



BIO PROCESSING FILTRATION SOLUTIONS



The GVS Group

In over 45 years of history, GVS has evolved from a supplier of components for the healthcare sector to a global group that produces highly technological diversified filtration solutions.

Wide range of products and custom design expertise

GVS produces a wide range of filter materials, filters and off-the-shelf components in all its divisions, enabling its customers to reduce the design time for new product launches. All the GVS divisions work in highly regulated environments and the Group therefore operates with extremely high-quality standards. Thanks to its research and development centres located all over the world, GVS is also able to offer an extremely efficient and personalized service to meet its customers' needs: from product conception and design to testing and mass production.

Dynamic and flexible structure

GVS has developed a streamlined, dynamic and technologically advanced structure that has made it possible to achieve constant and balanced growth. The Group currently employs a total of 4869 people who work in automated assembly departments, in lines for the production and processing of filter membranes and in class 10,000 and 100,000 cleanrooms.

Global growth

The GVS Group has always paid great attention to research, development and innovation of its products and processes and has shown a strong trend towards development in global markets since its foundation.

In addition to the corporate headquarters in Bologna, GVS currently has 19 plants in Italy, United Kingdom, Brazil, United States, China, Mexico, Romania e Puerto Rico, and 29 commercial offices located all over the world. GVS has always adopted a "glocal" approach: it operates locally in contact with its customers, but relies on the strength of a global network.

For more information, visit www.gvs.com



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CARTFLOW



CFP series PES membrane

CFP series PES membrane

Eco Grade PES Pleated Filter Cartridges

CFP series - PES Eco Grade Pleated Filter Cartridges use the hydrophilic polyethersulfone (PES) membrane, which is with extreme low extractables and non-fiber releasing.

The CFP series - PES Eco Grade Pleated Filter Cartridges have a broad chemical compatibility and better stability. This series is suitable for the filtration of bioburden reduction.



Features

- High flow rate
- High-durability PES membrane and other PP assemblies
- Broad chemical compactivity (pH 1-14)
- Special hydrophilic materials

Applications

- Large volume parenterals (LVP)
- Biological reagent filtration
- Ophthalmics filtration
- Aseptic filtration for detergent and disinfectant

Guarantees

- All filter cartridges are manufactured in 10,000-degree clean room
- Manufactured according to ISO9001:2015 certified quality management system
- Gross integrity

Dimension

OD	69 mm (2.72")
Length	5", 10", 20", 30", 40"

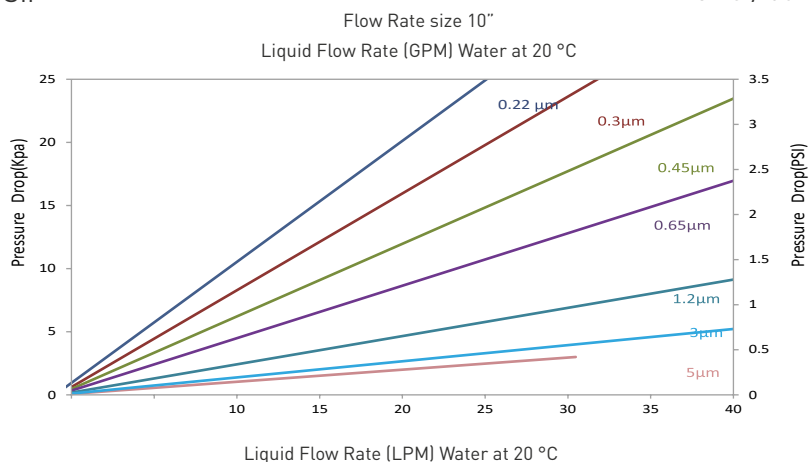


Material of Constructions

Media	Polyethersulfone (PES)
Support/Diversion	Polypropylene
Core/Cage/End Cap	Polypropylene

Performance

Max Operating Temperature	80 °C
Max. Operating DP	4.0 bar @20 °C
	2.4 bar @80 °C (Forward)
SIP	25 °C / 30 min



Quality

- Filter Cartridges are manufactured in a clean room environment
- Manufactured according to ISO9001:2015 certified Quality Management System

Food Contact Compliance

- Materials of construction comply with FDA regulations for food and beverage contact use as detailed in the US Code of Federal Regulations 21 CFR
- Materials used to produce filter media and hardware meet the specifications for biological safety per USP Class VI-121°C for plastics
- Filter cartridges passed European Commission Directives (EU10/2011)
- Halal Certified

Eg.=> CFPPS0022Z050AD0PSS0

ORDERING INFORMATION										
Product Type	Membrane Type	Membrane pore size	Application	Size	Diameter	Endcap	Inner Core	Sealing Material	Connection Support	Revision
CFP = Pleated Cartridge	PS = PES	0022 = 0.22µm	Z = Eco Gr	05 = 5"	0A = OD:69 mm	D0 = DOE	P = Polypro	S = Silicone	S = Standard	0 = Rev.0
		0045 = 0.45µm		10 = 10"		E2 = 213/Flat	S = SS Steel	E = EPDM		
		0065 = 0.65µm		20 = 20"		H1 = 222/Fin		V = Viton		
		0120 = 1.2µm		30 = 30"		H2 = 222/Flat		F = E-FKM		
		0300 = 3µm		40 = 40"		H5 = 222/Spear Fin				
		0500 = 5µm				K1 = 222 Ext/Fin				
						K2 = 222 Ext/Flat				
						G1 = 226/Fin			P = PSU reinforcement (Endcap G1, G2, only)	
						G2 = 226/Flat				
						G5 = 226/Spear Fin				

CFP series PES membrane

High Asymmetric PES Pleated Filter Cartridges

CFP series High Asymmetric Polyethersulfone (PES) pleated filter cartridges are made of hydrophilic high asymmetric polyethersulfone membrane, can provide exceptionally high flow rate and long service life for processing large fluid volumes. It has excellent retention of microorganisms for superior protection of final filters. This characteristic especially suits for Food and Beverage filtration.



Features

- Broad pH compatibility allows the use of filters in a wide range of fluids
- Bioburden reduction efficiency for process with variable bioburden applications with high flow requirements
- 100% integrity tested during manufacture
- Low extractables

Applications

- Food and beverage filtration
- Reduce biological load
- High flow process requirements
- Protection final filters or downstream equipment and systems such as tangential chromatographic

Integrity Test		
Micron	Bubble Point $\geq$ (Water)	Diffusion Flow $\leq$ (10"Ø69mm)
0.22 μ m	3.2 bar	35ml / min @ 2.76 bar
0.45 μ m	2.1 bar	35ml / min @ 1.70 bar
0.65 μ m	1.32 bar	24ml / min @ 1.1 bar

Dimension

Diameter	69 mm (2.72")
Length	5", 10", 20", 30", 40"

Quality

- Validated with B. diminuta (ATCC 191463) at 10^7 /CM² (0.22 μ m)
- Each membrane filter element has been individually tested for integrity
- Individual element is tracked by serial number
- Manufactured according to ISO 9001:2015 certified quality management system
- Meets USP Biological Reactivity Test requirements of the current USP <88> for plastic class VI-121 °C

Effluent quality

- Non-fiber releasing
- Meets TOC and water conductivity per USP Purified Water, pH per USP Sterile Purified Water.

Material of Constructions

Media	PES
Support	PP
Cage/Core/End	PP
Connection Adaptor	SS Insert, PSU Insert
	O-Ring Silicone, EPDM , Viton®

Performance

Operating Conditions

Max Operating Temperature	80 °C
Max. Operating DP	4 bar @ 21°C, 2.4 bar @ 80 °C

Sterilization

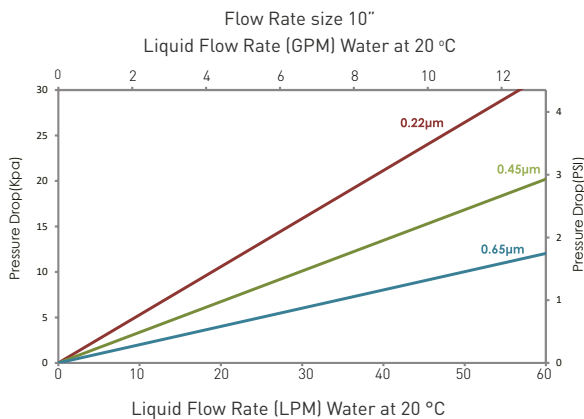
Autoclave Sterilization	121 °C, 60 Min
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Filtration Area

Ø 69mm	0.65 m ² / 10" Filter cartridges
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Extractables

10" Filter Cartridges	< 20mg
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Eg.=> CFPPS0010S050AD0PSS0

ORDERING INFORMATION													
Product Type	Membrane Type	Membrane pore size	Application	Size	Diameter	Endcap	Inner Core	Sealing Material	Connection Support	Revision			
CFP = Pleated Cartridge Filter	PS = PES	0010 = 0.1µm	G = Gen Purpose	05 = 5"	0A = OD:69 mm	D0 = DOE	P = Polypropylene	S = Silicone	S= Standard	0 = Rev.0			
		0022 = 0.22µm		10 = 10"		E2 = 213/Flat		S = SS Steel			E = EPDM		
		0045 = 0.45µm		20 = 20"		H1 = 222/Fin					B = NBR	Y = SS reinforcement	
		0065 = 0.65µm		30 = 30"		H2 = 222/Flat					V = Viton	(Endcap D0, E2, K1, K2, excluded)	
				40 = 40"		H5 = 222/Spear Fin					F = E-FKM		
						K1 = 222 Ext/Fin						P = PSU reinforcement (Endcap G1, G2, only)	
						K2 = 222 Ext/Flat							
						G1 = 226/Fin							
						G2 = 226/Flat							
						G5 = 226/Spear Fin							

CFP series PES membrane

Asymmetric PES Pleated Filter Cartridges

The CFP series Asymmetric Polyethersulfone (PES) Pleated Filter Cartridges are designed to provide greater bacteria and particle removal at high flow rates and low pressure drops in a wide range of biological fluids. It offers the greatest assurance of filtration performance, stability, and service life. All components of the filter cartridge comply with FDA regulations for food contact use.



Features

- Durable PES and PP components
- Highly porous asymmetric membrane
- Excellent chemical compatibility
- Low extractables
- 100% integrity tested during manufacture

Applications

- Large infusion (LVP), small injection (SVP), eye drops sterilization filtration
- Sterilization filtration of biological product
- Sterilization filtration of antibiotic aqueous solution
- Cleaning fluid and disinfectant sterilizing filtration

Dimension

Diameter	69 mm (2.72")
Length	5", 10", 20", 30", 40"

Material of Constructions

Media	PES
Support	PP
Cage/Core/End	PP
Connection Adaptor	SS Insert, PSU Insert
O-Ring	Silicone, EPDM , Viton®

Quality

- Validated with B. diminuta (ATCC 191463) at $10^7/\text{CM}^2$ (0.22 μm)
- Each membrane filter element has been individually tested for integrity
- Individual element is tracked by serial number
- Manufactured according to ISO 9001:2015 certified quality management system
- Meets USP Biological Reactivity Test requirements of the current USP <88> for plastic class VI-121°C

Performance

Operating Conditions

Max Operating Temperature	80 °C
Max. Operating DP	4 bar @ 21 °C , 2.4 bar @ 80 °C

Sterilization

Autoclave Sterilization	121°C , 60 Min
SIP	135°C , 30 Min , 20 cycles

Filtration Area

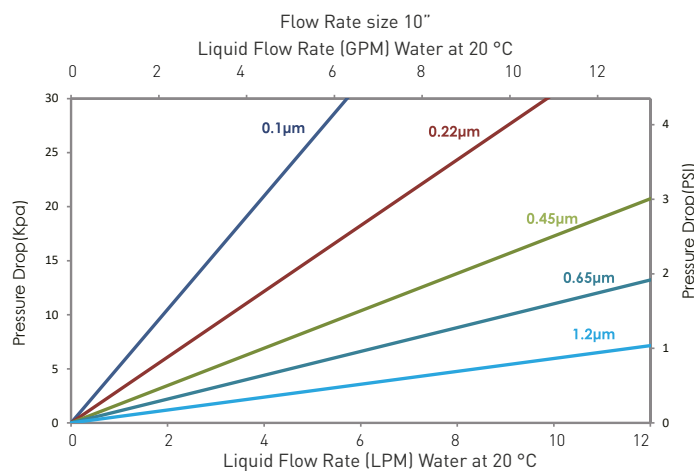
Ø 69mm	0.65 m ² / 10" Filter cartridges
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Extractables

10" Filter Cartridges	< 20 mg
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Effluent quality

- Non-fiber releasing
- Non-pyrogenic per USP Bacterial Endotoxins (<0.25 EU/mL)
- Meets TOC and water conductivity per USP Purified Water, pH per USP Sterile Purified Water



Integrity Test		
Micron	Bubble Point ≥ (Water)	Diffusion Flow ≤ (10" Ø69 mm)
0.1 µm	4.8 bar	25 ml / min @ 4.475 bar
0.22 µm	3.2 bar	25 ml / min @ 2.76 bar
0.45 µm	2.1 bar	25 ml / min @ 1.70 bar
0.65 µm	1.32 bar	12 ml / min @ 1.1 bar

Eg.=> CFPPS0010S050AD0PSS0

ORDERING INFORMATION										
Product Type	Membrane Type	Membrane pore size	Application	Size	Diameter	Endcap	Inner Core	Sealing Material	Connection Support	Revision
CFP = Pleated Cartridge Filter	PS = PES	0010 = 0.1µm	S = Ster Grade	05 = 5"	0A = OD:69 mm	D0 = DOE	P = Polypropylene	S = Silicone	S= Standard	0 = Rev.0
		0004=0.04µm		10 = 10"		E2 = 213/Flat	S = SS Steel	E = EPDM		
		0022 = 0.22µm		20 = 20"		H1 = 222/Fin		B = NBR	Y = SS reinforcement	
		0045 = 0.45µm		30 = 30"		H2 = 222/Flat		V = Viton	(Endcap D0, E2, K1, K2, excluded)	
		0065 = 0.65µm		40 = 40"		H5 = 222/Spear Fin		F = E-FKM		
		0120 = 1.2µm				K1 = 222 Ext/Fin			P = PSU reinforcement (Endcap G1, G2, only)	
						K2 = 222 Ext/Flat				
						G1 = 226/Fin				
		G2 = 226/Flat								
		G5 = 226/Spear Fin								

CFP series PES membrane

Double Layer Asymmetric PES Pleated Filter Cartridges

CFP series Double Layer Asymmetric PES Pleated Filter Cartridges is constructed of highly asymmetric polyether-sulfone membrane and support layer. Unique double layer hydrophilic polyethersul-fone makes it have excellent filtration performance and reliable bacteria intercepting ability. It is especially used in pharmaceutical industry with stringent requirement. All components of filter cartridge comply with FDA regulations. This filter can withstand repeated steam sterilization.

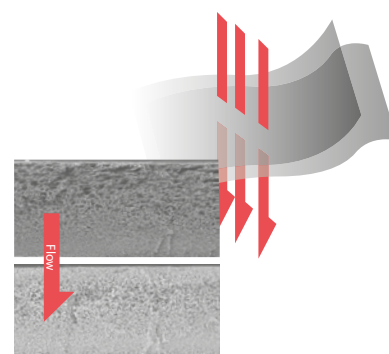
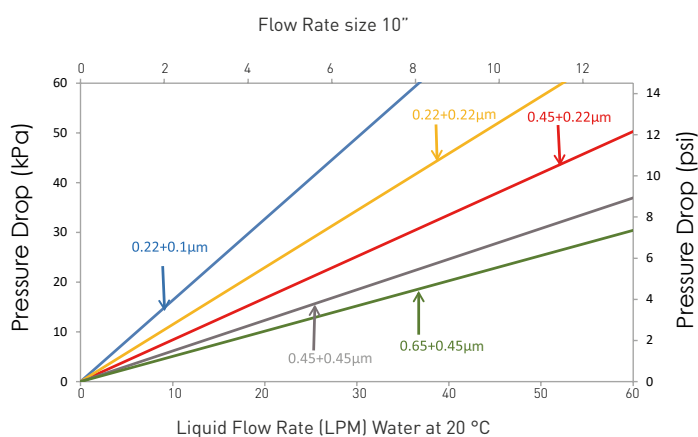


Features

- Unique double layer hydrophilic polyethersulfone with double security makes it have reliable bacteria intercepting ability, increasing filtration safety factor by more than 10 times
- Large effective filtration area makes the filter longer service life and lower cost
- Broad chemical compatibility (PH1-14) , it is suitable for various pharmaceutical filtration
- Structure Stabilization, it can withstand sterilization cycle with 50 times
- 100% integrity test ensures absolute sterilization
- Low protein adsorption
- ISO9001:2015 certified Quality Management System

Quality

- Validated with B. diminuta (ATCC 191463) at $10^7/\text{CM}^2$ (0.22 μm)
- Each membrane filter element has been individually tested for integrity
- Individual element is tracked by serial number
- Manufactured according to ISO 9001:2015 certified quality management system
- Meets USP Biological Reactivity Test requirements of the current USP <88> for plastic class VI-121 °C



Applications

Pharma - Particles filtration, bacterium filtration, API (Active Pharmaceutical Ingredient) filtration, Food and Beverage - Water filtration, Wine and Sparkling Wine filtration, Spirits filtration.

Material of Constructions

Media	PES
Support	PP
Cage/core/end cap	PP
Sealing	Silicone, EPDM, NBR, Viton®, Teflon®, E-FKM

Dimension

Outer Diameter	69 mm (2.72")
Length	5", 10", 20", 30", 40"

Performance

Operating Conditions

Max Operating Temperature	80 °C
Max. Operating DP	4.0 bar @ 20 °C
	2.4 bar @ 80 °C

Sterilization

Autoclave Sterilization	121 °C , 60 min
SIP	125 °C , 30 min

Filtration Area

Ø 69mm	0.65 m ² / 10"
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Extractables

10" Filter Cartridges	< 20 mg
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Effluent quality

- Non-fiber releasing
- Non-pyrogenic per USP Bacterial Endotoxins (<0.25EV/mL)
- Meets TOC and water conductivity per USP Purified Water, pH per USP Sterile Purified Water.

Integrity Test		
Membrane pore size	Bubble Point ≥ (Water)	Diffusion Flow ≤ (10" Ø69mm)
2201 = 0.22/0.1µm	4.8 bar	25ml/min @ 4.475 bar
2222 = 0.22/0.22µm	3.2 bar	20ml/min @ 2.76 bar
0422 = 0.45/0.22µm	3.2 bar	25ml/min @ 2.76 bar
0404 = 0.45/0.45µm	2.1 bar	20ml/min @ 1.70 bar
0604 = 0.65/0.45µm	2.1 bar	25ml/min @ 1.70 bar

Eg. => CFPPS2201P050AD0PSS0

ORDERING INFORMATION										
Product Type	Membrane Type	Membrane pore size	Application	Size	Diameter	Endcap	Inner Core	Sealing Material	Connection Support	Revision
CFP = Pleated Cartridge Filter	PS = PES	2201 = 0.22/0.1µm	P = Premier	05 = 5"	0A = OD: 69 mm	D0 = DOE	P = Polypropylene	S = Silicone	S = Standard	0 = Rev.0
		2222 = 0.22/0.22µm		10 = 10"		E2 = 213/Flat				
		0422 = 0.45/0.22µm		20 = 20"		H1 = 222/Fin				
		0404 = 0.45/0.45µm		30 = 30"		H2 = 222/Flat				
		0604 = 0.65/0.45µm		40 = 40"		H5 = 222/Spear Fin				
						K1 = 222 Ext/Fin				
						K2 = 222 Ext/Flat				
						G1 = 226/Fin				
						G2 = 226/Flat				
						G5 = 226/Spear Fin				

P = PSU reinforcement
(Endcap G1, G2, only)

CFP series PSU membrane

CFP series PSU membrane

General Applications PSU Pleated Filter Cartridges

CFP series General Applications Pleated PSU Filter Cartridges is constructed of highly asymmetric hydrophilic polysulfone membrane and polypropylene components. The unique PSU membrane delivers a high flow rate, long life time, and excellent particle removal efficiency. All the cartridges are made in a controlled clean room environment. The cartridges are ideally suitable for filtration of water-based fluids.



Features

- Highly asymmetric polysulfone membrane provides excellent dirt holding capacity and flow characteristics
- Hydrophilic polysulfone membrane eliminates the need for prewetting and flushing
- Asymmetric membrane structure provides high flow rates with lower differential pressure and a longer life time
- Widely compatible with cleaning applications in many processes such as developing, etching, and stripping
- Manufactured in controlled clean room environment

Applications

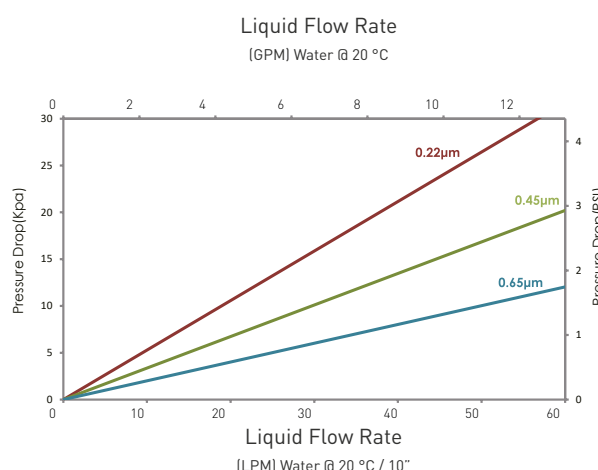
- General-Use water Filtration
- Deionized water systems
- Liquid clarification
- Chemical filtration
- Ultra-Pure water systems

Dimension

Diameter	69 mm (2.72")
Length	5", 10", 20", 30", 40"

Food Contact Compliance

- Materials of construction comply with FDA regulations for food and beverage contact use as detailed in the US Code of Federal Regulations 21CFR
- Materials used to produce filter media and hardware meet the specifications for biological safety per USP Calss VI-121C for plastics
- Filter cartridges passed European Commission Directives (EU10/2011)
- Halal Certified



Material of Constructions

- Media
- Support
- Cage/Core/End
- Sealing

Highly Asymmetric Hydrophilic PSU Membrane
Polypropylene (PP)
Polypropylene (PP)
EPDM, Viton®, E-FKM

Performance

Operating Conditions

Max. Operating Temperature

80 °C

Max. Operating DP

4 bar @ 21 °C, 2.4 bar @ 80 °C

Quality

- Filter Cartridges are manufactured in a clean room environment
- Manufactured according to ISO9001:2015 certified Quality Management System
- 100% integrity test

Eg.=> CFPSU0003G050ADOPSS0

ORDERING INFORMATION										
Product Type	Membrane Type	Membrane pore size	Application	Size	Diameter	Endcap	Inner Core	Sealing Material	Connection Support	Revision
CFP = Pleated Cartridge Filter	SU = Polysulfone	0003 = 0.03µm	G = Gen Purpose	05 = 5"	0A = OD:69 mm	D0 = D0E	P = Polypro	S = Silicone	S = Standard	0 = Rev.0
		0005 = 0.05µm		10 = 10"		E2 = 213/Flat	U = SUS Steel	E = EPDM		
		0010 = 0.1µm		20 = 20"		H1 = 222/Fin		B = NBR	Y = SS reinforcement	
		0020 = 0.20µm		30 = 30"		H2 = 222/Flat		V = Viton	(Endcap D0, E2, K1, K2, excluded)	
		0045 = 0.45µm		40 = 40"		H5 = 222/Spear Fin		F = E-FKM		
		0120 = 1.2µm				K1 = 222 Ext/Fin			P = PSU reinforcement (Endcap G1, G2, only)	
						K2 = 222 Ext/Flat				
						G1 = 226/Fin				
						G2 = 226/Flat				
						G5 = 226/Spear Fin				

CFP series PP media

CFP series PP media

General Applications PP Pleated Filter Cartridge

CFP series General Applications PP Pleated Filter Cartridge are all-polypropylene filter cartridges in economically efficient design, suitable for a wide range of process applications. The pleated polypropylene filter material provides a large filtration surface area which allows for maximized flow rate in the system. PP Pleated Filter Cartridges are available in nominal retention ratings from 0.1 to 50 micron.



Features

- Nominal rated structure, particle removal rating from 0.1 to 50 Micron
- 100% polypropylene components provide broad chemical compatibility, suitable for use in a variety of fluids
- Various end cap configurations to fit into the most standard housings
- Meets FDA requirements for food contact and passes European Commission Directives (EU10/2011)

Applications

- Food & Beverage
- Plating Chemicals
- RO Pre-Filtration
- Fine Chemicals
- Process Water
- Waste water

Dimension

Diameter	69 mm (2.72")
Length	5", 10", 20", 30", 40"

Food Contact Compliance

- Materials of construction comply with FDA regulations for food and beverage contact use as detailed in the US Code of Federal Regulations 21 CFR
- Materials used to produce filter media and hardware meet the specifications for biological safety per USP Class VI-121 °C for plastics
- Filter cartridges passed European Commission Directives (EU10/2011)
- Halal Certified

Material of Constructions

Media	PP
Support	PP
Cage / Core / End cap	PP
Sealing	Silicone, EPDM, NBR, Viton®, Teflon®, E-FKM

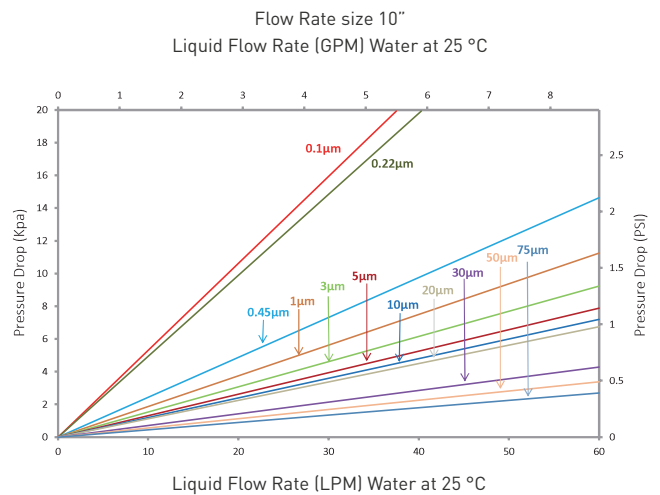
Operating Conditions

Max. Operating Temperature	80 °C
Max. Operating DP	4 bar @ 21°C , 2.4 bar @ 80 °C

Quality

- Filter Cartridges are manufactured in a clean room environment
- Manufactured according to ISO9001:2015 certified Quality Management System

Particle Removal Efficiency (µm)		
Membrane pore size identification	85% efficiency	95% efficiency
0010	0.1	----
0022	0.22	----
0045	0.45	----
0065	0.65	----
0100	1	----
0300	3	----
0500	5	----
1000	10	----
2000	20	----
5000	50	----



Eg.=> CFPPP0010G050AD0PSS0

ORDERING INFORMATION										
Product Type	Membrane Type	Removal Rating	Application	Size	Diameter	Endcap	Inner Core	Sealing Material	Connection Support	Revision
CFP = Pleated Cartridge	PP = Polypro	0010 = 0.1µm	G = Gen Purpose	05 = 5"	0A = OD:69 mm	D0 = DOE	P = Polypro	S = Silicone	S = Standard	0 = Rev.0
		0022 = 0.22µm		10 = 10"		E2 = 213/Flat		E = EPDM		
		0045 = 0.45µm		20 = 20"		H1 = 222/Fin		B = NBR		
		0100 = 1µm		30 = 30"		H2 = 222/Flat		V = Viton		
		0300 = 3µm		40 = 40"		H5 = 222/Spear Fin		F = E-FKM		
		0500 = 5µm				K1 = 222 Ext/Fin				
		1000 = 10µm				K2 = 222 Ext/Flat				
		2000 = 20µm				G1 = 226/Fin				
		5000 = 50µm				G2 = 226/Flat				
		7500 = 75µm				G5 = 226/Spear Fin				
									P = PSU reinforcement (Endcap G1, G2, only)	

CFP series PP media

Nominal Rated PP Pleated Filter Cartridges

CFP series Nominal Rated PP Pleated Filter Cartridges are all-polypropylene filter cartridges made with sub-micron fine fiber filter media which provide smaller pores. It is fabricated without using any binders, adhesives, plasticizers, and surfactants. These filter cartridges can be repeatedly hot water sanitized. The filter media and its support structure are thermally welded to the end caps, making integral filter cartridges of minimum extractables in a wide range of fluids and applications. All the filter cartridges are manufactured in a clean room environment.



Features

- Nominal rated structure, particle removal rating from 0.1 to 50 Micron
- Non fiber shedding
- 100% polypropylene components provide broad chemical compatibility, suitable for use in a variety of fluids
- Various end cap configurations to fit into the most standard housings
- Meet FDA requirements for food contact and passes European Commission Directives (EU10/2011)

Applications

- Pharmaceutical Water
- RO Pre-Filtration
- Fine Chemicals
- Process Water

Dimension

Diameter	69 mm (2.72")
Length	5", 10", 20", 30", 40"

Material of Constructions

- Media: PP
- Support: PP
- Cage/Core/Endcap: PP
- Connection: PP
- Sealing: Silicone, EPDM, NBR, Viton®



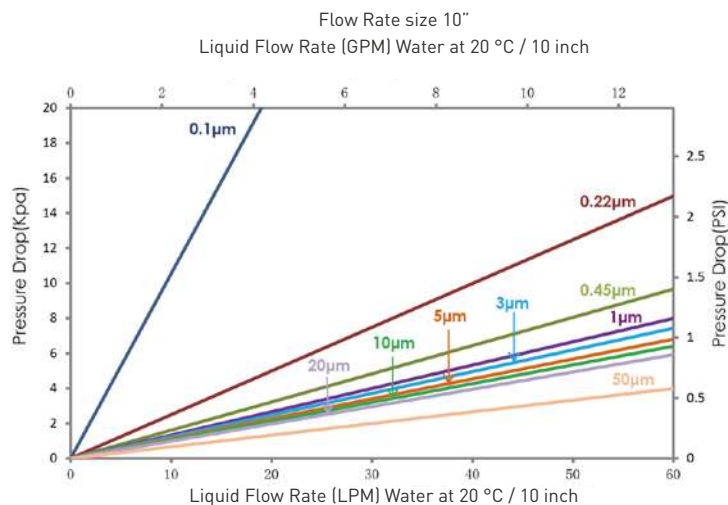
Performance

Max. Operating temperature:

80 °C

Max. Operating DP:

4 bar @ 21 °C , 2.4 bar @ 80 °C



Particle Removal Ratings (µm)		
Membrane pore size identification	90% efficiency	95% efficiency
0010	0.1 µm	----
0022	0.22 µm	----
0045	0.45 µm	----
0065	0.65 µm	----
0100	1 µm	----
0300	3 µm	5 µm
0500	5 µm	10 µm
1000	10 µm	15 µm

Quality

- Filter Cartridges are manufactured in a clean room environment
- Manufactured according to ISO9001:2015 certified Quality Management System

Food Contact Compliance

- Materials of construction comply with FDA regulations for food and beverage contact use as detailed in the US Code of Federal Regulations 21 CFR
- Materials used to produce filter media and hardware meet the specifications for biological safety per USP Class VI-121°C for plastics
- Filter cartridges passed European Commission Directives (EU10/2011)
- Halal Certified

Eg.=> **CFPPP0010C050AD0PSS0**

ORDERING INFORMATION											
Product Type	Membrane Type	Removal Rating	Application	Size	Diameter	Endcap	Inner Core	Sealing Material	Connection Support	Revision	
CFP = Pleated Cartridge	PP = Polypro	0010 = 0.1µm	C = Chem	05 = 5"	0A = OD:69 mm	D0 = DOE	P = Polypro	S = Silicone	S= Standard	0 = Rev.0	
		0022 = 0.22µm		10 = 10"		E2 = 213/Flat	U = SUS Steel	E = EPDM			
		0045 = 0.45µm		20 = 20"		H1 = 222/Fin		B = NBR			Y = SS reinforcement (Endcap D0, E2, K1, K2, excluded)
		0100 = 1µm		30 = 30"		H2 = 222/Flat		V = Viton			
		0300 = 3µm		40 = 40"		H5 = 222/Spear Fin		F = E-FKM			
		0500 = 5µm				K1 = 222 Ext/Fin			P = PSU reinforcement (Endcap G1, G2, only)		
		1000 = 10µm				K2 = 222 Ext/Flat					
		2000 = 20µm				G1 = 226/Fin					
		5000 = 50µm				G2 = 226/Flat					
						G5 = 226/Spear Fin					

CFP series PP media

High Rated PP Pleated Filter Cartridges

These CFP series filter cartridges are high rated pleated depth-type filters constructed of 100% polypropylene material. These filters are available in absolute particle retention ratings from 0.1 to 50 micron and various end cap configurations to fit into the most standard housings. All components of the series filter cartridges are FDA approved. The filter media and its support structure are thermally welded to the end caps, making integral filter cartridges of minimum extractables in a wide range of fluids and applications. All the filter cartridges are manufactured in a clean room environment.



Features

- Absolute rated structure, particle removal rating from 0.1 to 50 Micron
- 100% polypropylene components provide broad chemical compatibility, suitable for use in a variety of fluids
- Consistent particle removal, no migration of filter media and non fiber shedding
- Meets FDA requirements for food contact and passes European Commission Directives (EU10/2011)

Applications

- Food & Beverage
- Plating Chemicals
- RO Pre-Filtration
- Fine Chemicals
- Process Water

Dimension

Out Diameter	69mm
Length	5" , 10" , 20" , 30" , 40"

Material of Constructions

Media:	PP
Support:	PP
Hardware :	PP, SS core & adapter insert available
Sealing:	Silicone, EPDM, NBR Viton®, Teflon®, E-FKM

Performance

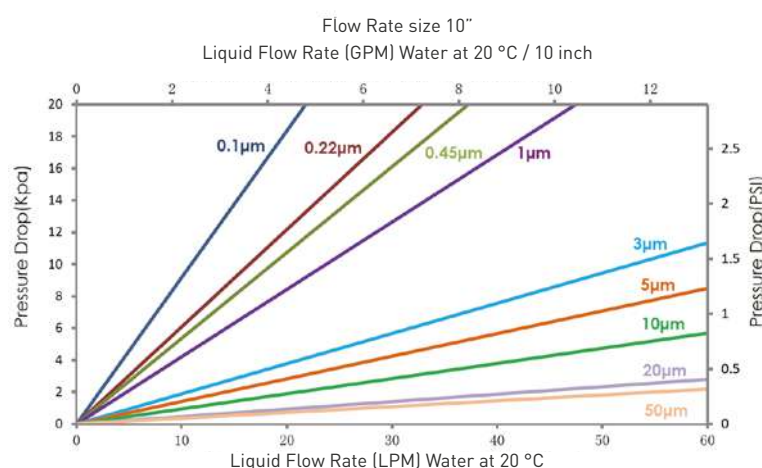
Max.Operating temperature: 80 °C
 Max.Operating DP: 4 bar @ 21°C,
 2.4 bar @ 80 °C

Quality

- Filter Cartridges are manufactured in a clean room environment
- Manufactured according to ISO9001:2015 certified Quality Management System

Food Contact Compliance

- Materials of construction comply with FDA regulations for food and beverage contact use as detailed in the US Code of Federal Regulations 21 CFR
- Materials used to produce filter media and hardware meet the specifications for biological safety per USP Class VI-121°C for plastics
- Filter cartridges passed European Commission Directives (EU10/2011)
- Halal Certified



Particle Removal Efficiency (µm)		
Membrane pore size identification	95% efficiency	99% efficiency
0010	0.1 µm	----
0022	0.22 µm	----
0045	0.45 µm	----
0065	0.65 µm	----
0100	----	1 µm
0300	----	3 µm
0500	----	5 µm
1000	----	10 µm

Eg.=> CFPP001P050AD0PSS0

ORDERING INFORMATION										
Product Type	Removal Rating	Removal Rating	Application	Size	Diameter	Endcap	Inner Core	Sealing Material	Connection Support	Revision
CFP = Pleated Cartridge	PP = Polypro	0010 = 0.1µm	P = Premier	05 = 5"	0A = OD:69 mm	D0 = DOE	P = Polypro	S = Silicone	S= Standard	0 = Rev.0
		0022 = 0.22µm		10 = 10"		E2 = 213/Flat	U = SUS Steel	E = EPDM		
		0045 = 0.45µm		20 = 20"		H1 = 222/Fin		B = NBR		
		0100 = 1µm		30 = 30"		H2 = 222/Flat		V = Viton		
		0300 = 3µm		40 = 40"		H5 = 222/Spear Fin		F = E-FKM		
		0500 = 5µm				K1 = 222 Ext/Fin				
		1000 = 10µm				K2 = 222 Ext/Flat				
		2000 = 20µm				G1 = 226/Fin				
		5000 = 50µm				G2 = 226/Flat				
						G5 = 226/Spear Fin				

CFP series PP media

Multi-Layers PP Pleated Filter Cartridges

CFP series Multi-Layers PP Pleated filter cartridges are comprised of multi-layers media. The unique construction results in a highly porous, continuous-ly graded pore structure with a tighter inner layer and several outer prefilter layers to substantially increase the dirt holding capacity. This filter structure provides excellent flow rates at low pressure drops and high throughputs while achieving submicron retentions, high efficiencies, and extraordinary dirt holding capacities. The filter media and its support structure are thermally welded to the end caps, making integral filter cartridges of minimum extractables in a wide range of fluids and applications. All the filter cartridges are manufactured in a clean room environment.



Features

- Gradient pore size structure
- 100% polypropylene components provide broad chemical compatibility, suitable for use in a variety of fluids
- Fixed filter matrix with no adhesives and surfactants providing consistent filtrate quality
- Meet FDA requirements for food contact and passes European Commission Directives (EU10/2011)

Applications

- Food & Beverage
- Plating Chemicals
- RO Pre-Filtration
- Fine Chemicals
- Process Water
- Colloid material filtration
- High viscosity liquids
- Fermentation liquids

Dimension

Out Diameter	69 mm
Length	5", 10", 20", 30", 40"

Material of Constructions

- Media: PP
- Support: PP
- Cage/ Core/ Endcap: PP
- Sealing: EPDM, Viton®, E-FKM



Performance

Max. Operating temperature:

80 °C

Max. Operating DP:

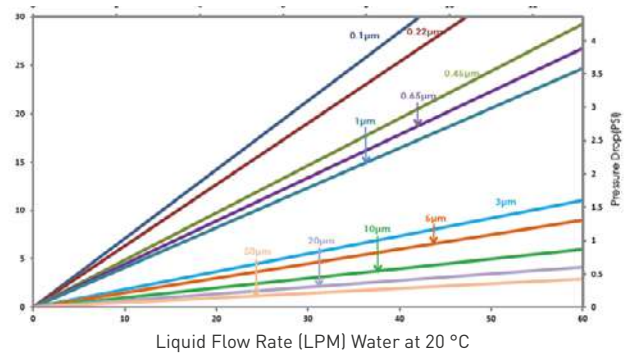
4 bar @ 21 °C,

2.4 bar @ 80 °C

Quality

- Filter Cartridges are manufactured in a clean room environment
- Manufactured according to ISO9001:2015 certified Quality Management System

Flow Rate size 10"
Liquid Flow Rate (GPM) Water at 20 °C / 10 inch



Food Contact Compliance

- Materials of construction comply with FDA regulations for food and beverage contact use as detailed in the US Code of Federal Regulations 21CFR
- Materials used to produce filter media and hardware meet the specifications for biological safety per USP Class VI-121°C for plastics
- Filter cartridges passed European Commission Directives (EU10/2011)
- Halal Certified

Eg.=> CFP001P050AD0PSS0

ORDERING INFORMATION										
Product Type	Membrane Type	Removal Rating	Application	Size	Diameter	Endcap	Inner Core	Sealing Material	Connection Support	Revision
CFP = Pleated Cartridge	PP = Polypro	0010 = 0.1µm	M = M.layer Fil	05 = 5"	0A = OD:69 mm	D0 = DOE	P = Polypro	S = Silicone	S = Standard	0 = Rev.0
		0022 = 0.22µm		10 = 10"		E2 = 213/Flat				
		0045 = 0.45µm		20 = 20"		H1 = 222/Fin				
		0100 = 1µm		30 = 30"		H2 = 222/Flat				
		0300 = 3µm		40 = 40"		H5 = 222/Spear Fin				
		0500 = 5µm				K1 = 222 Ext/Fin				
		1000 = 10µm				K2 = 222 Ext/Flat				
		2000 = 20µm				G1 = 226/Fin				
		4000 = 40µm				G2 = 226/Flat				
		5000 = 50µm				G5 = 226/Spear Fin				

CFP series Hydrophobic PTFE membrane

CFP series Hydrophobic PTFE membrane

General Applications Hydrophobic PTFE Pleated Filter Cartridges

CFP series General Applications Hydrophobic PTFE Pleated Filter Cartridges are made of polytetrafluoroethylene, and thus have excellent resistance to organic and inorganic chemical corrosive substances and have natural hydrophobicity of filtering materials. They are widely used in sterile filtration of strong solvents, strong corrosive liquids and strong oxidative liquids.



Features

- Inherently hydrophobic PTFE membranes
- All PP components and low extractables
- High-flow and low pressure drop
- Enhanced resistance to in-line and autoclave steam sterilization
- 100% Integrity Test

Applications

- Strong oxidative liquids filtration
- Prefiltration and terminal filtration of corrosive liquids
- Solvent materials filtration

Dimension

Out Diameter	69 mm (2.72")
Length	5", 10", 20", 30", 40"

Material of Constructions

- Media: Hydrophobic PTFE
- Support: PP
- Cage/ Cage/ Endcap: PP
- Seal Material: Please refer to ordering information

Performance

- Max Operating Temperature 80 °C
- Max Operating DP 4.5 bar @ 20 °C
2.4 bar @ 80 °C

Quality

- Filter Cartridges are manufactured in a clean room environment
- Manufactured according to ISO9001:2015 certified
- Quality Management System
- Materials of construction comply with FDA regulations for food and beverage contact use as detailed in the US Code of Federal Regulations 21 CFR 100% Integrity Tested
- Each individual element is tracked by serial number

Eg.=> CFPPT0010G050AD0PSS0

ORDERING INFORMATION										
Product Type	Membrane Type	Membrane pore size	Application	Size	Diameter	Endcap	Inner Core	Sealing Material	Connection Support	Revision
CFP = Pleated Cartridge	PT = PTFE phobic	0010 = 0.1µm	G = Gen Purpose	05 = 5"	0A = OD:69 mm	D0 = DOE	P = Polypro	S = Silicone	S= Standard	0 = Rev.0
		0022 = 0.22µm		10 = 10"		E2 = 213/Flat	U = SUS Steel	E = EPDM		
		0045 = 0.45µm		20 = 20"		H1 = 222/Fin		B = NBR		
		0100 = 1µm		30 = 30"		H2 = 222/Flat		V = Viton		
		0300 = 3µm		40 = 40"		H5 = 222/Spear Fin		F = E-FKM		
		0500 = 5µm				K1 = 222 Ext/Fin				
		1000 = 10µm				K2 = 222 Ext/Flat				
						G1 = 226/Fin				
						G2 = 226/Flat				
						G5 = 226/Spear Fin				
									P = PSU reinforcement (Endcap G1, G2, only)	

CFP series Hydrophobic PTFE membrane

Sterilizing grade Hydrophobic PTFE Pleated Filter Cartridges

CFP series Sterilizing grade Hydrophobic PTFE Pleated Filter Cartridges are made of hydrophobic PTFE membrane and inherently hydrophobic PTFE membrane ensuring the sterilizing performance in different humidity environments. The PP components offer superior oxidation resistance. The reinforced core makes the filter cartridges have higher pressure resistance to withstand, The in-line steam sterilization and autoclave, it is suitable for fermentation, pharmaceutical, and other biotechnology applications.



Features

- Inherently hydrophobic PTFE membranes
- Oxidation resistant hardware
- High-flow and low pressure drop
- Enhanced steaming resistance
- 100% Integrity tested

Applications

- Corrosive gas sterile filtration
- Compressed air and nitrogen gas solution
- Aseptic packaging
- Fermenter inlet air and exhaust venting, sterile process air and sterile venting of tanks

Dimension

Out Diameter	69 mm (2.72")
Length	5", 10", 20", 30", 40"

Integrity Test Parameters

• Bubble Point (BP)	≥ 1.1 bar @ IPA : Water 60 : 40
• Diffusion Flow (DF)	CFPPT0020Y ≤ 16 ml / min @ 1035 mbar CFPPT0020S ≤ 24 ml / min @ 1035 mbar
• Water Intrusion (WIT)	CFPPT0020Y ≤ 0.38 ml / min @ 2500 mbar CFPPT0020S ≤ 0.75 ml / min @ 2500 mbar

Material of Constructions

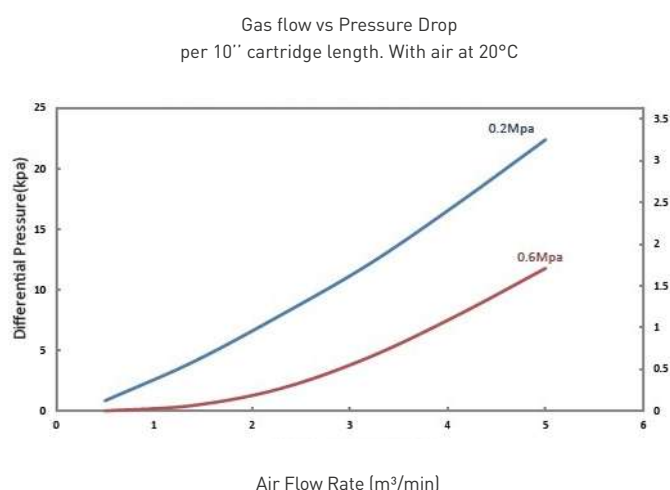
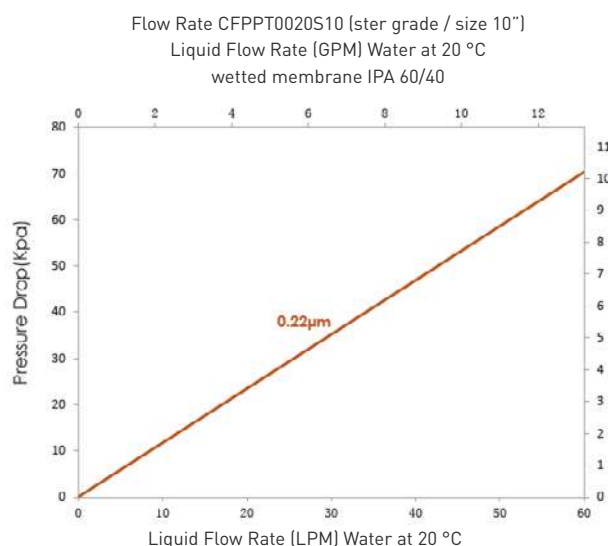
- Membranes: Inherently hydrophobic PTFE
- Support/Drainage: Oxidation resistant PP
- Cage/ Core/ Endcap: Oxidation resistant PP
- O-ring: Please refer to ordering information

Performance

- Maximum operating temperature 80 °C
- Maximum differential pressure 2.4 bar @ 80 °C
- 5.2 bar @ 20 °C

Sterilization

- Inline Steam Sterilization: 135 °C / 30 min, 150 cycles
- Maximum Forward Steam Sterilization: 1 bar @ 125 °C
0.3 bar @ 142 °C
- Maximum Reverse Steam Sterilization: 0.5 bar @ 125 °C
0.2 bar @ 142 °C



Quality

- Filter cartridges are manufactured in a clean room environment
- Manufactured according to ISO9001:2015 certified Quality Management System
- Material of construction comply with FDA regulations for food and beverage contact use as detailed in the US Code of Federal Regulations 21 CFR
- 100% integrity tested
- Each individual element is tracked by serial number

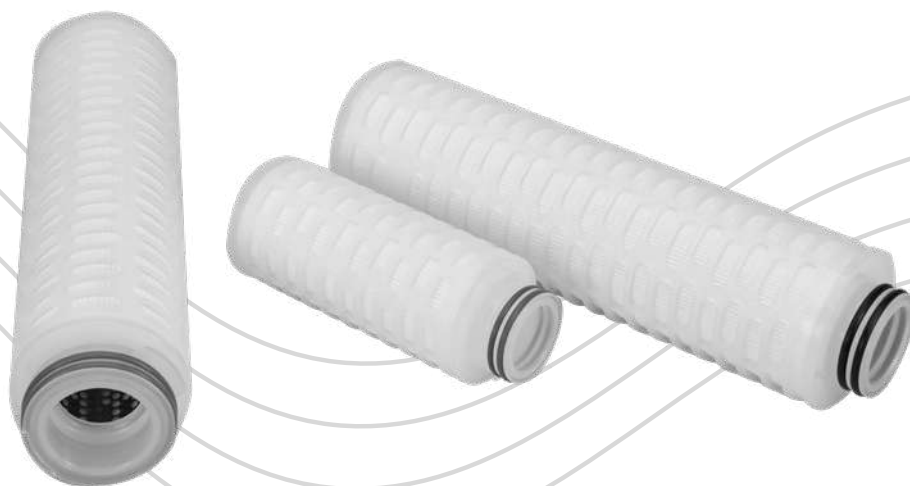
Eg.=>CFPPT0020S050AH1PSY0

ORDERING INFORMATION										
Product Type	Membrane Type	Membrane pore size	Application	Size	Diameter	Endcap	Inner Core	Sealing Material	Connection Support	Revision
CFP = Pleated Cartridge	PT = PTFE phobic	0020 = 0.2µm	S = Ster Grade Y = P Ster Gr	05 = 5" 10 = 10" 20 = 20" 30 = 30" 40 = 40"	0A = OD:69 mm	H1 = 222/Fin H2 = 222/Flat G1 = 226/Fin G2 = 226/Flat	P = Polypro U = SUS Steel	S = Silicone E = EPDM V = Viton	Y = SS reinforced P = PSU reinforced (Endcap: G1,G2, only)	0 = Rev.0

CFP series Hydrophobic PTFE membrane

High-Temperature Sterilizing grade Hydrophobic PTFE Pleated Filter Cartridges

CFP series Hydrophobic PTFE membrane High-Temperature Sterilizing grade Pleated Filter Cartridges can ensure the sterilizing performance in different humidity environment. The oxidation resistant PP components offer superior oxidation and high temperature resistance, reinforced core makes the filter cartridge higher pressure resistance, withstand in-line steam sterilization and autoclave, it is suitable for fermentation, pharmaceutical and other biotechnology applications.



Features

- Inherently hydrophobic PTFE membranes
- High temperature resistance
- Oxidation resistant hardware
- High-flow and low pressure drop
- Enhanced steaming resistance
- 100% Integrity tested

Applications

- Process venting
- Compressed air
- Gas purification
- Fermentation feed air

Dimension

Out Diameter	69 mm (2.72")
Length	5", 10", 20", 30", 40"

Integrity Test Parameters

- | | |
|-------------------------|---|
| • Diffusion Flow (DF) | ≤ 20 ml/min @ 1035 mbar (60/40 IPA/Water) |
| • Water Intrusion (WIT) | CFPPT0022U ≤ 0.38 ml/min @ 2500 mbar |
| | CFPPT0022T ≤ 0.75ml/min @ 2500 mbar |

Material of Constructions

• Media	PTFE
• Support	PP/PET
• Cage/End Cap	High temperature resistance PP
• Core	High temperature resistance PP/SS
• Adapter	PP with insert

Pore Size

Gas	0.01 µm
Liquid	0.2 µm

Performance

• Max Operating Temperature	100 °C
• Max Operating DP	5.2 bar @ 20 °C
	2.4 bar @ 80 °C

Sterilization

• Inline Steam Sterilization	135 °C / 30 min, 150 cycles
• Maximum Forward Steam Sterilization	1 bar @ 135 °C
	0.3 bar @ 142 °C
• Maximum Reverse Steam Sterilization	0.5 bar @ 125 °C
	0.2 bar @ 142 °C

Quality

- Filter cartridges are manufactured in a clean room environment
- Manufactured according to ISO9001:2015 certified Quality Management System
- Materials of construction comply with FDA regulations for food and beverage contact use as detailed in the US Code of Federal Regulations 21 CFR
- 100% Integrity Tested
- Each individual element is tracked by serial number

Eg.=> CFPPT0022T050AH1PSY0

ORDERING INFORMATION										
Product Type	Membrane Type	Membrane pore size	Application	Size	Diameter	Endcap	Inner Core	Sealing Material	Connection Support	Revision
CFP = Pleated Cartridge	PT = PTFE phobic	0022 = 0.22µm	T = HT Ster Gr U = HT P Ste Gr	05 = 5"	0A = OD:69 mm	H1 = 222/Fin	P = Polypro	S = Silicone E = EPDM V = Viton	Y = SS reinforced P = PSU reinforced (Endcap: G1,G2, only)	0 = Rev.0
				10 = 10"		H2 = 222/Flat	U = SUS Steel			
				20 = 20"		G1 = 226/Fin				
				30 = 30"		G2 = 226/Flat				
				40 = 40"						

CFP series Hydrophobic PTFE membrane

Absolute Rated Hydrophobic PTFE

All Fluoropolymer Pleated Filter Cartridges

CFP series Absolute Rated Hydrophobic PTFE membrane, All Fluoropolymer Pleated Filter Cartridges are constructed PTFE support netting, and ultra-pure PFA hardware. This presents a filter cartridge with excellent chemical compatibility corrosion resistance, and low extractions to ensure high efficiency filtration and long service life with chemicals.



Features

- Excellent chemical compatibility
- High flow rate, low pressure loss, long service life
- 100% integrity tested

Applications

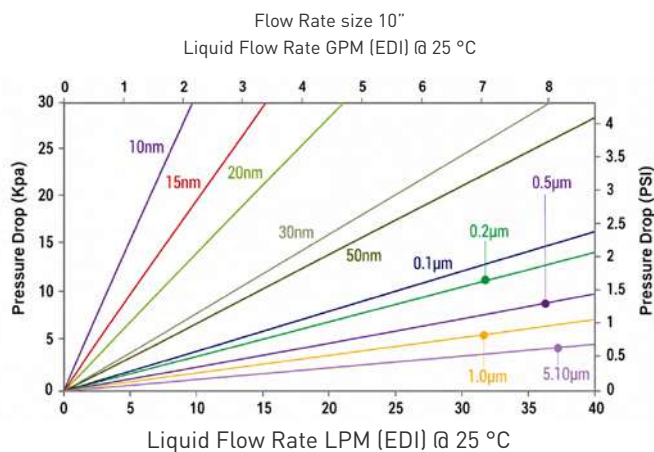
- Pharmaceutical products
- Fine chemicals
- Microelectronics fluids

Dimension

- Outer Diameter 2.72" (69 mm)
3.3" (83 mm) Only 10 inch is available
- Length 10"/20"/30"/40"
- Filtration Area:
 $H100A = H / 10" / OD:69mm = 0.9 \text{ m}^2$
 $H100H = H / 10" / OD:83mm = 1.51 \text{ m}^2$
- Premier Filtration Area
 $K100A = K / 10" / OD:69mm = 1.12 \text{ m}^2$
 $K100H = K / 10" / OD:83mm = 1.63 \text{ m}^2$

Material of Constructions

- Media Hydrophobic PTFE membrane
- Support Netting PFA/PTFE
- Cage/Core/End Cap PFA
- Seal Material E-FKM

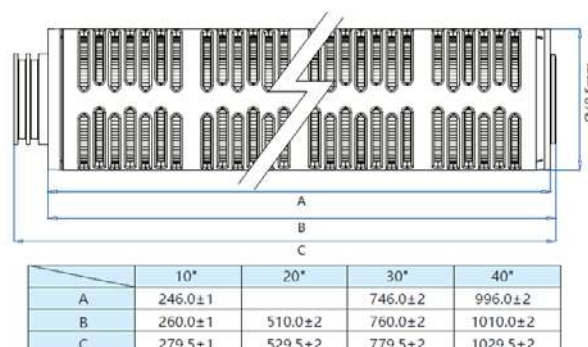
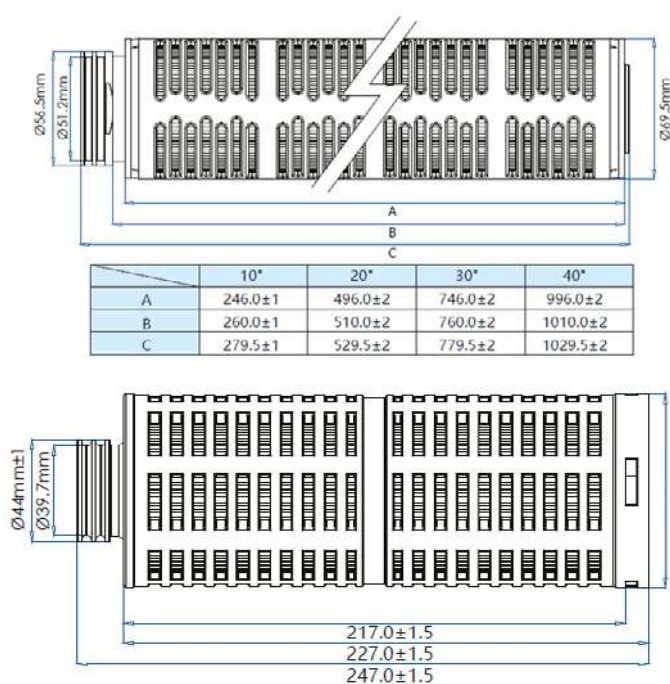


Performance

- Max Operating Temperature 160 °C
- Max Operating DP 5.0 bar @ 20 °C
2.0 bar @ 120 °C
- SIP 135 °C / 30 min

Quality

- Filter cartridges are manufactured in a clean room environment
- Manufactured according to ISO9001:2015 certified
- Quality Management System



Eg. => CFPPT0005H100AH2FFS2

ORDERING INFORMATION										
Product Type	Membrane Type	Membrane pore size	Application	Size	Diameter	Endcap	Inner Core	Sealing Material	Connection Support	Revision
CFP = Pleated Cartridge	PT = PTFE phobic	0N10=10nm	H = High Chem	10 = 10"	0A = OD:69 mm	H2 = 222/Flat	F = PFA	F = E-FKM	S= Standard	2 = Prewet
		0N15 = 15nm	K = P High Chem	20 = 20"	0H = OD:83mm (Size: 10, only)	G2 = 226/Flat				3 = No-Prewet
		0N20 = 20nm		30 = 30"						5 = H.CL Prew
		0N30 = 30nm		40 = 40"						6 = H.CL No-Prew
		0N50 = 50nm								
		0010 = 0.10µm								
		0020 = 0.20µm								
		0045 = 0.45µm								
		0100 = 1µm								
		0500 = 5µm								
		1000 = 10µm								

CFP series PVDF membrane

CFP series PVDF membrane

Hydrophilic PVDF Pleated Filter Cartridges

CFP series PVDF filter cartridges are constructed of hydrophilic PVDF membrane and Polypropylene hardware. The single open ended (SOE) configuration is designed to fit into sanitary housings to ensure effective microbial removal and assembly integrity. Due to the low absorption of the protein, it is especially suitable for the filtration of culture medium, biological agents, vaccines.



Features

- Very low protein adsorption and precipitation
- Easy to wet and integrity test
- High flow rate and longer service life
- 100% integrity tested during manufacture

Applications

- Filtration in the food and beverage industry
- Retention of particles and micro-organisms
- Protein purification
- Cell culture clarification
- Blood filtration

Dimension

OD	69mm
Length	5" , 10" , 20" , 30" , 40"

Pore Size

0.22µm 0.45µm 0.65µm

Material of Constructions

Media:	PVDF
Support:	PP
Core/Cage:	PP
End Cap	PSU insert/SS insert
Sealing:	Silicone, EPDM, FKM

Quality

- Filter Cartridges are manufactured in a clean room environment
- Manufactured according to ISO9001:2015 certified
- Quality Management System
- Materials used to produce filter media and hardware meet the specifications for biological safety per USP Class VI-121°C for plastics.
- 100% Integrity Tested

Performance

Operating Conditions

Max Operating Temperature	80 °C
Max. Operating DP	4.0 bar @ 20 °C
	2.4 bar @ 80 °C

Sterilization

125 °C /30 min, 30 cycles

Bacterial Retention

0.22µm	LRV ≥ 7
	Pseudomonas diminuta
0.45µm	

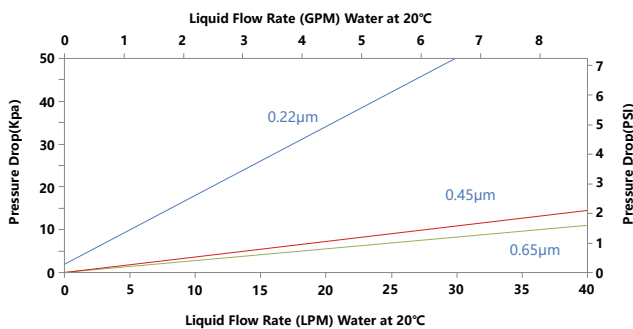
Filtration Area

Ø 69mm	0.65 m ² / 10"
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Extractables

10" Filter Cartridges	< 20 mg
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PVA Flow Rate per 10"



Integrity Test Parameters

Removal Rating	Bubble Point(BP)	Diffusion Flow(DF)
0.22µm	3.45Bar	25ml/min@2.76Bar
0.45µm	2.1Bar	25ml/min@1.70Bar
0.65µm	0.97Bar	5ml/min@0.62Bar

Eg.=> CFPPV0022G050ADOPSS0

ORDERING INFORMATION

Product Type	Membrane Type	Membrane pore size	Application	Size	Diameter	Endcap	Inner Core	Sealing Material	Connection Support	Revision
CFP = Pleated Cartridge	VH=PVDF philiic	0022=0.22µm	G = Gen Pur-pose	05 = 5"	0A = OD:69 mm	D0 = DOE	P = Polypro	S = Silicone	S= Standard	0 = Rev.0
		0045 = 0.45µm	S = Ster Grade	10 = 10"		E2 = 213/Flat	U = SUS Steel	E =EPDM	Y= SS reinforcement(Endcap Do, E2, K1, excluded	
		0065 = 0.65µm		20 = 20"		H1 = 222/Fin		B = NBR	P=PSU reinforcement(Endcap G1, G2, ONLY	
				30 = 30"		H2 = 222/Flat		V = Viton		
				40=40"		H5 = 222/Spear Fin		F =E-FKM		
						K1 = 222 Ext/Fin				
						K2 = 222 Ext/Flat				
						G1 =226/Fin				
						G2 = 226/Flat				
						G5 = 226/Spear Fin				

CFK series Cellulose Acetate membrane

CFK series Cellulose Acetate membrane

CA Pleated Filter Cartridges

The CFK series Cellulose Acetate (CA) Pleated Filter Cartridges are designed to the sterile filtration of vaccines, blood and plasma, and biopharmaceuticals with high product recovery. The low-adsorption membrane helps maintain the integrity of large, shear-sensitive proteins during processing.



Features

- Minimizes unspecific adsorption to support high yield and protect valuable proteins and excipients
- Excellent chemical compatibility
- Low extractables
- 100% integrity tested during manufacture

Applications

- Bioprocessed pharmaceuticals
- Sterilization filtration of biological product
- Coagulation factors, Albumin
- Bacterial, viral & mRNA-based vaccines

Dimension

Diameter	70 mm
Length	5", 10", 20", 30", 40"

Material of Constructions

Media	CelluloseAcetate
Support	PP
Cage/Core/End	PP
Connection Adaptor	SS Insert, PSU Insert
O-Ring	Silicone, EPDM, Viton®, Buna-N, Teflon® encapsulated

Quality

- Validated with B. diminuta (ATCC 191463) at $10^7/\text{CM}^2$ (0.22 μm)
- Each membrane filter element has been individually tested for integrity
- Individual element is tracked by serial number
- Manufactured according to ISO 9001:2015 certified quality management system
- Meets USP Biological Reactivity Test requirements of the current USP <88> for plastic class VI-121°C

Performance

Operating Conditions

Max Operating Temperature	80 °C
Max. Operating DP	5 bar @ 21 °C, 1bar @ 80 °C

Sterilization

Autoclave Sterilization	121 °C , 60 min
SIP	135 °C , 30 min, 30 cycles

Filtration Area

Ø 69mm	0.65 m ² / 10" Filter cartridges
--------	---

Extractables

10" Filter Cartridges	< 20 mg
-----------------------	---------

Effluent quality

- Non-fiber releasing
- Non-pyrogenic per USP Bacterial Endotoxins (<0.25EU/mL)
- Meets TOC and water conductivity per USP Purified Water, pH per USP Sterile Purified Water

Cartridge Integrity Test Specifications

Water wetted membrane

Pore size	Min. Bubble point
0.2µm	3.2 barg@22°C
0.45µm	2.1 barg@22°C
0.65µm	1.3 barg@22°C
0.8µm	1.1 barg@22°C
1.2µm	0.7 barg@22°C

Eg.=> CFKCA0020B050AD0PSS0

ORDERING INFORMATION										
Product Type	Membrane Type	Membrane pore size	Application	Size	Diameter	Endcap	Inner Core	Sealing Material	Connection Support	Revision
CFK = Pleated Cartridge	CA = CA	Application B	B = Low Bio	05 = 5"	0A = OD:69 mm	D0 = D0E	P = Polypro	S = Silicone	S = Standard	0 = Rev.0
		0020 = 0.2 µm	S = Ster Grade	10 = 10"		A1 = 020/Fin	S = SS Steel	E = EPDM		
		0045 = 0.45 µm		20 = 20"		A2 = 020/Flat			Y = SS reinforcement	
		0065 = 0.65 µm		30 = 30"		C1 = 120/Fin				
		0080 = 0.8 µm		40 = 40"		C2 = 120/Flat			P = PSU reinforcement	
		0120 = 1.2 µm				E1 = 213/Fin				
		Application S				E2 = 213/Flat				
		0402 = 0.45/0.2 µm				H1 = 222/Fin				
		0602 = 0.65/0.2 µm				H2 = 222/Flat				
		0604 = 0.65/0.45 µm				G1 = 226/Fin				
		0804 = 0.8/0.45 µm				G2 = 226/Flat				
		1204 = 1.2/0.45 µm								

CFP series Nylon membrane

CFP series Nylon membrane

General Applications NY Pleated Filter Cartridges

CFP series Nylon membrane General Applications Pleated Filter Cartridges are naturally hydrophilic due to polyamides filter media. This filter media has a high porosity and uniform pore size distribution, giving to series products high flow rate, high retention ability and long service life.



Features

- Naturally hydrophilic, no need for pre-wetting
- High flow rate, low DP and long service life
- Excellent integrity provides good particle removal and sterilization efficiency
- Non-contact welding adopted, no adhesives, low extractables
- Excellent chemical compactivity
- Tolerance for in-line steam sterilization
- Gross integrity

Applications

- Large volume parenterals (LVP) injections and antibiotic filtration
- Physiological saline solution and other solvents filtration of microorganism removal
- Pure Water and water-based filtration of microorganism removal

Dimension

Out Diameter	2,72" (69 mm)
Length	5" (125 mm)
	10" (254 mm)
	20" (500 mm)
	30" (750 mm)
	40" (1000 mm)

Food Contact Compliance

- Materials of construction comply with FDA regulations for food and beverage contact use as detailed in the US Code of Federal Regulations 21 CFR
- Materials used to produce filter media and hardware meet the specifications for biological safety per USP Class VI-121C for plastics
- Filter cartridges passed European Commission Directives (EU10/2011)
- Halal Certified

Material of Constructions

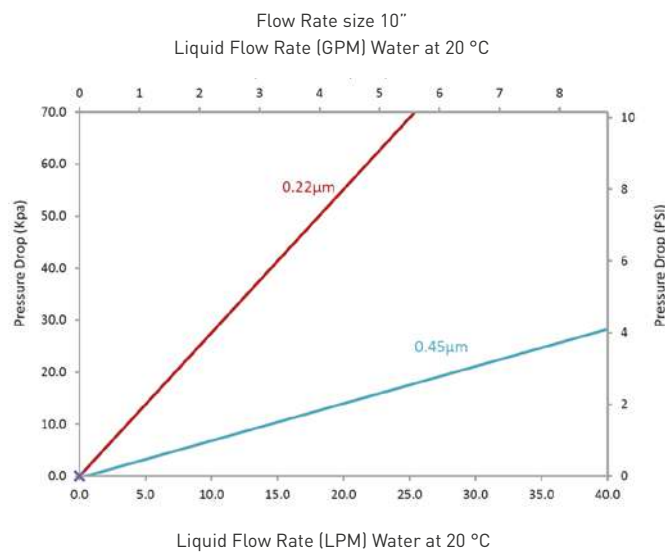
Filter medium	Nylon N66
Support/Drainage	PET
Cage/Core	Polypropylene
Endcap	Polypropylene and Insert

Performance

- Max Operating Temperature 80 °C
- Max Operating DP Forward 4.0 bar @ 25 °C
Forward 2.4 bar @ 80 °C
- SIP 125 °C , 30min

Quality

- Manufactured in 100,000-class clean room environment
- Manufactured according to ISO9001:2015 certified quality management system
- Meets USP Biological Reactivity Test Requirements of the current USP <88> for plastic class VI
- Extractables per 10 inch < 25 mg



Eg.=> CFPNY0010G050AD0PSS0

ORDERING INFORMATION										
Product Type	Membrane Type	Membrane pore size	Application	Size	Diameter	Endcap	Inner Core	Sealing Material	Connection Support	Revision
CFP = Pleated Cartridge	NY = Nylon	0010 = 0.1µm	G = Gen Purpose	05 = 5"	0A = OD:69 mm	D0 = DOE	P = Polypro	S = Silicone	S= Standard (Endcap: D0, only)	0 = Rev.0
		0022 = 0.22µm		10 = 10"		H1 = 222/Fin	S = SS Steel	E = EPDM	Y = SS reinforced (Endcap: D0, excluded)	
		0045 = 0.45µm		20 = 20"		H2 = 222/Flat		B = NBR	P = PSU reinforced (Endcap: G1, G2, only)	
		0120 = 1.2µm		30 = 30"		G1 = 226/Fin		V = Viton		
				40 = 40"		G2 = 226/Flat		K = FKM F = E-FKM		

CFP series

Polyester membrane

CFP series Polyester membrane

All Polyester Filter Cartridge

CFP Series Pleated Polyester Depth Media Filter Cartridges offers an efficient and economical filtration option with broad applications. The all-polyester construction allows higher temperature use (up to 120°C). The 2.6" or 2.7" OD allows use in housings where larger cartridges do not fit.

Manufactured in a clean room environment to maintain high standards of purity and cleanliness.



Features

- Increased surface area due to pleated design
- High temperature resistance
- High flow rate and low-pressure drop

Applications

- Process Water
- Solvents
- Fine chemicals
- Plating Chemicals
- Wastewater
- Produced water
- Hydrocarbons
- Synthetic Lubricants

Dimension

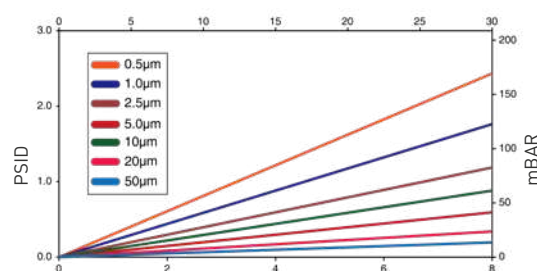
Out Diameter 66mm(Netting), 69mm(Cage)
Length 10", 20", 30", 40"

Performance

- Max Operating Temperature 120°C(248°F)
- Max Operating DP 4 bar(58psi)@20°C(68°F)

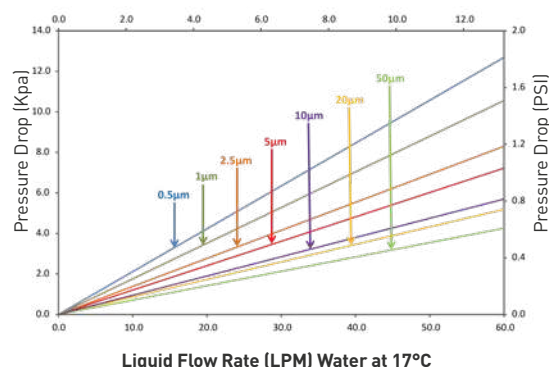
(Netting) 10" LPM

Flow Rate VS Pressure Drop



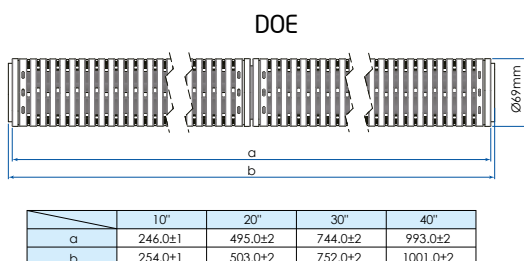
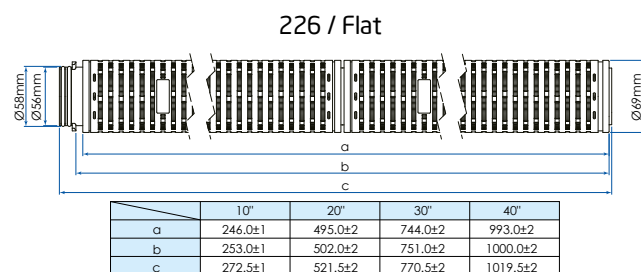
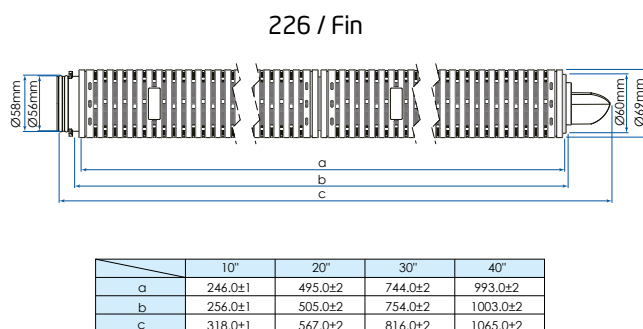
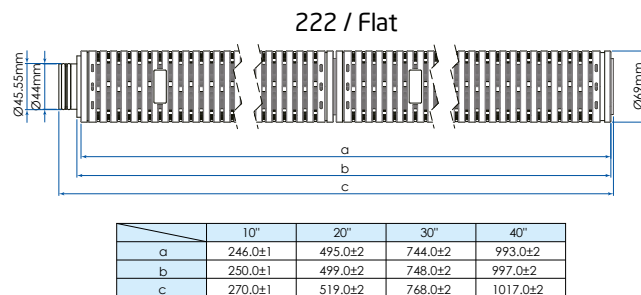
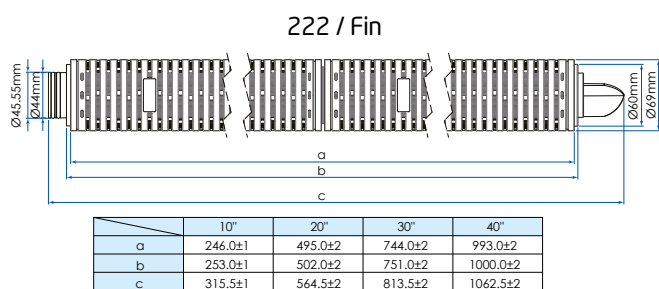
(Cage) 10" LPM

Liquid Flow Rate (GPM) Water at 17°C



Material of Constructions

Media:	Polyester
Support:	Polyester
End Cap	Polyester
Outer Netting:	Polyester
Sealing:	Silicone, EPDM , FKM , NBR



Eg.=> CFPET0050G050ND0SSS0

ORDERING INFORMATION										
Product Type	Membrane Type	Membrane pore size	Application	Size	Diameter	Endcap	Inner Core	Sealing Material	Connection Support	Revision
CFP = Pleated Cartridge	ET = Polyester	0050 = 0.5µm	G = General Application	05 = 5"	0N = OD:N66mm	D0 = DOE	S= Standard	S = Silicone	S= Standard	0 = Rev.0
		0100 = 1µm		10 = 10"	0A=OD:69mm	H1 = 222/Fin		E = EPDM		
		0250 = 2.5µm		20 = 20"		H2 = 222/Flat		B = NBR		
		0500 = 5µm		30 = 30"		G1 = 226/Fin		V = Viton		
		1000 = 10µm		40 = 40"		G2 = 226/Flat		K = FKM		
		2000 = 20µm						F = E-FKM		
		5000 = 50µm								

CFP Series

Glass Fiber media

CFP Series - Glass Fiber Media

General Applications Glass Fiber Pleated Filter Cartridges

The CFP series General Applications Glass Fiber (GF) Pleated Filter cartridges are highly efficient, good for the pre-filtration of gas and vent, and can be effectively used in a variety of industrial applications. The cartridge offers a large surface area for high flow rates and high dirt holding capacity, also reduces labor costs with less changing of the filters.



Features

- Low pressure drops and high flow rates
- High filtration efficiency, up to 96%
- Excellent chemical compatibility
- High dirt holding capacity and long service life

Applications

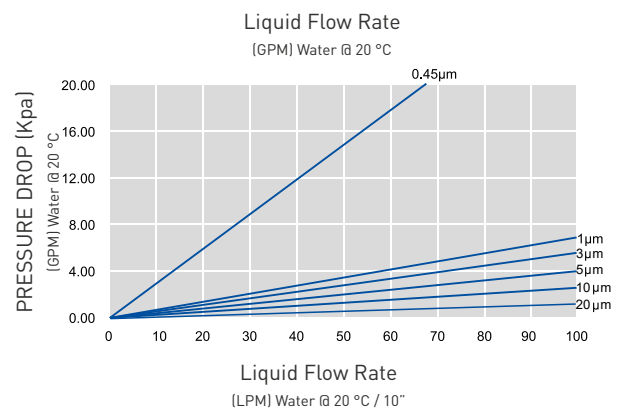
- Food & Beverage
- Chemicals & Oil
- Pharmaceutical
- Process Water Treatment
- Pre-filtration of vent & gas

Dimension

Diameter	69 mm (2.72")
Length	5", 10", 20", 30", 40"

Food Contact Compliance

- Materials of construction comply with FDA regulations for food and beverage contact use as detailed in the US Code of Federal Regulations 21CFR
- Materials used to produce filter media and hardware meet the specifications for biological safety per USP Class VI-121 °C for plastics
- Filter cartridges passed European Commission Directives (EU10/2011)
- Halal Certified



Material of Constructions

- Media GF
- Support PP
- Core/Cage/End Cap PP
- Seal Material Silicone, EPDM, NBR, FKM, E-FKM

Performance

Operating Conditions

Max. Operating Temperature	80 °C
Max. Operating DP	4.0 Bar @ 20 °C
	2.4 Bar @ 80 °C

Quality

- Filter Cartridges are manufactured in a clean room environment
- Manufactured according to ISO9001:2015 certified Quality Management System

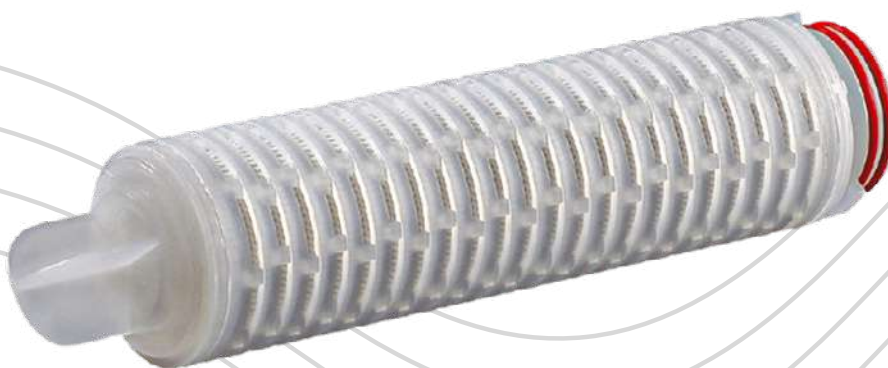
Eg.=> CFPGF0045G050AD0PSS0

ORDERING INFORMATION										
Product Type	Membrane Type	Membrane pore size	Application	Size	Diameter	Endcap	Inner Core	Sealing Material	Connection Support	Revision
CFP = Pleated Cartridge Filter	GF = Glass Fiber	0045 = 0.45µm	G = Gen Purpose	05 = 5"	0A = OD:69 mm	D0 = DOE	P = Polypro	S = Silicone	S= Standard	0 = Rev.0
		0100 = 1µm		10 = 10"		E2 = 213/Flat	S = SS Steel	E = EPDM		
		0300 = 3µm		20 = 20"		H1 = 222/Fin		B = NBR	Y = SS reinforcement	
		0500 = 5µm		30 = 30"		H2 = 222/Flat		V = Viton	(Endcap D0, E2, H1, H2, excluded)	
		1000 = 10µm		40 = 40"		H5 = 222/Spear Fin		F = E-FKM		
		2000 = 20µm				K1 = 222 Ext/Fin			P = PSU reinforcement (Endcap G1, G2, only)	
						K2 = 222 Ext/Flat				
						G1 = 226/Fin				
						G2 = 226/Flat				
						G5 = 226/Spear Fin				

CFP Series - Glass Fiber media

High Performance Glass Fiber Pleated Filter Cartridges

The CFP series High Performance Glass Fiber (GF) Pleated Filter cartridges are made of ultra-fine glass fiber. It has a high retention efficiency up to 96% which can effectively protect and prolong service life of terminal sterilization filters. It is widely used in the pre-filtration of gases etc.



Features

- No fiber releasing, very low leachables
- High flow rates and low pressure drops
- Excellent adsorption performance and high filtration efficiency
- All components comply with FDA regulations
- 100% integrity tested

Applications

- Remove particles in compressed gas, oil etc.
- Pre-filtration of gases in fermentation

Dimension

Diameter	69 mm (2.72")
Length	5", 10", 20", 30", 40"

Food Contact Compliance

- Materials of construction comply with FDA regulations for food and beverage contact use as detailed in the US Code of Federal Regulations 21CFR
- Materials used to produce filter media and hardware meet the specifications for biological safety per USP Class VI-121 °C for plastics
- Filter cartridges passed European Commission Directives (EU10/2011)
- Halal Certified

Material of Constructions

- Media GF
- Support PP
- Cage/Core/End PP
- O-Ring Silicone, EPDM, NBR, FKM, E-FKM

Quality

- Filter Cartridges are manufactured in a clean room environment
- Manufactured according to ISO9001:2015 certified Quality Management System
- 100% integrity test

Performance

Operating Conditions

Max Operating Temperature	80 °C
Max. Operating DP	4.0 bar @ 20 °C
	2.4 bar @ 80 °C

Sterilization

Autoclave Sterilization	121 °C , 60 min
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Filtration Area

Ø 69mm	0.45 m ² /10" Filter cartridges
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Extractables

10" Filter Cartridges	< 20 mg
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Eg.=> CFPGF0010P50AD0PSS0

ORDERING INFORMATION										
Product Type	Membrane Type	Removal Rating	Application	Size	Diameter	Endcap	Inner Core	Sealing Material	Connection Support	Revision
CFP = Pleated Cartridge	GF = Glass Fiber	0010=0.1µm	P = Premier	5 = 5"	0A = OD:69 mm	D0 = D0E	P = PP Core	S = Silicone	S= Standard	0 = Rev.0
		0030=0.3µm		10 = 10"		E2 = 213/Flat	S = SS Core	E = EPDM		
		0050=0.5µm		20 = 20"		H1 = 222/Fin		B = NBR	Y = SS reinforcement	
				30 = 30"		H2 = 222/Flat		V = FKM	(Endcap D0, E2, H1, H2, excluded)	
				40 = 40"		H5 = 222/Spear Fin		F = E-FKM		
						K1 = 222 Ext/Fin			P = PSU reinforcement (Endcap G1, G2, only)	
						K2 = 222 Ext/Flat				
						G1 = 226/Fin				
						G2 = 226/Flat				
						G2 = 226/Flat				

CFW series Glass Fibe String Wound

CFW series Glass Fiber String Wound

High Dirt Filter Cartridges

CFW Series String Wound Filter Cartridges are manufactured of structured loose outer layers and tight inner layers to offer true depth filtration for high dirt holding capacity and extremely low media migration. The main advantage of the string wound filter cartridge is its exceptionally high structural strength. Therefore, they can withstand higher PSID and severe operating conditions. The economical design makes the cartridges of greater superiority in cost-saving.



Features

- Broad chemical compatibility
- Many different combinations of filter materials and pore sizes
- String Wound depth filter cartridge
- High dirt holding capacity
- Economical design

Applications

- Consumer Products
- Food and Beverage
- Drinking Water
- Pharmaceutical
- Edible Oil
- Inks & Paints
- Photographic
- Plating Solutions
- Petrochemicals
- Waste Water
- Chemicals
- Oil

Dimension

Out Diameter

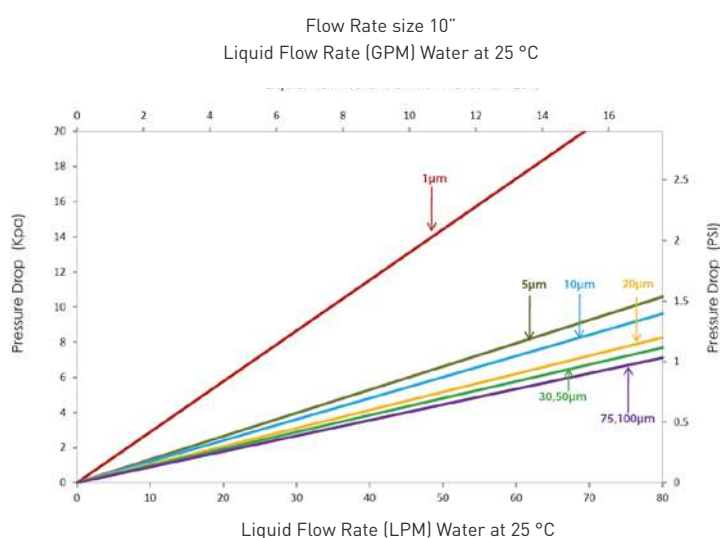
63 mm (2.5") , 115 mm (4.5")

Inner Diameter

28 mm

Length

9.87", 10", 20", 30", 40"



Particle Removal Efficiency		
Membrane pore size identification	85% efficiency	95% efficiency
CFW 0100	1	----
CFW 0500	5	----
CFW 1000	10	----
CFW 2000	----	20
CFW 3000	----	30
CFW 5000	----	50
CFW 7500	----	75
CFW 10000	----	100

Material of Constructions

- Media PP, Bleached Cotton, Glass Fiber
- Inner Core PP, SS

Performance

- Max. operating temperature PP: 80 °C
Cotton: 120 °C
Glass Fiber: 200 °C
- Max. pressure drop 2.0 bar @ 25 °C

Eg.=> CFWCW0100D98MD0POS0

ORDERING INFORMATION										
Product Type	Membrane Type	Membrane pore size	Application	Size	Diameter	Endcap	Inner Core	Sealing Material	Connection Support	Revision
CFW = String Wound Cartridge	CW = Cotton S.W.	0100=1µm	D = High Dirt	98 = 9.87"	0M = OD:63 mm	F = DOE	P = Polypro	O = No seal Mat	S = Standard	0 = Rev.0
	PW = Polypro S.W.	0500=5µm		10 = 10"	0L = OD:115 mm	M = 222 / Flat	S = SS Steel	S = Silicone		
	GW = Glass Fiber S.W.	1000=10µm		20 = 20"		T = 226 / Flat		E = EPDM		
		2000=20µm		30 = 30"		P = 222 / Fin		B = NBR		
		3000=30µm		40 = 40"		Q = 226 / Fin		V = Viton		
		5000=50µm				H = 213 / Flat				
		7500=75µm				E = 222 Extended / Fin				
		X100=100µm				N = 222 Extended / Flat				
						W = 222 Spear Fin				

CFM series PP Melt Blown

CFM series PP Melt Blown

Melt Blown Standard Filter Cartridges

CFM series PP Melt Blown Standard Filter Cartridges are fused and intertwined with polypropylene resin without any chemical glues. The cartridge is glued at random to form 3D micro pore which will make the cartridge's 3 layers with fibers on the surface and inside. With the fiber, density from high filtration rating, strong pollutants hold capacity, low pressure drop, gradual changing structure loose outside and close inside, it can remove contaminant effectively, -such as suspended substance, particulate and rust, providing efficient filtration and long service life.



Features

- H series: Coarse surface · Strong mechanical performance and high pressure resistant
- Blank series: Smooth Surface-No Fiber Shedding, Graded Density Pore Structure
- DG series: Deep Groove-Bigger Filtration Area , High Flow & Dirt Holding Capacity
- MG series: Minigroove-Tight Fiber Construction and High Filtration Efficiency

Applications

- R.O. Pre-filtration
- Food and Beverage
- Industry Water, Plating Solution
- Chemical, Organic Solvent Filtration
- Microelectronics
- Pharmaceuticals

Membrane pore size identification	Particle Removal Efficiency	
	85% efficiency	90% efficiency
1	1	----
3	3	----
5	5	----
10	----	10
25	----	25
50	----	50
75	----	75
100	----	100

Material of Constructions

- Media
- End Cap
- Sealing
- Core

PP

PP

Silicone, EPDM, NBR, Viton®

PP

Dimension

Out Diameter

63 mm { 2.5" } , 115 mm { 4.5" }

Inner Diameter

28 mm

Length

9,87", 10", 20", 30", 40"

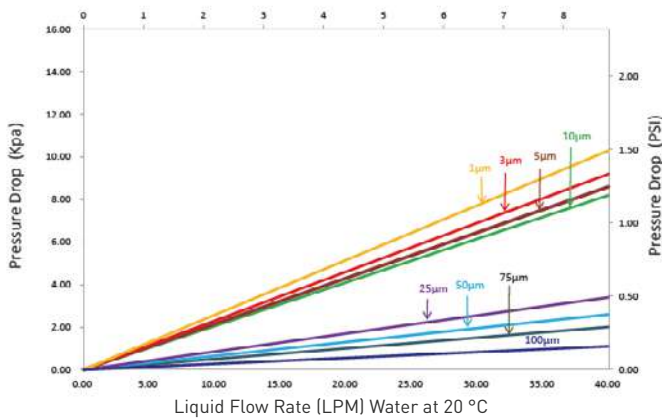
Performance

- Max Operating Temperature
- Max Operating DP

65 °C

2.0 bar @ 21 °C

Flow Rate size 10"
Liquid Flow Rate (GPM) Water at 20 °C



Eg.=> CFMPP0100G97ZBD4XOSS

ORDERING INFORMATION										
Product Type	Membrane Type	Membrane pore size	Application	Size	Diameter	Endcap	Inner Core	Sealing Material	Connection Support	Revision
CFM = Meltblown Cartridge	PP = Polypro	0100 = 1µm	G = Gen Purpose	97 = 9.75"	ZB = 28/63mm	D4 = DOE no Endcap	X = No core	O = No seal mat	S = Standard	S = Smooth Gr.D, Bag-Label
		0300 = 3µm		98 = 9.87"	ZD = 28/115mm	D5 = DOE PE gasket	P = Polypro	B = NBR		D = Deep G.ve-S, Bag-Label
		0500 = 5µm		10 = 10"		H1 = 222/Fin		E = EPDM		M = Mini G.ve-S, Bag-Label
		1000 = 10µm		20 = 20"		H2 = 222/Flat		V = Viton		R = Rough-S, Bag-Label
		2500 = 25µm		30 = 30"		G1 = 226/Fin				
		5000 = 50µm		40 = 40"		G2 = 226/Flat				
		7500 = 75µm								
		X100 = 100µm								

CJD series Junior Pleated Cartridge

CJD series Junior Pleated Cartridge

GVS's range of 56mm OD CJD filter elements are offered in multiple grades of PP, PES, PTFE and PVDF membrane as well as absolute-rated pleated polypropylene depth media.



Features

- Polypropylene depth media option offers ratings from 0.2um to 70um with high capacity and low pressure drop
- Hydrophilic PES and PVDF membrane, Hydrophobic PTFE membranes available in ratings from 0.03 to 1 micron. Integrity testing assures consistent, highly retentive performance. High tolerance to repeated cleaning and steaming cycles
- Products are manufactured in a controlled environment under a quality management system certified to ISO9001:2015

Applications

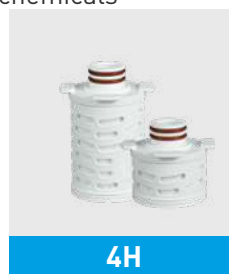
- Small-Batch Pharmaceutical, Bio-Technology, and Ophthalmic Products
 - Bio-reduction and clarification of ingredients and final products
- Semiconductor and Micro-Electronic fluids, fine chemicals
 - Cleaners, solvents, photoresist & developer solutions & process chemicals
- Pilot-Scale Investigations and R&D process development
 - Facilitates optimizations and scale-up

Material of Constructions

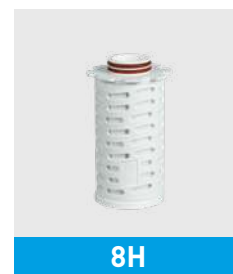
- | | |
|-----------------|---------------------|
| • Media | PP, PES, PTFE, PVDF |
| • Support | PP |
| • Cage/Core/End | PP |
| • Sealing | Silicone, EPDM, FKM |

Performance

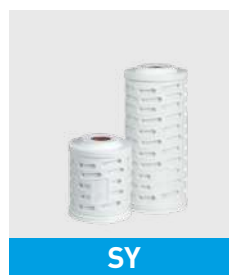
- | | |
|---------------------|--------------------------------------|
| • Max. Temperature | 80°C(176°F) |
| • Max. dP (forward) | 5 bar(73 psi) @ 50°C(122°F) |
| • Pressure | 3 bar(44 psi) @ 90°C(194°F) |
| | 0.3 bar(4 psi) @ 90°C(194°F) reverse |



4H



8H



SY



LY

PP Junior Cartridge

ORDERING INFORMATION										
Product Type	Membrane Type	Removal Rating	Application	Size	Diameter	Endcap	Inner Core	Sealing Material	Connection Support	Revision
CJD=Junior Pleated Cartridge	PP = Polypro	0100 = 1µm	P =Premier	H3=32mm H8=82mm X5=105mm For 4H	OF =OD:56mm	4H=AS118 15.3mm	P=PP	E=EPDM	S=Standard	0 = Rev.0
		0022=0.22µm		X7=107mm For 8H		8H=AS123 10.5mm		S=Silicone		
		0045=0.45µm		S7=70mm Y9=129mm For SY		SY=AS116 5mm		K=FKM		
		0100=1.0µm		L7=77mm Z6=136mm For LY		LY=AS116 12mm				
		0300 = 3µm								
		0500 = 5µm								
		1000 = 10µm								
		2000 = 20µm								
		5000 = 50µm								

PES Junior Cartridge

ORDERING INFORMATION										
Product Type	Membrane Type	Removal Rating	Application	Size	Diameter	Endcap	Inner Core	Sealing Material	Connection Support	Revision
CJD=Junior Pleated Cartridge	PS= PES	0004 = 0.04µm	S =Ster Grade	H3=32mm H8=82mm X5=105mm For 4H	OF =OD:56mm	4H=AS118 15.3mm	P=PP	E=EPDM	S=Standard	0 = Rev.0
		0010=0.1µm		X7=107mm For 8H		8H=AS123 10.5mm		S=Silicone		
		0022=0.22µm		S7=70mm Y9=129mm For SY		SY=AS116 5mm		K=FKM		
		0045=0.45µm		L7=77mm Z6=136mm For LY		LY=AS116 12mm				
		0065 = 0.65µm								
		0120 = 1.2µm								

PTFE Junior Cartridge

ORDERING INFORMATION										
Product Type	Membrane Type	Removal Rating	Application	Size	Diameter	Endcap	Inner Core	Sealing Material	Connection Support	Revision
CJD=Junior Pleated Cartridge	PT= PTFE	Application G	G =Gen Purpose	H3=32mm H8=82mm X5=105mm For 4H	OF =OD:56mm	4H=AS118 15.3mm	P=PP	E=EPDM	S=Standard	0 = Rev.0
		0010=0.1µm	S =Ster Grade	X7=107mm For 8H		8H=AS123 10.5mm		S=Silicone		
		0022=0.22µm		S7=70mm Y9=129mm For SY		SY=AS116 5mm		K=FKM		
		0045=0.45µm		L7=77mm Z6=136mm For LY		LY=AS116 12mm				
		0100= 1.0µm								
		0300 = 3.0µm								
		0500=5.00µm								
		1000=10.00µm								
		Application S								
		0010=0.1µm								
		0022=0.22µm								
		0045=0.45µm								
		0100=1.0µm								

PVDF Junior Cartridge

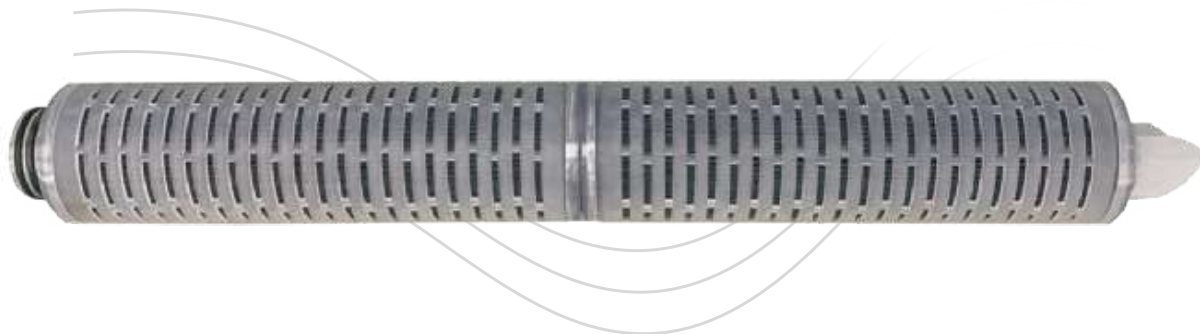
ORDERING INFORMATION										
Product Type	Membrane Type	Removal Rating	Application	Size	Diameter	Endcap	Inner Core	Sealing Material	Connection Support	Revision
CJD=Junior Pleated Cartridge	VH=PVDF philiic	0022=0.22µm	S =Ster Grade	H3=32mm H8=82mm X5=105mm For 4H	OF =OD:56mm	4H=AS118 15.3mm	P=PP	E=EPDM	S=Standard	0 = Rev.0
		0045=0.45µm		X7=107mm For 8H		8H=AS123 10.5mm		S=Silicone		
		0065 = 0.65µm		S7=70mm Y9=129mm For SY		SY=AS116 5mm		K=FKM		
				L7=77mm Z6=136mm For LY		LY=AS116 12mm				

CCD Series Carbon Cellulose Pleated Filter Cartridges

CCD Series

Carbon Cellulose Pleated Filter Cartridges

CCD Carbon Cellulose Pleated Filter Cartridges are made of high performance carbon impregnated cellulose media as well as FDA corresponding PP hardware and seal material. The media has features of narrow pore size distribution, big surface area, fast adsorption and desorption speed, good formability and other advantages. The main application of this filter cartridge is decolorizing filtration for pharmaceutical liquids and fine chemical products.



Applications

- Decolorizing filtration of organic solvent
- Decolorizing filtration of antibiotic, antivirus, hormone drugs
- Decolorizing filtration of Vitamins, amino acids, sugar, starch
- Decolorizing filtration of pesticide, fine chemical products

Dimension

Outer Diameter: 69 mm (2.72")
Length: 5", 10", 20", 30", 40"

Performance

Micro rating: 5 µm
PH: 1-13
Max Operating Temperature: ≤ 50°C
Max Operating Pressure: 65°C, 1.0 bar / 80°C
Max. Operating DP: 4 bar @ 20°C, 1 bar @ 65°C

Material of Constructions

Media: carbon impregnated
Support: cellulose media PP
Cage/Core/End cap: PP
Sealing: Silicon, EPDM, FKM

Eg.=> CCDCI0500L100AG1PSY0

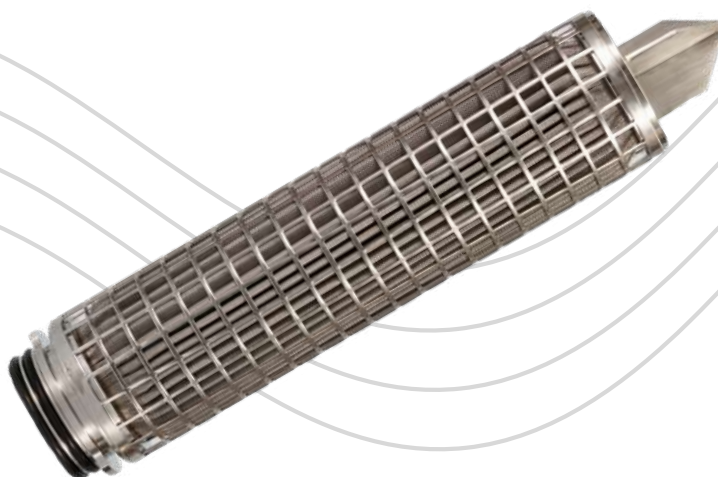
Product Type	Membrane Type	Membrane Pore Size	Application	Size	Diameter	Endcap	Inner Core	Seal Material	Connection Support	Revision
CCD = Carbon Cellulose Pleated Filter Cartridges	CI = Carbon impregnated Cellulose	0500 = 5µm	L = Decolorizing	05 = 5"	0A = OD: 69 mm	H2 = 222/Flat	P = Polypro	S = Silicone	Y = SS reinforcement	0 = Rev.0
				10 = 10"		H1 = 222/Fin				
				20 = 20"		G1 = 226/Fin				
				30 = 30"		G2 = 226/Flat				
				40 = 40"						
								E = EPDM		
								K = FKM		

SPK Series Stainless Steel

Stainless Steel filter

Stainless Steel Pleated Filter Cartridge

The GVS Stainless Steel pleated filter Cartridge are composed of pleated woven stainless steel meshes. The pleating process makes the filter media have a large effective filtration area, high dirt holding capacity and high flow rates. Sealing undergoes argon arc welding process, providing no leakage and excellent performance in high temperature and high pressure filtration environment. The filter cartridge can be cleaned repeatedly.



Features

- Homogeneous pore sizes, good permeability
- Metal media possess high mechanical strength and no releasing media
- Strong corrosive resistance, does not washable with long lifetime

Application

- Steam Filtration
- Oxidizing Liquid filtration
- Filtration of high viscosity liquids
- Liquid Decarburization filtration

Dimension

Outer Diameter: 60mm, 65mm, 68mm

Length: 5", 10", 20", 30", 40"

Material of Constructions

- Media 304/316L
- Core/Cage/Endcap 304/316L
- Seal Material Silicone, EPDM, NBR, E-FKM

Performance

- Maximum operating temperature 300°C
- Maximum working differential pressure: 5.0 bar

Quality

Manufactured according to ISO9001:
2015 certified Quality Management System

ORDERING INFORMATION										
Product Type	Membrane Type	Membrane Pore Size	Application	Size	Diameter	Endcap	Inner Core	Sealing Material	Connection Support	Revision
SPK=S-Steel Pleated Cartridge	SS=S304	0100 = 1µm	G=Gen Purpose	05=5"	0G=OD:60mm	D0=D0E	S=Standard	S=Silicone	S=Standard	0 = Rev.0
	SL=S316L	0300=3µm		10=10"	0E=OD:65mm	H2=222/Flat		E=EPDM		
		0500=5µm		20=20"	0B=OD:68mm	G2=226/Flat		B=NBR		
		1000=10µm		30=30"		S1=Screw		V=Viton		
		2000 = 20µm		40=40"				F=E-FKM		

Stainless Steel filter

Stainless Steel Sintered filter cartridge

GVS Metal Sintered filter cartridge is a microporous filter media formed by high purity stainless steel powder or titanium powder as raw material by high temperature and high vacuum sintering process. The filter media has high porosity, good mechanical properties, excellent chemical compatibility, no shedding, extremely low dissolution. Filter can be repeatedly cleaned and reused with low operating cost.



Features

- Tubular porous structure
- Metal material has high mechanical strength and no media falling off
- Good temperature resistance
- Washable and long-lasting

Application

- Steam Filtration
- Filtration of corrosive reagents
- High temperature fluid filtration
- Liquid Decarburization filtration

Dimension

Outer Diameter: 60mm, 65mm, 68mm

Length: 5", 10", 20", 30", 40"

Material of Constructions

- Media SS304/SS316L/Titanium
- Core/Cage/Endcap 304/316L
- Seal Silicone, EPDM, NBR, E-FKM

Performance

- Maximum operating temperature: 280°C
- Maximum Operating DP: 3.0 bar

Quality

Manufactured according to ISO9001:
2015 certified Quality Management System

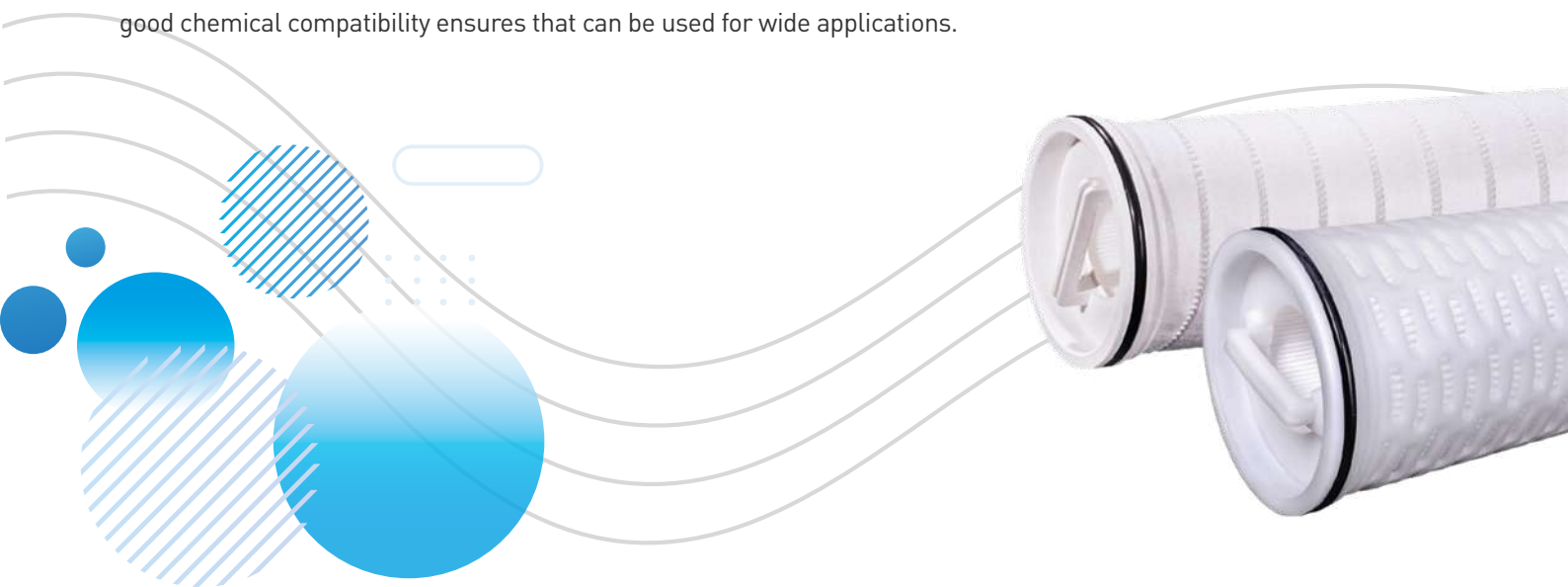
ORDERING INFORMATION										
Product Type	Membrane Type	Membrane Pore Size	Application	Size	Diameter	Endcap	Inner Core	Sealing Material	Connection Support	Revision
CTK = Titanium Powder Cartridge	SS=S304	0100 = 1µm	G=Gen Purpose	05=5"	0G=OD:60mm	D0=D0E	S=Standard	S=Silicone	S=Standard	0 = Rev.0
CPK = S-Steel Powder Cartridge	SL=S316L	0300=3µm		10=10"	0E=OD:65mm	H2=222/Flat		E=EPDM		
	TI=Titanium	0500=5µm		20=20"	0B=OD:68mm	G2=226/Flat		B=NBR		
		1000=10µm				S1=Screw		V=Viton		
								F=E-FKM		

HFH Series High Flow Filter Cartridges

HFH Series High Flow Pleated Filter Cartridges

High Flow filter cartridge

HFH Series High Flow Pleated Filter Cartridges are made of depth fine PP non-woven fabrics. The pleated filter cartridge is single open ended and in diameter of 6inch/152mm, inside to outside flow design ensures that the unwanted particles are trapped with the element. One HFH filter replaces few standard 10" filter cartridges to reduce the operating costs and make change out quickly and easily for critical applications. The multiple layers with depth pleated design provides higher removal efficiency and longer service life than other cartridges of equal efficiency. All the PP configuration with good chemical compatibility ensures that can be used for wide applications.



Features

- Available in economic/nominal/absolute structure, particle removal rating from 0.5 to 100 micron
- 100% polypropylene components provide wide chemical compatibility, suitable for use in a variety of fluids
- With depth fine non-woven fabrics and scientific design, the filter is in a good structure, having high dirt holding capacity and resulting in longer service life
- The pleated media in large diameter reduces operating costs, makes change out quickly and easily and makes cartridge in longer service life
- Higher dirt holding capacity with large diameter reduces the changes times of cartridges

Applications

- Food & Beverage
- RO Pre-Filtration
- Process water(Pre-RO, Cooling...)
- Ground/Reclaimed/Wastewater
- Sea water desalination
- Oil & Chemical
- Power plant water treatment
- Machinery & Equipment

Material of Constructions

- Media PP, GF
- Core/Cage/Endcap PP
- Sealing Silicone, EPDM,FKM, E-FKM

Dimension

Outer Diameter: 154mm

Length: 20", 40", 60"

Performance

Max Operating Temperature: 80°C

Max. Operating DP: 2.4 bar@20°C

Recommended Change out DP: 2.2 Bar@20°C

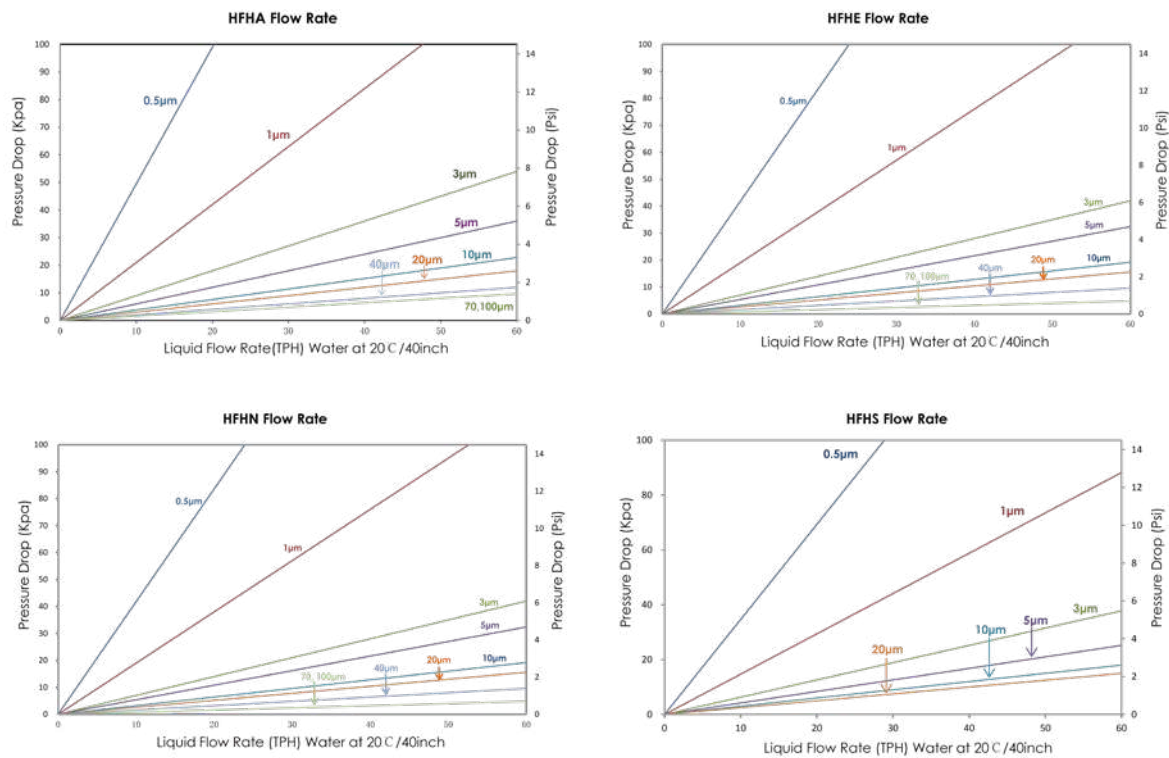
Quality

- Filter Cartridges are manufactured in a clean room environment
- Manufactured according to ISO9001:2015 certified Quality Management System

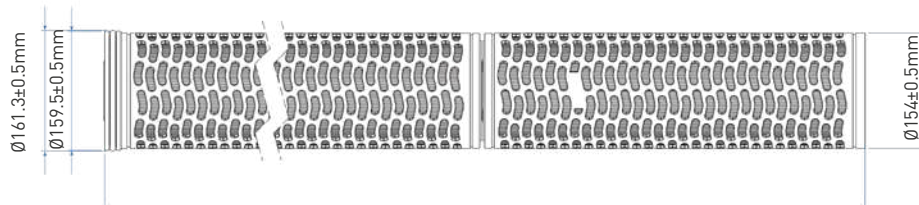
Food Contact Compliance

- Materials of construction comply with FDA regulations for food and beverage contact use as detailed in the US Code of Federal Regulations 21CFR
- Materials used to produce filter media and hardware meet the specifications for biological safety per USP Class VI-121 °C for plastics
- Filter cartridges passed European Commission Directives (EU10/2011)

Flow Rate



Dimensions



	20"	40"	60"
a	528.0±2	1016.0±2	1538.0±3

Eg.=> HFHAG0050PB20S

ORDERING INFORMATION					
Grade	Media Structure	Appearance	Length	Seal Material	Core
HFHA = Absolute	G0050 = PP0.5µm	B = Belt	20 = 20"	S = Silicon	Blank = No
HFHN = Nominal	G0100 = PP1µm	C = Cage	40 = 40"	E = EPDM	P = PP core
HFHE = EconomicC	G0300 = PP3µm		60 = 60"	V = FKM	
	G0500 = PP5µm			F = E-FKM	
	G1000 = PP10µm				
	G2000 = PP20µm				
	G4000 = PP40µm				
	G7000 = PP70µm				
	G9900 = PP100µm				

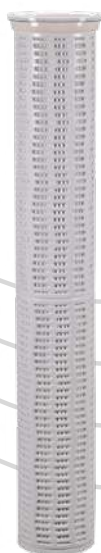
Eg.=> Eg.=> HFHS0050B20SP

ORDERING INFORMATION					
Hardware Material	Media Structure	Appearance	Length	Seal Material	Core
HFHS= Glass fiber	0050 = 0.5µm	B = Belt	20 = 20"	S = Silicon	Blank = No
	0100 = 1µm	C = Cage	40 = 40"	E = EPDM	P = PP core
	0300 = 3µm		60 = 60"	V = FKM	
	0500 = 5µm			F = E-FKM	
	1000 = 10µm				
	2000 = 20µm				

HFHT Series High Flow Pleated Filter Cartridges

High-Flow Polyester Pleated Filter Cartridges

HFHT Series Filter Cartridges feature all-polyester construction with high-efficiency retention performance. Superior chemical tolerance versus polypropylene for benzene, methylbenzene, and aromatic hydrocarbon solvents. Superior temperature tolerance versus polypropylene, allowing use in up to 120°C for periods. Thermally-bonded construction assures integrity and low degree of extractable substances.



Features

- Substantial effective filtration area allows for long operating service life.
- 100% polyester construction provides chemical compatibility where polypropylene isn't suited.
- Media composition is structured for ratings of 0.5 to 5microns.
- Optional micro-glass media options provide enhanced retention efficiency.

Material of Constructions

- Media GF, PBT
- Support Layer Polyester
- Cage/Core/End Caps Polyester
- Sealing Material Options EPDM, FKM

Dimension

Outer Diameter	152mm (6")
Length	1026mm (40"), 1524mm(60"), 1540mm (60"L)
Filtration Area	3.35m ² /40" 5 m ² /60"

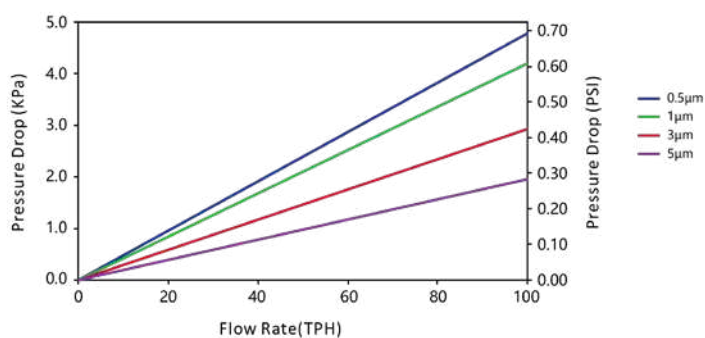
Operating Limits

Max. Temperature:	120° C (248° F)
Max. dP (forward):	4 bar (60 psi) @ 20°C (68°F)
Recommended Change-Out dP:	2.4 bar (35 psi) @ 80°C (176°F)

Applications

- Filtration of benzene and methylbenzene.
- Filtration of aromatic hydrocarbon solvents.

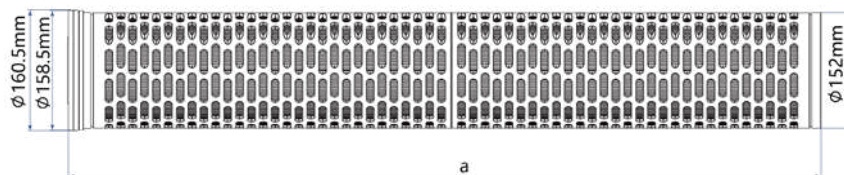
HFHT Series Flow Rate vs Pressure Drop
Per 40" cartridge length. With water at 25° C.



Quality

- Filter cartridges are manufactured in a production facility using Good Manufacturing Practices under an ISO9001:2015 registered Quality Management System.
- Full materials traceability is documented for all finished lots.

Dimensions



	a
20"	1026.0±2
60"	1524.0±3
	1540.0±3

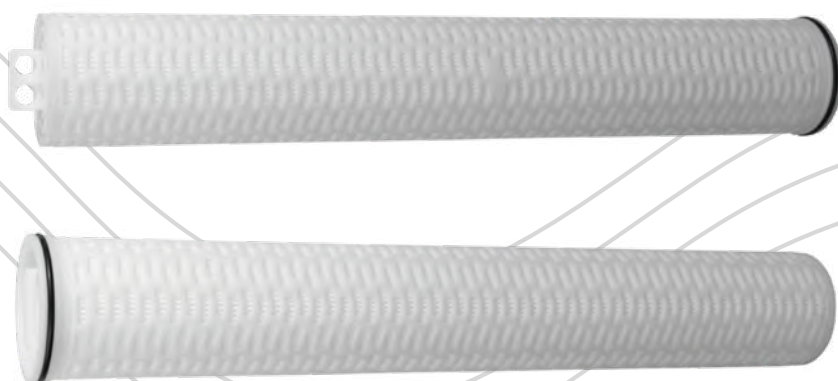
ORDERING INFORMATION				
Product Type	Media Structure		Length	Seal Material
HFHT = High-Flow Polyester Pleated Filter Cartridges	GF	PBT	40 = 1026mm	E = EPDM
	GF0050 = 0.5µm	PBT0050 = 0.5µm	60 = 1524mm	V = FKM
	GF0100 = 1µm	PBT0100 = 1µm	60L = 1540mm	
	GF0300 = 3µm	PBT0300 = 3µm		
	GF0500 = 5µm	PBT0500 = 5µm		

HFD Series High Flow Filter Cartridges

HFD Series High Flow Pleated Filter Cartridges

High Flow filter cartridge

HFD Series High Flow Filter Cartridges can be taken from filters conveniently with two stretchable handles on both ends. The single open-ended filter is designed with a large input whose diameter of 6 inches. The design of super high flow can thus better improve the efficiency of filter cartridges and filters and save the cost. This filter cartridge also adopts depth fine PP fiber membrane as the main filtration layer.



Features

- Big filtration area, high flow rate
- Double handles, both ends are easily accessible
- Optional remove ratings
- Manufactured in cleanroom environment

Performance

Max Operating Temperature: 80°C

Max. Operating DP: 2.4 bar@20°C

Recommended Change out DP: 2.2 Bar@20°C

Applications

- General purpose: RO system prefiltration
- Industrial: process water, cooling water, waste water filtration
- Chemical: filtration of various acids, bases, solvents, chilled water, saline
- Condensate water filtration in power plant

Material of Constructions

- | | |
|-----------|--------|
| • Media | PP, GF |
| • Support | PP |
| • Cage | PP |

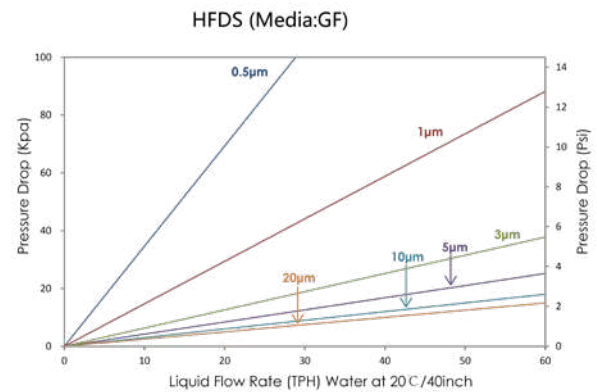
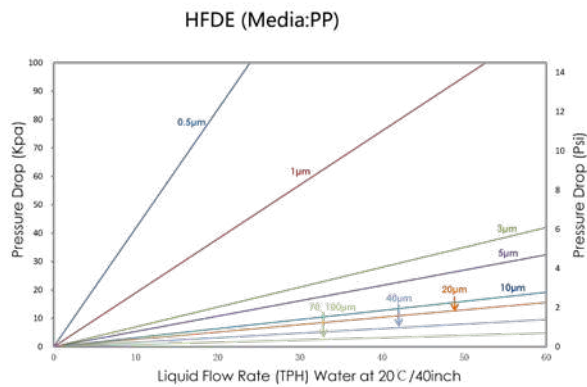
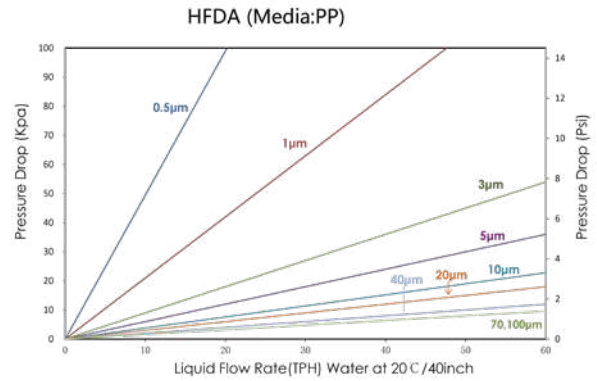
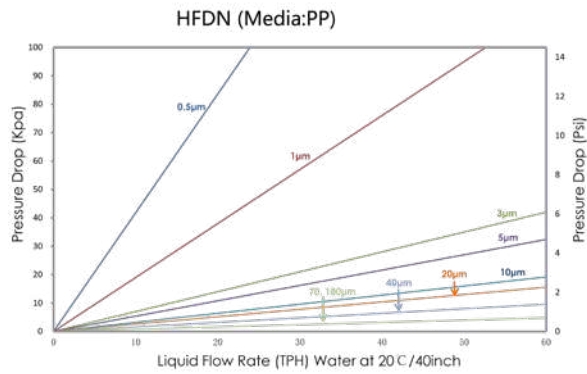
Dimension

Outer Diameter: 154mm

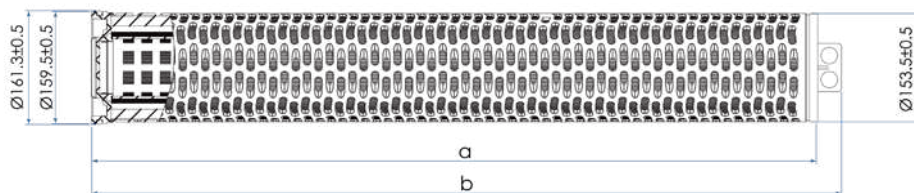
Length: 20", 40"



Flow Rate



Dimensions



	a	b
20"	528±2	562±2
40"	1020±2	1054±2

Eg.=> HFD40AG0050S

ORDERING INFORMATION

Grade	Remove Rating	Media	Seal Material
20 = 20"	A = Absolute	G0050 = PP0.5µm	S = Silicon
40 = 40"	N = Nominal	G0100 = PP1µm	E = EPDM
	E = Economic	G0300 = PP3µm	B = NBR
		G0500 = PP5µm	V = FKM
		G7000 = PP70µm	F = E-FKM
		G9999 = PP100µm	

HFM Series High Flow Filter Cartridges

HFM Series High Flow Pleated Filter Cartridges

High Flow filter cartridge

HFM Series High Flow Filter Cartridges are made of high performance media with horizontal pleat design that provides higher filtration area and longer service life. The media construction of multiple layers ensures the high dirt holding capacity with high efficiency per filter. The filter has a big diameter of 6.5inch/165mm. "Twist to lock" seating mechanism provides positive seal. One HFM filter replaces few standard 10" filter cartridges to reduce the operating costs and making change out quickly and easily for critical applications. All the PP configuration with good chemical ensures the wide applications.



Features

- Available in nominal structure, particle removal rating from 0.5 to 100 micron
- Horizontal pleat, high filtration area, high flow rate
- High performance fiber matrix with no adhesives or surfactants, non-fiber releasing to keep the high quality fluid, highly stable structure, and high dirt holding capacity
- 100% polypropylene components provide wide chemical compatibility, suitable for use in a variety of fluids
- Fewer cartridges required, reducing operating, saving space and system footprint
- The long service life results in low investment and less manpower in many applications

Applications

- Food & Beverage
- Process water(Pre-RO, Cooling...)
- Ground/Reclaimed/Wastewater
- Sea water desalination
- Oil & Chemical
- Power plant water treatment
- Machinery & Equipment
- Chemicals
- Refining(Amine, Final product)
- Machine coolants

Material of Constructions

- | | |
|-------------------------|----------------------------|
| • Media | PP |
| • Support | PP |
| • Cage / Core / End cap | PP |
| • Sealing | Silicone, EPDM, FKM, E-FKM |

Dimension

Outer Diameter: 165mm

Length: 40", 60"

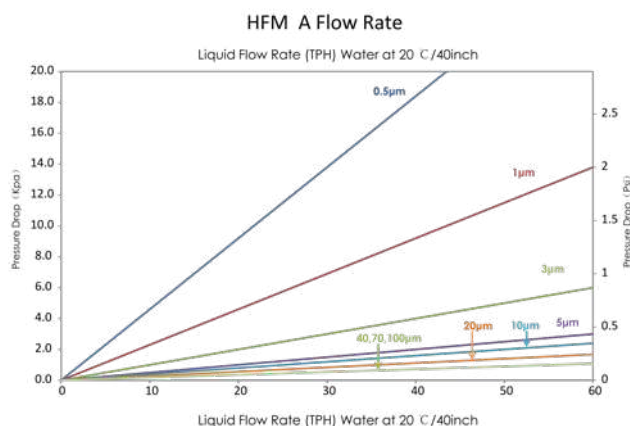
Performance

Max Operating Temperature: 80°C

Max. Operating DP: 3.0 bar@20°C

Recommended Change out DP: 2.4 Bar@20°C

Flow Rate



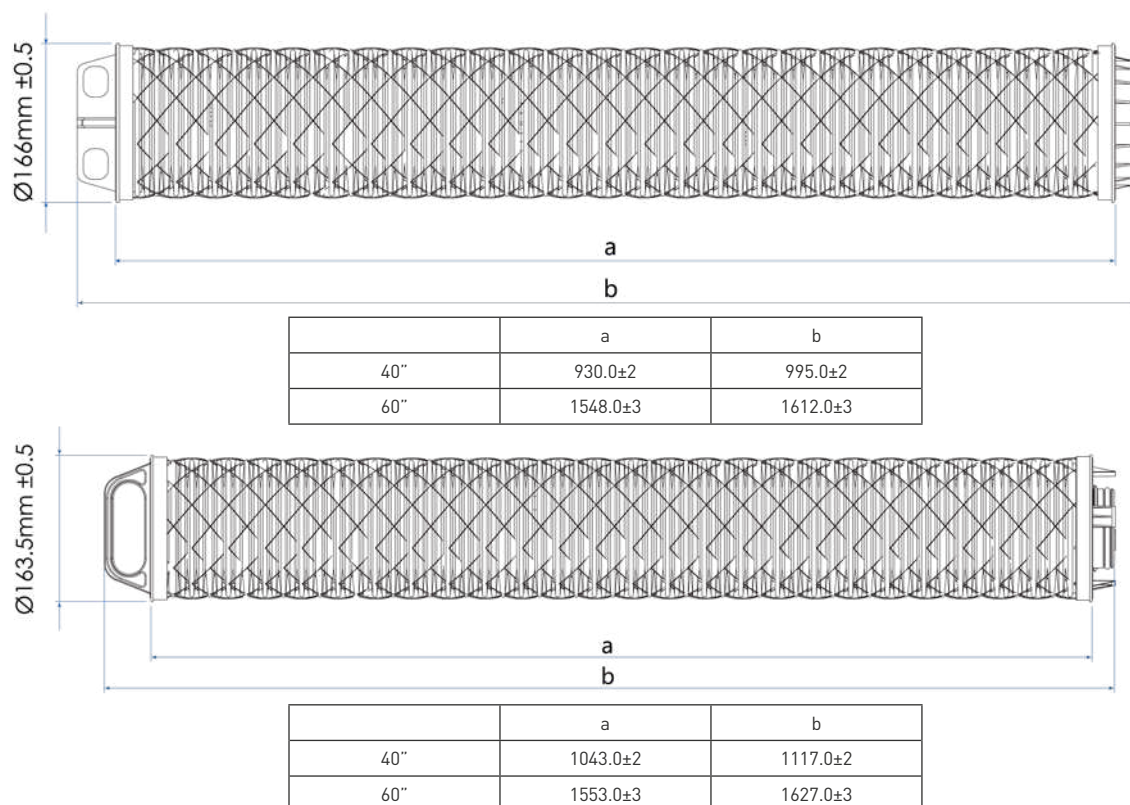
Food Contact Compliance

- Materials of construction comply with FDA regulations for food and beverage contact use as detailed in the US Code of Federal Regulations 21CFR
- Materials used to produce filter media and hardware meet the specifications for biological safety per USP Class VI-121 °C for plastics
- Filter cartridges passed European Commission Directives (EU10/2011)

Quality

- Filter Cartridges are manufactured in a clean room environment
- Manufactured according to ISO9001:2015 certified Quality Management System

Dimensions



Eg.=> HF MG0050PAB40S

ORDERING INFORMATION					
Media Type	Hardware Material	End Cap Type	Appearance	Length	Seal Material
G = PP	P = PP	A = In-line handle and big outlet	B = Netting	40 = 40''	S = Silicon
G0050 = PP0.5µm		B = Cross handle and small outlet	C = Cage	60 = 60''	E = EPDM
G0100 = PP1µm					V = FKM
G0300 = PP3µm					F = E-FKM
G0500 = PP5µm					
G1000 = PP10µm					
G2000 = PP20µm					
G4000 = PP40µm					
G7000 = PP70µm					
G9900 = PP100µm					

HFP Series High Flow Filter Cartridges

HFP Series High Flow Pleated Filter Cartridges

High Flow filter cartridge

HFP Series High Flow Pleated Filter Cartridges are single open-ended cartridges in 6.7 inch diameter with outside to inside flow pattern. It offers a high flow rate solution with quick changes for advanced water filtration systems including industrial and commercial osmosis type water and sea water filtration. It provides a cost effective alternative to 2.5 inch OD style filter cartridges in high flow applications.



Features

- Available in economic/nominal/absolute structure, particle removal rating from 0.5 to 100 Micron
- 100% polypropylene components provide broad chemical compatibility, suitable for a variety of fluids
- High dirt holding capacity and longer service life

Applications

- Food & Beverage
- RO Pre-Filtration
- Process Water
- Wastewater
- Sea water desalination
- Oil&Chemical
- Power plant water treatment
- Machinery&Equipment

Material of Constructions

- | | |
|-----------|------|
| • Media | PP |
| • Support | PP |
| • End cap | PP |
| • Sealing | Buna |

Dimension

- | | |
|----------------|----------|
| Outer Diameter | 172mm |
| Inner Diameter | 76mm |
| Length | 40", 60" |

Performance

Max Operating Temperature: 82°C

Max. Operating DP: 35Psid

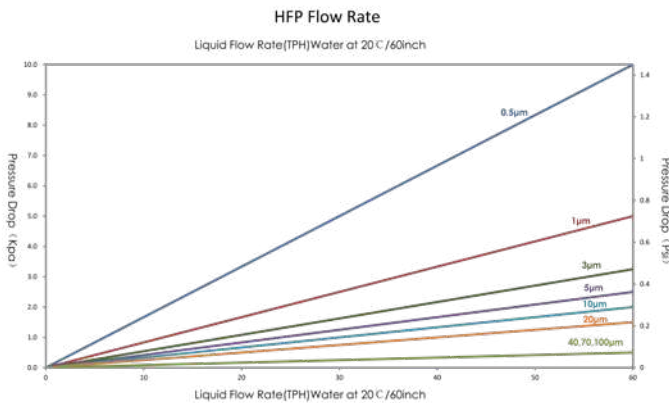
Food Contact Compliance

- Materials of construction comply with FDA regulations for food and beverage contact use as detailed in the US Code of Federal Regulations 21CFR
- Materials used to produce filter media and hardware meet the specifications for biological safety per USP Class VI-121 °C for plastics
- Filter cartridges passed European Commission Directives (EU10/2011)

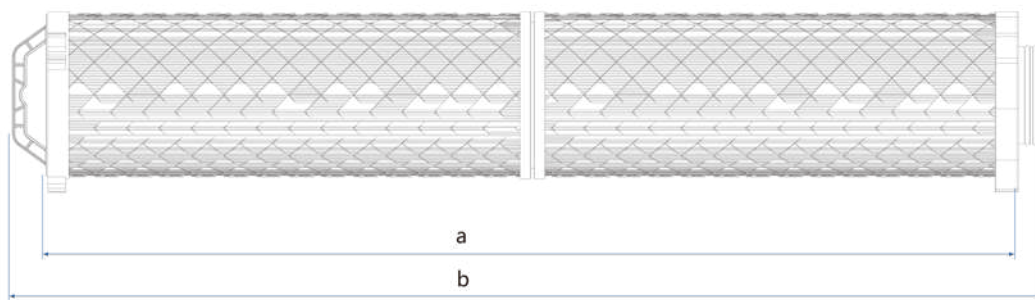
Quality

- Filter Cartridges are manufactured in a clean room environment
- Manufactured according to ISO9001:2015 certified Quality Management System

Flow Rate



Dimensions



	a	b
40"	1016.0±2	1525.0±2
60"	1080.0±2	1589.0±2

Eg.=> HFPAG0050P40SP

ORDERING INFORMATION					
Grade	Media Type(PP)	Hardware Material	Length	Seal Material	Core
HFP A = Absolute	G0050 = 0.5µm	P = PP	40 = 40"	S = Silicon	P = PP
HFP N = Nominal	G0100 = 1µm		60 = 60"	E = EPDM	
HFP E = Economic	G0300 = 3µm			V = FKM	
	G0500 = 5µm			F = E-FKM	
	G1000 = 10µm				
	G2000 = 20µm				
	G4000 = 40µm				
	G7000 = 70µm				
	G9900 = 100µm				

CDDB Series Depth Filter Cartridge

CDDB Series

Depth Cellulose Fibers Filter Cartridges

CDDB Depth Cellulose Fibers series is an ideal type of filter cartridge using depth filter sheets. It is designed to provide optimal clarification by using a double separator construction. The separator design increases the total stability of the filter cartridges as the separators fully support the sheet materials. This design also prevents filter sheet deformities after heat treatments and adverse effects of hot sanitation. It is manufactured with rigid external clips to prevent damage during module loading and unloading and offer easy and reliable handling.



Features

- Washable under certain conditions, resulting in longer service life
- Easy and reliable handling rigid external clips protect filter sheet during module loading and unloading
- No adverse effects to filter sheets during hot sanitization or process filtration

Quality

- Manufactured in a clean room environment
- Manufactured according to ISO9001:2015 certified Quality Management System
- Material of construction comply with FDA regulations for food and beverage contact use as detailed in the US Code of Federal Regulations 21 CFR
- Passed European Commission Directives (EU10/2011)

Applications

- Bio-Pharmaceuticals: Blood Products, Vaccine, Antibiotics, Growth Media, Buffer
- Food Products: Syrups, Vinegar, Edible Oils, Sugars
- Beverages: Wine, Beer, Juices, Soft Drinks, Cider, Liquor, Milk and dairy products
- Cosmetics: Perfumes, Lotions, Shampoos, Deodorants, Colognes

Material of Constructions

- Depth Filter Sheet: Cellulose fibers, Resins, Perlite, Diatomaceous earths, etc.
- Core/ Support Separator: PP
- Sealing: Silicone, EPDM, NBR, FKM, E-FKM

Eg. => CDDBDSC002D8S7

ORDERING INFORMATION						
Product Type	Removal Rating	End Cap Type	Outer Diameter	Seal Material	Construction	
CDDBDS Depth Filter Cartridges Cellulose Fibers	C002 = 0.2-0.4µm C004 = 0.4-0.6µm C006 = 0.6-1µm C100 = 1-3µm C150 = 2-5µm	C200 = 3-7µm C210 = 10-15µm C230 = 25-30µm C240 = 40-50µm C250 = 50-60µm	D = DOE with gaskets S = SOE with double o-rings (only available for 8")	8 = 8" 12 = 12" 16 = 16"	S = Silicone E = EPDM B = NBR V = FKM	7 = 7 Cell(8",16") 8 = 8 Cell(8",16") 9 = 9 Cell(12",16") 12 = 12 Cell(12",16") 15 = 15 Cell(12",16") 16 = 16 Cell(12",16")

CDDD Series

Depth Activated Carbon Filter Cartridges

GVS Depth Activated Carbon series are new type of filter cartridge using depth filter sheets. It is designed using a double separator concept. The Separator design increases the total stability of the filter cartridges as the separators fully support the sheet material. This design also prevents filter sheet deformities after heat treatments and adverse effects of contact with hot sanitation. It is manufactured with rigid external clips to prevent damaging filter sheets during module loading and unloading while allowing for easy and reliable handling.



Applications

- Removing dissociative chlorine and volatile organic compounds (VOC) in solution
- Oil and aromatic series in solution
- Remove smell, odor, organic pigment
- Remove Metal Ion

Material of Constructions

Depth Filter Sheet: Carbon Cellulose, Activated Carbon, Resins, and etc

Core/Separator: PP

Double O-ring or flat gasket: Silicon, EPDM, NBR

Performance

Max Operating Temperature: 80°C

Max Operating DP: 2.0 bar / 25°C 1.0 bar / 80°C

Eg.=> CDDDLSCC150D8E8

ORDERING INFORMATION					
Product Type	Removal Rating	End Cap Type	Outer Diameter	Seal Material	Construction
CDDDLSCC Depth Filter Cartridges Activated Carbon	C150 = 5µm	D = DOE with gaskets S = SOE with double o-rings (only available for 8")	8 = 8" 12 = 12" 16 = 16"	S = Silicone E = EPDM B = NBR	8 = 8 Cell 9 = 9 Cell 12 = 12 Cell 15 = 15 Cell 16 = 16 Cell

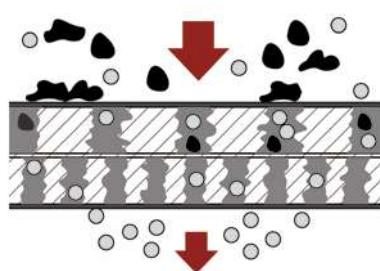
Backflushabel Filter Modules

CDDBDS2 Series

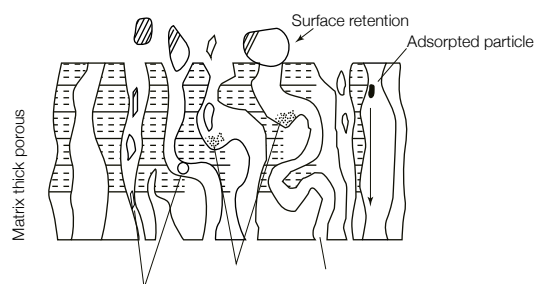
Backflushable Filter Modules

Stacked disc modules have been widely used in food/beverage and pharmaceutical with surface filtration, depth filtration and adsorption filtration.

Edible oils, syrups, beer, wine, etc. often contain fine suspended particles that must be removed to achieve various goals such as product polishing, bioburden reduction, clarification and filtration, protection food safety, and shelf-life extension. However, the burden of these solids can be high, which is a great challenge for membrane cartridges for surface filtration. The contaminant holding capacity of the cartridge is limited by the available surface area and void volume, leading to fast clogging. At this point, the solution can be solved by adding more cartridges, but it no doubt add more investment.



Surface filtration



Depth Filtration

Classic stacked disc modules represent first generation module design, but they have performance disadvantages. The sheets are directly exposed and can be damaged during transportation, handling, installation and removal. Modules may fall apart when removed from housing at the end of the process. Hot water sterilization or filtration can lead to warping and two cells to stick together, thus reducing the filter area. The module cannot be steam sterilized, limiting applications. Due to the lack of backflushing, which reduces the overall service life of the stacked disc module.

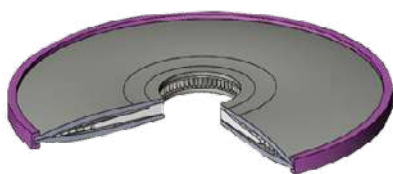


Advanced Construction Technology of CDDBDS2 Modules

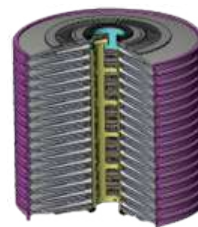
CDDBDS2 modules are stacked according to the order of separator, filter sheet, cell separator, filter sheet and separator. The center of the stack is locked together with a center core and cage assembly. Special connections are used between the cells to ensure strength.

The unique performance of the CDDBDS2 modules is due to its double separator design which provides both upstream and downstream support for the filter media. The media is individually sealed and separated in between polypropylene plates, which results in optimal flow through the available surface area and a mechanically robust module.

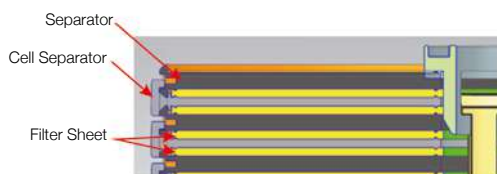
These advanced module designs enhance module integrity and provide excellent resistance to resist vacuum or back pressure.



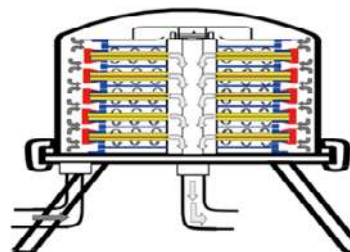
Single Filter Cell



Classic Stacked Disc Modules



Detailed drawing



Operating Principle

The Benefits of CDD BDS2 Modules

CDD BDS2 modules eliminate the disadvantages of CDD BDS stacked disc modules. Backflushing dissolves and flushes out the residual colloids, microorganisms and compressed particles in the stacked disc module.

CDD BDS2 modules aren't affected by hot water washing or sterilization in-place. The modules can be backflushed with water or products to remove contaminants and prolong their lifetime (Generally increases by 30-50%).

The module structures are integrity and easy to install and remove, while suitable for most module filter housings. Designed with the construction design, the module is easily installed and uninstalled. Housing is cleaned quickly, saving operating time. It is an ideal choice for manufacturers.

Applications



- Clarification and polishing filtration of wine



- Prefiltration of juice concentrate



- Particle removal in fruit juice and tea-based beverages



- Polishing filtration of beer
- Fine filtration of beer following DE prefiltration



- Polishing filtration of edible oil



- Polishing filtration of syrup



- Coarse filtration of spirits
- Polishing filtration and chill haze removal in spirits



- Clarification of enzyme solutions and thin liquor
- gelatine

Sterilization and Regeneration

Hot Water Sterilization

The hot water temperature should be adjusted to > 85 °C on the outlet pipe of the housing. When 85 °C is reached, circulate hot water for 25 - 30 minutes.

Positive Rinsing

Steam sterilized module must be positively rinsed with pure water until the downstream outlet water is odorless. The recommended rinsing volume is 50 L/ m² of filter area. The recommended flow rate for the rinsing cycle is 1.5 times the process flow rate with a maximum temperature of 85°C (185°F).

Sterilization in place

125°C, 30min@3cycles, while steam pressure less than 0.2 MPa.

Backwash

It is possible to cold water or Max.60°C hot water rinses the modules for 5-10 minutes in the reverse direction up to a maximum of 0.5 bar Dp.

Material of Constructions

- Media Cellulose/Diatomaceous earth/Resins etc.
- Cage/Support/Diversion Polypropylene
- Seal Material Options Silicone, EPDM, NBR, FKM

Performace

Max. Operating Temperature	80°C
Max. Operating DP	5bar
	1bar
SIP	125°C, 30min ,3cycles
Hot Water Sanitization	85°C(Not Exceed),25-30min

Dimension

	Diameter(mm)	Height(mm)	Filtration Area(m ²)
12" 9cells	291	175	1
12" 15cells	291	275	1.7
12" 16cells	291	291	1.8

Guarantees

- Manufactured in a clean room
- Manufactured according to ISO9001:2015 certified quality management system
- All components materials meet the requirements of the EU framework regulation [1935/2004/EC] regrading materials and articles intended to contact food
- All components materials meet the FDA Indirect Food Additive requirements cited in 21 CFR 177-182

ORDERING INFORMATION						
Product Type	Removal Rating		End Cap Type	Outer Diameter	Seal Material	Construction
CDDBD S2 Backflushable Filter Modules	C001 = 0.1-0.3µm C002 = 0.2-0.4µm C004 = 0.4-0.6µm C006 = 0.6-1µm C100 = 1-3µm C150 = 2-5µm	C200 = 3-7µm C210 = 10-15µm C230 = 25-30µm C240 = 40-50µm C250 = 50-60µm	D = DOE with flat gasket	12 = 12"	S = Silicone E = EPDM B = NBR V = FKM	9 = 9 Cell 15 = 15 Cell 16 = 16 Cell

Note: Please follow the operating procedures strictly, do not change or skip steps at will. If you have any questions, please do not hesitate to contact our technical team.

APPENDIX

CARTFLOW DIMENSIONS

Pleated cartridge membrane: PES, PSU, PTFE, Nylon

Endcap

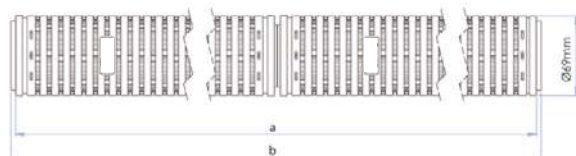
Connection support

Endcap

Connection support

DOE

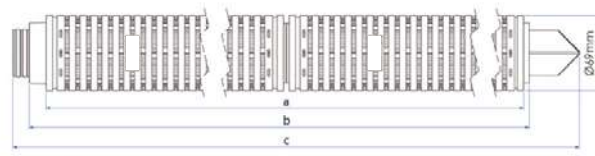
Standard



	5°	10°	20°	30°	40°
a	117.0±1	246.0±1	492.0±2	742.0±2	992.0±2
b	125.0±1	254.0±1	500.0±2	750.0±2	1000.0±2

222/ Spear Fin

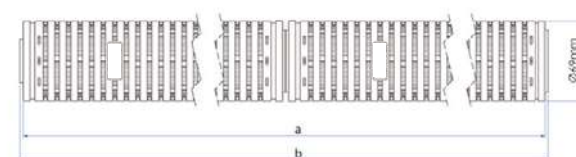
SS Reinforced



	5°	10°	20°	30°	40°
a	114.0±1	243.0±1	489.0±2	739.0±2	989.0±2
b	135.0±1	264.0±1	510.0±2	760.0±2	1010.0±2
c	196.0±1	325.0±1	571.0±2	821.0±2	1071.0±2

213/ Flat

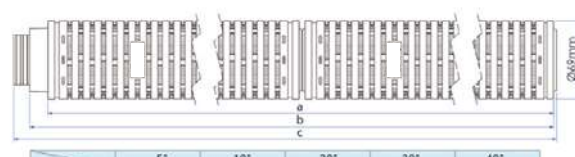
Standard



	5°	10°	20°	30°	40°
a	115.0±1	245.0±1	495.0±2	745.0±2	995.0±2
b	120.0±1	250.0±1	500.0±2	750.0±2	1000.0±2

222 Extended/ Flat

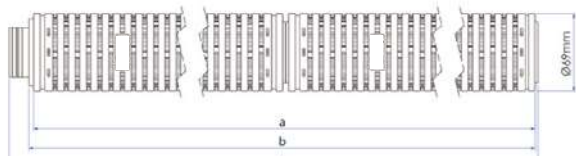
Standard



	5°	10°	20°	30°	40°
a	114.0±1	244.0±1	494.0±2	744.0±2	994.0±2
b	130.0±1	260.0±1	510.0±2	760.0±2	1010.0±2
c	146.5±1	276.5±1	526.5±2	776.5±2	1026.5±2

222/ Flat

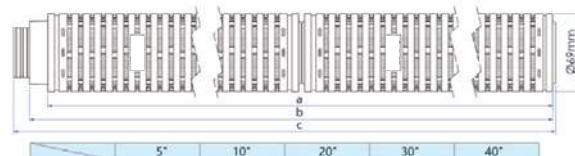
Standard



	5°	10°	20°	30°	40°
a	116.0±1	246.0±1	496.0±2	746.0±2	996.0±2
b	120.0±1	250.0±1	500.0±2	750.0±2	1000.0±2
c	140.0±1	270.0±1	520.0±2	770.0±2	1020.0±2

222 Extended/ Flat

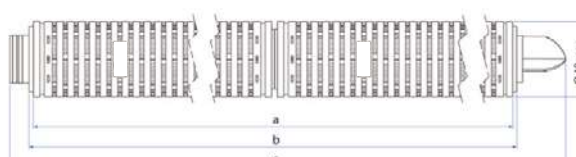
SS Reinforced



	5°	10°	20°	30°	40°
a	114.0±1	244.0±1	494.0±2	744.0±2	994.0±2
b	130.0±1	260.0±1	510.0±2	760.0±2	1010.0±2
c	146.5±1	276.5±1	526.5±2	776.5±2	1026.5±2

222/ Fin

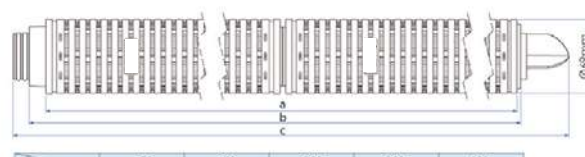
Standard



	5°	10°	20°	30°	40°
a	118.0±1	247.0±1	493.0±2	743.0±2	993.0±2
b	125.0±1	250.0±1	500.0±2	750.0±2	1000.0±2
c	177.5±1	316.5±1	562.5±2	812.5±2	1062.5±2

222 Extended/ Fin

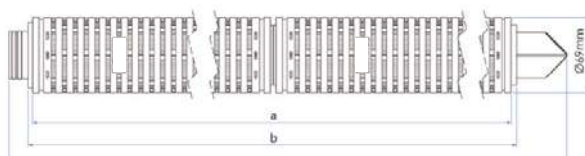
Standard



	5°	10°	20°	30°	40°
a	116.0±1	245.0±1	491.0±2	741.0±2	991.0±2
b	135.0±1	264.0±1	510.0±2	760.0±2	1010.0±2
c	194.5±1	323.5±1	569.5±2	819.5±2	1069.5±2

222/ Spear Fin

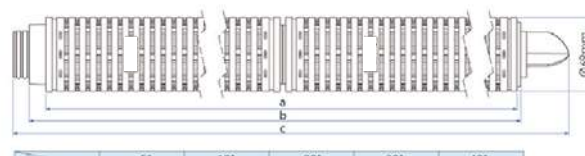
Standard



	5°	10°	20°	30°	40°
a	116.0±1	245.0±1	491.0±2	741.0±2	991.0±2
b	125.0±1	250.0±1	500.0±2	750.0±2	1000.0±2
c	188.5±1	317.5±1	563.5±2	813.5±2	1063.5±2

222 Extended/ Fin

SS Reinforced



	5°	10°	20°	30°	40°
a	116.0±1	245.0±1	491.0±2	741.0±2	991.0±2
b	135.0±1	264.0±1	510.0±2	760.0±2	1010.0±2
c	194.5±1	323.5±1	569.5±2	819.5±2	1069.5±2

CARTFLOW DIMENSIONS

Endcap

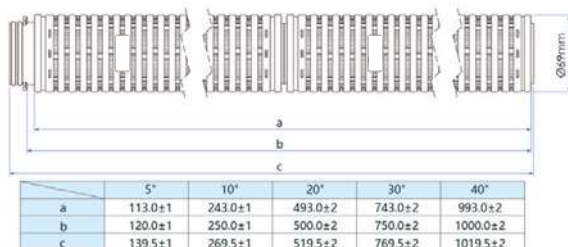
Connection support

Endcap

Connection support

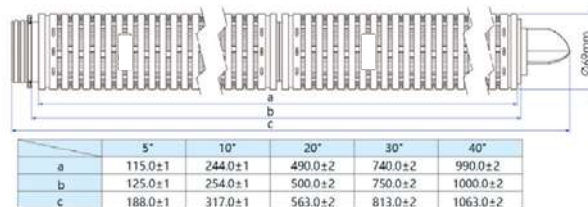
226/ Flat

Standard



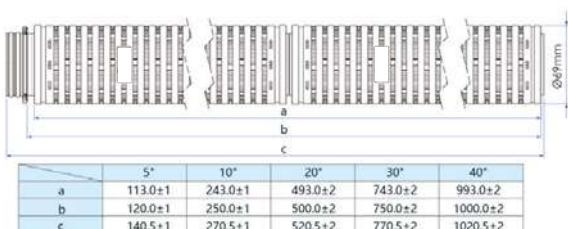
226/ Fin

PSU Reinforced



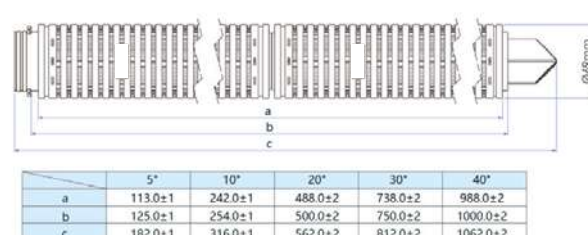
226/ Flat

SS Reinforced



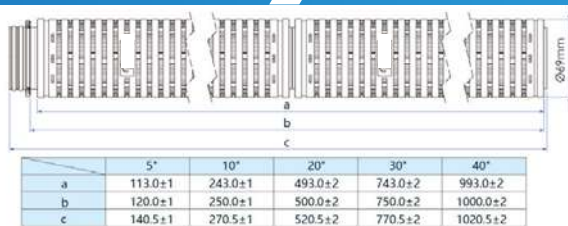
226/ Spear Fin

Standard



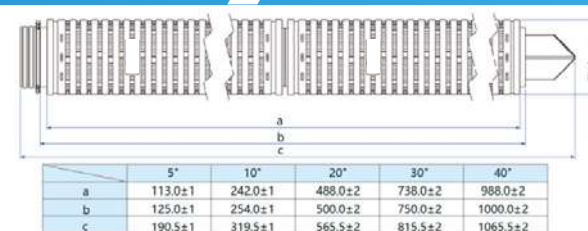
226/ Flat

PSU Reinforced



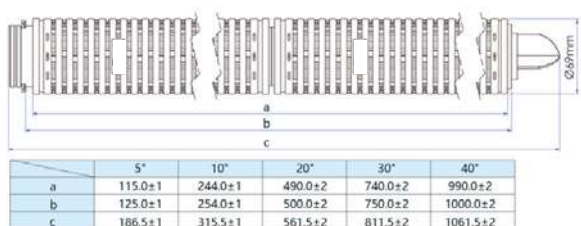
226/ Spear Fin

SS Reinforced



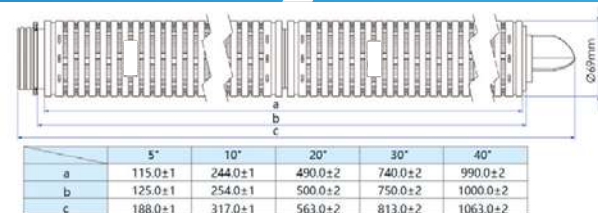
226/ Fin

Standard



226/ Fin

SS Reinforced



CARTFLOW DIMENSIONS

Pleated cartridge media: PP

Endcap

Connection support

Endcap

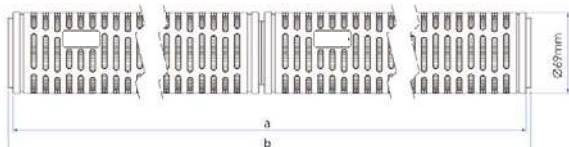
Connection support

DOE

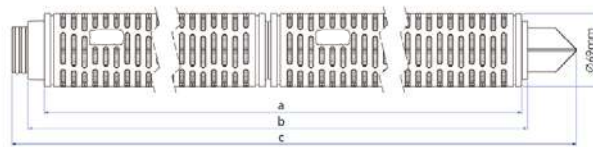
Standard

222/Spear Fin

SS Reinforced



	5°	10°	20°	30°	40°
a	117.0±1	242.0±1	492.0±2	742.0±2	992.0±2
b	125.0±1	250.0±1	500.0±2	750.0±2	1000.0±2



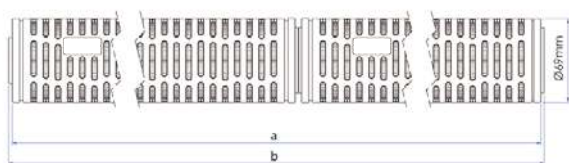
	5°	10°	20°	30°	40°
a	114.0±1	239.0±1	489.0±2	739.0±2	989.0±2
b	135.0±1	260.0±1	510.0±2	760.0±2	1010.0±2
c	196.0±1	321.0±1	571.0±2	821.0±2	1071.0±2

213/ Flat

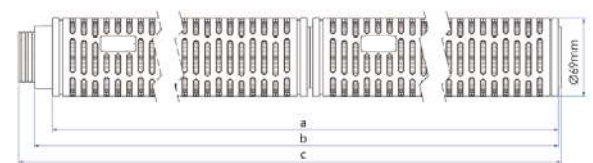
Standard

222 Extended/ Flat

Standard



	5°	10°	20°	30°	40°
a	115.0±1	245.0±1	495.0±2	745.0±2	995.0±2
b	120.0±1	250.0±1	500.0±2	750.0±2	1000.0±2



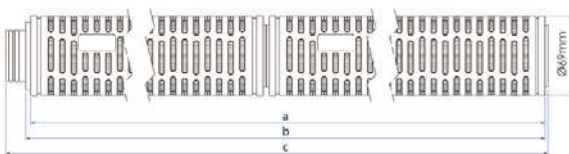
	5°	10°	20°	30°	40°
a	114.0±1	244.0±1	494.0±2	744.0±2	994.0±2
b	130.0±1	260.0±1	510.0±2	760.0±2	1010.0±2
c	146.5±1	276.5±1	526.5±2	776.5±2	1026.5±2

222/ Flat

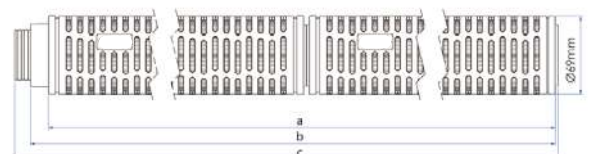
Standard

222 Extended/ Flat

SS Reinforced



	5°	10°	20°	30°	40°
a	116.0±1	246.0±1	496.0±2	746.0±2	996.0±2
b	120.0±1	250.0±1	500.0±2	750.0±2	1000.0±2
c	110.0±1	270.0±1	520.0±2	770.0±2	1020.0±2



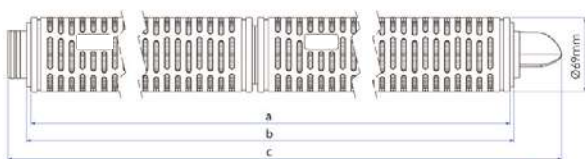
	5°	10°	20°	30°	40°
a	114.0±1	244.0±1	494.0±2	744.0±2	994.0±2
b	130.0±1	260.0±1	510.0±2	760.0±2	1010.0±2
c	146.5±1	276.5±1	526.5±2	776.5±2	1026.5±2

222/ Fin

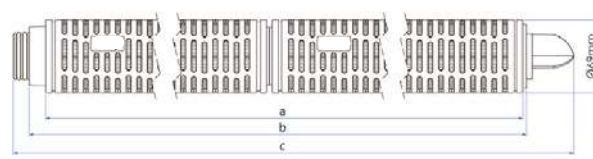
Standard

222 Extended/ Fin

Standard



	5°	10°	20°	30°	40°
a	118.0±1	243.0±1	493.0±2	743.0±2	993.0±2
b	125.0±1	250.0±1	500.0±2	750.0±2	1000.0±2
c	187.5±1	312.5±1	562.5±2	812.5±2	1062.5±2



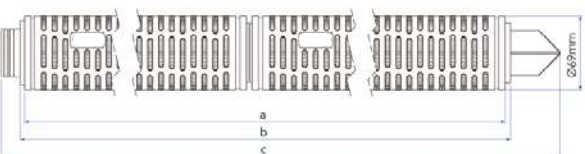
	5°	10°	20°	30°	40°
a	117.0±1	242.0±1	492.0±2	742.0±2	992.0±2
b	135.0±1	260.0±1	510.0±2	760.0±2	1010.0±2
c	194.5±1	319.5±1	569.5±2	819.5±2	1069.5±2

222/ Spear Fin

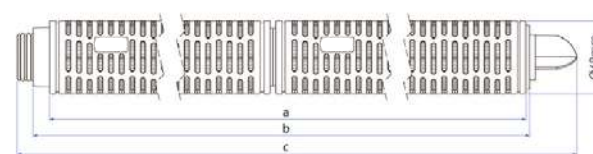
Standard

222 Extended/ Fin

SS Reinforced



	5°	10°	20°	30°	40°
a	116.0±1	241.0±1	491.0±2	741.0±2	991.0±2
b	125.0±1	250.0±1	500.0±2	750.0±2	1000.0±2
c	188.5±1	313.5±1	563.5±2	813.5±2	1063.5±2



	5°	10°	20°	30°	40°
a	117.0±1	242.0±1	492.0±2	742.0±2	992.0±2
b	135.0±1	260.0±1	510.0±2	760.0±2	1010.0±2
c	194.5±1	319.5±1	569.5±2	819.5±2	1069.5±2

CARTFLOW DIMENSIONS

Endcap

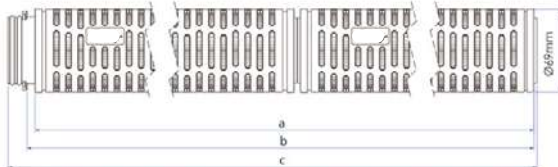
Connection support

Endcap

Connection support

226/ Flat

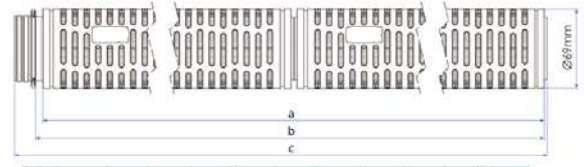
Standard



	5°	10°	20°	30°	40°
a	113.0±1	243.0±1	493.0±2	743.0±2	993.0±2
b	120.0±1	250.0±1	500.0±2	750.0±2	1000.0±2
c	138.5±1	268.5±1	518.5±2	768.5±2	1018.5±2

226/ Fin

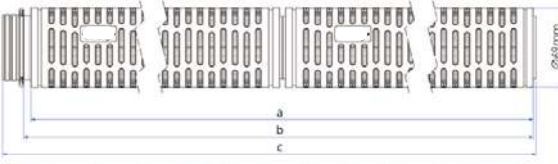
PSU Reinforced



	5°	10°	20°	30°	40°
a	113.0±1	243.0±1	493.0±2	743.0±2	993.0±2
b	120.0±1	250.0±1	500.0±2	750.0±2	1000.0±2
c	140.5±1	270.5±1	520.5±2	770.5±2	1020.5±2

226/ Flat

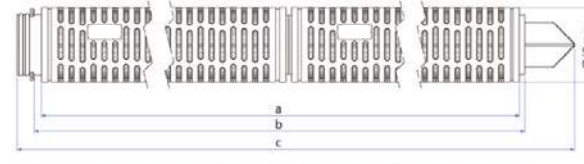
SS Reinforced



	5°	10°	20°	30°	40°
a	113.0±1	243.0±1	493.0±2	743.0±2	993.0±2
b	120.0±1	250.0±1	500.0±2	750.0±2	1000.0±2
c	140.5±1	270.5±1	520.5±2	770.5±2	1020.5±2

226/ Spear Fin

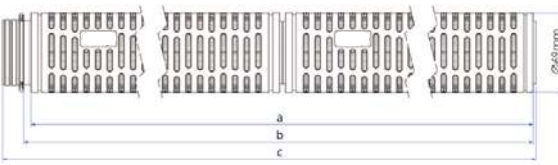
Standard



	5°	10°	20°	30°	40°
a	113.0±1	238.0±1	488.0±2	738.0±2	988.0±2
b	125.0±1	250.0±1	500.0±2	750.0±2	1000.0±2
c	187.0±1	312.0±1	562.0±2	812.0±2	1062.0±2

226/ Flat

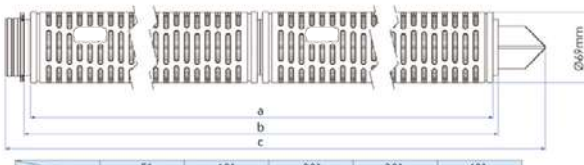
PSU Reinforced



	5°	10°	20°	30°	40°
a	113.0±1	243.0±1	493.0±2	743.0±2	993.0±2
b	120.0±1	250.0±1	500.0±2	750.0±2	1000.0±2
c	140.5±1	270.5±1	520.5±2	770.5±2	1020.5±2

226/ Spear Fin

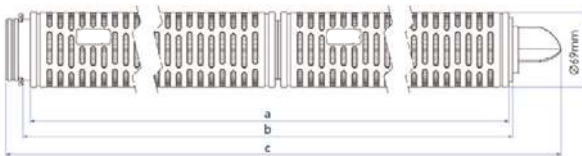
SS Reinforced



	5°	10°	20°	30°	40°
a	113.0±1	238.0±1	488.0±2	738.0±2	988.0±2
b	125.0±1	250.0±1	500.0±2	750.0±2	1000.0±2
c	189.0±1	318.0±1	564.0±2	814.0±2	1064.0±2

226/ Fin

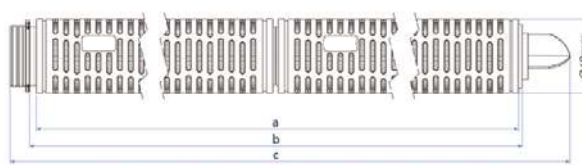
Standard



	5°	10°	20°	30°	40°
a	115.0±1	240.0±1	490.0±2	740.0±2	990.0±2
b	125.0±1	250.0±1	500.0±2	750.0±2	1000.0±2
c	185.5±1	310.5±1	560.5±2	810.5±2	1060.5±2

226/ Fin

SS Reinforced



	5°	10°	20°	30°	40°
a	115.0±1	240.0±1	490.0±2	740.0±2	990.0±2
b	125.0±1	250.0±1	500.0±2	750.0±2	1000.0±2
c	188.0±1	313.0±1	563.0±2	813.0±2	1063.0±2

HOUSFLOW



CHDA Series - Sanitary Single-Round Liquid Filter Housings



Sanitary Single-Round Liquid Filter Housings are designed to meet requirements for sanitary construction with smooth crevice-free welding and TC-type sanitary connections. Easy to clean and disassemble. Suitable for low flow rate applications with low-to-medium pressure conditions. This design is widely used in pharmaceutical, bio-technology, and food/beverage industries.

Features

- Ultra-high degree of polishing: Internal: $Ra \leq 0.3\mu m$; External: $Ra \leq 0.4\mu m$
- Meets GMP standards with smooth crevice-free welding and sanitary design
- Excellent cleanability & liquid drainage
- Vent/Drain Port: The threaded sleeve is separated from stepped hose barb, so the connection tube will not rotate when venting or draining
- A strengthened closure clamp allows a maximum operating pressure of 1.0MPa
- With a small footprint and ease of disassembly, this series is ideally suited for use in the manufacture of pharmaceutical and food/beverage product
- The heavy-duty housing legs have strengthened threads for stability and ruggedness. Adjustable nuts on the legs allow height adjustment for installation convenience
- Suitable for Suitable for Clean-in-Place and Steam-in Place processes.
- Compatible with cartridge connection for 222 and 226
- Optional N6 drain port (sampling port)

Surface Finish

Finish Processing Options:	Electropolished Mech. Polished
Polish Quality:	Internal: $Ra \leq 0.3\mu m$ External: $Ra \leq 0.4\mu m$

Materials

Shell Options:	304, 316L
Drain/Vent Port:	304, 316L
Tri-Clamp:	304
Stabilizer Blade:	304
Seal Materials:	Silicone, FKM, EPDM

Operating Conditions

Max. Operating Pressure:	1.0MPa (150psi)
Max. Operating Temperature:	140°C(284°F)

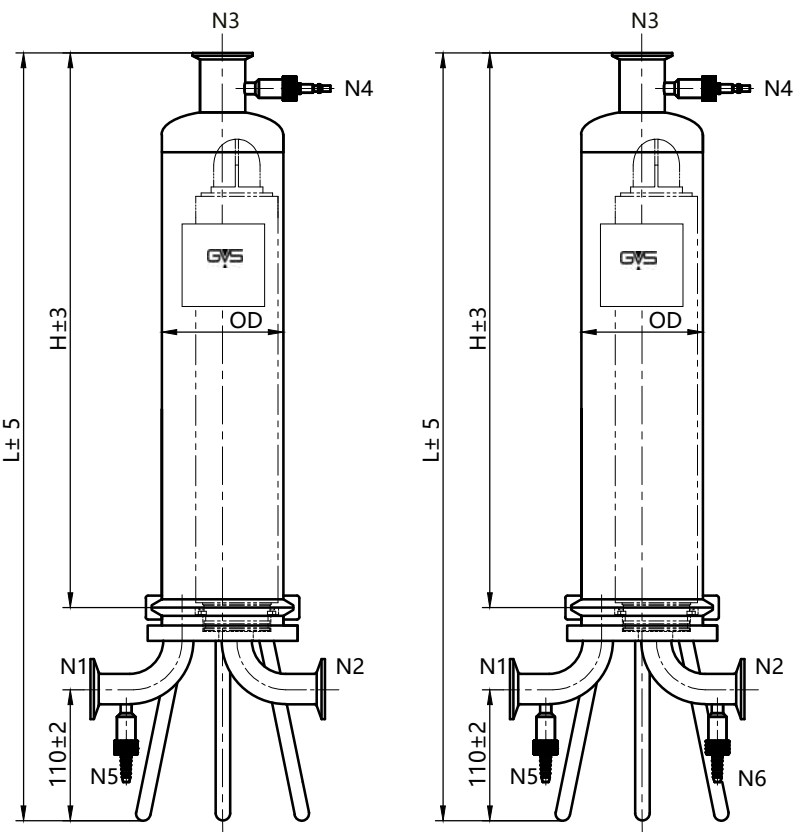
Connection

Shell Connection:	Tri-clamp
Inlet & Outlet (N1, N2):	1" Tri-clamp(T25)
Vent Port(N4):	Sanitary hose barb valve fit with integrity test interface
Drain Port (N5, N6):	Sanitary hose barb valve for 8mm i.D. tubing
Pressure Gauge Port(N3):	1.5" Tri-clamp

Applications

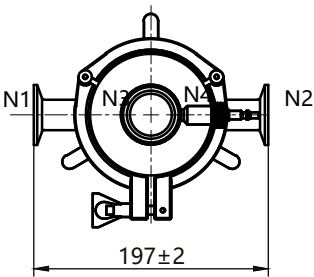
- Pharmaceuticals: filtration of injectables, LVPs, water for injection, antibiotics, and other biological products
- Food and beverage: filtration of beer, wine, distilled spirits, juices, syrups, and drinking water
- Petrochemical industry: filtration of oilfield water, organic solvents, acids, and alkaline fluids
- Microelectronics: pre-filtration of high-purity water

Dimensions (mm)



Type A (N6-free)

Type B



Housing Cartridge height (mm) length	H	L
5"	240	420
10"	370	550
20"	620	800
30"	870	1,050
40"	1,120	1,300

Eg.=>CHDAAQJ0105T25SEEY

ORDERING INFORMATION									
Series	Connection	Shell Material	Qty.	Length	Inlet&Outlet	Seal Material	Surface Finish (internal)	Surface Finish (external)	Design Pressure
CHDAA=CHDA Series Filter	Q = 226 / Fin	J=304	01=1	05 = 5"	T25=TCDN25	S=Silicone	E=Electropolished	E=Electropolished	Y=1.0Mpa
Housigs(N6-free)	P = 222 / Fin	K=316L		10 = 10"	B25=ASME-BPE	E=EPDM	M=Mech. Polished	M=Mech. Polished	
CHDAB=CHDA Series Filter	T = 226 / Flat			20 = 20"	DN25	V=FKM			
Housings	M = 222 / Flat			30 = 30"	F25=Flange DN25				
				40 = 40"					

CHDB Series - Sanitary Multi-Round Liquid Filter Housings



Sanitary Multi-Round Liquid Filter Housings are designed to meet requirements for sanitary construction with smooth crevice-free welding and TC-type sanitary connections. Easy to clean and disassemble. Suitable for higher flow rate applications with low-to-medium pressure conditions. This design is widely used in pharmaceutical, bio-technology, and food/beverage industries. The internal surface can be finely polished down to $Ra \leq 0.3\mu m$.

Features

- Ultra-high degree of polishing: Internal: $Ra \leq 0.3\mu m$; External: $Ra \leq 0.4\mu m$
- Meets GMP standards with smooth crevice-free welding and sanitary design. Excellent cleanability & liquid drainage
- Vent port feature: Tri-clamp connection for convenience
- A strengthened closure clamp allows a maximum operating pressure of 1.0MPa
- The faceplate can be made detachable for full-surface cleaning
- Suitable for CIP and SIP processes
- Compatible with cartridge connection for 222 and 226
- Optional N6 drain port (sampling port)

Surface Finish

Finish Processing Options:	Electropolished Mech. Polished
Polish Quality:	Internal: $Ra \leq 0.3\mu m$ External: $Ra \leq 0.4\mu m$

Operating Conditions

Max. Operating Pressure:	1.0MPa (150psi)
Max. Operating Temperature:	140°C (284°F)

Materials

Shell Options:	304 or 316L Stainless Steel
Drain/Vent Port:	304 or 316L
Tri-Clamp:	304
Stabilizer Blade:	304
Seal Materials:	Silicone, FKM, EPDM

Connection

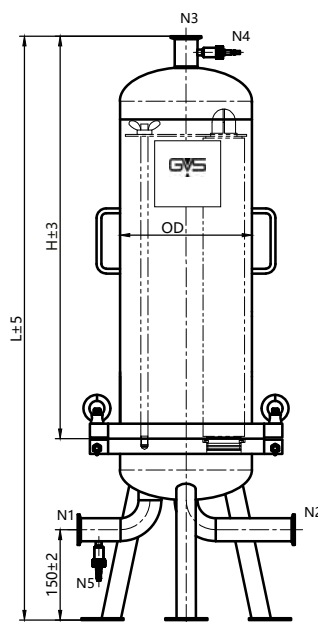
Shell Connection:	Flange eyebolt
Inlet & Outlet (N1, N2):	1.5", 2", 2.5" Tri-clamp
Vent Port(N4):	Sanitary hose barb valve fit with integrity test interface
Drain Port (N5, N6):	Sanitary hose barb valve for 8mm i.D. tubing
Pressure Gauge Port(N3):	1.5" Tri-clamp

Applications

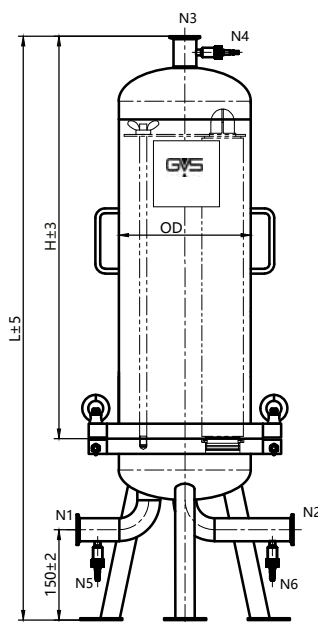
- Pharmaceuticals: filtration of injectables, LVPs, water for injection, antibiotics, and other biological products
- Food and beverage: filtration of beer, wine, distilled spirits, juices, syrups, and drinking water
- Petrochemical industry: filtration of oilfield water, organic solvents, acids, and alkaline fluids
- Microelectronics: pre-filtration of high-purity water

Dimensions (mm)

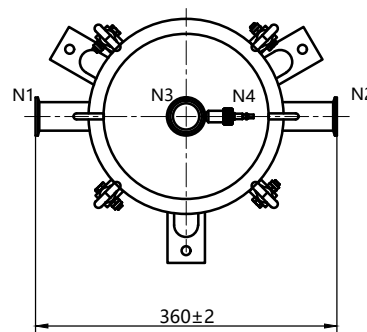
3-Round



Type A (N6-free)

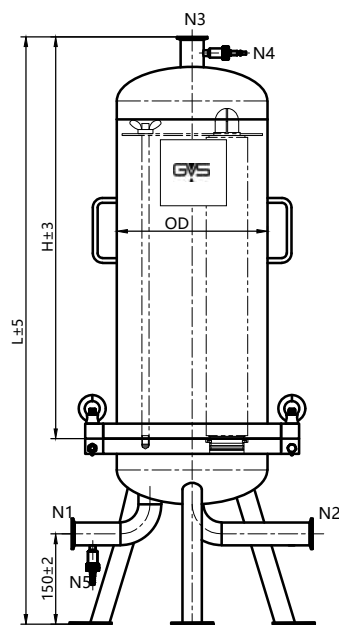


Type B

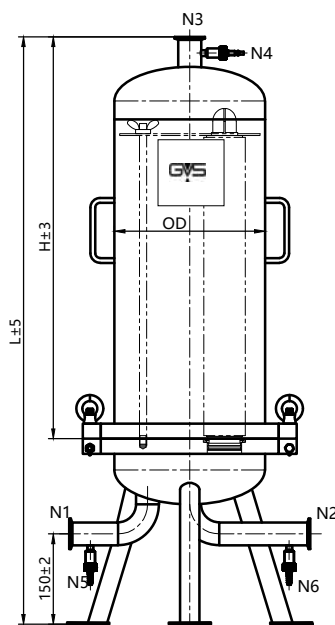


Housing Cartridge height(mm) length	H	L
10"	418	720
20"	668	970
30"	918	1,220
40"	1,168	1,470

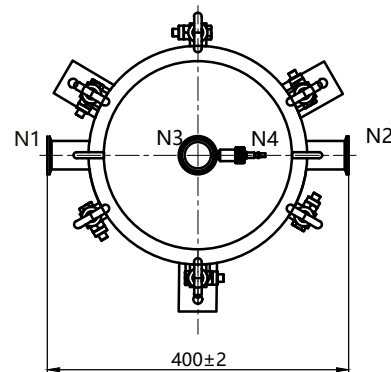
5-Round



Type A (N6-free)

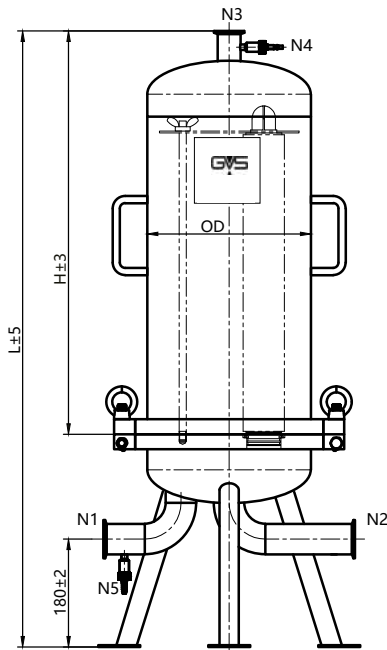


Type B

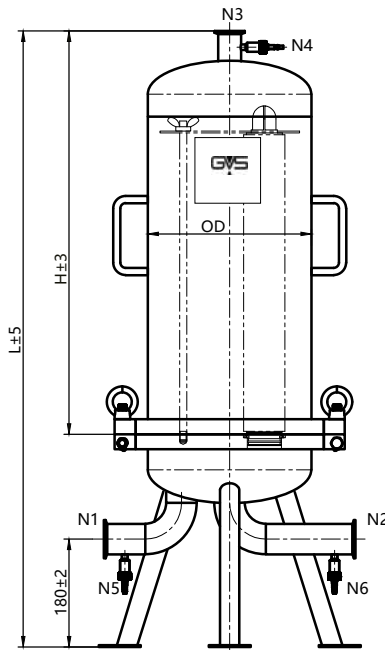


Housing Cartridge height(mm) length	H	L
10"	417	725
20"	667	975
30"	917	1,225
40"	1,167	1,475

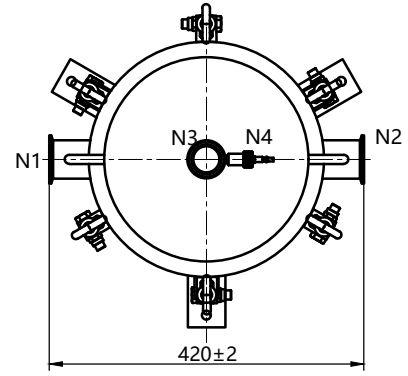
7-Round



Type A (N6-free)

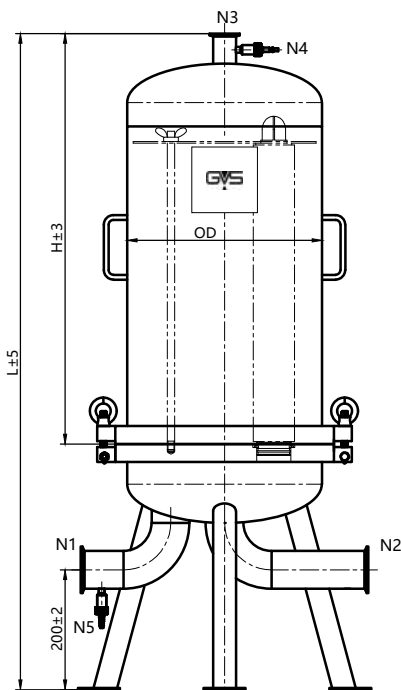


Type B

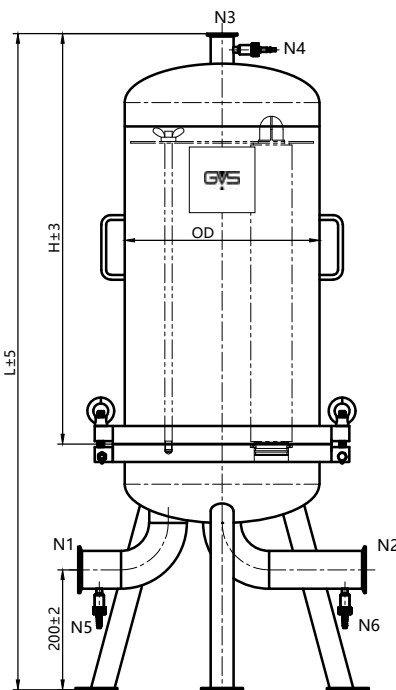


Housing Cartridge height(mm) length	H	L
10"	423	778
20"	673	1,028
30"	923	1,278
40"	1,173	1,528

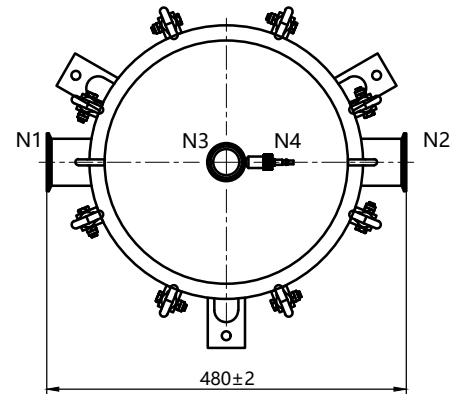
9-Round



Type A (N6-free)

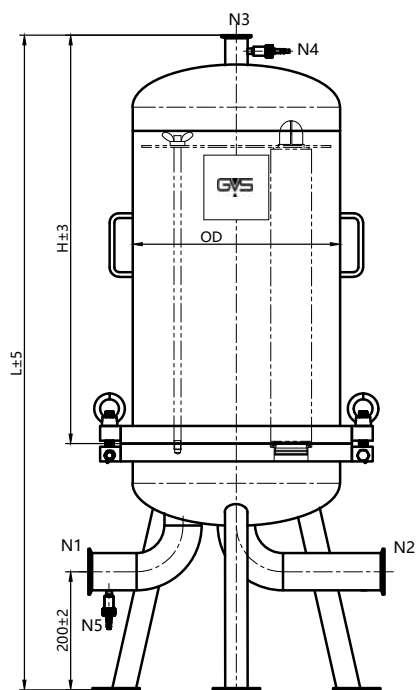


Type B

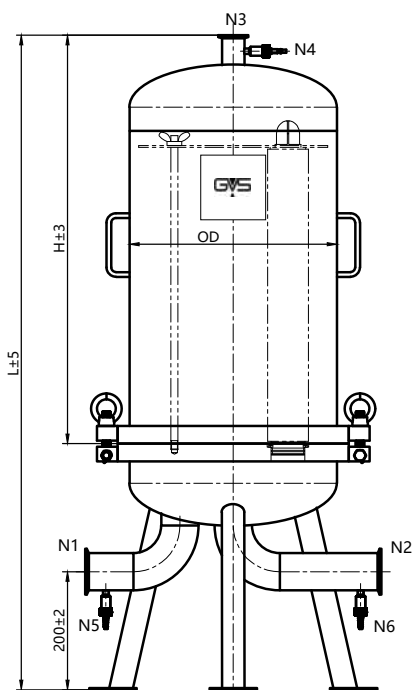


Housing Cartridge height(mm) length	H	L
10"	436	846
20"	686	1,096
30"	936	1,346
40"	1,186	1,596

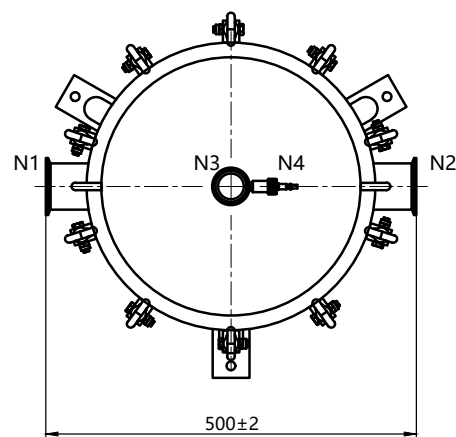
12-Round



Type A (N6-free)



Type B



Housing Cartridge Height(mm) length	H	L
10"	442	858
20"	692	1,108
30"	942	1,358
40"	1,192	1,608

Eg.=>CHDBAQJ0310T38SEFY

ORDERING INFORMATION									
Series	Connection	Shell Material	Qty.	Length	Inlet&Outlet	Seal Material	Surface Finish (internal)	Surface Finish (external)	Design Pressure
CHDBA=B Series Filter	Q = 226 / Fin	J=304	03 = 3	10 = 10"	T38=TC 1.5"(Only for 3	S=Silicone	E=Electropolished	E=Electropolished	Y=1.0Mpa
Housings(N6-free)	P = 222 / Fin	K=316L	05= 5	20 = 20"	cartridges)	E=EPDM	M=Mech. Polished	M=Mech. Polished	
CHDBB=B Series Filter	T = 226 / Flat		07 = 7	30 = 30"	T50=TC 2"	V=FKM			
Housings	M = 222 / Flat		09 = 9	40 = 40"	(for 5, 7 cartridges)				
			12 = 12		T63=TC 2.5"(for 9, 12 cartridges)				

CHDC Series - Sanitary In-Line Filter Housings



Sanitary In-Line Filter Housings are the ideal choice when the application calls for a compact and cost-effective design. Suitable for filtration of liquids and gases. Uses a convenient clamp body closure and drain/vent ports.

Features

- Ultra-high degree of polishing: Internal: $Ra \leq 0.3\mu m$; External: $Ra \leq 0.4\mu m$
- Meets GMP standards with smooth crevice-free welding and sanitary design
- Excellent cleanability & liquid drainage.
- Vent/Drain Valve: the threaded sleeve is separated from stepped hose barb, so the connection tube will not rotate when venting or draining
- A strengthened closure clamp allows a maximum operating pressure of 1.0MPa
- Compatible with cartridge connection for 222 and 226

Surface Finish

Finish Processing Options:	Electropolished Mech. Polished
Polish Quality:	Internal: $Ra \leq 0.3\mu m$ External: $Ra \leq 0.4\mu m$

Operating Conditions

Max. Operating Pressure:	1.0MPa (150psi)
Max. Operating Temperature:	140°C(284°F)

Materials

Shell Options:	304, 316L Stainless Steel
Drain/Vent Port:	304, 316L
Tri-Clamp:	304
Seal Materials:	Silicone, FKM, EPDM

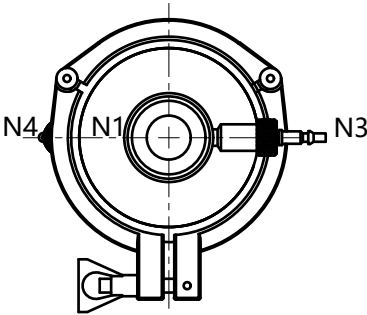
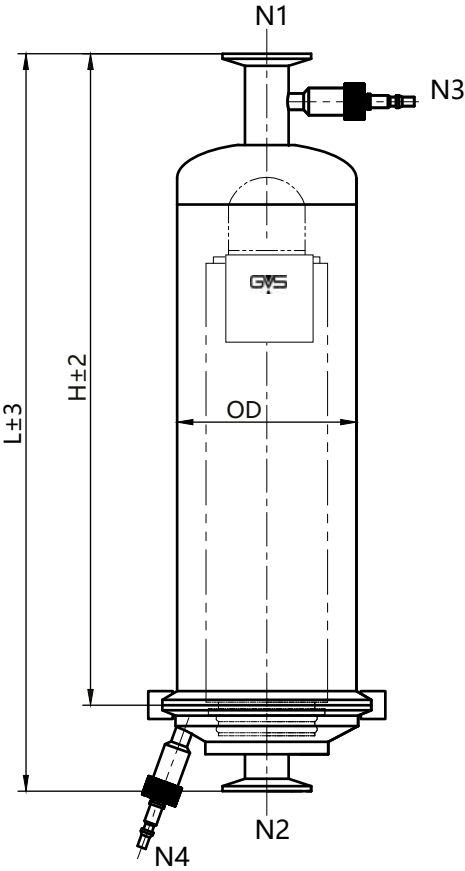
Connection

Shell Connection:	Tri-clamp
Inlet & Outlet (N1, N2):	1"Tri-clamp (T25)
Vent Port(N3):	Sanitary hose barb valve fit with integrity test interface
Drain Port (N4):	Sanitary hose barb valve for 8mm i.D. tubing

Applications

- Particle filtration of pipeline liquids
- In-line gas filtration or as a respirator
- Filtration of beverages, edible oils, etc

Dimensions (mm)



Housing Cartridge height (mm) length	H	L
5"	238	288
10"	368	418
20"	618	668
30"	868	918
40"	1,118	1,168

Eg.=>CHDCQJ0105T25SEEY

ORDERING INFORMATION									
Series	Connection	Shell Material	Qty.	Length	Inlet&Outlet	Seal Material	Surface Finish (internal)	Surface Finish (external)	Design Pressure
CHDC=Sanitary In-Line	Q = 226 / Fin	J=304	01=1	05 = 5"	T25=TCDN25	S=Silicone	E=Electropolished	E=Electropolished	Y=1.0Mpa
Filter Housing	P = 222 / Fin	K=316L		10 = 10"	B25=ASME-BPE	E=EPDM	M=Mech. Polished	M=Mech. Polished	
	T = 226 / Flat			20 = 20"	DN25F25=Flange				
	M = 222 / Flat			30 = 30"	DN25 V=FKM				
				40 = 40"					

CHDD Series - Sanitary Gas Filter Housings



Sanitary Gas Filter Housings are suitable for removal of particulate from gas streams. When used with appropriate sterilizing-grade filter cartridges, the combination can be used in high-purity sterile gas filtration.

Features

- Ultra-fine polishing: Internal: $Ra \leq 0.3\mu m$; External: $Ra \leq 0.4\mu m$
- Accepts 226-style cartridges with locking tabs to assure safe and secure sealing performance
- The Tri-Clamp body connection allows easy servicing and cartridge change-out
- Compatible with cartridge connection for 222 and 226, the housing is applied in high-purity, high-temperature, aseptic, fermentation, etc

Surface Finish

Finish Processing Options: Electropolished
Mech. Polished

Polish Quality: Internal: $Ra \leq 0.3\mu m$
External: $Ra \leq 0.4\mu m$

Operating Conditions

Max. Operating Pressure: 0.6MPa (90psi, Tri-clamp)
Max. Operating Temperature: 1.0MPa (150psi, Flange)
140°C (284°F)

Materials

Shell Options: 304 or 316L Stainless Steel

Drain Port: 304 or 316L

Tri-clamp: 304

Stabilizer Blade: 304

Seal Materials: Silicone, FKM, EPDM

Connection

Shell Connection: Tri-clamp or Flange

Inlet & Outlet (N1, N2): 1", 1.5" Tri-clamp or DN25/
DN50 Flange (PL-RF, HG/
T20592-2009 PN16)

Pressure Gauge Port (N3): M14*1.5 Thread

Drain Port (N4): FNPT 1/4" Thread

Applications

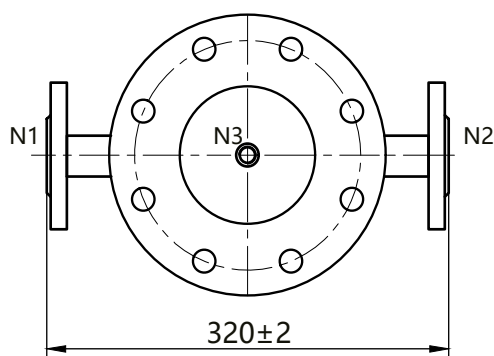
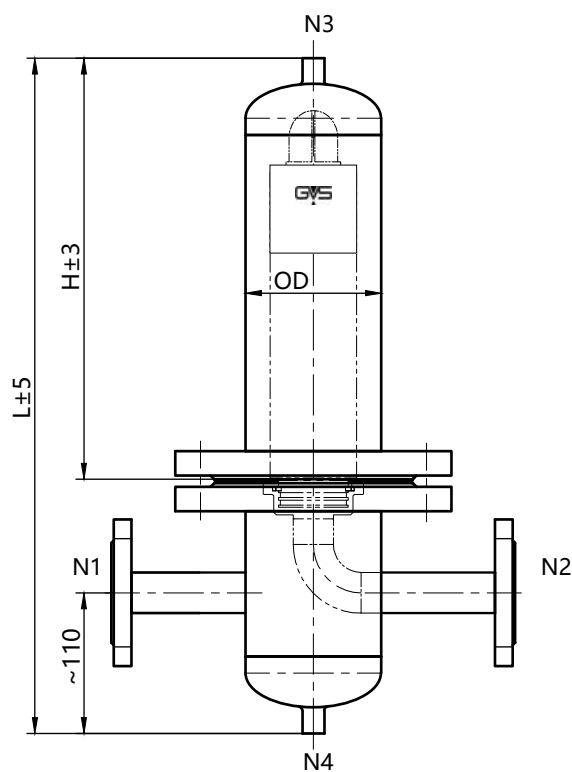
- Pharmaceuticals: gas sterilization and air/gas filtration in the production of biological products
- Food and beverage: gas sterilization and air/gas filtration in the production of food, beverages, and fermented products
- Chemical industry: filtration of industrial gases such as coal gas, hydrogen, nitrogen, and natural gas, among others
- Laboratory: environmental air filtration

Eg. => CHDDQJ0110T25SEEY

ORDERING INFORMATION									
Series	Connection	Shell Material	Qty.	Length	Inlet&Outlet	Seal Material	Surface Finish (internal)	Surface Finish (external)	Design Pressure
CHDD=Sanitary	Q = 226 / Fin	J=304	01=1	05= 5"	T25=TC 1"	S=Silicone	E=Electropolished	E=Electropolished	Y=1.0Mpa
Gas Filter Housing	P = 222 / Fin	K=316L		10 = 10"	T38=TC1.5"	E=EPDM	M=Mech. Polished	M=Mech. Polished	
	T = 226 / Flat			20 = 20"	F25=Flange DN25	V=FKM			
	M = 222 / Flat			30 = 30"	F50=Flange DN50				
				40 = 40"					

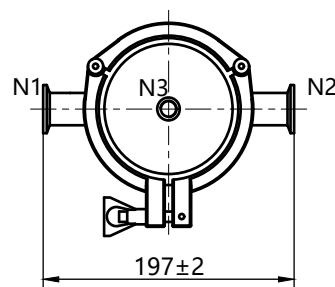
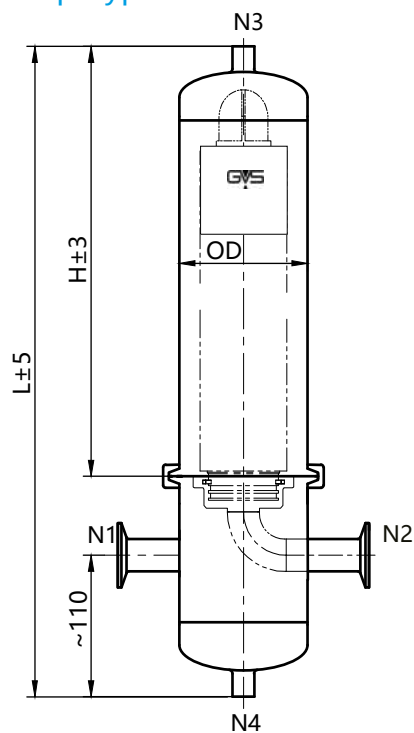
Dimensions (mm)

Flange Type



Housing Cartridge height(mm) length	H	L
5"	210	410
10"	340	540
20"	590	790
30"	840	1,040
40"	1,090	1,290

Tri-clamp Type



Housing Cartridge height(mm) length	H	L
5"	208	380
10"	338	510
20"	588	760
30"	838	1,010
40"	1,088	1,260

CHDE Series - Sanitary Vent Filter Housings



Sanitary Vent Filter Housings are comply with sanitary vessel design requirements. Suitable for gas sterilization filtration in the pharmaceutical and food industries. The top elbow is intended to prevent large particles and debris from entering the housing.

Features

- Ultra-fine polishing: Internal: $Ra \leq 0.3\mu m$, External: $Ra \leq 0.4\mu m$
- Complies with GMP standards
- Excellent cleanability
- Design prevents accumulation of liquid
- Top elbow prevents external particles and debris from entering the housing
- The vent filter housings are available in single-opening A and top elbow B model, compatible with cartridge connection for 222 and 226

Surface Finish

Finish Processing Options: Electropolished
Mech. Polished

Polish Quality: Internal: $Ra \leq 0.3\mu m$
External: $Ra \leq 0.4\mu m$

Operating Conditions

Max. Operating Pressure: 1.0MPa(10bar/150psi)
Max.Operating Temperature: 140°C(284°F)

Materials

Shell Options: 304 or 316L Stainless Steel

Clamp: 304 Stainless Steel

Seal Materials: Silicone, FKM, EPDM

Connection

Shell Connection: Clamp

Outlet&Inlet (N1, N2): Tri-clamp 1"(T25)

Applications

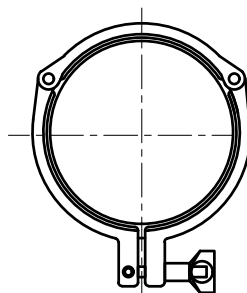
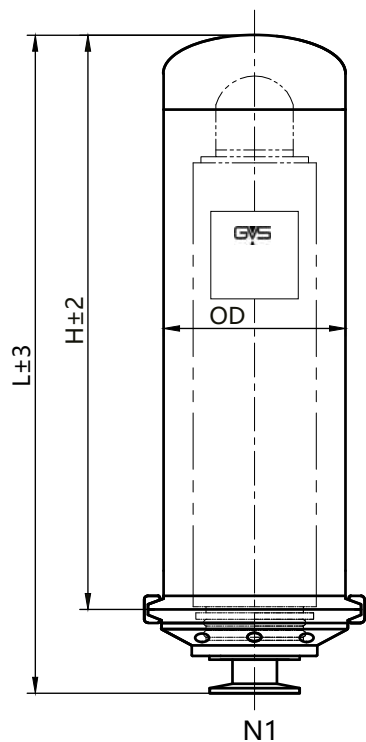
- Allows sterile filtration of vented gas flow in the production and storage of:
 - Pharmaceutical and bio-technology products
 - Fermentation process products
 - Food, beverages, potable water

Eg.=>CHDEAQJ0110T25SEFY

ORDERING INFORMATION									
Series	Connection	Shell Material	Qty.	Length	Inlet&Outlet	Seal Material	Surface Finish (internal)	Surface Finish (external)	Design Pressure
CHDEA = Vent Filter Housing Type A	Q = 226 / Fin	J=304	01=1	05 = 5"	T25=TC DN25	S=Silicone	E=Electropolished	E=Electropolished	Y=1.0Mpa
CHDEB = Vent Filter Housing Type B	P = 222 / Fin	K=316L		10 = 10"	B25=ASME-BPEDN25	E=EPDM	M=Mech. Polished	M=Mech. Polished	
	T = 226 / Flat			20 = 20"	F25=Flange DN25	V=FKM			
	M = 222 / Flat			30 = 30"					
				40 = 40"					

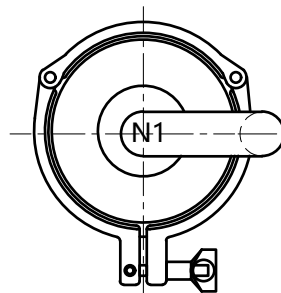
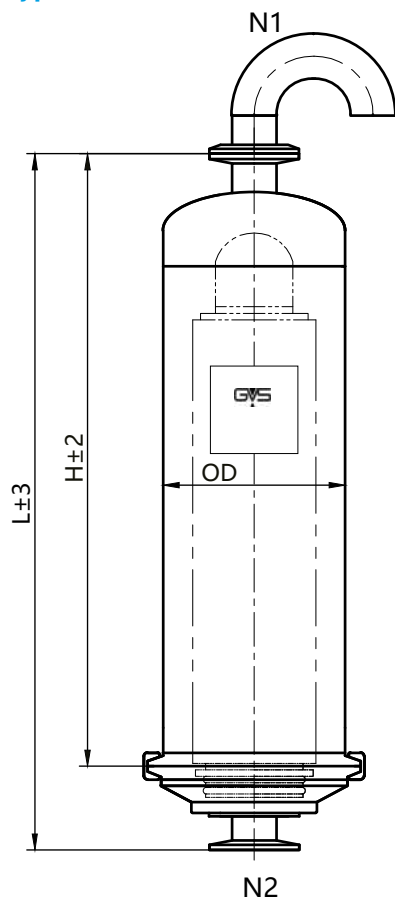
Dimensions (mm)

Type A



Housing Cartridge height(mm) length	H	L
5"	210	260
10"	340	390
20"	590	640
30"	840	890
40"	1,090	1,140

Type B



Housing Cartridge height(mm) length	H	L
5"	188	238
10"	318	368
20"	568	618
30"	818	868
40"	1,1068	1,118

CHDH Series - Sanitary Depth-Stack Filter Housings



Sanitary Depth-Stack Filter Housings are a new type of depth-stack filter housing. Designed to meet requirements for sanitary construction with smooth crevice-free welding and TC-type sanitary connections. Easy to clean and disassemble. The co-linear inlet and outlet flow paths beneath the vessel shell serve to minimize liquid turbulence. Available for 8", 12" and 16" diameter cartridges up to four high modules to meet high flow rates requirements.

Features

- Ultra-high degree of polishing: Internal: $Ra \leq 0.3\mu m$; External: $Ra \leq 0.4\mu m$
- Liquid turbulence is minimized with co-linear inlet-outlet porting beneath the housing shell
- Specially designed drain valves can optionally be installed on the inlet and outlet ports for easy liquid drainage
- Allows vertical stacking of up to four depth-stack cartridges and provides high flow rates at high retention efficiency
- Segmented cartridge design makes it more convenient to replace depth stack cartridges and helps to reduce liquid loss
- The housing is fitted with DOE and stack with support plates part or handle, 3 modules for 8" and 4 modules for 12" and 16"
- Optional N6 drain port (Sampling port)

Surface Finish

Finish Processing Options:	Electropolished Mech. Polished
Polish Quality:	Internal: $Ra \leq 0.3\mu m$ External: $Ra \leq 0.4\mu m$

Operating Conditions

Max. Operating Pressure:	1.0MPa (10bar150psi)
Max.Operating Temperature:	80°C(176°F)

Materials

Shell Options:	304 or 316L Stainless Steel
Vent Port:	304 or 316L
Eyebolts:	304
Legs:	304
Seal Materials:	Silicone, FKM, EPDM

Connection

Shell Connection: Inlet & Outlet (N1,N2):	Eyebolt Tri-clamp
Vent Port(N4):	Sanitary hose barb valve fit with integrity test interface
Drain Port (N5, N6):	Sanitary hose barb valve for 8mm i.D. tubing
Pressure Gauge (N3):	1.5" TC

Applications

- Pharmaceuticals: filtration of injectables, LVPs, water for injection, and other biological products
- Food and beverage: filtration of beer, wine, and distilled spirits, juices, syrups, and edible oils
- Chemical industry: filtration of grease and dirt, sludge, and gelatinous materials

Cartridge Sealing System

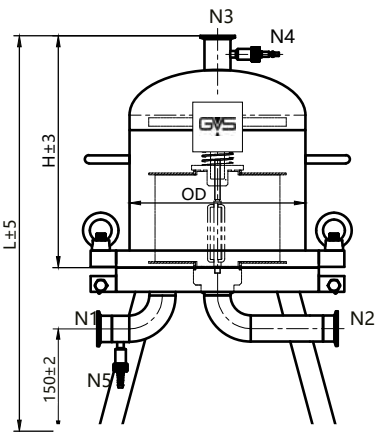
A spring-loaded sealing system provides optimal sealing compression to help prevent filter bypass even under the most arduous process conditions.



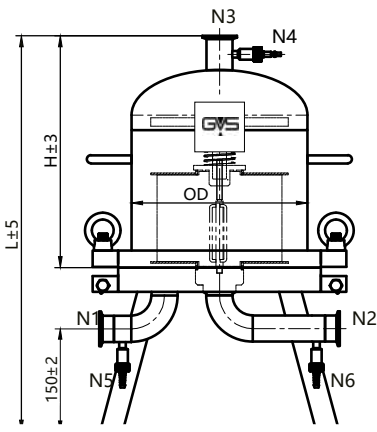
Carthflow

Dimensions (mm)

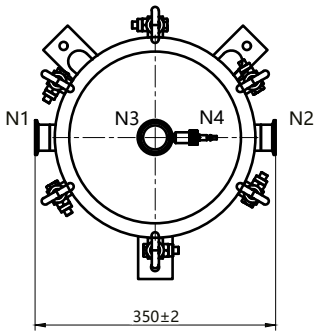
8"



Type A (N6-free)

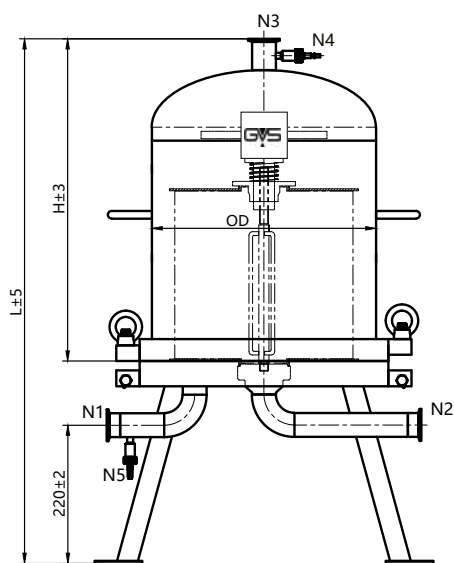


Type B

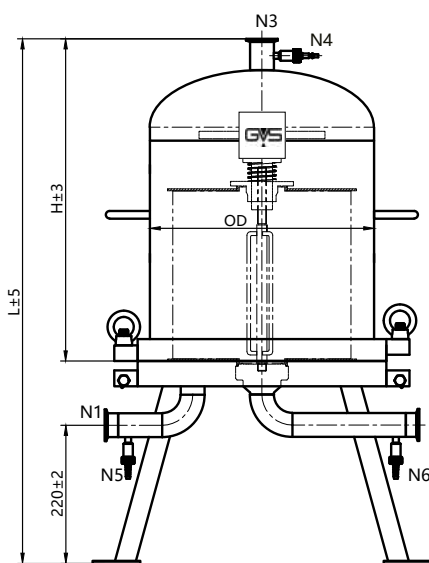


Housing Cartridge height(mm) length	H	L
8	337	572
16	477	712
24	617	852

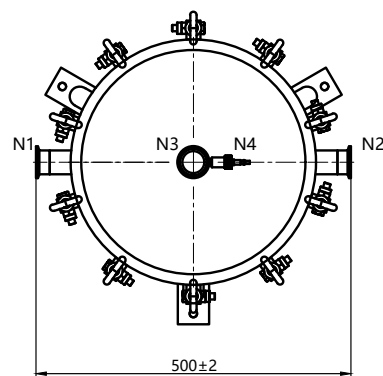
12"



Type A (N6-free)

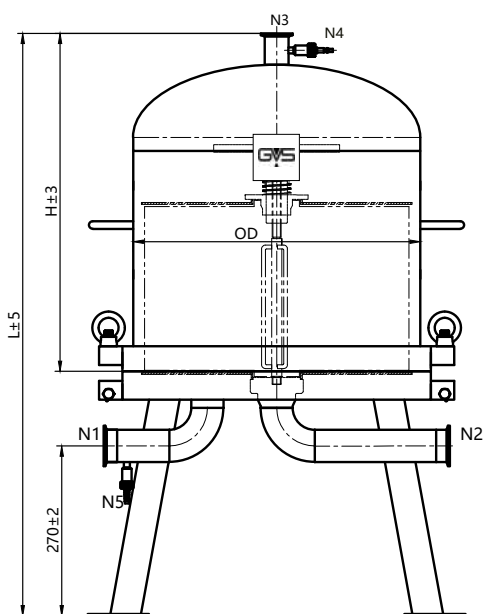


Type B

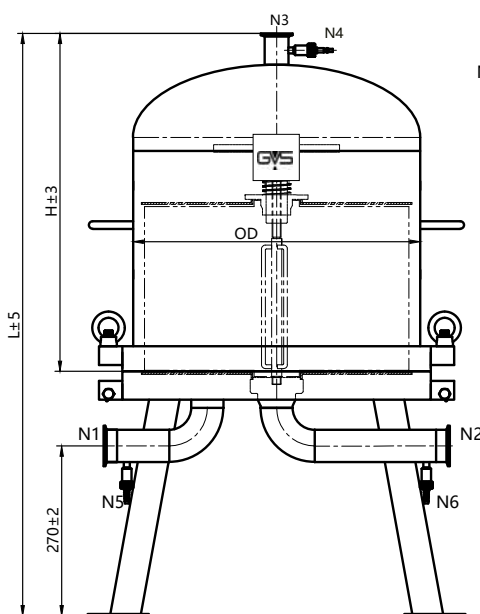


Housing Cartridge height(mm) length	H	L
16	512	825
32	792	1,105
48	1,072	1,385
64	1,352	1,665

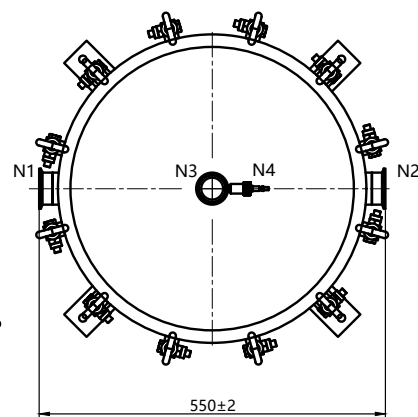
16"



Type A (N6-free)



Type B



Housing Cartridge height(mm) length	H	L
16	537	915
32	817	1,195
48	1,097	1,475
64	1,377	1,755

Eg.=>CHDHAFJ0801T38SEY

ORDERING INFORMATION								
Series	Connection	OD	Cells	Inlet&Outlet	Seal Material	Surface Finish (internal)	Surface Finish (external)	Design Pressure
CHDHAF= H Series Filter	J=304	08= 8"	01= 8(8")	T38=TC1.5"/ for 8",12"	S=Silicone	E=Electropolished	E=Electropolished	Y=1.0Mpa
Housings(N6-free)	K=316L	12 = 12"	05= 16	T50=TC2"/ for 16"	E=EPDM	M=Mech. Polished	M=Mech. Polished	
CHDHBF= H Series Filter		16 = 16"	07 = 24(8")		V=FKM			
Housings			10 = 32(12",16")					
			13 = 48(12",16")					
			15 = 64(12",16")					

CHDM Series - High Flow Filter Housings



CHDM Series - High Flow vertical Filter Housings are designed to accommodate HF series High Flow filter cartridges intended for use primarily for higher fluid flow applications, especially in water treatment. Housings are available in a range of sizes accommodating from 1 to 5 cartridges in lengths of 40". Constructed of high quality 304 or 316L stainless steel suitable for use in high temperatures, with tolerance to acids, alkalis, and organic chemicals. The vertical option minimizes the system's footprint. Customized configurations are available to suit customers' specific needs.

Features

- Using quality stainless steel components to build all housings, ensures consistent quality and performance
- Large cartridge size with expansive filtration area provides for high-volume liquid filtration at high retention efficiency with a low initial investment
- Housings are manufactured with crevice-free internals, fine polishing inside to ensure surface smoothness. Preferable for potable water and food/beverage production

Surface Finish

Finish Processing Options: Internal: Mech Polished / Passivated
External: Mech Polished / Passivated / Abrasive Blasted

Materials

Shell Options: 304 or 316L
Vent Port: 304 or 316L
Eyebolts: 304
Legs: 304
Seal Materials: Silicone, FKM, EPDM

Operating Conditions

Max. Operating Pressure: 1.0MPa (150psi)
Max. Operating Temperature: 80°C (176°F)

Connection

Num	Name	Specification	Connection	Note
N1	Inlet	pl-rf	Flange	HG/T20592-2009 PN16
N2	Outlet	pl-rf	Flange	HG/T20592-2009 PN16
N3	Vent	FNPT1/4"	Thread	-
N4	Pressure Gauge Connection	M14*1.5	Thread	-
N5	Outlet	FNPT1/4"	Thread	-

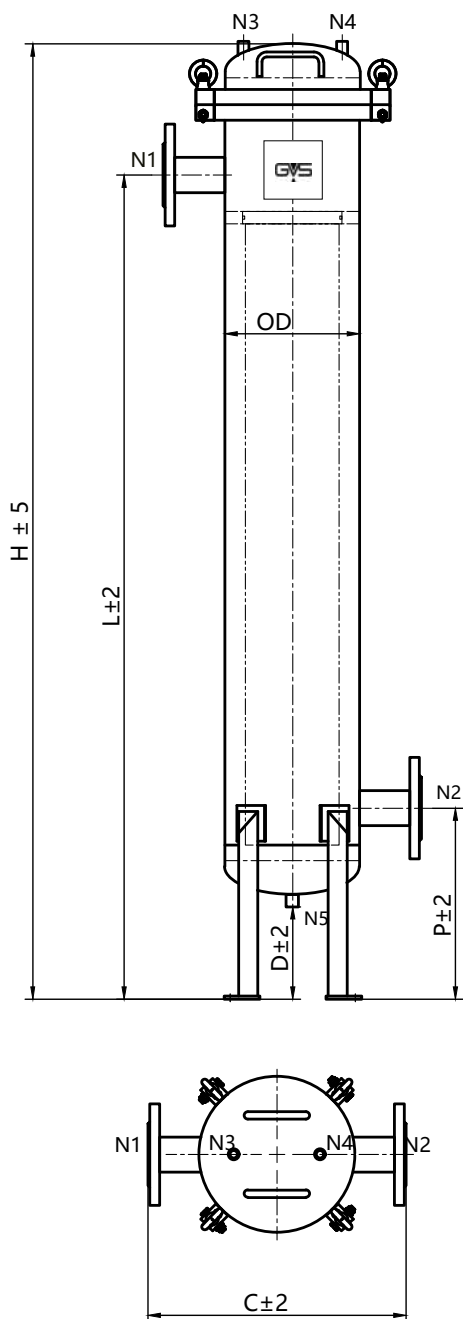
Applications

- Pre-filtration of RO systems; Bottled water production
- Filtration of process water, condensate water, cooling water, waste water
- Chemical industry filtration of acids, alkaline liquids, organic solvents
- Energy industry condensate & cooling waters
- Food and beverage: filtration of drinks, beverages and drinking water

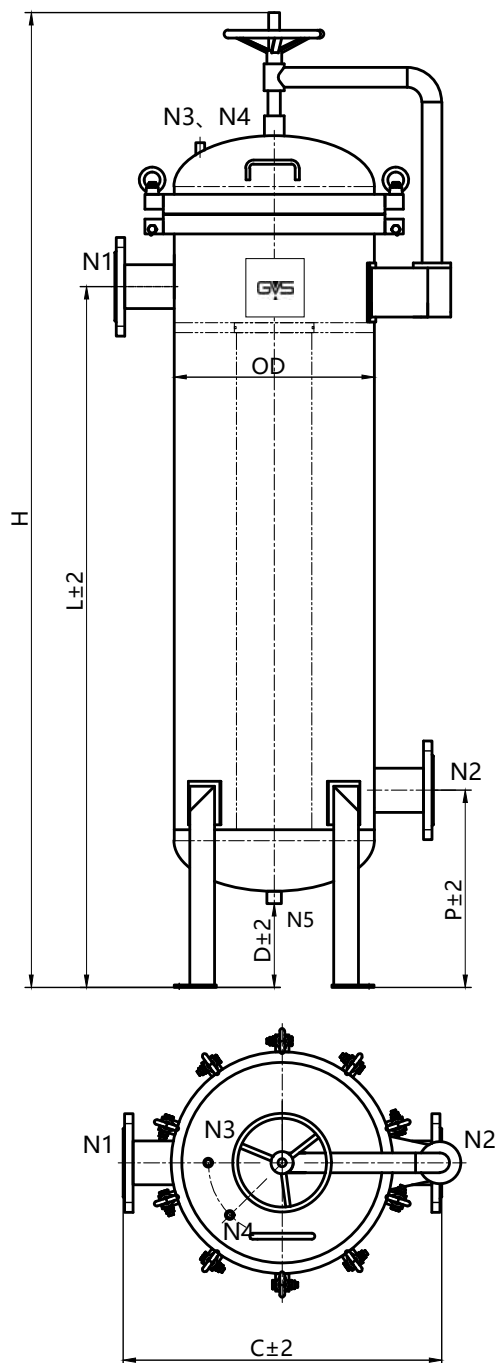
Eg.=>CHDMHJ0140F50SEFY

ORDERING INFORMATION									
Series	Connection	Shell Material	Number Round	Length	Inlet&Outlet	Seal Material	Surface Finish (internal)	Surface Finish (external)	Design Pressure
CHDM=High Flow Filter Housings	HF=HF Series Cartridges	J=304 K=316L	01 = 1	20 = 20"	F50=DN50/(for Single-round)	S=Silicone	M=Mech. Polished	M=Mech. Polished	Y=1.0Mpa
			02 = 2	40 = 40"	F80=DN80/(for 2-round)	E=EPDM	P=Passivated	P=Passivated	
			03 = 3	60 = 60"	F100=DN100/(for 3-round)	V=FKM		S=Abrasive Blasted	
			04 = 4		F125=DN125/(for 4/5-round)				
			05 = 5						

Single-round 40"



Multi-round 40"



Cartridges (mm)	H	L	P	N	C	D	OD
1	1550	1340	310	DN50	420	150	ø219
2	1980	1420	400	DN80	645	170	ø406
3	2030	1440	420	DN100	695	170	ø456
4	2090	1470	450	DN125	750	170	ø508
5	2120	1480	460	DN125	800	170	ø558

CHDN Series - Bag Filter Housings



CHDN Series - Bag Filter Housings from Filtration are offered in a range of sizes and port options to meet your needs for liquid filtration. The housings are fabricated using best-practice, industry leading production methods to deliver high quality and best value. These are an excellent choice for liquid filtration covering a wide range of applications: food and beverage, fine chemicals, process fluids. The single-bag and multi-bag housings can be customized depending on the user's specific needs.

Features

- Using quality stainless steel components to build all housings, ensures consistent quality and performance
- The three-point clamping closure ensures excellent sealing performance
- The swingbolt closure with eyebolts allows for easy handling and servicing
- Strengthened filter baskets provide more robust construction and longer service life
- Housings are manufactured with crevice-free internals, fine polishing inside to ensure surface smoothness
- Preferable for potable water and food/beverage production
- Compatible with 1# bag and 2# bag.

Surface Finish

Finish Processing Options: Internal: Mech Polished / Passivated
External: Mech Polished / Passivated / Abrasive Blasted

Operating Conditions

Max. Operating Pressure: 1.0MPa (150psi)
Max. Operating Temperature: 80°C (176°F)

Materials

Shell Options: 304 or 316L
Eyebolts: 304
Legs: 304
Seal Materials: FKM, EPDM

Connection

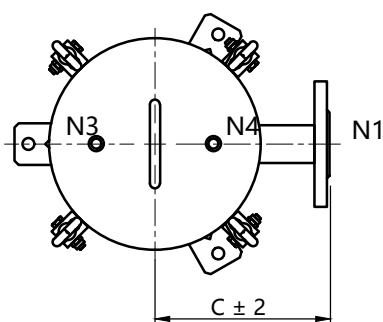
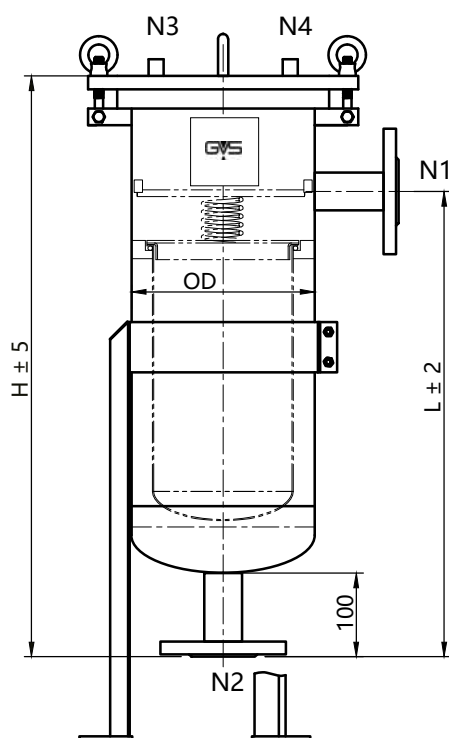
Num	Name	Connection	Note
N1	Inlet	FlangePL-RF/tc	T20592-2009 PN16
N2	Outlet	FlangePL-RF/tc	T20592-2009 PN16
N3	Vent	FNPT1/4"Thread	-
N4	Pressure Gauge Connection	M14*1.5 Thread	-

Applications

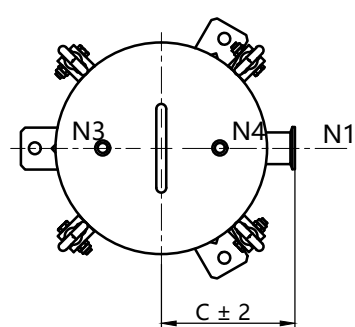
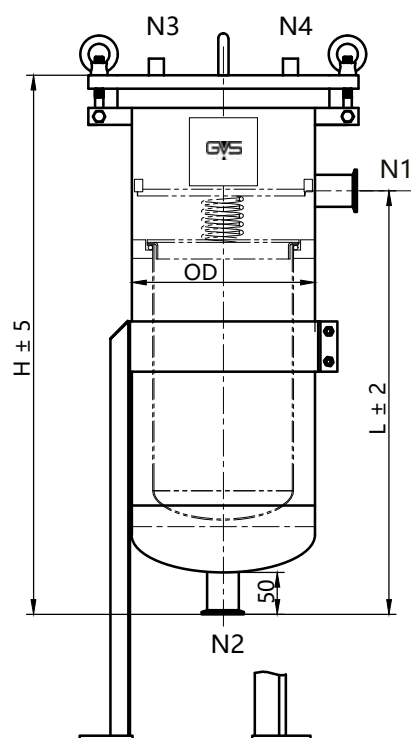
- Pre-filtration of RO systems, Bottled water production
- Filtration of process water, condensate water, cooling water, & waste water
- Chemical industry filtration of acids, alkaline liquids, & organic solvents
- Energy industry condensate & cooling waters

Dimensions (mm)

Single-bag 1#Flange

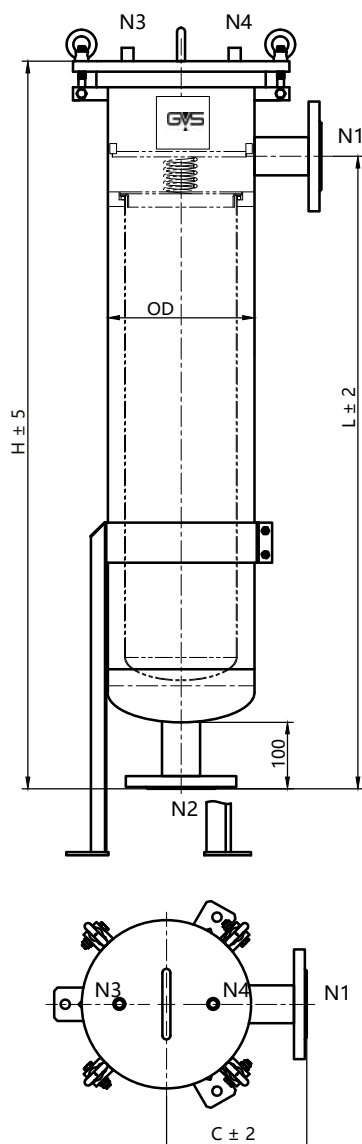


Single-bag 1#TC

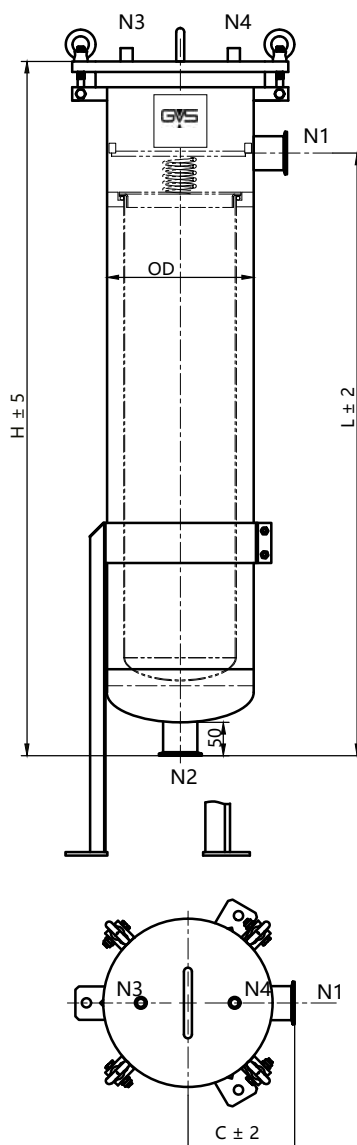


Mode	(mm)	H	L	P	N	C	OD
1# Single-bag TC		645	505	-	1.5"	150	ø219
1# Single-bag Flange		695	555	-	DN40	210	ø219
2# Single-bag TC		1045	905	-	2"	150	ø219
2# Single-bag Flange		1095	950	-	DN50	210	ø219
2#2 bags Flange		1680	1120	400	DN80	645	ø406
2#3 bags Flange		1730	1140	420	DN100	695	ø456
2#4 bags Flange		1790	1170	450	DN125	750	ø508
2#5 bags Flange		1820	1180	460	DN125	800	ø558

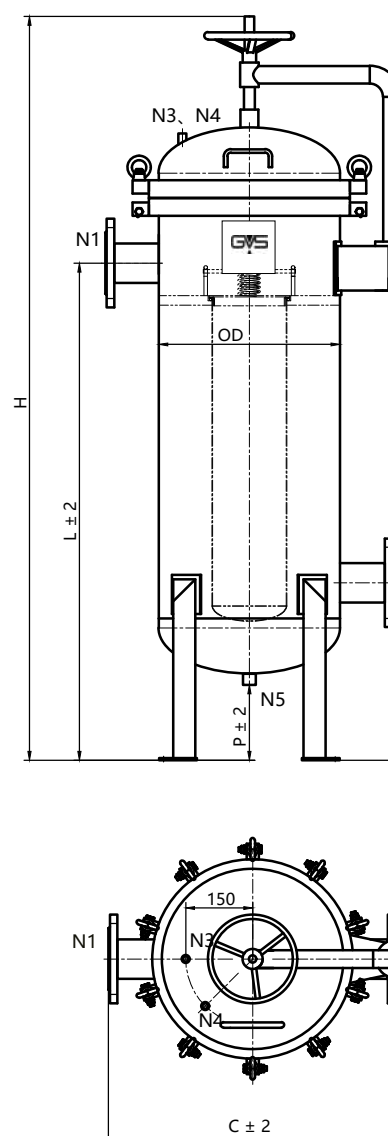
Single-bag 2#Flange



Single-bag 2#TC



Multi-bag 2#Flange



Eg.=>CHDNJ0101T38SMMY

ORDERING INFORMATION

Series	Shell Material	Number Round	FilterBag	Inlet&Outlet	Seal Material	Surface Finish (internal)	Surface Finish (external)	Design Pressure
CHDN=Bag Filter	J=304	01=1	01=1#	T38=TC 1.5"/(for Single-bag 1#)	S=Silicone	M=Mech. Polished	M=Mech. Polished	Y=1.0Mpa
	K=316L	02=2	02=2#	T50=TC 2"/(for Single-bag 2#)	E=EPDM	P=Passivated	P=Passivated	
		03=3		F40=Flange DN40/(for Single-bag 1#)	V=FKM		S=Abrasive Blasted	
		04=4		F50=Flange DN50/(for Single-bag 2#)				
		05=5		F80=Flange DN80/(for 2 bags 2#)				
		06=6		F100=Flange DN100/(for 3 bags 2#)				
		07=7		F125=Flange DN125/(for 4/5 bags 2#)				
		08=8						

CHDSBC Series - Multi-Cartridge Liquid Filter Housings



w/ Swing Bolt Closure

Manufactured of AISI304 or AISI316L stainless steel for high-purity industrial filtration requirements. The flexible design accommodates DOE, 222/FIN, and 222/FLAT style cartridges. They accept standard 2.5" to 2.85"OD filter cartridges in configurations of up to 50-around and up to 40" cartridge length.

This housing series offers a great many options for cartridge quantity, flow rate capacity, and porting. They're the standard choice to support higher flow rate applications with abundant options for cartridge media types and retention ratings.

Features

- Rugged swing-bolt closure allows easy access for cartridge changes
- Strengthened, welded legs provide a stable and durable installation
- 150 psi (10 bar) operating pressure rating
- Davit arm hand wheel features improved ease of operation (12 around and up)
Can provide flow rates to 1,200 GPM and beyond

Applications

- Suitable for the broadest range of industrial applications from process fluid streams for water, aqueous solutions, oils, and fine chemicals
- Used in food and beverage production: filtration of juices, syrups, food ingredients, and bottled water

Product Quality

- Manufactured within an ISO 9001:2015 certified quality management system
- Certification of Quality document can be provided upon request

Materials of Construction

Shell Components	AISI304 or AISI316L Stainless Steel
Seal Options	EPDM (standard), SILICONE, NBR, FKM

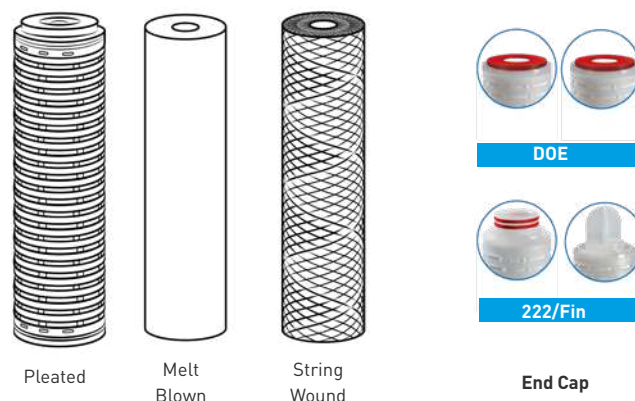
Surface Finish

Surface Quality	Glass beaded finish is standard Industrial electropolish option
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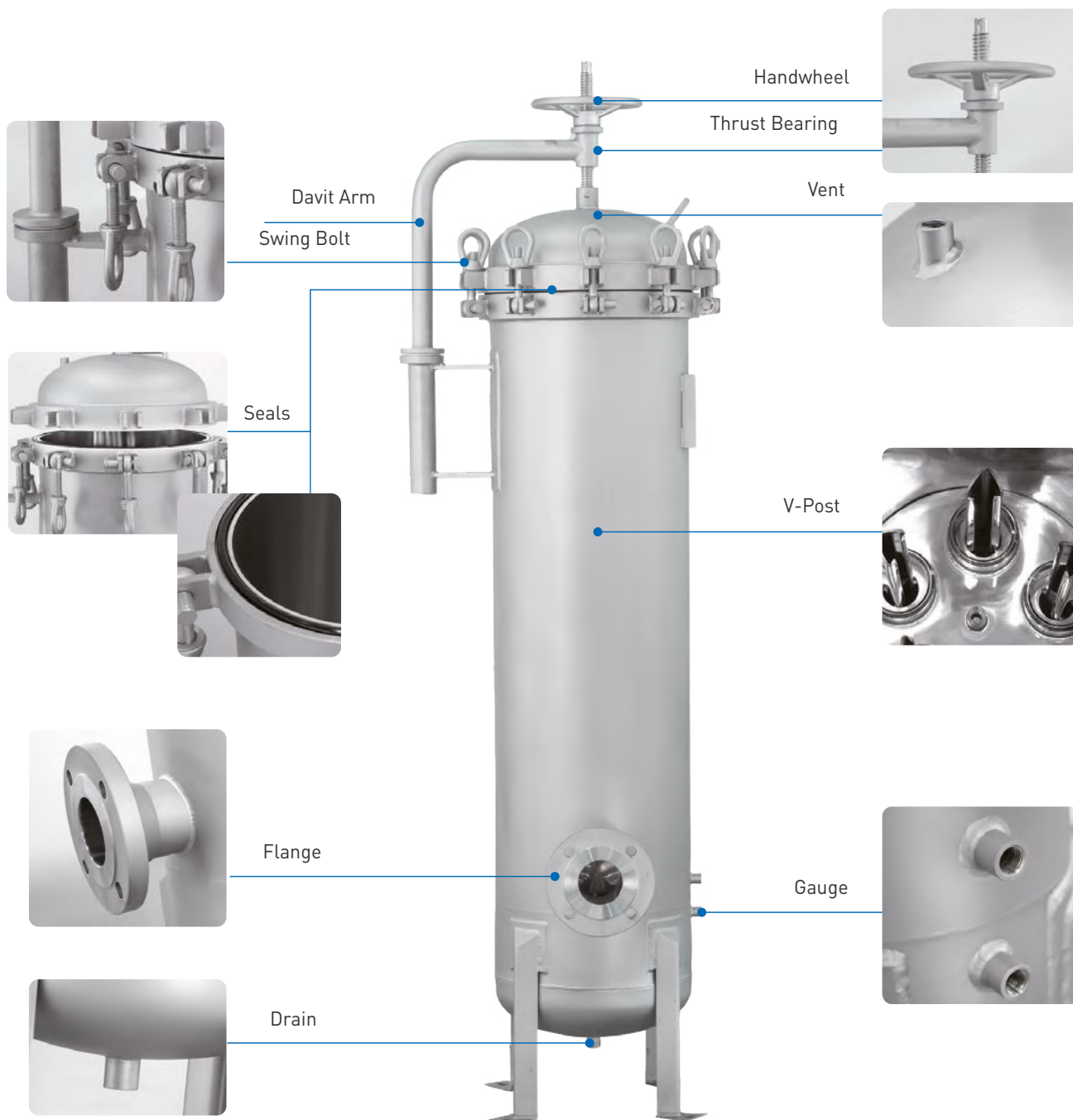
Operating Conditions

Operating Temperature	121°C (250°F) max.
Design Pressure	10 bar (150 psi)

Cartridge Type



CHDSBC Series - Multi-Cartridge Liquid Filter Housings

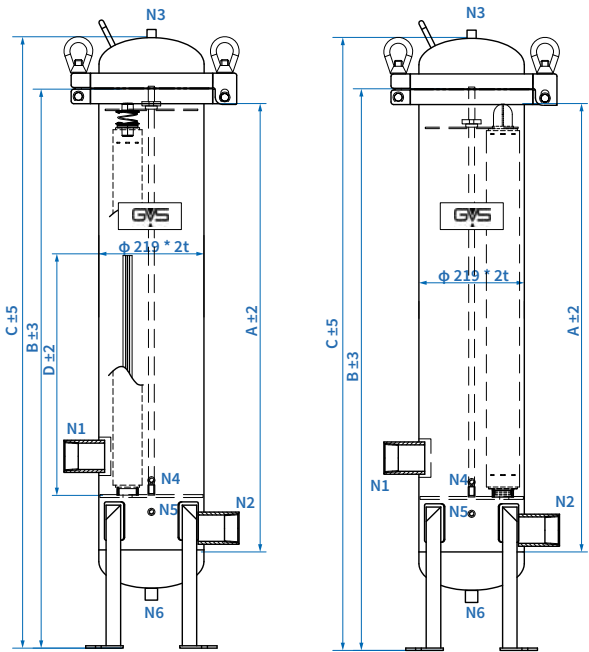
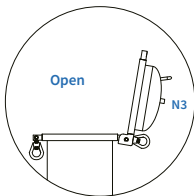
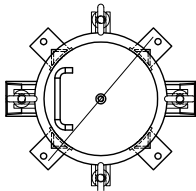


Dimensions (mm)

Industrial Cartridge Housing - 5X

Num	Name	Specification	Connection mode
N1	Inlet	FNPT 2"	Thread
N2	Outlet	FNPT 2"	
N3	Vent	FNPT 1/4"	
N4	Gauge	FNPT 1/4"	
N5	Gauge	FNPT 1/4"	
N6	Drain	FNPT 1/2"	

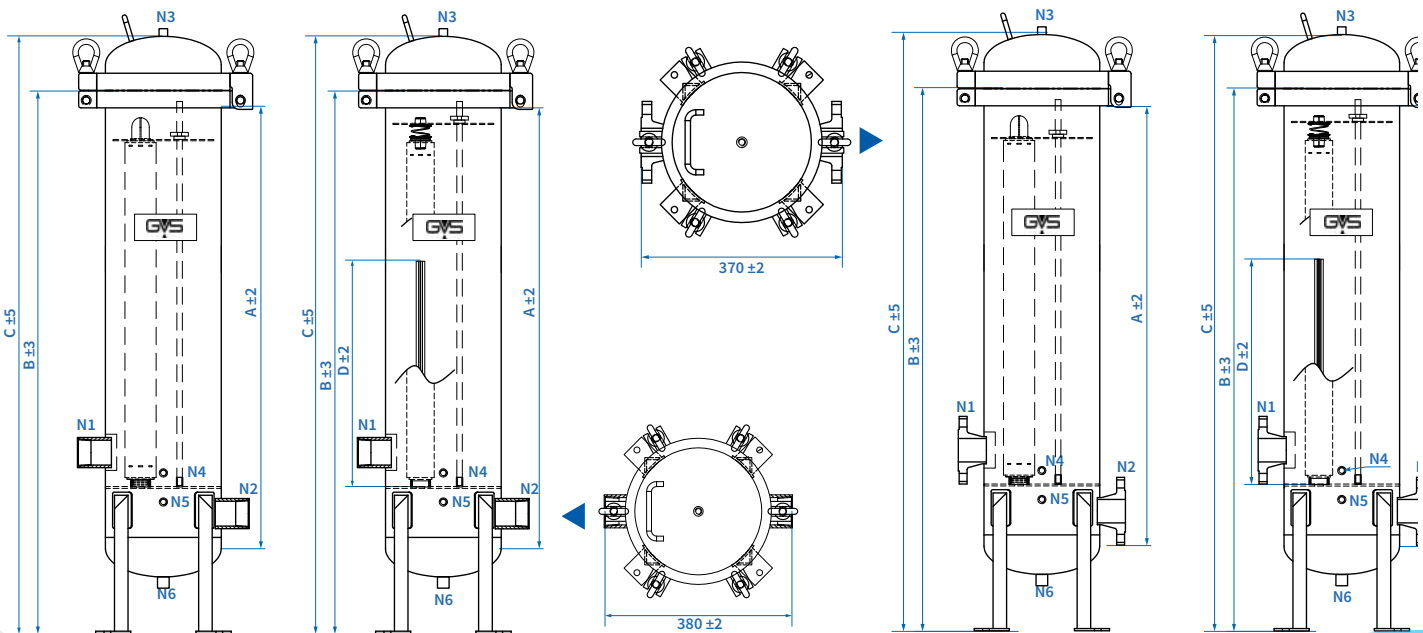
Size	A	B	C	D
10"	430	665	770	120
20"	680	915	1020	247
30"	930	1165	1270	498
40"	1180	1415	1520	746



Industrial Cartridge Housing - 7X

Size	A	B	C	D
10"	450	700	820	120
20"	700	950	1070	247
30"	950	1200	1320	498
40"	1200	1450	1570	746

Num	Material	Name	Specification	Connection mode
N1	304	Inlet	FNPT 2"	Thread
	316L	Outlet	WN50-150RF	Flange
N2	304	Inlet	FNPT 2"	Thread
	316L	Outlet	WN50-150RF	Flange
N3	304/316L	Vent	FNPT 1/4"	Thread
N4		Gauge	FNPT 1/4"	
N5		Gauge	FNPT 1/4"	
N6		Drain	FNPT 1/2"	

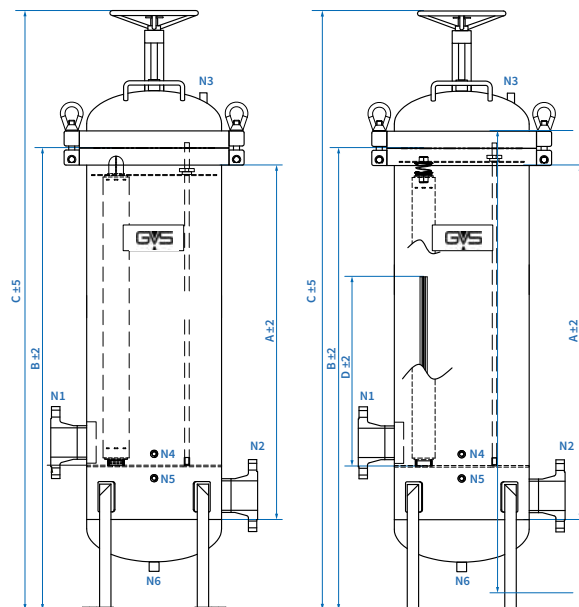


Dimensions (mm)

Industrial Cartridge Housing - 12X

Num	Name	Specification	Connection mode
N1	Inlet	WN80-150RF	Flange
N2	Outlet	WN80-150RF	
N3	Vent	FNPT 1/4"	Thread
N4	Gauge	FNPT 1/4"	
N5	Gauge	FNPT 1/4"	
N6	Drain	FNPT 1/2"	

Size	A	B	C	D
10"	435	717	1080	120
20"	685	967	1330	247
30"	935	1217	1580	498
40"	1185	1467	1830	746



Eg.=>CHDSBC4120N304SEP

ORDERING INFORMATION						
Series	Ctg Qty	Cartridge Length	Main Ports	Material	Seals	Option, Standard
CHDSBC	4 4 Cartridges	1 10"	20N 2"FNPT	304 AISI304	E EPDM	EP Electropolished
	5 5 Cartridges	2 20"	30N 3"FNPT	316L AISI316L	B NBR	
	7 7 Cartridges	3 30"	20F 2"RF FLANGE		S Silicone	
	12 12 Cartridges	4 40"	30F 3"RF FLANGE		V FKM	
	21 21 Cartridges		40F 4"RF FLANGE			
	36 36 Cartridges		60F 6"RF FLANGE			
	51 51 Cartridges					

Filter Bags

FBDG Series - Filter Bags

Filter bags are one of the most cost-effective choices for a wide range of filtrations, ranging from food and beverage to industrial chemical filtration. The micron ratings range from 0.5 micron to 100 micron and coupled with our wide of filter bag material choices. It applies to the removal of particles of various sizes. PP, PET needle felt bags are suitable for nominal precision filtration, while nylon mesh bags are suitable for filtration at lower ratings. Light weight and low-cost filtering material offer high chemical and corrosion resistance. It follows international standards and is compatible with bag filter housings of current mainstream brands.



Features

- Various media types and sizes available
- Broad chemical compatibility
- Sewn or fully welded construction
- High flow rate / low pressure drop
- High dirt holding capacity
- Low cost

Applications

- Chemicals
- Paints & Coatings
- Food and Beverage
- Machinery
- Water Treatment

Material of Constructions

- Media PP, PET, Nylon
- Seal Ring SS, PP

Dimensions

Size 1	Ø180mm x L420mm
Size 2	Ø180mm x L810mm
Size 3	Ø105mm x L230mm
Size 4	Ø102mm x L380mm
Size 5	Ø150mm x L520mm

Performance

Max. Operating Temperature	PP: 80°C(176°F) PET: 120°C(248°F) Nylon: 160°C(320°F)
Max. Operating DP	PP: 2 bar(29psi)@20°C(68°F) 1 bar(15psi)@80°C(176°F) PET: 2 bar(29psi)@20°C(68°F) 1 bar(15psi)@120°C(248°F) Nylon: 2 bar(29psi)@20°C(68°F) 1 bar(15psi)@80°C(176°F)

Eg.=>Eg.=>FBDG1ARG0050A

ORDERING INFORMATION							
Series	Size	Material	Body Construction	Removal Rating			
FBDG	1 = Size 1: Ø180mm x L420mm 2 = Size 2: Ø180mm x L810mm 3 = Size 3: Ø105mm x L230mm 4 = Size 4: Ø102mm x L380mm 5 = Size 5: Ø150mm x L520mm	A = PP Media and PP Collar B = PP Media and SS Seal Ring C = PET Media and SS Seal Ring D = Nylon Media and SS Seal Ring	R = Welded F = Sewn(ss seal ring)	G = PP G0050 = 0.5µm G0100 = 1µm G0300 = 3µm G0500 = 5µm G1000 = 10µm G2000 = 20µm G5000 = 50µm G7500 = 75µm G9900 = 100µm	Z = PET Z0050 = 0.5µm Z0100 = 1µm Z0300 = 3µm Z0500 = 5µm Z1000 = 10µm Z2000 = 20µm Z5000 = 50µm Z7500 = 75µm Z9900 = 100µm	B = Nylon B5000 = 50µm B7500 = 75µm B9900 = 100µm	A

Integrated Gas Filter Cartridges



Integrated Gas Filter Cartridges



GVS integrated gas filter cartridges, whose shell is made of electronic grade stainless steel 316L, the internal filter cartridge is made of PFA, and the membrane is PTFE/316L, can effectively remove particles in the gas. Corro-sion-resistant and high-pressure resistant materials are suitable for the filtration process of various special gases, with compact structures and easy replacement.

Features

- **High flux and low pressure loss**

The natural hydrophobicity of PTFE membrane enables it to filter gas with very huge filtration flux and very low initial DP. PTFE membrane has excellent particle trapping capacity, providing particle retention efficiency up to 99.99%. Removal rating up to 0.003 μ m to achieve fine filtration of pipeline gas.

- **Semiconductor Grade Housing Treatment**

The inner surface of the housing is electrolytically polished with Ra less than 0.1 μ m. The inner surface is corrosion-resistant and mirror-clean.

- **Excellent chemical compatibility**

PTFE is used as media and high purity SUS316L as the housing material. Both of them have excellent corrosion resistance and can be used for active gas filtration. At the same time, ensure the stable filtration of gas under high temperature and high pressure.

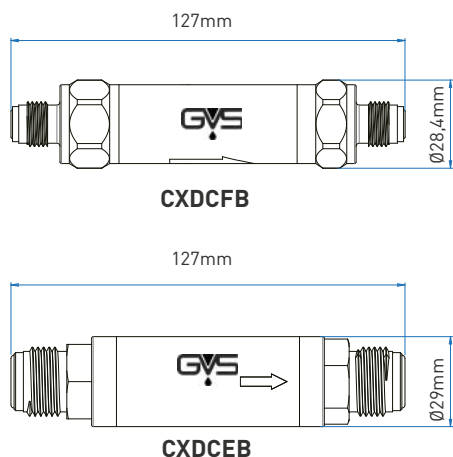
Material of Constructions

- Media PTFE
- Cage PFA/SUS316

Dimension

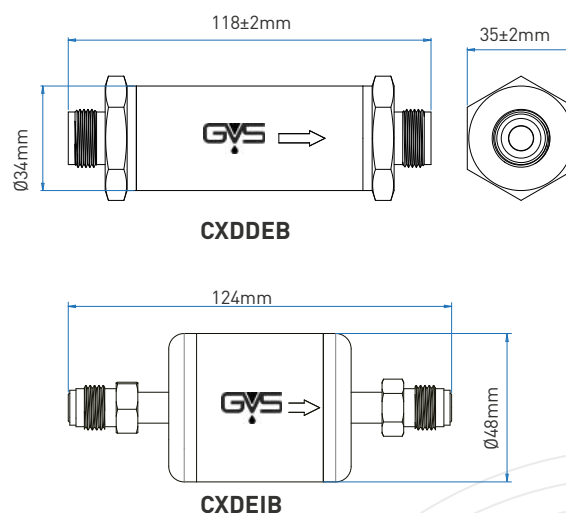
OD	28.4mm
Length	127mm

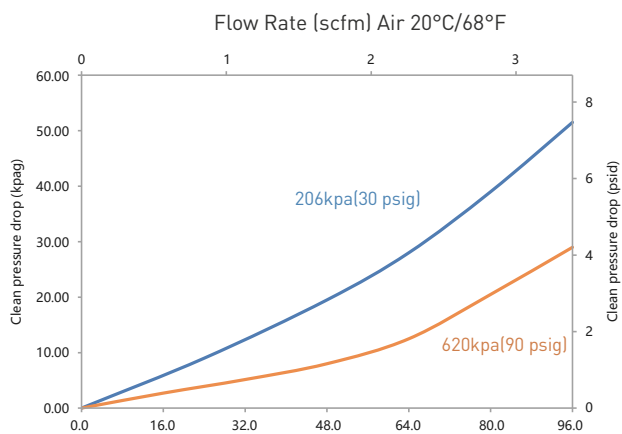
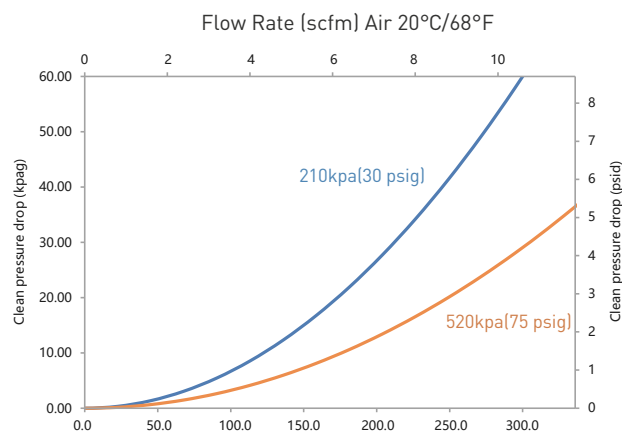
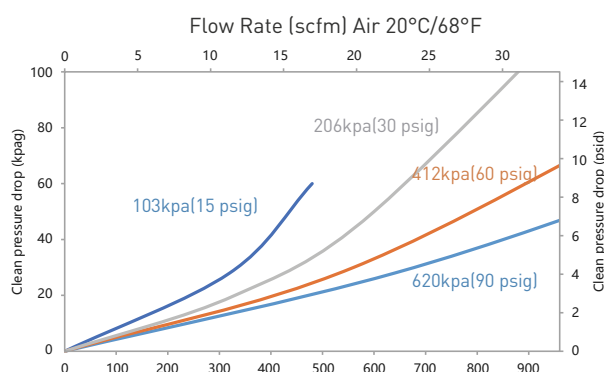
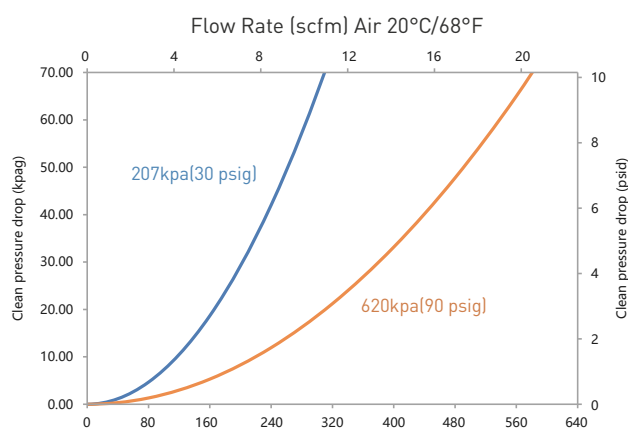
Dimensional Drawings



Performance

- Max Operating Temperature 80 °C
- Max Allowable DP 6bar @ 20 °C
- Max. Operating Pressure 5.2Mpa @ 80 °C



CXDCFB Pressure Drop vs. Gas Flow rate**CXDCEB Pressure Drop vs. Gas Flow rate****CXDDEB Pressure Drop vs. Gas Flow rate****CXDEIB Pressure Drop vs. Gas Flow rate****Eg.=>CXDCFBF0003MM18V**

Model	Cage Material	Removal Rating	Interface Type
CXDCF=BCFB	F = PFA / SUS316L	0003 = 0.003μm	MM18V = 1/8" VCR (Male/Male)
CXDDEB=DEB		001 = 0.01μm	MM14V = 1/4" VCR (Male/Male)
CXDCEB=CEB			MM38V = 3/8" VCR (Male/Male)
CXDEIB=EIB			MM12V = 1/2" VCR (Male/Male)
			MM34V = 3/4" VCR (Male/Male)
			MM1V = 1" VCR (Male/Male)
			MM14S = 1/4" Swagelok (Male/Male)
			MM516S = 5/16" Swagelok (Male/Male)
			MM38S = 3/8" Swagelok (Male/Male)
			MM12S = 1/2" Swagelok (Male/Male)
			MM58S = 5/8" Swagelok (Male/Male)
			MM34S = 3/4" Swagelok (Male/Male)
			MM78S = 7/8" Swagelok (Male/Male)

CAPSFLOW



CSK series

Capsule Filters

CSK series Asymmetrical PES membrane Capsule Filters

The PES membrane capsule utilizes single layer hydrophilic polyethersulfone membrane. It offers broad chemical compatibility, high flow rate and low extractable.

Polyethersulfone is particularly suited for the filtration of products that contain substances that adsorb to the media. The lower binding characteristics of polyethersulfone make it a good choice for filtration of valuable protein solutions such as vaccines and biologicals.



Typical Applications

- Cell Culture Media
- Large Volume Parenterals (LVP's)
- Pharmaceutical Bulk Chemical Solutions
- Diagnostics
- Blood and Serum Fractions
- Purified Water
- Beer, Wine and Spirits
- Juice & Soft Drinks
- Bottled Water

Fitting Option

- NPT-Male
- NPT-F
- Swagelok
- CPCPLC-Male
- CPCPLC-Female
- Hose Barb
- Stepped Hose Barb
- Triclover

Maximum Operating Conditions

- Maximum operating pressure:
 - Liquid: 5 bar (80psi) at 77°F/25°C
 - Gas: 3.5 bar (60psi) at 77°F/25°C

- Maximum Operating Temperature: 80 °C
- Autoclave at 125 °C, 30 minutes and 25 cycles
- Autoclave at 135 °C, 30 minutes and 15 cycles

Toxicity

All materials meet the specifications for biological safety per USP Class VI -121°C for plastics.

Filter Area

- 500 cm²
- 1000 cm²
- 1500 cm²
- 2100 cm²

Construction of Materials

- Filter Media: Polyethersulfone
- Media Support: Polypropylene
- End Caps: Polypropylene
- Inner Core: Polypropylene
- Outer Cage: Polypropylene
- Sealing Method: Thermal Bonding

Food Safety Compliance

Materials of construction comply with FDA regulations for food and beverage contact use as detailed in the US Code of Federal Regulations, 21CFR. Materials used to produce filter media and hardware are safe for use in contact with foodstuffs in accordance with EU Directives 10/2011

Capsule Integrity Test Specifications

Gen Purpose

Pore size	Min.Bubble point
0.04 µm	2.3 barg@22°C/IPA
0.1 µm	4.8 barg@22°C
0.2 µm	3.1 barg@22°C
0.45 µm	1.7 barg@22°C
0.65 µm	1.3 barg@22°C
0.8 µm	1.2 barg@22°C
1.2 µm	0.8 barg@22°C

Low Bio

Pore size	Min.Bubble point
0.2 µm	3.5 barg@22°C
0.45 µm	2.3 barg@22°C
0.65 µm	1.5 barg@22°C

Ster Grade

0.2/0.04µm	2.3 Barg@22°C (IPA)
0.45/0.04µm	2.3 Barg@22°C (IPA)
0.45/0.2µm	3.5 barg@22°C
0.65/0.2µm	3.5 barg@22°C
0.65/0.45µm	2.3 Barg@22°C
0.8/0.45µm	2.3 Barg@22°C
0.2/0.1µm	1.7 Barg@22°C (IPA)
0.45/0.1µm	1.7 Barg@22°C (IPA)

Capsule

Eg.=>CSKPS0010GN054NMNN0

ORDERING INFORMATION								
Product type	Membrane Type	Membrane pore size	Application	Sterilization	Size	Fittings in / out	Vent/ Drain	Revision
CSK = Capsule Filter	PS = PES	Application G	G = Gen Purpose	N = Not Sterile	05 = 500 cm ²	4NM = 1/4" NPT-M	NN = None	0 = Bag label
		0010 = 0.1µm	B = Low Bio		10 = 1000cm ²	8NM = 3/8" NPT-M		1 = Housing Label
		0020 = 0.2µm	S = Ster Grade		15 = 1500cm ²	2NM = 1/2" NPT-M		
		0045 = 0.45µm			21 = 2100cm ²	8NF = 3/8" NPT-F		
		0065 = 0.65µm				4SL = 1/4" Swagelok		
		0080 = 0.8µm				5SL = 5/16" Swagelok		
		0120 = 1.2µm				8SL = 3/8" Swagelok		
		Application B				4CM = 1/4" CPC-PLC-M		
		0020 = 0.2µm				4HB = 3/4" HB		
		0045 = 0.45µm				8HB = 3/8" HB		
		0065 = 0.65µm				48B = 1/4"-3/8" HB		
		Application S				1TC = 1" TC		
		02X4 = 0.2/0.04µm						
		04X4 = 0.45/0.04µm						
		0402 = 0.45/0.2µm						
		0602 = 0.65/0.2µm						
		0604 = 0.65/0.45µm						
		0804 = 0.8/0.45µm						
		0201 = 0.2/0.1µm						
		0401 = 0.45/0.1µm						

CSK series Hydrophobic ePTFE membrane Capsule Filters

CSK series PTFE membrane capsule utilizes single layer hydrophobic PTFE membrane. It offers broad chemical compatibility, high flow rate and low extractables.



Benefits

- 100% integrity tested
- FDA food contact compliant
- Thermal bonding
- Non-fiber releasing

Typical Application

- Sterile air feed
- Chemicals
- Pharmaceuticals
- Solvent

Fitting Option

- NPT-Male
- NPT-F
- Swagelok
- CPCPLC-Male
- CPCPLC-Female
- Hose Barb
- Stepped Hose Barb
- Triclover

Toxicity

All components meet the specifications for biological safety per USP Class VI -121 °C for plastics.

Cartridge Integrity Test Specifications

Low Bio

Pore size	0.2 mm
Subbie Point	≥1.4 barg (IPA/ Water)
Water Intrusion	≤0.17 mL/min@2500 mbar/2100cm ² , 2°C/22°C

Gen Purpose

Pore size	Bubble Point / IPA
0010 = 0.1µm	1.7 barg
0020 = 0.2µm	1.1 barg
0045 = 0.45µm	0.6 barg
0065 = 0.65µm	0.5 barg
0100 = 1.0µm	0.4 barg
0300 = 3.0µm	0.1 barg
0500 = 5.0µm	0.07 barg

Capsule Integrity

- Minimum burst pressure: 123.5 psi (8.5 barg)

Construction Materials

- Filter Membrane: ePTFE
- Membrane Media Support: Polypropylene
- Capsule: Polypropylene
- Inner Core: Polypropylene
- Outer Cage: Polypropylene
- Sealing Method: Thermal Bonding

Sanitization/Sterilization

- Autoclavable

Filter Area

- 500 cm²
- 1000 cm²
- 1500 cm²
- 2100 cm²

Food Safety Compliance

Materials of construction comply with FDA regulations for food and beverage contact use as detailed in the US Code of Federal Regulations, 21 CFR. Materials used to produce filter media and hardware are safe for use in contact with foodstuffs in accordance with EU Directives 10/2011.

Maximum Operating Conditions

- Maximum operating pressure
 - Liquid: 5 bar (80psi) at 77°F/25°C
 - Gas: 3.5 bar (60psi) at 77°F/25°C
- Maximum Operating Temperature: 80 °C
- Autoclave at 125 °C, 30 minutes and 25 cycles
- Autoclave at 135 °C, 30 minutes and 15 cycles

Eg.=>CSKPT0010GN054NMNNO

ORDERING INFORMATION								
Product Type	Membrane Type	Membrane pore size	Application	Sterilization	Size	Fittings in / out	Vent/Drain	Revision
CSK = Capsule Filter	PT = PTFE phobic	Application G	G = Gen Purpose	N = Not Sterile	05 = 500 cm ²	4NM = 1/4" NPT-M	NN = None	0 = Bag label
		0010 = 0.1µm	B = Low Bio		10 = 1000cm ²	8NM = 3/8" NPT-M		1 = Housing Label
		0020 = 0.2µm			15 = 1500cm ²	2NM = 1/2" NPT-M		
		0045 = 0.45µm			21 = 2100cm ²	8NF = 3/8" NPT-F		
		0065 = 0.65µm				4SL = 1/4" Swagelok		
		0100 = 1.0µm				5SL = 5/16" Swagelok		
		0300 = 3.0µm				8SL = 3/8" Swagelok		
		0500 = 5.0µm				4CM = 1/4" CPC-PLC-M		
		Application B				4HB = 3/4" HB		
		0020 = 0.2µm				8HB = 3/8" HB		
						48B = 1/4"-3/8" HB		
						1TC = 1" TC		

CSK series Polypropylene membrane Capsule Filters

CSK series PP Capsule Filters with depth structure of polypropylene media. It offers broad chemical compatibility, higher dirt holding capacity with high flow rates at low pressure drop, and low extractables. They are available in nominal and absolute rating.



Benefits

- Wide chemical compatibility
- High dirt hold capacity
- High retention
- Thermal bonding
- Non-fiber releasing

Typical Application

- Process Water
- Vinegar
- Aqueous solutions
- Beer, Wine and Spirits
- Juice, Soft Drinks, Edible Oils
- Bulk Chemicals
- Pharmaceutical intermediates

Construction Materials

- Filter Media: Polypropylene
- Media Support: Polypropylene
- End Caps: Polypropylene
- Inner Core: Polypropylene
- Outer Cage: Polypropylene
- Sealing Method: Thermal Bonding

Sanitization/Sterilization

- Autoclavable
- Hot water

Toxicity

All components meet the specifications for biological safety per USP Class VI -121 °C for plastics.

Filter Area

- 500 cm²
- 1000 cm²
- 1500 cm²
- 2100 cm²

Food Safety Compliance

Materials of construction comply with FDA regulations for food and beverage contact use as detailed in the US Code of Federal Regulations, 21CFR.

Materials used to produce filter media and hardware are safe for use in contact with foodstuffs in accordance with EU Directives 10/2011.

Maximum Operating Conditions

- Maximum operating pressure
 - Liquid: 5 bar (80psi) at 77°F/25°C
 - Gas: 3.5 bar (60psi) at 77°F/25°C
- Maximum Operating Temperature: 80 °C
- Autoclave at 125 °C, 30 minutes and 25 cycles
- Autoclave at 135 °C, 30 minutes and 15 cycles



Eg.=> CSKPP0030GN054NMNN0

ORDERING INFORMATION								
Product Type	Membrane Type	Membrane pore size	Application	Sterilization	Size	Fittings in / out	Vent/Drain	Revision
CSK = Capsule Filter	PP = Polypropylene	Application G	G = Gen Purpose	N = Not Sterile	05= 500 cm ²	4NM=1/4" NPT-M	NN = None	0 = Bag label
		0030 = 0.3µm	P= Premier		10 = 1000cm ²	8NM = 3/8" NPT-M		1 = Housing Label
		0060 = 0.6µm			15 = 1500cm ²	2NM = 1/2" NPT-M		
		0100 = 1.0µm			21 = 2100cm ²	8NF = 3/8" NPT-F		
		0300 = 3.0µm				4SL = 1/4" Swagelok		
		0500 = 5.0µm				5SL = 5/16" Swagelok		
		0700 = 7.0µm				8SL = 3/8" Swagelok		
		1000 = 10.0µm				4CM = 1/4" CPC-PLC-M		
		2000 = 20.0µm				4HB = 3/4" HB		
		3000 = 30.0µm				8HB = 3/8" HB		
		5000 = 50.0µm				48B = 1/4"-3/8" HB		
		Application P				1TC = 1" TC		
		0100 = 1.0µm						
		0300 = 3.0µm						
		0500 = 5.0µm						
		0700 = 7.0µm						
		1000 = 10.0µm						
		2000 = 20.0µm						
		3000 = 30.0µm						
		5000 = 50.0µm						

CSK series Nylon membrane Capsule Filters

CSK series Cartridge Filters with Nylon 66 membrane are 100% integrity tested, it is constructed of single -layer hydrophilic nylon66membrane.It offers broad chemical compatibility, higher filter area with high flowrates at low pressure drop and low extractables.



Benefits

- 100% integrity tested
- FDA food contact compliant
- Thermal bonding
- Non-fiber releasing

Typical Application

- Bottled Water
- Vinegar
- Aqueous solutions
- Beer, Wine and Spirits
- Juice, Soft Drink, Edible Oils
- Pharmaceutical intermediates

Construction Materials

- Filter Media: Nylon 66 Membrane
- Media Support: Polypropylene
- End Caps: Polypropylene
- Inner Core: Polypropylene
- Outer Cage: Polypropylene
- Sealing Method: Thermal Bonding

Sanitization/Sterilization

- Autoclavable
- Hot water

Toxicity

All components meet the specifications for biological safety per USP Class VI -121 °C for plastics.

Capsule Integrity

- Minimum burst pressure: 123.5 psi (8.5 barg)

Filter Area

- 500 cm²
- 1000 cm²
- 1500 cm²
- 2100 cm²

Food Safety Compliance

Materials of construction comply with FDA regulations for food and beverage contact use as detailed in the US Code of Federal Regulations, 21CFR.

Materials used to produce filter media and hardware are safe for use in contact with foodstuffs in accordance with EU Directives 10/2011.

Maximum Operating Conditions

- Maximum operating pressure
 - Liquid: 5 bar (80psi) at 77°F/25°C
 - Gas: 3.5 bar (60psi) at 77°F/25°C
- Maximum Operating Temperature: 80 °C
- Autoclave at 125 °C, 30 minutes and 25 cycles
- Autoclave at 135 °C, 30 minutes and 15 cycles

Capsule Integrity Test Specifications

Pore Size	Min.Bubble Point
0.1 µm	3.5 barg@22°C
0.2 µm	2.8 barg@22°C
0.45 µm	1.8 barg@22°C
1µm	0.6barg@22°C

Eg.=> CSKNY0010GN054NMNN0

ORDERING INFORMATION								
Product Type	Membrane Type	Membrane pore size	Application	Sterilization	Size	Fittings in / out	Vent/Drain	Revision
CSK = Capsule Filter	NY = Nylon	0010 = 0.1µm	G = Gen Purpose	N = Not Sterile	05= 500 cm ²	4NM=1/4”NPT-M	NN = None	0 = Bag label
		S = Sterile		10 = 1000cm ²	8NM = 3/8” NPT-M	1 = Housing Label		
				15 = 1500cm ²	2NM = 1/2” NPT-M			
				21 = 2100cm ²	8NF = 3/8” NPT-F			
					4SL = 1/4” Swagelok			
					5SL = 5/16” Swagelok			
					8SL = 3/8” Swagelok			
					4CM = 1/4” CPC-PLC-M			
					4HB = 3/4” HB			
					8HB = 3/8” HB			
					48B = 1/4”-3/8” HB			
					1TC = 1” TC			

Calyx Capsule Filter

GVS capsules are disposable filtration units designed for the removal of particles or bacteria from aqueous or solvent solutions and gas streams. They are ready to use, eliminating the need to disassemble, clean and reassemble filter housings. GVS capsules contain no glue or surfactants and feature serial layer filter design for increased throughput and extended life. Two upstream vents are included to facilitate venting in any position. All capsules containing membrane media are preflushed with purified water to reduce extractables. GVS capsules made with Polypropylene housings are food compliant (FDA/EU), as restrictions may apply depending on final application, it is end user’s responsibility to determine full compliance. All capsules pass class VI toxicology testing and are integrity tested prior to shipment. Capsule filters are available in sterile and non-sterile versions. The capsules are available with the following connections: 3/8 inch hose barb, 1/4 to 1/2 inch stepped hose barb, 1/4 inch NPTM, 1/2 inch NPTM, and 1.5 inch sanitary flange.



Capsule

Features

- Available filter medias: PES, Nylon 66, PTFE
- Available housing material: Polypropylene, Polyester
- Cage and Core: Polypropylene
- Endcaps: Polypropylene, polyester
- Media Support: Polypropylene, polyester

Diameter: 3.5" (9 cm)

Capsule Size	Nominal Effective Filtration Area	Total Length Connector end-to-end ¹
Small	0.8 ft ² (748cm ²)	3.5-4.7" (9-13cm)
Medium	3.0 ft ² (2806cm ²)	7.6-8.8" (9-23cm)
Large	5.9 ft ² (5500cm ²)	11.5-12.7" (29-33cm)

¹Varies with connection style

All units are packaged in low particulate plastic bags and individual boxes. Sterile units are shrink wrapped and include a sterility indicator.

Operational Limits	
Maximum Operational Pressure	80psi (5.5 bar) @ 70°F (21°C) in Liquid 50psi (3.8 bar) @ 70°F (21°C) in Gas
Maximum Differential Pressure	60psi (4.1 bar) @70°F (21°C)
Maximum Operating Temperature	110°F (43°C) @ ≤ 30 psi (2.1 bar) Operating Pressure
Autoclavable, PP Housing	110°F (121°C), 15psi, 30 minutes, up to 5 cycles

Media selection Guide

Teflon (PTFE) Hydrophobic Media: For Chemical and Vent Filtration, Acids, Base and Oxidant Filtration, Bulk Chemical, Electronics Grade Chemical Filtration, Sterile Venting, Process Air and Gas Filtration.

Polyethersulfone (PES) Hydrophilic Media: For Low Protein Binding and Broad Chemical Compatibility. ideal for Filtration of Acids, Bases, Oxidants, Serums, Solvents, Fine chemicals, Plating Solutions, Beverages, Electronics, Biologics, Lacquers, Parts Cleaning, Tissue Culture Media, Pharmaceutical Intermediates, Fine Inks and Dyes, Point of Use filtration for Process Water.

Nylon 66 Hydrophilic Media: Double Layer Media with a larger micron prefilter and second final filtration layer. For Beverages, Cosmetics, Electronics, Fine and Bulk Chemicals, Pharmaceuticals. Solvents, Fine chemicals, Ink Jets, Process Water, Parts Cleaning, Electronics, Biologics, Dyes, Lacquers. Avoid Acidic Solutions.

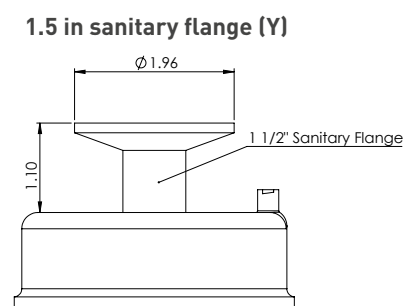
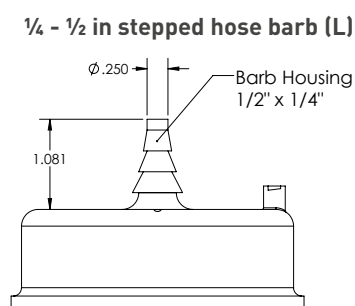
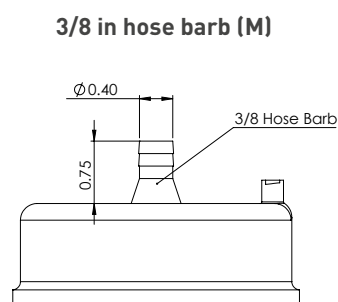
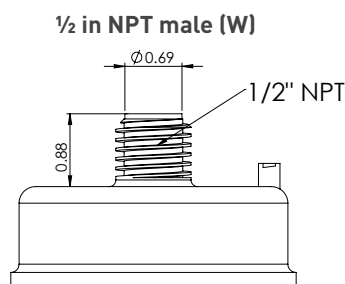
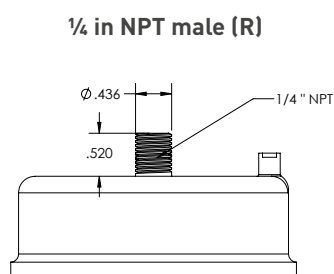
PP and PTFE media available in Polypropylene housings. Polypropylene housings may be repeatedly autoclaved for up to 5 cycles.

Nylon and PES media available in Polyester Housings. PES media also available in a PP housing by request.

Standard available combinations are shown in the tables below. Contact your local GVS sales representative for alternate solutions.

Adaptors Selection Guide

Unit of measure: inch



PTFE Capsule Filters - Hydrophobic - Polypropylene housing: Ordering information

Pore Size µm	Filtration area ft ² (cm ²)	Length in (cm)	Adaptors: L=¼ - ½ in stepped hose barb; M= 3/8 in hose barb; R=¼ in NPT male; Y=1.5 in sanitary flange; W=½ in NPT male			
			MM	RR	WW	YY
0.1	0.8 (748)	3.5 (9)		1213160		
		3.5 (9)		1213158		
0.2	0.8 (748)	4.0 (10)	1213155			
		4.3 (11)			1212937	
		4.7 (12)				1212978
0.2	5.9 (5500)	11.5 (29)		1212987		
0.4	0.8 (748)	3.5 (9)		1213161		
0.4	5.9 (5500)	11.5 (29)		1212992		

Nylon 66 Filter Media - Polyester housing: Ordering information

Pore Size µm	Filtration area ft ² (cm ²)	Length in (cm)	Adaptors: L=¼ - ½ in stepped hose barb; M= 3/8 in hose barb; R=¼ in NPT male; Y=1.5 in sanitary flange; W=½ in NPT male				
			LL	MM	RR	WW	YY
0.1	0.8 (748)	3.5 (9)			1213540		
		4.0 (10)	1212939	1213529	1213671		
0.2	0.8 (748)	3.5 (9)			1213561		
		4.0 (10)		1213550			
				1213757*			
0.4	0.8 (748)	3.5 (9)			1213577		
		4.0 (10)		1214457			
0.4	5.9 (5500)	12.0 (30)		1212908			
		12.3 (31)				1212911	

*sterile product

PES Polyethersulfone Filter Media - Polyester housing: Ordering information

Pore Size µm	Filtration area ft ² (cm ²)	Length in (cm)	Adaptors: L=¼ - ½ in stepped hose barb; M= 3/8 in hose barb; R=¼ in NPT male; Y=1.5 in sanitary flange; W=½ in NPT male					
			LL	MM	RR	WW	YY	WM
0.1	0.8 (748)	3.5 (9)			1222323			
		3.5 (9)			1213608			
0.2	0.8 (748)	4.0 (10)	1214225*		1214001*			
		4.7 (12)					1213956	
		4.0 (10)	1214436*					
0.2	3.0 (2808)	8.2 (21)						1235556**
		8.4 (21)				1215154		
		8.8 (22)				1223845*		
0.45	0.8 (748)	3.5 (9)			1213610		1222327	
		4.0 (10)	1214227*					
0.45	3.0 (2808)	8.1 (20)	1222432*					
0.45		8.8 (22)					1215030	

* Sterile

** PP Housing

CLK series

In Line Integrity Test Capsule Filter

CLK series Asymmetrical PES membrane Bio-burden Reduction Capsule Filters

The PES membrane capsule utilizes single layer hydrophilic polyethersulfone membrane. It offers broad chemical compatibility, high flow rate and low extractable.

Polyethersulfone is particularly suited for the filtration of products that contain substances that adsorb to the media. The lower binding characteristics of polyethersulfone make it a good choice for filtration of valuable protein solutions such as vaccines and biologicals.



Capsule

Typical Applications

- Cell Culture Media
- Large Volume Parenterals (LVP's)
- Pharmaceutical Bulk Chemical Solutions
- Diagnostics
- Blood and Serum Fractions
- Purified Water
- Beer, Wine and Spirits
- Juice & Soft Drinks
- Bottled Water

Vent/Drain Option

- Staubli
- Stepped hose barb

Fitting Option

- 1.5" TC
- 1/2" Hose Barb
- 3/4" Hose Barb

Maximum Operating Conditions

- Maximum operating pressure
 - Liquid: 5 bar (80psi) at 77°F/25°C
 - Gas: 3.5 bar (60psi) at 77°F/25°C
- Maximum Operating Temperature: 80 °C
- Autoclave at 125 °C, 30 minutes and 25 cycles
- Autoclave at 135 °C, 30 minutes and 15 cycles

Toxicity

All materials meet the specifications for biological safety per USP Class VI -121°C for plastics

Filter Area

Size Filtration Area

- 2.5" = 1400 cm²
- 5" = 2500 cm²
- 10" = 6000 cm²
- 20" = 12000 cm²
- 30" = 18000 cm²
- 40" = 24000 cm²

Construction of Materials

- Filter Media: Polyethersulfone
- Media Support: Polypropylene
- End Caps: Polypropylene
- Inner Core: Polypropylene
- Outer Cage: Polypropylene
- Sealing Method: Thermal Bonding

Food Safety Compliance

Materials of construction comply with FDA regulations for food and beverage contact use as detailed in the US Code of Federal Regulations, 21CFR. Materials used to produce filter media and hardware are safe for use in contact with foodstuffs in accordance with EU Directives 10/2011.

Cartridge Integrity Test Specifications

Water wetted membrane

Pore size	Min.Bubble point	Diffusive Flow/10"
0.04 µm	2.3 barg@22°C/IPA	≤ 25 ml/ 1.7 barg
0.1 µm	1.7 barg@22°C/IPA	≤ 25 ml/ 1.3 barg
0.2 µm	3.5 barg@22°C	≤ 25 ml/ 2.8 barg
0.45 µm	2.3 barg@22°C	≤ 25 ml/ 1.7 barg
0.65 µm	1.6 barg@22°C	≤ 25 ml/ 1.0 barg
0.8 µm	1.3 barg@22°C	≤ 25 ml / 0.8 barg
1.2 µm	0.9 barg@22°C	≤ 25 ml/ 0.6 barg

Eg.=>CIKPS0010BNSS5TCSS0

ORDERING INFORMATION								
Product Type	Membrane Type	Membrane pore size	Application	Sterilization	Size	Fittings In/Out	Vent/Drain	Revision
CIK = Capsule InT Filter	PS = PES	Application G	B =Low Bio	N = Not Sterile	SS = 2.5"	5TC = 1.5" TC	SS = St/St	0 = Bag label
		0010 = 0.1 µm			LL = 5"	2HB = 1/2" HB	HH = HB/HB	1 = Housing label
		0020 = 0.2 µm			TE = 10"	4HB = 3/4" HB	SH = St/HB	
		0045 = 0.45 µm			TW = 20"	T2B = 1.5" TC/ 1/2" HB	HS = HB/St	
		0065 = 0.65 µm			TH = 30"	T4B = 1.5" TC/ 3/4" HB		
		0080 = 0.80 µm			FO = 40"	2BT = 1/2"HB/ 1.5 TC		
		0120 = 1.2 µm				2B4 = 1/2"HB/ 3/4"HB		
		Application B				4BT = 3/4"HB/ 1.5"TC		
		0020 = 0.2 µm				4B2 = 3/4"HB/ 1/2"HB		
		0045 = 0.45 µm						
		0065=0.65µm						
		Application S						
		02x4 =0.2/0.04µm						
		04x4=0.45/0.04µm						
		0402=0.45/0.2µm						
		0602=0.65/0.2µm						
		0604=0.65/0.45µm						
		0804=0.8/0.45µm						
		0201=0.2/0.1µm						
		0401=0.45/0.1µm						

CIK series Hydrophobic ePTFE membrane Bio-burden Reduction Capsule Filters

Capsflow CIK series is family of full size capsule filters with Staubli connection at the vent, which enables in-line integrity test. The PTFE membrane Bio-burden reduction capsule utilizes single layer hydrophobic PTFE membrane. It offers broad chemical compatibility, high flow rate and low extractables.

Benefits

- 100% integrity tested
- FDA food contact compliant
- Thermal bonding
- Non-fiber releasing

Typical Application

- Sterile air feed
- Chemicals
- Pharmaceuticals
- Solvent

Capsule Integrity

- Minimum burst pressure: 123.5 psi (8.5 barg)

Construction Materials

- Filter Membrane: ePTFE
- Membrane Media Support: Polypropylene
- Capsule: Polypropylene
- Inner Core: Polypropylene
- Outer Cage: Polypropylene
- Sealing Method: Thermal Bonding

Sanitization/Sterilization

- Autoclavable

Cartridge Integrity Test Specifications

Pore size	0.2 mm
Subbie Point	≥1.2 barg (IPA/ Water)
Water intrusion	≤0.37 ml/min @ 2500 mbar/10", 22°C
Diffusive Flow	10 ml/min @ 800 mbar/ 10", 22°C

Filter Area

Size Filtration Area

- 2.5" = 1500 cm²
- 5" = 2700 cm²
- 10" = 6300 cm²
- 20" = 12600 cm²
- 30" = 18900 cm²
- 40" = 25200 cm²

Fitting Option

- 1.5" TC
- 1" Hose Barb
- 3/4" Hose Barb

Vent/Drain Option

- Staubli
- Stepped hose barb

Toxicity

- All components meet the specifications for biological safety per USP Class VI -121 °C for plastics

Food Safety Compliance

- Materials of construction comply with FDA regulations for food and beverage contact use as detailed in the US Code of Federal Regulations, 21 CFR.
- Materials used to produce filter media and hardware are safe for use in contact with foodstuffs in accordance with EU Directives 10/2011.

Maximum Operating Conditions

- Maximum operating pressure
 - Liquid: 5 bar (80psi) at 77°F/25°C
 - Gas: 3.5 bar (60psi) at 77°F/25°C
- Maximum Operating Temperature: 80 °C
- Autoclave at 125 °C, 30 minutes and 25 cycles
- Autoclave at 135 °C, 30 minutes and 15 cycles

Eg.=>CIKPT0020BNSS5TCSS0

ORDERING INFORMATION								
Product Type	Membrane Type	Membrane pore size	Application	Sterilization	Size	Fittings In/Out	Vent/Drain	Revision
CIK = Capsule InT Filter	PT = PTFE phobic	0020 = 0.2 µm	B = Low Bio	N = Not Sterile	SS = 2.5"	5TC = 1.5" TC	SS = St/St	0 = Bag label
					LL = 5"	2HB = 1/2" HB	HH = HB/HB	1 = Housing label
					TE = 10"	4HB = 3/4" HB	SH = St/HB	
					TW = 20"	T2B = 1.5" TC/ 1/2" HB	HS = HB/St	
					FO=40"	T4B = 1.5" TC/ 3/4" HB		
						2BT = 1/2"HB/ 1.5TC		
						2B4 = 1/2"HB/ 3/4"HB		
						4BT = 3/4"HB/ 1.5"TC		
						4B2 = 3/4"HB/ 1/2"HB		

CLK series Polypropylene media General Application Capsule Filters

CLK series PP Capsule Filters with depth structure of polypropylene media. It offers broad chemical compatibility, higher dirt holding capacity with high flow rates at low pressure drop, and low extractables. They are available in nominal and absolute rating.



Benefits

- Wide chemical compatibility
- High dirt hold capacity
- High retention
- Thermal bonding
- Non-fiber releasing

Typical Applications

- Process Water
- Vinegar
- Aqueous solutions
- Beer, Wine and Spirits
- Juice, Soft Drinks, Edible Oils
- Bulk Chemicals
- Pharmaceutical intermediates

Construction Materials

- Filter Media: Polypropylene
- Media Support: Polypropylene
- End Caps: Polypropylene
- Inner Core: Polypropylene
- Outer Cage: Polypropylene
- Sealing Method: Thermal Bonding

Sanitization/Sterilization

- Autoclavable
- Hot water

Toxicity

- All plastic parts meet the specifications for biological safety per USP Class VI -121°C for plastics.

Filter Area

Size	Filtration Area
------	-----------------

- | | |
|--------|------------------------|
| • 2.5" | =1480 cm ² |
| • 5" | =2650 cm ² |
| • 10" | =5500 cm ² |
| • 20" | =11000 cm ² |
| • 30" | =16500 cm ² |
| • 40" | =22000 cm ² |

Capsule Integrity

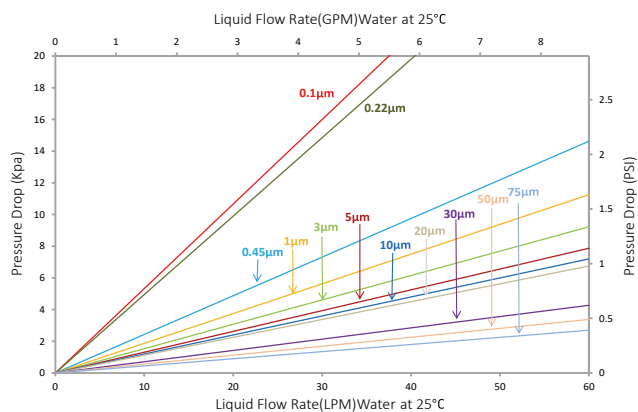
Minimum burst pressure: 123.5psi (8.5 barg) Food Safety Compliance

Materials of construction comply with FDA regulations for food and beverage contact use as detailed in the US Code of Federal Regulations, 21CFR.

Materials used to produce filter media and hardware are safe for use in contact with foodstuffs in accordance with EU Directives 10/2011

Maximum Operating Conditions

- Maximum operating pressure
 - Liquid: 5 bar (80psi) at 77°F/25°C
 - Gas: 3.5 bar (60psi) at 77°F/25°C
- Maximum Operating Temperature: 80 °C
- Autoclave at 125 °C, 30 minutes and 25 cycles
- Autoclave at 135 °C, 30 minutes and 15 cycles

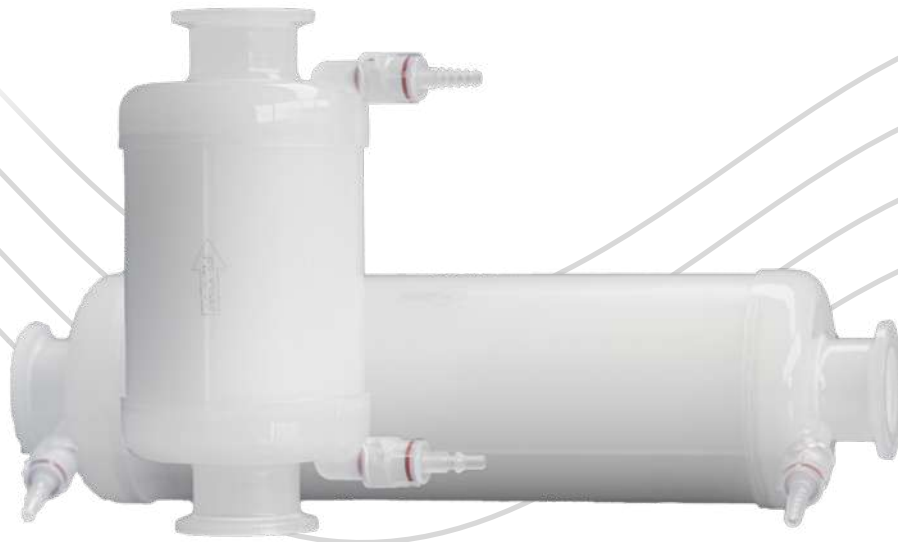


Eg.=>CIKPP0060GNSS5TCSS0

ORDERING INFORMATION								
Product Type	Membrane Type	Membrane pore size	Application	Sterilization	Size	Fittings In/Out	Vent/Drain	Revision
CIK = Capsule InT Filter	PP = Polypropylene	Application G	G = Gen Purpose	N = Not Sterile	SS = 2.5"	5TC = 1.5" TC	SS = St/St	0 = Bag label
		0060 = 0.6 µm	P= Premier		LL = 5"	2HB = 1/2" HB	HH = HB/HB	1 = Housing label
		Application P			TE = 10"	4HB = 3/4" HB	SH = St/HB	
		0100 = 1.0 µm			TW = 20"	T2B = 1.5" TC/ 1/2" HB	HS = HB/St	
		0300 = 3.0 µm			TH = 30"	T4B = 1.5" TC/ 3/4" HB		
		0500 = 5.0 µm			FO = 40"	2BT = 1/2"HB/ 1.5TC		
		0700 = 7.0 µm				2B4 = 1/2"HB/ 3/4"HB		
		1000 = 10.0 µm				4BT = 3/4"HB/ 1.5"TC		
		2000 = 20.0 µm				4B2 = 3/4"HB/ 1/2"HB		
		3000 = 30.0 µm						
		5000 = 50.0 µm						

CLK series Nylon membrane Bio-burden Reduction Capsule Filters

CLK series nylon membrane in an all-polypropylene construction provides excellent chemical compatibility and superior flow per unit area. The naturally hydrophilic nylon membrane does not require pretreating with IPA and flushing with DI water, thereby eliminating a potential source of contamination. The capsules are well-suited for critical applications where superior flow is required.



Capsule

Typical Applications

- Solvents
- Parts Cleaning
- Fine Chemicals
- Cosmetics
- Ink Jets
- Pharmaceuticals
- Process Water
- Biologics

Construction Materials

- Filter Media: Nylon
- Media Support: Polypropylene
- End Caps: Polypropylene
- Inner Core: Polypropylene
- Outer Cage: Polypropylene

Fitting Option

- 1.5" TC
- 0.5" TC
- 1/2" Hose Barb
- 3/4" Hose Barb

Vent/Drain Option

- Staubli
- Stepped hose barb

Filtration Area

Size	Filtration Area
------	-----------------

- 2.5" = 1480 cm²
- 5" = 2650 cm²
- 10" = 6200 cm²
- 20" = 12400 cm²
- 30" = 18600 cm²
- 40" = 24800 cm²

Toxicity

- All plastic parts meet the specifications for biological safety per USP Class VI -121°C for plastics.

Capsule Integrity

- Minimum burst pressure: 123.5psi (8.5 barg)

Cartridge Integrity Test Specifications

Pore size	Min.Bubble point
0.1 µm	3.5 barg@22°C
0.2 µm	2.8 barg@22°C
0.45 µm	1.8 barg@22°C
1 µm	0.6 barg@22°C

Food Safety Compliance

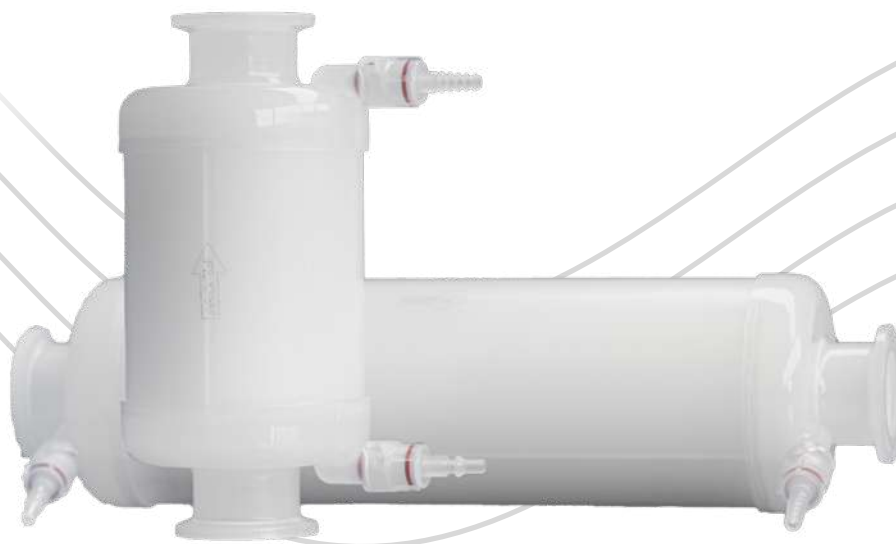
- Materials of construction comply with FDA regulations for food and beverage contact use as detailed in the US Code of Federal Regulations, 21 CFR.
- Materials used to produce filter media and hardware are safe for use in contact with foodstuffs in accordance with EU Directives 10/2011.

Eg.=>CIKNY0010GNSS5TCSS0

ORDERING INFORMATION								
Product Type	Membrane Type	Membrane pore size	Application	Sterilization	Size	Fittings In/Out	Vent/Drain	Revision
CIK = Capsule InT Filter	NY = Nylon	0010 = 0.1 µm	B= Low Bio	N = Not Sterile	SS = 2.5"	5TC = 1.5" TC	SS = St/St	0 = Bag label
		0020 = 0.2 µm			LL = 5"	2HB = 1/2" HB	HH = HB/HB	1 = Housing label
		0045 = 0.45 µm			TE = 10"	4HB = 3/4" HB	SH = St/HB	
		0100 = 1 µm			TW = 20"	T2B = 1.5" TC/ 1/2" HB	HS = HB/St	
					TH = 30"	T4B = 1.5" TC/ 3/4" HB		
					FO = 40"	2BT = 1/2"HB/ 1.5TC		
						2B4 = 1/2"HB/ 3/4"HB		
						4BT = 3/4"HB/ 1.5"TC		
						4B2 = 3/4"HB/ 1/2"HB		

CLK series PVDF membrane Bio-burden Reduction Capsule Filters

CLK series PVDF membrane capsule utilizes single layer hydrophilic PVDF membrane. It offers broad chemical compatibility, high flow rate and low extractables. No adhesives, binders, or surfactants are used during the manufacturing process resulting in superior downstream cleanliness. All filters are rinsed with high-purity water to reduce extractables and downtime.



Capsule

Typical Applications

- Beverages
- Fine Chemicals
- Pharmaceuticals
- Gas filtration
- Biologics
- Antibiotics

Construction Materials

- Filter Media: hydrophilic PVDF
- Media Support: Polypropylene
- End Caps: Polypropylene
- Inner Core: Polypropylene
- Outer Cage: Polypropylene

Fitting Option

- 1.5" TC
- 0.5" TC
- 1/2" Hose Barb
- 3/4" Hose Barb

Vent/Drain Option

- Staubli
- Stepped hose barb

Filtration Area

Size Filtration Area

- 2.5" =1500 cm²
- 4" =2000 cm²
- 5" =2700 cm²
- 10" =6300 cm²
- 20" =12600 cm²
- 30" =18900 cm²
- 40" =25200 cm²

Toxicity

- All plastic parts meet the specifications for biological safety per USP Class VI -121°C for plastics.

Capsule Integrity

- Minimum burst pressure: 123.5psi (8.5 barg)

Cartridge Integrity Test Specifications

Pore size	Min.Bubble point
0.1 µm	1.7 barg @ 22 °C / IPA
0.2 µm	3.5 barg @22°C
0.45 µm	2.0 barg @ 22°C
0.65 µm	1.1 barg@22°C

Food Safety Compliance

- Materials of construction comply with FDA regulations for food and beverage contact use as detailed in the US Code of Federal Regulations, 21 CFR.
- Materials used to produce filter media and hardware are safe for use in contact with foodstuffs in accordance with EU Directives 10/2011.

Eg.=>CIKPV0010BNSS5TCSS0

ORDERING INFORMATION								
Product Type	Membrane Type	Membrane pore size	Application	Sterilization	Size	Fittings In/Out	Vent/Drain	Revision
CIK = Capsule InT Filter	PV = PVDF philiic	0010 = 0.1 µm	B = Low Bio	N = Not Sterile	SS = 2.5"	5TC = 1.5" TC	SS = St/St	0 = Bag label
		0020 = 0.2 µm		S = Sterile	SL = 4"	2HB = 1/2" HB	HH = HB/HB	1 = Housing label
		0045 = 0.45 µm			LL = 5"	4HB = 3/4" HB	SH = St/HB	
		0065 = 0.65 µm			TE = 10"	T2B = 1.5" TC/ 1/2" HB	HS = HB/St	
					TW = 20"	T4B = 1.5" TC/ 3/4" HB		
					TH = 30"	2BT = 1/2"HB/ 1.5TC		
					FO = 40"	2B4 = 1/2"HB/ 3/4"HB		
						4BT = 3/4"HB/ 1.5"TC		
						4B2 = 3/4"HB/ 1/2"HB		

CLK series - Cellulose Acetate membrane Capsule Filters

Capsflow CLK series is family of full size capsule filters with Staubli connection at the vent, which enables in-line integrity test. The CA membrane capsule utilizes hydrophilic Cellulose Acetate membrane. It offers broad chemical compatibility, high flow rate and low extractable. Cellulose Acetate is particularly suited for the sterile filtration of vaccines, blood and plasma, and biopharmaceuticals with high product recovery. The low-adsorption membrane helps maintain the integrity of large, shear-sensitive proteins during processing.



Capsule

Typical Applications

- Bioprocessed pharmaceuticals
- Ophthalmics
- Coagulation factors, Albumin
- Diagnostics
- Blood and Serum Fractions
- Bacterial, viral & mRNA-based vaccines
- Purified protein solutions
- Biological fluids
- Fluids containing preservatives

Vent/Drain Option

- Staubli
- Stepped hose barb

Fitting Option

- 1.5" TC
- 1/2" Hose Barb
- 3/4" Hose Barb

Maximum Operating Conditions

- Maximum operating pressure
 - Liquid: 5 bar (80psi) at 77°F/25°C
- Maximum Operating Temperature: 80 °C
- Autoclave at 125 °C, 30 minutes and 25 cycles
- Autoclave at 135 °C, 30 minutes and 15 cycles

Toxicity

All materials meet the specifications for biological safety per USP Class VI -121°C for plastics

Filter Area

Size	Filtration Area
------	-----------------

- | | |
|--------|-------------------------|
| • 1.5" | = 900 cm ² |
| • 2.5" | = 1600 cm ² |
| • 5" | = 3200 cm ² |
| • 10" | = 6500 cm ² |
| • 20" | = 13000 cm ² |
| • 30" | = 19500 cm ² |
| • 40" | = 26000 cm ² |

Construction of Materials

- Filter Media: Cellulose Acetate
- Media Support: Polypropylene
- End Caps: Polypropylene
- Inner Core: Polypropylene
- Outer Cage: Polypropylene
- Sealing Method: Thermal Bonding

Food Safety Compliance

Materials of construction comply with FDA regulations for food and beverage contact use as detailed in the US Code of Federal Regulations, 21CFR. Materials used to produce filter media and hardware are safe for use in contact with foodstuffs in accordance with EU Directives 10/2011.

Cartridge Integrity Test Specifications

Water wetted membrane

Pore size	Min. Bubble point
0.2µm	3.2 barg@22°C
0.45µm	2.1 barg@22°C
0.65µm	1.3 barg@22°C
0.8µm	1.1 barg@22°C
1.2µm	0.7 barg@22°C

ORDERING INFORMATION								
Product Type	Membrane Type	Membrane pore size	Application	Sterilization	Size	Fittings In/Out	Vent/Drain	Revision
CIK = Capsule InT Filter	CA =CA	Application B	B =Low Bio	N = Not Sterile	XX = 1.5"	5TC = 1.5" TC	SS = St/St	0 = Bag label
		0020 = 0.2 µm						
		0045 = 0.45 µm						
		0065 = 0.65 µm	S = Ster Grade	S = Sterile	SS = 2.5"	2HB = 1/2" HB	HH = HB/HB	1 = Housing label
		0080 = 0.8 µm						
		0120 = 1.2 µm			LL = 5"	4HB = 3/4" HB	SH = St/HB	
		Application S						
		0402 = 0.45/0.2 µm			TE = 10"	T2B = 1.5" TC/ 1/2" HB	HS = HB/St	
		0602 = 0.65/0.2 µm						
		0604 = 0.65/0.45 µm			TW = 20"	T4B = 1.5" TC/ 3/4" HB		
		0804 = 0.8/0.45 µm			TH = 30"	2BT = 1/2"HB/ 1.5 TC		
		1204 = 1.2/0.45 µm			FO = 40"	2B4 = 1/2"HB/ 3/4"HB		
						4BT = 3/4"HB/ 1.5"TC		
						4B2 = 3/4"HB/ 1/2"HB		

Cellulosic Depth media Capsule Filter

Cellulosic depth media capsule filter have been designed for simple, quick, and efficient filtration of fluids used in laboratories, pilot, and small scale applications. The family of products is particularly suitable for high loading liquid applications. The compact design of the filters with respect to the filtration area, reduces hold-up volume and optimizes performance. Multiple pore size options is assembled in all polypropylene construction for excellent chemical compatibility.

The cellulosic depth media is structured in a stacked disk format to provide optimal flow. No adhesives, binders, surfactants are used in the process of manufacture.



Typical Applications

- Prefiltration
- Secondary clarification
- Cell culture harvest
- Cell culture clarification protein aggregate removal

Filtration Area

- Single layer: $1300\text{cm}^2/10''$
- Double layer: $650\text{cm}^2/10''$

Material construction

- Filter Media: -Cleaned and bleached cellulose
-Natural filter aid (kieselguhr, perlite)
- Media Support: Polypropylene
- End Caps: Polypropylene
- Inner Core: Polypropylene
- Outer Cage: Polypropylene

Fitting Option

- 1.5" TC
- 1/2" Hose Barb
- 3/4" Hose Barb
- 314" TC

Vent/Drain Option

- Staubli
- Stepped hose barb

Toxicity

All materials meet the specifications for biological safety per USP Class VI -121°C for plastics

Capsule Integrity

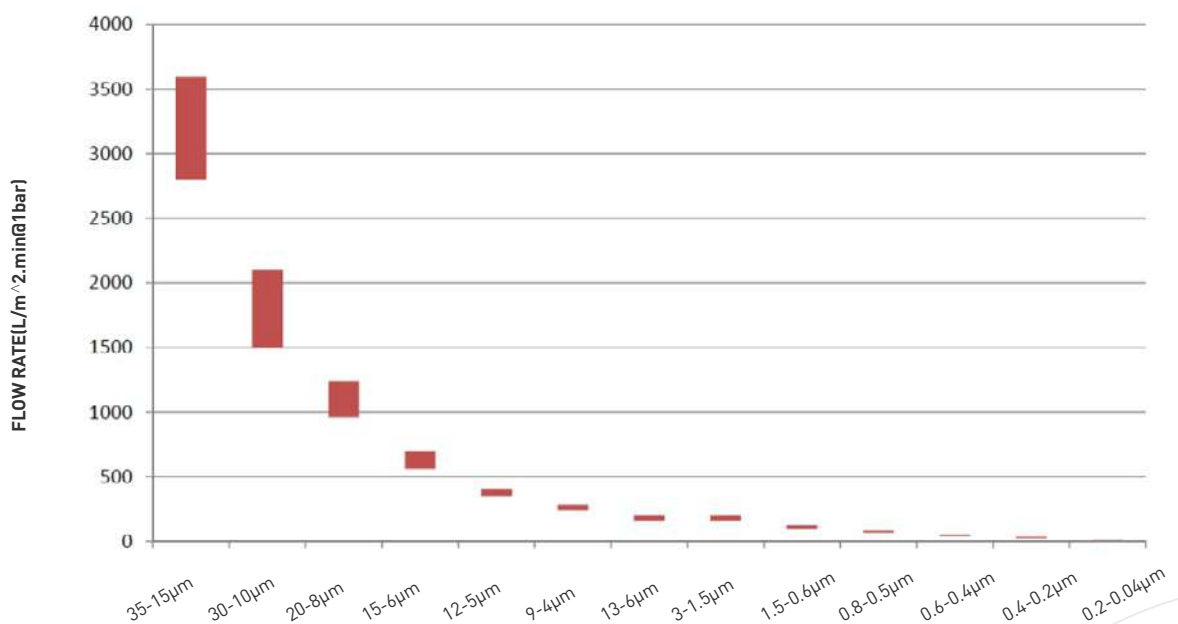
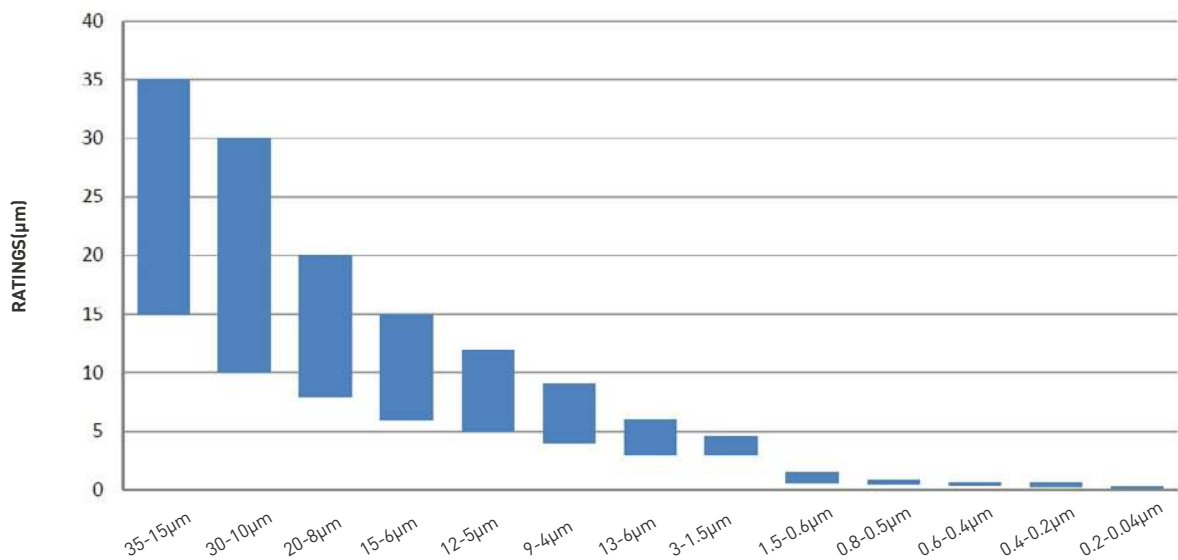
Minimum burst pressure: 123.5psi (8.5 barg)

Food Safety Compliance

Materials of construction comply with FDA regulations for food and beverage contact use as detailed in the US Code of Federal Regulations, 21CFR. Materials used to produce filter media and hardware are safe for use in contact with foodstuffs in accordance with EU Directives

Media Grade/Rating

	Retention Rating/ μm
Coarse filtration	35-15
Coarse filtration	30-10
Coarse filtration	20-8
Clear filtration	15-6
Clear filtration	12-5
Clear filtration	9-4
Clear filtration	6-13
Fine filtration	3-1.5
Germ Reduction filtration	1.5-0.6
Sterile Filtration	0.8-0.5(Serratia marcescens, LRV>5)
Sterile Filtration	0.6-0.4(Serratia marcescens, LRV>7)
Sterile Filtration	0.4-0.2(Serratia marcescens, LRV>8)
Sterile Filtration	0.2-0.04(Serratia marcescens, LRV>8)



Eg.=>CKCCCZ2Y4GNSS5TCSS0

ORDERING INFORMATION								
Product Type	Membrane Type	Membrane pore size	Application	Sterilization	Size	Fittings in / out	Vent/Drain	Revision
CKC = Capsule InT Depth Filter	CC = Cellulose	Z2Y4 = 0.2-0.04µm	G = Gen Purpose	N = Not Sterile	SS = 2.5"	5TC = 1.5" TC	SS = St/St	0 = Bag label
CCT = Capsule T-Line Depth Filter		Z4Z2=0.4-0.2µm			LL = 5"	2HB = 1/2" HB	HH = HB/HB	1 = Housing label
CCT is only available in 1.5"TC connection		Z6Z4 = 0.6-0.4µm			TE = 10"	4HB = 3/4" HB	SH = St/HB	
		Z8Z5=0.8-0.5µm			TW = 20"	T25 = 3/4" TC	HS = HB/St	
		15Z6=1.5-0.6µm			TH = 30"			
		3X15=3-1.5µm						
		9XX4=9-4µm						
		12X5=12-5µm						
		13X6=13-6µm						
		15X6=15-6µm						
		20X8=20-8µm						
		3010=30-10µm						
		33515=35-15µm						

CXK series

Steaming in Place Capsule Filter

CXK series

Steaming in Place Capsule Filters

The GVS CXK Capsflow Steaming in Place Capsule filters have a standard filter sealed in a robust plastic housing, which remains high-strength and integral at a harsh applications.

Typically Steaming in Place (SIP) sterilization. Capsflow filters are manufactured under criteria of certified Quality management system ISO 9001. All filters are integrity tested during manufacture to meet the set requirements. Materials of construction comply with FDA regulations for food and beverage contact use.



Capsule

Benefits

- Purpose-designed for SIP
- Cost-saving
- Easy connection with sanitary flange
- On-line connection to automatic integrity tester Available in multiple choice of media and ratings

Typical Application

- Sterile filtration of air and liquid in pharmaceutical and biological products
- Sterile air feed

Construction Materials

- Hydrophobic Filter membrane: PTFE,
- Hydrophilic Filter membrane: PES, NYLON
- Media Support: Polypropylene
- End Caps: Polypropylene
- Inner Core: Polypropylene
- Outer Cage: Polypropylene
- Filter sealing without glue in housing

Traceability

Each capsule is marked with a unique part number, batch number and serial number to enable full traceability

Size

- 2.5" (84 mm)
- 5" (159 mm)

Toxicity

All components meet the specifications for biological safety per USP class VI 121°C for plastic

Food Safety Compliance

Materials of construction comply with FDA regulations for food and beverage contact use as detailed in the US Code of Federal Regulations, 21 CFR. Materials used to produce filter media and hardware are safe for use in contact with foodstuffs in accordance with EU Directives 10/2011. Rohs 2011/65/EU compliance.

Filtration Area

CXKPT (PTFE), CXKPS (PES)

- 2.5" : 600 cm²

CXKNY (NYLON)

- 2.5" : 700 cm²
- 5" : 2100 cm²
- 5" : 1700 cm²

Performance data

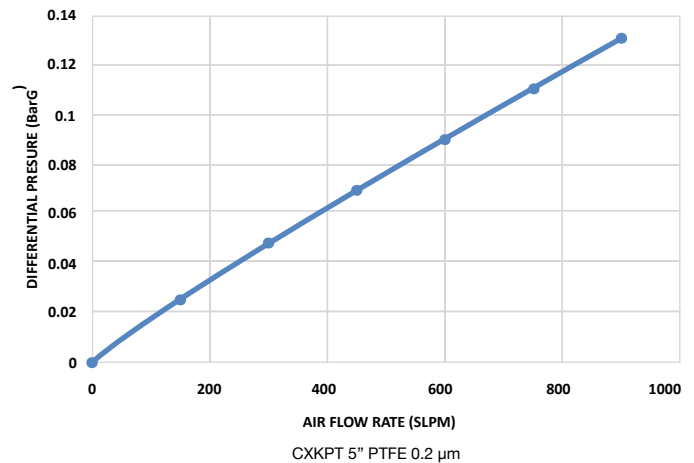
	CXKPT			CXKPS				CXKNY		
Filter membrane	PTFE (Hydrophobic)			PES (Hydrophilic)				NYLON (Hydrophilic)		
Membrane pore size	0.05 µm	0.1 µm	0.2 µm	0.45 µm	0.1 µm	0.21 µm	0.45 µm	0.1 µm	0.21 µm	0.45 µm
Flow rate 2.5" Liquid 1 cP *	2lpm@6psid 3.1lpm@6psid			5.9lpm@6psid	7.5lpm@5psid	5lpm@5psid	5lpm@2.6psid	4lpm@8.5psid	5lpm@5.5psid	5lpm@3.5psid
Flow rate 5" Liquid 1 cP *	5lpm@6.5psid 5lpm@4psid			5lpm@1.9psid	5lpm@4psid	5lpm@2.2psid	5lpm@1.3psid	5lpm@4.6psid	5lpm@3.4psid	5lpm@2.8psid
Maximum Operating Parameter Pressures Forward/Reverse (bar)	6.5/3.5	6.5/3.5	6.5/3.5	6.5/3.5	6.5/3.5	6.5/3.5	6.5/3.5	6.5/3.5	6.5/3.5	6.5/3.5
Integrity Test specification Bubble point (bar)	2.7 (IPA)	1.6 (IPA)	1.6 (IPA)	0.5 (IPA)	1.8 (IPA)	3.6 (WATER)	2.6 (WATER)	4.5 (WATER)	3.3 (WATER)	1.9 (WATER)
N. SiP sterilization cycles	100 cycles @126 °C				50 cycles @126 °C			50 cycles @126 °C		

* CXKPT (PTFE - Hydrophobic) IPA Wetted membrane

Maximum Operating Conditions

- CXKPT (PTFE) 0.2 µm:
- Maximum Pressure: 5.8 barg @ 40°C
- Maximum Differential Pressure: 5barg @ 40°C

Typical Air Flow Rate



Eg.=>CXKPT0005XNSS5TCSS0

ORDERING INFORMATION								
Product Type	Membrane Type	Membrane pore size	Application	Sterilization	Size	Fittings in / out	Vent/Drain	Revision
CXK = Capsule SIP Filter	PT = PTFE phobic	0005 = 0.05 µm (PT only)	X = Steaming in place	N = Not Sterile	SS = 2.5" LL = 5"	5TC = 1.5" TC	SS = St/St	0 = Bag label
	PT = PES	0010 = 0.1 µm					HH = HB/HB	
	NY = NYLON	0020 = 0.2 µm					SH = St/HB	
							HS = HB/St	

CIL series

In-line filter PES membrane Capsule Filter

TIn line filter PES membrane

Capsule Filters bio-burden reduction

The TIn-line capsule filters is family of full size capsule filters available in multiple option of length. The PES membrane capsule utilizes single layer hydrophilic polyethersulfone membrane. It offers broad chemical compatibility, high flow rate and low extractables.

Polyethersulfone is particularly suited for the filtration of products that contain substances that adsorb to the media. The lower binding characteristics of polyethersulfone make it a good choice for filtration of valuable protein solutions such as vaccines and biologicals.



Capsule

Typical Applications

- Cell Culture Media
- Large Volume Parenterals (LVP's)
- Pharmaceutical Bulk Chemical Solutions
- Diagnostics
- Blood and Serum Fractions
- Purified Water
- Beer, Wine and Spirits
- Juice & Soft Drinks
- Bottled Water

Toxicity

All materials meet the specifications for biological safety per USP Class VI -121C° for plastics.

Filter Area

- 6000cm²/10"

Fitting Option

- 1.5" TC

Vent/Drain Option

- Stepped hose barb

Capsule Integrity

- Minimum burst pressure: 123.5psi (8.5barg)

Construction Materials

- Filter Media: Polyethersulfone
- Media Support: Polypropylene
- End Caps: Polypropylene
- Inner Core: Polypropylene
- Outer Cage: Polypropylene
- Sealing Method: Thermal Bonding
- Filter sealing without glue in housing

Food Safety Compliance

Materials of construction comply with FDA regulations for food and beverage contact use as detailed in the US Code of Federal Regulations, 21CFR. Materials used to produce filter media and hardware are safe for use in contact with foodstuffs in accordance with EU Directives 10/2011.

Capsule Integrity Test Specifications

Pore size	Min.Bubble point	Diffusive Flow
0.2 µm	3.5 barg@22°C	≤28ml/2.8 barg
0.45 µm	2.3 barg@22°C	≤25ml/1.7 barg
0.65 µm	1.6 barg@22°C	≤25ml/1.0 barg

Eg.=>CILPS0020BNSS5TCHH0

ORDERING INFORMATION								
Product Type	Membrane Type	Membrane pore size	Application	Sterilization	Size	Fittings In/Out	Vent/Drain	Revision
CIL= TIn-Line Capsule Filter	PS = PES	0020 = 0.2 µm	B =Low Bio	N = Not Sterile	SS = 2.5"	5TC = 1.5" TC	HH = HB/HB	0 = Bag label
		0045 = 0.45 µm			LL = 5"			1 = Housing label
		0065 = 0.65 µm			TE = 10"			
					TW = 20"			
					TH = 30"			
					FO = 40"			

CIL series

Hydrophobic PTFE membrane
Capsule Filter

TIn line filter Hydrophobic PTFE membrane

Capsule Filters bio-burden reduction

The TIn-line capsule filters is family of full size capsule filters available in multiple option of length. The PTFE membrane bio-burden reduction capsule utilizes single layer hydrophobic PTFE membrane. It offers broad chemical compatibility, high flow rate and low extractables.



Capsule

Benefits

- 100% integrity tested
- FDA food contact compliant
- Thermal bonding
- Non-fiber releasing

Typical Applications

- Sterile air feed
- Chemicals
- Pharmaceuticals
- Solvent

Toxicity

- All materials meet the specifications
- far biological safety per USP Class
- VI -121C° far plastics.

Filter Area

- 6500 cm²/10"

Fitting Option

- 1.5" TC

Vent/Drain Option

- Hose barb

Capsule Integrity

- Minimum burst pressure: 123.5psi (8.5barg)

Construction Materials

- Filter Media: ePTFE membrane
- Media Support: Polypropylene
- Capsule: Polypropylene
- Inner Core: Polypropylene
- Outer Cage: Polypropylene
- Sealing Method: Thermal Bonding

Sanitization /Sterilizaion

Autoclavable

Food Safety Compliance

Materials of construction comply with FDA regulations for food and beverage contact use as detailed in the US Code of Federal Regulations, 21CFR. Materials used to produce filter media and hardware are safe for use in contact with foodstuffs in accordance with EU Directives 10/2011

Capsule Integrity Test Specifications

Pore size	Bubble point	Water Intrusion	Diffusive Flow
0.2 µm	≥ 1.2 barg(IPA/Water)	≤ 0.37ml/min @2500mbar/10",22°C	≤ 10ml/min @800mbar/10",22°C

Eg.=>CILPT0020BNSS5TCHH0

ORDERING INFORMATION								
Product Type	Membrane Type	Membrane pore size	Application	Sterilization	Size	Fittings In/Out	Vent/Drain	Revision
CIL= TIn-Line Capsule Filter	PT = PTFE phobic	0020 = 0.2 µm	B =Low Bio	N = Not Sterile	SS = 2.5"	5TC = 1.5" TC	HH = HB/HB	0 = Bag label
					LL = 5"			1 = Housing label
					TE = 10"			
					TW = 20"			
					TH = 30"			
					FO = 40"			

Bio Depth Capsule Filter

Bio Depth Capsule Filter

The Bio Depth Capsule Filter are designed for Bio-products industry which mainly used in cell harvest clarification and downstream liquid filtration. The MSBDID is for lab scale filtration, MSBDED is for pilot testing research and lab scale protein production. The MSBDRD includes three models with different processing capabilities: small, large and integrated models. All models are comprised of a holder, a set of top and bottom separators, and a number of filter modules that can be adjusted. The Bio Depth Capsule Filters have completely independent filter medium, its pore size of upper and lower layer is asymmetrical, this design not only helps to enhance the contaminant holding capacity but also helps to extend the service life of the filter cartridge.

Application

- Culture medium filtration
- Cell lysates filtration
- Host cell protein or hybrid protein aggregates filtration
- Protect downstream process

Features

- Disposable design makes it easier to install and dismantle
- High contaminant holding capacity
- High filtration efficiency for impurities
- Manufactured in a clean room environment

Bio-Safety

Endotoxin	Comply with USP<85>, endotoxin content <0.25EU/ mL
Biocompatibility	Comply with USP<87>USP<88>

Construction of Materials

MediaCellulose	filter-aids and resins
Core/Cage/End Cap	PP/PC
Seal Material Option	Silicone

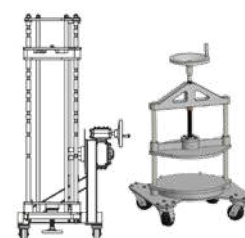
Performance

Max. Operating Temperature	40 °C(104°F)
Max. Operating DP	3 bar (44 psi) 125°C, 30min,
Autoclaving	1cycle



MSBDD-L

Filtration Area: 4000cm²



Filter Holders



MSBDID

Filtration Area: 34cm²



MSBDED-S

Filtration Area: 1600cm²



Single cell capsule

Filtration Area: 0.23m²(2.4ft²)



Multicell capsule

Dual layer:1 .6m²(17.2ft²)
Single layer:2 .5m²(27.0ft²)

ORDERING INFORMATION		
Product Type	Core	Removal Rating
MSBDID	P = PP	C0102 = 0.1~0.4µm C0105 = 0.1~0.8µm C0140 = 0.1~9µm C0240 = 0.2~9µm C0290 = 0.2~20µm C0690 = 0.6~20µm C0890 = 0.8~20µm

ORDERING INFORMATION			
Product Type	Core	Removal Rating	Length
MSBDID	P = PP	C0102 = 0.1~0.4µm C0105 = 0.1~0.8µm C0140 = 0.1~9µm C0240 = 0.2~9µm C0290 = 0.2~20µm C0690 = 0.6~20µm C0890 = 0.8~20µm	S = Short L = Long

ORDERING INFORMATION						
Product Type	Membrane	Removal Rating	Filter Cell	Layer		Seal Material
MSBDID	C = PC	C0102 = 0.1~0.4µm C0105 = 0.1~0.8µm C0140 = 0.1~9µm C0240 = 0.2~9µm C0290 = 0.2~20µm C0690 = 0.6~20µm C0890 = 0.8~20µm	S= Single-Cell Capsule L = Multi-Cell Capsule	001=1 003=3 005=5 007=7 009=9 011=11	002=2 004=4 006=6 008=8 010=10	S = Silicone B=None T=Top R=Bottom TR= Top + Bottom

Disk Capsule Filter

Disk Capsule Filter

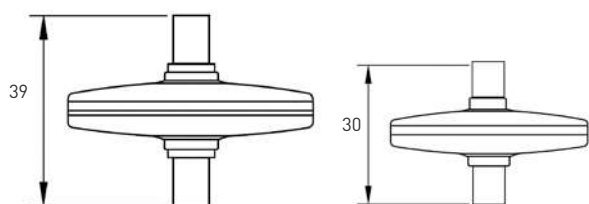
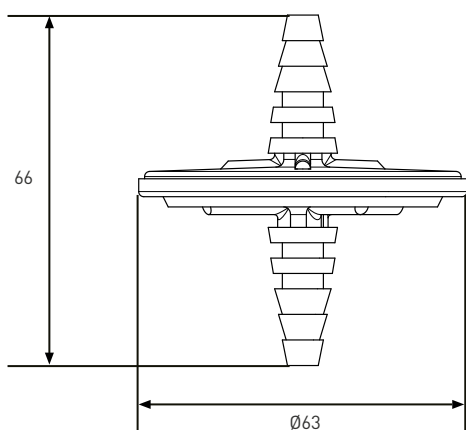
GVS disk filters are a family of capsule filters specifically designed for small volume, critical applications of gas and liquid filtration in pharmaceutical and biotechnology.



Typical Applications

- Sterile venting of small containers, vessels
- Sterile ventilation of small bioreactors
- Small volume liquid application

Dimensions



Advantages

- Cost Saving
- Easy connection
- 100% Integrity Test
- Available in multiple choice of media and ratings

Construction of Materials

Filter Membrane	PTFE, PES, Nylon, PVDF, PP
Media Support	PP
End Caps	PP

Active Filtration Area

21cm²

Toxicity

All materials meet the specifications for biological safety per USP Class VI -121C° for plastics.

Food Safety Compliance

Materials of construction comply with FDA regulations for food and beverage contact use as detailed in the US Code of Federal Regulations, 21CFR. Materials used to produce filter media and hardware are safe for use in contact with foodstuffs in accordance with EU Directives 10/2011

Eg.=>CDK50PT0004G4M24M20

订购信息							
Product Type	Membrane Type	Membrane pore size	Application	Fittings in	Fittings out	Revision	Filling Bell
CDK50 = Disk Filter	PT = PTFE phobic	0004 = 0.04µm	G = Gen Purpose	4M2 = 1/4"-1/2" M.Step HB	4M2 = 1/4"-1/2" M.Step HB	0 = Rev.0	B = Filling Bell
	PS = PES philic	0010 = 0.1µm	I = Ster. Gr. IR	1NM = 1/8" NPT	1NM = 1/8" NPT	1 = Ster Pack-R	Blank = without Filling Bell
	SH = PES phobic	0020 = 0.2µm		1LL = Luer	1LL = Luer		
	NY = Nylon	0045 = 0.45µm					
	PV = PVDF philic	0065 = 0.65µm					
	PP = PP	0100 = 1µm					
		0300 = 3µm					

Filter Integrity Tester



Filter Integrity Tester

GVS filter integrity tester is a new-generation device signed according to the latest GAMP guidelines. It combines intelligent technology with high-sensitivity performance and features large-capacity accurate data recording, exporting, and printing functions. The tester's system is designed for greater stability, making it suitable for most cleanroom environments. The device is lightweight, compact, and ergonomic. Its 10-inch high-definition truecolor touch screen enhances usability and simplifies operation.

Additionally, the equipment complies with GMP guidelines and meets FDA 21 CFR Part 11 requirements for electronic records, and 21 CFR 820.72 for calibration.

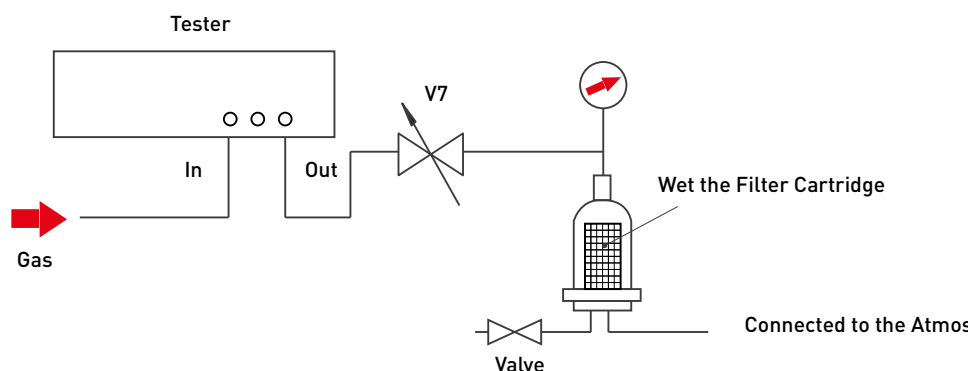


Diagram of Connection Between Tester and Filter

Product Code

ITMDG020

Features

◆ Innovation of Hardware Configuration

- The new high-performance industrial-grade dual-core design CPU significantly improves the data processing speed and capability to ensure the safety, reliability, and efficiency of the instrument during operation.
- The structure is optimized to achieve front IP65 level dust and splash protection, with superior internal sealing for reliable operation in wet environments, enhancing durability.
- The device features a 10-inch true-color touch screen design and a user-friendly interface, allowing for simple, quick, and reliable operation.
- The built-in thermal printer avoids the risk of particle and ink contamination, hardly produces any particles during the printing process, meets the FDA requirements for data recording, can maintain legible writing under the appropriate conditions for more than 10 years, and the printing paper outlet design is ergonomic.
- The instrument supports various industrial buses and analog control ports, tailored to customer needs. It features a rich data interface, including standard digital and analog interfaces (RS232/USB), and offers a USB disk data export function. This function exports not only the original test data but also source data and configuration data, enhancing flexibility.
- The equipment adopts compact and lightweight design, small size, light weight, less energy consumption, easy to carry.

◆ Flexible and Steady Operating System Design

- Optimize the Linux system, enhance the autonomy of the instrument, its stability has been fully verified, optimize test operation, and reduce the test time.
- With a perfect boot-up automatic self-check function and comprehensive diagnostic capabilities, the instrument ensures accurate operation.
- The scientific electronic signature system and user hierarchy management mechanism enhance responsibility division, reduce misoperations, and increase standardization and security in laboratory management.
- High-precision sensors and optimized algorithms can extend the gas path to 100m, make the upstream volume test more accurate, and the instrument can better meet the conditions of field use without affecting the test results.
- The operation interface displays the test data and process curve in real time, and monitors the test process throughout the process to ensure the accuracy and controllability of the test.
- Audit trail records can be exportable and be quickly queried record storage 5 years.
- Support database encryption export, which perfectly reflects the data integrity requirements of the instrument.
- Implemented an efficient calibration process to ensure accurate pressure and flow measurements within instrument test thresholds.

◆ Comprehensive Testing and Data Processing Capabilities

- Comprehensive and powerful, it covers all existing test methods for filter integrity, including the integrity testing of ultrafiltration systems.
- Advanced digital sensor technology is utilized to significantly enhance the accuracy and consistency of test results, ensuring precise evaluation of the performance indicators of the tested filter.
- Conduct both offline (with battery) and online testing using pressure sensors that provide higher accuracy and lower deviation.
- The tester provides detailed and comprehensive test data, along with complete test curves that accurately reflect various performance indicators of the filter being tested, delivering precise analytical information to users.
- Up to 12 20-inch filters can be tested, which greatly improves the user's work efficiency.

◆ Secure and Reliable Data Storage Capability

- Historical records can store up to 300,000 test results, support quick query and generate PDF test reports.
- "Reservation Solution (programs)" design simplifies operation, can establish 1000 sets of pre-stored programs, and fully meets multiple filter types and different test conditions in the field, which is more intelligent, simpler, and accurate.
- User-level management allows for the creation of up to 1,000 user accounts, which can be easily queried.
- The information base can store 5000 fault information and prompt information, and can be quickly queried.

Parameters

Dimension

- Weight: 8.2kg
- Depth x Width x Height:
350mm x 352mm x 178mm
(13.78in. x 13.86in. x 7.01in.)

Filter Test Methods

- Bubble point Test
- Extensive Bubble Point Test
- Pressure Holding Test
- Diffusion FLOW Test
- Water Intrusion Test
- Ultrafiltration Membrane Test

Function Test Methods

- Self-check
- Flow Check Test
- Printer Test
- Network Test

Other Functions

- Anti-backflow device (optional)
- Cleaning function
- Test program transfer functionality
- Set the transfer function
- Rights management transfer function
- Test result output function
- Backup function

Pressure Options

- mbar
- kPa
- psi
- kgf/cm²

Communication Ports

- USB
- RS232C
- Ethernet
- Wireless Ethernet Network (optional)

Test Accuracy

- Upstream Volume Test: $\pm 4\%$
- Bubble Point Test: $\pm 50\text{mbar}$
- Diffusion Flow Test: $\pm 4\%$
- Water Intrusion Test: $\pm 0.01\text{ml}$

Test Range

- Bubble Point: 100-8000mbar
- Diffusion Flow: 1-1000ml/min
- Water Intrusion: 0.01-100ml/min

Electrical Supply

- Voltage: Automatically adjusted between 100-240V AC , external power supply (including EU, UK, US, AU adaptors)
- Input Frequency: 50/60HZ
- Charging Power: 120W
- Spare Battery (optional)

Operation Conditions

- Operating Pressure: 100-10000 mbar (150psi)
- Dust and Splash Level: IP54, Front is IP65
- Operating Temperature: $+5^{\circ}\text{C}$ to $+40^{\circ}\text{C}$
- Storage Temperature: -20°C to $+70^{\circ}\text{C}$ Relative Humidity: 10-80%
- Applicable Environment: Above D level
- Usage: Online/Offline (with battery)

Display Screen

- Size: 10.1 inch
- Resolution: 1024x768 pixels
- Features: High definition, color, bright background, touch screen

Information Records

- Reservation Solution(programs): 1000 sets
- History Record Function: No limit on the number of records stored
- Result Backup: Support U disk export data (including test curve)

Audit Trial

- Audit trail records can exportable and irreversible
- Record storage 5 years

Printer

- Audit trail records can exportable and irreversible
- Record storage 5 years

User Management

- Authority Management: Login level 4 permission in full compliance with FDA 21CFR PART 11
- Number of Accounts : 1000

Operating System

- Linux System (more stable than Windows)

Applied Scope

- Symmetric and asymmetric membrane test, needle filters, capsule filters, flat filters, cartridge filters, ultrafiltration membrane packages, ultrafiltration columns, various irregular filters

Calibration Item

- Calibration limits for pressure sensors and flow measurements

Signal Output

- [4-20]mA, RS485, 12V alarm output



FibraFlow Tangential Flow



GVS provides comprehensive solutions on tangential flow filtration

TFFSPS01000301080N

1 Material of hollow fiber membrane

PS	PES(Modified polyethersulfone)
----	--------------------------------

2 MWC0

010M	0.1μm
020M	0.2μm
045M	0.45μm

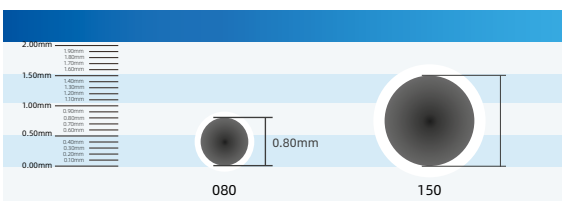
3 Passageway length

03	30cm
06	60cm
11	110cm

4 Housing Specifications

Code	Scale	Inner diameter(mm)	Membrane area(m²)	Passageway length(cm)	Housing length	Interface specifications Inlet/Return Port through Port
01	small scale	3	0.00067	27	32.2	4mm males luer female luer head 4mm males luer female luer head
02			0.0014	56	62.2	
03	middle scale	9	0.017	27	31.8	TC25(1/2")
04			0.035	56	61.8	TC25(1/2")
05		19	0.10	27	33.3	TC25(1/2")
06			0.20	56	63.3	TC25(1/2")
07	production	32	0.24	27	31.2	TC50(1-1/2")
08			0.50	56	61.2	TC25(1/2")
09		51	0.53	27	35.5	TC50(1-1/2")
10			1.1	56	65.5	TC25(1/2")
11	production	76	2.7	53	67.9	TC64(2")
12			5.1	101	117.9	TC50(1-1/2")
13		108	5.0	50	70.9	TC64(2")
14			10	101	121.9	TC50(1-1/2")

5 Member diameter



6 Specification

N	common filter
A	autoclavable filter
SU	single-use, irradiated

Hollow Fiber Filter



Applications:

- Lysate clarification
- Upstream cell perfusion culture
- Inclusion body clarification and renaturation
- Nanoparticle Diafiltration and Separation
- Liposome concentration and diafiltration
- Cell concentration, clarification, diafiltration
- Purification, concentration, diafiltration of proteins and nucleic acids
- Virus purification, concentration, diafiltration

The production raw materials of this product meet the requirements of EMEA/410/01.

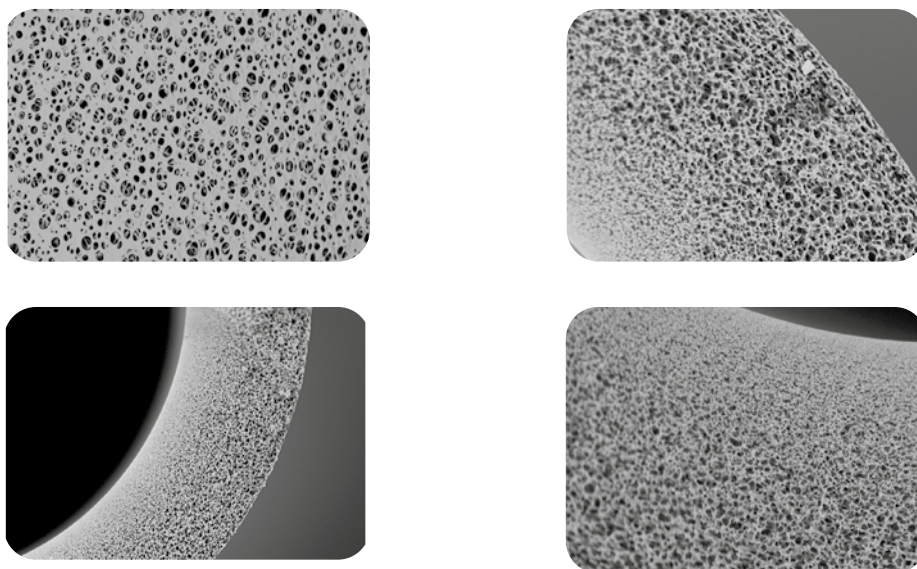
The technical parameters of this product meet the following regulatory requirements:

- Biological Reactivity Test, In Vivo per USP<88>Class VI
- 21CFR177 Indirect Food Additives
- L929 MEM Elution test - ISO 10993-5(Cytotoxicity)
- Hemolysis - Rabbit Blood (direct contact) - ISO 10993-4

The production of this product meets the requirements of 15013485:2016 quality management system.

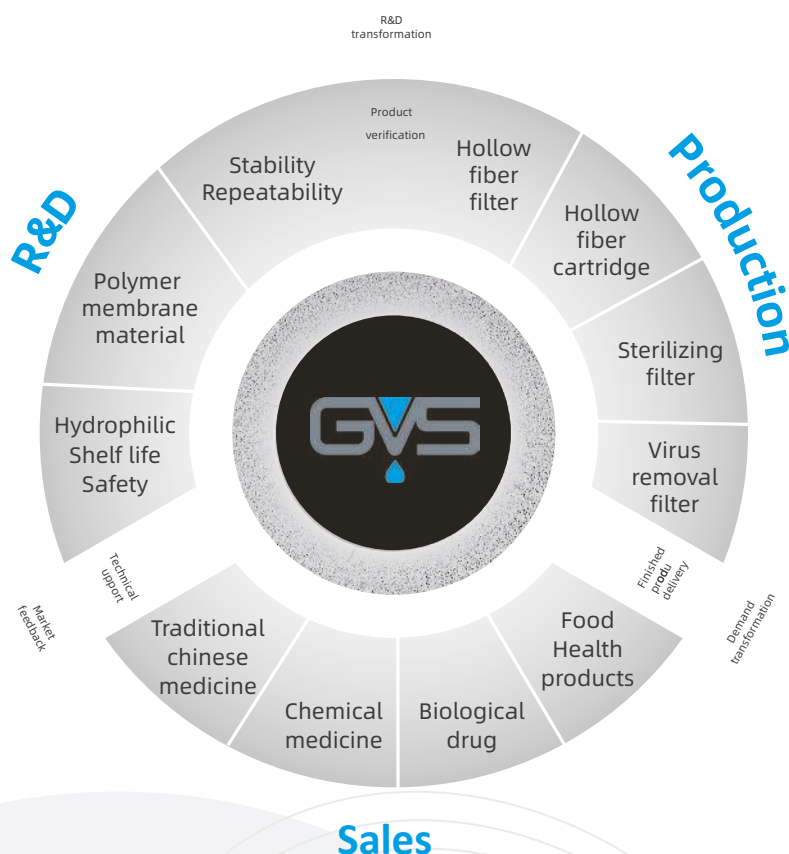
Hollow Fiber Membrane

GVS hollow fiber filter is made of modified polyethylene inkstone (mPES), which is suitable for filtration of various processes in the pharmaceutical industry (such as biopharmaceuticals, chemical drugs etc.) and the food industry. It can provide stable and reliable filtration performance.



GVS hollow fiber membrane made of modified polyphenol is an asymmetric structure, the membrane layer is dense, and the outer layer is relatively open. Its unique structural design can result in lower bioburden, lower non-specific adsorption, faster filtration rate, higher throughput, and shorter filtration time, so it is very suitable for the pharmaceutical and food industries.

GVS takes advantage of its professional production process in “membrane” to speed up the development of the biomedical industry



Chemical Compatibility Table

Code indication: R=recommended; L=limited exposure; NR=not recommended; U=unknown

Solvent / Material	Regenerated cellulose (RC)	Polysulfone(PS) polyethersulfone (PES)	Modified polyethersulfone (mPES)	Polypropylene (PP)	Polyvinylidene fluoride (PVDF)	Nylon (N)	Stainless steel (SS)	Polyester (P)	Fluorocarbons (F)
Ammonia (diluted)	R	R	R	R	R	R	R	U	R
Ammonia (diluted)(10%)	L	R	R	R	R	R	R	U	R
aniline	R	NR	NR	R	R	R	R	U	R
benzaldehyde	R	NR	NR	R	L	U	L	NR	R
phenol (0.5%)	R	R	R	R	R	NR	L	L	R
phenol (10%)	R	L	L	R	R	NR	L	NR	R
propanol	R	R	R	R	R	NR	R	R	R
acetone	R	NR	NR	R	L	R	R	R	R
acetic acid (5%)	R	R	R	R	R	NR	L	L	R
acetic acid (25%)	R	L	L	R	R	NR	L	NR	R
sodium hypochlorite	R	R	L	L	R	NR	NR	U	R
butanol	R	R	R	R	R	L	R	R	U
xylene	R	NR	NR	R	R	R	L	NR	R
dichloromethane	R	L	L	R	R	L	L	NR	R
dimethylformamide	L	NR	NR	R	NR	R	R	NR	U
dimethyl sulfoxide (50%)	U	L	L	U	U	U	U	U	U
glycerin	R	R	R	R	R	R	R	R	R
peracetic acid (0.1N)	U	R	R	U	U	U	U	U	U
perchloric acid(25%)	L	NR	NR	NR	R	NR	L	U	R
toluene	R	NR	NR	R	R	R	R	U	R
cresol	R	NR	NR	R	NR	NR	R	U	R
methanol	R	L	L	R	R	L	R	U	R
formaldehyde (2%)	R	R	R	R	R	R	R	R	R
formaldehyde (30%)	R	R	R	R	R	R	R	R	R
formic acid (25%)	R	R	R	R	R	NR	L	NR	R
formic acid (50%)	R	R	R	R	R	NR	L	NR	R
phosphoric acid (25%)	L	L	L	R	R	L	NR	U	R
sulfuric acid(5%)	R	R	R	R	R	L	NR	NR	R
sulfuric acid(25%)	L	R	R	R	R	NR	NR	NR	R
citric acid(2%)	U	R	R	U	U	U	U	U	U
urea	R	R	R	R	R	R	L	R	R
urea (6N)	R	NR	R	R	R	R	L	R	R
boric acid	R	R	R	R	R	L	L	R	R
hydrofluoric acid (25%)	L	L	L	NR	R	L	NR	NR	R
potassium hydroxide (1N)	R	R	R	R	R	L	L	R	R
potassium hydroxid (25%)	R	R	R	R	R	L	L	R	R
sodium hydroxide (0.1N)	R	R	R	R	R	R	L	R	R
sodium hydroxide (5%)	L	R	R	R	R	R	L	L	R
sodium hydroxide (25%)	L	R	R	R	R	R	L	NR	R
trichloroacetic acid (25%)	NR	R	R	R	R	L	NR	NR	R
trichloromethane (chloroform)	R	NR	NR	R	R	R	R	R	R
triethylamine	R	NR	NR	L	R	R	R	U	R
carbon tetrachloride	R	NR	NR	R	R	NR	L	R	U
tetrahydrofuran	R	NR	NR	R	R	R	R	R	R
diacetone alcohol	R	NR	NR	R	R	R	L	U	R
hydrogen peroxide(30%)	R	L	L	R	R	NR	L	R	R

Solvent / Material	Regenerated cellulose (RC)	Polysulfone(PS) polyethersulfone (PES)	Modified polyethersulfone (mPES)	Polypropylene (PP)	Polyvinylidene fluoride (PVDF)	Nylon (N)	Stainless steel (SS)	Polyester (P)	Fluorocarbons (F)
petroleum ether	R	R	R	R	R	U	U	R	U
nitric acid(5%)	R	R	R	R	NR	NR	R	R	R
nitric acid (25%)	NR	R	R	R	NR	NR	R	L	R
nitric acid (6N)	NR	L	L	L	R	NR	R	R	R
acetonitrile	R	NR	NR	R	L	U	U	U	U
ether	R	NR	NR	L	L	R	R	NR	R
ethyl acetate	R	NR	NR	R	R	R	L	U	R
amyl acetate (banana oil)	R	NR	NR	R	R	L	R	L	R
ethanol	R	R	R	R	R	R	R	R	R
ethanol(15%)	R	R	R	R	R	R	R	R	R
ethanol(95%)	R	L	L	R	R	R	R	R	R
ethylene glycol	R	R	R	R	R	R	L	R	R
hydrochloric acid (5%)	R	R	R	R	R	L	NR	R	R
hydrochloric acid (25%)	NR	R	R	R	R	NR	NR	R	R
hydrochloric acid(37%)	NR	R	R	L	R	NR	NR	R	R
Isopropyl alcohol	R	R	R	R	R	NR	L	R	R
n-hexane	R	R	R	R	R	L	R	R	R

This table is for informational purposes only and is not a guarantee of chemical compatibility. Variations in temperature, concentration, exposure time and other factors may affect the performance of the product and it is recommended to test under your own conditions.

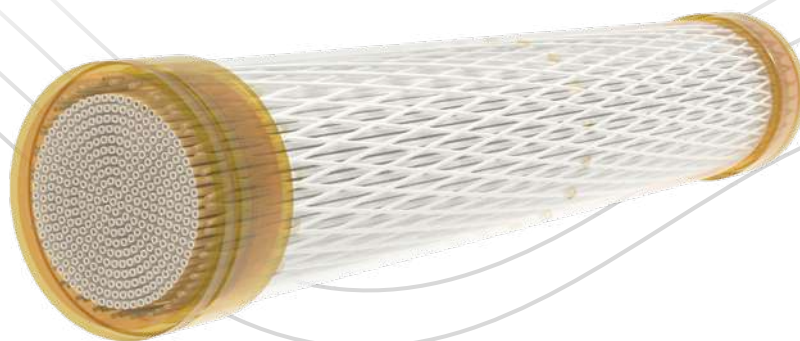
Quality compliance

GVS hollow fiber filter is designed, developed and produced under the ISO13485 quality management system certified by the authoritative organization. After the production be completed in an ISO CLASS 7 clean room, a quality certificate is issued after the products passing the inspection. Products with good quality specifications can meet the regulatory needs of biopharmaceutical customers.

- USP <88> Class VI Testing: All flow path materials have been tested confirmed to the USP <88> Class VI biocompatibility standards
- Bioburden: Bioburden of a single hollow fiber column < 1000 Colony Forming Units (CFU)
- Pyrogen: Hollow fiber filter production and assembly are carried out under strictly monitored conditions to ensure minimal endotoxin levels, but the product line cannot be guaranteed to be completely pyrogen-free
- Free of Animal Origin: Synthetic and processed materials used in fiber synthesis that do not contain any animal or derived substances
- Shipping and Packaging Verification: GVS has verified product shipping/packaging configurations to ISTA 3A (2008) requirements to ensure that sterile products are adequately protected from damage during shipping
- Product Validity: Non-sterile filters are valid for 5 years from the date of manufacture

Hollow Fiber Filter

GVS hollow fiber filters are designed for online steam sterilization processes. The mPES hollow fiber membrane has characteristics of high temperature resistance, tolerance to steam circulation operations and recycle.



Applications

- Filtration of proteins
- Nucleic acids
- Polysaccharides
- Viruses, etc.

Features

- Higher membrane strength
- Design for steam-in-place
- Reusable
- Stable performance, long-term work

Material of Constructions

- Membrane Material: mPES
- Housing: PSU
- Mesh Material: PP
- Shim: PE

Operating Parameters

- Max. operating pressure: 2bar
- Operating temperature: $\leq 80^{\circ}\text{C}$
- Operating PH range: 2~14
- Storage: 0.05-0.1N NaOH

TFFS PS 020M 06CC 080 S

① ② ③ ④ ⑤

Material ①	Pore size ②	Housing specifications ③	Fiber ID ④	Sterilization method ⑤
PS=mPES	020M=0.2 μm 045M=0.45 μm	06CC	080=0.8 μm 100=1.00 μm	s=Steam-in-place

Reciprocating Tangential Flow Filter

Perfusion system, compared with the classical fed-batch system, could competent higher cell density culture and dramatically improve yield productions. A small-scale bioreactor with a perfusion system can yield equal or even more products than a large-scale bioreactor, achieving more flexibility and lower cost. It has been deeply applied to drive higher yield biopharmaceutical products, including antibodies, recombinant proteins, viral vaccines, VLPs, viral vectors, and bioprocesses of N-1 perfusion system and expansion of stem cells, or CAR-T cells.

GVS have developed hollow fiber filters to resolve the requirements of sterility and long-term work used in the perfusion system. The hollow fiber silk is made of hydrophilic polyether sulfone (mPES) with 0.2 μm pore size.

It has many good characteristics, such as very low protein adsorption, high resistance to contamination, tolerance to humid heat sterilization and steam in place, and standard connection type, making it a great potential alternative consumable for various perfusion systems.



TFF

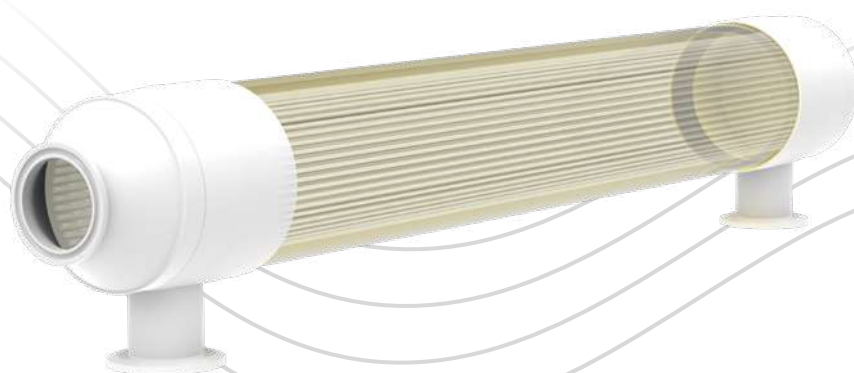
Features

- Asymmetric membrane structure, better resistance
- mPES, better hydrophilia
- Normalized pore size, more stable
- Open flow path, lower shear force
- Reusable

TFFS **R** **020M** **CRT** **030** **04** **A**

① **②** **③** **④** **⑤** **⑥**

Filter series brand ①	Rating ②	Filter style ③	Flowpath length ④	Housing specification (Length*Diameer) ⑤	Type ⑥
R	020M=0.2 μm	X=CRT	030=30cm 060=60cm	04=362mm*58mm 06=637mm*75.2mm 10=515mm*175.5mm	A=Autoclavable



Features

- Asymmetric membrane structure, better resistance
- mPES, better hydrophilia
- Normalized pore size, more stable
- Open flow path, lower shear force
- Single-use

TFFS **R** **020M** **FLT** **030** **02** **SU**

① **②** **③** **④** **⑤** **⑥**

Filter series brand ①	Rating ②	Filter style ③	Flowpath length ④	Housing specification (Length*Diameter) ⑤	Type ⑥
R	020M=0.2μm	FLT=Filter	030=30cm 060=60cm 110=110cm	02=633mm*23mm 04=362mm*58mm 06=637mm*75.2mm 10=515mm*175.5mm	A=Autoclavable SU=Single-use, irradiated

Ultra H₂O

Terminal Ultrafilter



GVS Terminal Ultrafilter

GVS terminal ultrafiltration filter can effectively remove bacteria endotoxins, nucleases, proteases and bacteria from water, making it suitable for areas requiring very high water quality such as ultrapure substance analysis, cell culture, trace detection, and gene sequencing.

Features

- Removal of bacterial endotoxins: Bacterial endotoxins, which are components of the cell walls of Gram-negative bacteria, primarily consist of lipopolysaccharides. These endotoxins can interact with other molecules or aggregate to form microstructures, causing interference in various analytical and separation methods like cell differentiation, resin purification, electrophoretic analysis, and plasmid extraction.
- Removal of nucleases: Under appropriate water conditions, the GVS terminal ultrafiltration filter can produce nuclease-free water. This process is convenient and safe, and it avoids the CO₂ and alcohol contamination that often results from frequent DEPC treatment.
- Removal of bacteria: It has been verified that the GVS terminal ultrafiltration filter can effectively remove bacteria, allowing for the production of sterile water when used normally in a clean environment.

Material

Membrane:	Modified polyether sulfone
Housing:	ABS
End base:	ABS
Sealing ring:	Silicone
Sealing material:	Polyurethane

Parameters

Membrane area:	0.43m ²
Maximum inlet water temperature:	60°C
Interception molecular:	>15000Da
Bacterial:	<1 cuf/100ml
Bacterial endotoxin:	<0.001EU/ml
RNase:	<1pg/ml
DNase:	<5pg/ml
Replacement cycle:	90 days
Flow rate:	less than 2.5L/min
Inlet size:	1/4" plug in



Product Code

UFSGPES15KD4302S

Sterilo Microbial Test Units



Sterility Test Canister

Gamma sterilization

Features

- Assembled clamps for pipelines are more convenient to use
- Double-layer aseptic packaging facilitates the transfer in the clean room and reduces the pollution during the transfer process
- Gamma ray sterilization, no residue, safe and reliable, avoiding the appearance of false negative results
- $SAL \leq 10^{-6}$
- Ultrasonic welding process ensures tightness and pressure resistance
- 100% passed the airtight performance test
- Microbial retention, microbial growth (sensitivity) and sterility testing ensure that the results of sterility testing are authentic and reliable
- Filter membrane: bubble point method, bacterial retention rate test
- Sterility test: 14-day culture cycle



Schematic diagram	Product code	Inspection style	Bottle/Packaging size
	MTWGNCGN220G	MCE membrane for Glass bottle large volume injection	18 sets/box, 72 sets/carton 12 sets/box, 48 sets/carton
	MTWGNCGN330G		
	MTWGNYGA220G	Nylon membrane for Glass bottle large capacity antibiotic injection	18 sets/box, 72 sets/carton 12 sets/box, 48 sets/carton
	MTWGNYGA330G		
	MTWGNCAN220G	MCE membrane for Ampoule injection	18 sets/box, 72 sets/carton 12 sets/box, 48 sets/carton
	MTWGNCAN330G		
	MTWGNYAA220G	Nylon membrane for Ampoule antibiotic injection	18 sets/box, 72 sets/carton 12 sets/box, 48 sets/carton
	MTWGNYAA330G		
	MTWGNCVN220G	MCE membrane for vial bottle soluble powder	18 sets/box, 72 sets/carton 12 sets/box, 48 sets/carton
	MTWGNCVN330G		
	MTWGNYVA220G	Nylon membrane for vial bottle solution antibiotic powder	18 sets/box, 72 sets/carton 12 sets/box, 48 sets/carton
	MTWGNYVA330G		
	MTWGNCSN220G	MCE membrane for soft bag large volume injection	18 sets/box, 72 sets/carton 12 sets/box, 48 sets/carton
	MTWGNCSN330G		
	MTWGPPIN220G	PP membrane for insoluble liquid, oily, high viscous products	18 sets/box, 72 sets/carton 12 sets/box, 48 sets/carton
	MTWGPPIN330G		
	MTWGNYPN220G	Nylon membrane for powder that need to be dissolved and diluted	18 sets/box, 72 sets/carton 12 sets/box, 48 sets/carton
	MTWGNYPN330G		

*Available in EO sterilization and the PN ends with "E" instead of "G"

Sterility Test Canister

EO sterilization

Features

- Adopt composite film packaging technology, good air permeability and bacteria resistance
- Ultrasonic welding process is adopted to ensure tightness and pressure resistance
- The pipe is equipped with a stop clip, which is convenient for customers to operate and improve efficiency
- The pump tube is made of composite materials, with high tensile strength
- Durable, wear and pressure resistant, can ensure the maximum amount of filtrate on successfully completed
- Filter membrane: bubble point method, bacterial retention rate test
- 100% passed the sealing performance test
- No residue, safe and reliable, avoiding the occurrence of false negative results; SAL $\leq 10^{-6}$
- Aseptic independent packaging, and double-layer packaging mode, so that through the buffer zone into the aseptic room, to achieve rapid detection
- Through microbial retention, microbial growth promotion (sensitivity) and sterility test, to ensure that the sterility test results are authentic and reliable
- Sterility test: 14-day culture cycle

The advantages of gamma ray sterilization compared with other main sterilization methods

Sterilization method	Requirements for packaging	Chemical residue	Temperature increase	Sterilization effect (Whether sterilization can be achieved, That is SAL $\leq 10^{-6}$)	Post-sterilization treatment
Gamma rays	No	No	No	Yes	can be used immediately after irradiation
Ethylene oxide	Must use Special packaging material	Yes	Yes	Yes	must be left for at least 48 hours after sterilization. Volatilization reduces residual chemical solvents in the product
High temperature steam	Must use Special packaging material	No	Yes	No	After sterilization requires a certain amount of time to cool

Technical parameters

Cups count	2pcs / 3pcs	Cup material	AS
Cup Withstand pressure	0.4MPA	Bottom material	ABS
Cup volume	100ml	Filter/needle holder material	ABS
Filter membrane material	MCE/Nylon/PP 0.45 μ m	Clips/needle cover/caps material	PP
Filter material	PTFE diameter 25mm, 0.45 μ m	Caps materials	Silicone

Sterility Test Pump

Features

- Straight-line installation of pump tube and pump head automatic opening and closing function
- The pump head opening and closing and the runner running indication function keep the instrument working state at any time
- With stepless speed regulation, speed memory function
- Misoperation of interlock design and alarm prompt function to avoid accidents
- Stainless steel mirror body, small size and beautiful appearance
- Color LCD display, friendly man-machine interface, simple and intuitive, easy to operate
- Rotary coding switch for operation and parameter setting
- Adopting brushless motor, high reliability, long life, no electrical contact spark, good safety and explosion-proof performance
- Forced air cooling to ensure safe use of the product
- The panel type MTWGCP08A/MTWGCP08B is suitable for sterility inspection isolation system installation

Technical Parameter

Working power:	AC220V /50Hz
Power:	240W
Peristaltic pump speed:	15~240rpm
Runner quantity:	3pc
Height (including bottle rack):	37cm
Dimensions:	36*36*20cm
Weight:	20kg

Product Code

MTWGCP08



Sterility Test Pump

Features

- Polishing processing stainless steel case, easy to clean and disinfect
- Large touch LCD screen display, opening and closing of the pump head, running status indication function in time clock function, master the instrument working status at any time
- Toughened glass panel, touch button control, smooth surface, not easy to scratch, easy to clean
- With stepless speed regulation, four - speed direct speed regulation, speed memory function
- Straight type pump pipe installation, the pump head with automatic opening and closing function
- Pump head anti-pinch pipe design
- Misoperation of interlock design and alarm function to avoid accidents
- Adopts brushless dc motor, high reliability, long service life, no electrical contact spark, security, explosion-proof
- Forced air cooling heat dissipation, to ensure the safe use of products

Technical Parameter

Working power:	AC220V /50Hz
Power:	240W
Peristaltic pump speed:	20~300rpm
Runner quantity:	3pc
Height (including bottle rack):	39cm
Dimensions:	32*28*18.1cm
Weight:	16kg

Product Code

MTWGCP06



Sterility Test Pump

Features

- Mini-size design reduces occupying space of super-clean control console and airBow interference
- Waterproof design of equipment body is used to avoid liquid entering into interior of apparatus
- Super-huge LCD can observe running status and clock function
- Direct speed adjustment in 4 levels has memory function for rotating speed
- Adopting brushless motor, high reliability, long life, no electrical contact spark, good safety and explosion-proof performance
- Mirror-polished treatment on stainless steel equipment box is easy to clean and disinfect

Technical Parameter

Working power:	AC220V /50Hz
Power:	200W
Peristaltic pump speed:	15~240rpm
Runner quantity:	3pc
Height (including bottle rack):	39cm
Dimensions:	32*22*12cm
Weight:	12kg



Product Code

MTWGCP03



Sterility Test Pump

Features

- Mini-size design reduces occupying space of super-clean control console and air lowinterference
- Waterproof design of equipment body is used to avoid liquid entering into interior of apparatus
- Concise & modern interface is easy to clean
- Knob with unlimited speed adjustment has memory function of rotating speed
- Mirror-polished treatment on stainless steel equipment box is easy to clean
- Panel type MTWGCP01/MTWGCP01 for sterility inspection isolation system installation

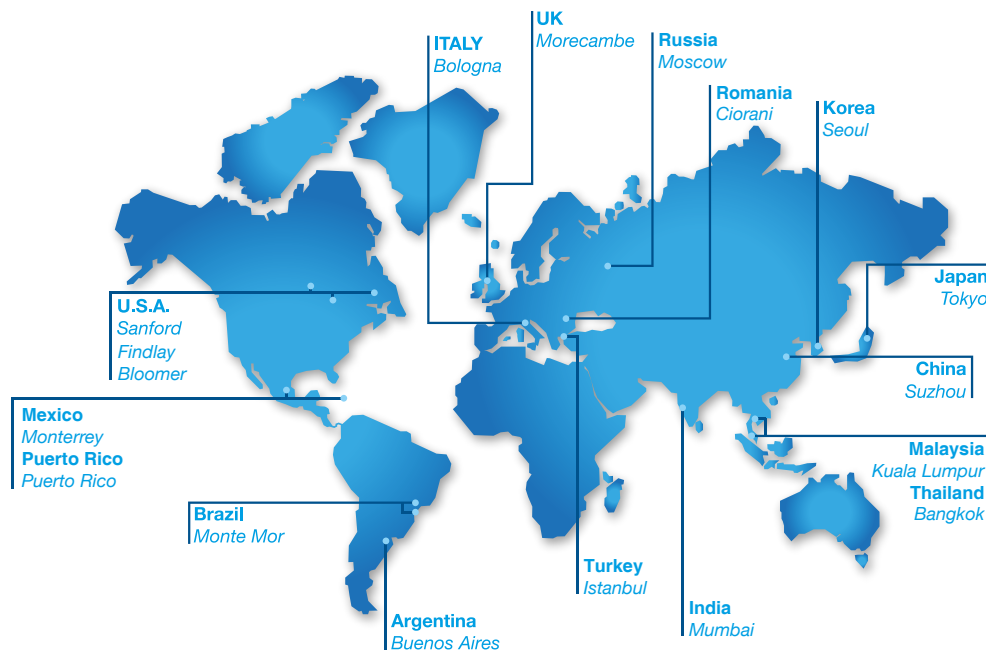
Technical Parameter

Working power:	AC220V /50Hz
Power:	150W
Peristaltic pump speed:	15~240rpm
Runner quantity:	3pc
Height (including bottle rack):	39cm
Dimensions:	32*22*13cm
Weight:	12kg

Product Code

MTWGCP01





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PRODUCT COLLECTION - Bio Processing

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