



EN FILTER CARTRIDGE

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FILTER CARTRIDGE

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STANDARD Series



ABSOLUTE PP

FILTER CARTRIDGE



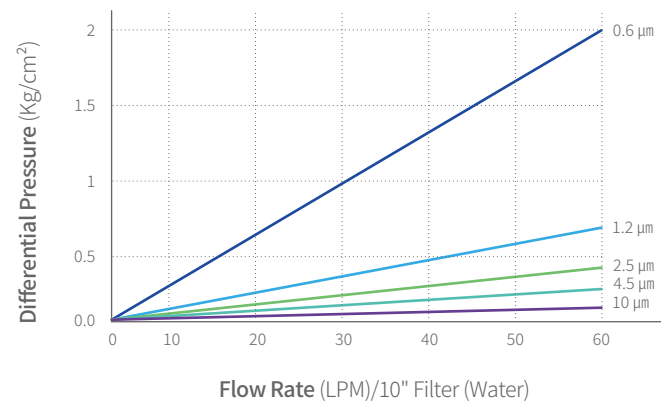
KLARING is the brand name of Clean & Science Co., Ltd. products.

Absolute PP Filter Cartridge

The Absolute PP Filter features pleated structure that maximizes filtration area, enabling high flow rates and excellent particle retention. Additionally, thermal welding ensures structural integrity and eliminates extractables while the use of 100% polypropylene provides outstanding chemical compatibility.

Specification

Material	• Filter Media	Polypropylene
	• Support / Drain	Polypropylene
	• Hardware	Polypropylene
Dimensions	• Outer Diameter	2.7" (inch)
	• Length	10", 20", 30", 40"
Removal Rating	• 0.6, 1.2, 2.5, 4.5, 10 µm	
Operating Condition	• Max ΔP	2.1 bar (30psid) / 176 °F
		5.0 bar (70psid) / 68 °F
	• Max Temp	176 °F



Features

Absolute Grade	Thermal Welding
Broad Chemical Compatibility	All Materials Meet USP Standards
Wide Range of Applications	Manufactured in a Cleanroom
FDA21 CFR	ISO 9001, ISO 14001

Applications

- **General Industry** / Process Water, Gas, Pre-RO, Etchant, Automotive Coating, Paint and others
- **Electronics Industry** / Photoresist, Chemicals, Gas, Electroplating and DI Water Pre-filtration
- **Food and Beverages Industry** / Bottled Water, Beer, Wine, Syrup, Flavor, Edible Oil and Various Processing Gases
- **Chemical and Petrochemical Industry** / Acid, Alkali, Solvent, Amine for Gas and Liquids
- **Power Generation Industry** / Feed Water, Condensation Water and Cooling Water
- **Biology and Pharmaceutical Industry** / Serum, Tissue Culture Medium, Culture Medium, Vaccine, Water-Added Medium, Process Gas, Pre-filtration of Sterilized Process and others
- **Fermentation Industry** / Liquid Culture Medium, Adding Water, Intermediate and Final Liquid Product and Pre-filtration of Air and Gas Sterilization

Ordering Information

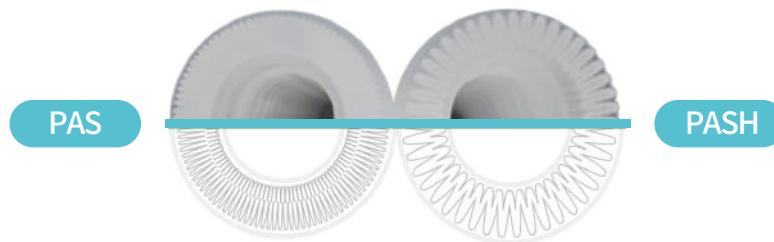
PAS							
Media	Removal Rating		Length	Code	Cage · Core · End Cap	O Ring	Option
PP	0P60	0.6 μm	1 10 "	DM 250 mm DOE	1 PP + PP	S Silicone	S STS Ring
	01P2	1.2 μm	2 20 "	DI 254 mm DOE	2 PP + Reinforced PP	E EPDM	C Flushed
	02P5	2.5 μm	3 30 "	2L 222 / Locking Tab		V Viton	
	04P5	4.5 μm	4 40 "	2F 222 / Flat		N Buna-N	
	10P0	10 μm		2T 222 / Fin		F TEV	
				6L 226 / Locking Tab			
				6F 226 / Flat			
				6T 226 / Fin			

※ Other grades besides the above Removal Ratings can also be provided

STANDARD Series

ABSOLUTE PP HIGH FLOW

FILTER CARTRIDGE



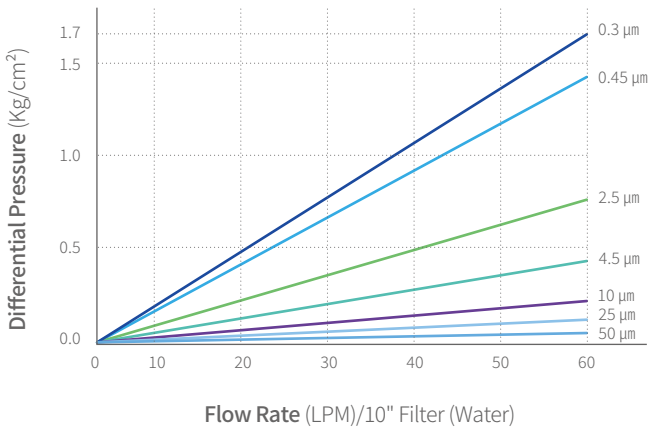
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Absolute PP High Flow Filter Cartridge

The Absolute PP High Flow Filter Cartridge is an upgraded version of the Absolute PP Filter with enhanced flow rate. Improvements to the filter media, support and drain have maximized the flow rate.

Specification

Material	<div><div></div><div>• Filter Media</div><div>• Support / Drain</div><div>• Hardware</div></div>	<div>Polypropylene</div> <div>Polypropylene</div> <div>Polypropylene</div>
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Features

Absolute Grade	Thermal Welding
Broad Chemical Compatibility	All Materials Meet USP Standards
Wide Range of Applications	Manufactured in a Cleanroom
FDA 21 CFR	ISO 9001, ISO 14001
High Flow & Low ΔP	

Applications

- **General Industry** / Process Water, Gas, Pre-RO, Etchant, Automotive Coating, Paint and others
- **Electronics Industry** / Photoresist, Chemicals, Gas, Electroplating and DI Water Pre-filtration
- **Food and Beverages Industry** / Bottled Water, Beer, Wine, Syrup, Flavor, Edible Oil and Various Processing Gases
- **Chemical and Petrochemical Industry** / Acid, Alkali, Solvent, Amine for Gas and Liquids
- **Power Generation Industry** / Feed Water, Condensation Water and Cooling Water
- **Biology and Pharmaceutical Industry** / Serum, Tissue Culture Medium, Culture Medium, Vaccine, Water-Added Medium, Process Gas Pre-filtration of Sterilized Process and others
- **Fermentation Industry** / Liquid Culture Medium, Adding Water, Intermediate, Final Liquid Product and Pre-filtration of Air and Gas Sterilization

Ordering Information

PASH						
Media	Removal Rating		Length	Code	Cage · Core · End Cap	O Ring · Option
PP	0P30	0.3 μm	1 10 "	DM 250 mm DOE	1 PP + PP	S Silicone S STS Ring
	0P45	0.45 μm	2 20 "	DI 254 mm DOE	2 PP + Reinforced PP	E EPDM C Flushed
	02P5	2.5 μm	3 30 "	2L 222 / Locking Tab		V Viton
	04P5	4.5 μm	4 40 "	2F 222 / Flat		N Buna-N
	10P0	10 μm		2T 222 / Fin		F TEV
	25P0	25 μm		6L 226 / Locking Tab		
	50P0	50 μm		6F 226 / Flat		
				6T 226 / Fin		

※ Other grades besides the above Removal Ratings can also be provided

STANDARD Series



NOMINAL PP

FILTER CARTRIDGE



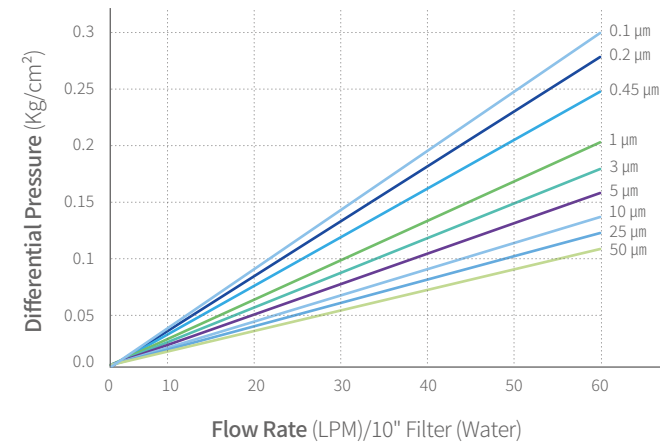
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Nominal PP Filter Cartridge

The Nominal PP Filter Cartridge features a continuous pleated structure that maximizes filtration area allowing high flow rates and excellent particle retention. Thermal welding ensures structural integrity and eliminates extractables while the 100% polypropylene construction offers outstanding chemical compatibility.

Specification

Material	<div><div></div><div>• Filter Media</div><div>• Support / Drain</div><div>• Hardware</div></div>	<div>Polypropylene</div> <div>Polypropylene</div> <div>Polypropylene</div>
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Features

Nominal Grade	Thermal Welding
Broad Chemical Compatibility	All Materials Meet USP Standards
Wide Range of Applications	Manufactured in a Cleanroom
FDA 21 CFR	ISO 9001, ISO 14001

Applications

- **General Industry** / Process Water, Gas, Pre-RO, Etchant, Automotive Coating, Paint and others
- **Electronics Industry** / Photoresist, Chemicals, Gas, Electroplating and DI Water Pre-filtration
- **Food and beverages Industry** / Bottled Water, Beer, Wine, Syrup, Flavor, Edible Oil and Various Processing Gases
- **Chemical and Petrochemical Industry** / Acid, Alkali, Solvent, Amine for Gas and Liquids
- **Power Generation Industry** / Feed Water, Condensation Water and Cooling Water
- **Biology and Pharmaceutical Industry** / Serum, Tissue Culture Medium, Culture Medium, Vaccine, Water-Added Medium, Process Gas, Pre-filtration of Sterilized Process and others
- **Fermentation Industry** / Liquid Culture Medium, Adding Water, Intermediate, Final Liquid Product and Pre-filtration of Air and Gas Sterilization

Ordering Information

PNS						
Media	Removal Rating	Length	Code	Cage • Core • End Cap	O Ring	Option
PP	0P10 0.1 µm	1 10 "	DM 250 mm DOE	1 PP + PP	S Silicone	S STS Ring
	0P20 0.2 µm	2 20 "	DI 254 mm DOE	2 PP + Reinforced PP	E EPDM	C Flushed
	0P45 0.45 µm	3 30 "	2L 222 / Locking Tab		V Viton	
	01P0 1 µm	4 40 "	2F 222 / Flat		N Buna-N	
	03P0 3 µm		2T 222 / Fin		F TEV	
	05P0 5 µm		6L 226 / Locking Tab			
	10P0 10 µm		6F 226 / Flat			
	25P0 25 µm		6T 226 / Fin			
	50P0 50 µm					

STANDARD Series

NOMINAL PP HIGH FLOW

FILTER CARTRIDGE



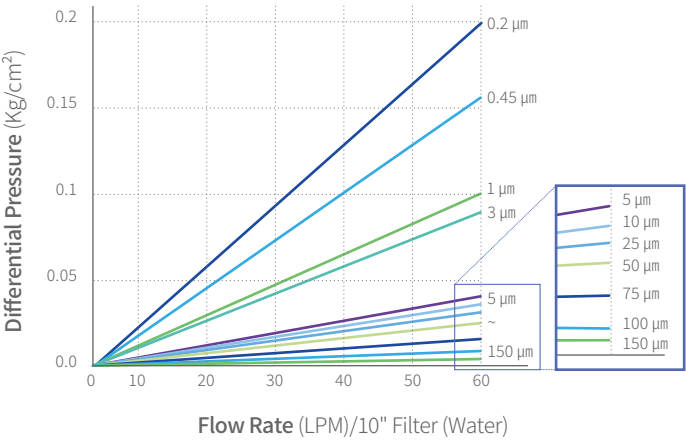
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Nominal PP High Flow Filter Cartridge

The Nominal PP High Flow Filter Cartridge is an upgraded version of the Nominal PP Filter with enhanced flow rate. By improving the filter media, support and drain, the flow rate has been significantly maximized.

Specification

Material	• Filter Media	Polypropylene
	• Support / Drain	Polypropylene
	• Hardware	Polypropylene
Dimensions	• Outer Diameter	2.7" (inch)
	• Length	10", 20", 30", 40"
Removal Rating	• 0.2, 0.45, 1, 3, 5, 10, 25, 50 μm	
Operating Condition	• Max ΔP	2.1 bar (30psid) / 176 °F
		5.0 bar (70psid) / 68 °F
	• Max Temp	176 °F



Features

Nominal Grade	Thermal Welding
Broad Chemical Compatibility	High Flow & Low ΔP
Wide Range of Applications	Manufactured in a Cleanroom
FDA 21 CFR	ISO 9001, ISO 14001

Applications

- **General Industry** / Process Water, Gas, Pre-RO, Etchant, Automotive Coating, Paint and others
- **Electronics Industry** / Photoresist, Chemicals, Gas, Electroplating and DI Water Pre-filtration
- **Food and Beverages Industry** / Bottled Water, Beer, Wine, Syrup, Flavor, Edible Oil and Various Processing Gases
- **Chemical and Petrochemical Industry** / Acid, Alkali, Solvent, Amine for Gas and Liquids
- **Power Generation Industry** / Feed Water, Condensation Water and Cooling Water
- **Biology and Pharmaceutical Industry** / Serum, Tissue Culture Medium, Culture Medium, Vaccine, Water-Added Medium, Process Gas, Pre-filtration of Sterilized Process and others
- **Fermentation Industry** / Liquid Culture Medium, Adding Water, Intermediate, Final Liquid Product and Pre-filtration of Air and Gas Sterilization

Ordering Information

PNSH								
Media	Removal Rating		Length	Code		Cage · Core · End Cap	O Ring	Option
PP	0P20	0.2 μm	1 10 "	DM	250 mm DOE	1 PP + PP	S Silicone	S STS Ring
	0P45	0.45 μm	2 20 "	DI	254 mm DOE	2 PP + Reinforced PP	E EPDM	C Flushed
	01P0	1 μm	3 30 "	2L	222 / Locking Tab		V Viton	
	03P0	3 μm	4 40 "	2F	222 / Flat		N Buna-N	
	05P0	5 μm		2T	222 / Fin		F TEV	
	10P0	10 μm		6L	226 / Locking Tab			
	25P0	25 μm		6F	226 / Flat			
	50P0	50 μm		6T	226 / Fin			
	75P0	75 μm						
	100P	100 μm						
	150P	150 μm						
	180P	180 μm						

STANDARD Series



GLASS FIBER

FILTER CARTRIDGE



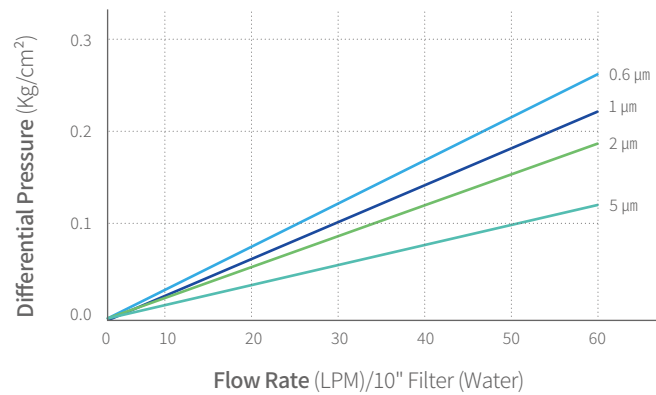
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Glass Fiber Filter Cartridge

The Glass Fiber Filter is made with low-extractable glass fiber in pleated structure to maximize filtration area ensuring high flow rate and excellent particle retention. Its thermal welding construction provides structural integrity, offering excellent chemical compatibility and making it ideal for removing gel-type contaminants.

Specification

Material	• Filter Media	Glass Fiber
	• Support / Drain	Polyester or Polypropylene
	• Hardware	Polypropylene
Dimensions	• Outer Diameter	2.7" (inch)
	• Length	10", 20", 30", 40"
Removal Rating	• 0.6, 1, 2, 5 μ m	
Operating Condition	• Max Δ P	2.1 bar (30psid) / 176 °F
		5.0 bar (70psid) / 68 °F
	• Max Temp	212 °F



Features

Absolute Media	Thermal Welding
Broad Chemical Compatibility	High Flow & Low Δ P
Wide Range of Applications	Manufactured in a Cleanroom
FDA 21 CFR	ISO 9001, ISO 14001

Applications

- **Electronics Industry** / Chemicals, Gas, Electroplating and DI Water Pre-filtration
- **Food and Beverages Industry** / Beer, Wine, Syrup, Flavor, Edible Oil and Various Processing Gases
- **Chemical and Petrochemical Industry** / Acid, Alkali, Solvent, Amine for Gas and Liquids
- **Biology and Pharmaceutical Industry** / Serum, Tissue Culture Medium, Culture Medium, Vaccine, Water-Added Medium, Process Gas, Pre-filtration of Sterilized Process and others
- **Fermentation Industry** / Liquid Culture Medium, Adding Water, Intermediate, Final Liquid Product and Pre-filtration of Air and Gas Sterilization

Ordering Information

PGS							
Media	Removal Rating		Length	Code	Cage · Core · End Cap	O Ring	Option
GF	0P60	0.6 μm	1 10 "	DM 250 mm DOE	1 PP + PP	S Silicone	S STS Ring
	01P0	1 μm	2 20 "	DI 254 mm DOE	2 PP + Reinforced PP	E EPDM	C Flushed
	02P0	2 μm	3 30 "	2L 222 / Locking Tab		V Viton	
	05P0	5 μm	4 40 "	2F 222 / Flat		N Buna-N	
				2T 222 / Fin		F TEV	
				6L 226 / Locking Tab			
				6F 226 / Flat			
				6T 226 / Fin			

STANDARD Series



HYDROPHOBIC PTFE

FILTER CARTRIDGE



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Hydrophobic PTFE Filter Cartridge

The Hydrophobic PTFE Filter Cartridge consists of a hydrophobic PTFE membrane and a polypropylene support and drain layer. It is thermal welded to eliminate extractables from solvents and its large filtration area ensures excellent flow rates, outstanding particle removal efficiency and superior chemical compatibility.

Specification

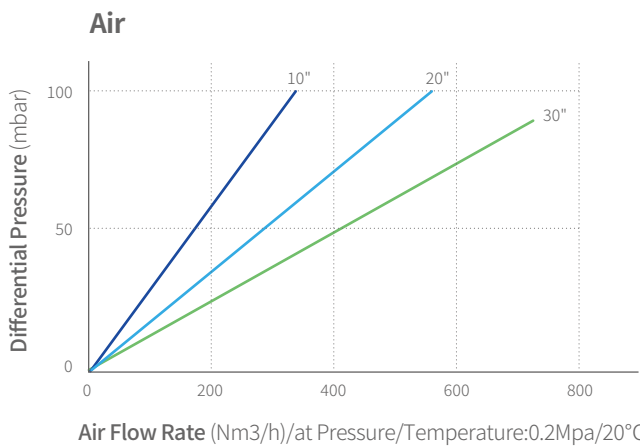
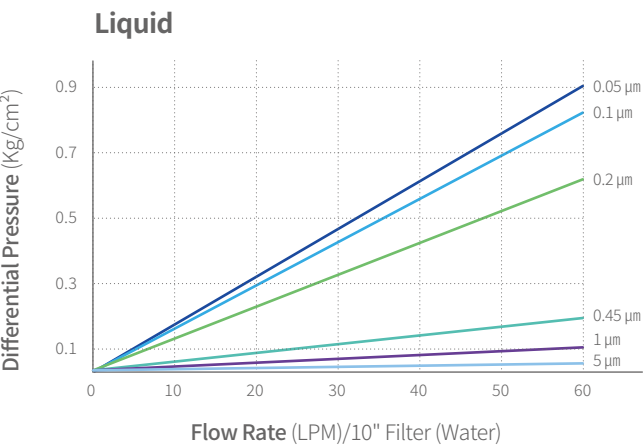
Material	• Filter Media	Hydrophobic PTFE
	• Support / Drain	Polypropylene
	• Hardware	Polypropylene
Dimensions	• Outer Diameter	2.7" (inch)
	• Length	10", 20", 30", 40"
Removal Rating	• 0.01(for gas), 0.05, 0.1, 0.2, 0.45, 1, 5 μm	
Operating Condition	• Max ΔP	4.1 bar (60psid) / 140 °F
	• Max Temp	176 °F
	• Steam Sterilization	284 °F / 30 min

Features

Absolute Grade	Thermal Welding
Suitable for Air & Gas Sterilization	100% Integrity Tested
Autoclave / Steam Sterilizable	Manufactured in a Cleanroom
FDA 21 CFR	ISO 9001, ISO 14001

Applications

- **General Industry** / Bacteria, Gas, Sterile Inlet Gas, Breathing Exhaust Filtration, Clean Air, Compressed Air and others
- **Chemical Industry** / High-Precision Filtration of Various Acids, Alkalis and Solvents



Ordering Information

MTS						
Media	Removal Rating		Length	Code		Option
Hydrophobic PTFE	0P01	0.01 μm	1 10 "	DM	250 mm DOE	1 PP + PP
	0P05	0.05 μm	2 20 "	DI	254 mm DOE	2 PP + Reinforced PP
	0P10	0.1 μm	3 30 "	2L	222 / Locking Tab	S Silicone
	0P20	0.2 μm	4 40 "	2F	222 / Flat	E EPDM
	0P45	0.45 μm		2T	222 / Fin	V Viton
	01P0	1 μm		6L	226 / Locking Tab	N Buna-N
	05P0	5 μm		6F	226 / Flat	F TEV
				6T	226 / Fin	

STANDARD Series



HYDROPHILIC PTFE

FILTER CARTRIDGE



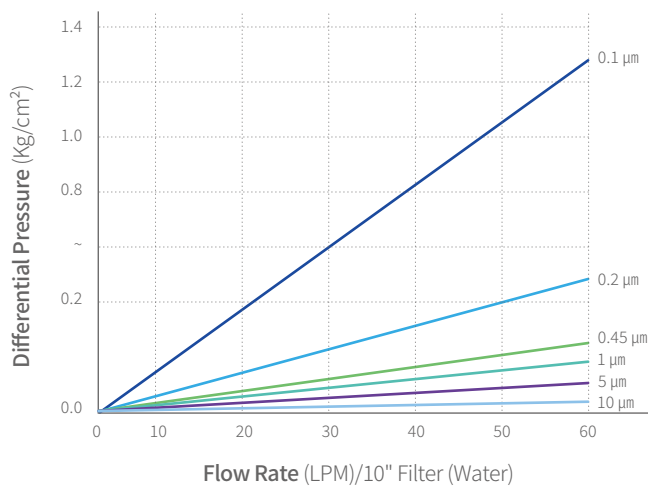
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Hydrophilic PTFE Filter Cartridge

The Hydrophilic PTFE Filter Cartridge is composed of a hydrophilic PTFE membrane and a polypropylene support and drain layer making it ideal for liquid filtration. It is thermal welded to eliminate solvent extractables and its large filtration area ensures excellent flow rates, superior particle removal efficiency and outstanding chemical compatibility.

Specification

Material	• Filter Media	Hydrophilic PTFE
	• Support / Drain	Polypropylene
	• Hardware	Polypropylene
Dimensions	• Outer Diameter	2.7" (inch)
	• Length	10", 20", 30", 40"
Removal Rating	• 0.1, 0.2, 0.45, 1, 5, 10 μm	
Operating Condition	• Max ΔP	4.1 bar (60psid) / 140 °F
	• Max Temp	176 °F



Features

Hydrophilic Material	Thermal Welding
Broad Chemical Compatibility	100% Integrity Tested
FDA 21 CFR	Manufactured in a Cleanroom
ISO 9001, ISO 14001	

Applications

- **General Industry** / High-Precision Filtration of Various Fluids
- **Electronics Industry** / Pre and Final Filtration of Various Chemicals such as Acids, Alkalis and Solvents, Photoresists, Process Cooling Water and DI Water
- **Chemical Industry** / High-Precision Filtration of Various Acids, Alkalis and Solvents

Ordering Information

MHS						
Media	Removal Rating		Length	Code	Cage · Core · End Cap	O Ring
Hydrophilic PTFE	0P10	0.1 μm	1 10 "	DM 250 mm DOE	1 PP + PP	S Silicone
	0P20	0.2 μm	2 20 "	DI 254 mm DOE	2 PP + Reinforced PP	E EPDM
	0P45	0.45 μm	3 30 "	2L 222 / Locking Tab		V Viton
	01P0	1 μm	4 40 "	2F 222 / Flat		N Buna-N
	05P0	5 μm		2T 222 / Fin		F TEV
	10P0	10 μm		6L 226 / Locking Tab		
				6F 226 / Flat		
				6T 226 / Fin		

STANDARD Series

HYDROPHILIC PES

FILTER CARTRIDGE



KLARING is the brand name of Clean & Science Co., Ltd. products.

Hydrophilic PES Filter Cartridge

The Hydrophilic PES Filter Cartridge is composed of an asymmetric polyethersulfone (PES) microporous membrane and a polypropylene support and drain layer making it ideal for liquid filtration. Manufactured through thermal welding, it contains no solvent extractables and provides excellent flow rates and superior particle removal efficiency due to its large filtration area.

Specification

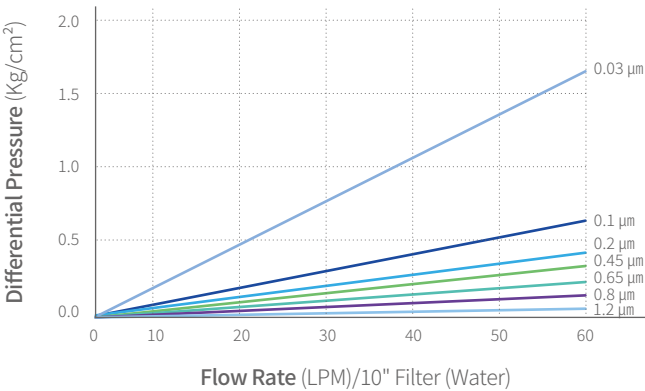
Material	<div><div></div><div>• Filter Media</div><div>• Support / Drain</div><div>• Hardware</div></div>	<div>Hydrophilic PES Membrane</div> <div>Polypropylene</div> <div>Polypropylene</div>
Dimensions	<div><div>• Outer Diameter</div><div>• Length</div></div>	<div>2.7"(inch)</div> <div>10", 20", 30", 40"</div>
Removal Rating	<div>• 0.03, 0.1, 0.2, 0.45, 0.65, 0.8, 1.2 μm</div>	
Operating Condition	<div><div>• Max ΔP</div><div>• Max Temp</div><div>• Steam Sterilization</div></div>	<div>5.0 bar (70psid)</div> <div>185 °F</div> <div>284 °F / 30 min</div>

Features

Broad Chemical Compatibility	All Materials Meet USP Standards
High Flow & Low Δ P	100% Integrity Tested
FDA 21 CFR	Manufactured in a Cleanroom
ISO 9001, ISO 14001	Absolute Rating /LRV > 10 ⁷

Applications

- General Industry** / Various Types of Process Water
- Electronics Industry** / Pre and Final Filtration of Chemicals, Process Cooling Water and DI Water
- Food and Beverages Industry** / Final Filtration of Process Water, Bottled Water, Beer, Wine and Syrup
- Pharmaceutical & Fermentation Industry** / High-Precision and Sterile Filtration of Various Fluids



Ordering Information

MGS						
Media	Removal Rating		Length	Code	Cage · Core · End Cap	O Ring
Hydrophilic PES	0P03	0.03 μ m	1 10 "	DM 250 mm DOE	1 PP + PP	S Silicone
	0P10	0.1 μ m	2 20 "	DI 254 mm DOE	2 PP + Reinforced PP	E EPDM
	0P20	0.2 μ m	3 30 "	2L 222 / Locking Tab		V Viton
	0P45	0.45 μ m	4 40 "	2F 222 / Flat		N Buna-N
	0P65	0.65 μ m		2T 222 / Fin		F TEV
	0P80	0.8 μ m		6L 226 / Locking Tab		
	01P2	1.2 μ m		6F 226 / Flat		
				6T 226 / Fin		

STANDARD Series 

NYLON 66

FILTER CARTRIDGE



KLARING is the brand name of Clean & Science Co., Ltd. products.

Nylon 66 Filter Cartridge

The Nylon 66 Filter Cartridge is composed of a Nylon 66 membrane and a polyester support and drain layer designed specifically for liquid filtration. It is thermal welded to eliminate solvent extractables and its large filtration area ensures excellent flow rates, superior particle removal efficiency and broad chemical compatibility.

Specification

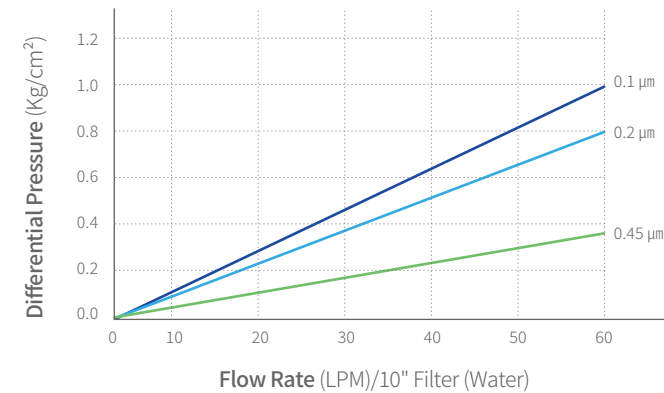
Material	• Filter Media	Hydrophilic Nylon Membrane
	• Support / Drain	Polyester / Polypropylene
	• Hardware	Polypropylene
Dimensions	• Outer Diameter	2.7" (inch)
	• Length	10", 20", 30", 40"
Removal Rating	• 0.1, 0.2, 0.45 µm	
Operating Condition	• Max ΔP	2.1 bar (60psid) / 176 °F
		5.0 bar (70psid) / 68 °F
	• Max Temp	176 °F

Features

Hydrophilic Material	Thermal Welding
Broad Chemical Compatibility	100% Integrity Tested
FDA 21 CFR	Manufactured in a Cleanroom
ISO 9001, ISO 14001	

Applications

- **General Industry** / High-Precision Filtration of Various Fluids
- **Electronics Industry** / Pre and Final Filtrations of Chemicals, Photoresists, Process Cooling Water and DI Water
- **Chemical Industry** / High-Precision and Filtration of Various Solvents



Ordering Information

MNS							
Media	Removal Rating		Length	Code	Cage · Core · End Cap	O Ring	Option
Hydrophilic Nylon	0P10	0.1 μm	1 10 "	DM 250 mm DOE	1 PP + PP	S Silicone	S STS Ring
	0P20	0.2 μm	2 20 "	DI 254 mm DOE	2 PP + Reinforced PP	E EPDM	C Flushed
	0P45	0.45 μm	3 30 "	2L 222 / Locking Tab		V Viton	
			4 40 "	2F 222 / Flat		N Buna-N	
				2T 222 / Fin		F TEV	
				6L 226 / Locking Tab			
				6F 226 / Flat			
				6T 226 / Fin			

HIGH FLOW Series



HIGH FLOW PP

FILTER CARTRIDGE



KLARING is the brand name of Clean & Science Co., Ltd. products.

High Flow PP Filter Cartridge

The High Flow PP Filter Cartridge is designed for flat panel display application. Its large filtration area increases particle holding capacity and extends service life, making it ideal for high flow processing. Manufactured through thermal welding, it ensures structural integrity with low extractables and its 100% polypropylene hardware offers excellent chemical compatibility.

Specification

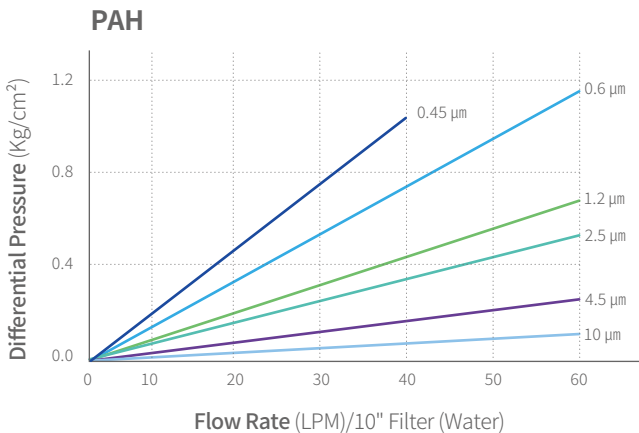
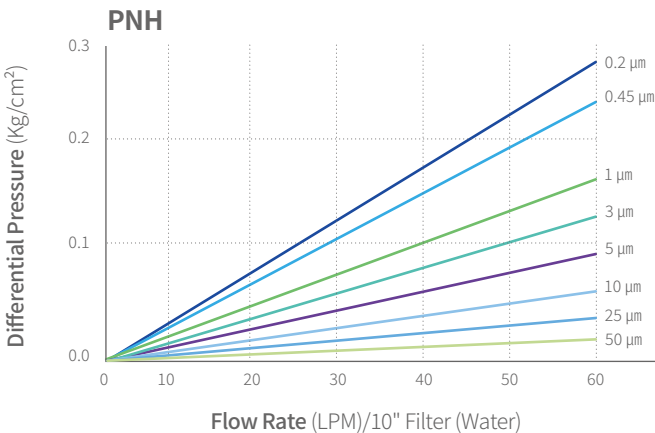
Material	• Filter Media	Polypropylene
	• Support / Drain	Polypropylene
	• Hardware	Polypropylene
Dimensions	• Outer Diameter	3" (inch)
	• Length	9.45" (inch)
	• O-Ring	226
Removal Rating	• PNH	0.2, 0.45, 1, 3, 5, 10, 25, 50 μm
	• PAH	0.6, 1.2, 2.5, 4.5, 10 μm
Operating Condition	• Max ΔP	5.0 bar (70psid) / 68 °F
		2.5 bar (36psid) / 176 °F
	• Max Temp	176 °F

Features

Suitable for High Flow ($\geq 100\text{L/min}$)	Manufactured in a Cleanroom
Broad Chemical Compatibility	ISO 9001, ISO 14001
FDA21 CFR	

Applications

- High-Flow System
- Flat Panel Display Process
- Pre RO Filtration
- Food & Beverage



Ordering Information

PNH PAH										
Media	Removal Rating				Length	Code	Cage · Core · End Cap	O Ring	Option	
PP	PNH			PAH *	1 10 "	6F 226 / Flat	1 PP + PP	S Silicone E EPDM V Viton F TEV	C Flushed	
	0P20	0.2 μm	0P45	0.45 μm						
	0P45	0.45 μm	0P60	0.6 μm						
	01P0	1 μm	01P2	1.2 μm						
	03P0	3 μm	02P5	2.5 μm						
	05P0	5 μm	04P5	4.5 μm						
	10P0	10 μm	10P0	10 μm						
	25P0	25 μm								
	50P0	50 μm								

※ For PAH *, other grades besides the above Removal Ratings can also be provided.

HIGH FLOW Series



HIGH FLOW PTFE

FILTER CARTRIDGE



KLARING is the brand name of Clean & Science Co., Ltd. products.

High Flow PTFE Filter Cartridge

The High Flow PTFE Filter Cartridge is designed for flat panel display application. With a large filtration area it offers increased particle holding capacity and extended service life, making it ideal for high flow processing. Manufactured using thermal welding, it ensures structural integrity with low extractables and its 100% polypropylene hardware provides excellent chemical compatibility.

Specification

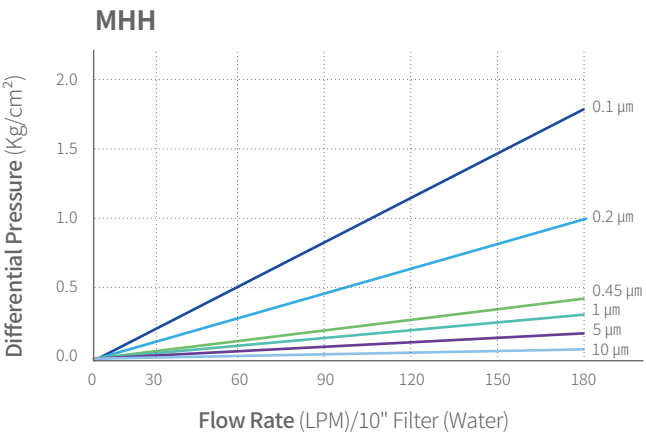
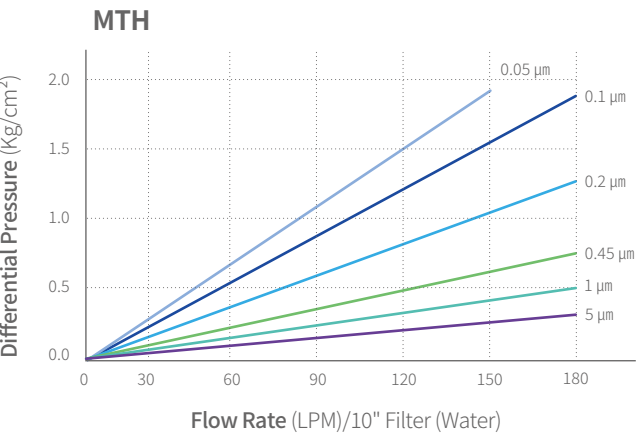
Material	• Filter Media	MTH : Hydrophobic PTFE MHH : Hydrophilic PTFE
	• Support / Drain	Polypropylene
	• Hardware	Polypropylene
Dimensions	• Outer Diameter	3" (inch)
	• Length	9.45" (inch)
	• O-Ring	226
Removal Rating	• MTH	0.05, 0.1, 0.2, 0.45, 1, 5 µm
	• MHH	0.1, 0.2, 0.45, 1, 5, 10 µm
Operating Condition	• Max ΔP	5.0 bar (70psid) / 68 °F 2.5 bar (36psid) / 176 °F
	• Max Temp	176 °F

Features

Broad Chemical Compatibility	Manufactured in a Cleanroom
FDA 21 CFR	100% Integrity Tested
ISO 9001, ISO 14001	

Applications

- High-Flow System
- Flat Panel Display Process



Ordering Information

MTH MHH									
Media	Removal Rating				Length	Code	Cage · Core · End Cap	O Ring	Option
Hydrophobic PTFE	MTH		MHH		1 10 "	6F 226 / Flat	1 PP + PP	S Silicone E EPDM V Viton F TEV	C Flushed
	OP05	0.05 µm	OP10	0.1 µm					
	OP10	0.1 µm	OP20	0.2 µm					
Hydrophilic PTFE	OP20	0.2 µm	OP45	0.45 µm					
	OP45	0.45 µm	01P0	1 µm					
	01P0	1 µm	05P0	5 µm					
	05P0	5 µm	10P0	10 µm					

HIGH FLOW Series



HIGH FLOW PES

FILTER CARTRIDGE



KLARING is the brand name of Clean & Science Co., Ltd. products.

High Flow PES Filter Cartridge

The High Flow PES Filter Cartridge is designed for flat panel display application. Its large filtration area increases particle holding capacity and extends service life, making it ideal for high flow processing. Manufactured using thermal welding, it provides structural integrity with low extractables and its 100% polypropylene hardware ensures excellent chemical compatibility.

Specification

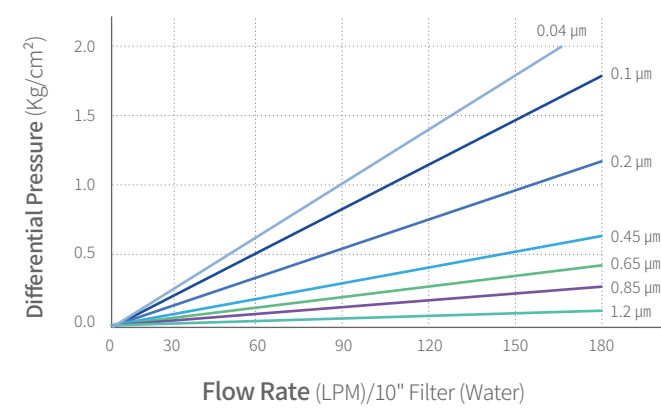
Material	• Filter Media	Hydrophilic PES Membrane
	• Support / Drain	Polypropylene
	• Hardware	Polypropylene
Dimensions	• Outer Diameter	3" (inch)
	• Length	9.45" (inch)
	• O-Ring	226
Removal Rating	• 0.04, 0.1, 0.2, 0.45, 0.65, 0.85, 1.2 μm	
Operating Condition	• Max ΔP	5.0 bar (70psid) / 68 °F
		2.5 bar (36psid) / 176 °F
	• Max Temp	185 °F

Features

Suitable for High Flow (≥100L/min)	Manufactured in a Cleanroom
Broad Chemical Compatibility	100% Integrity Tested
FDA21 CFR	ISO 9001, ISO 14001

Applications

- High-Flow System
- Flat Panel Display Process



Ordering Information

MGH							
Media	Removal Rating		Length	Code	Cage · Core · End Cap	O Ring	Option
Hydrophilic PES	0P04	0.04 μm	1 10 "	6F 226 / Flat	1 PP + PP	S Silicone	C Flushed
	0P10	0.1 μm				E EPDM	
	0P20	0.2 μm				V Viton	
	0P45	0.45 μm				F TEV	
	0P65	0.65 μm					
	0P85	0.85 μm					
	1P20	1.2 μm					

HIGH FLOW Series



HIGH FLOW NYLON 66

FILTER CARTRIDGE



KLARING is the brand name of Clean & Science Co., Ltd. products.

High Flow Nylon 66 Filter Cartridge

The High Flow Nylon 66 Filter Cartridge is designed for flat panel display application. Its large filtration area increases particle holding capacity and service life, making it ideal for high flow processing. Manufactured using thermal welding it ensures structural integrity with low extractables and its 100% polypropylene hardware provides excellent chemical compatibility.

Specification

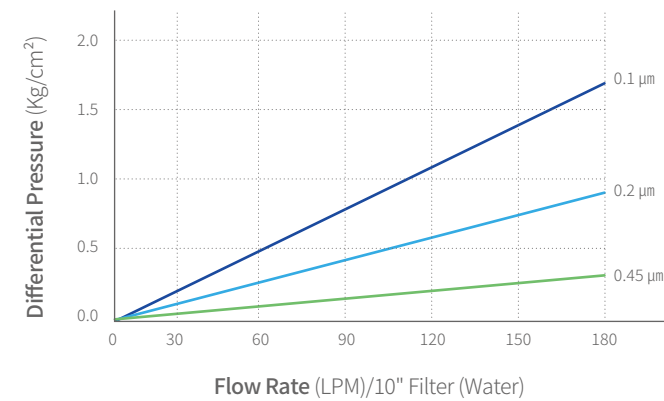
Material	<div><div></div><div>• Filter Media</div><div>Hydrophilic Nylon Membrane</div><div>• Support / Drain</div><div>Polypropylene, Polyester</div><div>• Hardware</div><div>Polypropylene</div></div>
Dimensions	<div><div></div><div>• Outer Diameter</div><div>3" (inch)</div><div>• Length</div><div>240 mm</div><div>• O-Ring</div><div>226</div></div>
Removal Rating	<div><div></div><div>• 0.1, 0.2, 0.45 μm</div></div>
Operating Condition	<div><div></div><div>• Max ΔP</div><div>5.0 bar (70psid) / 77 °F</div><div>2.1 bar (30psid) / 176 °F</div><div>• Max Temp</div><div>176 °F</div></div>

Features

Absolute	Thermal Welding
100% Integrity Tested	Manufactured in a Cleanroom
FDA 21 CFR	ISO 9001, ISO 14001

Applications

- High-Flow Systems
- Semiconductor, Water Treatment and Food & Beverage Industries
- Flat Panel Display Wet Process



Ordering Information

MNH						
Media	Removal Rating	Length	Code	Cage · Core · End Cap	O Ring	Option
Nylon 66	OP10	0.1 μm	1 10"	6F 226 / Flat	1 PP + PP	S Silicone
	OP20	0.2 μm				E EPDM
	OP45	0.45 μm				V Viton
						F TEV
						C Flushed

ULTRA FLOW Series



ULTRA FLOW PP

FILTER CARTRIDGE



KLARING is the brand name of Clean & Science Co., Ltd. products.

Ultra Flow PP Filter Cartridge

The Ultra Flow PP Filter Cartridge is designed for flat panel display application. With a large filtration area, it offers increased particle holding capacity and extended service life, making it ideal for high flow processing. It is thermal welded for structural integrity with low extractables and its 100% polypropylene hardware provides excellent chemical compatibility.

Specification

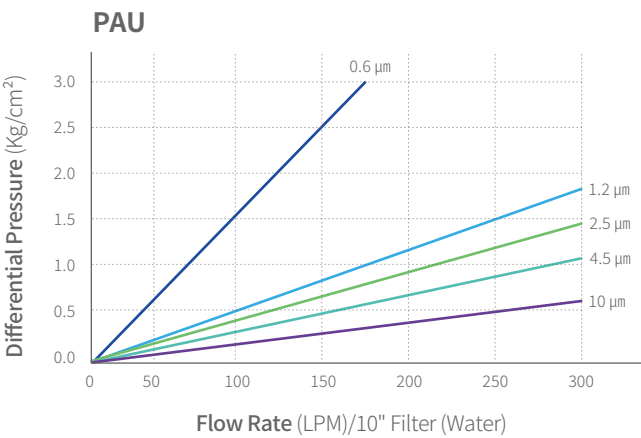
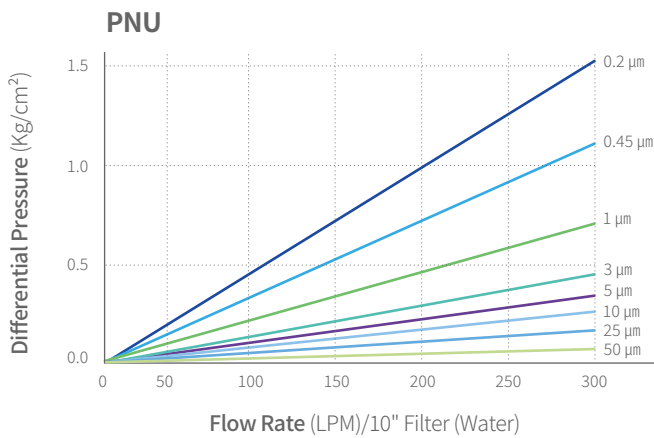
Material	<div><div>• Filter Media</div><div>• Support / Drain</div><div>• Hardware</div></div>	<div>Polypropylene</div> <div>Polypropylene</div> <div>Polypropylene</div>
Dimensions	<div>• Outer Diameter</div> <div>• Length</div> <div>• O-Ring</div>	<div>5" (inch)</div> <div>272 mm</div> <div>334</div>
Removal Rating	<div>• PNU</div> <div>• PAU</div>	<div>0.2, 0.45, 1, 3, 5, 10, 25, 50 μm</div> <div>0.6, 1.2, 2.5, 4.5, 10 μm</div>
Operating Condition	<div>• Max ΔP</div> <div>• Max Temp</div>	<div>5.0 bar (70psid) / 68 °F</div> <div>2.5 bar (36psid) / 176 °F</div> <div>176 °F</div>

Features

Broad Chemical Compatibility	Thermal Welding
FDA 21 CFR	Manufactured in a Cleanroom
Suitable for High Flow (≥200L/min)	ISO 9001, ISO 14001

Applications

- High-Flow System
- Flat Panel Display Process



Ordering Information

PNU PAU						
Media	Removal Rating		Length	Code	Cage · Core · End Cap	O Ring Option
PP	PNU	PAU *	1 10 "	4F 334 / Flat	1 PP + PP	E EPDM F TEV C Flushed
	0P20 0.2 μm	0P60 0.6 μm				
	0P45 0.45 μm	01P2 1.2 μm				
	01P0 1 μm	02P5 2.5 μm				
	03P0 3 μm	04P5 4.5 μm				
	05P0 5 μm	10P0 10 μm				
	10P0 10 μm					
	25P0 25 μm					
	50P0 50 μm					

※ For PAU *, other grades besides the above Removal Ratings can also be provided.

ULTRA FLOW Series



ULTRA FLOW PTFE

FILTER CARTRIDGE



KLARING is the brand name of Clean & Science Co., Ltd. products.

Ultra Flow PTFE Filter Cartridge

The Ultra Flow PTFE Filter Cartridge is designed for flat panel display application. Its large filtration area enhances particle holding capacity and extends service life, making it ideal for high flow processing. Manufactured using thermal welding, it ensures structural integrity with low extractables and its 100% polypropylene hardware provides excellent chemical compatibility.

Specification

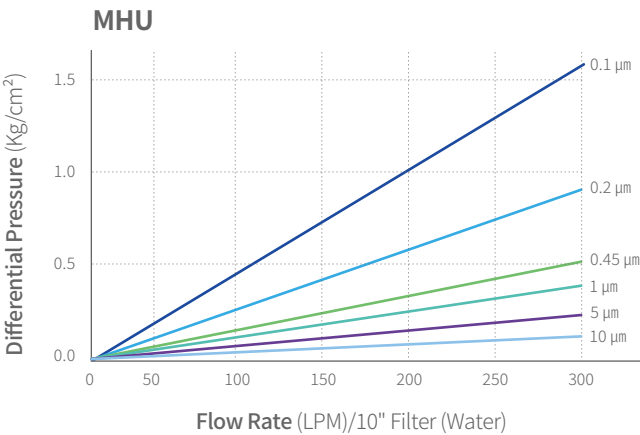
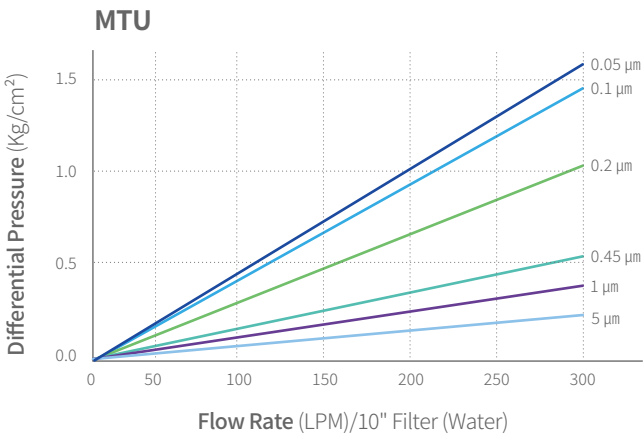
Material	• Filter Media	MTU - Hydrophobic PTFE MHU - Hydrophilic PTFE
	• Support / Drain	Polypropylene
	• Hardware	Polypropylene
Dimensions	• Outer Diameter	5" (inch)
	• Length	272 mm
	• O-Ring	334
Removal Rating	• MTU	0.05, 0.1, 0.2, 0.45, 1, 5 µm
	• MHU	0.1, 0.2, 0.45, 1, 5, 10 µm
Operating Condition	• Max ΔP	5.0 bar (70psid) / 68 °F 2.5 bar (36psid) / 176 °F
	• Max Temp	176 °F

Features

Broad Chemical Compatibility	Thermal Welding
Wide Range of Applications	100% Integrity Tested
FDA 21 CFR	Manufactured in a Cleanroom
Extended Service Life	ISO 9001, ISO 14001

Applications

- High-Flow System
- Flat Panel Display Process



Ordering Information

MTU MHU										
Media	Removal Rating				Length	Code	Cage · Core · End Cap	O Ring	Option	
Hydrophobic PTFE	MTU		MHU		1 10 "	4F 334 / Flat	1 PP + PP	E EPDM F TEV	C Flushed	
	0P05	0.05 μm	0P10	0.1 μm						
	0P10	0.1 μm	0P20	0.2 μm						
Hydrophilic PTFE	0P20	0.2 μm	0P45	0.45 μm	1 10 "	4F 334 / Flat	1 PP + PP	E EPDM F TEV	C Flushed	
	0P45	0.45 μm	01P0	1 μm						
	01P0	1 μm	05P0	5 μm						
	05P0	5 μm	10P0	10 μm						

ULTRA FLOW Series



ULTRA FLOW PES

FILTER CARTRIDGE



KLARING is the brand name of Clean & Science Co., Ltd. products.

Ultra Flow PES Filter Cartridge

The Ultra Flow PES Filter Cartridge is designed for flat panel display application. Its large filtration area increases particle holding capacity and service life, making it ideal for high flow processing. Manufactured using thermal welding, it ensures structural integrity with low extractables and its 100% polypropylene hardware offers excellent chemical compatibility.

Specification

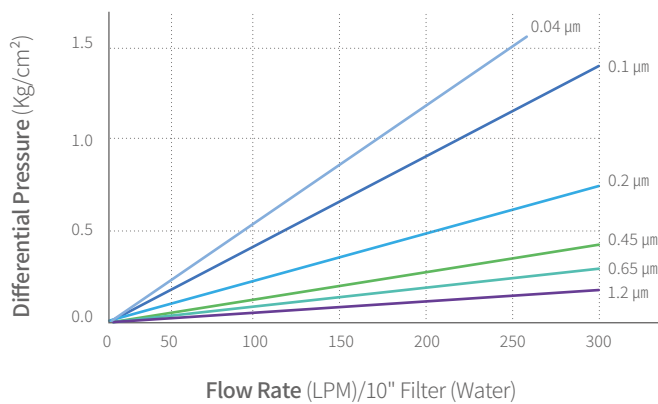
Material	<div><ul style="list-style-type: none">Filter MediaSupport / DrainHardware</div>	<div>Hydrophilic PES Membrane</div> <div>Polypropylene</div> <div>Polypropylene</div>
Dimensions	<div><ul style="list-style-type: none">Outer DiameterLengthO-Ring</div>	<div>5" (inch)</div> <div>272 mm</div> <div>334</div>
Removal Rating	<div><ul style="list-style-type: none">0.04, 0.1, 0.2, 0.45, 0.65, 1.2 μm</div>	
Operating Condition	<div><ul style="list-style-type: none">Max ΔPMax Temp</div>	<div>5.0 bar (70psid) / 68 °F</div> <div>2.5 bar (36psid) / 176 °F</div> <div>176 °F</div>

Features

Broad Chemical Compatibility	Thermal Welding
Wide Range of Applications	100% Integrity Tested
Suitable for High Flow (≥200L/min)	Manufactured in a Cleanroom
FDA 21 CFR	ISO 9001, ISO 14001

Applications

- High-Flow System
- Flat Panel Display Process



Ordering Information

MGU						
Media	Removal Rating	Length	Code	Cage · Core · End Cap	O Ring	Option
Hydrophilic PES	0P04 0.04 μm	1 10 "	4F 334 / Flat	1 PP + PP	E EPDM F TEV	C Flushed
	0P10 0.1 μm					
	0P20 0.2 μm					
	0P45 0.45 μm					
	0P65 0.65 μm					
	01P2 1.2 μm					

SUPER JUMBO Series



JSF SUPER JUMBO

FILTER CARTRIDGE



KLARING is the brand name of Clean & Science Co., Ltd. products.

JSF Super Jumbo Filter Cartridge

The JSF Filter Cartridge is a 155mm pleated filter made of polypropylene (PP), offering excellent chemical compatibility and a large filtration area that maximizes both flow rate and dirt holding capacity. Manufactured through thermal welding, it is free from solvent extractables and its broad surface allows for compact installation, reduced operating costs and easy maintenance.

Specification

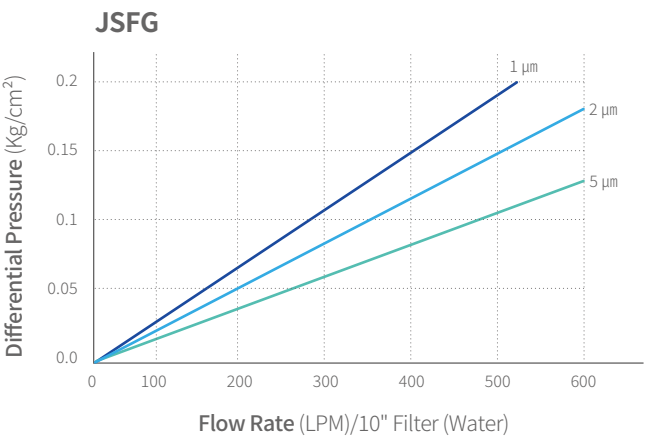
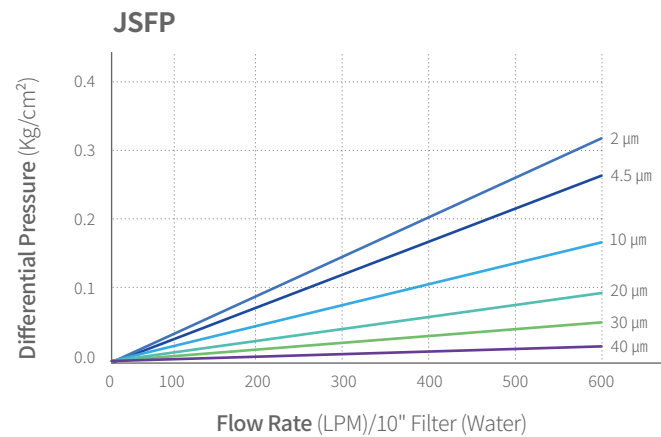
Material	• Filter Media	JSFP : Polypropylene JSFG : Glass Fiber
	• Support / Drain	JSFP : Polypropylene JSFG : Polyester
	• Hardware	Polypropylene
Dimensions	• Outer Diameter	6" (inch)
	• Length	20", 40", 60" mm
Removal Rating	• JSFP	2, 4.5, 10, 20, 30, 40 µm
	• JSFG	1, 2, 5 µm
Operating Condition	• Max ΔP	5.0 bar (70psid) / 68 °F 2.5 bar (36psid) / 176 °F
	• Max Temp	176 °F

Features

Thermal Welding	Reduced Operating Cost & Ease of Use
FDA 21 CFR	In → Out Flow Configuration
ISO 9001, ISO 14001	Manufactured in a Cleanroom
High Flow Capacity (≥80m³/h per 40" Cartridge)	

Applications

- **General Industry** / Pre RO, Process Fluids and Cooling Water
- **Electronics Industry** / Pre Filtration of DI Water
- **Chemical Industry** / Petrochemical Processes, Acid, Alkali and Solvent, Quenching Water, Saline and other Chemicals, Power Generation Feed Water, Condensation Water and Cooling Water



Ordering Information

JSFP JSFG							
Media	Removal Rating		Length	End Cap	Cage	O Ring	Option
PP	JSFP *	JSFG					
	02P0 2 µm	01P0 1 µm	2 20 "	5F Cap / Flat	1 PP Cage	S Silicone	U U-Cup
	04P5 4.5 µm	02P0 2 µm	4 40 "		2 PP Mesh	E EPDM	
GF	10P0 10 µm	05P0 5 µm	6 60 "			F TEV	
	20P0 20 µm						
	30P0 30 µm						
	40P0 40 µm						

※ For JSFP *, other grades besides the above Removal Ratings can also be provided.

SUPER JUMBO Series



JST SUPER JUMBO

FILTER CARTRIDGE



KLARING is the brand name of Clean & Science Co., Ltd. products.

JST Super Jumbo Filter Cartridge

The JST Filter Cartridge is a 6.5" pleated filter made of polypropylene (PP), featuring excellent chemical compatibility and a large filtration area to maximize flow rate and dirt holding capacity. It is thermally welded to eliminate solvent extractables and its wide filtration surface allows for compact installation, reduced operating costs and easy maintenance.

Specification

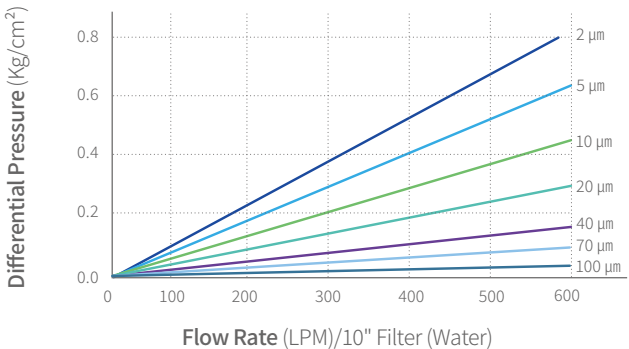
Material	• Filter Media	Polypropylene
	• Support / Drain	Polypropylene
	• Hardware	Polypropylene
Dimensions	• Outer Diameter	165 mm
	• Length	40"
Removal Rating	• 2, 5, 10, 20, 40, 70, 100 µm	
Operating Condition	• Max ΔP	3.4 bar (50psid) / 77 °F
	• Max Temp	176 °F

Features

Thermal Welding	Reduced Operating Cost & Ease of Use
FDA21 CFR	Manufactured in a Cleanroom
ISO 9001, ISO 14001	High Flow Capacity (≥80m³/h per 40" Cartridge)

Applications

- **General Industry** / Pre RO, Process Water, Process Fluids and Cooling Water
- **Electronics Industry** / Pre Filtration of DI Water
- **Chemical Industry** / Petrochemical Processes, Acid, Alkali and Solvent, Quenching Water, Saline and other Chemicals, Power Generation Feed Water, Condensation Water and Cooling Water



Ordering Information

JST						
Media	Removal Rating		Length	Code	Cage · Core · End Cap	O Ring
PP	02P0	2 μm	4 40 "	6F 226 / Flat	1 PP + PP	S Silicone
	05P0	5 μm		3F 338 / Flat		E EPDM
	10P0	10 μm				
	20P0	20 μm				
	40P0	40 μm				
	70P0	70 μm				
	100P	100 μm				

※ Other grades besides the above Removal Ratings can also be provided.

DEPTH Series



MELT BLOWN DEPTH

FILTER CARTRIDGE



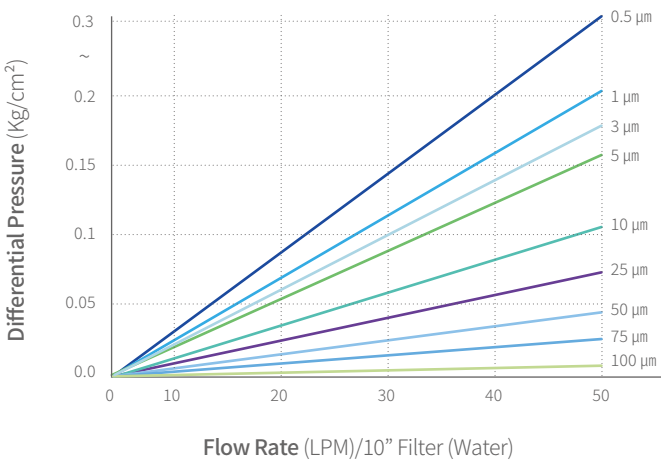
KLARING is the brand name of Clean & Science Co., Ltd. products.

Melt Blown Depth Filter Cartridge

The PP Melt Blown Filter is made from pure 100% polypropylene without the use of any organic solvents. Its depth structure is designed for pre-filtration on the upstream side and final filtration on the downstream side, ensuring excellent service life and particle retention. Broad chemical compatibility of polypropylene, it is suitable for a wide range of applications.

Specification

Material	• Polypropylene	
Dimensions	• Inner Diameter	28, 30 mm
	• Outer Diameter	62 mm
	• Length	10", 20", 30", 40", 50"
Removal Rating	• 0.5, 1, 3, 5, 10, 25, 50, 75, 100 µm	
Operating Condition	• Max ΔP	2.1 bar (30psid) / 140 °F 4.2 bar (60psid) / 86 °F
	• Max Temp	176 °F



Features

Nominal Grade	100% Additive-Free Polypropylene
ISO 9001, ISO 14001	All Materials Meet USP Standards
FDA 21 CFR	Broad Chemical Compatibility
Depth Structure for High Flow & High Particle Holding Capacity	

Applications

- **General Industry** / Pre RO, Process Water or Fluids and others
- **Electronics Industry** / Chemicals and DI Water Pre-filtration
- **Food and Beverage Industry** / Bottled Water, Beer and Syrup
- **Chemical and Petrochemical Industry** / Acids, Alkalis, Solvents and others
- **Power Generation** / Feed Water, Condensation Water and Cooling Water
- **Biology and Pharmaceutical Industry** / Pre RO

Ordering Information

DMNP							
Media		Removal Rating		Length		Inner Diameter	
PP	DMNP	0P50	0.5 µm	1	250 mm	A	30 mm
		01P0	1 µm	2	500 mm	B	28 mm
		03P0	3 µm	3	750 mm		
		05P0	5 µm	4	1000 mm		
	DMN	10P0	10 µm				
		25P0	25 µm				
		50P0	50 µm				
		75P0	75 µm				
		100P	100 µm				

DEPTH Series



STRING WOUND DEPTH

FILTER CARTRIDGE



KLARING is the brand name of Clean & Science Co., Ltd. products.

String Wound Depth Filter Cartridge

The String Wound Filter Cartridge is a traditional depth-type wound filter that fully utilizes the volume of the filter area. It offers excellent service life and particle retention, making it suitable for various applications including high-viscosity liquids and use as a pre-filter.

Specification

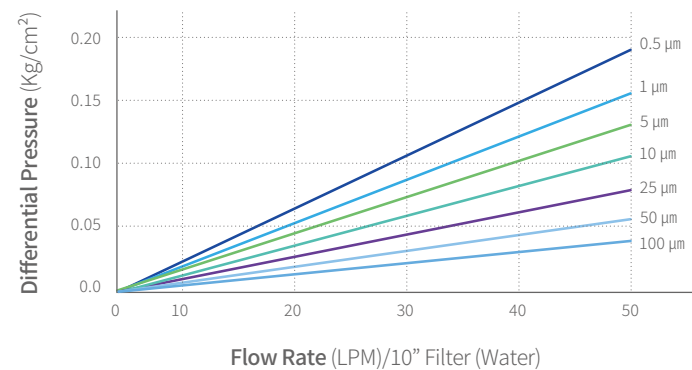
Material	• Filter Media	PP, Non-forming PP, Natural Cotton, Blanched Cotton, Glass Fiber
	• Core	PP, Reinforced PP STS 304, STS 316 L
Dimensions	• Inner Diameter	28, 30 mm
	• Outer Diameter	62 mm
	• Length	10", 20", 30", 40"
Removal Rating	• 0.5 ~ 100 μm	
Operating Condition	• Max ΔP	2.1 bar (30psid) / 140 °F 4.2 bar (60psid) / 86 °F
	• Max Temp	PP Core : 176 °F STS Core : 296.6 °F

Features

Low Pressure Drop	Broad Chemical Compatibility
ISO 9001, ISO 14001	Suitable for High-Viscosity Liquid
Excellent Flow Rate & Particle Holding Capacity	

Applications

- **General Industry** / Pre RO, Process Water, Process Fluids and Cooling Water
- **Electronics Industry** / Pre-Filtration of DI Water
- **Chemical Industry** / Petrochemical Processes, Acids, Alkalis and Solvents, Quenching Water, Saline and other Chemicals, Power Generation Feed Water, Condensation Water and Cooling Water



Ordering Information

DWN				
Media	Removal Rating		Length	
String Wound	0P50	0.5 μm	1	250 mm
	01P0	1 μm	2	500 mm
	05P0	5 μm	3	750 mm
	10P0	10 μm	4	1000 mm
	25P0	25 μm		
	50P0	50 μm		
	100P	100 μm		
			Fiber	
			Core	

CAPSULE Series

CAPSULE FILTER



KLARING is the brand name of Clean & Science Co., Ltd. products.

Capsule Filter

The Capsule Filter features an integrated structure and is optimized for small-batch filtration and laboratory testing.

Specification

Material	• Filter Media	PNC: Polypropylene Nominal Grade	
		PAC: Polypropylene Absolute Grade	
		MGC: PES Membrane	
		MTC: PTFE Membrane	
	• Support / Drain	Polypropylene	
	• Hardware	Polypropylene	
Dimensions	• Fitting	Inlet / Outlet	1/4 " NPT
		Vent	3/8 " NPT
	• Capsule Length	5.4 " (138 mm)	
	• Capsule Diameter	2.8 " (72 mm)	
Removal Rating	• PNC: 0.2, 0.45, 1, 3, 5, 10 μm		
	• PAC: 0.45, 0.6, 1.2, 2.5, 4.5, 10 μm		
	• MGC: 0.1, 0.45, 0.65, 0.85, 1.2 μm		
	• MTC: 0.05, 0.1, 0.2, 0.45, 1, 5 μm		
Operating Condition	• Max ΔP	2.1 bar (30psid) / 176 °F / PP	
		5.0 bar (70psid) / 68 °F / PP	
	• Max Temp	176 °F / PP	

Features

Broad Chemical Compatibility	Thermal Welding
Manufactured in a Cleanroom	Suitable for Laboratory Use
Various Filter Media Options Available	ISO 9001, ISO 14001

Applications

- General Industry
- Electronics Industry
- Food and Beverage Industry
- Chemical and Petrochemical Industry
- Biology and Pharmaceutical Industry
- Fermentation Industry
- Laboratory

Ordering Information

**C			
Media	Removal Rating		Protect
PP : PNC, PAC PES : MGC PTFE : MTC	0P05	0.05 μm	5 5 " 1 PP + PP
	0P10	0.1 μm	
	0P20	0.2 μm	
	0P45	0.45 μm	
	01P0	1 μm	
	05P0	5 μm	
	10P0	10 μm	
	25P0	25 μm	
	50P0	50 μm	

CAPSULE Series

Q-CHANGE



KLARING is the brand name of Clean & Science Co., Ltd. products.

KLARING CAPSULE Series

Q-Change Capsule Filter

The Q-Change Capsule Filter is a Multi layer pleated filter ideal for high-viscosity liquid, solids and various plating. It overcomes the inconvenience of traditional filter replacement by allowing fast and easy filter changes.

Specification

Material	<div><div>• Filter Media</div><div>• Support / Drain</div><div>• Hardware</div></div>	<div>Polypropylene / Glass</div> <div>Polypropylene</div> <div>Polypropylene</div>
Dimensions	<div><div>• In / Out Size</div><div>• Vent Size</div><div>• Capsule Length</div><div>• Outer Diameter</div></div>	<div>Ø 0.90 " (23 mm)</div> <div>Ø 0.95 " (24.3 mm)</div> <div>11.6 " (295 mm) (A Type) 13.1 " (335 mm) (B Type)</div> <div>2.9 " (76 mm)</div>
Removal Rating	<div>• 0.5, 1, 3, 5, 8, 10 µm</div>	
Operating Condition	<div><div>• Max ΔP</div><div>• Max Temp</div></div>	<div>4.0 bar</div> <div>176 °F</div>

Features

Suitable for Pilot or Lab Testing	Thermal Welding
Broad Chemical Compatibility	Manufactured in a Cleanroom
Various Filter Media Options	ISO 9001, ISO 14001

Applications

- Filtration of MLCC, CMP and Slurry
- Filtration of Plating Solutions
- Filtration of Paint, Ink and Paste
- Filtration of Various Solvents

Ordering Information

QCP QCG					
Media	Removal Rating		Length	O-Ring	Vent
PP	0P50	0.5 μm	1 10 "	E EPDM	A Vent X
	01P0	1 μm		S Silicone	
GF	03P0	3 μm			
	05P0	5 μm			
	08P0	8 μm			
	10P0	10 μm			

CAPSULE Series



ION EXCHANGE



KLARING is the brand name of Clean & Science Co., Ltd. products.

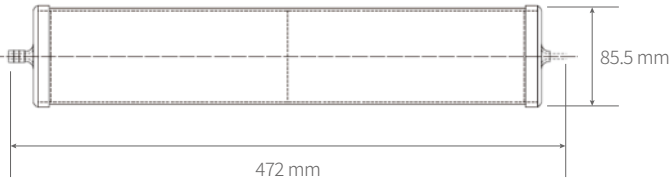
KLARING CAPSULE Series

Ion Exchange Capsule Filter

The Ion Exchange Capsule Filter is used in mixed-bed deionization processes. It features color-dyed anion resin, allowing for easy visual monitoring of resin exhaustion.

Specification

Material	<div><div></div><div>Housing, End Cap</div><div>Polypropylene</div><div></div><div>Disc Filter</div><div>Polyethylene</div><div></div><div>Fitting Cap</div><div>Polypropylene</div></div>
Dimensions	<div><div></div><div>Diameter</div><div>3.36 " (85.5 mm)</div><div></div><div>Length</div><div>18.58 " (472 mm)</div><div></div><div>Inlet / Outlet</div><div>3/8 " PT hose</div></div>
Operating Condition	<div><div></div><div>Max Flow Rate</div><div>1.5 LPM</div><div></div><div>Max Temp</div><div>140 °F</div></div>



PMB

Appearance	Spherical beads	
Size	300 ~ 1200 um	
Color Indicator	Deep Blue > Amber	
Component	Anion	Cation
Type	Gel-Strong Base Anion	Gel-Strong Acid Cation
Functional Group	Quaternary Ammonium	Sulfonic Acid
Ionic Form	OH ⁻ form	H ⁺ form
Volumetric Ratio	60 %	40 %
Total Capacity	1.0 eq/L	1.8 eq/L
Uniformity Coefficient	1.7	

PUC

Appearance	Spherical beads	
Size	600 ± 40 um	
Color Indicator	None	
Component	Anion	Cation
Type	Ultraclean Grade Gel Anion	Ultraclean Grade Gel Cation
Functional Group	Quaternary Ammonium	Sulfonic Acid
Ionic Form	OH ⁻ form	H ⁺ form
Volumetric Ratio	60 %	40 %
Total Capacity	1.0 eq/L	1.8 eq/L
Uniformity Coefficient	1.7	

Ordering Information

CSI		
Media	Color Indicator	No
CSI	<div>PMB O</div> <div>PUC X</div>	0001

CMP FILTER CARTRIDGE



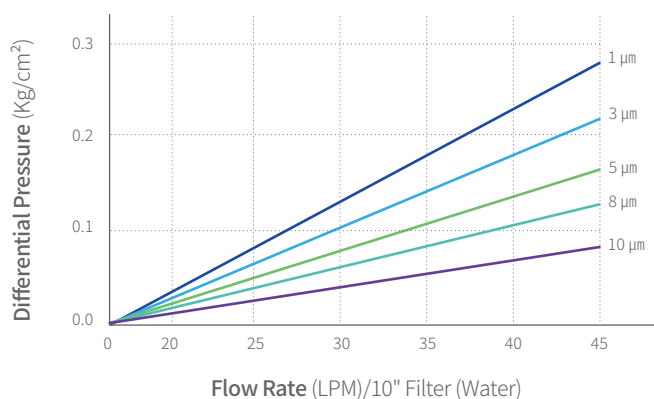
KLARING is the brand name of Clean & Science Co., Ltd. products.

Specification

Material	• Filter Media	Polypropylene
	• Support / Drain	Polypropylene
	• Hardware	Polypropylene
Dimensions	• Outer Diameter	2.7 " (inch)
	• Length	10", 20", 30", 40"
Removal Rating	• 1, 3, 5, 8, 10 µm	
Operating Condition	• Max ΔP	2.1 bar (30psid) / 176 °F 4.8 bar (70psid) / 77 °F
	• Max Temp	176 °F

Absolute Grade	Designed with Various Pore Sizes
Thermal Welding	Manufactured in a Cleanroom
ISO 9001, ISO 14001	Extended Filter Life with Multi-layer Structure
All Plastic Components Pass USP Class VI – 121°C Test	

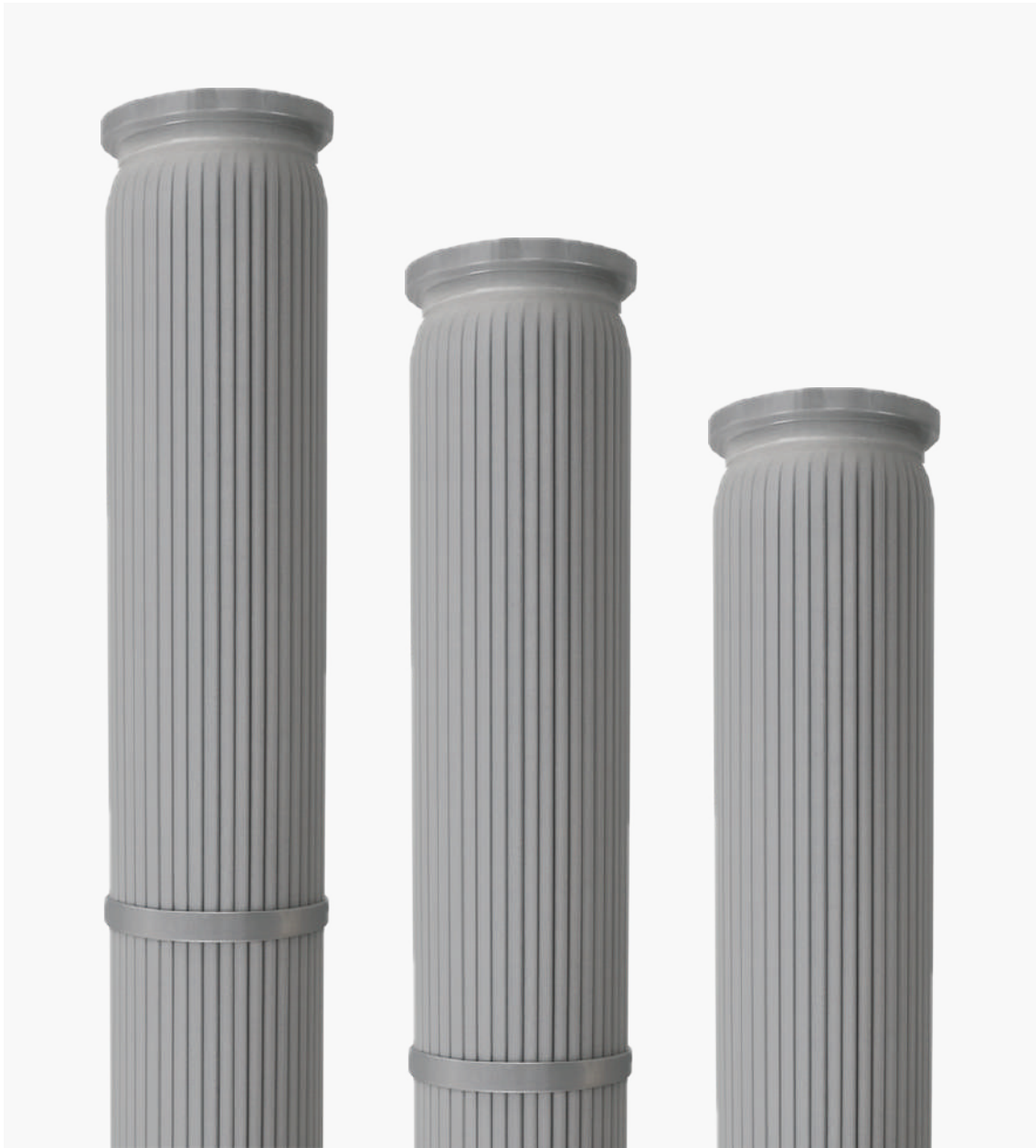
- The CMP Filter maintains desired particle sizes while removing only critical contaminants, ensuring a consistent slurry distribution.



CSC							
Media	Micro Rating	Length	Code	Protect	O-Ring	Option	
PP	01P0	1 μm	1 10 "	DM 250 mm DOE	1 PP + PP	S Silicone	S STS Ring
	03P0	3 μm	2 20 "	DI 254 mm DOE	2 Reinforced PP	E EPDM	C Flushed
	05P0	5 μm	3 30 "	2L 222 / Locking Tab		V Viton	
	08P0	8 μm	4 40 "	2F 222 / Flat		N Buna-N	
	10P0	10 μm		2T 222 / Fin		F TEV	
				6L 226 / Locking Tab			
				6F 226 / Flat			
				6T 226 / Fin			

STAINLESS STEEL

FILTER CARTRIDGE



KLARING is the brand name of Clean & Science Co., Ltd. products.

Stainless Steel Filter Cartridge

The Stainless Steel Filter Cartridge is suitable for high-temperature, low-temperature and high-pressure applications. It is available in both sintered and mesh types and can be reusable. Custom sizing is also available.

Specification

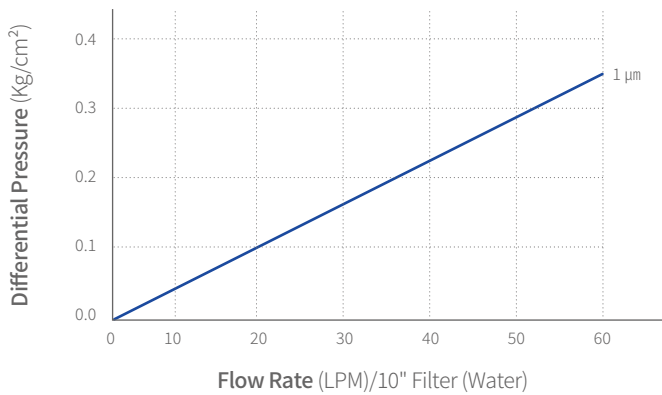
Material	• Stainless Steel 304 / 316L
Dimensions	• Outer Diameter 2.7 " (inch) • Length 10", 20", 30", 40"
Removal Rating	• 1, 3, 5 μm, etc. / Custom-Made
Type	• Cylindrical Type • Pleated Type
Operating Temp.	• -22 ~ 572 °F (Varies depending on O-Ring)

Features

Absolute Grade	ISO 9001, ISO 14001
Designed with Various Pore Sizes	
Prevents Premature Clogging with Multi-layer Structure	

Applications

- High-temperature liquids and gases
- Corrosive fluids
- Steam
- High-viscosity liquids
- Reusable (Semi-Permanent use)
- Reusable by back washing (Cylindrical Type)
- Reusable by ultrasonic cleaning (Pleated Type)
- Screen mesh type

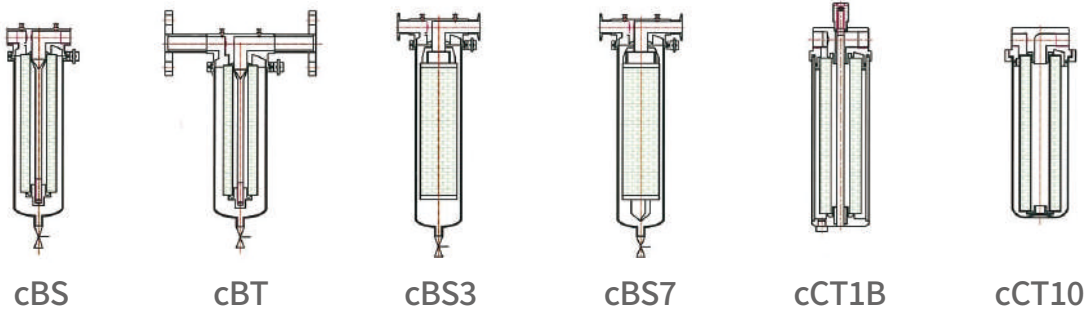


Ordering Information

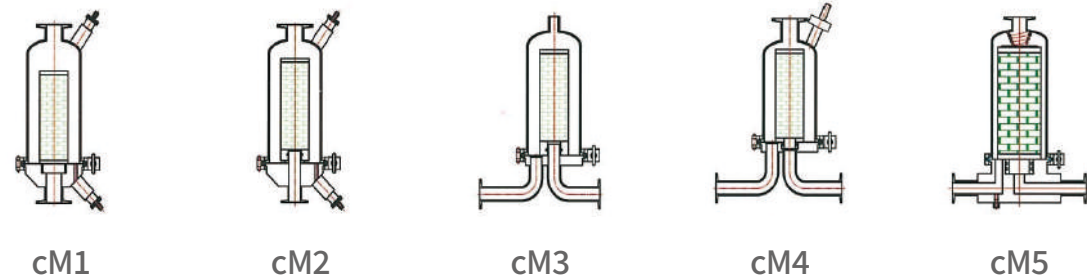
CMF						
Media	Removal Rating	Type	Length	Code	Material	O-Ring / Gasket
Stainless Steel	1 1 μm	P Pleated	1 10 "	DM 250 mm DOE	4 304	S Silicone
	3 3 μm	C Cylindrical	2 20 "	3F 222	6 316L	E EPDM
	5 5 μm		3 30 "	7F 226		V Viton
			4 40 "			N Buna-N
						F TEV

Single Element

cBS, cBT, cBF, cCT - TYPE

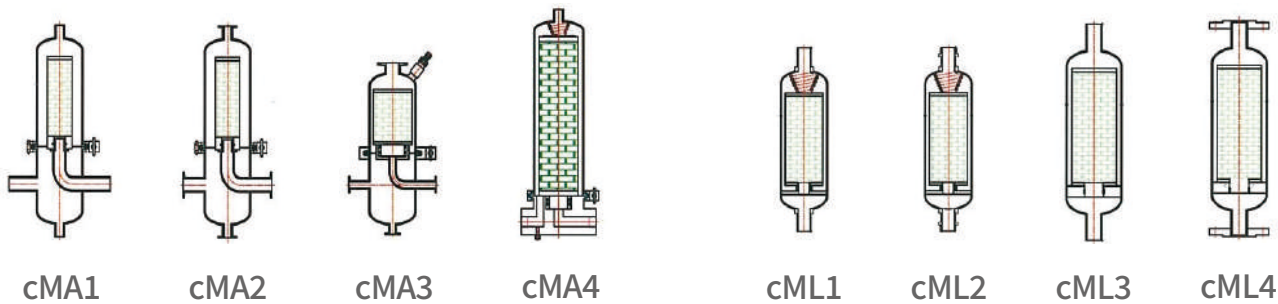


cM - TYPE

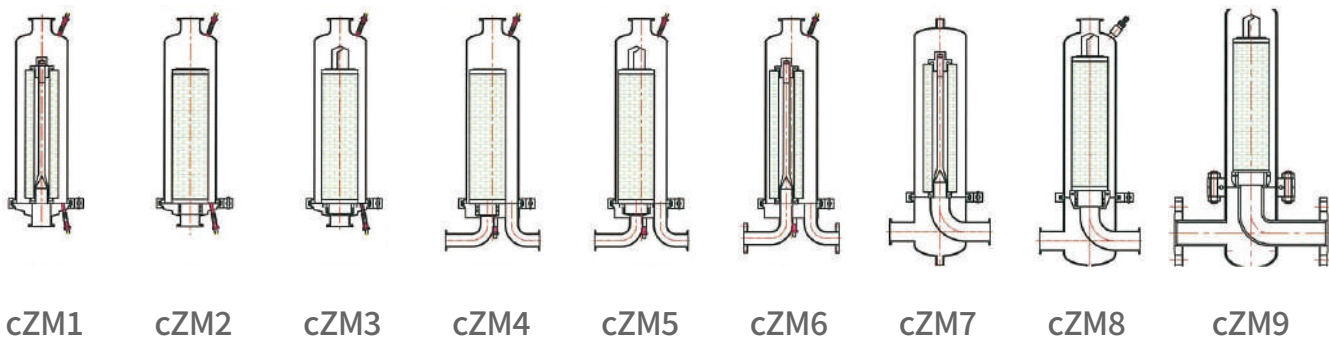


cMA - TYPE

cML - TYPE

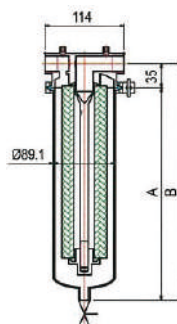


cZM - TYPE



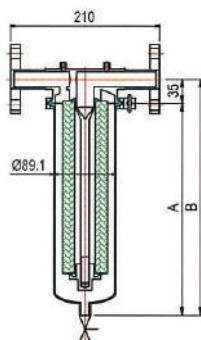


cBS, cBT, cBF, cCT - TYPE



BS-TYPE

Model	Cartridge	A	B
1BS05	5"L	195	430
1BS1	10"L	320	555
1BS2	20"L	570	605
1BS3	30"L	820	855

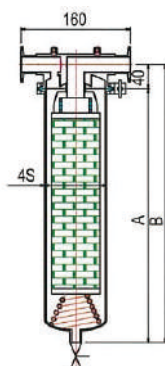


BT-TYPE

Model	Cartridge	A	B
1BT1	10"L	320	555
1BT2	20"L	570	605
1BT3	30"L	820	855

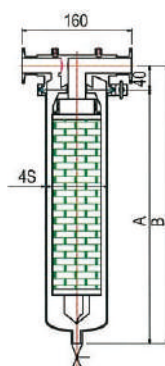
cBS / cBT

- **Pressure**
150PSI(at) 200°F(94°C)
- **Material**
SUS304, 316
- **Connector**
20A, 25A, 32A's PT, Ferrule, Flange
- **Feature**
Housing for general industrial applications using DOE filter and manufactured according to user requirements.



BF3-TYPE

Model	Cartridge	A	B
1BF3-1	10"L	320	350
1BF3-2	20"L	570	600
1BF3-3	30"L	820	850

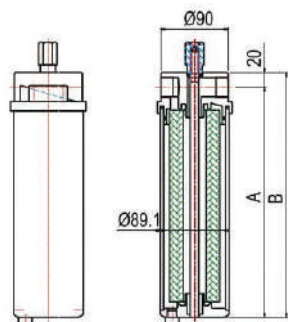


BF7-TYPE

Model	Cartridge	A	B
1BF7-1	10"L	365	405
1BF7-2	20"L	615	655
1BF7-3	30"L	865	905

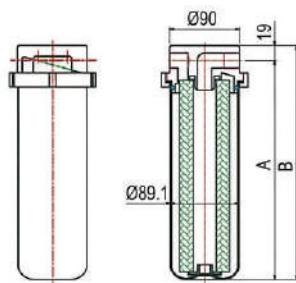
cBF

- **Pressure**
150PSI(at) 200°F(94°C)
- **Material**
SUS304, 316
- **Connector**
20A, 25A, 32A's PT, Ferrule, Flange
- **Feature**
Housing for general industrial applications using 222 or 226 O-ring type filter and manufactured according to user requirements.



CT1B-TYPE

Model	Cartridge	A	B
CT1B1	10"L	300	320
CT1B2	20"L	550	570



BF10-TYPE

cCT

- **Pressure**
150PSI(at) 200°F(94°C)
- **Material**
SUS304, 316
- **Connector**
3/4 " NPT
- **Feature**
User a regular filter, Widely used in vending machines and general industrial applications. Applications using DOE filter.

FILTER HOUSING SELECTION GUIDE

cSL-Type Element

cSL, cSLB, cSLS - TYPE

• Pressure

Manufactured according to customer requirements

• Material

SUS304, 316, 316L

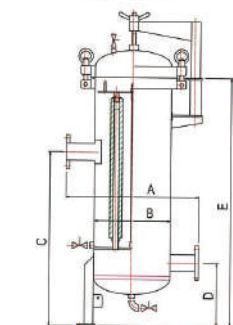
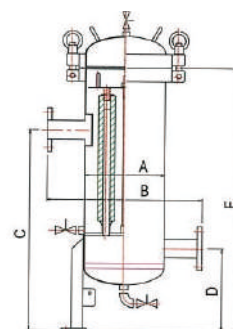
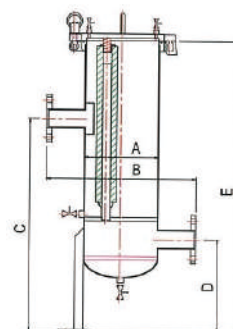
• Feature

Housing for general industrial applications using and manufactured according to user requirements

cSL TYPE

Cartridge Size : $\Phi 63$ / Design Pressure : 10kg/cm²

Model	FlowRate (m ³ /Hr)	No. of Cartridge		Connections		Approx Dimensions (mm)				
		No.	Length	Inlet	Outlet	A	B	C	D	E
3cSL2	5 ~ 8	3	500	1 1/2B	40A	196	496	800	305	1000
6cSL2	10 ~ 18	6	500	2B	50A	236	476	750	365	1000
10cSL3	18 ~ 27	10	750	2 1/2B	65A	318	618	900	330	1300
12cSL3	25 ~ 35	12	750	3B	80A	356	656	930	350	1330
15cSL3	30 ~ 45	15	750	3B	80A	406	706	930	340	1330
19cSL3	35 ~ 60	19	750	4B	80A	456	756	930	340	1330
27cSL3	55 ~ 80	27	750	4B	100A	506	806	1020	420	1420
30cSL3	70 ~ 90	30	750	5B	100A	556	856	1020	420	1420
40cSL3	80 ~ 120	40	750	5B	125A	608	908	1040	430	1440
50cSL3	130 ~ 180	50	750	6B	125A	658	958	1050	440	1450
60cSL3	140 ~ 200	60	750	6B	150A	710	1010	1110	480	1510
70cSL3	150 ~ 220	70	750	8B	150A	760	1060	1110	480	1510
80cSL3	160 ~ 240	80	750	8B	200A	810	1170	1220	560	1620
90cSL3	180 ~ 270	90	750	8B	200A	862	1222	1220	560	1620
100cSL3	200 ~ 300	100	750	8B	200A	912	1272	1220	560	1620
120cSL3	240 ~ 360	120	750	8B	200A	962	1342	1240	580	1640
130cSL3	260 ~ 390	130	750	8B	200A	1012	1372	1260	600	1660
150cSL3	300 ~ 450	150	750	8B	200A	1062	1422	1260	600	1660
180cSL3	360 ~ 540	180	750	8B	250A	1162	1562	1350	660	1750
200cSL3	400 ~ 600	200	750	10B	250A	1216	1616	1350	660	1750
220cSL3	440 ~ 660	220	750	10B	250A	1266	1666	1360	660	1760
230cSL3	460 ~ 690	230	750	10B	250A	1316	1716	1370	660	1770
250cSL3	500 ~ 750	250	750	12B	300A	1366	1766	1400	680	1800

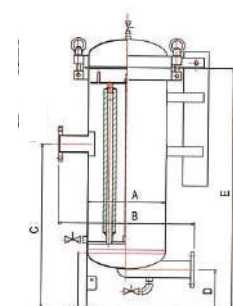


cSL TYPE

cSLB TYPE

Cartridge Size : $\Phi 63$ / Design Pressure : 10kg/cm²

Model	FlowRate (m ³ /Hr)	No. of Cartridge		Connections		Approx Dimensions (mm)				
		No.	Length	Inlet	Outlet	A	B	C	D	E
15cSLB3	30 ~ 45	15	750	3B	80A	406	706	860	210	1260
19cSLB3	35 ~ 60	19	750	3B	80A	456	756	865	203	1265
27cSLB3	55 ~ 80	27	750	4B	100A	506	806	880	206	1280
30cSLB3	70 ~ 90	30	750	4B	100A	556	856	900	218	1300
40cSLB3	80 ~ 120	40	750	5B	125A	608	908	900	208	1300
50cSLB3	130 ~ 180	50	750	5B	125A	658	958	910	208	1310
60cSLB3	140 ~ 200	60	750	6B	150A	710	1010	960	248	1360
70cSLB3	150 ~ 220	70	750	6B	150A	760	1060	970	248	1370
80cSLB3	160 ~ 240	80	750	8B	200A	810	1170	1010	268	1410
90cSLB3	180 ~ 270	90	750	8B	200A	860	1220	1020	278	1420
100cSLB3	200 ~ 300	100	750	8B	200A	910	1270	1030	278	1430

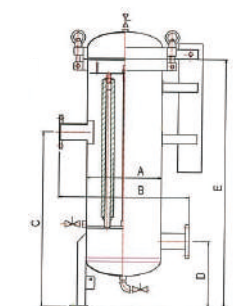


cSLB TYPE

cSLS TYPE

Cartridge Size : $\Phi 63$ / Design Pressure : 10kg/cm²

Model	FlowRate (m ³ /Hr)	No. of Cartridge		Connections		Approx Dimensions (mm)				
		No.	Length	Inlet	Outlet	A	B	C	D	E
15cSLS3	30 ~ 45	15	750	3B	80A	406	706	950	360	1350
19cSLS3	35 ~ 60	19	750	3B	80A	456	756	950	360	1350
27cSLS3	55 ~ 80	27	750	4B	100A	506	806	1020	420	1420
30cSLS3	70 ~ 90	30	750	4B	100A	556	856	1020	420	1420
40cSLS3	80 ~ 120	40	750	5B	125A	608	908	1040	430	1440
50cSLS3	130 ~ 180	50	750	5B	125A	658	958	1050	440	1450
60cSLS3	140 ~ 200	60	750	6B	150A	710	1010	1110	500	1510
70cSLS3	150 ~ 220	70	750	6B	150A	760	1060	1110	500	1510
80cSLS3	160 ~ 240	80	750	8B	200A	810	1170	1220	560	1620
90cSLS3	180 ~ 270	90	750	8B	200A	860	1220	1220	560	1620
100cSLS3	200 ~ 300	100	750	8B	200A	910	1270	1220	560	1620



cSLS TYPE

FILTER HOUSING SELECTION GUIDE

Multi Element

cSR, cSRB - TYPE

- Pressure**

Manufactured according to customer requirements

- Material**

SUS304, 316, 316L

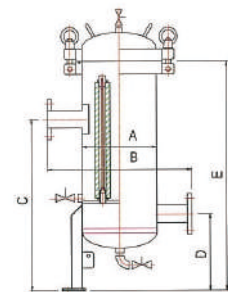
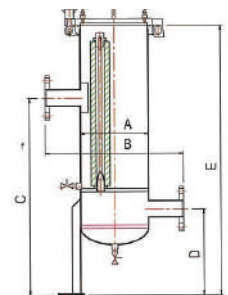
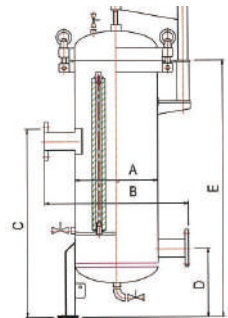
- Feature**

Large-scale housing for general industrial applications using and manufactured according to user requirements. Independent assembly provides outstanding sealing and suitable for high pressure applications

cSR TYPE

Cartridge Size : $\Phi 63$ / Design Pressure : 10kg/cm²

Model	FlowRate (m3/Hr)	No. of Cartridge		Connections		Approx Dimensions (mm)				
		No.	Length	Inlet	Outlet	A	B	C	D	E
3cSR2	5 ~ 8	3	500	1 1/2B	40A	196	496	740	305	940
6cSR2	10 ~ 18	6	500	2B	50A	236	476	690	365	940
10cSR3	18 ~ 27	10	750	2 1/2B	65A	318	618	840	330	1240
12cSR3	25 ~ 35	12	750	3B	80A	356	656	870	350	1270
15cSR3	30 ~ 45	15	750	3B	80A	406	706	870	340	1270
19cSR3	35 ~ 60	19	750	3B	80A	456	756	870	340	1270
27cSR3	55 ~ 80	27	750	4B	100A	506	806	960	420	1360
30cSR3	70 ~ 90	30	750	4B	100A	556	856	960	420	1360
40cSR3	80 ~ 120	40	750	5B	125A	608	908	980	430	1380
50cSR3	120 ~ 160	50	750	5B	125A	658	958	990	440	1390
60cSR3	130 ~ 180	60	750	6B	150A	710	1010	1050	480	1450
70cSR3	160 ~ 200	70	750	6B	150A	760	1060	1050	480	1450
80cSR3	200 ~ 220	80	750	8B	200A	810	1170	1160	560	1550
90cSR3	220 ~ 250	90	750	8B	200A	862	1222	1160	560	1550
100cSR3	220 ~ 280	100	750	8B	200A	912	1272	1160	560	1560
120cSR3	280 ~ 300	120	750	8B	200A	962	1342	1180	580	1580
130cSR3	260 ~ 390	130	750	8B	200A	1012	1372	1200	600	1600
150cSR3	300 ~ 450	150	750	8B	200A	1062	1422	1200	600	1600
180cSR3	360 ~ 540	180	750	10B	250A	1162	1562	1290	660	1690
200cSR3	400 ~ 600	200	750	10B	250A	1216	1616	1290	660	1690
220cSR3	440 ~ 660	220	750	10B	250A	1266	1666	1290	660	1700
230cSR3	460 ~ 690	230	750	10B	250A	1316	1716	1310	660	1710
250cSR3	500 ~ 750	250	750	12B	300A	1366	1766	1340	680	1740

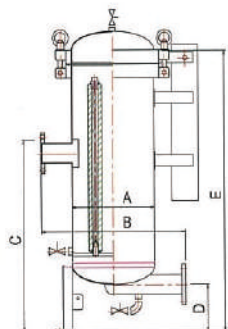


cSR TYPE

cSRB TYPE

Cartridge Size : $\Phi 63$ / Design Pressure : 10kg/cm²

Model	FlowRate (m3/Hr)	No. of Cartridge		Connections		Approx Dimensions (mm)				
		No.	Length	Inlet	Outlet	A	B	C	D	E
15cSRB3	30 ~ 45	15	750	3B	80A	406	706	800	210	1200
19cSRB3	35 ~ 60	19	750	3B	80A	456	756	805	203	1205
27cSRB3	55 ~ 80	27	750	4B	100A	506	806	820	206	1220
30cSRB3	70 ~ 90	30	750	4B	100A	556	856	840	218	1240
40cSRB3	80 ~ 120	40	750	5B	125A	608	908	840	208	1240
50cSRB3	120 ~ 150	50	750	5B	125A	658	958	850	208	1250
60cSRB3	150 ~ 180	60	750	5B	125A	710	1010	900	248	1300
70cSRB3	170 ~ 200	70	750	5B	125A	760	1060	910	248	1310
80cSRB3	200 ~ 220	80	750	6B	150A	810	1170	950	268	1350
90cSRB3	230 ~ 250	90	750	6B	150A	860	1220	960	278	1360
100cSRB3	260 ~ 280	100	750	6B	150A	910	1270	970	278	1370

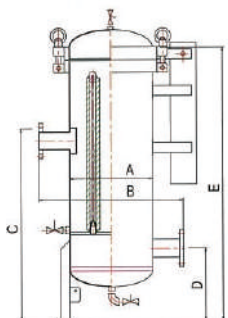


cSRB TYPE

cSRS TYPE

Cartridge Size : $\Phi 63$ / Design Pressure : 10kg/cm²

Model	FlowRate (m3/Hr)	No. of Cartridge		Connections		Approx Dimensions (mm)				
		No.	Length	Inlet	Outlet	A	B	C	D	E
15cSRS3	30 ~ 45	15	750	3B	80A	406	706	800	360	1290
19cSRS3	35 ~ 60	19	750	3B	80A	456	756	805	360	1290
27cSRS3	55 ~ 80	27	750	4B	100A	506	806	820	420	1360
30cSRS3	70 ~ 90	30	750	4B	100A	556	856	840	420	1360
40cSRS3	80 ~ 120	40	750	5B	125A	608	908	840	430	1380
50cSRS3	120 ~ 150	50	750	5B	125A	658	958	850	440	1390
60cSRS3	150 ~ 180	60	750	5B	125A	710	1010	900	500	1450
70cSRS3	170 ~ 200	70	750	5B	125A	760	1060	910	500	1450
80cSRS3	200 ~ 230	80	750	6B	150A	810	1170	950	560	1560
90cSRS3	230 ~ 250	90	750	6B	150A	860	1220	960	560	1560
100cSRS3	260 ~ 280	100	750	6B	150A	910	1270	970	560	1560



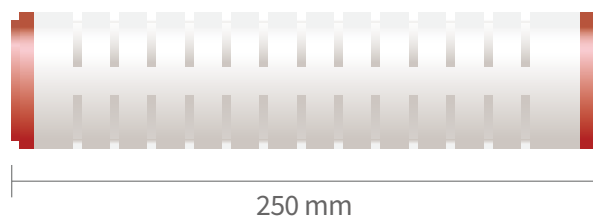
cSRS TYPE

The attached spring lead minimizes the space required and allows easily opening and closing for the worker

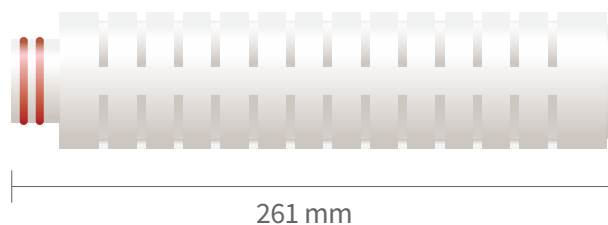
Cartridge Configurations

CODE / Length

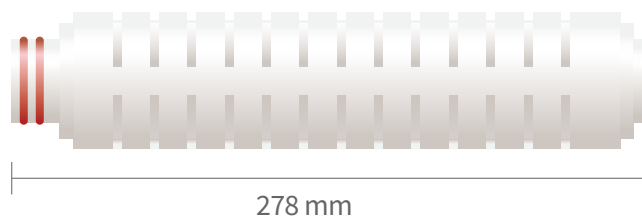
DM (DOE: Double Open End)



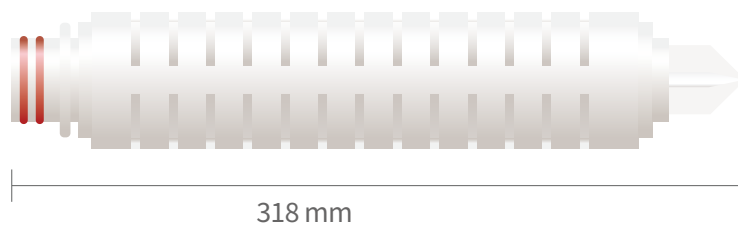
2F (Code 0 / 222 O-ring)



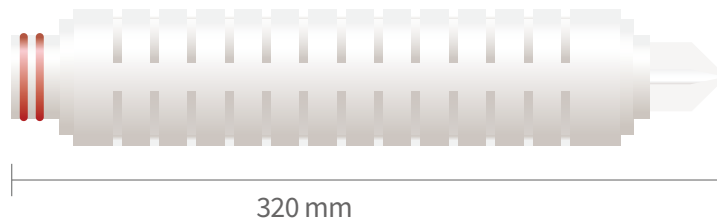
2L (Code 3 / 222 O-ring)



6T (Code 7 / 226 O-ring)



2T (Code 8 / 222 O-ring)



Clean & Science

TEST EQUIPMENT

Multipass Tester



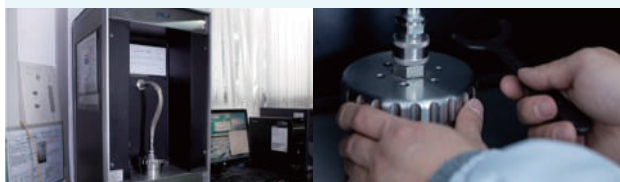
Particle Counter



Tensile Strength Tester



Porosimeter (Mean Flow Pore Size)



Flammability Tester



TSI Tester (Efficiency Measurement of Filter Media)



Air Filter Tester (Air)



HEPA Filter Tester



Gas Adsorption-Desorption Unit



Cabin Filter Tester



Integrity Tester



Particle Counter 1



Particle Counter 2



Single Pass Tester



Porometer



Chemical Compatibility

Chemical		Filter Media				O-ring Materials			
		P.P	PTFE	PES	Nylon	EPDM	Silicon	Viton	Teflon
Acids	Acetic Acid, Glacial	R	R	R	N	L	R	L	R
	Acetic Acid, 5%	R	R	R	R	L	R	L	R
	Acetic Acid, 10%	R	R	R	L	L	R	L	R
	Boric Acid	R	R	R	L	R	R	R	R
	Hydrochloric Acid, 6N	L	R	R	N	N	R	R	R
	Hydrochloric Acid, cone	R	R	N	N	N	R	N	R
	Nitric Acid, 6N	L	L	N	N	R	N	R	R
	Nitric Acid, conc	L	L	N	N	N	N	R	R
	Sulfuric Acid, Conc	L	L	N	N	L	N	R	R
Alcohol	Amyl Alcohol	R	R	R		R	N	R	R
	Benzyl Alcohol	R	R	N	N	R	R	R	R
	Butyl Alcohol	R	R	R	R	R	R	R	R
	Ethyl Alcohol	R	R	R	L	R	L	R	R
	Ethylene Glycol	R	R	R	R	R	R	R	R
	Glycerine (Glycerol)	R	R	R	R	R	R	R	R
	Isobutyl Alcohol	R	R	R	L	R	R	R	R
	Isopropanol(IPA)	R	R	R	L	R	R	R	R
	Methanol	R	R	R	L	R	R	L	R
	Propanol	R	L	R	L	R	L	R	R
Bases	Ammonium Hydroxide	R	R	N	L	R	R	R	R
	Potassium Hydroxide	R	R	N	R	R	N	R	R
	Sodium Hydroxide, 3N	R	R	R	R	R	R	R	R
	Sodium Hydroxide, 6N	R	R	R	R	R	R	R	R
Esters	Amyl Acetate	L	R	L		R	N	N	R
	Butyl Acetate	L	L	N	R	R	N	N	R
	Cellosolve Acetate	R	R	R		R	N	N	R
	Ethyl Acetate	L	R		R	L	N	N	
	Isopropyl Acetate	L	R	N	R	R	N	N	R
	Methyl Acetate	R	L	N	R	R	N	N	R
Solvent	Acetone	R	R	N	R	R	R	N	R
	Acetonitrile	L	R	R	L	R	N	N	R
	Benzene	N	L	N	L	N	N	R	R
	Carbon Tetrachloride	L	R	R	R	N	N	R	R
	Chloroform	N	L	N	R	N	N	R	R
	Cyclohexanone	R	R	R	L	L	L	N	R
	Dienthyl Acetamid	R	R	N	L	L	R	N	R
	Dimethyl Formamide	R	R	N	L	R	N	N	R
	Dioxane	R	R	N	L	N	N	N	R

R - Recommended / L - Limited Recommended / N - Not Recommended

Chemical		Filter Media				O-ring Materials			
		P.P	PTFE	PES	Nylon	EPDM	Silicon	Viton	Teflon
Solvent	Ethyl Ether	L	N	N		N	N	N	
	Formaldehyde	R	R	N		R	R	N	R
	Gasoline	N	N	N	N	N	N	R	R
	Hexane	L	R	N	N	N	N	R	R
	Isobutyl Alcohol	R	R	R	L	R	R	R	R
	Kerosene	L	L	L	R	N	N	R	R
	Methy Ethyl Keton	L	R	N	R	R	N	N	R
	Methy Isobutyl Keton	R	R	L	L	R	N	N	
	Methylene Chloride	N	N	N	L	N	N	N	R
	Nitrobenzene	L	N	N	R	R	N	R	R
	Toluene	L	L	N	R	N	N	R	R
	Pentane	L	L	L	R	N	N	R	R
	Pyridine	R	R	N	L	N	N	N	R
	Toluene	L	R	N	L	N	N	R	R
	Trichloroethane	L	N	N	L	N	N	R	R
	Trichlorethylene	N	N	N	L	N	N	R	R
	Xylene	L	R	N	L	N	N	R	R
Gases	Helium	R	R	N	R	N	R	R	R
	Hydrozen	R	R	N	R	R	N	R	R
	Methane	L	R	L	R	R	N	R	R
	Nitrozen	R	R	N	R	R	R	R	R
	Ozone	L	N	N	N	L	N	N	
Oils	Cottonseed Oil	R	R	L	R	R	R	R	R
	Peanut Oil	R	R	L	L	L	N	R	R
	Sesame Oil	R	R	R	R	L	N	R	R
	Silicon Oil	R	R	R	R	N	N	R	R

