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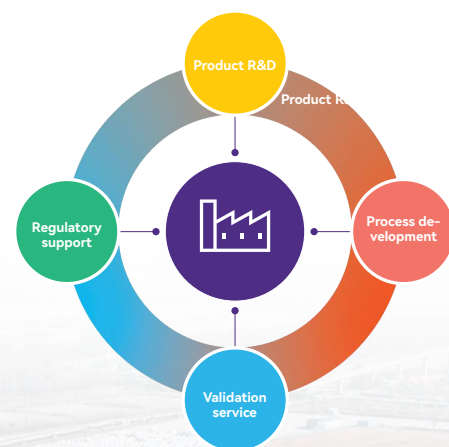
Alioth Product Manual

Company Profile

Alioth Biotech (Shanghai) Co., Ltd. is a leading technology-driven company advancing filtration and membrane separation solutions for the pharmaceutical industry. We focus on the development and application of innovative process filtration products, delivering high-quality separation and purification solutions that meet stringent global regulatory standards.

At Alioth, innovation begins with membrane material science. Our R&D teams—led by internationally recognized membrane scientists in Boston, USA, and Shanghai, China—develop proprietary filtration membranes and devices with independent intellectual property. These technologies are engineered to optimize critical filtration processes and enhance drug manufacturing efficiency.

Quality and reliability are central to our operations. Alioth operates under the ISO9001 quality system and adheres to GMP guidelines. With more than 15,000 square meters of multiple manufacturing facilities in China, we maintain end-to-end control of membrane and filter production. Our capabilities are further supported by a CNAS-accredited validation center and dedicated process development laboratories, ensuring supply chain security and enabling pharmaceutical partners to achieve safer, compliant, and innovative drug production.



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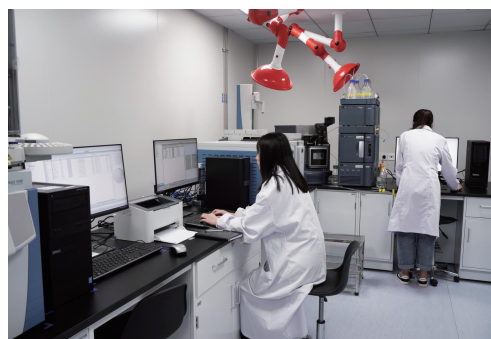
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01

**STERILE
FILTRATION**

**STERILE
FILTRATION**

Alipore® DHC High-Throughput Sterilizing-Grade Hydrophilic PES Filter

Polyethersulfone (PES)

High Capacity

High Flux

Process Economics



Product Introduction

Alioth Alipore® DHC filters are constructed with a double-layer asymmetric polyethersulfone (PES) membrane, which allow for various combinations of membrane pore sizes to meet the requirements for filtration precision in different applications. The filters are suitable for a variety of sterile filtration of process fluids.

Alipore® DHC filters are validated by strict filtration performance guarantees, with wide chemical compatibility, high flow rate and high capacity to optimize process efficiency and cost effectiveness.

Key Features and Benefits

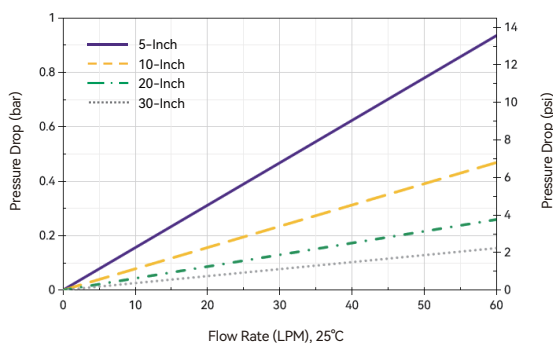
- Reliable bacterial retention performance
- High flux and high capacity
- 100% integrity test passed
- Consistent scale-up performance from lab to commercial manufacturing

Typical Applications

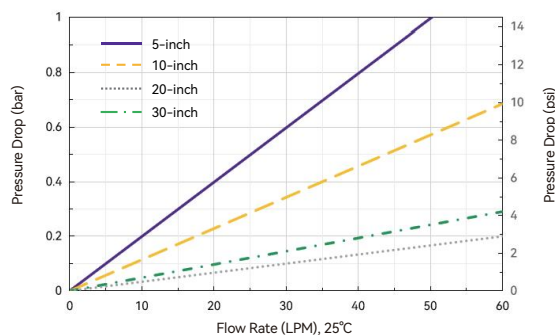
- Culture media filtration
- Buffer filtration
- Intermediate product filtration
- Final fill filtration

Typical Flow Characteristics

Water Flow Rate and Pressure Drop-Alipore® DHC 0.45+0.2 μ m Cartridge Filters



Water Flow Rate and Pressure Drop-Alipore® DHC 0.2+0.2 μ m Cartridge Filters



Alipore® DHC High-Throughput Sterilizing-Grade Hydrophilic Filter

⊕ Product Specifications - Alidisk® Disc Filters

Product Specifications	Size (Diameter)	50 mm
Materials of Construction	Membrane	Hydrophilic polyethersulfone (PES)
	Supporting Layer/ Housing	Polypropylene (PP)
Integrity Testing	Bubble Point	≥ 3520 mbar (51 psi) (wetted with H ₂ O, 20°C, compressed air)
Working Characteristics	Maximum Differential Pressure	Forward: 5.0 bar (72.5 psi) @ 25°C
		Reverse: 1.0 bar (14.5 psi) @ 25°C
		Autoclave(A&G): 125°C, 60 min, 30 cycles
	Sterilization Resistance	Gamma-compatible (G): 25-45 kGy *Presterilized disc filter(s) must not be re-sterilized
	Effective Filtration Area	18 cm ²
	Pore Size	0.2+0.2 µm, 0.45+0.2 µm
	Bacterial Retention	>10 ⁷ cfu/cm ² B. <i>diminuta</i> (ATCC® 19146™)
	Biological Safety	All construction components meet the biological safety requirements referring to USP<88>
		Class VI plastic and USP<87>
	Indirect Food Additive	All component materials meet the requirements of Indirect Food Additive cited in EU 1935/2004/EC and FDA 21 CFR 177-182
	Cleanliness	Meets the requirements for a 'non-fiber releasing' filter defined in FDA 21 CFR 211.72 and 210.3 (b) (5) (6), and particulate matter meets the requirements of USP<788>
	Endotoxin	Endotoxin<0.25 EU/mL by LAL test method, which complies with the requirements of USP<85>
	TOC / Conductivity	TOC < 0.5 mg/L, Conductivity < 1.3 µS/cm
	Manufacturing Integrity	100% integrity test passed
	Manufacturing Environment	Manufactured in conformance with cGMP

⊕ Ordering Information

Format D=Disc	Membrane material E=PES	Membrane series D=D series	Pore size 22=0.2+0.2 µm 52=0.45+0.2 µm	Length 5=Diameter 50 mm	Disc adaptor B0=7-13 mm(1/4"-1/2") Hose barb inlet and outlet
Package 6=6/PK	Sterilization A=Autoclavable G=Gamma compatible S=Sterile				

Alipore® DHC High-Throughput Sterilizing-Grade Hydrophilic Filter

⊕ Product Specifications - Alicap® Capsule Filters

		L300	L600	L02	L04	L3	L5	L10	L20	L30	T10	T20	T30
Product Specifications	Body Diameter	67 mm	67 mm	72 mm	72 mm	97 mm	92 mm	92 mm	92 mm	92 mm	92 mm	92 mm	92 mm
	Maximum Width	75 mm	75 mm	97 mm	97 mm	128 mm	132 mm	132 mm	132 mm	132 mm	132 mm	132 mm	132 mm
	Maximum Length	98.5 mm	120 mm	161 mm	214 mm	170 mm	211 mm	330 mm	575 mm	830 mm	350 mm	596 mm	851 mm
Materials of Construction	Membrane	Hydrophilic polyethersulfone (PES)											
	Supporting Layer	Polypropylene (PP)											
	O-rings	Silicone											
	Core/Cage/End caps/Housing	Polypropylene (PP)											
Integrity Testing	Bubble Point	≥3800 mbar (55.1 psi) (wetted with H ₂ O, 20°C, compressed air) (0.2+0.2 µm)											
		≥3520 mbar (51 psi) (wetted with H ₂ O, 20°C, compressed air) (0.45+0.2 µm)											
	Diffusion Flow	Test pressure 3000 mbar (43.5 psi) (20°C, compressed air), ≤25 mL/min @10 inch (0.2+0.2 µm)											
		Test pressure 2760 mbar (40 psi) (20°C, compressed air), ≤25 mL/min @10 inch (0.45+0.2 µm)											
Working Characteristics	Maximum Differential Pressure	Forward: 5.0 bar (72.5 psi) @ 25°C/3.0 bar (43.5 psi) @ 80°C											
		Reverse: 3.0 bar (43.5 psi) @ 25°C/1.0 bar (14.5 psi) @ 80°C											
	Sterilization Resistance	Autoclave(A&G): 131°C, 30 min, 10 cycles											
		Gamma-compatible (G): 25-45 kGy											
		*Capsule filters can't be sterilized by SIP, sterile type capsule filters can't be sterilized again											
	Effective Filtration Area	230 cm ²	430 cm ²	0.11 m ²	0.19 m ²	0.18 m ²	0.28 m ²	0.55 m ²	1.1 m ²	1.65 m ²	0.55 m ²	1.1 m ²	1.65 m ²
	Pore Size	0.2+0.2 µm, 0.45+0.2 µm											
	Bacterial Retention	>10 ⁷ cfu/cm ² B. <i>diminuta</i> (ATCC® 19146™)											
	Biological Safety	All construction components meet the biological safety requirements referring to USP<88> Class VI plastic and USP<87>											
	Indirect Food Additive	All component materials meet the requirements of Indirect Food Additive cited in EU 1935/2004/EC and FDA 21 CFR 177-182											
	Cleanliness	Meets the requirements for a 'non-fiber releasing' filter defined in FDA 21 CFR 211.72 and 210.3 (b) (5) (6), and particulate matter meets the requirements of USP<788>											
	Endotoxin	Endotoxin<0.25 EU/mL by LAL test method, which complies with the requirements of USP<85>											
	TOC/Conductivity	TOC<0.5 mg/L, Conductivity<1.3 µS/cm											
	Manufacturing Integrity	100% integrity test passed											
	Manufacturing Environment	Manufactured in conformance with cGMP											

⊕ Ordering Information

Format	Membrane material	Membrane series	Pore size	Length	Capsule connector
K=L-type Capsule T=T-type Capsule	E=PES	D=D series	22=0.2+0.2 µm 52=0.45+0.2 µm	S2: Alicap® L300 S3: Alicap® L600 M1: Alicap® L02 M3: Alicap® L04 L3: Alicap® L3 5: Alicap® L5 1: Alicap® L10 2: Alicap® L20 3: Alicap® L30	T1: 38 mm(1 1/2") Sanitary flange inlet and outlet T3: 19 mm(3/4") Sanitary flange inlet and outlet B4: 13 mm(1/2") Single-stage hose inlet and outlet B5: 9.6 mm(3/8") Multistage hose inlet and outlet B6: 7-13 mm(1/4"-1/2") Hose barb inlet and outlet B7: 6 mm(1/4") Multistage hose inlet and outlet
O-ring	Package	Sterilization			
S=Silicone	1=1/PK	A=Autoclavable G=Gamma compatible S=Sterile			

• Connector:

Alicap® L300/L600, available with B6 Connector; Alicap® L02/L04, available with T1, T3, B5, B7 Connector; Alicap® L3/L5/L10/L20/L30, available with B4, T1 Connector; Alicap® T10/T20/T30, available with T1 Connector.

Alipore® DHC High-Throughput Sterilizing-Grade Hydrophilic Filter

⊕ Product Specifications - Cartridge Filters

Product Specifications		5 inch	10 inch	20 inch	30 inch
	Diameter	69 mm	69 mm	69 mm	69 mm
	Maximum Length	155 mm	318 mm	566 mm	813 mm
Materials of Construction	Membrane	Hydrophilic polyethersulfone (PES)			
	Supporting Layer	Polypropylene (PP)			
	O-rings	Silicone, Ethylene propylene diene monomer (EPDM), FEP/PFA encapsulated O-rings			
	Core/Cage/End caps/Adaptor	Polypropylene (PP)			
Integrity Testing	Bubble Point	≥3800 mbar (55.1 psi) (wetted with H ₂ O, 20°C, compressed air) (0.2+0.2 µm)			
		≥3520 mbar (51 psi) (wetted with H ₂ O, 20°C, compressed air) (0.45+0.2 µm)			
	Diffusion Flow	Test pressure 3000 mbar (43.5 psi) (20°C, compressed air), ≤25 mL/min @10 inch (0.2+0.2 µm) Test pressure 2760 mbar (40 psi) (20°C, compressed air), ≤25 mL/min @10 inch (0.45+0.2 µm)			
Working Characteristics	Maximum Differential Pressure	Forward: 7.0 bar (101.5 psi) @ 25°C/3.0 bar (43.5 psi) @ 80°C Reverse: 3.0 bar (43.5 psi) @ 25°C/1.0 bar (14.5 psi) @ 80°C			
	Sterilization Resistance	Steam-In-Place: 135°C, 30 min, 50 cycles Autoclave: 135°C, 30 min, 50 cycles			
	Effective Filtration Area	0.28 m ²	0.55 m ²	1.1 m ²	1.65 m ²
	Pore Size	0.2+0.2 µm, 0.45+0.2 µm			
	Bacterial Retention	>10 ⁷ cfu/cm ² B. diminuta (ATCC® 19146™)			
	Biological Safety	All construction components meet the biological safety requirements referring to USP<88> Class VI plastic and USP<87>			
	Indirect Food Additive	All component materials meet the requirements of Indirect Food Additive cited in EU 1935/2004/EC and FDA 21 CFR 177-182			
	Cleanliness	Meets the requirements for a 'non-fiber releasing' filter defined in FDA 21 CFR 211.72 and 210.3 (b) (5) (6), and particulate matter meets the requirements of USP<788>			
	Endotoxin	Endotoxin<0.25 EU/mL by LAL test method, which complies with the requirements of USP<85>			
	TOC/Conductivity	TOC<0.5 mg/L, Conductivity<1.3 µS/cm			
	Manufacturing Integrity	100% integrity test passed			
	Manufacturing Environment	Manufactured in conformance with cGMP			

⊕ Ordering Information

Format C=Cartridge	Membrane material E=PES	Membrane series D=D series	Pore size 22=0.2+0.2 µm 52=0.45+0.2 µm	Length 5=5 inch 1=10 inch 2=20 inch 3=30 inch	Cartridge adaptor 7=226, Spearhead with fins 2=226, Flat end with fins(5 inch)
O-ring S=Silicone T=EPDM B=FEP/PFA encapsulated O-rings	Package 1=1/PK 3=3/PK(20&30 inch)				

Alipore® DPHC High-Throughput Hydrophilic PES Prefilter

Polyethersulfone (PES)

High Throughput

Particle Removal

Process Protection



Product Introduction

Alioth Alipore® DPHC monolayer polyethersulfone (PES) prefilters are suitable for a variety of biopharmaceutical industry of process fluids with both cartridge and disposable capsule format available. This filter features validated excellent chemical compatibility, particle removal capabilities, and high throughput characteristics, protecting the sterilizing filter to optimize economic benefits.

Key Features and Benefits

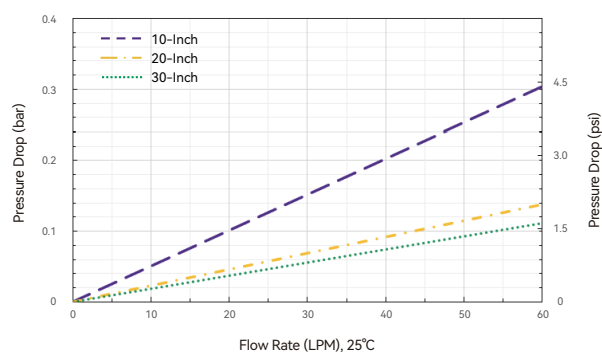
- Highly asymmetric monolayer PES membrane
- High flux and high capacity
- Removal of particulate impurities
- Wide chemical compatibility (pH1-14)

Typical Applications

- Buffers
- Protective filtration before critical purification process
- Bacteria reduction filtration process for biological products

Typical Flow Characteristics

Water Flow Rate and Pressure Drop-Alipore® DPHC 0.65+0.45 µm Cartridge Filters



Alipore® DPHC High-Throughput Hydrophilic PES Prefilter

⊕ Product Specifications - Alicap® Capsule Filters

		L5	L10	L20	L30	T10	T20	T30
Product Specifications	Body Diameter	92 mm	92 mm	92 mm	92 mm	92 mm	92 mm	92 mm
	Maximum Width	132 mm	132 mm	132 mm	132 mm	132 mm	132 mm	132 mm
	Maximum Length	211 mm	330 mm	575 mm	830 mm	350 mm	596 mm	851 mm
Materials of Construction	Membrane	Hydrophilic polyethersulfone (PES)						
	Supporting Layer	Polypropylene (PP)						
	O-rings	Silicone						
	Core/Cage/End caps/Housing	Polypropylene (PP)						
Working Characteristics	Maximum Differential Pressure	Forward: 7.0 bar (101.5 psi) @ 25°C/3.0 bar (43.5 psi) @ 80°C Reverse: 3.0 bar (43.5 psi) @ 25°C/1.0 bar (14.5 psi) @ 80°C						
	Sterilization Resistance	Autoclave(A&G): 131°C, 30 min, 15 cycles Gamma-compatible (G): 45 kGy *Capsule filters can't be sterilized by SIP, sterile type capsule filters can't be sterilized again						
	Effective Filtration Area (Single layer)	0.32 m²	0.65 m²	1.30 m²	1.95 m²	0.65 m²	1.30 m²	1.95 m²
	Effective Filtration Area (Double layer)	0.28 m²	0.55 m²	1.10 m²	1.65 m²	0.55 m²	1.10 m²	1.65 m²
	Pore Size	0.45 µm, 0.65 µm, 0.8 µm, 1.2 µm (Supports arbitrary combinations of dual-layer pore sizes as specified above)						
	Biological Safety	All construction components meet the biological safety requirements referring to USP<88> Class VI plastic and USP<87>						
	Indirect Food Additive	All component materials meet the requirements of Indirect Food Additive cited in EU 1935/2004/EC and FDA 21 CFR 177-182						
	Cleanliness	Meets the requirements for a 'non-fiber releasing' filter defined in FDA 21 CFR 211.72 and 210.3 (b) (5) (6), and particulate matter meets the requirements of USP<788>						
	Endotoxin	Endotoxin<0.25 EU/mL by LAL test method, which complies with the requirements of USP<85>						
	TOC/Conductivity	TOC<0.5 mg/L, Conductivity<1.3 µS/cm						
	Manufacturing Integrity	100% integrity test passed						
	Manufacturing Environment	Manufactured in conformance with cGMP						

⊕ Ordering Information

Format	Membrane material	Membrane series	Pore size	Length	Capsule connector
K=L-type Capsule T=T-type Capsule	E=PES	D=D series	04=0.45 µm 06=0.65 µm 08=0.8 µm 1U=1.2 µm	5: Alicap® L5 1: Alicap® L10 2: Alicap® L20 3: Alicap® L30	T1: 38 mm(1 1/2") Sanitary flange inlet and outlet B4: 13 mm(1/2") Single-stage hose inlet and outlet
O-ring	Package	Sterilization			
S=Silicone	1=1/PK	A=Autoclavable G=Gamma compatible S=Sterile			

• Pore Size:

Single layer: 0.45 µm, 0.65 µm, 0.8 µm, and 1.2 µm.

Double layer: Support arbitrary combinations of pore sizes from the above specifications.

• Connector:

Alicap® L5/L10/L20/L30, available with B4, T1 Connector; Alicap® T10/T20/T30, available with T1 Connector.

Alipore® DPHC High-Throughput Hydrophilic PES Prefilter

⊕ Product Specifications - Cartridge Filters

Product Specifications		5 inch	10 inch	20 inch	30 inch
	Diameter	69 mm	69 mm	69 mm	69 mm
	Maximum Length	155 mm	318 mm	566 mm	813 mm
Materials of Construction	Membrane	Hydrophilic polyethersulfone (PES)			
	Supporting Layer	Polypropylene (PP)			
	O-rings	Silicone, Ethylene propylene diene monomer (EPDM), FEP/PFA encapsulated O-rings			
	Core/Cage/End caps/Adaptor	Polypropylene (PP)			
Working Characteristics	Maximum Differential Pressure	Forward: 7.0 bar (101.5 psi) @ 25°C/3.0 bar (43.5 psi) @ 80°C Reverse: 3.0 bar (43.5 psi) @ 25°C/1.0 bar (14.5 psi) @ 80°C			
	Sterilization Resistance	Steam-In-Place: 135°C, 30 min, 50 cycles Autoclave: 135°C, 30 min, 50 cycles			
	Effective Filtration Area	0.32 m ²	0.65 m ²	1.30 m ²	1.95 m ²
	Pore Size	0.45 µm, 0.65 µm, 0.8 µm, 1.2 µm (Supports arbitrary combinations of dual-layer pore sizes as specified above)			
	Biological Safety	All construction components meet the biological safety requirements referring to USP<88> Class VI plastic and USP<87>			
	Indirect Food Additive	All component materials meet the requirements of Indirect Food Additive cited in EU 1935/2004/EC and FDA 21 CFR 177-182			
	Cleanliness	Meets the requirements for a 'non-fiber releasing' filter defined in FDA 21 CFR 211.72 and 210.3 (b) (5) (6), and particulate matter meets the requirements of USP<788>			
	Endotoxin	Endotoxin<0.25 EU/mL by LAL test method, which complies with the requirements of USP<85>			
	TOC/Conductivity	TOC<0.5 mg/L, Conductivity<1.3 µS/cm			
	Manufacturing Integrity	100% integrity test passed			
	Manufacturing Environment	Manufactured in conformance with cGMP			

⊕ Ordering Information

Format	Membrane material	Membrane series	Pore size	Length	Cartridge adaptor
C=Cartridge	E=PES	D=D series	04=0.45 µm 06=0.65 µm 08=0.8 µm 1U=1.2 µm	5=5 inch 1=10 inch 2=20 inch 3=30 inch	7=226, Spearhead with fins 2=226, Flat end with fins(5 inch)
O-ring	Package				
S=Silicone T=EPDM B=FEP/PFA encapsulated O-rings	1=1/PK 3=3/PK(20&30 inch)				

• Pore Size:

Single layer: 0.45 µm, 0.65 µm, 0.8 µm, and 1.2 µm.

Double layer: Support arbitrary combinations of pore sizes from the above specifications.

Alipore® DHR High Retention Hydrophilic PES Filter

Polyethersulfone (PES)

High Capacity

High Flux

Process Economics



Product Introduction

Alioth Alipore® DHR filters feature a 0.1 μm rated membrane and a built-in 0.2 μm hydrophilic asymmetric PES prefilter. This design delivers high flow rate, high throughput, and exceptional retention rates for mycoplasma and bacterial, making it ideal for applications that require enhanced sterility assurance and where the risk of mycoplasma contamination is increasing, such as culture media filtration and bioreactor feeds.

Key Features and Benefits

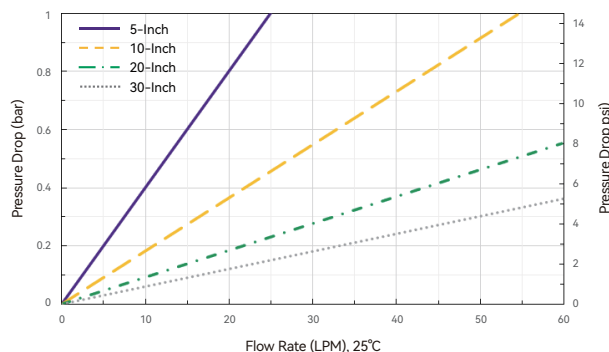
- Reliable mycoplasma and bacterial retention performance
- High flux and high capacity
- 100% integrity test passed
- Consistent scale-up performance from lab to commercial manufacturing

Typical Applications

- Bioreactor feeds
- Serum filtration
- Culture media filtration
- Buffer filtration
- Intermediate product filtration
- Final fill filtration

Typical Flow Characteristics

Water Flow Rate and Pressure Drop-Alipore® DHR 0.2+0.1 μm Cartridge Filters



Alipore® DHR High Retention Hydrophilic PES Filter

⊕ Product Specifications - Alicap® Capsule Filters

		L300	L600	L02	L04	L5	L10	L20	L30	T10	T20	T30	
Product Specifications	Body Diameter	67 mm	67 mm	72 mm	72 mm	92 mm	92 mm	92 mm	92 mm	92 mm	92 mm	92 mm	
	Maximum Width	75 mm	75 mm	97 mm	97 mm	132 mm	132 mm	132 mm	132 mm	132 mm	132 mm	132 mm	
	Maximum Length	98.5 mm	120 mm	161 mm	214 mm	211 mm	330 mm	575 mm	830 mm	350 mm	596 mm	851 mm	
Materials of Construction	Membrane	Hydrophilic polyethersulfone (PES)											
	Supporting Layer	Polypropylene (PP)											
	O-rings	Silicone											
	Core/Cage/End caps/Housing	Polypropylene (PP)											
Integrity Testing	Diffusion Flow(mL/min)	Test pressure 4000 mbar (58 psi) (20°C, compressed air)											
		≤ 1.5	≤ 3	≤ 6	≤ 12	≤ 15	≤ 30	≤ 60	≤ 90	≤ 30	≤ 60	≤ 90	
Working Characteristics	Maximum Differential Pressure	Forward: 5.0 bar (72.5 psi) @ 25°C/3.0 bar (43.5 psi) @ 80°C Reverse: 3.0 bar (43.5 psi) @ 25°C/1.0 bar (14.5 psi) @ 80°C											
	Sterilization Resistance	Alicap® L300/L600/L02/L04: Autoclave(A&G): 131°C, 30 min, 5 cycles Gamma-compatible (G): 25-45 kGy *Capsule filters can't be sterilized by SIP, sterile type capsule filters can't be sterilized again							Alicap® L5/L10/L20/L30/T10/T20/T30: Autoclave(A&G): 131°C, 30 min, 15 cycles Gamma-compatible (G): 25-45 kGy *Capsule filters can't be sterilized by SIP, sterile type capsule filters can't be sterilized again				
	Effective Filtration Area	230 cm²	430 cm²	0.11 m²	0.19 m²	0.28 m²	0.55 m²	1.1 m²	1.65 m²	0.55 m²	1.1 m²	1.65 m²	
	Pore Size	0.2+0.1 μm											
	Microbial Retention	>10 ⁷ cfu/cm² B. diminuta (ATCC® 19146™); >10 ⁷ cfu/cm² A. laidlawii (ATCC® 23206™)											
	Biological Safety	All construction components meet the biological safety requirements referring to USP<88> Class VI plastic and USP<87>											
	Indirect Food Additive	All component materials meet the requirements of Indirect Food Additive cited in EU 1935/2004/EC and FDA 21 CFR 177-182											
	Cleanliness	Meets the requirements for a 'non-fiber releasing' filter defined in FDA 21 CFR 211.72 and 210.3 (b) (5) (6), and particulate matter meets the requirements of USP<788>											
	Endotoxin	Endotoxin<0.25 EU/mL by LAL test method, which complies with the requirements of USP<85>											
	TOC/Conductivity	TOC<0.5 mg/L, Conductivity<1.3 μS/cm											
	Manufacturing Integrity	100% integrity test passed											
Manufacturing Environment	Manufactured in conformance with cGMP												

⊕ Ordering Information

Format	Membrane material	Membrane series	Pore size	Length	Capsule connector
K=L-type Capsule T=T-type Capsule	E=PES	D=D series	21=0.2+0.1 µm	S2: Alicap® L300 S3: Alicap® L600 M1: Alicap® L02 M3: Alicap® L04 5: Alicap® L5 1: Alicap® L10/T10 2: Alicap® L20/T20 3: Alicap® L30/T30	T1: 38 mm(1 1/2") Sanitary flange inlet and outlet T3: 19 mm(3/4") Sanitary flange inlet and outlet B4: 13 mm(1/2") Single-stage hose inlet and outlet B5: 9.6 mm(3/8") Multistage hose inlet and outlet B6: 7-13 mm(1/4"- 1/2") Hose barb inlet and outlet B7: 6 mm(1/4") Multistage hose inlet and outlet
O-ring	Package	Sterilization			
S=Silicone	1=1/PK	A=Autoclavable G=Gamma compatible S=Sterile			

• Connector:

Alicap® L300/L600, available with B6 Connector; Alicap® L02/L04, available with T1, T3, B5, B7 Connector; Alicap® L5/L10/L20/L30, available with B4, T1 Connector; Alicap® T10/T20/T30, available with T1 Connector.

Alipore® DHR High Retention Hydrophilic PES Filter

⊕ Product Specifications - Cartridge Filters

Product Specifications		5 inch	10 inch	20 inch	30 inch
	Diameter	69 mm	69 mm	69 mm	69 mm
	Maximum Length	155 mm	318 mm	566 mm	813 mm
Materials of Construction	Membrane	Hydrophilic polyethersulfone (PES)			
	Supporting Layer	Polypropylene (PP)			
	O-rings	Silicone, Ethylene propylene diene monomer (EPDM), FEP/PFA encapsulated O-rings			
	Core/Cage/End caps/Adaptor	Polypropylene (PP)			
Integrity Testing	Diffusion Flow	Test pressure 4000 mbar (58 psi) (20°C, compressed air)			
		≤15 mL/min	≤30 mL/min	≤60 mL/min	≤90 mL/min
Working Characteristics	Maximum Differential Pressure	Forward: 7.0 bar (101.5 psi) @ 25°C/3.0 bar (43.5 psi) @ 80°C Reverse: 3.0 bar (43.5 psi) @ 25°C/1.0 bar (14.5 psi) @ 80°C			
	Sterilization Resistance	Steam-In-Place: 135°C, 30 min, 50 cycles Autoclave: 131°C, 30 min, 50 cycles			
	Effective Filtration Area	0.28 m ²	0.55 m ²	1.1 m ²	1.65 m ²
	Pore Size	0.2+0.1 µm			
	Bacterial Retention	>10 ⁷ cfu/cm ² <i>B. diminuta</i> (ATCC® 19146™); >10 ⁷ cfu/cm ² <i>A. laidlawii</i> (ATCC® 23206™)			
	Microbial Safety	All construction components meet the biological safety requirements referring to USP<88> Class VI plastic and USP<87>			
	Indirect Food Additive	All component materials meet the requirements of Indirect Food Additive cited in EU 1935/2004/EC and FDA 21 CFR 177-182			
	Cleanliness	Meets the requirements for a 'non-fiber releasing' filter defined in FDA 21 CFR 211.72 and 210.3 (b) (5) (6), and particulate matter meets the requirements of USP<788>			
	Endotoxin	Endotoxin<0.25 EU/mL by LAL test method, which complies with the requirements of USP<85>			
	TOC/Conductivity	TOC<0.5 mg/L, Conductivity<1.3 µS/cm			
	Manufacturing Integrity	100% integrity test passed			
	Manufacturing Environment	Manufactured in conformance with cGMP			

⊕ Ordering Information

Format	Membrane material	Membrane series	Pore size	Length	Cartridge adaptor
C=Cartridge	E=PES	D=D series	21=0.2+0.1 µm	5=5 inch 1=10 inch 2=20 inch 3=30 inch	7=226, Spearhead with fins 2=226, Flat end with fins (5 inch)
O-ring	Package				
S=Silicone T=EPDM B=FEP/PFA encapsulated O-rings	1=1/PK 3=3/PK (20&30 inch)				

Alipore® DHF High-Throughput Hydrophilic PES Filter

Polyethersulfone (PES)

Bioburden Control

High Flowrate

Wide Compatibility



⊕ Product Introduction

Alioth Alipore® DHF Single-layer Cartridge Filter is a 0.2 μm single-layer polyethersulfone (PES) filter that can efficiently retain bacteria and particulate contaminants. It has wide chemical compatibility and low leaching level, thus suitable for the bioburden control and pre-filtration of various fluids. It can provide more effective protection at different stages of bioprocess, prolonging the service life of sterilizing filters and safeguarding other processing systems. This filter is produced in a controlled environment, and its manufacturing process conforms to ISO9001 quality system standards. Each cartridge filter undergoes an integrity testing during the process of manufacturing.

⊕ Key Features and Benefits

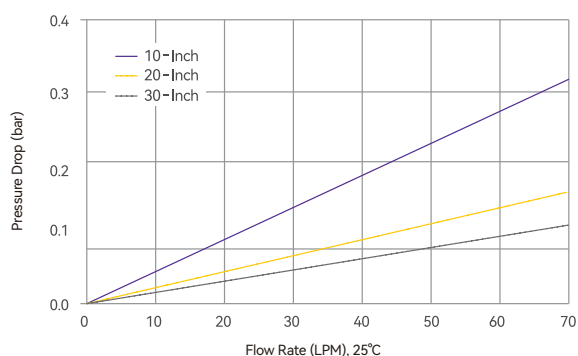
- High flow rate, high capacity
- Bioburden control
- Resistance to multiple steam sterilization
- Wide chemical compatibility

⊕ Typical Applications

- Terminal sterilization product
- Intermediate products filtration
- Pre-column protective filtration
- Pre-filtration before final sterile filtration, etc.

⊕ Typical Flow Characteristics

Water Flow Rate and Pressure Drop-Alipore® DHF 0.2 μm Cartridge Filters



Alipore® DHF High-Throughput Hydrophilic PES Filter

⊕ Product Specifications

Product Specifications		5 inch	10 inch	20 inch	30 inch
	Diameter	69 mm	69 mm	69 mm	69 mm
	Maximum Length	155 mm	318 mm	566 mm	813 mm
Materials of Construction	Membrane	Hydrophilic polyethersulfone (PES)			
	Supporting Layer	Polypropylene (PP)			
	O-rings	Silicone, Ethylene propylene diene monomer(EPDM), FEP/PFA encapsulated O-rings			
	Core/Cage/End caps/Adaptor	Polypropylene (PP)			
Integrity Testing	Bubble Point	≥3180 mbar (46 psi) (wetted with H ₂ O, 20°C, compressed air)			
	Maximum Differential Pressure	Forward: 5.0 bar (72.5 psi) @ 25°C/1.5 bar (21.75 psi) @ 80°C Reverse: 2.0 bar (29 psi) @ 25°C			
	Sterilization Resistance	Steam-In-Place: 135°C, 30 min, 10 cycles Autoclave: 135°C, 30 min, 20 cycles			
	Effective Filtration Area	0.32 m ²	0.66 m ²	1.32 m ²	1.98 m ²
Working Characteristics	Pore Size	0.2 µm			
	Bacterial Retention	TR>10 ⁶ B. <i>diminuta</i> (ATCC® 19146™)			
	Biological Safety	All construction components meet the biological safety requirements referring to USP<88> Class VI plastic and USP<87>			
	Indirect Food Additive	All component materials meet the requirements of Indirect Food Additive cited in EU 1935/2004/EC and FDA 21 CFR 177-182			
	Cleanliness	Meets the requirements for a 'non-fiber releasing' filter defined in FDA 21 CFR 211.72 and 210.3 (b) (5) (6), and particulate matter meets the requirements of USP<788>			
	Endotoxin	Endotoxin<0.25 EU/mL by LAL test method, which complies with the requirements of USP<85>			
	TOC/Conductivity	TOC<0.5 mg/L, Conductivity<1.3 µS/cm			
	Manufacturing Integrity	100% integrity test passed			
	Manufacturing Environment	Manufactured in conformance with cGMP			

⊕ Ordering Information

Format	Membrane material	Membrane series	Pore size	Length	Cartridge adaptor
C=Cartridge	E=PES	D=D series	02=0.2 µm	5=5 inch 1=10 inch 2=20 inch 3=30 inch	7=226, Spearhead with fins 2=226, Flat end with fins(5 inch)
O-ring	Package				
S=Silicone T=EPDM B=FEP/PFA encapsulated O-rings	1=1/PK 3=3/PK (20&30 inch)				

Aligard® MHF High-Flowrate Hydrophilic MCE Prefilter

Mixed Cellulose Ester (MCE)

High Flowrate

High Capacity

High Dirt-holding Capacity



⊕ Product Introduction

Alioth Aligard® MHF Single-layer Cartridge Filter, constructed from mixed cellulose ester, features a robust structure with stable material properties. It delivers high-efficiency contaminant retention, effectively removing particles and colloidal substances without blocking critical active ingredients. This ensures the protection of downstream filtration equipment while preventing early fouling.

⊕ Key Features and Benefits

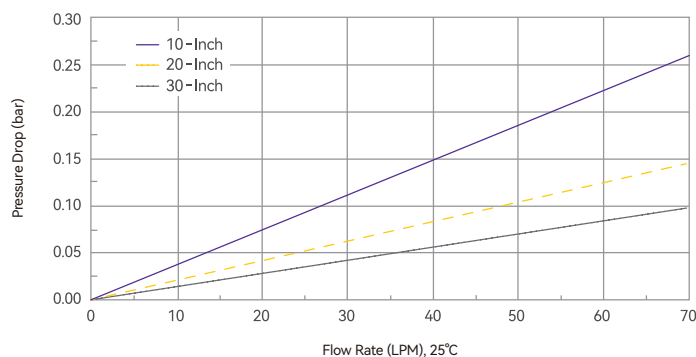
- High flow rate
- High capacity
- Non-fiber release
- Resistance to multiple steam sterilization

⊕ Typical Applications

- Culture media and buffer prefiltration
- LVP/SVP prefiltration
- Plasma product prefiltration
- Pre-column protective filtration

⊕ Typical Flow Characteristics

Water Flow Rate and Pressure Drop–Alipore® MHF 0.45 µm Cartridge Filters



Aligard® MHF High-Flowrate Hydrophilic MCE Prefilter

⊕ Product Specifications

		5 inch	10 inch	20 inch	30 inch
Product Specifications	Diameter	69 mm	69 mm	69 mm	69 mm
	Maximum Length	155 mm	318 mm	566 mm	813 mm
Materials of Construction	Membrane	Mixed Cellulose Ester (MCE)			
	Supporting Layer	Polypropylene (PP)			
	O-rings	Silicone, Ethylene propylene diene monomer (EPDM), FEP/PFA encapsulated O-rings			
	Core/Cage/End caps/Adaptor	Polypropylene (PP)			
Working Characteristics	Maximum Differential Pressure	Forward: 5.0 bar (72.5 psi) @ 25°C/1.5 bar (21.75 psi) @ 80°C Reverse: 2.0 bar (29.0 psi) @ 25°C			
	Sterilization Resistance	Steam-In-Place: 121°C, 30 min, 5 cycles Autoclave: 121°C, 30 min, 5 cycles			
	Effective Filtration Area	0.32 m ²	0.68 m ²	1.32 m ²	2.04 m ²
	Pore Size	0.45 µm			
	Biological Safety	All construction components meet the biological safety requirements referring to USP<88> Class VI plastic and USP<87>			
	Indirect Food Additive	All component materials meet the requirements of Indirect Food Additive cited in EU 1935/2004/EC and FDA 21 CFR 177-182			
	Cleanliness	Meets the requirements for a 'non-fiber releasing' filter defined in FDA 21 CFR 211.72 and 210.3 (b) (5) (6), and particulate matter meets the requirements of USP<788>			
	Endotoxin	Endotoxin<0.25 EU/mL by LAL test method, which complies with the requirements of USP<85>			
	TOC/Conductivity	TOC<0.5 mg/L, Conductivity<1.3 µS/cm			
	Manufacturing Integrity	100% integrity test passed			
	Manufacturing Environment	Manufactured in conformance with cGMP			

⊕ Ordering Information

Format C=Cartridge	Membrane material M=MCE	Membrane series B=B series	Pore size 04=0.45 µm	Length 5=5 inch 1=10 inch 2=20 inch 3=30 inch	Cartridge adaptor 7=226, Spearhead with fins 2=226, Flat end with fins (5 inch)
O-ring S=Silicone T=EPDM B=FEP/PFA encapsulated O-rings	Package 1=1/PK 3=3/PK (20&30 inch)				

Alisafe® TCHF Sterilizing-Grade Hydrophobic PTFE Gas Filter

Hydrophobic Polytetrafluoroethylene (PTFE)

Sterilizing-grade gas filters

Non-aqueous liquid filtration



Product Introduction

The Alioth Alisafe® TCHF Series utilizes a hydrophobic and chemically inert PTFE (polytetrafluoroethylene) membrane. Through rigorous liquid bacteria retention validation, this product effectively retains microorganisms and particles in wet or humid gas streams. Engineered for high strength, it withstands multiple steam-in-place (SIP) sterilization cycles. The TCHF Series is ideal for sterile gas filtration and the filtration of organic solvents with stringent quality requirements in pharmaceutical applications.

Key Features and Benefits

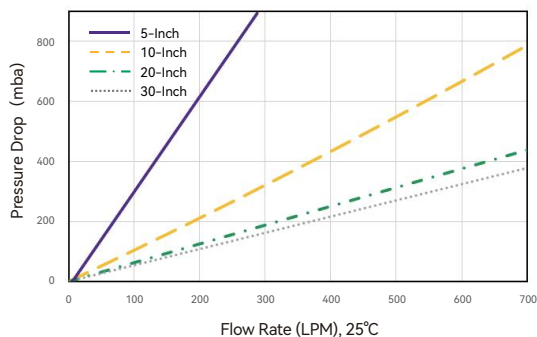
- Natural hydrophobic material
- High gas flux and low-pressure drop
- Reliable bacterial/particles removal efficiency
- Excellent chemical compatibility
- Resistance to multiple steam sterilization

Typical Applications

- Bioreactors (inlet | outlet)
- Storage tank venting
- Filling equipment venting
- Lyophilizer
- Autoclave venting
- Sterile filtration of organic solvents

Typical Flow Characteristics

Air Flow Rate and Pressure Drop–Alisafe® TCHF 0.2 µm Cartridge Filters



Alipore® TCHF Sterilizing-Grade Hydrophobic PTFE Gas Filter

⊕ Product Specifications - Alicap® Capsule Filters

		L300	L600	L02	L04	L3	L5	L10	L20	L30	T10	T20	T30
Product Specifications	Body Diameter	67 mm	67 mm	72 mm	72 mm	97 mm	92 mm	92 mm	92 mm	92 mm	92 mm	92 mm	92 mm
	Maximum Width	75 mm	75 mm	97 mm	97 mm	128 mm	132 mm	132 mm	132 mm	132 mm	132 mm	132 mm	132 mm
	Maximum Length	98.5 mm	120 mm	161 mm	214 mm	170 mm	211 mm	330 mm	575 mm	830 mm	350 mm	596 mm	851 mm
Materials of Construction	Membrane	Polytetrafluoroethylene (PTFE)											
	Supporting Layer	Polypropylene (PP)											
	O-rings	Silicone											
	Core/Cage/End caps/Housing	Polypropylene (PP)											
Integrity Testing	Bubble Point	≥1300 mbar (18.9 psi) (wetted with 60% IPA, 20°C, compressed air)											
	Diffusion Flow(mL/min)	Test pressure 1040 mbar (15 psi) (wetted with 60% IPA, 20°C, compressed air)											
		≤ 0.75	≤ 1.5	≤ 3	≤ 4	≤ 4.5	≤ 6.5	≤ 13	≤ 26	≤ 39	≤ 13	≤ 26	≤ 39
	Water Intrusion(mL/min)	Test pressure 2500 mbar (36 psi) (20°C, compressed air)											
		≤ 0.03	≤ 0.05	≤ 0.1	≤ 0.15	≤ 0.17	≤ 0.25	≤ 0.5	≤ 1	≤ 1.5	≤ 0.5	≤ 1	≤ 1.5
Working Characteristics	Maximum Differential Pressure	Forward: 5.5 bar (79.8 psi) @ 25°C/3.0 bar (43.5 psi) @ 80°C Reverse: 4.0 bar (58.0 psi) @ 25°C/1.0 bar (14.5 psi) @ 80°C											
	Sterilization Resistance	Alicap® L300/L600/L02/L04/L3: Autoclave(A): 135°C, 30 min, 30 cycles *Capsule filters can't be sterilized by SIP, sterile type capsule filters can't be sterilized again						Alicap® L5/L10/L20/L30/T10/T20/T30: Autoclave(A): 135°C, 30 min, 50 cycles *Capsule filters can't be sterilized by SIP, sterile type capsule filters can't be sterilized again					
	Effective Filtration Area	260 cm ²	480 cm ²	0.1 m ²	0.2 m ²	0.22 m ²	0.33 m ²	0.65 m ²	1.3 m ²	1.95 m ²	0.65 m ²	1.3 m ²	1.95 m ²
	Pore Size	0.2 µm											
	Bacterial Retention	>10 ⁷ cfu/cm ² B. <i>diminuta</i> (ATCC® 19146™)											
	Biological Safety	All construction components meet the biological safety requirements referring to USP<88> Class VI plastic and USP<87>											
	Indirect Food Additive	All component materials meet the requirements of Indirect Food Additive cited in EU 1935/2004/EC and FDA 21 CFR 177-182											
	Cleanliness	Meets the requirements for a 'non-fiber releasing' filter defined in FDA 21 CFR 211.72 and 210.3 (b) (5) (6), and particulate matter meets the requirements of USP<788>											
	Endotoxin	Endotoxin<0.25 EU/mL by LAL test method, which complies with the requirements of USP<85>											
	Manufacturing Integrity	100% integrity test passed											
	Manufacturing Environment	Manufactured in conformance with cGMP											

⊕ Ordering Information

Format	Membrane material	Membrane series	Pore size	Length	Capsule connector
K=L-type Capsule T=T-type Capsule	T=PTFE	C=C series	02=0.2 µm	S2: Alicap® L300 S3: Alicap® L600 M1: Alicap® L02 M3: Alicap® L04 L3: Alicap® L3 5: Alicap® L5 1: Alicap® L10 2: Alicap® L20 3: Alicap® L30	T1: 38 mm(1 1/2") Sanitary flange inlet and outlet T3: 19 mm(3/4") Sanitary flange inlet and outlet B4: 13 mm(1/2") Single-stage hose inlet and outlet B5: 9.6 mm(3/8") Multistage hose inlet and outlet B6: 7-13 mm(1/4"-1/2") Hose barb inlet and outlet B7: 6 mm(1/4") Multistage hose inlet and outlet
O-ring	Package	Sterilization			
S = Silicone	1=1/PK	A=Autoclavable			

• Connector:

Alicap® L300/L600, available with B6 Connector; Alicap® L02/L04, available with T1, T3, B5, B7 Connector; Alicap® L3/L5/L10/L20/L30, available with B4, T1 Connector; Alicap® T10/T20/T30, available with T1 Connector.

Alisafe® TCHF Sterilizing-Grade Hydrophobic PTFE Gas Filter

⊕ Product Specifications - Cartridge Filters

Product Specifications		5inch	10inch	20inch	30inch
	Diameter	69 mm	69 mm	69 mm	69 mm
	Maximum Length	155 mm	318 mm	566 mm	813 mm
Materials of Construction	Membrane	Polytetrafluoroethylene (PTFE)			
	Supporting Layer	Polypropylene (PP)			
	O-rings	Silicone, Ethylene propylene diene monomer (EPDM), FEP/PFA encapsulated O-rings			
	Core/Cage/End caps/Adaptor	Polypropylene (PP)			
Integrity Testing	Bubble Point	≥1300 mbar (19 psi) (wetted with 60% IPA, 20°C, compressed air)			
	Diffusion Flow	Test pressure 1040 mbar (15 psi) (wetted with 60% IPA, 20°C, compressed air)			
		≤6.5 mL/min	≤13 mL/min	≤26 mL/min	≤39 mL/min
	Water Intrusion	Test pressure 2500 mbar (36 psi) (20°C, compressed air)			
		≤0.25 mL/min	≤0.5 mL/min	≤1.0 mL/min	≤1.5 mL/min
Working Characteristics	Maximum Differential Pressure	Forward: 7.0 bar (101.5 psi) @ 25°C/3.0 bar (43.5 psi) @ 80°C			
		Reverse: 4.0 bar (58.0 psi) @ 25°C/1.0 bar (14.5 psi) @ 80°C			
	Sterilization Resistance	Steam-In-Place at 142°C for 30 min, 150 cycles (100 forward cycles plus 50 reverse cycles)			
		Autoclave at 135°C for 30 min, 200 cycles			
	Effective Filtration Area	0.33 m ²	0.65 m ²	1.30 m ²	1.95 m ²
	Pore Size	0.2 µm			
	Bacterial Retention	>10 ⁷ cfu/cm ² <i>B. diminuta</i> (ATCC® 19146™)			
	Biological Safety	All construction components meet the biological safety requirements referring to USP<88> Class VI plastic and USP<87>			
	Indirect Food Additive	All component materials meet the requirements of Indirect Food Additive cited in EU 1935/2004/EC and FDA 21 CFR 177-182			
	Cleanliness	Meets the requirements for a 'non-fiber releasing' filter defined in FDA 21 CFR 211.72 and 210.3 (b) (5) (6), and particulate matter meets the requirements of USP<788>			
	Endotoxin	Endotoxin<0.25 EU/mL by LAL test method, which complies with the requirements of USP<85>			
	Manufacturing Integrity	100% integrity test passed			
	Manufacturing Environment	Manufactured in conformance with cGMP			

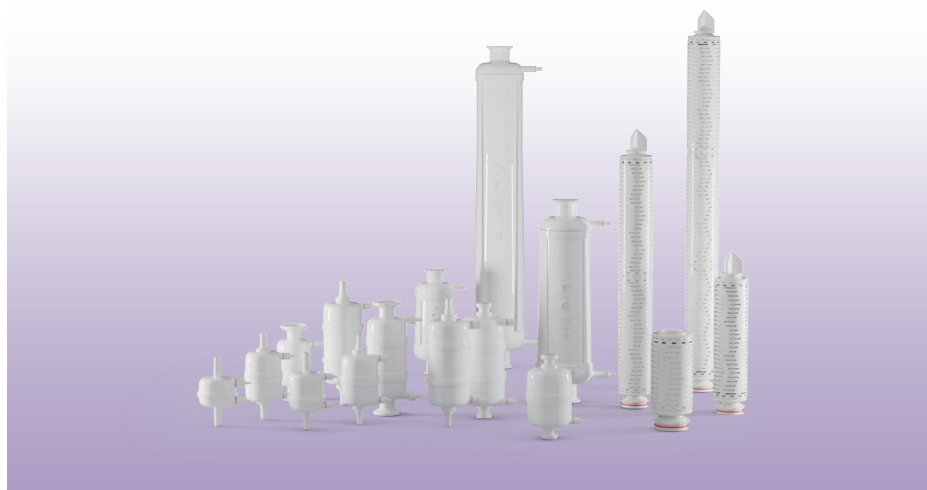
⊕ Ordering Information

Format	Membrane material	Membrane series	Pore size	Length	Cartridge adaptor
C=Cartridge	T=PTFE	C=C series	02=0.2 µm	5=5 inch 1=10 inch 2=20 inch 3=30 inch	7=226, Spearhead with fins 2=226, Flat end with fins(5 inch)
O-ring	Package				
S=Silicone T=EPDM B=FEP/PFA encapsulated O-rings	1=1/PK 3=3/PK(20&30 inch)				

Alipore® TEHF Radiation-Resistant Gas Filter

Hydrophobic Polyethersulfone (PES)

Sterilizing-grade gas filters



⊕ Product Introduction

Alipore® TEHF Series filters consist of hydrophobic polyethersulfone (PES) membranes and have undergone rigorous liquid bacterial retention validation. They effectively retain microorganisms or particles in wet or humid gases, featuring high mechanical strength, radiation resistance, and tolerance to repeated autoclaving cycles. Ideal for sterile gas filtration in single-use systems for pharmaceutical applications, including sterilization of air, hydrogen, nitrogen, and other gases.

⊕ Key Features and Benefits

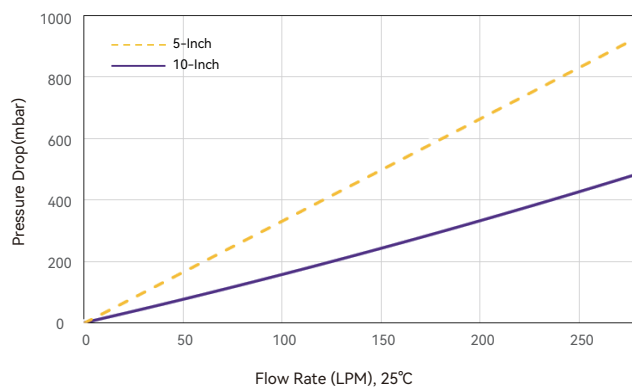
- Hydrophobic material
- Tolerance to 45 kGy gamma irradiation
- Reliable bacterial retention and particle removal efficiency
- High gas flux with low pressure differential
- Excellent chemical compatibility

⊕ Typical Applications

- Vent filter for single-use bags
- Aeration of single-use reaction bags
- Sterile filtration of gases (air/hydrogen/nitrogen, etc.)

⊕ Typical Flow Characteristics

Air Flow Rate and Pressure Drop-Alipore® TEHF Alicap® L5/L10 0.2 µm Capsule Filters



Alipore® TEHF Radiation-Resistant Gas Filter

⊕ Product Specifications - Alidisk® Disc Filters

Product Specifications	Diameter	50 mm
Materials of Construction	Membrane	Hydrophobic polyethersulfone (PES)
	Inlet/Outlet Cap, Supporting layer	Polypropylene (PP)
Integrity Testing	Bubble Point	≥1300 mbar (19 psi) (wetted with 60% IPA, 20°C, compressed air)
	Maximum Differential	Forward: 5.0 bar (72.5 psi) @ 25°C
	Pressure	Reverse: 1.0 bar (14.5 psi) @ 80°C
		Gamma-compatible (G): 25-45 kGy
	Sterilization Resistance	Autoclave at 135°C for 30 min, 50 cycles
		*Capsule filters can't be sterilized by SIP, sterile type capsule filters can't be sterilized again
	Effective Filtration Area	18 cm²
	Pore Size	0.2 µm
	Bacterial Retention	>10 ⁷ cfu/cm² B. diminuta (ATCC® 19146™)
	Biological Safety	All construction components meet the biological safety requirements referring to USP<88> Class VI plastic and USP<87>
Working Characteristics	Indirect Food Additive	All component materials meet the requirements of Indirect Food Additive cited in EU 1935/2004/EC and FDA 21 CFR 177-182
	Cleanliness	Meets the requirements for a 'non-fiber releasing' filter defined in FDA 21 CFR 211.72 and 210.3 (b) (5) (6), and particulate matter meets the requirements of USP<788>
	Endotoxin	Endotoxin<0.25 EU/mL by LAL test method, which complies with the requirements of USP<85>
	Manufacturing Integrity	100% integrity test passed
	Manufacturing Environment	Manufactured in conformance with cGMP

⊕ Ordering Information

Format	Membrane material	Membrane series	Pore size	Length	Disc adaptor
D=Disc	E=PES	E=E series	02=0.2 µm	5=Diameter 50 mm	B0=7-13 mm(1/4"-1/2") Hose barb inlet and outlet
Package	Sterilization				
6=6/PK	G=Gamma compatible S=Sterile				

Alipore® TEHF Radiation-Resistant Gas Filter

⊕ Product Specifications - Alicap® Capsule Filters

		L300	L600	L02	L04	L3	L5	L10	L20	L30	T10	T20	T30
Product Specifications	Body Diameter	67 mm	67 mm	72 mm	72 mm	97 mm	92 mm	92 mm	92 mm	92 mm	92 mm	92 mm	92 mm
	Maximum Width	75 mm	75 mm	97 mm	97 mm	128 mm	132 mm	132 mm	132 mm	132 mm	132 mm	132 mm	132 mm
	Maximum Length	98.5 mm	120 mm	161 mm	214 mm	170 mm	211 mm	330 mm	575 mm	830 mm	350 mm	596 mm	851 mm
Materials of Construction	Membrane	Hydrophobic polyethersulfone (PES)											
	Supporting Layer	Polypropylene (PP)											
	O-rings	Silicone											
	Core/Cage/End caps/Housing	Polypropylene (PP)											
Integrity Testing	Bubble Point	≥1300 mbar (19 psi) (wetted with 60% IPA, 20°C, compressed air)											
	Diffusion Flow(mL/min)	Test pressure 1040 mbar (15 psi) (wetted with 60% IPA, 20°C, compressed air)											
		-	≤ 1.5	≤ 3.0	≤ 5.0	≤ 5.0	≤ 7.5	≤ 15	≤ 30	≤ 45	≤ 15	≤ 30	≤ 45
Working Characteristics	Maximum Differential Pressure	Forward: 5.5 bar (79.8 psi) @ 25°C/3.0 bar (43.5 psi) @ 80°C Reverse: 4.0 bar (58.0 psi) @ 25°C/1.0 bar (14.5 psi) @ 80°C											
	Sterilization Resistance	Alicap® L300/L600/L02/L04/L3: Gamma compatible & Autoclavable: 25–45 kGy gamma irradiation or 135°C autoclaving for 30 minute, for 30 cycles. *Capsule filters can't be sterilized by SIP, sterile type capsule filters can't be sterilized again						Alicap® L5/L10/L20/L30/T10/T20/T30: Gamma compatible & Autoclavable: 25–45 kGy gamma irradiation or 135°C autoclaving for 30 minute, for 50 cycles. *Capsule filters can't be sterilized by SIP, sterile type capsule filters can't be sterilized again					
	Effective Filtration Area	230 cm ²	430 cm ²	0.11 m ²	0.19 m ²	0.19 m ²	0.30 m ²	0.59 m ²	1.18 m ²	1.77 m ²	0.59 m ²	1.18 m ²	1.77 m ²
	Pore Size	0.2 µm											
	Bacterial Retention	>10 ⁷ cfu/cm ² B. diminuta (ATCC® 19146™)											
	Biological Safety	All construction components meet the biological safety requirements referring to USP<88> Class VI plastic and USP<87>											
	Indirect Food Additive	All component materials meet the requirements of Indirect Food Additive cited in EU 1935/2004/EC and FDA 21 CFR 177-182											
	Cleanliness	Meets the requirements for a 'non-fiber releasing' filter defined in FDA 21 CFR 211.72 and 210.3 (b) (5) (6), and particulate matter meets the requirements of USP<788>											
	Endotoxin	Endotoxin<0.25 EU/mL by LAL test method, which complies with the requirements of USP<85>											
	Manufacturing Integrity	100% integrity test passed											
	Manufacturing Environment	Manufactured in conformance with cGMP											

⊕ Ordering Information

Format	Membrane material	Membrane series	Pore size	Length	Capsule connector
K=L-type Capsule T=T-type Capsule	E=PES	E=E series	02=0.2 µm	S2: Alicap® L300 S3: Alicap® L600 M1: Alicap® L02 M3: Alicap® L04 L3: Alicap® L3 5: Alicap® L5 1: Alicap® L10/T10 2: Alicap® L20/T20 3: Alicap® L30 /T30	T1: 38 mm(1 1/2") Sanitary flange inlet and outlet T3: 19 mm(3/4") Sanitary flange inlet and outlet B4: 13 mm(1/2") Single-stage hose inlet and outlet B5: 9.6 mm(3/8") Multistage hose inlet and outlet B6: 7-13 mm(1/4"-1/2") Hose barb inlet and outlet B7: 6 mm(1/4") Multistage hose inlet and outlet
O-ring	Package	Sterilization			
S = Silicone	1=1/PK	G=Gamma compatible S=Sterile			

• Connector:

Alicap® L300/L600, available with B6 Connector; Alicap® L02/L04, available with T1, T3, B5, B7 Connector; Alicap® L3/L5/L10/L20/L30, available with B4, T1 Connector; Alicap® T10/T20/T30, available with T1 Connector.

Aligard® PHF High-Performance PP Clarifying Filter

Polypropylene (PP)

High Dirt-Holding Capacity

Clarification Filtration

Process Economics



⊕ Product Introduction

Polypropylene (PP) membrane is suitable for depth filtration with stable physical and chemical properties and strong pressure resistance. Alioth prefilters are made of PP with high porosity and strong dirt-holding capacity. The filters are ideal for removing particles and microorganisms from a broad range of challenging pharmaceutical liquids in prefiltration process.

⊕ Key Features and Benefits

- Excellent chemical capability
- High retention efficiency
- High flow rate and low flow differential pressure
- No fiber releasing
- Robust with stable performance
- Stable performance and sturdy durability
- Traceable
- Resistance to multiple steam sterilization

⊕ Typical Applications

- Intermediate products prefiltration
- Blood products prefiltration
- Culture media prefiltration
- Prefiltration during the solution preparation process

Aligard® PHF High-Performance PP Clarifying Filter

⊕ Product Specifications - Disc Filters

Product Specifications	Nominal Dimensions	69 mm
Materials of Construction	Membrane	Polypropylene (PP)
	Supporting layer/Housing	Polypropylene (PP)
Working Characteristics	Highest Working Temperature	60°C
	Max Inlet Pressure	3.5 bar (50 psi) @ 25°C
	Sterilization Resistance	Autoclave: 126°C, 30 min, 3 cycles
	Max Differential Pressure	Forward: 4.0 bar @ 25°C, 1.0 bar @ 60°C, Not applicable for Reverse Filtration
	Effective Filtration Area	19.6 cm²
	Pore Size	0.1 / 0.2 / 0.5 / 1.0 / 3.0 / 5.0 / 10 / 20 / 30 / 50 / 70 / 100 µm
	Connection Type	HB 7-13 mm
	Endotoxin	Endotoxin<0.25 EU/mL by LAL test method, which complies with the requirements of USP<85>
	TOC/Conductivity	TOC<0.5 mg/L, Conductivity<1.3 µS/cm
	Cleanliness	Meets the requirements for a 'non-fiber releasing' filter defined in FDA 21 CFR 211.72 and 210.3 (b) (5) (6), and particulate matter meets the requirements of USP<788>
	Biological Safety	All construction components meet the biological safety requirements referring to USP<88> Class VI plastic and USP<87>
	Quality System	Manufactured in a facility whose Quality Management System has been certified with ISO 9001
	Shelf Life	3 years at 10-35°C and below 70% humidity

⊕ Ordering Information

HAD	T P	0 1	D 5	H 6	A	1 0
Product HAD=Disc	Membrane Material TP=PP	Pore Size 01=0.1 µm 02=0.2 µm 04=0.5 µm 1 U= 1.0 µm 3 U= 3.0 µm 5 U=5.0 µm 10=10 µm 20=20 µm 30=30 µm 50=50 µm 70=70 µm 100=100 µm	Size D5=ID 50	Connection Type H6=7-13 mm HB	Sterilization A=Autoclavable	Package 10=10/PK

Aligard® PHF High-Performance PP Clarifying Filter

⊕ Product Specifications - Capsule Filters

Product Specifications		1 inch	2 inch	4 inch	5 inch	10 inch	20 inch
Product Specifications	Membrane	Polypropylene (PP)					
	Supporting layer/Housing	Polypropylene (PP)					
	O-rings	Silicone					
Materials of Construction	Highest Working Temperature	60°C					
	Max Inlet Pressure	5.5 bar (80 psi) @ 25°C					
	Sterilization Resistance	Autoclave: 126°C, 30min, 3 cycles					
	Max Differential Pressure	Forward: 4.0 bar (58 psi) @ 25°C					
	Effective Filtration Area	0.04 m²	0.12 m²	0.24 m²	0.3 m²	0.6 m²	1.2 m²
	Pore Size	0.1 / 0.2 / 0.5 / 1.0 / 3.0 / 5.0 / 10 / 20 / 30 / 50 / 70 / 100 µm					
	Connection Type	HB 7-13 mm	TC 25 mm or TC 50 mm or HB 7-13 mm	TC 25 mm or TC 50 mm or HB 7-13 mm	TC 50 mm	TC 50 mm	TC 50 mm
	Biological Safety	All construction components meet the biological safety requirements referring to USP<88> Class VI plastic and USP<87>					
	Cleanliness	Meets the requirements for a 'non-fiber releasing' filter defined in FDA 21 CFR 211.72 and 210.3 (b) (5) (6), and particulate matter meets the requirements of USP<788>					
	Endotoxin	Endotoxin<0.25 EU/mL by LAL test method, which complies with the requirements of USP<85>					
	TOC/Conductivity	TOC<0.5 mg/L, Conductivity<1.3 µS/cm					
	Quality System	Manufactured in a facility whose Quality Management System has been certified with ISO 9001					
	Shelf Life	3 years at 10-35°C and below 70% humidity					

⊕ Ordering Information

HAK	T	P	0	1	0	2	0	1	S	A	1
Product HAK=Capsule	Membrane Material TP=PP	Pore Size 01=0.1 µm 02=0.2 µm 04=0.5 µm 1 U=1.0 µm 3 U=3.0 µm 5 U=5.0 µm 10=10 µm 20=20 µm 30=30 µm 50=50 µm 70=70 µm 100=100 µm	Size 01=1 inch 02=2 inch 05=5 inch 10=10 inch 20=20 inch 30=30 inch	Connection Type T2=25 mm TC H7=7-13 HB T5=50 mm TC	O-ring S=Silicone	Sterilization A=Autoclavable	Package 1=1/PK				

Aligard® PHF High-Performance PP Clarifying Filter

⊕ Product Specifications - Cartridge Filters

Product Specifications		2.5 inch	5 inch	10 inch	20 inch	30 inch
	Nominal Dimensions	69 mm*2.5"	69 mm*5"	69 mm*10"	69 mm*20"	69 mm*30"
Materials of Construction	Membrane	Polypropylene (PP)				
	Supporting layer/Adaptor	Polypropylene (PP)				
	O-rings	Silicone, Ethylene propylene diene monomer(EPDM), FEP/PFA encapsulated O-rings				
Materials of Construction	Highest Working Temperature	80°C				
	Max Inlet Pressure	5.5 bar (80 psi) @ 25°C				
	Sterilization Resistance	Autoclave: 126°C, 30min, 30 cycles				
	Max Differential Pressure	Forward: 4.2 bar (60.9 psi) @ 23°C				
		Forward: 2.4 bar (34.8 psi) @ 80°C				
	Effective Filtration Area	0.12 m ²	0.25 m ²	0.5 m ²	1.0 m ²	1.5 m ²
	Pore Size	0.1 /0.2 /0.5 /1.0 /3.0 /5.0 /10 /20 /30 /50 /70 /100 µm				
	Adaptor Type	226/222				
	Biological Safety	All construction components meet the biological safety requirements referring to USP<88>				
		Class VI plastic and USP<87>				
Materials of Construction	Cleanliness	Meets the requirements for a 'non-fiber releasing' filter defined in FDA 21 CFR 211.72 and 210.3 (b) (5) (6), and particulate matter meets the requirements of USP<788>				
	Endotoxin	Endotoxin<0.25 EU/mL by LAL test method, which complies with the requirements of USP<85>				
	TOC/Conductivity	TOC<0.5 mg/L, Conductivity<1.3 µS/cm				
	Quality System	Manufactured in a facility whose Quality Management System has been certified with ISO 9001				
	Shelf Life	3 years at 10-35°C and below 70% humidity				

⊕ Ordering Information

HAC	T	P	0	1	0	2	7	S	A	1
Product HAC=Cartridge	Membrane Material TP=PP	Pore Size 01=0.1 μm 02=0.2 μm 04=0.5 μm 1 U=1.0 μm 3 U=3.0 μm 5 U=5.0 μm 10=10 μm 20=20 μm 30=30 μm 50=50 μm 70=70 μm 100=100 μm	Size 02=2.5 inch 05=5 inch 10=10 inch 20=20 inch 30=30 inch	Adaptor Type 7=226, Spearhead with fins 2=226, Flat end with fins 8=222, Spearhead with fins 3=222, Flat end with fins	O-ring S=Silicone T=EPDM B=FEP/PFA encapsulated O-rings	Sterilization A=Autoclavable	Package 1=1/PK			

SHF Polysulfone Membrane Filter

Polysulfone (PSF)

High Throughput

Process Economics

Reduced Process Time



⊕ Product Introduction

Alioth SHF polysulfone (PSF) filters feature a highly asymmetrical polysulfone (PSF) membrane and pleated construction for high flow and low pressure drop. It has good high temperature resistance and wide chemical compatibility. It is suitable for pre- and final filtration of process cooling and deionized water, and is widely used in the pharmaceutical industry and chemicals.

⊕ Key Features and Benefits

- High flow, low differential pressure
- Wide chemical compatibility
- Excellent high temperature resistance

⊕ Typical Applications

- Pre-filtration and final filling filtration of chemicals
- Pre-filtration and final filling filtration in the pharmaceutical industry
- Pre-filtration and final filling filtration of process cooling water
- Pre-filtration and final filling filtration of deionized water

SHF Polysulfone Membrane Filter

⊕ Product Specifications - Alicap® Capsule Filters

		L300	L600	L02	L04	L5	L10	L20
Product Specifications	Body Diameter	67 mm	67 mm	72 mm	72 mm	85 mm	85 mm	85 mm
	Maximum Width	75 mm	75 mm	97 mm	97 mm	147 mm	147 mm	147 mm
	Maximum Length	98.5 mm	120 mm	161 mm	214 mm	220 mm	319 mm	569 mm
Materials of Construction	Membrane	Polysulfone (PSF)						
	Supporting Layer	Polypropylene (PP)						
	O-rings	Silicone						
	Core/Cage/End caps/Housing	Polypropylene (PP)						
Integrity Testing	Bubble Point	≥4000 mbar (58 psi) (wetted with H ₂ O, 20°C, compressed air) (0.2 μm)						
Working Characteristics	Maximum Differential Pressure	Forward: 5.0 bar (72.5 psi) @ 25°C/3.0 bar (43.5 psi) @ 80°C Reverse: 2.0 bar (29.0 psi) @ 25°C						
	Sterilization Resistance	Alicap® L300/L600/L02/L04: Autoclave(A&G): 131°C, 30 min, 3 cycles Gamma-compatible (G): 45 kGy *Capsule filters can't be sterilized by SIP, sterile type capsule filters can't be sterilized again			Alicap® L5/L10/L20: Autoclave(A&G): 131°C, 30 min, 5 cycles Gamma-compatible (G): 45 kGy *Capsule filters can't be sterilized by SIP, sterile type capsule filters can't be sterilized again			
	Effective Filtration Area	200 cm ²	400 cm ²	0.12 m ²	0.24 m ²	0.3 m ²	0.6 m ²	1.2 m ²
	Pore Size	0.2 μm/0.45 μm						
	Biological Safety	All construction components meet the biological safety requirements referring to USP<88> Class VI plastic and USP<87>						
	Indirect Food Additive	All component materials meet the requirements of Indirect Food Additive cited in EU 1935/2004/EC and FDA 21 CFR 177-182						
	Cleanliness	Meets the requirements for a 'non-fiber releasing' filter defined in FDA 21 CFR 211.72 and 210.3 (b) (5) (6), and particulate matter meets the requirements of USP<788>						
	Endotoxin	Endotoxin<0.25 EU/mL by LAL test method, which complies with the requirements of USP<85>						
	TOC/Conductivity	TOC<0.5 mg/L, Conductivity<1.3 μS/cm						
	Manufacturing Integrity	100% integrity test passed						
	Manufacturing Environment	Manufactured in conformance with cGMP						

⊕ Ordering Information

Format	Membrane material	Membrane series	Pore size	Length
K=L-type Capsule	S=PSF	A=A series	02=0.2 μm 04=0.45 μm	S2: Alicap® L300 S3: Alicap® L600 M1: Alicap® L02 M3: Alicap® L04 5: Alicap® L5 1: Alicap® L10 2: Alicap® L20
Capsule connector	O-ring	Package	Sterilization	
T1: 38 mm(1 1/2") Sanitary flange inlet and outlet T3: 19 mm(3/4") Sanitary flange inlet and outlet B5: 13 mm(1/2") Multistage hose inlet and outlet B6: 7-13 mm(1/4"-1/2") Hose barb inlet and outlet B7: 6 mm(1/4") Multistage hose inlet and outlet	S=Silicone	1=1/PK	A=Autoclavable G=Gamma compatible S=Sterile	

• Connector:

Alicap® L300/L600, available with B6 Connector; Alicap® L02/L04, available with T1, T3, B5, B7 Connector; Alicap® L5/L10/L20, available with T1 Connector.

SHF Polysulfone Membrane Filter

⊕ Product Specifications - Cartridge Filters

Product Specifications	Nominal Dimensions	5 inch	10 inch	20 inch	30 inch
		69 mm*5"	69 mm*10"	69 mm*20"	69 mm*30"
Materials of Construction	Membrane	Polysulfone (PSF)			
	Supporting Layer	Polypropylene (PP)			
	O-rings	Silicone, Ethylene propylene diene monomer (EPDM) 、FEP/PFA encapsulated O-rings			
	Core/Cage/End caps/Adaptor	Polypropylene (PP)			
Integrity Testing	Bubble Point	≥4000 mbar (58 psi) (wetted with H ₂ O, 20°C, compressed air) (0.2 μm)			
	Maximum Differential Pressure	Forward: 5.0 bar (72.5 psi) @ 25°C/3.0 bar (43.5 psi) @ 80°C			
		Reverse: 2.0 bar (29.0 psi) @ 25°C			
	Effective Filtration Area	0.3 m ²	0.6 m ²	1.2 m ²	1.8 m ²
	Pore Size	0.2 μm/0.45 μm			
	Biological Safety	All construction components meet the biological safety requirements referring to USP<88> Class VI plastic and USP<87>			
	Indirect Food Additive	All component materials meet the requirements of Indirect Food Additive cited in EU 1935/2004/EC and FDA 21 CFR 177-182			
	Cleanliness	Meets the requirements for a 'non-fiber releasing' filter defined in FDA 21 CFR 211.72 and 210.3 (b) (5) (6), and particulate matter meets the requirements of USP<788>			
Working Characteristics	Endotoxin	Endotoxin<0.25 EU/mL by LAL test method, which complies with the requirements of USP<85>			
	TOC/Conductivity	TOC<0.5 mg/L, Conductivity<1.3 μS/cm			
	Manufacturing Integrity	100% integrity test passed			
	Manufacturing Environment	Manufactured in conformance with cGMP			

⊕ Ordering Information

Format	Membrane material	Membrane series	Pore size	Length	Cartridge adaptor
C=Cartridge	S=PSF	A=A series	02=0.2 μm 04=0.45 μm	0=2.5 inch 5=5 inch 1=10 inch 2=20 inch 3=30 inch	7=226, Spearhead with fins 2=226, Flat end with fins 8=222, Spearhead with fins 3=222, Flat end with fins 9=215, Spearhead with fins 4=215, Flat end with fins
O-ring	Package				
S=Silicone T=EPDM B=FEP/PFA encapsulated O-rings	1=1/ PK 3=3/PK(20&30 inch)	A			

Alipore® TAHF Sterilizing-Grade Hydrophobic PTFE Gas Disc Filter

Hydrophobic Polytetrafluoroethylene (PTFE)

Sterilizing-grade gas filters

Non-aqueous liquid filtration



⊕ Product Introduction

The Alioth Alipore® TAHF Series features a hydrophobic and chemically inert PTFE (polytetrafluoroethylene) filter membrane. Through rigorous liquid bacteria retention validation, the product effectively retains microorganisms and particles even in wet or humid gas streams. Engineered for high mechanical strength, it withstands repeated steam-in-place (SIP) sterilization cycles. The TAHF Series is ideal for sterile gas filtration and the filtration of organic solvents with stringent quality requirements in pharmaceutical applications.

⊕ Key Features and Benefits

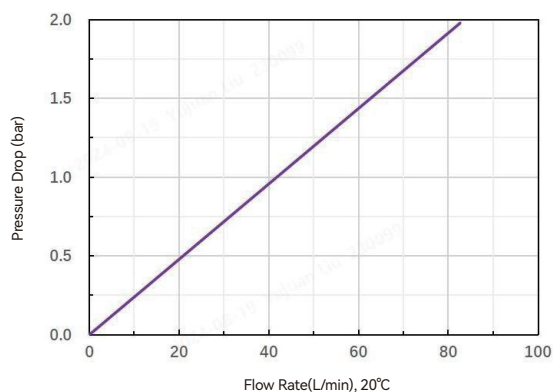
- Natural hydrophobic material
- High gas flux and low-pressure drop
- Reliable bacterial/particles removal efficiency
- Excellent chemical compatibility

⊕ Typical Applications

- Sterile gas filtration
- Sterile filtration of organic solvents vent

⊕ Typical Flow Characteristics

Air Flow Rate and Pressure Drop-Alipore® TAHF 0.2 µm Disc Filters



Alipore® TAHF Sterilizing-Grade Hydrophobic PTFE Gas Disc Filter

⊕ Product Specifications - Alidisk® Disc Filters

Product Specifications	Diameter	50 mm
Materials of Construction	Membrane	Hydrophobic Polytetrafluoroethylene (PTFE)
	Inlet/Outlet Cap, Supporting layer	Polypropylene (PP)
Integrity Testing	Bubble Point	≥1100 mbar (16 psi) (wetted with 60% IPA, 20°C, compressed air)
	Maximum Differential	Forward: 5.0 bar (72.5 psi) @ 25°C
	Pressure	Reverse: 3.0 bar (43.5 psi) @ 25°C
	Sterilization Resistance	Autoclave(A): 125°C, 60min, 30 cycles
		*Capsule filters can't be sterilized by SIP, sterile type capsule filters can't be sterilized again
	Effective Filtration Area	18 cm²
	Pore Size	0.2 µm
	Bacterial Retention	>10 ⁷ cfu/cm² B. <i>diminuta</i> (ATCC® 19146™)
	Working Characteristics	All construction components meet the biological safety requirements referring to USP<88>
		Class VI plastic and USP<87>
	Indirect Food Additive	All component materials meet the requirements of Indirect Food Additive cited in EU 1935/2004/EC and FDA 21 CFR 177-182
	Cleanliness	Meets the requirements for a 'non-fiber releasing' filter defined in FDA 21 CFR 211.72 and 210.3 (b) (5) (6), and particulate matter meets the requirements of USP<788>
	Endotoxin	Endotoxin<0.25 EU/mL by LAL test method, which complies with the requirements of USP<85>
	Manufacturing Integrity	100% integrity test passed
	Manufacturing Environment	Manufactured in conformance with cGMP

⊕ Ordering Information

Format	Membrane material	Membrane series	Pore size	Length	Disc adaptor
D=Disc	T=PTFE	A=A series	02=0.2 µm	5=Diameter 50 mm	B0=7-13 mm(1/4"-1/2") Hose barb inlet and outlet
Package	Sterilization				
6=6/PK	A=Autoclavable				

BrilliFlow® Disposable Vacuum Filtration Device

High Retention

Low Adsorption

Easy Operation

Gamma Sterilization



⊕ Key Features and Benefits -----

- Available in 4 sizes: 150 mL/250 mL/500 mL/1000 mL, which can meet the requirements for handling different volumes of samples
- Utilize the latest generation of highly asymmetric pharmaceutical-grade polyethersulfone (PES) sterilizing membrane
- Low adsorption, high flow rate, and high capacity
- The filtration device features high stability
- The screw cap, hose connection, and other parts are ergonomically designed, enabling easy and effortless operation
- The scales are accurate and easy to read
- Individually packaged and subjected to gamma irradiation sterilization
- Free from DNase, RNase, and pyrogen

⊕ Structural Materials -----

- Upper cup and collection bottle: Polystyrene(PS)
- Vacuum port connector: Acrylonitrile-Butadiene-Styrene copolymer (ABS)
- Bottle cap: Polyethylene(PE)
- Membrane material: Polyethersulfone(PES)
- The above materials all comply with the USP Class VI standard

⊕ Typical Applications -----

- Cell media filtration
- Buffer filtration
- Protein intermediate filtration
- Filtration of other biological samples and reagents

⊕ Maximum Operating Pressure -----

- 0.09 Mpa

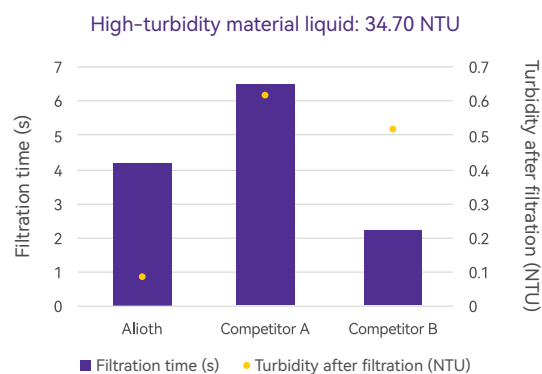
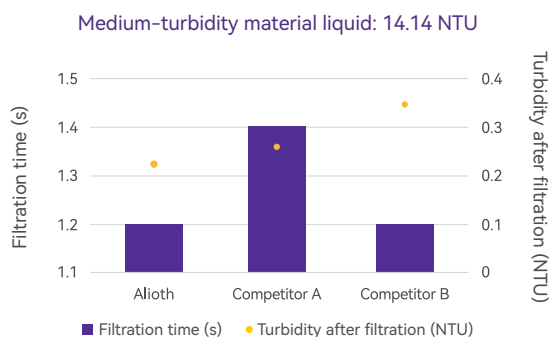
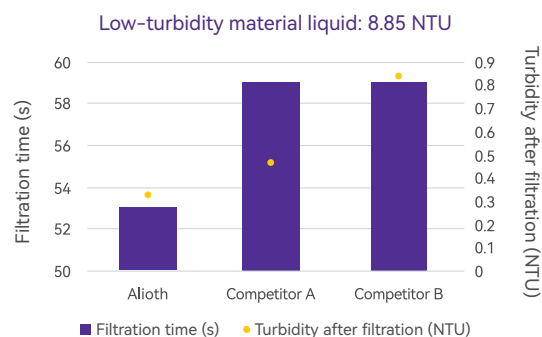
⊕ Product Specifications -----

Volume (mL)	Filter membrane diameter (mm)	Working volume (mL)	Residual volume (mL)	Maximum operating temperature (°C)
150	50	150	3	45
250	50	250	3	45
500	75	500	3	45
1000	91	1000	3	45

BrilliFlow® Disposable Vacuum Filtration Device

⊕ Filtration Performance Comparison

Alioth BrilliFlow® Disposable Vacuum Filtration Device exhibits superior overall performance in filtering high-, medium-, and low-turbidity materials, with a small residual volume



⊕ Filtration Performance Comparison

Parameters	Alioth (500 mL)	Competitor A (500 mL)	Competitor B (500 mL)
Membrane material	PES	PES	PES
Diameter (mm)	75	65	73
Area (cm ²)	44.2	33.2	40
Measured retention volume (mL)	3.21	1.97	4.7

⊕ Ordering Information

Format	Pore size	Type
8=Disposable vacuum filtration device (reservoir+filter accessories+ bottle cap)	2=0.2 μm 4=0.45 μm	150=150 mL 250=250 mL 500=500 mL 000=1000 mL

⊕ Ordering Information for Accessories

Format	Type	Format	Pore size	Type
BT=Receiver	150=150 mL 250=250 mL 500=500 mL 000=1000 mL	FC=Upper cup of disposable filter	2=0.2 μm 4=0.45 μm	150=150 mL 250=250 mL 500=500 mL 000=1000 mL

Alioth Membrane Filter

Chemical Compatibility

High Retention

Moist Heat Sterilization

Gamma Irradiation



⊕ Product Introduction

Alioth Membrane Filter is made from hydrophilic polyethersulfone (PES) membrane, and placed in a compatible membrane holder. It can remove particles and microorganisms from liquids, thus very suitable for the development and validation of early-stage filtration process. Besides, it can withstand multiple cycles of high-temperature and high-pressure sterilization, meeting the common requirements for liquid filtration in pharmaceutical industry.

⊕ Key Features and Benefits

- Excellent chemical compatibility
- Excellent wettability
- High retention capacity
- Low adsorption
- Excellent optical properties
- Appropriate flow rate
- Few extractables
- Resistance to multiple steam sterilization
- Resistance to gamma irradiation sterilization
- Original membrane integrity tested
- Stable performance and sturdy durability
- Available materials: PES/PTFE/MCE/PP/GF/PSF
- Available diameters: 47 mm, 90 mm, 142 mm, 200 mm
- Easy and flexible to operate, user-friendly

Alioth Membrane Filter

⊕ Product Specifications

Membrane	Polyethersulfone (PES)			
Diameter	47 mm	90 mm	142 mm	200 mm
Effective Filtration Area	13 cm ²	50 cm ²	141 cm ²	255 cm ²
Thickness	Approximately 110 µm			
Pore Size	0.2 µm/0.45 µm/0.45+0.2 µm/0.65+0.2 µm/0.8+0.2 µm/1.2+0.2 µm			
Maximum Operating Temperature	Can withstand moist heat sterilization			
Integrity	As an example, for PES A series with a single layer of 0.2 µm, bubble point is 4.8±0.5 bar			
	As an example, for PES C series with a single layer of 0.2 µm, bubble point is 4.3±0.5 bar			
Water Permeability	As an example, for PES A series with a single layer of 0.2 µm, water flux is ≥45 mL/bar/min/cm ²			
	As an example, for PES C series with a single layer of 0.2 µm, water flux is ≥35 mL/bar/min/cm ²			
Bacterial Retention	>10 ⁷ cfu/cm ² <i>B.diminuta</i> (ATCC® 19146™)			
Biological Safety	All construction components meet the biological safety requirements referring to USP <88> Class VI plastic and USP <87>			
Quality System	Manufactured in a facility whose Quality Management System has been certified with ISO 9001			
Manufacturing Environment	Manufactured in conformance with cGMP			
Shelf Life	3 years at 10–35°C and below 70% humidity			

⊕ Ordering Information

Product format	Membrane	Pore size	Size	Package
MF=Membrane filter	EC=PES material C series ED=PES material D series	02=0.2 µm 04=0.45 µm 52=0.45+0.2 µm 62=0.65+0.2 µm 82=0.8+0.2 µm 12=1.2+0.2 µm	047=47 mm 090=90 mm 142=142 mm 200=200 mm	25=25/PK

02

DEPTH
FILTRATION

DEPTH
FILTRATION

Alidep® Depth Filter

Single-use Design

Flexible Media Selection

Robust & Reliable

Easy Operation



⊕ Product Introduction

The Alioth Alidep® Depth Filter is designed primarily for clarification steps in pharmaceutical processes, offering enhanced flexibility for large-scale production through its disposable format.

The Alidep® Depth Filter is available in a range of media combinations, typically composed of cellulose, filter aids, and positively charged resins. It delivers a high dirt-holding capacity, making it well-suited for clarifying cell culture fluid. The filter progressively retains intact cells and cell fragments, reduces turbidity, and effectively adsorbs impurities such as DNA, host cell proteins (HCP), and endotoxins—thereby reducing the burden on downstream purification steps.

With multiple product specifications available, the Alidep® Depth Filter supports applications from laboratory and pilot-scale through to manufacturing-scale.

⊕ Key Features and Benefits

- Disposable design eliminates the need for cleaning validation
- Modular design adapts to current mainstream clarification holders and systems
- Small hold-up volume facilitates easy product recovery, improving yield
- Flexible media selection optimize customer product development
- Easy operation, small footprint, and space-saving design

⊕ Typical Applications

- Clarification of CHO cell culture
- Clarification in vaccine production process
- Clarification of yeast fermentation broth (after centrifugation)
- Clarification in plasmid production process (E. coli lysate)
- Clarification of lentivirus and adeno-associated virus culture fluid

Alidep® Depth Filter

Product Specifications

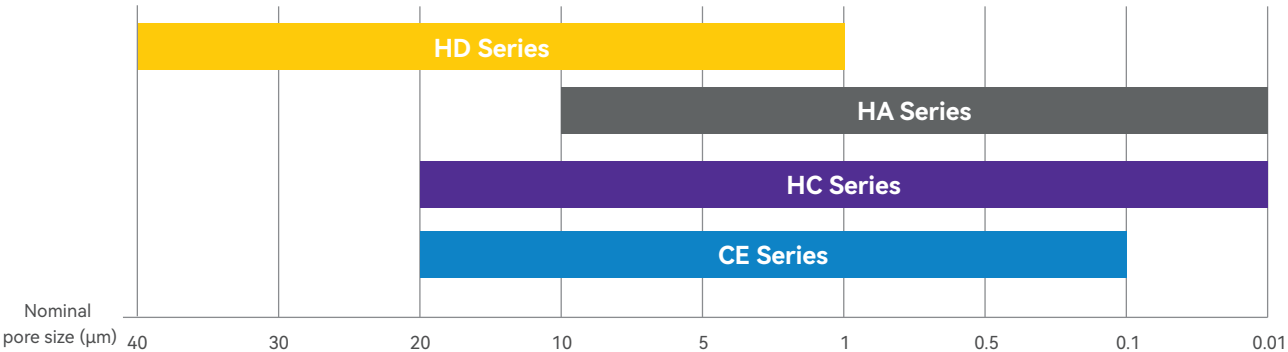
Product Specifications	Product Series	Alidep® process development scale (L series)	Alidep® laboratory scale (P series)	Alidep® production scale (M series)
	Effective Filtration Area	23 cm²	270 cm², 540 cm²	0.11 m², 0.55 m², 1.1 m²
	Overall Dimension	9.4 × 7.1 × 4.3 cm	22 × 14 × (7.4 ~ 9.6) cm	62 × 32 × (3.1 ~ 12.4) cm
Materials of Construction	Inlet, Outlet and Exhaust Port	Luer connector: Polypropylene 6 mm hose connector: Glass fiber-filled polypropylene		Flat end connector: Glass fiber-filled polypropylene
	Frame and Cover Material	Glass fiber-filled polypropylene		
	Filter Plate	Cellulose, Filter Aid, Resin or Cellulose		
	Supporting Layer	Polypropylene		
	O-ring	Silicone		
Working Characteristics	Aerosol Challenge Test	Aerosol leakage < 0.01%		
	Maximum Operating Pressure	3.5 bar @ 40°C		
	Maximum Forward Differential Pressure	3.0 bar @ 25°C		
	Maximum Reverse Differential Pressure	2.0 bar @ 25°C		
	Sterilization Resistance	Autoclave: 125°C 60 min, 2cycles		
	Indirect Food Additive	All component materials meet the requirements of Indirect Food Additive cited in FDA 21 CFR 177-182		
	Toxicity	The raw materials of all Alidep® Depth Filter components, including filter plates (mainly made from cellulose, filter aids and resin), frames and covers made from glass fiber-filled polypropylene, depth supporting nets made from polypropylene, and silicone O-rings, meet the biological safety requirements refering to USP <88> Class VI plastic		
	Bacterial Endotoxin	The endotoxin level of rinsing liquid is < 0.25 EU/mL, which complies with the requirements for water for injection in Chinese Pharmacopoeia and United States Pharmacopoeia		

Pore Size Range

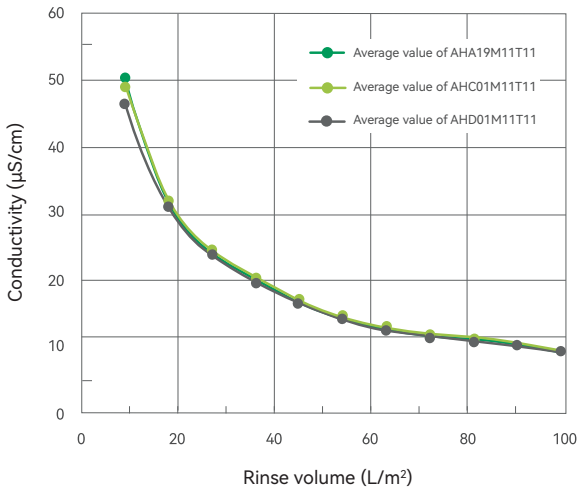
Name of medium	Application	Features	Composition
Double-layer HD Series	Primary clarification of cell culture fluid	Two-stage filter plate and open pore size design, which can retain large particles and fragments	Cellulose, filter aids and resin
Double-layer HA Series	Secondary clarification of cell culture fluid	Double-stage filter plate with a dense structure for stricter turbidity control	Cellulose, filter aids and resin
Double-layer HC Series	Direct clarification of cell culture fluid	Double-stage filter plate, which is designed to clarify material liquid with a low cell density	Cellulose, filter aids and resin
Double-layer CE Series	Clarification of plasmids and virus particles, etca.	Double-stage filter plate, which features low ad-sorption	Cellulose

Alidep® Depth Filter

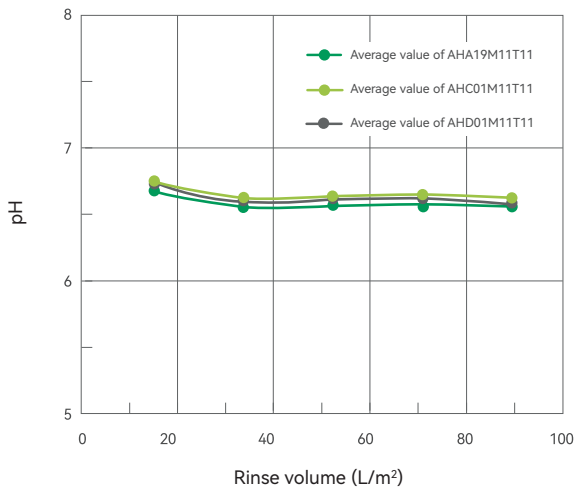
⊕ Pore Size Range



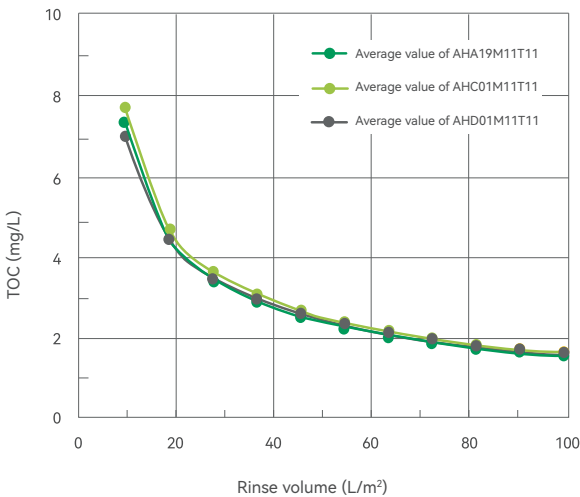
⊕ Conductivity Test Results



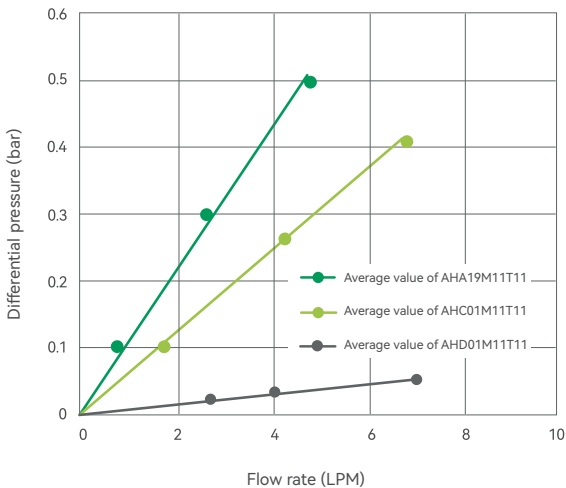
⊕ pH Test Results



⊕ TOC Test Results



⊕ Test Results of Flow Differential Pressure



Alidep® Depth Filter

Validation Methods and Results

Conductivity	Several filters were randomly selected from different production batches and subjected to high-pressure sterilization at 125°C for 60 minutes. These filters were then rinsed with 100 L/m ² pure water for 10-20 minutes. The conductivity ranged from 2.79 to 7.51 µS/cm
NVR	Several filters were randomly selected from different production batches and subjected to high-pressure sterilization at 125°C for 60 minutes. These filters were then rinsed with 100 L/m ² pure water for 10-20 minutes. The NVR ranged from 667 to 1,314 mg
TOC	Several filters were randomly selected from different production batches and subjected to high-pressure sterilization at 125°C for 60 minutes. These filters were then washed with 100 L/m ² pure water for 10-20 minutes. The TOC ranged from 1.12 to 1.55 mg/L
pH	Several filters were randomly selected from different production batches and subjected to high-pressure sterilization at 125°C for 60 minutes. These filters were then rinsed with 100 L/m ² pure water for 10-20 minutes. The pH ranged from 6.10 to 6.62
Endotoxin	Several filters were randomly selected from different production batches, then rinsed with 100L/m ² pure water for 10-20minutes, followed by soaking in pure water for 24 hours. The endotoxin level was <0.25 EU/mL as indicated by Tachypleus Amebocyte Lysate test
Flow Differential Pressure	Several filters were randomly selected from different production batches and subjected to high-pressure sterilization at 125°C for 60 minutes. These filters were then rinsed with 100 L/m ² pure water for 10-20 minutes. The experiment was conducted at room temperature. After venting, the flow rate was gradually increased, and the upstream and downstream pressures were observed. Within 8 LPM, the differential pressure was < 0.6 bar
Tolerated Liquid Pressure	Several filters were randomly selected from different production batches and subjected to high-pressure sterilization at 125°C for 60 minutes, twice. The tightness of filter was tested. High-viscosity solution was filtered to increase the upstream and downstream differential pressure of filter. The filter was subjected to forward and reverse pulse pressures at room temperature, followed by rinsing, drying and tightness challenge test. At room temperature, Alidep® Depth Filter can withstand 3.0 bar forward pressure and 2.0 bar reverse pressure

Ordering Information

Format	Membrane type	Filter membrane area	Connector type	Package
A=Depth filter	HA01 HC01 HD01 CE01 ACA01 HA02 HC02 HD02 CE02 ACA02	L23=23 cm ² P27=0.027 m ² P54=0.054 m ² M01=0.11 m ² M05=0.55 m ² M11=1.1 m ²	L0=Luer connector (L23) B0=6 mm hose connector (P27, P54) T1=Flat end connector (M01, M05, M11)	1=1/PK 3=3/PK (L23)

Alidep® Depth Stacked Filter



⊕ Product Introduction

The Alioth Alidep® Depth Stacked Filters are designed primarily for clarification steps in pharmaceutical processes and are used in conjunction with stainless steel filter housings. Available in a variety of sizes, the filters offer flexibility to meet diverse customer requirements.

These depth filters feature multiple media combinations, typically composed of cellulose, filter aids, and positively charged resins—or in some configurations, pure cellulose. This construction enables high throughput and efficient performance in cell culture clarification. The filters provide gradual retention of cells and cell debris, effectively reducing turbidity while adsorbing impurities such as DNA, host cell proteins (HCP), and endotoxins. This helps alleviate the burden on downstream purification steps.

⊕ Key Features and Benefits

- Multiple size specifications and customized according to customer needs.
- Flexible media selection to optimize customer product development.
- Adapted to current mainstream filter housing and systems.
- Strict production control and release testing, reliable performance, and low process risk.

⊕ Typical Applications

- Clarification of CHO cell culture
- Clarification in vaccine production process
- Clarification of yeast fermentation broth
- Clarification of other liquid material

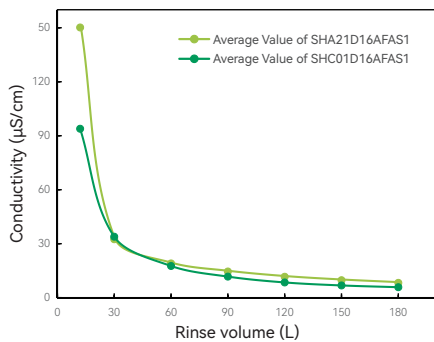
Alidep® Depth Stacked Filter

Product Specifications

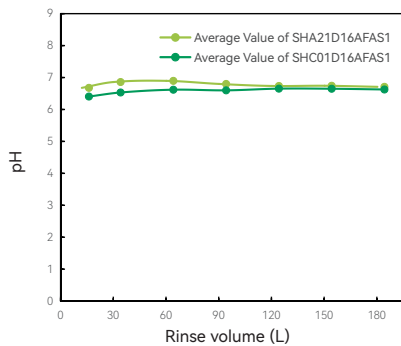
Product Specifications	Product Series	16 inch	12 inch	Other Custom Specifications
	Effective Filtration Area Per Layer	0.23 m ²	0.11 m ²	Optional
	Represents Product Height	Double-layer membrane: 8 layers – 184 mm; 10 layers – 275 mm Single-layer membrane: 10 layers – 258 mm; 16 layers – 275 mm		
Materials of Construction	Filter Media	Cellulose, Filter Aid, Resin or Cellulose		
	Frame and Supporter	Glass Fiber Reinforced Polypropylene		
	Stainless Steel Band	316L		
	O-ring	Silicone		
Working Characteristics	Particle Challenge	Particle Intercept>90%		
	Max Operation Pressure	3.0 bar @ 25°C		
	Max Pressure Differential	Forward: 2.0 bar @ 25°C		
		Reverse: not recommended		
	Sterilization Resistance	Steam-In-Place: 126°C 30 min, 3 cycles		
	Indirect Food Additive	All component materials meet the requirements of Indirect Food Additive cited in FDA 21 CFR 177-182		
	Toxicity	The raw materials of all Alidep® Depth Stacked Filter components meet the biological safety requirements referring to USP<88> Class VI plastic		
	Bacterial Endotoxin	The endotoxin level of rinsing liquid is <0.25 EU/mL, which complies with the requirements for water for injection in Chinese Pharmacopoeia and United States Pharmacopoeia		

Validation Methods and Results

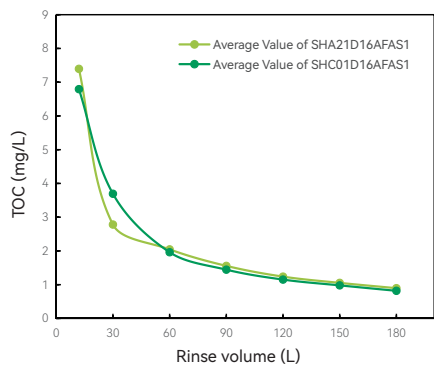
Conductivity Test Results



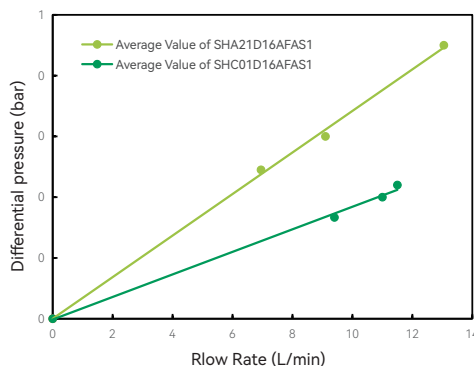
pH Test Results



TOC Test Results



Test Results of Flow and Differential Pressure



Alidep® Depth Stacked Filter

⊕ Validation Summary

Conductivity	Several filters were randomly selected from different production batches, then rinsed with 100L/m ² pure water for 10–20 minutes. The conductivity ranged from 5–8 µS/cm.
TOC	Several filters were randomly selected from different production batches, then rinsed with 100L/m ² pure water for 10–20 minutes. The TOC was about 1mg/L.
pH	Several filters were randomly selected from different production batches, then rinsed with 100L/m ² pure water for 10–20minutes. The pH ranged from 6.6–6.8.
Endotoxin	Several filters were randomly selected from different production batches, then rinsed with 100L/m ² pure water for 10–20minutes, followed by soaking in pure water for 24 hours. The endotoxin level was < 0.25 EU/mL as indicated by Tachypleus Amebocyte Lysate test.
Endurance to Sterilization	Several filters were randomly selected from different production batches, after 3 cycles of SIP at 126°C for 30min, filters passed air tightness, diffusion flow, hydraulic stress. Flow rate and pressure dropafter SIP met the product quality standard.
Hydraulic Stress	Several filters were randomly selected from different production batches, respectively conduct hydraulic stress test at ambient temperature and after 3 cycles of SIP at 123°C for 30min. High-viscosity solutions was filtered to increase the pressure drop across the filters. Apply forward pulse pressure to the filter at ambient temperature, rinseand conduct diffusion flow. Depth stacked filter can withstand 2.0bar forward pressure at ambient temperature.

⊕ Ordering Information

Format S=Depth Stacked Filter	Membrane type HA01, HA02.. HC01, HC02... CE01, CE02..	Membrane component D=Double layer S=Single layer	Dimension 12=12 inch 16=16 inch	Cell A=8 cells C=10 cells F=16 cells	Adapter F=Flat Seal
Structure A=SS Band	O-ring S=Silicone	Package 1=1EA/pkg			

Alicarb® Activated Carbon Series Stacks



⊕ Product Introduction

The Alicarb® Activated Carbon Series is designed to meet the liquid filtration requirements of diverse industries, including pharmaceuticals, food and beverage, cosmetics, biotechnology, and fine chemicals. Primarily used for decolorization, deodorization, impurity removal, and clarification, these products are engineered for integration with stainless steel filter housings and are available in multiple size specifications to accommodate a wide range of customer needs.

The series features various filter cartridge configurations, each composed of cellulose, filter aids, positively charged resin, and activated carbon. Alioth meticulously selects five standardized types of activated carbon for the production of Alicarb® cartridges, ensuring broad applicability across different sectors. Additionally, cartridges with varying pore sizes are available to handle liquids with differing turbidity and viscosity levels.

These cartridges effectively perform decolorization and deodorization for a wide variety of liquids. Tailored to specific feedstocks, they remove diverse impurity molecules—such as retaining cell fragments and adsorbing small-molecule impurities—thereby reducing the processing burden on downstream purification.

⊕ Key Features and Benefits

- High adsorption efficiency for decolorization and deodorization
- Complex pore structure and large specific surface area enabling versatile applications in demanding scenarios
- Flexible media selection with tailored product development for specific feedstocks
- User-friendly membrane stack operation featuring dust-free processing
- Constant flow rate/pressure filtration for high efficiency and reduced process time

⊕ Typical Applications

- Antibiotic decolorization
- Solution deodorization
- Endotoxin removal
- Purification of antibodies, vaccines, and peptides
- Detergent and defoamer removal
- Catalyst removal
- Solvent decolorization
- Organic impurity removal from active ingredients
- Decolorization in food processing

Alicarb® Activated Carbon Series Stacks

⊕ Product Specifications

Product Specifications	Product Series	16" 8-Layer Single -Membrane Stack	16" 13-Layer Single -Membrane Stack	16" Other Customized Specifications
	Effective Filtration Area	1.8 m ²	3 m ²	Selectable
	Product Height	204 mm	275 mm	Specification-dependent
Materials of Construction	Filter Plate Composition	Cellulose, Filter Aids, Resin, Activated Carbon		
	Frame and Cover Material	Glass Fiber Reinforced Polypropylene		
	Stainless Steel	316L		
Working Characteristics	Silicone Gasket	Silicone Rubber		
	Max. Operation Pressure	3.0 bar @ 25°C		
	Max. Pressure Differential	Forward: 2.0 bar @ 25°C		
		Reverse: Not recommended		
	Indirect Food Additive Complain	All components comply with FDA 21 CFR 177-182 requirements for food contact materials		
	Toxicity Certification	All materials meet USP <88> Class VI biological safety requirements for in vivo use		
	Bacterial Endotoxin	Endotoxin level in flush fluid <0.125 EU/mL, compliant with Chinese Pharmacopoeia and USP standards for Water for Injection		

⊕ Ordering Information

Format	Membrane type	Membrane Configuration	Size	Layers	Connection Type
S=Depth Membrane Stack	ACA01, ACA02 ACC03, ACC04	S=Single-layer	16=16 inch	U=2 layers W=4 layers S=6 layers A=8 layers C=10 layers D=13 layers	F=Flange connection
Structure	Gasket Material	Packaging Quantity			
A=Stainless steel band	S=Silicone Rubber	1=1 pc/pack			

Alioth Disposable Connector Kit

Disposable Design

Strong Compatibility

Stable Performance



⊕ Product Introduction

Alioth disposable straight-through connector and Blind-plug connector sets, which are made from polypropylene, can enable the correct installation of depth filter and meet the requirements of depth filtration process when used with Alidep depth filter and holders.

⊕ Key Features and Benefits

- Good chemical compatibility, with a tolerance range of pH 1-14
- Good pressure resistance and sealing performance
- Single use recommended
- Stable performance, sturdy structure and durable service
- Available in straight-through and blind-plug connectors

⊕ Ordering Information

Order No.	Product Description	Package Available for Ordering
KITORING	3 straight-through connectors,	1=1/PK
	3 blind-plug connectors	
KITORING 6	6 straight-through connectors	1=1/PK



Alidep® Disc Depth Filter



⊕ Product Introduction

Alidep® disc depth filters have a variety of filter media combinations. Filter media are mainly composed of cellulose, filter aid and positive-charged resins or pure cellulose, and thus have high throughput. Filters are mainly used for pre-filtration and clarification in virus filtration, improve the robustness of virus filtration operations by efficiently removing impurities, such as protein aggregates.

⊕ Key Features and Benefits

- Flexible media selection to optimize customer product development.
- Adapted to current mainstream virus filters.
- Strict production control and release testing, reliable performance, and low process risk.

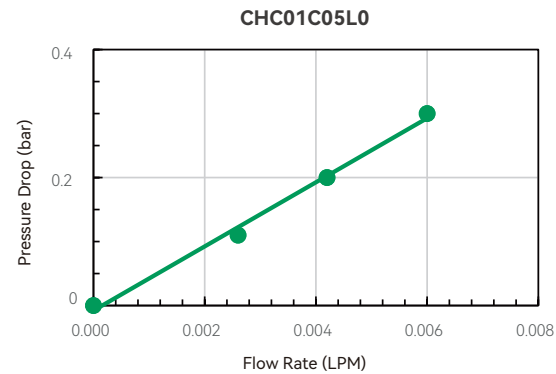
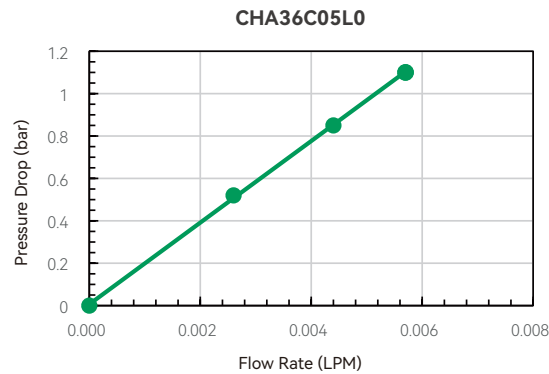
⊕ Product Specifications

Effective Filtration Area	5 cm ²
Filter Media	Cellulose, filter aid, resin or cellulose
Frame and Supporter	Glass fiber reinforced polypropylene
Inlet and Outlet	Luer connector
Pressure Leak Test	<50 mbar @ 3.0 bar
Max Operation Pressure	3.0 bar @ 25°C
Max Pressure Differential	Forward: 3.0 bar @ 25°C Reverse: not recommended
Sterilization Resistance	Autoclave: 125°C 60min, 2 cycles
Indirect Food Additive	All component materials meet the requirements of Indirect Food Additive cited in FDA 21 CFR 177-182
Toxicity	All construction components meet the biological safety requirements referring to USP <88> Class VI plastic
Bacterial Endotoxin	The endotoxin level of rinsing liquid is <0.25 EU/mL, which complies with the requirements for water for injection in Chinese Pharmacopoeia and United States Pharmacopoeia

Alidep® Disc Depth Filter

Validation Methods and Results

Test Results of Flow and Differential Pressure



Validation Summary

Endotoxin	Several filters were randomly selected from different production batches, then rinsed with 100 L/m ² pure water for 10-20minutes, followed by soaking in pure water for 24 hours. The endotoxin level was < 0.25 EU/mL as indicated by Tachypleus Amebocyte Lysate test.
Endurance to Sterilization	Several filters were randomly selected, after 2 cycles of autoclave at 125°C for 60min, filters passed pressure leak test. Flow rate and pressure drop after autoclave met the product quality standard.

Ordering Information

Product format	Media type	Dimension	Adapter	Package quantity
C=Depth Capsule Filters	HA01, HA02.. HC01, HC02.. ACA01, ACA02.. CE01, CE02..	C05=5 cm ²	L0=Luer	9=9 EA/pkg

03

HARDWARE

HARDWARE

Alioth Stainless Steel Filter Housing

Sanitary Level

Easy to Clean

Easy to Drain

High Compatibility



⊕ Product Introduction

Alioth stainless steel filter housing is designed according to sanitary requirements and GMP requirements. Combined with various materials of diaphragms and various sizes of cartridge filters produced by Alioth, it can be flexibly used at different stages of different processes in different industries. It is extremely easy to clean and drain, poses no concerns about residual liquid, and can meet the strict requirements of key material liquid and key parts for filter housing in biopharmaceutical industry. It can also be widely used in industries such as pharmaceuticals, bioengineering, food and beverages. At the same time, this filter housing is compatible with different brands of cartridge filters in the market, greatly facilitating customers to make flexible choices.

⊕ Key Features and Benefits

- Sanitary design, which meets the strict regulatory requirements of pharmaceutical industry
- Compliant with cGMP standards
- Effort-saving, safe and easy operation
- Compatible with major brands of cartridge filters in the market
- Equipped with a low-point drain valve for easy removal of residual material liquid and CIP liquid
- Equipped with a high-point vent valve to prevent filtration blockage caused by compressed gas and ensure SIP performance
- Available in a full range of specifications for laboratory research scale, clinical pilot production scale, and commercial large-scale production
- Adopt industry-standard chuck interface connection
- Can be specially customized according to the requirements of customer

⊕ Product Documentation Package

- Basic drawings of the product
- Maintenance guide and operation manual
- Calibration certificates of instruments
- Material certification documents
- Certification document of surface finish
- List of spare parts
- Custom files related to other customized products

⊕ Product Applications

- Culture media filtration
- Collection of fermentation broth
- Water for injection
- Gas filtration

Alioth Stainless Steel Filter Housing

Product Specifications

Material	Filter housing: 316L stainless steel Gasket: Silicone rubber Hoop: 304 stainless steel
Filter Connector Type	Code 7/2-226
Sterilization	Available for steam sterilization in place or high-pressure moist heat sterilization
Finish	Internal polishing $\leq 0.6\text{ }\mu\text{m}$; external polishing $\leq 0.8\text{ }\mu\text{m}$
Size of Loadable Filter	2.5 inch/5 inch/10 inch/20 inch/30 inch
Size/Weight	Please refer to the drawings of products with different article numbers for details
Number of Loadable Filters	1 cartridge, 3 cartridges, 5 cartridges ※ (7 cartridges, 9 cartridges, 11 cartridges please contact sales personnel for customization)
Maximum Operating Conditions	25°C @ 10 bar; 145°C @ 3.2 bar

Information on Spare Parts

					
HSSPCTT1	HSSPOST1	HSSPGTT1	HSSPMTT1	HSSPDTB0	HSSPATDC06
1.5-inch stainless steel hoop	1.5-inch silicone gasket	1.5-inch diaphragm pressure gauge	1.5-inch stainless steel stuffy cover	Stainless steel vent valve assembly	50 mm TC to 14 mm hose connector

Ordering Information

Format HS=Stainless Steel Filter Housing HSP=Stainless Steel Filter Housing P Type	Number of filters 1=1 cartridge 3=3 cartridges 5=5 cartridges	Filter housing type T=T line N=In line C=C line	Size 02=2.5 inch 05=5 inch 10=10 inch 20=20 inch 30=30 inch	Filter connector 7=226 Spearhead with fins 8=222 Spearhead with fins
Filter housing connector A=1" pipe, 50.5 TC B=1.5" pipe, 50.5 TC C=2" pipe, 64 TC	Exhaust port V=Vent valve N=None	Drain port V=Drain valve N=None	Package 1=1/PK	

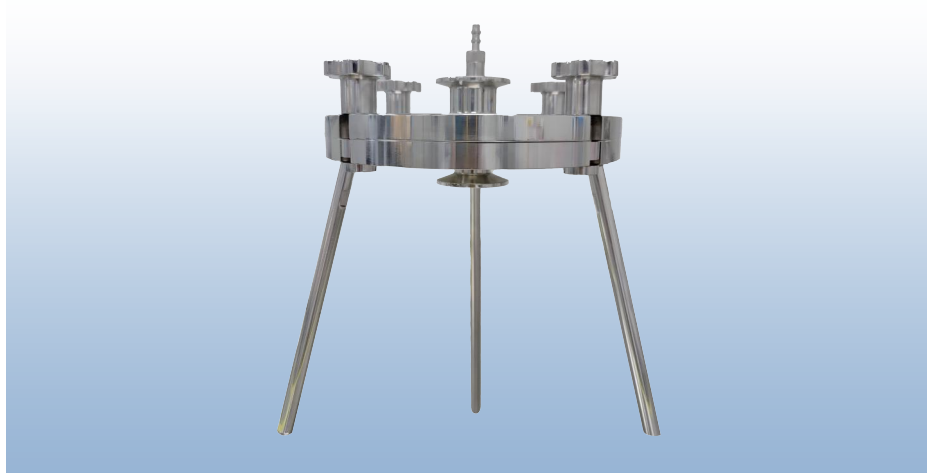
Alioth Membrane Holder

High Compatibility

Easy Discharge

Standard Connector

Customizable



⊕ Product Introduction

Alioth membrane holder is designed according to sanitary requirements and GMP standards. Combined with various materials and sizes of diaphragms produced by Alioth, it can be flexibly used at the diaphragm material selection stage of different processes in different industries. It is easy to clean and drain, poses no concerns about residual liquid, and can meet the relevant requirements of biopharmaceutical industry.

It can also be widely used in industries such as pharmaceuticals, bioengineering, food and beverages. At the same time, this membrane holder can also be compatible with diaphragms of the same diameter from different brands in the market, greatly facilitating customers to make flexible choices.

⊕ Key Features and Benefits

- Sanitary design, which meets the strict regulatory requirements of pharmaceutical industry
- Compliant with cGMP standards; effort-saving, safe and easy operation
- Compatible with major brands of diaphragms in the market
- Equipped with a low-point vent valve for easy removal of residual material liquid
- Compatible with diaphragms from different brands
- Adopt industry-standard chuck interface connection
- Can be specially customized according to the requirements of customer

⊕ Product Applications

- Liquid filtration
- Diaphragm material selection
- Process development

Alioth Membrane Holder

Product Specifications

Material	Stainless steel: SS 316L, SS 304L Gasket: Silicone
Connector Type	Available in: Flange connectors 25 mm and 50 mm
Finish	Available in: Mirror polishing, internal electrolytic polishing and external mechanical polishing
Diameter	Available in: 47, 90, 142, 200, 293 mm
Maximum Operating Conditions	0.6 MPa

Ordering Information

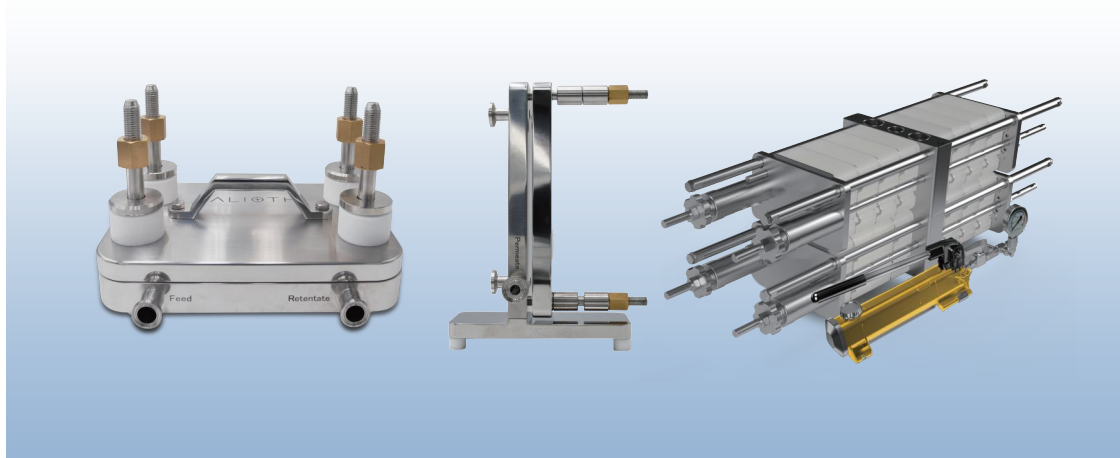
Format MH=Stainless Steel Membrane Holder	Diameter 047=47 mm 090=90 mm 142=142 mm 200=200 mm 293=293 mm	Material 4=SS 304 6=SS 316L	Inlet and outlet connectors T2=TC 25 mm (47/90 mm) T5=TC 50 mm (142/200/293 mm)	Sealing ring S=Silicone
Surface treatment M=Mirror polishing E=Internal electrolytic polishing and external mechanical polishing	Package 1=1/PK			

Alioth Ultrafiltration Cassette Holder

316L Stainless Steel

Easy Operation

Pharmaceutical-grade Standard



⊕ Product Introduction

Alioth ultrafiltration cassette holder is commonly used in ultrafiltration process. It is used to hold ultrafiltration cassette of a specific area. With the help of a specific power source, it allows material liquid to pass through the ultrafiltration membrane, thus achieving the purpose of retaining target substances.

Made from 316L stainless steel, it can adapt well to different types of material liquids and meet the special requirements of pharmaceutical industry. It is also compatible with plate-type ultrafiltration cassettes commonly seen in the market. It can provide a full range of specifications from research and development to production level. It can also be used in conjunction with and integrated into ultrafiltration systems from different brands.

⊕ Key Features and Benefits

- Made from 316L stainless steel
- Material liquid-contact surface $Ra < 0.6 \mu m$
- Diaphragm valves and pressure gauges, which meet cGMP's requirements for designing sanitary dead angle in the structure conforming to pharmaceutical-grade standards
- Elliptical inlet flow channel design, which can reduce the system pressure loss during operation
- Compatible with major brands of ultrafiltration cassettes in the market
- Available in a full range of specifications for laboratory research scale, clinical pilot production scale, and commercial large-scale production
- Resistant to acids, alkali, organic solvents, etc., and meeting SIP/CIP as well as cleaning validation requirements
- Adopt industry-standard chuck interface connection
- Can be specially customized according to the requirements of customer

⊕ Product Documentation Package

- CoQ
- Basic drawings of the product
- Maintenance guide and operation manual
- Calibration certificates of instruments
- Material certification documents
- Certification document of surface finish
- IQ/OQ validation services and documents
- List of spare parts
- Custom files related to other customized products

⊕ Product Applications

- Purification steps in the production processes of monoclonal antibodies, recombinant proteins, vaccines, blood products, liposomes, small molecules, and other pharmaceuticals
- Suitable for various processes such as concentration, dialysis, buffer solution replacement, desalination, purification, pyrogen removal, clarification, etc.

Alioth Ultrafiltration Cassette Holder

⊕ Ordering Information

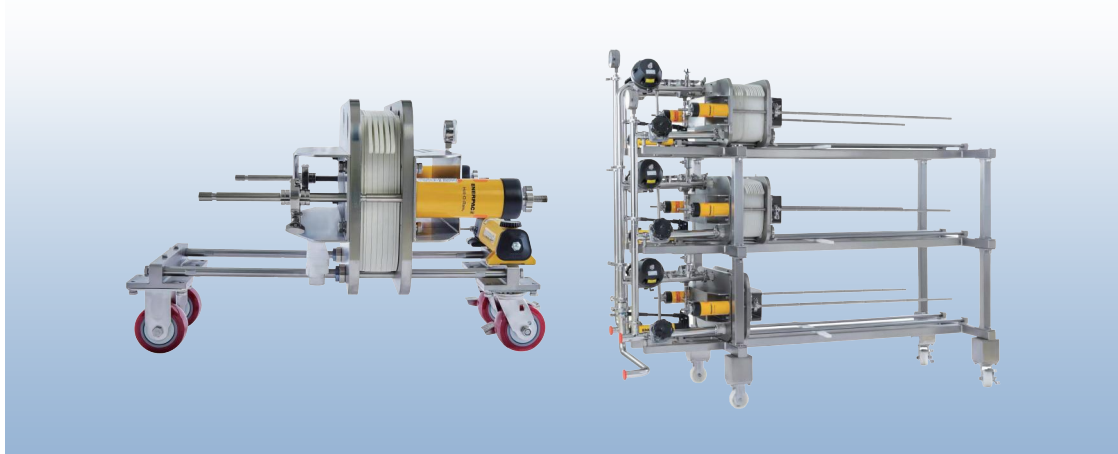
Order No.	Product description	Package
TFHPR0A1-1	Ultrafiltration Cassette Holder 0.1 m ²	1/PK
TFHPR0A1-2	Ultrafiltration Cassette Holder 0.1 m ² Set (including holder, wrench, pressure gauge, diaphragm valve, tee-junction, hoop, sealing ring, etc.)	1/PK
TFHPR0A5-1	Ultrafiltration Cassette Holder 0.5 m ²	1/PK
TFHPR0A5-2	Ultrafiltration Cassette Holder 0.5 m ² Set (including holder, wrench, pressure gauge, diaphragm valve, tee-junction, hoop, sealing ring, etc.)	1/PK
TFHPR2A5-1	Ultrafiltration Cassette Holder 2.5 m ²	1/PK
TFHPR2A5-2	Ultrafiltration Cassette Holder 2.5 m ² set (including holder, wrench, pressure gauge, diaphragm valve, tee-junction, hoop, sealing ring, etc.)	1/PK
TFHPR2A5-ET51	Ultrafiltration Cassette Holder 2.5 m ² , with extension design could support 5m ²	1/PK
TFHPR2A5-ET52	Ultrafiltration Cassette Holder 2.5 m ² , with extension design could support 5m ² , set (including holder, wrench, pressure gauge, diaphragm valve, tee-junction, hoop, sealing ring, etc.)	1/PK
TFHPR5A0-1	Ultrafiltration Cassette Holder 5 m ²	1/PK
TFHPR5A0-2	Ultrafiltration Cassette Holder 5 m ² Set (including holder, wrench, pressure gauge, diaphragm valve, tee-junction, hoop, sealing ring, etc.)	1/PK
TFHPR10A-1	Ultrafiltration Cassette Holder 10 m ²	1/PK
TFHPR20A-1	Ultrafiltration Cassette Holder 20 m ²	1/PK

Alioth Stainless Steel Depth Filter Holder M Type

Easy to Use

Linear Amplification

In Compliance with Pharmaceutical Industry Requirements



⊕ Product Introduction

Alioth stainless steel depth filter holder M type is commonly used to hold depth filter holder of a specific area. With the help of a specific power source, it allows material liquid to pass through the depth filter, thus achieving the purpose of separating impurities from liquid. When used in combination with Alioth-produced depth filter, it can support the needs for different scales of production and use. Made from 316L stainless steel, it meets the requirements of pharmaceutical industry. The equipment is simple, structurally robust, and easy to install and use. It is also compatible with common plate-type depth filter holders from other brands.

⊕ Key Features and Benefits

- Made from 316L stainless steel
- Surface finish $Ra < 1.2 \mu m$, liquid contact surface finish $Ra < 0.6 \mu m$
- Diaphragm valves and pressure gauges, which meet cGMP's requirements for designing sanitary dead angle in the structure conforming to pharmaceutical-grade standards
- Equipped with stainless steel pipeline, and also compatible with disposable pipeline
- Equipped with hydraulic device and depth filter holder; effort-saving, safe and easy operation
- Compatible with major brands of depth filter holders in the market
- Available in a full range of specifications for laboratory research scale, clinical pilot production scale, and commercial large-scale production
- Resistant to acids, alkalis, organic solvents, etc., and meeting SIP / CIP as well as cleaning validation requirements
- Adopt industry-standard chuck interface connection
- Can be specially customized according to the requirements of customer

⊕ Product Configuration

- Alioth depth cartridge filter is connected to process pipelines through disposable connectors, forming disposable flow passage
- Disposable separation plate allows installation of more than one filter models on a single-layer holder

⊕ Product Documentation Package

- CoQ
- Basic drawings of the product
- Maintenance guide and operation manual
- Calibration certificates of instruments
- Material certification documents
- Certification document of surface finish
- FDA certificate for hydraulic oil
- Seal component 2.2 certificate
- EN 10204 certificate for flow passage component
- IQ/OQ validation service and documents
- List of spare parts
- Custom files related to other customized products

⊕ Product Applications

- Clarification step in monoclonal antibody production process
- Clarification step in recombinant protein production process
- Clarification step in vaccine production process
- Clarification step in blood product production process

Alioth Stainless Steel Depth Filter Holder M Type

⊕ Product Specifications

Type	2.2 m ²	5.5 m ²	11 m ²	22 m ²	33 m ²
Dimension (length × width × height)	81x64x51 cm	133x73x100 cm	196x73x100 cm	199x89x117 cm	195x89x157 cm
	103x64x51 cm	162x73x100 cm	223x73x100 cm	203x89x117 cm	203x89x177 cm
(including pipeline valves)(including pipeline valves)(including pipeline valves)(including pipeline valves)(including pipeline valves)					
Data for reference only, dimensions subject to drawings					
Weight	110-120 kg	160-170 kg	180-190 kg	340-360 kg	480-500 kg
Holder Baffle	SS 304				
Liquid-contacting Part	SS 316L				
Surface Finish	Surface finish Ra<1.2 μm, liquid-contacting surface finish Ra<0.6 μm				
Equipment Frame	SS 304				

⊕ Ordering Information

Order No.	Product description	Package
DFHPRM2A2-1	Depth Filter Holder M Type, 2.2 m ² , with bottom liquid-contacting tray	1/PK
DFHPRM2A2-2	Depth Filter Holder M Type, 2.2 m ² , with bottom liquid-collecting tray, valve, pressure gauge and fittings	1/PK
DFHPRM5A5-1	Depth Filter Holder M Type, 5.5 m ² , with bottom liquid-contacting tray	1/PK
DFHPRM5A5-2	Depth Filter Holder M Type, 5.5 m ² , with bottom liquid-collecting tray, valve, pressure gauge and fittings	1/PK
DFHPRM11A-1	Depth Filter Holder M Type, 11 m ² , with bottom liquid-contacting tray	1/PK
DFHPRM11A-2	Depth Filter Holder M Type, 11 m ² , with bottom liquid-collecting tray, valve, pressure gauge and fittings	1/PK
DFHPRM22A-1	Depth Filter Holder M Type, 22 m ² , with bottom liquid-contacting tray	1/PK
DFHPRM22A-2	Depth Filter Holder M Type, 22 m ² , with bottom liquid-collecting tray, valve, pressure gauge and fittings	1/PK
DFHPRM33A-1	Depth Filter Holder M Type, 33 m ² , with bottom liquid-contacting tray	1/PK
DFHPRM33A-2	Depth Filter Holder M Type, 33 m ² , with bottom liquid-collecting tray, valve, pressure gauge and fittings	1/PK

Alioth Stainless Steel Depth Filter Holder P Type

316L Stainless Steel

Flexible and Compact

Customizable Strong Compatibility



⊕ Product Introduction

Alioth stainless steel depth filter holder P type is commonly used in deep depth filtration process. It is used to clamp depth filter holder of a specific area. With the help of a specific power source, it allows liquid to pass through the deep depth filter, thus achieving the purpose of separating impurities such as solid particles from liquid.

Made from 316L stainless steel, it is compatible with different types of liquids and meets the special requirements of pharmaceutical industry. The equipment is simple, structurally robust, and easy to install and use. Its vertical design contributes to a small footprint. It is also compatible with round cake-type depth filter holder commonly seen in the market. Different holding capacities greatly facilitate pharmaceutical customers to make flexible choices at different stages.

⊕ Key Features and Benefits

- Vertical design; with guide plates, allow for filtration operations such as bottom-in and bottom-out, top-in and bottom-out, and bottom-in and top-out
- Made from 316 L stainless steel
- Surface finish $Ra < 1.2 \mu m$
- Diaphragm valves and pressure gauges, which meet cGMP's requirements for designing sanitary dead angle in the structure conforming to pharmaceutical-grade standards
- Optionally equipped with hydraulic device and filter holder; effort-saving, safe and easy operation
- Compatible with major brands of round cake-type depth filter holders in the market
- Comprehensive range of product specifications, and flexible selection Resistant to acid, alkali, organic solvents, etc., and meeting SIP/CIP as well as cleaning validation requirements
- Adopt industry-standard chuck interface connection
- Can be specially customized according to the requirements of customer

⊕ Product Documentation Package

- CoQ
- Basic drawings of the product
- Maintenance guide and operation manual
- Calibration certificates of instruments
- Material certification documents
- FDA certificate for hydraulic oil
- Certification document of surface finish
- IQ/OQ validation service and documents
- List of spare parts
- Custom files related to other customized products

⊕ Product Applications

- Clarification step in monoclonal antibody production process
- Clarification step in recombinant protein production process
- Clarification step in vaccine production process
- Clarification step in blood product production process
- Clarification step in cellular/genetic drug production process

Alioth Stainless Steel Depth Filter Holder P Type

⊕ Product Specifications

Type	Hydraulic filter holder		Manual filter holder	
Dimension (length × width × height)	115x94x223 cm	115x82x156 cm	115x94x223 cm	115x82x156 cm
	(10 m² filter holder, with a large baseplate)	(5 m² filter holder, with a large baseplate)	(10 m² filter holder, with a large baseplate)	(5 m² filter holder, with a large baseplate)
	Data for reference only, dimensions subject to drawings			
Weight	170–180 kg		170–180 kg	
Surface Finish	Surface finish Ra<1.2 μm, liquid-contacting surface finish Ra<0.6 μm			
Equipment Frame	SS 304			

⊕ Ordering Information

Order No.	Product description	Package
DFHBGP05-1	Depth Filter Holder P Type, with the ability of holding 1-5 filter holders, and without manual hydraulic pump	1/PK
DFHBGP05-2	Depth Filter Holder P Type, for holding 1-5 filter holders, with manual hydraulic pump	1/PK
DFHBGP10-1	Depth Filter Holder P Type, with the ability of holding 1-10 filter holders, and without manual hydraulic pump	1/PK
DFHBGP10-2	Depth Filter Holder P Type, with the ability of holding 1-10 filter holders, and with manual hydraulic pump	1/PK

Alioth Virus Filter Holder

Easy Operation

Safe and Convenient

316L Stainless Steel



⊕ Product Introduction

Alioth Virus Filter Holder is commonly used in virus removal filtration process. It is used to hold virus filter holder of a specific area. With the help of a specific power source, it allows liquid to pass through the virus filter holder, thus achieving the goal of retaining viruses in the liquid.

⊕ Key Features and Benefits

- Made from 316L stainless steel
- Surface polishing $Ra < 1.2 \mu m$
- Diaphragm valves and pressure gauges, which meet cGMP's requirements for designing sanitary dead angle in the structure conforming to pharmaceutical-grade standards
- Equipped with hydraulic device and filter holder; effort-saving, safe and easy operation
- Compatible with major brands of virus filter holders in the market
- Available in a full range of specifications for laboratory research scale, clinical pilot production scale, and commercial large-scale production
- Resistant to acids, alkalis, organic solvents, etc., and meeting SIP/CIP as well as cleaning validation requirements
- Adopt industry-standard chuck interface connection

⊕ Product Documentation Package

- CoQ
- Basic drawings of the product
- IQ/OQ validation service and documents
- List of spare parts
- Calibration qualification certificate for device pressure gauge that must undergo calibration before leaving the factory
- Maintenance guide and operation manual
- Material certification documents
- FDA certificate for hydraulic oil
- Surface finish certification

⊕ Product Applications

- Virus removal step in monoclonal antibody production process
- Virus removal step in blood product production process

Alioth Virus Filter Holder

⊕ Product Specifications

Type	Virus Filter Holder (Single Side)	Virus Filter Holder (Double Sides) (with pre-filtration function)
Dimension (length × width × height)	90x60x130 cm	100x60x128 cm
	Data for reference only, dimensions subject to drawings	
Weight	142 kg	165 kg
Material Composition	SS 304, SS 316L	SS 304, SS 316L

⊕ Ordering Information

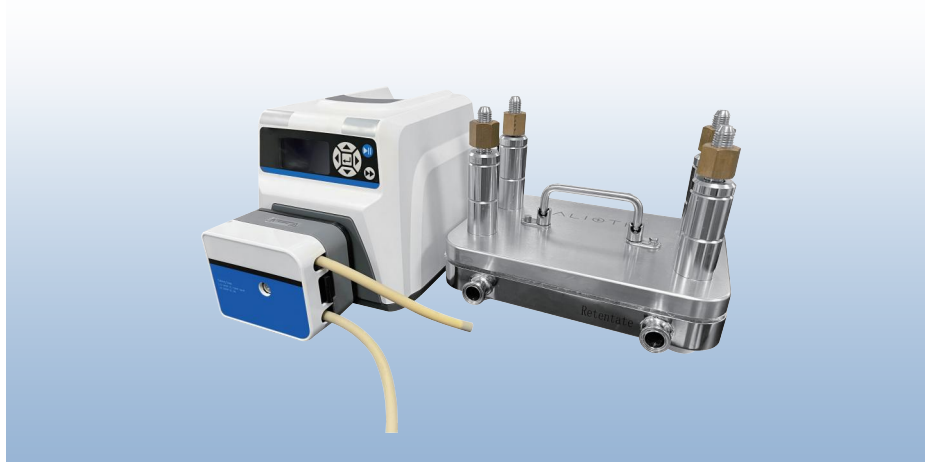
Order No.	Product description	Package
VFHBGM-S	Virus Filter Holder (Single Side)	1/PK
VFHBGM-D	Virus Filter Holder (Double Sides)	1/PK

Alioth Manual Ultrafiltration System

Easy Operation

Safe and Convenient

316L Stainless Steel



⊕ Product Introduction

Alioth manual ultrafiltration system, with its modular design and flexible combination options, supports the use of filters or hollow fibers of different areas, thus realizing various filtration requirements ranging from a minimum of 0.1 m² to a maximum of 20 m², or even a larger area. It is operated manually, providing convenient control. Both desktop- and ground-based versions are available to meet different site needs. The overall system design is compact and space-saving. By displaying pressure and manually adjusting flow rate, the system can control TMP and Delta P effectively. It has flexible design, versatile functions, and diverse applications, thus suitable for various stages and needs in pharmaceutical industry, such as laboratory-scale process development, pilot-scale drug production, and GMP-level drug production. Customers can configure different functional modules, such as flow rate, temperature, pH, conductivity, and UV, according to their own process requirements. It has a sanitary design and provides complete IQ / OQ verification service and document support. It can be applied in various pharmaceutical production processes, including but not limited to concentration/diafiltration, microfiltration, and unidirectional tangential flow filtration.

⊕ Key Features and Benefits

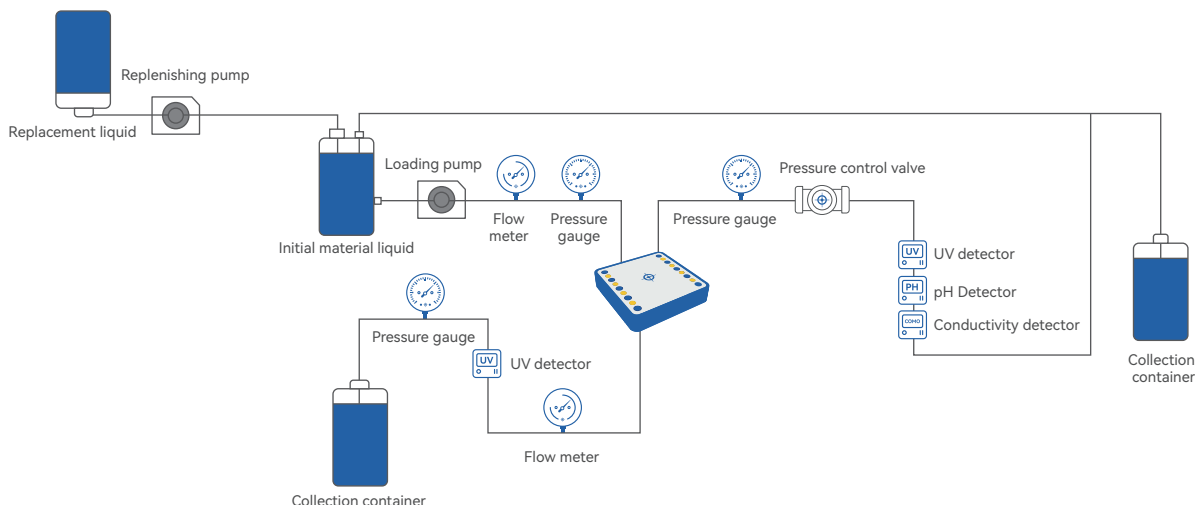
- Compatible with different types of consumables, and flat filters or hollow fibers of different areas
- Compatible with mainstream brands of filters and hollow fibers in the market
- Sanitary design, with main liquid-contacting materials being 316L stainless steel and FDA-compliant non-metal materials such as EPDM/PTFE/TPE commonly used in pharmaceutical industry
- Resistant to acid and alkali corrosion, liquid-contacting surfaces can be selected with Ra<0.4 μm EP or Ra<0.6 μm MP as needed
- The holder adopts standard TC connector, allowing free adaptation to the system
- Compact and rational system design, resulting in a small footprint
- Simple system configuration and convenient operation
- Can adapt to a filtration area of approximately 0.1–20 m²
- Pump overpressure protection, mechanical interlocking, safe and reliable operation
- Reliable quality, traceable process, accessible liquid-contacting material certificate and cleanliness certificate
- High-quality service, and accessible FAT/SAT/IQ/OQ service packages that can be purchased according to needs

⊕ Product Applications

- Vaccine purification
- Virus purification
- Blood product purification
- Monoclonal antibody purification
- Recombinant protein purification
- Endotoxin removal

Alioth Manual Ultrafiltration System

PID Flowchart



Product Specifications

Membrane Area	Common filter series: 0.1-0.5 m ²	Common filter series: 0.5-2.5 m ²	Common filter series: 5-10 m ²	Common filter series: 10-20 m ²
Pump	Optional diaphragm pump or peristaltic pump			
Operation Mode	Manual control of TMP, manual control of valves, manual recording of data			
Power Supply	220V/50Hz (P+N+PE) or 380 V/50 Hz (3P+N+PE)			
System Pressure Resistance	Maximum 6 bar			
Operating Temperature	SS 316L; Polymer; EPDM; Silicone; TPE			
Pipeline Material	4-40°C recommended for plastic material part; 4-60°C recommended for SS 316L part			
Sanitary Connection Method	Sanitary chuck			
Liquid-contacting Surface Finish	Optional: Ra<0.4 μm EP or Ra<0.6 μm MP			

Ordering Information

Format	Diameter	Filter holder	Polishing	Services
TFH0M5=Manual Ultrafiltration System 0.1-0.5 m ² TFH2M5=Manual Ultrafiltration System 0.5-2.5 m ² TFH5M0=Manual Ultrafiltration System 2.5-5 m ² TFH10M=Manual Ultrafiltration System 5-10 m ² TFH20M=Manual Ultrafiltration System 10-20 m ²	P0=Diaphragm pump P1=Peristaltic pump	H0=No holder H1=With holder	EP=Ra<0.4 μm EP MP=Ra<0.6 μm MP	S0=No requirement S1=FAT S2=SAT/IOQ S3=FAT+SAT/IOQ

04

**TECHNOLOGY
SERVICE**

**TECHNOLOGY
SERVICE**

Alipharma® Process Development Service



Product R&D Related Testing

- R&D testing support for the company's catalog products
- R&D testing support for customized products developed according to the requirements of customer



Product Selection and Filterability Testing

- Testing of product selected by the customer on site and recommendation of scheme
- Training on the experimental operation of sterile/depth filtration, ultrafiltration products
- Design considerations for sterile filtration systems



Process Scale-up Support & Training on Product Use

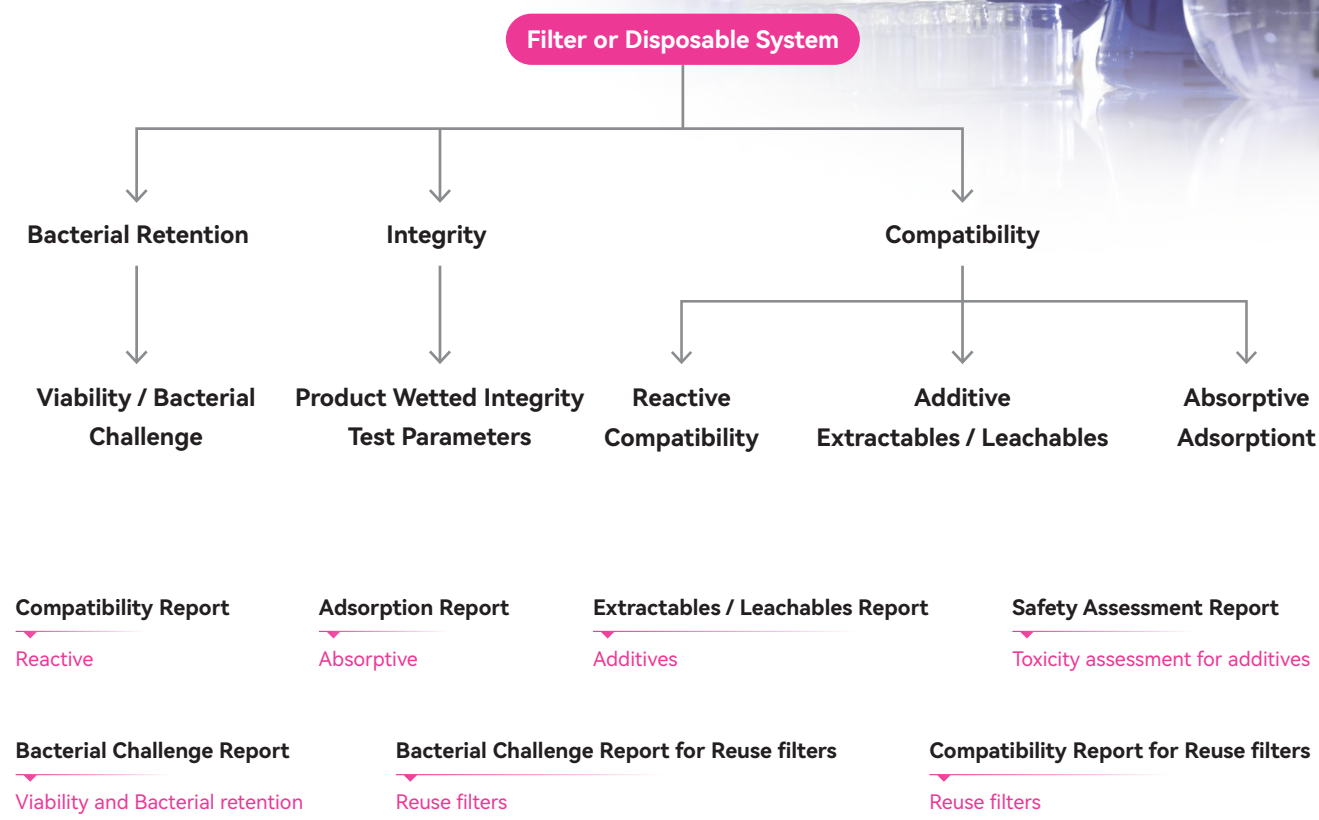
- Integrity testing procedures
- Precautions for the use, sterilization and operation of filter
- Training on the use and operation of depth filter and holder
- Training on the use of hollow fiber, ultrafiltration filter and holder



Problem Solving and Troubleshooting

- Troubleshooting of integrity testing issues
- Troubleshooting of usage issues with sterilizing, depth filtration products, ultrafiltration products, and other filtration products

Alpharma® Validation Service



Turning your requirements into a seamless one-stop service. We provide end-to-end support, including process validation, proposals, and reports, all backed by rich data for clear understanding by users and regulatory authorities.

 Validation Suggestions

- Evaluate customer processes according to regulatory requirements and develop a validation plan as the major plan for process validation
- Provide clear logic for users and regulatory agencies easily understanding validation documents

 Validation Schemes

- Explain validation principles, methods, key parameters and acceptance criteria of the test based on regulatory requirements and industry guidelines
- Action plan for addressing deviations

 Validation Reports

- Provide original test data
- Provide calculation methods and derive validation conclusions based on results
- Offer regulatory consulting services related to validation

Alioth Laboratory Introduction

Alioth validation laboratory provides validation services including Bacterial challenge, Extractables and Leachables, Compatibility, Product-based integrity test values and Binding studies for pharmaceutical manufacturers. It also conducts in-house validation on company products and provides experimental data for validation guidelines. The laboratory follows ISO9001 quality management system, upholds the concept of data reliability, and ensures that the data is **true, accurate, and traceable**.

The main staff of validation laboratory have rich experience in process validation, and the validation methods are scientifically reasonable, ensuring the provision of filtration process validation services that meet global regulatory requirements. In line with the quality principle of meeting customer needs, the laboratory provides comprehensive validation services to users, including regulatory interpretation, evaluation of process and validation reports, and other consulting services. It also offers process validation services for both our own and other companies' products.

The laboratory is equipped with advanced validation equipment, including high-resolution LCMS-MS, GCMS, sterilization-in-place systems, particle counters, etc., to provide users with reliable validation data.

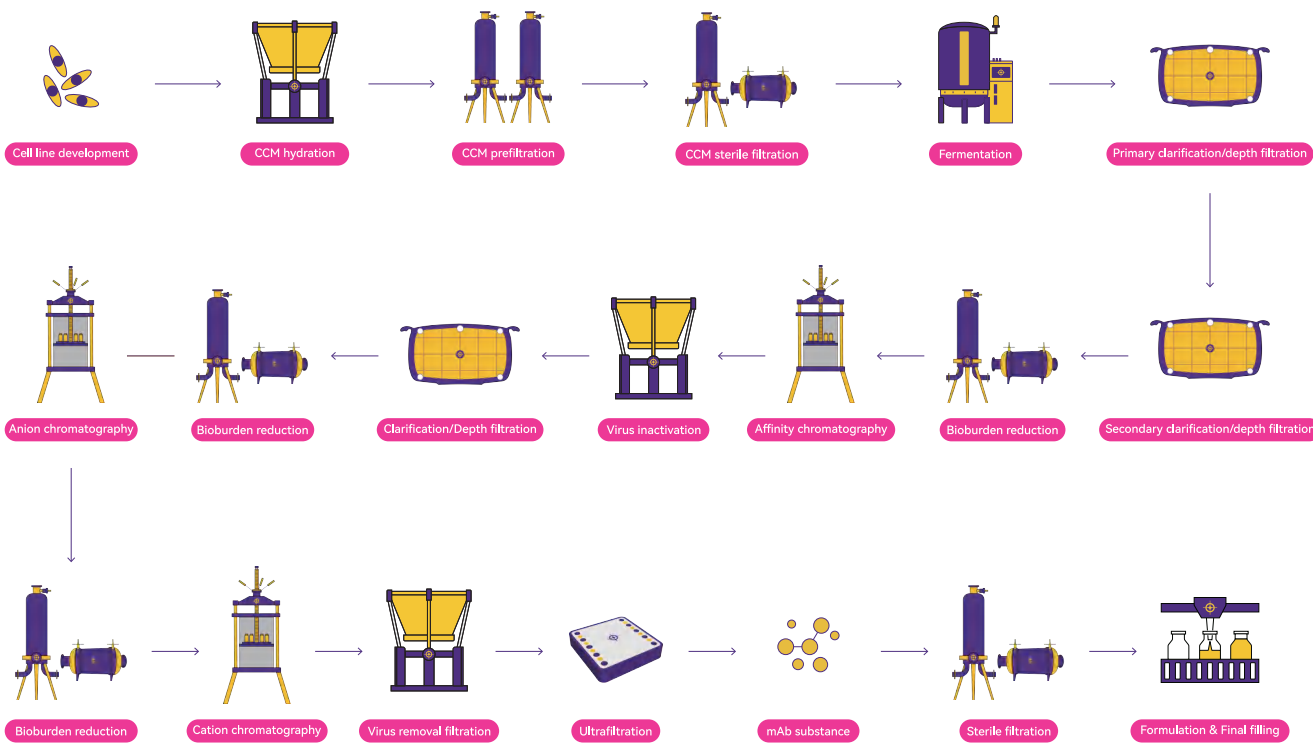
Alioth also has **a process development laboratory, a membrane material R&D center, and a pilot-scale laboratory**. Following the core development concept of Design by Application (DbA) and considering the specific needs of biopharmaceutical companies, it explores new technologies, develops new products, and applies them to the research, pilot-scale and large-scale production of biopharmaceuticals. The process development laboratory aims to solve key challenges in process development and production for biopharmaceutical customers. It is equipped with advanced process development and pilot-scale equipment, and has technical application experts with many years of experience in biopharmaceutical industry. It can assist enterprise customers with technical consulting, process development, product training, and problem resolution, and promote the rapid progress and transformation of biopharmaceutical R&D projects.



Applications



mAb Process Map



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Version No.: D2605



LinkedIn



Alioth Official Account

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