# **Pharmaceutical Filtration Solutions**

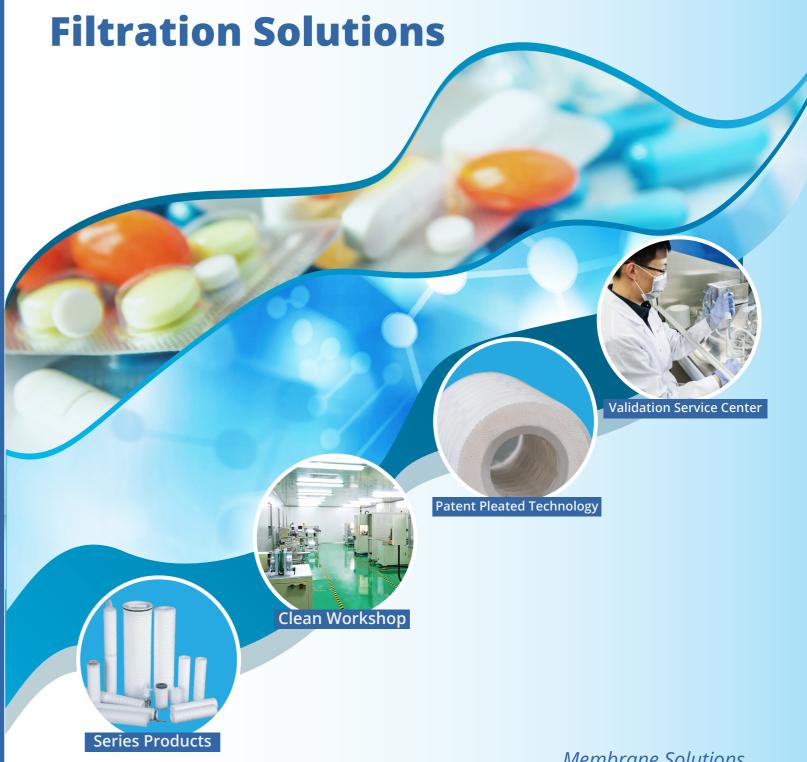
# **Our Membrane** For Your Solutions

## **Membrane Solutions**

Address: 4530 B STREET NW #A,AUBURN WA 98001,USA Phone: 001-866-528-4572 **Email:** info@membrane-solutions.com Web: www.membrane-solutions.com



# **Pharmaceutical**





Membrane Solutions









## INTRODUCTION

Membrane Solutions, founded in 2006, is a world-renowned supplier of membrane filtration products. It is a high-tech enterprise integrating R&D, production and sales.

Membrane Solutions owns the American patent technology of independent research and development of filter membrane, independently researches and develops and produces Nylon, PVDF, PTFE, PES, etc. (membrane pore size is 0.02-10µm) microporous membrane and membrane filter cartridge. The corresponding products have obtained ISO9001 and CE certification. And in 2013 passed the US FDA and NSF certification.

The company specializes in the development, production and manufacture of various applied membrane filtration products, such as microfiltration membrane products, membrane pleated filter cartridges, small filters, capsule filters and other products. Membrane Solutions provides professional overall filtration solutions for applications in the global biopharmaceutical field, such as purification and filtration of active pharmaceutical ingredients/reagents, blood products or vaccine products. At the same time, it also provides the most professional fluid filtration and purification solutions for customers in the fields of medical equipment, food and beverage, laboratory analysis, microelectronics industry, etc.









## **Enterprise Certification**



Uni	ted States Patent and Trademark Office
🕑 нол	e Site Index Search FAQ Glossary Guides Contacts eBusiness eBiz alerts News Help
Trademar	ks > Trademark Electronic Search System (TESS)
Induction	No > Indemark Electronic Search System (1255)
CCC una last	updated on Wed Aug 14 03:47:02 EDT 2019
ESS was rast t	posted on vied Aug 14 03/47.02 EDT 2018
SS HOME NON	USER STRUCTURED FREE FORM BROWSEDED SEARCH OG DOTTOM HELP Physician Councillest
the last Dev	Dis. Prev Dist. Next Doc. Last Doc.
Logout Plea	ase logout when you are done to release system resources allocated for you.
Start List A	t: OR Jump to record: Record 1 out of 5
June List A	t: OR Jump to record: Record 1 out of 5
Membrane	
Vord Mark Soods and services	
Vord Mark Soods and iervices	MEMBRANE SOLUTIONS 10:000. US 021 102:302 0308 036. G & S: Water testing instrumentation for monitoring water quality in the manuer of water testing instrumentation for monitoring and detecting contamination. Lab fittration products, namely, synthes filters, membrane filters, sample filtration viais with naps and septa, and lab ubspure eschange resin. FIRST USE: 20101100. FIRST USE IN COMMERCE: 20101100 10:01 US 0132 (1023 01343; G & S: Membranes, namely, water purification membranes, membrane filters for fipual, water filtration membranes. Water trustment equipment, namely, reverse somas units, exourpment, namely, water filtrations. Reverse connois water purification generations. FIRST USE:
Vord Mark soods and ervices	MEMBRANE SOLUTIONS 10:000. US Q21 102:00:030 036. G & S: Water testing instrumentation for monitoring water quality in the nature of water testing instrumentation for monitoring and detecting contamination. Lab fitration products, namely, synthes fitters, membrane fitters, sample fittation vials with caps and sept, and lab ultrapute water fittation springer fitters, membrane fitters, sample fittation vials with caps and sept, and lab ultrapute water fittation springer fitters and the sense of the sense of the sense of the sense of the sense fitters for given and the sense of the sense of the sense of the sense of the sense fitters for given and profiles of the sense of the sense of the sense of the sense fitters for given and profiles of the sense of the sense of the sense of the sense 10:10. US 0132 (02:03:03:03:04:05:05:06:00:00:00:00:00:00:00:00:00:00:00:00:
Vord Mark boods and ervices tark Drawing bode lesign Search bode	MEMBRANE SOLUTIONS 10 000. US 021 023 028 038 036. G & S: Water testing instrumentation for monitoring water quality in the transmission of water testing instrumentation for monitoring and detecting contamination; Lab fittation products, water fittation systems comprised of reverse consons filters, conductivity reader; UV lights, and on exchange resent. FIRST USE 2016/1001. FIRST USE IN COMMERCE: 2016/1010 10.011; US 013 021 023 031 034; G & S: Menchanes, namely, water purification membranes, membranes times for ligid, water filtation methranes. Water transmission equipment, namely, reverse sonsois units; Water filtration and purification units and replacement carridges and filters therefor. Water treatment apprent, namely, water filtation methranes. Altore treatment exploring apparatus. FIRST USE 2006/000, FIRST USE 10.00000. () DESION FULV WORDS, LETTERS, ANDOR NUMBERS 0) 15.06 - Fanichop (a single drop): Single drop (rain, teac, etc.); Teardrop (a single drop) 20.0007. Altoreting, banners.
Vord Mark soods and ervices	MEMBRANE SOLUTIONS 10 000. US 021 023 028 038 036. G & S: Water testing instrumentation for monitoring water quality in the transmission of water testing instrumentation for monitoring and detecting contamination; Lab fittation products, water fittation systems comprised of reverse consons filters, conductivity reader; UV lights, and on exchange resent. FIRST USE 2016/1001. FIRST USE IN COMMERCE: 2016/1010 10.011; US 013 021 023 031 034; G & S: Menchanes, namely, water purification membranes, membranes times for ligid, water filtation methranes. Water transmission equipment, namely, reverse sonsois units; Water filtration and purification units and replacement carridges and filters therefor. Water treatment apprent, namely, water filtation methranes. Altore treatment exploring apparatus. FIRST USE 2006/000, FIRST USE 10.00000. () DESION FULV WORDS, LETTERS, ANDOR NUMBERS 0) 15.06 - Fanichop (a single drop): Single drop (rain, teac, etc.); Teardrop (a single drop) 20.0007. Altoreting, banners.
Solur Vord Mark isods and ervices	MEMBRANE SOLUTIONS 10:000. US Q21 102:00:030 08:0. 6 & S: Water testing instrumentation for monitoring water quality in the nature of water testing instrumentation for monitoring and detecting contamination. Lab fitration products, namely, synthes fitters, membrane fitters, sample fittation vials with page and sept, and lab ultrapure water fitterion synthesis comprised of prevense controls fitters, conductivity reader. UV jahls, and ion exohange reasn. FIRST USE: 2016/100. FIRST USE IN COMMERCE 2016/100 10:011. US 01302 (102 03 0134). 6 & S. S. Menhones, manentwy, water purification membranes, membrane fitters for jiquid, water fittation membranes. Water trustment equipment, namely, revense consists units; 2008/0000, FIRST USE: DCOMMERCE: 2008/000 (3) DESIGN FLUS WORDS, LETTERS, AND/OR NUMBERS 0) 1508 - Rainford (a single drop) (single drop) (single drop (single drop) (single drop) 24.0007 - Advertiang, banners , Banners September 28, 2017 1A
Solur Vord Mark isods and ervices tark Drawing isode lesign Search ode ervial Number iling Date turrent Basis	MEMBRANE SOLUTIONS 10:000. US Q21 102:00:030 08:0. 6 & S: Water testing instrumentation for monitoring water quality in the nature of water testing instrumentation for monitoring and detecting contamination. Lab fitration products, namely, synthes fitters, membrane fitters, sample fittation vials with page and sept, and lab ultrapute water fitterion synthesis comprised of prevense controls fitters, conductivity reader. UV jahls, and ion exohange reas. FIRST USE: 2016/100. FIRST USE IN COMMERCE 2016/100 10:011. US 01302 (102 03 0134). 6 & S. S. Menhones, manentwide, and fitters bench, tametely, revense consists units; visiter fitterion on putricitation units and explosionent controllegies and fitters bencher. Water traditioners. Visiter fitterion on putricitation units and replosement controllegies and fitters bencher. Water traditioners. 2008/0000. FIRST USE: NCOMMERCE: 2008/000. (3) DESIGN FLUS WORDS, LETTERS, AND/OR NL/MBERS 0) 1508 - Rainford, e single drop; Isingle drop (rain, tear, etc.); Teardrop (a single drop) 24.0007 - Advertising, banners. Banners September 28, 2017 14.
Solury Vord Mark Soods and iervices Aark Drawing Sode Design Search Sode Cerial Number Hilling Date Current Basis Sorginal Filling Basis	MEMBRANE SOLUTIONS 10:000. US Q21 102:00:030 08:0. 6 & S: Water testing instrumentation for monitoring water quality in the nature of water testing instrumentation for monitoring and detecting contamination. Lab fitration products, namely, synthes fitters, membrane fitters, sample fittation vials with page and sept, and lab ultrapute water fitterion synthesis comprised of prevense controls fitters, conductivity reader. UV jahls, and ion exohange reas. FIRST USE: 2016/100. FIRST USE IN COMMERCE 2016/100 10:011. US 01302 (102 03 0134). 6 & S. S. Menhones, manentwide, and fitters bench, tametely, revense consists units; visiter fitterion on putricitation units and explosionent controllegies and fitters bencher. Water traditioners. Visiter fitterion on putricitation units and replosement controllegies and fitters bencher. Water traditioners. 2008/0000. FIRST USE: NCOMMERCE: 2008/000. (3) DESIGN FLUS WORDS, LETTERS, AND/OR NL/MBERS 0) 1508 - Rainford, e single drop; Isingle drop (rain, tear, etc.); Teardrop (a single drop) 24.0007 - Advertising, banners. Banners September 28, 2017 14.
Solut ford Mark icods and ervices hark Drawing ode esign Search ode erial Number lining Date urrent Basis triginal Filing asis ublished for pposition registration	MEMBRANE SOLUTIONS II 000. US QCI 102 30:00 808. 0 & 6. S. Water testing instrumentation for monitoring water quality in the mature of water testing instrumentation for monitoring and detecting contamination. Lab (fittation products, name), synthes fitters, membrane fitters, sample fittation vate with auge and setpL, and lab ubspure outputs of water testing instrumentation. C. REM USE 10:00 WATER CONTROL (SCI 000 WATER) CONTROL (SCI 002 301 904. 0 & 5. Methodness, name), water purification membranes, membrane schwange resin. FITST USE 20:01001 RERT USE 10:00 WATER CONTROL (SCI 000 WATER) CONTUNE (SCI 002 301 904. 0 & 5. Methodness, name), water purification membranes, membrane schwange resin. FITST USE 20:00 CONTENTS USE 10:00 WATER) CONTUNE (SCI 002 301 904. 0 & 5. Methodness, name), water purification methoanes, membrane schwange resin. FITST USE 20:01000 CONTUNE (SCI 002 301 904. 0 & 5. Methodness, name), water purification and purification and pulfication. Networks controls water purifying apparatus. FIRST USE: 20080000. FIRST USE 10:00 MATER CONTENT USE 10:00 MATER CONTENT CONTINUE (SCI 000) CONTUNE (SCI 000 ). Single drop (nam, tear, etc.); Teardrop (a single drop) 240:02-340 September 28, 2017 14
Aark Drawing Sode and iervices Aark Drawing Sode besign Search Sode Current Basis Friiling Date Current Basis Triginal Filing Sasis Autorent Basis Current B	MEMBRANE SOLUTIONS  10.000, US Q21 102 302 083 083, 0 8 6; Water testing instrumentation for monitoring water quality in the mature of water testing instrumentation for monitoring and detecting contamination. Lab fittration products, namely, sympton Bins, membrane filters, sample Bination value with auge and septa, and lab ubspure workinge reash. FIRST USE 20101100, FIRST USE IN COMMERCE: 20101100 (2011. US 0132 1023 0134 6; 6; 5; Nembranes, namely, water purification membranes, membrane filters for liqual, water filtration membranes. Water transmerit equipment, namely, reverse comoas units augment, namely, water filtration membranes. Water transmerit equipment, namely, reverse comoas units 20080000, FIRST USE 10 COMMERCE: 2008000 (3) DESIGN PLUS WORDS, LETTERS, ANDIOR NUMBERS (01 1508 - Raindro (a single dro); Single drop (rain, tear, etc.); Teardrop (a single drop) 24 0027 - Advertaing, borners; Banners 8722373 September 28, 2017 14 December 18, 2018
Vord Mark Soods and iervices Aark Drawing Sode Jesign Search Sode Varient Basis Driginal Filing Basis Published for Pyposition Registration Iumber	MEMBRANE SOLUTIONS II 000, US 021 002 000 000 08, 05, 45, Vitere Hesting Instrumentation for monolitoring asset equality in their membrane firsts, manage fattation with with the park and equality and the structure provide of fitness structure. UV lights, and one contrained on the structure provide fitness membrane resear. FITS USE 2016/0100. IREGI USE INCOMENCE: 2016/0100. IREGI

### **Registered Trademark** Certification

02

# **Validation Service Center**

As a means of reducing or removing microorganisms (bacteria, mycoplasmas, bacteriophages, endotoxins, etc.) in sterile pharmaceuticals, filtration technology plays a pivotal role in the quality of pharmaceuticals. Membrane Solutions provides products and services that help pharmaceutical manufacturers better comply with industry regulations (GMP) and their stringent standards. The validation support service simplifies the validation process for customers in terms of filter regulations, helping customers reduce system costs. Membrane Solutions validation center has perfect management procedures, standard validation process and operating specifications, operates in accordance with the company's ISO 9001 quality system requirements, and establishes the management system and technical requirements of the validation center in accordance with CNAS-CL 01:2018 "Accreditation Standard for Testing and Calibration Laboratory Competence". The validation center consists of comprehensive microbial analysis laboratory, comprehensive chemical analysis laboratory, filtration performance laboratory and electron microscope analysis room, which provides complete testing and validation services for food and beverage, pharmaceutical companies and filter manufacturers.



## **Membrane Solutions Process Validation**

#### Validation Service Scope (Including but not limited to):

1.Bacteria Survival Test (Non-final Sterilized Products are required)

- 2.Bacteria Challenge Test (Non-final Sterilized Products are required)
- 3.Product Wettability/Integrity Test

4.Chemical Compatibility Test (Non-final Sterilized Products are required) 5. Dissolution Test (Non-final Sterilized Products are required)

6.Adsorption Test

7.Filterability







**Membrane Solutions Validation Guide** 

Species	Chemical Name	Nylon6,6	P۷
	Glacial Acetic Acid	NR	F
	Concentrated Hydrochloric Acid	NR	I
	Hydrochloric Acid (6N)	NR	
Acid	Concentrated Nitric Acid	NR	
Acid	Nitric Acid (6N)	NR	
	Concentrated Phosphoric Acid	NR	
	Concentrated Sulfuric Acid	NR	
	Hydrofluoric Acid (6N)	NR	
	Ammonium Hydroxide (1N)	R	l
Alkali	Ammonium Hydroxide (3N)	R	1
Alkali	Potassium Hydroxide (3N)	R	l
	Sodium Hydroxide (3N)	R	l
	Sodium Hydroxide (6N)	R	1
	Amyl Alcohol	R	
	Benzyl Alcohol	R	
Alcohols	Butanol	R	
	Isopropyl Alcohol	R	
	Methanol	LR	
	Acetone	R	I
Ketone	Cyclohexanone	-	I
Reconc	Methyl Ethyl Ketone	LR	I
	Methyl Isobutyl Ketone	LR	
	Cottonseed Oil	R	
Oil	Lubricating Oil	R	
	Peanut Oil	R	
	Sesame Oil	R	
Aromatic	Benzene	LR	
Hydrocarbon	Toluene	NR	
	Xylene	LR	
	Carbon Tetrachloride	LR	
	Chloroform	LR	
	Ethylene Dichloride	LR	
Halogenated	Freon TF	R	
Hydrocarbon	Freon TMC	LR	I
	Methylene Chloride	NR	I
	Perchloroethylene	-	I
	Trichloroethylene	LR	I
Ethylene	Ethylene Glycol	R	
Glycols	Glycerin	R	
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Propylene Glycol	R	
	Ether	NR	
Ether	Isopropyl Ether	-	
	Two 4-dioxane	R	
	Tetrahydrofuran	NR	
	Amyl Acetate	LR	
	Butyl Acetate	LR	
Esters	Cellulose Acetate	-	
230013	Ethyl Acetate	LR	
	Methyl Acetate	LR	
	Isopropyl Acetate	-	
	Aniline	LR	
	Dimethylformamide	R	1
	Formaldehyde 37%	R	
	Gasoline	LR	I
	Hexane (no water)	-	I
Other	Kerosene	-	
0 0101	Phenol	R	
	Pyridine	LR	
	Turpentine Oil	-	
	Water	R	
	Acetonitrile	LR	
	Nickel Sulfate Solution		



# **Chemical Compatibility**

**NR** not resistance

no data at present

/DF	PTFE	PES	PP	Silicone	EPDM	Viton	PS/PV
R	R	NR	R	LR	R	NR	R
R	R	R	R	NR	NR	NR	R
R	R	R	R	NR	NR	R	R
R	R	-	R	NR	NR	R	R
R	R	-	R	LR	NR	R	R
R	R	-	R	NR	R	R	R
R	R	NR	R	NR	NR	R	R
R	R	-	NR	NR	NR	-	R
R	R	R	R	R	R	R	R
IR	R	R	R	R	LR	LR	R
R	R	R	R	LR	R	R	R
.R	R	R	R	R	R	R	R
IR	R	R	R	R	R	R	R
R	R	R	R	NR	R	R	R
R	R	R	R	LR	R	R	R
R	R	R	R	R	R	LR	R
R	R	R	R	R	R	R	R
R	R	R	R	R	R	NR	R
.R	R	NR	R	NR	R	NR	R
.R	R	NR	R	NR	NR	NR	R
.R	R	-	R	NR	R	NR	R
.R R	R	NR -	R	NR	R R	NR R	R
			R	R			
R	R	NR	R	R	R	R	R
R	R	-	R	R	R	R	R
R	R	R	R	R	R	R	R
.R	R	LR	NR	NR	NR	R	R
.R	R	NR	NR	NR	NR	R	R
.R	R	NR	NR	NR	NR	R	R
R	R	LR	LR	NR	NR	R	R
.R	R	NR	LR	NR	NR	R	R
.R	R	NR	LR	NR	NR	LR	R
R	R	R	LR	NR	NR	R	R
.R	R	NR	LR	NR	NR	LR	R
.R	R	NR	LR	NR	NR	LR	R
.R	R	LR	LR	NR	NR	R	R
IR	R	LR	LR	NR	NR	R	R
R	R	LR	R	R	R	R	R
R	R	LR	R	R	R	R	R
R	R	LR	R	R	R	R	R
R	R	R	LR	LR	NR	NR	R
R	R	-	R	NR	NR	NR	R
R	R	-	R	NR	NR	NR	R
.R	R	NR	LR	NR	NR	NR	R
R	R	-	R	NR	R	NR	R
R	R	-	LR	NR	R	R	R
R	R	R	R	NR	R	NR	R
R	R	LR	LR	R	R	R	R
R	R	NR	R	-	R	R	R
R	R	R	R	LR	R	NR	R
R	R	NR	LR	NR	R	R	R
IR	R	NR	R	R	R	NR	R
R	R	R	R	R	R	NR	R
R	LR	R	LR	NR	R	R	LR
R	LR	LR	LR	NR	NR	R	LR
R	R	R	R	NR	NR	R	R
R	R	NR	R	NR	NR	R	R
R	R	NR	LR	NR	R	NR	R
R	R	R	LR	NR	NR	R	R
R R	R			LR	R	R	R
		R	R	- LK			
R	R	R	LR		R	NR	R
R	R	-	R	R	R	-	R

Note: This table is for reference only

04

# CONTENT



٠	Introduction	01
٠	Enterprise Certification	02
٠	Validation Service Center	03
٠	Chemical Compatibility Table	04
٠	Flow Diagram of Filtration Process in Biopharmaceutical Industry	07
٠	PFA All Fluorine Filter Cartridge	09
٠	All Fluorine Filter Cartridge with PVDF Cage	10
٠	PTFE	11
	FG Series FBG Series FSG Series FDG Series FL Series	
•	NY PN Series MZ Series	16
٠	PP	18
	PPC Series PPD Series PPA Series	
٠	ACR Series Activated Carbon Fiber Filter Cartridge	21
٠	PVDF PVL Series PVG Series	22

- PES
   SP Series SPB Series SPD Series, SPP Series
- Mini Pleated Filter Cartridge
- PP Melt Blown Filter Cartridge ------
- String Wound Filter Cartridge
- High Flow PP Pleated Filter Cartrid
- Nylon Monofilament Filter Bag ......
- Needle Felt Filter Bag
- Depth Filter Sheets and Module
- ◆ Metal Pleated Filter Cartridge
- Metal Titanium Rod Filter Cartridg

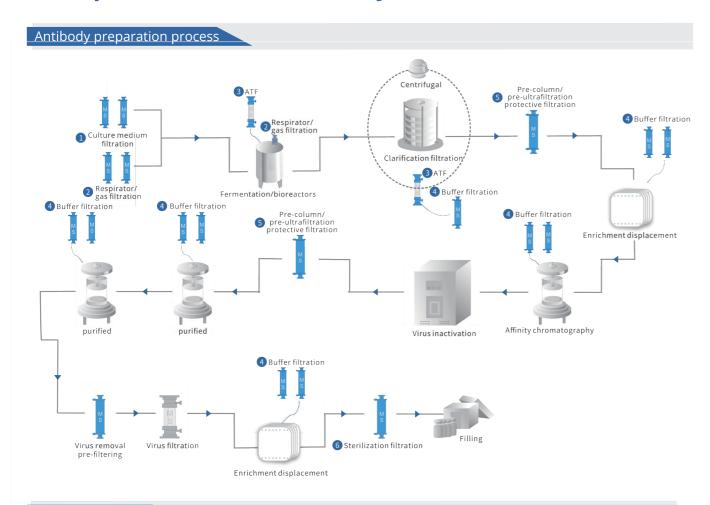


	24
	2-1
	28
	29
	30
dge	31
ge	36

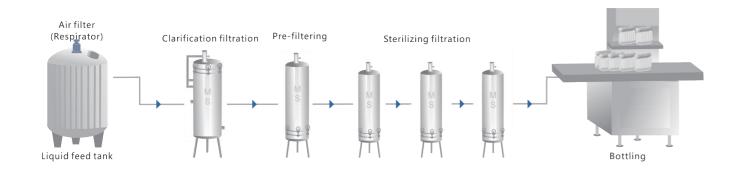


# Flow Diagram of Filtration Process in Biopharmaceutical Industry

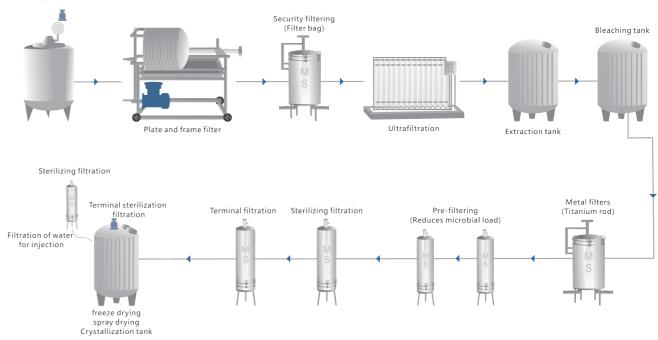
# Flow Diagram of Filtration Process in Biopharmaceutical Industry



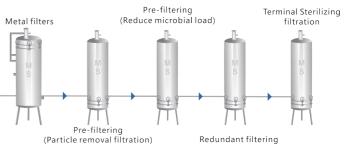
Serological process



Antibiotic processes Respirator Plate and frame filter



Injection process Air filter Terminal Sterilizing (respirator) Metal filters filtration Thinning tanks Concentrated tank





## **PFA All Fluorine Filter Cartridge with Strong Chemical Compatibility**

#### ACG Series

ACG series all fluorine filter cartridge is welded and sealed by ultra-pure PFA resin with high chemical compatibility and high cleanliness PTFE membrane by high-temperature hot-melt technology. The ACG all fluorine filter cartridge does not contain any adhesive. It is washed with 18.2MΩ.cm ultra-pure water after production and is available for pre-wetting packaging to ensure very low precipitation levels in harsh use environment, providing good retention efficiency and service life while minimizing the impact on the filtrate.

#### Technical Parameters

	Filter Membrane	Hydrophobic PTFE		
	Support/Drainage	PFA		
Maria dala 20	Cage/End Cap	PFA		
Materials of Construction	Core	PFA		
	Adaptor	PFA		
	O-rings	PS/PV		
	Sealed by hot melt welding, no adhesive			
	Outer Diameter	68mm		
Filter	Inner Diameter	33mm		
Dimensions	Length	5-40inches		
	Filtration Area	≥0.62m²/10inches		
Operating	Maximum Differential Pressure (Reverse)	4.3 bar @ 25°C,0.5 bar @ 170°C		
Conditions	Maximum Differential Pressure (Forward)	3.0 bar @ 25°C		

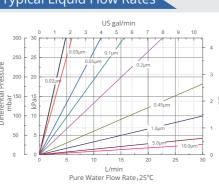
#### Pure Water Flow Rate

- Filtration of strong acid and alkali solutions
- Filtration of strong oxidizing solutions
- Filtration of ultra-pure chemicals
- Filtration of high temperature chemicals
- Sterilization filtration of cleaning solutions and disinfectants

#### Ordering Information

	Length	Pore Size	Adaptor	Seal Material
CRACG	005 = 5" 010 = 10" 020 = 20" 030 = 30" 040 = 40"	002 = 0.02µm 003 = 0.03µm 005 = 0.05µm 010 = 0.10µm 020 = 0.20µm 045 = 0.45µm 100 = 1.0µm 500 = 5.0µm	0=DOE 2=222/Flat 3=222/Fin 6=226/Fin 7=226/Flat	PS=FEP Encapsulated Silicone PV==FEP Encapsulated FPM/FKM





#### Features

- All fluorine structure, strong chemical compatibility
- High cleanliness, pre-wetting packaging is available
- High flow rate, long service life



FFVG

improves the convenience of using.

Technical Pa	a
Materials of Construction	-
Filter Dimensions	-
Operating Conditions	_
Quality Control	

#### Features

• Structure with all fluorine materials

Typical Liquid Flow Rates

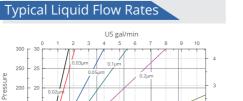
- High cleanliness, pre-wetting packaging is available
- High flow rate, long service life
- High retention efficiency

### Ordering Information

		Length	Pore Size	Adaptor	Seal Material
CRPTEV	G=Hydrophobic L=Hydrophilic	010 = 10" 020 = 20" 030 = 30" 040 = 40"	005 = 0.05µm 010 = 0.10µm 020 = 0.20µm 045 = 0.45µm 100 = 1.0µm 500 = 5.0µm H10 = 10.0µm	0=DOE 2=222/Flat 3=222/Fin 6=226/Fin 7=226/Flat	PS=FEP Encapsulated Silicone PV==FEP Encapsulated FPM/FK!

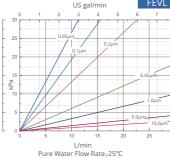






- High retention efficiency

Pure Water Flow Rate, 25°C





### Typical Applications

- Filtration of strong acid solutions

## All Fluorine FilterCartridge with PVDF Cage

#### **FEV** Series

FEV series all fluorine filter cartridge adopts PVDF cage and ECTFE support, and the high porosity PTFE membrane is welded and sealed by high-temperature hot-melt technology. The all fluorine structure provides this product with excellent chemical compatibility and cleanliness. The FEVG hydrophilic type can be widely used in the filtration and purification of a variety of strong corrosive solutions. The FEVL hydrophilic type can be widely used in the filtration and purification of a wide range of high surface tension and strong corrosive solutions. The hydrophilic filter medium can be used without pre-wetting, which greatly

rameters	
Filter Membrane	PTFE
Support/Drainage	ECTFE
Cage/End Cap	PVDF
Core	PVDF
Adaptor	PVDF
O-rings	PS/PV
Sealed by hot melt welding, no adhesi	ve
Outer Diameter	68mm
Inner Diameter	33mm
Length	10-40inches
Filtration Area	≥0.70m²/10inches
Maximum Differential Pressure (Reverse)	5.2 bar @ 25°C,1.9 bar @ 120°C
Maximum Differential Pressure (Forward)	3.4 bar @ 25°C

- ISO 9001:2015 quality management system
- 100% integrity test
- Filter cartridge is fully traceable
- All materials comply with relevant requirements of CFR21
- Proven particle retention efficiency and bacteria retention efficiency

10

• High cleanliness raw materials

- Filtration of strong oxidizing solutions
- Filtration of ultra-pure chemicals
- Filtration of high temperature chemicals
- Sterilization filtration of cleaning solutions and disinfectants

# Hydrophobic PTFE Pleated Filter Cartridge with Extremely Strong Chemical Compatibility

#### FG Series

FG series PTFE pleated filter cartridge is made of high porosity hydrophobic PTFE membrane, which has the characteristics of high flux and long service life. Its broad chemical resistance makes the FG series filter cartridge particularly suitable for the filtration of a wide variety of low surface tension chemicals and gases.

#### Technical Parameters

	Filter Membrane	Hydrophobic PTFE
	Support/Drainage	РР
Materials of	Cage/End Cap	РР
	Core	PP/316L Stainless Steel
Construction	Adaptor	PP/PP+Stainless Steel
	O-rings	S/E/N/F
	Sealed by hot melt wel	ding, no adhesive
Filter Dimensions	Outer Diameter	69mm
	Inner Diameter	33mm
	Length	5-40inches
	Filtration Area	≥0.36m <sup>2</sup> (5inches), ≥0.74m <sup>2</sup> /10inches
Operating	Maximum Differential Pressure (Reverse)	5.2 bar @ 25°C,1.9 bar @ 82°C
Conditions	Maximum Differential Pressure (Forward)	2.1 bar @ 25°C
Biological	Endotoxins	<0.25 EU/mL
Safety	Extractables(WFI)	<15 mg/10 inches
Sterilizable	Steam In-place	140°C 30min differential pressure<0.3 bar
	Autoclave	121°C 30min
Quality Control	<ul> <li>100% integrity test</li> <li>Filter cartridge is full</li> <li>All materials comply</li> <li>Bacteria (Pseudomo</li> </ul>	ty management system ly traceable with relevant requirements of CFR21 nas diminuta) Aerosol Challenge Test TR≥10 <sup>5</sup> for Monodisperse PSL particles≥99.99%

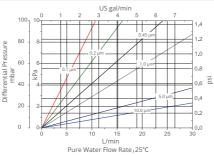
#### Ordering Information

	Length	Pore Size	Adaptor	Seal Material	Core
CRPTFEG	005 = 5" 010 = 10" 020 = 20" 030 = 30" 040 = 40"	G10=0.01µm(gas) 010=0.10µm 020=0.20µm 045=0.45µm 100=1.0µm 500=5.0µm H10=10.0µm	0=DOE 1=222/Flat with 316L SS insert 2=222/Flat 3=222/Fin 4=222/Fin with 316L SS insert 5=226/Fin with 316L SS insert 6=226/Flat 8=226/Flat with 316L SS insert	S=Silicone E=EPDM N=Nitrile F=FKM	Blank=PP R=Reinforced PP S=316L Stainless Steel

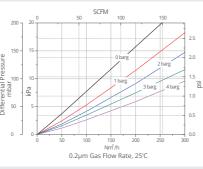
## 11



#### Typical Liquid Flow Rates



#### Typical Air Flow Rates



#### Typical Applications

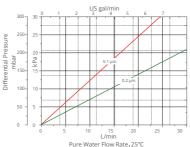
- Filtration of low surface tension solvents
- Filtration of strong acid and alkali liquid
- Filtration of strong oxidizing liquid
  - Sterilization filtration of compressed air and nitrogen
  - Sterilization filtration of fermentation tank, storage tank, batching tank
  - Filtration of solvents and disinfectants

#### Features '

- Extensive chemical compatibility
- High porosity PTFE membrane
- High flux, low pressure difference
- Excellent cost saving performane



#### Typical Liquid Flow Rates





## Filte

gas.

Dimens

Opera Condit

Biolog

Steriliz

- Typical Applications • Filtration of low surface tension solvents/disinfectants
- . Sterilization filtration of fermentation tank, storage tank,

Nm<sup>3</sup>/h 0.2µm Gas Flow Rate, 25'C

250

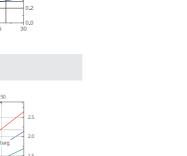
- batching tank
- Filtration of strong acid and alkali/oxidizing liquid
- Sterilization filtration of compressed air/nitrogen

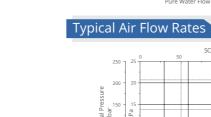
#### Features

- Extensive chemical compatibility
- Proven sterilization efficiency
- High flux, low precipitation
- Water intrusion test can be used

### Ordering Information

	Length	Pore Size	Adaptor	Seal Material	Core
CRPTFEBG	005 = 5" 010 = 10" 020 = 20" 030 = 30" 040 = 40"	G10 = 0.01μm (gas) 010 = 0.10μm 020 = 0.20μm	0=DOE 1=222/Flat with 316L SS insert 2=222/Flat 3=222/Fin 4=222/Fin with 316L SS insert 5=226/Fin with 316L SS insert 6=226/Flat 8=226/Flat with 316L SS insert	S=Silicone E=EPDM N=Nitrile F=FKM	Blank=PP R=Reinforced PP S=316L Stainless Ste





## **Cost-effective PTFE Pleated Filter Cartridge for GMP Gas Sterilizing Filtration Requirements**

### FBG Series

FBG series PTFE pleated filter cartridge is made of naturally hydrophobic sterilizing-grade PTFE membrane, which has excellent uniformity of pore and proven sterilization efficiency, and can provide reliable sterility guarantee for high humidity

#### **Technical Parameters**

	Filter Membrane	Hydrophobic PTFE		
	Support/Drainage	PP		
	Cage/End Cap	PP		
Materials of	Core	PP/316L Stainless Steel		
Construction	Adaptor	PP/PP+Stainless Steel		
	O-rings	S/E/N/F		
	Sealed by hot melt v	velding, no adhesive		
	Outer Diameter	69mm		
Filter	Inner Diameter	33mm		
Dimensions	Length	5-40inches		
	Filtration Area	≥0.36m <sup>2</sup> (5inches),≥0.74m <sup>2</sup> /10inches		
Operating	Maximum Differential Pressure (Reverse)	5.2 bar @ 25°C,1.9 bar @ 82°C		
Conditions	Maximum Differential Pressure (Forward)	2.1 bar @ 25°C		
Biological	Endotoxins	<0.25 EU/mL		
Safety	Extractables	<15 mg/10 inches		
Sterilizable	Steam In-place	140°C 30min differential pressure<0.3 bar		
	Autoclave	121°C 30min		
Quality	<ul><li> 100% integrity test</li><li> Filter cartridge is full</li></ul>	lity management system Illy traceable		

• All materials comply with relevant requirements of CFR21

Control • Bacteria (Pseudomonas diminuta) Aerosol Challenge Test TR≥10<sup>8</sup>

• Bacteria (Pseudomonas diminuta) Liquid Challenge Test TR≥10<sup>11</sup>



# PTFE Pleated Filter Cartridge for GMP Gas Sterilizing Filtration Requirements

### FSG Series

FSG series PTFE pleated filter cartridge is made of strong hydrophobic and uniformly distributed pore size PTFE membrane. Its proven sterilization ability and stable chemical properties enable the filter to provide excellent sterility protection for high humidity gas and low surface tension liquid even after 150 times of moist heat sterilization at 121°C.

#### Technical Parameters

	Filter Membrane	Hydrophobic PTFE
	Support/Drainage	РР
	Cage/End Cap	РР
Materials of Construction	Core	PP/316L Stainless Steel
Construction	Adaptor	PP/PP+Stainless Steel
	O-rings	S/E/N/F
	Sealed by hot melt wel	ding, no adhesive
	Outer Diameter	69mm
Filter	Inner Diameter	33mm
Dimensions	Length	5-40inches
	Filtration Area	≥0.36m <sup>2</sup> (5inches),≥0.74m <sup>2</sup> /10inches
Operating	Maximum Differential Pressure (Reverse)	5.2 bar @ 25°C, 1.9 bar @ 82°C
Conditions	Maximum Differential Pressure (Forward)	2.1 bar @ 25°C
Biological	Outer Diameter	<0.25 EU/mL
Safety	Inner Diameter	<15 mg/10 inches
Sterilizable	Length	140°C 30min differential pressure<0.3 bar
Stermzable	Filtration Area	121°C 30min
Quality Control		v traceable with relevant requirements of CFR21 has diminuta) Aerosol Challenge Test TR≥10 <sup>8</sup>

#### Ordering Information

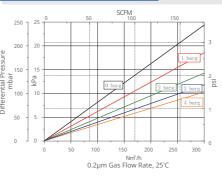
0	Color of the second sec



Typical Liquid Flow Rates

#### Pure Water Flow Rate, 25°C

#### Typical Air Flow Rates



#### Typical Applications

- Sterilization filtration of compressed air/nitrogen
- Sterilization of fermentation tank, batching tank and breathing filter
- Filtration of aseptic packaging air
- Sterilization filtration of solvents/disinfectants

#### Features

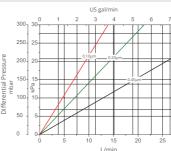
- Extensive chemical compatibility
- Proven sterilization efficiency
- High reliability
- Water intrusion test can be used

	Length	Pore Size	Adaptor	Seal Material	Core
CRPTFESG	005 = 5" 010 = 10" 020 = 20" 030 = 30" 040 = 40"	G10 = 0.01µm (gas) 005 = 0.05µm 010 = 0.10µm 020 = 0.20µm 045 = 0.45µm	0=DOE 1=222/Flat with 316L SS insert 2=222/Flat 3=222/Fin 4=222/Fin with 316L SS insert 5=226/Fin with 316L SS insert 6=226/Flat 8=226/Flat with 316L SS insert	S=Silicone E=EPDM N=Nitrile F=Fluorine Rubber	Blank=PP R=Reinforced PP S=316L Stainless Steel

# Double-layer PTFE Pleated Filter Cartridge for GMP Gas Sterilizing Filtration Requirements

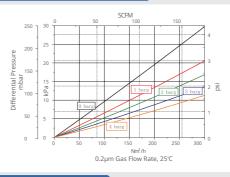


#### Typical Liquid Flow Rates





#### Typical Air Flow Rates



#### Typical Applications

- Sterilization filtration of compressed air/nitrogen
- Sterilization of fermentation tank, batching tank and breathing filter
- Filtration of aseptic packaging air
- Sterilization filtration of solvents/disinfectants

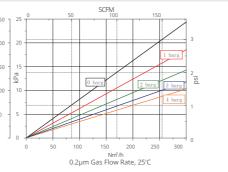
#### Features

- Extensive chemical compatibility
- High sterilization efficiency
- High flux, low pressure difference
- Water intrusion test can be used

#### Ordering Information

Length         Pore Size           005 = 5"         G03 = 0.003µm(gas)         0=DOE           010 = 10"         010 = 0.10µm         1=222/Fla           020 = 20"         020 = 0.20µm         2=222/Fla           030 = 30"         040 = 40"         4=222/Fla           6=226/Fla         8=222/Fla           8=226/Fla         8=226/Fla				
010 = 10"         010 = 0.10µm         1=222/Fla           020 = 20"         020 = 0.20µm         2=222/Fla           030 = 30"         3=222/Fla         3=222/Fla           040 = 40"         4=222/Fla         4=222/Fla           6=226/Fla         6=226/Fla         5=226/Fla           7=226/Fla         7=226/Fla         7=226/Fla		Length	Pore Size	
	CRPTFEDG	010 = 10" 020 = 20" 030 = 30"	010 = 0.10µm	1=222/Fla 2=222/Fla 3=222/Fir 4=222/Fir 5=226/Fir 6=226/Fir 7=226/Fla





### **FDG Series**

FDG series PTFE pleated filter cartridge is made of double-layer Sterilizing-grade PTFE membrane, which has higher retention efficiency and can meet the requirements of phage retention and other harsh conditions to provide extremely reliable sterility guarantee for gases.

#### Technical Parameters

	Filter Membrane	Hydrophobic PTFE
	Support/Drainage	РР
	Cage/End Cap	РР
Materials of	Core	PP/316L Stainless Steel
Construction	Adaptor	PP/PP+Stainless Steel
	O-rings	S/E/N/F
	Sealed by hot melt we	elding, no adhesive
	Outer Diameter	69mm
Filter	Inner Diameter	33mm
Dimensions	Length	5-40inches
	Filtration Area	≥0.36m <sup>2</sup> (5inches),≥0.74m <sup>2</sup> /10inches
Operating	Maximum Differential Pressure (Reverse)	5.2 bar @ 25°C,1.9 bar @ 82°C
Conditions	Maximum Differential Pressure (Forward)	2.1 bar @ 25°C
Biological	Endotoxins	<0.25 EU/mL
Safety	Extractables	<15 mg/10 inches
	Steam In-place	140°C 30min differential pressure<0.3 bar
Sterilizable	Autoclave	121°C 30min
Quality Control	<ul> <li>100% integrity test</li> <li>Filter cartridge is full</li> <li>All materials comply</li> <li>Bacteria (Pseudomo</li> </ul>	ty management system ly traceable with relevant requirements of CFR21 nas diminuta) Aerosol Challenge Test TR≥10 <sup>8</sup> nas diminuta) Liquid Challenge Test TR≥10 <sup>11</sup>

Adaptor	Seal Material	Core
Flat with 316L SS insert Flat Fin with 316L SS insert Fin with 316L SS insert Fin Flat Flat with 316L SS insert	S=Silicone E=EPDM N=Nitrile F=FKM	Blank=PP R=Reinforced PP S=316L Stainless Steel

# Hydrophilic PTFE Pleated Filter Cartridge with High Flow Rate and Strong Chemical Compatibility

#### FL Series

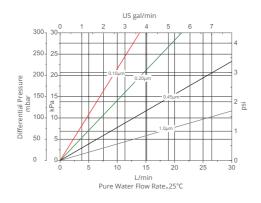
FL series PTFE pleated filter cartridge is made of hydrophilic PTFE membrane, which can be used for filtration of various strong acid and alkali and oxidizing solutions without pre-wetting.

#### Technical Parameters

	Filter Membrane	Hydrophilic PTFE		
	Support/Drainage	РР		
	Cage/End Cap	PP		
Materials of	Core	PP/316L Stainless Steel		
Construction	Adaptor	PP/PP+Stainless Steel		
	O-rings	S/E/N/F		
	Sealed by hot melt we	lding, no adhesive		
	Outer Diameter	69mm		
Filter	Inner Diameter	33mm		
Dimensions	Length	5-40inches		
	Filtration Area	≥0.36m <sup>2</sup> (5inches),≥0.74m <sup>2</sup> /10inches		
Operating	Maximum Differential Pressure (Reverse)	5.2 bar @ 25°C,1.9 bar @ 82°C		
Conditions	Maximum Differential Pressure (Forward)	2.1 bar @ 25°C		
Biological	Endotoxins	<0.25 EU/mL		
Safety	Extractables	<15 mg/10 inches		
	Steam In-place	140°C 30min differential pressure<0.3 bar		
Sterilizable	Autoclave	121°C 30min		
Quality Control	<ul><li>100% integrity test</li><li>Filter cartridge is ful</li><li>All materials comply</li></ul>	ity management system Ily traceable y with relevant requirements of CFR21 r for Monodisperse PSL particles≥99.99%		



#### Typical Liquid Flow Rates



#### Features

- Extensive chemical compatibility
- Good corrosion resistance, oxidation resistance, heat resistance
- High porosity PTFE membrane, no pre-wetting required
- High flux, low precipitation, low pressure difference • 100% integrity test ensures the effect of sterilization

#### Typical Applications

- Filtration of high temperature and high viscosity solvents
- Filtration of strong acid liquid
- Filtration of strong oxidizing liquid
- Filtration of high-purity chemicals
- Filtration of LVP
- Filtration of biological reagents



6	5 C							
ľ		7		4				
$\vdash$	И							
$\swarrow$			/	3				
		1						
		+		2	psi			
		-	~					
				1				
20	2	5		- 0 30				

Pure Water Flow Rate, 25°C

#### Features

- Naturally hydrophilic, easy to wet
- Extensive chemical compatibility, resistant to organic solvents
- Good integrity to ensure the filter sterile-grade particle retention efficiency
- Low pressure difference, high flux, long service life

#### Typical Applications

- Sterilization filtration of sterile APIs, antibiotic solutions, etc.
- Filtration of alcohol, soft drinks, pure water, etc.
- Filtration of high- purity chemicals and organic solvents
- Sterilization filtration of physiological saline and reagent water
- Sterilization filtration of SVP and LVP

Ordering Inforn	nation				
	Length	Pore Size	Adaptor	Seal Material	Core
CRNY	005 = 5" 010 = 10" 020 = 20" 030 = 30" 040 = 40"	02X = 0.20µm + 0.20µm 020 = 0.20µm 045 = 0.45µm 065 = 0.65µm 100 = 1.0µm	0=DOE 1=222/Flat with 316L SS insert 2=222/Flat 3=222/Fin 4=222/Fin with 316L SS insert 5=226/Fin with 316L SS insert 6=226/Flat 8=226/Flat with 316L SS inser	S=Silicone E=EPDM N=Nitrile F=FKM	Blank=PP R=Reinforced PP S=316L Stainless Steel

#### Ordering Information

	Length	Pore Size	Adaptor	Seal Material	Core
	005 = 5" 010 = 10" 020 = 20" 030 = 30"	010 = 0.10µm 020 = 0.20µm 045 = 0.45µm 100 = 1.0µm	0=DOE 1=222/Flat with 316L SS insert 2=222/Flat 3=222/Fin	S=Silicone E=EPDM N=Nitrile F=FKM	Blank=PP R=Reinforced PP S=316L Stainless Steel
CRPTFEL	040 = 40"		4=222/Fin with 316L SS insert 5=226/Fin with 316L SS insert 6=226/Fin 7=226/Flat 8=226/Flat with 316L SS insert		





- Cont

# Nylon66 Pleated Filter Cartridge with High Strength and High Temperature Resistance

#### **PN** Series

PN Series Nylon pleated filter cartridge is made of hydrophilic nylon66 membrane with lining, which has excellent chemical compatibility and mechanical strength. After special cleaning steps, the filter membrane has low precipitation and no shedding. It can be widely used in the filtration of strong alkali, weak acid and organic solvents.

#### Technical Parameters

	Filter Membrane	Nylon66
	Support/Drainage	РР
	Cage/End Cap	PP/316L Stainless Steel
Materials of	Core	PP/PP+Stainless Steel
Construction	Adaptor	S/E/N/F
	O-rings	
	Sealed by hot melt we	lding, no adhesive
	Outer Diameter	69mm
Filter	Inner Diameter	33mm
Dimensions	Length	5-40inches
	Filtration Area	≥0.33m <sup>2</sup> (5inches),≥0.62m <sup>2</sup> /10inches
Operating	Maximum Differential Pressure (Reverse)	5.2 bar @ 25°C,1.9 bar @ 82°C
Conditions	Maximum Differential Pressure (Forward)	2.1 bar @ 25°C
Biological	Endotoxins	<0.25 EU/mL
Safety	Extractables	<40 mg/10 inches
Sterilizable	Steam In-place	121°C 30min differential pressure<0.3 bar
	Autoclave	121°C 30min
<ul> <li>ISO 9001:2015 quality management system</li> <li>100% integrity test</li> <li>Filter cartridge is fully traceable</li> <li>All materials comply with relevant requirements of CF</li> <li>Bacteria (Pseudomonas diminuta) Liquid Challenge Te</li> </ul>		ly traceable v with relevant requirements of CFR21

• Retention Efficiency for Monodisperse PSL particles≥99.99%



## **Positively Charged Modified Nylon 66 Pleated Filter** Cartridge

#### **MZ** Series

Materials of

Construction

Filter

Dimensions

Operating

Conditions

Biological

Safety

Sterilizable

Quality

Control

The positively charged modified nylon membrane used in the MZ series has a stable positive charge point in water-based solutions. The positive charge of the nylon membrane loaded with high specific surface area can efficiently adsorb negatively charged impurities, whose size is much smaller than the pore size of the filter

> Nylon66 PP

PP/316L Stainless Steel

PP/PP+Stainless Steel

PP

S/E/N/F

69mm

33mm

5-40inches

<0.25 EU/mL

121°C 30min

• All materials comply with relevant requirements of CFR21

ISO 9001:2015 quality management system

• Escherichia coli Endotoxin Challenge n≥99.999%

• Filter cartridge is fully traceable

• Bacteria Liquid Challenge Test TR≥10<sup>1</sup>

<40 mg/10 inches

≥0.33m<sup>2</sup> (5inches),≥0.62m<sup>2</sup>/10inches

121°C 30min differential pressure < 0.3 bar

5.2 bar @ 25°C,1.9 bar @ 82°C

Sealed by hot melt welding, no adhesive

Maximum Differential 2.1 bar @ 25°C

#### Technical Parameters

Filter Membrane

Support/Drainage

Cage/End Cap

Outer Diameter

Inner Diameter

Filtration Area

Maximum Differential

Pressure (Reverse)

Pressure (Forward)

Endotoxins

Extractables

Autoclave

Steam In-place

100% integrity test

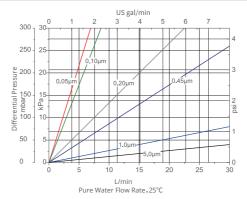
Length

Core

Adaptor O-rings



### Typical Liquid Flow Rates



#### Features

- Highly hydrophilic, easy to wet
- Positive charge on membrane surface
- Good integrity to ensure the filter sterile-grade particle retention efficiency
- No fiber shedding

#### Typical Applications

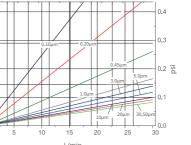
- Sterilization filtration of sterile APIs, antibiotic solutions, etc.
- Sterilization filtration of intermediates, soft drinks, pure water, etc.
- Filtration of high- purity chemicals and organic solvents
- Sterilization filtration of physiological saline, reagents and water for injection
- Sterilization filtration of SVP and LVP

### Ordering Information

	Length	Pore Size	Adaptor	Seal Material	Core
CRNYZ	005 = 5" 010 = 10" 020 = 20" 030 = 30" 040 = 40"	005 = 0.05μm· 010 = 0.10μm 020 = 0.20μm 045 = 0.45μm 100 = 1.0μm 500 = 5.0μm	0=DOE 1=222/Flat with 316L SS insert 2=222/Flat 3=222/Fin 4=222/Fin with 316L SS insert 5=226/Fin with 316L SS insert 6=226/Flat 8=226/Flat with 316L SS insert	S=Silicone E=EPDM N=Nitrile F=Fluorine Rubber	Blank=PP R=Reinforced PP S=316L Stainless Steel







#### L/min Pure Water Flow Rate 25°C

#### Features

• Extensive chemical compatibility

Typical Liquid Flow Rates

- High efficiency, high flux, low pressure difference, long service life
- High efficiency particle retention rate to protect terminal filter sterilization safety
- No fiber shedding

#### Typical Applications

- Filtration of colloidal products
- · Filtration of fermentation broth and high viscosity materials
- Prefiltration of culture media and blood products · Filtration of chemical intermediates, organic solvents,
- pure water

### Ordering Information

	Length	Pore Size	Adaptor	Seal Material	Core
CRPP	005 = 5" 010 = 10" 020 = 20" 030 = 30" 040 = 40"	010 = 0.10µm 020 = 0.20µm 045 = 0.45µm 100 = 1.0µm 300 = 3.0µm 500 = 5.0µm H10 = 10µm H20 = 20µm H30 = 30µm H50 = 50µm	0=DOE 1=222/Flat with 316L SS insert 2=222/Flat 3=222/Fin 4=222/Fin with 316L SS insert 5=226/Fin with 316L SS insert 6=226/Flat 8=226/Flat with 316L SS insert	S=Silicone E=EPDM N=Nitrile F=FKM	Blank=PP R=Reinforced PP S=316L Stainless Steel





- - Oper Cond

Dime

- Biolo

## Safe

Steril

Qua

Con

## **PP Pleated Filter Cartridge with High Flux and High Flow Rate**

#### **PPC** Series

PPC series PP pleated filter cartridge is made of high fluffy polypropylene filter material, which has the characteristics of high flow rate and high dirt holding capacity. It has excellent cost performance as clarification filter and pre-filter. The full PP structure enables the filter cartridge to be applied to the filtration of various acid and alkali and organic solvents.

	Filter Membrane	PP	
	Support/Drainage	PP	
	Cage/End Cap	PP	
laterials of	Core	PP/316L Stainless Steel	
onstruction	Adaptor	PP/PP+Stainless Steel	
	O-rings	S/E/N/F	
	Sealed by hot melt we	lding, no adhesive	
	Outer Diameter	69mm	
Filter	Inner Diameter	33mm	
imensions	Length	5-40inches	
	Filtration Area	≥0.25m <sup>2</sup> (5inches),≥0.52m <sup>2</sup> /10inches	
Operating	Maximum Differential Pressure (Reverse)	5.2 bar @ 25°C,1.9 bar @ 82°C	
Conditions	Maximum Differential Pressure (Forward)	2.1 bar @ 25°C	
Biological Safety	Endotoxins	<0.25 EU/mL	
	Extractables	<40 mg/10 inches	
terilizable	Steam In-place	121°C 30min differential pressure<0.3 bar	
	Autoclave	121°C 30min	
Quality Control	<ul> <li>ISO 9001:2015 quality management system</li> <li>Filter cartridge is fully traceable</li> <li>All materials comply with relevant requirements of CFR21</li> </ul>		



## **Multi-layer PP Pleated Filter Cartridge with Long** Service Life

#### PPD Series

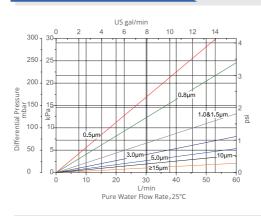
PPD adopts multi-layer gradient PP fiber material, which combines the advantages of depth filtration and pleated filtration, so that the filter cartridge has high dirt holding capacity and high retention efficiency. The full PP structure makes PPD series pleated filter cartridge suitable for clarification and filtration of various high-load chemicals.

#### Technical Parameters

Filter MembranePPSupport/DrainagePPCage/End CapPPCage/End CapPPCorePP/316L Stainless SteelAdaptorPP/PP+Stainless SteelO-ringsS/E/N/FSealed by hot melt we/ding, no adhesiveOuter Diameter69mmInner Diameter33mmLength5-40inchesFilterFiltration AreaOperating ConditionsMaximum Differential Pressure (Reverse)Aximum Differential Pressure (Forward)5.2 bar @ 25°C, 1.9 bar @ 82°CBiological SafetyEndotoxinsSterilizableSteam In-placeAutoclave121°C 30min differential pressure<<0.3 baQuality Control. ISO 9001:2015 quality management system • Filter cartridge is fully traceable • All materials comply with relevant requirements of CFR21				
Materials of Construction       Cage/End Cap       PP         Materials of Construction       Core       PP/316L Stainless Steel         Adaptor       PP/PP+Stainless Steel         O-rings       S/E/N/F         Sealed by hot melt welding, no adhesive         Outer Diameter       69mm         Inner Diameter       33mm         Length       5-40inches         Filter       Filtration Area         Voraitions       Maximum Differential Pressure (Reverse)         Maximum Differential Pressure (Forward)       5.2 bar @ 25°C, 1.9 bar @ 82°C         Biological Safety       Endotoxins       <0.25 EU/mL		Filter Membrane	РР	
Materials of ConstructionCorePP/316L Stainless SteelAdaptorPP/PP+Stainless SteelO-ringsS/E/N/FSealed by hot melt welding, no adhesiveOuter Diameter69mmInner Diameter33mmLength5-40inchesFilter DimensionsFiltration AreaOperating ConditionsMaximum Differential Pressure (Reverse)Biological SafetyEndotoxinsSterilizableEndotoxinsQuality. ISO 9001:2015 quality management system • Filter cartridge is fully traceable		Support/Drainage	РР	
ConstructionCorePP/316L Stainless SteelAdaptorPP/PP+Stainless SteelO-ringsS/E/N/FSealed by hot melt welding, no adhesiveOuter Diameter69mmInner Diameter33mmLength5-40inchesFiltration Area≥0.15m² (5inches),≥0.30m²/10inchesOperatingMaximum Differential Pressure (Reverse)ConditionsMaximum Differential Pressure (Forward)Biological SafetyEndotoxinsSterilizableSteam In-placeQuality• ISO 9001:2015 quality management system • Filter cartridge is fully traceable		Cage/End Cap	РР	
AdaptorPP/PP+Stainless SteelO-ringsS/E/N/FSealed by hot melt welding, no adhesiveSealed by hot melt welding, no adhesiveOuter Diameter69mmInner Diameter33mmLength5-40inchesFiltration Area≥0.15m² (5inches),≥0.30m²/10inchesOperating ConditionsMaximum Differential Pressure (Reverse)Biological SafetyEndotoxinsSterilizableSteam In-placeQuality. ISO 9001:2015 quality management system • Filter cartridge is fully traceable		Core	PP/316L Stainless Steel	
Sealed by hot melt welding, no adhesive         Sealed by hot melt welding, no adhesive         Outer Diameter         Joint Diameter         Dimensions         Length       5-40inches         Filtration Area       ≥0.15m² (5inches),≥0.30m²/10inches         Operating       Maximum Differential Pressure (Reverse)       5.2 bar @ 25°C, 1.9 bar @ 82°C         Conditions       Maximum Differential Pressure (Forward)       2.1 bar @ 25°C         Biological       Endotoxins       <0.25 EU/mL	Construction	Adaptor	PP/PP+Stainless Steel	
Filter       Outer Diameter       69mm         Dimensions       Inner Diameter       33mm         Length       5-40inches         Filtration Area       ≥0.15m² (5inches),≥0.30m²/10inches         Operating       Maximum Differential Pressure (Reverse)       5.2 bar @ 25°C, 1.9 bar @ 82°C         Maximum Differential Pressure (Forward)       2.1 bar @ 25°C         Biological Safety       Endotoxins       <0.25 EU/mL		O-rings	S/E/N/F	
Filter     Inner Diameter     33mm       Dimensions     Length     5-40inches       Filtration Area     ≥0.15m² (5inches),≥0.30m²/10inches       Operating     Maximum Differential Pressure (Reverse)     5.2 bar @ 25°C, 1.9 bar @ 82°C       Conditions     Maximum Differential Pressure (Forward)     2.1 bar @ 25°C       Biological     Endotoxins     <0.25 EU/mL		Sealed by hot melt we	lding, no adhesive	
Filter       Inner Diameter       Source         Dimensions       Length       5-40inches         Filtration Area       ≥0.15m² (5inches),≥0.30m²/10inches         Operating Conditions       Maximum Differential Pressure (Reverse)       5.2 bar @ 25°C, 1.9 bar @ 82°C         Maximum Differential Pressure (Forward)       2.1 bar @ 25°C         Biological Safety       Endotoxins       <0.25 EU/mL		Outer Diameter	69mm	
Length       Definitions         Filtration Area       ≥0.15m² (5inches),≥0.30m²/10inches         Operating       Maximum Differential Pressure (Reverse)       5.2 bar @ 25°C, 1.9 bar @ 82°C         Conditions       Maximum Differential Pressure (Forward)       2.1 bar @ 25°C         Biological       Endotoxins       <0.25 EU/mL	Filter	Inner Diameter	33mm	
Operating Conditions     Maximum Differential Pressure (Reverse)     5.2 bar @ 25°C, 1.9 bar @ 82°C       Maximum Differential Pressure (Forward)     2.1 bar @ 25°C       Biological Safety     Endotoxins     <0.25 EU/mL	Dimensions	Length	5-40inches	
Operating Conditions       Pressure (Reverse)       5.2 bar @ 25°C, 1.9 bar @ 82°C         Maximum Differential Pressure (Forward)       2.1 bar @ 25°C         Biological Safety       Endotoxins       <0.25 EU/mL		Filtration Area	≥0.15m <sup>2</sup> (5inches),≥0.30m <sup>2</sup> /10inches	
Biological Safety       Endotoxins       <0.25 EU/mL	Operating	individual Differencia	5.2 bar @ 25°C,1.9 bar @ 82°C	
Biological     Extractables     <40 mg/10 inches       Safety     Extractables     <40 mg/10 inches       Sterilizable     Steam In-place     121°C 30min differential pressure<0.3 ba       Quality     • ISO 9001:2015 quality management system       • Filter cartridge is fully traceable	Conditions		2.1 bar @ 25°C	
Sterilizable         Steam In-place         121°C 30min differential pressure <0.3 ba           Quality         • ISO 9001:2015 quality management system           • Filter cartridge is fully traceable	Biological	Endotoxins	<0.25 EU/mL	
Sterilizable         Autoclave         121°C 30min           Quality         • ISO 9001:2015 quality management system         • Filter cartridge is fully traceable	Safety	Extractables	<40 mg/10 inches	
Autoclave     121°C 30min       Quality     • ISO 9001:2015 quality management system       • Filter cartridge is fully traceable		Steam In-place	121°C 30min differential pressure<0.3 bar	
• Filter cartridge is fully traceable	Sterilizable	Autoclave	121°C 30min	
		Filter cartridge is fully traceable		



#### Typical Liquid Flow Rates



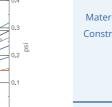
#### Features

- Multi-layer pore size gradient filter medium, extensive chemical compatibility
- Combination of depth filter and pleated filter
- High efficiency, high flux, low pressure difference, long service life No fiber shedding

#### Typical Applications

- Filtration of glue, dyestuff, grinding fluid, high-load filtrate
- Filtration of colloidal products
- Filtration of fermentation broth and high viscosity materials • Prefiltration of culture media, blood products

# **Typical Liquid Flow Rates** US gal/min 3 4 5



#### Filt Dimen

Pure Water Flow Rate,25°C

20

- Extensive chemical compatibility
- · Gradient pore size design
- High efficiency particle retention rate to protect terminal filter sterilization safety
- No fiber shedding

Features

#### Typical Applications

- Filtration of colloidal products
- Filtration of fermentation broth and high viscosity materials
- Prefiltration of culture media, blood products • Filtration of chemical intermediates, organic solvents, pure water

## Qua Cont

#### Ordering Information Pore Size Length 020 = 0.20µm 0=DO 005 = 5" 045 = 0.45µm 1=222 010 = 10" 065 = 0.65µm 2=222 020 = 20" 100 = 1.0µm 3=222 CRPPA 030 = 30" . 300 = 3.0µm 4=222 040 = 40" . 500 = 5.0µm 5=226 . H10 = 10µm 6=226 7=226 8=226

#### Ordering Information

	Length	Pore Size	Adaptor	Seal Material	Core
CRPPD	005 = 5" 010 = 10" 020 = 20" 030 = 30" 040 = 40"	050 = 0.50µm 080 = 0.80µm 100 = 1.0µm 150 = 1.5µm 300 = 3.0µm 500 = 5.0µm H10 = 10µm H15 = 15µm H20 = 20µm H30 = 30µm	0=DOE 1=222/Flat with 316L SS insert 2=222/Flat 3=222/Fin 4=222/Fin with 316L SS insert 5=226/Fin with 316L SS insert 6=226/Flat 8=226/Flat with 316L SS insert	S=Silicone E=EPDM N=Nitrile F=FKM	Blank=PP R=Reinforced PP S=316L Stainless Steel



## **PP Pleated Filter Cartridge with Higher Removal Efficiency**

#### **PPA Series**

PPA series PP pleated filter cartridge is made of multi-layer PP microfiber. With gradient pore size and high strength support, the filter cartridge has high retention efficiency and high flow rate. The full PP structure enables the filter cartridge to be applied to the filtration of various acid and alkali and organic solvents.

	Filter Membrane	РР	
	Support/Drainage	РР	
	Cage/End Cap	РР	
Materials of	Core	PP/316L Stainless Steel	
Construction	Adaptor	PP/PP+Stainless Steel	
	O-rings	S/E/N/F	
	Sealed by hot melt we	lding, no adhesive	
	Outer Diameter	69mm	
Filter Dimensions	Inner Diameter	33mm	
	Length	5-40inches	
	Filtration Area	≥0.25m <sup>2</sup> (5inches),≥0.52m <sup>2</sup> /10inches	
Operating	Maximum Differential Pressure (Reverse)	5.2 bar @ 25°C,1.9 bar @ 82°C	
Conditions	Maximum Differential Pressure (Forward)	2.1 bar @ 25°C	
Biological	Endotoxins	<0.25 EU/mL	
Safety	Extractables	<40 mg/10 inches	
	Steam In-place	121°C 30min differential pressure<0.3 bar	
Sterilizable	Autoclave	121°C 30min	
Quality Control	<ul> <li>ISO 9001:2015 quality management system</li> <li>Filter cartridge is fully traceable</li> <li>All materials comply with relevant requirements of CFR21</li> <li>Proven microbial and particle retention efficiency</li> </ul>		

Adaptor	Seal Material	Core
OOE 22/Flat with 316L SS insert 22/Flat 22/Fin 22/Fin with 316L SS insert 26/Fin with 316L SS insert 26/Flat 26/Flat with 316L SS insert	S=Silicone E=EPDM N=Nitrile F=FKM	Blank=PP R=Reinforced PP S=316L Stainless Steel



## **Avtivated Carbon Fiber Filter Cartridge**

#### **ACR Series**

The food-grade activated carbon fiber used in the ACR series activated carbon fiber winding filter cartridge has extremely high surface area and high porosity. It has the characteristics of fast adsorption rate and high adsorption capacity and can provide ideal retention efficiency.

#### Technical Parameters

	Filter Membrane	Activated Carbon Fiber	
	Support/Drainage	PP	
	Cage/End Cap	PP	
Materials of	Core	PP/316L Stainless Steel	
Construction	Adaptor	PP/PP+Stainless Steel	
	O-rings	S/E/N/F	
	Sealed by hot melt welding, no adhesive		
	Outer Diameter	69 mm	
Filter Dimensions	Inner Diameter	33 mm	
	Length	5-40inches	
Operating	Maximum Differential Pressure (Reverse)	5.2 bar @ 25°C,1.9 bar @ 82°C	
Conditions	Maximum Differential Pressure (Forward)	2.1 bar @ 25°C	
Quality Control	<ul> <li>ISO 9001:2015 quality management system</li> <li>Filter cartridge is fully traceable</li> <li>All materials comply with relevant requirements of CFR21</li> </ul>		

#### Ordering Information

	Length	Pore Size	Adaptor	Seal Material	Core
CRACR	005 = 5" 010 = 10" 020 = 20" 030 = 30" 040 = 40"	050 = 0.50μm 100 = 1.0μm 150 = 1.5μm 300 = 3.0μm 500 = 5.0μm H10 = 10μm H15 = 15μm H30 = 30μm H50 = 50μm T10 = 100μm	0=DOE 1=222/Flat with 316L SS insert 2=222/Flat 3=222/Fin 4=222/Fin with 316L SS insert 5=226/Fin with 316L SS insert 6=226/Flat 8=226/Flat with 316L SS insert	S=Silicone E=EPDM N=Nitrile F=FKM	Blank=PP R=Reinforced PP S=316L Stainless Steel



#### Features

- · Activated carbon with high iodine value
- Fast adsorption
- Depth filter
- Long service life

#### Typical Applications

- Decolorization of material liquid
- Deodorization of material liquid
- Clarification and filtration
- Dechlorination of material liquid

## Hydrophilic PVDF Pleated Filter Cartridge with **Broad Chemical Compatibility**

Typical Liquid Flow Rates 

Pure Water Flow Rate, 25°C

• Low precipitation and have extensive chemical

High porosity, very low protein binding

Constru

Mater

Filte Dimen

### Opera Condit

Biolog

• 100% integrity test ensures the effect of germ removal • No pre-wetting required

20 25

### Steriliz

- Qua
- Cont
- Filtration of sterile APIs and ophthalmic preparations • Filtration of vaccines, biological products, blood products
- and other high protein content materials

• Filtration of high-purity chemicals, chemical intermediates,

#### Ordering Information

Typical Applications

strong acid and oxidizing liquid

Filtration of SVP and LVP

Features

compatibility

	Length	Pore Size	Adaptor	Seal Material	Core
CRPVDFL	005 = 5" 010 = 10" 020 = 20" 030 = 30" 040 = 40"	010 = 0.10µm 020 = 0.20µm 045 = 0.45µm 065 = 0.65µm 100 = 1.0µm	0=DOE 1=222/Flat with 316L SS insert 2=222/Flat 3=222/Fin 4=222/Fin with 316L SS insert 5=226/Fin with 316L SS insert 6=226/Flat 8=226/Flat with 316L SS insert	S=Silicone E=EPDM N=Nitrile F=FKM	Blank=PP R=Reinforced PP S=316L Stainless Stee



#### **PVL** Series

PVL series PVDF pleated filter cartridge is made of unlined hydrophilic PVDF membrane. The filter membrane has the characteristics of symmetrical pore type, uniform hydrophilicity, high porosity and extremely low protein binding, which make the filter cartridge easy to use without pre-wetting. The filter cartridge is suitable for the sterilization filtration of various biological products.

#### Technical Parameters

	Filter Membrane	Hydrophilic PVDF	
	Support/Drainage	РР	
	Cage/End Cap	РР	
Materials of	Core	PP/316L Stainless Steel	
onstruction	Adaptor	PP/PP+Stainless Steel	
	O-rings	S/E/N/F	
	Sealed by hot melt we	lding, no adhesive	
	Outer Diameter	69mm	
Filter	Inner Diameter	33mm	
Dimensions	Length	5-40inches	
	Filtration Area	≥0.32m <sup>2</sup> (5inches),≥0.65m <sup>2</sup> /10inches	
Operating	Maximum Differential Pressure (Reverse)	5.2 bar @ 25°C,1.9 bar @ 82°C	
Conditions	Maximum Differential Pressure (Forward)	2.1 bar @ 25°C	
Biological	Endotoxins	<0.25 EU/mL	
Safety	Extractables	<40 mg/10 inches	
Sterilizable	Steam In-place	121°C 30min differential pressure<0.5 bar	
	Autoclave	121°C 30min	
Quality Control	100% integrity test		

Proven bacteria retention efficiency



# Hydrophobic PVDF Pleated Filter Cartridge with High Flow Rate and Long Service Life

#### **PVG Series**

PVG series PVDF pleated filter cartridge is made of unlined hydrophobic PVDF membrane. The filter membrane has the characteristics of symmetrical pore type, high porosity and extremely low protein binding, which make the filter cartridge has high initial flow rate and longer service life. The filter cartridge is suitable for the filtration of various chemical solvents and biological products.

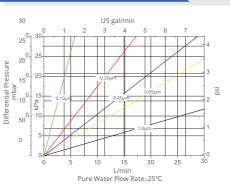
#### Technical Parameters

	Filter Membrane	Hydrophobic PVDF		
	Support/Drainage	РР		
	Cage/End Cap	РР		
Materials of	Core	PP/316L Stainless Steel		
Construction	Adaptor	PP/PP+Stainless Steel		
	O-rings	S/E/N/F		
	Sealed by hot melt welding, no adhesive			
	Outer Diameter	69mm		
Filter	Inner Diameter	33mm		
Dimensions	Length	5-40inches		
	Filtration Area	≥0.32m <sup>2</sup> (5inches),≥0.65m <sup>2</sup> /10inches		
Operating Conditions	Maximum Differential Pressure (Reverse)	5.2 bar @ 25°C,1.9 bar @ 82°C		
	Maximum Differential Pressure (Forward)	2.1 bar @ 25°C		
Biological	Endotoxins	<0.25 EU/mL		
Safety	Extractables	<40 mg/10 inches		
Constitution in the	Steam In-place	121°C 30min differential pressure<0.5 bar		
Sterilizable	Autoclave	121°C 30min		
Quality Control	<ul> <li>ISO 9001:2015 quality management system</li> <li>100% integrity test</li> <li>Filter cartridge is fully traceable</li> <li>All materials comply with relevant requirements of CFR21</li> <li>Proven bacteria retention efficiency</li> </ul>			



the second s	
and the second se	
1 - T Percent Color	
the second se	
A CONTRACTOR OF THE OWNER OWNER OF THE OWNER OWNE	
and the second se	
and the second se	
and a second sec	
and the second s	
and and a second se	
and merely and the second	

#### Typical Liquid Flow Rates



#### Features

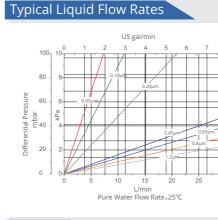
- Low precipitation, very low protein binding
- Extensive chemical compatibility
- 100% integrity test ensures the effect of germ removal • High porosity, long service life

#### Typical Applications

- Filtration of high-purity chemicals, chemical intermediates, strong acid and oxidizing liquid
- Filtration of SVP and LVP
- Filtration of sterile APIs and ophthalmic preparations • Filtration of vaccines, biological products, blood products
- and other high protein content materials

	Length	Pore Size	Adaptor	Seal Material	Core
CRPVDFG	005 = 5" 010 = 10" 020 = 20" 030 = 30" 040 = 40"	010 = 0.10μm 020 = 0.20μm 045 = 0.45μm 065 = 0.65μm 100 = 1.0μm	0=DOE 1=222/Flat with 316L SS insert 2=222/Flat 3=222/Fin 4=222/Fin with 316L SS insert 5=226/Fin with 316L SS insert 6=226/Flat 8=226/Flat with 316L SS insert	S=Silicone E=EPDM N=Nitrile F=FKM	Blank=PP R=Reinforced PP S=316L Stainless Steel





#### Features

- Strong chemical compatibility
- High flux, low protein binding
- 100% integrity test
- Long service life

#### Typical Applications

- · Filtration of water for injection, cleaning solutions, purified water, deionized water
- Filtration of LVP, APIs, buffers, eye drops, disinfectants, etc. • Filtration of vaccines, serums, biological products,
- antibiotic water-based liquid, etc.
- Filtration of red wine, beer, juice, purified water, etc.

#### Ordering Information

	Length	Pore Size	Adaptor	Seal Material	Core
CRPES	005 = 5" 010 = 10" 020 = 20" 030 = 30" 040 = 40"	002 = 0.02µm 005 = 0.05µm 010 = 0.10µm 020 = 0.20µm 045 = 0.45µm 065 = 0.65µm 080 = 0.80µm 120 = 1.20µm	0=DOE 1=222/Flat with 316L SS insert 2=222/Flat 3=222/Fin 4=222/Fin with 316L SS insert 5=226/Fin with 316L SS insert 6=226/Flat 8=226/Flat with 316L SS insert	S=Silicone E=EPDM N=Nitrile F=FKM	Blank=PP R=Reinforced PP S=316L Stainless Steel



Materials

Constructi

## Filter

Dimensio

Operatin Condition

Biologica Safety

Sterilizab

Quality

Control

## **PES Pleated Filter Cartridge with High Flow Rate and** Long Service Life

#### **SP** Series

SP series PES pleated filter cartridge is made of naturally hydrophilic highly asymmetric PES membrane. It has good heat resistance and can withstand hot water sterilization and steam sterilization for a long time. The removal rate of the filter cartridge to typical bacteria in industry passes bath validation. Longer service life can be provided while effectively reducing the load.

#### Technical Parameters

	Filter Membrane	PES		
	Support/Drainage	РР		
	Cage/End Cap	РР		
of	Core	PP/316L Stainless Steel		
tion	Adaptor	PP/PP+Stainless Steel		
	O-rings	S/E/N/F		
	Sealed by hot melt we	lding, no adhesive		
	Outer Diameter	69mm		
ons –	Inner Diameter	33mm		
	Length	5-40inches		
	Filtration Area	≥0.32m² (5inches),≥0.65m²/10inches		
ng	Maximum Differential Pressure (Reverse)	5.2 bar @ 25°C,1.9 bar @ 82°C		
ns	Maximum Differential Pressure (Forward)	2.1 bar @ 25°C		
al	Endotoxins	<0.25 EU/mL		
	Extractables	<40 mg/10 inches		
	Steam In-place	121°C 30min differential pressure<0.5 bar		
le	Autoclave	121°C 30min		
,	ISO 9001:2015 quality management system     100% integrity test			

100% integrity test

- Filter cartridge is fully traceable
- All materials comply with relevant requirements of CFR21
- Retention Efficiency for Monodisperse PSL particles≥99.99%



# Sterilizing-grade PES Pleated Filter Cartridge with High Flow Rate and High Efficiency

#### **SPB** Series

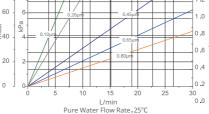
SPB series PES pleated filter cartridge is made of imported asymmetric PES membrane, which has ultra-low protein binding and dissolution/precipitation level. Its good heat resistance enables the filter cartridge to withstand multiple moist heat sterilization. Batch bacteria challenge guarantees the stable bacteria removal ability of the filter cartridge.

#### Technical Parameters

	Filter Membrane	PES	
	Support/Drainage	РР	
	Cage/End Cap	РР	
Materials of	Core	PP/316L Stainless Steel	
Construction	Adaptor	PP/PP+Stainless Steel	
	O-rings	S/E/N/F	
	Sealed by hot melt we	lding, no adhesive	
	Outer Diameter	69mm	
Filter	Inner Diameter	33mm	
Dimensions	Length	5-40inches	
	Filtration Area	≥0.32m <sup>2</sup> (5inches),≥0.65m <sup>2</sup> /10inches	
Operating	Maximum Differential Pressure (Reverse)	5.2 bar @ 25°C,1.9 bar @ 82°C	
Conditions	Maximum Differential Pressure (Forward)	2.1 bar @ 25°C	
Biological	Endotoxins	<0.25 EU/mL	
Safety	Extractables	<40 mg/10 inches	
	Steam In-place	121°C 30min differential pressure<0.5 bar	
Sterilizable	Autoclave	121°C 30min	
Quality Control	<ul> <li>ISO 9001:2015 quality management system</li> <li>100% integrity test</li> <li>Filter cartridge is fully traceable</li> <li>All materials comply with relevant requirements of CFR21</li> <li>Bacteria Liquid Challenge Test T<sub>R</sub>≥10<sup>11</sup></li> </ul>		

#### Ordering Information





#### Features

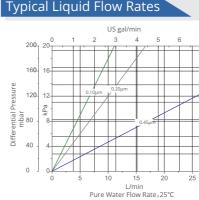
- Strong chemical compatibility
- High flux, low protein binding
- Proven sterile-grade filter cartridge
- Ultra-low dissolved/precipitated materials

#### Typical Applications

- Sterilization filtration of water for injection, cleaning solutions, purified water, deionized water, etc.
  - Sterilization filtration of LVP, APIs, buffers, eye drops, disinfectants, etc. • Sterilization filtration of vaccines, serums, biological products,
  - antibiotic water-based liquid, etc.
  - Filtration of red wine, beer, juice, purified water, etc.

	Length	Pore Size	Adaptor	Seal Material	Core
CRPESB	005 = 5" 010 = 10" 020 = 20" 030 = 30" 040 = 40"	010 = 0.10µm 020 = 0.20µm 045 = 0.45µm 065 = 0.65µm 080 = 0.80µm	0=DOE 1=222/Flat with 316L SS insert 2=222/Flat 3=222/Fin 4=222/Fin with 316L SS insert 5=226/Fin with 316L SS insert 6=226/Flat 8=226/Flat with 316L SS insert	S=Silicone E=EPDM N=Nitrile F=FKM	Blank=PP R=Reinforced PP S=316L Stainless Steel





#### Features

- Strong chemical compatibility
- High flux, low protein binding
- Proven sterile-grade filter cartridge
- Higher protection ability of sterilization

#### Typical Applications

- Sterilization filtration of water for injection, cleaning solutions, purified water, deionized water
- Sterilization filtration of LVP, APIs, buffers, eye drops, disinfectants, etc.
- Sterilization filtration of vaccines, serums, biological products, antibiotic water-based liquid, etc.
- Filtration of red wine, beer, juice, purified water

#### Ordering Information

	Length	Pore Size	
CRPESD	005 = 5" 010 = 10" 020 = 20" 030 = 30" 040 = 40"	010 = 0.10μm + 0.10μm 020 = 0.20μm+ 0.20μm 045 = 0.45μm+ 0.45μm	0=DOE 1=222/Flat 3=222/Flat 3=222/Fin 4=222/Fin 5=226/Fin 7=226/Flat 8=226/Flat





Materi Constru

Filte Dimer

Opera

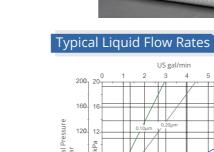
Safe

Steriliz

Cont

- Condi
- Biolog

- Qual





# Sterilizing-grade Double-layer PES Pleated Filter Cartridge with Higher Removal Efficiency

#### SPD Series

SPD series PES pleated filter cartridge is made of double-layer imported asymmetric PES membrane. The double-layer Sterilizing-grade membrane provides a higher level of sterilization protection. It is suitable for harsh sterile terminal filtration.

	Filter Membrane	PES
	Support/Drainage	PP
	Cage/End Cap	PP
ials of	Core	PP/316L Stainless Steel
uction	Adaptor	PP/PP+Stainless Steel
	O-rings	S/E/N/F
	Sealed by hot melt we	lding, no adhesive
	Outer Diameter	69mm
ter nsions	Inner Diameter	33mm
	Length	5-40inches
	Filtration Area	≥0.26m <sup>2</sup> (5inches),≥0.55m <sup>2</sup> /10inches
ating	Maximum Differential Pressure (Reverse)	5.2 bar @ 25°C,1.9 bar @ 82°C
itions	Maximum Differential Pressure (Forward)	2.1 bar @ 25°C
gical	Endotoxins	<0.25 EU/mL
ety	Extractables	<40 mg/10 inches
	Steam In-place	121°C 30min differential pressure<0.5 bar
zable	Autoclave	121°C 30min
ality trol	<ul><li>100% integrity test</li><li>Filter cartridge is ful</li></ul>	with relevant requirements of CFR21





# Sterilizing-grade Double-layer PES Pleated Filter Cartridge with Long Service Life and High Efficiency

### SPP Series

SPP series PES pleated filter cartridge is made of double-layer imported asymmetric PES membrane. The double-layer filter membrane is specially designed so that the filter cartridge has reliable sterilization ability and can provide longer flux.

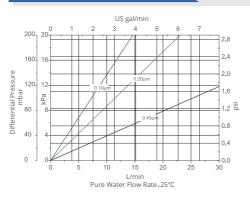
#### Technical Parameters

Ordering Information

	Filter Membrane	PES	
	Support/Drainage	РР	
	Cage/End Cap	РР	
Materials of	Core	PP/316L Stainless Steel	
Construction	Adaptor	PP/PP+Stainless Steel	
	O-rings	S/E/N/F	
	Sealed by hot melt we	lding, no adhesive	
	Outer Diameter	69mm	
Filter	Inner Diameter	33mm	
Dimensions	Length	5-40inches	
	Filtration Area	≥0.26m <sup>2</sup> (5inches),≥0.55m <sup>2</sup> /10inches	
Operating	Maximum Differential Pressure (Reverse)	5.2 bar @ 25°C,1.9 bar @ 82°C	
Conditions	Maximum Differential Pressure (Forward)	2.1 bar @ 25°C	
Biological	Endotoxins	<0.25 EU/mL	
Safety	Extractables	<40 mg/10 inches	
	Steam In-place	121°C 30min differential pressure<0.3 bar	
Sterilizable	Autoclave	121°C 30min	
Quality Control	<ul> <li>ISO 9001:2015 quality management system</li> <li>100% integrity test</li> <li>Filter cartridge is fully traceable</li> <li>All materials comply with relevant requirements of CFR21</li> <li>Bacteria Liquid Challenge Test TR≥10<sup>11</sup></li> </ul>		



#### Typical Liquid Flow Rates



#### Features

- Strong chemical compatibility
- High flux, low protein binding
- Proven sterile-grade filter cartridge
- Super long service life

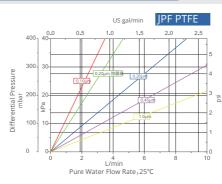
#### Typical Applications

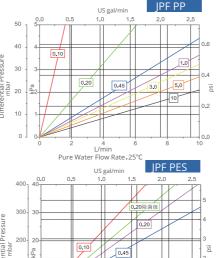
- Sterilization filtration of water for injection, cleaning solutions, purified water, deionized water
- Sterilization filtration of LVP, APIs, buffers, eye drops, disinfectants, etc. Sterilization filtration of vaccines, serums, biological products,

	Length	Pore Size	Adaptor	Seal Material	Core
CRPESP	005 = 5" 010 = 10" 020 = 20" 030 = 30" 040 = 40"	010=0.10µm+0.20µm 020=0.20µm+0.80µm 045=0.45µm+1.0µm	0=DOE 1=222/Flat with 316L SS insert 2=222/Flat 3=222/Fin 4=222/Fin with 316L SS insert 5=226/Fin with 316L SS insert 6=226/Flat 8=226/Flat with 316L SS insert	S=Silicone E=EPDM N=Nitrile F=FKM	Blank=PP R=Reinforced PP S=316L Stainless Steel



#### Typical Liquid Flow Rates





1.0

PES

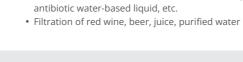
PESB=Sterile-grade PES

Features

• Proven sterilization efficiency • High flow rate, long service life

2 4 6 L/min Pure Water Flow Rate, 25°C Ordering Information Filter Membrane Length F25=2.5" PP PTFEG=Hydrophobic PTFE J25=2.5" CR PTFESG=Sterile-grade J50=5" Hydrophobic PTFE





## **Mini Pleated Filter Cartridge**

#### **JPF** Series

JPF series mini pleated filter cartridges are used for laboratory research, small-scale process validation in the pharmaceutical industry and other sterilization filtration, particle control, pre-filtration, etc. We can provide microporous membrane with different materials and removal ratings and product selection of different installation interface to meet various needs of customers.

#### Technical Parameters

	Filter Membrane	Hydrophobic PTFE/PP/PES
	Support/Drainage	PP
	Cage/End Cap	PP
Materials of Construction	Core	PP
Construction	Adaptor	PP
	O-rings	S/E/F
	Sealed by hot melt welding, no adhesive	
Filter Dimensions	Outer Diameter	J25/J50: 56mm, F25:42mm
	Length	2.5inches, 5inches
	Filtration Area	J25≥0.1m²,J50≥0.2m²,F25≥0.045m²
	Maximum Differential Pressure (Forward)	4.2 bar @ 25°C,1.5 bar @ 82°C, 0.5 bar @ 95°C
Operating Conditions	Maximum Differential Pressure (Reverse)	2.1 bar @ 25°C
	Steam In-place	121°C 30min differential pressure<0.3 bar
	Autoclave	121°C 30min

- Interpolation is compact and easy to use
- Sterilization filtration of compressed air,
- nitrogen, etc.
- Filtration of aseptic packaging air
- Withstand multiple moist heat sterilization Sterilization filtration of solvents, disinfectants, etc. • Sterilization filtration of biological preparations,
  - culture medium, sterile APIs, antibiotic liquid, etc.

Pore Size	Adaptor	Seal Material
010=0.10µm 020=0.20µm 045=0.45µm 100=1.00µm 300=3.00µm 500=5.00µm H10=10µm	M=Internal 116/Flat with bayonet MN= Internal 116/Flat no bayonet CK= Extermal 126/Flat with 2-Flange bayonet PK= Skiirt Flange without o-ring CM =Extermal 113 without bayonet (Only for F25)	S=Silicone E=EPDM N=Nitrile F=FKM



## **PP Melt Blown Filter Cartridge**

### **MicroPure Classic Series**

PP melt blown filter cartridge is made of 100% pure PP particles without any adhesive, and is made by fiber hot-melt entanglement. The unique three-layer gradient pore size design forms a three-dimensional slag filtering effect, which has the characteristics of high porosity, high retention efficiency, high dirt holding capacity and low pressure difference. The pure PP structure makes it have extensive chemical compatibility and is suitable for the filtration of strong acid, strong alkali and organic solvents. The advanced fiber hot-melt technology can meet the various needs of customers for this product.

#### Technical Parameters

	Filter Membrane	РР
	Cage/End Cap	PP
Materials of	Core	РР
construction	Connection	DOE/222Flat/222Fin/226Fin/226Flat
	O-rings	S/F/N/E
	Surface Treatment	Flat/Orange/Embossing/Grooved
	Outer Diameter	63 / 114 mm
Filter Dimensions	Inner Diameter	28 / 30 mm
Dimensions	Removal Rating	0.5µm/1µm/5µm/10µm/20µm/30µm 50µm/75µm/100µm/150µm
	Length	10"/20"/ 30"/ 40"/ 50"/ 60"/ 70"
Operating Conditions	Operating Temperature and pH	<82°С рН1-13
conditions	Maximum Differential Pressure (forward)	3.5 bar @ 20°C,1.0 bar @ 82°C
	Recommended Replacement Differential Pressure	2.4 bar @ 20°C

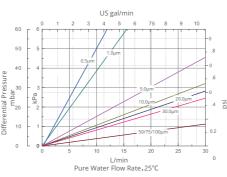
#### Features `

- Gradient pore size structure, high dirt holding capacity
- High-purity PP material, extensive chemical resistance
- Uniform void distribution, high filtering effect, large area
- Double service life and low replacement costs
- Inner ironing treatment and PP core structure to avoid fiber precipitation
- NFS certification

#### Ordering Information

L		
Ł		
L		
0	)	

#### Typical Liquid Flow Rates



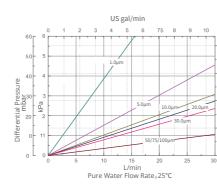
- · Power plant water treatment: filtration of cooling water, boiler brine removal
- Pretreatment of biopharmaceutical, water for injection and other pure water
- Filtration of drinking water: filtration of food, beverages and bottled water
- Filtration of electroplating solutions
- Pretreatment of oil/gas industry, filtration of oilfield reinjection water

	Length	Pore Size	Adaptor	Seal Material	Appearance	Core
	010=10"	0050=0.5µm	Blank=DOE	Blank=Non	Blank=Conventional Surface	Blank=Non
	020=20"	0100=1µm	2=222/Flat	S=Silicone	HG=Fluffy Surface (High Dirt Holding)	P=PP
CRMPP	030=30"	0500=5µm	3=222/Fin	E=EPDM	G=Grooved Surface	
C	040=40"	1000=10µm	6=226/Fin	N=Nitrile	E=Embossing Surface	
	050=50"	2000=20µm			0	
	060=60"	3000=30µm	7=226/Flat	F=FKM	O=Orange Surface	
	070=70″	5000=50µm			B=Big and Fat (Conventional Surface)	
		10000=100µm				



Materials Constructi

#### Typical Liquid Flow Rates



Dimensio

Filter

Operatir Conditior

#### Features

- Wide selection of filter materials and core materials ensure superior performance
- Gradient pore structure effectively removes particles of different size • Long service life and save operating costs

#### Ordering Information

• Extensive chemical resistance

• High dirt holding capacity

	Material	Length	Pore Size	Core	Adaptor	Seal Material
CRW	PP CT=Absorbent Cotton GF=Glass Fiber	010=10" 020=20" 030=30" 040=40" 050=50" 060=60" 070=70"	005 = 0.5µm 010 = 1µm 050 = 5µm 100 = 10µm 200 = 20µm 300 = 30µm 500 = 50µm H10 = 100µm	P=PP Skeleton S=304SS Skeleton L=316L Skeleton	Blank=DOE 2=222/Flat 3=222/Fin 6=226/Fin 7=226/Flat	Blank=Non S=Silicone E=EPDM F=FKM N=Nitrile Rubber







## **String Wound Filter Cartridge**

### **AquaPure Series**

String wound filter cartridge is a kind of depth filter, which is used for the filtration of liquid with low viscosity and low impurity content. The string wound filter cartridge is made of PP yarn or absorbent cotton or glass fiber yarn precisely wound on the porous skeleton according to a specific density, which has a honeycomb structure with a sparse outside and a dense inside. It can effectively remove suspended matter, particles, rust and other impurities in the fluid, and has very excellent filtration performance.

#### Technical Parameters

	Filter Membrane	PP/Absorbent Cotton/Glass Fiber
	Cage/End Cap	РР
s of tion	Core	PP/304/316 Stainless Steel
	Connection	DOE/222Flat/222Fin/226Fin/226Flat
	O-rings	S/F/N/E
	Outer Diameter	63 / 114 mm
	Inner Diameter	28 / 30 mm
ons	Removal Rating	0.5µm/1µm/5µm/10µm/20µm/30µm 50µm/75µm/100µm/150µm
	Length	10″/20″/ 30″/ 40″/ 50″/ 60″/ 70″
	Operating Temperature	PP<82°C Absorbent Cotton/Glass Fiber<120°C
ng Ins	Maximum Differential Pressure (forward)	4.2 bar @ 20°C
	Recommended Replacement Differential Pressure	2.4 bar @ 20°C
	PH	1-13

- Pretreatment of biopharmaceutical high-purity water/water for injection
- RO pretreatment
- Petrochemical/power plant filtration
- Filtration of industrial oils
- Filtration of microelectronics ultra-pure water
- Filtration of fine chemical acid and alkali or organic solutions



## **High Flow PP Pleated Filter Cartridge**

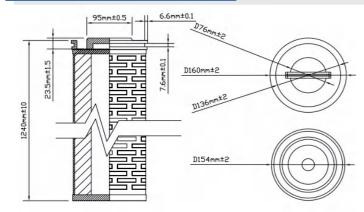
#### 600 FlowPure-HF Series

600 FlowPure-HF high flow series pleated filter cartridge has a large diameter of 6inch(152mm), no core, and a single opening design. The large diameter ensures a larger filtration area and increases the flux, thereby reducing the number of filters and cartridges. Long service life and high flow rate reduce investment costs.

#### Technical Parameters

	Filter Membrane	PP/Glass Fiber	
	Support/Shell	PP/GF Reinforced PP	
Materials of Construction	End Cap	Reinforced PP	
	O-rings	S/E/N	
	Welding Method	Hot-melt Welding(No Adhesive)	
	Outer Diameter	152mm(6")	
Filter Dimensions	Length	20"/40"/60"	
	Connection	Carrying Handle Type	
	Operating	Ordinary PP Shell<80°C	
Operating	Temperature	GF Reinforced PP Shell<120°C	
Conditions	Maximum Differential Pressure	3.4 bar @ 82°C	
	Recommended Replacement Differential Pressure	2.4 bar @ 20°C	

#### High Flow Dimensional Drawing



### Ordering Information

	Filter Material	Length	Removal Rating	Seal Material	Appearance
CRHF	PP GF=Glass Fiber	020 = 20" 040 = 40" 060 = 60"	100 = 1μm 450 = 4.5μm 600 = 6μm 1000 = 10μm 2000 = 20μm 5000 = 50μm 7000 = 70μm 10000= 100μm	S=Silicone E=EPDM N=Nitrile Rubber	B=Bind Belt Type C=Shell Type



#### Features

- Filter material has gradient pore structure
- Flow rate is 5 times that of ordinary pleated filter cartridge
- 50% less investment in the overall system
- Uses hot-melt welding technology

#### Typical Applications

- RO prefiltration, desalination plants and industrial process water
- Filtration of power plants, condensed water
- Drinking water, food and beverage, edible oil, etc.
- Filtration of oilfield reinjection water
- High-purity water process pretreatment in biopharmaceutical industry



### Features

- Fixed pore size, fixed value filtration
- High tensile strength
- Easy to clean and reusable
- Can intercept all kinds of hard particle impurities
- Suitable for high viscosity materials

#### Ordering Information

	Material	Pore Size	Outer Filter Cloth	Dimension	Interface Ring Material
FB	NMO=Nylon Monofilament Cloth	025=25µm 050=50µm 075=75µm 100=100µm 200=200µm 300=300µm 400=400µm 600=600µm 800=800µm	P=Non N=Nylon Monofilament Cloth	01=Bag 1(Φ7"*17"L) 02=Bag 2(Φ7"*32"L) 03=Bag 3(Φ4"*9"L) 04=Bag 4(Φ4"*16"L)	P=PP Ring E=Polyester Ring S=Stainless Steel Ring



Ор Cor

## Nylon Monofilament Filter Bag

#### NMO Series

Nylon monofilament filter bag is made of filter material woven by a single nylon fiber, and the structure is welded and fused or wire stitched. It has good compressive strength, smooth surface and is not easy to deform, easy to clean and can be used repeatedly. It is suitable for the fields with low removal rating requirements such as coarse filtration or prefiltration as well as liquid filtration with high impurity content.

#### Technical Parameters

	Filter Membrane	Nylon Monofilament cloth
Materials of Construction	Connection Material	PP/Polyester/Stainless Steel
	Technique	Wire Stitching/Hot-melt
	Bag 1	Φ7"×17" L; 0.25 m <sup>2</sup>
Filter Dimensions	Bag 2	Φ7"×32" L; 0.50 m <sup>2</sup>
	Bag 3	Φ4"×9" L; 0.09 m <sup>2</sup>
	Bag 4	Φ4"×16" L; 0.16 m <sup>2</sup>
Operating Operating Conditions Temperature		<160°C

- Prefiltration of water treatment
- Petrochemical industry
- Light industry food and beverages
- Solid-liquid separation and treatment in metallurgy, electronics,
- pharmaceutical and other fields
- Water treatment for biopharmaceutical industry



## **Needle Felt Filter Bag**

#### **PP/PE/PTFE Series**

Needle felt filter bag is made of 100% ultra-fine pure fiber needle felt with three-dimensional deep filtration structure. It is highly fluffy, has a tortuous interior, and has super air permeability and high dirt holding capacity. It can effectively capture fine solid particles and colloidal particles, and is not easy to block. The surface of the felt cloth adopts high temperature heat treatment, singeing and calendering treatment to avoid pollution caused by fiber shedding, and to avoid the excessive blockage of the filter holes caused by the traditional rolling treatment and shorten the service life. The filter bag is available in different materials such as pure PP, polyester and PTFE to meet your different filtering needs.

#### Technical Parameters

	Filter Membrane	PP/PE/PTFE Needle Felt
Materials of Construction	Connection Material	PP/Polyester/Stainless Steel
Construction	Technique	Wire Stitching/Hot-melt
	Bag 1	Φ7"×17"L; 0.25 m <sup>2</sup>
Filter	Bag 2	Φ7"×32" L; 0.50 m <sup>2</sup>
Dimensions	Bag 3	Φ4"×9" L; 0.09 m <sup>2</sup>
	Bag 4	Φ4"×16" L; 0.16 m <sup>2</sup>
Operating Conditions	Operating Temperature	PP < 90°C PE < 160°C PTFE < 240°C

#### Features

- High permeability and high dirt holding capacity
- No hair removal on the surface, no chemical release
- · Hot-melt seamless welding
- Material does not contain silicone oil
- High flow rate, low pressure difference

#### Typical Applications

- Prefiltrration of water treatment
- Food and beverage industry
- Filtration of pretreatment precleaning, electrophoretic paint, spray water, circulating water, etc. in the automotive industry
- Solvent purification and treatment, resin and wastewater treatment, etc. in the paint industry
- Water treatment for biopharmaceutical industry

#### Ordering Information

	Material	Pore Size	Outer Filter Cloth	Dimension	Interface Ring Material
FB	PO=PP Needle Felt PE=Polyester Needle Felt PTFE	025 = 25µm 050 = 50µm 100 = 100µm 200 = 200µm 300 = 300µm 400 = 400µm 600 = 600µm 800 = 800µm	P=Non PM=PP Multifilament Cloth EM=Polyester Multifilament Cloth	01=Bag 1(Φ7"*17"L) 02=Bag 2(Φ7"*32"L) 03=Bag 3(Φ4"*9"L) 04=Bag 4(Φ4"*16"L)	P=PP Ring E=Polyester Ring S=Stainless Steel Ring



#### Typical Applications

- Clarification and filtration of raw material liquid
- Filtration of vaccines
- Decarbonization filtration of LVP
- Filtration of blood products
- Sterilization filtration of Chinese medicine liquid
- Fine chemical industry Food and beverages

#### Features

- Thermal disinfection or hot filter fluid has no adverse effect on the filter board
- The operation is simple and reliable, and the solid outer skeleton design makes the filter cartridge not damaged during installation and disassembly
- High-purity cellulose greatly reduce the ion precipitation grade and endotoxin content
- The three-dimensional space structure and the porous structure of diatomite greatly improve the dirt holding capacity and service life
- Flushable under certain conditions and extend the service life

#### Ordering Information

	Pore Size	Connection	Outer Diameter	O-rings	Structural Unit
CRDS	002=0.2-0.4µm 004=0.4-0.6µm 006=0.6-1µm 010=1-3µm 020=2-5µm 030=3-7µm 100=10-15µm 250=25-30µm 400=40-50µm 500=50-60µm	D=Double Open End S=Single Open End (For 8"only)	08=8" 12=12" 16=16"	S=Silicone Rubber E=EPDM Rubber V=Fluorine Rubber	8=Layer 8 (8" DOE) 9=Layer 9 (12", 16") 12=Layer 12 (12", 16") 15=Layer 15 (12", 16") 16=Layer 16 (12", 16")



## **Depth Filter Sheets and Modules CRDS** Series

CRDS series deep membrane stack filter cartridge compounded with high-purity lignocellulose and inorganic filter aids (diatomite, etc.). Its special three-dimensional space of channel makes each square meter filter area has thousands of square meters of internal surface area, and has a very high dirt holding capacity and filtration quality. Diatomite and resin can not only improve the permeability of the filter plate, but also improve the overall adsorption of the filter plate, and effectively filter the impurities and microorganisms in the liquid through mechanical interception, electrostatic adsorption, etc. The deep stacking technology effectively solves the problems of material and liquid loss, heavy workload and high investment cost of the traditional plate and frame filter.

	Filter Membrane	Cellulose/Diatomite/Resin,etc.	
Materials of Construction	Skeleton/Support Separation Plate	РР	
construction	O-rings	See ordering information selection table	
Operating	Maximum Operating Temperature	80°C	
Conditions	Maximum Differential Pressure	2.0 bar/25°C 1.0 bar/80°C	
Product Guarantee	<ul> <li>The filter cartridges are a grade clean environmen</li> <li>Strictly implement ISO 9 management system</li> <li>All filter cartridge materi FDA certified materials</li> </ul>	t 001:2015 quality	



## **Metal pleated Filter Cartridge**

#### **CRPM Series**

CRPM series metal pleated cartridge filter is pleated by special stainless steel wire mesh. The pleated process enables the filter cartridge to have a large filtration area, high dirt holding capacity and high flow rate. Each seal adopts the argon arc welding process without leakage. Under the high temperature and high pressure filtration environment, the stainless steel filter cartridge has excellent performance, and the filter cartridge can be repeatedly cleaned.

#### Technical Parameters

	Removal Rating	1 μm, 3 μm, 5 μm, 10 μm	
	Length	10", 20", 30", 40"	
Materials of	Filter Membrane	Stainless Steel Wire Mesh	
Construction	Cage/End Cap/Core	Stainless Steel	
	O-rings	See filter cartridge selection table	
Operating	Maximum Operating Temperature	200°C	
Conditions	Maximum Differential Pressure	5 bar	

#### Typical Applications

- Filtration of steam
- Filtration of oxidizing liquid
- Filtration of high viscosity liquid
- Filtration of liquid and gases under high temperature and high pressure condition
- Decarbonization filtration of material liquid
- Filtration of strong acid and alkali liquid

#### Ordering Information

	⊦e	at	เน	re	S	
_						

- Pore distribution, good permeability
- Mental material has higher mechanical strength
- No media shedding
- Wide temperature range that can be used
- Strong corrosion resistance, not easy to damage
- Washable and long service life

	Material	Length	Removal Rating	End Cap	Seal Material
CRPM	4=304 Stainless Steel 6=316L Stainless Steel	005 = 5" 010 = 10" 020 = 20" 030 = 30" 040 = 40"	100 = 1μm 300 = 3μm 500 = 5μm H10 = 10μm	2=222/Flat 3=222/Fin 6=226/Fin 7=226/Flat	S=Silicone E=EPDM F=Fluorine N=Nitrile Rubber



## **Metal Titanium Rod Filter Cartridge**

#### **CRST Series**

CRST series metal titanium rod filter cartridge is a microporous filter cartridge formed by high-purity titanium powder and sintered at high temperature and high vacuum. It has high porosity, good mechanical properties, high corrosion resistance, good chemical compatibility, no media shedding, very low leachables, can be repeatedly cleaned and reused, and low operating costs.

#### Technical Parameters

	Removal Rating	1µm/3µm/5µm/10µm	
Materials of Construction	Length	5"/10"/20"	
	Filter Membrane	Sintered Titanium Powder	
	Cage/End Cap/Core	High-purity Titanium	
	O-rings	See filter cartridge selection ta	
Operating	Maximum Operating Temperature	≤280°C	
Conditions	Maximum Differential Pressure	3.0 bar	
	ricosure		

#### Features

- Tubular porous structure
- High mechanical strength
- Good temperature resistance
- Can be repeatedly cleaned and reused

	Material	Length	Removal Rating	End Cap	Seal Materia
CRS	T = Titanium	005 = 5" 010 = 10" 020 = 20"	100 = 1 μm 300 = 3 μm 500 = 5 μm H10 = 10 μm	2=222/Flat 7=226/Flat N=M30 Threaded Connection L=M20 Threaded Connection	S=Silicone E=EPDM F=Fluorine N=Nitrile Rubbe







- Decarbonization filtration in concentration ration of LVP, small injection and oral liquid
- Impurity removal and filtration of API production, sterilization filtration of fermentation broth
- Filtration of corrosive reagents
- Filtration of high temperature liquid and steam

