

About Hawach Scientific

Hawach Scientific is a top professional enterprise devoted to providing superior quality products, exclusive services and integrated solutions to filtration industry. We located in Xi'an, Shaanxi Province, the largest inland port of China with convenient transportation.

Hawach plant covers a production workshop area of 8000 m², with 4000 m² of clean room. We have international advanced level of product lines. The main products including Filter Cartridge, Filter Bag, Filter Capsule with ISO9001 system and product quality certificate like SGS test report.

Today, we are happy to see our products exported to the United States, Korea, UK, Germany, Dubai, Israel and Mexico... The quality and service of our products received consistent approval from customers. Hawach' s philosophy is "high quality, good service, both win", By joint efforts of Hawach' s employee, business partners and customers, we believe Hawach can be a top leader of filtration industry.



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1. Filter Cartridge

1.1 Membrane Pleated Filter Cartridge

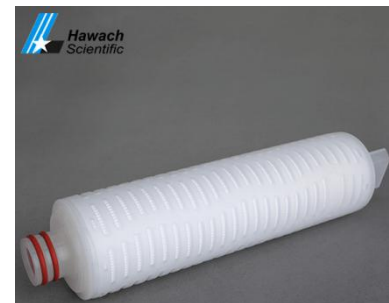
1.1.1 PES (polysulfone) series pleated filter cartridge

➤ **Absolute rate asymmetric PES hydrophilic membrane pleated filter cartridge(AAPES)**

The absolute rate AAPES pleated filter cartridge is constructed of imported asymmetric hydrophilic PES membrane media and PP support layers. All construction process are thermally welded without using any glue or adhesives to get low extraction level. It has advantages of absolute rate, high porosity, and homogeneous pore distribution, which make it ideal product for final bacterial removal.

Features

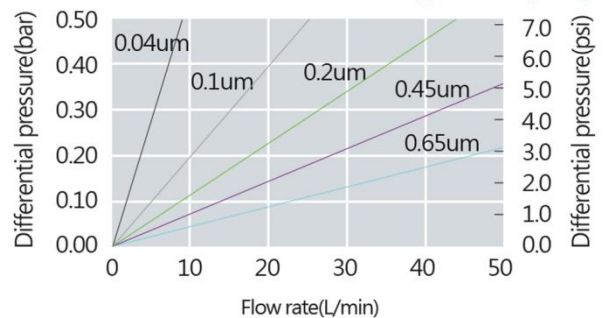
- * Highly asymmetric PES filter media provides high dirt holding capacity and long life
- * Absolute rate inherently hydrophilic PES membrane filter for final sterilizing grade filtration
- * Higher throughput and flow-rate than any other sterilizing grade filter cartridge
- * Low protein binding, suit for a broad range of pharmaceutical products
- * Excellent resistance to hydrolysis allows use in Ultra Pure Water(UPW) system
- * 100% integrity test



Application

- Bacterial removal of API, LPV, blood serum, biologicals, buffers, culture media and other pharmaceuticals
- Sterile filtration for water, mineral water, wine, beer and other beverages
- Ultrapure water and disk, display, multi silicon process water in electronics
- Fine chemicals, water process

TYPICAL WATER FLOW RATE @ 25 °C (10")



Specifications

Construction Materials	Filter Media	Hydrophilic asymmetric polysulfone membrane
	Support Layers	Polypropylene
	Inner core	Polypropylene
	Outer cage, End Cap	Polypropylene
	Seal Method	Thermal Bonding, No Adhesives
	O-rings/ Gaskets	Silicone/EPDM/Viton/PTFE/Nitrile
Technical Data	Micron Rating	0.04,0.1,0.2,0.45,0.65,0.85,1.2 um
	Operating Temperature	Normal <60°C (140 °F) Max. <85°C (185 °F)
	Normal Flow Direction pressure	4.2 bar (60.9 psi) at 25°C (77°F)
	Reverse Flow Direction pressure	2.1 bar (30.5 psi) at 25°C (77°F)
	pH Value Compatibility	2-13
	Sterilization	Flush with hot water at 121±2°C for 30 minutes, at $\Delta P \leq 1.0$ bar (14.5psi) Cumulative Time: 8 hours
Cartridge Size	Outer Diameter	Φ 69 mm(2.75")
	Inner diameter	Φ 33 mm(1.30")
	Length(based on DOE end cap)	5", 10", 20", 30", 40"
	Filtration Area(m ²)	0.65 m ² /10"
Biosecurity	Endotoxin	<0.25 EU/ml
	Extractable	≤ 30 mg/10"
100% Integrity test Purified water at 25°C (77 °F)	0.04 um 0.10 um 0.20 um 0.45 um 0.65 um	≥ 3.0 bar (43 psi) ≥ 2.1 bar (30 psi) ≥ 3.2 bar (46 psi) ≥ 2.0 bar (29 psi) ≥ 1.4 bar (20 psi)

Order Information

Grade	Product	Micron(um)	End Cap	Length	O-ring/Gasket	Core
F-Food & beverage	AAPES	004-0.04	AO-DOE(220)	05-5"	S-silicone	B-temperature resistant
P-pharmaceutical		010-0.1	CN-226/FIN	10-10"	E-epdm	
C-chemical		020-0.2	CF-226/FLAT	20-20"	N-nitrile	C-SS
E-electronics		045-0.45	BN-222/FIN	30-30"	T- encapsulated	
		065-0.65	BF-222/FLAT	40-40"	teflon	
		085-0.85	EN-222 three locking ears/Fin		V-viton	
		120-1.2				

e.g.: FAAPES004AO5SC: Food & beverage+ AAPES+0.04+DOE+5”+Silicone+SS

➤ Double PES Absolute rate asymmetric membranes pleated filter cartridge(DAPES)

The DAPES pleated filter cartridge are double imported PES membranes and has better dirt holding capacity and long life. All construction process are thermally welded without using any glue or adhesives to get low extraction level. It has advantages of absolute rate, high porosity, and homogeneous pore distribution, which make it ideal product for final bacterial removal.

Features

- Double PES Absolute rate asymmetric membranes provides better dirt holding capacity, long life and better bacterial filtration efficiency
- Absolute rate inherently hydrophilic PES membrane filter for final sterilizing grade filtration
- Higher throughput and flow-rate than any other sterilizing grade filter cartridge
- Low protein binding, suit for a broad range of pharmaceutical products
- Excellent resistance to hydrolysis allows use in Ultra Pure Water(UPW) system
- 100% integrity test



Application

- sterile filtration of blood serum, biologicals, buffers, culture media and other pharmaceuticals
- Sterile filtration for water, mineral water, wine, beer and other beverages

Specification

Construction Materials	Filter Media	Double Hydrophilic asymmetric PES membrane
	Support Layers	Polypropylene
	Inner core	Polypropylene
	Outer cage, End Cap	Polypropylene
	Seal Method	Thermal Bonding, No Adhesives
	O-rings/ Gaskets	Silicone/EPDM/Viton/PTFE/Nitrile
Technical Data	Micron Rating	0.2+0.1, 0.2+0.2, 0.45+0.2 um(accept private orders)
	Operating Temperature	Normal <60°C (140 °F) Max. <85°C (185 °F)
	Normal Flow Direction pressure	4.2 bar (60.9 psi) at 25°C (77°F)
	Reverse Flow Direction pressure	2.1 bar (30.5 psi) at 25°C (77°F)
	pH Value Compatibility	2-13

	Sterilization	Flush with hot water at 121±2°C for 30 minutes, at $\Delta P \leq 1.0$ bar (14.5psi) Cumulative Time: 8 hours
Cartridge Size	Outer Diameter	Φ 69 mm(2.75")
	Inner diameter	Φ 33 mm(1.30")
	Length(based on DOE end cap)	5", 10", 20", 30", 40"
	Filtration Area(m ²)	0.65 m ² /10"
Biosecurity	Endotoxin	<0.25 EU/ml
	Extractable	≤30 mg/10"
100% Integrity test Purified water at 25°C (77 °F)	0.2+0.1 um 0.2+0.2 um 0.45+0.2 um	≥4.0 bar (58 psi) ≥3.7 bar (53 psi) ≥3.5 bar (50 psi)

Order Information

Grade	Product	Micron(um)	End Cap	Length	O-ring/Gasket	Core
F-Food & beverage	DAPES	021-0.2+0.1	AO-DOE(220)	05-5"	S-silicone	B-temperature resistant
P-pharmaceutical		022-0.2+0.2	CN-226/FIN	10-10"	E-epdm	C-SS
C-chemical		042-0.2+0.45	CF-226/FLA	20-20"	N-nitrile	
			T	30-30"	T- encapsulated	
E-electronics		BN-222/FIN	40-40"	teflon		
			BF-222/FLAT		V-viton	
			EN-222 three locking ears/Fin			

e.g.: FDAPES021AO5SC: Food & beverage+ DAPES+0.2/0.1+DOE+5"+Silicone+SS

➤ Other PES membranes pleated filter cartridge

Other PES membranes pleated filter cartridge like those used in high viscosity liquid, has different structure and shape can also accepted private order.

For these product please contact our sales for details information!

1.1.2 PTFE (Polytetrafluoroethylene) series pleated filter cartridge

➤ Hydrophilic PTFE membrane pleated filter cartridge(LPTFE)

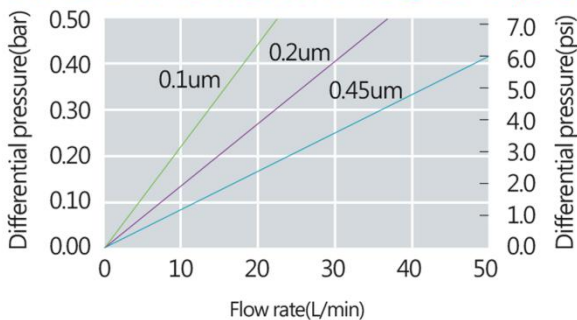
The hydrophilic PTFE membrane pleated filter cartridge is constructed of imported PTFE membrane media and PP support layers. All construction process is thermally welded without using any glue or adhesives to get low extraction level. It has superior chemical compatibility, which is ideal for strong alkali /acids and other corrosive liquid



Features

- superior chemical compatibility, ideal for strong alkali and acids, resistant to high temperature, ozone
- Hydrophilic PTFE membrane suit for liquids sterile filtration, no pre-wetting
- High filtration efficiency, $\geq 99.99\%$, long service life
- Uniform pore-size distribution allow high flow rate
- 100% integrity test

TYPICAL WATER FLOW RATE @ 25 °C (10")



Application

- Mineral water, purified water, ozone, strong oxidizing liquid filtration
- High temperature liquids filtration
- Strong alkali, acids, corrosive liquids filtration

Specifications

Construction Materials	Filter Media	Hydrophilic PTFE membrane
	Support Layers	Polypropylene
	Inner core	Reinforced Polypropylene
	Outer cage, End Cap	Reinforced Polypropylene
	Seal Method	Thermal Bonding, No Adhesives
	O-rings/ Gaskets	Silicone/EPDM/Viton/PTFE/Nitrile
Technical Data	Micron Rating	0.1, 0.2, 0.45, 0.65, 1.0, 3.0 um
	Operating Temperature	Normal <65 °C (149 °F) Max. <90 °C (194 °F)
	Normal Flow Direction pressure	4.2 bar (60.9 psi) at 25 °C (77 °F)
	Reverse Flow Direction pressure	2.1 bar (30.5 psi) at 25 °C (77 °F)
	pH Value Compatibility	1-14
	Sterilization	Flush with hot water at 121±2 °C for 30 minutes, 100 cycles, autoclave 30 minutes(optinal)
Cartridge Size	Outer Diameter	Φ 69 mm(2.75")
	Inner diameter	Φ 33 mm(1.30")
	Length(based on DOE end cap)	10", 20", 30", 40"
	Filtration Area(m ²)	0.65 m ² /10"
Biosecurity	Endotoxin	<0.25 EU/ml
	Extractable	≤30 mg/10"
100% Integrity test	0.1 um	≥1.3 bar (19 psi)

7:3=IPA:Water at 23°C (75 °F)	0.2 um 0.45 um	≥0.9 bar (13 psi) ≥0.4 bar (5.8 psi)
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Order Information

Grade	Product	Micron(um)	End Cap	Length	O-ring/Gasket	Core
F-Food & beverage	LPTFE	010-0.1	AO-DOE(220)	05-5"	S-silicone	B-temperature resistant C-SS
		020-0.2)	10-10"	E-epdm	
P-pharmaceutical		045-0.45	CN-226/FIN	20-20"	N-nitrile	
C-chemical		065-0.65	CF-226/FLA	30-30"	T- encapsulated	
E-electronics		100-1.0	T	40-40"	teflon	
		300-3.0	BN-222/FIN BF-222/FLAT EN-222 three locking ears/Fin		V-viton	
e.g.: FLPTFE010AO5SC: Food & beverage+ LPTFE+0.1+DOE+5"+Silicone+SS						

➤ Hydrophobic PTFE membrane pleated filter cartridge(BPTFE)

The hydrophobic PTFE membrane pleated filter cartridge is constructed of imported natural PTFE membrane media and PP support layers. All construction process are thermally welded without using any glue or adhesives to get low extraction level. It has superior chemical compatibility, which is ideal for corrosive organic liquid and gas

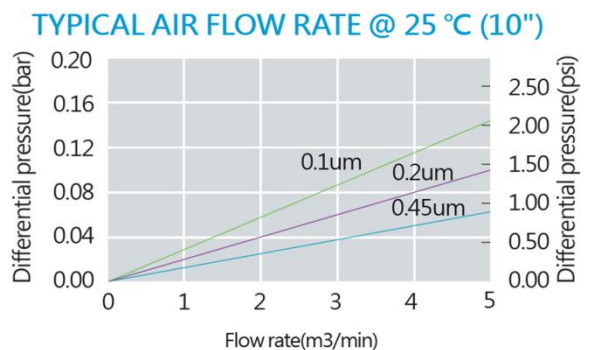
Features

- Naturally hydrophobic PTFE membrane with excellent porosity, high flow rate
- Absolute rating, filtration efficiency≥99.99%, Up to 0.01 micron in gas sterile filtration
- Low pressure drop and long service life
- Wide chemical compatibility, resistant to aggressive gases and corrosive organic solvents
- High temperature endurance performance
- 100% integrity tested



Application

- Compressed air, CO₂ line sterile filtration
- Tank vent, Fermentation air
- Air filtration in aseptic packaging
- Aggressive acids, Bases, Solvents
- Photo resists, Etch Solutions



Specifications

Construction Materials	Filter Media	hydrophobic PTFE membrane
	Support Layers	Polypropylene
	Inner core	Reinforced Polypropylene/ Stainless Steel
	Outer cage	Reinforced Polypropylene
	End Cap	Polypropylene/ Stainless Steel
	Seal Method	Thermal Bonding, No Adhesives
	O-rings/ Gaskets	Silicone/EPDM/Viton/PTFE/Nitrile
Technical Data	Micron Rating	0.1, 0.2, 0.45, 0.65, 1.0, 3.0 um
	Operating Temperature	Normal <65°C (149 °F) Max. <90°C (194 °F)
	Normal Flow Direction pressure	4.2 bar (60.9 psi) at 25°C (77°F)
	Reverse Flow Direction pressure	2.1 bar (30.5 psi) at 25°C (77°F)
	pH Value Compatibility	1-14
	Sterilization	Flush with hot water at 121±2°C for 30 minutes, 100 cycles, autoclave 30 minutes(optinal)
Cartridge Size	Outer Diameter	Φ 69 mm(2.75")
	Inner diameter	Φ 33 mm(1.30")
	Length(based on DOE end cap)	10", 20", 30", 40"
	Filtration Area(m ²)	0.65 m ² /10"
Biosecurity	Endotoxin	<0.25 EU/ml
	Extractable	≤30 mg/10"
100% Integrity test 7:3=IPA:Water at 23°C (75 °F)	0.1 um 0.2 um 0.45 um	≥1.3 bar (19 psi) ≥0.9 bar (13 psi) ≥0.4 bar (5.8 psi)

Order Information

Grade	Product	Micron(um)	End Cap	Length	O-ring/Gasket	Core
F-Food & beverage	BPTFE	010-0.1	AO-DOE(220)	05-5"	S-silicone	B-temperatur e resistant
P-pharmaceutical		020-0.2	CN-226/FIN	10-10"	E-epdm	
C-chemical		045-0.45	CF-226/FLAT	20-20"	N-nitrile	
E-electronics		065-0.65	BN-222/FIN	30-30"	T- encapsulated	
		100-1.0	BF-222/FLAT	40-40"	teflon	
		300-3.0	EN-222 three locking ears/Fin		V-viton	
e.g.: FBPTFE010AO5SC: Food & beverage+ BPTFE+0.1+DOE+5"+Silicone+SS						

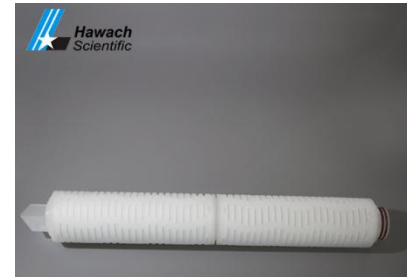
1.1.3 PVDF (Polyvinylidene Fluoride) series pleated filter cartridge

➤ Hydrophobic PVDF membrane pleated filter cartridge(BPVDF)

The hydrophobic PVDF membrane pleated filter cartridge is constructed of imported natural hydrophobic PVDF membrane filter media and PP support layers. All construction process are thermally welded without using any glue or adhesives to get low extraction level. The low protein binding and good chemical compatibility make it suit for a broad range of pharmaceutical products.

Features

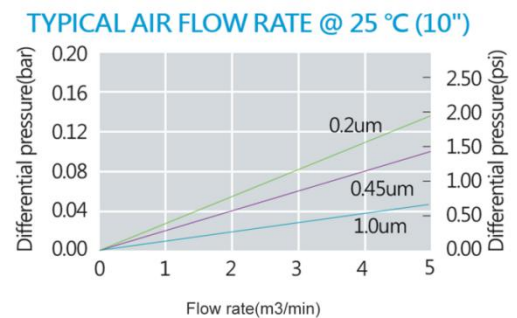
- Hydrophobic PVDF membrane for gas and solvents sterile filtration
- Absolute rating, filtration effective is $\geq 99.99\%$, Minimum micron to 0.1um
- Wide Chemical compatibility, low protein binding
- 100% integrity tes



Application

- Fermentation air
- Tank vent
- Compressed air
- Sterile filtration of aggressive solvents/gases

Specification



Construction Materials	Filter Media	hydrophobic PVDF membrane
	Support Layers	Polypropylene
	Inner core	Reinforced Polypropylene
	Outer cage	Reinforced Polypropylene
	End Cap	Polypropylene/ Stainless Steel
	Seal Method	Thermal Bonding, No Adhesives
	O-rings/ Gaskets	Silicone/EPDM/Viton/PTFE/Nitrile
Technical Data	Micron Rating	0.1, 0.2, 0.45, 0.65, 1.0, 3.0 um
	Operating Temperature	Normal <65 °C (149 °F) Max. <90 °C (194 °F)
	Normal Flow Direction pressure	4.2 bar (60.9 psi) at 25 °C (77 °F)
	Reverse Flow Direction pressure	2.1 bar (30.5 psi) at 25 °C (77 °F)
	pH Value Compatibility	1-13
	Sterilization	Steam sterilization for 30 min at 135 °C, cumulative time:50 hours
Cartridge Size	Outer Diameter	Φ 69 mm(2.75")
	Inner diameter	Φ 33 mm(1.30")
	Length(based on DOE end cap)	10", 20", 30", 40"

	Filtration Area(m ²)	0.65 m ² /10"
Biosecurity	Endotoxin	<0.25 EU/ml
	Extractable	≤30 mg/10"
100% Integrity test 7:3=IPA:Water at 23°C (75 °F)	0.1 um	≥0.6 bar (8.7psi)
	0.2 um	≥0.35 bar (5.1 psi)
	0.45 um	≥0.2 bar (2.9 psi)

Order Information

Grade	Product	Micron(um)	End Cap	Length	O-ring/Gasket	Core	
F-Food & beverage	BPVDF	010-0.1	AO-DOE(220)	05-5"	S-silicone	B-temperature resistant C-SS	
P-pharmaceutical		020-0.2	CN-226/FIN	10-10"	E-epdm		
C-chemical		045-0.45	CF-226/FLA	20-20"	30-30"		T- encapsulated
		065-0.65	T	40-40"	teflon		
E-electronics		100-1.0	BN-222/FIN		V-viton		
		300-3.0	BF-222/FLAT EN-222 three locking ears/Fin				
e.g.: FBPVDF010AO5SC: Food & beverage+ BPVDF+0.1+DOE+5"+Silicone+SS							

➤ Hydrophilic PVDF membrane pleated filter cartridge(LPVDf)

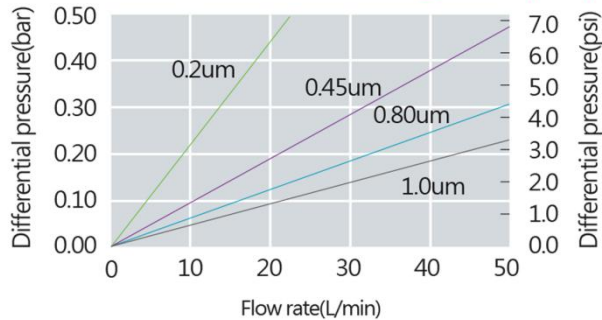
The hydrophilic PVDF membrane pleated filter cartridge is constructed of imported hydrophilic PVDF membrane filter media and PP support layers. All construction process are thermally welded without using any glue or adhesives to get low extraction level. The low protein binding and good chemical compatibility make it suit for a broad range of pharmaceutical products and water solvent.

Features

- Hydrophilic PVDF membrane filter for liquids sterile filtration, absolute rating ≥99.99%
- Low protein binding and low extraction, ideal for bioburden reduction and particle removal
- High throughput flow rate with minimal differential pressure
- Broad chemical compatibility, suitable for aggressive, high viscosity liquids
- Withstand multiple steam sterilization
- 100% integrity test



TYPICAL WATER FLOW RATE @ 25 °C (10")



Application

- Ophthalmics, WFI
- Diagnostics, diluents, serum, tissue culture media and media additives
- Sterile filtration of high viscosity liquid
- Strong alkaline, acids and aggressive solvents

Specification

Construction Materials	Filter Media	hydrophilic PVDF membrane
	Support Layers	Polypropylene
	Inner core	Reinforced Polypropylene
	Outer cage	Reinforced Polypropylene
	End Cap	Polypropylene/ Stainless Steel
	Seal Method	Thermal Bonding, No Adhesives
	O-rings/ Gaskets	Silicone/EPDM/Viton/PTFE/Nitrile
Technical Data	Micron Rating	0.1, 0.2, 0.45, 0.65, 1.0, 3.0 um
	Operating Temperature	Normal <65°C (149 °F) Max. <90°C (194 °F)
	Normal Flow Direction pressure	4.2 bar (60.9 psi) at 25°C (77°F)
	Reverse Flow Direction pressure	2.1 bar (30.5 psi) at 25°C (77°F)
	pH Value Compatibility	1-13
	Sterilization	Steam sterilization for 30 min at 135°C, cumulative time:50 hours
Cartridge Size	Outer Diameter	Φ 69 mm(2.75")
	Inner diameter	Φ 33 mm(1.30")
	Length(based on DOE end cap)	10", 20", 30", 40"
	Filtration Area(m ²)	0.65 m ² /10"
Biosecurity	Endotoxin	<0.25 EU/ml
	Extractable	≤30 mg/10"
100% Integrity test 7:3=IPA:Water at 23°C (75 °F)	0.2 um	≥0.6 bar (8.7psi)
	0.45 um	≥0.35 bar (5.1 psi)
	1.0 um	≥0.2 bar (2.9 psi)

Order Information

Grade	Product	Micron(um)	End Cap	Length	O-ring/Gasket	Core
F-Food & beverage	LPVDF	010-0.1	AO-DOE(220)	05-5"	S-silicone	B-temperature resistant
P-pharmaceutical		020-0.2	CN-226/FIN	10-10"	E-epdm	
C-chemical		045-0.45	CF-226/FLAT	20-20"	N-nitrile	C-SS
E-electronics		065-0.65	BN-222/FIN	30-30"	T- encapsulated	
		100-1.0	BF-222/FLAT	40-40"	teflon	
	300-3.0	EN-222 three locking ears/Fin		V-viton		

e.g.: FLPVDF010AO5SC: Food & beverage+ BPVDF+0.1+DOE+5"+Silicone+SS

1.1.4 Nylon series pleated filter cartridge

➤ Nylon 66 membrane pleated filter cartridge(PN66)

The Nylon 66 membrane pleated filter cartridge is constructed of imported Nylon 66 membrane filter media and PP support layers. All construction process are thermally welded without using any glue or adhesives to get low extraction level.

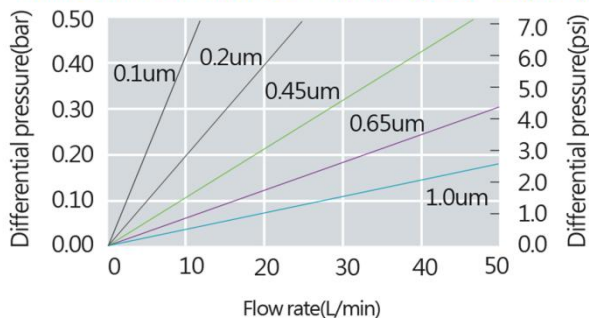
Features

- Naturally hydrophilic Nylon 6,6 membrane for sterile filtration, absolute rating $\geq 99.99\%$
- Chemical resistant to alkaline solutions and solvents, ideally suitable for sterile filtration of those
- Excellent flow rate and cost-effective
- High non-specific adsorption and low extractables
- 100% integrity test



Application

TYPICAL WATER FLOW RATE @ 25 °C (10")



- Bacterial removal of wine, beer, mineral water, pure water
- Sterile filtration of solvents, as bulk pharmaceutical chemicals, LVP, solvents for HPLC
- Fine chemicals, especially ketone, ester, ether
- Ultrapure water and disk, display, multi silicon process water in Electronics
- Digital inks

Specification

Construction Materials	Filter Media	hydrophilic Nylon66 membrane
	Support Layers	Polypropylene
	Inner core	Polypropylene
	Outer cage, End Cap	Polypropylene
	Seal Method	Thermal Bonding, No Adhesives
	O-rings/ Gaskets	Silicone/EPDM/Viton/PTFE/Nitrile
Technical Data	Micron Rating	0.1, 0.2, 0.45, 0.65, 1.0 um
	Operating Temperature	Normal <65°C (149 °F) Max. <90°C (194 °F)
	Normal Flow Direction pressure	4.2 bar (60.9 psi) at 25°C (77°F)
	Reverse Flow Direction pressure	2.1 bar (30.5 psi) at 25°C (77°F)
	pH Value Compatibility	6-14
	Sterilization	Steam sterilization for 30 min at 135°C, cumulative time:50 hours
Cartridge Size	Outer Diameter	Φ 69 mm(2.75")
	Inner diameter	Φ 33 mm(1.30")
	Length(based on DOE end cap)	10", 20", 30", 40"
	Filtration Area(m ²)	0.65 m ² /10"
Biosecurity	Endotoxin	<0.25 EU/ml
	Extractable	≤30 mg/10"
100% Integrity test 7:3=IPA:Water at 23°C (75 °F)	0.1 um 0.2 um 0.45 um 1.0 um	≥4.5 bar (65psi) ≥3.2 bar (46 psi) ≥2.0 bar (29 psi) ≥0.9 bar (13 psi)

Order Information

Grade	Product	Micron(um)	End Cap	Length	O-ring/Gasket	Core
F-Food & beverage P-pharmaceutical C-chemical E-electronics	PN66	010-0.1	AO-DOE(220)	05-5"	S-silicone	B-temperature resistant C-SS
		020-0.2	CN-226/FIN	10-10"	E-epdm	
		045-0.45	CF-226/FLAT	20-20"	N-nitrile	
		065-0.65	BN-222/FIN	30-30"	T- encapsulated	
		100-1.0	BF-222/FLAT	40-40"	teflon	
		300-3.0	EN-222 three locking ears/Fin		V-viton	
e.g.: FPN66010AO5SC: Food & beverage+ PN66+0.1+DOE+5"+Silicone+SS						

1.1.5 MCE pleated filter cartridge (MCE)

MCE pleated filter cartridge is constructed of MCE membrane and PP support layer. All construction process are thermally welded without using any glue or adhesives to get low extraction level. The low protein binder make it idea using in Pharmaceuticals.

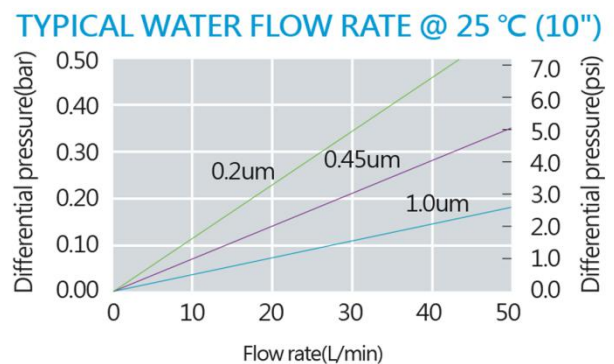


Features

- Naturally Hydrophilic mixed cellulose esters membrane
- Absolute Rating, Filtration effective $\geq 99.99\%$
- Low binding capacity, suitable for the filtration of high value biological solutions and pharmaceuticals
- Super flow rate for water or near water liquid filtration
- 100% integrity test

Application

- Pharmaceuticals; Plasma; Serum; Vaccine; Ophthalmic; LVP; SVP
- Alcohol, Wine, Beer, Juice, Colas, Bottled water
- Process water of microelectronics application



Specification

Construction Materials	Filter Media	MCE membrane
	Support Layers	Polypropylene
	Inner core	Polypropylene
	Outer cage, End Cap	Polypropylene
	Seal Method	Thermal Bonding, No Adhesives
	O-rings/ Gaskets	Silicone/EPDM/Viton/PTFE/Nitrile
Technical Data	Micron Rating	0.2, 0.45, 0.65, 1.0 um
	Operating Temperature	Normal <math>< 55^{\circ}\text{C}</math> (131 °F) Max. <math>< 80^{\circ}\text{C}</math> (176 °F)
	Normal Flow Direction pressure	4.2 bar (60.9 psi) at 25 °C (77°F)
	Reverse Flow Direction pressure	2.1 bar (30.5 psi) at 25 °C (77°F)
	pH Value Compatibility	6-8
	Sterilization	Steam sterilization for 30 min at 135 °C, cumulative time:50 hours
Cartridge Size	Outer Diameter	Φ 69 mm(2.75")
	Inner diameter	Φ 33 mm(1.30")
	Length(based on DOE end cap)	10", 20", 30", 40"
	Filtration Area(m ²)	0.65 m ² /10"
Biosecurity	Endotoxin	<math>< 0.25</math> EU/ml

	Extractable	≤30 mg/10''
100% Integrity test	0.2 um	≥1.6 bar (23 psi)
Purified Water	0.45 um	≥0.8 bar (12 psi)
at 25°C (77 °F)	1.0 um	≥0.2 bar (3 psi)

Order Information

Grade	Product	Micron(um)	End Cap	Length	O-ring/Gasket	Core
F-Food & beverage	MCE	020-0.2	AO-DOE(220)	05-5''	S-silicone	B-temperature resistant C-SS
P-pharmaceutical		045-0.45	CN-226/FIN	10-10''	E-epdm	
C-chemical		065-0.65	CF-226/FLAT	20-20''	N-nitrile	
E-electronics		100-1.0	BN-222/FIN	30-30''	T- encapsulated	
		...	BF-222/FLAT	40-40''	teflon	
			EN-222 three locking ears/Fin		V-viton	

e.g.: FMCE020AO5SC: Food & beverage+ PP2+0.1+DOE+5''+Silicone+SS

1.1.6 Single piece construction series pleated filter cartridge

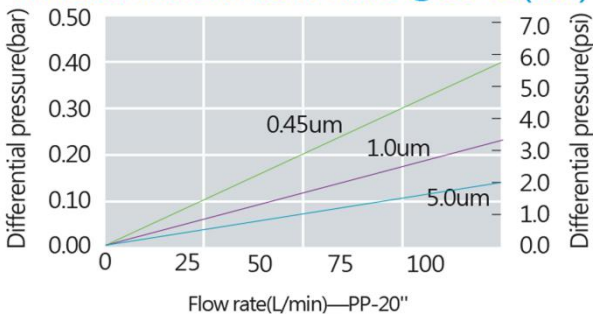
Single piece construction pleated filter cartridge can be made into 20'', 30'', 40'' without joint, reduce the risk of leakage and break.

Features

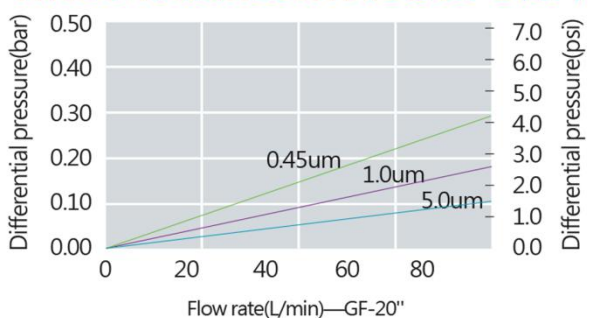
- Single piece construction with larger surface area
- Polypropylene and Glass fiber filter medias for option
- Cage without any joints, less leakage possibility
- Thermal bonded, No adhesives, up to 40inch length



TYPICAL WATER FLOW RATE @ 25 °C (10'')



TYPICAL WATER FLOW RATE @ 25 °C (10'')



Application

- R.O. pre-filtration
- Oil field water filtration
- Chemical processing
- Pharmaceuticals
- Wine clarification

Specification

Construction Materials	Filter Media	PP OR GF
	Support Layers	Polypropylene
	Inner core	Polypropylene
	Outer cage, End Cap	Polypropylene
	Seal Method	Thermal Bonding, No Adhesives
	O-rings/ Gaskets	Silicone/EPDM/Viton /Nitrile/PTFE
Technical Data	Micron Rating	0.2, 0.45, 1.0, 3.0, 5.0,10, 20 um
	Operating Temperature	Normal <55°C (131 °F) Max. <80°C (176 °F)
	Normal Flow Direction pressure	4.2 bar (60.9 psi) at 25°C (77°F)
	Reverse Flow Direction pressure	2.1 bar (30.5 psi) at 25°C (77°F)
	pH Value Compatibility	1-13
Cartridge Size	Sterilization	Steam sterilization for 30 min at 121±2°C
	Outer Diameter	Φ 69 mm(2.75")
	Inner diameter	Φ 33 mm(1.30")
	Length(based on DOE end cap)	20", 30", 40"
Biosecurity	Filtration Area(m ²)	0.65 m ² /10"
	Endotoxin	<0.25 EU/ml
	Extractable	≤30 mg/10"

Order Information

Grade	Product	Micron(um)	End Cap	Length	O-ring/Gasket	Core
F-Food & beverage	SPP	020-0.2	AO-DOE(220)	20-20"	S-silicone	B-temperature
P-pharmaceutical	SGF	045-0.45	CN-226/FIN	30-30"	E-epdm	resistant
C-chemical		100-1.0	CF-226/FLAT	40-40"	N-nitrile	C-SS
E-electronics		300-3.0	BN-222/FIN		T- encapsulated	
		...	BF-222/FLAT		teflon	
			EN-222 three locking ears/Fin		V-viton	

e.g.: FSP020AO20SC: Food & beverage+ SPP+0.2+DOE+20"+Silicone+SS

1.1.7 PP(polypropylene) series pleated filter cartridge

➤ PP membrane pleated filter cartridge(PP1)

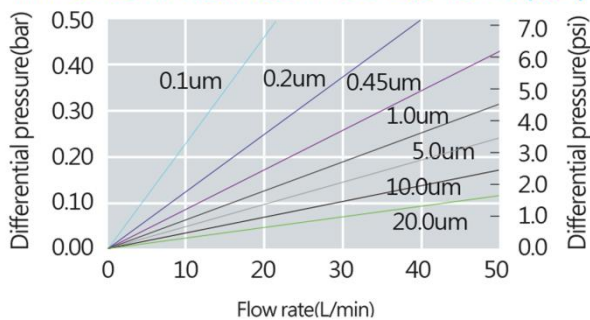
PP1 pleated filter cartridge is constructed of normal PP membrane and PP support layer. it is economical cartridge for most solvent and industry pre-filtration.

Features

- Nominally rated filters designed for particle removal applications in liquids and gases
- Complete polypropylene structure offer wide chemical compatibility
- Broad range of micron ratings from 0.1um to 100um
- Thermally bonded and adhesive free, No media migration into the process fluid
- Economical choice for the pre-filtration and guard filtration before critical filtration



TYPICAL WATER FLOW RATE @ 25 °C (10")



Application

- Pharmaceuticals; APIs; Biologics;
- Fine Chemicals; Plating solutions; Ink
- Food & Beverages; Wine, Beer, Mineral Water
- Electronics; Semi-Conductor, LCD Display; Discs

Specification

Construction Materials	Filter Media	Polypropylene membrane
	Support Layers	Polypropylene
	Inner core	Polypropylene
	Outer cage, End Cap	Polypropylene
	Seal Method	Thermal Bonding, No Adhesives
	O-rings/ Gaskets	Silicone/EPDM/Viton/PTFE/Nitrile
Technical Data	Micron Rating	0.1, 0.2, 0.45, 0.65, 1.0, 2.0, 3.0, 5.0, 10, 30, 40, 50, 70, 100 um
	Operating Temperature	Normal <55°C (131 °F) Max. <80°C (176 °F)
	Normal Flow Direction pressure	4.2 bar (60.9 psi) at 25°C (77°F)
	Reverse Flow Direction pressure	2.1 bar (30.5 psi) at 25°C (77°F)
	pH Value Compatibility	1-13
	Sterilization	Steam sterilization for 30 min at 135°C, cumulative time:50 hours

Cartridge Size	Outer Diameter	Φ 69 mm(2.75")
	Inner diameter	Φ 33 mm(1.30")
	Length(based on DOE end cap)	10", 20", 30", 40"
	Filtration Area(m ²)	0.65 m ² /10"
Biosecurity	Endotoxin	<0.25 EU/ml
	Extractable	≤30 mg/10"
Liquid retention ratings(um) test	0.1 um	≥90%
	0.2 um	≥90%
	0.45 um	≥90%
	1.0 um	≥90%
	5.0	≥90%

Order Information

Grade	Product	Micron(um)	End Cap	Length	O-ring/Gasket	Core
F-Food & beverage P-pharmaceutical C-chemical E-electronics	PP1	010-0.1	AO-DOE(220)	05-5"	S-silicone	B-temperature resistant
		020-0.2	CN-226/FIN	10-10"	E-epdm	
		045-0.45	CF-226/FLAT	20-20"	N-nitrile	C-SS
		065-0.65	BN-222/FIN	30-30"	T- encapsulated	
		100-1.0	BF-222/FLAT	40-40"	teflon	
300-3.0	EN-222 three locking ears/Fin		V-viton			
e.g.: FPP1010AO5SC: Food & beverage+ PP2+0.1+DOE+5"+Silicone+SS						

➤ Superfine PP membrane pleated filter cartridge(PP2)

PP2 pleated filter cartridge is co structured of superfine PP membrane and PP support layer. All construction process are thermally welded without using any glue or adhesives to get low extraction level, the depth filtration and absolute filter ratings make it idea for pre-filtration and maximum dirt holding capacity.

Features

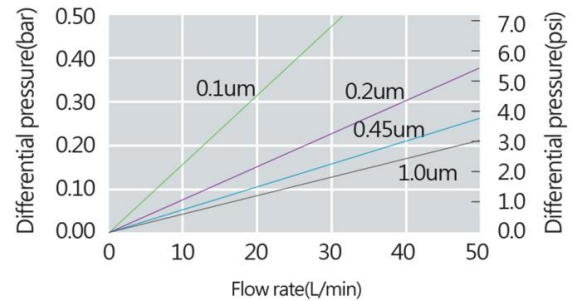
- Graded density ultrafine polypropylene membrane filter, could provide absolute rating filtration
- Pleated depth media for high flow rate and maximum dirt holding capacity
- 100% polypropylene construction offers broad chemical compatibility
- High retention efficiency provide excellent protection of downstream filters
- No fiber migration into the process fluid



Application

- Pharmaceuticals; APIs; Biologics
- Fine Chemicals; Plating solutions; Ink
- Food & Beverages; Wine, Beer, Mineral Water
- Electronics; Semi-Conductor, LCD Display; Discs

TYPICAL WATER FLOW RATE @ 25 °C (10")



Specification

Construction Materials	Filter Media	Polypropylene membrane
	Support Layers	Polypropylene
	Inner core	Polypropylene
	Outer cage, End Cap	Polypropylene
	Seal Method	Thermal Bonding, No Adhesives
	O-rings/ Gaskets	Silicone/EPDM/Viton/PTFE/Nitrile
Technical Data	Micron Rating	0.1, 0.2, 0.45, 0.65, 1.0, 2.0,3.0,5.0 um
	Operating Temperature	Normal <60°C (140 °F) Max. <80°C (176 °F)
	Normal Flow Direction pressure	4.2 bar (60.9 psi) at 25°C (77°F)
	Reverse Flow Direction pressure	2.1 bar (30.5 psi) at 25°C (77°F)
	pH Value Compatibility	1-13
	Sterilization	Steam sterilization for 30 min at 135°C, cumulative time:50 hours
Cartridge Size	Outer Diameter	Φ 69 mm(2.75")
	Inner diameter	Φ 33 mm(1.30")
	Length(based on DOE end cap)	10", 20", 30", 40"
	Filtration Area(m ²)	0.65 m ² /10"
Biosecurity	Endotoxin	<0.25 EU/ml
	Extractable	≤30 mg/10"
Liquid retention ratings(um) test	0.1 um	≥99%
	0.2 um	≥99%
	0.45 um	≥99%
	1.0 um	≥99%
	5.0	≥99%

Order Information

Grade	Product	Micron(um)	End Cap	Length	O-ring/Gasket	Core
F-Food & beverage	PP2	010-0.1	AO-DOE(220)	05-5"	S-silicone	B-temperature resistant C-SS
P-pharmaceutical		020-0.2	CN-226/FIN	10-10"	E-epdm	
C-chemical		045-0.45	CF-226/FLAT	20-20"	N-nitrile	
E-electronics		065-0.65	BN-222/FIN	30-30"	T- encapsulated	
		100-1.0	BF-222/FLAT	40-40"	teflon	
		300-3.0	EN-222 three locking ears/Fin		V-viton	
e.g.: FPP2010AO5SC: Food & beverage+ PP2+0.1+DOE+5"+Silicone+SS						

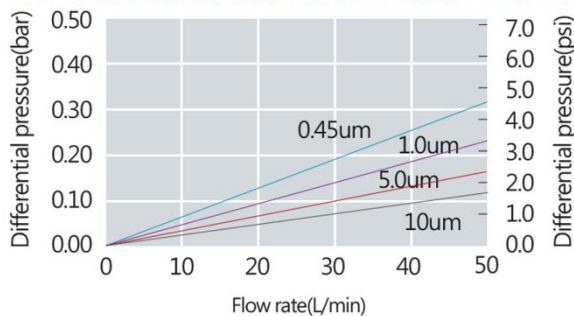
➤ Multi layers super-fine PP membrane pleated filter cartridge(PP3)

PP3 pleated filter cartridge is co structured of multi layers superfine PP membrane and PP support layer. All construction process are thermally welded without using any glue or adhesives to get low extraction level, the depth filtration and absolute filter ratings make it idea for pre-filtration and maximum dirt holding capacity.

Features

- Multi layers fine polypropylene membrane offer superior dirt holding capacity
- High flow rate and excellent filtration efficiency
- Complete Polypropylene structure, wide chemical compatibility
- Good choice for the fluids which is high viscosity or contain high bio-burdens

TYPICAL WATER FLOW RATE @ 25 °C (10")



Application

- High viscosity fluids, such as syrups
- Wine, Beer, Juice and mineral water in beverage industry
- Ink, Solvents, plating solutions
- Pre-filtration of R.O. system in electronics industry
- Oral Liquids, Parenterals, Ophthalmic, Vaccines and other pharmaceuticals



Specification

Construction Materials	Filter Media	Multi layers fine polypropylene membrane
	Support Layers	Polypropylene
	Inner core	Polypropylene
	Outer cage, End Cap	Polypropylene
	Seal Method	Thermal Bonding, No Adhesives
	O-rings/ Gaskets	Silicone/EPDM/Viton/PTFE/Nitrile

Technical Data	Micron Rating	0.2, 0.45, 1.0, 3.0,5.0, 10, 20 um
	Operating Temperature	Normal <55°C (131 °F) Max. <80°C (176 °F)
	Normal Flow Direction pressure	4.2 bar (60.9 psi) at 25°C (77°F)
	Reverse Flow Direction pressure	2.1 bar (30.5 psi) at 25°C (77°F)
	pH Value Compatibility	1-13
	Sterilization	Steam sterilization for 30 min at 135°C, cumulative time:50 hours
Cartridge Size	Outer Diameter	Φ 69 mm(2.75")
	Inner diameter	Φ 33 mm(1.30")
	Length(based on DOE end cap)	10", 20", 30", 40"
	Filtration Area(m ²)	0.65 m ² /10"
Biosecurity	Endotoxin	<0.25 EU/ml
	Extractable	≤30 mg/10"
Liquid retention ratings(um) test	0.1 um	≥95%
	0.2 um	≥95%
	0.45 um	≥95%
	1.0 um	≥95%
	5.0	≥95%

Order Information

Grade	Product	Micron(um)	End Cap	Length	O-ring/Gasket	Core
F-Food & beverage	PP3	010-0.1	AO-DOE(220)	05-5"	S-silicone	B-temperature resistant
P-pharmaceutical		020-0.2	CN-226/FIN	10-10"	E-epdm	
C-chemical		045-0.45	CF-226/FLAT	20-20"	N-nitrile	C-SS
E-electronics		065-0.65	BN-222/FIN	30-30"	T- encapsulated	
		100-1.0	BF-222/FLAT	40-40"	teflon	
	300-3.0	EN-222 three locking ears/Fin		V-viton		
		...				

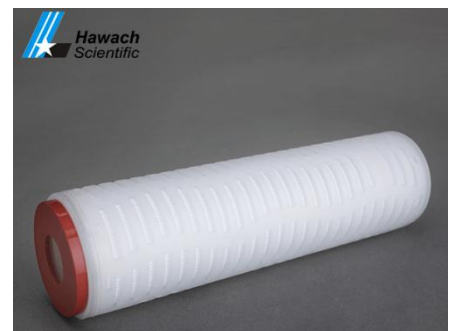
e.g.: FPP2010AO5SC: Food & beverage+ PP3+0.1+DOE+5"+Silicone+SS

1.2 Micro Fiber Pleated Filter Cartridge

1.2.1 GF (glass fiber) series pleated filter cartridge

Features

- Combination of highly adsorptive and mechanical retention for effective clarification



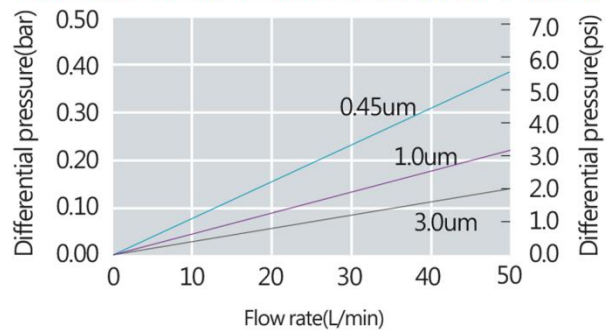
- High dirt holding capacity and excellent flow performance
- Suitable for the removal of colloids, lipids, protein aggregates and particles
- Glass fiber prefilter layer is available for higher dirt holding capacity and longer service life
- Good oil resistance, wide chemical compatibility
- Economical and ideal choice for protection of final membrane filters

Application

Clarification of wine, spirits, fruit juices, soft drinks or other beverages

- Removal of colloids, lipids and protein aggregates in cell cultures,
- ophthalmic, LVPs, serum and other media in bio-pharmaceutical industry
- Pre-filtration of fine chemicals, as reagents, inks and paints
- Kinds of lubricating oil and hydraulic oil clarification
- Oil and other contaminants removal in air/gas filtration

TYPICAL WATER FLOW RATE @ 25 °C (10")



Specification

Construction Materials	Filter Media	GF
	Support Layers	Polypropylene
	Inner core	Polypropylene
	Outer cage, End Cap	Polypropylene
	Seal Method	Thermal Bonding, No Adhesives
	O-rings/ Gaskets	Silicone/EPDM/Viton/PTFE/Nitrile
Technical Data	Micron Rating	0.45, 1.0, 3.0, 5.0, 10 um
	Operating Temperature	Normal <60°C (140 °F) Max. <85°C (185 °F)
	Normal Flow Direction pressure	4.2 bar (60.9 psi) at 25°C (77°F)
	Reverse Flow Direction pressure	2.1 bar (30.5 psi) at 25°C (77°F)
	pH Value Compatibility	1-13
	Sterilization	In-line steam sterilization is Not recommended, Flush with hot water at 82°C (180 °F) for 30 minutes
Cartridge Size	Outer Diameter	Φ 69 mm(2.75")
	Inner diameter	Φ 33 mm(1.30")
	Length(based on DOE end cap)	10", 20", 30", 40"
	Filtration Area(m ²)	0.65 m ² /10"
Biosecurity	Endotoxin	<0.25 EU/ml

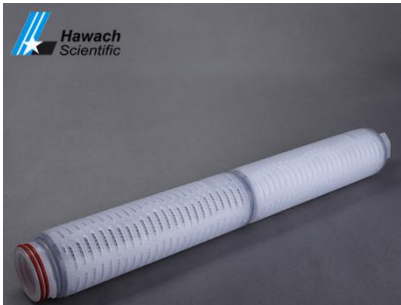
	Extractable	≤30 mg/10''
Filtration efficiency	≥90%	

Order Information

Grade	Product	Micron(um)	End Cap	Length	O-ring/Gasket	Core
F-Food & beverage	GF	045-0.45	AO-DOE(220)	05-5''	S-silicone	B-temperature resistant C-SS
		100-1.0	CN-226/FIN	10-10''	E-epdm	
P-pharmaceutical		300-3.0	CF-226/FLAT	20-20''	N-nitrile	
C-chemical		500-5.0	BN-222/FIN	30-30''	T- encapsulated	
E-electronics			BF-222/FLAT	40-40''	teflon	
			EN-222 three locking ears/Fin		V-viton	
e.g.: FGF045AO5SC: Food & beverage+ GF+0.45+DOE+5''+Silicone+SS						

1.2.2 ACF (active carbon fiber) series pleated filter cartridge

The ACF pleated filter cartridge is made from high grade active carbon fiber and PP support layer, it can use to improve the water taste, odor reduction and color reduction.

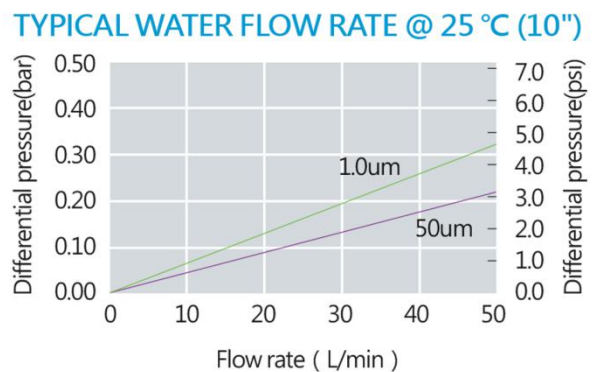


Features

- Excellent adsorptive capacity, high particles removal efficiency
- High chlorine taste and odor reduction
- Long service life

Application

- Pre-filtration or pre-treatment in RO applications
- Chlorine and odor removal
- Color reduction



Specification

Construction Materials	Filter Media	Active carbon fiber membrane
	Inner core	Polypropylene
	Outer cage	Polypropylene
	End Cap	Polypropylene
	Seal Method	Thermal Bonding, No Adhesives
	O-rings/ Gaskets	Silicone/Nitrile/EPDM/Viton

Technical Data	Micron Rating	1.0, 3.0, 5.0 um
	Operating Temperature	Normal <50°C (122 °F) Max. <80°C (176 °F)
	Normal Flow Direction pressure	4.2 bar (60.9 psi) at 25°C (77°F)
	Reverse Flow Direction pressure	2.1 bar (30.5 psi) at 25°C (77°F)
	pH	2-13
Cartridge Size	Outer Diameter	Φ 69mm(2.75")
	Inner diameter	Φ 33mm(1.30")
	Length(based on DOE end cap)	10", 20", 30", 40"
	Filtration Area(m ²)	0.5 m ² /10"
Biosecurity	Endotoxin	<0.25 EU/ml
	Extractable	≤30 mg/10"

Order Information

Product	Micron(um)	End Cap	Length	O-ring/Gasket	Core	
ACF	100-1.0	AO-DOE(220)	10-10"	S-silicone	B-temperature resistant C-SS	
	300-3.0		20-20"	N-nitrile		
	500-5.0		30-30"			
			40-40"			
e.g.: ACF500AO10SB: ACF+5.0 um+DOE+10"+Silicone+temperature resistant						

1.3 Big Pleated Filter Cartridge

The big pleated filter cartridge is made from various membrane and PP support layer, the bigger EFA and bigger filtration flow rate make it suit for big volume solvent filtration.

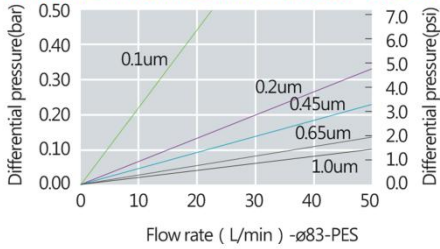
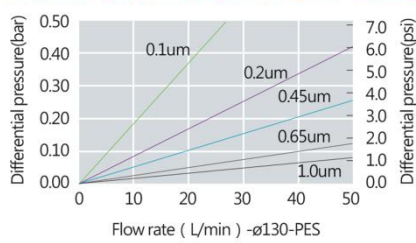
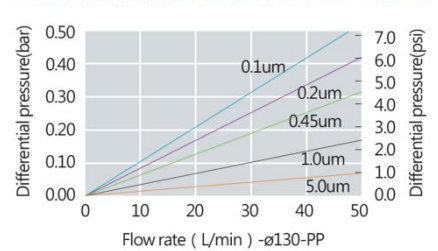
Features

- Higher water flow rate and longer service life
- Large filtration area, pleated cartridge, reduce the numbers of filters required
- Excellent compatibility with various process liquids
- Single open end filter, easy to change-out
- Available in a wide range of removal ratings

Application

- Wet cleaning process in Thin Film Transistor Liquid Crystal Display (TFT LCD) manufacturing
- Semiconductor or other electronic industrial processes water purification
- Large volume of clarification and sterile filtration in Food&beverage industry
- High pressure and flow rate water filtration in pharmaceutical and chemical industry



TYPICAL WATER FLOW RATE @ 25 °C (10")

TYPICAL WATER FLOW RATE @ 25 °C (10")

TYPICAL WATER FLOW RATE @ 25 °C (10")


Specification

Construction Materials	Filter Media	PP or PES
	Support layer	Polypropylene
	Inner core	Polypropylene
	Outer cage, End Cap	Polypropylene
	Seal Method	Thermal Bonding, No Adhesives
	O-rings/ Gaskets	Silicone/EPDM/Viton/Teflon
Technical Data	Micron Rating	PP: 0.1, 0.2, 0.45, 1.0, 3.0 um PES: 0.1, 0.2, 0.45, 1um
	Normal Operating Temperature	Up to 60°C (140 °F)
	Max. Operating Temperature	Max. <85°C (185 °F)
	Normal Flow Direction pressure	4.2 bar (60.9 psi) at 25°C (77°F)
	Reverse Flow Direction pressure	2.1 bar (30.5psi) at 25°C (77°F)
Cartridge Size	Outer Diameter	Φ 83 mm(3.26"), Φ 130 mm(5.11")
	Inner diameter	Φ 40 mm(1.57"), Φ 63 mm(2.48")
	Length(based on DOE end cap)	237 mm, 270mm
	Filtration Area(m ²)	Φ 83- ≥1.0 m ² /10" Φ 130 mm ≥ 2.0 m ² /10"
Biosecurity	Endotoxin	<0.25 EU/ml
	Extractable	≤30 mg/10"

Order Information

Grade	Out Diameter	Media material	Micron(um)	End Cap	Length	O-ring/Gasket	Core
F-Food & beverage	83-83 mm	PP	045-0.45	322	10-10"	S-silicone	B-temperature resistant
P-pharmaceutical	130-130 mm	PES	100-1.0	321		E-epdm	C-SS
C-chemical			300-3.0			N-nitrile	
E-electronics			500-5.0			V-viton	
			...				

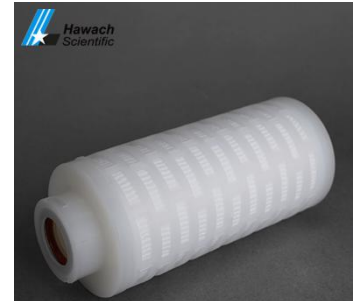
e.g.: F83PP04532210SC: Food & beverage+ 83 mm +PP+0.45+322+10"+Silicone+SS

1.4 Small Pleated Filter Cartridge(SMP)

The small pleated filter cartridge is made from various membrane and PP support layer, the small volume make it suit for limited small volume filtration and precious samples.

Features

- Wide range of filter medias to meet various process systems PP, PES, PTFE, NYLON66, PVDF for options
- Ideal for small and medium batch processing pre-filtration and sterile filtration in air and liquids
- Removal rating from 0.1um to 50um for different filtration requirements
two connections are available:
214 - Single Open End with one internal O-ring
216- Single Open End with two locking ears and two external O-rings



Application

- Small-scale sterile process gases, sterile vents
- Small and medium batch pharmaceuticals and bioprocessing
- Laboratory solutions
- Electronics and semiconductors
- Filtration for optical resin gum
- Small-scale fine chemicals and solvents
- Point-of-use water supply

Specification

Construction	Filter Media	PES/PP/PTFE/PN66/PVDF
Materials	Inner core	Polypropylene/SUS

	Outer cage, End Cap	Polypropylene
	Seal Method	Thermal Bonding, No Adhesives
	O-rings/ Gaskets	Silicone/Nitrile/EPDM/Viton
Technical Data	Micron Rating	PP: 0.1, 0.2, 0.45, 1.0, 5.0, 10.0, 50.0 um PES: 0.1, 0.2, 0.45, 0.65 um PTFE: 0.1, 0.2, 0.45 um PVDF(hydrophilic): 0.2, 0.45, 0.65, 1.0 um PN66: 0.1, 0.2, 0.45, 0.65, 1.0 um
	Normal operating temperature	Up to 60°C (140 °F)
	Max. Operating Temperature	Max. <80°C (176 °F)
	Normal Flow Direction pressure	4.2 bar (58 psi) at 25°C (77°F)
	Reverse Flow Direction pressure	2.1 bar (29 psi) at 25°C (77°F)
	Sterilization	Steam Sterilization for 30 minutes at 135°C (275 °F)
Cartridge Size	Outer Diameter	Φ 56 mm
	Length(based on DOE end cap)	70mm (except end cap) 125mm(except end cap)
Biosecurity	Endotoxin	<0.25 EU/ml
	Extractable	≤0.015 g/10”

Order Information

Grade	product	Out Diameter	Media material	Micron(um)	End Cap	Length	O-ring /Gasket	Core
F-Food & beverage P-pharmaceutical C-chemical E-electronics	SMP	56-56 mm	PP PES PTFE PVDF PN	020-0.2 045-0.45 065-0.65 100-1.0 ...	214 216	70 125	S-silicone E-epdm N-nitrile V-viton	B-temperatur e resistant C-SS
e.g.: FSMP56PP02021470SC: Food & beverage+SMP+56 mm +PP+0.2 um+214+70 mm+Silicone+SS								

1.5 Metal Filter Cartridge

1.5.1 Ti powder sintered filter cartridge

Ti filter cartridge is made from high purity Ti powder (99.6%), and melt in high temperature, it can use repeatedly and suit for liquid with rigid particles.

Features

- High purity titanium powder (99%) sintered under high temperature
- Resistant to high temperatures and corrosive environments



- Washable and reusable, providing an economical choice
- Uniform pore sizes, excellent filtration efficiency

Application

- Steam filtration
- Liquids or gases filtration in high temperature and pressure
- Filtration of liquids or gases containing ozone
- Pre-filtration and decarbonization in pharmaceutical industry, as small injection, oral, etc
- Highly corrosive liquid and gas purification

Specification

Construction Materials	Filter Media	Ti powder sintered
	Seal Method	Thermal Bonding, No Adhesives
	O-rings/ Gaskets(only for 222,226,DOE)	Silicone/Nitrile/EPDM/Viton/Telon
Technical Data	Porosity	30-50%
	Micron Rating	0.45, 1.0, 5.0, 10, 20, 50, 100um
	Operating Temperature	Max. <280°C (536 °F)
	Max. differential pressure	5.0 bar
	Filtration efficiency	≥ 90%
	Flow rate	0.5 T/h
Cartridge Size	Outer Diameter	Φ 60/80 mm
	Length(based on DOE end cap)	10", 20", 30", 40"
	pH	1-14

Order Information

Media material	Out Diameter	Micron(um)	End Cap	Length	O-ring/Gasket
Ti-TI	60-60 mm	100-1	NIL-cut end(cylinder)	10-10"	S-silicone
	80-80 mm	300-3	AA-DOE(with gaskets)	20-20"	E-epdm
		500-5	BF-222/Seal	30-30"	N-nitrile
		1000-10	CF-226/Seal	40-40"	V-viton
		...	YBP-1" BSP Threaded HBP-1/2" BSP Threaded		
e.g.: TI80100NIL10S: Ti+ 80 mm +1.0 um + cut end +10" +Silicone					

1.5.2 Stainless steel filter cartridge (SS)

The SS cartridge is made by imported stainless steel wire mesh and fold with welding, it has good chemical compatibility to strong acid and alkaline, and high temperature resistant ability, it is suit for high volume liquid and gas filtration. Two type of stainless steel mesh pleated cartridge (STP) and stainless steel powder sintered cartridge(STS) are available for different use request

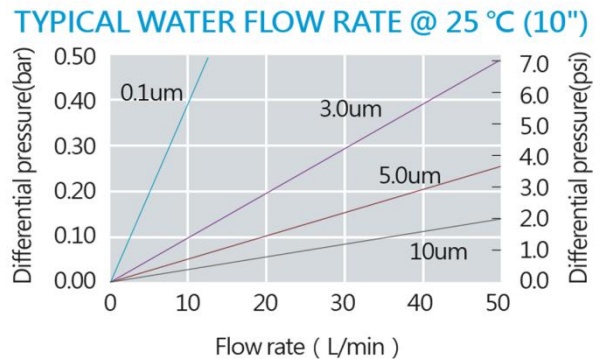
Features

- Extremely robust construction, high mechanical strength
- Ideal for aggressive solvents, viscous and hot solutions
- Backwashable and cleaned by chemical solvent, hot water, steam, long service life
- Pleated Cartridge provides higher filtration area
- Removal rating from 1.0 to 100 microns



Application

- Steam filtration
- Pre-filtration and decarbonization of high viscosity liquid filtration
- Removing impurities of liquids in Petrochemical industry
- Aggressive solvents filtration
- Highly corrosive liquid and gas purification
- Liquids or gases filtration in high temperature and pressure



Specification

Construction Materials	STP	Filter Media	SUS316L Mesh Pleated
		Micron rating	5.0, 10, 20, 50, 100um
		Porosity	65-85%
	STS	Filter Media	SUS316L Powder Sintered
		Micron rating	1.0, 5.0, 10, 20, 50, 100um
		Porosity	35-45%
	O-rings/ Gaskets(only for 222,226,DOE)		Silicone/Nitrile/EPDM/Viton/Teflon
	Filtration efficiency		≥ 90%
Technical Data			
	Operating Temperature		Max. <300 °C (572 °F)
	Max. differential pressure		6.0 bar
	pH		1-14

Cartridge Size	Outer Diameter	Φ 60/80 mm
	Length(based on DOE end cap)	10", 20", 30", 40"

Order Information

Media material	Out Diameter	Micron(um)	End Cap	Length	O-ring/Gasket
STS	60-60 mm	100-1	NIL-cut end(cylinder)	10-10"	S-silicone
STP	80-80 mm	300-3	AA-DOE(with gaskets)	20-20"	E-epdm
		500-5	BF-222/Seal	30-30"	N-nitrile
		1000-10	CF-226/Seal	40-40"	V-Viton
		2000-20	YBP-1" BSP Threaded		
		...	HBP-1/2" BSP Threaded		

e.g.: STS80100NIL10S: Ti+ 80 mm +1.0 um + cut end +10" +Silicone

1.6 Other filter Cartridge

1.6.1 Melt-blown filter cartridge (MBPP)

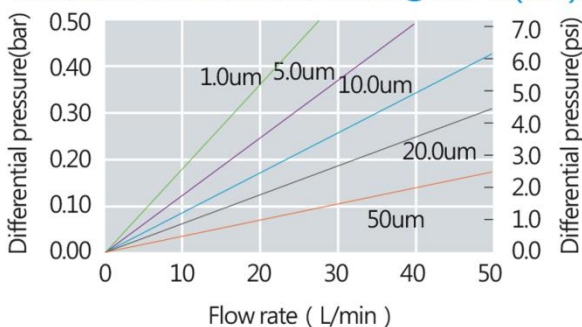
Melt-blown filter cartridge are often used in pre-filtration

Features

- 100% high purity polypropylene (melt blown), no adhesives
- High dirt holding capacity and low pressure loss
- Many connections(DOE, 226, 222 End caps)are available
- Wide chemical compatibility, various micron ratings(1um to 100um)
- One piece construction, up to 1524mm(60")



TYPICAL WATER FLOW RATE @ 25 °C (10")



Application

- Pre-filtration in process water treatment industry
- Clarification for waste water treatment
- Bottled water, wine, beer pre-filtration in food and beverage industry
- Pre-filtration before RO system in electronics process water
- Organic solvents, inks, plating solution, metal cutting, fluids, photoresist filtration

Specification

Construction Materials	Filter Media	Melt Blown Polypropylene
	Inner core	PP or core less
	Seal Method	Thermal Bonding, No Adhesives
	O-rings/ Gaskets(only for 222,226,DOE)	Silicone/Nitrile/EPDM/Viton/Teflon
Technical Data	Micron Rating	1.0, 5.0, 10, 20, 50, 70, 100um
	Normal Operating Temperature	<50°C (122 °F)
	Max. Operating Temperature	<80°C (176 °F)
	Normal flow direction pressure	4.0 bar(58 psi)
	Reverse flow direction pressure	2.0 bar(29psi)
	Filtration efficiency	≥ 80%
	Sterilization	Not recommended
Cartridge Size	Outer Diameter	Φ 63(2.5")/114(4.5) mm
	Inner Diameter	Φ 28mm (1.10")
	Filtration area(m ²)	0.4 /10"
	Length(based on DOE end cap)	10", 20", 30", 40", 50", 60"
	pH	1-13

Order Information

Media material	Out Diameter	Micron(um)	End Cap	Length	O-ring/Gasket
MBPP- Melt-blown PP	63-63 mm	100-1	NIL-CUT END	10-10"	S-silicone
	114-114 mm	500-5	BN-222/FIN	20-20"	E-EPDM
		1000-10	CN-226/FIN	30-30"	N-nitrile
		...		40-40"	V-Viton
e.g.: MBPP63100NIL10S: Melt-blown PP+ 63 mm +1.0 um + cut end +10" +Silicone					

1.6.2 String wound filter cartridge (SW)

String wound filter cartridge are made by PP, Bleached Cotton, Glass Fiber filter media, the big dirt holding capability and depth filtration make it suit for economical pre-filtration

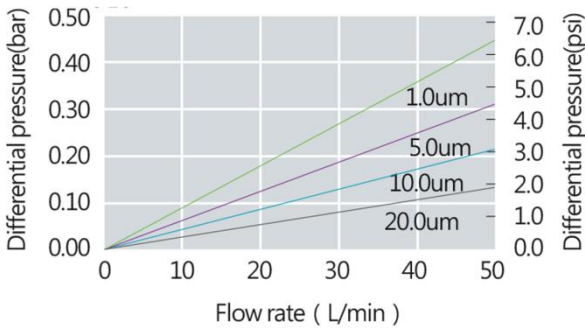
Features

- Polypropylene, bleached cotton and glass Fiber filter medias for option
- High dirt holding capacity for depth filtration, protection of absolute filters



- Many connections(Cut Ends, 226, 222 End caps) are available
- Wide chemical compatibility, pH 1-13
- To max. length 70"

TYPICAL WATER FLOW RATE @ 25 °C (10")



Application

- Pre-filtration for pure water system
- Pre-filtration for pharmaceutical and chemical solution
- Process and waste water pre-filtration in electronics industry
- Wine, beer, mineral water, pure water, beverage filtration

Specification

Technical data	Filter Media	PP/Bleached Cotton/Glass Fiber
	Inner core	PP or stainless steel
	O-rings/ Gaskets(only for 222,226,DOE)	Silicone/Nitrile/EPDM/Viton
	Micron Rating	1.0, 5.0, 10, 20um
	Normal Operating Temperature	PP : <80°C (176 °F) at $\Delta P \leq 1.0$ bar (14.5psi) Bleached cotton: 150 °C (302 °F) at $\Delta P \leq 1.0$ bar (14.5psi)
	Max. Operating Temperature	<80°C (176 oF)
	flow pressure	PP: 4.0 bar(58psi) at 25°C (77°F) Bleached cotton: 5.0 bar(72psi) at 25°C (77°F)
	Filtration efficiency	$\geq 80\%$
	Sterilization	Not recommended
Cartridge Size	Outer Diameter	Φ 63(2.5")/114(4.5) mm
	Inner Diameter	Φ 28mm (1.10")
	Filtration area(m2)	0.4 /10"
	Length(based on DOE end cap)	10", 20", 30", 40", 50", 60", 70"
	pH	1-13

Order Information

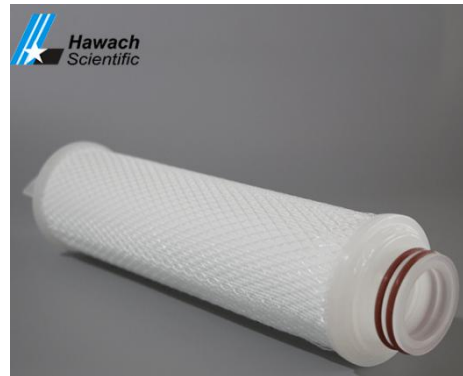
Media material	Out Diameter	Micron(um)	End Cap	Length	O-ring/Gasket
PPW-PP	63-63 mm	100-1	NIL-CUT END	10-10"	S-silicone
Wound	114-114 mm	500-5	BN-222/FIN	20-20"	E-epdm
CW-Cotton		1000-10	CN-226/FIN	30-30"	N-nitrile
Wound	Outer Dia.of	2000-20		40-40"	V-viton
GFW-Glass	Glass	...			
Fiber Wound	Fiber wound is only 63mm(2.5")				

e.g.: PPW63100NIL10S: PP wound+ 63 mm +1.0 um + cut end+10" +Silicone

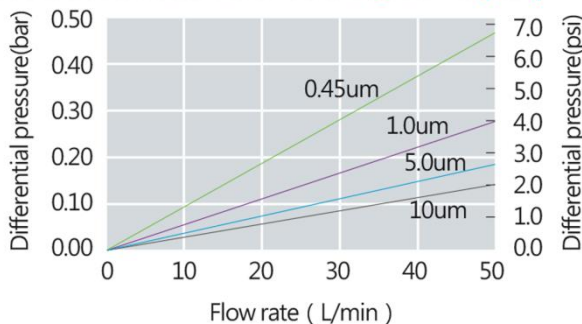
1.6.3 Mesh pleated filter cartridge (ME)

Features

- Outer support is PP mesh net.
- Economical choice for water pre-filtration
- Polypropylene and Glass Fiber filter medias for option
- Low pressure drop and high flow capacity
- Single piece construction for length over 20inch



TYPICAL WATER FLOW RATE @ 25 °C (10")



Application

- Pre-filtration in water treatment
- Clarification for waste water process system
- R.O. pre-filtration in electronic industry
- Solvents, plating solutions filtration
- Coating, paints and inks

Specifications

Construction Materials	Filter Media	PP/Glass Fiber
	Support layers	PP
	Inner core	PP
	Outer cage	PP mesh net

	End cap	PP
	Seal method	Thermal bonded, no adhesive
	O-rings/ Gaskets(only for 222,226,DOE)	Silicone/Nitrile/EPDM/Viton
Operation conditions	Micron Rating	0.45, 1.0, 3.0, 5.0, 10.0 um
	Normal Operating Temperature	Up to 55 °C (131°F)
	Max. Operating Temperature	<80°C (176 °F)
	Normal flow pressure	4.2 bar(60.9psi) at 25°C (77°F)
	Reverse flow pressure	2.1 bar(30.5psi) at 25°C (77°F)
	Filtration efficiency	≥ 95 %
	pH	1-13
Cartridge Size	Sterilization	Not recommended
	Outer Diameter	Φ 65 (2.5") mm
	Inner Diameter	Φ 33mm (1.30")
	Filtration area(m2)	0.6 m ² /10"
	Length(based on DOE end cap)	10", 20", 30", 40"
Cartridge safety	pH	1-13
	Endotoxin	< 0.25 EU/ml
	Extractable	0.03 g/10"

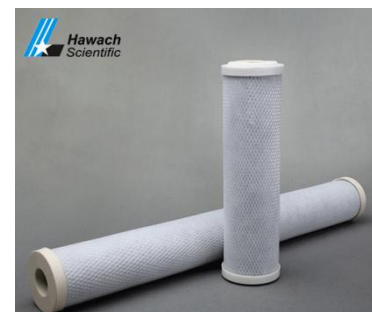
Order Information

Product	Media material	Micron(um)	End Cap	Length	O-ring/Gasket
ME	P-PP	045-0.45 mm	AO-DOE(220)	10-10"	S-silicone
	GF-Glass	100-1.0 mm	CN-226/FIN	20-20"	E-epdm
	Fiber	300-3.0 mm	CF-226/FLAT	30-30"	N-nitrile
		500-5.0 mm	BN-222/FIN	40-40"	V-viton
			BF-222/FLAT		
			EN-222 three locking ears/Fin		
e.g.: MEP045AO10S: mesh+ PP + 0.45 um + DOE+10" +Silicone					

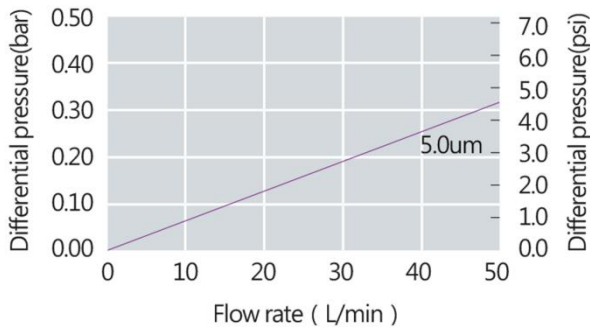
1.6.4 Active carbon block filter cartridge (ACB)

Features

- Excellent adsorptive capacity, high particles removal efficiency
- High chlorine taste and odor reduction
- Long service life



TYPICAL WATER FLOW RATE @ 25 °C (10")



Application

- Pre-filtration or pre-treatment in RO applications
- Chlorine and odor removal
- Color reduction

Specification

Construction Materials	Filter Media	Active carbon
	Inner core	PP non-woven cloth
	Outer cage	PP non-woven cloth
	End cap	PP
	O-rings/ Gaskets(only for 222,226,DOE)	Silicone
Operation conditions	Micron Rating	5.0 um
	Normal Operating Temperature	55°C (131 °F)
	Normal flow pressure	4.0 bar(58psi) at 25°C (77°F)
	Reverse flow pressure	2.0 bar(29psi) at 25°C (77°F)
	Filtration efficiency	≥ 90 %
	Sterilization	Not recommended
Cartridge Size	Outer Diameter	Φ 65 (2.5") mm
	Inner Diameter	Φ 28mm (1.10")
	Filtration area(m2)	0.4 m ² /10"
	Length(based on DOE end cap)	10", 20", 30", 40"

Order Information

Product& Media material	Micron(um)	End Cap	Length	O-ring/Gasket
ACB-active carbon block	500-5.0 mm	AO-DOE	10-10"	S-silicone N-nitrile
			20-20"	
			30-30"	
			40-40"	
e.g.: ACB500AO10S: Active carbon block+ 5.0 um + DOE+10" +Silicone				

1.6.5 Swimming pool filter cartridge (SPFC)

Swimming pool filter cartridge (SPFC) are made of pleated polyester filter media for low pressure drop, increased surface area and longer life. This is designed for general water filtration processes

Features

- pleated design increased surface area and contaminant removal
- longer filtration runs for fewer change-out and less maintenance
- low pressure drop
- designed for general water filtration purpose

Application

- General water such as swimming pool water filtration
- industrial chemical solvents filtration



Specification

Construction Materials	Filter Media	Polyester, cellulose
	End cap	PU, Plastisol
Operation conditions	Micron Rating	1.0, 5.0, 10.0, 20.0, 50.0 um
	Maximum Operating Temperature	60 °C
	Normal flow pressure	40 psi
	Sterilization	Not recommended
Cartridge Size	Outer Diameter	Φ 197 mm
	Length(based on DOE end cap)	245mm, 495mm, 781mm

Order Information

Product	Length	Micron(um)	Media type	
SPFC-Swimming pool filter cartridge	40-245 mm	1-1	A-polyester	
	90-495 mm	5-5	B-cellulose	
	170-781 mm	10-10		
		20-20		
		50-50		

2. Filter Capsule

Hawach capsule filters are kind of self contained, ready to use, disposable filters, they are made up of polypropylene and pleated membrane filter inside by thermal bonding, free of adhesives, binders and other chemicals. They are manufactured in a clean room environment and are processes in double sealed packaging to avoid any contamination.

Features

- made in the clean environment and always keep clean situation
- many kind of filter media and removal rating
- absolutely bio-safety and non-toxic
- have many kinds of capsule size. According to flow rate and flow speed to choose the correct filter, because different capsule length have his own effective filtration area.

Application

- Digital inks, paintings
- Small injection and tissue cultures in pharmaceutical industry
- Corrosive liquids/solvents filtration in chemical industry
- Photo resist, acids, etc in electronic industry
- Gas/Air sterile filtration
- Laboratory solutions



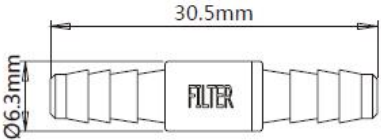
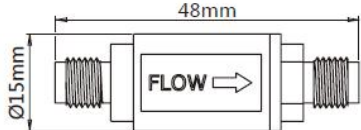
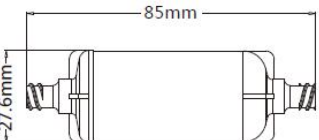
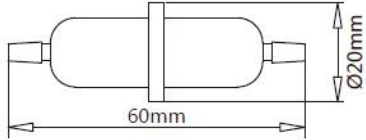
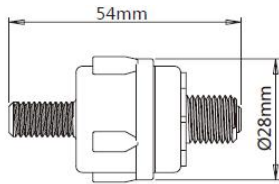
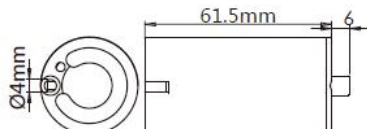
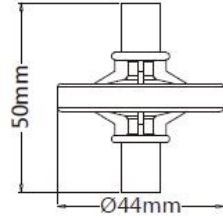
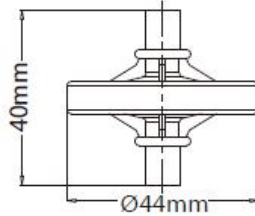
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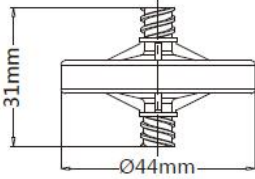
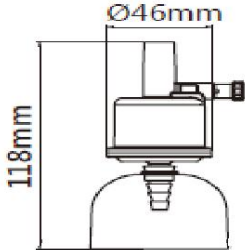
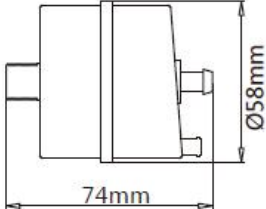
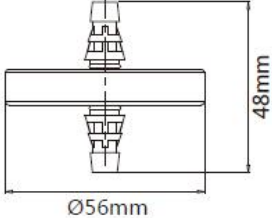
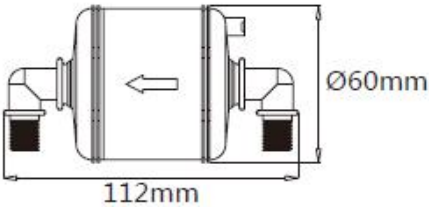
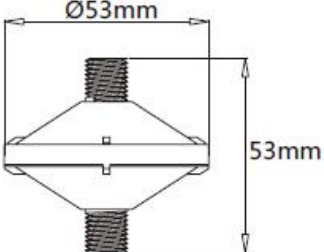
Construction Materials	Filter Media	PP, PES, PTFE, Nylon6, GF
	Filter housing	PP
	Support material	PP
Operation conditions	Micron Rating	PP: 0.1, 0.22, 0.45, 1.0, 3.0, 5.0, 10.0, 20.0, 30.0, 50.0 um PES: 0.05, 0.1, 0.22, 0.45, 0.65, 0.8, 1.2 um PTFE: Liquid: 0.1, 0.22, 0.45 um Gas: 0.01, 0.02 um Nylon6: 0.1, 0.2, 0.45, 0.65, 1.0 um

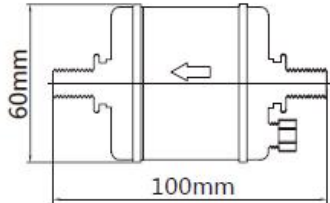
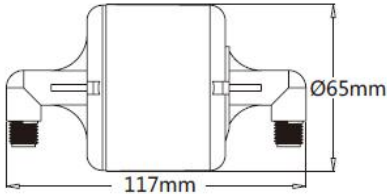
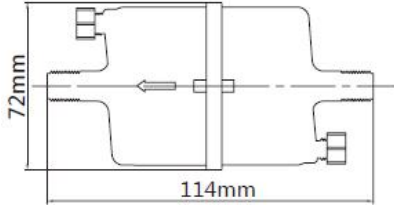
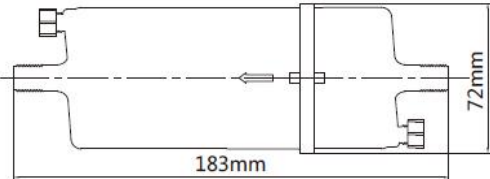
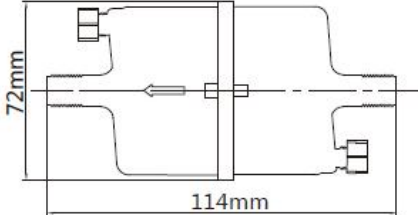
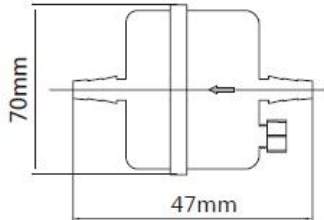
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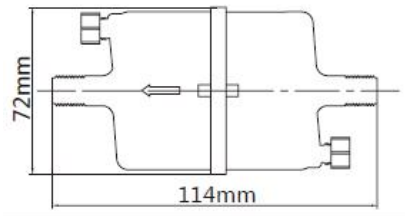
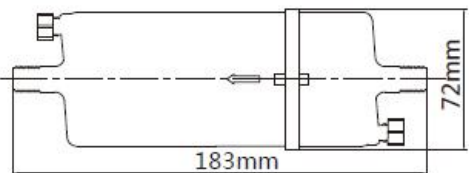
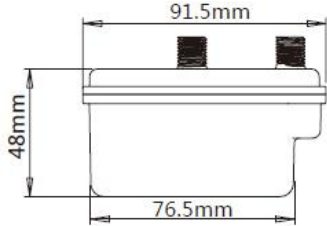
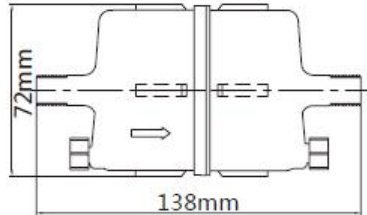
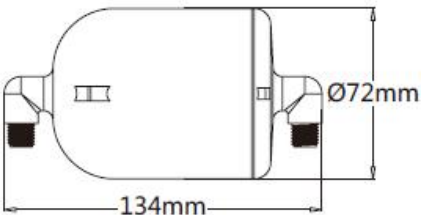
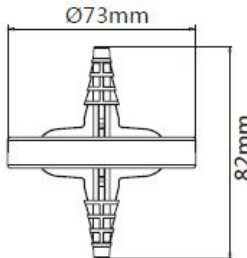
Model	Media	Micron(um)
128 136 219 227 306 325	A- PP	001-0.01
414 415 416 418 505 759	B- PES	002-0.02
517 519 523 601 624 702	C- PTFE	01-0.1
703 704 707 709 558 710	D- NY6	022-0.22
711 712 722 726 734 738	E- GF	045-0.45
741 743 148 656 149 150		1-1
151 152 753 754 553 554		3-3
555 831L 657		5-5
		10-10
		20-20
		50-50

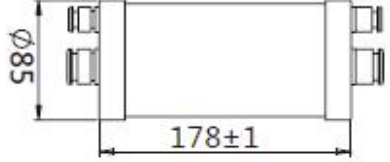
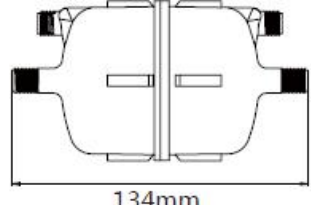
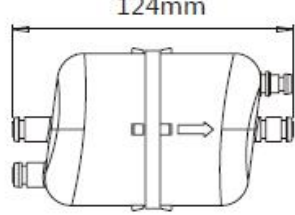
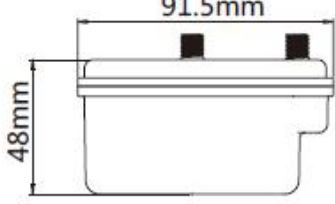
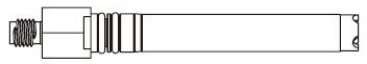




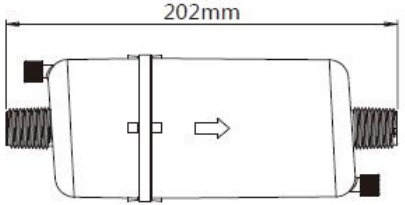
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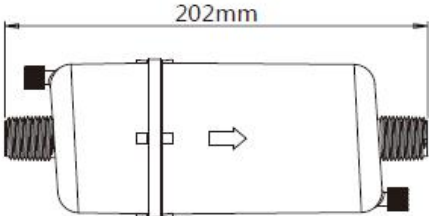
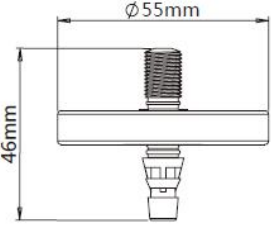
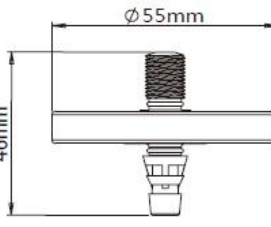
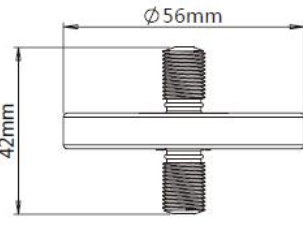
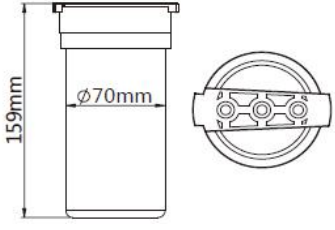
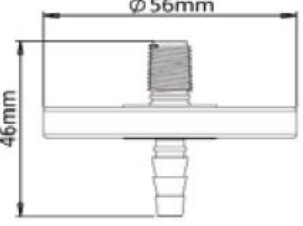
Code	Joint	Drawing
128	In/out: hose barb vent: N/A	
136	In/out: 1/8" Swagelok	
219	In/out: Luer lock	
227	In/out: 1/8" hose barb	
306	In: 1/8" NPTM Out: 1/4" NPTM Filtration area: 35 cm ²	
325	In/out: 1/4" Luer Slip Vent/Drain: 1/4" Luer Slip	
414	In/out: 1/4" Swagelok Filtration area: 9.5 cm ²	
415	In/out: 1/8" Swagelok Filtration area: 9.5 cm ²	

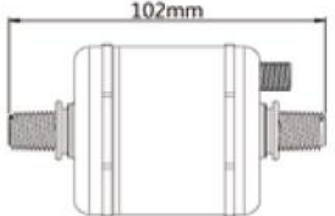
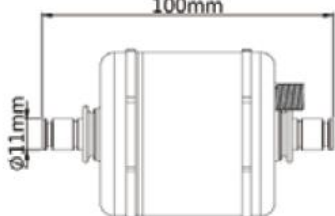
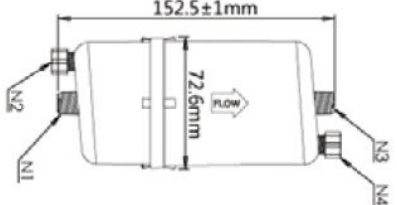
<p>416</p>	<p>In/out: Luer Lock Filtration area: 9.5 cm²</p>	
<p>418</p>	<p>In: 1/4" NPTM Out: 3/8 HB OUT Filtration area: 150 cm²</p>	
<p>505</p>	<p>In: Hose Barb Out: 1/4" NPTM Vent: Luer Lock Filtration area: 455 cm²</p>	
<p>517</p>	<p>In/out: 1/4"-3/8" Hose Barb Filtration area: 13.8 cm²</p>	
<p>519</p>	<p>In/out: 1/4" Swagelok Vent: Luer Lock Filtration area: 250 cm²</p>	
<p>523</p>	<p>In/out: 1/4" Swagelok</p>	

<p>601</p>	<p>In/out: 1/4" Swagelok Vent/Drain: 1/8" NPTM Filtration area: 455 cm²</p>	
<p>624</p>	<p>In/out: 1/4" Swagelok Vent: N/A Filtration area: 560 cm²</p>	
<p>702</p>	<p>In/out: 1/4" Swagelok Vent/Drain: 1/4" Swagelok Filtration area: 1134 cm²</p>	
<p>703</p>	<p>In/out: 3/8" Swagelok Vent/Drain: 1/4" Swagelok Filtration area: 1920 cm²</p>	
<p>704</p>	<p>In/out: 1/4" Swagelok Vent/Drain: 1/8" Swagelok Filtration area: 840 cm²</p>	
<p>707</p>	<p>In/out: 1/4" stepped Hose Barb Vent/Drain: 1/4" Swagelok Filtration area: 570 cm²</p>	

<p>709</p>	<p>In/out: 1/4" NPTM Vent/Drain: 1/8" NPTM Filtration area: 840 cm²</p>	
<p>710</p>	<p>In/out: 1/2" Swagelok Vent/Drain: 1/4" Swagelok Filtration area: 1920 cm²</p>	
<p>711</p>	<p>In/out: 1/4" Swagelok Filtration area: 358 cm²</p>	
<p>712</p>	<p>In/out: 1/4" NPTM Vent/Drain: 1/4" Swagelok Filtration area: 1134 cm²</p>	
<p>722</p>	<p>In/out: 1/4" Swagelok Vent: N/A Filtration area: 1300 cm²</p>	
<p>726</p>	<p>In/out: 1/4"-1/2" Hose Barb Vent/Drain: N/A Filtration area: 30 cm²</p>	

734	Seal Material: EPDM Filtration area: 350 cm ²	
738	In/out: 1/4" Swagelok Vent/Drain: 1/4" Swagelok Filtration area: 1200 cm ²	
741	Seal Material: EPDM Filtration area: about 1200 cm ²	
743	In/out: 1/8" Swagelok	
148	1/8" Swagelok	
149	1/4" Swagelok	
150	1/8" Swagelok	
151	1/4" Swagelok	
152		
753	In/out: 1/2" NPT Vent/Drain: Luer Lock	

<p>754</p>	<p>In/out: 3/8" NPT Vent/Drain: Luer Lock</p>	
<p>553</p>	<p>M10X1-1/4"-3/8" HB</p>	
<p>554</p>	<p>M10X1.5-1/4"-3/8" HB</p>	
<p>555</p>	<p>M10X1.5-M10X1.5</p>	
<p>831L</p>		
<p>558</p>	<p>Inlet: 1/8" NPT Outlet: 1/4" Hose bard</p>	

656	In/Out: 1/4" NPT Vent: 1/8" NPT	
657	In/Out: CPC Vent: 1/8" NPT	
759	Connection type: N1/N3: 1/4" NPT N2/N4: 1/8" NPT	

3. Filter Bag

Features

- Economical filter bags provide cost effective filtration for industrial applications. High filtration performance and extended life time, Washable and reusable.
- Large Flow Rate, suitable for the large volume or high viscosity liquid filtration.
- Wide Chemical compatibility, filter bags are made of different materials in various micron ratings. Which can be compatible for many situations.
- 100% Welded Seams, all abutting edges are welded without media migration or bypass. Customized Filter Bags Are Available



Specification

Type	Flow rate(m3/h)	Filtration area(m2)	Size(diameter×length)
#1	20	0.25	7"×16" (180 mm×410 mm)
#2	40	0.50	7" ×32" (180 mm×810 mm)
#3	6	0.10	4" ×8.25"(102 mm×210 mm)
#4	12	0.15	4" ×14"(102 mm×356 mm)
#5	5	0.30	6.7" ×8"(175 mm×870 mm)

*Size could be on your request

Working conditions

	Polyester Needle (PET)	Polypropylene Needle Felt (PPF)	Polypropylene Plain (PPP)	Nylon Monofilament (NMO)
Temp.	130 °C	90 °C	90 °C	130 °C
Aqueous	✓	✓	✓	✓
Aliphatic	✓	✓	✓	✓
Alkaline	✓	✓	✓	✓
Strong Alkaline				✓
Aromatic	✓			✓
Acid	✓	✓	✓	
Strong acid		✓	✓	

Order Information

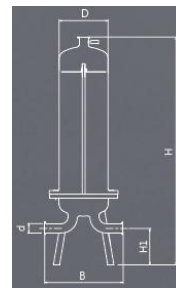
Product	Material	Micron	Seal type	Size
FB	PET	5 um-500	Steel ring-S	1
	PPF	10 um-1000	Polypropylene ring-P	2
	PPP	25 um-2500		3
	NMO	50 um-5000		4
		75 um-7500		5
		100 um-10000		X-special

4. Filter Housing

4.1 Hawach BJH Series Liquid Filter Housing

Features

- Easy To Install Design With Sanitary Connections, Easy to Clean
Available in tri-clamp, flanged and thread connections
Mirror Surface Finish Complete Stainless Steel Construction
Reduces bacterial/particle adhesion and no dead space
Excellent corrosion resistance
Requires minimum floor space and quickly dismantle for easy cleaning
- Housings Accommodate From One (1) to Many 10", 20", 30" or 40" Cartridges
Suitable for small to large batch sizes and flow rates
High pressure & high temperature designs are available
- Clean-in-Place (CIP) /Steam-in-Place (SIP) Design



Applications

Water Treatment, RO system

- Pharmaceuticals, API, Biologics
- Food and Beverage, Wine, Beer, Dairy, Mineral Water
- Paints, Inks Plating Solutions
- Process Chemicals and Electronics Industry

Technical Data

Material	Housing	Stainless steel 304 and 316 for choice	
	O-Ring	Silicone, Viton, EPDM, etc	
Surface finish	Interior/Exterior	Electro polished, Ra≤0.2 um	
connections	Inlet/Outlet	Tri Clamp	1" to 10" or as your request
		Flange	
		Thread	
	Vent	1/4" female	
	Drain	1" male or as your request	
Lid/cover Type	Swing Bolts or Tri Clamp(only for single round)		
Designed Pressure	10 bar(145 psi) with in 30 mins		
Operating Pressure	Max. 7.2 bar(108 psi)		
Temperature	Max. 105 °C (design 140 °C)		
Cartridge type	DOE(220), 222, 226, etc		
Cartridge Capacity	1, 3, 5,8...30, 36, 45		

Specification

cartridges		Body closure	Dimensions (mm)				
Nos.	length		D(outlet/inlet)	D	B	H1	H
1	5"	Ferrule Clamp	1 inch	102	108	120	570
	10"						690
	20"						940
	30"						1190
3	10"	Stud bolts	1 1/4 inch	184	240	180	720
	20"						980
	30"						1210
5	10"	Stud bolts	1.5 inch	219	280	200	130
	20"						990
	30"						1220
	40"						1460

7	20"	Stud blots	13/4 inch	273	420	210	1060
	30"						1290
	40"						1530
.....							

Order Information

Product	Material	Cartridge NOS.	Cartridge type	Length	How to order?
BJH	304-SUS304	01-single	AA-DOE	5"-5	Material: SUS304 Cartridge Nos.: single Cartridge type: DOE Cartridge length:10" Selection code is:BJH30401AA10
	316-SUS316L	03-three	CN-226/FIN	10"-10	
		05-five	BN-222/FIN	20"-20	
		07-seven	AF-220/FLAT SEAL	30"-30	
		09-nine	BF-222/FLAT SEAL	40"-40	
		10-ten	CF-226/FLAT SEAL	Other-XX	
		12-twelve			
X- more					

4.2 Hawach BJQ Series Gas Filter Housing



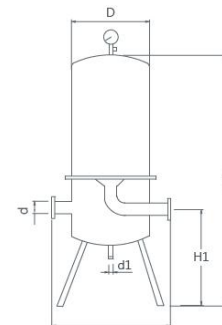
Features

- Meet the GMP Requirements
Electro polished, smooth and hygienic design by avoiding dead space
Easy management of condensate
- Complete Stainless Steel Structure
Made of 100% 304 or 316L stainless steel of the highest quality
- Easy To Install Design, Easy to Clean
Available in tri-clamp or flanged connections



Technical data

Designed pressure	9.6 bar(136psi) within 30 mins
Max. operating pressure	6.0 bar(87psi)
Max. Temperature	105 °C (design 140 °C)
Surface finish	Electro polished, Ra≤0.2 um



Specification

cartridges		Body closure	Dimensions (mm)				
Nos.	length		d(outlet/inlet)	D	B	H1	H
1	5"	Ferrule Clamp, Flange	3/4 inch	102	108	120	570
	10"		1 inch				690
	20"		1 inch				940

	30"		1 1/4 inch				1190
3	10"	Flange, Stud bolts	2 inch	184	240	180	720
	20"		2.5 inch				980
5	10"		3 inch	219	280	200	130
	20"		4 inch				990

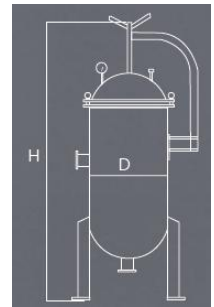
Order Information

Product	Material	Cartridge NOS.	Cartridge type	Length	How to order?
BJQ	304-SUS304	01-single	AA-DOE	5"-5	Material: SUS304
	316-SUS316L	03-three	CN-226/FIN	10"-10	Cartridge Nos.: single
		05-five	BN-222/FIN	20"-20	Cartridge type: 226/FIN
			AF-220/FLAT SEAL	30"-30	Cartridge length:10"
			BF-222/FLAT SEAL	40"-40	Selection code
CF-226/FLAT SEAL	Other-XX	is:BJQ30401CN10			

4.3 Hawach BJD Series Bag Filter Housing

Features

- Designed for Bag Filtration System
Consists of stainless steel housing, bag holder and filter bags
Wide range of bag sizes for choice
- Complete Stainless Steel Structure
Quality stainless steel 304 or 316L material
High pressure & high temperature design are available
- Meet the GMP Requirements
Smooth and round corner design, no dead space
Surface is mechanical/electro polished or sand blasting passivation
- Clean-in-Place (CIP) /Steam-in-Place (SIP) Design



Application

- Liquid pre-filtration, particularly suitable for large volume or high viscosity liquids

Specification

Type	Model	Dimensions		Inlet/Outlet	Bag		Flow Rate (m ³ /h)
		D	H		size	Q'ty(pc)	
Single Bag Filters	BJD1	220	550	2" Female Pipe	#1	One	20
	BJD2	220	950	Thread/Tri-Clamp/Flange	#2		40
	BJD4	130	650		#4		12
Multi-Bag Filters	BJD2-2	400	1550	3" Female Pipe	#2	Two	80
	BJD2-3	500	1550	Thread/Tri-Clamp/Flange	#2	Three	120

	BJD2-4	550	1550		#2	Four	160
	BJD2-5	600	1550		#2	Five	200
	BJD2-6	650	1620		#2	Six	240

Order Information

Product	Bag Size	Bag Q'ty	Inlet/Outlet	Connection	Surface	Material
BJD	1- #1 bag	01-singl	A-side in and side out	K-Tri-Clamp	S-Sand blasting	SUS304
	2- #2 bag	e	B-side in and bottom	F-Flange	T-Polished	SUS316L
	3- #3 bag	02-two	out	S-Thread	Bag size: #1; Bag Q'ty: Single	
	4- #4 bag	03-three	C-bottom in and		Inlet/outlet: side in and side out	
	5- #5 bag	04-four	bottom out		Connection: Tri-Clamp Surface:	
	6- #6 bag	05-five	D-top in and bottom		Polished	
	X- other	06-six	out		Material: SUS304	
	size	08-eight			Selection code is: BJD101AKT304	

4.4 Hawach BJTI Ti Alloy cartridge Filter Housing

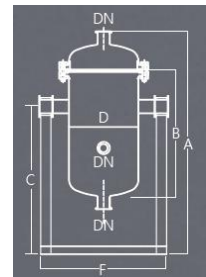
Features

- Stainless Steel 304 or 316L Filter Housing With Titanium Power Sintered Filter Cartridges Inside to Use
Electro-polished filter housing, meet the GMP requirements
- High Temperature Resistant and Wide Chemical Compatibility
Titanium filter cartridge can work under high temperature, can resist to strong acid and alkaline conditions
- Long Surviving Life
Filter could be back flushed and cleaned by chemical solvent, hot water, steam
- Easy To Install Design, Easy to Clean
Available in tri-clamp connections



Application

- Widely used for pre-filtration in food & beverage, pharmaceutical, industries, etc
- Particularly suitable for decarburization filtration of LVP/SVP in pharmaceutical industry
- Mineral water, pure water filtration after ozone sterilization
- Steam/gas filtration



Specification

Model	Titanium Filter Cartridge		Dimensions (mm)		
	Number	Length	D	B	DN (Outlet/Inlet)
BJTI310	3	10"	168	300	25
BJTI510	5	10"	200	300	25
BJTI710	7	10"	273	310	25
BJTI320	3	20"	168	550	32
BJTI520	5	20"	200	550	32
BJTI720	7	20"	273	560	32

Technical data

Designed pressure	6.0 bar(87 psi) with in 30 mins
Max. operating pressure	5.0 bar(72.5 psi)
Max. operating temperature	180 °C
Ti filter cartridge	Micron: 0.45 um-50 um, OD=60 mm

Order Information

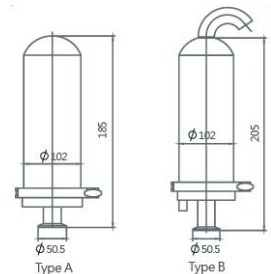
Product	Cartridge NOS.	Length	Material	Micron	Cartridge type	How to order
BJTI	03-three 05-five 07-seven	10"-10 20"-20	SUS304 SUS316L	045-0.45 um 100-1.00 um 5000-50 um XX- others	YBP-1" BSP thread HBP-1.5" BSP thread CF-226/SEAL BF-222/FLAT	Cartridge Nos.: Three, Length: 10" Material: SUS304, Cartridge Micron: 0.45um CARTRIDGE TYPE: 1" BSP Thread Selection Code is: BJTI0310304045YBP

4.5 Hawach BJT Vent Housing/Gas Filter Housing

The Hawach vent housing is designed for the pharmaceutical, food & beverage, water treatment and other industries' gas filtration, in the container, reactors, storage tanks and other equipments, to remove the impurities, bacteria, provides a clean and easy way to let filtered air into tanks as well as allowing gases to flow out. It is in line with the GMP design requirements.

Specification

Material	SUS316L, SUS304
Length	5", 10", 20", 30"
Inlet/outlet connection	Tri-Clamp or Flange



5" vent housing drawing

Surface finish	Electro polished
Air flow rate	3-36 m ³ /min
Type	Type A, Type B

Order Information

Product	Type	Cartridge NOS.	Length	Material	Cartridge type	How to order?
BJF-Vent housing	A	01-single	5"-05	SUS304	CN-226/FIN	Type A, Cartridge Nos.: Single, Length: 10" Material: SUS316, CARTRIDGE TYPE: 226/Fin Selection Code is: BJF0110316CN
	B		10"-10	SUS316L	BN-222/FIN	
			20"-20		CF-226/SEAL	
			30"-30		BF-222/FLAT	