

cobetter[®]
— filtration —



Pharmaceutical Industry

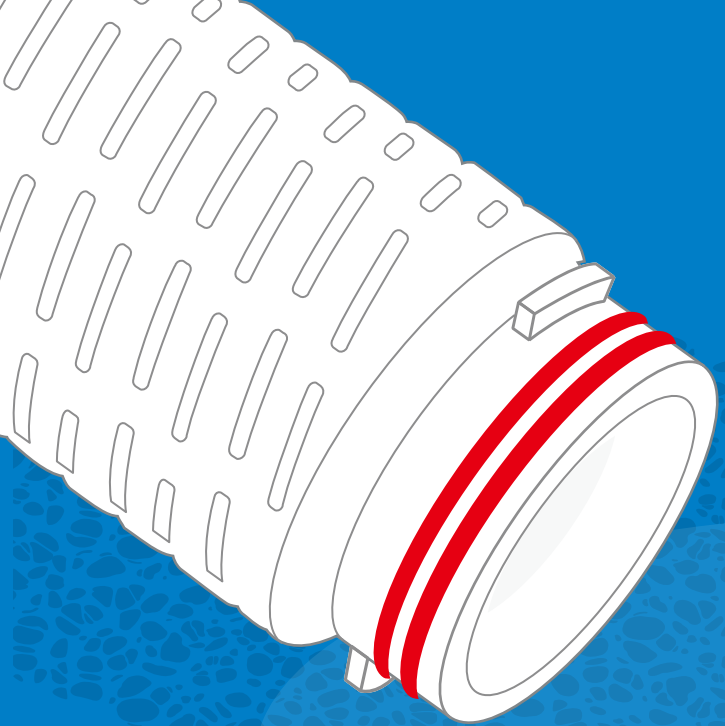
Filtration Solutions



Liquid & Gas Filtration

For Microelectronics, Pharmaceutical, Fine chemical,
Food and Beverage Industries

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Filtration Separation Purification

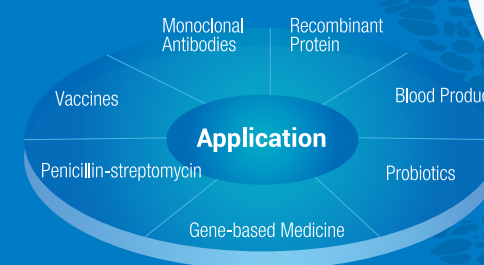
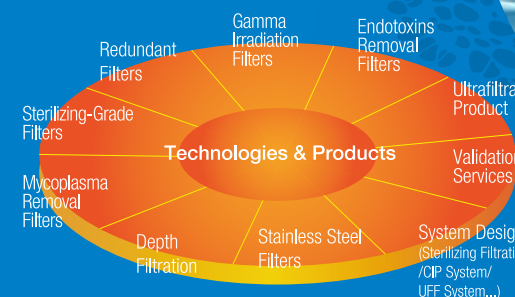


Cobetter dedicates itself to providing Filtration, Separation, & Purification

Solutions across all industries. Cobetter provides over **5,400+** technical analysis reports annually

for customers in the pharmaceutical industry and over **2,500+** technical analysis reports annually

for customers in chemical, microelectronics and life sciences industries



Membrane Manufacturing

AVL Center

Filter Manufacturing

Housing Manufacturing

C1 Factory
Membrane Filter Manufacturing
9400 SQM

C2 Factory
Depth Filter Manufacturing
9000 SQM

C3 Factory
Semiconductor & Biological Filter Manufacturing
13500 SQM

C4 Factory
Stainless Filter Manufacturing & Fluoroplastics Resurtech Manufacturing & Housing Manufacturing
28000 SQM

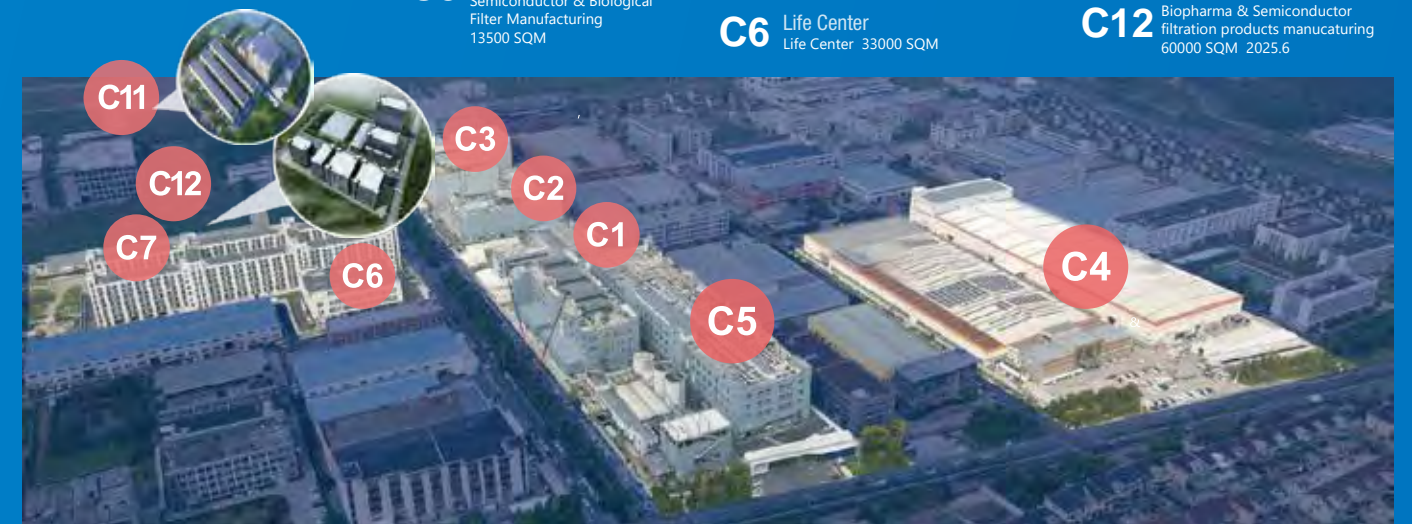
C5 Lab & Factory
AVL Center & Bio-Pharma Single-use Bag Semi-litho Filter
41,000 SQM

C6 Life Center
Life Center 33000 SQM

C7 Factory
Bio-materials Research Center
1300 SQM

C11 Semiconductor Ultra-pure water Degassing Membrane
66500 SQM, 2025

C12 Biopharma & Semiconductor filtration products manufacturing
60000 SQM 2025.6





Validation Expert
Taketomi Hidetoshi, Japanese
Previous Pall Lab Expert for
More Than 30 Years.



Advanced Japanese Quality Control Methods

Ensure that Every Product is Safe, Reliable, and Stable

Quality Assurance is based on the Quality Assurance System
- Focus on the Production Process

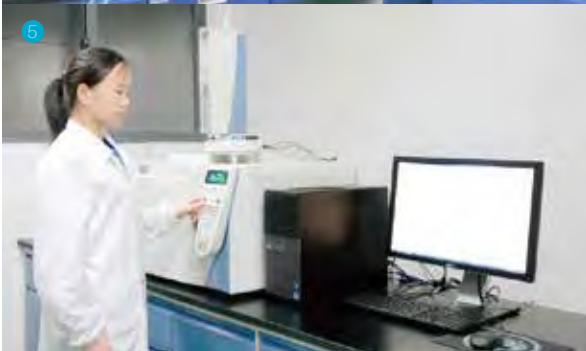
Implement 4M Quality Management Concept
- Process and System Simultaneous Completion

All Products are based on the QC Project Table
- Produced as per SOP for Stable Production



AVL Center

Accredited by China National Accreditation Service for Conformity (CNAS)
Established with an initial 31million USD investment



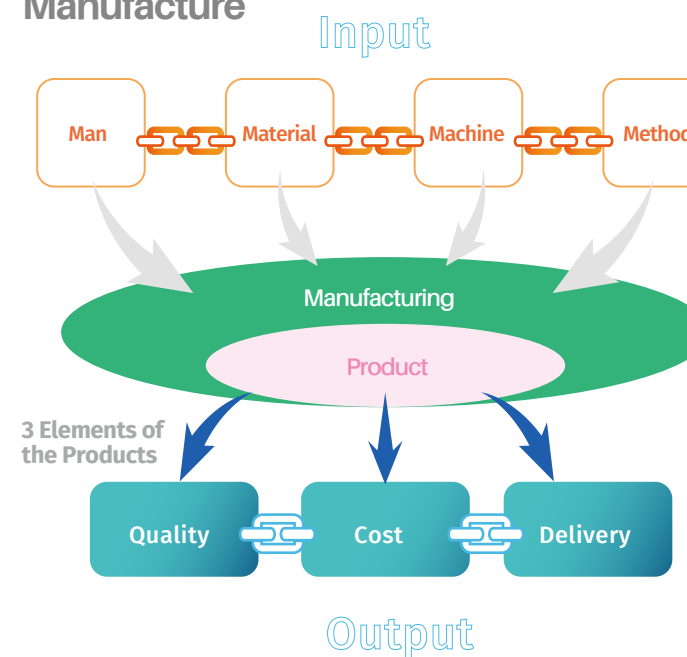
200+ Equipments
180+ SOP
300+ Engineers
Cover all the Validation Tests

Life & Science Validation Center

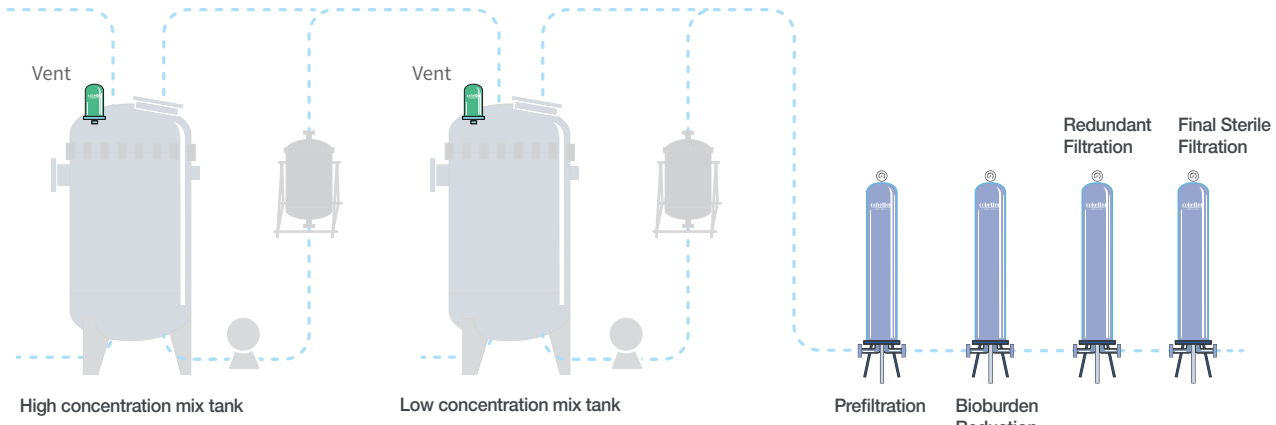
- ①⑥ **Bacterial Challenge Test** : Retention tests for Mycoplasma, B.diminuta, Serratia marcescens, lactobacillus, saccharomycetes, colibacillus and other microorganisms
- Chemical Analysis** : Extractable & Leachables , Chemical Compatibility test
- UV/PDA-HPLC** : UV/PDA scanning to determine extractables and leachables
- ④ **UPLC/MS** : Determine the nonvolatile and semivolatile of extractable & leachables quantitatively and qualitatively
- ⑤ **GC-MS** : Determine volatile/semi-volatile status of extractables and leachables quantitatively and qualitatively
- ② **IC/ICP-MS** : Analyze alkalis, halogen family, acid radicals, ammonia, and other ions quantitatively
- NVR** : Analyze non-volatile extractable from water, IPA, Acetone and other volatile solutions quantitatively
- FTIR** : Analyze polymers and oligomers in non-volatile extractable & leachables qualitatively
- ③ **SEM/EDS** : Analyze filter membrane defect, appearance, and impurities. SEM analysis of chemical compatibility

4M

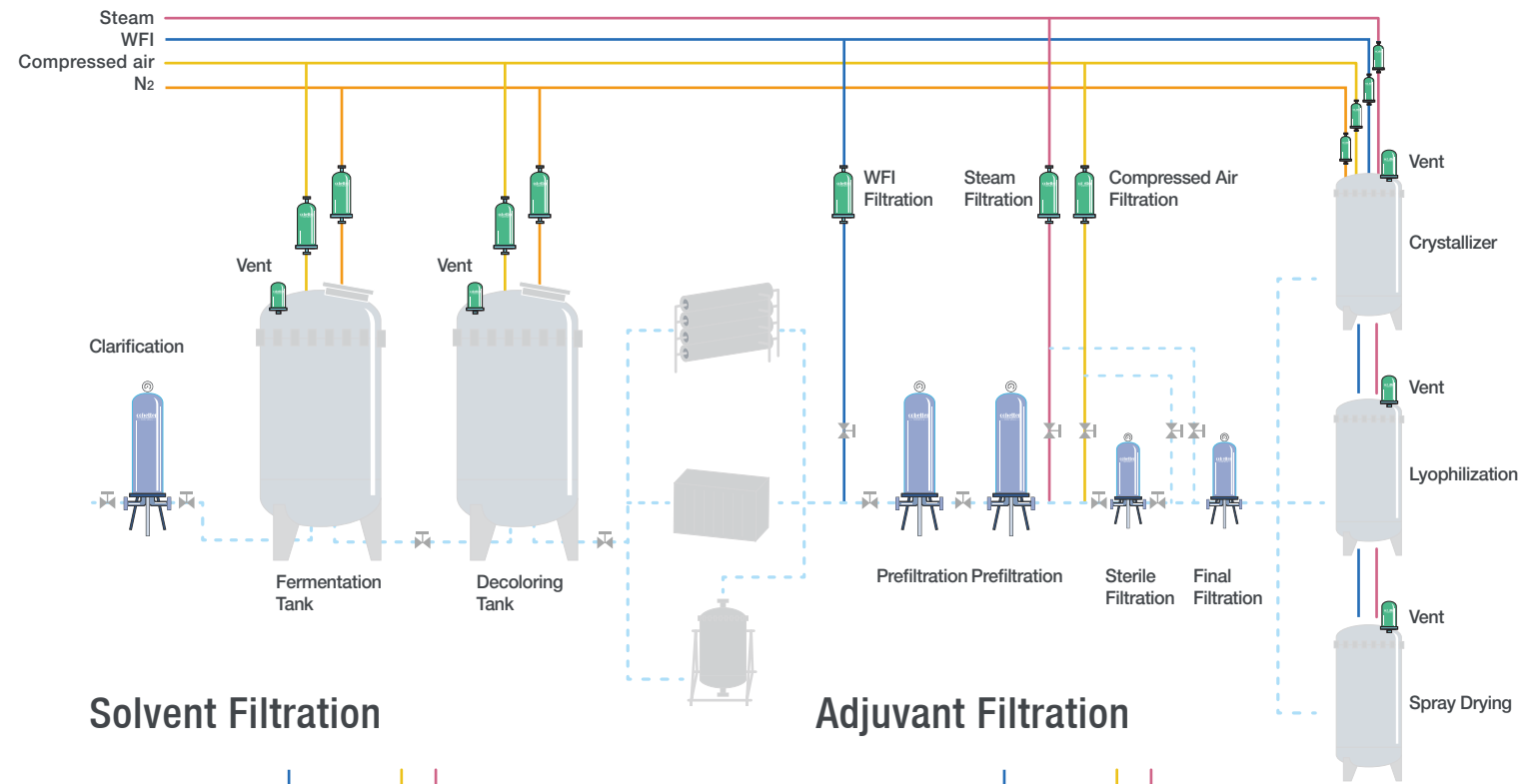
Manufacture



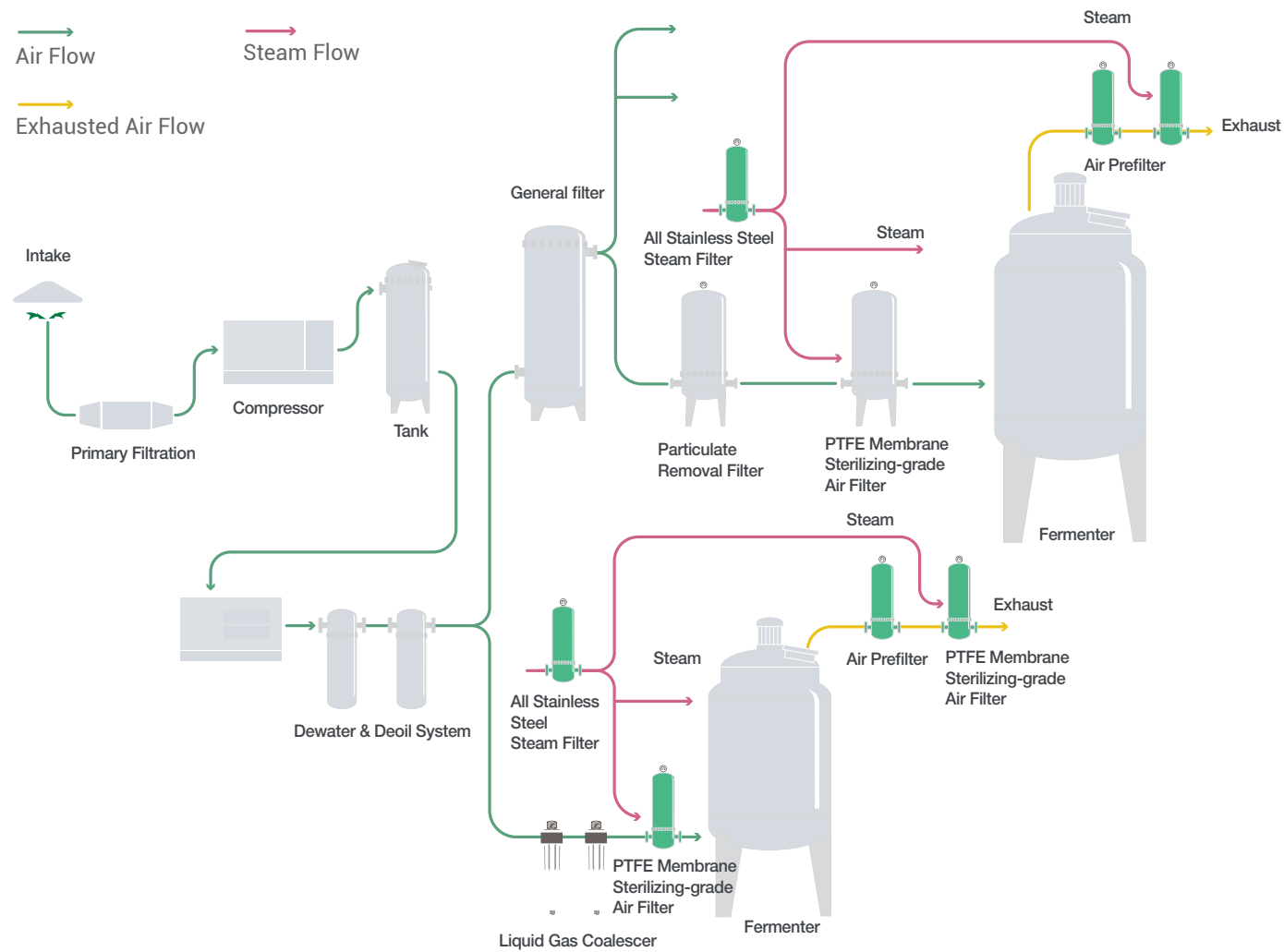
LARGE VOLUME PARENTERALS



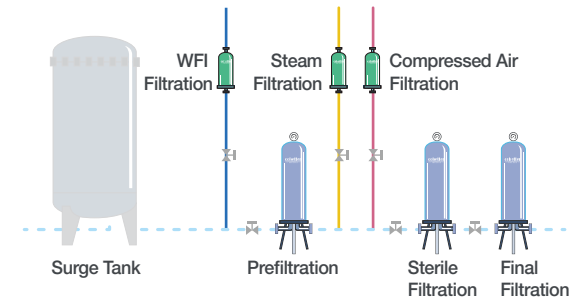
ANTIBIOTIC



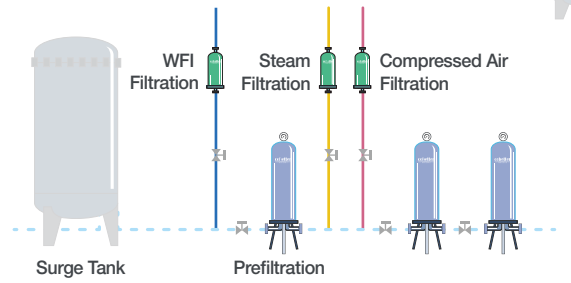
FERMENTATION GAS FILTRATION



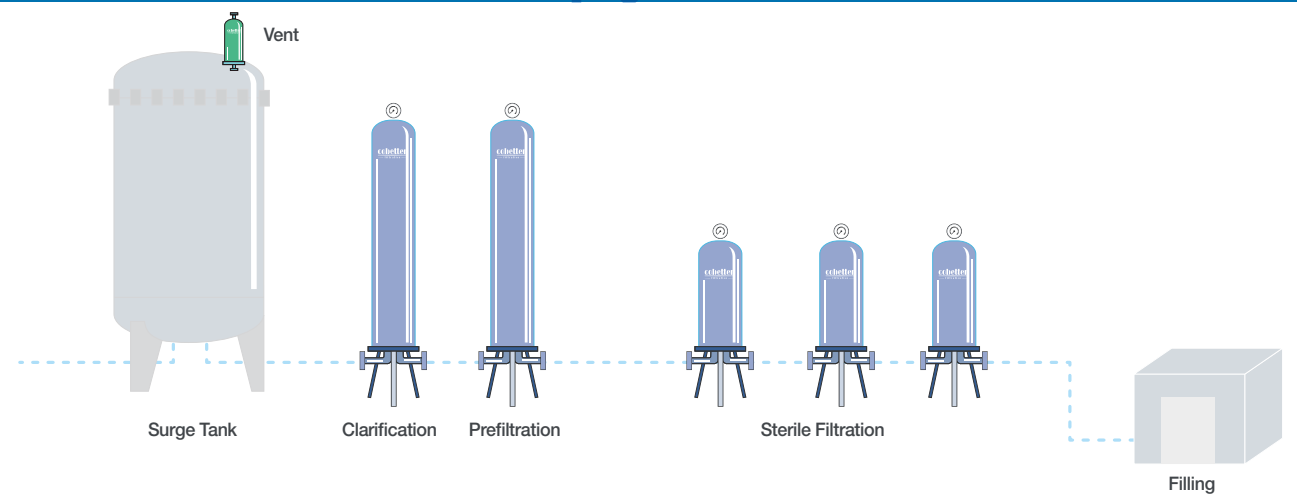
Solvent Filtration



Adjuvant Filtration



SERUM



Catalog



Super-Dura Filter Cartridges
Hydrophilic PTFE Membrane · Sterile Liquid Filter

SLHPP Series P 07
DLHPP

Duredunty Filter Cartridges
Double-layer PES Membrane · Sterile Liquid Filter

DPSDDT Series P 09

SteriPS Filter Cartridges
PES Membrane · Sterile Liquid Filter

SPSHR Series P 11

DN66PC Filter Cartridges
Positive Zeta Nylon66 Membrane · Sterile Liquid Filter

DN66PC Series P 13

DN66TC Filter Cartridges
Nylon66 Membrane · Sterile Liquid Filter

NY6TC Series P 15
DN66TC

FluoroPV Filter Cartridges
PVDF Membrane · Sterile Liquid Filter

LHPVND Series P 17
DLHPVND

LHPVHBR Filter Cartridges
Positive-Charged Zeta PVDF Membrane · Sterile Liquid Filter

LHPVHBR Series P 19
DLHPVHBR

FluoroPV Filter Cartridges
PVDF Membrane · Sterile Liquid Filter

LHPVNDR Series P 21
DLHPVNDR

TeflonFlow Filter Cartridges
Hydrophobic PTFE Membrane · Sterile Solvent Filter

LPF Series P 23

TefloGas Filter Cartridges
Hydrophobic PTFE Membrane · Sterile Gas Filter

GPFMP Series P 25
GPFP

HT TefloGas Filter Cartridges
Hydrophobic PTFE Membrane · Sterile-Grade Filter for Critical Gas Filtration

HSGPFP Series P 27

AdvanLife Filter Cartridges
PES Membrane · Bio-burden Reduction Liquid Filter

APSEA Series P 29

MultiPoly Filter Cartridges
Multi-layer Pleated Polypropylene Media · Pre-filter for Liquids

PFSA2 Series P 31

PoliFlow Filter Cartridges
Polypropylene · Pre-filter for Liquids

HPP Series P 33

Absoguard Filter Cartridges
Absolute Rated Polypropylene · Pre-filter for Liquids

APP Series P 35

H2D Filter Cartridges
Polypropylene Media · Particle Removal

H2D Series P 37

GlassFlow Filter Cartridges
Glass Fiber · Pre-filter for Liquids

LGFP Series P 39
LGFPD

GlassGas Filter Cartridges
Glass Fiber · Pre-filter for Gas

GGFP Series P 41
DGGFP

PFA Filter Cartridges
All Fluoropolymer Constructed

PFA Series P 43
PFAT

StarCaps Capsule Filter Series
Ready-to-Use Capsule Filters · From R&D to Production

Series P 45

Claricap CSD & Roheap CSD Filter
High Dirt Holding Capacity

Series P 53

Super-Dura Filter Cartridges

Hydrophilic PTFE Membrane · Sterile Liquid Filter



Super-Dura Filter Cartridges are designed for the majority of pharmaceutical liquids, but especially for solvent-containing liquids and ophthalmic solutions. These filters are composed of a hydrophilic PTFE membrane which provides excellent chemical and heat tolerance.

Features and Benefits

- Hydrophilic PTFE membrane which requires no pre-wetting
- Excellent chemical compatibility especially for solvent-containing liquids
- Minimal preservative binding in ophthalmic solutions
- Clean membrane with very low gravimetric extractable

Quality Standards

- Bacterial quantitative retention of 10^7 CFU/cm² Brevundimonas Diminuta (ATCC 19146) according to ASTM F838 methodology.
- 100% Integrity testing in manufacturing.
- Each filter is fully traceable with unique serial number.
- Manufactured in a facility which adheres to ISO 9001: 2015 Practices.
- Full Regulatory Compliance with following :
 - Bacterial Endotoxin: Aqueous extraction of autoclaved filter contains <0.25 EU/ml as determined by Limulus Amebocyte Lysate (LAL), USP<85>.
 - Non-fiber Releasing: Component materials meet the criteria for a "Non-fiber-releasing filter" as defined in 21 CFR 210.3(b)(6).
 - Component Material Toxicity: Meet the requirement of USP <87> In Vitro Cytotoxicity Test; Meet the Criteria of USP<88> Biological Reactivity Test for Class VI-121°C plastics.
 - TOC / Conductivity at 25 °C: Autoclaved filter effluent meet the USP<643> for Total Organic Carbon and USP<645> for Water Conductivity per WFI requirements after a UPW flush of specified volume.
 - Particle Shedding: Autoclaved filter effluent meet the USP<788> for large volume injections.
 - Indirect Food Additive: All component materials meet the FDA Indirect Food Additive requirements cited in 21 CFR 177-182, and EU framework regulation [1935/2004/EC].

Typical Application

- Antibiotics
- LVP & SVP
- Large Batch Solutions
- Ophthalmic Solutions
- Disinfectants and Sanitizing Agents



Materials of Construction

Filter Media	SLHPF Hydrophilic PTFE Membrane
	DLHPF Double-Layer Hydrophilic PTFE Membrane
Support	Polypropylene
Core/Cage/End Caps	Polypropylene

Operating Conditions

Max. Operating Pressure	6.9 bar (100 psi) at 25 °C 4.0 bar (58 psi) at 60 °C 2.4 bar (35 psi) at 80 °C
Max. Differential Pressure	Forward 6.9 bar (100 psi) at 25 °C 4.0 bar (58 psi) at 60 °C 2.4 bar (35 psi) at 80 °C Reverse 3.0 bar (44 psi) at 25 °C 1.0 bar (15 psi) at 80 °C
Effective Filtration Area	0.65m ² / Φ 69-10 inch

Sterilization

Inline Steam Sterilization	up to 20 cycles (135°C for 30min< 0.3 bar per cycle), SLHPF (0.22µm) up to 35 cycles (135°C for 30min< 0.3 bar per cycle), DLHPF (0.22µm)
Autoclave	up to 120 cycles (130°C for 30min per cycle), SLHPF (0.22µm) up to 120 cycles (130°C for 30min per cycle), DLHPF (0.22µm)

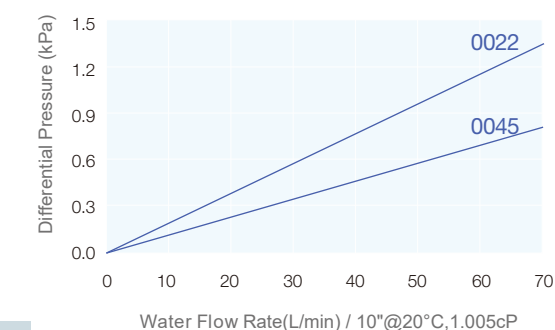
Integrity Test Data

Water Bubble Point at 20°C	BP: ≥ 3.0 bar (44psi), air, SLHPF (0.22µm) BP: ≥ 3.2 bar (46psi), air, DLHPF (0.22µm)
At Diffusion at 20°C	DF: ≤ 45 ml/min at 2.2bar (32psi) , wetted with water, SLHPF (0.22µm) DF: ≤ 30 ml/min at 2.2bar (32psi) , wetted with water, DLHPF (0.22µm)

Ordering Information

Cartridge Type	SLHPF	Removal Ratings	End Cap	Nominal Length	Seal Material	-P
blank = 69mm		0022 = 0.22µm	HSF = 226/Fin (PBT Insert)	05 = 5"	S = Silicone E = EPDM V = Viton P = FEP/ PFA encapsulated O-rings	
		0045 = 0.45µm	HSCG = 226/Flat (PBT Insert)	10 = 10"		
		0100 = 1.0µm	HTF = 222/Fin (PBT Insert)	20 = 20"		
			HTCG = 222/Flat (PBT Insert)	30 = 30"		
			DOE = Double Open End	40 = 40"		
DLHPF (Double Layer)		0022 = 0.22µm				
		0045 = 0.45µm				

Flow Rate Characteristics





Duredunty Filter Cartridges

Double-layer PES Membrane·Sterile Liquid Filter

Duredunty Filter Cartridges use a unique double-layer PES membrane which provides excellent reliability in filtration and sterilization. They are designed for the filtration of a broad range of pharmaceutical products and the removal of particles, cysts, oocysts and bacteria in aqueous filtration application, while providing superior flow rates and high particle removal efficiency when compared to other sterilizing grade filter cartridges.

Features and Benefits

- Double-layer hydrophilic PES membrane which requires no pre-wetting
- Asymmetric pre-filter layer provides longer service life and lower filtration cost
- Broad chemical compatibility (pH 1-14)
- Provides 10x the safety when compared to normal PES filters
- Design allows for multiple autoclave cycles (up to 30) and extended use

Quality Standards

- Bacterial quantitative retention of 10^7 CFU/cm² Brevundimonas Diminuta (ATCC 19146) according to ASTM F838 methodology .
- 100% Integrity testing in manufacturing .
- Each filter is fully traceable with unique serial number .
- Manufactured in a facility which adheres to ISO 9001:2015 Practices .
- Full Regulatory Compliance with following :
 - Bacterial Endotoxin: Aqueous extraction of autoclaved filter contains <0.25 EU/ml as determined by Limulus Amebocyte Lysate (LAL), USP<85>.
 - Non-fiber Releasing: Component materials meet the criteria for a "Non-fiber-releasing filter" as defined in 21 CFR 210.3(b)(6).
 - Component Material Toxicity: Meet the requirement of USP <87> In Vitro Cytotoxicity Test; Meet the Criteria of USP<88> Biological Reactivity Test for Class VI-121°C plastics.
 - TOC / Conductivity at 25 °C: Autoclaved filter effluent meet the USP<643> for Total Organic Carbon and USP<645> for Water Conductivity per WFI requirements after a UPW flush of specified volume.
 - Particle Shedding: Autoclaved filter effluent meet the USP<788>for large volume Injections.
 - Indirect Food Additive: All component materials meet the FDA Indirect Food Additive requirements cited in 21 CFR 177-182, and EU framework regulation [1935/2004/EC].

Typical Application

- Biological Vaccines
- Blood Products
- LVP and SVP
- Lyophilization Freeze-dried Powder
- Ophthalmic Solutions
- Sterile API



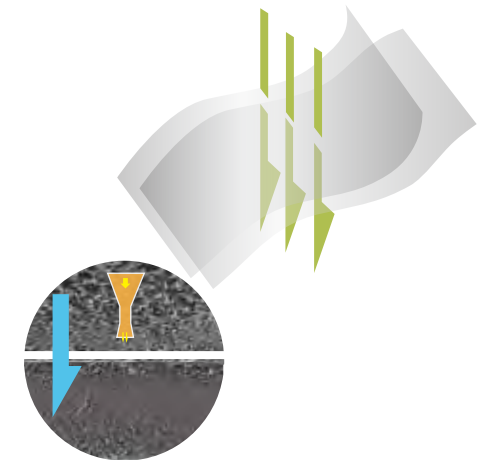
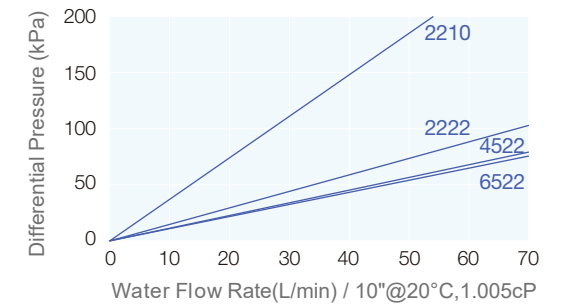
Materials of Construction

Filter Media	Double-Layer PES Membrane (Asymmetric PES + Symmetric PES)
Cage/Support	Polypropylene
Core/End Cap	Polypropylene

Operating Conditions

Max. Operating Pressure	6.9 bar (100 psi) at 25 °C 4.0 bar (58 psi) at 60 °C 2.4 bar (35 psi) at 80 °C
Max. Differential Pressure	Forward 6.9 bar (100 psi) at 25 °C 4.0 bar (58 psi) at 60 °C 2.4 bar (35 psi) at 80 °C Reverse 3.0 bar (44 psi) at 25 °C 1.0 bar (15 psi) at 80 °C
Effective Filtration Area	0.6m ² / Φ 69-10 inch

Flow Rate Characteristics



Sterilization

Inline Steam Sterilization	up to 100 cycles (135°C for 30min< 0.3 bar per cycle)
Autoclave	up to 200 cycles (130°C for 30min per cycle)

Integrity Test Data

Bubble Point	≥0.34 MPa (water) ,0.45+0.22μm
Diffusion Flow	≤25 ml/min/10" @ 0.275MPa (water),0.45+0.22μm

Ordering Information

Cartridge Type	DPSDDT	Removal Ratings	End Cap	Nominal Length	Seal Material	-P
blank	= 69mm	2210 = 0.22+0.1μm 2222 = 0.22+0.22μm 4522 = 0.45+0.22μm 6522 = 0.65+0.22μm 4545 = 0.45+0.45μm 6545 = 0.65+0.45μm	HSF = 226/Fin (PBT Insert) HSCG = 226/Flat (PBT Insert) HTF = 222/Fin (PBT Insert) HTCG = 222/Flat (PBT Insert) DOE = Double Open End	05 = 5" 10 = 10" 20 = 20" 30 = 30" 40 = 40"	S = Silicone E = EPDM V = Viton P = FEP/ PFA encapsulated O-rings	

SteriPS Filter Cartridges

PES Membrane · Sterile Liquid Filter

SteriPS Filter Cartridges are specially designed to provide a reliable sterilizing solution at an economical cost. Hydrophilic PES membrane cartridges require no pre-wetting and are ready to use. In addition, these filters provide excellent performance in pharmaceutical applications.

Features and Benefits

- Low diffusion flow
- Inherently hydrophilic PES membrane
- High surface area provides excellent flow rates and extended service life while maintaining high bacteria removal efficiency
- Low protein binding

Quality Standards

- Bacterial quantitative retention of 10^7 CFU/cm² *Brevundimonas Diminuta* (ATCC 19146) according to ASTM F838 methodology .
- 100% Integrity testing in manufacturing .
- Each filter is fully traceable with unique serial number .
- Manufactured in a facility which adheres to ISO 9001:2015 Practices .
- Full Regulatory Compliance with following:
 - Bacterial Endotoxin: Aqueous extraction of autoclaved filter contains <0.25 EU/ml as determined by Limulus Amebocyte Lysate (LAL), USP<85>.
 - Non-fiber Releasing: Component materials meet the criteria for a "Non-fiber-releasing filter" as defined in 21 CFR 210.3(b)(6).
 - Component Material Toxicity: Meet the requirement of USP <87> In Vitro Cytotoxicity Test; Meet the Criteria of USP<88> Biological Reactivity Test for Class VI-121°C plastics.
 - TOC / Conductivity at 25 °C: Autoclaved filter effluent meet the USP<643> for Total Organic Carbon and USP<645> for Water Conductivity per WFI requirements after a UPW flush of specified volume.
 - Particle Shedding: Autoclaved filter effluent meet the USP<788>for large volume Injections.
 - Indirect Food Additive: All component materials meet the FDA Indirect Food Additive requirements cited in 21 CFR 177-182, and EU framework regulation [1935/2004/EC].

Typical Applications

- Antibiotics
- LVP & SVP
- Large Batch Solutions
- Cleaning & Disinfecting Liquids



Materials of Construction

Filter Media	PES Membrane
Cage/Support	Polypropylene
Core/End Caps	Polypropylene

Operating Conditions

Max. Operating Pressure	6.9 bar (100 psi) at 25 °C 4.0 bar (58 psi) at 60 °C 2.4 bar (35 psi) at 80 °C
Max. Differential Pressure	Forward 6.9 bar (100 psi) at 25 °C 4.0 bar (58 psi) at 60 °C 2.4 bar (35 psi) at 80 °C Reverse 3.0 bar (44 psi) at 25 °C 1.0 bar (15 psi) at 80 °C
Effective Filtration Area	0.58m ² / Φ 69-10 inch

Sterilization

Inline Steam Sterilization	up to 50 cycles (135°C for 30min< 0.3 bar per cycle)
Autoclave	up to 50 cycles (130°C for 30min per cycle)

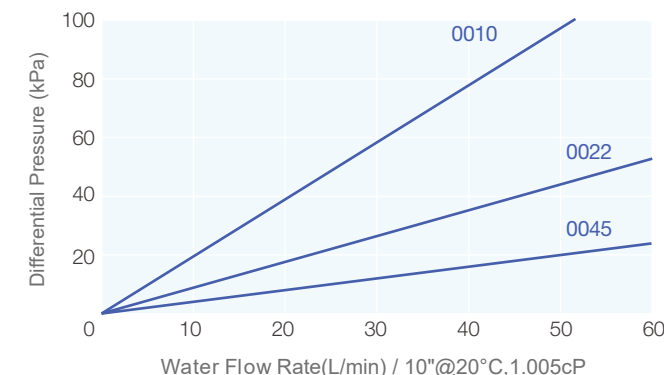
Integrity Test Data

Bubble Point	BP : ≥ 0.32 MPa (water), 0.22 μm BP : ≥ 0.20 MPa(water), 0.45 μm
Diffusion Flow	DF : ≤ 25 ml/min/10"@ 0.275 Mpa, 0.22 μm DF : ≤ 25 ml/min/10"@ 0.15 Mpa, 0.45 μm

Ordering Information

Cartridge Type	SPSHR	Removal Ratings	End Cap	Nominal Length	Seal Material	-P
blank	= 69mm	0010 = 0.10μm 0022 = 0.22μm 0045 = 0.45μm	HSF = 226/Fin (PBT Insert) HSCG = 226/Flat (PBT Insert) HTF = 222/Fin (PBT Insert) HTCG = 222/Flat (PBT Insert) DOE = Double Open End	05 = 5" 10 = 10" 20 = 20" 30 = 30" 40 = 40"	S = Silicone E = EPDM V = Viton P = FEP/ PFA encapsulated O-rings	

Flow Rate Characteristics



DN66PC Filter Cartridges

Positive Zeta Nylon66 Membrane · Sterile Liquid Filter

DN66PC Filter Cartridges are composed of an inherently hydrophilic Nylon 66 membrane. It's specifically designed for bio-burden reduction and the final filtration of a wide range of pharmaceutical and biological solutions. A modified Nylon 66 membrane with positive-charged Zeta particles is available, which provides enhanced retention of fine particles such as endotoxins.

Features and Benefits

- Inherently water wettability
- Nylon66 filter removes endotoxins through the formation of positive-charged Zeta particles
- High bubble point ensures a more reliable retention efficiency
- Low pressure drops and high flow rates
- Longer service life

Quality Standards

- Bacterial quantitative retention of 10^7 CFU/cm² Brevundimonas Diminuta (ATCC 19146) according to ASTM F838 methodology .
- 100% Integrity testing in manufacturing .
- Each filter is fully traceable with unique serial number .
- Manufactured in a facility which adheres to ISO 9001:2015 Practices .
- Full Regulatory Compliance with following :
 - Bacterial Endotoxin: Aqueous extraction of autoclaved filter contains <0.25 EU/ml as determined by Limulus Amebocyte Lysate (LAL), USP<85>.
 - Non-fiber Releasing: Component materials meet the criteria for a "Non-fiber-releasing filter" as defined in 21 CFR 210.3(b)(6).
 - Component Material Toxicity: Meet the requirement of USP <87> In Vitro Cytotoxicity Test; Meet the Criteria of USP<88> Biological Reactivity Test for Class VI-121°C plastics.
 - TOC / Conductivity at 25 °C: Autoclaved filter effluent meet the USP<643> for Total Organic Carbon and USP<645> for Water Conductivity per WFI requirements after a UPW flush of specified volume.
 - Particle Shedding: Autoclaved filter effluent meet the USP<788>for large volume Injections.
 - Indirect Food Additive: All component materials meet the FDA Indirect Food Additive requirements cited in 21 CFR 177-182, and EU framework regulation [1935/2004/EC].

Typical Application

- Buffer Solutions
- WFI
- LVP & Antibiotics



Materials of Construction

Filter Media	Nylon 66 membrane
Support	Polypropylene
Cage/Core/End Caps	Polypropylene
Adapter Internal Support	PBT
O-rings	Silicone, EPDM, Fluoroelastomer

Operating Conditions

Max. Operating Pressure	6.9 bar (100 psi) at 25 °C
	4.0 bar (58 psi) at 60 °C
	2.4 bar (35 psi) at 80 °C
Max. Differential Pressure	Forward 6.9 bar (100 psi) at 25 °C
	4.0 bar (58 psi) at 60 °C
	2.4 bar (35 psi) at 80 °C
	Reverse 3.0 bar (44 psi) at 25 °C 1.0 bar (15 psi) at 80 °C
Bubble Point	BP: ≥ 3.0 bar (44 psi), air, 0.22+0.22 / 0.45+0.22µm ≥ 1.2 bar (17 psi), air, 1.2+0.45µm
Diffusion Flow	DF: ≤ 16 mL/min at 2.75 bar (40psi), water wetted, 0.22+0.22µm ≤ 20 mL/min at 2.75 bar (40psi), water wetted, 0.45+0.22µm ≤ 18 mL/min at 1.0 bar (15psi), water wetted, 1.2+0.45µm
Effective Filtration Area	0.58m ² / Ø69-10 inch 0.22+0.22 / 0.45+0.22µm
	0.84m ² / Ø69-10 inch 1.2+0.45µm

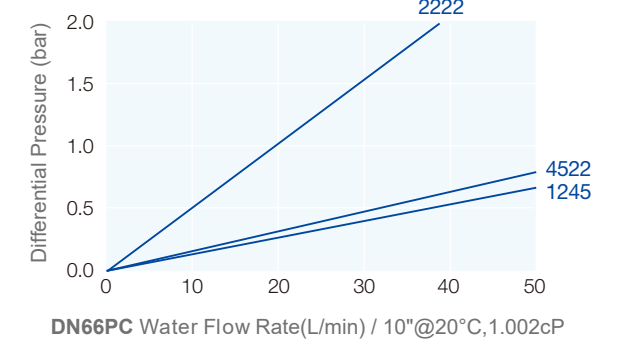
Sterilization

Inline Steam Sterilization	Up to 10 cycles (121°C for 30 min < 0.3 bar per cycle)
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Ordering Information

Cartridge Type	DN66PC	Removal Ratings	End Cap	Nominal Length	Seal Material	-P
blank = 69mm 71 = 71mm	(Single-Layer)	0022 = 0.22µm	HSF = 226/Fin (PBT Insert)	05 = 5"	S = Silicone E = EPDM V = Viton P = FEP/ PFA encapsulated O-rings	
			HSCG = 226/Flat (PBT Insert)	10 = 10"		
	(Double Layer)	2222 = 0.22+0.22µm 4522 = 0.45+0.22µm 1245 = 1.2+0.45µm	HTF = 222/Fin (PBT Insert)	20 = 20"		
			HTCG = 222/Flat (PBT Insert)	30 = 30"		
			DOE = Double Open End	40 = 40"		

Flow Rate Characteristics



DN66TC Filter Cartridges

Nylon66 Membrane · Sterile Liquid Filter

DN66TC Filter Cartridges are composed of an inherently hydrophilic Nylon 66 membrane. It's Specifically designed for bio-burden reduction and the final filtration of a wide range of pharmaceutical and biological solutions .

Features and Benefits

- Intrinsically water wettability
- Reliable Retention Efficiency
- High Flow Rates
- Extended Service Life
- Low Pressure Drops

Quality Standards

- Bacterial quantitative retention of 10^7 CFU/cm² Brevundimonas Diminuta (ATCC 19146) according to ASTM F838 methodology.
- 100% Integrity testing in manufacturing.
- Each filter is fully traceable with unique serial number.
- Manufactured in a facility which adheres to ISO 9001: 2015 Practices.
- Full Regulatory Compliance with following :
 - Bacterial Endotoxin: Aqueous extraction of autoclaved filter contains <0.25 EU/ml as determined by Limulus Amebocyte Lysate (LAL), USP<85>.
 - Non-fiber Releasing: Component materials meet the criteria for a "Non-fiber-releasing filter" as defined in 21 CFR 210.3(b)(6).
 - Component Material Toxicity:
 - Meet the requirement of USP <87> In Vitro Cytotoxicity Test;
 - Meet the Criteria of USP<88> Biological Reactivity Test for Class VI-121°C plastics.
 - TOC / Conductivity at 25 °C: Autoclaved filter effluent meet the USP<643> for Total Organic Carbon and USP<645> for Water Conductivity per WFI requirements after a UPW flush of specified volume.
 - Particle Shedding: Autoclaved filter effluent meet the USP<788> for large volume Injections.
 - Indirect Food Additive: All component materials meet the FDA Indirect Food Additive requirements cited in 21 CFR 177-182, and EU framework regulation [1935/2004/EC].

Typical Application

- Reagents ,Intermediates and Viscous Fluids
- WFI
- LVP & Antibiotics



Materials of Construction

Filter Media	Nylon 66
Support	Polypropylene
Cage/Core/End Caps	Polypropylene
Adapter Internal Support	PBT

Operating Conditions

Max. Operating Pressure	6.9 bar (100 psi) at 25 °C
	4.0 bar (58 psi) at 60 °C
	2.4 bar (35 psi) at 80 °C
Max. Differential Pressure	Forward 6.9 bar (100 psi) at 25 °C
	4.0 bar (58 psi) at 60 °C
	2.4 bar (35 psi) at 80 °C
	Reverse 3.0 bar (44 psi) at 25 °C 1.0 bar (15 psi) at 80 °C
Bubble Point	BP: ≥0.30 Mpa (Water), 0.22+0.22/0.45+0.22µm
	BP: ≥0.32 Mpa (Water), 0.22µm
	BP: ≥0.14 Mpa (Water), 0.45µm
Effective Filtration Area	0.58m ² / Ø69-10 inch DN66TC
	0.62m ² / Ø71-10 inch DN66TC
	0.68m ² / Ø69-10 inch NY6TC
	0.84m ² / Ø71-10 inch NY6TC

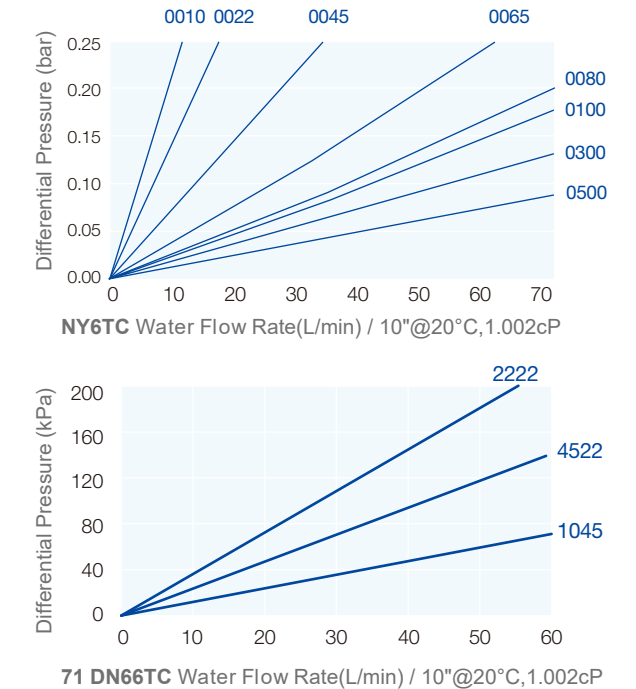
Sterilization

Inline Steam Sterilization	Up to 35 cycles (121 °C for 30 min < 0.3 bar per cycle), 0.22 /0.45µm
	Up to 50 cycles (121 °C for 30 min < 0.3 bar per cycle),0.22+0.22/0.45+0.22µm

Ordering Information

Cartridge Type	NY6TC (Single Layer)	Removal Ratings	End Cap	Nominal Length	Seal Material	-P
blank	69mm	0010 = 0.1µm	HSF = 226/Fin (PBT Insert)	05 = 5"	S = Silicone	
71	71mm	0022 = 0.22µm	HSCG = 226/Flat (PBT Insert)	10 = 10"	E = EPDM	
		0045 = 0.45µm	HTF = 222/Fin (PBT Insert)	20 = 20"	V = Viton	
		0065 = 0.65µm	HTCG = 222/Flat (PBT Insert)	30 = 30"	P = FEP/ PFA encapsulated O-rings	
		0080 = 0.8µm	DOE = Double Open End	40 = 40"		
		0100 = 1.0µm				
		0300 = 3.0µm				
		0500 = 5.0µm				
DN66TC (Double Layer)		2222 = 0.22+0.22µm				
		4522 = 0.45+0.22µm				
		1045 = 1.0+0.45µm				

Flow Rate Characteristics



FluoroPV Filter Cartridges

PVDF Membrane · Sterile Liquid Filter

FluoroPV Filter Cartridges are composed of a unique hydrophilic polyvinylidene fluoride (PVDF) membrane characterized by low extractable and protein binding. They are suitable for the sterilized filtration of pharmaceutical liquids including ophthalmic liquids, biological and other diluted preservative solutions.

Features and Benefits

- Low extractable and protein binding
- Broad chemical compatibility and temperature resistance
- Excellent durability proven by testing forward/reverse pulse up to 100x

Quality Standards

- Bacterial quantitative retention of 10^7 CFU/cm² Brevundimonas Diminuta (ATCC 19146) according to ASTM F838 methodology .
- 100% Integrity testing in manufacturing .
- Each filter is fully traceable with unique serial number .
- Manufactured in a facility which adheres to ISO 9001:2015 Practices .
- Full Regulatory Compliance with following :

- Bacterial Endotoxin: Aqueous extraction of autoclaved filter contains <0.25 EU/ml as determined by Limulus Amebocyte Lysate (LAL), USP<85>.
- Non-fiber Releasing: Component materials meet the criteria for a " Non-fiber-releasing filter " as defined in 21 CFR 210.3(b)(6).
- Component Material Toxicity: Meet the requirement of USP <87> In Vitro Cytotoxicity Test ; Meet the Criteria of USP<88> Biological Reactivity Test for Class VI-121°C plastics
- TOC/Conductivity at 25 °C: Autoclaved filter effluent meet the USP<643> for Total Organic Carbon and USP<645> for Water Conductivity per WFI requirements after a UPW flush of specified volume.
- Particle Shedding: Autoclaved filter effluent meet the USP<788>for large volume Injections .
- Indirect Food Additive: All component materials meet the FDA Indirect Food Additive requirements cited in 21 CFR 177-182.

Typical Applications

- Antibiotics
- Aggressive Solvents
- Biological Agents
- Blood Products
- Chemicals
- Cold and Hot WFI
- Ophthalmic Solutions
- Sanitizing Agents



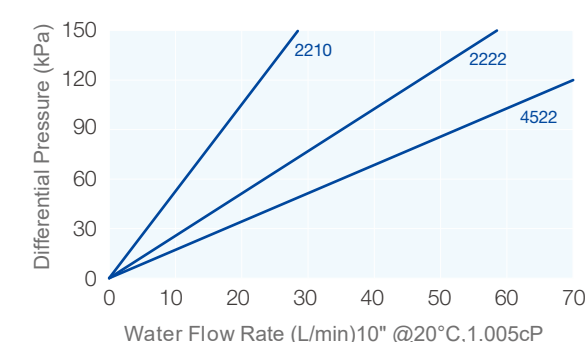
Materials of Construction

Filter Media	LHPVND: Single-Layer Hydrophilic PVDF Membrane DLHPVND: Double-Layer Hydrophilic PVDF Membrane
Support	Polypropylene
Cage/Core/End Caps	Polypropylene

Operating Conditions

Max. Operating Pressure	6.9 bar (100 psi) at 25 °C 4.0 bar (58 psi) at 60 °C 2.4 bar (35 psi) at 80 °C
Max. Differential Pressure	Forward 6.9 bar (100 psi) at 25 °C 4.0 bar (58 psi) at 60 °C 2.4 bar (35 psi) at 80 °C Reverse 3.0 bar (44 psi) at 25 °C 1.0 bar (15 psi) at 80 °C
Effective Filtration Area	0.58m ² / Φ 69-10 inch

Flow Rate Characteristics



Sterilization

Inline Steam Sterilization (LHPVND & DLHPVND)	Up to 100 forward cycles and 50 reverse cycles (135 °C for 30 min < 0.3 bar per cycle)
Autoclave (LHPVND & DLHPVND)	up to 400 cycles (130°C for 30min per cycle)

Integrity Test Data

Bubble Point	BP : ≥ 3.2 bar(water), LHPVND (0.22 μm) BP : ≥ 3.2 bar(water), DLHPVND (0.22+0.22 μm)
Diffusion Flow	DF : ≤ 20 ml/min/10"@ 2.8bar, LHPVND (0.22 μm) DF : ≤ 18 ml/min/10"@ 2.8bar, DLHPVND (0.22+0.22 μm)

Ordering Information

Cartridge Type	LHPVND	Removal Ratings	End Cap	Nominal Length	Seal Material	-P
blank = 69mm	(Single-Layer)	0010 = 0.10μm	HSF = 226/Fin (PBT Insert)	05 = 5"	S = Silicone E = EPDM V = Viton P = FEP/ PFA encapsulated O-rings	
		0022 = 0.22μm	HSCG = 226/Flat (PBT Insert)	10 = 10"		
		0045 = 0.45μm	HTF = 222/Fin (PBT Insert)	20 = 20"		
		0065 = 0.65μm	HTCG = 222/Flat (PBT Insert)	30 = 30"		
		0100 = 1.0μm	DOE = Double Open End	40 = 40"		
DLHPVND	(Double Layer)	2210 = 0.22+0.1μm				
		2222 = 0.22+0.22μm				
		4522 = 0.45+0.22μm				
		4545 = 0.45+0.45μm				
		6545 = 0.65+0.45μm				
		1045 = 1.0+0.45μm				

LHPVHBR Filter Cartridges

Positive-Charged Zeta PVDF Membrane · Sterile Liquid Filter

LHPVHBR Filter Cartridges feature a modified PVDF membrane that removes a significant level of particles and endotoxins. They are suitable for the sterilized filtration of pharmaceutical liquids including ophthalmic liquids, biological and other diluted preservative solutions.

Features and Benefits

- Low extractable and protein binding
- Modified PVDF membrane with positive-charged Zeta particles absorbs small particles and endotoxins
- Broad chemical compatibility and temperature resistance
- Excellent durability proven by testing forward/reverse pulse up to 100x

Quality Standards

- Bacterial quantitative retention of 10^7 CFU/cm² Brevundimonas Diminuta (ATCC 19146) according to ASTM F838 methodology.
- 100% Integrity testing in manufacturing.
- Each filter is fully traceable with unique serial number.
- Manufactured in a facility which adheres to ISO 9001:2015 Practices.
- Full Regulatory Compliance with following :

- Bacterial Endotoxin: Aqueous extraction of autoclaved filter contains <0.25 EU/ml as determined by Limulus Amebocyte Lysate (LAL), USP<85>.
- Non-fiber Releasing: Component materials meet the criteria for a " Non-fiber-releasing filter " as defined in 21 CFR 210.3(b)(6).
- Component Material Toxicity: Meet the requirement of USP <87> In Vitro Cytotoxicity Test ; Meet the Criteria of USP<88> Biological Reactivity Test for Class VI-121°C plastics
- TOC/Conductivity at 25°C: Autoclaved filter effluent meet the USP<643> for Total Organic Carbon and USP<645> for Water Conductivity per WFI requirements after a UPW flush of specified volume.
- Particle Shedding: Autoclaved filter effluent meet the USP<788> for large volume Injections .
- Indirect Food Additive: All component materials meet the FDA Indirect Food Additive requirements cited in 21 CFR 177-182.

Typical Applications

- Antibiotics
- Aggressive Solvents
- Biological Agents
- Blood Products
- Chemicals
- Cold and Hot WFI
- Ophthalmic Solutions
- Sanitizing Agents



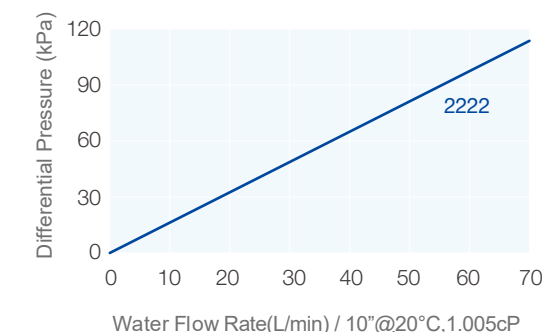
Materials of Construction

Filter Media	LHPVHBR: Single-Layer Positive-Charged Zeta PVDF Membrane DLHPVHBR: Double-Layer Positive-Charged Zeta PVDF Membrane
Support	Polypropylene
Cage/Core/End Caps	Polypropylene

Operating Conditions

Max. Operating Pressure	6.9 bar (100 psi) at 25 °C 4.0 bar (58 psi) at 60 °C 2.4 bar (35 psi) at 80 °C
Max. Differential Pressure	Forward 6.9 bar (100 psi) at 25 °C 4.0 bar (58 psi) at 60 °C 2.4 bar (35 psi) at 80 °C Reverse 3.0 bar (44 psi) at 25 °C 1.0 bar (15 psi) at 80 °C
Effective Filtration Area	0.58m ² / Φ 69-10 inch

Flow Rate Characteristics



Sterilization

Inline Steam Sterilization	Up to 100 forward cycles and 50 reverse cycles (135 °C for 30 min < 0.3 bar per cycle).
Autoclave	up to 400 cycles (130°C for 30min per cycle)

Integrity Test Data

Bubble Point	BP: ≥ 0.32 MPa(water) , LHPVHBR(0.22 μm) BP: ≥ 0.32 MPa(water) , DLHPVHBR(0.45+0.22 μm)
Diffusion Flow	DP: ≤ 20.0 ml/min at 2.8bar (40psi), wetted with water LHPVHBR(0.22 μm) DP: ≤ 20.0 ml/min at 2.8bar (40psi), wetted with water DLHPVHBR(0.45+0.22 μm)

Ordering Information

Cartridge Type	LHPVHBR	Removal Ratings	End Cap	Nominal Length	Seal Material	-P
blank = 69mm	(Single-Layer)	0022=0.22μm	HSF = 226/Fin (PBT Insert)	05 = 5"	S = Silicone E = EPDM V = Viton P = FEP/ PFA encapsulated O-rings	
		0045= 0.45μm	HSCG = 226/Flat (PBT Insert) HTF = 222/Fin (PBT Insert) HTCG = 222/Flat (PBT Insert) DOE = Double Open End	10 = 10" 20 = 20" 30 = 30" 40 = 40"		
DLHPVHBR	4522 = 0.45+0.22μm	(Double-Layer)				

FluoroPV Filter Cartridges

PVDF Membrane · Sterile Liquid Filter

FluoroPV Filter Cartridges are composed of a unique hydrophilic polyvinylidene fluoride (PVDF) membrane characterized by low extractable and protein binding. They are suitable for the sterilized filtration of pharmaceutical liquids including ophthalmic liquids, biological and other diluted preservative solutions.

Features and Benefits

- Low extractable and protein binding
- Broad chemical compatibility and temperature resistance
- Excellent durability proven by testing forward/reverse pulse up to 100x

Quality Standards

- Bacterial quantitative retention of 10⁷ CFU/cm² Brevundimonas Diminuta (ATCC 19146) according to ASTM F838 methodology .
- 100% Integrity testing in manufacturing .
- Each filter is fully traceable with unique serial number .
- Manufactured in a facility which adheres to ISO 9001:2015 Practices .
- Full Regulatory Compliance with following :

- Bacterial Endotoxin: Aqueous extraction of autoclaved filter contains <0.25 EU/ml as determined by Limulus Amebocyte Lysate (LAL), USP<85>.
- Non-fiber Releasing: Component materials meet the criteria for a " Non-fiber-releasing filter " as defined in 21 CFR 210.3(b)(6).
- Component Material Toxicity: Meet the requirement of USP <87> In Vitro Cytotoxicity Test ; Meet the Criteria of USP<88> Biological Reactivity Test for Class VI-121°C plastics
- TOC/Conductivity at 25 °C: Autoclaved filter effluent meet the USP<643> for Total Organic Carbon and USP<645> for Water Conductivity per WFI requirements after a UPW flush of specified volume.
- Particle Shedding: Autoclaved filter effluent meet the USP<788>for large volume Injections .
- Indirect Food Additive: All component materials meet the FDA Indirect Food Additive requirements cited in 21 CFR 177-182.

Typical Applications

- Antibiotics
- Aggressive Solvents
- Biological Agents
- Blood Products
- Chemicals
- Cold and Hot WFI
- Ophthalmic Solutions
- Sanitizing Agents



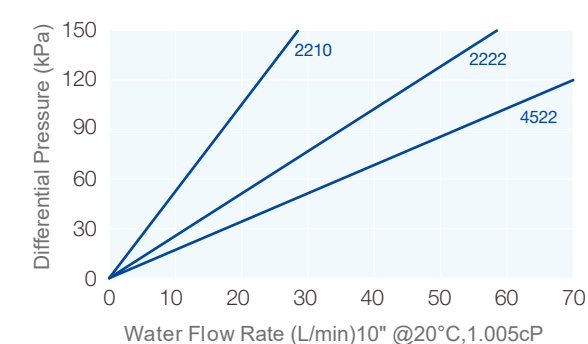
Materials of Construction

Filter Media	LHPVND: Single-Layer Hydrophilic PVDF Membrane DLHPVND: Double-Layer Hydrophilic PVDF Membrane
Support	Polypropylene
Cage/Core/End Caps	Polypropylene

Operating Conditions

Max. Operating Pressure	6.9 bar (100 psi) at 25 °C 4.0 bar (58 psi) at 60 °C 2.4 bar (35 psi) at 80 °C
Max. Differential Pressure	Forward 6.9 bar (100 psi) at 25 °C 4.0 bar (58 psi) at 60 °C 2.4 bar (35 psi) at 80 °C Reverse 3.0 bar (44 psi) at 25 °C 1.0 bar (15 psi) at 80 °C
Effective Filtration Area	0.58m ² / Φ 69-10 inch

Flow Rate Characteristics



Sterilization

Inline Steam Sterilization (LHPVND & DLHPVND)	Up to 100 forward cycles and 50 reverse cycles (135 °C for 30 min < 0.3 bar per cycle)
Autoclave (LHPVND & DLHPVND)	up to 400 cycles (130°C for 30min per cycle)

Integrity Test Data

Bubble Point	BP : ≥ 3.2 bar(water), LHPVND (0.22 μm) BP : ≥ 3.2 bar(water), DLHPVND (0.22+0.22μm)
Diffusion Flow	DF : ≤ 20 ml/min/10"@ 0.28 MPa, LHPVND (0.22 μm) DF : ≤ 18 ml/min/10"@ 0.28 MPa, DLHPVND (0.22+0.22 μm)

Ordering Information

Cartridge Type	LHPVND	Removal Ratings	End Cap	Nominal Length	Seal Material	-P
blank = 69mm (Single-Layer)		0010 = 0.10μm	HSF = 226/Fin (PBT Insert)	05 = 5"	S = Silicone	
		0022 = 0.22μm	HSCG = 226/Flat (PBT Insert)	10 = 10"	E = EPDM	
		0045 = 0.45μm	HTF = 222/Fin (PBT Insert)	20 = 20"	V = Viton	
		0065 = 0.65μm	HTCG = 222/Flat (PBT Insert)	30 = 30"	P = FEP/ PFA encapsulated O-rings	
		0100 = 1.0μm	DOE = Double Open End	40 = 40"		
DLHPVND (Double Layer)		2210 = 0.22+0.1μm				
		2222 = 0.22+0.22μm				
		4522 = 0.45+0.22μm				
		4545 = 0.45+0.45μm				
		6522 = 0.65+0.22μm				
	6545 = 0.65+0.45μm					
	1045 = 1.0+0.45μm					

TeflonFlow Filter Cartridges

Hydrophobic PTFE Membrane · Sterile Solvent Filter

TeflonFlow Filter Cartridges are composed of a hydrophobic PTFE membrane. Characteristics include organic & inorganic corrosion resistance and it's inherently hydrophobic nature. These filters are ideally suited for the sterile filtration of solvents and corrosive and oxidized liquids.

Features and Benefits

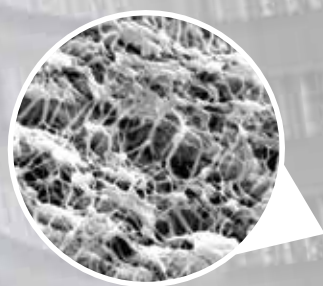
- Inherently hydrophobic
- Broad chemical compatibility
- High tolerance for aggressive acids and bases
- High flow rates
- Low extractable

Quality Standards

- Bacterial quantitative retention of 10^7 CFU/cm² Brevundimonas Diminuta (ATCC 19146) according to ASTM F838 methodology .
- 100% Integrity testing in manufacturing .
- Each filter is fully traceable with unique serial number .
- Manufactured in a facility which adheres to ISO 9001:2015 Practices
- Full Regulatory Compliance with following :
 - Bacterial Endotoxin: Aqueous extraction of autoclaved filter contains <0.25 EU/ml as determined by Limulus Amebocyte Lysate (LAL), USP<85>.
 - Non-fiber Releasing: Component materials meet the criteria for a " Non-fiber-releasing filter " as defined in 21 CFR 210.3(b)(6).
 - Component Material Toxicity :
 - Meet the requirement of USP <87> In Vitro Cytotoxicity Test ;
 - Meet the Criteria of USP<88> Biological Reactivity Test for Class VI-121°C plastics
 - TOC/Conductivity at 25°C: Autoclaved filter effluent meet the USP<643> for Total Organic Carbon and USP<645> for Water Conductivity per WFI requirements after a UPW flush of specified volume.
 - Particle Shedding: Autoclaved filter effluent meet the USP<788> for large volume Injections .
 - Indirect Food Additive: All component materials meet the FDA Indirect Food Additive requirements cited in 21 CFR 177-182 , and EU framework regulation [1935/2004/EC].

Typical Applications

- Corrosive Liquid Sterilization and Particle Removal
- Oxidized Liquids
- Solvents



Materials of Construction

Filter Media	Hydrophobic PTFE Membrane
Support	Polypropylene
Core/Cage/End Caps	Polypropylene

Operating Conditions

Max. Operating Pressure	6.9 bar (100 psi) at 25 °C 4.0 bar (58 psi) at 60 °C 2.4 bar (35 psi) at 80 °C
Max. Differential Pressure	Forward 6.9 bar (100 psi) at 25 °C 4.0 bar (58 psi) at 60 °C 2.4 bar (35 psi) at 80 °C Reverse 3.0 bar (44 psi) at 25 °C 1.0 bar (15 psi) at 80 °C
Effective Filtration Area	0.68-0.99m ² / Φ 68-10 inch

Sterilization

In-line Steam Sterilization	up to 35 forward cycles (135°C for 30min < 0.3 bar per cycle.)
Autoclave	up to 400 cycles (130°C for 30min for every cycle)

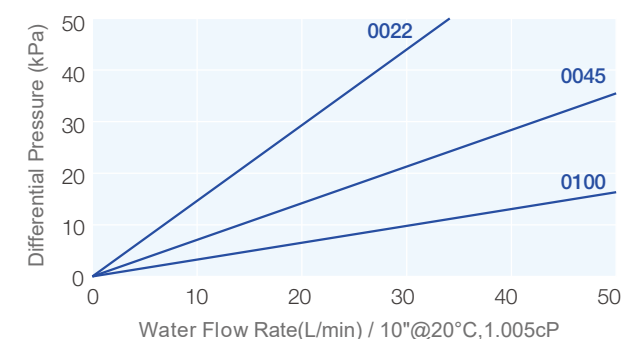
Integrity Test Data

Bubble Point	BP: ≥ 0.11Mpa (60%/40%IPA/Water), 0.22µm
Diffusion Flow	DF: ≤ 16ml/min/10"cartridge @80KPa (60%/40%IPA/Water) , 0.22µm
Water Intrusion Test	WFT : ≤ 0.38ml/min/10"cartridge @0.25MPa, 0.22µm

Ordering Information

Cartridge Type	LPF	Removal Ratings	End Cap	Nominal Length	Seal Material	-P
blank = 68mm	Y0010 = 0.1µm 0022 = 0.22µm 0045 = 0.45µm HP0022 = 0.22µm DT0100 = 1.0µm AX1000 = 10.0µm	HSF = 226/Fin (PBT Insert) HSCG = 226/Flat (PBT Insert) HTF = 222/Fin (PBT Insert) HTCG = 222/Flat (PBT Insert) DOE = Double Open End	05 = 5" 10 = 10" 20 = 20" 30 = 30" 40 = 40"	S = Silicone E = EPDM V = Viton P = FEP/ PFA encapsulated O-rings		

Flow Rate Characteristics



TefloGas Filter Cartridges

Hydrophobic PTFE Membrane · Sterile Gas Filter

TefloGas Filter Cartridges are composed of a hydrophobic PTFE membrane and a thick thermal-resistance polypropylene core. They are characterized by a high filtration area and non-metallic ion release and are easy to clean when compared to filters with a stainless steel core. As a result, they are highly recommended for air and gas sterile filtration of biological liquids and fermentation and pharmaceutical industries.

Features and Benefits

- Inherently hydrophobic
- Exceptionally high flow rates with low pressure drops

Quality Standards

- Bacterial quantitative retention of 10^7 CFU/cm² Brevundimonas Diminuta (ATCC 19146) according to ASTM F838 methodology.
- 100% Integrity testing in manufacturing.
- Each filter is fully traceable with unique serial number.
- Manufactured in a facility which adheres to ISO 9001: 2015 Practices.
- Full Regulatory Compliance with following:
 - Bacterial Endotoxin: Aqueous extraction of autoclaved filter contains <0.25 EU/ml as determined by Limulus Amebocyte Lysate (LAL), USP<85>.
 - Non-fiber Releasing: Component materials meet the criteria for a " Non-fiber-releasing filter " as defined in 21 CFR 210.3(b)(6).
 - Component Material Toxicity: Meet the requirement of USP <87> In Vitro Cytotoxicity Test ; Meet the Criteria of USP<88> Biological Reactivity Test for Class VI-121°C plastics
 - TOC/Conductivity at 25°C: Autoclaved filter effluent meet the USP<643> for Total Organic Carbon and USP<645> for Water Conductivity per WFI requirements after a UPW flush of specified volume.
 - Particle Shedding: Autoclaved filter effluent meet the USP<788> for large volume Injections .
 - Indirect Food Additive: All component materials meet the FDA Indirect Food Additive requirements cited in 21 CFR 177-182 , and EU framework regulation [1935/2004/EC].

Typical Applications

- Aseptic Packaging
- Compressed Air and Nitrogen Gas Sterilization
- Corrosive Gases Sterilization
- Vent Filtration



Materials of Construction

Filter Media	Hydrophobic PTFE Membrane
Support	Polypropylene
Core/Cage/End Caps	Polypropylene

Operating Conditions

Max. Operating Pressure	6.9 bar (100 psi) at 25 °C 4.0 bar (58 psi) at 60 °C 2.4 bar (35 psi) at 80 °C
Max. Differential Pressure	Forward 6.9 bar (100 psi) at 25 °C 4.0 bar (58 psi) at 60 °C 2.4 bar (35 psi) at 80 °C Reverse 3.0 bar (44 psi) at 25 °C 1.0 bar (15 psi) at 80 °C
Effective Filtration Area	0.68m ² / Φ 68/71-10 inch

Sterilization

In-line Steam Sterilization	Up to 100 forward cycles and 50 reverse cycles (145°C for 30min <0.3bar per cycle)
Autoclave	up to 400 cycles (130°C for 30min for every cycle)

Integrity Test Data

GPFMP

Bubble Point	BP : ≥0.1Mpa (60%/40%IPA/Water)
Diffusion Flow	DF : ≤24ml/min/10" cartridge @ 80KPa(60%/40%IPA/Water)
Water Intrusion Test	WFT : ≤0.75ml/min/10" cartridge @ 0.25MPa

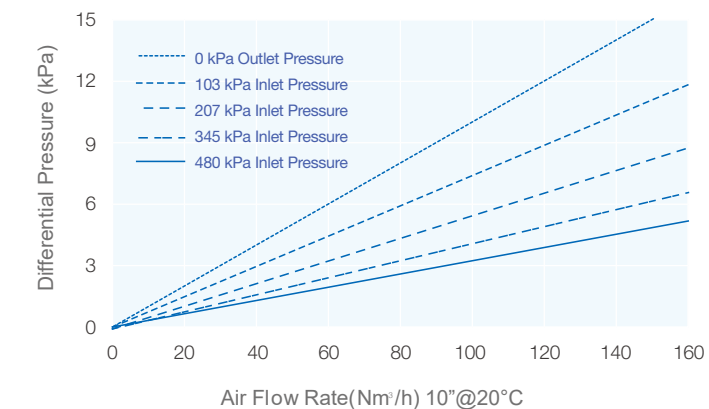
GPFP

Bubble Point	BP : ≥0.11Mpa (60%/40%IPA/Water)
Diffusion Flow	DF : ≤16ml/min/10" cartridge @ 80KPa(60%/40%IPA/Water)
Water Intrusion Test	WFT : ≤0.38ml/min/10" cartridge @ 0.25MPa

Ordering Information

Cartridge Type	GPFMP GPFP	Removal Ratings	End Cap	Nominal Length	Seal Material	-P
blank = 68mm 71 = 71mm		0001 = 0.01 μm 0022 = 0.22 μm	HSF = 226/Fin (PBT Insert) HSCG = 226/Flat (PBT Insert) HTF = 222/Fin (PBT Insert) HTCG = 222/Flat (PBT Insert) DOE = Double Open End	05 = 5" 10 = 10" 20 = 20" 30 = 30" 40 = 40"	S = Silicone E = EPDM V = Viton P = FEP/ PFA encapsulated O-rings	

Flow Rate Characteristics



HT TefloGas Filter Cartridges

Hydrophobic PTFE Membrane · Sterile-Grade Filter for Critical Gas Filtration

HT TefloGas Filter Cartridges are composed of a PTFE membrane with advanced high-temperature-resistant core and internal adaptor. They are specially designed for air, gas, and vent sterile filtration at critically high temperatures.

Features and Benefits

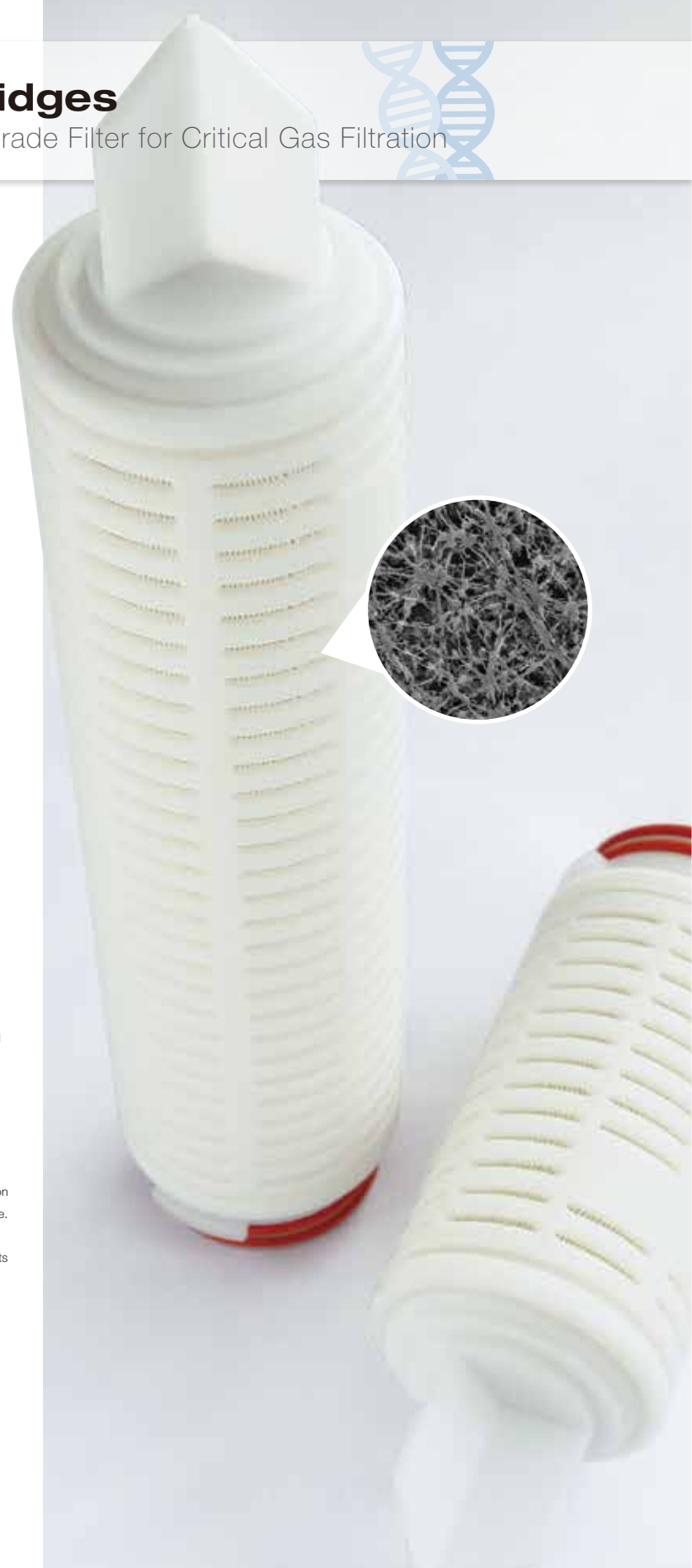
- Designed for Water Intrusion Test (requires no alcohol)
- Oxidation-resistant materials provides longer service life in high temperature air and vent applications
- Exceptionally high flow rates with low pressure drops
- Part/Serial number are laser-etched and have 2D matrix code for easy tracking
- Filter construction provides steam resistance at high temperatures

Quality Standards

- Bacterial quantitative retention of 10^7 CFU/cm² *Brevundimonas Diminuta* (ATCC 19146) according to ASTM F838 methodology .
- 100% Integrity testing in manufacturing .
- Each filter is fully traceable with unique serial number .
- Manufactured in a facility which adheres to ISO 9001:2015 Practices .
- Full Regulatory Compliance with following :
 - Bacterial Endotoxin: Aqueous extraction of autoclaved filter contains <0.25 EU/ml as determined by Limulus Amebocyte Lysate (LAL), USP<85>.
 - Non-fiber Releasing :Component materials meet the criteria for a " Non-fiber-releasing filter " as defined in 21 CFR 210.3(b)(6).
 - Component Material Toxicity:
 - Meet the requirement of USP <87> In Vitro Cytotoxicity Test ;
 - Meet the Criteria of USP<88> Biological Reactivity Test for Class VI-121°C plastics
 - TOC/Conductivity at 25°C: Autoclaved filter effluent meet the USP<643> for Total Organic Carbon and USP<645> for Water Conductivity per WFI requirements after a UPW flush of specified volume.
 - Particle Shedding: Autoclaved filter effluent meet the USP<788>for large volume Injections.
 - Indirect Food Additive: All component materials meet the FDA Indirect Food Additive requirements cited in 21 CFR 177-182 , and EU framework regulation [1935/2004/EC].

Typical Applications

- Autoclaves
- Fermented Inlet Air
- Aseptic Packaging/Blow-fill Seal (BFS)
- Hot Water for Injection (WFI) Tank Vents
- Oxygen-rich Fermented Air



Materials of Construction

Filter Media	Hydrophobic PTFE Membrane
Support/Drainage Layers	Polyphenylenesulphide (PPS)
Core/Cage/Endcaps	Polypropylene

Operating Conditions

Max. Operating Pressure	6.9 bar (100 psi) at 25 °C 4.0 bar (58 psi) at 60 °C 3.4 bar (35 psi) at 80 °C
Max. Differential Pressure	Forward 6.9 bar (100 psi) at 25 °C 4.0 bar (58 psi) at 60 °C 3.4 bar (35 psi) at 80 °C Reverse 3.0 bar (44 psi) at 25 °C 1.0 bar (15 psi) at 80 °C
Effective Filtration Area	0.68m ² / Φ 68/71-10 inch

Sterilization

In-line Steam Sterilization	Up to 100 forward cycles and 50 reverse cycles (145 °C for 30 min < 0.3 bar per cycle)
Autoclave	up to 400 cycles (130°C for 30min per cycle)

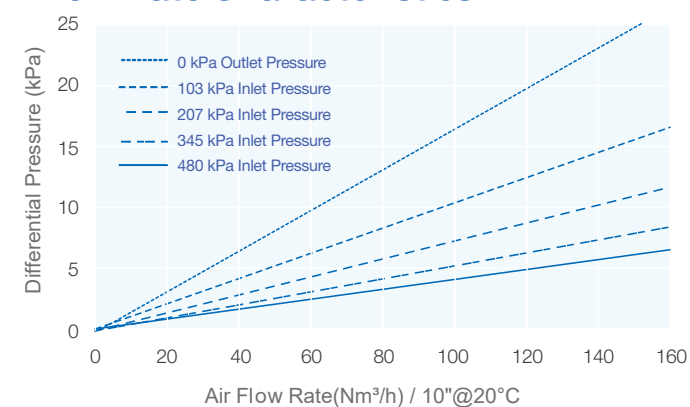
Integrity Test Data

Bubble Point	BP : ≥0.11Mpa (60%/40%IPA/Water), 0.01µm
Diffusion Flow	DF : ≤16ml/min/10" cartridge @ 80KPa (60%/40%IPA/Water), 0.01µm
Water Intrusion Test	WFT : ≤0.53ml/min/10" cartridge @ 0.25MPa, 0.01µm

Ordering Information

Cartridge Type	HSGPFF	Removal Ratings	End Cap	Nominal Length	Seal Material	-P
blank = 68mm		0001 = 0.01 µm	HSF = 226/Fin (PBT Insert)	05 = 5"	S = Silicone	
71 = 71mm		0022 = 0.22 µm	HSCG = 226/Flat (PBT Insert)	10 = 10"	E = EPDM	
			HTF = 222/Fin (PBT Insert)	20 = 20"	V = Viton	
			HTCG = 222/Flat (PBT Insert)	30 = 30"	P = FEP/ PFA encapsulated O-rings	
			DOE = Double Open End	40 = 40"		

Flow Rate Characteristics



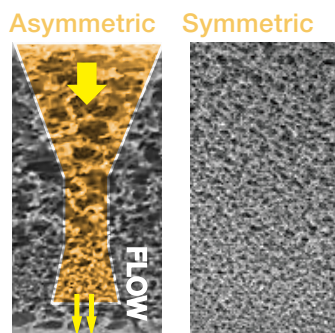
AdvanLife Filter Cartridges

PES Membrane · Bio-burden Reduction Liquid Filter

AdvanLife Filter Cartridges are constructed of a single-layer asymmetric hydrophilic PES membrane. Characteristics include excellent throughput and high dirt hold capacity and durability. These filters are recommended as a bio-burden reduction filter as it provides final stage sterilizing-grade filters with additional protection to increase its service life.

Features and Benefits

- Highly asymmetric PES membrane provides high dirt holding capacity and longer service life
- Broad chemical compatibility

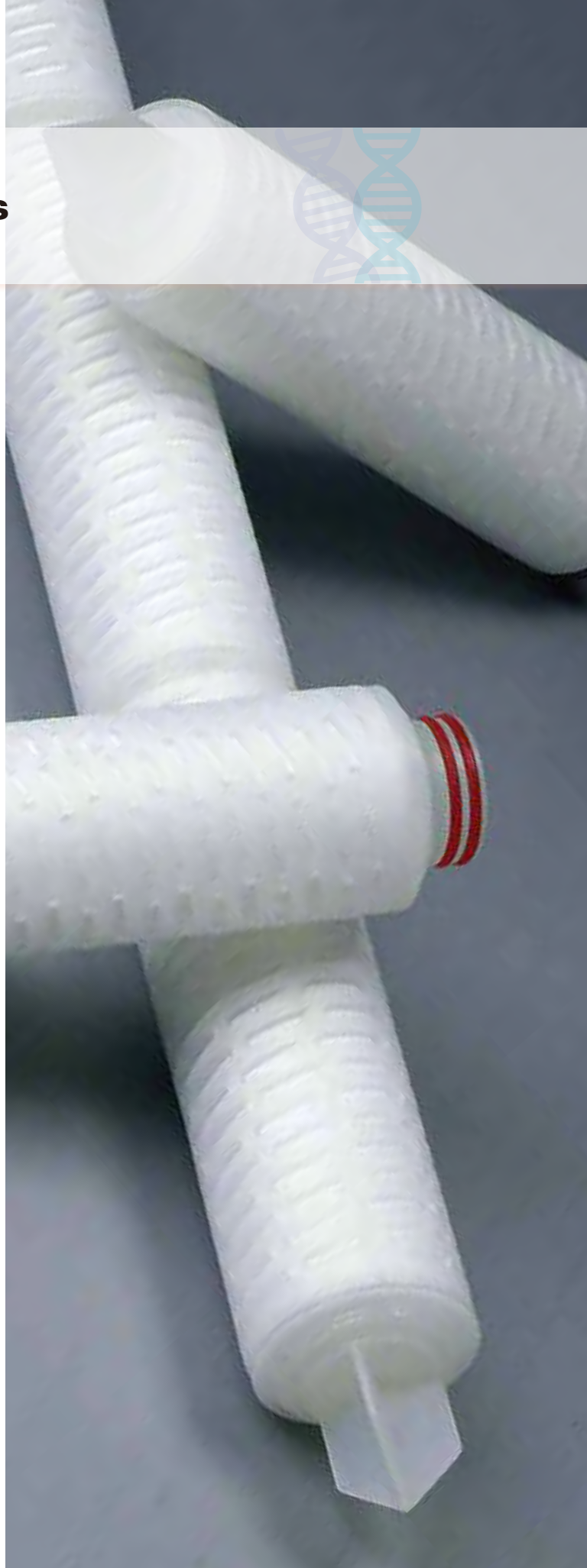


Quality Standards

- Manufactured in a facility which adheres to ISO 9001:2015 Practices .
- Full Regulatory Compliance with following :
 - Bacterial Endotoxin: Aqueous extraction of autoclaved filter contains <0.25 EU/ml as determined by Limulus Amebocyte Lysate (LAL), USP<85>.
 - Non-fiber Releasing: Component materials meet the criteria for a " Non-fiber-releasing filter " as defined in 21 CFR 210.3(b)(6).
 - Component Material Toxicity: Meet the requirement of USP <87> In Vitro Cytotoxicity Test ; Meet the Criteria of USP<88> Biological Reactivity Test for Class VI-121°C plastics
 - TOC/Conductivity at 25°C: Autoclaved filter effluent meet the USP<643> for Total Organic Carbon and USP<645> for Water Conductivity per WFI requirements after a UPW flush of specified volume.
 - Particle Shedding: Autoclaved filter effluent meet the USP<788> for large volume Injections .
 - Indirect Food Additive: All component materials meet the FDA Indirect Food Additive requirements cited in 21 CFR 177-182, and EU framework regulation [1935/2004/EC].

Applications

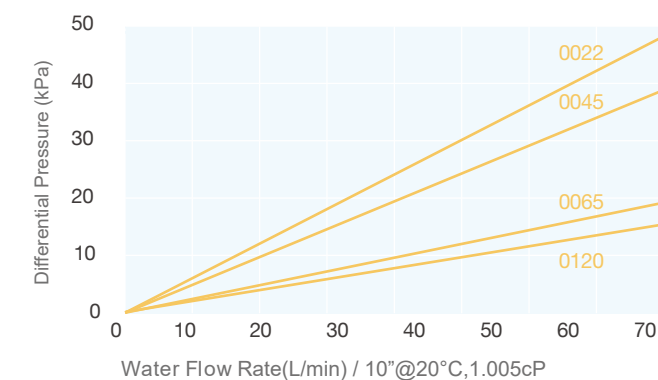
- Buffer and Culture Solutions
- Plasma, Serums, and Vaccines
- LVP
- Ophthalmic Solutions
- Water-soluble Antibiotics



Materials of Construction

Filter Medium	PES Membrane
Cage/Support	Polypropylene
Core/End Caps	Polypropylene

Flow Rate Characteristics



Operating Conditions

Max. Operating Pressure	6.9 bar (100 psi) at 25 °C 4.0 bar (58 psi) at 60 °C 2.4 bar (35 psi) at 80 °C
Max. Differential Pressure	Forward 6.9 bar (100 psi) at 25 °C 4.0 bar (58 psi) at 60 °C 2.4 bar (35 psi) at 80 °C Reverse 3.0 bar (44 psi) at 25 °C 1.0 bar (15 psi) at 80 °C
Effective Filtration Area	0.66m ² / Φ 69-10 inch

Sterilization

Inline Steam Sterilization	up to 100 cycles (135°C for 30min< 0.3 bar per cycle)
Autoclave	up to 200 cycles (130°C for 30min per cycle)

Integrity Test Data

Bubble Point at 20°C	BP: ≥ 1.1 bar (16psi) in 60% IPA 40% water, air
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Ordering Information

Cartridge Type	APSEA	Removal Ratings	End Cap	Nominal Length	Seal Material	-P
blank = 69mm		0022 = 0.22µm 0045 = 0.45µm 0065 = 0.65µm 0100 = 1.0µm 0120 = 1.2µm	HSF = 226/Fin (PBT Insert) HSCG = 226/Flat (PBT Insert) HTF = 222/Fin (PBT Insert) HTCG = 222/Flat (PBT Insert) DOE = Double Open End	05 = 5" 10 = 10" 20 = 20" 30 = 30" 40 = 40"	S = Silicone E = EPDM V = Viton P = FEP/ PFA encapsulated O-rings	

MultiPoly Filter Cartridges

Multi-layer Pleated Polypropylene Media · Pre-filter for Liquids

MultiPoly Filter Cartridges are composed entirely of pleated polypropylene. Characteristics of the depth filter design include graded pore size and high dirt holding capacity which eliminates high viscosity contaminants (including gels and agglomerates) and avoids filter surface jams. The graded pore size distribution from coarse (upstream) to fine (downstream) removes particles gradually and extends the filter's service life making it especially suited for high suspended particulates, colloids, and viscous liquids.

Features and Benefits

- 5 to 7 layers of PP media with a graded pore size distribution enables additional particle loading and high dirt holding capacity



- Multi-layer nano fiber media provides excellent removal of contaminants including gels and agglomerates
- Polypropylene construction yields excellent chemical compatibility

Quality Standards

- Manufactured in a facility which adheres to ISO 9001:2015 Practices.
- Full Regulatory Compliance with following :
 - Bacterial Endotoxin: Aqueous extraction of autoclaved filter contains <0.25 EU/ml as determined by Limulus Amebocyte Lysate (LAL), USP<85>.
 - Non-fiber Releasing: Component materials meet the criteria for a " Non-fiber-releasing filter " as defined in 21 CFR 210.3(b)(6).
 - Component Material Toxicity :
 - Meet the requirement of USP <87> In Vitro Cytotoxicity Test ;
 - Meet the Criteria of USP<88> Biological Reactivity Test for Class VI-121°C plastics
 - TOC/Conductivity at 25°C: Autoclaved filter effluent meet the USP<643> for Total Organic Carbon and USP<645> for Water Conductivity per WFI requirements after a UPW flush of specified volume.
 - Particle Shedding: Autoclaved filter effluent meet the USP<788> for large volume Injections.
 - Indirect Food Additive: All component materials meet the FDA Indirect Food Additive requirements cited in 21 CFR 177-182 ,and EU framework regulation [1935/2004/EC].

Typical Applications

- Culture Medium
- Fermentation Broths
- Gel Materials
- High Viscosity Materials
- Serums



Materials of Construction

Filter Media	Multi-Layer Nano Fiber Polypropylene
Support	Polypropylene
Core/Cage/End Caps	Polypropylene

Operating Conditions

Max. Operating Pressure	6.9 bar (100 psi) at 25 °C 4.0 bar (58 psi) at 60 °C 2.4 bar (35 psi) at 80 °C
Max. Differential Pressure	Forward 6.9 bar (100 psi) at 25 °C 4.0 bar (58 psi) at 60 °C 2.4 bar (35 psi) at 80 °C Reverse 3.0 bar (44 psi) at 25 °C 1.0 bar (15 psi) at 80 °C
Effective Filtration Area	0.26-0.29m ² / Φ 68-10 inch-Layer

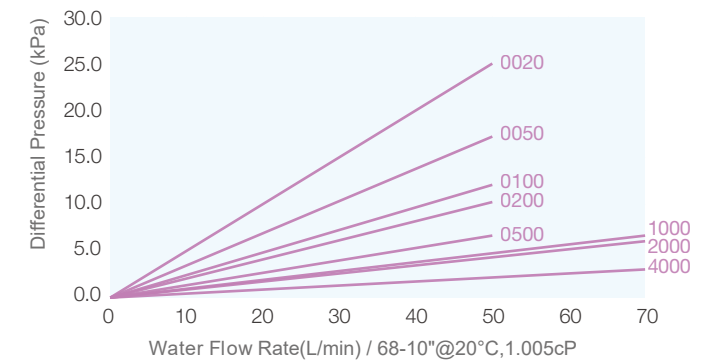
Sterilization

Inline Steam Sterilization	up to 20 cycles (125°C for 30min< 0.3 bar per cycle)
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Ordering Information

Cartridge Type	PFSA2	Removal Ratings	End Cap	Nominal Length	Seal Material	-P
blank = 68mm		0020 = 0.2µm	HSF = 226/Fin (PBT Insert)	05 = 5"	S = Silicone	
71 = 71mm		0050 = 0.5µm	HSCG = 226/Flat (PBT Insert)	10 = 10"	E = EPDM	
		0100 = 1.0µm	HTF = 222/Fin (PBT Insert)	20 = 20"	V = Viton	
		0200 = 2.0µm	HTCG = 222/Flat (PBT Insert)	30 = 30"	P = FEP/ PFA	
		0300 = 3.0µm	DOE = Double Open End	40 = 40"	encapsulated O-rings	
		0500 = 5.0µm				
		1000 = 10µm				
		2000 = 20µm				
		4000 = 40µm				
		7000 = 70µm				

Flow Rate Characteristics



PoliFlow Filter Cartridges

Polypropylene · Pre-filter for Liquids

PoliFlow Filter Cartridges are composed entirely of pleated polypropylene microfiber which provides great filtration performance with a low cost. Characteristics include high flow rates, dirt holding capacity, and filtration efficiency making it the ideal solution for the pre-filtration of liquids.

Features and Benefits

- High filtration efficiency
- Broad chemical compatibility makes it suitable for acids, bases, and solvents
- Pleated surface area provides superior flow rate and extended service life
- Welded design eliminates the need for adhesives which can be a contamination source
- Available in nominal ratings from 0.1µm to 25µm for precise particle removal

Quality Standards

- Manufactured in a facility which adheres to ISO 9001:2015 Practices .
- Full Regulatory Compliance with following :

- Bacterial Endotoxin: Aqueous extraction of autoclaved filter contains <0.25 EU/ml as determined by Limulus Amebocyte Lysate (LAL), USP<85>.
- Non-fiber Releasing: Component materials meet the criteria for a " Non-fiber-releasing filter " as defined in 21 CFR 210.3(b)(6).
- Component Material Toxicity:
 - Meet the requirement of USP <87> In Vitro Cytotoxicity Test;
 - Meet the Criteria of USP<88> Biological Reactivity Test for Class VI-121°C plastics
- TOC/Conductivity at 25°C: Autoclaved filter effluent meet the USP<643> for Total Organic Carbon and USP<645> for Water Conductivity per WFI requirements after a UPW flush of specified volume.
- Particle Shedding: Autoclaved filter effluent meet the USP<788> for large volume Injections .
- Indirect Food Additive: All component materials meet the FDA Indirect Food Additive requirements cited in 21 CFR 177-182, and EU framework regulation [1935/2004/EC].

Typical Applications

- Biological Products
- Fermentation Liquids
- Infusion Solutions
- Process Water
- RO Water



Materials of Construction

Filter Media	Polypropylene
Support	Polypropylene
Core/Cage/End Caps	Polypropylene

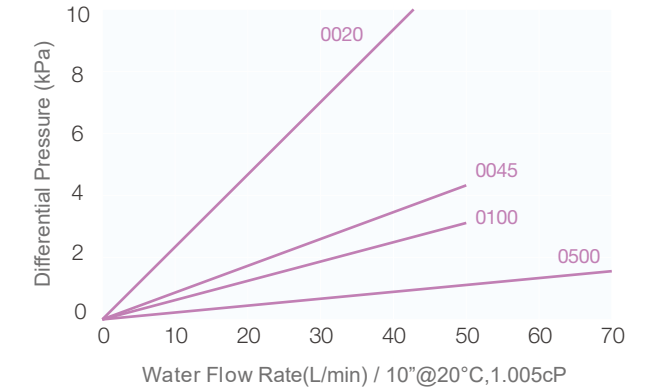
Operating Conditions

Max. Operating Pressure	6.9 bar (100 psi) at 25 °C 4.0 bar (58 psi) at 60 °C 2.4 bar (35 psi) at 80 °C
Max. Differential Pressure	Forward 6.9 bar (100 psi) at 25 °C 4.0 bar (58 psi) at 60 °C 2.4 bar (35 psi) at 80 °C Reverse 3.0 bar (44 psi) at 25 °C 1.0 bar (15 psi) at 80 °C
Effective Filtration Area	0.48-0.63m ² / Ø 68/71-10 inch

Sterilization

Inline Steam Sterilization Up to 20 cycles (125°C for 30 min < 0.3 bar per cycle)

Flow Rate Characteristics



Ordering Information

Cartridge Type	HPP	Removal Ratings	End Cap	Nominal Length	Seal Material	-P
blank = 68mm		0020 = 0.2µm	HSF = 226/Fin (PBT Insert)	05 = 5"	S = Silicone	
71 = 71mm		0045 = 0.45µm	HSCG = 226/Flat (PBT Insert)	10 = 10"	E = EPDM	
		0100 = 1.0µm	HTF = 222/Fin (PBT Insert)	20 = 20"	V = Viton	
		0300 = 3.0µm	HTCG = 222/Flat (PBT Insert)	30 = 30"	P = FEP/ PFA	
		0500 = 5.0µm	DOE = Double Open End	40 = 40"	encapsulated	
		1000 = 10µm			O-rings	
		2000 = 20µm				

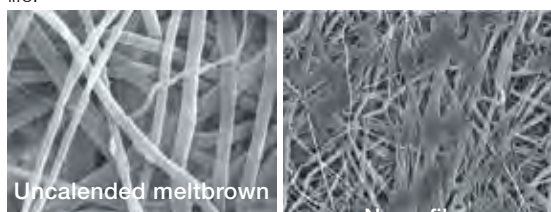
Absoguard Filter Cartridges

Absolute Rated Polypropylene-Pre-filter for Liquids

Absoguard Filter Cartridges are composed of a polypropylene membrane. Characteristics include absolute-rated membrane with high dirt holding capacity, long service life, and extremely high flow rates. They provide efficient retention of particles in critical applications.

Features and Benefits

- Pleated surface provides superior flow rate and extended service life.



- Nano fiber media provides excellent particle retention and filtration performance
- 100% all polypropylene construction provides wide chemical compatibility

Quality Standards

- Manufactured in a facility which adheres to ISO 9001:2015 Practices .
- Full Regulatory Compliance with following :
 - Bacterial Endotoxin: Aqueous extraction of autoclaved filter contains <0.25 EU/ml as determined by Limulus Amebocyte Lysate (LAL), USP<85>.
 - Non-fiber Releasing: Component materials meet the criteria for a " Non-fiber-releasing filter " as defined in 21 CFR 210.3(b)(6).
 - Component Material Toxicity:
 - Meet the requirement of USP <87> In Vitro Cytotoxicity Test;
 - Meet the Criteria of USP<88> Biological Reactivity Test for Class VI-121°C plastics
 - TOC/Conductivity at 25°C: Autoclaved filter effluent meet the USP<643> for Total Organic Carbon and USP<645> for Water Conductivity per WFI requirements after a UPW flush of specified volume.
 - Particle Shedding: Autoclaved filter effluent meet the USP<788> for large volume Injections .
 - Indirect Food Additive: All component materials meet the FDA Indirect Food Additive requirements cited in 21 CFR 177-182, and EU framework regulation [1935/2004/EC].

Typical Applications

- API
- Blood Products
- Cell Cultures
- Gel Materials



Materials of Construction

Filter Media	Polypropylene
Support	Polypropylene
Core/Cage/End Caps	Polypropylene

Operating Conditions

Max. Operating Pressure	6.9 bar (100 psi) at 25 °C
	4.0 bar (58 psi) at 60 °C
	2.4 bar (35 psi) at 80 °C
Max. Differential Pressure	Forward 6.9 bar (100 psi) at 25 °C
	4.0 bar (58 psi) at 60 °C
	2.4 bar (35 psi) at 80 °C
	Reverse 3.0 bar (44 psi) at 25 °C
	1.0 bar (15 psi) at 80 °C
Effective Filtration Area	0.37-0.68m ² / Φ 68/71-10 inch

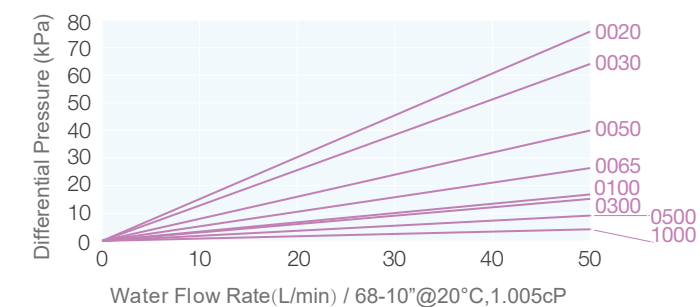
Sterilization

Inline Steam Sterilization Up to 20 cycles (125°C for 30 min < 0.3 bar per cycle)

Ordering Information

Cartridge Type	APP	Removal Ratings	End Cap	Nominal Length	Seal Material	-P
blank = 68mm		0020 = 0.2µm	HSF = 226/Fin (PBT Insert)	05 = 5"	S = Silicone	
71 = 71mm		0030 = 0.3µm	HSCG = 226/Flat (PBT Insert)	10 = 10"	E = EPDM	
		0050 = 0.5µm	HTF = 222/Fin (PBT Insert)	20 = 20"	V = Viton	
		0065 = 0.65µm	HTCG = 222/Flat (PBT Insert)	30 = 30"	P = FEP/ PFA encapsulated O-rings	
		0080 = 0.8µm	DOE = Double Open End	40 = 40"		
		0100 = 1.0µm				
		0300 = 3.0µm				
		0500 = 5.0µm				
		0600 = 6.0µm				
		1000 = 10µm				
		2000 = 20µm				

Flow Rate Characteristics



Water Flow Rate(L/min) / 68-10" @20°C, 1.005cP

H2D Filter Cartridges

Polypropylene Media · Particle Removal

Cobetter H2D Filter Cartridges are composed of high-density pleated membrane, which ensures a larger filtration area when compared to other high-density polypropylene filters. Graded pore size distribution from coarse (upstream) to fine (downstream) provides higher dirt holding capacity and longer service life.

Features and Benefits

- Large filtration area
- FDA-listed material per 21 CFR
- Low pressure drop and longer service life when compared to similar filters
- All polypropylene construction ensures chemical compatibility
- High flow rates and dirt holding capacity
- Low extractables

Quality Standards

- Bacterial quantitative retention of 10^7 CFU/cm² *Brevundimonas Diminuta* (ATCC 19146) according to ASTM F838 methodology .
- 100% Integrity testing in manufacturing .
- Each filter is fully traceable with unique serial number .
- Manufactured in a facility which adheres to ISO 9001:2015 Practices.
- Full Regulatory Compliance with following :
 - Bacterial Endotoxin: Aqueous extraction of autoclaved filter contains <0.25 EU/ml as determined by Limulus Amebocyte Lysate (LAL), USP<85>.
 - Non-fiber Releasing: Component materials meet the criteria for a "Non-fiber-releasing filter" as defined in 21 CFR 210.3(b)(6).
 - Component Material Toxicity: Meet the requirement of USP <87> In Vitro Cytotoxicity Test ; Meet the Criteria of USP<88> Biological Reactivity Test for Class VI-121°C plastics
 - TOC/Conductivity at 25°C: Autoclaved filter effluent meet the USP<643> for Total Organic Carbon and USP<645> for Water Conductivity per WFI requirements after a UPW flush of specified volume .
 - Particle Shedding: Autoclaved filter effluent meet the USP<788> for large volume injections.
 - Indirect Food Additive: All component materials meet the FDA Indirect Food Additive requirements cited in 21 CFR 177-182.

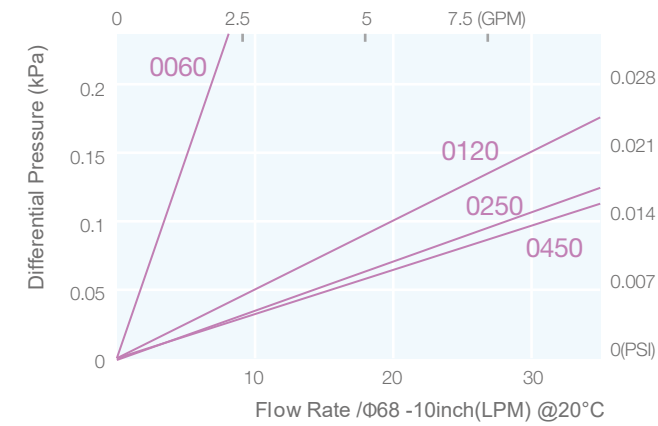
Typical Applications

- Biological Products
- Chemicals
- DI Water
- Gas Filtration
- Pharmaceuticals
- Film & Fiber



Suitable for Highly Rigid Liquid and Gas Impurities

Flow Rate Characteristics



Materials of Construction

Filter Medium	Polypropylene
Support	Polypropylene
Core/Cage/End Caps	Polypropylene
O-Rings	Refer to Ordering Information
Effective Filtration Area	0.8m ² / Ø68 -10inch

Biological Safety

Extractables	< 30mg per 10 inch
Endotoxins	< 0.25 EU/mL

Operating Conditions

Max. Temperature	80°C
Max. Differential Pressure	Forward: 0.69MPa/25°C, 0.4MPa/60°C, 0.24MPa/80°C Reverse: 0.3MPa/25°C, 30min 0.1MPa/80°C, 30min
Inline Steam Sterilization	up to 20 cycles (125°C/30min, ΔP≤30kPa)
Hot Water Sterilization	85°C / 30min

Ordering Information

Cartridge Type	H2D	Removal Rating	End Cap	Nominal Length	Seal Material	-P
blank	= 68mm	0030 = 0.3 μm	HSF = 226/Fin (PBT Insert)	05 = 5"	S = Silicone	
71	= 71mm	0060 = 0.6 μm	HSCG = 226/Flat (PBT Insert)	10 = 10"	E = EPDM	
		0080 = 0.8 μm	HTF = 222/Fin (PBT Insert)	20 = 20"	V = Viton	
		0120 = 1.2 μm	HTCG = 222/Flat (PBT Insert)	30 = 30"	P = FEP/ PFA encapsulated O-rings	
		0250 = 2.5 μm	DOE = Double Open End	40 = 40"		
		0450 = 4.5 μm				
		0600 = 6.0 μm				
		1000 = 10 μm				
		1500 = 15 μm				
		2000 = 20 μm				
		3000 = 30 μm				
		4000 = 40 μm				
		100H = 100 μm				

GlassFlow Filter Cartridges

Glass Fiber · Pre-filter for Liquids

GlassFlow Filter Cartridges are composed of super-fine glass microfiber media and polypropylene layers. This combination provides the filter with an inherently absorptive characteristic that enhances filter retention capability. Characteristics include high dirt holding capacity and excellent particle removal resulting in additional protection for sterilizing-grade filters. These filters are ideally suited in the filtration of liquids containing gels, lipids, and proteins.

Features and Benefits

- High dirt holding capacity and longer service life
- High flow rates with low pressure drops
- Glass Fiber media ensures high flow rates and excellent filtration efficiency

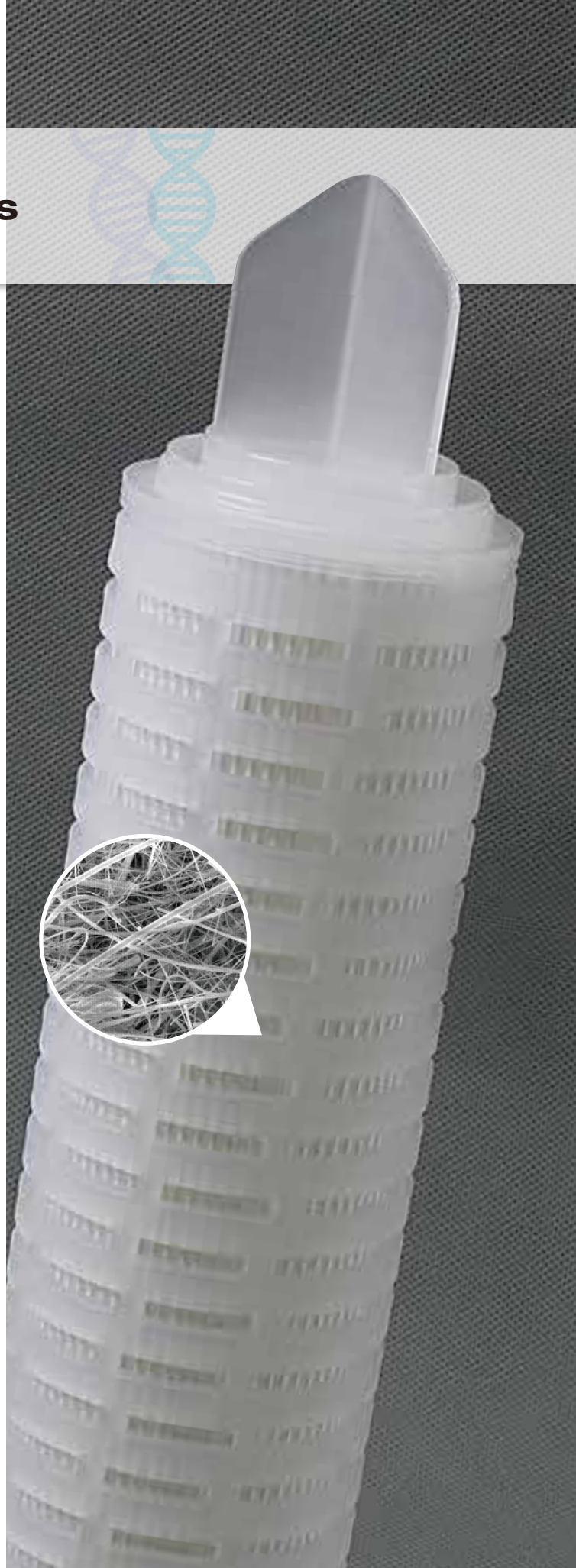
Quality Standards

- Manufactured in a facility which adheres to ISO 9001:2015 Practices .
- Full Regulatory Compliance with following :

- Bacterial Endotoxin: Aqueous extraction of autoclaved filter contains <0.25 EU/ml as determined by Limulus Amebocyte Lysate (LAL), USP<85>.
- Non-fiber Releasing: Component materials meet the criteria for a " Non-fiber-releasing filter " as defined in 21 CFR 210.3(b)(6).
- Component Material Toxicity:
 - Meet the requirement of USP <87> In Vitro Cytotoxicity Test;
 - Meet the Criteria of USP<88> Biological Reactivity Test for Class VI-121°C plastics
- TOC/Conductivity at 25°C: Autoclaved filter effluent meet the USP<643> for Total Organic Carbon and USP<645> for Water Conductivity per WFI requirements after a UPW flush of specified volume.
- Particle Shedding: Autoclaved filter effluent meet the USP<788>for large volume Injections .
- Indirect Food Additive: All component materials meet the FDA Indirect Food Additive requirements cited in 21 CFR 177-182, and EU framework regulation [1935/2004/EC].

Typical Applications

- Blood Products
- High Viscosity Liquids
- Serums



Materials of Construction

Filter Media	GlassMicrofiber
Support	Polypropylene
Core/Cage/End Caps	Polypropylene

Operating Conditions

Max. Operating Pressure	6.9 bar (100 psi) at 25 °C 4.0 bar (58 psi) at 60 °C 2.4 bar (35 psi) at 80 °C
Max. Differential Pressure	Forward 6.9 bar (100 psi) at 25 °C 4.0 bar (58 psi) at 60 °C 2.4 bar (35 psi) at 80 °C Reverse 3.0 bar (44 psi) at 25 °C 1.0 bar (15 psi) at 80 °C
Effective Filtration Area	0.28-0.31m ² / Ø 68/71-10 inch

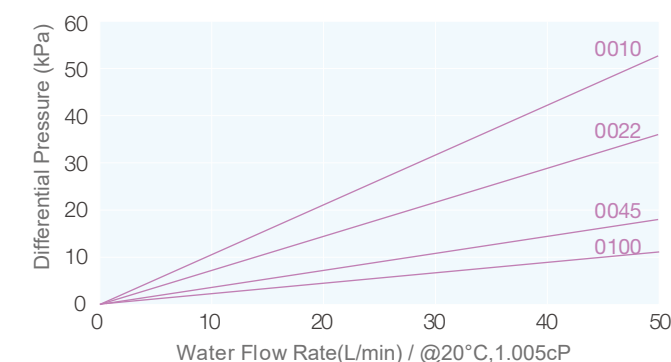
Sterilization

Inline Steam Sterilization up to 20 cycles (121°C for 30min< 0.3 bar per cycle)

Ordering Information

Cartridge Type	LGFP	Removal Ratings	End Cap	Nominal Length	Seal Material	-P
blank = 68mm		0020 = 0.2µm	HSF = 226/Fin (PBT Insert)	05 = 5"	S = Silicone	
71 = 71mm		0045 = 0.45µm	HSCG = 226/Flat (PBT Insert)	10 = 10"	E = EPDM	
			HTF = 222/Fin (PBT Insert)	20 = 20"	V = Viton	
			HTCG = 222/Flat (PBT Insert)	30 = 30"	P = FEP/ PFA	
			DOE = Double Open End	40 = 40"	encapsulated	
					O-rings	
	LGFPD	0065 = 0.65µm				
		0100 = 1.0µm				

Flow Rate Characteristics



GlassGas Filter Cartridges

Glass Fiber · Pre-filter for Gas

GlassGas Filter Cartridges are composed of super-fine glass microfiber with a dirt holding capacity over 90%. They are highly recommended for the pre-filtration of foul gases as an effective protection for the final sterilizing-grade filters to increase their service life.

Features and Benefits

- High porosity and flow rates
- High absorption and retention efficiency
- Low pressure drops

Quality Standards

- Manufactured in a facility which adheres to ISO 9001:2015 Practices .
- Full Regulatory Compliance with following :
 - Bacterial Endotoxin: Aqueous extraction of autoclaved filter contains <0.25 EU/ml as determined by Limulus Amebocyte Lysate (LAL), USP<85>.
 - Non-fiber Releasing: Component materials meet the criteria for a " Non-fiber-releasing filter " as defined in 21 CFR 210.3(b)(6).
 - Component Material Toxicity:
 - Meet the requirement of USP <87> In Vitro Cytotoxicity Test;
 - Meet the Criteria of USP<88> Biological Reactivity Test for Class VI-121°C plastics
 - TOC/Conductivity at 25°C: Autoclaved filter effluent meet the USP<643> for Total Organic Carbon and USP<645> for Water Conductivity per WFI requirements after a UPW flush of specified volume.
 - Particle Shedding: Autoclaved filter effluent meet the USP<788> for large volume Injections .
 - Indirect Food Additive: All component materials meet the FDA Indirect Food Additive requirements cited in 21 CFR 177-182, and EU framework regulation [1935/2004/EC].

Typical Applications

- Antibiotic Fermented Air
- Compressed Air
- Bio-engineered Fermented Air



Materials of Construction

Filter Media	Supre-fine Glass Microfiber
Support	Polypropylene
Core/Cage/End Caps	Polypropylene

Operating Conditions

Max. Operating Pressure	6.9 bar (100 psi) at 25 °C 4.0 bar (58 psi) at 60 °C 2.4 bar (35 psi) at 80 °C
Max. Differential Pressure	Forward 6.9 bar (100 psi) at 25 °C 4.0 bar (58 psi) at 60 °C 2.4 bar (35 psi) at 80 °C Reverse 3.0 bar (44 psi) at 25 °C 1.0 bar (15 psi) at 80 °C
Effective Filtration Area	0.34 m ² / Φ 71-10inch

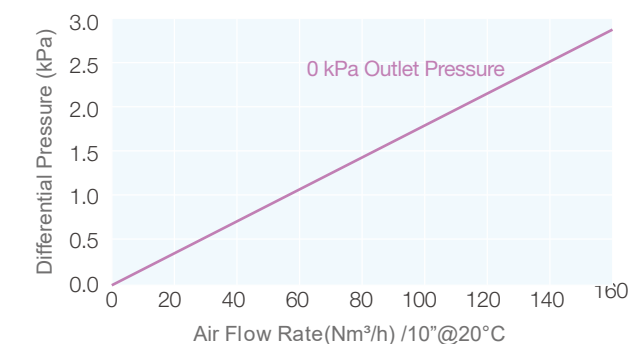
Sterilization

Inline Steam Sterilization	up to 20 cycles (121°C for 30min< 0.3 bar per cycle)
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Ordering Information

Cartridge Type	GGFP	Removal Ratings	End Cap	Nominal Length	Seal Material	-P
blank = 71mm		0050 = 0.5µm	HSF = 226/Fin (PBT Insert) HSCG = 226/Flat (PBT Insert) HTF = 222/Fin (PBT Insert)	05 = 5" 10 = 10" 20 = 20"	S = Silicone E = EPDM V = Viton	
blank = 71mm	DGGFP	0001 = 0.01µm	HTCG = 222/Flat (PBT Insert) DOE = Double Open End	30 = 30" 40 = 40"	P = FEP/ PFA encapsulated O-rings	

Flow Rate Characteristics



PFA Filter Cartridges

All Fluoropolymer Constructed

COBETTER PFA Filter Cartridges are composed of an expanded PTFE membrane and PFA cage, core and support. These filters are specially designed for applications with extremely aggressive environments including strong acids, alkalis and solvents and high temperatures.

Among this series filters, validated sterile grade is also available, named as PFA-T which is highly recommended for strict pharmaceutical applications.

Features and Benefits

- 100% all Fluoropolymer construction
- High filtration performance including high flow rates and low pressure drops
- Available in pre-wetted package if requested

Quality Standards

- Manufactured in a facility which adheres to ISO 9001:2015 Practices .
- Full Regulatory Compliance with following :
 - Bacterial Endotoxin: Aqueous extraction of autoclaved filter contains <0.25 EU/ml as determined by Limulus Amebocyte Lysate (LAL),USP<85>.
 - Non-fiber Releasing: Component materials meet the criteria for a " Non-fiber-releasing filter " as defined in 21 CFR 210.3(b)(6).
 - Component Material Toxicity:
 - Meet the requirement of USP <87> In Vitro Cytotoxicity Test ;
 - Meet the Criteria of USP<88> Biological Reactivity Test for Class VI-121°C plastics
 - TOC/Conductivity at 25°C: Autoclaved filter effluent meet the USP<643> for Total Organic Carbon and USP<645> for Water Conductivity per WFI requirements after a UPW flush of specified volume.
 - Particle Shedding: Autoclaved filter effluent meet the USP<788>for large volume injections .
 - Indirect Food Additive: All component materials meet the FDA Indirect Food Additive requirements cited in 21 CFR 177-182 ,and EU framework regulation [1935/2004/EC].

Typical Applications

- Corrosive Acids, Alkalis and Solvents
- High Temperature Applications
- Air and Liquid Oxidization



Materials of Construction

Filter Media	Expanded PTFE Membrane
Cage/Support	PFA
Core/End Caps	PFA
O-ring	PTFE/FEP Encapsulated Viton

Operating Conditions

Max. Continuous Operating Temperature	170°C
Max. Differential Pressure	4.0 bar / 50°C (forward) 3.0 bar / 110°C (forward) 1.5 bar / 170°C (forward)
Effective Filtration Area	0.88m ² / Φ 68-10 inch

Sterilization

Inline Steam Sterilization	up to 30 cycles (135°C for 30min< 0.3 bar per cycle)
Autoclaving	up to 30 cycles (130°C for 30min per cycle)

Integrity Test Data

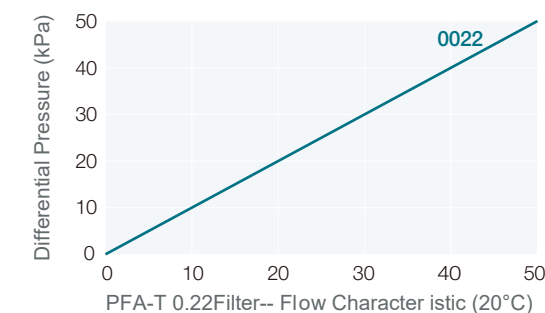
Bubble Point	BP : ≥ 0.11 MPa (60%/40%, IPA/Water), PFA-T
Water Intrusion Test	WIT : ≤ 0.38ml/min/10" @ 0.25 MPa, PFA-T

Ordering Information

Cartridge Type	PFA	Removal Ratings	End Cap	Nominal Length	Seal Material	-P
blank = 68mm	PFA	0020 = 0.2µm	TF = 222 / Fin	03 = 3"	P = PFA encapsulated viton S = Silicone E = EPDM K = All-fluoropolymer	
		0045 = 0.45µm	SF = 226 / Fin	04 = 4"		
		0100 = 1.0µm	TC = 222 / Flat	10 = 10"		
		0500 = 5.0µm	SC = 226 / Flat	20 = 20"		
		1000 = 10µm	FSSC = 226 / Flat (SS insert)			
	PFAT	0020 = 0.2µm	FSSF = 226 / Fin (SS insert)			
			FSTC = 222 / Flat (SS insert)			

- PFA-T available in 0.22µm only.
- PFA filter is not 100% integrity tested, it is designed as a pre-filter or final filter when validation and sterility guarantee are not necessary.
- Please Select the SS insert end cap if the filter will be sterilized by SIP.

Flow Rate Characteristics



Sterile Filtration

Bio-burden Reduction

Pre-Filtration

All-Fluorine Filters

Capsule Filters

Depth Filters

StarCaps Capsule Filter Series

Ready-to-Use Capsule Filters · From R&D to Production



StarCaps Capsule Filters are self-contained ready-to-use capsule filters. Available in varying sizes and filter media including depth filters, liquid sterile-grade filters and gas filters, they were developed to meet a wide range of pharmaceutical filtration requirements from R&D to Production.

StarCaps Capsule Filter Series eliminates cleaning validation requirements when compared to the traditional filter cartridge and housing combination.

Features and Benefits

- Can be used from R&D to Production
- Available in varying filter medias depending on application requirements
- Disposable filter design reduces cleaning and maintenance cost
- Thermally bonded with no adhesives or glues
- Sanitary flange and hose barb connections provide clean and easy connection

Quality Standards

- Manufactured in a facility which adheres to ISO 9001:2015 Practices.
- Full Regulatory Compliance with following :
 - Bacterial Endotoxin: Aqueous extraction of autoclaved filter contains <0.25 EU/ml as determined by Limulus Amebocyte Lysate (LAL), USP<85>.
 - Non-fiber Releasing: Component materials meet the criteria for a " Non-fiber-releasing filter " as defined in 21 CFR 210.3(b)(6).
 - Component Material Toxicity:
 - Meet the requirement of USP <87> In Vitro Cytotoxicity Test;
 - Meet the Criteria of USP<88> Biological Reactivity Test for Class VI-121°C plastics
 - TOC/Conductivity at 25°C: Autoclaved filter effluent meet the USP<643> for Total Organic Carbon and USP<645> for Water Conductivity per WFI requirements after a UPW flush of specified volume.
 - Particle Shedding: Autoclaved filter effluent meet the USP<788> for large volume Injections.
 - Indirect Food Additive: All component materials meet the FDA Indirect Food Additive requirements cited in 21 CFR 177-182, and EU framework regulation [1935/2004/EC].

Typical Applications

- Biological Fluids
- Buffer Solutions
- Chemicals
- Cleaning and Disinfecting Solutions
- Injectable Solutions
- Gas Filtration



Materials of Construction

Outer Shell	Gamma Stable Polypropylene		
Filter Media*	Membrane Media	Code	Media
		SPSHR	Symmetric PES Membrane
APSB	Asymmetric PES Membrane		
DPSDDT	Double-layer PES Membrane		
LHPVND	PVDF Membrane		
LHPVHBR	Charged PVDF Membrane		
LHPF	Hydrophilic PTFE Membrane		
GPF-P (for gas)	Hydrophobic PTFE Membrane		
LPF (for liquids)	Hydrophobic PTFE Membrane		
Depth Media	APP	Absolute-Rated Polypropylene	
	HPP	Nominal-Rated Polypropylene	
	PFSA2	Multi-layer Polypropylene	
	LGFP	Glass Fiber	
Sealing Material	Please see the Ordering Information below		
Inlet & Outlet Vent/ Drain Ports	According to Ordering Information		

* This table does not indicate all the available filtration media. For additional media options, please contact Cobetter or your Cobetter Sales Engineer.

Effective Filtration Area

Capsule	SPSHR	APSB	DPSDDT	LHPVND	LHPVNDR	DLHPVNDR	DLHPVHBR
PKZ	390cm ²	390cm ²	390cm ²	350cm ²	350cm ²	350cm ²	350cm ²
STKZ	1200cm ²	1200cm ²	1200cm ²	1200cm ²	1200cm ²	1200cm ²	1200cm ²
WSF-05	2900cm ²	2900cm ²	3000cm ²	2900cm ²	2900cm ²	2900cm ²	2900cm ²
WSF-10	5800cm ²	5800cm ²	6000cm ²	5800cm ²	5800cm ²	5800cm ²	5800cm ²
92WM	400cm ²	400cm ²	400cm ²	400cm ²	400cm ²	400cm ²	400cm ²
WM	800cm ²	800cm ²	800cm ²	800cm ²	800cm ²	800cm ²	800cm ²
195WM	1400cm ²	1400cm ²	1400cm ²	1500cm ²	1500cm ²	1500cm ²	1500cm ²
STBT1	1140cm ²	1140cm ²	1200cm ²	1140cm ²	1140cm ²	1140cm ²	1140cm ²
STBT2	2000cm ²	2000cm ²	2000cm ²	2000cm ²	2000cm ²	2000cm ²	2000cm ²

Capsule	SLHPF/DLHPF	GPF-P	LPF	APP 1.0	HPP 0.45	PFSA2 1.0	LGFP 0.45
PKZ	400cm ²	488cm ²	400cm ²	350cm ² (APP5.0)	350cm ²	200cm ²	500cm ²
STKZ	1400-1500cm ²	1600cm ²	1600cm ²	1100cm ²	1100cm ²	800cm ² (PFSA2 0.45)	600cm ² (LGFP 1.0)
WSF-05	3300cm ²	3400cm ²	3400cm ²	2600cm ²	2400cm ²	1250cm ²	1400cm ²
WSF-10	6500cm ²	6800cm ²	6800cm ²	5200cm ²	4800cm ²	2500cm ²	2800cm ²
92WM	500cm ²	900cm ²	550cm ²	400cm ²	400cm ²	1800cm ²	200cm ²
WM	950-1000cm ²	1800cm ²	1000cm ²	900cm ²	800cm ²	350cm ²	400cm ²
195WM	1700-1800cm ²	3200cm ²	2000cm ²	1600cm ²	1400cm ²	600cm ²	750cm ²
STBT1	1400-1500cm ²	1600cm ²	1600cm ²	1000cm ²	1100cm ²	500cm ²	500cm ² (LGFP 1.0)
STBT2	2200-2650cm ²	2850cm ²	2550cm ²	1800cm ²	1800cm ²	900cm ²	900cm ² (LGFP 1.0)

Operating Conditions

Max. Continuous Operating Temperature	40°C
Max. Differential Pressure	5.0 bar / 20°C (forward)

* Sterile-grade Capsule Filters are Integrity Tested. Please contact your Cobetter Sales Engineer for the Integrity Test Data related to your sterile-grade filter
 ** Please contact your Cobetter Sales Engineer to received specific information regarding sterilization options.

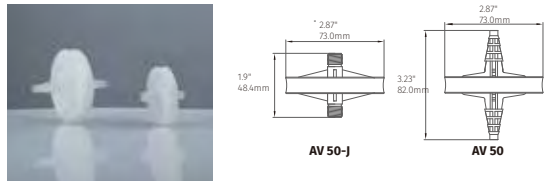
Dimensions

	AV 50 Series	PKZ Capsule	STKZ Capsule	STBT1 Capsule	STBT2 Capsule
Filter Media	PP / PTFE	PES / PTFE / PP / Nylon / PVDF / PP	PP / PTFE / PES / N66	PP / PTFE / PES / N66	PP / PTFE / PES / N66
Other Construction	PP	PP	PP	PP	PP
Dimensions	AV50 Length: 82mm Diameter: Φ73mm AV50-J Length: 48mm Diameter: Φ73mm	Length: 119mm Diameter: Φ94.5mm	Length: 6.3"(161mm) Diameter: Φ2.7"(69.5mm)~Φ2.9"(74mm)	Length: 5.7"(145mm) Diameter: Φ 2.7"(69.5mm)~Φ 2.9"(74mm)	Length: 7.6"(192mm) Diameter: Φ 2.7"(69.5mm)~Φ 2.9"(74mm)
Endcap Configuration	AV50 Inlet/Outlet: 1/4"-1/2"Hose Barb AV50-J Inlet/Outlet: 1/4"Jaco	Inlet / Outlet 1"Sanitary Flange	Inlet / Outlet 1"Sanitary Flange	Inlet / Outlet 1/2" Stepped Hose Barb	Inlet / Outlet 1/2" Stepped Hose Barb

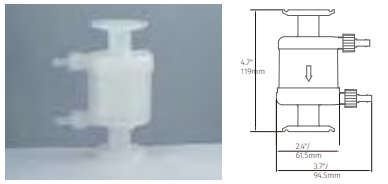
	KZ 50 Capsule	WM Capsule	WSF Capsule	UCF-T Capsule
Filter Media	PP / PTFE / GF	PP / PTFE / GF	PTFE / PP / PES / GFC / Nylon	PTFE / PP / PES / GFC / Nylon
Other Construction	PP	PP	PP	PP
Dimensions	Length: 68.4mm Diameter: Φ71.9mm	92 WM Length: 92mm Diameter: Φ 70mm WM Length: 138mm Diameter: Φ 65mm 195 WM Length: 195mm Diameter: Φ 65mm	WSF-03 Length: 165mm Diameter: Φ 87.5mm WSF-05 Length: 214mm Diameter: Φ 87.5mm WSF-10 Length: 336mm Diameter: Φ 87.5mm WSF-20 Length: 580mm Diameter: Φ 87.5mm WSF-30 Length: 825mm Diameter: Φ 87.5mm	UCF-T-10 Length: 310mm Diameter: Φ 86.5mm UCF-T-20 Length: 554mm Diameter: Φ 86.5mm UCF-T-30 Length: 800mm Diameter: Φ 86.5mm
Endcap Configuration	Inlet / Outlet 25mm Tri-Clamp	Inlet / Outlet 1/4"-3/8"Hose Barb	Inlet / Outlet 1-1/2" Sanitary Flange	Inlet / Outlet 1" Sanitary Flange

Configuration and Dimensions


AV 50 Series




PKZ Capsule




STKZ Capsule



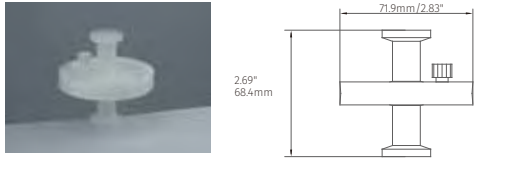
STBT1 Capsule




STBT2 Capsule



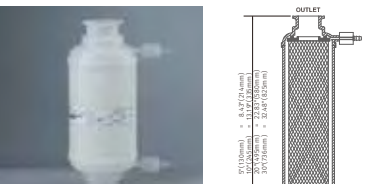
KZ 50 Capsule



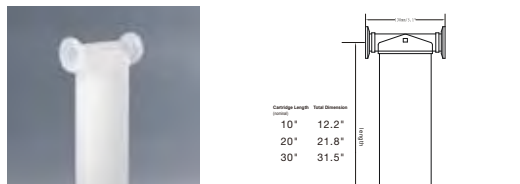
WM Capsule



WSF Capsule



UCF-T Capsule



Ordering Information

Membrane Type	Removal Ratings	-P
AV50 KZ50 PKZ STKZ STBT1 STBT2 92WM WM 195WM WSF-03 WSF-05 WSF-10 UCF-T-10 UCF-T-20 ...	Single-Layer 0001 0.01µm 0500 5.0µm 0010 0.1µm 1000 10µm 0022 0.22µm 2000 20µm 0045 0.45µm 4000 40µm 0065 0.65µm 0100 1.0µm 0300 3.0µm	
	Double-Layer 2210 0.22+0.1µm 2222 0.22+0.22µm 4522 0.45+0.22µm 4545 0.45+0.45µm 6545 0.65+0.45µm	

CoMini Filter Cartridge Series

Features

- Wide option of filtration media (PTFE/PES/PVDF/PP)
- Different endcap configuration
- No surfactants or binders
- Materials of construction are list FDA listed

Benefits

- Low extractables
- Cartridge is appropriate for use in the pharmaceutical, biological and food & beverage industries

Effective Filtration Area

Filter	APP 1.0/cm ²	SPSHR/cm ²	GPFL/cm ²	LHPVND/cm ²	DPSDDT/cm ²	DLHPVNDR/cm ²
126-70	800	800	1100	800	800	800
126	2100	2000	2800	2000	2000	2000
56-70-OBC	1100	1100	1300	1100	1100	1100
56-70	1100	1100	1500	1100	1100	1100
56-84	1500	1500	1850	1500	1500	1500
56	1900	2000	2800	2000	2000	2000
PCF	1100	1000	1300	1000	1000	1000
PCF-134	2000	1900	2600	1900	1900	1900
DH56	1900	2000	2800	2000	2000	2000

Part Number / Ordering Information

56 LPF 0020 S

Code	Filter Medium	Removal Ratings	Seal Material
42-60	LPF =TelfonFlow	0001 =0.01µm 0500 =5.0µm	S =Silicone
56	GPF-P =TefloGas	0010 =0.1µm 2000 =20µm	E =EPDM
56-70	APP =Absoguard	0022 =0.22µm 2000 =20µm	V =Viton
56-84	PFSA2 =MultiPoly	0045 =0.45µm 4000 =40µm	
DH56	HPP =PolyFlow	0065 =0.65µm	
56-70-OBC	DPSDDT =Duredunty	0100 =1.0µm	
126	SPSHR =SteriPS	0300 =3.0µm	
126-70	LHPVND =FluoroPV(Singer-Layer)		
SLVP/SLVF	DLHPVNDR =FluoroPV(Double-Layer)	Double-Layer	
SLVP-72/SLVF-72		2210 =0.22+0.1µm	
SLVP-72/SLVF-120		2222 =0.22+0.22µm	
PCF II - 69		4522 =0.45+0.22µm	
PCF II -127		4545 =0.45+0.45µm	
OCF		6545 =0.65+0.45µm	
OCF-1			

Sterile Filtration
Bio-burden Reduction
Pre-Filtration
All-Fluorine Filters
Capsule Filters
Depth Filters



Specifications

		TefloGas®	TelfonFlow®	SteriPS®	Duredunty®	FluoroPV®	Absoguard®	MultiPoly®	PolyFlow®
Materials	Filter Medium	PTFE Hydrophobic	PTFE Hydrophobic	PES Single-Layer	PES Double-Layer	PVDF Hydrophobic	PP Absolute-Rated	PP Multi-layer PP	PP Nominal-Rated
	Other Components	PP	PP	PP	PP	PP	PP	PP	PP
Removal Ratings		0.01 µm 0.22 µm	0.1 µm, 0.22 µm 0.45 µm, 1.0 µm 3.0 µm, 5.0 µm 10 µm	0.22 µm, 0.45 µm	0.22+0.1 µm 0.22+0.22 µm 0.45+0.22 µm 0.45+0.45 µm 0.65+0.45 µm	Single-Layer 0.1/0.22/0.45/0.65/1.0 µm Double-Layer 0.22+0.1 µm 0.22+0.22 µm 0.45+0.45 µm 1.0+0.45 µm	0.1-20 µm	0.5 µm, 1.0 µm 1.5 µm, 2.0 µm 5.0 µm, 10 µm 20 µm, 40 µm	0.1 µm, 0.2 µm 0.3 µm, 0.45 µm 1.0 µm, 3.0 µm 5.0 µm, 10 µm 20 µm, 25 µm
Max.Operating Temperature		80°C	90°C	90°C	90°C	90°C	80°C	80°C	80°C
Max.Differential Pressure		5 bar@21°C 2.4bar@80°C	4 bar@21°C 2.1bar@80°C	4 bar@21°C 2.4bar@90°C	4 bar@21°C 2.4bar@90°C	4 bar@21°C 2.4bar@90°C	4 bar@21°C 21bar@80°C	4 bar@21°C 21bar@80°C	4 bar@21°C 21bar@80°C
Endcap Configuration		116 Internal O-rings (56/56-70/56-84/DH56) , 1”BSP (56-70-OBC) , Truseal 126 O-rings (126/126-70) , 118Layout Type Double O-ring (SLV/SLV-72/SLV-120)				116 Internal O-rings (56/56-70/56-84/DH56) , 1”BSP (56-70-OBC) , Truseal 126 O-rings (126/126-70) , 118Layout Type Double O-ring (SLV/SLV-72/SLV-120)			
Seal Material		PTFE Encapsulated	Silicone				Silicone EPDM Viton Encapsulated Viton		

Configuration and Dimensions



Claricap CSD & Roheap CSD Filter

High Dirt Holding Capacity



Features

- Filter media composed of lignocellulose and inorganic filter aids
- Gradient filter structure provides high dirt holding capacity and retention efficiency
- Low initial pressure difference and long service life
- Positive Zeta charge results in removal efficiency for host DNA, HCP, etc.



Applications

- Clarification of fermentation broth/cell cultures
- Filtration of blood and blood products
- Filtration of enzyme preparation
- Filtration of colloids/viscous liquids

Materials of Construction

Filter Media	Cellulose, diatomite filter aid and ionic wet-strength resin
Process Type	P pharmaceutical C High dirt holding capacity with positive charge

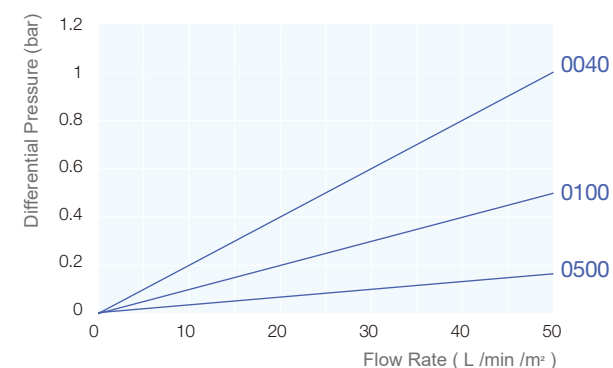
Operating Conditions

	Roheap CSD Filter	CDF Capsule Filter
Max. Temperature	80°C	40°C
Max. Differential Pressure	0.24 MPa /80°C	0.3 MPa /40°C
Flush	Single Layer: 50L/m ² , Double Layer:100L/m ² , flow rate 10L/min/m ²	

Biological Safety

Endotoxins	<0.25 EU/ml
Bio-compatibility	Meet the requirement of USP<87> In Vitro Cytotoxicity Test; Meet the criteria of the USP<88> Biological Reactivity Test for Class VI-121°C plastics

Flow Rate Characteristics



Chemical Compatibility

Chemicals	Concentration	@20°C	@80°C
NaOH	2%	G	P
HCl	5%	G	P
HNO ₃	5%	G	P
H ₂ SO ₄	10%	G	P
Acetic acid	38%	G	G
Citric acid	10%	G	G
Peracetic acid	0.1%	G	G
Butanol	80%	G	G
Ethanol	80%	G	G

G = Recommended ; P = Not recommended

Filtration Area

Specification	Single Layer	Double Layers
CDFC	23cm ²	23cm ²
L05SS	207cm ²	115cm ²
L10SS	414cm ²	230cm ²
L03TT	225cm ²	90cm ²
L05TT	405cm ²	180cm ²
CSCA	0.2m ²	0.15m ²
CSCC	0.5m ²	0.4m ²
CSCB	1.15m ²	0.92m ²
CSD 12" Per Layer	0.11m ²	0.11m ²
CSD 16" Per Layer	0.23m ²	0.23m ²

Leachables

PC	Ion	ppb	Ion	ppb
	Mg	5.201	Ni	0.334
	Al	34.540	Cu	0.770
	Ca	63.447	As	0.532
	Cr	0.047	Pb	0.04
	Fe	27.287		

Ordering Information

Cobetter Claricap Lab Depth Capsule Filters

CDFC		Number of Layers	Media	Removal Ratings		Type	-P
S	Single-Layer	CSD	Single-Layer		PC	Positive Charge	
			0004	0.04-0.2µm			
D	Double-Layer	CSD	Double-Layer		PC	Positive Charge	
			0020	0.2-0.4µm			
			0040	0.4-0.6µm	04	0.4-0.6µm	
			0060	0.6-0.8µm	06	0.6-0.8µm	
			0100	0.8-1.5µm	10	0.8-1.5µm	
			0150	1.5-3.0µm	15	1.5-3.0µm	
			0300	3.0-6.0µm	30	3.0-6.0µm	
			0400	4.0-9.0µm	40	4.0-9.0µm	
			0500	5.0-12.0µm	42	6.0-12.0µm	
			0600	6.0-15.0µm	50	5.0-12.0µm	
			0700	7.0-18.0µm	60	6.0-15.0µm	
			0800	8.0-20.0µm	70	7.0-18.0µm	
			0402	6.0-12.0µm	72	7.0-30.0µm	
			0702	7.0-30.0µm	80	8.0-20.0µm	
			H003	0.02-0.2µm	H0	0.02-0.2µm	
			H004	0.04-0.2µm	HP	0.02-0.2µm	
			H007	0.01-0.2µm	H2	0.01-0.2µm	
			H008	0.1-0.2µm	S7	0.01-0.2µm	
			REL P	0.5-0.8µm	S8	0.1-0.2µm	



CSD		Number of Layers	Media	Removal Ratings		Type	End Cap	Diameter	Number of Cell	O-ring Material	-P
S	Single-Layer	CSD	Single-Layer		PC	Positive Charge	DOE TCT	12 12 inch 16 16 inch	Single-Layer	S Silicone E EPDM V Fluoroelastomer T FEP/PFA encapsulated O-rings	
			0004	0.04-0.2µm							
D	Double-Layer	CSD	Double-Layer		PC	Positive Charge	DOE TCT	12 12 inch 16 16 inch	Single-Layer	S Silicone E EPDM V Fluoroelastomer T FEP/PFA encapsulated O-rings	
			0020	0.2-0.4µm							
			0040	0.4-0.6µm	04	0.4-0.6µm			W	2 Cells	
			0060	0.6-0.8µm	06	0.6-0.8µm			Y	3 Cells	
			0100	0.8-1.5µm	10	0.8-1.5µm			G	4 Cells	
			0150	1.5-3.0µm	15	1.5-3.0µm			B	5 Cells	
			0300	3.0-6.0µm	30	3.0-6.0µm			N	9 Cells	
			0400	4.0-9.0µm	40	4.0-9.0µm			X	10 Cells	
			0500	5.0-12.0µm	42	6.0-12.0µm			Q	11 Cells	
			0600	6.0-15.0µm	50	5.0-12.0µm			T	12 Cells	
			0700	7.0-18.0µm	60	6.0-15.0µm			F	15 Cells	
			0800	8.0-20.0µm	70	7.0-18.0µm			D	16 Cells	
			0402	6.0-12.0µm	72	7.0-30.0µm			Double-Layer		
			0702	7.0-30.0µm	80	8.0-20.0µm			A	1 Cell	
			REL P	0.5-0.8µm	H0	0.02-0.2µm			W	2 Cells	
			H003	0.02-0.2µm	HP	0.02-0.2µm			Y	3 Cells	
			H004	0.04-0.2µm	H2	0.01-0.2µm			G	4 Cells	
			H007	0.01-0.2µm	S7	0.01-0.2µm			B	5 Cells	
			H008	0.1-0.2µm	S8	0.1-0.2µm			H	8 Cells	
			REL P	0.5-0.8µm	S8	0.1-0.2µm			N	9 Cells	
									X	10 Cells	



Cobetter Claricap L Depth Capsule Filters

L05SS L10SS L03TT L05TT L08TT		Media	Number of Layers	Removal Ratings		Type	-P
S	Single-Layer	CSD	Single-Layer		PC	Positive Charge	
			0004	0.04-0.2µm			
D	Double-Layer	CSD	Double-Layer		PC	Positive Charge	
			0020	0.2-0.4µm			
			0040	0.4-0.6µm	04	0.4-0.6µm	
			0060	0.6-0.8µm	06	0.6-0.8µm	
			0100	0.8-1.5µm	10	0.8-1.5µm	
			0150	1.5-3.0µm	15	1.5-3.0µm	
			0300	3.0-6.0µm	30	3.0-6.0µm	
			0400	4.0-9.0µm	40	4.0-9.0µm	
			0500	5.0-12.0µm	50	5.0-12.0µm	
			0600	6.0-15.0µm	60	6.0-15.0µm	
			0700	7.0-18.0µm	70	7.0-18.0µm	
			0800	8.0-20.0µm	80	8.0-20.0µm	
			0402	6.0-12.0µm	H0	0.02-0.2µm	
			0702	7.0-30.0µm	HP	0.02-0.2µm	
			H003	0.02-0.2µm	H2	0.01-0.2µm	
			H004	0.04-0.2µm	42	6.0-12.0µm	
			H007	0.01-0.2µm	72	7.0-30.0µm	
			H008	0.1-0.2µm	S7	0.01-0.2µm	
			REL P	0.5-0.8µm	S8	0.1-0.2µm	



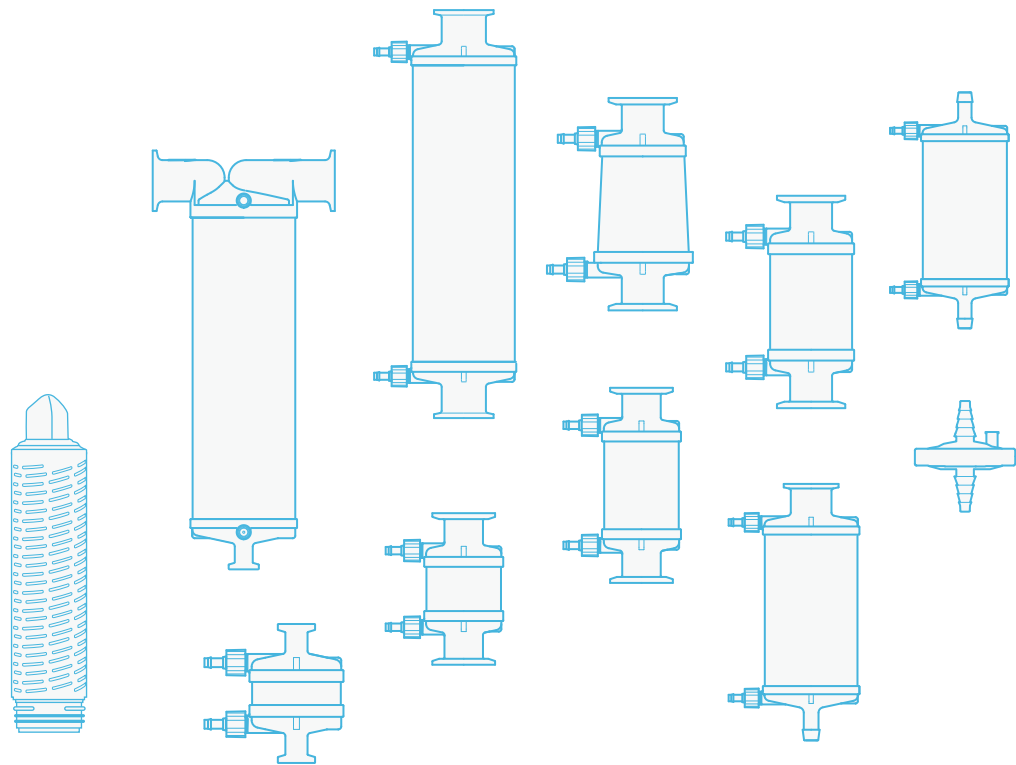
Cobetter Claricap Depth Capsule Filters

CSCA CSCB CSCC CSCD CSCE CSCM (only D)		Number of Layers	Removal Ratings		Type	-P
S	Single-Layer	CSD	Single-Layer		PC	Positive Charge
			0004	0.04-0.2µm		
D	Double-Layer	CSD	Double-Layer		PC	Positive Charge
			0020	0.2-0.4µm		
			0040	0.4-0.6µm	04	0.4-0.6µm
			0060	0.6-0.8µm	06	0.6-0.8µm
			0100	0.8-1.5µm	10	0.8-1.5µm
			0150	1.5-3.0µm	15	1.5-3.0µm
			0300	3.0-6.0µm	30	3.0-6.0µm
			0400	4.0-9.0µm	40	4.0-9.0µm
			0500	5.0-12.0µm	42	6.0-12.0µm
			0600	6.0-15.0µm	50	5.0-12.0µm
			0700	7.0-18.0µm	60	6.0-15.0µm
			0800	8.0-20.0µm	70	7.0-18.0µm
			0402	6.0-12.0µm	80	8.0-20.0µm
			0702	7.0-30.0µm	H0	0.02-0.2µm
			REL P	0.5-0.8µm	HP	0.02-0.2µm
			H003	0.02-0.2µm	H2	0.01-0.2µm
			H004	0.04-0.2µm	S7	0.01-0.2µm
			H007	0.01-0.2µm	S8	0.1-0.2µm
			H008	0.1-0.2µm	S8	0.1-0.2µm



Our Mission

Through Excellent Products & Sustainable Innovative Solutions,
We Help Customers Solve Process Problems & Increase Yield.



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