 222 O-Ring Flat 3 = 222 O-Ring w/tabs Spear 5 = 222 O-Ring Spear 6 = 226 O-Ring Flat 7 = 226 O-Ring Spear 8 = 223 O-Ring Flat F = DOE Flat Gasket S = SOE Flat Gasket Z = SOE Internal O-ring Flat **	1 - 10" 2 - 20" 3 - 30" 4 - 40" 5 = 5" 9 = 9.75"	E = EPDM N = Buna N P = Peroxide Cured EPDM Q = Platinum Cured Silicon S = Silicone T = TEV or FEP Gasket U = TES* V = Fluoroelastomer	1 = 1pc/ pack	-5 = Stainless Steel Insert (standard)
Example - PureFlo PTFE Cartridge, 10", 1.0 micron cartridge, with 2-222 Silicone o-ring, Flat end cap, and SS insert would be MBF1X01S1-5						
* - not available in Code Z ** - only available in 5", 9.75", 10" and 20", retrofit for DOE housings						

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PureFlo PTFE with PE construction Cartridges
(PTFE Membrane w/PE construction)

PureFlo® PTFE w/ PE construction cartridges are highly retentive and naturally hydrophobic. The polyethylene (PE) support structure is a reliable choice for the purification of compressed and vent gases, solvents, and chemicals. The PTFE membrane with high-density polyethylene (HDPE) construction is an excellent economic alternative to the more expensive fluoropolymer -based cartridges.

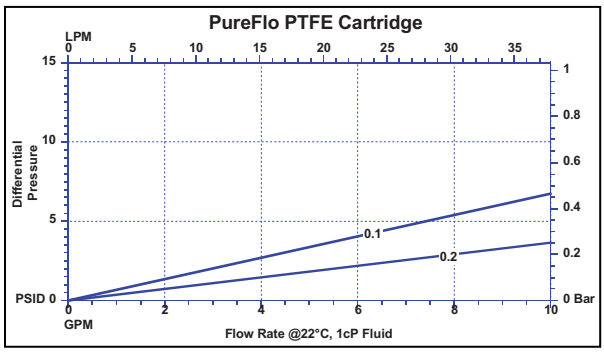
No adhesives, binders, or surfactants are used in the manufacturing process. PureFlo® Polyethylene Cartridges are absolute rated to ensure consistent filter performance each and every time out of the package. All filter cartridges are 100% integrity tested and flushed to ensure filter performance. PureFlo® PTFE/PE filter cartridges are well-suited for critical applications where superior microorganism removal efficiency is required in a high temperature or aggressive environments.

Applications	
Clarification	Solvents
Hard Particle	Food & Beverages
Vacuum Pump	Pharmaceuticals
Chemicals	Biologics
Inks, Dyes	Tank Vent
Aerator	Vent

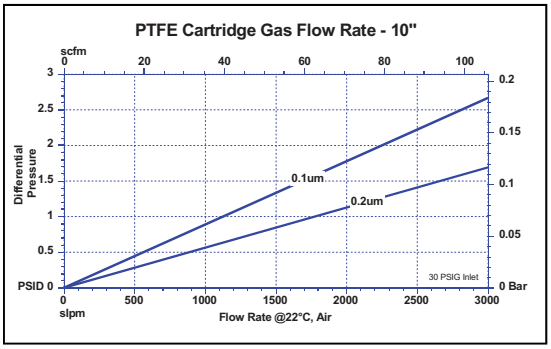
Specifications

Materials of Construction:	Media: PTFE membrane (hydrophobic) Media Supports: Polyethylene Cage, Core, End Caps: HDPE O-Rings: Silicone, EPDM, Fluoroelastomer, Buna N
Effective Filtration Area:	0.52m^2 (6.0 ft^2) per 10" cartridge element
Nominal Dimensions:	Lengths: 5 in. (13 cm), 10 in. (25 cm), 20 in. (51 cm), 30 in. (76 cm), 40 in. (102 cm) Diameter: 2.75 in. (70 mm)
Available Ratings:	0.1 µm, 0.2 µm (0.003 µm in gas), 0.45 µm, 0.65 µm, 1.0 µm, 3.0 µm, 5.0 µm, and 10.0 µm
Operating Conditions:	Maximum Forward Differential Pressure: 6.0 bar (87 psid) at 22 °C 3.0 bar (43.5 psid) at 80 °C Maximum Reverse Differential Pressure: 3.0 bar (43.5 psid) at 22 °C 1.0 bar (14.5 psid) at 80 °C Maximum Operating Temperature: 60 °C
Regulatory Compliance:	The filters are constructed with polypropylene resins and filtration media in compliance with 21 CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastic.

PureFlo PTFE/PE construction Cartridges



Liquid



Gas

Specifications (cont.)

Sterilization & Autoclaving:

No autoclaving or steam sterilization.

The filters can be sanitized by common chemicals that are compatible with the filter components.

Retention: For 0.2 µm (0.003 µm in Gas)

Liquid: Complete retention of $\geq 10^7$ organisms/cm^2 of *Brevundimonas diminuta* in accordance with the current HIMA challenge methodology (ASTM F838-05).

Gas: Validated by aerosol bacterial (*Staphylococcus aureus*) and Viral (ϕX174 Bacteriophage) challenge testing.

Integrity tested: All cartridges are 100% integrity tested — validation guide available upon request.

PureFlo PTFE/PE construction Cartridge Ordering Guide

PureFlo PTFE Filter Cartridges	Removal Rating	End Modifications	Length	O-Ring / Gasket Materials	Package Qty	Inserts
MEF = Hydrophobic PTFE W/ PE Construction	10 - 0.10 micron 20 - 0.20 micron 45 - 0.45 micron 1X - 1.0 micron 3X - 3.0 micron 5X - 5.0 micron 9X - 10 micron	0 = 222 O-Ring Flat 3 = 222 O-Ring w/tabs Spear 5 = 222 O-Ring Spear 6 = 226 O-Ring Flat 7 = 226 O-Ring Spear 8 = 223 O-Ring Flat F = DOE Flat Gasket S = SOE Flat Gasket Z = SOE Internal O-ring Flat **	1 - 10" 2 - 20" 3 - 30" 4 - 40" 5 = 5" 9 = 9.75"	E = EPDM N = Buna N P = Peroxide Cured EPDM Q = Platinum Cured Silicon S = Silicone T = TEV or FEP Gasket U = TES* V = Fluoroelastomer	1 = 1pc/ pack	Blank = Standard
Example - PureFlo PTFE w/ PE Cartridge, 10", 1.0 micron cartridge, with 2-222 Silicone o-ring, Flat end cap, and no insert would be MEF1X01S1						
* - not available in Code Z		** - only available in 5", 9.75", 10" and 20", retrofit for DOE housings				

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PureFlo Hydrophilic PTFE Cartridges
(Hydrophilic PTFE Membrane w/PP construction)

High Compatibility Level

PureFlo® Hydrophilic PTFE Cartridges are highly retentive PTFE membrane filters with polypropylene components that have been specially designed for critical liquid applications. The hydrophilic PTFE membrane provides excellent chemical compatibility and superior flow per unit area for liquid applications. No adhesives, binders, or surfactants are used in the manufacturing process and all cartridges are rinsed with high-purity water to reduce extractables and downtime.

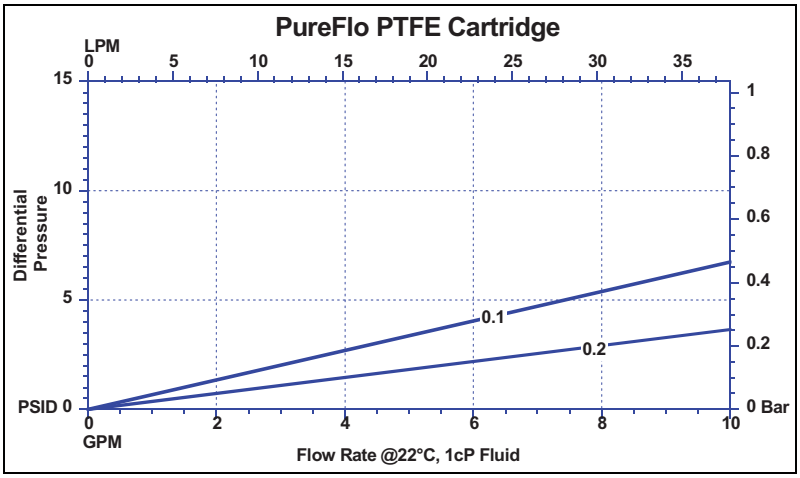
The hydrophilic PTFE membrane has been modified to accept aqueous liquids into its pore structure. All filter cartridges are 100% integrity tested to ensure filter performance each and every time out of the package. PureFlo® Hydrophilic PTFE filter cartridges are well-suited for critical applications where superior flow and particle or microorganism removal efficiency is required in aqueous environment.

Applications	
Chemicals	Water
Aqueous Liquids	Fine Chemicals

Specifications

Materials of Construction:	Media: PTFE membrane (hydrophilic) Media Supports: Polypropylene media O-ring insert: Stainless steel 316L - option Cage, Core, End Caps: Polypropylene O-Rings: Silicone, EPDM, Fluoro-elastomer, Buna N
Effective Filtration Area:	7.0 ft^2 (0.65 m^2) per 10" cartridge element
Nominal Dimensions:	Lengths: 5 in. (13 cm), 10 in. (25 cm), 20 in. (51 cm), 30 in. (76 cm), 40 in. (102 cm) Diameter: 2.75 in. (70 mm)
Available Ratings:	0.1, 0.2, 0.45, 0.65, 1.0, 3.0, 5.0, and 10.0 µm
Operating Conditions:	Maximum Forward Differential Pressure: 6.0 bar (87 psid) at 22 °C 3.0 bar (43.5 psid) at 80 °C Maximum Reverse Differential Pressure: 3.0 bar (43.5 psid) at 22 °C 1.0 bar (14.5 psid) at 80 °C Maximum Operating Temperature: 80 °C
Regulatory Compliance:	The filters are constructed with polypropylene resins and filtration media in compliance with 21 CFR Part 177 of the US Code of Federal Regulations.

PureFlo Hydrophilic PTFE Cartridges



Specifications (cont.)

Sterilization & Autoclaving:

The filters can be sterilized by autoclaving for up to 25 cycles at 135 °C (275 °F) for 30 minutes. The filters can also sanitized by hot water or common chemicals that are compatible with filter components.

Integrity tested: All cartridges are 100% integrity tested

PureFlo Hydrophilic PTFE Cartridge Ordering Guide

PureFlo PTFE Filter Cartridges	Removal Rating	End Modifications	Length	O-Ring / Gasket Materials	Package Qty	Inserts
MCHF = Hydrophilic PTFE W/ PP Construction	10 - 0.10 micron 20 - 0.20 micron 45 - 0.45 micron 1X - 1.0 micron 3X - 3.0 micron 5X - 5.0 micron 9X - 10 micron	0 = 222 O-Ring Flat 3 = 222 O-Ring w/tabs Spear 5 = 222 O-Ring Spear 6 = 226 O-Ring Flat 7 = 226 O-Ring Spear 8 = 223 O-Ring Flat F = DOE Flat Gasket S = SOE Flat Gasket Z = SOE Internal O-ring Flat **	1 - 10" 2 - 20" 3 - 30" 4 - 40" 5 = 5" 9 = 9.75"	E = EPDM N = Buna N P = Peroxide Cured EPDM Q = Platinum Cured Silicon S = Silicone T = TEV or FEP Gasket U = TES* V = Fluoroelastomer	1 = 1pc/ pack	Blank = Standard -5 = Stainless Steel Insert
Example - PureFlo Philic PTFE Cartridge, 10", 1.0 micron cartridge, with 2-222 Silicone o-ring, Flat end cap, and no insert would be MCHF1X01S1						
* - not available in Code Z		** - only available in 5", 9.75", 10" and 20", retrofit for DOE housings				

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PureFlo® Polyethylene Cartridges
(PE membrane with HDPE construction)

PureFlo® Polyethylene Cartridges are highly retentive and naturally hydrophobic. The polyethylene (PE) membrane is a reliable choice for the purification of compressed and vent gases, solvents, and chemicals. The PE membrane with high-density polyethylene (HDPE) construction is an excellent economic alternative to the more expensive fluoropolymer-based cartridges.

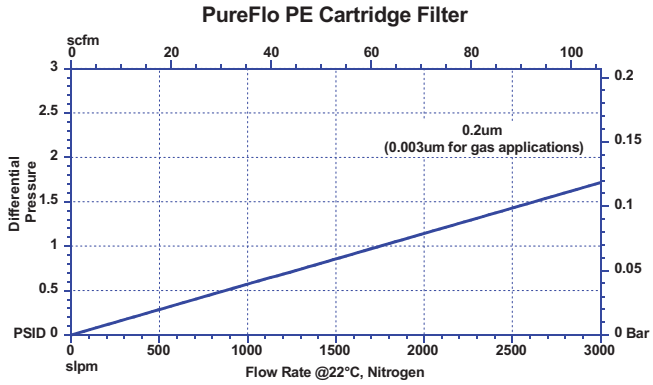
No adhesives, binders, or surfactants are used in the manufacturing process. PureFlo® Polyethylene Cartridges are absolute rated to ensure consistent filter performance each and every time out of the package. All filter cartridges are 100% integrity tested and flushed to ensure filter performance.

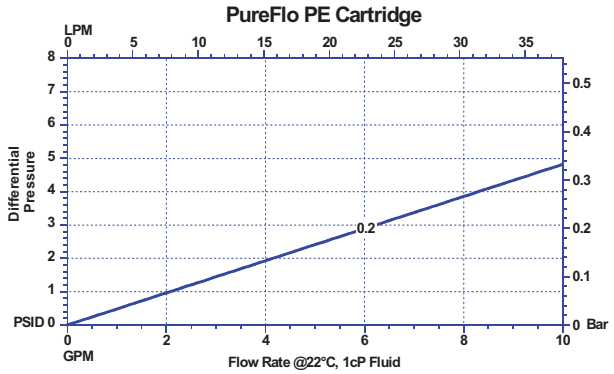
Applications	
Clarification	Solvents
Hard Particle	Food & Beverages
Vacuum Pump	Pharmaceuticals
Chemicals	Biologics
Inks, Dyes	Tank Vent
Aerator	Vent

Specifications

Materials of Construction:	Media: Polyethylene Media Supports: Polyethylene Shell, Cage, Core, End Caps: HDPE Sealing: Thermally bonded
Effective Filtration Area:	0.50 m^2 (5.4 ft^2) per 10” cartridge element
Nominal Dimensions:	Lengths: 5 in. (13 cm), 10 in. (25 cm), 20 in. (51 cm), 30 in. (76 cm), 40 in. (102 cm) Diameter: 2.75 in. (70 mm)
Available Ratings:	0.2 µm, 1 µm, 1.5 µm, & 2.5 µm
Operating Conditions:	Maximum Forward Differential Pressure: 4.1 bar (59.5 psid) at 22 °C 2.0 bar (29 psid) at 60 °C Maximum Reverse Differential Pressure: 2.0 bar (29 psid) at 22 °C 1.0 bar (14.5 psid) at 60 °C Maximum Operating Temperature: 60 °C
Regulatory Compliance:	The filters are constructed with High Density Polyethylene resins and filtration media in compliance with 21 CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastics.

PureFlo® Polyethylene Cartridges





Specifications (cont.)

Sterilization & Autoclaving:

No autoclaving or steam sterilization.

The filters can be sanitized by common chemicals that are compatible with the filter components.

PureFlo® Polyethylene Cartridge Ordering Guide

PureFlo PE Filter Cartridges	Removal Rating	End Modifications	Length	O-Ring / Gasket Materials	Package Qty
MCUE = Hydrophobic PE W/ PE Construction	**10** = 0.1 **20** = 0.20 (0.003um for gas application) **45** = 0.45 **1X** = 1.0	0 = 222 O-Ring Flat 3 = 222 O-Ring w/tabs Spear 5 = 222 O-Ring Spear 6 = 226 O-Ring Flat 7 = 226 O-Ring Spear 8 = 223 O-Ring w/tabs Flat B = 1.5" Tri-Clamp Flat F = DOE Flat Gasket S = SOE Flat Gasket Z = SOE Internal O-ring Flat **	1 - 10" 2 - 20" 3 - 30" 4 - 40" 5 = 5" 9 = 9.75"	E = EPDM N = Buna N P = Peroxide Cured EPDM Q = Platinum Cured Silicon S = Silicone T = TEV or FEP Gasket U = TES* V = Fluoroelastomer O = No O-rings	1 = 1pc/ pack
Example - PureFlo PE Cartridge, 10", 1.0 micron cartridge, with 2-222 Silicone o-ring, Flat end cap, and no insert would be MCUE1X01S1					
* - not available in Code Z		** - only available in 5", 9.75", 10" and 20", retrofit for DOE housings			

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PureFlo® Nylon Cartridges

PureFlo® Nylon Cartridges are highly-retentive, naturally hydrophilic nylon membrane filters that have been specially designed for critical applications. The nylon membrane in an all-polypropylene construction provides excellent chemical compatibility and superior flow per unit area as compared to other membrane cartridges. No adhesives, binders, or surfactants are used in the manufacturing process and all cartridges are rinsed with high-purity water to reduce extractables and downtime.

The naturally hydrophilic nylon membrane does not require pre-wetting with IPA and flushing with DI water, thereby eliminating a potential source of contamination and hazardous waste. In addition, unlike hydrophobic filters such as PTFE, the hydrophilic membrane of nylon reduces the potential for bubble formation by not de-wetting in out-gassing fluids. All filter cartridges are 100% integrity tested to ensure filter performance each and every time out of the package. PureFlo® Nylon Cartridges are well-suited for critical applications where superior flow and particle removal efficiency at 0.05, 0.1, 0.2, 0.45, 0.65, 0.85 and 1.2 micron is required.

Applications	
Solvents	Ink Jets
Fine Chemicals	Parts Cleaning
Plating Solutions	Pharmaceuticals
Process Water	Biologics
Beverages	Dyes

Materials of Construction

Membrane: Naturally Hydrophilic Nylon 6,6
Membrane Supports: Polypropylene
Cage, Core, End Caps: Polypropylene
O-Rings: Silicone, EPDM, Viton, Buna N, TES, TEV

Dimensions (nominal)

Lengths: 5 in. (13 cm), 10 in. (25 cm), 20 in. (51 cm), 30 in. (76 cm), 40 in. (102 cm)
Diameter: 2.75 in. (70 mm)

Effective Filtration Area

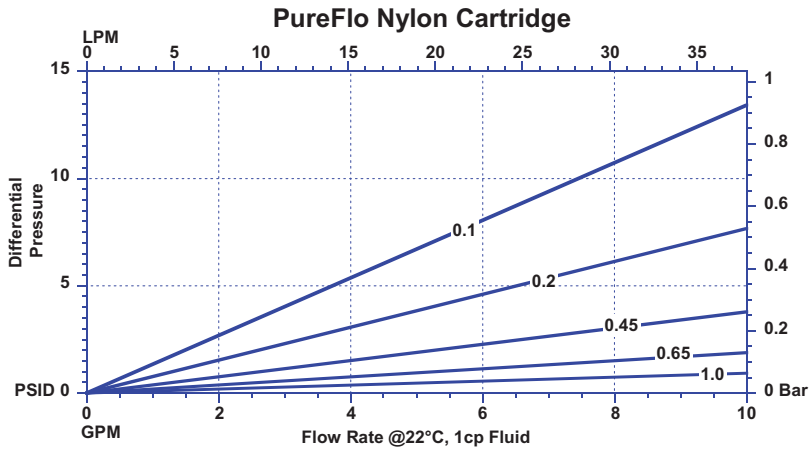
0.65 m^2 (7.0 ft^2) per 10" cartridge element

Operating Conditions

Maximum Forward Differential Pressure:
5 bar (72.5 psid) at 22 °C
2 bar (29 psid) at 80 °C
Maximum Reverse Differential Pressure:
3.0 bar (43.5 psid) at 22 °C
1 bar (14.5 psid) at 80 °C
Maximum Operating Temperature: 80 °C

Features	Benefits
■ Naturally Hydrophilic Nylon Membrane (Absolute Rated)	■ IPA pre-wetting not required – thereby eliminating a potential source of contamination and disposal waste ■ Reduces downtime and improves throughput ■ Economic alternative to PTFE and PVDF filters ■ No dewetting in outgassing fluids unlike hydrophobic filters such as polypropylene
■ Built To Exacting Specifications	■ Provides a consistent level of filtration
■ Low Levels of Filter Extractables	■ No adhesives, binders, or surfactants are used during manufacturing resulting in superior downstream cleanliness ■ Cartridges are rinsed with high-purity water

PureFlo® Nylon Cartridges



Regulatory Compliance:

Manufactured from materials that conform to the requirements of 21 CFR Part 177 of the U.S. Code of Federal Regulations and USP Class VI Biological Test for Plastic.

Sterilization & Autoclaving:

The filters can be sterilized by autoclaving for up to 5 cycles at 125 °C (257 °F) for 30 minutes. The filters can also be sterilized by steam-in-place procedure up to 3 cycles at 135 °C (275 °F) for 30 minutes at less than 0.3 bar (4.35 psi) differential pressure. The filters can also sanitized by hot water or common chemicals that are compatible with filter components.

PureFlo Nylon Cartridge Ordering Guide

PureFlo Nylon Filters	Removal Rating	End Modifications	Length	O-Ring / Gasket Materials	Package Qty	Options
Cartridge	05 - 0.05 micron	0 = 222 O-Ring Flat	1 - 10"	E = EPDM	1= 1pc/ pack	- 5 = SS Insert
MCN = Nylon	10 - 0.10 micron	3 = 222 O-Ring w/tabs Spear	2 - 20"	N = Buna N		-RI = RFID Chip
w/ PP construction	20 - 0.20 micron	5 = 222 O-Ring Spear	3 - 30"	P = Peroxide Cured EPDM		
	50 - 0.45 micron	6 = 226 O-Ring Flat	4 - 40"	Q = Platinum Cured Silicon		
	65 - 0.65 micron	7 = 226 O-Ring Spear	5 = 5"	S = Silicone		
	80 - 0.80 micron	8 = 223 O-Ring Flat	9 = 9.75"	T = TEV or FEP Gasket		
	1X - 1.2 micron	F = DOE Flat Gasket		U = TES*		
		S = SOE Flat Gasket		V = Fluoroelastomer		
		Z = SOE Internal O-ring Flat **				

Example - PureFlo Nylon filter, 10", 0.2 micron cartridge, with 2-222 Silicone o-ring, Flat end cap, and no insert would be MCN2001S1

* - not available in Code Z ** - only available in 5", 9.75", 10" and 20", retrofit for DOE housings

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PureFlo® Nylon Z Cartridges

PureFlo® Nylon Z filter cartridges are highly-retentive, naturally hydrophilic nylon membrane filters that have been specially designed for improved wet-ability. The nylon membrane in a polypropylene construction provides excellent chemical compatibility and superior flow per unit area as compared to other membrane cartridges. No adhesives, binders, or surfactants are used in the manufacturing process and all cartridges are rinsed with high-purity water to reduce extractables and downtime.

The naturally hydrophilic nylon membrane does not require pre-wetting with IPA and flushing with DI water, thereby eliminating a potential source of contamination and hazardous waste. In addition, unlike hydrophobic filters such as PTFE, the hydrophilic membrane of nylon reduces the potential for bubble formation by not de-wetting in out-gassing fluids. All filter cartridges are 100% integrity tested to ensure filter performance each and every time out of the package. PureFlo nylon filter cartridges are well-suited for critical applications where superior flow and particle removal efficiency at 0.1, 0.2, 0.45, 0.65, 0.85 and 1.2 micron is required.

Materials of Construction

Membrane: Naturally Hydrophilic Nylon 6,6
Membrane Supports: Polyester (PET)
Cage, Core: Polypropylene
End Caps: Nylon
O-Rings: Silicone, EPDM, Viton, Buna N, TES, TEV

Dimensions (nominal)

Lengths: 5 in. (13 cm), 10 in. (25 cm), 20 in. (51 cm), 30 in. (76 cm), 40 in. (102 cm)
Diameter: 2.75 in. (70 mm)

Effective Filtration Area

0.65 m^2 (7.0 ft^2) per 10" cartridge element

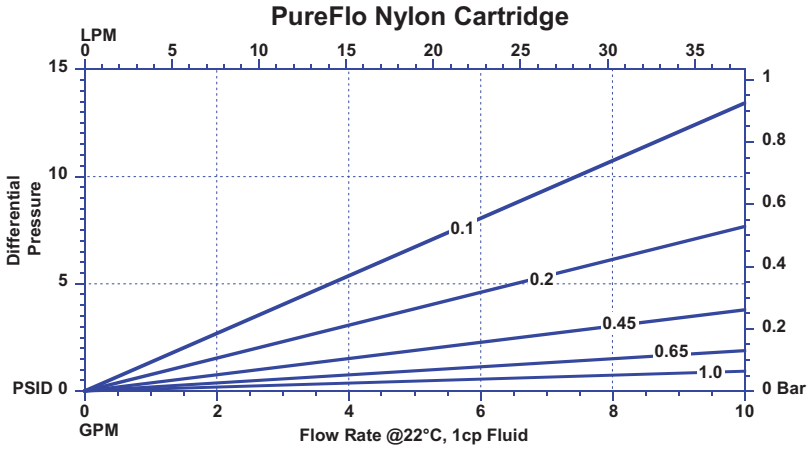
Operating Conditions

Maximum Forward Differential Pressure:
5 bar (72.5 psid) at 22 °C
2 bar (29 psid) at 80 °C
Maximum Reverse Differential Pressure:
3.0 bar (43.5 psid) at 22 °C
1 bar (14.5 psid) at 80 °C
Maximum Operating Temperature: 80 °C

Applications	
Solvents	Ink Jets
Fine Chemicals	Parts Cleaning
Plating Solutions	Pharmaceuticals
Process Water	Biologics
Beverages	Dyes

Features	Benefits
■ Naturally Hydrophilic Nylon Membrane (Absolute Rated)	■ IPA pre-wetting not required – thereby eliminating a potential source of contamination and disposal waste ■ Improved wet-ability for quicker start ups and post integrity testing ■ Economic alternative to PTFE and PVDF filters ■ No dewetting in outgassing fluids unlike hydrophobic filters such as polypropylene
■ Built To Exacting Specifications	■ Provides a consistent level of filtration
■ Low Levels of Filter Extractables	■ No adhesives, binders, or surfactants are used during manufacturing resulting in superior downstream cleanliness ■ Cartridges are rinsed with high-purity water

PureFlo® Nylon Z Cartridges



Specifications (cont.)

Sterilization & Autoclaving:

The filters can be sterilized by autoclaving for up to 5 cycles at 125°C (257°F) for 30 minutes. The filters can also be sterilized by steam-in-place procedure up to 3 cycles at 135°C (275°F) for 30 minutes at less than 0.3 bar (4.35 psi) differential pressure. The filters can also sanitized by hot water or common chemicals.

Regulatory Compliance:

Manufactured from materials that conform to the requirements of 21 CFR Part 177 of the U.S. Code of Federal Regulations and USP Class VI Biological Test for Plastic.

PureFlo Nylon Z Cartridge Ordering Guide

PureFlo Nylon Z Filters	Removal Rating	End Modifications	Length	O-Ring / Gasket Materials	Package Qty	Options
Cartridge	05 - 0.05 micron	0 = 222 O-Ring Flat	1 - 10"	E = EPDM	1= 1pc/ pack	- 5 = SS Insert
MZN = Nylon	10 - 0.10 micron	3 = 222 O-Ring w/tabs Spear	2 - 20"	N = Buna N		-RI = RFID Chip
	20 - 0.20 micron	5 = 222 O-Ring Spear	3 - 30"	P = Peroxide Cured EPDM		
Nylon Membrane	50 - 0.45 micron	6 = 226 O-Ring Flat	4 - 40"	Q = Platinum Cured Silicon		
PET support	65 - 0.65 micron	7 = 226 O-Ring Spear	5 = 5"	S = Silicone		
PP/Nylon construction	80 - 0.80 micron	8 = 223 O-Ring Flat	9 = 9.75"	T = TEV or FEP Gasket		
	1X - 1.2 micron	F = DOE Flat Gasket		U = TES*		
		S = SOE Flat Gasket		V = Fluoroelastomer		
		Z = SOE Internal O-ring Flat **				

Example - PureFlo Nylon Z filter, 10", 0.2 micron cartridge, with 2-222 Silicone o-ring, Flat end cap, and no insert would be MZN2001S1

* - not available in Code Z ** - only available in 5", 9.75", 10" and 20", retrofit for DOE housings

Your Local Distributor:

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TÜV MANAGEMENT SERVICE ISO 13485

PureFlo® All-Nylon Cartridges

PureFlo® All-Nylon Cartridges are highly retentive, naturally hydrophilic membrane filters that have been specially designed for high temperature applications. The nylon membrane in an all-nylon construction provides excellent chemical compatibility and superior flow per unit area as compared to other membrane cartridges. No adhesives, binders, or surfactants are used in the manufacturing process and all cartridges are rinsed with high-purity water to reduce extractables and downtime.

The naturally hydrophilic nylon membrane does not require pre-wetting with IPA or flushing with DI water, thereby eliminating a potential source of contamination and hazardous waste. In addition, the hydrophilic membrane reduces the potential for bubble formation by not de-wetting in outgassing fluids unlike hydrophobic filters such as polypropylene. All filter cartridges are 100% integrity tested to ensure filter performance each and every time out of the package. PureFlo® All-Nylon Cartridges are well-suited for critical applications where superior flow and particle removal efficiency at 0.1, 0.2, 0.45, 0.65, and 1.0 micron is required.

Applications	
Solvents	Ink Jets
Fine Chemicals	Industrial
Plating Solutions	Parts Cleaning
Process Water	Lacquers
Industrial	Dyes

Materials of Construction

Membrane: Nylon 6,6
Membrane Supports: Nylon
Cage, Core: Nylon
End Caps: Nylon
O-Rings: Silicone, EPDM, Fluoroelastomer, Buna N, TES, and TEV

Dimensions (nominal)

Lengths: 5 in. (13 cm), 10 in. (25 cm), 20 in. (51 cm), 30 in. (76 cm), 40 in. (102 cm)
Diameter: 2.75 in. (70 mm)

Effective Filtration Area

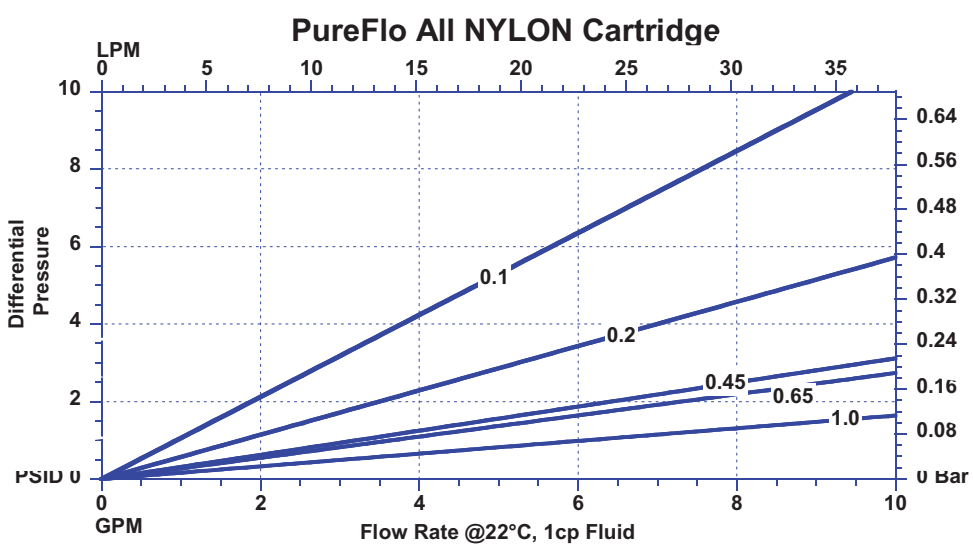
0.6 m^2 (6.5 ft^2) per 10" cartridge element

Operating Conditions

Maximum Forward Differential Pressure:
6.0 bar (87 psid) at 22 °C
3.0 bar (43.5 psid) at 80 °C
Maximum Reverse Differential Pressure:
3.0 bar (43.5 psid) at 22 °C
1.0 bar (14.5 psid) at 80 °C
Maximum Operating Temperature: 95 °C

Features	Benefits
■ All Nylon Construction (Absolute Rated)	■ Higher temperature range ■ Maximum compatibility range ■ Superior filter lifetime and process throughputs
■ Wide Chemical & Thermal Compatibility	■ Provides excellent compatibility with a wide-range chemicals such as acids, bases, and solvents ■ No media migration into the process fluid
■ Low Filter Extractables	■ No adhesives, binders, or surfactants are used during the manufacturing process resulting in superior downstream cleanliness ■ All cartridges are rinsed with high purity water to reduce downtime

PureFlo® All-Nylon Cartridges



Specifications (cont.)

Sterilization & Autoclaving:

The filters can be sterilized by autoclaving for up to 5 cycles at 125 °C (257 °F) for 30 minutes. The filters can also be sterilized by steam-in-place procedure up to 3 cycles at 135 °C (275 °F) for 30 minutes at less than 0.3 bar (4.35 psi) differential pressure. The filters can also sanitized by hot water or common chemicals that are compatible with filter components.

Regulatory Compliance:

Manufactured from materials that conform to the requirements of 21 CFR Part 177 of the U.S. Code of Federal Regulations and USP Class VI Biological Test for Plastic.

PureFlo® All-Nylon Cartridge Ordering Guide

PureFlo Nylon Filters	Removal Rating	End Modifications	Length	O-Ring / Gasket Materials	Package Qty	Inserts
MSN = all Nylon Nylon with All Nylon Construction	05 - 0.05 micron 10 - 0.10 micron 20 - 0.20 micron 50 - 0.45 micron 65 - 0.65 micron 80 - 0.80 micron 1X - 1.2 micron	0 = 222 O-Ring Flat 3 = 222 O-Ring w/tabs Spear 5 = 222 O-Ring Spear 6 = 226 O-Ring Flat 7 = 226 O-Ring Spear 8 = 223 O-Ring Flat F = DOE Flat Gasket S = SOE Flat Gasket Z = SOE Internal O-ring Flat **	1 - 10" 2 - 20" 3 - 30" 4 - 40" 5 = 5" 9 = 9.75"	E = EPDM N = Buna N P = Peroxide Cured EPDM Q = Platinum Cured Silicon S = Silicone T = TEV or FEP Gasket U = TES* V = Fluoroelastomer	1= 1pc/ pack	Blank = Standard -5 = SS Insert
Example - All Nylon Cartridge, 10", 0.2 micron cartridge, with 2-226 Silicone o-ring, Spear, and no insert would be MSN2071S1						

* - not available in Code Z ** - only available in 5", 9.75", 10" and 20", retrofit for DOE housings

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PureFlo® Charged Nylon Cartridges
(Charged Nylon Membrane with PP Construction)

High Contaminant Removal

PureFlo® Charged Nylon Cartridges are designed to remove particles smaller than its rated pore size with the power of electrical attraction (adsorption/ adhesion). Many particles in water and other liquids have a negative charge that can be captured by a positively charged filter. This property, combined with particle size exclusion (sieving) and a impaction/ interception capture mechanism make this charged nylon filter extremely efficient.

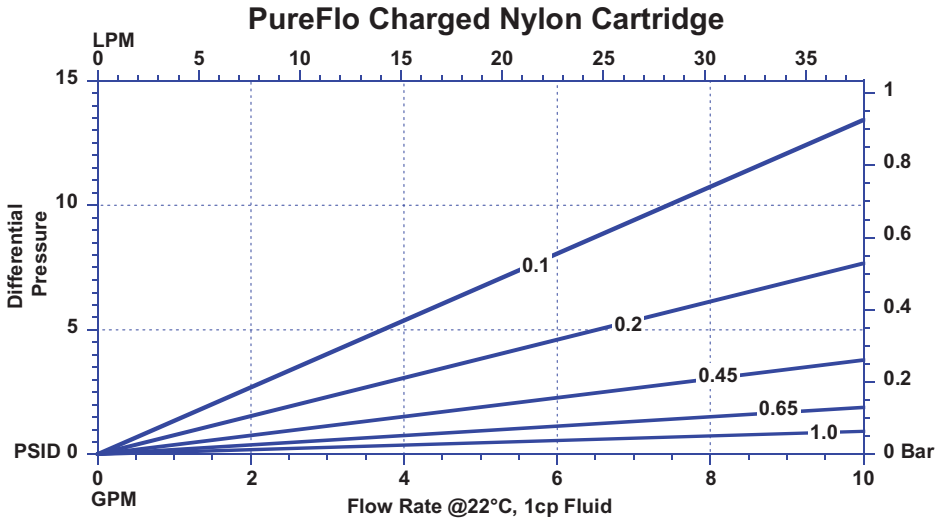
The PureFlo® Charged Nylon Cartridges are naturally hydrophilic nylon membrane filters with a polyester support layer for added wetability of the membrane. The nylon membrane in an all-polypropylene construction provides excellent chemical compatibility and superior flow per unit area as compared to other membrane cartridges. No adhesives, binders, or surfactants are used in the manufacturing process and all cartridges are rinsed with high-purity water to reduce extractables and downtime. All filter cartridges are 100% integrity tested to ensure filter performance each and every time out of the package.

Applications	
DI Water	UltraPure Water
Critical Parts Cleaning	Endotoxin Minimization
Fine Chemicals	Plating Solutions

Specification

Materials of Construction:	Media: Charged Nylon 6,6 membrane (hydrophilic) Media Supports: Polyester Cage, Core, End Caps: Polypropylene O-Rings: Silicone, EPDM, Fluoroelastomer, Buna N
Effective Filtration Area:	EPN Version - 6.5 ft^2 (0.6 m^2) per 10" cartridge element MPN Version - 9 ft^2 (0.84 m^2) per 10" cartridge element
Nominal Dimensions:	Lengths: 5 in. (13 cm), 10 in. (25 cm), 20 in. (51 cm), 30 in. (76 cm), 40 in. (102 cm) Diameter: 2.75 in. (70 mm)
Available Ratings:	0.05, 0.1, 0.2, 0.45, 0.65, 0.8,1.0 µm
Operating Conditions:	Maximum Forward Differential Pressure: 5.0 bar (72.5 psid) at 22 °C 2.0 bar (29 psid) at 80 °C Maximum Reverse Differential Pressure: 3.0 bar (43.5 psid) at 22 °C 1.0 bar (14.5 psid) at 80 °C Maximum Operating Temperature: 80 °C
Regulatory Compliance:	The filters are constructed with polypropylene resins and filtration media in compliance with 21 CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastic.

PureFlo® Charged Nylon Cartridges



Specifications (cont.)

Sterilization & Autoclaving:

The filters can be sterilized by autoclaving for up to 5 cycles at 125 °C (257 °F) for 30 minutes. The filters can also be sterilized by steam-in-place procedure up to 3 cycles at 135 °C (275 °F) for 30 minutes at less than 0.3 bar (4.35 psi) differential pressure. The filters can also sanitized by hot water or common chemicals that are compatible with filter components.

PureFlo® Charged Nylon Cartridge Ordering Guide

PureFlo Charged Nylon Filters	Removal Rating	End Modifications	Length	O-Ring / Gasket Materials	Package Qty	Inserts
	05 - 0.05 micron	0 = 222 O-Ring Flat	1 - 10"	E = EPDM	1= 1pc/ pack	Blank = Standard
EPN = Charged Nylon (6.5Ft2) per 10"	10 - 0.10 micron	3 = 222 O-Ring w/tabs Spear	2 - 20"	N = Buna N		-5 = SS Insert
	20 - 0.20 micron	5 = 222 O-Ring Spear	3 - 30"	P = Peroxide Cured EPDM		
	50 - 0.45 micron	6 = 226 O-Ring Flat	4 - 40"	Q = Platinum Cured Silicon		
MPN = Charged Nylon (9.0 Ft2) per 10"	65 - 0.65 micron	7 = 226 O-Ring Spear	5 = 5"	S = Silicone		
	80 - 0.80 micron	8 = 223 O-Ring Flat	9 = 9.75"	T = TEV or FEP Gasket		
	1X - 1.2 micron	F = DOE Flat Gasket		U = TES*		
		S = SOE Flat Gasket		V = Fluoroelastomer		
		Z = SOE Internal O-ring Flat **				
Example - Charged Nylon with 9ft2, 10", 0.2 micron cartridge, with 2-226 Silicone o-ring, Spear, and no insert would be MPN2071S1						
* - not available in Code Z		** - only available in 5", 9.75", 10" and 20", retrofit for DOE housings				

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PureFlo® Charged Nylon Z Series Cartridges

High Contaminant Removal

PureFlo® Charged Nylon Z Series Cartridges are designed to remove contaminants smaller than the rated pore size (including endotoxins) by way of an adsorptive mechanism. The Z Series filters have been further optimized for improved wettability to improve ease-of-use in applications that require pre/post use integrity testing.

Many particles common in water and other liquids have a net negative charge, allowing for enhanced capture by the positively charged nylon membrane in this filter. This charge-based filtration mechanism combined with the traditional particle size exclusion (sieving) mechanism results in an extremely high removal efficiency at and even below the rated pore size.

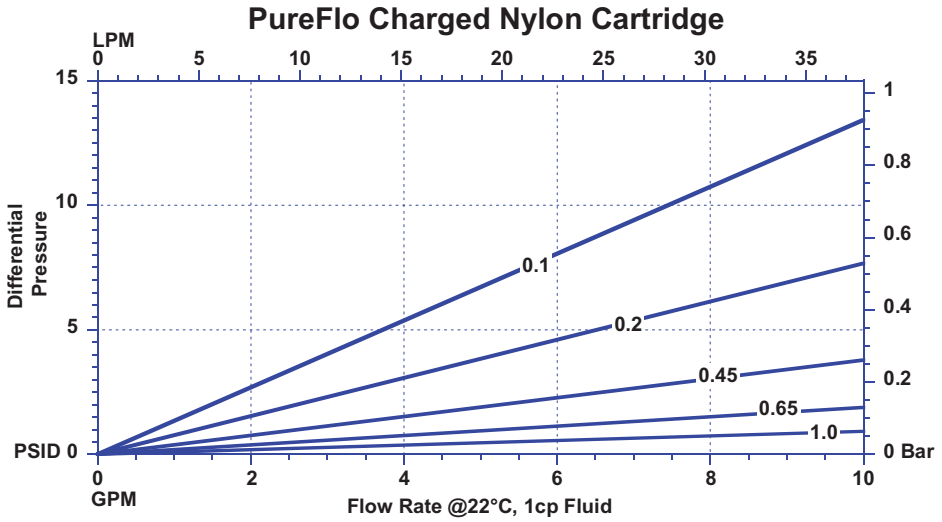
Endotoxins much smaller than the filter's rated pore size are readily and efficiently removed from water by way of the non-sieving mechanism, as seen in ZenPure's Test Report TR20008.
All filter cartridges are 100% integrity tested to ensure high filter performance each and every time out of the package.

Applications	
DI Water	UltraPure Water
Critical Parts Cleaning	Endotoxin Minimization
Fine Chemicals	Plating Solutions

Specification

Materials of Construction:	Media: Charged Nylon 6,6 membrane (hydrophilic) Media Supports: Polyester Cage and Core: Polypropylene End Caps: Nylon O-Rings: Silicone, EPDM, Fluoroelastomer, Buna N
Effective Filtration Area:	EPN Version - 6.5 ft^2 (0.6 m^2) per 10" cartridge element MPN Version - 9 ft^2 (0.84 m^2) per 10" cartridge element
Nominal Dimensions:	Lengths: 5 in. (13 cm), 10 in. (25 cm), 20 in. (51 cm), 30 in. (76 cm), 40 in. (102 cm) Diameter: 2.75 in. (70 mm)
Available Ratings:	0.05, 0.1, 0.2, 0.45, 0.65, 0.8,1.0 µm
Operating Conditions:	Maximum Forward Differential Pressure: 5.0 bar (72.5 psid) at 22 °C 2.0 bar (29 psid) at 80 °C Maximum Reverse Differential Pressure: 3.0 bar (43.5 psid) at 22 °C 1.0 bar (14.5 psid) at 80 °C Maximum Operating Temperature: 80 °C
Regulatory Compliance:	The filters are constructed with resins and filtration media in compliance with 21 CFR Part 177 of the US Code of Federal

PureFlo® Charged Nylon Z Series Cartridges



Specifications (cont.)

Sterilization & Autoclaving:

The filters can be sterilized by autoclaving for up to 5 cycles at 125 °C (257 °F) for 30 minutes. The filters can also be sterilized by steam-in-place procedure up to 3 cycles at 135 °C (275 °F) for 30 minutes at less than 0.3 bar (4.35 psi) differential pressure. The filters can also sanitized by hot water or common chemicals that are compatible with filter components.

PureFlo® Charged Nylon Z Cartridge Ordering Guide

PureFlo Charged Nylon Filters	Removal Rating	End Modifications	Length	O-Ring / Gasket Materials	Package Qty	Inserts
ENZ = Charged Nylon (6.5Ft2) per 10"	05 - 0.05 micron	0 = 222 O-Ring Flat	1 - 10"	E = EPDM	1= 1pc/ pack	Blank = Standard
	10 - 0.10 micron	3 = 222 O-Ring w/tabs Spear	2 - 20"	N = Buna N		-5 = SS Insert
	20 - 0.20 micron	5 = 222 O-Ring Spear	3 - 30"	P = Peroxide Cured EPDM		
MNZ = Charged Nylon (9.0 Ft2) per 10"	50 - 0.45 micron	6 = 226 O-Ring Flat	4 - 40"	Q = Platinum Cured Silicon		
	65 - 0.65 micron	7 = 226 O-Ring Spear	5 = 5"	S = Silicone		
	80 - 0.80 micron	8 = 223 O-Ring Flat	9 = 9.75"	T = TEV or FEP Gasket		
PET support	1X - 1.2 micron	F = DOE Flat Gasket		U = TES*		
		S = SOE Flat Gasket		V = Fluoroelastomer		
PP/Nylon construction		Z = SOE Internal O-ring Flat **				
Example - Charged Nylon with 9ft2, 10", 0.2 micron cartridge, with 2-226 Silicone o-ring, Spear, and no insert would be MNZ2071S1						
* - not available in Code Z		** - only available in 5", 9.75", 10" and 20", retrofit for DOE housings				

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PureFlo® All-Nylon Charged Cartridges

The PureFlo® All-Nylon Charged Cartridges are designed to remove particles smaller than their rated pore size with the power of electrical attraction (adsorption/adhesion). Many particles in water and other liquids have a negative charge that can be captured by attraction to a positively charged filter. This property, combined with particle size exclusion (sieving) process and an impaction/interception particle capture mechanism, make this charged nylon filter extremely efficient.

PureFlo® All-Nylon Charged Cartridges are highly retentive, naturally hydrophilic membrane filters that have been specially designed for high temperature applications. The charged nylon membrane in an all-nylon construction provides excellent chemical compatibility and superior flow per unit area as compared to other membrane cartridges. No adhesives, binders, or surfactants are used in the manufacturing process and all cartridges are rinsed with high-purity water to reduce extractables and downtime.

The naturally hydrophilic nylon membrane does not require pre-wetting with IPA and flushing with DI water, thereby eliminating a potential source of contamination and hazardous waste. In addition, the hydrophilic membrane, unlike hydrophobic filters such as polypropylene, reduces the potential for bubble formation by not dewetting in out-gassing fluids. All filter cartridges are 100% integrity tested to ensure filter performance each and every time out of the package. PureFlo All-Nylon Charged Cartridges are well-suited for critical applications where superior flow and particle removal efficiency at 0.05, 0.1, 0.2, 0.45, 0.65, and 1.0 micron is required.

Applications	
Solvents	Ink Jets
Fine Chemicals	Industrial
Plating Solutions	Parts Cleaning
Process Water	Lacquers
Industrial	Dyes

Materials of Construction

Membrane: Charged Nylon 6,6
Membrane Supports: Nylon
Cage, Core: Nylon
End Caps: Nylon
O-Rings: Silicone, EPDM, Fluoroelastomer, Buna N, TES, and TEV

Dimensions (nominal)

Lengths: 5 in. (13 cm), 10 in. (25 cm), 20 in. (51 cm), 30 in. (76 cm), 40 in. (102 cm)
Diameter: 2.75 in. (70 mm)

Effective Filtration Area

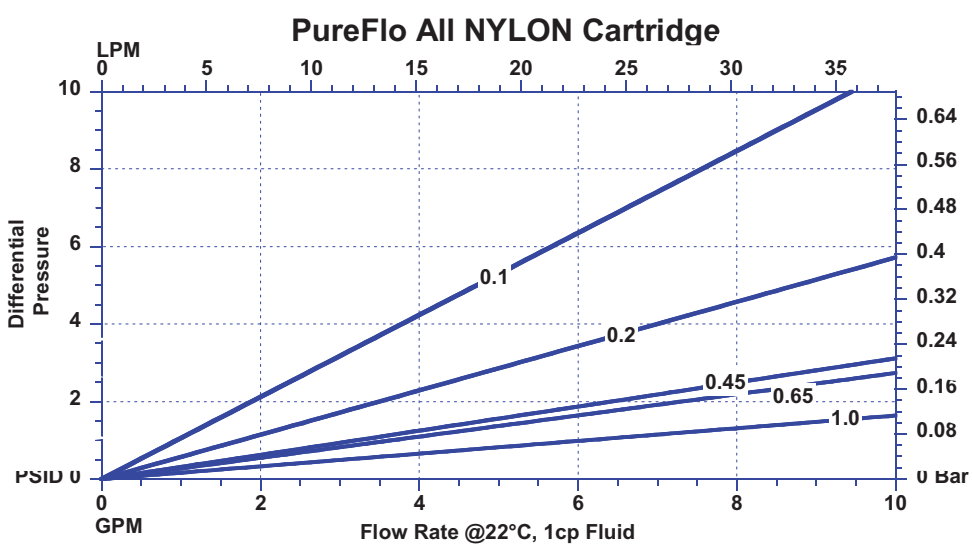
0.6 m^2 (6.5 ft^2) per 10" cartridge element

Operating Conditions

Maximum Forward Differential Pressure:
6.0 bar (87 psid) at 22 °C
3.0 bar (43.5 psid) at 80 °C
Maximum Reverse Differential Pressure:
3.0 bar (43.5 psid) at 22 °C
1.0 bar (14.5 psid) at 80 °C
Maximum Operating Temperature: 95 °C

Features	Benefits
■ All Nylon Construction (Absolute Rated)	■ Higher temperature range ■ Maximum compatibility range ■ Superior filter lifetime and process throughputs
■ Wide Chemical & Thermal Compatibility	■ Provides excellent compatibility with a wide-range of chemicals such as acids, bases, and solvents ■ No media migration into the process fluid
■ Low Levels of Extractables	■ No adhesives, binders, or surfactants are used during the manufacturing process resulting in superior downstream cleanliness ■ Reduces endotoxin levels in fluid

PureFlo® All-Nylon Charged Cartridges



Specifications (cont.)

Sterilization & Autoclaving:

The filters can be sterilized by autoclaving for up to 5 cycles at 125°C (257°F) for 30 minutes. The filters can also be sterilized by steam-in-place procedure up to 3 cycles at 135°C (275°F) for 30 minutes at less than 0.3 bar (4.35 psi) differential pressure. The filters can also sanitized by hot water or common chemicals that are compatible with filter components.

Regulatory Compliance:

Manufactured from materials that conform to the requirements of 21 CFR Part 177 of the U.S. Code of Federal Regulations and USP Class VI Biological Test for Plastic.

PureFlo All-Nylon Charged Cartridge Ordering Guide

PureFlo All Nylon Filters	Removal Rating	End Modifications	Length	O-Ring / Gasket Materials	Package Qty	Inserts
	05 - 0.05 micron	0 = 222 O-Ring Flat	1 - 10"	E = EPDM	1= 1pc/ pack	Blank = Standard
EEN = Charged Nylon	10 - 0.10 micron	3 = 222 O-Ring w/tabs Spear	2 - 20"	N = Buna N		-5 = SS Insert
(6.5Ft2) per 10"	20 - 0.20 micron	5 = 222 O-Ring Spear	3 - 30"	P = Peroxide Cured EPDM		
	50 - 0.45 micron	6 = 226 O-Ring Flat	4 - 40"	Q = Platimum Cured Silicon		
MEN = Charged Nylon	65 - 0.65 micron	7 = 226 O-Ring Spear	5 = 5"	S = Silicone		
(9.0 Ft2) per 10"	80 - 0.80 micron	8 = 223 O-Ring Flat	9 = 9.75"	T = TEV or FEP Gasket		
	1X - 1.2 micron	F = DOE Flat Gasket		U = TES*		
		S = SOE Flat Gasket		V = Fluoroelastomer		
		Z = SOE Internal O-ring Flat **				
Example - All-Nylon Charged filter with 9ft2, 10", 0.2 micron cartridge, with 2-226 Silicone o-ring, Spear, and no insert would be MEN2071S1						
* - not available in Code Z		** - only available in 5", 9.75", 10" and 20", retrofit for DOE housings				

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PureFlo® Nylon Screen Cartridges
(Nylon Screen w/ PP Construction)

Screen Filtration

PureFlo® Nylon Screen Cartridges are designed for filtration and clarification applications in the pharmaceutical, biotechnology, food and beverage, medical, chemical, and water industries. This family of products is particularly suitable for fluids with large sizes particles. The nylon screen removes the particles by a sieving action. Hard particles can be easily removed by the use of these units.

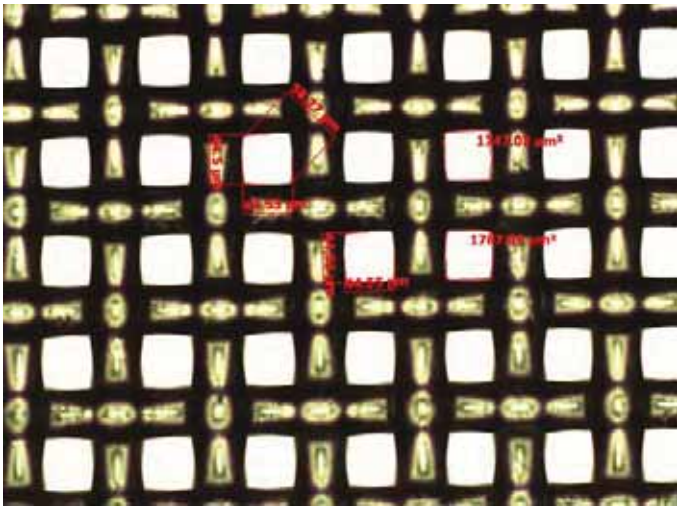
The nylon screen in an all-polypropylene construction provides excellent chemical compatibility. The PureFlo® Nylon Screen Cartridges are well-suited for cellular filtration applications. No adhesives, binders, or surfactants are used in the manufacturing process. All capsules are rinsed with high-purity water to reduce extractables and downtime in a clean room environment to ensure filter performance each

Applications	
Chemical	Clarification
Critical Cleaning	Solvents
Fine Chemicals	Plating Solutions
Pre-Filtration	Acids & Bases
Cell filtration	Biologic Retention

Specification

Materials of Construction:	Screen: Nylon Screen Screen Supports: Polypropylene Cage, Core, End Caps: Polypropylene O-Rings: Silicone, EPDM, Fluoroelastomer, Buna N
Effective Filtration Area:	5.4 ft^2 (0.5 m^2) per 10" cartridge element
Nominal Dimensions:	Lengths: 5 in. (13 cm), 10 in. (25 cm), 20 in. (51 cm), 30 in. (76 cm), 40 in. (102 cm) Diameter: 2.75 in. (70 mm)
Available Ratings:	10, 20, 40, 60, 100, 200 µm
Operating Conditions:	Maximum Forward Differential Pressure: 5.0 bar (72.5 psid) at 22 °C 2.0 bar (29 psid) at 80 °C Maximum Reverse Differential Pressure: 3.0 bar (43.5 psid) at 22 °C 1.0 bar (14.5 psid) at 80 °C Maximum Operating Temperature: 80 °C
Regulatory Compliance:	The filters are constructed with polypropylene resins and filtration screen in compliance with 21 CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastic.

PureFlo® Nylon Screen Cartridges



60 µm Nylon Screen

Specifications (cont.)

Sterilization & Autoclaving:

The filters can be sterilized by autoclaving for up to 25 cycles at 257 °F (125 °C) for 30 minutes. The filters can also be sterilized by steam-in-place procedure up to 3 cycles at 275 °F (135 °C) for 30 minutes at less than 0.3 bar (4.3 psi) differential pressure. The filters may also be sanitized by hot water or common chemicals that are compatible with filter components.

PureFlo Nylon Screen Cartridge Ordering Guide

PureFlo Nylon Screen Filters	Removal Rating	End Modifications	Length	O-Ring / Gasket Materials	Package Qty	Inserts
NNS = Nylon Screen Cartridge	07 = 7 micron 10 = 10 micron 20 = 20 micron 40 = 40 micron 60 = 60 micron 1X = 100 micron 2X = 200 micron 25X = 250 micron 3X = 300 micron	0 = 222 O-Ring Flat 3 = 222 O-Ring w/tabs Spear 5 = 222 O-Ring Spear 6 = 226 O-Ring Flat 7 = 226 O-Ring Spear 8 = 223 O-Ring Flat B = 1.5" Tri-Clamp Flat F = DOE Flat Gasket S = SOE Flat Gasket Z = SOE Internal O-ring Flat **	1 - 10" 2 - 20" 3 - 30" 4 - 40" 5 = 5" 9 = 9.75"	E = EPDM N = Buna N P = Peroxide Cured EPDM Q = Platinum Cured Silicon S = Silicone T = TEV or FEP Gasket U = TES* V = Fluoroelastomer O = No O-ring	1= 1pc/ pack	Blank = Standard - 5 = SS Insert
Example - Nylon Screen, 10", 20 micron cartridge, with 2-226 Silicone o-ring, Spear, and no insert would be NNS2071S1						
* - not available in Code Z		** - only available in 5", 9.75", 10" and 20", retrofit for DOE housings				

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PureFlo® Nylon Media Cartridges
(Nylon Media w/ PP Construction)

Nylon Depth Filtration

The PureFlo® Nylon Media Cartridges are designed for clarification and pre-filtration applications with aggressive chemistries. The nylon media provides a depth for a longer lifetime of the filter by providing high loading capabilities and protection of tighter final filters.

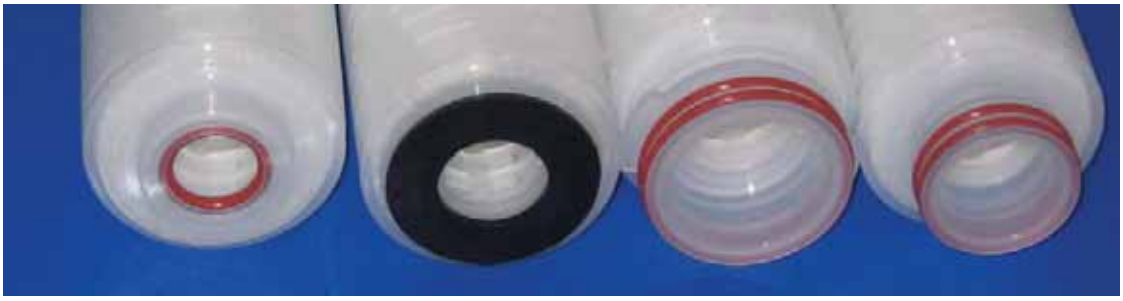
The non-woven nylon media in a polypropylene construction provides excellent chemical compatibility and superior flow. No adhesives, binders, or surfactants are used in the manufacturing process and all cartridges are rinsed with high-purity water to reduce extractables and downtime. All filter cartridges are tested to ensure filter performance each and every time out of the package.

Applications	
Chemical	Clarification
Critical Cleaning	Solvents
Fine Chemicals	Plating Solutions
Pre-Filtration	Acids & Bases
Inks	Biologic Retention

Specifications

Materials of Construction:	Media: Nylon (non-woven) Media Supports: Polypropylene Cage, Core, End Caps: Polypropylene O-Rings: Silicone, EPDM, Fluoroelastomer, Buna N
Effective Filtration Area:	5.4 ft^2 (0.5 m^2) per 10" cartridge element
Nominal Dimensions:	Lengths: 5 in. (13 cm), 10 in. (25 cm), 20 in. (51 cm), 30 in. (76 cm), 40 in. (102 cm) Diameter: 2.75 in. (70 mm)
Available Ratings:	1, 3, 5, 10, 20, and 40 µm
Operating Conditions:	Maximum Forward Differential Pressure: 5.0 bar (73 psid) at 22 °C 2.0 bar (29 psid) at 80 °C Maximum Reverse Differential Pressure: 3.0 bar (44 psid) at 22 °C 1.0 bar (14.5 psid) at 80 °C Maximum Operating Temperature: 80 °C
Regulatory Compliance:	The filters are constructed with polypropylene resins and filtration media in compliance with 21 CFR Part 177 of the US Code of Federal Regulations.

PureFlo® Nylon Media Cartridges



Specifications (cont.)

Sterilization & Autoclaving:

The filters can be sterilized by autoclaving for up to 25 cycles at 257 °F (125 °C) for 30 minutes. The filters can also be sterilized by steam-in-place procedure up to 3 cycles at 275 °F (135 °C) for 30 minutes at less than 0.3 bar (4.3 psi) differential pressure. The filters may also be sanitized by hot water or common chemicals that are compatible with the filter components.

PureFlo Nylon Media Cartridge Ordering Guide

PureFlo Nylon Filters	Removal Rating	End Modifications	Length	O-Ring / Gasket Materials	Package Qty	Inserts
NNN = Non-woven Nylon Media w/PP construction	10 = 1 micron	0 = 222 O-Ring Flat	1 - 10"	E = EPDM	1= 1pc/ pack	Blank = Standard
	30 = 3 micron	3 = 222 O-Ring w/tabs Spear	2 - 20"	N = Buna N		-5 = SS Insert
	50 = 5 micron	5 = 222 O-Ring Spear	3 - 30"	P = Peroxide Cured EPDM		
	1X = 10 micron	6 = 226 O-Ring Flat	4 - 40"	Q = Platinum Cured Silicon		
	2X = 20 micron	7 = 226 O-Ring Spear	5 = 5"	S = Silicone		
	4X = 40 micron	8 = 223 O-Ring Flat	9 = 9.75"	T = TEV or FEP Gasket		
		B = 1.5" Tri-Clamp Flat		U = TES*		
		F = DOE Flat Gasket		V = Fluoroelastomer		
		S = SOE Flat Gasket		O = No O-ring		
		Z = SOE Internal O-ring Flat **				
Example - Nylon Media, 10", 20 micron cartridge, with 2-226 Silicone o-ring, Spear, and no insert would be NNN2X71S1						

* - not available in Code Z ** - only available in 5", 9.75", 10" and 20", retrofit for DOE housings

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PureFlo® All Nylon Media Cartridges
(All Nylon Media w/ Nylon Construction)

Nylon Depth Filtration

The chemically resistant nature of nylon makes the PureFlo® All Nylon Media Cartridge ideal for clarification and pre-filtration applications in standard and high temperature conditions. The nylon media provides a depth for a longer lifetime of the filter by providing high loading capabilities and protection of tighter final filters.

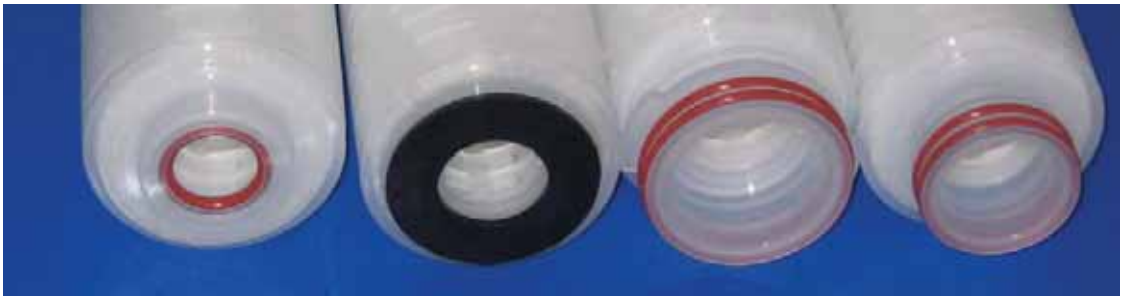
The non-woven nylon media in an all-nylon construction provides excellent chemical compatibility and superior flow. No adhesives, binders, or surfactants are used in the manufacturing process and all cartridges are rinsed with high-purity water to reduce extractables and downtime. All filter cartridges are tested to ensure filter performance each and every time out of the package.

Applications	
Chemical	Clarification
Critical Cleaning	Solvents
Fine Chemicals	Plating Solutions
Pre-Filtration	Acids & Bases
Inks	Biologic Retention

Specification

Materials of Construction:	Media: Nylon (non-woven) Media Supports: Nylon Cage, Core, End Caps: Nylon O-Rings: Silicone, EPDM, Fluoroelastomer, Buna N
Effective Filtration Area:	5.4 ft^2 (0.5 m^2) per 10" cartridge element
Nominal Dimensions:	Lengths: 5 in. (13 cm), 10 in. (25 cm), 20 in. (51 cm), 30 in. (76 cm), 40 in. (102 cm) Diameter: 2.75 in. (70 mm)
Available Ratings:	1, 3, 5, 10, 20, and 40 µm
Operating Conditions:	Maximum Forward Differential Pressure: 5.0 bar (73 psid) at 22 °C 2.0 bar (29 psid) at 80 °C Maximum Reverse Differential Pressure: 3.0 bar (44 psid) at 22 °C 1.0 bar (14.5 psid) at 80 °C Maximum Operating Temperature: 95 °C
Regulatory Compliance:	The filters are constructed with nylon resins and filtration media in compliance with 21 CFR Part 177 of the US Code of Federal Regulations.

PureFlo® All Nylon Media Cartridges



Specifications (cont.)

Sterilization & Autoclaving:

The filters can be sterilized by autoclaving for up to 25 cycles at 257 °F (125 °C) for 30 minutes. The filters can also be sterilized by steam-in-place procedure up to 3 cycles at 275 °F (135 °C) for 30 minutes at less than 0.3 bar (4.3 psi) differential pressure. The filters may also be sanitized by hot water or common chemicals that are compatible with the filter components.

PureFlo All Nylon Media Cartridge Ordering Guide

PureFlo Nylon Filters	Removal Rating	End Modifications	Length	O-Ring / Gasket Materials	Package Qty	Inserts
NAN = All Nylon Non-woven Media	10 = 1 micron 30 = 3 micron 50 = 5 micron 1X = 10 micron 2X = 20 micron 4X = 40 micron	0 = 222 O-Ring Flat 3 = 222 O-Ring w/tabs Spear 5 = 222 O-Ring Spear 6 = 226 O-Ring Flat 7 = 226 O-Ring Spear 8 = 223 O-Ring Flat B = 1.5" Tri-Clamp Flat F = DOE Flat Gasket S = SOE Flat Gasket Z = SOE Internal O-ring Flat **	1 - 10" 2 - 20" 3 - 30" 4 - 40" 5 = 5" 9 = 9.75"	E = EPDM N = Buna N P = Peroxide Cured EPDM Q = Platinum Cured Silicon S = Silicone T = TEV or FEP Gasket U = TES* V = Fluoroelastomer O = No O-ring	1= 1pc/ pack	Blank = Standard -5 = SS Insert

Example - All Nylon Media, 10", 20 micron cartridge, with 2-226 Silicone o-ring, Spear, and no insert would be NAN2X71S1

* - not available in Code Z ** - only available in 5", 9.75", 10" and 20", retrofit for DOE housings

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PureFlo® PES Cartridges

PureFlo® PES Cartridges are highly retentive hydrophilic PES membrane filters that have been specially designed for critical applications. The PES membrane in an all-polypropylene construction provides excellent chemical compatibility and superior flow per unit area as compared to other membrane cartridges. No adhesives, binders, or surfactants are used in the manufacturing process and all cartridges are rinsed with high-purity water to reduce extractables and downtime.

The hydrophilic PES membrane does not require pre-wetting with IPA and flushing with DI water, thereby eliminating a potential source of contamination and hazardous waste. In addition, unlike hydrophobic filters such as PTFE, the hydrophilic PES membrane reduces the potential for bubble formation by not de-wetting in outgassing fluids. All filter cartridges are 100% integrity tested to ensure filter performance each and every time out of the package. PureFlo® PES filter cartridges are well-suited for critical applications where superior flow and particle removal efficiency at 0.05, 0.1, 0.2, 0.45, 0.65, 0.80 and 1.2 micron is required.

Materials of Construction:

Membrane: Hydrophilic Polyethersulfone
Membrane Supports: Polypropylene
Cage, Core, End Caps: Polypropylene
Gasket / O-Rings: EPDM, Buna N, Silicone, Viton, TES, and TEV

Dimensions (nominal):

Lengths: 5 in. (13 cm), 10 in. (25 cm), 20 in. (51 cm), 30 in. (76 cm), 40 in. (102 cm)
Diameter: 2.75 in. (70 mm)

Effective Filtration Area:

0.65 m^2 (7 ft^2) per 10" cartridge element

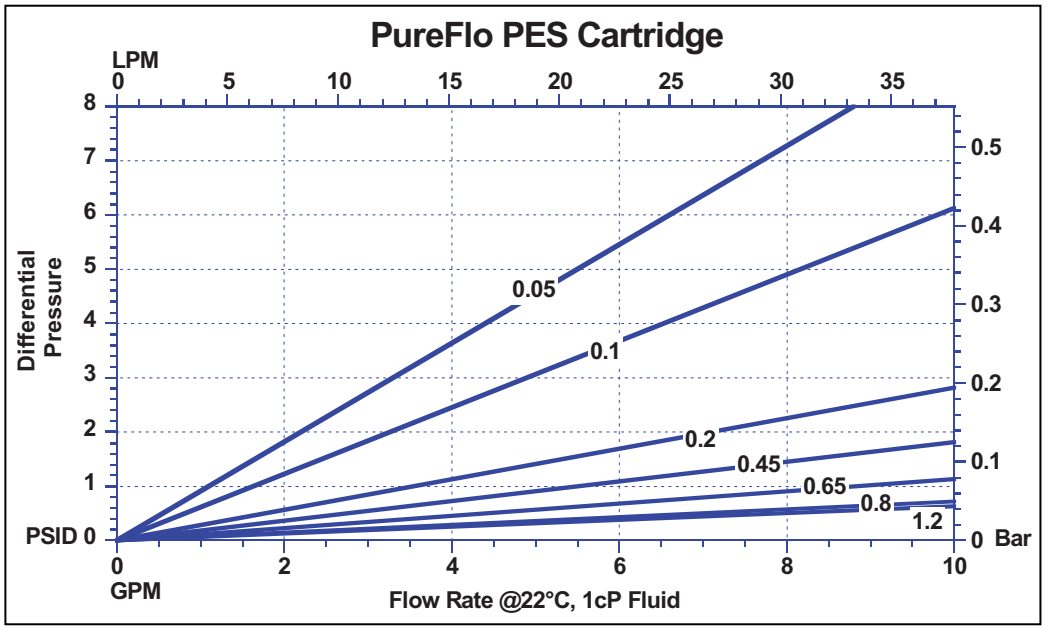
Operating Conditions:

Maximum Forward Differential Pressure:
5.0 bar (72.5 psid) at 22 °C
2.0 bar (29 psid) at 80 °C
Maximum Reverse Differential Pressure:
3.0 bar (43.5 psid) at 22 °C
1.0 bar (14.5 psid) at 80 °C
Maximum Operating Temperature: 80 °C

Applications	
Acids	Ink Jets
Bases	Clarification
Solvents	Pharmaceuticals
Fine Chemicals	Biologics
Plating Solutions	Dyes
Process Water	Lacquers
Beverages	Parts Cleaning

Features	Benefits
■ Hydrophilic PES Membrane (Absolute Rated)	■ IPA pre-wetting not required – thereby eliminating a potential source of contamination and disposal waste ■ Reduces downtime and improves throughput ■ Economic alternative to PTFE filters ■ No de-wetting in out-gassing fluids, unlike hydrophobic filters
■ Wide Chemical & Thermal Compatibility	■ Provides excellent compatibility with a wide-range of chemicals
■ Low levels of Filter Extractables	■ No adhesives, binders, or surfactants are used during manufacturing resulting in superior downstream cleanliness ■ All cartridges are rinsed with high-purity water

PureFlo® PES Cartridges



Regulatory Compliance:

Manufactured from materials that conform to the requirements of 21 CFR Part 177 of the U.S. Code of Federal Regulations and USP Class VI Biological Test for Plastic

Sterilization & Autoclaving:

The filters can be sterilized by autoclaving for up to 25 cycles at 125 °C (257 °F) for 30 minutes. The filters can also be sterilized by steam-in-place procedure up to 10 cycles at 135 °C (275 °F) for 30 minutes at less than 0.3 bar differential pressure. The filters can also sanitized by hot water or common chemicals that are compatible with filter components.

PureFlo® PES Cartridge Ordering Guide

PureFlo PES Filter Cartridges	Removal Rating	End Modifications	Length	O-Ring / Gasket Materials	Package Qty	Options
MCS	05 - 0.05 micron 10 - 0.10 micron 20 - 0.20 micron 50 - 0.45 micron 65 - 0.65 micron 80 - 0.80 micron 1X - 1.20 micron	0 = 222 O-Ring Flat 3 = 222 O-Ring w/tabs Spear 5 = 222 O-Ring Spear 6 = 226 O-Ring Flat 7 = 226 O-Ring Spear 8 = 223 O-Ring Flat F = DOE Flat Gasket S = SOE Flat Gasket Z = SOE Internal O-ring Flat **	1 - 10" 2 - 20" 3 - 30" 4 - 40" 5 = 5" 9 = 9.75"	E = EPDM N = Buna N P = Peroxide Cured EPDM Q = Platimum Cured Silicon S = Silicone T = TEV or FEP Gasket U = TES* V = Fluoroelastomer	1 = 1pc/ pack	Blank = Standard - 5 = SS Insert -RI = RFID Chip -B =Bio-Reduction grade
Example - PureFlo PES, 10", 0.2 micron cartridge, with 2-222 Silicone o-ring, Flat end cap, and no insert would be MCS2001S1						
* - not available in Code Z ** - only available in 5", 9.75", 10" and 20", retrofit for DOE housings						

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ISO Certified 9001 14001

ZenFlo PES Cartridges

ZenFlo PES cartridges are designed for high throughput and easy integrity testing. The filter's built-in Highly Asymmetric Prefilter significantly improves throughput in the most challenging filtration applications. Specifically optimized for the final filtration in biological and pharmaceutical applications, ZenFlo provides extended throughput compared to most single and even dual-layered filters. The cartridge's optimized design makes the filter very easy to wet which eliminates false-integrity test failures when using a suitable pre-wetting procedure.

The hydrophilic PES membrane is low protein-binding allowing optimum performance in biopharmaceutical processes. No adhesives, binders, or surfactants are used in the manufacturing process. All cartridges are rinsed with pyrogen-free water to reduce extractables and downtime. All filter cartridges are 100% integrity tested to ensure filter performance and quality. ZenFlo PES cartridges are well-suited for critical applications where superior flow and bacterial retention is required.

Applications	
Buffers and Media	Fermentation Broths
Serum	LVP (Large Volume Parenterals)
Product Sterilization	Pharmaceuticals
Vaccines	Biologics
Fine Chemicals	Water
Antibiotics	

Materials of Construction

Membrane: Hydrophilic Polyethersulfone (PES)
Membrane Supports: Polyester
Cage, Core: Polypropylene
End Caps: Nylon
Gasket / O-Rings: EPDM, Buna N, Silicone, Viton, TES, and TEV

Dimensions (nominal)

Lengths: 5 in. (13 cm), 10 in. (25 cm), 20 in. (51 cm), 30 in. (76 cm), 40 in. (102 cm)
Diameter: 2.75 in. (70 mm)

Effective Filtration Area

0.54 m^2 (5.8 ft^2) per 10" cartridge element

Operating Conditions

Maximum Forward Differential Pressure:
5.0 bar (72.5 psid) at 22°C
2.0 bar (29 psid) at 80°C
Maximum Reverse Differential Pressure:
3.0 bar (43.5 psid) at 22°C
1.0 bar (14.5 psid) at 80°C
Maximum Operating Temperature: 80°C

Features	Benefits
■ Hydrophilic PES Membrane (Absolute Rated)	■ Inherently hydrophilic ■ High flow rate reduces processing time ■ Low protein-binding membrane maximizes yields ■ Biologically inert membrane ■ Bacterially retentive to produce sterile solutions
■ Ease of wettability	■ Quicker and easier pre and post integrity testing
■ Low Levels of Filter Extractables	■ No adhesives, binders, or surfactants are used during manufacturing resulting in superior downstream cleanliness ■ All cartridges are rinsed with pyrogen-free water

ZenFlo PES Cartridges

Bacterial Retention

Complete retention of ≥ 10^7 organisms/cm^2 of *Brevundimonas diminuta* in accordance with the current HIMA challenge methodology (ASTM F838-05). Validation guide available upon request.

Water Bubble Point Specification

0.2 µm : 50 psi (0.35 MPA)

Bio-Safety

Filter effluent is non-pyrogenic per USP bacterial endotoxin (<0.25 EU/ml)

Sterilization & Autoclaving

The filters can be sterilized by autoclaving for up to 50 cycles at 125 °C (257 °F) for 30 minutes. The filters can also be sterilized by steam-in-place procedure up to 30 cycles at 135 °C (275 °F) for 30 minutes at less than 0.3 bar differential pressure. The filters can also sanitized by hot water or common chemicals that are compatible with filter components.

Regulatory Compliance

Manufactured from materials that conform to the requirements of 21 CFR Part 177 of the U.S. Code of Federal Regulations and USP Class VI Biological Test for Plastics.

ZenFlo PES Cartridge Ordering Guide

PureFlo PES Filter Cartridges	Removal Rating	End Modifications	Length	O-Ring / Gasket Materials	Package Qty	Options	Options
MZZS = PES with Prefilter Dual PES membrane, PET support, with Nylon Endcaps, PP Cage & Core Construction	**10** = 0.10 micron **20** = 0.20 micron **45** = 0.45 micron	**0** = 222 O-Ring Flat **3** = 222 O-Ring w/tabs Spear **5** = 222 O-Ring Spear **6** = 226 O-Ring Flat **7** = 226 O-Ring Spear **8** = 223 O-Ring Flat **F** = DOE Flat Gasket **S** = SOE Flat Gasket **Z** = SOE Internal O-ring Flat **	**1** = 10" **2** = 20" **3** = 30" **4** = 40" **5** = 5" **9** = 9.75"	**E** = EPDM **N** = Buna N **P** = Peroxide Cured EPDM **Q** = Platinum Cured Silicon **S** = Silicone **T** = TEV or FEP Gasket **U** = TES* **V** = Fluoroelastomer	**1** = 1pc/ pack	**- 5** = SS Insert **- RI** = RFID Chip	**Blank** = Pharma Grade **-ETO** = ETO Sterilization
Example - Pharmaceutical grade, 10", 0.2 micron cartridge, with 2-222 Silicone o-ring, Flat end cap, and no insert would be MZZS2001S1							
* - not available in Code Z ** - only available in 5", 9.75", 10" and 20", retrofit for DOE housings							

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PureFlo® PES Pharma Z Cartridges

The PureFlo® Pharma Z Grade Cartridges are designed for product sterility and ease of wettability. PureFlo® Pharmaceutical Grade Cartridges have been designed for final filtration in biopharmaceutical applications. The main benefit of the PES Pharma Z cartridge is the ease of pre and post integrity testing, for the validation of the filtered product. The hydrophilic PES membrane wet quicker allowing for easier and quicker integrity testing.

The PES membrane has low protein-binding characteristics to maximize yields. No adhesives, binders, or surfactants are used in the manufacturing process. All cartridges are rinsed with pyrogen-free water to reduce extractables and downtime. All filter cartridges are 100% integrity tested to ensure filter performance and quality. PureFlo® Pharmaceutical Grade Cartridges are well-suited for critical applications where superior flow and bacterial retention is required.

Applications	
Culture media	Fermentation Broths
Serums	LVP (Large Volume Parenterals)
Vaccines	Pharmaceuticals
Fine Chemicals	Biologics
Antibiotics	Beverages
Water	Scale-Up Processes

SPECIFICATIONS

Bacterial Retention

Complete retention of $\geq 10^7$ organisms/cm^2 of *Brevundimonas diminuta* in accordance with the current HIMA challenge methodology (ASTM F838-05). Validation guide available upon request.

Water Bubble Point Specification

0.1 µm : 23 psi (0.16 MPA) in IPA
0.2 µm : 50 psi (0.35 MPA)

Bio-Safety

Filter effluent is non-pyrogenic per USP bacterial endotoxin (<0.25 EU/ml)

Sterilization & Autoclaving

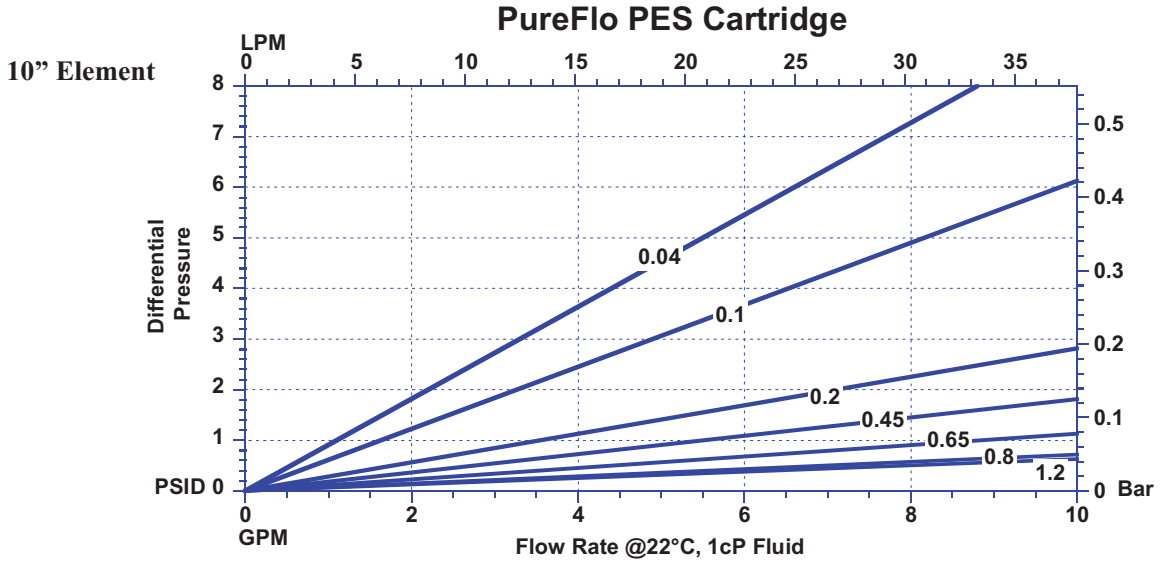
The filters can be sterilized by autoclaving for up to 50 cycles at 125 °C (257 °F) for 30 minutes. The filters can also be sterilized by steam-in-place procedure up to 30 cycles at 135 °C (275 °F) for 30 minutes at less than 0.3 bar differential pressure. The filters can also sanitized by hot water or common chemicals that are compatible with filter components.

Regulatory Compliance

Manufactured from materials that conform to the requirements of 21 CFR Part 177 of the U.S. Code of Federal Regulations and USP Class VI Biological Test for Plastics.

Features	Benefits
■ Hydrophilic PES Membrane (Absolute Rated)	■ Inherently hydrophilic ■ High flow rate reduces processing time ■ Low protein-binding membrane maximizes yields ■ Biologically inert membrane ■ Bacterially retentive to produce sterile solutions
■ Ease of wettability	■ Quicker and easier pre and post integrity testing
■ Low Levels of Filter Extractables	■ No adhesives, binders, or surfactants are used during manufacturing resulting in superior downstream cleanliness ■ All cartridges are rinsed with pyrogen-free water

PureFlo® PES Pharma Z Cartridges



Materials of Construction

Membrane: Hydrophilic Polyethersulfone (PES)
Membrane Supports: Polyester
Cage, Core: Polypropylene
End Caps: Nylon
Gasket / O-Rings: EPDM, Buna N, Silicone, Viton, TES, and TEV

Dimensions (nominal)

Lengths: 5 in. (13 cm), 10 in. (25 cm), 20 in. (51 cm), 30 in. (76 cm), 40 in. (102 cm)

Effective Filtration Area

0.65 m^2 (7 ft^2) per 10" cartridge element

Operating Conditions

Maximum Forward Differential Pressure:
5.0 bar (72.5 psid) at 22°C
2.0 bar (29 psid) at 80°C
Maximum Reverse Differential Pressure:
3.0 bar (43.5 psid) at 22°C
1.0 bar (14.5 psid) at 80°C
Maximum Operating Temperature: 80°C

PureFlo PES Pharma Z Grade Cartridge Ordering Guide

PureFlo PES Filter Cartridges	Removal Rating	End Modifications	Length	O-Ring / Gasket Materials	Package Qty	Options	Options
MZS = Single Layer PES membrane, PET support, with Nylon Endcaps, PP Cage & Core Construction	04 = 0.04 micron 10 = 0.10 micron 20 = 0.20 micron 45 = 0.45 micron 65 = 0.65 micron 80 - 0.80 micron 1X = 1.20 micron	0 = 222 O-Ring Flat 3 = 222 O-Ring w/tabs Spear 5 = 222 O-Ring Spear 6 = 226 O-Ring Flat 7 = 226 O-Ring Spear 8 = 223 O-Ring Flat F = DOE Flat Gasket S = SOE Flat Gasket Z = SOE Internal O-ring Flat **	1 = 10" 2 = 20" 3 = 30" 4 = 40" 5 = 5" 9 = 9.75"	E = EPDM N = Buna N P = Peroxide Cured EPDM Q = Platimum Cured Silicon S = Silicone T = TEV or FEP Gasket U = TES* V = Fluoroelastomer	1 = 1pc/ pack	- 5 = SS Insert - RI = RFID Chip	Blank = Pharma Grade -ETO = ETO Sterilization -G(pore Size)= Glass Fiber PreFilter -P(pore Size)= PolyPro Media PreFilter -S(pore Size) = PES PreFilter
Example - Pharmaceutical grade, 10", 0.2 micron cartridge, with 2-222 Silicone o-ring, Flat end cap, and no insert would be MZS2001S1							
* - not available in Code Z ** - only available in 5", 9.75", 10" and 20", retrofit for DOE housings							

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PureFlo® Pharmaceutical Grade Cartridges

The PureFlo® Pharmaceutical Grade Cartridges are designed for product sterility. The all-polypropylene construction provides excellent chemical compatibility and superior flow per unit area as compared to other membrane cartridges. PureFlo® Pharmaceutical Grade Cartridges have been designed for final filtration in biopharmaceutical applications. The hydrophilic PES membrane does not require pre-wetting agents, thereby eliminating a potential source of contamination. Also, the PES membrane has low protein-binding characteristics to maximize yields.

No adhesives, binders, or surfactants are used in the manufacturing process. All cartridges are rinsed with pyrogen-free water to reduce extractables and downtime. All filter cartridges are 100% integrity tested to ensure filter performance and quality. PureFlo® Pharmaceutical Grade Cartridges are well-suited for critical applications where superior flow and bacterial retention is required.

Applications	
Culture media	Fermentation Broths
Serums	LVP (Large Volume Parenterals)
Vaccines	Pharmaceuticals
Fine Chemicals	Biologics
Antibiotics	Beverages
Water	Scale-Up Processes

SPECIFICATIONS

Bacterial Retention

Complete retention of $\geq 10^7$ organisms/cm^2 of *Brevundimonas diminuta* in accordance with the current HIMA challenge methodology (ASTM F838-05). Validation guide available upon request.

Water Bubble Point Specification

0.1 µm : 23 psi (0.16 MPA) in IPA
0.2 µm : 50 psi (0.35 MPA)

Bio-Safety

Filter effluent is non-pyrogenic per USP bacterial endotoxin (<0.25 EU/ml)

Sterilization & Autoclaving

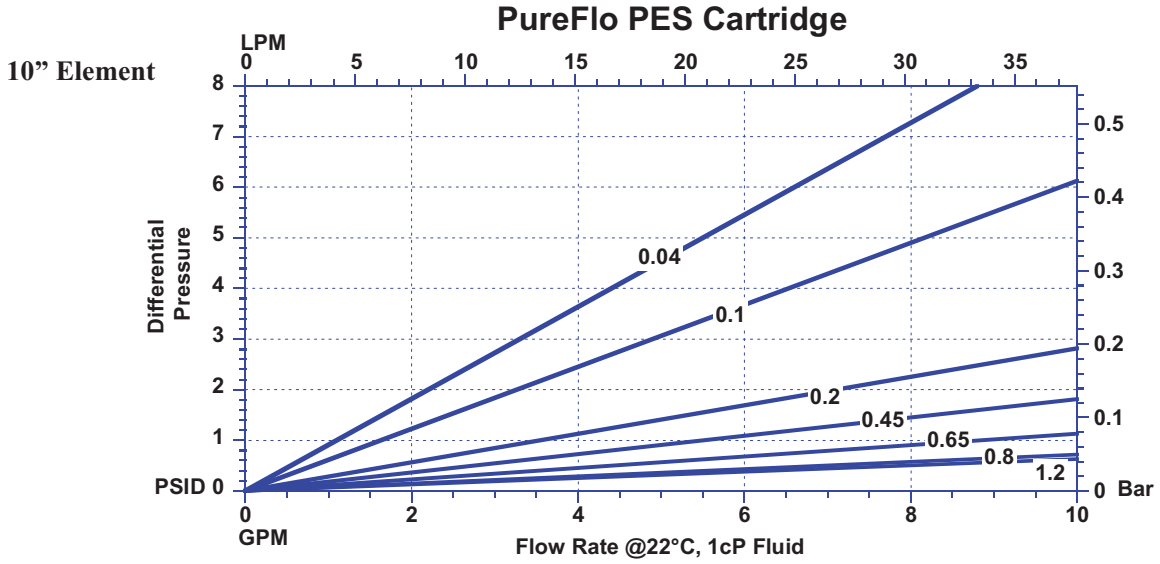
The filters can be sterilized by autoclaving for up to 50 cycles at 125 °C (257 °F) for 30 minutes. The filters can also be sterilized by steam-in-place procedure up to 30 cycles at 135 °C (275 °F) for 30 minutes at less than 0.3 bar differential pressure. The filters can also sanitized by hot water or common chemicals that are compatible with filter components.

Regulatory Compliance

Manufactured from materials that conform to the requirements of 21 CFR Part 177 of the U.S. Code of Federal Regulations and USP Class VI Biological Test for Plastics.

Features	Benefits
■ Hydrophilic PES Membrane (Absolute Rated)	■ Inherently hydrophilic ■ High flow rate reduces processing time ■ Low protein-binding membrane maximizes yields ■ Biologically inert membrane ■ Bacterially retentive to produce sterile solutions
■ Wide Chemical & Thermal Compatibility	■ Provides excellent compatibility with a wide-range of chemicals
■ Low Levels of Filter Extractables	■ No adhesives, binders, or surfactants are used during manufacturing resulting in superior downstream cleanliness ■ All cartridges are rinsed with pyrogen-free water

PureFlo® Pharmaceutical Grade Cartridges



Materials of Construction

Membrane: Hydrophilic Polyethersulfone (PES)
Membrane Supports: Polypropylene
Cage, Core, End Caps: Polypropylene
Gasket / O-Rings: EPDM, Buna N, Silicone, Viton, TES, and TEV

Dimensions (nominal)

Lengths: 5 in. (13 cm), 10 in. (25 cm), 20 in. (51 cm), 30 in. (76 cm), 40 in. (102 cm)
Diameter: 2.75 in. (70 mm)

Effective Filtration Area

0.65 m^2 (7 ft^2) per 10" cartridge element

Operating Conditions

Maximum Forward Differential Pressure:
5.0 bar (72.5 psid) at 22°C
2.0 bar (29 psid) at 80°C
Maximum Reverse Differential Pressure:
3.0 bar (43.5 psid) at 22°C
1.0 bar (14.5 psid) at 80°C
Maximum Operating Temperature: 80°C

PureFlo PES Pharmaceutical Grade Cartridge Ordering Guide

PureFlo PES Filter Cartridges	Removal Rating	End Modifications	Length	O-Ring / Gasket Materials	Package Qty	Options	Options
MCS = PES with PP construction Pharma grade	04 = 0.04 micron 10 = 0.10 micron 20 = 0.20 micron 50 = 0.45 micron 65 = 0.65 micron 80 - 0.80 micron 1X = 1.20 micron	0 = 222 O-Ring Flat 3 = 222 O-Ring w/tabs Spear 5 = 222 O-Ring Spear 6 = 226 O-Ring Flat 7 = 226 O-Ring Spear 8 = 223 O-Ring Flat F = DOE Flat Gasket S = SOE Flat Gasket Z = SOE Internal O-ring Flat **	1 = 10" 2 = 20" 3 = 30" 4 = 40" 5 = 5" 9 = 9.75"	E = EPDM N = Buna N P = Peroxide Cured EPDM Q = Platimum Cured Silicon S = Silicone T = TEV or FEP Gasket U = TES* V = Fluoroelastomer	1 = 1pc/ pack	- 5 = SS Insert - RI = RFID Chip	-PH = Pharma Grade -ETO = ETO Sterilization -G(pore Size)= Glass Fiber PreFilter -P(pore Size)= Poly Pro Media PreFilter -S(pore Size) = PES PreFilter
Example - Pharmaceutical grade, 10", 0.2 micron cartridge, with 2-222 Silicone o-ring, Flat end cap, and no insert would be MCS2001S1-PH							
* - not available in Code Z		** - only available in 5", 9.75", 10" and 20", retrofit for DOE housings					

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PureFlo® Biological Reduction Grade Cartridges

PureFlo® Biological Reduction Grade Cartridges are highly retentive hydrophilic PES membrane filters that have been designed for critical solutions in the pharmaceutical industry. The PES membrane in an all-polypropylene construction provides excellent chemical compatibility. The PureFlo® Biological Reduction Grade Cartridge has superior flow per unit area as compared to other membrane cartridges. No adhesives, binders, or surfactants are used in the manufacturing process. All cartridges are rinsed with high-purity water to reduce extractables and downtime.

The PureFlo® PES membrane is inherently hydrophilic and does not require pre-wetting with IPA or flushing with DI water. This eliminates a potential source of contamination and hazardous waste. All filter cartridges are 100% integrity tested to ensure filter integrity each and every time. PureFlo® Biological Grade Cartridges are well-suited for critical applications where superior flow, microbial reduction and particle retention at 0.1, 0.2, 0.45, 0.65 and 0.8 micron are needed. The PES membrane also exhibits low protein-binding characteristics.

Applications	
Serums	Vaccines
Biologics	Pre-filtration
Bacterial Growth Media	Pharmaceutical Intermediates
Reagent Chemicals	Biologics
Fermentation Broths	Ophthalmic Solutions
Process Water	Liquids

Benefits

- Superior flow rate reducing process time
- Long service life
- Biologically inert
- Low protein binding, maximizing yields
- Integrity testable
- All cartridges are rinsed with high-purity water
- Provides excellent compatibility with a wide-range of chemicals

Materials of Construction:

Membrane: Hydrophilic Polyethersulfone
Membrane Supports: Polypropylene
Cage, Core, End Caps: Polypropylene
Gasket / O-Rings: EPDM, Buna N, Silicone, Viton, TES, and TEV

Dimensions (nominal):

Lengths: 5 in. (13 cm), 10 in. (25 cm), 20 in. (51 cm), 30 in. (76 cm), 40 in. (102 cm)
Diameter: 2.75 in. (70 mm)

Effective Filtration Area:

0.65 m^2 (7 ft^2) per 10" cartridge element

Sterilization & Autoclaving:

The filters can be sterilized by autoclaving for up to 25 cycles at 125 °C (257 °F). The filters can also be sterilized by steam-in-place procedure up to 10 cycles at 135 °C (275 °F) for 30 minutes at less than 0.3 bar (4.35 psi) differential pressure. The filters can also sanitized by hot water or common chemicals that are compatible with filter components.

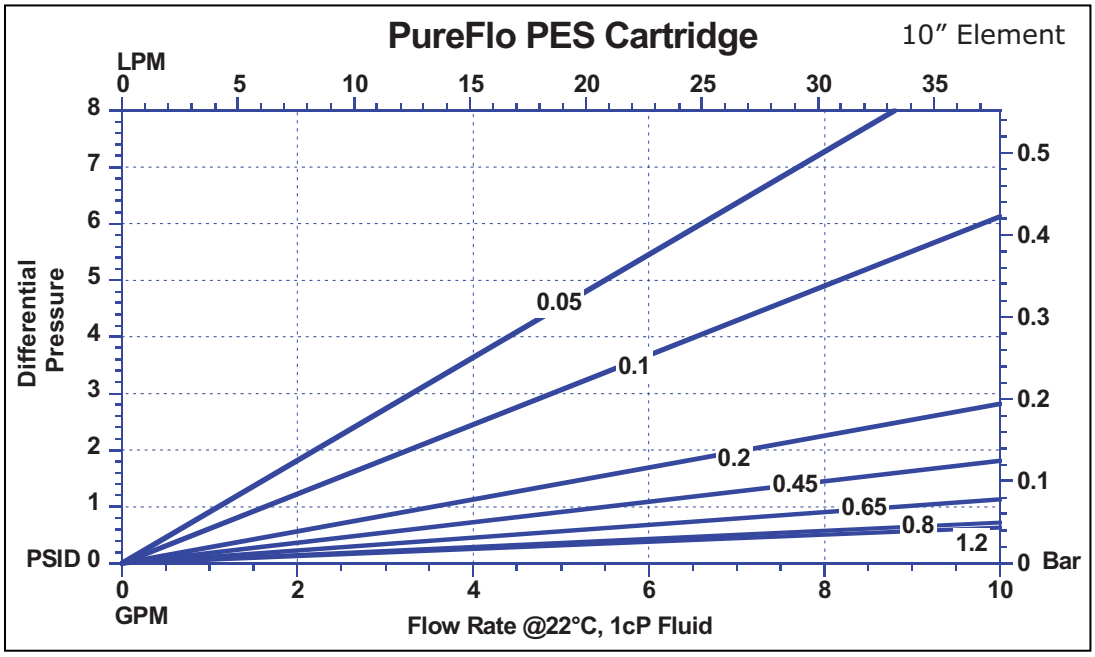
Water Bubble Point Specification:

0.1 µm : 23 psi (0.16 MPa) in IPA
0.2 µm : 45 psi (0.32 MPa)

Operating Conditions:

Maximum Forward Differential Pressure:
5.0 bar (72.5 psid) at 22 °C
2.0 bar (29 psid) at 80 °C
Maximum Reverse Differential Pressure:
3.0 bar (43.5 psid) at 22 °C
1.0 bar (14.5 psid) at 80 °C
Maximum Operating Temperature: 80 °C

PureFlo® Biological Reduction Grade Cartridges



Regulatory Compliance:

Manufactured from materials that conform to the requirements of 21 CFR Part 177 of the U.S. Code of Federal Regulations and USP Class VI Biological Test for Plastics.

PureFlo® Biological Grade Cartridge Ordering Guide

PureFlo PES Filter Cartridges	Removal Rating	End Modifications	Length	O-Ring / Gasket Materials	Package Qty	Options
MCS	05 - 0.05 micron 10 - 0.10 micron 20 - 0.20 micron 50 - 0.45 micron 65 - 0.65 micron 80 - 0.80 micron 1X - 1.20 micron	0 = 222 O-Ring Flat 3 = 222 O-Ring w/tabs Spear 5 = 222 O-Ring Spear 6 = 226 O-Ring Flat 7 = 226 O-Ring Spear 8 = 223 O-Ring Flat F = DOE Flat Gasket S = SOE Flat Gasket Z = SOE Internal O-ring Flat **	1 - 10" 2 - 20" 3 - 30" 4 - 40" 5 = 5" 9 = 9.75"	E = EPDM N = Buna N P = Peroxide Cured EPDM Q = Platimum Cured Silicon S = Silicone T = TEV or FEP Gasket U = TES* V = Fluoroelastomer	1 = 1pc/ pack	-B =Bio-Reduction grade - 5 = SS Insert -RI = RFID Chip
Example - PureFlo PES, 10", 0.2 micron cartridge, with 2-222 Silicone o-ring, Flat end cap, and no insert would be MCS2001S1-B						
* - not available in Code Z ** - only available in 5", 9.75", 10" and 20", retrofit for DOE housings						

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PureFlo® BEV Cartridges

PureFlo® BEV Cartridges are highly-retentive hydrophilic PES membrane filters. The BEV filter has been designed for beverage applications. The PES membrane, with polyester supports and nylon end caps, provides excellent wettability. No adhesives, binders, or surfactants are used in the manufacturing process. All cartridges are rinsed with high-purity water to reduce extractables.

The hydrophilic PES membrane, with the polyester supports and nylon end caps, enhances the PES pore structure to make it spontaneously wet out in your liquid beverage. No pre-wetting with IPA and flushing with DI water required, thus, eliminating a potential source of contamination and hazardous waste. All filter cartridges are flushed and 100% integrity tested to ensure filter performance each and every time. PureFlo BEV filter cartridges are well-suited for critical applications where superior flow and particle removal efficiency at 0.1, 0.2, 0.45, 0.65, and 1.2 micron is required.

Applications	
Wines	Beers
Liquids	Juices
Syrups	Beverages
Process Water	Potable Water

Materials of Construction

Membrane: Hydrophilic Polyethersulfone
Membrane Supports: Polyester
Cage and Core: Polypropylene
End Caps: Nylon
Gasket / O-Rings: EPDM, Buna N, Silicone, Viton, TES, and TEV

Dimensions (nominal)

Lengths: 5 in. (13 cm), 10 in. (25 cm), 20 in. (51 cm), 30 in. (76 cm), 40 in. (102 cm)
Diameter: 2.75 in. (70 mm)

Effective Filtration Area

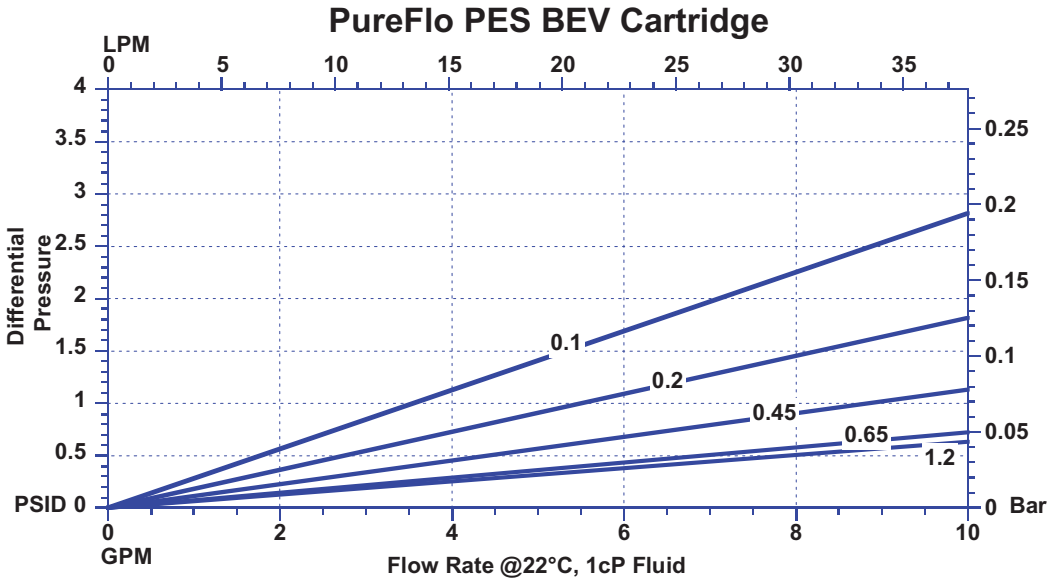
0.65 m^2 (7.0 ft^2) per 10" cartridge element

Operating Conditions

Maximum Forward Differential Pressure:
5.0 bar (72.5 psid) at 22 °C
2.0 bar (29 psid) at 80 °C
Maximum Reverse Differential Pressure:
3.0 bar (43.5 psid) at 22 °C
1.0 bar (14.5 psid) at 80 °C
Maximum Operating Temperature: 80 °C

Features	Benefits
■ Hydrophilic PES Membrane	■ IPA pre-wetting not required – thereby eliminating a potential source of contamination and disposal waste ■ Reduces downtime and improves throughput
■ Wide Chemical & Thermal Compatibility	■ Provides excellent compatibility with a wide-range of chemicals
■ Low Levels of Filter Extractables	■ No adhesives, binders, or surfactants are used during manufacturing resulting in superior downstream cleanliness ■ All cartridges are rinsed with high-purity water

PureFlo® BEV Cartridges



10" Element

Specifications (cont.)

Regulatory Compliance:

Manufactured from materials that conform to the requirements of 21 CFR Part 177 of the U.S. Code of Federal Regulations and USP Class VI Biological test for Plastics

Sterilization & Autoclaving:

The filters can be sterilized by autoclaving for up to 25 cycles at 125 °C (257 °F) for 30 minutes. The filters can also be sterilized by steam-in-place procedure up to 10 cycles at 135 °C (275 °F) for 30 minutes at less than 0.3 bar (4.35 psi) differential pressure. The filters can also sanitized by hot water or common chemicals that are compatible with filter components.

PureFlo BEV Cartridge Ordering Guide

PureFlo PES Filter Cartridges	Removal Rating	End Modifications	Length	O-Ring / Gasket Materials	Package Qty	Inserts
MBS = PES Filter Cartridge Beverage Grade	10 = 0.10 micron 20 = 0.20 micron 45 = 0.45 micron 65 = 0.65 micron 80 - 0.80 micron 1X = 1.20 micron	0 = 222 O-Ring Flat 3 = 222 O-Ring w/tabs Spear 5 = 222 O-Ring Spear 6 = 226 O-Ring Flat 7 = 226 O-Ring Spear 8 = 223 O-Ring Flat F = DOE Flat Gasket S = SOE Flat Gasket Z = SOE Internal O-ring Flat **	1 = 10" 2 = 20" 3 = 30" 4 = 40" 5 = 5" 9 = 9.75"	E = EPDM N = Buna N P = Peroxide Cured EPDM Q = Platimum Cured Silicon S = Silicone T = TEV or FEP Gasket U = TES* V = Fluoroelastomer	1 = 1pc/ pack 6 = 6pc/ pack (for10" and 20" only)	Blank = Standard -5 = SS Insert
Example - Beverage grade PES, 10", 0.2 micron cartridge, with 2-222 Silicone o-ring, Flat end cap, and no insert would be *MBS2001S1*						

* - not available in Code Z ** - only available in 5", 9.75", 10" and 20", retrofit for DOE housings

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PureFlo® PES Cartridges — General Grade

PureFlo® General Grade PES Cartridges are a cost-effective alternative to standard or pharmaceutical grade cartridges for the pre-filtration of aqueous-based liquids. The PES membrane in a high-purity all-polypropylene construction provides excellent chemical compatibility and competitive flow rates per unit area. No adhesives, binders, or surfactants are used in the manufacturing process.

The hydrophilic PES membrane does not require pre-wetting with IPA and flushing with water, thereby eliminating a potential source of contamination and hazardous waste. In addition, unlike hydrophobic filters such as polypropylene and PTFE, the hydrophilic membrane reduces the potential for bubble formation by not de-wetting in out-gassing fluids.

General grade PES filter cartridges are fabricated and packaged under clean room conditions.

Materials of Construction:

Membrane: Hydrophilic Polyethersulfone
Membrane Supports: Polypropylene
Cage, Core, End Caps: Polypropylene
Gasket / O-Rings: EPDM, Buna N, Silicone, Viton, TES, and TEV

Dimensions (nominal):

Lengths: 5 in. (13 cm), 10 in. (25 cm), 20 in. (51 cm), 30 in. (76 cm), 40 in. (102 cm)
Diameter: 2.75 in. (70 mm)

Effective Filtration Area:

0.6 m^2 (6.5 ft^2) per 10" cartridge element

Operating Conditions:

Maximum Forward Differential Pressure:
5.0 bar (72.5 psid) at 22 °C
2.0 bar (29 psid) at 80 °C
Maximum Reverse Differential Pressure:
3.0 bar (43.5 psid) at 22 °C
1.0 bar (14.5 psid) at 80 °C
Maximum Operating Temperature: 80 °C

Applications
Inks
Dyes
Parts Cleaning
Process Water
Plating Solutions
Liquid Clarification

Features	Benefits
■ Hydrophilic PES Membrane (Absolute Rated)	■ IPA pre-wetting not required, thereby eliminating a potential source of contamination and disposal waste ■ Reduces downtime and improves throughput ■ No adhesives, binders, or surfactants are used during manufacturing resulting in superior downstream cleanliness
■ Wide Chemical & Thermal Compatibility	■ Provides excellent compatibility with a wide-range of chemicals
■ Economic Filtration	■ Cost-effective product

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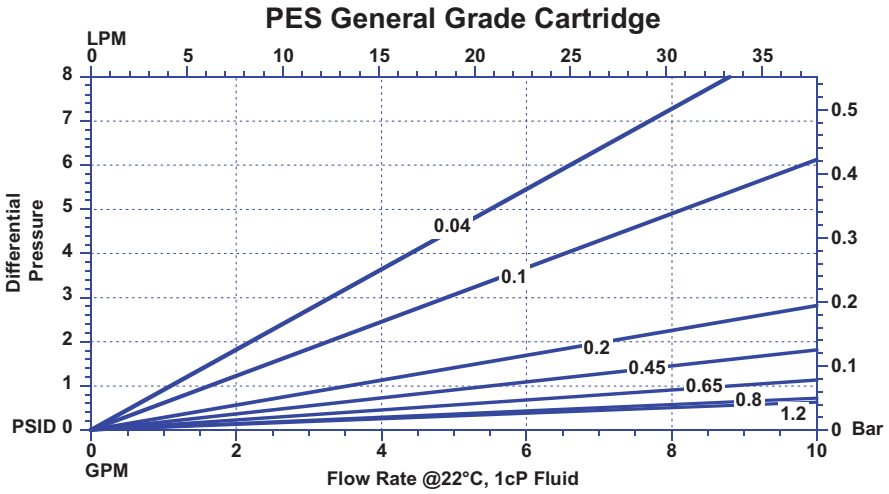
PureFlo® PES Cartridges — General Grade

Regulatory Compliance:

Manufactured from materials that conform to the requirements of 21 CFR Part 177 of the U.S. Code of Federal Regulations and USP Class VI Biological Test for Plastics

Sanitizing Agents:

Cartridges may be sanitized by common chemical sanitizing agents that are compatible with filter components.



PureFlo® PES Cartridge Ordering Guide - General Grade

PES Filter Cartridges	Removal Rating	End Modifications	Length	O-Ring / Gasket Materials	Package Qty	Inserts
MGS General Grade PES Cartridge	04 - 0.04 micron 10 - 0.10 micron 20 - 0.20 micron 50 - 0.45 micron 65 - 0.65 micron 80 - 0.80 micron 1X - 1.20 micron	0 = 222 O-Ring Flat 3 = 222 O-Ring w/tabs Spear 5 = 222 O-Ring Spear 6 = 226 O-Ring Flat 7 = 226 O-Ring Spear 8 = 223 O-Ring Flat F = DOE Flat Gasket S = SOE Flat Gasket Z = SOE Internal O-ring Flat **	1 - 10" 2 - 20" 3 - 30" 4 - 40" 5 = 5" 9 = 9.75"	E = EPDM N = Buna N P = Peroxide Cured EPDM Q = Platimum Cured Silicon S = Silicone T = TEV or FEP Gasket U = TES* V = Fluoroelastomer	1 = 1pc/ pack	Blank = Standard - 5 = Stainless Steel Insert
Example - PES General Grade, 10", 0.2 micron cartridge, with 2-222 Silicone o-ring, Flat end cap, and no insert would be MGS2001S1						
* - not available in Code Z		** - only available in 5", 9.75", 10" and 20", retrofit for DOE housings				

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PES Cartridge – Water Grade

Water grade Polyethersulfone (PES) Cartridges are a cost-effective alternative to standard or pharmaceutical grade cartridges for the filtration of aqueous-based liquids. The PES membrane in a high-purity all polypropylene construction provides excellent chemical compatibility and competitive flow rates per unit area. No adhesives, binders, or surfactants are used in the manufacturing process.

The hydrophilic PES membrane does not require pre-wetting with IPA and flushing with water, thereby eliminating a potential source of contamination and hazardous waste. In addition, unlike hydrophobic filters such as polypropylene and PTFE, the hydrophilic membrane reduces the potential for bubble formation by not de-wetting in out-gassing fluids.

Water grade PES filter cartridges are fabricated and packaged under cleanroom conditions. All filter cartridges are flushed and 100% integrity tested to ensure filter performance each and every time.

Materials of Construction:

Membrane: Hydrophilic Polyethersulfone
Membrane Supports: Polypropylene
Cage, Core, End Caps: Polypropylene
Gasket / O-Rings: EPDM, Buna N, Silicone, Viton, TES, and TEV

Dimensions (nominal):

Lengths: 5 in. (13 cm), 10 in. (25 cm), 20 in. (51 cm), 30 in. (76 cm), 40 in. (102 cm)
Diameter: 2.75 in. (70 mm)

Effective Filtration Area:

0.52 m^2 (5.6 ft^2) per 10" cartridge element

Operating Conditions:

Maximum Forward Differential Pressure:
5.0 bar (72.5 psid) at 20 °C
2.0 bar (29 psid) at 80 °C
Maximum Reverse Differential Pressure:
3.0 bar (43.5 psid) at 20 °C
1.0 bar (14.5 psid) at 80 °C
Maximum Operating Temperature: 80 °C

Applications	
Inks	Pre Filter for Water
Dyes	DI Water
Parts Cleaning	Process Water
Process Water	Chemicals
Plating Solutions	Acids
Liquid Clarification	Bases

Features	Benefits
■ Hydrophilic PES Membrane (Absolute Rated)	■ IPA pre-wetting not required – thereby eliminating a potential source of contamination and disposal waste ■ Reduces downtime and improves throughput ■ No adhesives, binders, or surfactants are used during manufacturing resulting in superior downstream cleanliness
■ Wide Chemical & Thermal Compatibility	■ Provides excellent compatibility with a wide-range of chemicals
■ Economic Filtration	■ Cost-effective product

PES Cartridge – Water Grade

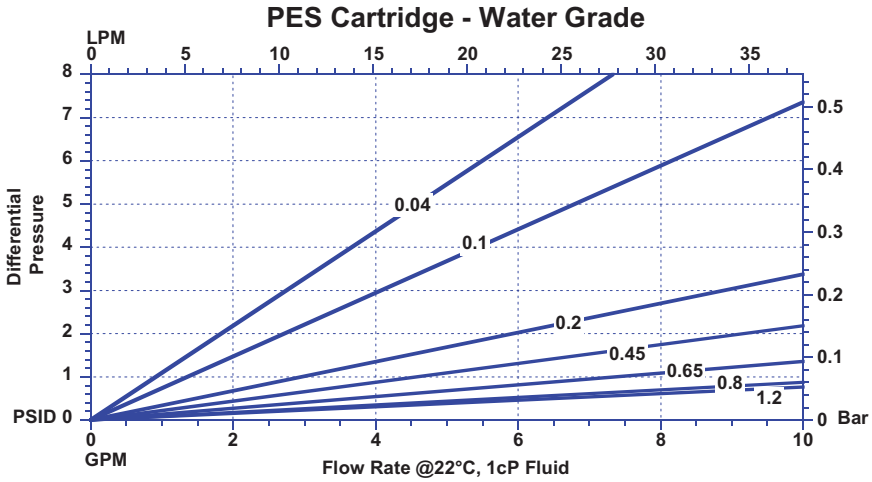
Specifications (cont.)

Regulatory Compliance:

Manufactured from materials that conform to the requirements of 21 CFR Part 177 of the U.S. Code of Federal Regulations and USP Class VI Biological test for Plastics

Sterilization & Autoclaving:

The filters can be sterilized by autoclaving for up to 25 cycles at 125 °C (257 °F) for 30 minutes. The filters can also be sterilized by steam-in-place procedure up to 10 cycles at 135 °C (275 °F) for 30 minutes at less than 0.3 bar (4.35 psi) differential pressure. The filters can also sanitized by hot water or common chemicals that are compatible with filter components.



PES Cartridge Ordering Guide - General Grade

PES Filter Cartridges	Removal Rating	End Modifications	Length	O-Ring / Gasket Materials	Package Qty	Inserts
MWS Water Grade	04 - 0.04 micron 10 - 0.10 micron 20 - 0.20 micron 45 - 0.45 micron 65 - 0.65 micron 80 - 0.80 micron 1X - 1.20 micron	0 = 222 O-Ring Flat 3 = 222 O-Ring w/tabs Spear 5 = 222 O-Ring Spear 6 = 226 O-Ring Flat 7 = 226 O-Ring Spear 8 = 223 O-Ring Flat F = DOE Flat Gasket S = SOE Flat Gasket Z = SOE Internal O-ring Flat **	1 - 10" 2 - 20" 3 - 30" 4 - 40" 5 = 5" 9 = 9.75"	E = EPDM N = Buna N P = Peroxide Cured EPDM Q = Platimum Cured Silicon S = Silicone T = TEV or FEP Gasket U = TES* V = Fluoroelastomer	1 = 1pc/ pack	Blank = Standard - 5 = Stainless Steel Insert
Example - Water Grade, 10", 0.2 micron cartridge, with 2-222 Silicone o-ring, Flat end cap, and no insert would be *M S2001S1*						
* - not available in Code Z		** - only available in 5", 9.75", 10" and 20", retrofit for DOE housings				

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PureFlo® CA Cartridges

PureFlo® CA (Cellulose Acetate) Cartridges are highly retentive hydrophilic membrane filters that have been specially designed for critical applications. The Cellulose Acetate membrane in an all-polypropylene construction provides excellent compatibility in across a wide range of applications. No adhesives or binders are used in the manufacturing process and all cartridges are rinsed with high-purity water to reduce extractables and downtime.

The hydrophilic Cellulose Acetate membrane does not require pre-wetting with IPA and flushing with DI water, thereby eliminating a potential source of contamination and hazardous waste. In addition, the Cellulose Acetate membrane is low protein binding for use in pharmaceutical and biotechnology applications.

All filter cartridges are 100% integrity tested to ensure filter performance each and every time out of the package. PureFlo® CA filter cartridges are well-suited for critical applications where low protein binding and high particle removal efficiency at 0.2, 0.45, 0.65, 0.80 and 1.2 micron is required.

Materials of Construction:

Membrane: Hydrophilic Cellulose Acetate
Membrane Supports: Polypropylene
Cage, Core, End Caps: Polypropylene
Gasket / O-Rings: EPDM, Buna N, Silicone, Viton, TES, and TEV

Dimensions (nominal):

Lengths: 5 in. (13 cm), 10 in. (25 cm), 20 in. (51 cm), 30 in. (76 cm), 40 in. (102 cm)
Diameter: 2.75 in. (70 mm)

Effective Filtration Area:

0.65 m^2 (7 ft^2) per 10" cartridge element

Operating Conditions:

Maximum Forward Differential Pressure:
5.0 bar (72.5 psid) at 22 °C
2.0 bar (29 psid) at 80 °C
Maximum Reverse Differential Pressure:
3.0 bar (43.5 psid) at 22 °C
1.0 bar (14.5 psid) at 80 °C
Maximum Operating Temperature: 80 °C

Applications	
Acids	Ink Jets
Bases	Clarification
Solvents	Pharmaceuticals
Fine Chemicals	Biologics
Plating Solutions	Dyes
Process Water	Lacquers
Beverages	Parts Cleaning

Features	Benefits
■ Hydrophilic Cellulose Acetate Membrane (Absolute Rated)	■ IPA pre-wetting not required – thereby eliminating a potential source of contamination and disposal waste ■ Reduces downtime and improves throughput ■ Economic alternative to PTFE filters ■ No de-wetting in out-gassing fluids, unlike hydrophobic filters
■ Wide Chemical & Thermal Compatibility	■ Provides excellent compatibility with a wide-range of chemicals
■ Low levels of Filter Extractables	■ No adhesives, binders, or surfactants are used during manufacturing resulting in superior downstream cleanliness ■ All cartridges are rinsed with high-purity water

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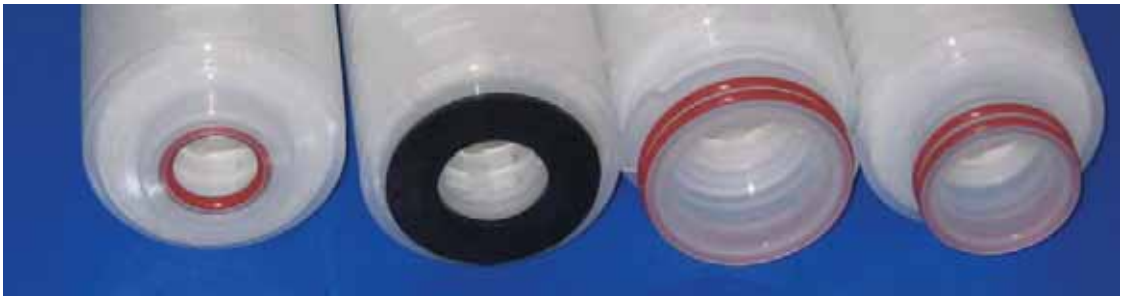
PureFlo® CA Cartridges



Regulatory Compliance:

Manufactured from materials that conform to the requirements of 21 CFR Part 177 of the U.S. Code of Federal Regulations and USP Class VI Biological Test for Plastic

Sterilization & Autoclaving:

The filters can be sterilized by autoclaving for up to 25 cycles at 125 °C (257 °F) for 30 minutes. The filters can also be sterilized by steam-in-place procedure up to 3 cycles at 135 °C (275 °F) for 30 minutes at less than 0.3 bar differential pressure. The filters can also sanitized by hot water or common chemicals that are compatible with filter components.

PureFlo® CA Cartridge Ordering Guide

PureFlo PES Filter Cartridges	Removal Rating	End Modifications	Length	O-Ring / Gasket Materials	Package Qty	Options
MCA Cellulose Acetate membrane, PP support, with PP Construction	20 - 0.20 micron 45 - 0.45 micron 65 - 0.65 micron 80 - 0.80 micron 1X - 1.20 micron	0 = 222 O-Ring Flat 3 = 222 O-Ring w/tabs Spear 5 = 222 O-Ring Spear 6 = 226 O-Ring Flat 7 = 226 O-Ring Spear 8 = 223 O-Ring Flat F = DOE Flat Gasket S = SOE Flat Gasket Z = SOE Internal O-ring Flat **	1 - 10" 2 - 20" 3 - 30" 4 - 40" 5 = 5" 9 = 9.75"	E = EPDM N = Buna N P = Peroxide Cured EPDM Q = Platinum Cured Silicon S = Silicone T = TEV or FEP Gasket U = TES* V = Fluoroelastomer	1 = 1pc/ pack	- 5 = SS Insert
Example - PureFlo Cellulose Acetate, 10", 0.2 micron cartridge, with 2-222 Silicone o-ring, Flat end cap, and no insert would be MCA2001S1						
* - not available in Code Z ** - only available in 5", 9.75", 10" and 20", retrofit for DOE housings						

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PureFlo® Glass Microfiber Cartridges

PureFlo® Glass Microfiber Cartridges are highly retentive filters that have a pleated design to maximize surface area. The borosilicate microfiber media in an all polypropylene construction provides excellent chemical compatibility and superior flow per surface area. No adhesives or surfactants are used in the manufacturing process. The borosilicate microfiber is "non-fiber releasing."

The borosilicate microfiber is ideally-suited for microbial reduction. In addition, the media provides superior flow and pressure drop characteristics per unit area. PureFlo® microfiber filter cartridges are well-suited for critical applications where superior flow and retention of deformable and non-deformable particles is required.

Materials of Construction:

Media: Borosilicate Microfiber
Membrane Supports: Polypropylene
Cage, Core, End Caps: Polypropylene
O-Rings: Silicone, EPDM, Viton, Buna N, TES, and TEV

Dimensions (nominal):

Lengths: 5 in. (13 cm), 10 in. (25 cm), 20 in. (51 cm), 30 in. (76 cm), 40 in. (102 cm)
Diameter: 2.75 in. (70 mm)

Effective Filtration Area:

0.47 m^2 (5.0 ft^2) per 10" cartridge element

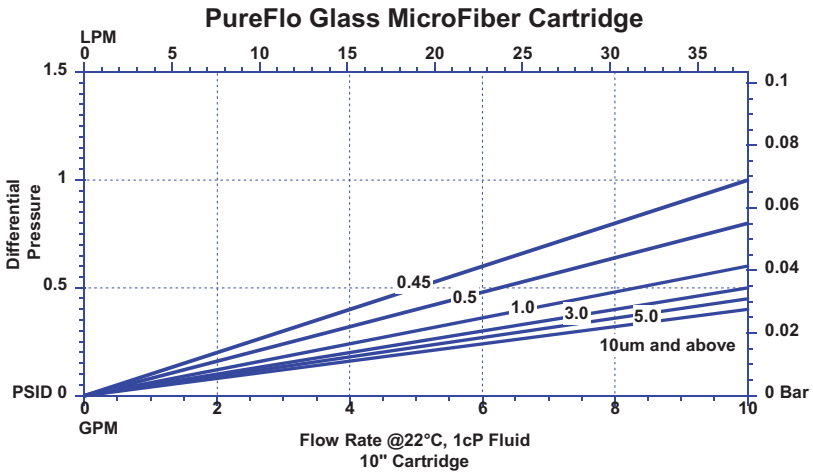
Operating Conditions:

Maximum Forward Differential Pressure:
5.0 bar (72.5 psid) at 22 °C
2.0 bar (29 psid) at 80 °C
Maximum Reverse Differential Pressure:
3.0 bar (43.5 psid) at 22 °C
1.0 bar (14.5 psid) at 80 °C
Maximum Operating Temperature: 80 °C

Applications	
Pre-filtration	Biologics
Serums	Bio-Burden Reduction
Pharmaceuticals	Retention of Deformable Particles
Wine Clarification	Inks
Food & Beverage	Cosmetics

Features	Benefits
■ Borosilicate Microfiber media	■ High dirt-loading capacity ■ Superior filter lifetime and process throughputs
■ Wide Chemical & Thermal Compatibility	■ Provides excellent compatibility with a wide range of chemicals ■ No media migration into the process fluid
■ Quality Construction	■ No adhesives, binders, or surfactants are used during the manufacturing process resulting in superior downstream cleanliness ■ Thermally welded construction to eliminate bypass

PureFlo® Glass Microfiber Cartridges



Specifications (cont.)

Regulatory Compliance:

Manufactured from materials that conform to the requirements of USP Class VI Biological Test for Plastics

Sterilization & Autoclaving:

The filters can be sterilized by autoclaving for up to 25 cycles at 125 °C (257 °F) for 30 minutees. The filters can also be sterilized by steam-in-place procedure up to 10 cycles at 135 °C (275 °F) for 30 minutes at less than 0.3 bar (4.35 psi) differential pressure. The filters can also sanitized by hot water or common chemicals that are compatible with filter components.

PureFlo® Glass Microfiber Cartridge Ordering Guide

PureFlo Glass Micro-fiber Filter Cartridges	Removal Rating	End Modifications	Length	O-Ring / Gasket Materials	Package Qty	Options
NCG = Glass MicroFiber W/ PP Construction	H = HEPA U = ULPA 02 = 0.2 micron 04 = 0.45 micron 05 = 0.5 micron 10 = 1 micron 30 = 3 micron 50 = 5 micron 1X = 10 micron 2X = 20 micron 3X = 30 micron	0 = 222 O-Ring Flat 3 = 222 O-Ring w/tabs Spear 5 = 222 O-Ring Spear 6 = 226 O-Ring Flat 7 = 226 O-Ring Spear 8 = 223 O-Ring Flat B = 1.5" Tri Clamp Flat F = DOE Flat Gasket S = SOE Flat Gasket Z = SOE Internal O-ring Flat **	1 - 10" 2 - 20" 3 - 30" 4 - 40" 5 = 5" 9 = 9.75"	E = EPDM N = Buna N P = Peroxide Cured EPDM Q = Platinum Cured Silicon S = Silicone T = TEV or FEP Gasket U = TES* V = Fluoroelastomer O = No O-ring	1 = 1pc/ pack 6 = 6pc/ pack (for 10" and 20" only)	Blank = Standard - 5 = SS Insert
Example - Glass MicoFiber Cartridge, 10", 3.0 micron cartridge, with 2-222 Silicone o-ring, Flat end cap, and no insert would be NCG3001S1						

* - not available in Code Z ** - only available in 5", 9.75", 10" and 20", retrofit for DOE housings

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ISO Certified 9001 14001

PureFlo® Hi Temp Glass Microfiber Cartridges

(Glass Microfiber with Hi Temp PP construction)

PureFlo® Hi Temp Glass Microfiber Cartridges are highly retentive filters that have a pleated design to maximize surface area. The construction is with a high temp PP resin for longer life in elevated temperatures. The borosilicate microfiber media with polypropylene construction provides excellent chemical compatibility and superior flow per surface area. No adhesives or surfactants are used in the manufacturing process. The borosilicate microfiber is "non-fiber releasing."

The borosilicate microfiber is ideally-suited for microbial reduction. In addition, the media provides superior flow and pressure drop characteristics per unit area. PureFlo® microfiber filter cartridges are well-suited for critical applications where superior flow and retention of deformable and non-deformable particles is required.

Applications	
Pre-filtration	Biologics
Serums	Bio-Burden Reduction
Pharmaceuticals	Retention of Deformable Particles
Wine Clarification	Inks
Food & Beverage	Cosmetics

Materials of Construction:

Media: Borosilicate Microfiber
Membrane Supports: Polypropylene
Cage, Core, End Caps: Polypropylene
O-Rings: Silicone, EPDM, Viton, Buna N, TES, and TEV

Dimensions (nominal):

Lengths: 5 in. (13 cm), 10 in. (25 cm), 20 in. (51 cm), 30 in. (76 cm), 40 in. (102 cm)
Diameter: 2.75 in. (70 mm)

Effective Filtration Area:

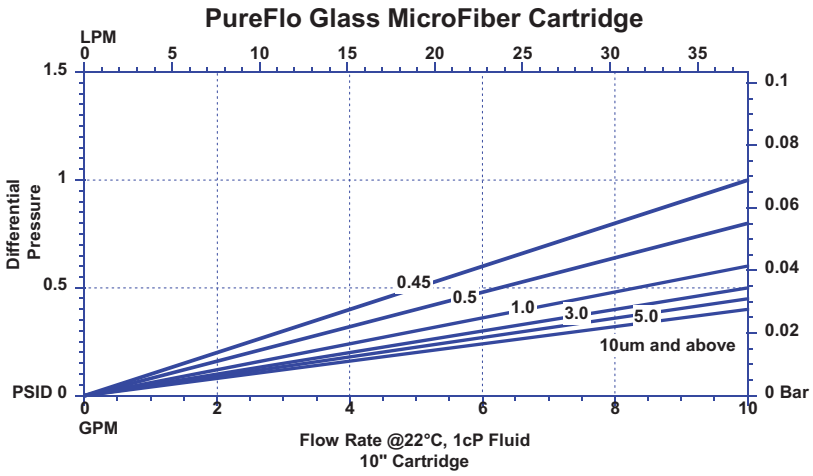
0.47 m^2 (5.0 ft^2) per 10" cartridge element

Operating Conditions:

Maximum Forward Differential Pressure:
5.0 bar (72.5 psid) at 22 °C
2.0 bar (29 psid) at 80 °C
Maximum Reverse Differential Pressure:
3.0 bar (43.5 psid) at 22 °C
1.0 bar (14.5 psid) at 80 °C
Maximum Operating Temperature: 85 °C

Features	Benefits
■ Borosilicate Microfiber media	■ High dirt-loading capacity ■ Superior filter lifetime and process throughputs
■ Wide Chemical & Thermal Compatibility	■ Longer lifetime in higher temperatures ■ No media migration into the process fluid
■ Quality Construction	■ No adhesives, binders, or surfactants are used during the manufacturing process resulting in superior downstream cleanliness ■ Thermally welded construction to eliminate bypass

PureFlo® Hi Temp Glass Microfiber Cartridges



Specifications (cont.)

Regulatory Compliance:

Manufactured from materials that conform to the requirements of USP Class VI Biological Test for Plastics

Sterilization & Autoclaving:

The filters can be sterilized by autoclaving for up to 100 cycles at 125 °C (257 °F) for 30 minutes. The filters can also be sterilized by steam-in-place procedure up to 100 cycles at 135 °C (275 °F) for 30 minutes at less than 0.3 bar (4.35 psi) differential pressure. The filters can also sanitized by hot water or common chemicals that are compatible with filter components.

PureFlo® Hi Temp Glass Microfiber Cartridge Ordering Guide

PureFlo Hi Temp Glass Micro-fiber Filter Cartridges	Removal Rating	End Modifications	Length	O-Ring / Gasket Materials	Package Qty	Options
NBG = Glass MicroFiber W/ High Temp PP Construction	H = HEPA U = ULPA 02 = 0.2 micron 04 = 0.45 micron 05 = 0.5 micron 10 = 1 micron 30 = 3 micron 50 = 5 micron 1X = 10 micron 2X = 20 micron 3X = 30 micron	0 = 222 O-Ring Flat 3 = 222 O-Ring w/tabs Spear 5 = 222 O-Ring Spear 6 = 226 O-Ring Flat 7 = 226 O-Ring Spear 8 = 223 O-Ring Flat F = DOE Flat Gasket S = SOE Flat Gasket Z = SOE Internal O-ring Flat **	1 - 10" 2 - 20" 3 - 30" 4 - 40" 5 = 5" 9 = 9.75"	E = EPDM N = Buna N P = Peroxide Cured EPDM Q = Platinum Cured Silicon S = Silicone T = TEV or FEP Gasket U = TES* V = Fluoroelastomer	1 = 1pc/ pack 6 = 6pc/ pack (for10" and 20" only)	Blank = Standard - 5 = SS Insert
Example - Glass MicoFiber Cartridge with high Temp PP construction, 10", 3um, with 2-222 Silicone o-ring, Flat end cap, and ss insert would be *B 001S1*						

* - not available in Code Z ** - only available in 5", 9.75", 10" and 20", retrofit for DOE housings

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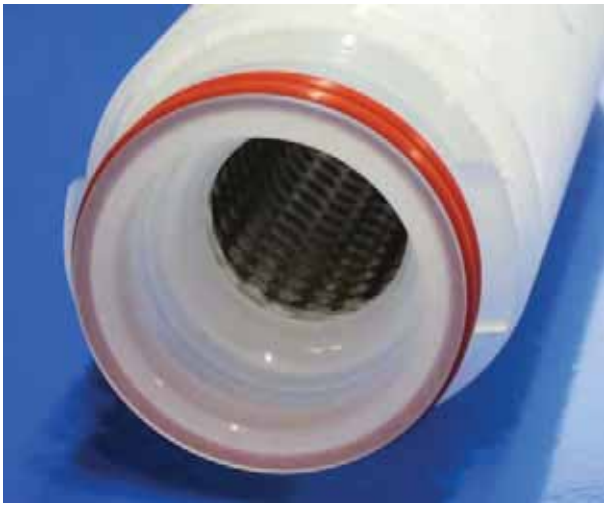
TÜV ISO 13485

PureFlo® Hi Temp Glass Microfiber Cartridges

(Glass Microfiber w/ Hi Temp PP and SS core)

PureFlo® Hi Temp Glass Microfiber Cartridges are highly retentive filters that have a pleated design to maximize surface area. The construction is with a high temp PP resin and a stainless steel core for longer life in elevated temperatures. The borosilicate microfiber media with polypropylene construction provides excellent chemical compatibility and superior flow per surface area. No adhesives or surfactants are used in the manufacturing process. The borosilicate microfiber is "non-fiber releasing."

The borosilicate microfiber is ideally-suited for microbial reduction. In addition, the media provides superior flow and pressure drop characteristics per unit area. PureFlo® microfiber filter cartridges are well-suited for critical applications where superior flow and retention of deformable and non-deformable particles is required.



Applications	
Pre-filtration	Biologics
Serums	Bio-Burden Reduction
Pharmaceuticals	Retention of Deformable Particles
Wine Clarification	Inks
Food & Beverage	Cosmetics

Materials of Construction:

Media: Borosilicate Microfiber
Membrane Supports: Polypropylene
Cage, End Caps: Polypropylene
Core: Stainless Steel
O-Rings: Silicone, EPDM, Viton, Buna N, TES, and TEV

Dimensions (nominal):

Lengths: 5 in. (13 cm), 10 in. (25 cm), 20 in. (51 cm), 30 in. (76 cm), 40 in. (102 cm)
Diameter: 2.75 in. (70 mm)

Effective Filtration Area:

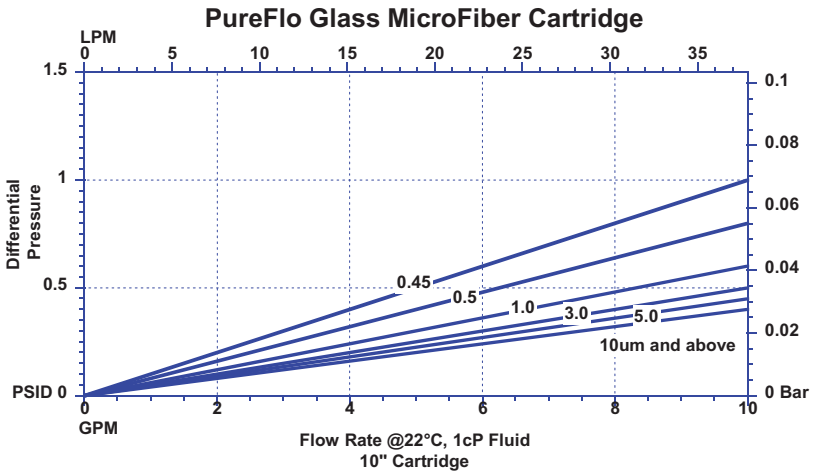
0.47 m^2 (5.0 ft^2) per 10" cartridge element

Operating Conditions:

Maximum Forward Differential Pressure:
5.0 bar (72.5 psid) at 22 °C
2.0 bar (29 psid) at 80 °C
Maximum Reverse Differential Pressure:
3.0 bar (43.5 psid) at 22 °C
1.0 bar (14.5 psid) at 80 °C
Maximum Operating Temperature: 90 °C

Features	Benefits
■ Borosilicate Microfiber media	■ High dirt-loading capacity ■ Superior filter lifetime and process throughputs
■ Wide Chemical & Thermal Compatibility	■ Longer lifetime in higher temperatures ■ No media migration into the process fluid
■ Quality Construction	■ No adhesives, binders, or surfactants are used during the manufacturing process resulting in superior downstream cleanliness ■ Thermally welded construction to eliminate bypass

PureFlo® Hi Temp Glass Microfiber Cartridges



Specifications (cont.)

Regulatory Compliance:

Manufactured from materials that conform to the requirements of USP Class VI Biological Test for Plastics

Sterilization & Autoclaving:

The filters can be sterilized by autoclaving for up to 150 cycles at 125 °C (257 °F) for 30 minutes. The filters can also be sterilized by steam-in-place procedure up to 150 cycles at 135 °C (275 °F) for 30 minutes at less than 0.3 bar (4.35 psi) differential pressure. The filters can also sanitized by hot water or common chemicals that are compatible with filter components.

PureFlo® Hi Temp Glass Microfiber w/ SS core Cartridge Ordering Guide

PureFlo Glass Micro-fiber Filter Cartridges	Removal Rating	End Modifications	Length	O-Ring / Gasket Materials	Package Qty	Options
NSG = Glass MicroFiber W/ Stainless Steal core and High Temp PP Construction	H = HEPA U = ULPA 02 = 0.2 micron 04 = 0.45 micron 05 = 0.5 micron 10 = 1 micron 30 = 3 micron 50 = 5 micron 1X = 10 micron 2X = 20 micron 3X = 30 micron	0 = 222 O-Ring Flat 3 = 222 O-Ring w/tabs Spear 5 = 222 O-Ring Spear 6 = 226 O-Ring Flat 7 = 226 O-Ring Spear 8 = 223 O-Ring Flat F = DOE Flat Gasket S = SOE Flat Gasket Z = SOE Internal O-ring Flat **	1 - 10" 2 - 20" 3 - 30" 4 - 40" 5 = 5" 9 = 9.75"	E = EPDM N = Buna N P = Peroxide Cured EPDM Q = Platinum Cured Silicon S = Silicone T = TEV or FEP Gasket U = TES* V = Fluoroelastomer	1 = 1pc/ pack 6 = 6pc/ pack (for10" and 20" only)	Blank = Standard - 5 = SS Insert
Example - Glass MicoFiber Cartridge withSS core and high Temp PP construction, 10", 3um, with 2-222 Silicone o-ring, Flat end cap, and SS insert would be NSG3001S1-5						
* - not available in Code Z ** - only available in 5", 9.75", 10" and 20", retrofit for DOE housings						

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PureFlo® Natural Glass Microfiber Cartridges

PureFlo® Natural Glass Microfiber Cartridges are highly retentive filters that have a pleated design for liquid applications. The media is hydrophilic, allowing for easier wetting of the borosilicate microfiber media. The filter is made with an all polypropylene construction providing excellent chemical compatibility and superior flow per surface area. The borosilicate microfiber media is binder free and "non -fiber releasing."

The natural borosilicate microfiber is ideally-suited for microbial reduction in aqueous applications. In addition, the media provides superior flow and pressure drop characteristics per unit area. PureFlo® Natural Glass Microfiber Cartridges are well-suited for critical applications where superior flow and retention of particles is required.

Applications	
Pre-filtration	Biologics
Serums	Bio-Burden Reduction
Pharmaceuticals	Retention of Deformable Particles
Wine Clarification	Inks
Food & Beverage	Cosmetics

Materials of Construction:

Media: Natural Borosilicate Microfiber
Membrane Supports: Polyester
Cage, Core, End Caps: Polypropylene
O-Rings: Silicone, EPDM, Viton, Buna N, TES, and TEV

Dimensions (nominal):

Lengths: 5 in. (13 cm), 10 in. (25 cm), 20 in. (51 cm), 30 in. (76 cm), 40 in. (102 cm)
Diameter: 2.75 in. (70 mm)

Effective Filtration Area:

0.47 m^2 (5.0 ft^2) per 10" cartridge element

Operating Conditions:

Maximum Forward Differential Pressure:
5.0 bar (72.5 psid) at 22 °C
2.0 bar (29 psid) at 80 °C
Maximum Reverse Differential Pressure:
3.0 bar (43.5 psid) at 22 °C
1.0 bar (14.5 psid) at 80 °C
Maximum Operating Temperature: 80 °C

Features	Benefits
■ Natural Borosilicate Microfiber Media (Hydrophilic)	■ High dirt-loading capacity ■ Superior filter lifetime and process throughputs ■ Easier wetting
■ Wide Chemical & Thermal Compatibility	■ Provides excellent compatibility with a wide range of chemicals ■ No media migration into the process fluid
■ Quality Construction	■ No adhesives, binders, or surfactants are in the final product resulting in superior downstream cleanliness ■ Thermally welded construction to eliminate bypass

PureFlo® Natural Glass Microfiber Cartridges

Specifications (cont.)

Regulatory Compliance:

Manufactured from materials that conform to the requirements of USP Class VI Biological Test for Plastics.

Sterilization & Autoclaving:

The filters can be sterilized by autoclaving for up to 25 cycles at 125 °C (257 °F) for 30 minutes. The filters can also be sterilized by steam-in-place procedure up to 10 cycles at 135 °C (275 °F) for 30 minutes at less than 0.3 bar (4.35 psi) differential pressure. The filters can also sanitized by hot water or common chemicals that are compatible with filter components.

PureFlo® Natural Glass Microfiber Cartridge Ordering Guide

PureFlo Natural Glass Microfiber Filter Cartridges	Removal Rating	End Modifications	Length	O-Ring / Gasket Materials	Package Qty	Options
NCNG = Natural Glass MicroFiber w/ PP Construction	05 = 0.5 micron 10 = 1 micron 30 = 3 micron 50 = 5 micron	0 = 222 O-Ring Flat 3 = 222 O-Ring w/tabs Spear 5 = 222 O-Ring Spear 6 = 226 O-Ring Flat 7 = 226 O-Ring Spear 8 = 223 O-Ring Flat B = 1.5" Tri Clamp Flat F = DOE Flat Gasket S = SOE Flat Gasket Z = SOE Internal O-ring Flat **	1 - 10" 2 - 20" 3 - 30" 4 - 40" 5 = 5" 9 = 9.75"	E = EPDM N = Buna N P = Peroxide Cured EPDM Q = Platinum Cured Silicon S = Silicone T = TEV or FEP Gasket U = TES* V = Fluoroelastomer 0 = O-ringless	1 = 1pc/ pack 6 = 6pc/ pack (for10" and 20" only)	Blank = Standard - 5 = SS Insert
Example - Natural Glass MicoFiber Cartridge, 10", 3um, 222 Silicone o-rings, Flat end cap, and no insert would be						*001S1*
* - not available in Code Z		** - only available in 5", 9.75", 10" and 20", retrofit for DOE housings				

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PureFlo® Polyester Screen Cartridges
(Polyester Screen w/ PP Construction)

Screen Filtration

PureFlo® Polyester Screen Cartridges are designed for filtration and clarification applications in the pharmaceutical, biotechnology, food and beverage, medical, chemical, and water industries. This family of products is particularly suitable for fluids with large sizes particles. The Polyester screen removes the particles by a sieving action. Hard particles can be easily removed by the use of these units.

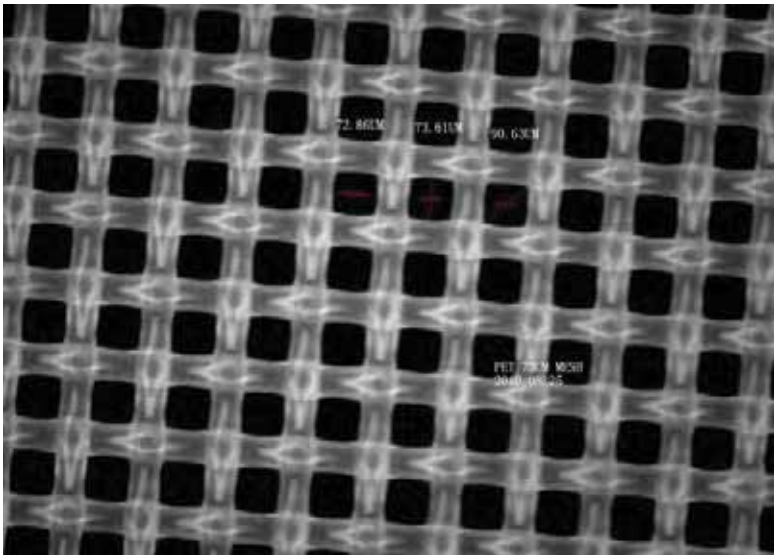
The Polyester screen in an all-polypropylene construction provides excellent chemical compatibility. The PureFlo® Polyester Screen Cartridges are well-suited for cellular filtration applications. No adhesives, binders, or surfactants are used in the manufacturing process. All capsules are rinsed with high-purity water to reduce extractables and downtime in a clean room environment to ensure filter performance each and every time out of the package.

Applications	
Chemical	Clarification
Critical Cleaning	Solvents
Fine Chemicals	Plating Solutions
Pre-Filtration	Acids & Bases
Cell filtration	Biologic Retention

Specification

Materials of Construction:	Screen: Polyester Screen Screen Supports: Polypropylene Cage, Core, End Caps: Polypropylene O-Rings: Silicone, EPDM, Fluoroelastomer, Buna N
Effective Filtration Area:	5.4 ft^2 (0.5 m^2) per 10" cartridge element
Nominal Dimensions:	Lengths: 5 in. (13 cm), 10 in. (25 cm), 20 in. (51 cm), 30 in. (76 cm), 40 in. (102 cm) Diameter: 2.75 in. (70 mm)
Available Ratings:	5, 7, 10, 20, 30, 40, 60, 73µm
Operating Conditions:	Maximum Forward Differential Pressure: 5.0 bar (72.5 psid) at 22 °C 2.0 bar (29 psid) at 80 °C Maximum Reverse Differential Pressure: 3.0 bar (43.5 psid) at 22 °C 1.0 bar (14.5 psid) at 80 °C Maximum Operating Temperature: 80 °C
Regulatory Compliance:	The filters are constructed with polypropylene resins and filtration screen in compliance with 21 CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastic.

PureFlo® Polyester Screen Cartridges



73µm Polyester Screen

Specifications (cont.)

Sterilization & Autoclaving:

The filters can be sterilized by autoclaving for up to 25 cycles at 257 °F (125 °C) for 30 minutes. The filters can also be sterilized by steam-in-place procedure up to 3 cycles at 275 °F (135 °C) for 30 minutes at less than 0.3 bar (4.3 psi) differential pressure. The filters may also be sanitized by hot water or common chemicals that are compatible with filter components.

PureFlo Polyester Screen Cartridge Ordering Guide

PureFlo Polyester Screen Filters	Removal Rating	End Modifications	Length	O-Ring / Gasket Materials	Package Qty	Inserts
NTS = Polyester Screen Cartridge	05 = 5 micron 07 = 7 micron 10 = 10 micron 20 = 20 micron 30 = 30 micron 40 = 40 micron 55 = 55 micron 73 = 73 micron	0 = 222 O-Ring Flat 3 = 222 O-Ring w/tabs Spear 5 = 222 O-Ring Spear 6 = 226 O-Ring Flat 7 = 226 O-Ring Spear 8 = 223 O-Ring Flat B = 1.5" Tri Clamp Flat F = DOE Flat Gasket S = SOE Flat Gasket Z = SOE Internal O-ring Flat **	1 - 10" 2 - 20" 3 - 30" 4 - 40" 5 = 5" 9 = 9.75"	E = EPDM N = Buna N P = Peroxide Cured EPDM Q = Platinum Cured Silicon S = Silicone T = TEV or FEP Gasket U = TES* V = Fluoroelastomer 0 = O-ringless	1= 1pc/ pack	Blank = Standard - 5 = SS Insert
Example - Polyester Screen, 10", 20 micron cartridge, with 2-226 Silicone o-ring, Spear, and no insert would be NTS2071S1						
* - not available in Code Z		** - only available in 5", 9.75", 10" and 20", retrofit for DOE housings				

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Thermally Bonded Polypropylene Depth Cartridges

JALT Technologies®

Thermally Bonded Polypropylene Depth Cartridges utilize graded density media that is well-suited for clarification and pre-filtration applications where high particle removal is essential. The graded density design efficiently captures contaminants throughout the media matrix, resulting in excellent contaminant holding capacity, lifetime, and pressure drop. Furthermore, the all-polypropylene construction provides excellent thermal and chemical compatibility with high and low high pH chemicals.

Cartridges can be provided with or without a core to provide additional strength. The filters are rated at nominal, 90% or 99% effeciancy at the rated pore size, to meet the needs of the specify application. The filters can come in a standard 2.5" and the larger 4.3" Big Blue diameter.

Applications	
Pre-Reverse Osmosis	Ink
Hydrocarbons	Beverages
Solvents	Water
Fine Chemicals	Biologics
Plating Solutions	Dyes
Parts Cleaning	Gas Processing

Benefits
■ Media matrix removes particles throughout the entire depth of the filter cartridge ■ High flow rates and low pressure drops ■ Economic option for high particle level fluids ■ Superior lifetime and throughput
■ Provides excellent thermal and chemical compatibility with a wide-range of chemicals
■ Consistent and reproducible particle removal

Materials of Construction:

Media: Polypropylene Melt Blown Fibers
Core: Polypropylene
End caps: Polypropylene
Gaskets/o-rings: Silicon, Buna-N, Viton, EPDM

Dimensions (nominal):

Lengths: 4", 9 7/8",10",19 1/2", 20", 29 1/2", 30", 39.5", 40"and 50"
Diameter: 2.5" and 4.3"
Inner diameter :1.1"

Operating Conditions:

Recommended Change out Differential Pressure: 2.4 bar (35 psid) at 20 °C
Maximum Operating Temperature: 85°C (185°F)

Regulatory Compliance:

Manufactured from materials that conform to the FDA requirements of 21 CFR Part 177.1500 of the U.S. Code of Federal Regulations

Toxicity:

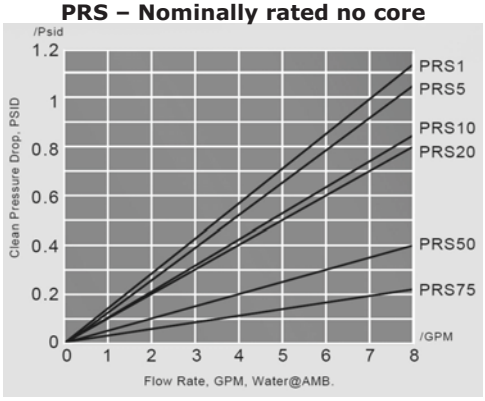
All cartridge components meet UPS Class VI criteria

Purity:

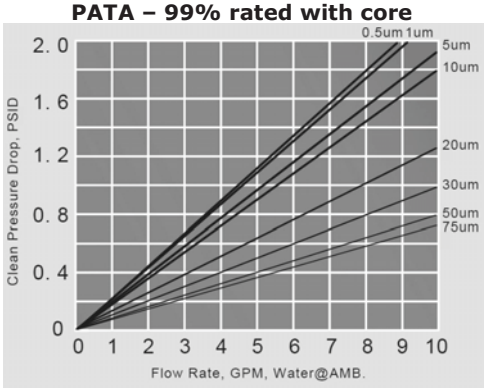
All Filter cartridges are free of surfactants, anti-static, binders and adhesives

Thermally Bonded Polypropylene Depth Cartridges

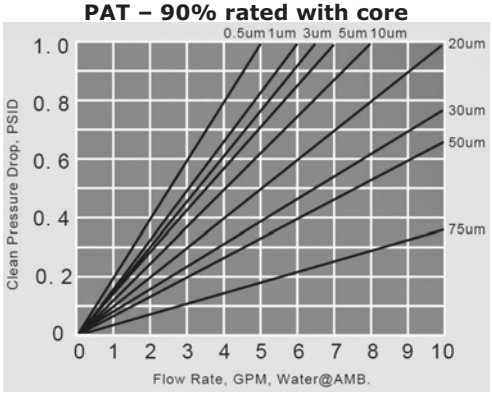
PRS – Nominally rated no core



PATA – 99% rated with core



PAT – 90% rated with core



Only Sold in Box of

Standard 2.5" diameter

- 10": Box 30
- 20",30",40": DOE, PE in Box of 15
- 20",30",40": FS, 3,7,8 in Box of 12

Big Blue Size 4.3" diameter

- 10" in Box of 12
- 20" in Box of 6

Flow rate is per 10" cartridge. For liquids other than water, multiply the pressure drop by the fluid viscosity in Centipoises.

Thermally Bonded Polypropylene Depth Cartridge

Thermally Bonded PolyPro Depth	Micron Rating	Length	Core	End Configuration	O-ring Seal Material
Nominal Rated **PRS**	**0.5-** = 0.5um*	**4-** = 4"	**Blank** = No Core (only for PRS)	**Blank** = DOE	**Blank** = No Seal
	1- = 1.0um	**9.87-** = 9 7/8"		**3** = 222 O-rings/ Flat	**E** = EPDM
	3- = 3.0um	**10-** = 10"		**8** = 222 O-ring /Fin	**N** = Buna N
	5- = 5.0um	**19.5-** = 19 1/2"		**7** = 226 O-ring /Fin	**S** = Silicone
90% Rated	**10-** = 10um	**20-** = 20"	**P** = PP core	**PE** = PE Gaskets	**V** = Viton
PAT	**20-** = 20um	**29.5-** = 29 1/2"	(for PAT and PATA)	**FS** = Spring End Cap	**T** = TEV
	30- = 30um	**30-** = 30"			
99% Rated	**50-** = 50um	**39.5-** = 39 1/2"		**BB** = Big Blue Size, only for PRS (4.3" diameter,DOE)	
PATA	**75-** = 75um	**40-** = 40"			
		50- = 50"			
Example – 90% Rated PP depth filter, 5.0 micron cartridge, 20" , with PP Core, DOE, would be ***PAT5-20P***					
Note: * 0.5µm only avalible at 90% and 99% rated					

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String Wound Cartridges

String Wound Cartridges are manufactured using a high speed, continuous wind process which creates a superior one-piece filter with hundreds of diamond shaped tunnels that get progressively smaller from the outer diameter to the core. Finer particles are progressively trapped as fluid travels to the center of the filter which allows for a much greater retention capacity than flat surface filter media of the same dimensions and porosity.

The 10" and 20" string wound filters have a unique dual density that is superior to most string wound filters. The filters are wound at high tension for the first half of the winding process and then at a lower tension during the second half of the wind. This produces a superior and efficient filter that does not blind as quickly, thereby giving longer filter life with better filtration without compromising efficiency.

The winding pattern provides 3.5 square feet per each 10 inches of cartridge length. For each 10 inch filter length there will be approximately 1/2 to 1 pound retention of solids before replacement becomes necessary. The amount of solids retained depends on the type of solids in the solution as well as the head pressure developed by the pump.

String wound filters can be custom made from 4" to 72" in length and from 2" to 5" in diameter. We can satisfy your filtration needs by producing filters with filtration capabilities from 0.5 microns up to 400 microns.

Materials of Construction:

Media: Cotton, Polypropylene, Rayon, Polyester, Nylon, Fiberglass, and Ryton

Core Material: Polypropylene, Tin Plated Steel, 304 Stainless Steel, 316 Stainless Steel

Core Cover: Polypropylene, Nylon, Fiberglass

Gaskets/ O-rings: EPDM, Buna N, Silicon, Viton, TEV

Dimensions (nominal):

Lengths: 5" to 40" (up to 72" custom)
Diameters: 2 1/4", 2 3/8", 2 7/16", 4 1/2"
(and custom from 2" to 5")

Features	Benefits
■ Dual Density string wound	■ Two zones to provide increased depth filtration that does not blind as quickly as standard filters ■ Wound in a precise pattern around the core providing greater surface area. The result is higher dirt-loading capacity and greater efficiency than standard wound cartridges
■ Wide variety of materials to choose from	■ 11 different classifications of material to meet your specific filtration needs
■ Quality Manufacturing	■ Most technically advanced string wound filter on the market ■ Continuous wound with no seams or binders

String Wound Cartridges

Media	Max Temp	Applications
Bleached Cotton (C) FDA	300° F 150° C	For potable liquids, vegetable oils, beverages, organic solvents, water, dilute acids, petroleum oils, and other services.
Industrial White Cotton (W)	300° F 150° C	Same (non - FDA) applications as bleached cotton.
Natural Cotton (U)	300° F 150° C	Same (non - FDA) applications as bleached cotton.
Polypropylene (P)	180° F 82° C	Filtration of organic acids, alkalies, solvents and many other chemicals. Very effective in low viscosity solutions.
FDA Polypropylene (A)	180° F 82° C	Same chemical compatibility as polypropylene, fiber complies with FDA regulation that permits contact with food and edible products.
Fibrillated Polypropylene (F)	180° F 82° C	Same chemical compatibility as polypropylene. Has no finish on material, therefore, will not cause foaming.
Rayon (R)	300° F 150° C	Chemical compatibility similar to cotton. Used primarily in filtration of petroleum oils.
Polyester (Y)	250° F 121° C	Chemical compatibility similar to cotton and polypropylene. Has a higher temperature resistance than polypropylene in most cases.
Nylon (N)	350° F 177° C	Used for special process applications, concentrated alkalies and hydrocarbons.
Fiberglass (G)	750° F 399° C	Filtration of organic acids, organic solvents, petroleum oils, mineral acids, and other corrosive or high-temperature services

String Wound Cartridge Ordering Guide

String Wound Cartridges	MEDIA	MICRON RATING	NOMINAL DIAMETER (INCHES)	NOMINAL LENGTH (INCHES)	CORE MATERIAL:	CORE COVER	END TREATMENT, CORE EXTENSIONS	Gasket/ O-Ring materials
	C = FDA Bleached Cotton	**05** = 0.5um	**B** = 2 1/4"	**5** = 5"	**P** = Polypropylene	**Blank** = None	**Blank** = None	**Blank** = None
	W = Industrial White Cotton	**1** = 1.0um	**E** = 2 3/8"	**9.5** = 9 1/2"	**T** = Tin Plated Steel	**N** = Nylon	**0** = 222 O-Ring Flat, PP	**E** = EPDM
SW	**U** = Natural Cotton	**3** = 3.0um	**R** = 2 7/16"	**9.75** = 9 3/4"	**S** = 304 Stainless Steel	**P** = Polypropylene	**5** = 222 O-Ring Spear, PP	**N** = Buna N
	P = Polypropylene	**5** = 5.0um	*(standard)*	**10** = 10" *(standard)*	**A** = 316 Stainless Steel	**G** = Fiberglass	**6** = 226 O-Ring Flat, PP	**S** = Silicon
	A= FDA Polypropylene	**10** = 10um	**P** = 4 1/2"	**19.5** = 19 1/2"		**C** = Cotton	**7** = 226 O-Ring Spear, PP	**V** = Viton
	F = Fibrillated Polypropylene	**15** = 15um		**20** = 20"			**6** = 226 O-Ring Flat, PP	**T** = TEV
	R = Rayon	**20** = 20um		**30** = 30"			**F** = DOE Flat Gasket, PP	
	Y = Polyester	**25** = 25um		**40** = 40"			**S** = SOE Flat Gasket/Flat, PP	**Options**
	N = Nylon	**30** = 30um					**PE** =Poly Core Insert	-IW **= Individually Wrapped**
	G = Fiberglass	**40** = 40um					**AE** = 316 SS Core Insert	
		50 = 50um					**EC** = Extended Crimped Core	
		75 = 75um					**CC** = Core Connector	
		100 = 100um		**Specials available upon request**			**PS** = Poly Spring	
		125 = 125um					**PM** = Metal Spring (poly cap)	
		150 = 150um					**ACS** = Std. 316SS Cap and Spring	
		250 = 250um						
		350 = 350um						

Example – String Wound FDA bleached cotton, 3um, 2 7/16" Diameter, 10", Polypropylene core - ***SWC3R10P***

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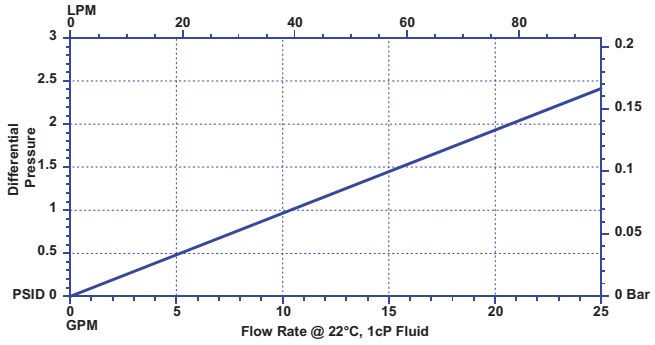
PureFlo® Activated Carbon Fiber Cartridge

PureFlo® Activated Carbon Fiber Cartridges are designed to remove organic compounds, hydrocarbons, chlorine, color, and odors from aqueous and organic liquids and gasses. The unique fibrous carbon media is designed for maximum flow and contaminant removal without the release of carbon fibers. The fibers allow for efficient contact time and adsorption capacity. The cartridges are designed with clean, durable polyethylene end caps, cage and core to provide superior downstream cleanliness.

No adhesives, binders, or surfactants are used in the manufacturing process. Each cartridge is manufactured under tight process control to achieve a uniform product with every filter. These activated carbon filters are available in a range of lengths and connections to suit your individual purification and filtration needs. The cartridges are manufactured to fit most single and multi

PureFlo Activated Carbon Cartridge



Materials of Construction:

Membrane: Fibrous Activated Carbon
Cage, Core, End Caps: Polypropylene
Gaskets: EPDM, Silicon, Buna N, and Fluoro-Elastomer

Dimensions (nominal):

Lengths: 10 - 40 in. (254 - 1016 mm)
Diameter: 2.75 in. (70 mm)

Operating Conditions:

Maximum Forward Differential Pressure:
4.1 bar (60 psi) at 22 °C
2 bar (29 psi) at 80 °C
Maximum Reverse Differential Pressure:
3.0 bar (43.5 psi) at 22 °C
1.0 bar (14.5 psi) at 80 °C
Maximum Operating Temperature: 80 °C

PureFlo Activated Carbon Fiber Cartridge Ordering Guide

Activated Carbon Fiber Filter	Removal Rating	End Modifications	Length	O-Ring / Gasket Materials	Package Qty
WCC	10 - 10 micron (Nominal)	0 = 222 O-Ring Flat 3 = 222 O-Ring w/tabs Spear 5 = 222 O-Ring Spear 6 = 226 O-Ring Flat 7 = 226 O-Ring Spear 8 = 223 O-Ring w/tabs Flat B = 1.5" Tri-Clamp Flat F = DOE Flat Gasket S = SOE Flat Gasket Z = SOE Internal O-ring Flat **	1 = 10" 2 = 20" 3 = 30" 4 = 40" 5 = 5" 9 = 9.75"	E = EPDM N = Buna N P = Peroxide Cured EPDM Q = Platinum Cured Silicon S = Silicone T = TEV or FEP Gasket U = TES* V = Fluoroelastomer O = No O-ring	1 = 1pc/ pack
Example - One 10" cartridge, with DOE Flat EPDM Gasket would be *WCC10F1E1*					
* - not available in Code Z		** - only available in 5", 9.75", 10" and 20", retrofit for DOE housings			

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Stainless Steel Cartridges

Stainless Steel Cartridges are ideal for high temperature applications up to 400 °C (750 °F). These cartridges are available in both cylindrical and pleated styles and are constructed from either 304 or 316 Stainless Steel for use in a wide variety of applications. In many applications, these cartridges can be cleaned and reused, reducing overall cost of ownership.

Applications	
High Temperature	High Differential Pressure
Water	Caustic Fluids
Electronics	Straining
Corrosive Liquids	Hydraulic Oil

Materials of Construction

Media: 304 or 316 Stainless Steel

Dimensions (nominal)

Lengths: 9-3/4", 9-7/8", 10", 19-1/2", 20", 29-1/4", 30", 40"
Diameter: 2.5"

Operating Conditions

Maximum Differential Pressure: 5.1 bar (74 psid)
Maximum Operating Temperature: 398°C (750°F)

Stainless Steel Cartridge Ordering Guide

Construction	Material	Micron	Type	Length	End Caps	Elastomer Material
SSF = Stainless Steel Filter	304 = 304SS 316 = 316SS	**5** = 5um **10** = 10um **20** = 20um **40** = 40um **75** = 75um **100** = 100um **120** = 120um **150** = 150um **190** = 190um **230** = 230um **280** = 280um **370** = 370um **540** = 540um **840** = 840um	**C** = Cylindrical **P** = Pleated	**5** = 5" **9.75** = 9.75" **9-7/8** = 9-7/8 **10** = 10" **19.5** = 19.5" **20** = 20" **29.25** = 29.25" **30** = 30"	**DOE** = Double Open Ends (Std) **SOE** = Single Open Ends (Std) **222** = 222 End Cap **226** = 226 End Cap **MNPT** = 1" Male NPT	B = Buna N (Std.) V = Viton T = TEV
Example - Stainless Steel 304SS, 10 micron, Pleated, 10", Single Open End, Viton is **SSF30410P10SOEV**						

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PureFlo® Resin Holder Cartridge
(Reusable Resin holder)

For use in standard filter housing

PureFlo® Resin Holder cartridge filters are designed for reusable filtration/purification and clarification applications in the pharmaceutical, biotechnology, food and beverage, medical, chemical, and water industries. The application is dependent only upon what you put in it. This family of products is particularly cost effective when used with bulk resins and medias.

Ideal for laboratory application for testing different media and mixtures of resins and other granular or powdered material. The cartridge is designed with a removable cap to allow you to fill new media and remove old. The inlet is located in the cap with screen material to allow liquid or gas into the cartridge. The outlet also has screen material to keep the media in the cartridge but allow the liquid/gas out. Different screen sizes can be chosen to meet your specific needs.

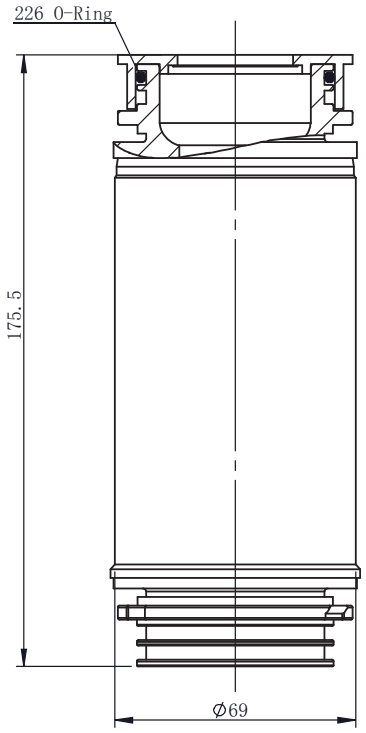
DE material inside holder

Applications	
Clarification	Purification
Filtration	Ion Exchange Resin
Yeast Removal	Pharmaceuticals
Granulated Carbon	Biologics

Specifications

Materials of Construction:	Media: Screen (Nylon or Polyester) Cage, Core, End Caps: Polypropylene O-Rings: Silicone, EPDM, Fluoro-Elastomer, Buna N, TES, TEV
Fitting Connections:	222, 226, Internal o-ring for DOE housings
Nominal Dimensions:	Lengths: 5 in. (13 cm), 10 in. (25 cm), 20 in. (51 cm), 30 in. (76 cm), 40 in. (102 cm) Diameter: 2.75 in. (70 mm)
Operating Conditions:	Maximum Forward Differential Pressure: 5.0 bar (72.5 psid) at 20 °C, 2.0 bar (29 psid) at 80 °C Maximum Reverse Differential Pressure: 3.0 bar (43.5 psid) at 20 °C, 1.0 bar (14.5 psid) at 80 °C Maximum Operating Temperature: 80 °C
Regulatory Compliance:	The filters are constructed with polypropylene resins and filtration media in compliance with 21 CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastic.

PureFlo® Resin Holder Cartridge



5” - 226 cartridge

PureFlo Resin Holder Cartridge Ordering Guide

Media Holder Membrane Filter Cartridges	Material Screen	Screen size (Microns)		End Modifications	Length	O-Ring / Gasket Materials	Package Quantity	Options
	NS = Nylon Screen	TS	NS	0 = 222 O-Rings Flat	1 = 10"	E = EPDM	1 = 1 per pack	
SVC = Resin holder	TS = Polyester Screen	050 = 5	070 = 7	2 = 222 O-rings w/tabs Flat	2 = 20"	N = Buna N		- 5 = Stainless
Cartridge		070 = 7	100 = 10	6 = 226 O-Rings Flat	3 = 30"	P = Peroxide Cured EPDM		Steel Insert
		100 = 10	200 = 20	Z = SOE Internal O-ring **	4 = 40"	Q = Platinum Cured Silicon		
Reusable		200 = 20	400 = 40		5 = 5"	S = Silicone		
		300 = 30	600 = 60		9 = 9.75"	T = TEV or FEP Gasket		
		400 = 40	10X = 100			U = TES*		
		550 = 55	20X = 200			V = Fluoro-Elastomer		
		730 = 73	25X = 250					
			30X = 300					

Example - Resin holder , 10", 40um Nylon screen, with 226 Silicone o-ring would be *S S 00 1S1*

* - not available in Code Z ** - only available in 5", 9.75", 10" and 20", retrofit for DOE housings

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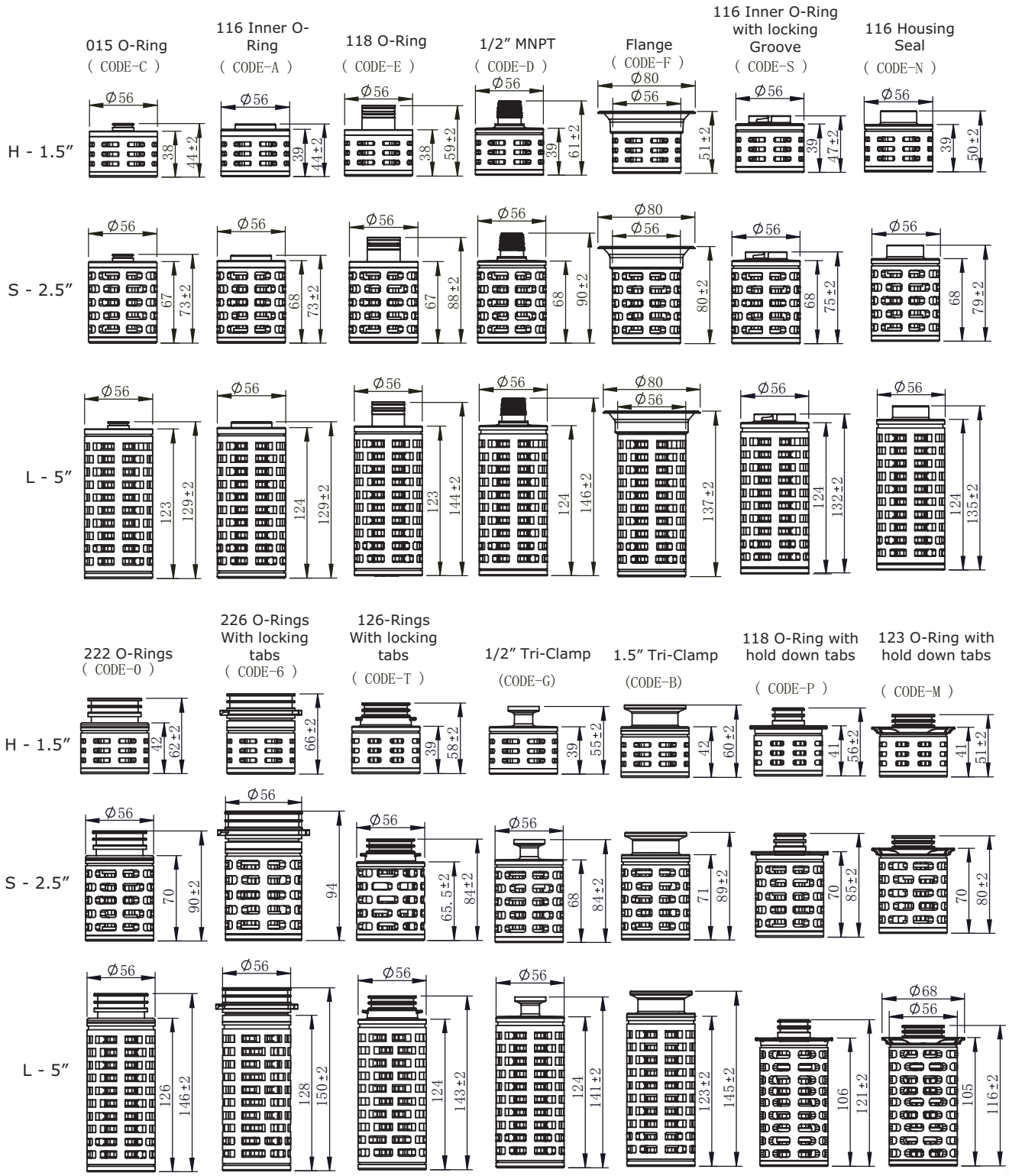
ISO Certified 9001 14001

TÜV ISO 13485

PureFlo Mini Filter Cartridge Series Sizes



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PureFlo® Polypro Mini Membrane Cartridges

PureFlo® Polypro Mini Membrane Cartridges are highly retentive and naturally hydrophobic filters. The polypropylene membrane is a reliable choice for the purification of aggressive chemicals, compressed gases, and vent applications. The all-polypropylene construction is an excellent economic alternative to the more expensive fluoropolymer based cartridges.

No adhesives, binders, or surfactants are used in the manufacturing process. Furthermore, the all-polypropylene construction provides excellent thermal and chemical compatibility with low and high pH chemicals.

PureFlo® Polypro Mini Membrane Cartridges are absolute-rated to ensure consistent filter performance each and every time out of the package. All filter cartridges are 100% integrity tested to ensure filter performance.

Materials of Construction

Media: Polypropylene Membrane (hydrophobic)
Media Supports: Polypropylene
Cage, Core, End Caps: Polypropylene
O-Rings: Silicone, EPDM, Fluoroelastomer, Buna N

Dimensions (nominal)

Lengths: 1.5in (38 mm), 2.5 in (63.5 mm), 5 in. (127 mm)
Diameter: 2.2 in. (56 mm)

Effective Filtration Area

0.7 ft^2 (650 cm^2) per 1.5" cartridge
1.4 ft^2 (1300 cm^2) per 2.5" cartridge
2.7 ft^2 (2510 cm^2) per 5.0" cartridge

Operating Conditions

Maximum Forward Differential Pressure:
4.1 bar (59.5 psid) at 22 °C
2.0 bar (29 psid) at 80 °C
Maximum Reverse Differential Pressure:
2.0 bar (29 psid) at 22 °C
1.0 bar (14.5 psid) at 80 °C
Maximum Operating Temperature: 80 °C

Regulatory Compliance

Manufactured from materials that conform to the requirements of 21 CFR Part 177 of the U.S. Code of Federal Regulations and USP Class VI Biological Test for Plastics.

Applications	
Acids	Ink
Bases	Parts Cleaning
Solvents	Pharmaceuticals
Fine Chemicals	Biologics
Plating Solutions	Venting

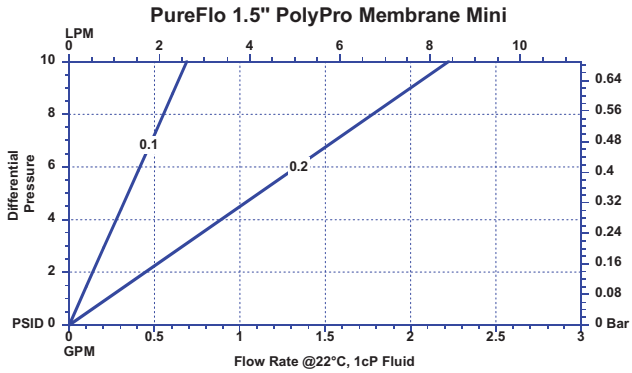
Sterilization & Autoclaving

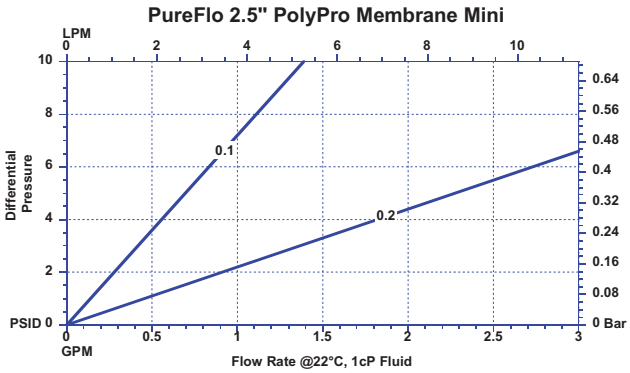
The filters can be sterilized by autoclaving for up to 25 cycles at 125 °C (257 °F) for 30 minutes. The filters can also be sterilized by steam-in-place procedure up to 5 cycles at 135 °C (275 °F) for 30 minutes at less than 0.3 bar (4.35 psi) differential pressure. The filters can also sanitized by hot water or common chemicals that are compatible with filter components.

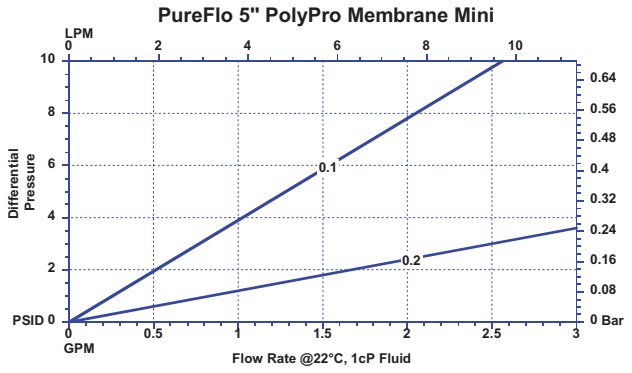
Retrofits Code 2230, 4463, 4440 & SLK

Features	Benefits
■ Polypropylene Pleated Membrane Media (Absolute Rated)	■ Consistent and reproducible particulate removal ■ High flow rates and low pressure drops ■ Superior filter lifetime and process throughputs
■ 100% Polypropylene Construction	■ Provides excellent compatibility with a wide-range of chemicals such as acids, bases, and solvents ■ No media migration into the process fluid
■ Low Levels of Filter Extractables	■ No adhesives, binders, or surfactants are used during manufacturing resulting in superior downstream cleanliness ■ All cartridges are rinsed with high-purity water to reduce extractables and downtime

PureFlo® Polypro Mini MembraneCartridges







Flange End Modification

PureFlo Polypro Mini Cartridge Ordering Guide

PureFlo Mini PP Filter Cartridges	Removal Rating (Micron)	End Modifications	Length	O-Ring / Gasket Materials	Package Qty
MMP = Mini PP Membrane Cartridge	**010** = 0.1 **020** = 0.2	**0** = 222 O-Ring Flat **6** = 226 O-Ring Flat **A** = 116 Inner O-Ring **B** = 1.5" Tri-Clamp **C** = 015 O-Ring **D** = 1/2" MNPT **E** = 118 O-Rings **F** = Flange* **G** = 1/2" Tri-Clamp **M** = 123 O-Rings with hold down tabs** **N** = 116 Inner Housing Seal **P** = 118 O-Rings with hold down tabs **S** = 116 Inner O-Ring with locking groove **T** = 126 O-Rings with locking tabs***	**H** = 1.5" **S** = 2.5" **L** = 5"	**E** = EPDM **N** = Buna N **S** = Silicone **T** = TEV **U** = TES **V** = Fluroelastomer **O** = O-Ringless	**2P** = 2pc/ pack (5") **3P** = 3pc/ pack (1.5" and 2.5") **Option** **- 5** = SS Insert

Example - A 3 pack of 2.5", 0.1 micron filters with 116 internal EPDM o-ring would be **MMP010ASE3P**

* - F end modification is compatible to fit in a PALL SealKleen™ Housing, **- M end modification is compatible to fit in a Millipore OptiSeal™ Housing, ***-T end modification is compatible to fit a Parker Trueseal™ Housing

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TÜV ISO 13485

PureFlo® Hi Performance Polypro Mini Cartridges

PureFlo® Hi Performance Polypropylene Mini Cartridge filter capsules are >98% retentive. The media is made up of small diameter fibers that removes particles with limited flow or pressure drop loss. The fine fibers are only 1-5um in diameter allowing for increased efficiency with a lower pressure drop. They are pleated to provide maximum filtration area for higher throughput. The design has been optimized for clarification and pre-filtration applications with a bleed valve.

No adhesives, binders, or surfactants are used in the manufacturing process. The fine fiber non-woven media does not allow for migration into the process fluid, thereby reducing the potential for extractables and downtime. Furthermore, the all-polypropylene construction provides excellent thermal and chemical compatibility with low and high pH chemicals.

PureFlo® Hi Performance Polypro Mini Cartridges are >98% rated to ensure consistent filter performance each and every time out of the package at 0.1, 0.2, 0.3, 0.6, 1, 3, 5, and 10 microns.

Applications	
Acids	Ink Jets
Bases	Beverages
Solvents	Pharmaceuticals
Fine Chemicals	Biologics
Plating Solutions	Dyes
Process Water	Parts Cleaning

Sterilization & Autoclaving:

The filters can be sterilized by autoclaving for up to 25 cycles at 125 °C (257 °F) for 30 minutes. The filters can also be sterilized by steam-in-place procedure up to 5 cycles at 135 °C (275 °F) for 30 minutes at less than 0.3 bar (4.35 psi) differential pressure. The filters can also sanitized by hot water or common chemicals that are compatible with filter components.

Materials of Construction:

Media: Fine Non-Woven Polypropylene
Media Supports: Polypropylene
Cage, Core, End Caps: Polypropylene
O-Rings: Silicone, EPDM, Fluoroelastomer, Buna N

Dimensions (nominal):

Lengths: 1.5in (38 mm), 2.5 in (63.5 mm), 5 in. (127 mm)
Diameter: 2.2 in. (56 mm)

Effective Filtration Area:

0.54-0.59 ft^2 (500-550 cm^2) per 1.5" cartridge
1.1-1.2 ft^2 (1000-1100 cm^2) per 2.5" cartridge
1.9-2.2 ft^2 (1800-2050 cm^2) per 5.0" cartridge

Operating Conditions:

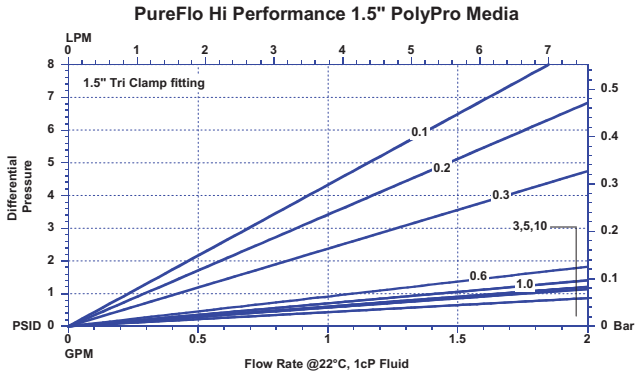
Maximum Forward Differential Pressure:
4.1 bar (59.5 psid) at 20 °C
2.0 bar (29 psid) at 80 °C
Maximum Reverse Differential Pressure:
2.0 bar (29 psid) at 20 °C
1.0 bar (14.5 psid) at 80 °C
Maximum Operating Temperature: 80 °C

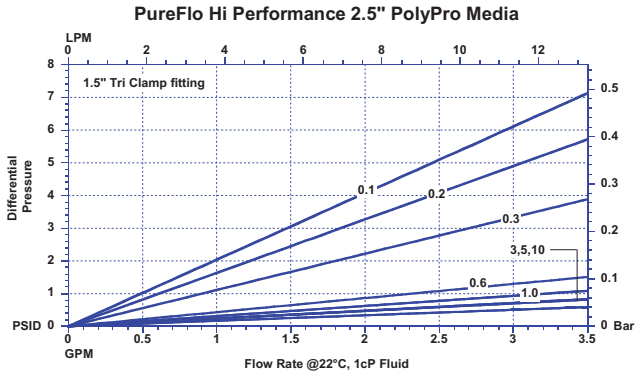
Regulatory Compliance

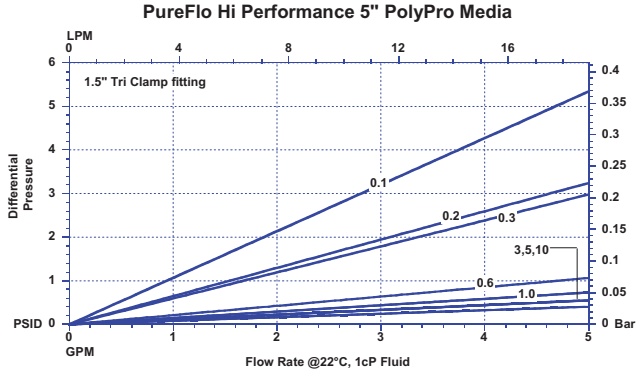
Manufactured from materials that conform to the requirements of 21 CFR Part 177 of the U.S. Code of Federal Regulations and USP Class VI Biological test for Plastics

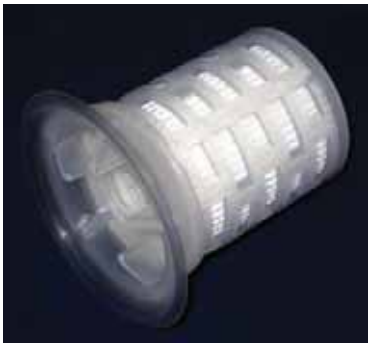
Features	Benefits
■ >98% Rated Pleated Polypropylene Media	■ The fine fiber media matrix removes particles with a high efficiency ■ High flow rates and low pressure drops ■ Superior filter lifetime and process throughputs ■ Consistent and reproducible particulate removal
■ 100% Polypropylene Disposable Capsule	■ Excellent thermal and chemical compatibility ■ No media migration ■ Rapid installation and reduced downtime ■ Reduced chemical handling and hazardous waste disposal
■ Low Filter Extractables	■ No adhesives, binders, or surfactants are used during manufacturing, resulting in superior downstream cleanliness ■ Capsules are rinsed with high-purity water

PureFlo® Hi Performance Polypro Mini Cartridges









Flange End Modification

PureFlo® Hi Performance Polypro Mini Cartridge Ordering

PureFlo Mini PP Filter Cartridges	Removal Rating	End Modifications	Length	O-Ring / Gasket Materials	Package Qty
MHP = Mini PP Hi Performance Pleated Media Cartridge	**001** = 0.1um **002** = 0.2um **003** = 0.3um **006** = 0.6um **010** = 1.0um **030** = 3.0um **050** = 5.0um **100** = 10 um	**0** = 222 O-Ring Flat **6** = 226 O-Ring Flat **A** = 116 Inner O-Ring **B** = 1.5" Tri-Clamp **C** = 015 O-Ring **D** = 1/2" MNPT **E** = 118 O-Rings **F** = Flange* **G** = 1/2" Tri-Clamp **M** = 123 O-Rings with hold down tabs** **N** = 116 Inner Housing Seal **P** = 118 O-Rings with hold down tabs **S** = 116 Inner O-Ring with locking groove **T** = 126 O-Rings with locking tabs***	**H** = 1.5" **S** = 2.5" **L**= 5"	**E** = EPDM **N** = Buna N **S** = Silicone **T** = TEV **U** = TES **V** = Fluroelastomer **O** = O-Ringless	**2P** = 2pc/ pack (5") **3P** = 3pc/ pack (1.5" and 2.5") **Option** **- 5** = SS Insert

Example - A 3 pack of 2.5", 3 micron filters with 116 Internal EPDM o-ring would be **MHP030ASE3P**

*- F end modification is compatible to fit in a PALL SealKleen™ Housing, **- M end modification is compatible to fit in a Millipore OptiSeal™ Housing,
***-T end modification is compatible to fit a Parker Trueseal™ Housing

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PureFlo® Polypro Mini Cartridges

PureFlo® Polypro Mini Cartridges are highly retentive graded porosity polypropylene media filters that have been specially designed for clarification and pre-filtration applications.

The graded porosity design removes particles in sequence by size exclusion – larger particles by the more open outer layers and smaller particles by the tighter inner layers. The outer layers act as a pre-filter while the inner layers provide an absolute rating at the specified pore size. This variation efficiently spreads the contaminants throughout the media matrix resulting in superior contaminant holding capacity, lifetime, and pressure drop as compared to other media cartridges. No adhesives, binders, or surfactants are used in the manufacturing process. The non-woven media does not allow for migration into the process fluid, thereby reducing the potential for extractables and downtime. Furthermore, the all-polypropylene construction provides excellent thermal and chemical compatibility with low and high pH chemicals.

PureFlo® Polypro Mini Cartridges are absolute-rated to ensure consistent filter performance each and every time out of the package at 0.3, 0.6, 1, 3, 5, 7, 10, 30, 50 and 70 microns.

Applications	
Acids	Ink Jets
Bases	Beverages
Solvents	Pharmaceuticals
Fine Chemicals	Biologics
Plating Solutions	Dyes
Process Water	Parts Cleaning

Regulatory Compliance

Manufactured from materials that conform to the requirements of 21 CFR Part 177 of the U.S. Code of Federal Regulations and USP Class VI Biological test for Plastics

Materials of Construction:

Media: Graded Porosity Polypropylene (non-woven)
Media Supports: Polypropylene
Cage, Core, End Caps: Polypropylene
O-Rings: Silicone, EPDM, Fluoroelastomer, Buna N

Dimensions (nominal):

Lengths: 1.5in (38 mm), 2.5 in (63.5 mm), 5 in. (127 mm)
Diameter: 2.2 in. (56 mm)

Effective Filtration Area:

0.59 ft^2 (550 cm^2) per 1.5" cartridge
1.3 ft^2 (1210 cm^2) per 2.5" cartridge
2.368 ft^2 (2200 cm^2) per 5.0" cartridge

Operating Conditions:

Maximum Forward Differential Pressure:
4.1 bar (59.5 psid) at 20 °C
2.0 bar (29 psid) at 80 °C
Maximum Reverse Differential Pressure:
2.0 bar (29 psid) at 20 °C
1.0 bar (14.5 psid) at 80 °C
Maximum Operating Temperature: 80 °C

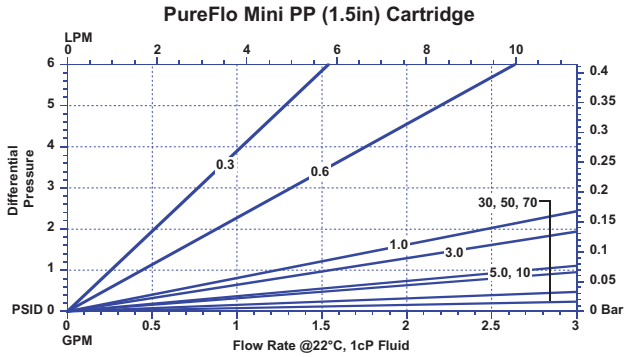
Sterilization & Autoclaving:

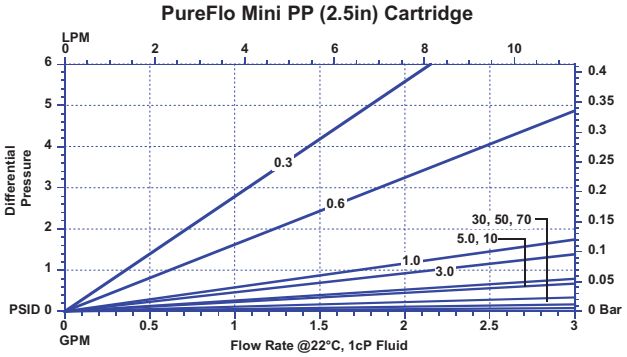
The filters can be sterilized by autoclaving for up to 25 cycles at 125 °C (257 °F) for 30 minutes. The filters can also be sterilized by steam-in-place procedure up to 5 cycles at 135 °C (275 °F) for 30 minutes at less than 0.3 bar (4.35 psi) differential pressure. The filters can also sanitized by hot water or common chemicals that are compatible with filter components.

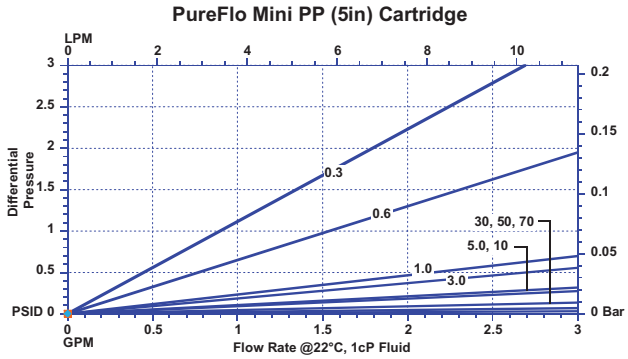
Retrofits Code 2230, 4463, 4440 & SLK

Features	Benefits
■ Graded Porosity Pleated Polypropylene Media	■ Media matrix removes particles in sequence by size – larger particles by the more open outer layers and smaller particles by the tighter inner layers ■ High flow rates and low pressure drops ■ Superior filter lifetime and process throughputs
■ 100% Polypropylene Construction	■ Excellent thermal and chemical compatibility ■ No media migration
■ Absolute-Rated Filter Performance	■ Consistent and reproducible particulate removal
■ Low Levels of Filter Extractables	■ No adhesives, binders, or surfactants used ■ Excellent downstream cleanliness reduces start-up time

PureFlo® Polypro Mini Cartridges







Flange End Modification

PureFlo® Polypro Mini Cartridge Ordering Guide

PureFlo Mini PP Filter Cartridges	Removal Rating	End Modifications	Length	O-Ring / Gasket Materials	Package Qty
NMP = Mini PP Pleated Media Cartridge	**003** = 0.3um **006** = 0.6um **010** = 1.0um **030** = 3.0um **050** = 5.0um **070** = 7.0um **100** = 10 um **300** = 30 um **500** = 50 um **700** = 70 um	**0** = 222 O-Ring Flat **6** = 226 O-Ring Flat **A** = 116 Inner O-Ring **B** = 1.5" Tri-Clamp **C** = 015 O-Ring **D** = 1/2" MNPT **E** = 118 O-Rings **F** = Flange* **G** = 1/2" Tri-Clamp **M** = 123 O-Rings with hold down tabs** **N** = 116 Inner Housing Seal **P** = 118 O-Rings with hold down tabs **S** = 116 Inner O-Ring with locking groove **T** = 126 O-Rings with locking tabs***	**H** = 1.5" **S** = 2.5" **L**= 5"	**E** = EPDM **N** = Buna N **S** = Silicone **T** = TEV **U** = TES **V** = Fluroelastomer **O** = O-Ringless	**2P** = 2pc/ pack (5") **3P** = 3pc/ pack (1.5" and 2.5") **Option** **- 5** = SS Insert

Example - A 3 pack of 2.5", 3 micron filters with 116 Internal EPDM o-ring would be **NMP030ASE3P**

*- F end modification is compatible to fit in a PALL SealKleen™ Housing, **- M end modification is compatible to fit in a Millipore OptiSeal™ Housing,
***-T end modification is compatible to fit a Parker Trueseal™ Housing

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TÜV MANAGEMENT SERVICE ISO 13485

PureFlo® Mini Depth Pleated PP Cartridges
(Depth PP Media on PP Construction)

High Contaminant Holding Filtration

PureFlo® Mini Depth Pleated PP Cartridges are designed for filtration and clarification applications in the pharmaceutical, biotechnology, food and beverage, medical, chemical, and water industries. This family of products is particularly suitable for fluids that contain gels, colloidal suspensions, or high suspended solids.

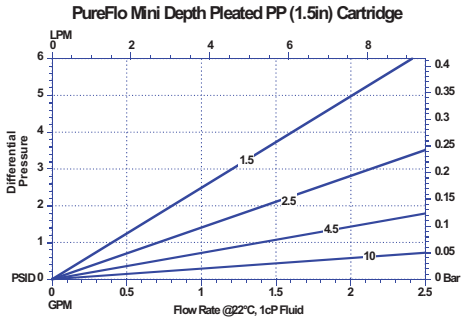
The highly retentive graded porosity design removes particles by size exclusion – larger particles by the more open outer layers and smaller particles by the tighter inner layers. The outer layers act as a pre-filter while the inner layers provide an absolute rating at the specified pore size. This variation efficiently spreads the contaminants throughout the media matrix, thereby, resulting in superior contaminant holding capacity and lifetime, as well as a lower pressure drop as compared to other depth media cartridges.

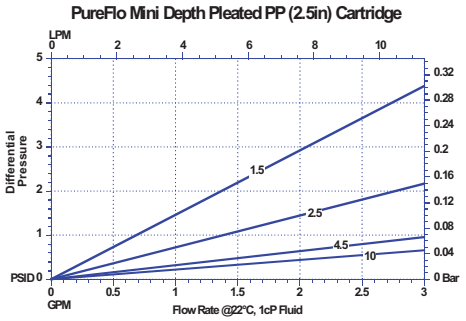
Applications	
Clarification	Ink
Gel Removal	Beverages
Yeast Removal	Pharmaceuticals
Fine Chemicals	Biologics
Plating Solutions	Wine
Beer	Water

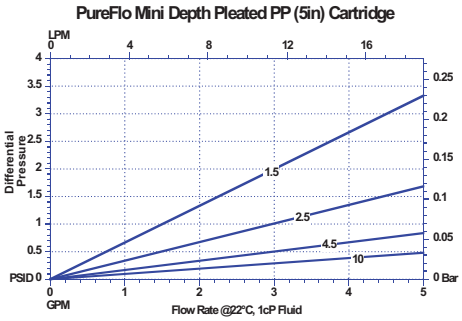
Specifications

Materials of Construction:	Media: Thick Non-Woven Polypropylene Media Supports: Polypropylene Cage, Core, End Caps: Polypropylene O-Rings: Silicone, EPDM, Fluoroelastomer, Buna N,
Nominal Dimensions:	Lengths: 1.5”, 2.5”, 5”, and 10” Diameter: 2.2 in. (56 mm)
Available Ratings:	0.5, 1.0, 1.5, 2.5, 4.5, 10, and 20 µm
Operating Conditions:	Maximum Forward Differential Pressure: 4.1 bar (59.5 psid) at 20 °C 2.0 bar (29 psid) at 80 °C Maximum Reverse Differential Pressure: 2.0 bar (29 psid) at 20 °C 1.0 bar (14.5 psid) at 80 °C Maximum Operating Temperature: 80 °C
Regulatory Compliance:	The filters are constructed with polypropylene resins and filtration media in compliance with 21 CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastic.

PureFlo® Mini Depth Pleated PP Cartridges







Specifications (cont.)

Sterilization & Autoclaving:

The filters can be sterilized by autoclaving for up to 25 cycles at 125 °C (257 °F) for 30 minutes. The filters can also be sterilized by steam-in-place procedure up to 5 cycles at 135 °C (275 °F) for 30 minutes at less than 0.3 bar (4.35 psi) differential pressure. The filters can also sanitized by hot water or common chemicals that are compatible with filter components.

PureFlo Mini Depth Pleated PP Cartridge Ordering Guide

PureFlo Depth Pleated Mini PP Filter Cartridges	Removal Rating	End Modifications	Length	O-Ring / Gasket Materials	Package Qty
JDP = Mini Depth Pleated PP Cartridge	**002** = 0.2 micron **005** = 0.5 micron **010** = 1.0 micron **015** = 1.5 micron **025** = 2.5 micron **045** = 4.5 micron **100** = 10 micron **200** = 20 micron	**0** = 222 O-Ring Flat **6** = 226 O-Ring Flat **A** = 116 Inner O-Ring **B** = 1.5" Tri-Clamp **C** = 015 O-Ring **D** = 1/2" MNPT **E** = 118 O-Rings **F** = Flange* **G** = 1/2" Tri-Clamp **M** = 123 O-Rings with hold down tabs** **N** = 116 Inner Housing Seal **P** = 118 O-Rings with hold down tabs **S** = 116 Inner O-Ring with locking groove **T** = 126 O-Rings with locking tabs***	**H** = 1.5" **S** = 2.5" **L**= 5"	**E** = EPDM **N** = Buna N **S** = Silicone **T** = TEV **U** = TES **V** = Fluroelastomer **O** = O-Ringless	**2P** = 2pc/ pack (5") **3P** = 3pc/ pack (1.5" and 2.5") **Option** **- 5** = SS Insert

Example - A 3 pack of 2.5", 2.5 micorn filters with 116 Internal EPDM o-ring would be **JDP025ASE3P**

*- F end modification is compatible to fit in a PALL SealKleen™ Housing, **- M end modification is compatible to fit in a Millipore OptiSeal™ Housing, ***-T end modification is compatible to fit a Parker Trueseal™ Housing

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PureFlo® Mini Wrapped PP Cartridges
(Wrapped PP Media on PP Construction)

High Contaminant Holding Filtration

PureFlo® Mini Wrapped PP Cartridges are designed for filtration and clarification applications in the pharmaceutical, biotechnology, food and beverage, medical, chemical, and water industries. This family of products is particularly suitable for fluids that contain gels, colloidal suspensions, or high suspended solids.

The highly retentive graded porosity design removes particles by size exclusion – larger particles by the more open outer layers and smaller particles by the tighter inner layers. The outer layers act as a pre-filter while the inner layers provide an high efficiency rating at the specified pore size. This variation efficiently spreads the contaminants throughout the media matrix, thereby, resulting in superior contaminant holding capacity and lifetime, as well as a lower pressure drop as compared to other depth media cartridges.

Applications	
Clarification	Ink
Gel Removal	Beverages
Yeast Removal	Pharmaceuticals
Fine Chemicals	Biologics
Plating Solutions	Wine
Beer	Water

Specifications

Materials of Construction:	Media: Non-Woven Polypropylene Media Supports: Polypropylene Cage, Core, End Caps: Polypropylene O-Rings: Silicone, EPDM, Fluoroelastomer, Buna N,
Nominal Dimensions:	Lengths: 1.5”, 2.5”, 5”, and 10” Diameter: 2.2 in. (56 mm)
Available Ratings:	0.3, 0.6, 1.0, 3.0, 5.0, 7.0, 10, 30, 50 and 70 µm
Operating Conditions:	Maximum Forward Differential Pressure: 4.1 bar (59.5 psid) at 20 °C 2.0 bar (29 psid) at 80 °C Maximum Reverse Differential Pressure: 2.0 bar (29 psid) at 20 °C 1.0 bar (14.5 psid) at 80 °C Maximum Operating Temperature: 80 °C
Regulatory Compliance:	The filters are constructed with polypropylene resins and filtration media in compliance with 21 CFR Part 177 of the US Code of Federal Regulations and USP Class VI Biological Test for Plastic.

PureFlo® Mini Wrapped PP Cartridges

Specifications (cont.)

Sterilization & Autoclaving:

The filters can be sterilized by autoclaving for up to 25 cycles at 125 °C (257 °F) for 30 minutes. The filters can also be sterilized by steam-in-place procedure up to 5 cycles at 135 °C (275 ° F) for 30 minutes at less than 0.3 bar (4.35 psi) differential pressure. The filters can also sanitized by hot water or common chemicals that are compatible with filter components.

Flange end Modification

PureFlo Mini Wrapped PP Cartridge Ordering Guide

PureFlo Mini PP Filter Cartridges	Removal Rating	End Modifications	Length	O-Ring / Gasket Materials	Package Qty
NMRP = Mini PP Pleated Wrapped Media Cartridge	**003** = 0.3um **006** = 0.6um **010** = 1.0um **030** = 3.0um **050** = 5.0um **070** = 7.0um **100** = 10 um **300** = 30 um **500** = 50 um **700** = 70 um	**0** = 222 O-Ring Flat **6** = 226 O-Ring Flat **A** = 116 Inner O-Ring **B** = 1.5" Tri-Clamp **C** = 015 O-Ring **D** = 1/2" MNPT **E** = 118 O-Rings **F** = Flange* **G** = 1/2" Tri-Clamp **M** = 123 O-Rings with hold down tabs** **N** = 116 Inner Housing Seal **P** = 118 O-Rings with hold down tabs **S** = 116 Inner O-Ring with locking groove **T** = 126 O-Rings with locking tabs***	**H** = 1.5" **S** = 2.5" **L**= 5"	**E** = EPDM **N** = Buna N **S** = Silicone **T** = TEV **U** = TES **V** = Fluroelastomer **O** = O-Ringless	**2P** = 2pc/ pack (5") **3P** = 3pc/ pack (1.5" and 2.5") **Option** **- 5** = SS Insert

Example - A 3 pack of 2.5", 3 micron filters with 116 Internal EPDM o-ring would be **NMPR030ASE3P**

*- F end modification is compatible to fit in a PALL SealKleen™ Housing, **- M end modification is compatible to fit in a Millipore OptiSeal™ Housing,
***-T end modification is compatible to fit a Parker Trueseal™ Housing

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PureFlo® PTFE Mini Cartridges
(PTFE/PP Construction)

Versatile Small Cartridge

PureFlo® PTFE mini filter cartridges are highly retentive, hydrophobic PTFE membrane filters that have been specially designed for critical applications. No adhesives, binders, or surfactants are used in the manufacturing process. All cartridges are rinsed with high-purity pyrogen-free water to reduce extractables and downtime.

The naturally hydrophobic PTFE membrane is ideally suited for filtering aggressive chemicals such as acids, bases, and solvents. In addition, the hydrophobic membrane provides superior flow and pressure drop characteristics per unit area for gas filtration and tank venting applications. All filter cartridges are 100% integrity tested to ensure filter performance each and every time out of the package. We are currently offering seven different PTFE pore sizes with eight different end modifications and three different length options to meet the needs of a wide variety of processes.

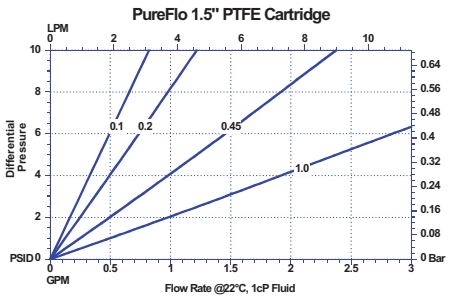
Retrofit for Mini Cartridge

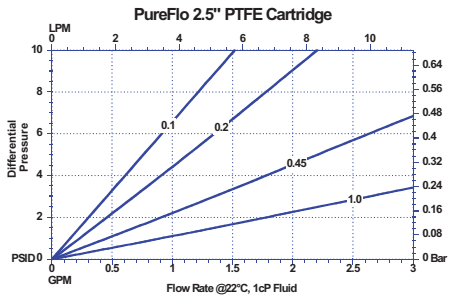
Applications	
Buffers and Media	Fermentation Tanks
Product Sterilization	Venting
Bio Bags	Pharmaceuticals
Vaccines	Biologics
Gas Filtration	Scale up Processing
Ink Jets	Acids and Bases

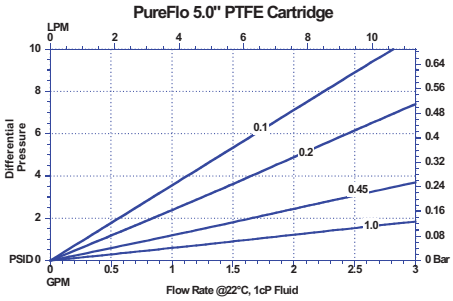
Specification

Materials of Construction:	Media: PTFE Media Supports: Polypropylene Cage, Core, End Caps: Polypropylene O-Rings: Silicon (Standard), EPDM, Buna N, TES, Fluroelastomer Sealing: Thermally welded
Nominal Dimensions:	Lengths: 1.5 in (38 mm), 2.5 in (63.5 mm), 5 in. (127 mm) Diameter: 2.2 in. (56 mm)
Effective Filtration Area:	0.70 ft^2 (650 cm^2) per 1.5" cartridge 1.35 ft^2 (1250 cm^2) per 2.5" cartridge 2.6 ft^2 (2420 cm^2) per 5.0" cartridge
Available Ratings:	0.1 µm to 10 µm (see ordering guide)
Operating Conditions:	Maximum Forward Differential Pressure: 4.1 bar (60 psid) at 22 °C 2.0 bar (29 psid) at 80 °C Maximum Reverse Differential Pressure: 2.0 bar (29 psid) at 22 °C 1.0 bar (14.5 psid) at 80 °C Maximum Operating Temperature: 80 °C
Regulatory Compliance:	The filters are constructed with polypropylene resins and filtration media in compliance with 21 CFR Part 177 of the U.S. Code of Federal Regulations and USP Class VI Biological Test for Plastics.

PureFlo® PTFE Mini Cartridges







Specifications (cont.)

Bacterial Retention (for 0.2 µm membrane):

Complete retention of > 10^7 organisms/cm^2 of *Brevundimonas diminuta* in accordance with the current HIMA challenge methodology (ASTM F838-05). Validation Guide upon request.

Sterilization & Autoclaving

The filters can be sterilized by autoclaving for up to 25 cycles at 125 °C (257 °F) for 30 minutes. The filters can also be sterilized by steam-in-place procedure up to 10 cycles at 135 °C (275 °F) for 30 minutes at less than 0.3 bar (4.35 psi) differential pressure. The filters can also sanitized by hot water or common chemicals that are compatible with filter components.

Bacterial Endotoxin:

Effluent is non-pyrogenic per USP Bacterial Endotoxin (0.25 EU/ml), determined using Limulus Amebocyte Lysate (LAL) Test.

Flange End Modification

PureFlo® PTFE Mini Cartridge Ordering Guide

PureFlo Mini PTFE Filter Cartridges	Removal Rating	End Modifications	Length	O-Ring / Gasket Materials	Package Qty
MMF = Mini PTFE Cartridge	**010** - 0.10 micron **020** - 0.20 micron (0.003um Gas filter) **045** - 0.45 micron **100** - 1.0 micron **300** - 3.0 micron **500** - 5.0 micron **999** - 10 micron	**0** = 222 O-Ring Flat **6** = 226 O-Ring Flat **A** = 116 Inner O-Ring **B** = 1.5" Tri-Clamp **C** = 015 O-Ring **D** = 1/2" MNPT **E** = 118 O-Rings **F** = Flange* **G** = 1/2" Tri-Clamp **M** = 123 O-Rings with hold down tabs** **N** = 116 Inner Housing Seal **P** = 118 O-Rings with hold down tabs **S** = 116 Inner O-Ring with locking groove **T** = 126 O-Rings with locking tabs***	**H** = 1.5" **S** = 2.5" **L** = 5"	**E** = EPDM **N** = Buna N **S** = Silicone **T** = TEV **U** = TES **V** = Fluroelastomer **O** = O-Ringless	**2P** = 2pc/ pack (5") **3P** = 3pc/ pack (1.5" and 2.5") **Option** **- 5** = SS Insert

Example - A 3 pack of 2.5", 0.1 micron filters with 2-015 EPDM o-ring would be **MMF010CSE3P**

* - F end modification is compatible to fit in a PALL SealKleen™ Housing, ** - M end modification is compatible to fit in a Millipore OptiSeal™ Housing, *** - T end modification is compatible to fit a Parker Trueseal™ Housing

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PureFlo® PTFE Small Vent Cartridges
(PTFE/PP Construction)

Versatile Small Cartridge

PureFlo® PTFE Small Vent Cartridges are highly retentive, hydrophobic PTFE membrane filters that have been specially designed for critical applications. The PTFE membrane in an all-polypropylene construction provides excellent chemical compatibility and superior flow per unit area as compared to other membrane cartridges. No adhesives, binders, or surfactants are used in the manufacturing process. All cartridges are rinsed with high-purity pyrogen-free water to reduce extractables and downtime.

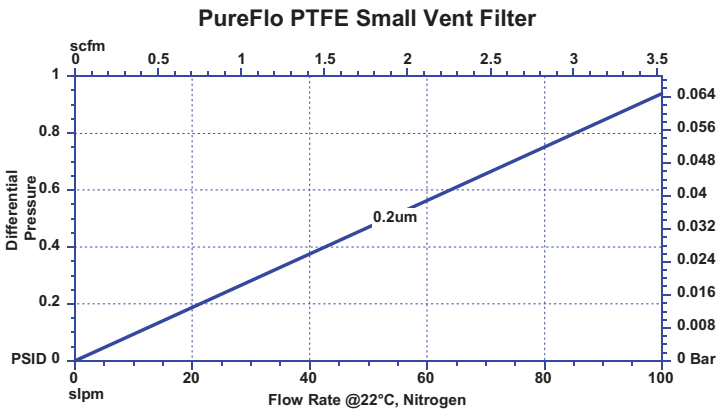
The naturally hydrophobic PTFE membrane is ideally-suited for aggressive fumes from chemicals such as acids, bases, and solvents. The hydrophobic membrane will provides superior flow and pressure drop characteristics per unit area for gas filtration and tank venting applications. All filter cartridges are 100% integrity tested to ensure filter performance each and every time out of the package.

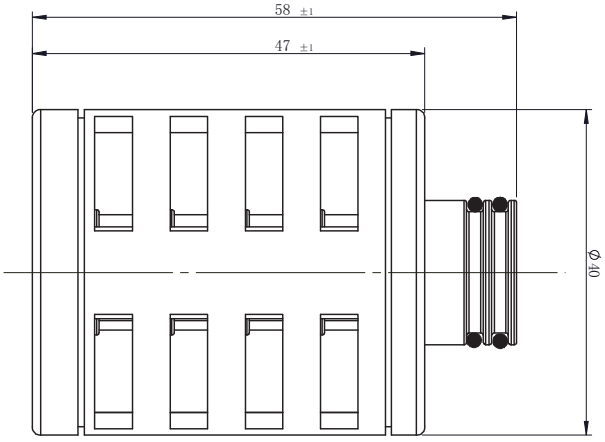
Applications	
Buffers and Media	Fermentation Tanks
Product Sterilization	Venting/ Exhaust
Cell Culture	Pharmaceuticals
Vaccines	Biologics
Gas Filtration	Sterile Air/Gas Inlet

Specifications

Materials of Construction:	Media: PTFE Media Supports: Polypropylene Cage, Core, End Caps: Polypropylene O-Rings: Silicon (Standard), EPDM, Buna N, TES, Fluoroelastomer Sealing: Thermally welded
Nominal Dimensions:	Lengths: 2.28 in (58 mm) Diameter: 1.54 in. (40 mm)
Effective Filtration Area:	0.46 ft^2 (427 cm^2) per cartridge
Available Ratings:	0.2 µm
Operating Conditions:	Maximum Forward Differential Pressure: 4.1 bar (59.5 psid) at 22 °C 2.0 bar (29 psid) at 80 °C Maximum Reverse Differential Pressure: 2.0 bar (29 psid) at 22 °C 1.0 bar (14.5 psid) at 80 °C Maximum Operating Temperature: 80 °C
Regulatory Compliance:	The filters are constructed with polypropylene resins and filtration media in compliance with 21 CFR Part 177 of the U.S. Code of Federal Regulations and USP Class VI Biological Test for Plastics.

PureFlo® PTFE Small Vent Cartridges





Specifications (cont.)

Bacterial Retention (for 0.2 µm membrane):

Complete retention of > 10^7 organisms/cm^2 of *Brevundimonas diminuta* in accordance with the current HIMA challenge methodology (ASTM F838-05). Validation Guide upon request.

Sterilization & Autoclaving:

The MVF Series filter can be sterilized by autoclaving for up to 25 cycles at 125 °C (257 °F) for 30 minutes. The MVF Series filter can also be sterilized by steam-in-place procedure up to 10 cycles at 135 °C (275 °F) for 30 minutes at less than 0.3 bar (4.35 psi) differential pressure. Can also be sanitized by hot water or common chemicals that are compatible with filter components.

Bacterial Endotoxin:

Effluent is non-pyrogenic per USP Bacterial Endotoxin (0.25 EU/ml), determined using Limulus Amebocyte Lysate (LAL) Test.

PureFlo PTFE Small Vent Cartridge Ordering Guide

Filter Type and Construction	Removal Rating (Micron)	Adaptors	O-Ring Materials	Standard Package Qty
MVF - PTFE with standard PP parts and PP support	**020** = 0.2 (0.003um for gas)	**C** = 015 O-Ring	**E** = EPDM **N** = Buna N **S** = Silicone **U** = TES **T** = TEV **V** = Fluroelastomer	**3P** = 3pc/pack **Option** **- 5** = SS Insert
Example - A 3 pack mini vent filter with PTFE 0.2 micron with 2-015 EPDM o-ring would be **MVF020CE3P**				

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PureFlo® PE Mini Cartridges
(PE/HDPE Construction)

Versatile Small Cartridge

PureFlo® PE Mini Cartridges are highly retentive, hydrophobic filters with polyethylene (PE) membranes that have been specially designed for critical applications. The PE membrane in a High-density Polyethylene (HDPE) construction provides excellent chemical compatibility and superior flow per unit area. No adhesives, binders, or surfactants are used in the manufacturing process. All cartridges are rinsed with high-purity pyrogen-free water to reduce extractables and downtime.

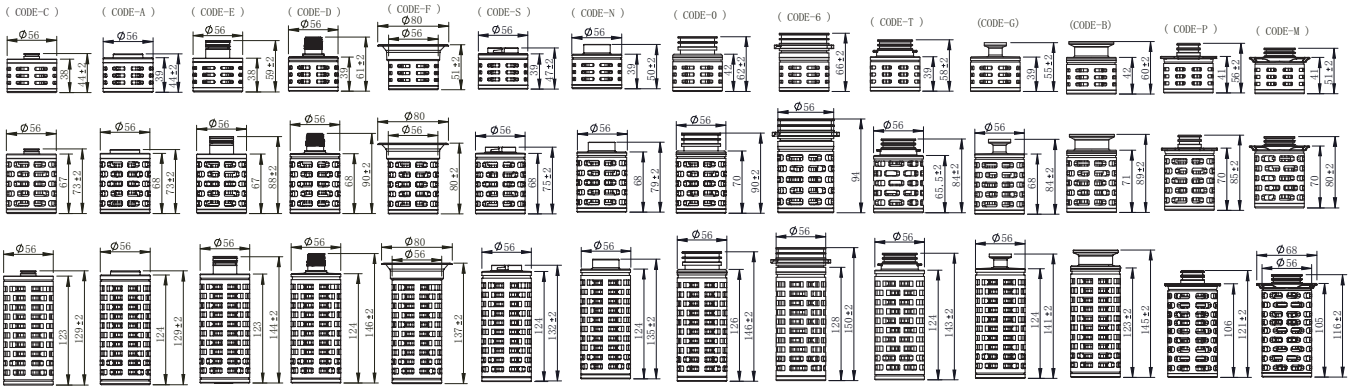
The PE membrane is ideally-suited for chemicals such as acids, bases, and solvents. In addition, the hydrophobic membrane provides superior flow and pressure drop characteristics per unit area for gas filtration and tank venting applications. All filter cartridges are 100% integrity tested to ensure filter performance each and every time out of the package. Currently, four different PE pore sizes are available with eight different end modifications and three different length options to meet the needs of a wide variety of processes.

Applications	
Buffers and Media	Fermentation Tanks
Product Sterilization	Venting
Bio Bags	Pharmaceuticals
Vaccines	Biologics
Gas Filtration	Scale up Processing
Ink Jets	Acids and Bases

Specifications

Materials of Construction:	Media: Polyethylene Media Supports: HDPE Cage, Core, End Caps: HDPE O-Rings: Silicon (Standard), EPDM, Buna N, TES, Fluoroelastomer Sealing: Thermally welded
Nominal Dimensions:	Lengths: 1.5 in (3.8 cm), 2.5 in (6.4 cm), 5 in. (12.7 cm) Diameter: 2.2 in. (5.6 cm)
Effective Filtration Area:	0.54 ft^2 (500 cm^2) per 1.5" cartridge 1.1 ft^2 (1020 cm^2) per 2.5" cartridge 2.0 ft^2 (1860 cm^2) per 5.0" cartridge
Available Ratings:	0.1 µm to 10 µm (see ordering guide)
Operating Conditions:	Maximum Forward Differential Pressure: 4.1 bar (59.5 psid) at 22 °C 2.0 bar (29 psid) at 80 °C Maximum Reverse Differential Pressure: 2.0 bar (29 psid) at 22 °C 1.0 bar (14.5 psid) at 80 °C Maximum Operating Temperature: 60 °C
Regulatory Compliance:	The filters are constructed with HDPE resins and filtration media in compliance with 21 CFR Part 177 of the U.S. Code of Federal Regulations and USP Class VI Biological Test for Plastics.

PureFlo® PE Mini Cartridges



Specifications (cont.)

Bacterial Retention (for 0.2 µm membrane):

Complete retention of > 10^7organisms/cm^2 of *Brevundimonas diminuta* in accordance with the current HIMA challenge methodology (ASTM F838-05). Validation guide available upon request.

Sanitization:

The filters can be gamma sterilized up to 45 kGy. The filters can also be chemically sanitized in situ using common sanitizing agents or hot water at 90 °C (194 °F) for a limited time (dependent on time and temperature). Not autoclavable.

Bacterial Endotoxin:

Effluent is non-pyrogenic per USP Bacterial Endotoxin (0.25 EU/ml), determined using Limulus Amebocyte Lysate (LAL) Test.

PureFlo PE Mini Cartridge Ordering Guide

PureFlo Mini PE Filter Cartridges	Removal Rating	End Modifications	Length	O-Ring / Gasket Materials	Package Qty
MMUE = Mini PE Cartridge with HDPE Construction	**010** = 0.1 **020** = 0.20 **045** = 0.45 **100** = 1.0	**0** = 222 O-Ring Flat **6** = 226 O-Ring Flat **A** = 116 Inner O-Ring **B** = 1.5" Tri-Clamp **C** = 015 O-Ring **D** = 1/2" MNPT **E** = 118 O-Rings **F** = Flange* **G** = 1/2" Tri-Clamp **M** = 123 O-Rings with hold down tabs** **N** = 116 Inner Housing Seal **P** = 118 O-Rings with hold down tabs **S** = 116 Inner O-Ring with locking groove **T** = 126 O-Rings with locking tabs***	**H** = 1.5" **S** = 2.5" **L** = 5"	**E** = EPDM **N** = Buna N **S** = Silicone **T** = TEV **U** = TES **V** = Fluroelastomer **O** = O-Ringless	**2P** = 2pc/ pack (5") **3P** = 3pc/ pack (1.5" and 2.5") **Option** **- 5** = SS Insert

Example - A 3 pack of 2.5", 0.1 micorn filters with 2-116 EPDM o-ring would be **MMUE010ASE3P**

* - F end modification is compatible to fit in a PALL SealKleen™ Housing, ** - M end modification is compatible to fit in a Millipore OptiSeal™ Housing,
***-T end modification is compatible to fit a Parker Trueseal™ Housing

Flange End Modification

Your Local Distributor:

ZenPure

North & South Americas:
ZenPure Americas, Inc
www.zenpure.com
Info-us@zenpure.com
703-335-9910

All Other Regions:
ZenPure Corporation
www.zenpure.com
info@zenpure.com
+86 571 2288 6800

ISO Certified 9001 14001

TÜV ISO 13485

PureFlo® Nylon Z Mini Cartridges

PureFlo® Nylon Z filter cartridges are highly-retentive, naturally hydrophilic nylon membrane filters that have been specially designed for improved wet-ability. This help with pre and post integrity testing of the filter. The nylon membrane provides excellent chemical compatibility and superior flow per unit area as compared to other membrane cartridges. No adhesives, binders, or surfactants are used in the manufacturing process and all cartridges are rinsed with high-purity water to reduce extractables and downtime.

The naturally hydrophilic nylon membrane does not require pre-wetting with IPA and flushing with DI water, thereby eliminating a potential source of contamination and hazardous waste. In addition, unlike hydrophobic filters such as PTFE, the hydrophilic membrane of nylon reduces the potential for bubble formation by not de-wetting in out-gassing fluids. All filter cartridges are 100% integrity tested to ensure filter performance each and every time out of the package. PureFlo® nylon filter cartridges are well-suited for critical applications where superior flow and particle removal efficiency at 0.1, 0.2, 0.45, 0.65, 0.85 and 1.2 micron is required.

Applications	
Acids	Ink Jets
Bases	Beverages
Solvents	Pharmaceuticals
Fine Chemicals	Biologics
Plating Solutions	Dyes
Process Water	Parts Cleaning

Materials of Construction

Membrane: Naturally Hydrophilic Nylon 6,6
Membrane Supports: Polyester
Cage, Core: Polypropylene
End Caps: Nylon
O-Rings: Silicone, EPDM, Fluoroelastomer, Buna N

Dimensions (nominal)

Lengths: 1.5 in (38 mm), 2.5 in (64 mm), 5 in. (127 mm)
Diameter: 2.2 in. (56 mm)

Effective Filtration Area

0.78 ft^2 (720 cm^2) per 1.5" cartridge
1.3 ft^2 (1210 cm^2) per 2.5" cartridge
2.6 ft^2 (2420 cm^2) per 5.0" cartridge

Operating Conditions

Maximum Forward Differential Pressure:
4.1 bar (59.5 psid) at 22 °C
2.0 bar (29 psid) at 80 °C
Maximum Reverse Differential Pressure:
2.0 bar (29 psid) at 22 °C
1.0 bar (14.5 psid) at 80 °C
Maximum Operating Temperature: 80 °C

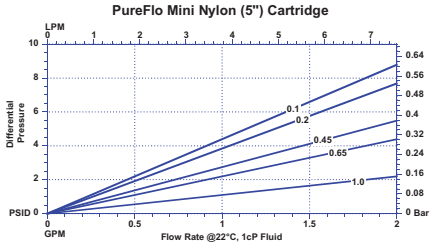
Regulatory Compliance

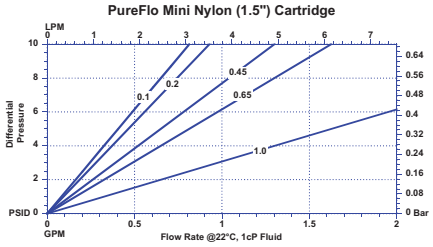
Manufactured from materials that conform to the requirements of 21 CFR Part 177 of the U.S. Code of Federal Regulations and USP Class VI Biological test for Plastic.

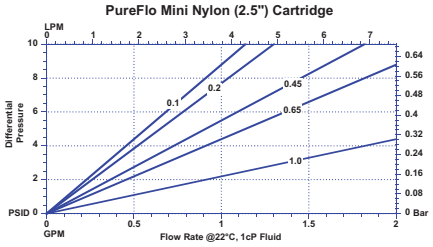
Retrofits Code 2230, 4463, 4440 & SLK

Features	Benefits
■ Naturally Hydrophilic Nylon Membrane (Absolute Rated)	■ Ease of wet-ability for quicker start ups and post integrity testing ■ Economic alternative to PTFE and PVDF filters ■ No de-wetting in outgassing fluids unlike hydrophobic filters such as polypropylene
■ Quick wetting Construction	■ Provides excellent wettability in aqueous solutions for quick start ups and quick integrity testing.
■ Low Levels of Filter Extractables	■ No adhesives, binders, or surfactants are used during manufacturing resulting in superior downstream cleanliness

PureFlo® Nylon Z Mini Cartridges







Sterilization & Autoclaving:

The filters can be sterilized by autoclaving for up to 5 cycles at 125 °C (257 °F) for 30 minutes. The filters can also be sterilized by steam-in-place procedure up to 3 cycles at 135 °C (275 ° F) for 30 minutes at less than 0.3 bar (4.35 psi) differential pressure. The filters can also sanitized by hot water or common chemicals that are compatible with filter components.

Flange End Modification

PureFlo Nylon Z Mini Cartridge Ordering Guide

PureFlo Mini Z Nylon Filter Cartridges	Removal Rating (Micron)	End Modifications	Length	O-Ring / Gasket Materials	Package Qty
MMZN = Mini Nylon Cartridge	**005** = 0.05 **010** = 0.10 **020** = 0.20 **045** = 0.45 **065** = 0.65 **080** = 0.80 **120** = 1.20	**0** = 222 O-Ring Flat **6** = 226 O-Ring Flat **A** = 116 Inner O-Ring **B** = 1.5" Tri-Clamp **C** = 015 O-Ring **D** = 1/2" MNPT **E** = 118 O-Rings **F** = Flange* **G** = 1/2" Tri-Clamp **M** = 123 O-Rings with hold down tabs** **N** = 116 Inner Housing Seal **P** = 118 O-Rings with hold down tabs **S** = 116 Inner O-Ring with locking groove **T** = 126 O-Rings with locking tabs***	**H** = 1.5" **S** = 2.5" **L** = 5"	**E** = EPDM **N** = Buna N **S** = Silicone **T** = TEV **U** = TES **V** = Fluroelastomer **O** = O-Ringless	**2P** = 2pc/ pack (5") **3P** = 3pc/ pack (1.5" and 2.5") **Option** **- 5** = SS Insert

Example - A 3 pack of 2.5", 0.1 micron filters with 2-015 EPDM o-ring would be **MMZN010CSE3P**

* - F end modification is compatible to fit in a PALL SealKleen™ Housing, ** - M end modification is compatible to fit in a Millipore OptiSeal™ Housing,
***-T end modification is compatible to fit a Parker Trueseal™ Housing

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All Other Regions:
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www.zenpure.com
info@zenpure.com
+86 571 2288 6800

PureFlo® Nylon Mini Cartridges

PureFlo® Nylon Mini Cartridges are highly retentive, naturally hydrophilic nylon membrane filters that have been specially designed for critical applications. The nylon membrane in an all-polypropylene construction provides excellent chemical compatibility and superior flow per unit area as compared to other membrane cartridges. No adhesives, binders, or surfactants are used in the manufacturing process and all cartridges are rinsed with high-purity water to reduce extractables and downtime.

The naturally hydrophilic nylon membrane does not require pre-wetting with IPA and flushing with DI water, thereby eliminating a potential source of contamination and hazardous waste. In addition, unlike hydrophobic membrane such as PTFE, the hydrophilic membrane of nylon reduces the potential for bubble formation by not de-wetting in out gassing fluids. All filter cartridges are 100% integrity tested to ensure filter performance each and every time out of the package. PureFlo® Nylon Mini Cartridges are well-suited for critical applications where superior flow and particle removal efficiency at 0.1, 0.2, 0.45, 0.65, and 1.0 micron is required.

Applications	
Acids	Ink Jets
Bases	Beverages
Solvents	Pharmaceuticals
Fine Chemicals	Biologics
Plating Solutions	Dyes
Process Water	Parts Cleaning

Regulatory Compliance

Manufactured from materials that conform to the requirements of 21 CFR Part 177 of the U.S. Code of Federal Regulations and USP Class VI Biological test for Plastic

Materials of Construction

Membrane: Naturally Hydrophilic Nylon 6,6
Membrane Supports: Polypropylene
Cage, Core, End Caps: Polypropylene
O-Rings: Silicone, EPDM, Fluoroelastomer, Buna N

Dimensions (nominal)

Lengths: 1.5 in (38 mm),2.5 in (63.5 mm), 5 in. (1127 mm)
Diameter: 2.2 in. (56 mm)

Effective Filtration Area

0.78 ft^2 (720 cm^2) per 1.5" cartridge
1.3 ft^2 (1210 cm^2) per 2.5" cartridge
2.6 ft^2 (2420 cm^2) per 5.0" cartridge

Operating Conditions

Maximum Forward Differential Pressure:
4.1 bar (59.5 psid) at 22 °C
2.0 bar (29 psid) at 80 °C
Maximum Reverse Differential Pressure:
2.0 bar (29 psid) at 22 °C
1.0 bar (14.5 psid) at 80 °C
Maximum Operating Temperature: 80 °C

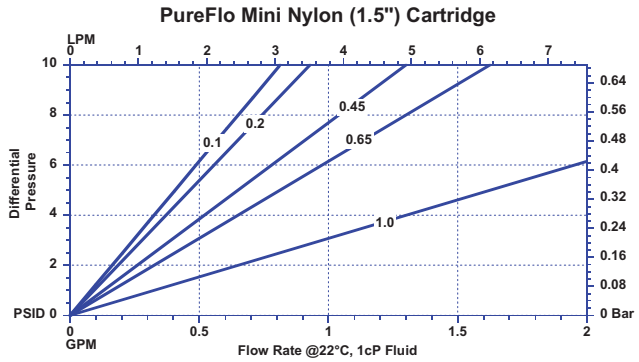
Sterilization & Autoclaving

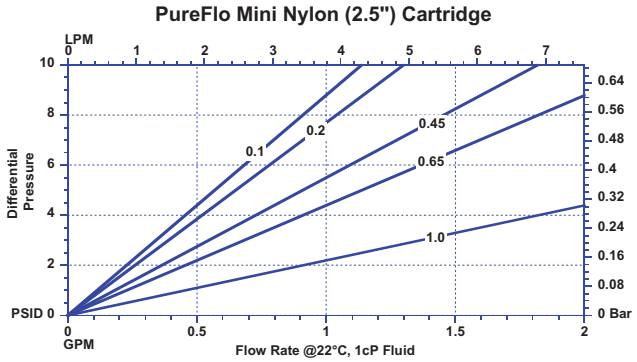
The filters can be sterilized by autoclaving for up to 5 cycles at 125 °C (257 °F) for 30 minutes. The filters can also be sterilized by steam-in-place procedure up to 3 cycles at 135 °C (275 °F) for 30 minutes at less than 0.3 bar (4.35 psi) differential pressure. The filters can also sanitized by hot water or common chemicals that are compatible with filter components.

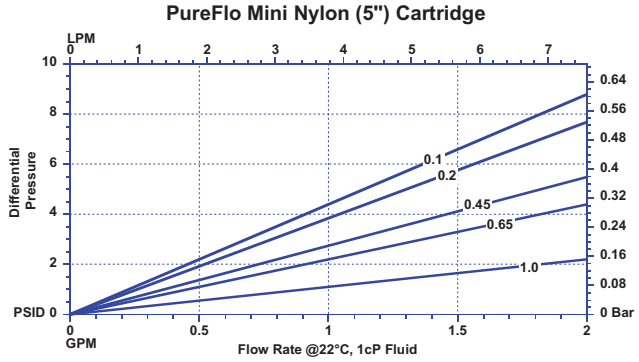
Retrofits Code 2230, 4463, 4440 & SLK

Features	Benefits
■ Naturally Hydrophilic Nylon Membrane (Absolute Rated)	■ IPA pre-wetting not required, thereby eliminating a potential source of contamination and disposal waste ■ Reduces downtime and improves throughput ■ Economic alternative to PTFE and PVDF filters ■ No de-wetting in out gassing fluids
■ Wide Chemical & Thermal Compatibility	■ Provides excellent compatibility with a wide range of chemicals
■ Low Levels of Filter Extractables	■ No adhesives, binders, or surfactants are used during manufacturing resulting in superior downstream cleanliness

PureFlo® Nylon Mini Cartridges







Flange End Modification

PureFlo Nylon Mini Cartridge Ordering Guide

PureFlo Mini Nylon Filter Cartridges	Removal Rating (Micron)	End Modifications	Length	O-Ring / Gasket Materials	Package Qty
MMN = Mini Nylon Cartridge	**005** = 0.05 **010** = 0.10 **020** = 0.20 **045** = 0.45 **065** = 0.65 **080** = 0.80 **120** = 1.20	**0** = 222 O-Ring Flat **6** = 226 O-Ring Flat **A** = 116 Inner O-Ring **B** = 1.5" Tri-Clamp **C** = 015 O-Ring **D** = 1/2" MNPT **E** = 118 O-Rings **F** = Flange* **G** = 1/2" Tri-Clamp **M** = 123 O-Rings with hold down tabs** **N** = 116 Inner Housing Seal **P** = 118 O-Rings with hold down tabs **S** = 116 Inner O-Ring with locking groove **T** = 126 O-Rings with locking tabs***	**H** = 1.5" **S** = 2.5" **L** = 5"	**E** = EPDM **N** = Buna N **S** = Silicone **T** = TEV **U** = TES **V** = Fluroelastomer **O** = O-Ringless	**2P** = 2pc/ pack (5") **3P** = 3pc/ pack (1.5" and 2.5") **Option** **- 5** = SS Insert

Example - A 3 pack of 2.5", 0.1 micorn filters with 2-015 EPDM o-ring would be **MMN010CSE3P**

* - F end modification is compatible to fit in a PALL SealKleen™ Housing, **- M end modification is compatible to fit in a Millipore OptiSeal™ Housing,
***-T end modification is compatible to fit a Parker Trueseal™ Housing

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info@zenpure.com
+86 571 2288 6800

PureFlo® Charged Nylon Z Mini Cartridges

PureFlo® Charged Nylon Z filter cartridges are designed to improve wettability and remove particles smaller that its rated pore size with the power of electrical attraction (adsorption/adhesion). Many particles in water and other liquids have a negative charge that can be captured by a positively charged filter. This property combined with a particle size exclusion (sieving) and impaction/ interception capture mechanism make this charged nylon filter extremely efficient.

The PureFlo® Charged Nylon Z Mini Cartridges are naturally hydrophilic nylon membrane filters with a polyester support layer for increased wetability of the membrane. The charged nylon membrane provides excellent chemical compatibility and superior flow per unit area as compared to other membrane cartridges. No adhesives, binders, or surfactants are used in the manufacturing process and all cartridges are rinsed with high-purity water to reduce extractables and downtime. All filter cartridges are 100% integrity tested to ensure filter performance each and every time out of the package.

Applications	
Acids	Ink Jets
Bases	Beverages
Solvents	Pharmaceuticals
Fine Chemicals	Biologics
Plating Solutions	Dyes
Process Water	Parts Cleaning

Materials of Construction

Membrane: Charged Nylon 6,6 (Hydrophilic)
Membrane Supports: Polyester
Cage, Core,: Polypropylene
End Caps: Nylon
O-Rings: Silicone, EPDM, Fluoroelastomer, Buna N

Dimensions (nominal)

Lengths: 1.5 in (38 mm), 2.5 in (64 mm), 5 in. (127 mm)
Diameter: 2.2 in. (56 mm)

Effective Filtration Area

0.78 ft^2 (720 cm^2) per 1.5" cartridge
1.3 ft^2 (1210 cm^2) per 2.5" cartridge
2.6 ft^2 (2420 cm^2) per 5.0" cartridge

Operating Conditions

Maximum Forward Differential Pressure:
4.1 bar (59.5 psid) at 22 °C
2.0 bar (29 psid) at 80 °C
Maximum Reverse Differential Pressure:
2.0 bar (29 psid) at 22 °C
1.0 bar (14.5 psid) at 80 °C
Maximum Operating Temperature: 80 °C

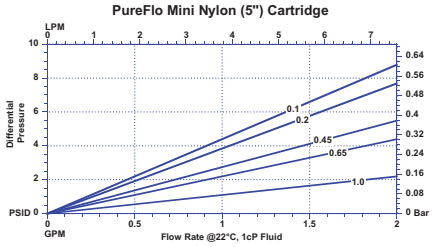
Regulatory Compliance

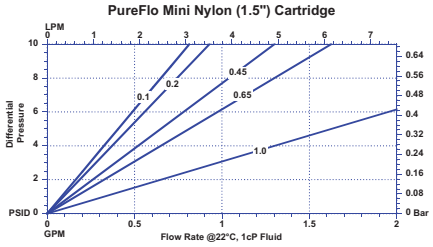
Manufactured from materials that conform to the requirements of 21 CFR Part 177 of the U.S. Code of Federal Regulations and USP Class VI Biological test for Plastic.

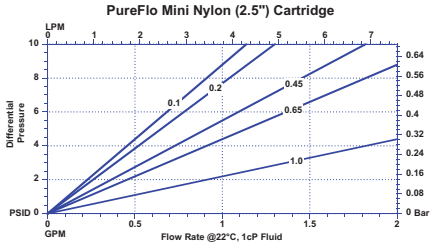
Retrofits Code 2230, 4463, 4440 & SLK

Features	Benefits
■ Naturally Hydrophilic Nylon Membrane (Absolute Rated)	■ Ease of wet-ability for quicker start ups and post integrity testing ■ Economic alternative to PTFE and PVDF filters ■ No de-wetting in outgassing fluids unlike hydrophobic filters such as polypropylene
■ Quick wetting Construction	■ Provides excellent wettability in aqueous solutions for quick start ups and quick integrity testing.
■ Low Levels of Filter Extractables	■ No adhesives, binders, or surfactants are used during manufacturing resulting in superior downstream cleanliness

PureFlo® Charged Nylon Z Mini Cartridges







Sterilization & Autoclaving:

The filters can be sterilized by autoclaving for up to 5 cycles at 125 °C (257 °F) for 30 minutes. The filters can also be sterilized by steam-in-place procedure up to 3 cycles at 135 °C (275 °F) for 30 minutes at less than 0.3 bar (4.35 psi) differential pressure. The filters can also sanitized by hot water or common chemicals that are compatible with filter components.

Flange End Modification

PureFlo Nylon Z Mini Cartridge Ordering Guide

PureFlo Mini Z Nylon Filter Cartridges	Removal Rating (Micron)	End Modifications	Length	O-Ring / Gasket Materials	Package Qty
EMZN = Mini Charged Nylon Cartridge	**005** = 0.05 **010** = 0.10 **020** = 0.20 **045** = 0.45 **065** = 0.65 **080** = 0.80 **120** = 1.20	**0** = 222 O-Ring Flat **6** = 226 O-Ring Flat **A** = 116 Inner O-Ring **B** = 1.5" Tri-Clamp **C** = 015 O-Ring **D** = 1/2" MNPT **E** = 118 O-Rings **F** = Flange* **G** = 1/2" Tri-Clamp **M** = 123 O-Rings with hold down tabs** **N** = 116 Inner Housing Seal **P** = 118 O-Rings with hold down tabs **S** = 116 Inner O-Ring with locking **T** = 126 O-Rings with locking tabs***	**H** = 1.5" **S** = 2.5" **L** = 5"	**E** = EPDM **N** = Buna N **S** = Silicone **T** = TEV **U** = TES **V** = Fluroelastomer **O** = O-Ringless	**2P** = 2pc/ pack (5") **3P** = 3pc/ pack (1.5" and 2.5") **Option** **- 5** = SS Insert

Example - A 3 pack of 2.5", 0.1 micorn filters with 2-015 EPDM o-ring would be **EMZN010CSE3P**

* - F end modification is compatible to fit in a PALL SealKleen™ Housing, ** - M end modification is compatible to fit in a Millipore OptiSeal™ Housing,
***-T end modification is compatible to fit a Parker Trueseal™ Housing

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All Other Regions:
ZenPure Corporation
www.zenpure.com
info@zenpure.com
+86 571 2288 6800

PureFlo® Charged Nylon Mini Cartridge
(Charged Nylon/PP Construction)

High Contaminant Removal

PureFlo® Charged Nylon Mini Cartridges are designed to remove particles smaller that its rated pore size with the power of electrical attraction (adsorption/ adhesion). Many particles in water and other liquids have a negative charge that can be captured by a positively charged filter. This property combined with a particle size exclusion (sieving) and impaction/ interception capture mechanism make this charged nylon filter extremely efficient.

The PureFlo® Charged Nylon Mini Cartridges are naturally hydrophilic nylon membrane filters with a polyester support layer for increased wetability of the membrane. The nylon membrane in an all-polypropylene construction provides excellent chemical compatibility and superior flow per unit area as compared to other membrane cartridges. No adhesives, binders, or surfactants are used in the manufacturing process and all cartridges are rinsed with high-purity water to reduce extractables and downtime. All filter cartridges are 100% integrity tested to ensure filter performance each and every time out of the package.

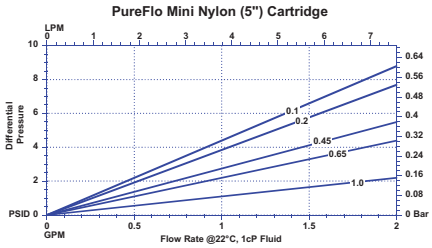
Retrofits Code 2230, 4463, 4440 & SLK

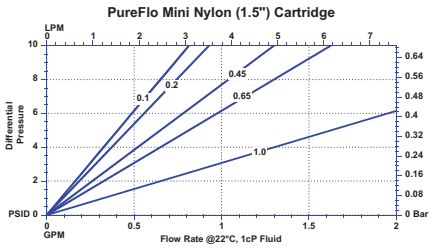
Applications	
DI Water	UltraPure Water
Critical Parts Cleaning	Endotoxin Reduction
Fine Chemicals	Plating Solutions

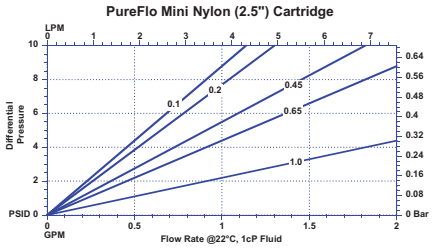
Specification

Materials of Construction:	Media: Charged Nylon 6,6 membrane (hydrophilic) Media Supports: Polypropylene Cage, Core, End Caps: Polypropylene O-Rings: Silicon (Standard), EPDM, Buna N, TES, Fluoroelastomer Sealing: Thermally welded
Nominal Dimensions:	Lengths: 1.5 in (38 mm), 2.5 in (63.5 mm), 5 in. (127 mm) Diameter: 2.2 in. (56 mm)
Effective Filtration Area:	0.77 ft^2 (720 cm^2) per 1.5" cartridge 1.48 ft^2 (1380 cm^2) per 2.5" cartridge 2.80 ft^2 (2600 cm^2) per 5.0" cartridge
Available Ratings:	0.1, 0.2, 0.45, 0.65 and 1.0 µm
Operating Conditions:	Maximum Forward Differential Pressure: 4.1 bar (59.5 psid) at 22 °C 2.0 bar (29 psid) at 80 °C Maximum Reverse Differential Pressure: 2.0 bar (29 psid) at 22 °C 1.0 bar (14.5 psid) at 80 °C Maximum Operating Temperature: 80 °C
Regulatory Compliance:	The filters are constructed with polypropylene resins and filtration media in compliance with USP Class VI Biological Test for Plastics.

PureFlo® Charged Nylon Mini Cartridge

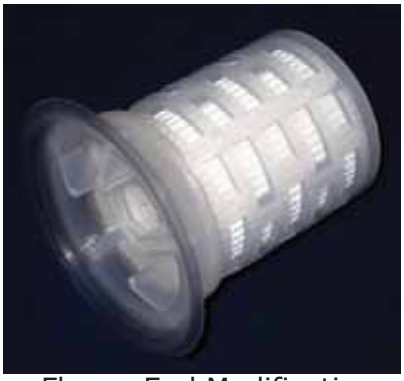






Sterilization & Autoclaving:

The filters can be sterilized by autoclaving for up to 5 cycles at 125 °C (257 °F) for 30 minutes. The filters can also be sterilized by steam-in-place procedure up to 3 cycles at 135 °C (275 °F) for 30 minutes at less than 0.3 bar (4.35 psi) differential pressure. The filters can also sanitized by hot water or common chemicals that are compatible with filter components.



Flange End Modification

PureFlo Charged Nylon Mini Cartridge Ordering Guide

PureFlo Mini Cartridges	Removal Rating (Micron)	End Modifications	Length	O-Ring / Gasket Materials	Package Qty
EMN = Mini Charged Nylon Cartridge	**005** = 0.05 **010** = 0.10 **020** = 0.20 **045** = 0.45 **065** = 0.65 **080** = 0.80 **120** = 1.20	**0** = 222 O-Ring Flat **6** = 226 O-Ring Flat **A** = 116 Inner O-Ring **B** = 1.5" Tri-Clamp **C** = 015 O-Ring **D** = 1/2" MNPT **E** = 118 O-Rings **F** = Flange* **G** = 1/2" Tri-Clamp **M** = 123 O-Rings with hold down tabs** **N** = 116 Inner Housing Seal **P** = 118 O-Rings with hold down tabs **S** = 116 Inner O-Ring with locking groove **T** = 126 O-Rings with locking tabs***	**H** = 1.5" **S** = 2.5" **L** = 5"	**E** = EPDM **N** = Buna N **S** = Silicone **T** = TEV **U** = TES **V** = Fluroelastomer **O** = O-Ringless	**2P** = 2pc/ pack (5") **3P** = 3pc/ pack (1.5" and 2.5") **Option** **- 5** = SS Insert

Example - A 3 pack of 2.5", 0.1 micorn filters with 2-015 EPDM o-ring would be **EMN010CSE3P**

* - F end modification is compatible to fit in a PALL SealKleen™ Housing, **- M end modification is compatible to fit in a Millipore OptiSeal™ Housing,
***-T end modification is compatible to fit a Parker Trueseal™ Housing

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PureFlo® All Nylon Mini Cartridges

PureFlo® all nylon mini filter cartridges are highly retentive, naturally hydrophilic nylon membrane filters that have been specially designed for critical applications. The all nylon filter has excellent chemical compatibility and superior flow per unit area as compared to other membrane cartridges. No adhesives, binders, or surfactants are used in the manufacturing process and all cartridges are rinsed with high-purity water to reduce extractables and downtime.

The naturally hydrophilic nylon membrane does not require pre-wetting with IPA and flushing with DI water, thereby eliminating a potential source of contamination and hazardous waste. In addition, unlike hydrophobic membrane such as PTFE, the hydrophilic membrane of nylon reduces the potential for bubble formation by not de-wetting in out gassing fluids. All filter cartridges are 100% integrity tested to ensure filter performance each and every time out of the package. PureFlo® all nylon mini filter cartridges are well-suited for critical applications where superior flow and particle removal efficiency at 0.1, 0.2, 0.45, 0.65, and 1.0 micron is required.

Applications	
Acids	Ink Jets
Bases	Beverages
Solvents	Pharmaceuticals
Fine Chemicals	Biologics
Plating Solutions	Dyes
Process Water	Parts Cleaning

Regulatory Compliance

Manufactured from materials that conform to the requirements of 21 CFR Part 177 of the U.S. Code of Federal Regulations and USP Class VI Biological test for Plastic

Materials of Construction

Membrane: Naturally Hydrophilic Nylon 6,6
Membrane Supports: Nylon
Cage, Core, End Caps: Nylon
O-Rings: Silicone, EPDM, Fluoroelastomer, Buna N

Dimensions (nominal)

Lengths: 1.5 in (38 mm),2.5 in (63.5 mm), 5 in. (127 mm)
Diameter: 2.2 in. (56 mm)

Effective Filtration Area

0.78 ft^2 (720 cm^2) per 1.5" cartridge
1.3 ft^2 (1210 cm^2) per 2.5" cartridge
2.6 ft^2 (2420 cm^2) per 5.0" cartridge

Operating Conditions

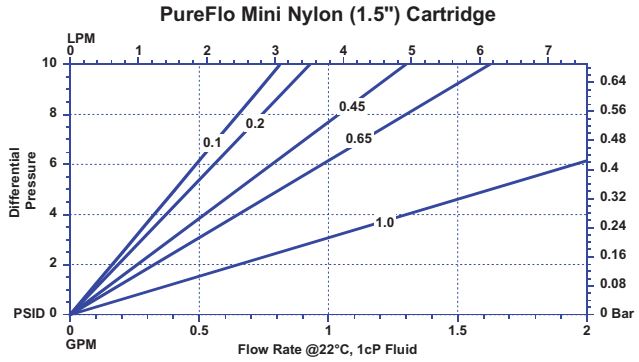
Maximum Forward Differential Pressure:
4.1 bar (59.5 psid) at 22°C
2.0 bar (29 psid) at 80°C
Maximum Reverse Differential Pressure:
2.0 bar (29 psid) at 22°C
1.0 bar (14.5 psid) at 80°C
Maximum Operating Temperature: 95°C

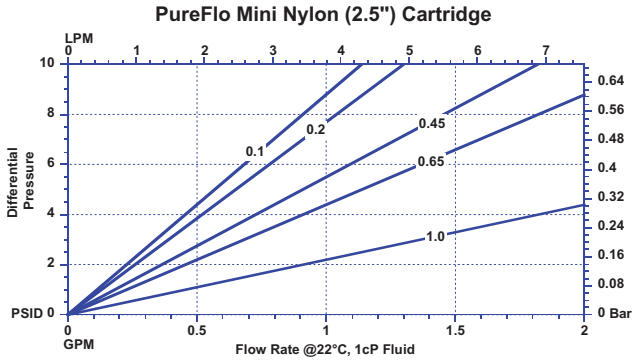
Sterilization & Autoclaving

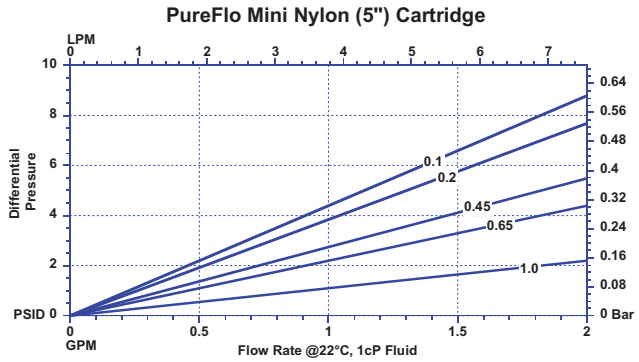
The filters can be sterilized by autoclaving for up to 5 cycles at 125°C (257°F) for 30 minutes. The filters can also be sterilized by steam-in-place procedure up to 3 cycles at 135°C (275°F) for 30 minutes at less than 0.3 bar (4.35 psi) differential pressure. The filters can also be sanitized by hot water or common chemicals that are compatible with filter components.

Features	Benefits
■ All Nylon Construction (Absolute Rated)	■ Higher Temperature Range ■ Maximum Compatibility Range ■ Economic alternative to PTFE and PVDF filters ■ No de-wetting in out gassing fluids
■ Wide Chemical & Thermal Compatibility	■ Provides excellent compatibility with a wide range of chemicals ■ No Media migration into the process fluid
■ Low Levels of Extractables	■ No adhesives, binders, or surfactants are used during manufacturing resulting in superior downstream cleanliness

PureFlo® All Nylon Mini Cartridges







Flange End Modification

PureFlo All Nylon Mini Cartridge Ordering Guide

PureFlo Mini All Nylon Filter Cartridges	Removal Rating	End Modifications	Length	O-Ring / Gasket Materials	Package Qty
MAN = Mini All Nylon Cartridge	**005** = 0.05 micron **010** = 0.10 micron **020** = 0.20 micron **045** = 0.45 micron **065** = 0.65 micron **080** = 0.80 micron **120** = 1.20 micron	**0** = 222 O-Ring Flat **6** = 226 O-Ring Flat **A** = 116 Inner O-Ring **B** = 1.5" Tri-Clamp **C** = 015 O-Ring **D** = 1/2" MNPT **E** = 118 O-Rings **F** = Flange* **G** = 1/2" Tri-Clamp **M** = 123 O-Rings with hold down tabs** **N** = 116 Inner Housing Seal **P** = 118 O-Rings with hold down tabs **S** = 116 Inner O-Ring with locking groove **T** = 126 O-Rings with locking tabs***	**H** = 1.5" **S** = 2.5" **L** = 5"	**E** = EPDM **N** = Buna N **S** = Silicone **T** = TEV **U** = TES **V** = Fluro-Elastomer **O** = O-Ringless	**2P** = 2pc/ pack (5") **3P** = 3pc/ pack (1.5" and 2.5") **Option** **- 5** = SS Insert
Example - A 3 pack of 2.5", 0.1 micorn filters with 2-015 EPDM o-ring would be **MAN010CSE3P**					

*- F end modification is compatible to fit in a PALL SealKleen™ Housing, **- M end modification is compatible to fit in a Millipore OptiSeal™ Housing,
***-T end modification is compatible to fit a Parker Trueseal™ Housing

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PureFlo® Nylon Screen Mini Cartridge
(Nylon Screen/PP Construction)

Large Particle Removal

PureFlo® Nylon Screen Mini Cartridges are particularly well suited for the removal of large particles in applications where a sharp retention cutoff is required. With a wide range of removal ratings from 7 µm to 250 µm, typical applications include general cell clarification, removal of microcarriers, and the protection of sensitive equipment from debris.

The woven nylon screen filtration media provides a fixed and discrete pore size that cannot be achieved by typical non-woven medias that rely on a 'tortuous path' to meet the specified removal rating. This feature provides a particularly sharp retention cutoff for hard particles.

The PureFlo Nylon Screen Mini Cartridges are naturally hydrophilic. No adhesives, binders, or surfactants are used in the manufacturing process and all cartridges are rinsed with high-purity water to reduce extractables and downtime. All filter cartridges are 100% integrity tested to ensure proper performance each and every time out of the package.

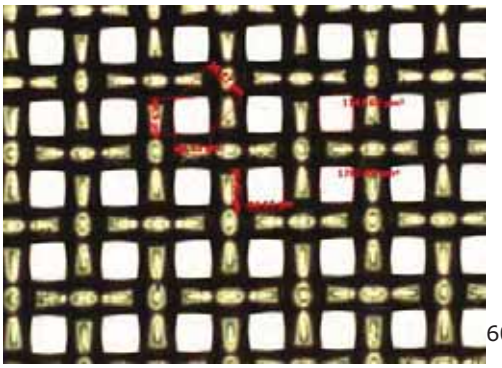
Retrofits Code 2230, 4463, 4440 & SLK

Applications	
Clarification	Microcarrier Removal
Cell Removal	Pharmaceuticals
Biologics	Hard particles

Specification

Materials of Construction:	Media: Nylon Screen Cage, Core, End Caps: Polypropylene O-Rings: Silicon (Standard), EPDM, Buna N, TES, Fluoroelastomer Sealing: Thermally welded
Nominal Dimensions:	Lengths: 1.5 in (38 mm), 2.5 in (63.5 mm), 5 in. (127 mm) Diameter: 2.2 in. (56 mm)
Effective Filtration Area:	0.65 ft^2 (500 cm^2) per 1.5" cartridge 1.3 ft^2 (1000 cm^2) per 2.5" cartridge 2.1 ft^2 (2000 cm^2) per 5.0" cartridge
Available Ratings:	7, 10, 20, 40, 60, 100, 200, 250µm
Operating Conditions:	Maximum Forward Differential Pressure: 4.1 bar (59.5 psid) at 22 °C 2.0 bar (29 psid) at 80 °C Maximum Reverse Differential Pressure: 2.0 bar (29 psid) at 22 °C 1.0 bar (14.5 psid) at 80 °C Maximum Operating Temperature: 80 °C (176 °F)
Regulatory Compliance:	The filters are constructed with polypropylene resins and filtration media in compliance with USP Class VI Biological Test for Plastics.

PureFlo® Nylon Screen Mini Cartridge



60 µm Nylon Screen

Flange End Modification

Sterilization & Autoclaving:

The filters can be sterilized by autoclaving for up to 25 cycles at 125 °C (257 °F) for 30 minutes. The filters can also be sterilized by steam-in-place procedure up to 3 cycles at 135 °C (275 °F) for 30 minutes at less than 0.3 bar (4.35 psi) differential pressure. The filters can also sanitized by hot water or common chemicals that are compatible with filter components.

PureFlo Nylon Screen Mini Cartridge Ordering Guide

PureFlo Mini Nylon Screen Filter Cartridges	Removal Rating (Micron)	End Modifications	Length	O-Ring / Gasket Materials	Package Qty
NMNS = Mini Nylon Screen Cartridge	**070** = 7 **100** = 10 **200** = 20 **400** = 40 **600** = 60 **10X** = 100 **20X** = 200 **25X** = 250 **30X** = 300	**0** = 222 O-Ring Flat **6** = 226 O-Ring Flat **A** = 116 Inner O-Ring **B** = 1.5" Tri-Clamp **C** = 015 O-Ring **D** = 1/2" MNPT **E** = 118 O-Rings **F** = Flange* **G** = 1/2" Tri-Clamp **M** = 123 O-Rings with hold down tabs** **N** = 116 Inner Housing Seal **P** = 118 O-Rings with hold down tabs **S** = 116 Inner O-Ring with locking groove **T** = 126 O-Rings with locking tabs***	**H** = 1.5" **S** = 2.5" **L** = 5"	**E** = EPDM **N** = Buna N **S** = Silicone **T** = TEV **U** = TES **V** = Fluro-Elastomer **O** = O-Ringless	**2P** = 2pc/ pack (5") **3P** = 3pc/ pack (1.5" and 2.5") **Option** **- 5** = SS Insert
Example - A 3 pack of 2.5", 10 micorn filters with 2-015 EPDM o-ring would be ***NMNS100CSE3P***					

*-F end modification is compatible to fit in a PALL SealKleen™ Housing, **-M end modification is compatible to fit in a Millipore OptiSeal™ Housing, ***-T end modification is compatible to fit a Parker Trueseal™ Housing

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PureFlo® Nylon Non-Woven Mini Cartridge
(Nylon Non-Woven Media/PP Construction)

Large Particle Removal

PureFlo® Nylon Non-Woven Mini Cartridges are particularly well suited for the removal of particles in high-loading applications. These filters are available in a wide range of removal ratings from 1 µm to 40 µm and are suitable for use in numerous of applications. Typical applications include pre-filtration, chemical clarification, hard and soft particle retention, and the protection of sensitive equipment from debris.

The non-woven nylon media removes contamination throughout the depth of the matrix, resulting in superior contaminant holding capacity, lifetime, and pressure drop as compared to other membrane and media cartridges.

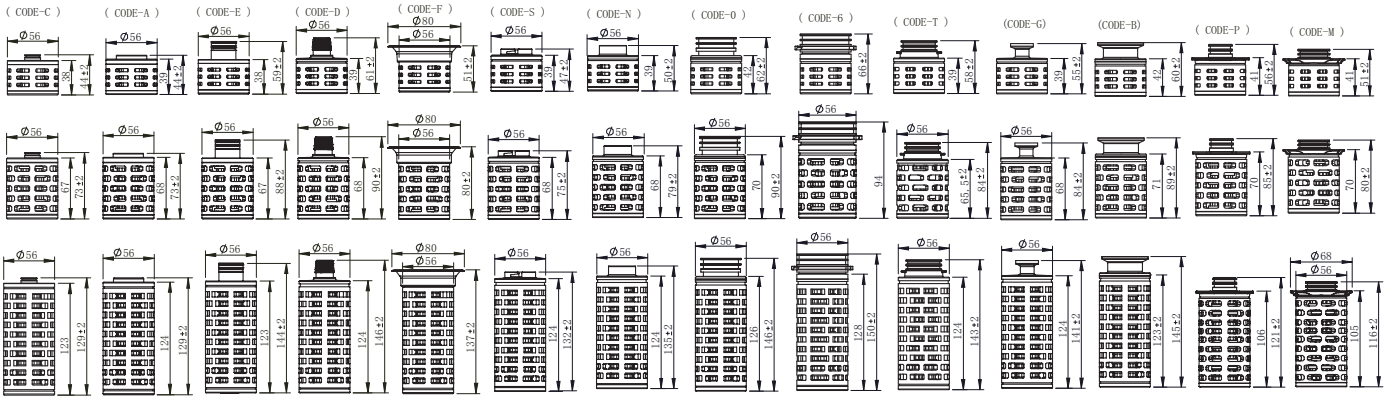
The PureFlo Nylon Non-Woven Mini Cartridges are naturally hydrophilic. No adhesives, binders, or surfactants are used in the manufacturing process and all cartridges are rinsed with high-purity water to reduce extractables and downtime. All filter cartridges are 100% tested, flushed, dried, and packaged to ensure proper performance each and every time out of the package.

Applications	
Clarification	Microcarrier Removal
Chemicals	Pharmaceuticals
Biologics	Hard particles
Pre-Filtration	Filtration Protection

Specification

Materials of Construction:	Media: Nylon Non-woven Cage, Core, End Caps: Polypropylene O-Rings: Silicon (Standard), EPDM, Buna N, TES, Fluoroelastomer Sealing: Thermally welded
Nominal Dimensions:	Lengths: 1.5 in (38 mm), 2.5 in (63.5 mm), 5 in. (127 mm) Diameter: 2.2 in. (56 mm)
Effective Filtration Area:	0.65 ft^2 (500 cm^2) per 1.5" cartridge 1.3 ft^2 (1000 cm^2) per 2.5" cartridge 2.1 ft^2 (2000 cm^2) per 5.0" cartridge
Available Ratings:	1, 3, 5, 10, 20, 40 µm
Operating Conditions:	Maximum Forward Differential Pressure: 4.1 bar (59.5 psid) at 22 °C 2.0 bar (29 psid) at 80 °C Maximum Reverse Differential Pressure: 2.0 bar (29 psid) at 22 °C 1.0 bar (14.5 psid) at 80 °C Maximum Operating Temperature: 80 °C (176 °F)
Regulatory Compliance:	Manufactured from materials that conform to the requirements of 21 CFR Part 177 of the U.S. Code of Federal Regulations

PureFlo® Nylon Non-Woven Mini Cartridge



Sterilization & Autoclaving:

The filters can be sterilized by autoclaving for up to 25 cycles at 125 °C (257 °F) for 30 minutes. The filters can also be sterilized by steam-in-place procedure up to 3 cycles at 135 °C (275 °F) for 30 minutes at less than 0.3 bar (4.35 psi) differential pressure. The filters can also sanitized by hot water or common chemicals that are compatible with filter components.

Flange End Modification

PureFlo Nylon Non-Woven Mini Cartridge Ordering Guide

PureFlo Mini Nylon Media Filter Cartridges	Removal Rating (Micron)	End Modifications	Length	O-Ring / Gasket Materials	Package Qty
NMNN = Mini Nylon Media Cartridge W PP Construction	**010** = 1 **030** = 3 **050** = 5 **100** = 10 **200** = 20 **400** = 40	**0** = 222 O-Ring Flat **6** = 226 O-Ring Flat **A** = 116 Inner O-Ring **B** = 1.5" Tri-Clamp **C** = 015 O-Ring **D** = 1/2" MNPT **E** = 118 O-Rings **F** = Flange* **G** = 1/2" Tri-Clamp **M** = 123 O-Rings with hold down tabs** **N** = 116 Inner Housing Seal **P** = 118 O-Rings with hold down tabs **S** = 116 Inner O-Ring with locking groove **T** = 126 O-Rings with locking tabs***	**H** = 1.5" **S** = 2.5" **L** = 5"	**E** = EPDM **N** = Buna N **S** = Silicone **T** = TEV **U** = TES **V** = Fluro-Elastomer **O** = O-Ringless	**2P** = 2pc/ pack (5") **3P** = 3pc/ pack (1.5" and 2.5") **Option** **- 5** = SS Insert
Example - A 3 pack of 2.5", 10 micorn filters with 2-015 EPDM o-ring would be ***NMNN100CSE3P***					

*- F end modification is compatible to fit in a PALL SealKleen™ Housing, **- M end modification is compatible to fit in a Millipore OptiSeal™ Housing,
***-T end modification is compatible to fit a Parker Trueseal™ Housing

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ZenFlo PES ZS Mini Cartridges

ZenFlo PES cartridges are designed for high throughput and easy integrity testing. The filter's built-in Highly Asymmetric Prefilter significantly improves throughput in the most challenging filtration applications. Specifically optimized for the final filtration in biological and pharmaceutical applications, ZenFlo provides extended throughput compared to most single and even dual-layered filters. The cartridge's optimized design makes the filter very easy to wet which eliminates false-integrity test failures when using a suitable pre-wetting procedure.

The hydrophilic PES membrane is low protein-binding allowing optimum performance in biopharmaceutical processes.

No adhesives, binders, or surfactants are used in the manufacturing process. All cartridges are rinsed with pyrogen-free water to reduce extractables and downtime. All filter cartridges are 100% integrity tested to ensure filter performance and quality. ZenFlo PES cartridges are well-suited for critical applications where superior flow and bacterial retention is required.

Materials of Construction:
Membrane: Dual–Layer Hydrophilic Polyethersulfone
Membrane Supports: Polyester
Cage, Core: Polypropylene
End Caps: Nylon
O-Rings: Silicone, EPDM, Fluoroelastomer, Buna N

Dimensions (nominal):
Lengths: 1.5 in (38 mm), 2.5 in (63.5 mm), 5 in. (127 mm)
Diameter: 2.2 in. (56 mm)

Effective Filtration Area:
0.70 ft^2 (650 cm^2) per 1.5" cartridge
1.34 ft^2 (1250 cm^2) per 2.5" cartridge
2.58 ft^2 (2400 cm^2) per 5.0" cartridge

Operating Conditions:
Maximum Forward Differential Pressure:
4.1 bar (59.5 psid) at 22 °C
2.0 bar (29 psid) at 80 °C
Maximum Reverse Differential Pressure:
2.0 bar (29 psid) at 22 °C
1.0 bar (14.5 psid) at 80 °C
Maximum Operating Temperature: 80 °C

Applications	
Buffers and Media	Fermentation Broths
Serum	LVP (Large Volume Parenterals)
Product Sterilization	Pharmaceuticals
Vaccines	Biologics
Fine Chemicals	Antibiotics

Features	Benefits
■ Hydrophilic PES Membrane (Absolute Rated)	■ Inherently hydrophilic ■ High flow rate reduces processing time ■ Low protein-binding membrane maximizes yields ■ Biologically inert membrane ■ Bacterially retentive to produce sterile solutions
■ Ease of wettability	■ Quicker and easier pre and post integrity testing
■ Low Levels of Filter Extractables	■ No adhesives, binders, or surfactants are used during manufacturing resulting in superior downstream cleanliness ■ All cartridges are rinsed with pyrogen-free water

ZenFlo® PES ZS Mini Cartridges

Bacterial Retention

Complete retention of ≥ 10^7 organisms/cm^2 of *Brevundimonas diminuta* in accordance with the current HIMA challenge methodology (ASTM F838-05). Validation guide available upon request.

Water Bubble Point Specification

0.2 µm : 50 psi (0.35 MPA)

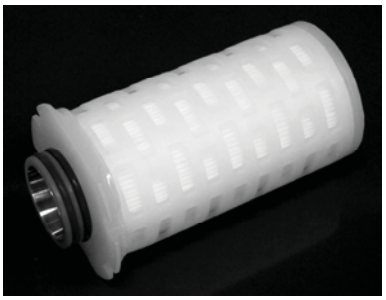
Bio-Safety

Filter effluent is non-pyrogenic per USP bacterial endotoxin (<0.25 EU/ml)

Sterilization & Autoclaving

The filters can be sterilized by autoclaving for up to 50 cycles at 125 °C (257 °F) for 30 minutes. The filters can also be sterilized by steam-in-place procedure up to 30 cycles at 135 °C (275 °F) for 30 minutes at less than 0.3 bar differential pressure. The filters can also sanitized by hot water or common chemicals that are compatible with filter components.

Flange End Modification



123 O-ring End Modification

ZenFlo PES Cartridge Ordering Guide

ZenFlo Mini PES Filter Cartridges	Removal Rating	End Modifications	Length	O-Ring / Gasket Materials	Package Qty
MMZZS = Mini PES Cartridge - for easier wettability	**010** = 0.10 micron **020** = 0.20 micron **045** = 0.45 micron	**0** = 222 O-Ring Flat **6** = 226 O-Ring Flat **A** = 116 Inner O-Ring **B** = 1.5" Tri-Clamp **C** = 015 O-Ring **D** = 1/2" MNPT **E** = 118 O-Rings **F** = Flange* **G** = 1/2" Tri-Clamp **M** = 123 O-Rings with hold down tabs** **N** = 116 Inner Housing Seal **P** = 118 O-Rings with hold down tabs **S** = 116 Inner O-Ring with locking groove **T** = 126 O-Rings with locking tabs***	**H** = 1.5" **S** = 2.5" **L** = 5"	**E** = EPDM **N** = Buna N **S** = Silicone **T** = TEV **U** = TES **V** = Fluro-Elastomer **O** = O-Ringless	**2P** = 2pc/ pack (5") **3P** = 3pc/ pack (1.5" and 2.5") **Option** **- 5** = SS Insert

Example - A 3 pack of 2.5", 0.1 micorn filters with 2-116 EPDM o-ring would be **MZZS010ASE3P**

*- F end modification is compatible to fit in a PALL SealKleen™ Housing, **- M end modification is compatible to fit in a Millipore OptiSeal™ Housing, ***-T end modification is compatible to fit a Parker Trueseal™ Housing

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PureFlo® PES Z Mini Cartridges

PureFlo® PES Z Mini Cartridges are highly-retentive hydrophilic PES membrane filters that have been specially designed for ease of wettability. The PES membrane provides excellent chemical compatibility and superior flow per unit area as compared to other membrane cartridges. No adhesives, binders or surfactants are used in the manufacturing process. All cartridges are rinsed with high-purity water to reduce extractables and downtime.

The hydrophilic PES with the unique construction allows for ease of wettability allowing for quick integrity testing. It does not require pre-wetting with IPA and flushing with DI water, thereby eliminating a potential source of contamination and hazardous waste. In addition, unlike hydrophobic filters such as PTFE, the hydrophilic membrane reduces the potential for bubble formation by not de-wetting in outgassing fluids. All filter cartridges are 100% integrity tested to ensure filter performance each and every time out of the package. PureFlo® PES Mini Cartridges are well-suited for critical applications where superior flow and particle removal efficiency at 0.04, 0.1, 0.2, 0.45, 0.65, 0.80 and 1.2 micron is required.

Applications	
Acids	Ink Jets
Bases	Beverages
Solvents	Pharmaceuticals
Fine Chemicals	Biologics
Plating Solutions	Dyes
Process Water	Lacquers

Regulatory Compliance:

Manufactured from materials that conform to the requirements of 21 CFR Part 177 of the U.S. Code of Federal Regulations and USP Class VI Biological Test for Plastics

Materials of Construction:

Membrane: Hydrophilic Polyethersulfone
Membrane Supports: Polyester
Cage, Core: Polypropylene
End Caps: Nylon
O-Rings: Silicone, EPDM, Fluoroelastomer, Buna N

Dimensions (nominal):

Lengths: 1.5 in (38 mm), 2.5 in (63.5 mm), 5 in. (127 mm)
Diameter: 2.2 in. (56 mm)

Effective Filtration Area:

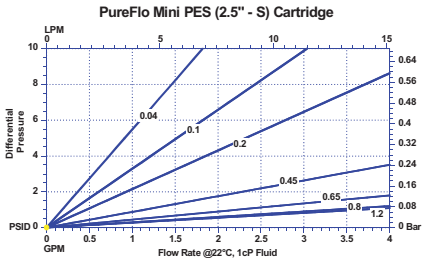
0.78 ft^2 (720 cm^2) per 1.5" cartridge
1.5 ft^2 (1390 cm^2) per 2.5" cartridge
2.8 ft^2 (2600 cm^2) per 5.0" cartridge

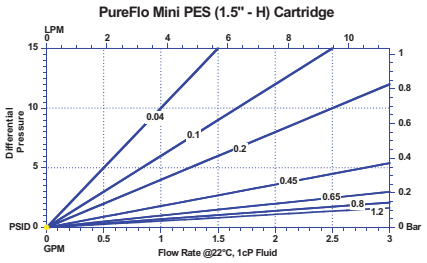
Operating Conditions:

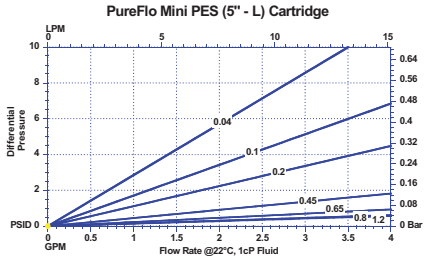
Maximum Forward Differential Pressure:
4.1 bar (59.5 psid) at 22 °C
2.0 bar (29 psid) at 80 °C
Maximum Reverse Differential Pressure:
2.0 bar (29 psid) at 22 °C
1.0 bar (14.5 psid) at 80 °C
Maximum Operating Temperature: 80 °C

Features	Benefits
■ Hydrophilic PES Membrane	■ Ease of wettability for quicker start ups and post integrity testing ■ Reduces downtime and improves throughput ■ No de-wetting in outgassing fluids, unlike hydrophobic filters such as PTFE
■ Wide Chemical & Thermal Compatibility	■ Provides excellent compatibility with a wide-range of applications
■ Low Levels of Filter Extractables	■ No adhesives, binders, or surfactants are used during manufacturing resulting in superior downstream cleanliness ■ All cartridges are rinsed with high-purity water

PureFlo® PES Z Mini Cartridges







Bacterial Retention

Complete retention of ≥ 10^7 organisms/cm^2 of *Brevundimonas diminuta* in accordance with the current HIMA challenge methodology (ASTM F838-05). Validation guide available upon request.

Water Bubble Point Specification

0.2 µm : 50 psi (0.35 MPA)

Bio-Safety

Filter effluent is non-pyrogenic per USP bacterial endotoxin (<0.25 EU/ml)

Sterilization & Autoclaving

The filters can be sterilized by autoclaving for up to 50 cycles at 125 °C (257 °F) for 30 minutes. The filters can also be sterilized by steam-in-place procedure up to 30 cycles at 135 °C (275 °F) for 30 minutes at less than 0.3 bar differential pressure. The filters can also sanitized by hot water or common chemicals that are compatible with filter components.

PureFlo PES Cartridge Ordering Guide

PureFlo Mini PES Filter Cartridges	Removal Rating	End Modifications	Length	O-Ring / Gasket Materials	Package Qty
MMZS = Mini PES Cartridge - for easier wettability	**004 =** 0.04 micron **010** = 0.10 micron **020** = 0.20 micron **045** = 0.45 micron **065** = 0.65 micron **080** = 0.8 micron **120** = 1.2 micron	**0** = 222 O-Ring Flat **6** = 226 O-Ring Flat **A** = 116 Inner O-Ring **B** = 1.5" Tri-Clamp **C** = 015 O-Ring **D** = 1/2" MNPT **E** = 118 O-Rings **F** = Flange* **G** = 1/2" Tri-Clamp **M** = 123 O-Rings with hold down tabs** **N** = 116 Inner Housing Seal **P** = 118 O-Rings with hold down tabs **S** = 116 Inner O-Ring with locking groove **T** = 126 O-Rings with locking tabs***	**H** = 1.5" **S** = 2.5" **L** = 5"	**E** = EPDM **N** = Buna N **S** = Silicone **T** = TEV **U** = TES **V** = Fluro-Elastomer **O** = O-Ringless	**2P** = 2pc/ pack (5") **3P** = 3pc/ pack (1.5" and 2.5") **Option** **- 5** = SS Insert

Example - A 3 pack of 2.5", 0.1 micorn filters with 2-116 EPDM o-ring would be **MMZS010ASE3P**

* - F end modification is compatible to fit in a PALL SealKleen™ Housing, **- M end modification is compatible to fit in a Millipore OptiSeal™ Housing,
***-T end modification is compatible to fit a Parker Trueseal™ Housing

Your Local Distributor:

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PureFlo® PES Mini Cartridges

PureFlo® PES Mini Cartridges are highly-retentive hydrophilic PES membrane filters that have been specially designed for critical applications. The PES membrane in an all-polypropylene construction provides excellent chemical compatibility and superior flow per unit area as compared to other membrane cartridges. No adhesives, binders or surfactants are used in the manufacturing process. All cartridges are rinsed with high-purity water to reduce extractables and downtime.

The hydrophilic PES membrane does not require pre-wetting with IPA and flushing with DI water, thereby eliminating a potential source of contamination and hazardous waste. In addition, unlike hydrophobic filters such as PTFE, the hydrophilic membrane reduces the potential for bubble formation by not de -wetting in outgassing fluids. All filter cartridges are 100% integrity tested to ensure filter performance each and every time out of the package. PureFlo® PES Mini Cartridges are well-suited for critical applications where superior flow and particle removal efficiency at 0.04, 0.1, 0.2, 0.45, 0.65, 0.80 and 1.2 micron is required.

Applications	
Acids	Ink Jets
Bases	Beverages
Solvents	Pharmaceuticals
Fine Chemicals	Biologics
Plating Solutions	Dyes
Process Water	Lacquers

Regulatory Compliance:

Manufactured from materials that conform to the requirements of 21 CFR Part 177 of the U.S. Code of Federal Regulations and USP Class VI Biological Test for Plastics

Materials of Construction:

Membrane: Hydrophilic Polyethersulfone
Membrane Supports: Polypropylene
Cage, Core, End Caps: Polypropylene
O-Rings: Silicone, EPDM, Fluoroelastomer, Buna N

Dimensions (nominal):

Lengths: 1.5 in (38 mm), 2.5 in (63.5 mm), 5 in. (127 mm)
Diameter: 2.2 in. (56 mm)

Effective Filtration Area:

0.78 ft^2 (720 cm^2) per 1.5" cartridge
1.5 ft^2 (1390 cm^2) per 2.5" cartridge
2.8 ft^2 (2600 cm^2) per 5.0" cartridge

Operating Conditions:

Maximum Forward Differential Pressure:
4.1 bar (59.5 psid) at 20 °C
2.0 bar (29 psid) at 80 °C
Maximum Reverse Differential Pressure:
2.0 bar (29 psid) at 20 °C
1.0 bar (14.5 psid) at 80 °C
Maximum Operating Temperature: 80 °C

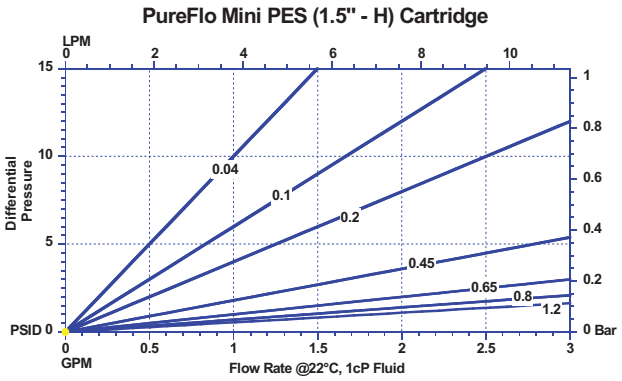
Sterilization & Autoclaving:

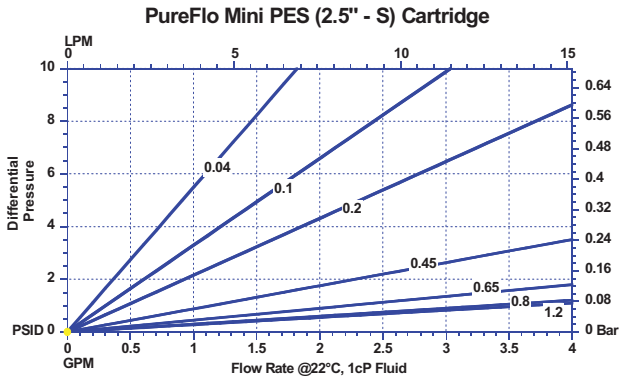
The filters can be sterilized by autoclaving for up to 25 cycles at 125 °C (257 °F) for 30 minutes. The filters can also be sterilized by steam-in-place procedure up to 10 cycles at 135 °C (275 °F) for 30 minutes at less than 0.3 bar (4.35 psi) differential pressure. The filters can also sanitized by hot water or common chemicals that are compatible with filter components.

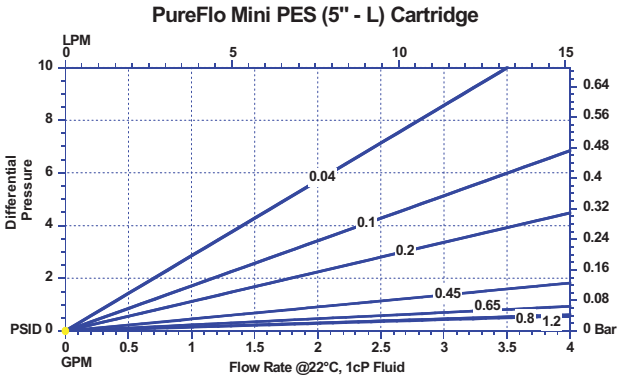
Retrofits Code 2230, 4463, 4440 & SLK

Features	Benefits
■ Hydrophilic PES Membrane	■ IPA pre-wetting not required – thereby eliminating a potential source of contamination and disposal waste ■ Reduces downtime and improves throughput ■ Economic alternative to PTFE filters ■ No de-wetting in outgassing fluids, unlike hydrophobic filters such as PTFE
■ Wide Chemical & Thermal Compatibility	■ Provides excellent compatibility with a wide-range of chemicals
■ Low Levels of Filter Extractables	■ No adhesives, binders, or surfactants are used during manufacturing resulting in superior downstream cleanliness ■ All cartridges are rinsed with high-purity water

PureFlo® PES Mini Cartridges







Flange End Modification

PureFlo PES Cartridge Ordering Guide

PureFlo Mini PES Filter Cartridges	Removal Rating	End Modifications	Length	O-Ring / Gasket Materials	Package Qty	Grade
MMS = Mini PES Cartridge	**004 =** 0.04 micron **010** = 0.10 micron **020** = 0.20 micron **045** = 0.45 micron **065** = 0.65 micron **080** = 0.8 micron **120** = 1.2 micron	**0** = 222 O-Ring Flat **6** = 226 O-Ring Flat **A** = 116 Inner O-Ring **B** = 1.5" Tri-Clamp **C** = 015 O-Ring **D** = 1/2" MNPT **E** = 118 O-Rings **F** = Flange* **G** = 1/2" Tri-Clamp **M** = 123 O-Rings with hold down tabs** **N** = 116 Inner Housing Seal **P** = 118 O-Rings with hold down tabs **S** = 116 Inner O-Ring with locking groove **T** = 126 O-Rings with locking tabs***	**H** = 1.5" **S** = 2.5" **L** = 5"	**E** = EPDM **N** = Buna N **S** = Silicone **T** = TEV **U** = TES **V** = Fluroelastomer **O** = O-Ringless	**2P** = 2pc/ pack (5") **3P** = 3pc/ pack (1.5" and 2.5")	Blank = Standard - PH = Pharm grade **Option** **- 5** = SS Insert

Example - A 3 pack of 2.5", 0.1 micorn filters with 2-116 EPDM o-ring would be **MMS010ASE3P**

* - F end mondification is compatible to fit in a PALL SealKleen™ Housing, **- M end modification is compatible to fit in a Millipore OptiSealTM Housing

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ISO Certified 9001 14001

TÜV ISO 13485

PureFlo® CA Mini Cartridges

PureFlo® CA Mini Cartridges are highly retentive hydrophilic Cellulose Acetate membrane filters that have been specially designed for critical applications. The Cellulose Acetate membrane in an all-polypropylene construction provides excellent compatibility across a wide range of applications. No adhesives or binders are used in the manufacturing process and all cartridges are rinsed with high-purity water to reduce extractables and downtime.

The hydrophilic Cellulose Acetate membrane does not require pre-wetting with IPA and flushing with DI water, thereby eliminating a potential source of contamination and hazardous waste. In addition, the Cellulose Acetate membrane is low protein binding for use in pharmaceutical and biotechnology applications.

All filter cartridges are 100% integrity tested to ensure filter performance each and every time out of the package. PureFlo® PES Mini Cartridges are well-suited for critical applications where low protein binding and high particle removal efficiency at 0.2, 0.45, 0.65, 0.80 and 1.2 micron is required.

Applications	
Acids	Ink Jets
Bases	Beverages
Solvents	Pharmaceuticals
Fine Chemicals	Biologics
Plating Solutions	Dyes
Process Water	Lacquers

Regulatory Compliance:

Manufactured from materials that conform to the requirements of 21 CFR Part 177 of the U.S. Code of Federal Regulations and USP Class VI Biological Test for Plastics

Materials of Construction:

Membrane: Hydrophilic Cellulose Acetate
Membrane Supports: Polypropylene
Cage, Core, End Caps: Polypropylene
O-Rings: Silicone, EPDM, Fluoroelastomer, Buna N

Dimensions (nominal):

Lengths: 1.5 in (38 mm), 2.5 in (63.5 mm), 5 in. (127 mm)
Diameter: 2.2 in. (56 mm)

Effective Filtration Area:

0.78 ft^2 (720 cm^2) per 1.5" cartridge
1.5 ft^2 (1390 cm^2) per 2.5" cartridge
2.8 ft^2 (2600 cm^2) per 5.0" cartridge

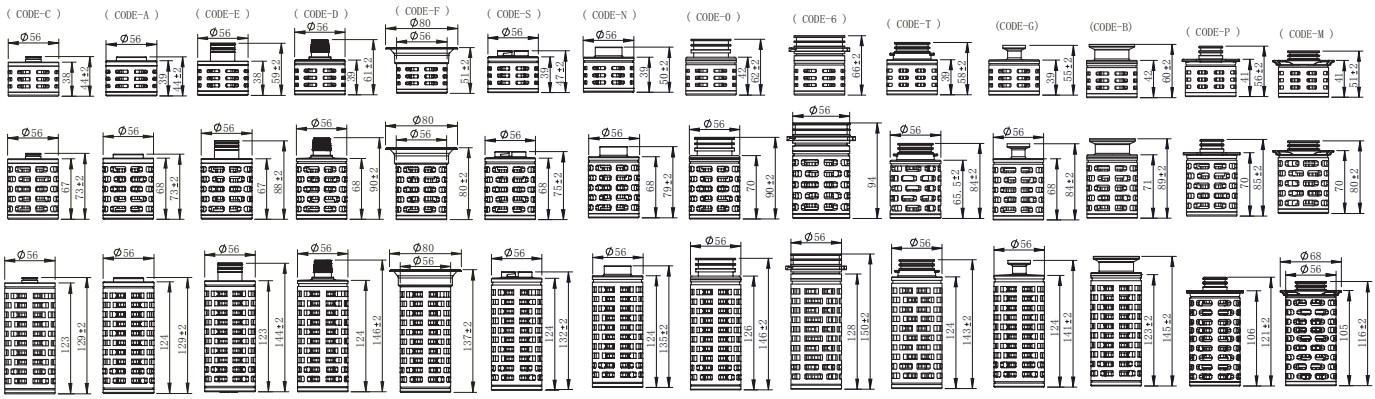
Operating Conditions:

Maximum Forward Differential Pressure:
4.1 bar (59.5 psid) at 20 °C
2.0 bar (29 psid) at 80 °C
Maximum Reverse Differential Pressure:
2.0 bar (29 psid) at 20 °C
1.0 bar (14.5 psid) at 80 °C
Maximum Operating Temperature: 80 °C

Retrofits Code 2230, 4463, 4440 & SLK

Features	Benefits
■ Hydrophilic Cellulose Acetate Membrane	■ IPA pre-wetting not required – thereby eliminating a potential source of contamination and disposal waste ■ Reduces downtime and improves throughput ■ Economic alternative to PTFE filters ■ No de-wetting in outgassing fluids, unlike hydrophobic filters such as PTFE
■ Wide Chemical & Thermal Compatibility	■ Provides excellent compatibility with a wide-range of chemicals
■ Low Levels of Filter Extractables	■ No adhesives, binders, or surfactants are used during manufacturing resulting in superior downstream cleanliness ■ All cartridges are rinsed with high-purity water

PureFlo® CA Mini Cartridges



Sterilization & Autoclaving:

The filters can be sterilized by autoclaving for up to 25 cycles at 125 °C (257 °F) for 30 minutes. The filters can also be sterilized by steam-in-place procedure up to 3 cycles at 135 °C (275 °F) for 30 minutes at less than 0.3 bar (4.35 psi) differential pressure. The filters can also sanitized by hot water or common chemicals that are compatible with filter components.

Flange End Modification

PureFlo CA Cartridge Ordering Guide

PureFlo Mini Cellulose Acetate Filter Cartridges	Removal Rating (Micron)	End Modifications	Length	O-Ring / Gasket Materials	Package Qty
MMA = Mini Cellulose Acetate Cartridge	**020** = 0.20 **045** = 0.45 **065** = 0.65 **080** = 0.80 **120** = 1.20	**0** = 222 O-Ring Flat **6** = 226 O-Ring Flat **A** = 116 Inner O-Ring **B** = 1.5" Tri-Clamp **C** = 015 O-Ring **D** = 1/2" MNPT **E** = 118 O-Rings **F** = Flange* **G** = 1/2" Tri-Clamp **M** = 123 O-Rings with hold down tabs** **N** = 116 Inner Housing Seal **P** = 118 O-Rings with hold down tabs **S** = 116 Inner O-Ring with locking groove **T** = 126 O-Rings with locking tabs***	**H** = 1.5" **S** = 2.5" **L** = 5"	**E** = EPDM **N** = Buna N **S** = Silicone **T** = TEV **U** = TES **V** = Fluro-Elastomer **O** = O-Ringless	**2P** = 2pc/ pack (5") **3P** = 3pc/ pack (1.5" and 2.5") **Option** **- 5** = SS Insert

Example - A 3 pack of 2.5", 0.45micron filters with 2-015 EPDM o-ring would be ***MMA045CSE3P***

* - F end modification is compatible to fit in a PALL SealKleen™ Housing, **- M end modification is compatible to fit in a Millipore OptiSeal™ Housing,
***-T end modification is compatible to fit a Parker Trueseal™ Housing

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TÜV ISO 13485

PureFlo® Glass Microfiber Mini Cartridges
(Glass Fiber/PP Construction)

Versatile Small Cartridge

PureFlo® Glass Microfiber Mini Cartridges are highly retentive filters that have been specially designed for critical high loading applications. The filter is made using a borosilicate microfiber in an all-polypropylene construction that provides excellent chemical compatibility. The filter is designed for superior flow per surface area as compared to other cartridges. No adhesives are used in the filter manufacturing process. The borosilicate microfiber is a non-fiber releasing media.

The PureFlo® Glass Microfiber Mini Cartridge is ideally-suited for microbial reduction. In addition to the high loading capacity, it has low pressure drop characteristics for liquid and gas filtration applications. These microfiber mini filter cartridges are well-suited for applications where the removal of deformable and non-deformable particles is required.

We are currently offering eight different media sizes with five different end adaptors and three different length options to meet the needs of a wide variety of processes. The glass fiber media can also be added as a pre-filter layer to membrane filter in a cartridge or capsule.

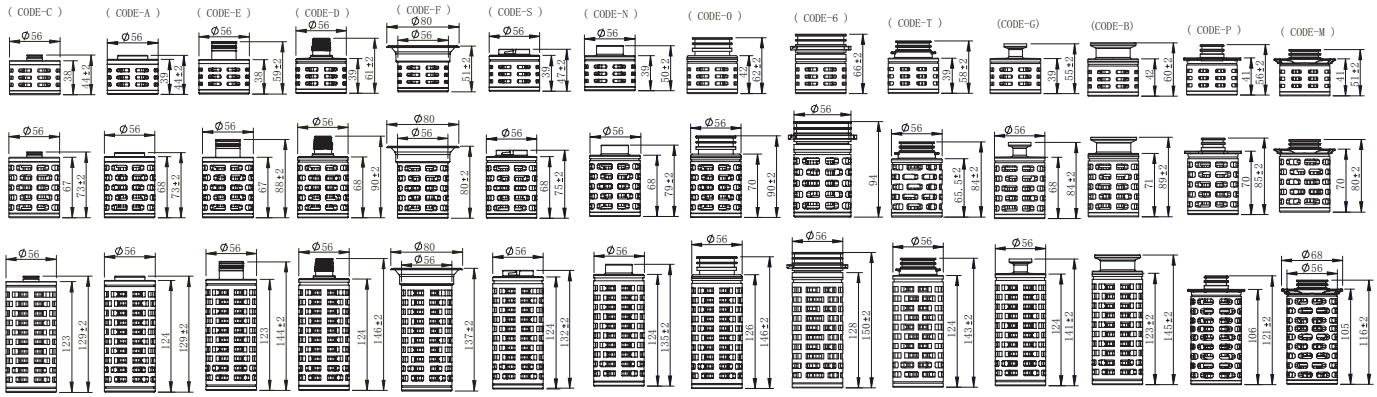
Applications	
Buffers and Media	Fermentation clarification
Cell Harvesting	Venting
Pre-Filtration	Pharmaceuticals
Vaccines	Biologics
Gas Filtration	Scale-up Processing
Ink Jets	Acids and Bases

Retrofits Code 2230, 4463, 4440 & SLK

Specifications

Materials of Construction:	Media: Borosilicate Glass Microfiber Media Supports: Polypropylene Cage, Core, End Caps: Polypropylene O-Rings: Silicon (Standard), EPDM, Buna N, TES, Fluoroelastomer Sealing: Thermally welded
Nominal Dimensions:	Lengths: 1.5 in (38 mm), 2.5 in (63.5 mm), 5 in. (127 mm) Diameter: 2.2 in. (56 mm)
Effective Filtration Area:	0.48 ft^2 (450 cm^2) per 1.5" cartridge 0.70 ft^2 (650 cm^2) per 2.5" cartridge 1.83 ft^2 (1700 cm^2) per 5.0" cartridge
Available Ratings:	0.45 µm to 30 µm (see ordering guide)
Operating Conditions:	Maximum Forward Differential Pressure: 4.1 bar (59.5 psid) at 22 °C 2.0 bar (29 psid) at 80 °C Maximum Reverse Differential Pressure: 2.0 bar (29 psid) at 22 °C 1.0 bar (14.5 psid) at 80 °C Maximum Operating Temperature: 80 °C
Regulatory Compliance:	The filters are constructed with polypropylene resins and filtration media in compliance with USP Class VI Biological Test for Plastics.

PureFlo® Glass Microfiber Mini Cartridge



Specifications (cont.)

Sterilization & Autoclaving:

The filters can be sterilized by autoclaving for up to 25 cycles at 125 °C (257 °F) for 30 minutes. The filters can also be sterilized by steam-in-place procedure up to 10 cycles at 135 °C (275 °F) for 30 minutes at less than 0.3 bar (4.35 psi) differential pressure. The filters can also sanitized by hot water or common chemicals that are compatible with filter components.

PureFlo Glass Microfiber Mini Cartridge Ordering Guide

PureFlo Mini Glass Microfiber Filter Cartridges	Removal Rating	End Modifications	Length	O-Ring / Gasket Materials	Package Qty
NMG = Mini Glass Microfiber Cartridge	**002** = 0.2um **004** = 0.4um **005** = 0.5um **010** = 1.0um **030** = 3.0um **050** = 5.0um **100** = 10 um **200** = 20 um **300** = 30 um **H** = HEPA **U =** ULPA	**0** = 222 O-Ring Flat **6** = 226 O-Ring Flat **A** = 116 Inner O-Ring **B** = 1.5" Tri-Clamp **C** = 015 O-Ring **D** = 1/2" MNPT **E** = 118 O-Rings **F** = Flange* **G** = 1/2" Tri-Clamp **M** = 123 O-Rings with hold down tabs** **N** = 116 Inner Housing Seal **P** = 118 O-Rings with hold down tabs **S** = 116 Inner O-Ring with locking groove **T** = 126 O-Rings with locking tabs***	**H** = 1.5" **S** = 2.5" **L**= 5"	**E** = EPDM **N** = Buna N **S** = Silicone **T** = TEV **U** = TES **V** = Fluroelastomer **O** = O-Ringless	**2P** = 2pc/ pack (5") **3P** = 3pc/ pack (1.5" and 2.5") **Option** **- 5** = SS Insert
Example - A 3 pack of 2.5", 3 micorn filters with 116 Internal EPDM o-ring would be **NMG030ASE3P**					

*-F end modification is compatible to fit in a PALL SealKleen™ Housing, **-M end modification is compatible to fit in a Millipore OptiSeal™ Housing,
***-T end modification is compatible to fit a Parker Trueseal™ Housing

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ISO Certified 9001 14001

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PureFlo® Mini Carbon/HEPA Cartridges

PureFlo® Mini Activated Carbon Fiber (ACF) / HEPA Cartridges are designed to remove volatile organic compounds, hydrocarbons, chlorine, color, and odors from gases and aqueous or organic liquids. This fibrous carbon media is designed for maximum flow and contaminant removal to eliminate potential health hazards. The ACF is pleated with a HEPA rated media on the down stream side to remove particulates from the gas while purifying it. The carbon fiber allows for highly efficient adsorption kinetics and capacity utilization. PureFlo® Mini Activated Carbon Fiber (ACF) / HEPA Cartridges are designed with a clean, durable polypropylene support structure to provide superior down stream cleanliness.

No adhesives are used in the manufacturing process. Each cartridge is manufactured under tight process control to give you a uniform product. These ACF/HEPA filters are available in a range of lengths and connections to suit your individual purification and filtration needs.

Materials of Construction

Media: Fibrous Activated Carbon and HEPA media
Media Supports: Polypropylene
Cage, Core, End Caps: Polypropylene
O-Rings: Silicone, EPDM, Fluoroelastomer, Buna N

Dimensions (nominal)

Lengths: 1.5 in. (38 mm), 2.5 in. (63.5 mm), 5 in. (127 mm)
Diameter: 2.2 in. (56 mm)

Effective ACF Purification Capacity

1.5 in.: 1.5 to 6.0 grams
2.5 in.: 2.5 to 10 grams
5.0 in.: 5 to 20 grams
(ACF weights are dependent on HEPA media selection. Custom weight and length are available upon request.)

Operating Conditions

Maximum Forward Differential Pressure:
4.1 bar (60 psi) at 22°C
Maximum Reverse Differential Pressure:
2.1 bar (30 psi) at 68°F/22°C
Maximum Operating Temperature: 140°F/60°C

Applications	
Gas purification	Liquid purification
Fine Chemicals	Water
Reagent Purification	Pharmaceuticals
Odor removal	Biologics
Vacuum pumps	Outlet exhaust

Features	Benefits
■ Activated Carbon Fiber	■ Greater surface area than granular carbon to trap VOC's ■ Faster kinetics than granular carbon for VOC absorption since the VOCs do not need to travel as far ■ Light weight and high surface area for lower pressure drop ■ More porous with 100 times more accessible activated sites for VOC than granular activated carbon
■ HEPA filtration	■ Removes 0.3 µm in size with an efficiency rating of 99.97%. ■ Filter design allows for high loading capacity ■ High flow rates with low pressure drops across filter media
■ Compact	■ Mini cartridge unit to easily change out ■ Several sizes and configurations to choose from

PureFlo® Mini Carbon/HEPA Cartridges

Specifications (cont.)

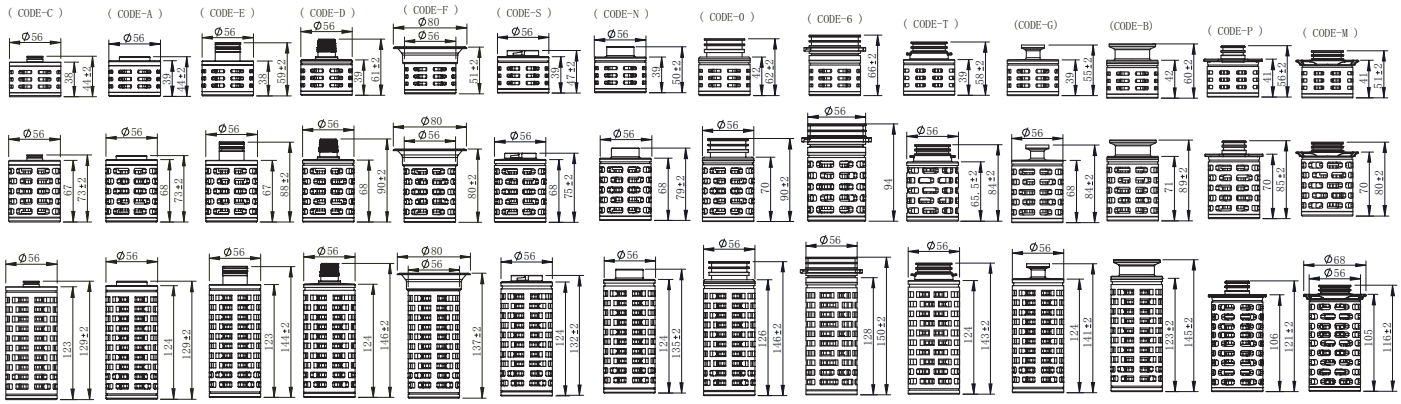
Sterilization & Autoclaving

The filters can be sterilized by autoclaving for up to 25 cycles at 125°C (257°F) for 30 minutes. The filters can also be sterilized by steam-in-place (SIP) procedure up to 5 cycles at 135°C (275°F) for 30 minutes at less than 0.3 bar (4.35 psi) differential pressure. The filters can also be sanitized by hot water or common chemicals that are compatible with filter components.

Note: The Polyethylene membrane can only be sterilized by gamma irradiation. No autoclaving or SIP procedures.

Regulatory Compliance

Manufactured from materials that conform to the requirements of 21 CFR Part 177 of the U.S. Code of Federal Regulations and USP Class VI Biological test for Plastics.



PureFlo Mini Carbon/HEPA Filter Cartridge Ordering Guide

PureFlo Mini Glass Microfiber Filter Cartridges	HEPA Filter Media	End Modifications	Length	O-Ring / Gasket Materials	Package Qty
MCH = Mini Carbon Fiber / HEPA Cartridge	**UE** = Polyethylene	**0** = 222 O-Ring Flat	**H** = 1.5"	**E** = EPDM	**2P** = 2pc/ pack (5")
	F = PTFE	**6** = 226 O-Ring Flat	**S** = 2.5"	**N** = Buna N	**3P** = 3pc/ pack (1.5" and 2.5")
	G = Glass Fiber	**A** = 116 Inner O-Ring	**L**= 5"	**S** = Silicone	
	P = Polypropylene Media	**B** = 1.5" Tri-Clamp		**T** = TEV	
		C = 015 O-Ring		**U** = TES	**Option**
Layered together in a thick pleate	**Blank** = for Carbon only	**D** = 1/2" MNPT		**V** = Fluro-Elastomer	**- 5** = SS Insert
		E = 118 O-Rings		**O** = O-Ringless	
		F = Flange*			
		G = 1/2" Tri-Clamp			
		M = 123 O-Rings with hold down tabs**			
		N = 116 Inner Housing Seal			
		P = 118 O-Rings with hold down tabs			
		S = 116 Inner O-Ring with locking groove			
		T = 126 O-Rings with locking tabs***			

Example - A 3 pack of 2.5", Carbon fiber with a PP media HEPA filter with 116 Internal EPDM o-ring would be ***MCHPASE3P***

* - F end modification is compatible to fit in a PALL SealKleen™ Housing, **- M end modification is compatible to fit in a Millipore OptiSeal™ Housing,
***-T end modification is compatible to fit a Parker Trueseal™ Housing

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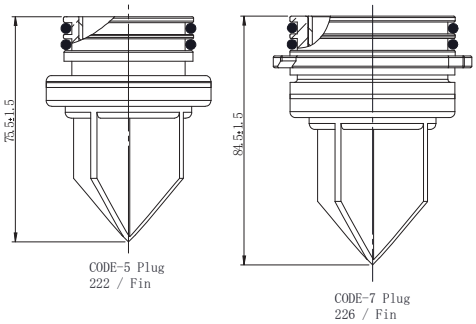
PureFlo® Cartridge End Cap Filter Plug

PureFlo® Cartridge End Cap Filter Plug have been designed for simple and quick plugging of filter element holes in multi-round filter housings. For use in systems that were over designed or change in process parameters that do not need as many filters in housing. This allows you to continued use of the filter housings with lower number of filters, lowering filter cost. These units will blind off the filter ports in the housings. They can be using for small scale testing in the actual system by limiting filtration. No adhesives, binders, are used in the manufacturing process. The filter plugs are thermally sealed.

Operating Conditions

		PP Shell
Maximum working pressure @ 77°F/25°C:	Liquid:	80 psi (5.5 bar)
	Gas:	60 psi (4.1 bar)
Minimum burst pressure @ 77°F/25°C:		120 psi (8.3 bar)
Maximum working temp:		176°F (80°C)



Materials of Construction
Plastic: Polypropylene
O-ring: See Ordering guide

Fitting Connections
For 222 and 226 o-ring configuration housings

Regulatory Compliance
The plug are manufactured from materials that conform to the requirements of 21CFR Part 177 of the U.S. Code of Federal Regulations. Medias and Membranes are also in compliance with the USP Class VI Biological Test for Plastics.

PureFlo Cartridge End Cap Filter Plug Ordering Guide

Filter Cartridge Plug	Material	End Modifications	O-Ring	Options
CFP = Cartridge End Cap Filter Plug Reusable	P = Polypropylene	**5** = 222 O-Ring/ Fin **7**= 226 O-Ring/ Fin	E = EPDM N = Buna N S = Silicone V = Fluro-Elastomers T = TEV U = TES*	- 5 = Stainless Steel
Example - Cartridge End Cap Filter Plug, Polypropylene, 226/Fin, Silicone o-ring with SS insert, would be CFPP7S-5				

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MAXX Series Pleated Filter Elements
for Bag Filter Housings

The MAXX series of pleated filter elements is to be the next generation of filter elements for bag filter housings. This product introduction offers the most comprehensive product offerings of inside-out flow elements available. MAXX elements combine the proven ease of use and exceptional solids loading capacity of bag filtration, with the high efficiency performance characteristics of cartridge filtration. All this results in the most versatile, reliable, and economical filter in the marketplace today.

The MAXX series of filter elements come in five different filter media type to meet your high flow, high loading applications.

MAXX filters multiplies the area of filtration that is possible to get in a #1 or #2 size bag filter housings. The filters allow you to utilize your existing bag filtration equipment to process more fluid at a lower pressure drop, thus saving you the time and expense to upgrade the capital equipment.

JALT Technologies®

- Polypropylene Micro-Fiber—PMF
- Borosilicate Micro fiberglass—BMF
- Polypropylene Felt—PPF
- Polyester Felt—PEF
- Phenolic Treated Polyester—PTP

Applications	
Industrial	Membrane Prefiltration
Coatings	Lubricating Oils
Food and Beverage	Beer & Wine
Chemical Processing	Photographic
Pharmaceuticals	R.O. Prefiltration

Features	Benefits
■ Absolute-Rated	■ Provides reliable pore size control resulting in repeatable filtration performance ■ Thermally bonded construction, eliminating bypass
■ Non-Fiber Releasing	■ Minimal extractables and particle release from filter, providing a high purity filtrate
■ Quality Media	■ Low pressure drop yields higher flow and reduced processing time ■ Non-Calandard Micro-Glass matrix offering greater service life, reducing operating costs per cartridge

MAXX Series Pleated Filter Elements
for Bag Filter Housings

MAXX Polypropylene Micro Fiber (PMF) filters are engineered for critical high-purity applications by optimizing the media while maintaining absolute rated performance that is both predictable and repeatable. Our unique filter media is constructed on the latest continuous Micro−Fiber manufacturing equipment, accurately controlling fiber diameter and web integrity. This state-of-the-art manufacturing method utilizes online monitoring equipment that delivers the industry's most uniform and consistent media, resulting in unparalleled product consistency.

By combining this high performance media in a MAXX PMF filter element, we have created the ultimate filter element. This element combines the advantages of typical bag filtration, ease of use and exceptional dirt holding capacity with the high efficiency and performance characteristics of cartridge filtration. The inside-out flow design ensures that unwanted contaminates stay inside the element during change-out unlike typical cartridge filtration. This virtually eliminates the possibility of downstream contamination.

Our 100% polypropylene construction provides an excellent range of chemical compatibility for your most demanding applications.

JALT Technologies ®

Materials of Construction

Media: Polypropylene Micro-Fiber
Media Supports: Polypropylene
Cage, Core, End Caps: Polypropylene
O-Rings: EPDM, Buna N, Viton, and TEV
Sealing: Thermal Bond

Dimensions (nominal)

Lengths: Size 1 (14"), Size 2 (28")
Diameter: 7 in. (178cm)

Effective Filtration Area

Size 1 = 24 ft^2
Size 2 = 50 ft^2

Operating Conditions

Maximum Forward Differential Pressure:
- Polypropylene support:
6.3 bar (90PSID) at 24°C (75°F)

Maximum Operating Temperature:
- Polypropylene support: 93°C

Regulatory Compliance

Manufactured from materials that conform to the requirements of 21CFR Part 177 of the U.S. Code of Federal Regulations and USP Class VI Biological Test for Food and Beverage

MAXX Polypropylene Micro Fiber Ordering Guide

MAXX Polypropylene Micro Fiber Cartridges	Removal Rating	Length	Oring Configuration	O-Ring Materials	Grade
	005 = 0.5 micron	P1 = Size 1	D1 = Single 261 oring	E = EPDM	Blank = Industrial
PMF	01 = 1.0 micron	P2 = Size 2	D2 = Double 261 oring	N = Buna N (standard)	-1 = Beverage/FDA grade
	03 = 3.0 micron			V = Viton	
	05 = 5.0 micron			T = TEV	
	10 = 10.0 micron				
	25 = 25.0 micron				
	50 = 50.0 micron				
Example - MAXX Polypropylene, 1.0 micron, size #1, with single 261 Buna N o-ring, industrial grade would be PMF01P1D1N					

MAXX Series Pleated Filter Elements
for Bag Filter Housings

MAXX Borosilicate Micro Fiberglass (BMF) filter elements are engineered for critical high-purity applications optimizing throughput while maintaining an absolute rated performance that is consistent and reliable. Our microglass filter elements features a media structure with high surface area and increased void volume. The media also has an optimized pore size geometry to minimize pressure drop. Precision media manufacturing of fine fibers results in a highly uniform matrix that optimizes element service life. This advanced fine fiber technology outperforms all competing micro−fiber technologies.

MAXX pleat design coupled with the micro-fiber offers greater surface area, ensuring longer service life thus reduce operating cost. The media is non-fiber releasing with minimal extractables providing high-purity for these absolute-rated elements. The cartridges are thermally bonded eliminating any chance of bypass.

MAXX BMF cartridges are the preferred choice for filtering beverages such as beer and wine because they do not remove flavor enhancing proteins.

Materials of Construction

Media: Borosilicate Micro fiberglass
Media Supports: Polyester
Cage, Core, End Caps: Polypropylene
O-Rings: EPDM, Buna N, Viton, and TEV
Sealing: Thermal Bond

Dimensions (nominal)

Lengths: Size 1 (14”), Size 2 (28”)
Diameter: 7 in. (178cm)

Effective Filtration Area

P1 Size = 24 ft^2
P2 Size = 50 ft^2
P2L Size = 55 ft^2

Operating Conditions

Maximum Forward Differential Pressure:
- Polyester support:
4.8bar(70PSID) at 24°C(75°F)

Maximum Operating Temperature:
- Polyester support: 60°C

Regulatory Compliance

Manufactured from materials that conform to the requirements of 21CFR of the U.S. Code of Federal Regulations and USP Class VI Biological test for Food and Beverage

JALT Technologies ®

MAXX Borosilicate Micro Fiberglass Ordering Guide

MAXX Borosillicate MicroFiber Cartridges	Removal Rating	Length	Cage Design	Oring Configuration	O-Ring Materials	Grade
BMF	005 = 0.5 micron 01 = 1.0 micron 02 = 3.0 micron 03 = 3.0 micron 06 = 6.0 micron 10 = 10.0 micron 15 = 15.0 micron	P1 = Size 1 (14") P2 = Size 2 (26") P2L = Size 2 (30")	B = Resin Bonded Felt C = Plastic PP	D1 = Single 261 oring D2 = Double 261 oring P = Over-the-top Style	E = EPDM N = Buna N (standard) V = Fluorocarbon T = TEV S = Silicon	Blank = Industrial 1 = Beverage/FDA grade
Example - MAXX Borosillicate Microfiberglass, 1.0 micron, size #1, with single 261 Buna N o-ring, industrial grade would be BMF01P1D1N						

MAXX Series Pleated Filter Elements
for Bag Filter Housings

MAXX Polypropylene and Polyester Felt (PPF and PEF) Elements feature the proven benefits of small fiber diameter and a high void area, creating the perfect depth filters. Available in either polypropylene or polyester, these elements offer five to ten times more surface area, depending upon the chosen configuration and materials of construction. Coupled with your choice of single or double o-ring seals, the result is the most reliable, and most versatile filters available.

The increased surface area offers higher flow capacity in existing applications. This boosts production without investing in capital equipment. The filters have dual density with a built in pre-filter which prevents premature blinding of the final filter media. The pleats are held open with an internal pleat separator to enssure full utilization of the entire pleat surface area.

Materials of Construction

Media: Polypropylene, Polyester
Cage, Core, End Caps: Polypropylene
O-Rings: EPDM, Buna N, Viton, and TEV
Sealing: Thermal Bond

Dimensions (nominal)

Lengths: Size 1 (14”), Size 2 (28”)
Diameter: 7 in. (178cm)

Effective Filtration Area

Size 1 = 10 ft^2
Size 2 = 20 ft^2

Operating Conditions

Maximum Forward Differential Pressure:
- Polypropylene:
  6.3 bar(90PSID) at 24°C(75°F)
- Polyester:
  4.8bar(70PSID) at 24°C(75°F)

Maximum Operating Temperature:
- Polypropylene support: 93°C
- Polyester: 60°C

MAXX Polypropylene and Polyester Felt Ordering Guide

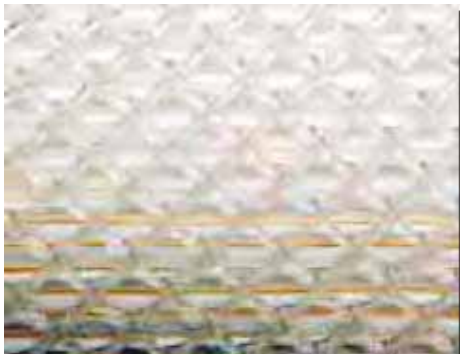
MAXX Polypropylene and Polyester Felt Cartridges	Removal Rating	Length	Oring Configuration	O-Ring Materials	Grade
	01 = 1.0 micron	P1 = Size 1	D1 = Single 261 oring	E = EPDM	Blank = Industrial
PPF = Polypropylene Felt	05 = 5.0 micron	P2 = Size 2	D2 = Double 261 oring	N = Buna N (standard)	
PEF = Polyester Felt	10 = 10.0 micron			V = Viton	
	25 = 25.0 micron			T = TEV	
	50 = 50.0 micron				
	75 = 75.0 micron				
	100 = 100.0 micron				
	200 = 200.0 micron				
Example - MAXX Polyester Felt, 1.0 micron, size #1, with single 261 Buna N o-ring, industrial grade would be PEF01P1D1N					

MAXX Series Pleated Filter Elements
for Bag Filter Housings

MAXX Phenolic Treated Polyester (PTP) combines the advantages of resin bonded cartridges and enhanced depth filtration with the proven inside-out flow advantages of bag filtration. This makes the MAXX PTP filter the optimum alternative to cartridge filtration. The MAXX PTP utilizes a phenolic treated polyester with gradient density fiber material in a pleat design to create the non-compressible media filter. Our unique patent-protected textile provides unsurpassed gel and particle removal due to maximized surface area and the true depth design.

There is no fiber migration due to the utilization of proprietary textile which has lengthy heat set fibers. This eliminates post-filter fiber migration, which could results in compromised product and a need to re-filter. The gradient density design, prevents premature blinding of final filtration layer. Thermally-bonded end caps eliminate bypass

The increased surface area in these pleated elements means longer filter life and reduced disposal cost. Longer filter life reduces labor time associated with change-outs. This allows for higher productivity due to longer run times. One size #1 element can replaces 40 10" equivalent resin bonded cartridges.



Materials of Construction

Media: Phenolic Treated Polyester
Cage, Core, End Caps: Polypropylene
O-Rings: EPDM, Buna N, Viton, and TEV
Sealing: Thermal Bond

Dimensions (nominal)

Lengths: Size 1 (14”), Size 2 (28”)
Diameter: 7 in. (178cm)

Effective Filtration Area

Size 1 = 10 ft^2
Size 2 = 20 ft^2

Phenolic Treaded Polyester Cartridge Ordering Guide

MAXX Phenolic Treated Polyester Cartridges	Removal Rating	Length	Oring Configuration	O-Ring Materials	Grade
	01 = 1um Nom./5um Abs.	P1 = Size 1	D1 = Single 261 oring	E = EPDM	Blank = Industrial
PTP = Polypropylene Felt	05 = 5um Nom./10um Abs.	P2 = Size 2	D2 = Double 261 oring	N = Buna N (standard)	
	10 = 10um Nom./25um Abs.			V = Viton	
	25 = 25um Nom./50um Abs.			T = TEV	
	50 = 50um Nom./75um Abs.				
	75 = 75um Nom./100um Abs.				
	100 = 100um Nom./200um Abs.				
	200 = 200um Nom./200um Abs.				
Example - MAXX Phenolic Treated Polyester, 1.0 micron, size #1, with single 261 Buna N o-ring, industrial grade would be PTP01P1D1N					

Your Local Distributor:

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www.zenpure.com
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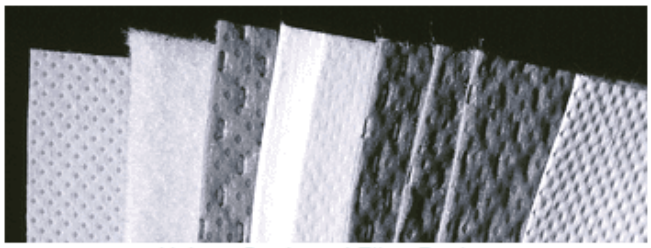
Hi-Pro Micro Felt Bag Filters

Hi-Pro micro felt bag filters provide a full range of absolute rated filtration media to meet your exacting needs. All four editions of the Hi-Pro Micro (HPM) line incorporate a unique graduated layering of media, starting with a built-in pre-filter inner layer and progressing to the tighter outer layers. The smaller particles are systematically removed as fluid travels through multiple layers with each individual layer performing a special function. This graduation aids in the prevention of premature blinding which causes unnecessary filter change out.



Unique Graduated Filter Design

The product line offerings include the Hi-Pro Micro 9200, Hi-Pro Micro 9500, and the ultimate in bag filtration the Hi-Pro Micro 9700 and 9900. The unrivaled Hi-Pro Micro line is the product suggested by US EPA for the most effective removal of *Giardia* and other zooflagellates. The product has the lowest standard deviation of any other filter, which means users achieve more consistent results from batch to batch. Equally important, this product presents the ultimate value in high-purity filtration.

JALT Technologies ®

Materials of Construction
Polypropylene Felt

Bag Sizes
1, 2, and other upon request.

Micron Sizes
1,3.5, 5, 10, 25 microns

Finish
Plain

Ring/ Flange option
Stainless Steel

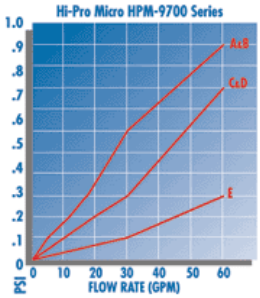
Operating Conditions
Max differential pressure: 25 psid (5 Bar)
Max Operating Temperature:
Polypropylene Felt : 200ºF (93ºC)

Features	Benefits
■ Three dimensional construction	■ Alternative for high particle level fluids ■ Longer life bag filter with greater flow rates ■ Low density and high permeability
■ Wide chemical & thermal compatibility	■ Provides excellent compatibility with a wide range of chemicals such as acids, bases and solvents ■ High quality products for almost every application
■ Complete line of bag filters	■ Wide selection of filtration media ■ Provides the most complete range of standard liquid filter bags
■ Quality manufacturing	■ Consistent and reproducible particle removal

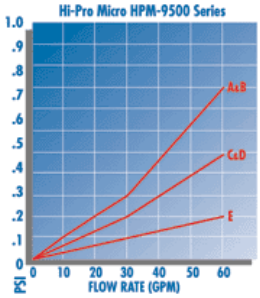
Hi-Pro Micro Felt Bag Filters

Hi-Pro Micro Felt bag filters are designed to remove heavy contamination in liquid fluid paths. These filters offer a perfect replacement for your particular application. Felt bag filters are offered in a large range of micron sizes. Filters can also be customized to meet your specific needs.

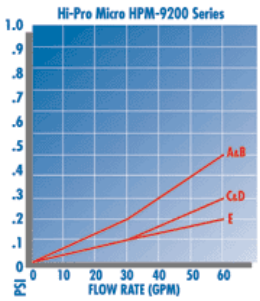
Applications	
Acids	Ink Jets
Adhesives	Electroplating
Alcohols	Esters
Amines	Greases and Oils
Beverages	Electronics
Solvents	Parts Cleaning
Coating Products	Inks
Fine Chemicals	Lacquers
Water	Machinery Cooling
Paints	Resins
Plating Solutions	Dyes



- Up to 99% Efficiency
- Superior dirt holding
- Long life



- Up to 97% Efficiency
- Superior dirt holding
- Best choice for oil contamination
- Effective removal of gel-like particles



- Particularly well suited for all applications requiring confident removal of specific particle sizes from liquids at a reasonable cost/benefit ratio
- Up to 95% efficiency
- Superior dirt holding capacity

Hi-Pro Micro Felt Bag Filter Ordering Guide

Hi-ProMicro Felt Bag Filters				
Material	**Efficiency**	**Micron Size**	**Bag Size**	**Ring**
HPM = Hi-Pro Micro	**99** **97** **95** **92**	**A** =1.0 **B** =3.5 **C** =5.0 **D** =10 **E** =25	**1** = 7" x 16" **2** = 7" x 30.5	**SS** = Stainless Steel
Example - a Hi Pro Micro Felt bag, 95%, 10um, size #2, with SS Ring would be **HPM95D2SS**				

Your Local Distributor:

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www.zenpure.com
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ISO Certified 9001 14001

TÜV MANAGEMENT SERVICE ISO 13485

JALT Technologies® Felt Bag Filters

Felt bag filters fit a wide variety of applications and bag filter housings. The material's three dimensional construction creates a fabric with low density and high permeability. These features offer longer life bags with greater flow rates and increased dirt-holding capacity. Felt provides depth for greater particle retention and generally the best cost per gallon filter bag on the market. Felt is a versatile fabric available in several materials and numerous micron ratings.

Bag filters are designed to remove heavy contamination in liquid fluid paths. These filters offer a perfect replacement for your particular application. Felt bag filters are offered in a large range of micron sizes. Filters can also be customized to meet your specific needs.

Applications	
Acids	Ink Jets
Adhesives	Electroplating
Alcohols	Esters
Amines	Greases and Oils
Beverages	Electronics
Solvents	Parts Cleaning
Coating Products	Inks
Fine Chemicals	Lacquers
Water	Machinery Cooling
Paints	Resins
Plating Solutions	Dyes

Materials of Construction

Polyester Felt	Polypropylene Felt
Viscose Felt	Nylon Felt
Nomex Felt	Teflon Felt

Bag Sizes

1, 2, 3, 4, 7, 8, 9, 12, 30, 65, PH2, RP2, and other upon request.

Micron Sizes

0.5 to 200 microns

Finish

Plain	Singed One Side
Cerex Cover	Singed Both Sides
Nylon Cover	

Ring/ Flange options

Draw String	No Ring
Plastic Flange	Polypropylene
Carbon Steel	Stainless Steel

Operating Conditions

Max differential pressure: 25 psid (5Bar)

Max Operating Temperature:

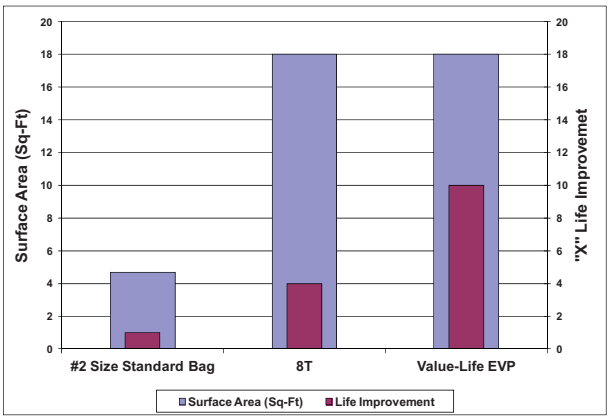
- Nylon Felt: 300ºF (150ºC)
- Polyester Felt: 300ºF (150ºC)
- Polypropylene Felt : 200ºF (93ºC)
- Viscous Felt : 250ºF (120ºC)
- Nomex Felt : 400ºF (200ºC)
- Teflon Felt : 450ºF (230ºC)

Features	Benefits
■ Three dimensional construction	■ Economical alternative for high particle level fluids ■ Longer life bag filter with greater flow rates ■ Low density and high permeability
■ Wide chemical & thermal compatibility	■ Provides excellent compatibility with a wide range of chemicals such as acids, bases and solvents ■ High quality products for almost every application
■ Complete line of bag filters	■ Wide selection of filtration media ■ Provides the most complete range of standard liquid filter bags
■ Quality manufacturing	■ Consistent and reproducible particle removal

Felt Bag Filters

Value Life Pleat options

EVP Pleated Bag filters



Test results from actual customer process

Value Life bags ***combine unparalleled pleat integrity with our proprietary "Depth by Design" materials and construction gives EVP filters distinct performance, and economic, advantages versus common pleated filter elements!***

Options

8T - 8 columns of vertical pleats to increase surface area (#3 and #4 bag only)

XL - double layered bag with an internal layer that captures large particles of dirt so the outer bag can last longer and filter the finer particles not caught by the inner bag

EVP - Enhanced life vertical pleats to increase surface area and life time (#1 and #2 bag only)

Felt Bag Filter Ordering Guide

Felt Bag Filters

Material	Removal Rating (Microns)						Finish	Size	Ring/ Flange	Options
	PE	PP	V	N	NO	T				
PE = Polyester Felt	0.5						**B** = Singed Both Sides	**1** = 7" x 16"	**S** = Carbon Steel	**HS** = Handle Strap
PP = Polypropylene Felt	1	1	1		1		**C** = Cerex Cover	**2** = 7" x 30.5	**SS** = Stainless Steel	**8T** = 8 Column Value Life
V = Viscose Felt	3	3		Special Request		Special Request	**N** = Nylon Cover	**3** = 4" x 8"	**P** = Plastic Flange	**XL** = Extended Life
N = Nylon Felt	5	5	5		5		**P** = Plain	**4** = 4" x 14"	**DS** = Draw String	**EVP** = Enhanced Life Verticle Pleat
NO = Nomex Felt	10	10	10		10		**S** = Singed One Side	**7** = (612) 5.5" x 13"	**PR** = Polypropylene	
T = Teflon Felt	15		15		15			**8** = (618) 5.5" x 19"	**N** = No Ring	
	25	25	25		25			**9** = (630) 5.5" x 31"		
	50	50	50		50			**12** = 8.37" x 32"		
	75	75						**30** =4.118" x10"		
	100	100	100		100			**65** = 4.118 x 22"		
	150							**PH2** = 7" x 32"		
	200	200			200			**RP2** = 8" x 27"		
								RP4 = 8" x 14"		

Example - a Polypropylene Felt bag, 100um, size #3, with a plastic flange and handle strap would be **PP-100-P-3-P-HS**

Your Local Distributor:

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North & South Americas:
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Mono & Multifilament Mesh Bag Filters

Mono and Multifilament mesh bag filters fit a wide-variety of applications and bag filter housings. Bag filters are normally used in industrial applications where there is a lot of heavy contamination in liquid fluid paths. The bags are offered in a range from 1 to 800 um.

Monofilament mesh bag filters are made of a single threaded material that is both strong and efficient. The threads are thicker and stronger than a multifilament, offering a more exacting micron opening. Monofilament bags are reuseable. Multifilament mesh bags are constructed of multiple woven fibers that maximize bag strength at an economical cost.

Filters can be customized to meet your application.

JALT Technologies ®

Materials of Construction
- Nylon Monofilament
- Polyester Monofilament
- Polypropylene Monofilament
- Nylon Multifilament
- Polyester Multifilament

Bag Sizes
- 1, 2, 3, 4, 7, 8, 9, 12, 30, 65, PH2, RP2 and others upon request.

Micron Sizes
- 1 to 800 microns

Finish
- Plain

Ring/ Flange options
- Draw String
- Plastic Flange
- Carbon Steel
- Stainless Steel
- No Ring
- Polypropylene
- Seal Rite

Operating Conditions
- Max differential pressure: 25 psid (5Bar)
- Max Operating Temperature:
  - Nylon Monofilament: 300ºF (150ºC)
  - Polyester Monofilament: 300ºF (150ºC)
  - Polypropylene Monofilament: 200ºF (93ºC)
  - Nylon Multifilament: 300ºF (150ºC)
  - Polyester Multifilament: 250ºF (120ºC)

Applications	
Acids	Ink Jets
Adhesives	Electroplating
Alcohols	Esters
Amines	Greases and Oils
Beverages	Electronics
Solvents	Parts Cleaning
Coating Products	Inks
Fine Chemicals	Lacquers
Water	Machinery Cooling
Paints	Resins
Plating Solutions	Dyes

Features	Benefits
■ Wide selection of micron sizes	■ Economical alternative for high particle level fluids ■ Provides the most complete range of standard liquid filter bags ■ Complete line of bag filters
■ Wide chemical & thermal compatibility	■ Provides excellent compatibility with a wide range of chemicals such as acids, bases and solvents ■ High quality products for almost every application
■ Complete line of bag filters	■ Wide selection of filtration media
■ Quality manufacturing	■ Consistent and reproducible particle removal

Mono & Multifilament Mesh Bag Filters

Ordering Instructions

Material : This three or four letter code designates filtration media used to construct the filtration product.
Micron : Please check individual material for micron availability.
Finish: Plain
Size: This number indicates the filter bag size. Most bags fit into standard categories; however, special sizes are available. Please refer to the price list for all sizes.
Ring/ Flange: Description of the ring/ flange type to be used.
Options: This item indicates a specific option choice.

BT - narrow cloth tape used to fabricate a stronger seam
HS - Handle Strap to make change-outs easier

Mono and Multifilament Mesh Bag Filter Ordering Guide

Mono and Multifilament Mesh Bag Filters									
Material	Removal Rating (Microns)					Finish	Size	Ring/ Flange	Options
	NMO	PEMO	POMO	NMU	PEMU				
	1								
NMO = Nylon Mono	5					**P** = Plain	**1** = 7" x 16"	**DS** = Draw String	**BT** = Bias Tape
PEMO = Polyester Mono	10		10				**2** = 7" x 30.5	**N** = No ring	**HS** = Handle Strap
POMO = Polypro Mono	25						**3** = 4" x 8"	**P** = Plastic Flange	
NMU = Nylon Multi	35						**4** = 4" x 14"	**PR** = Polypropylene	
PEMU = Polyester Multi	50	50					**7** = (612) 5.5" x 13"	**S** = Carbon Steel	
	75	75					**8** = (618) 5.5" x 19"	**SR** = Seal Rite	
	100	100	100	100	100		**9** = (630) 5.5" x 31"	**SS** = Stainless Steel	
	125						**12** = 8.37" x 32"		
	150	150	150	150	150		**30** =4.118" x10"		
	200	200	200	200	200		**65** = 4.118 x 22"		
	250			250	250		**PH2** = 7" x 32"		
	300	300	300	300	300		**RP2** = 8" x 27"		
	400		400	400	400		**RP4** = 4" x 14"		
	600	600	600	600	600				
	800		800	800	800				
Example - a Nylon Monofilament, 100um, size 3 bag, with a plastic flange and bias tape would be **NMO-100-P-3-P-BT**									

Your Local Distributor:

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www.zenpure.com
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Chem Bag

Chem Bags are designed for chemical purification and/or dissolving solid chemicals in a bag filter housing. This unique bag and filter combination allows for solid substances to come in contact with a dynamic liquid flow path. This will allow the solid contents in the Chem Bag to purify or add to the liquid stream as required.

The Chem Bag has an internal sidewall that is impervious to liquid. It is made out of high density polyethylene for chemical compatibility. The liner forces the liquid to pass through the entire column of solid substance. This allows for maximum contact time and does not allow the chemical to simply go around the bag like a normal bag filter would.

The clean effluent passes only through the bottom of the bag filtering and keeps the solid material contained. The top of the bag has a zipper so filling and change-outs are a easy, clean, and safe operation.

The Chem Bag could also be filled with more that one substance minimizing your need for additional housings. It could also be used for small test runs in lab scale experiments for proof of concept.

Applications	
Acids	Ink Jets
Adhesives	Electroplating
Alcohols	Esters
Amines	Greases and Oils
Beverages	Electronics
Solvents	Parts Cleaning
Coating Products	Inks
Fine Chemicals	Lacquers
Water	Machinery Cooling
Paints	Resins
Plating Solutions	Dyes

JALT Technologies®

Materials of Construction

Bag material
- Polyester Felt
- Polypropylene Felt

Liner/side wall - High Density Polyethylene
Zipper - Nylon teeth, Polyester cloth

Bag Sizes

1, 2, 3, 4, 7, 8, 9, 12, 30, 65, PH2, RP2, and other upon request.

Micron Sizes

0.5 to 200 microns

Finish

Plain — Singed One Side
Singed Both Sides

Ring/ Flange Options

Plastic Flange — Polypropylene
Carbon Steel — Stainless Steel

Operating Conditions

Max differential pressure: 25 psid (5Bar)
Max Operating Temperature: 120ºF (50ºC)

Features	Benefits
■ Lined inner wall	■ Contact with the entire solid material column in the bag ■ Allows for multiple materials in the same bag to perform multiple process steps
■ Handle and zipper	■ Easy uses of filling and removing the bag. ■ Can easily dispose of entire bag with contents
■ Wide chemical & thermal compatibility	■ Provides excellent compatibility with a wide range of chemicals such as acids, bases, and solvents ■ High quality products for almost every application
■ Quality manufacturing	■ Consistent and reproducible particle removal

Ordering Instructions

Material :	The letter code designates filtration media used to construct the filtration product.
Micron :	Please check individual material for micron availability.
Finish:	Type of finish applied to the felt or the type of cover.
Size:	This number indicates the filter bag size. Most bags fit into standard categories; however, special sizes are available. Please refer to the price list for all sizes.
Ring/ Flange:	Description of the ring/ flange type to be used.
Chem Bag:	This code designates Chem Bag

Chem Bag Specials with different material or options can be requested for quotation.

Chem Bag Filter Ordering Guide

Chem Bag Filters

Material	Microns		Finish	Size	Ring/ Flange	Chem Bag
	PE	PP				
PE = Polyester Felt	0.5		**P** = Plain	**1** = 7" x 16"	**S** = Carbon Steel	**CB** = Chem Bag
PP = Polypropylene Felt	1	1	**S** = Singed One Side	**2** = 7" x 30.5	**SS** = Stainless Steel	
	3	3			**PR** = Polypropylene	
	5	5				
	10	10				
	15					
	25	25				
	50	50				
	75	75				
	100	100				
	150					
	200	200				

Example - a Polypropylene Felt bag, 100um, size #2, with a plastic flange PP-100-P-2-P-CB

Specials can be quoted upon request

Your Local Distributor:

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ZenPure Americas, Inc
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Resinator Bag Filter

The Resinator combines the positive qualities of resin-bonded cartridges with the proven advantages of a premium quality bag filter. The users gain the non-compressibility of a resin filter along with the greatly enhanced solids loading capacity and cost savings of a gradient-density filter bag.

The Resinator's patented design incorporates two layers of fully infused phenolic resin textile; with the inner layer acting as a pre-filter to the more retentive outer layer. This proven gradient density approach, coupled with the increased surface area, results in enhanced efficiencies and increased filter lifetime. The Resinator's non-compressible depth media is more effective than conventional filters in retaining gel-like particles. Unlike cartridges, which accumulate debris on the outside of the element and are prone to remnants falling off the element during change-out, the Resinator bag filter contains contaminates securely inside the bag. This not only ensures the integrity of the filtration process, it builds an effective pre-filter cake that promotes higher efficiencies without higher pressure drop or loss of flow capacity.

Just one Resinator bag filter can replace 12 Resin-bonded cartridges

JALT Technologies®

Materials of Construction
Bag Material - Double Layer Polyester
Resin - Phenolic

Bag Sizes
1, 2, 3, 4, 7, 8, 9, 12, 30, 65 and others upon request.

Micron Sizes
1 to 200 microns

Finish
Heat Treated Finish

Ring/ Flange Options
Polypropylene Flange
Carbon Steel
304 Stainless Steel

Operating Conditions
Max differential pressure: 25 psid (1.7 bar)
Max operating temperature: 300ºF (150ºC)

Features	Benefits
■ High loading capability	■ Fewer change-outs, thus more up time in your process ■ Replaces 12 resin bonded cartridges, therefore lower disposal cost
■ Gradient density	■ Enhanced efficiencies and increased filter life ■ No fiber migration issues
■ Wide chemical & thermal compatibility	■ Provides excellent compatibility with a wide range of chemicals such as acids, bases and solvents ■ High quality products for almost every application
■ Bag handles	■ Easy, clean change-out ■ Cost savings on faster change-out time ■ Can easily dispose of entire bag with contents

Resinator Bag Filter

Typical Resinator Applications				
Adhesives, Coatings, and Inks	**Petroleum Products**	**Resins**	**Water-based**	**Other Applications**
Adhesives	Asphalts	Acrylics	Antifreeze	Animal Oils
Emulsions	Machine Coolants	Alkyds	Cooling Tower Water	Cosmolene
Enamels	Crude Oils	Aminos	Industrial Process Water	Elastomers
Box Inks	Hydraulic Fluids	Epoxies	Oil Well Completion	Glycerin
Lacquers	Kerosene	Silicones	Solutions	Inorganic
Paints	Silicon Oils	Urethanes	Salt Water	Acids (dilute)
Sealants	Waxes	Vinyls		Plasticizers
Shellac				Rapeseed Oils
Varnishes				Turpentine
				Tung Oils

Note: The Resinator has not been tested for use in food, beverage, pharmaceutical, or potable water applications

Resinator Bag Filter Ordering Guide

Resinator Bag Filters				
Resinator Bag Filters	**Microns**	**Finish**	**Size**	**Ring/ Flange**
BRB	**1** **5** **10** **25** **50** **75** **100** **200**	**P** = Plain **N** = Quick Release Cover **(Heat treated finish)**	**1** = 7" x 16" **2** = 7" x 30.5 **7** = (612) 5.5" x 13" **8** = (618) 5.5" x 19" **9** = (630) 5.5" x 31" **12** = 8.37" x 32"	**S** = Carbon Steel **SS** = Stainless Steel **P** = Plastic Flange
Example - a Resinator bag, 10um, size #2, Plain finish, with a plastic flange is **BRB10P2P**				

Specials can be quoted upon request

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Stainless Steel Disc Holder

The Stainless Steel disc holder can be used for simple, quick, and efficient filtration of fluids and gases used in laboratory, pilot, and small scale applications. The disk holder accepts the PureFlo Membrane discs which is the same filter media used in full size PureFlo cartridges and capsules. This will ensure consistent scale-up of the product through laboratory, pilot, and full-scale production.

The compact design allows for low hold-up volume to minimize wasted fluid. The locking ring provides quick turn-around of sampling and testing with no tools required. The disk holder is designed to minimize differential pressure. This ensures accurate testing and results of the filter media.

The disc holder can be used for clarification, compatibility, sampling, particle counter testing and other small scale applications.

DHP version

DHT version

Materials of Construction

Head: 316L Stainless Steel
Bowl: 316L Stainless Steel
Screen: Sintered 316 Stainless Steel
O-Rings: EPDM, Silicon , Fluoroelastomer

Dimensions (47mm version)

Length: 2.75in (70mm)
Width: 2.36in (60 mm)

Connections

Inlet/Outlet : Compression, MNPT, and Hose Barb, Quick Coupling
Vent: 1/4" Compression, Valve, Luer Lock or No vent

Finish

Electropolished finish

Operating Conditions

Max operating pressure: 87 psi (6 Bar)

Stainless Steel Disc Holder Ordering Guide

Disc Holder	Closure Mechanism	Diameter	Inlet Fittings	Outlet Fittings	Vent	O-Ring
DH = Stainless Steel Disc Holder	**P** = Locking Ring **T** = Sanitary Clamp	**025** = 25mm **047** = 47mm **090** = 90mm **142** = 142mm	**All sizes** **1N** = 1/8" MNPT **1Q** = 1/8" Male Quick Coupling **2C** = 1/4" Compression (Jaco Compatible) **2H** = 1/4" Hose Barb **2N** = 1/4" MNPT **2Q** = 1/4" Male Quick Coupling **2QP** = 1/4" Male Quick Coupling for Plastic **2S** = 1/4" Compression (SwageLok compatible) **3N** = 3/8" MNPT **LF** = Female Luer lock **2B** = 1/4" Male BSP **2BF** = 1/4" Female BSP **90 and 142 size only** **MT** = 1/2" Tri clamps **TC** = 1-1/2" Tri clamp **3T** = 3/8" Weld Tube **3H** = 3/8" Hose Barb **4S** = 1/2" Compression (SwageLok compatible) **Other fitting possible by request**	**All sizes** **1N** **1Q** **2C** **2H** **2N** **2Q** **2QP** **2S** **3N** **LF** **2B** **2BF** **90 and 142 size only** **MT** **TC** **3T** **3H** **4S**	**1V** = Valve with 1/8" Hose Barb **2C** = 1/4" Compression **LF** = Female Luer lock **NV** = No Vent	**E** = EPDM **S** = SILICONE **V** = Fluoro-elastamer
Example - 47mm Stainless Steel Disk holder with 1/4" MNPT, no vent and EPDM O-ring - DHP0472N2NNVE						

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Stainless Steel Media Disc Holder

The Stainless Steel disc media holder can be used for simple, quick, and efficient filtration of fluids and gases used in laboratory, pilot, and small scale applications. The disc media holder accepts media discs from a thickness range of 0.1 to 5 mm. This will allow for testing of different media thickness variations as well as multiple layers.

The compact design allows for high hold-up volume to allow for filter caking and extended testing. The locking ring is the key to allow the different media thicknesses. It also allows for quick turn-around of sampling and testing with no tools required. The media holder is designed to minimize the effects of differential pressure by providing a strong supporting screen thus ensuring accurate testing and results.

The media holder can be used for clarification, compatibility, sampling, particle counter testing and other small scale applications.

Materials of Construction
- Head: 316L Stainless Steel
- Bowl: 316L Stainless Steel
- Screen: Perforated 316 Stainless Steel
- O-Rings: EPDM, Silicon , Fluoroelastomer

Dimensions (60mm version)
- Length: 8.7in (221mm)
- Width: 3.5in (90 mm)

Connections
- Inlet/Outlet: Compression, MNPT, and Hose Barb, Quick Coupling
- Vent: 1/4" Compression, Valve, Luer Lock or No vent

Finish
- Electropolished finish

Operating Conditions
- Max operating pressure: 87 psi (6 Bar)

Stainless Steel Disc Media Holder Ordering Guide

Disc Media Holder	Closure Mechanism	Diameter	Void Chamber Height	Inlet Fittings	Outlet Fittings	Vent	O-Ring
DM = Stainless Steel Disc Media Holder	**P** = Locking Ring	**025** = 25mm **047** = 47mm **060** = 60mm **090** = 90mm **142** = 142mm	**xxx** = Specify Height in mm **Example:** 127 = 127 mm height (5")	**All sizes** **1N** = 1/8" MNPT **1Q** = 1/8" Male Quick Coupling **2C** = 1/4" Compression (Jaco Compatible) **2H** = 1/4" Hose Barb **2N** = 1/4" MNPT **2Q** = 1/4" Male Quick Coupling **2QP** = 1/4" Male Quick Coupling for Plastic Latch **2S** = 1/4" Compression (SwageLok compatible) **3N** = 3/8" MNPT **LF** = Female Luer lock **2B** = 1/4" Male BSP **2BF** = 1/4" Female BSP **60mm and Larger** **MT** = 1/2" Tri clamps **TC** = 1-1/2" Tri clamp **3T** = 3/8" Weld Tube **3H** = 3/8" Hose Barb **4S** = 1/2" Compression (SwageLok compatible)	**All sizes** **1N** **1Q** **2C** **2H** **2N** **2Q** **2QP** **2S** **3N** **LF** **2B** **2BF** **60mm and Larger** **MT** **TC** **3T** **3H** **4S**	**NV** = No Vent **1V** = Valve with 1/8" Hose Barb **2C** = 1/4" Compression **LF** = Female Luer lock	**E** = EPDM **S** = SILICONE **V** = Fluoro-elastamer
				Other fitting possible by request			
Example - 47mm Stainless Steel Disk Media Holder with 1/4" MNPT, no vent and EPDM O-ring - DMP0472N2NNVE							

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Stainless Steel Disc Holder for Visual Testing (DHV)

The Visual Stainless Steel Disc Holder may be used for simple, quick, and efficient Bubble Point and Water Intrusion testing of filtration membranes and media. The unit may be used to visually see the bubble point of both hydrophilic and hydrophobic medias by filling the outlet chamber with water (or suitable fluid) and applying gas pressure through the inlet. The water intrusion pressure (WIP) may also be visually determined by pressurizing the inlet with water.

Designed for ease of use, the visual disc holder may be quickly assembled and disassembled for rapid testing of multiple disc samples. The disc holder may be used with PureFlo® 47 mm membrane discs, which represent the same filter media used in full size PureFlo® cartridges and capsules, or with 47 mm discs from other sources.

The compact and open-outlet design allows for easy laboratory use with minimal fluid waste. A sanitary clamp provides quick and secure assembly and disassembly with no tools required. The open-outlet concept of the disc holder allows for a precise visual determination of filter bubble point and water intrusion to ensure accurate and reproducible testing results.

Applications	
Bubble Point	Water Intrusion
Filter Selection	Visual Inspection

Specifications

Materials of Construction:	Head: 316L Stainless Steel Bowl: 316L Stainless Steel Screen: 316 Stainless Steel Screen with a PFA ring O-Rings: EPDM, Silicon , Fluoroelastomer
Fitting Connections:	See ordering guide for availability. (Custom adaptors available upon request)
Effective Filtration Area:	2.05 in^2 (13.2 cm^2)
Dimensions :	(47 mm version) Length: 1.77 in (45 mm) — fitting dependent Width: 3.03 in (77 mm)
Finish:	Electro-polished Finish
Operating Conditions:	Maximum Working Pressure: 87 psid @ 72 °F/22 °C (6 bar)
Connections:	Inlet : Compression, MNPT, Hose Barb, or Quick Coupling Outlet: Visual port

Stainless Steel Disc Holder for Visual Testing

Instructions for water intrusion test:

1) Place test media in the holder and secure.
2) Fill the upstream side of the disc holder with water.
3) Apply gas pressure to the inlet of the disc holder, pushing the water towards the membrane.
4) Slowly increase the gas pressure until liquid is seen at the outlet of the disc holder.
5) Record the pressure at which water is seen at the outlet as the water intrusion pressure.

For more information on bubble point and water intrusion testing, please read the ZenPure Bubble Point and Integrity Testing Guide.

Instructions for bubble point test:

1) Place test media in the holder and secure.
2) Attached gas line to bottom of unit.
3) With the vent port open to atmosphere, fill the top view port of the disc holder with a suitable wetting fluid:
   - Water is commonly used for hydrophilic membranes/media
   - 60% Isopropanol is commonly used for hydrophobic membranes/media.
4) Slowly increase gas pressure until a the first bubbles are seen passing through the sample. Record this value as the initial bubble point.
5) Slowly increase the gas pressure until a continuous stream of bubbles is seen passing through the sample. Record this value as the full bubble point.

Visual Stainless Steel Disc Holder Ordering Guide

Disc Holder	Type	Diameter	Inlet Fittings	O-Ring
DH = Stainless Steel Disc Holder	**V** = Visual Disc holder with Sanitary Clamp	**047** = 47mm	**1N** = 1/8" MNPT **1Q** = 1/8" Male Quick Coupling **2C** = 1/4" Compression (Jaco Compatible) **2H** = 1/4" Hose Barb **2N** = 1/4" MNPT **2Q** = 1/4" Male Quick Coupling **2QP** = 1/4" Male Quick Coupling for Plastic Latch **2S** = 1/4" Compression (SwageLok compatible) **3N** = 3/8" MNPT **LF** = Female Luer lock **2B** = 1/4" Male BSP **2BF** = 1/4" Female BSP	**E** = EPDM **S** = SILICONE **V** = Fluoro-elastamer
Example - 47mm Stainless Steel Visual Disc holder with 1/4" compression inlet, EPDM O-ring - DHV0472CE				

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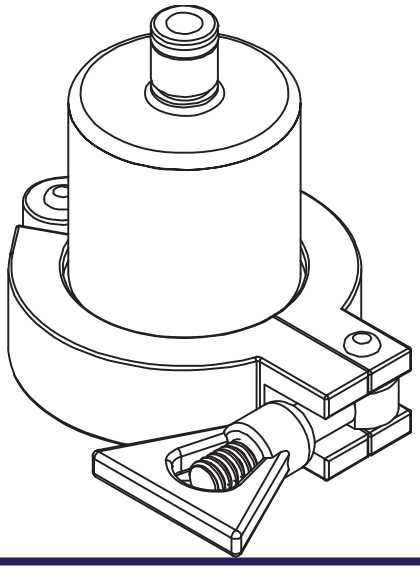
Junior SS Housing
(JHT)



The ZenPure Junior Stainless Steel Housing may be used for simple, quick, and efficient filtration. The Junior SS housing may be quickly assembled and disassembled for rapid change outs especially with quick connect fittings with the use of PureFlo Junior Cartridges to meet the needs of your small scale application.

The unit may be used for applications in both gas and liquids. All wetted surfaces are constructed of 316L stainless steel and are electropolished, providing excellent corrosion resistance.

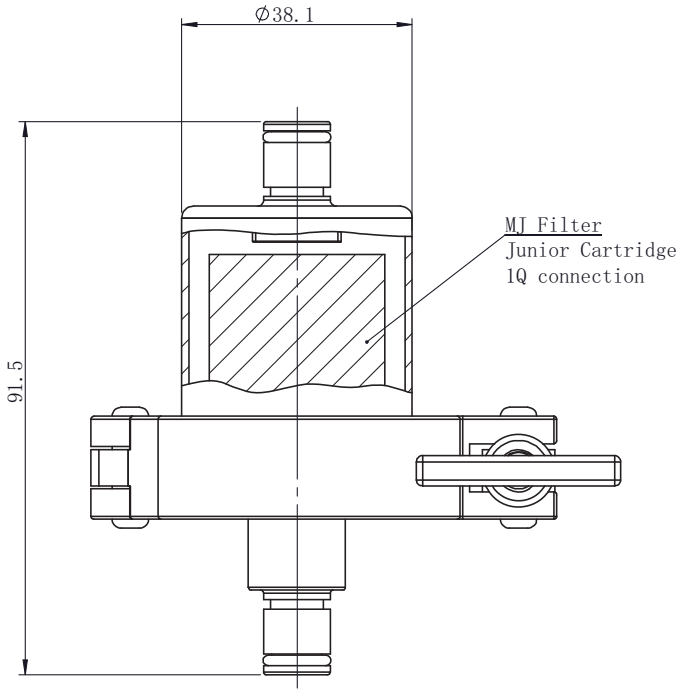
The unit is designed for ease of use. The compact design allows for minimal fluid waste in a compact design. A sanitary clamp provides quick and secure assembly and disassembly with no tools required. These Junior stainless steel housings are ideal for laboratory, small production or pilot scale operations. The ZenPure Junior filters utilized with these housing can be scaled up to as large as 40" filter with the same exact material of construction.

Applications	
POU Filtration	Gas Filtration
Small volume	Out door use
Ink	Process Water
Chemicals	Solvents
Scale testing	Laboratory

Specifications

Materials of Construction:	Head: 316L Stainless Steel Bowl: 316L Stainless Steel Screen: 316 Stainless Steel Sanitary Clamp: 304 Stainless Steel O-Rings: EPDM, Silicon , Fluoroelastomer
Fitting Connections:	See ordering guide for availability. (Custom adaptors available upon request)
Filter required:	PureFlo Junior Cartridge with 1Q fitting
Dimensions :	Width: 1.5 in (31.8 mm) Plus Sanitary clamp 3.5 in (89mm) Height: 3.6 in (91.5 mm) - fitting dependent
Finish:	Electro-polished Finish
Operating Conditions:	Maximum Working Pressure: 87 psid @ 72 °F/22 °C (6 bar)
Connections:	Compression, MNPT, Hose Barb, Female Luer Lock or Quick Coupling

Junior SS Housing



Junior Stainless Steel Housing Ordering Guide

Junior Housing	Closure Mechanism	Length	Cartridge Code	Inlet Fittings	Outlet Fittings	Vent	O-Ring
JH = Stainless Junior Housing	**T** = Sanitary Clamp	**H** = 1.5" **S** = 2.5"	**Q** = 1Q	**1N** = 1/8" MNPT **1Q** = 1/8" Male Quick Coupling **2B** = 1/4" Male BSP **2BF** = 1/4" Female BSP **2C** = 1/4" Compression (Jaco Compatible) **2H** = 1/4" Hose Barb **2N** = 1/4" MNPT **2Q** = 1/4" Male Quick Coupling **2QP** = 1/4" Male Quick Coupling for Plastic Latch **2S** = 1/4" Compression (SwageLok compatible) **3H** = 3/8" Hose Barb **3N** = 3/8" MNPT **3T** = 3/8" Weld Tube **4S** = 1/2" Compression (SwageLok compatible) **LF** = Female Luer lock **MT** = 1/2" Tri clamps **TC** = 1-1/2" Tri clamp	**1N** **1Q** **2B** **2BF** **2C** **2H** **2N** **2Q** **2QP** **2S** **3H** **3N** **3T** **4S** **LF** **MT** **TC**	**1V** = Valve with 1/8" Hose Barb **2C** = 1/4" Compression **LF** = Female Luer lock **NV** = No Vent	**E** = EPDM **S** = SILICONE **V** = Fluoroelastamer
				Other fitting possible by request			
Example - 1.5" Stainless Steel Junior Housing with 1/4" Male Quick Coupling I/O, no vent and SIL O-ring, for MJ-H-1Q cartridges - *JHTHQ2Q2QNVS*							

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Virgin Polypropylene Housing

ZenPure virgin polypropylene housings have been specially designed for critical applications that require a high degree of cleanliness. No metal components are used in the construction of the housing, therefore, eliminating the potential for ionic or metallic contamination. In addition, the locking ring and housing threads are external to the housing (non-wetted surface) thereby reducing the potential for particles being generated as the surfaces are tightened or loosened.

ZenPure virgin polypropylene housings are offered in 10" or 20" lengths that accept filter cartridges with 2-222 O-rings. The compact design of the housings requires minimal installation space while reducing hold-up volume. ZenPure virgin polypropylene housings can withstand high operating pressures and are an economic alternative to metal housings.

Materials of Construction

Head: Virgin Polypropylene
Bowl: Virgin Polypropylene
Locking Ring: Polypropylene
Vent / Drain Plugs: Virgin Polypropylene
O-Rings: Silicone, EPDM

Maximum Operating Pressure

100 psig (6.9Bar) @ 125°F (52° C)
125 psig (8.6 Bar) @ 68°F (20° C)

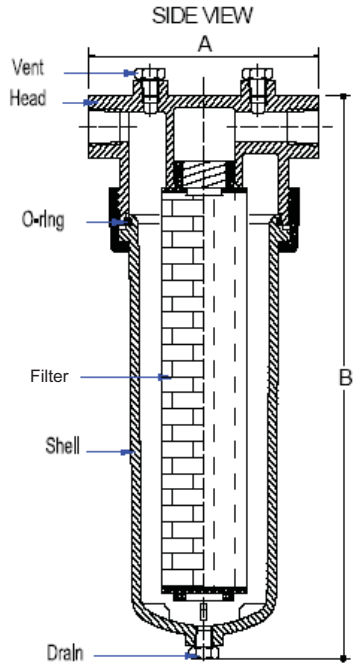
Lengths (Nominal): 10 in., 20 in.

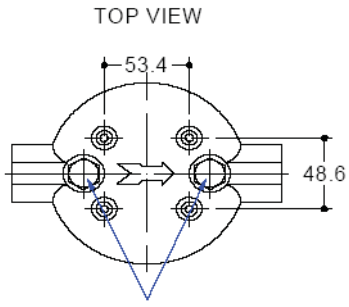
Inlet / Outlet Connections: 3/4" NPT, 1" NPT

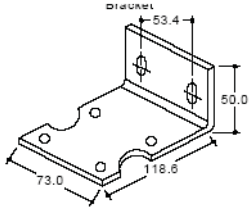
Applications	
Solvents	Ink Jets
Fine Chemicals	Electronics
Plating Solutions	Pharmaceuticals
Process Water	Biologics
Beverages	Dyes
Parts Cleaning	Lacquers

Features	Benefits
■ Small Compact Design	■ Low hold-up volume ■ Minimal installation space required
■ 100% Polypropylene Construction	■ Eliminates the potential for metallic or ionic contamination ■ Provides excellent compatibility with a wide-range of fluids ■ Economic alternative to metal housings
■ External Locking Ring	■ Provides a robust and consistent seal ■ Able to withstand high operating pressures ■ Reduces the potential for particles being generated as the mating surfaces are being tightened or loosened

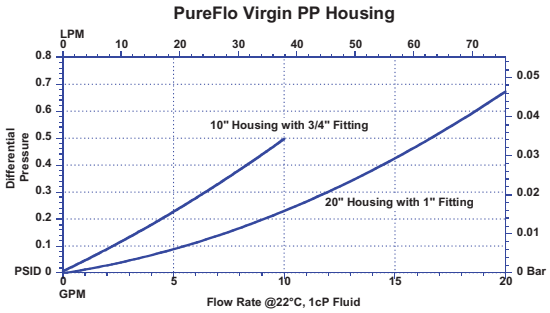
Virgin Polypropylene Housing







Nominal Length	A	B
10"	165mm (6.5in")	354mm (13.9")
20"	165mm (6.5in")	603mm (23.7")



Virgin Polypropylene Ordering Guide

Filter Housing	Cartridge #	Cartridge Code	Length	VENT/ DRAIN	BODY STYLE	INLET/OUTLET	O-Ring Materials
PHV	01	0	10	P	T	G	E
PHV =Virgin PP housing	01 = 1 Round	0 = 2-222	10 = 10" 20 = 20"	P = 1/4" FNPT (plugs included)	T= T-LINE	G = 3/4" FNPT (10")	E = EPDM (Standard) S = Silicone

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Sanitary Mini Stainless Steel Housing

ZenPure® Sanitary Mini Stainless Steel housings are designed for high purity applications. All wetted surfaces are constructed of 316L stainless steel and are electropolished, providing excellent corrosion resistance. The housings are compatible with 1.5, 2.5 and 5 inch Mini Filters to meet the needs of your small scale application.

The housing can support the 116 o-ring size where the orings are on the filter (code A) or the housing (code N). The design of the housing provides for a positive seal with the filters thereby preventing fluid bypass. The housing is sealed by the use of an easy to use tri-clamp that requires no special tools to open or close.

These sanitary mini stainless steel housings are ideal for laboratory, small production or pilot scale operations. The ZenPure mini filters utilized with these housing can be scaled up to as large as 40" filter.

Materials of Construction

Head: 316L Stainless Steel
Bowl: 316L Stainless Steel
Clamp: 304 Stainless Steal
Center post with Seel plate: 316 Stainless Steel
Vent/ Drain Plug: 316L Stainless Steel
O-Rings: Silicone, EPDM, Viton

Dimensions (nominal)

Filter Lengths: 1.5in., 2.5in., 5in.
Width: 2.5in (64 mm)

Connections

Inlet/ Outlet : ½", 1", 1.5" sanitary fitting
Vent / Drain: welded valve, 1.4" FNPT,
or no vent/drain

Finish

Electropolished

Operating Conditions

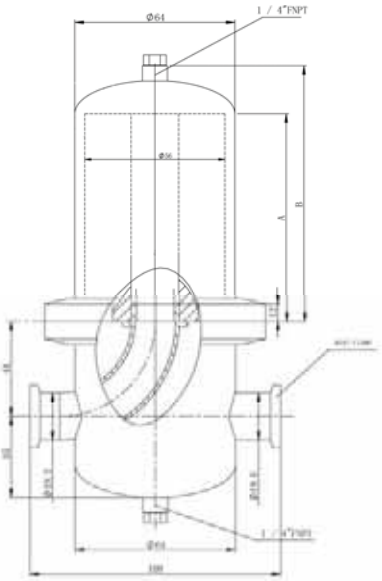
Max liquid operating pressure: 87 psi (6 bar)

Applications	
Solvents	Ink
Fine Chemicals	Pilot Lab Applications
Plating Solutions	Pharmaceuticals
Process Water	Biologics
Beverages	Dyes
Parts Cleaning	Lacquers

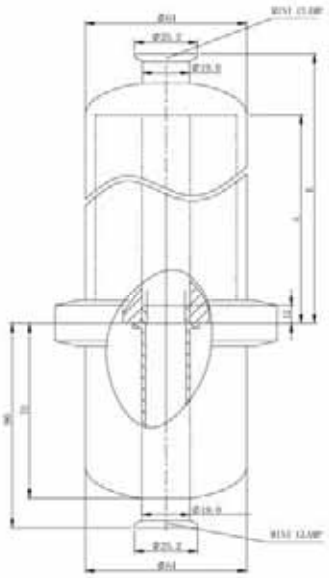
Features	Benefits
■ Wide Chemical & Thermal Compatibility	■ Provides excellent compatibility with a wide range of chemicals ■ The electropolished finish eliminates possible contamination that could potentially leach into the process chemicals.
■ Three different sizes	■ Allows you to pick the amount of filtration area to minimize filtration cost and hold-up volume
■ Tri-clamp for housing	■ The housing allows for inspection of the filter before the housing is sealed ■ Ease of filter change-out

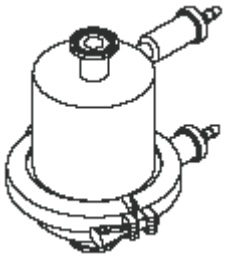
Sanitary Mini Stainless Steel Housing

T– Style



In Line– Style

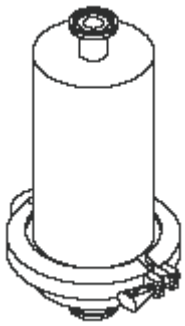




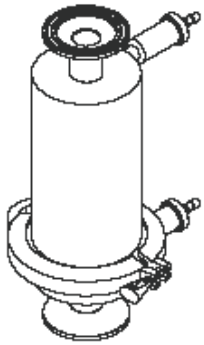
With Vents

Dimentions	Overall Length (L) mm		
	1.5" Filter	2.5" Filter	5" Filter
In-Line	159	193	243
T-Line	159	189	241

Actual length will vary with different fittings



Without Vents



With 1" Sanitary Fittings

Sanitary Stainless Steel Mini-Housing Ordering Guide

Housing Construction	Material	Cartridge #	Cartridge Code	Length	Vent/ Drain	Body Style	Inlet/Outlet	Gasket Materials
SM = Sanitary Mini-Housings	**P** = 316L	**01** = 1 Round	**A** = compatible with a internal 116 oring on a Cartridge (typical) **N** = 116 o-ring on the Housing for the filter	**01** = 1.5" **02** = 2.5" **05** = 5"	**V** = Welded valves **N** = No V/D **P** = 1/4" FNPT (for T-Line	**T** = T-LINE **I** = IN-LINE	**A** = 1/2" TC, 1/2" Pipe **B** = 1" TC, 1" Pipe **C** = 3/4" TC, 19mm Pipe **F** = 1/2" Butt weld pipe **G** = 1/4" NPT **H** = 3/8" Hose barb **I** = 3/8" FNPT **J** = 1/2" FNPT	**E** = EPDM **S** = SILICONE **U** = TES **V** = VITON
Example - 5" Sanitary T-line Mini SS housing with Silicon gaslet, no Vent for 116 oring filter with 1" TC connection - **SMP01A05NTBS**								

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Sanitary Stainless Steel Housing

ZenPure® sanitary stainless steel housings are designed for high-purity applications. All wetted surfaces are constructed of 316L stainless steel and are electropolished, there by providing excellent corrosion resistance. The housing comes in 5 inch to 30 inch sizes to meet the needs of your application.

The housing can support both Code 0 with 2-222 o-rings and Code F, double open-ended filters. The design of the housing provides for a positive seal with the filters, thereby preventing fluid bypass. The unique design for Code F filters allows for cost saving and ease of installation. The housing is sealed by the use of an easy to use tri-clamp that requires no special tools to open or close.

Materials of Construction

Head: 316L Stainless Steel
Bowl: 316L Stainless Steel
Clamp: 304 Stainless Steel
Center post with Seal plate: 316 Stainless Steal
Vent/ Drain Plug: 316L Stainless Steel
O-Rings: Silicone, EPDM

Dimensions (nominal)

Lengths: 5 in., 10 in., 20 in., 30 in.
Width: 5.51 in. (140mm)

Connections

Inlet/ Outlet : ½", 1", 1.5" sanitary fitting
Vent / Drain :½" sanitary, or welded valve

Finish

Electropolished

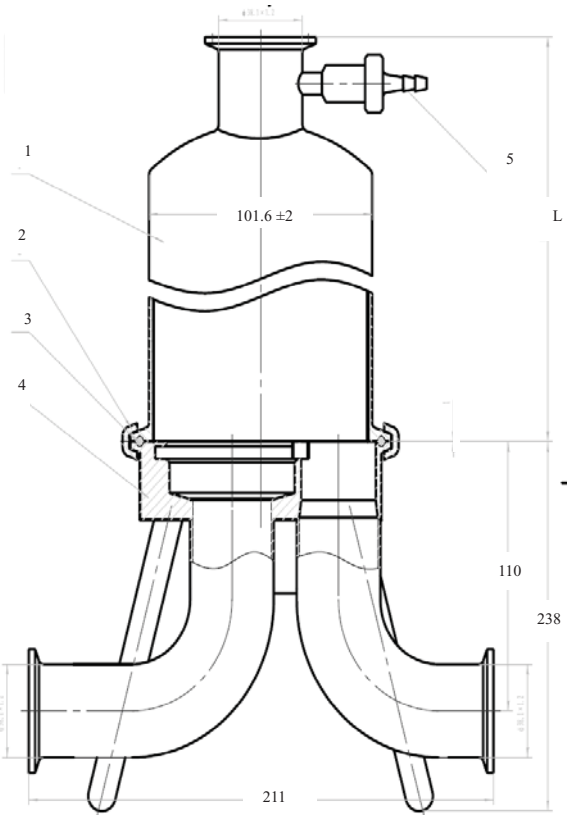
Operating Conditions

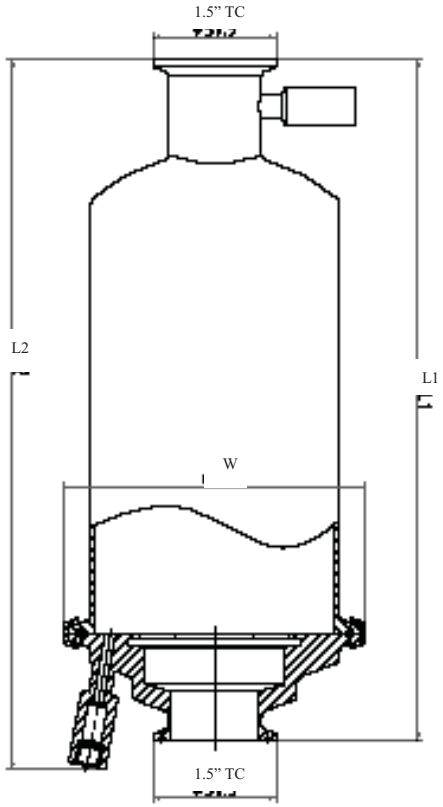
Max operating pressure: 145 psi (10Bar)

Applications	
Solvents	Ink Jets
Fine Chemicals	Electronics
Plating Solutions	Pharmaceuticals
Process Water	Biologics
Beverages	Dyes
Parts Cleaning	Lacquers

Features	Benefits
■ Wide Chemical & Thermal Compatibility	■ Provides excellent compatibility with a wide range of chemicals ■ The electropolished finish eliminates possible contamination that could potentially leach into the process chemical.
■ Mounting	■ T-line housing can be supported by tripod legs, rigid tubing, or wall-mounted bracket
■ Tri-Clamp	■ The housing allows for inspection of the filter before the housing is sealed. ■ Ease of filter change-out

Sanitary Stainless Steel Housing





Item	Description	Material	Size
1	Bowl	316L SS	5,10,20,30"
2	Tri-Clamp	304 SS	4"
3	O-ring	EPDM/ Silicon/ Viton/ PTFE	4"
4	Base	316L SS	1/2", 1", 1.5"
5	Valve	316L SS	

Nominal Length	L (T-Line)	L1 (In-Line)	L2 (In-Line)	W (In-Line)
5"	182mm (7.16")	226mm (8.9")	238mm (9.37")	135mm (5.31")
10"	343mm (13.5")	387mm (15.24")	399mm (15.7")	135mm (5.31")
20"	597mm (23.5")	641mm (25.24")	653mm (25.7")	135mm (5.31")
30"	838mm (33.0")	895mm (35.24")	907mm (35.7")	135mm (5.31")

Sanitary Stainless Steel Housing Ordering Guide

Housing Construction	Material	Cartridge #	Cartridge Code	Length	Vent/ Drain	Body Style	Inlet/Outlet	Gasket Materials
SH = Sanitary Housings	**P** = 316L	**01** = 1 Round	**0** = 2-222 **7** = 2-226	**05** = 5" **10** = 10" **20** = 20" **30** = 30" **40** = 40"	**A** = ½" TC **V** = Welded valves **N** = No Vent or drain	**T** = T-Line **I** = In-Line **L** = L-Line	**A** = 1/2" TC **B** = 1" TC **C** = 1.5" TC	**E** = EPDM **S** = Silicone **V** = Viton **F** = PTFE
Example - 10" Sanitary T-line SS housing with Silicon gaslet for Code 0 filter with 1" TC connection - **SHP01010ATBS**								

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ZenPure® Sanitary SS Gas Housing

The Sanitary Purity Stainless Steel Gas Housing is designed for High Purity gas applications. These housings are commonly used in the purification of compressed air and specialty gases in the Pharmaceutical, Biotechnology, and Food and Beverage industries. These housings are equipped with Sanitary Tri-Clamp, flange and butt weld connections to meet your process specification needs.

The housings are constructed of 316L stainless steel and are designed to meet the requirements of sanitary and other high purity applications and come in lengths from 5 to 40 inches.

This housing is available with either 222 O-ring or 226 o-ring cartridge configurations. The machined seat plate provides lower pressure drops in air & gas applications. Machined seat plates also insure easier clean ability. The housing is sealed by means of a tri-clamp that requires no special tools to open or close.

Custom options are available

Features	Benefits
• Aseptic Design	• Crevice Free Electropolished surfaces, >25 Ra internal surfaces • No Dead Legs
• Low point drain valve	• Removable for clean ability • Ease of filter change-out

Materials of Construction

Head: 316L Stainless Steel
Bowl: 316L Stainless Steel
Clamp: 304 Stainless Steel
Vent/ Drain Plug: 316L Stainless Steel
O-Rings: Silicone, EPDM

Dimensions (nominal)

Lengths (in): 5, 10 , 20, 30 and 40

Connections

Inlet/ Outlet : Tri-clamp, RF Flange, Butt Weld, or NPT
Vent / Drain : NPT, Tri-Clamp, Valve (also available without Vent/Drain)

Finish

Exterior: <32Ra, Electropolished
Interior: <25Ra, Electropolished

Operating Conditions

Max operating pressure: See Drawing

ZenPure Sanitary Gas Housing Ordering Guide

Housing Construction	Cartridge #	Cartridge Code	Length	Top Bowl Port	Vent (Bowl)	Drain (Base)	Body Style	Inlet/Outlet Fitting Size	Inlet/Outlet Fitting Style	Gasket Materials
SGH = Sanitary Gas 316L Housing	**01** = 1 Round	**0** = 2-222 **7** = 2-226	**05** = 5" **10** = 10" **20** = 20" **30** = 30" **40** = 40"	**X** = None **A** = ½" TC **N** = ¼" NPT **V** = Welded valves	**X** = No Vent **N** = ¼" NPT **V** = Welded valves	**X** = No Vent **A** = ½" TC **N** = ¼" NPT **V** = Welded valves	**T** = T-Line **I** = In-Line	**A** = 1/2" **B** = 1" **C** = 1.5" **D** = 2"	**B** = Butt Weld **N** = FNPT **RF** = Flange **TC** = Tri-clamp	**E** = EPDM **S** = Silicone **V** = Viton **F** = PTFE **P** = Peroxide Cured White EPDM
Example - 10" Sanitary T-line SS housing with EPDM gasket for Code 7 filter with 1/4" NPT bowl port and 2" NPT I/O connections - **SGH01710NXXT2NE**										

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Sanitary SS Filter Housing Multi-Round

JALT Technologies ®

The Sanitary Stainless Steel filter housings are constructed of electropolished 316L stainless steel for excellent resistance to corrosive chemicals and product purity. These housings are typically used in the Pharmaceutical industry.

The housing is compatible with 10" to 40" filters elements to meet the needs of your application. The housing can support 222 and 226 style filters. Housings from 1 to 12 rounds are available to fit your flow rate. T-line and in-line configurations allow flexibility in piping options.

The design of the housing provides for a positive seal with the filters, thereby preventing fluid bypass. The unique design for closure with fixed bolts and opti-clamp hold down, ensure maximum strength and ease of operation. The housing has a removable separator plate with a double o-ring seal that allows for complete disassembly for cleaning.

Customization of the housing is available.

Applications	
Acids	Plating Solutions
Bases	Electronics
Solvents	Pharmaceuticals
Fine Chemicals	Biologics

Materials of Construction

Head:	316L Stainless Steel
Bowl:	316L Stainless Steel
Clamp:	304 Stainless Steel
Vent/Drain Plug:	316L Stainless Steel
O-Rings:	Silicone, Viton or EPDM

Dimensions (nominal)

Lengths (in): 10 , 20, 30 and 40

Connections

Inlet/ Outlet : Tri Clamp

Vent / Drain : Tri Clamp, Valve

Finish

Electropolished, <20Ra

Operating Conditions

Max operating pressure:

125 psi (10Bar) at 200°F (93°C)

Test Pressure :

165psi (11.4 Bar)at 75°F (24°C)

Sanitary Filter Housing Ordering Guide

Construction	Number of Filters	Configuration	Length	Cartridge Code	Inlet/Outlet Fitting Size	Inlet/Outlet Fitting Style	Vent/Drain	Gasket Material	Interior/Exterior Finish
SAN = Sanitary High Purity	**1** = 1 Filter **3** = 3 Filters **5** = 5 Filters **6** = 6 Filters **7** = 7 Filters **12** = 12 Filters	**I** = In-Line **T** = T-line	**1**=10" **2**=20" **3**=30" **4**=40"	**7** = 2-226 **8** = 2-222	**1** = 1" **2** = 2"	**TC** = Tri Clamp	**TC** = 1/2" Tri Clamp **V** = 1/4" Valve	**E** = EPDM **V** = Viton **S** = Silicon	**EP** = Electropolish
Note - Not all options are available on all sizes of housings. See cut sheets for more detail									
Example - 30"- 3 round for 222 filter, T-line, 2" Tri Clamp I/O, 1/2" Tri Clamp V/D, EPDM Gasket and Electropolished is **SAN3T382TCTCEEP**									

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Sanitary SS Filter Housing Multi-Round

JALT Technologies ®

The Sanitary Stainless Steel filter housings are constructed of electropolished 316L stainless steel for excellent resistance to corrosive chemicals and product purity. These housings are typically used in the Pharmaceutical industry and food & beverage industries.

The housing is compatible with 10" to 40" filters elements to meet the needs of your application. The housing can support 222, 226 and DOE style filters. Housings from 3 to 12 rounds are available to fit your flow rate. T-line configurations allow flexibility in piping options.

The design of the housing provides for a positive seal with the filters, thereby preventing fluid bypass. The closure is a fixed swing bolts with hold down to ensure maximum strength and ease of operation. The housing has a removable filter connection separator plate that allows for total disassembly for cleaning.

Customization of the housing is available.

Applications	
Water	Fine Chemicals
Reagents	Wine
Food & Beverage	Pharmaceuticals
Liquid processing	Biologics

Materials of Construction

Head: 316L Stainless Steel
Bowl: 316L Stainless Steel
Clamp: 304 Stainless Steel
Center Post with Seal plate: 316L Stainless Steel
Vent/Drain Plug: 316L Stainless Steel
O-Rings: Silicone, Viton or EPDM

Dimensions (nominal)

Lengths (in): 10 , 20, 30 and 40

Connections

Inlet/ Outlet : Tri Clamp, Flange
Vent / Drain : Tri Clamp, Valve option

Finish

Interior: Electropolished <20Ra (0.4um)
Exterior: Electropolished <32Ra (0.8um)

Operating Conditions

Max operating pressure:
100 psi (6.8Bar) at 200°F (93°C)

Sanitary Filter Housing Ordering Guide

Construction	Number of Filters	Configuration	Length	Cartridge Code	Inlet/Outlet Fitting Size	Inlet/Outlet Fitting Style	Vent	Drain	Gasket Material	Interior/Exterior Finish	Options
	3 = 3 Filters	T = T-line	1=10"	7 = 2-226	1 = 1"	TC = Tri Clamp	* = None	* = None	E = EPDM	EP = Electropolish	1V = 1/2" Tri clamp
SSC = Sanitary	5 = 5 Filters		2=20"	8 = 2-222	2 = 2"	F = Flange	MT = 1/2" Tri Clamp	MT = Inlet and outlet 1/2" Tri Clamp	V = Viton		Valve (Qty 1)
Swing Bolt Closure	6 = 6 Filters		3=30"	F = DOE	3 = 3"	(150PSI)	TC = 1 1/2" Tri Clamp	IMT = Inlet 1/2" Tri Clamp only	S = Silicone		2V = 1/2" Tri clamp
	7 = 7 Filters		4=40"				TCV =1 1/2" Tri Clamp	OMT = Outlet 1/2" Tri Clamp only			Valve (Qty 2)
with removable filter	12 = 12 Filters						with 1/2" Tri clamp side				3V = 1/2" Tri clamp
plate for cleaning							4N = 1/2 MNPT	4N = 1/2 MNPT			Valve (Qty 3)

Example - 30"- 3 round for 226 filter, T-line, 2" Tri Clamp I/O, 1 1/2" Tri Clamp Vent with 1/2" Tri clamp on side, 1/2" Tri Camp Drains, EPDM Gasket and Electropolished with 1 Tri Clamp Valve is SSC-3T-3-7-2TC-TCV-MT-E-EP-1V

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TÜV

Sanitary Double Swing Bolt Closure SS Filter Housing Multi-Round

The sanitary double swing bolt closure stainless steel cartridge housings are designed to meet your critical processing needs. These housings are commonly used in the Pharmaceutical Industry, Food and Beverage and High Purity Chemicals. These housings are ideal using only superior grade 316L and 304L stainless steel.

The housings are available in 222, 226 o-ring style. A complete line of housings from 7 to 75 round and in sizes from 20 to 40 inches are available to meet the needs of your critical applications. The design of the housing provides a positive seal with double swing bolt closure. This allows you to fully tear down and clean the housing easily on both the upstream and down stream locations.

Custom options are available and include: handles, lifting davit , upstream and downstream drains and choice of inlet/outlet connection sizes.

Applications	
High Purity Water	Food & Beverage
Pharmaceutical	Biological Fluids
Fine Chemicals	Electronics

Features	Benefits
■ Aseptic Design	■ Crevice Free Electropolished Sanitary surfaces with greater than **Ra< 20 uin (<0.4um) internal surfaces** ■ Fully Self draining ■ No Dead Legs
■ Low Hold Volume	■ Maximize Product Recovery
■ Easy to use low point drain valve	■ Ease of filter change-out

Sanitary Double Swing Bolt Closure SS Filter Housing Multi-Round

Materials of Construction

Head: 316L Stainless Steel
Bowl: 316L Stainless Steel
Center Post with Seal plate: 316L SS
Vent/ Drain Plug: 316L Stainless Steel
O-Rings: Silicone , EPDM, Viton

Connections:

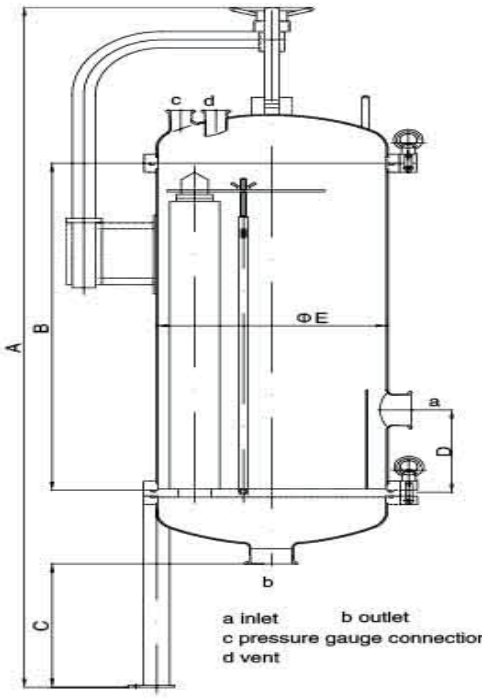
Inlet/ Outlet : Tri-Clover, Flange
Vent / Drain : 1 1/2" or 1/2" Tri-clover

Finish

Exterior & Interior Finish: Interior 20ra, Exterior 32ra

Operating Conditions

Max operating pressure: 1.0 Mpa (145 psi)
Max operating temp: 110C



No.of Cartridges	A			B			C	D	E
	20"	30"	40"	20"	30"	40"			
15-18R	1475	1775	1975	600	800	1050	300	200	400
21R	1520	1770	2020	600	800	1050	300	200	450
24.27.30R	1580	1830	2080	600	800	1050	300	200	500
36R	1580	1830	2080	600	800	1050	300	200	550
42R	1600	1830	2100	600	800	1050	300	200	600
48-54R	1595	1845	2095	600	800	1050	300	200	650
60R	1650	1900	2150	600	800	1050	300	200	700
75R	1705	1955	2205	600	800	1050	300	200	800

Nominal Dimentions (mm)

Sanitary Filter Housing Ordering Guide

Construction	Number of Filters	Configuration	Length	Cartridge Code	Inlet/Outlet Fitting Size	Inlet/Outlet Fitting Style	Pressure Gauge Connection	Vent	Gasket Material	Interior/Exterior Finish
SDC = Sanitary Double Swing Bolt Closure SS Filter Housing Multi-Round	**7** = 7 Filters **12** = 12 Filters **15** = 15 Filters **16** = 16 Filters **18** = 18 Filters **21** = 21 Filters **24** = 24 Filters **27** = 27 Filters **30** = 30 Filters **36** = 36 Filters **42** = 42 Filters **48** = 48 Filters **50** = 50 Filters **54** = 54 Filters **60** = 15 Filters **75** = 75 Filters	**L** = L Line - In side out bottom **T** = T line - In and out the bottom	**2**=20" **3**=30" **4**=40"	**7** = 2-226 **8** = 2-222	**1** = 1" **2** = 2" **3** = 3" **4** = 4" **5** = 5" **6** = 6" **8** = 8" **10**= 10" **12** = 12"	**TC** = Tri Clamp **F** = Flange (150PSI)	* = None **MT** = 1/2" Tri Clamp **TC** =1 1/2" Tri Clamp	* = None **MT** = 1/2" Tri Clamp **TC** =1 1/2" Tri Clamp	**E** = EPDM **V** = Viton **S** = Silicone	**EP** = Electropolish
Example - 30"- 15 round for 222 filter, T-line, 4" Tri Clamp I/O, 1/2" Tri Clamp V/D, EPDM Gasket and Electropolished is **SDC15T374TCTCEEP**										

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Industrial Stainless Steel Housing Single Round

ZenPure® industrial stainless steel housings are designed to meet your critical high-purity chemical processing needs. The housing is constructed of 316L stainless steel for excellent resistance to corrosive chemicals. The housing is compatible with 5 inch to 30 inch filters lengths to meet the needs of your application.

Code U housings can support both Code 0 with 222 o-rings and Code F, double open-ended filters. The unique design of the Code U housing allows for cost saving and ease of installation. You can engage DOE filter before closing the housing to ensure they are properly sealed. The design of the housing provides for a positive seal with the filters thereby preventing fluid bypass. The housing is sealed by the use of an easy to use tri-clamp that requires no special tools to open or close.

Materials of Construction

Head: 316L Stainless Steel
Bowl: 316L Stainless Steel
Clamp: 304 Stainless Steel
Center Post with Seal Plate: 316L SS
Vent/Drain Plug: 316L Stainless Steel
O-Rings: Silicone or EPDM

Dimensions (nominal)

Lengths (in): 5 , 10 , 20, and 30
Width: 5.51 in. (140mm)

Connections

Inlet/ Outlet : ¾" or 1"
Vent / Drain : ¼" NPT, ¼" BSP

Finish

Electropolished

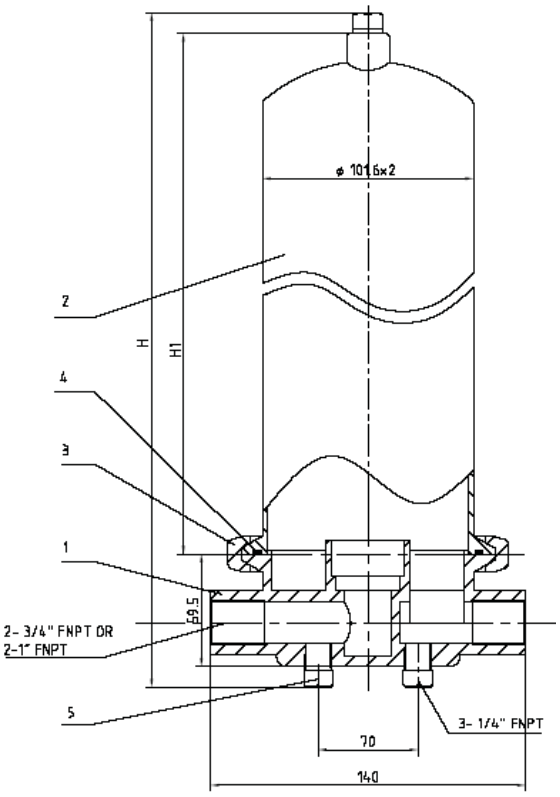
Operating Conditions

Max operating pressure: 145 psi (10Bar)

Applications	
Solvents	Ink Jets
Fine Chemicals	Electronics
Plating Solutions	Pharmaceuticals
Process Water	Biologics
Beverages	Dyes
Parts Cleaning	Lacquers

Features	Benefits
■ Wide Chemical & Thermal Compatibility	■ Provides excellent compatibility with a wide range of chemicals ■ The electropolished finish eliminates possible contamination that could potentially leach into the process chemicals
■ Tri-Clamp	■ The housing allows for inspection of the filter before the housing is sealed ■ Ease of filter change-out
■ Universal Housing	■ Allows the user to change between filters with 222 o-rings and double open-ended in the same housing.

Industrial Stainless Steel Housing
Single Round



Nominal Length	H1 (Bowl Height)	H (Overall Height)
5"	167mm (6.57")	246mm (9.69")
10"	300mm (11.81")	379mm (14.92")
20"	550mm (21.65")	629mm (24.76")
30"	800mm (31.5")	879mm (34.6")

Item	Description	Material	Size
1	Base	316L SS	3/4 or 1"
2	Bowl	316L SS	5,10,20,30"
3	Tri-Clamp	304 SS	
4	O-ring	EPDM/Silicon	110x3.1
5	Plug	316L SS	1/4" NPT

Industrial Stainless Steel Housing Ordering Guide

Housing Construction	Material	Cartridge #	Cartridge Code	Length	VENT/ DRAIN	BODY STYLE	INLET/OUTLET	O-Ring Materials
IH = Industrial Housings	**P** = 316L	**01** = 1 Round	**0** = 2-222 **F** = DOE **U** = Universal (DOE & 222)	**05** = 5" **10** = 10" **20** = 20" **30** = 30"	**P** = 1/4" FNPT (plugs included) **Q** = 1/4" BSP	**T** = T-LINE	**G** = 3/4" FNPT **H** = 1" FNPT **J** = 3/4" BSP **K** = 1" BSP	**E** = EPDM **S** = Silicone
Example - 10" Industrial SS housing with silicon o-ring for 222 filter with 3/4" FNPT connection - **IHP01010PTGS**								

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Industrial High Purity SS Filter Housing

Multi-Round

JALT Technologies ®

The industrial high purity stainless steel cartridge filter housings are designed to meet your critical high purity chemical processing needs. These housings are commonly used in the food and beverage industries. The housing is constructed of 316L stainless steel for excellent resistance to corrosive chemicals. The housing is compatible with 10" to 40" filter elements to meet the needs of your application flow.

The housing can support 222 and 226 o-rings and double open-ended filters. A complete line of housings from 1 to 26 round are available to fit any flow rate. The design of the housing provides for a positive seal with the filters, thereby preventing fluid bypass.

T-line and offset configurations allow flexibility in piping options. The housing has an unique closure with fixed bolts and opti-clamp hold downs that ensure maximum strength and ease of operation.

Applications	
Acids	Ink Jets
Bases	Electronics
Solvents	Pharmaceuticals
Fine Chemicals	Biologics
Plating Solutions	Dyes
Parts Cleaning	Lacquers

Materials of Construction

Head:	316L Stainless Steel
Bowl:	316L Stainless Steel
Clamp:	304 Stainless Steel
Center Post with Seal plate:	316L SS
Vent/ Drain Plug:	316L Stainless Steel
O-Rings:	Silicone, Viton or EPDM

Dimensions (nominal)

Lengths (in): 10 , 20, 30 and 40

Connections

Inlet/ Outlet : Tri-Clamp, Flange, FNPT
Vent / Drain : Tri-Clamp, FNPT

Finish

Exterior: Electropolished, Bead Blast
Interior: Electropolished, Bead Blast

Operating Conditions

Max operating pressure:
125 psi (8.6 bar) @200°F (93°C)
Test Pressure :
165psi (11.4 Bar)@75°F (24°C)

Industrial High Purity Filter Housing Ordering Guide

Housing Construction	Number of Filters	Configuration	Length	Cartridge Code	Inlet/Outlet Fitting Size	Inlet/Outlet Fitting Style	Vent/Drain	Gasket Material	Interior/Exterior Finish
IHP = Industrial High Purity	**1** = 1 Filter **3** = 3 Filters **5** = 5 Filters **6** = 6 Filters **7** = 7 Filters **12** = 12 Filters **21** = 21 Filters **22** = 22 Filters **26** = 26 Filters	**IN** = In-Line **TM** = T-Line Machined **TB** = T-Line Bottom Open **TT** = T-Line Top Open **OT** = Offset Top Open	**1** = 10" **2** = 20" **3** = 30" **4** = 40"	**1** = DOE **2** = Cup & Post **7** = 2-226 **8** = 2-222	**1.5** = 1.5" **3/4** = 3/4" **1** = 1" **2** = 2" **3** = 3" **4** = 4"	**TC** = Tri-clamp **F** = Flange **N** = FNPT	**1/4N** = 1/4" FNPT **1/2TC** = 1/2" Tri-clamp **1/2N** = 1/2" FNPT	**E** = EPDM **V** = Viton **S** = Silicone **T** = TES	**BBP** = Bead Blast & Passivate **EP** = Electropolish

Note- Not all options are available on all sizes of housings. See cut sheets for more detail.

Example - 30" 12 round for 222 filter, T-line with top opening, 3" Flange, 1/2" Tri-clamp, EPDM Gasket, Electropolished is **IHP12TT383F1/2TCEEP**

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TÜV

Industrial Economy Filter Housing Multi-Round

The industrial economy stainless steel filter housings are constructed of 316L stainless steel for excellent resistance to corrosive chemicals and to ensure product purity. The housing is compatible with 10" to 40" filters elements to meet the needs of your application.

The housing can support 222 and 226 o-rings and Code F, double open-ended filters. A line of housings from 1 to 7 rounds are available to fit your flow rate needs. The unique design for Code F filters allows for cost saving and ease of installation.

The offset configurations allows rapid pluming installation. The design of the housing provides for a positive seal with the filters, thereby preventing fluid bypass. The unique design for closure with fixed bolts and opti-clamp hold down to ensure maximum strength and ease of operation.

Customization of the housing is available.

Applications	
Acids	Ink Jets
Bases	Electronics
Solvents	Parts Cleaning
Fine Chemicals	Lacquers
Plating Solutions	Dyes

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Materials of Construction

Head: 316L Stainless Steel
Bowl: 316L Stainless Steel
Clamp: 304 Stainless Steel
Center Post with Seal plate: 316L SS
Vent/Drain Plug: 316L Stainless Steel
O-Rings: Silicone, Viton or EPDM

Dimensions (nominal)

Lengths (in): 10 , 20, 30 and 40

Connections - Offset

Inlet/Outlet : Tri Clamp, Flange, FNPT
Vent/Drain : Tri Clamp, FNPT, Valve

Finish

Interior/Exterior: Bead Blast, Electropolished

Operating Conditions

Max operating pressure:
125 psi (8.6bar) at 200°F (93°C)
Test Pressure :
165psi (11.4 bar) at 75°F (24°C)

Industrial Economy Filter Housing Ordering Guide

Construction	Number of Filters	Length	Cartridge Code	Inlet/Outlet Fitting Size	Inlet/Outlet Fitting Style	Vent/Drain	Gasket Material	Interior/Exterior Finish
IE = Industrial Economy	**3** = 3 Filters **5** = 5 Filters **6** = 6 Filters **7** = 7 Filters	**1**=10" **2**=20" **3**=30" **4**=40"	**1** = DOE **2** = Cup and Post **7** = 2-226 **8** = 2-222	**1.5** = 1.5" **2** = 2"	**TC** = Tri-Clamp **F** = Flange **N** = FNPT	**TC** = 1/2" Tri-Clamp **N** = 1/2" FNPT **V** = 1/4" Valve	**E** = EPDM	**BBP** = Bead Blast & Passivate **EP** = Electropolish
Example - 30"- 3 round for 222 filter, 2" Tri-Clamp I/O, 1/2" Tri-Clamp V/D, EPDM Gasket and Electropolished is **IE3382TCTCEEP**								

Note- Not all options are available on all sizes of housings. See cut sheets for more detail.

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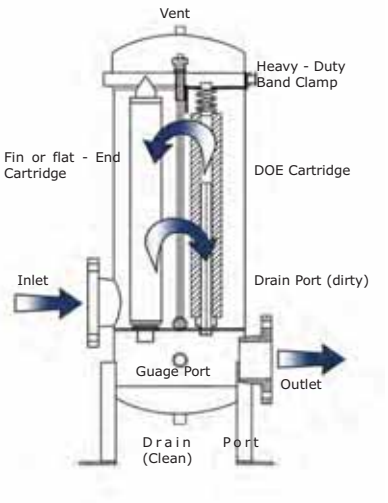
TÜV

Band Clamp SS Filter Housing Multi-Round

Band Clamp Filter Housing Vessels
are designed for industrial and commercial applications. Vessels are constructed of 304 or 316 stainless steel and accept DOE, 222/FLAT, and 222/FIN end cartridges in 10", 20", 30" & 40" nominal lengths.

Features:
- Single o-ring design (Buna-N standard)
- Easy-access self-centering heavy-duty band-clamp closure
- 316 stainless steel universal seal cups and compression plates allow vessels to accept D OE , -222/FLAT, or -222/FIN-end cartridges
- 304 & 316 stainless steel construction
- Poly-coat finish (exterior only)
- 150 PSI pressure rating
- Heavy-duty welded mounting/support legs
- 316 stainless steel cap/spring assemblies and v-posts



Materials of Construction
Housing: 316/ 304 Stainless Steel
Clamp: 304 Stainless Steel
Cap Spring: 316L SS
O-Rings: Buna N

Dimensions (nominal)
Lengths (in): 10 , 20, 30 and 40

Connections - Offset
Inlet/Outlet : Tri Clamp, Flange, FNPT
Vent/Drain : FNPT

Finish
Interior: 2B finish
Exterior: PolyCoat

Operating Conditions
Max operating pressure: 150 psi (10bar)

Band Clamp Filter Housing Ordering Guide

Construction	Number of Filters	Length	Inlet/Outlet Fitting Size	Inlet/Outlet Fitting Style	Outlet Configurations	Material of Construction	Pressure Rating	Interior / Exterior Finish
GTCHB = Band Clamp SS Filter Housing	**4** = 4 Filters **5** = 5 Filters **7** = 7 Filters **12** = 12 Filters **22** = 22 Filters	**1**=10" **2**=20" **3**=30" **4**=40"	**2** = 2" **3** = 3" **4** = 4"	**F** = RF Flange **M** = MNPT **TC** = Tri-Clamp	**2** = Opposite Side Outlet	**4** = 304SS **6** = 316SS	**15** = 150 PSI @ 250 F	**PC** = Poly-Coat
Example - 30"- 4 round , 2" Tri-Clamp I/O, Opposite Side Outlet, 304SS, Buna N Gasket is **GTCHB432TC2415PC**								

Note- Not all options are available on all sizes of housings

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Industrial High Purity Bag Filter Housing

The industrial high-purity stainless steel bag filter housings are designed to meet your critical high purity chemical processing needs. These housings are commonly used for industrial applications where gross contamination is a concern. The housing is constructed of 316L stainless steel for excellent resistance to corrosive chemicals. The housing is compatible with number 2 bag filters to meet the needs of your application flow.

The offset configurations allows rapid pluming installation. The design of the housing provides for a positive seal with the filters, thereby preventing fluid bypass. The unique design for closure with fixed bolts and opti-clamp hold down to ensure maximum strength and ease of operation.

Customization of the housing is available.

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Materials of Construction

Head:	316L Stainless Steel
Bowl:	316L Stainless Steel
Clamp:	304 Stainless Steel
Vent/ Drain Plug:	316L Stainless Steel
O-Rings:	Silicone, Viton or EPDM

Dimensions (nominal)

Lengths (in): ~46" Ref for Bag #2

Connections

Inlet/ Outlet : Tri-Clamp, Flange
Vent / Drain : Tri-Clamp, FNPT

Finish

Exterior: Electropolished, Bead Blast
Interior: Electropolished, Bead Blast

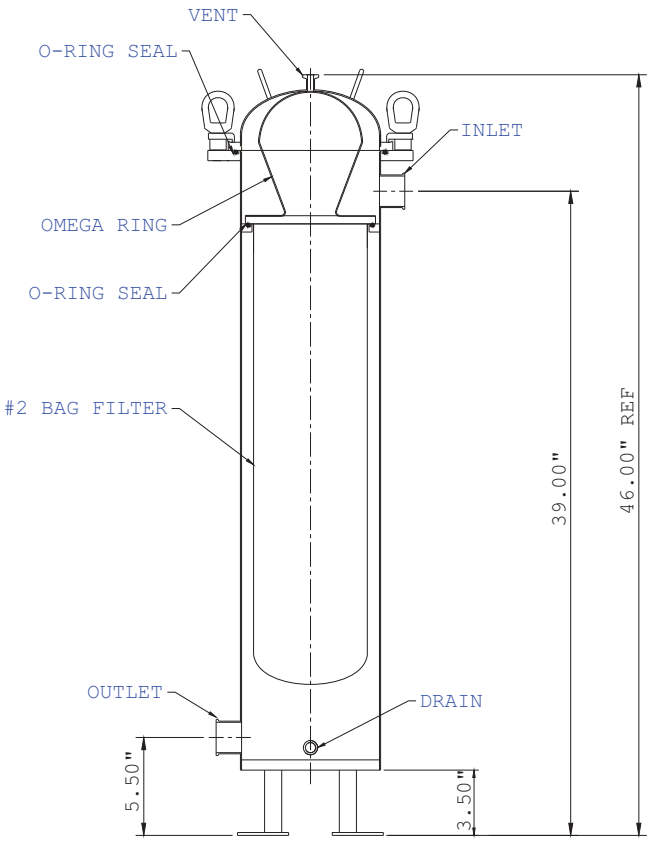
Operating Conditions

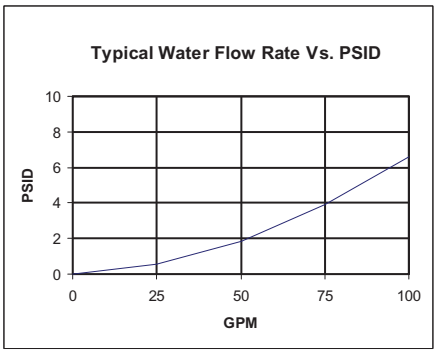
Max operating pressure:
125 psi (8.6 bar) at 200°F (93°C)
Test Pressure :
165psi (11.4 Bar) at 75°F (24°C)

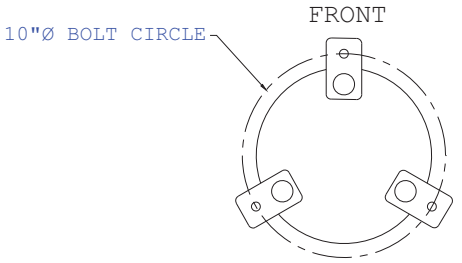
Applications	
Acids	Ink Jets
Bases	Electronics
Solvents	Pharmaceuticals
Fine Chemicals	Biologics
Plating Solutions	Dyes
Parts Cleaning	Lacquers

Features	Benefits
■ Wide Chemical & Thermal Compatibility	■ Provides excellent compatibility with a wide range of chemicals ■ The electropolished finish eliminates possible contamination that could potentially leach into the process chemicals
■ Omega Ring	■ Provides easy removal of the bag and it's captured particulate matter ■ Security to hold the bag in place, preventing any dislodging of the filter bag from any back pressure

Industrial High Purity Bag Filter Housing







BOTTOM VIEW

Note: Dimensions are for reference only. Design drawings available upon request.

Industrial High Purity Bag Filter Housing Ordering Guide

Construction	Bag #	Inlet/Outlet Fitting size	Inlet/Outlet Fitting Style	Vent/Drain	Gasket Material	Interior/Exterior Finish
IHPB = Industrial High Purity Bag Housing	**2** = Number 2	**2** = 2"	**TC** = Tri-Clamp **N** = FNPT	**1/2TC** = 1/2" Tri-Clamp **1/2N** = 1/2" FNPT	**E** = EPDM **V** = Viton **S** = Silicon	**BBP** = Bead Blast & Passivate **EP** = Electropolish
Example - #2 Bag filter housing with Tri-Clamp fittings and 1/2" Tri-Clamp Vent/Drain, EPDM Gasket and Electropolished is **IHPB22TC1/2TCEEP**						

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004 Series Bag Housings (low flow)

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The **004** series bag filter vessel design is available in 3 lengths; 6", 12" & 24" which utilizes standard #3, #4 & #5 size bag filters. Bag filter housing designs effectively remove dirt, and other contaminents from liquids offering particulate removal from 1 thru 800 microns, low differential pressure drops and cost effective clean fluids.

2-Lug

STANDARD FEATURES: for the 2 lug housing

⇒ CARBON STEEL, 304L STAINLESS STEEL
⇒ PERMANENTLY PIPED VESSELS
⇒ STAINLESS STEEL RESTRAINER BASKETS
⇒ 150 P.S.I.
⇒ 2-LUG HINGED LID DESIGN
⇒ OUTLETS AVAILABLE: BOTTOM OR OPPOSITE SIDE
⇒ NPT OR FLANGED CONNECTIONS
⇒ VENT, GAUGE, DRAIN PORTS
⇒ BUNA SEALS

3-Lug

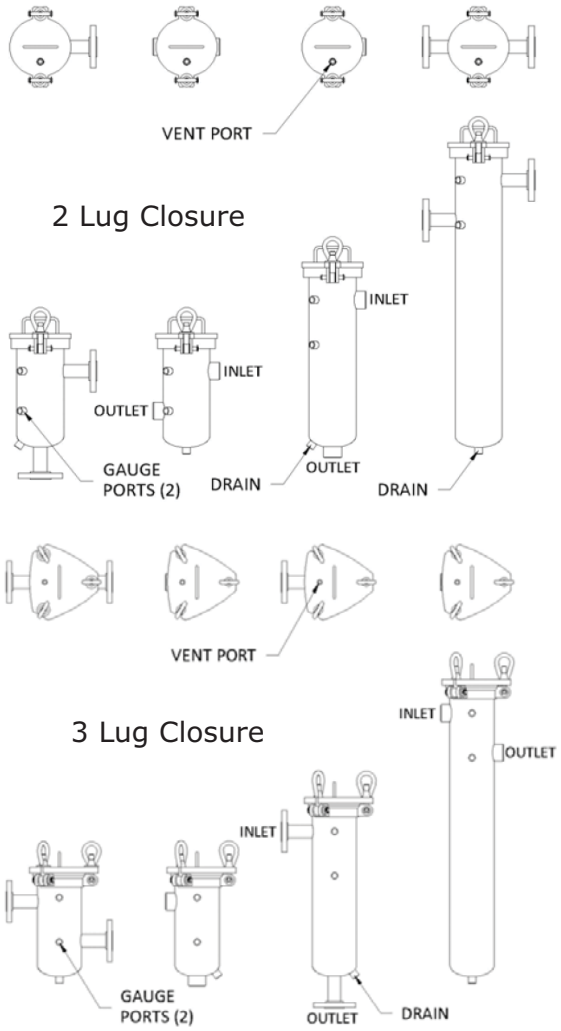
STANDARD FEATURES: for the 3 lug housing

⇒ CARBON STEEL, 304L & 316L STAINLESS STEEL
⇒ PERMANENTLY PIPED VESSELS
⇒ STAINLESS STEEL RESTRAINER BASKETS
⇒ 300 P.S.I.
⇒ 3-LUG HINGED LID DESIGN
⇒ OUTLETS AVAILABLE: BOTTOM OR OPPOSITE SIDE
⇒ NPT OR FLANGED CONNECTIONS
⇒ VENT, GAUGE, DRAIN PORTS
⇒ BUNA SEALS

OPTIONS:

⇒ INLET / OUTLET CONNECTION
⇒ INLET / OUTLET LOCATIONS
⇒ MANUAL / AUTOMATIC DUPLEXING
⇒ SEAL MATERIAL: EPDM, VITON, TEFLON ENCAPSULATED VITON
⇒ MESH LINED RESTRAINER BASKETS
⇒ OMEGA SPRING (BAG HOLD DOWN)
⇒ HIGHER PRESSURE RATING
⇒ SPECIALTY DESIGNED VESSELS
⇒ ADJUSTABLE TRIPOD LEGS

004 Series Bag Housings



Bag Sizes	Industry Standard #3, #4 and #5 Bags
Basket Length	6", 12", 24"
Basket Material	Stainless Steel with 9/64" Perforation
Housing Lid	2 or 3-Lug Hinged Lid with 0.25" (F) NPT Vent Port and Handle
Connection Size	0.75", 1.0", 1.25", 1.5" or 2"
Connection Style	NPT or Flanged
Inlet / Outlet Locations	Outlets Available: Bottom, Opposite Side, Same Side, Bottom Elbowed Away
Seals	Buna, EPDM, Viton, Teflon Encapsulated Viton
Construction / Finish	Carbon Steel w/ Standard Exterior Finish; Stainless Steel w/ Bead Blast Satin Finish
Pressure Rating	150 PSI @ 250° F - 2 Lug 300 PSI @ 250° F - 2 Lug
Additional Ports	Two 0.25" (F) NPT Gauge Ports; One 0.25" (F) NPT Drain Port
Base	Optional Adjustable Tripod Legs

004 Bag Filter Housing Ordering Guide

004 Low Flow Service Vessels

Housing Type	Vessel Size	# of Baskets	Basket length	Lid Sealing design	Inlet/Outlet Size (inch)	Inlet/Outlet Fitting Style	Outlet locations	Seal Material	Material
0 **Regular Housing**	**04 = 4"**	**01** = 1 basket	**06** = 6" **12** = 12" **24** = 24"	**2L** = 2 Lug Hinged **3L** = 3 Lug Hinged 1/4" FNPT Vent port and Handle	**007** = 0.75" **010** = 1" **012** = 1.25" 015 = 1.5" **020** = 2"	**N** = FNPT **F** = Flange	**1** = Bottom out **2** = Opposite Side Out	**B** = Buna N **R** = EPDM **V** = Viton **E** = Teflon Enc. Viton **T** = Teflon	**C** = Carbon Steel **4** = 304 SS **6** = 316 SS

Example - a 004 vessel, 6" basket, 2 Lug, 1" FNPT I/O, Bottom out, Viton, 304SS would be **00401062L010N1V4**

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SRS Series Bag Housings

SRS Standard Series filter bag/strainer vessels are designed with a recessed basket and new horizontal pivoting cover. The new design achieves an advanced bag-to-vessel seal. These vessels are available in #1 and #2 sizes in a variety of pressure ratings with 150 psi being standard. Standard swing bolt closure allows for quick accessibility when a filter bag or strainer needs replacement. The SRS is an outstanding combination of performance and value.

Shown with optional compression device

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Materials of Construction

Head: 316,304, Carbon Steel
Bowl: 316,304, Carbon Steel
O-Rings: Silicone, Viton or EPDM (Standard

Orientation

Side-in/ Bottom-out (Standard)
Side-in/ Side-out (optional)

Connections

Inlet/Outlet : FNPT, Flange

Maximum Recommended Flow Rates and Surface Area

For the following recommended flow rates, vessels need a minimum inlet/outlet size of 2" NPT. The recommended flow for basket and filter combination is for nominally rated filter bags, not for our high efficiency filter bag line.

SRS 1-2	SRS 2-2
100 gpm*	200 gpm

*Rates are for nominally rated bags only

Standard Features

- Adjustable height tripod stand
- Inlet/outlet orientation: Side-in Bottom-out (standard) or Side-in Side-out (optional)
- Low pressure drop
- Positive cover seal
- Easily cleaned
- Heavy duty perforated basket
- Swing bolt closures
- .25" NPT vent tap
- Pipe sizes from .75" to 3" NPT, RFF or Quick Disconnect connections

Optional Features

- Epoxy coating, electopolish and fuse coating
- Jacketing
- Compression devices
- Wire mesh support baskets
- Mesh-lined basket for straining applications - 50 micron and higher

SRS Bag Filter Housing Ordering Guide

Housing Construction	Bag Size	Inlet/Outlet Size (inch)	Fitting Style	Material	Other Options
SRS	1 2	0.75 1 1.5 2 3	**Blank** = FNPT **F** = Flange	**A** = Carbon Steel **B** = 304 SS **C** = 316 SS	**SSS** = Stainless Steel Swing Bolts **SST** = Stainless Stand **D** = 1" NPT Drain **SO** = Side Output **GT** = Gauge Taps **MB4** = Mesh Basket 304SS **MB6** = Mesh Basket 316SS **HD** = Bag Compression Device
Example - a 304SS SRS bag filter housing,size #1, 2"FNPT is **SRS-1-2-NB**					

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SRH Series Bag Housings

All SRH Series filter bag/strainer vessels are designed for heavy service. The SRH housings come with a recessed basket, a volume displacer permanently welded to the top cover, and a stainless steel wire mesh retainer basket.

Our standard wire mesh baskets increase available filtration surface area up to 30% compared to the perforated retainer baskets that come standard with competitors' vessels. This unique and efficient design results in longer filter life and decreased labor costs.

Materials of Construction
- Head: 316, 304, Carbon Steel
- Bowl: 316, 304, Carbon Steel
- O-Rings: Silicone, Viton or EPDM (standard)

Orientation
- Side-in/ Bottom-out (Standard)
- Side-in/ Side-out (optional)

Connections
- Inlet/Outlet : Flange, FNPT

Standard Features

- Adjustable height tripod stand
- Built-in volume displacer located on cover
- Inlet/outlet orientation: Side-in Bottom-out (standard) or Side-in Side-out (optional)
- Low pressure drop
- Positive cover seal
- 150 psi design, available up to 3,000 psi
- Easily cleaned
- Stainless steel wire mesh basket
- ASME Code stamp available on all SRH style vessels
- Swing bolt closures
- .25" NPT vent tap
- Pipe sizes from .75" to 4" NPT, RFF or quick disconnect connections

Maximum Recommended Flow Rates and Surface Area

For the following recommended flow rates, vessels need a minimum inlet/outlet size of 2" NPT. The recommended flow for basket and filter combination is for nominally rated filter bags, not for our high efficiency filter bag line.

Product	Basket Strainer	Mesh Lined Basket Strainer	Retainer Basket with Filter Bag	Surface Area Sq. Ft.
SRH 1	150 gpm	110 gpm	100 gpm	2.25
SRH 2	300 gpm	220 gpm	200 gpm	4.5

SRH Bag Filter Housing Ordering Guide

Housing Construction	Bag Size	Inlet/Outlet Size (inch)	Fitting Style	Material	Other Options
SRH	1 2	0.75 1 2 3 4	**Blank** = NPT (0.75-3" only) **F** = Flange	**A** =Carbon Steel **B** = 304 SS **C** = 316 SS	**GT** = Gauge Taps **HD** = Bag Compression Device **MB4** = Mesh Basket 304SS **MB6** = Mesh Basket 316SS **PC** = Powder Coat for CS **SO** = Side Out **SSS** = SS Swing Bolts **U** = ASME Code **UM** = ASME Code
Example - a 304SS SRH bag filter housing,size #2, with a 3" flange is **SRH-2-3F-B**					

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SRM Series Multi-Cavity Housings

SRM Multi-cavity filter vessels offer large surface areas capable of handling up to 5,600 gpm in a single housing. The increased surface area allows for longer processing time prior to filter change-out. The multi-cavity vessels can contain anywhere from two to 28 bags/baskets in a single vessel. Our standard side-inlet side-outlet design offers the greatest inlet/outlet flexibility and doesn't require a platform to be built in order to change-out or clean the filter bag or strainers.

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Standard Features	Optional Features
• Inlet/outlet orientation: Ergonomically superior Side-in Side-out (standard) or Bottom-in Bottom-out (optional)	• Epoxy coating, electro-polish and fuse, or Teflon coating
• Low pressure drop, positive cover seal	• Higher pressure ratings available up to 3,000 psi
• Easily cleaned	• Variety of lid-lifting devices - hydraulic, jack, or manual wheel davit
• Stainless Steel perforated baskets (standard)	• Jacketing
• ASME code stamp available	• Sanitary construction
• Swing bold closures	• Wire mesh support baskets
• 1" to 2" NPT drain port on bottom	• Mesh-lined basket for straining applications - 50 micron and higher
• .5" to 1" NPT pressure gauge/vent tap	• Differential pressure gauge taps
• Pipe sizes from 2" to 14" RFF connections	
• Davit lift	
• Compression Device	

Materials of Construction

Head: 316L, 304, Carbon Steel
Bowl: 316L, 304, Carbon Steel
O-Rings: Silicone, Viton or EPDM (standard)

Orientation

Side-in/ Side-out (Standard)
Bottom-in/ Bottom-out (optional)

Connections

Inlet/Outlet : Flange
Vent/Drain : FNPT

SRM Bag Filter Housing Ordering Guide

Housing Construction	Multi Bag Option	Inlet/Outlet Size (inch)	Fitting Style	Material	Other Options
SRM	**2** = 2 Bags **3** = 3 Bags **4** = 4 Bags **5** = 5 Bags **6** = 6 Bags **8** = 8 Bags **10** = 10 Bags **12** = 12 Bags **Custom**	**2** **3** **4** **6** **8** **10** **12** **14**	**F** = Flange	**A** =Carbon Steel **B** = 304 SS **C** = 316 SS	**GT** = Gauge Taps **MB4** = Mesh Basket 304 SS **MB6** = Mesh Basket 316 SS **PC** = Powder Coat for CS **SSS** = SS Swing Bolts **U** = ASME Code
Example - a 3 bag 304SS SRM bag filter housing,size #2, with a 3" flange is **SRM-3-3F-B**					

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TÜV ISO 13485

MultiPlex Series Bag Housings

(Multiple bag housings)

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The **MultiPlex** series bag filter vessel design is a cost effective alternative to multi-bag vessels that allow isolation for bag change-out without service interruption. Allows for plumbing flexibility and a smaller footprint for your application. This bag housing design effectively remove dirt and other contaminates from process liquids offering particulate removal from 1 thru 800 microns

STANDARD FEATURES:

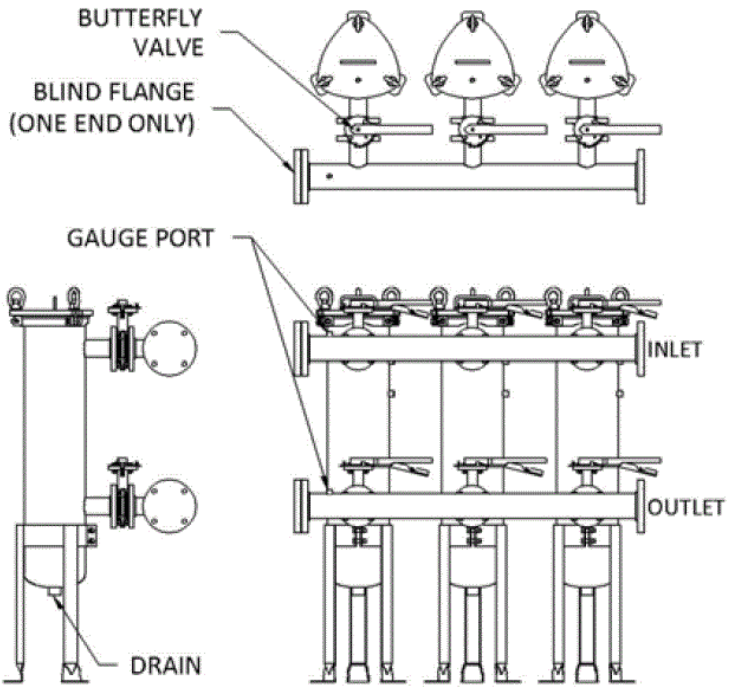
⇒ 2 or More Vessels with Common Headers
⇒ Carbon Steel, 304 & 316 Stainless Steel
⇒ Continuous Flow Rates
⇒ Minimal Pressure Drop
⇒ Manual Independent Controls
⇒ Butterfly Valves
⇒ 150 PSI
⇒ Outlet Available: Bottom, Opposite or Same Side
⇒ Flange Connections
⇒ Vent, Gauge, Drain Ports
⇒ Buna Seals/ Seats
⇒ Adjustable Carbon Steel Tripod Legs

OPTIONS:

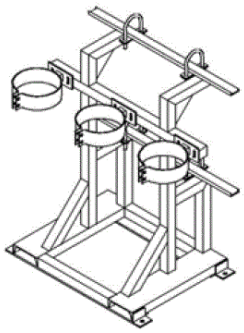
⇒ Several Vessel Models Available
⇒ Seal/ Seat Material : EPDM, Viton, Teflon encapsulated Viton
⇒ Mesh Lined Restrainer Baskets
⇒ Inlet / Outlet Locations
⇒ Higher Pressure Rating
⇒ Drain Package
⇒ Gauge Package
⇒ Differential Pressure Switch/ Gauge / Alarm Option
⇒ Multiplex Stand
⇒ Drip Pan Base

Applications	
Chemical Process	DI/RO Water
Manufacturing	Coating & Paint
Environmental / Ground Remediation	Pharmaceuticals
Cooling Tower	Food & Beverage
Plating Solutions	Power Generation

MultiPlex Series Bag Housings



Vessel Models	Industry Standard Bag filter housing
Bag Size	Industry Standard Bag filter
Basket Material	Stainless Steel with 9/64" Perforation
Connection Size	2", 3", 4", 6" or 8"
Connection Style	Flanged
Inlet / Outlet Locations	Outlets Available: Bottom, Opposite Side, Same Side
Seals	Buna, Epdm, Viton, Teflon Encapsulated Viton
Construction / Finish	Carbon Steel w/ Standard Exterior Finish; Stainless Steel w/ Bead Blast Satin Finish
Pressure Rating	100 PSI @ 300° F 150 PSI @ 300° F 300 PSI @ 300° F
Additional Ports	One 0.25" (F) NPT Gauge PORTS Per Header
Operation	Manual Continuous Operation



OPTIONAL STAND (REF)

MultiPlex Bag Filter Housing Ordering Guide

MultiPlex Series Vessels

Housing Type	Vessel Size/ Diameter	# of Baskets	Basket length	Lid Sealing design	Inlet/Outlet Size (inch)	Inlet/Outlet Fitting Style	Outlet locations	Seal Material	Material
M **MultiPlex Housing**	**08 = 8"**	**01** = 1 basket **02** = 2 basket **03** = 3 basket **04** = 4 basket	**15** = #1 size **30** = #2 Size	**3L** = 3 Lug Hinged 1/4" FNPT Vent port and Handle	**020** = 2" **030** = 3" **040** = 4" **060** =6" **080** = 8"	**F** = Flange	**1** = Bottom out **2** = Opposite Side Out	**B** = Buna N **R** = EPDM **V** = Viton **E** = Teflon Enc. Viton **T** = Teflon	**C** = Carbon Steel **4** = 304 SS **6** = 316 SS

Example - a MultiPlex vessel, #2 size, 3"Baskest, 3 Lug, 4" Flange I/O, Bottom out, Viton, 304SS would be M08**01153L040F1V4**

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TÜV

Portable Bag Filter Cart

Portable bag filter carts are ideal for those who need filtration at several location but don't have the foot-print space for fixed filtration units. It also is ideal for filtration testing to prove the benefits of filtration without the permanent commitment of installing filtration equipment.

These carts can be sold with or without the pump enabling the using to select the ideal pump for their application. A turn-key system complete with factory installed pumps chosen for your unique application is readily available

The bag filter carts are designed to offer customers the greatest flexibility to handle a variety of application throughout a manufacturing facility. Available in two or four wheel designs, these units are the perfect choice for station to station, or remote location filtration applications.

Features	Benefits
• Portable	• Can be utilized in more than one location
• Complete Prefabricated System	• Comes from the factory ready to plug in to your system and filter
• Customizable	• Designed to the customers specification to meet their needs

Materials of Bag Filter Housing

Carbon Steel
304 Stainless Steel
316 Stainless Steel

Housing Sizes

1, 2, 30, 65

Pumps

Specified by customer or application
Electric, Pneumatic, Impellor, Bellows, Diaphragm, others

Options

- Heavy Duty Wheels - two or four
- Epoxy, Teflon or Fuse Coating
- ASME Code Stamp
- Two or more vessels configured in parallel or series
- Differential pressure gauges
- others

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Industrial High Purity Vent Filter Housing

The industrial high purity stainless steel vent housing is constructed of 316L stainless steel for high purity applications to allow venting of large and small tanks. The housing is typically used in the food and beverage industries. The housing comes in 10" to 40" sizes to meet the needs of your application. The housing is a clean and easy way to provide filtered air into tanks as well as allowing gasses to flow out.

The housing can support 222 and 226 o-rings and Code F, double open-ended filters. The design of the housing provides for a positive seal with the filters, thereby, preventing fluid bypass. The unique design for Code F filters allows for cost saving and ease of installation. The housing is attached by the use of a flange on the inlet and a tri-clamp, or FNPT fitting, on the outlet.

Customization available upon request.

JALT Technologies ®

Applications	
Fine Chemicals	Ink Jets
Plating Solutions	Electronics
Process Water	Pharmaceuticals
Beverages	Biologics

Materials of Construction

Head: 316L Stainless Steel
Bowl: 316L Stainless Steel
Clamp: 304 Stainless Steel
Center Post with Seal Plate: 316L SS
O-Rings: Silicone, Viton or EPDM

Dimensions (nominal)

Lengths (in): 10 , 20, 30 and 40

Connections

Inlet/ Outlet : Tri-clamp, Flange, FNPT
Vent / Drain : Tri-clamp, FNPT

Finish

Exterior: Bead Blast, Electropolish

Operating Conditions

Max operating pressure:
145 psi (10 bar) at 200°F (93°C)
Test Pressure :
165psi (11.4 bar) at 75°F (24°C)

Industrial High Purity Vent Filter Housing Ordering Guide

Construction	Number of Filters	Configuration	Length	Cartridge Code	Inlet Connection	Outlet Connection	Gasket Material	Interior/Exterior Finish
IHP = Industrial High Purity	**1** = 1 Filter	**IV** = In-Line Vent	**1**=10" **2**=20" **3**=30" **4**=40"	**1** = DOE **7** = 2-226 **8** = 2-222	**3/4F** = 3/4" Flange	**1 1/2TC** = 1 1/2" Tri-clamp **1 1/2NPT** = 1 1/2" FNPT	**E** = EPDM **V** = Viton **S** = Silicon	**BBP** = Bead Blast & Passivate **EP** = Electropolish
Example - 10" for a 222 filter, In-line with 3/4" inlet Flange, and 1.5"outlet Tri-clamp, EPDM Gasket and Electropolished is **IHP1IV183/4F11/2TCEEP**								

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TÜV

Sanitary Stainless Steel Vent Housing

Atmospheric Tank Vent Housing

ZenPure® sanitary stainless steel vent housing is constructed of 316L stainless steel for high purity applications to allow venting of large and small tanks. The housing comes in 5" to 30" sizes to meet the needs of your application. The design provides a clean and easy way to provide filtered air into tanks as well as allowing gasses to flow out.

The housing can support filters with 2-226 o-rings. It provides a positive seal on the filters that will prevent any particulate bypass. The housing is sealed by the use of a tri-clamp that requires no special tools to open or close.

Materials of Construction

Head: 316L Stainless Steel
Bowl: 316L Stainless Steel
Clamp: 304 Stainless Steel
O-Rings: Silicone, EPDM, Viton, PTFE

Dimensions (nominal)

Lengths: 5 in., 10 in., 20 in., 30 in.,
Width: 5.51 in. (140mm)

Connections

Inlet/ Outlet: 1.5" Sanitary Fitting

Finish

Electropolished

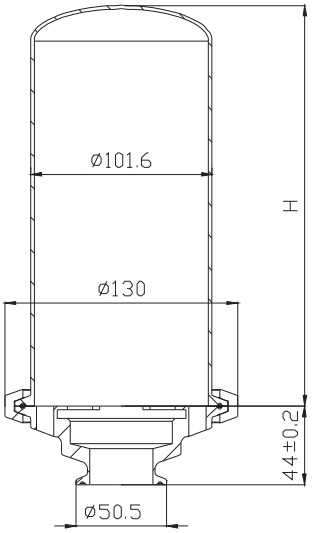
Operating Conditions

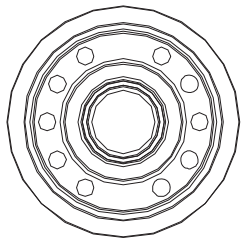
Max operating pressure: 145 psi (10 bar)

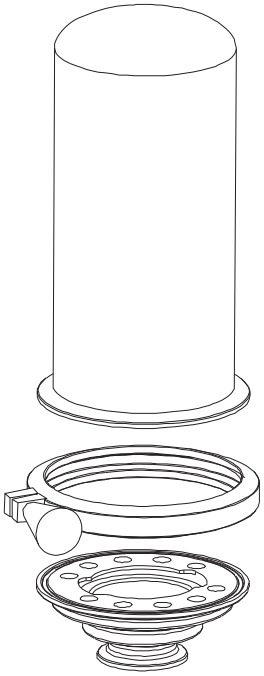
Applications	
Fine Chemicals	Ink Jets
Plating Solutions	Electronics
Process Water	Pharmaceuticals
Beverages	Biologics

Features	Benefits
■ Wide Chemical & Thermal Compatibility	■ Provides excellent compatibility with a wide range of chemicals ■ The electropolished finish eliminates possible contamination that could potentially leach into the process chemicals.
■ Tri-clamp	■ The housing allows for inspection of the filter before the housing is sealed. ■ Easy filter change-out

Sanitary Stainless Steel Vent Housing







Nominal Length	H (Bowl Height)
5"	185mm (7.28")
10"	305mm (12.0")
20"	555mm (21.85")
30"	805mm (31.69")

Sanitary Stainless Steel Vent Housing Ordering Guide

Housing Construction	Material	Cartridge #	Cartridge Code	Length	CONNECTION	Gasket Materials
SV = Sanitary Vent Filter Housing	**P** = 316L	**01** = 1 Round	**7** = 2-226	**05** = 5" **10** = 10" **20** = 20" **30** = 30"	**C** = 1.5" Tri-clamp **T2** = 2" Tri-clamp **T3** = 3" Tri-clamp	**E** = EPDM **S** = Silicone **V** = Fluoro-elastomer **F** = PTFE
Example - 10" Sanitary SS Vent Housing with Silicon gasket for Code 7 filter with1.5" Sanitary connection - **SVP01710CS**						

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Sample and Vent Valves

The sample and vent valves for high purity piping and stainless steel filter housings are engineered for cleanliness and ease of use. The valves are constructed of 316L stainless steel for excellent resistance to corrosive chemicals and to ensure product purity. They are machined to a <20Ra finish. Each valve comes with it's own serial number, material certificates and certificate of compliance.

The valves come in both in-line and 90 degree models. Additional assemblies come with a pressure gauge, tee fitting and valve for ease of use. The output fitting on the valve is a hose barb to make quick attachments with a hose to vent or take samples. The design of the unit minimizes dead space for possible contamination build-up between usage. The valve has a limited stem travel for safety and valve protection. The knob is made out of Delrin®, a material from DuPont, which is durable, low wear, low friction plastic, ideal for this application.

The newest release are the inline sampler with a constant flow throw purge. The liquid is pulled from the middle of the stream for sampling. The sample tube is constantly being flushed through by the moving fluid pressure and exiting a small hole on the down stream side right before the Ferrule, NPT or Weld connection to the tubing.

PN # OFSVILF-1.13EXT
Inline 1/2" Tri-clamp

Example: Cross section of pipe with flow through purge valve

JALT Technologies Brand

Materials of Construction

Body:	316L Stainless Steel
Knob:	Solid Delrin Knob
O-Rings:	USP Class VI Silicone
	FDA Silicon
	EPDM
	Viton

Connections

Inlet: Tri-clamp, Ferrule, NPT, Butt Weld
Outlet: 3/8" Hose Barb

Finish

Machined <20Ra

Operating Conditions

Max operating pressure:
400 psi (27 bar) at 200°F (93°C)
300 psi (20 bar) at 100°F (37°C)

Applications	
Filter Housings	Tanks
Product Sampling	Product testing
Pressure Vessels	Day Tanks

OFSVILF-SSK

OFSVI90F-1

OFSVILF-1-2EXT

OFSVILF-1

Sample and Vent Valves

OFSV90N

OFSVILN-1.13EXT

OFSVILN-2EXT

OFSVILN

OFSV90F

OFSVILF-1.13EXT

OFSVILF-2EXT

OFSVILF

OFSV90W

OFSVILW-1.13EXT

OFSVILW-2EXT

OFSVILW

OFSV90F-2

OFSVILF-2-1.13EXT

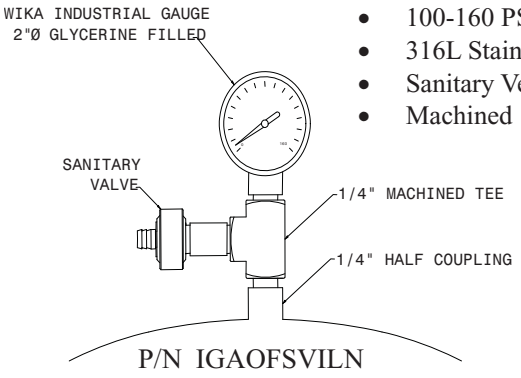
OFSVILF-2

Sample and Vent Valves

Sample and Vent Valves

Part number	Connection Type	Connection Size	Configuration Angle	Sampling Stem	Knob Material
OFSV90N	NPT	1/4"	90 degree	none	Delrin
OFSVILN-1.13EXT	NPT	1/4"	In-line	1-1/8"	Delrin
OFSVILN-2EXT	NPT	1/4"	In-line	2"	Delrin
OFSVILN	NPT	1/4"	In-line	none	Delrin
OFSV90F-1	Sanitary Ferrule	1"	90 degree	none	Delrin
OFSVILF-1-1.13EXT	Sanitary Ferrule	1"	In-line	1-1/8"	Delrin
OFSVILF-1-2EXT	Sanitary Ferrule	1"	In-line	2"	Delrin
OFSVILF-1	Sanitary Ferrule	1"	In-line	none	Delrin
OFSV90F	Sanitary Ferrule	1/2"	90 degree	none	Delrin
OFSVILF-1.13EXT	Sanitary Ferrule	1/2"	In-line	1-1/8"	Delrin
OFSVILF-2EXT	Sanitary Ferrule	1/2"	In-line	2"	Delrin
OFSVILF	Sanitary Ferrule	1/2"	In-line	none	Delrin
OFSVILF-SSK	Sanitary Ferrule	1/2"	In-line	none	Stainless Steel
OFSV90F-2	Sanitary Ferrule	2"	90 degree	none	Delrin
OFSVILF-2-1.13EXT	Sanitary Ferrule	2"	In-line	1-1/8"	Delrin
OFSVILF-2-2EXT	Sanitary Ferrule	2"	In-line	2"	Delrin
OFSVILF-2	Sanitary Ferrule	2"	In-line	none	Delrin
OFSV90W	Weld	1/4"	90 degree	none	Delrin
OFSVILW-1.13EXT	Weld	1/4"	In-line	1-1/8"	Delrin
OFSVILW-2EXT	Weld	1/4"	In-line	2"	Delrin
OFSVILW	Weld	1/4"	In-line	none	Delrin
IGAOFSVILN	NPT	1/4"	Assembly	none	Delrin
SGAOFSVILF	Sanitary Ferrule	1-1/2"	Assembly	none	Delrin

Industrial Pressure Gauge and Vent Valve Assembly

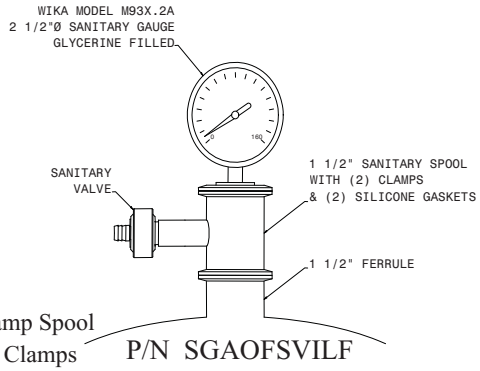


P/N IGAOFSVILN

Additional Assembly Options

- 100-160 PSI Pressure Gauge
- 316L Stainless Steel
- Sanitary Vent/Sample Valve
- Machined 1/4" NPT Tee

Sanitary Pressure Gauge and Vent Valve Assembly



P/N SGAOFSVILF

- 100-160 PSI Pressure Gauge
- 316L Stainless Steel
- Sanitary Vent/Sample Valve
- 1 1/2" Electropolished Tri-Clamp Spool
- (2) Silicone Gaskets & (2) SS Clamps

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Sanitary Y-Strainer

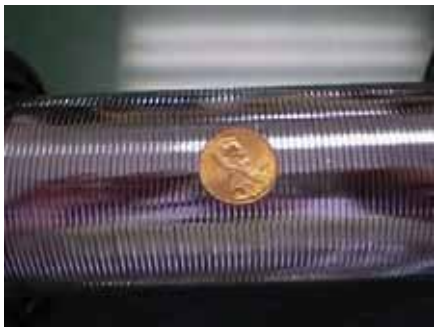
The sanitary Y-Strainer is constructed of 316L stainless steel for excellent resistance to corrosive chemicals and to ensure product purity. The strainer is utilized in the food and beverage industry to remove impurities from the liquid stream.

We offer a complete line of strainers that range from 1.5" to 6" inlet/outlet with sanitary, flange or I-Line union connections to fit your flow rates. The wellscreen design is durable and can handle high differential pressure without failure. The Y-style makes for easy servicing without removing the entire unit, saving time and effort. The large sightglass allows for easy viewing of the upstream (dirty) wellscreen surface.

Customization of the housing is available.

JALT Technologies®

Applications	
Food & Beverage	Ink Jets
Fine Chemicals	Electronics
Plating Solutions	Pharmaceuticals
Process Water	Parts Cleaning



Picture of Internal WellScreen

Materials of Construction

Body: 316L Stainless Steel
Siteglass: Glass
Clamp: 304 Stainless Steel
Gasket: Silicone, Viton or EPDM
Wellscreen: 316L Stainless Steel

Connections

Inlet/Outlet : Tri-clamp, Flange and I-Line Union
Sizes (in): 1.5, 2, 3, 4, 6

Finish

Interior/Exterior: Bead Blast and Passivate, or Electropolished

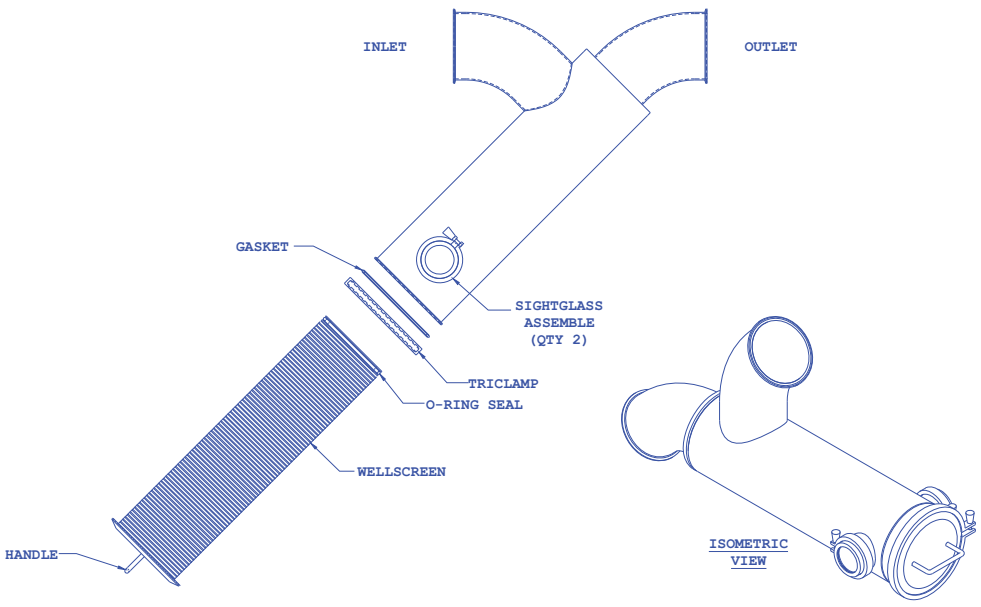
Operating Conditions

Max operating pressure:
145 psi (10Bar) at 200°F (93°C)
Test Pressure :
165psi (11.4 Bar) at 75°F (24°C)

Features	Benefits
■ Wide Chemical & Thermal Compatibility	■ Provides excellent compatibility with a wide range of chemicals ■ The electropolished finish eliminates possible contamination that could potentially leach into the process chemicals
■ Y - Design	■ For quick change out, and ease of use ■ Provides the ability to put the strainer into a straight line of pipe
■ Siteglass	■ Allows the user to see the wellscreen and particulate matter without opening the housing ■ Prevents unnecessary contamination of the fluid stream

Sanitary Y-Strainer

Outside to Inside Flow



Y- Strainer Slot Size			
U.S Mesh	Inches	Microns	Millimeters
3	0.2650	6730	6.730
3.5	0.2230	5660	5.660
4	0.1870	4760	4.760
5	0.1570	4000	4.000
6	0.1320	3360	3.360
7	0.1110	2830	2.830
8	0.0937	2380	2.380
10	0.0787	2000	2.000
12	0.0661	1680	1.680
14	0.0555	1410	1.410
16	0.0469	1190	1.190
18	0.0394	1000	1.000
20	0.0331	840	0.840
25	0.0280	707	0.710
30	0.0232	595	0.590
35	0.0197	500	0.500
40	0.0165	420	0.420
45	0.0138	354	0.350
50	0.0117	297	0.297
60	0.0098	250	0.250
70	0.0083	210	0.210
80	0.0070	177	0.177
100	0.0059	149	0.149
120	0.0049	125	0.125
140	0.0041	105	0.105
170	0.0035	88	0.088
200	0.0029	74	0.074
230	0.0024	63	0.063
270	0.0021	53	0.053

Sanitary Y-Strainer Ordering Guide

Construction	Inlet/Outlet Fitting Size	Inlet/Outlet Fitting Style	Strainer Slot Size	Gasket Material	Interior/Exterior Finish	Options
SYS = Sanitary Y-Strainer	**1.5** = 1.5" **2** = 2" **3** = 3" **4** = 4" **6** = 6"	**TC** = Tri Clamp **F** = Flange **I** = I-Line Union	***M** - Pick U.S. Mesh Size from Table	**E** = EPDM **V** = Viton **S** = Silicon	**BBP** = Bead Blast & Passivate **EP** = Electropolish	-NS = No Sight Glass
Example - Y- Strainer with 2" flange fitting with a 100 mesh stainer, EPDM gasket and electropolished is **SYS2F100MEEP**						

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2. Cancellation: Orders may be canceled or deliveries deferred only upon the condition the Buyer assumes immediate liability for and makes prompt payment to Seller of all expenses incurred, charges for commitments made by Seller, profit on work in process and contract value of items completed and ready for shipment.

3. Prices, Taxes, and Payment: All prices are firm unless otherwise agreed in writing. Seller reserves the right to change the prices and specifications of its Products at any time without notice. Any tax, duty, custom or other fee of any nature imposed upon this transaction by any international, export, import, federal, state or local governmental authority shall be paid by Buyer in addition to the price quoted or invoiced. In the event Seller is required to prepay any such tax, Buyer will reimburse Seller. Payment terms shall be net 30 days after shipment by Seller.

4. Delivery and Shipment: Seller will make every effort to ship the Products or provide the services hereunder in accordance with the requested date, provided, that Seller accepts no liability for any losses or for general, special or consequential damages arising out of delays in delivery. Shipment of all Products shall be F.O.B point of distribution by Seller. Identification of the Products shall occur when they leave Seller point of distribution, at which time title and risk of loss shall pass to Buyer. All shipment costs shall be paid by Buyer and if prepaid by Seller the amount thereof shall be reimbursed to Seller within thirty (30) days after notice of such payment to Buyer.

5. Inspection: Buyer shall inspect all items upon arrival and shall give written notice to Seller within ten (10) days of arrival of any claim for shortage or non-conformance with the terms hereof. If Buyer shall fail to give such notice, all items shall be deemed to conform with, and Buyer shall be bound to accept and pay for items in accordance with the terms hereof.

6. Returns: No product may be returned without Seller's prior written approval. Transportation charges are to be prepaid by Buyer. Returned goods are subject to the Seller's inspection and acceptance. Seller may, in its discretion, either (a) refund to Buyer the amount paid for the returned items, (b) repair the returned items or (c) replace one or all returned items within a reasonable time after Seller determines that the returned goods are not in accordance herewith, and in such event Seller shall not be liable for any damages arising from the defective delivery or delay caused thereby. When expressly authorized by Seller in writing, unused products may be returned to Seller subject to service handling, restocking charges and rebuilding charges to "as new" condition.

7. Force Majeure: Seller shall not be liable for any delays in the delivery of orders, due in whole or in part, directly or indirectly, to fire, act of God, strike, shortage of raw materials, supplies or components, retooling, upgrading of technology, delays of carriers, embargo, government order or directive, or any other circumstance beyond Seller reasonable control.

8. Indemnification Against Infringement: Buyer shall protect and indemnify Seller and its affiliates, directors, officers, agents and employees against all claims for damages or profits, including all reasonable costs incurred by Seller in connection therewith, arising from infringement of patents, copyrights, trademarks or misappropriation of designs, proprietary data or trade secrets of any person with respect to all goods manufactured either in whole or in part in accordance with Buyer's specification.

9. Indemnification: Buyer shall indemnify and hold harmless Seller its affiliates, directors, officers, agents and employees from all loses, claims, damages, expenses or liabilities of any kind (including attorney's fees and court costs) resulting from or arising out of any use by Buyer of the products purchased herein.

10. Repairs, Alterations, and Modification: Any repairs made to the products shipped by the Seller shall be at the expense of the Buyer unless specifically authorized by the Seller in writing. Alterations or modifications to the product involving welding, soldering, drilling, or machining by the Buyer are not permitted or approved by the Seller without specific authorization in writing by the Seller. Any unauthorized alteration or modification by the Buyer will void the warranty.

11. Warranty: Seller warrants its products against defects in workmanship and material for a period of 12 months from the date of shipment from the factory or Seller distributor under normal use and service and otherwise when such products are used in accordance with instructions furnished by Seller and for purposes disclosed in writing at the time of purchase, if any. Seller's liability under this warranty shall be limited to repair or replacement, F.O.B point of distribution, of any defective products or part which, having been returned to the factory, transportation charges prepaid, has been inspected and determined by the Seller to be defective.

This warranty is in lieu of any other warranty either expressed or implied, as to the merchantability, quality, description, and fitness for any particular purpose or use, or any other matter.

Under no circumstance shall the Seller be liable to Buyer or any other third party for any loss of profits or other direct or indirect costs, expenses, losses or consequential damages arising out of or as a result of any defects in or failure of its products or any part or parts thereof or arising out of or as a result of parts or components incorporated in Seller's products but not supplied by the Seller.

12. Arbitration: Any and all disputes or controversies arising under, out of or in connection with this contract or the sale or performance of the products shall be resolved by final and binding arbitration in the State of Nevada.

13. General: No items to be furnished hereunder shall be exported by Buyer or by any customer of Buyer unless Seller is first notified in writing of the intention to so export and all applicable regulations and licenses are complied with and obtained by Buyer or its customer.
Seller reserves the right to make changes in design at any time without incurring any obligation to make such changes in any items previously purchased, whether or not delivered.

Seller expressly disclaims application of any government procurement regulations in connection with any items to be furnished hereunder unless expressly agreed to in writing by an authorized representative of Seller. Buyer understands that to the extent the goods are being shipped to the United States, the Seller's sale of the product to Buyer are subject to U.S. export control laws and regulations and Buyer shall comply with all such laws and regulations.

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The failure of Seller to enforce at any time any of the provisions of this contract, to exercise any election or option provided herein, or to require at any time performance by Buyer of any of the provisions herewith shall in no way be construed to be a waiver of any such provisions, or the right of Seller thereafter to enforce each and every provision.

14. **Seller**: For purposes, herein, the term "Seller" shall mean, as applicable, ZenPure (Hangzhou), Co., Ltd., ZenPure Corp. and ZenPure Americas, Inc. For purposes of Sections 8, 9 and 12, the term "Seller" shall apply to, and inure to the benefit of, the applicable Seller, and each other entity listed in this Section 14 and their respective parents, affiliates, successors and assigns. Each such other party shall be a third party beneficiary under this Agreement.

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About *ZenPure*

ZenPure Corporation was founded in November 2002, specializing in development and manufacturing of filtration and purification products and specialty membrane devices for a wide range of industries and applications.

ZenPure strives for customer satisfaction and trust by providing reliable, unique, efficient, and cost effective design, development, and manufacturing services to our customers, including OEM and private labeled products.

ZenPure Can offer filters or membrane devices of any size, fitting type, and configuration based on all types of filtration media combinations. All Products are manufactured in a Class 10,000 clean room environment with full material traceability and quality control.

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