CSK series
Capsule Filters

CSK series - Asymmetrical PES membrane Capsule Filters

Description and use

- The PES membrane capsule utilizes single layer hydrophilic polyethersulfone membrane. lt offers broad chemical compatibility, high flow rate and low extractable.
- Polyethersulfone is particularly suited for the filtration of products that contain substances that adsorb to the media. The lower binding characteristics of polyethersulfone make it a good choice for filtration of valuable protein solutions such as vaccines and biologicals.

Typical Applications

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

Fitting Option

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

Maximum Operating Conditions

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

Toxicity

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

Filter Area

- 500 cm^2
- 1000 cm^2
- 1500 cm^2
- 2100 cm^2

Construction of Materials

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

Food Safety Compliance

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

Capsule Integrity Test Specifications

Gen Purpose

Pore size	Min.Bubble point
0.04 µm	2.3 barg@22°C/IPA
0.1 µm	4.8 barg@22°C
0.2 µm	3.1 barg@22°C
0.45 µm	1.7 barg@22°C
0.65 µm	1.3 barg@22°C
0 .8 µm	1.2 barg@22°C
1.2 µm	0.8 barg@22°C

Low Bio

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

Ster Grade

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

ORDERING INFORMATION

Product ype	Membrane Type	Membrane pore size	Application	Sterilization	Size	Fittings in / out	Vent/ Drain	Revision
CSK = Capsule Filter	PS = PES	**Application G**	G = Gen Purpose	N = Not Sterile	05= 500 cm^2	4NM=1/4"NPT-M	NN = None	0 = Bag label
		0010 = 0.1µm	B = Low Bio		10 = 1000cm^2	8NM = 3/8" NPT-M		1 = Housing Label
		0020 = 0.2µm	S = Ster Grade		15 = 1500cm^2	2NM = 1/2" NPT-M		
		0045 = 0.45µm			21 = 2100cm^2	8NF = 3/8" NPT-F		
		0065 = 0.65µm				4SL = 1/4" Swagelok		
		0080 = 0.8µm				5SL = 5/16" Swagelok		
		0100 = 1.2µm				8SL = 3/8" Swagelok		
		Application B				4CM = 1/4" CPC-PLC-M		
		0020 = 0.2µm				4HB = 3/4" HB		
		0045 = 0.45µm				8HB = 3/8" HB		
		0065 = 0.65µm				48B = 1/4"-3/8" HB		
		Application S				1TC = 1" TC		
		02X4 = 0.2/0.04µm						
		04X4 = 0.45/0.04µm						
		0402 = 0.45/0.2µm						
		0602 = 0.65/0.2µm						
		0604 = 0.65/0.45µm						
		0804 = 0.8/0.45µm						
		0201 = 0.2/0.1µm						
		0401 = 0.45/0.1µm						

CSK series - Hydrophobic ePTFE membrane Capsule Filters

Description and use

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

Benefits

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

Typical Application

- Sterile air feed
- Chemicals
- Pharmaceuticals
- Solvent

Fitting Option

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

Toxicity

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

Cartridge Integrity Test Specifications

Low Bio

Pore size	0.2 mm
Subbie Point	≥1. 4 barg (IPA/ Water)
Water intrusion	≤0.17 ml/min@2500 mbar/2100cm2, 2°C22°C

Gen Purpose

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

Capsule Integrity

- Minimum burst pressure: 123.5 psi (8.5 barg)

Construction Materials

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

Sanitization/Sterilization

- Autoclavable

Filter Area

- 500 cm^2
- 1000 cm^2
- 1500 cm^2
- 2100 cm^2

Food Safety Compliance

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

Maximum Operating Conditions

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

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

CSK series - Polypropylene membrane Capsule Filters

Description and use

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

Benefits

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

Typical Application

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

Construction Materials

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

Sanitization/Sterilization

- Autoclavable
- Hot water

Toxicity

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

Capsule Integrity

- Minimum burst pressure: 123.5 psi (8.5 barg)

Filter Area

- 500 cm^2
- 1000 cm^2
- 1500 cm^2
- 2100 cm^2

Food Safety Compliance

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

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

Maximum Operating Conditions

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

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