

Pharmaceutical Capsule Filter
Filtration Solutions



PHARMACEUTICAL CAPSULE FILTER

Filtration Solutions

MEMBRANE SOLUTIONS

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*Our Membrane
For Your Solutions*

Membrane Solutions COMPANY PROFILE

Membrane Solutions is a high-tech enterprise integrating the preparation of nano-scale high polymer microporous membranes and the production of membrane filter products. It is a high-tech enterprise integrating R&D, design, manufacturing, sales and services. Membrane Solutions independently develops and produces PP/PTFE/PES/Nylon/PVDF and other microporous membranes (membrane removal ratings include 5nm-10 μ m), and specializes in the development, production and manufacture of various filtration products, such as microfiltration membrane products, membrane pleated cartridge filters, small filters, capsule filters and other products. Membrane Solutions provides professional overall filtration solutions for applications in the global biopharmaceutical field, such as purification and filtration of active pharmaceutical ingredient/reagents, blood products or vaccine products.

Membrane Solutions can provide a full range of filtration products from pre-filters to terminal filters. Products include compact capsule filters and capsule filters with high flux, available in different sizes and connections to meet your different application needs.

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MEDCAP CLARIFICATION FILTRATION SERIES

MedCap-UTC PPA High Flow-rate Capsule Filter

DESCRIPTION

MedCap-UTC PPA series PP pleated capsule filter is made of polypropylene microfiber. It has a gradient pore size and a high strength support, which makes the filter has the characteristics of high retention efficiency and high flow rates, and is especially suitable for clarification filtration of liquid and pre-filtration of gas.

MedCap-UTC PPA series capsule filter is available in a wide range of removal ratings and in a wide range of cages and connections to meet the needs of different applications, widely used in bio-pharmacy and food and beverage.



FEATURES

- ☆ Excellent chemical compatibility
- ☆ High particle retention efficiency
- ☆ Longer service life and lower cost
- ☆ Various cages and connections are available

APPLICATIONS

- ☆ Clarification filtration of cell culture medium
- ☆ Clarification filtration of fermentation broth/cell culture medium
- ☆ Pre-filtration of serums/blood products
- ☆ Pre-filtration of gas sterilization
- ☆ Filtration of colloidal products

TECHNICAL PARAMETERS

Materials of Construction	Filter Membrane	PP
	Support/Drainage	PP
	Core/Cage/End Cap	PP
	Capsule Shell	PP
Removal Ratings	0.20μm、0.30μm、0.45μm、0.65μm、1.0μm、3.0μm、5.0μm、10.0μm、20.0μm、30.0μm、50.0μm、70.0μm	
Filtration Area	C80/ C150 / C300 / C610 / C620	450-840cm ² / 1200-1400cm ² /2400-2800cm ² / 5500-6000cm ² /11000-12000cm ²
Operating Conditions	Maximum Operating Differential Pressure	0.5Mpa@25℃ 0.1Mpa@80℃
	Maximum Operating Temperature	80℃
Biological Safety	Bio-compatibility	Meet USP <87> in vitro Cytotoxicity Test Meet the criteria of the USP <88> Biological Reactivity Test for Class VI-121℃ plastics
	Endotoxins	<0.25EU/ml

ORDERING INFORMATION

C80

Capsule Filter Size

C80
C150
C300
C610
C620

N2

Inlet/Outlet

N2 1/4" NPT
N3 3/8" NPT
N4 1/2" NPT
H1 1/8" Hosebarb**
H2 1/4" Hosebarb
H3 3/8" Hosebarb
H4 1/2" Hosebarb*
HS 1/4"-1/2" Stepped Hosebarb
HC 1/4"-3/8" Stepped Hosebarb
TCA 1 1/2" Tri-clamp*
TCB 1/2" Tri-clamp*
TCC 1" Tri-clamp*

* For C610/C620 Size
**Not available for C80

PPA

010

Removal Ratings

020 0.20μm
030 0.30μm
045 0.45μm
065 0.65μm
100 1.0μm
300 3.0μm
500 5.0μm
H10 10.0μm
H20 20.0μm
H30 30.0μm
H50 50.0μm
H70 70μm

Note: This ordering information is a guide for selecting filter element specifications. For other special connections or installation details, please contact MS.

MEDCAP CLARIFICATION FILTRATION SERIES

MedCap-UTC GF High Retention Efficiency Capsule Filter

DESCRIPTION

MedCap-UTC GF series pleated capsule filter is designed to provide good protection for downstream filters. The glass microfiber layer has a unique three-dimensional structure, which can provide high dirt holding capacity and high retention efficiency. GF filter is suitable for intercepting colloidal substances from high-load and high-viscosity fluids and intercepting impurity particles in gases.

MedCap-UTC GF series capsule filter is available in a wide range of removal ratings and in a wide range of cages and connections to meet the needs of different applications, widely used in bio-pharmacy and food and beverage.



FEATURES

- ☆ Composed of super-fine glass fiber media
- ☆ High dirt holding capacity and high retention efficiency
- ☆ Low initial pressure, high flow rates, long service life
- ☆ Various cages and connections are available

APPLICATIONS

- ☆ Clarification filtration of fermentation broth/cell culture medium
- ☆ Pre-filtration of serums/blood products
- ☆ Pre-filtration of gas sterilization
- ☆ Filtration of colloidal products

TECHNICAL PARAMETERS

Materials of Construction	Filter Membrane	GF
	Support/Drainage	PP
	Core/Cage/End Cap	PP
	Capsule Shell	PP
Removal Ratings	0.45µm、1.0µm、3.0µm、5.0µm、10.0µm、20.0µm	
Filtration Area	C80/ C150 / C300 / C610 / C620	450-840cm ² /1200-1400cm ² /2400-2800cm ² /5500-6000cm ² /11000-12000cm ²
Operating Conditions	Maximum Operating Differential Pressure	0.5MPa@25℃ 0.1MPa@80℃
	Maximum Operating Temperature	80℃
	Sterilization Method	Autoclave steam sterilization: 30min@121℃ Hot water disinfection: 30min@90℃
Biological Safety	Bio-compatibility	Meet USP <87> in vitro Cytotoxicity Test Meet the criteria of the USP <88> Biological Reactivity Test for Class VI-121℃ plastics
	Endotoxins	<0.25EU/ml

ORDERING INFORMATION

C80

Capsule Filter Size

C80
C150
C300
C610
C620

N2

Inlet/Outlet

N2 1/4" NPT
N3 3/8" NPT
N4 1/2" NPT
H1 1/8" Hosebarb**
H2 1/4" Hosebarb
H3 3/8" Hosebarb
H4 1/2" Hosebarb*
HS 1/4"-1/2" Stepped Hosebarb
HC 1/4"-3/8" Stepped Hosebarb
TCA 1 1/2" Tri-clamp*
TCB 1/2" Tri-clamp*
TCC 1" Tri-clamp*

GF

045

Removal Ratings

045 0.45µm
100 1.0µm
300 3.0µm
500 5.0µm
H10 10.0µm
H20 20.0µm

* For C610/C620 Size
** Not available for C80

MEDCAP PRE-FILTRATION AND REDUCE BIOLOGICAL LOAD SERIES

MedCap-UTC PN Hydrophilic Capsule Filter

DESCRIPTION

MedCap-UTC PN series capsule filter is made of hydrophilic nylon66 membrane, which has excellent chemical compatibility and mechanical strength, and can provide stable and reliable filtration performance of sterilization and particle removal. Its removal ratings for typical bacteria in the industry have been verified by batches and can effectively reduce the microbial load level of the filtrate.

MedCap-UTC PN series capsule filter is available in a wide range of cages and connections to meet the needs of different applications, widely used in bio-pharmacy and food and beverage.



FEATURES

- ☆ Inherently hydrophilic, easy to wet
- ☆ Extensive chemical compatibility, tolerance of organic solvents
- ☆ Low differential pressure, high flux, long service life
- ☆ Various cages and connections are available

APPLICATIONS

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

TECHNICAL PARAMETERS

Materials of Construction	Filter Membrane	Nylon 66
	Support/Drainage	PP
	Core/Cage/End Cap	PP
	Capsule Shell	PP
Removal Ratings	0.10µm、0.20µm、0.45µm、0.80µm、1.0µm、5.0µm	
Filtration Area	C80/ C150 / C300 / C610 / C620	450-840cm ² / 1200-1400cm ² /2400-2800cm ² / 5500-6000cm ² /11000-12000cm ²
Operating Conditions	Maximum Operating Differential Pressure	0.5MPa@25℃ 0.1MPa@80℃
	Maximum Operating Temperature	80℃
	Sterilization Method	Autoclave steam sterilization: 30min@121℃ Hot water disinfection: 30min@90℃
Biological Safety	Bio-compatibility	Meet USP <87> in vitro Cytotoxicity Test Meet the criteria of the USP <88> Biological Reactivity Test for Class VI-121℃ plastics
	Endotoxins	<0.25EU/ml

ORDERING INFORMATION

C80

Capsule Filter Size

C80
C150
C300
C610
C620

N2

Inlet/Outlet

N2 1/4" NPT
N3 3/8" NPT
N4 1/2" NPT
H1 1/8" Hosebarb**
H2 1/4" Hosebarb
H3 3/8" Hosebarb
H4 1/2" Hosebarb*
HS 1/4"-1/2" Stepped Hosebarb
HC 1/4"-3/8" Stepped Hosebarb
TCA 1 1/2" Tri-clamp*
TCB 1/2" Tri-clamp*
TCC 1" Tri-clamp*

NY

045

Removal Ratings

010 0.10µm
020 0.20µm
045 0.45µm
080 0.80µm
100 1.0µm
500 5.0µm

* For C610/C620 Size

** Not available for C80

MEDCAP PRE-FILTRATION AND REDUCE BIOLOGICAL LOAD SERIES

MedCap-UTC PES High Flow-rate and Long Service Life Capsule Filter

DESCRIPTION

MedCap-UTC PES series capsule filter is made of asymmetric PES membrane, which can provide stable and reliable filtration performance of sterilization and particle removal. Its removal ratings of typical bacteria in the industry have been verified by batches, which can effectively reduce the microbial load level of the filtrate, and is especially suitable for the filtration of biomedical liquid where the microbial limit needs to be controlled at a low level.

MedCap-UTC PES series capsule filter is available in a wide range of cages and connections to meet the needs of different applications, widely used in bio-pharmacy and food and beverage.



FEATURES

- ☆ Asymmetric PES membrane
- ☆ Very low protein non-specific binding
- ☆ Hot melt welding, without any adhesive
- ☆ Various cages and connections are available

APPLICATIONS

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

TECHNICAL PARAMETERS

Materials of Construction	Filter Membrane	PES
	Support/Drainage	PP
	Core/Cage/End Cap	PP
	Capsule Shell	PP
Removal Ratings	0.10µm、0.20µm、0.45µm、0.65µm、0.80µm、1.0µm、3.0µm、5.0µm、10.0µm	
Filtration Area	C80/ C150 / C300 / C610 / C620	450-840cm ² / 1200-1400cm ² /2400-2800cm ² / 5500-6000cm ² /11000-12000cm ²
Operating Conditions	Maximum Operating Differential Pressure	0.5MPa@25 °C 0.1MPa@80 °C
	Maximum Operating Temperature	80 °C
	Sterilization Method	Autoclave steam sterilization: 30min@121 °C Hot water disinfection: 30min@90 °C
Biological Safety	Bio-compatibility	Meet USP <87> in vitro Cytotoxicity Test Meet the criteria of the USP <88> Biological Reactivity Test for Class VI-121°C plastics
	Endotoxins	<0.25EU/ml

ORDERING INFORMATION

C80

Capsule Filter Size

C80
C150
C300
C610
C620

N2

Inlet/Outlet

N2 1/4" NPT
N3 3/8" NPT
N4 1/2" NPT
H1 1/8" Hosebarb**
H2 1/4" Hosebarb
H3 3/8" Hosebarb
H4 1/2" Hosebarb*
HS 1/4"-1/2" Stepped Hosebarb
HC 1/4"-3/8" Stepped Hosebarb
TCA 1 1/2" Tri-clamp*
TCB 1/2" Tri-clamp*
TCC 1" Tri-clamp*

PES

045

Removal Ratings

010 0.10µm
020 0.20µm
045 0.45µm
065 0.65µm
080 0.80µm
100 1.0µm
300 3.0µm
500 5.0µm
H10 10.0µm

* For C610/C620 Size

** Not available for C80

MEDCAP PRE-FILTRATION AND REDUCE BIOLOGICAL LOAD SERIES

MedCap-UTC PTFEG Strong Chemical Resistance Capsule Filter

DESCRIPTION

MedCap-UTC PTFEG series capsule filter is made of high porosity hydrophobic PTFE membrane, which has a wide range of chemical tolerance and can provide stable and reliable filtration performance of sterilization and particle removal. Its removal ratings of typical bacteria in the industry have been verified by batches, which can effectively reduce the level of microbial load in liquid filtrate and gas, and is especially suitable for the filtration of various low surface tension chemicals and gases.

MedCap-UTC PES series capsule filter is available in a wide range of cages and connections, and at the same time have good heat tolerance, can withstand hot water disinfection and steam sterilization for a long time, and is widely used in food and beverage and bio-pharmacy.



FEATURES

- ☆ High porosity PTFE membrane
- ☆ Pre-filtration of gas sterilization
- ☆ Broad chemical tolerance
- ☆ High particle retention efficiency
- ☆ Various cages and connections are available

APPLICATIONS

- ☆ Sterilization of bio-fermentation gas
- ☆ Filtration of aseptic packaging gas
- ☆ Sterilization of food fermentation gas
- ☆ Sterilization filtration of respirator
- ☆ Filtration of chemical solvents

TECHNICAL PARAMETERS

Materials of Construction	Filter Membrane	PTFE
	Support/Drainage	PP
	Core/Cage/End Cap	PP
	Capsule Shell	PP
Removal Ratings	0.10µm、0.20µm、0.45µm、1.0µm、5.0µm、10.0µm	
Filtration Area	C80/ C150 / C300 / C610 / C620	450-840cm ² / 1200-1400cm ² /2400-2800cm ² / 5500-6000cm ² /11000-12000cm ²
Operating Conditions	Maximum Operating Differential Pressure	0.5MPa@25℃ 0.1MPa@80℃
	Maximum Operating Temperature	80℃
	Sterilization Method	Autoclave steam sterilization: 30min@121℃ Hot water disinfection: 30min@90℃
Biological Safety	Bio-compatibility	Meet USP <87> in vitro Cytotoxicity Test Meet the criteria of the USP <88> Biological Reactivity Test for Class VI-121℃ plastics
	Endotoxins	<0.25EU/ml

ORDERING INFORMATION

C80

Capsule Filter Size

C80
C150
C300
C610
C620

N2

Inlet/Outlet

N2 1/4" NPT
N3 3/8" NPT
N4 1/2" NPT
H1 1/8" Hosebarb**
H2 1/4" Hosebarb
H3 3/8" Hosebarb
H4 1/2" Hosebarb*
HS 1/4"-1/2" Stepped Hosebarb
HC 1/4"-3/8" Stepped Hosebarb
TCA 1 1/2" Tri-clamp*
TCB 1/2" Tri-clamp*
TCC 1" Tri-clamp*

PTFEG

045

Removal Ratings

010 0.10µm
020 0.20µm
045 0.45µm
100 1.0µm
500 5.0µm
H10 10.0µm

* For C610/C620 Size
** Not available for C80

MEDCAP EFFICIENT STERILE REMOVAL SERIES

MedCap-UTC PESB Sterile-Grade Capsule Filter with Low Protein Binding and High Retention Efficiency

DESCRIPTION

MedCap-Eff PESB series capsule filter is made of asymmetric PES membrane. With ultra-low protein binding and dissolution/precipitation levels, it can provide stable and reliable terminal sterilization filtration performance. It has passed the batch verification of typical bacterial removal ratings in the industry, and its sterilization ability $LRV > 7$.

MedCap-Pre PESB series capsule filter is available in a wide range of cages and connections, and can provide double-layer PES filter membrane. The double-layer filter membrane can provide a longer service life with reliable sterilization ability of the filter element through special design. It is widely used in food and beverage and bio-pharmacy.



FEATURES

- ☆ Strong chemical compatibility
- ☆ High Flux, low protein binding
- ☆ Proven sterile-grade filter element
- ☆ Ultra-low dissolution/precipitation
- ☆ Double-layer membrane can be provided
- ☆ Various cages and connections are available

APPLICATIONS

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

TECHNICAL PARAMETERS

Materials of Construction	Filter Membrane	PES
	Support/Drainage	PP
	Core/Cage/End Cap	PP
Removal Ratings	Capsule Shell	PP
	Removal Ratings	0.10 μ m、0.20 μ m、0.45 μ m、0.10+0.20 μ m、0.10+0.45 μ m、0.20+0.45 μ m、0.45+0.65 μ m
Filtration Area	C80/ C150 / C300 / C610 / C620	450-840cm ² / 1200-1400cm ² /2400-2800cm ² / 5500-6000cm ² /11000-12000cm ²
	Maximum Operating Differential Pressure	0.5MPa@25 $^{\circ}$ C .1MPa@80 $^{\circ}$ C
Operating Conditions	Maximum Operating Temperature	60 $^{\circ}$ C
	Sterilization Method	Autoclave steam sterilization: 30min@121 $^{\circ}$ C Hot water disinfection: 30min@90 $^{\circ}$ C
Biological Safety	Bio-compatibility	Meet USP <87> in vitro Cytotoxicity Test Meet the criteria of the USP <88> Biological Reactivity Test for Class VI-121 $^{\circ}$ C plastics
	Endotoxins	<0.25EU/ml

ORDERING INFORMATION

C80

Capsule Filter Size

C80
C150
C300
C610
C620

N2

Inlet/Outlet

N2 1/4" NPT
N3 3/8" NPT
N4 1/2" NPT
H1 1/8" Hosebarb**
H2 1/4" Hosebarb
H3 3/8" Hosebarb
H4 1/2" Hosebarb*
HS 1/4"-1/2" Stepped Hosebarb
HC 1/4"-3/8" Stepped Hosebarb
TCA 1 1/2" Tri-clamp*
TCB 1/2" Tri-clamp*
TCC 1" Tri-clamp*

PESB

045

Removal Ratings

010 0.10 μ m
020 0.20 μ m
045 0.45 μ m
X20 0.20+0.20 μ m
B10 0.10+0.20 μ m
C10 0.10+0.45 μ m
C20 0.20+0.45 μ m
D45 0.45+0.65 μ m

* For C610/C620 Size
** Not available for C80

Note: This ordering information is a guide for selecting filter element specifications. For other special connections or installation details, please contact MS.

MEDCAP EFFICIENT STERILE REMOVAL SERIES

MedCap-UTC PTFESG Sterile-Grade Capsule Filter with High Retention Efficiency and High Flux

DESCRIPTION

MedCap-UTC PTFESG series capsule filter is made of high porosity hydrophobic PTFE membrane, which has a broad range of chemical tolerance and can provide stable and reliable terminal sterilization filtration performance. Its removal ratings of typical bacteria in the industry have been verified by batches, and its sterilization ability LRV >7.

MedCap-UTC PTFESG series capsule filter is available in a wide range of cages and connections, and can provide double-layer PTFE filter membrane. The double-layer filter membrane can provide a longer service life with reliable sterilization ability of the filter element through special design. It is widely used in food and beverage and bio-pharmaceutical.



FEATURES

- ☆ Broad chemical tolerance
- ☆ Proven sterilization efficiency
- ☆ Double-layer membrane can be provided
- ☆ High reliability

APPLICATIONS

- ☆ Sterilization filtration of compressed air, nitrogen
- ☆ Sterilization of fermentation tank, batching tank and breathing filter
- ☆ Filtration of aseptic packaging gas
- ☆ Sterilization filtration of solvents and disinfectant

TECHNICAL PARAMETERS

Materials of Construction	Filter Membrane	PTFE
	Support/Drainage	PP
	Core/Cage/End Cap	PP
	Capsule Shell	PP
Removal Ratings	0.10µm、0.20µm、0.45µm、0.20+0.45µm、0.20+0.65µm、0.20+0.80µm	
Filtration Area	C80/ C150 / C300 / C610 / C620	450-840cm ² / 1200-1400cm ² /2400-2800cm ² / 5500-6000cm ² /11000-12000cm ²
Operating Conditions	Maximum Operating Differential Pressure	0.5MPa@25℃ 0.1MPa@80℃
	Maximum Operating Temperature	80℃
	Sterilization Method	Autoclave steam sterilization: 30min@121℃ Hot water disinfection: 30min@90℃
Biological Safety	Bio-compatibility	Meet USP <87> in vitro Cytotoxicity Test Meet the criteria of the USP <88> Biological Reactivity Test for Class VI-121℃ plastics
	Endotoxins	<0.25EU/ml

ORDERING INFORMATION

C80

Capsule Filter Size

C80
C150
C300
C610
C620

N2

Inlet/Outlet

N2 1/4" NPT
N3 3/8" NPT
N4 1/2" NPT
H1 1/8" Hosebarb**
H2 1/4" Hosebarb
H3 3/8" Hosebarb
H4 1/2" Hosebarb*
HS 1/4"-1/2" Stepped Hosebarb
HC 1/4"-3/8" Stepped Hosebarb
TCA 1 1/2" Tri-clamp*
TCB 1/2" Tri-clamp*
TCC 1" Tri-clamp*

PTFESG

045

Removal Ratings

010 0.10µm
020 0.20µm
045 0.45µm
X20 0.20+0.20µm
C20 0.20+0.45µm
D20 0.20+0.65µm
E20 0.20+0.80µm

* For C610/C620 Size

** Not available for C80