

CAPSFLOW





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CIK series - Asymmetrical PES membrane General Application Capsule Filters



Capsflow CIK series is family of full size capsule filters with Staubli connection at the vent, which enables in-line integrity test.

The PES membrane capsule utilizes single layer hydrophilic polyethersulfone membrane. It 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

Vent/Drain Option

- Staubli
- Stepped hose barb

Fitting Option

- 1.5" TC
- 1/2" Hose Barb
- 3/4" Hose Barb

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 for biological safety per USP Class VI -121C° for plastics.

Filter Area

- | Size | Filtration Area |
|--------|-------------------------|
| • 2.5" | = 1400 cm ² |
| • 5" | = 2500 cm ² |
| • 10" | = 6000 cm ² |
| • 20" | = 12000 cm ² |
| • 30" | = 18000 cm ² |
| • 40" | = 24000 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.

Cartridge Integrity Test Specifications

Water wetted membrane

Pore size	Min. Bubble point	Diffusive Flow/10"
0.04 µm	2.3 barg @ 22 °C/ IPA	≤ 25 ml/ 1.7 barg
0.1 µm	1.7 barg @ 22 °C/ IPA	≤ 25 ml/ 1.3 barg
0.2 µm	3.5 barg @ 22 °C	≤ 25 ml/ 2.8 barg
0.45 µm	2.3 barg @ 22 °C	≤ 25 ml/ 1.7 barg
0.65 µm	1.6 barg @ 22 °C	≤ 25 ml/ 1.0 barg
0.8 µm	1.3 barg @ 22 °C	≤ 25 ml / 0.8 barg
1.2 µm	0.9 barg @ 22 °C	≤ 25 ml/ 0.6 barg

ORDERING INFORMATION

Product Type	Membrane Type	Membrane pore size	Application	Sterilization	Size	Fittings In/Out	Vent/Drain	Revision
CIK = Capsule InT Filter	PS = PES	0004 = 0.04 µm 0010 = 0.1 µm 0020 = 0.2 µm 0045 = 0.45 µm 0065 = 0.65 µm 0080 = 0.80 µm 0120 = 1.2 µm	G = Gen Purpose	N = Not Sterile	SS = 2.5" LL = 5" TE = 10" TW = 20" TH = 30" FO = 40"	5TC = 1.5" TC 2HB = 1/2" HB 4HB = 3/4" HB T2B = 1.5" TC/ 1/2" HB T4B = 1.5" TC/ 3/4" HB 2BT = 1/2" HB/ 1.5 TC 2B4 = 1/2" HB/ 3/4" HB 4BT = 3/4" HB/ 1.5" TC 4B2 = 3/4" HB/ 1/2" HB	SS = St/St HH = HB/HB SH = St/HB HS = HB/St	0 = Rev.0



CAPSFLOW

CIK series - Hydrophobic ePTFE membrane Bio-burden Reduction Capsule Filters

Capsflow CIK series is family of full size capsule filters with Staubli connection at the vent, which enables in-line integrity test.

The PTFE membrane Bio-burden reduction capsule utilizes single layer hydrophobic PTFE membrane. It 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

Cartridge Integrity Test Specifications

Pore size	0.2 mm
Bubble Point	≥ 1.2 barg (IPA/ Water)
Water intrusion	≤0.37 ml/min @ 2500 mbar/10", 22 °C
Diffusive Flow	10 ml/min @ 800 mbar/ 10", 22 °C

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

Size	Filtration Area
2.5"	1500 cm ²
5"	2700 cm ²
10"	6300 cm ²
20"	12600 cm ²
30"	18900 cm ²
40"	25200 cm ²



Fitting Option

- 1.5" TC
- 1/2" Hose Barb
- 3/4" Hose Barb

Vent/Drain Option

- Staubli
- Stepped hose barb

Toxicity

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

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
CIK = Capsule In T Filter	PT = PTFE phobic	0020 = 0.2µm	B = Low Bio	N = Not Sterile	SS = 2.5" LL = 5" TE = 10" TW = 20" TH = 30" FO = 40"	5TC = 1.5" TC 2HB = 1/2" HB 4HB = 3/4" HB T2B = 1.5" TC/ 1/2" HB T4B = 1.5" TC/ 3/4" HB 2BT = 1/2"HB/ 1.5TC 2B4 = 1/2"HB/ 3/4"HB 4BT = 3/4"HB/ 1.5"TC 4B2 = 3/4"HB/ 1/2"HB	SS = St/St HH = HB/HB SH = St/HB HS = HB/St	0 = Rev.0



CAPSFLOW

CIK series - Polypropylene membrane General Application

CIKPP Capsule Filters with depth structure of polypropylene media. It 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 Applications

- 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
- Inner Core: Polypropylene
- Outer Cage: Polypropylene
- Sealing Method: Thermal Bonding

Sanitization/Sterilization

- Autoclavable
- Hot water

Toxicity

All plastic parts 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

- | Size | Filtration Area |
|------|-------------------------|
| 2.5" | = 1480 cm ² |
| 5" | = 2650 cm ² |
| 10" | = 5500 cm ² |
| 20" | = 11000 cm ² |
| 30" | = 16500 cm ² |
| 40" | = 22000 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	Vent/Drain	Revision
CIK = Capsule InT Filter	PP = Polypropylene	0060 = 0.6 µm	G = Gen Purpose	N = Not Sterile	SS = 2.5"	5TC = 1.5" TC	SS = St/St	0 = Rev.0
		0100 = 1.0 µm	P = Premier		LL = 5"	2HB = 1/2" HB	HH = HB/HB	
		0300 = 3.0 µm			TE = 10"	4HB = 3/4" HB	SH = St/HB	
		0500 = 5.0 µm			TW = 20"	T2B = 1.5" TC/ 1/2" HB	HS = HB/St	
		0700 = 7.0 µm			TH = 30"	T4B = 1.5" TC/ 3/4" HB		
		1000 = 10.0 µm			FO = 40"	2BT = 1/2"HB/ 1.5" TC		
		2000 = 20.0 µm				2B4 = 1/2"HB/ 3/4" HB		
		3000 = 30.0 µm				4BT = 3/4"HB/ 1.5" TC		
		5000 = 50.0 µm				4B2 = 3/4"HB/ 1/2" HB		

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Steaming in Place Capsule Filter CXK series

Description and use

The GVS CXK Capsflow Steaming in Place Capsule Filters have a standard filter sealed in a robust plastic housing, which remains high-strength and integral at a harsh applications. Typically Steaming in Place (SIP) sterilization. Capsflow filters are manufactured under criteria of certified Quality management system ISO 9001. All filters are integrity tested during manufacture to meet the set requirements. Materials of construction comply with FDA regulations for food and beverage contact use.

Benefits

- Purpose-designed for SIP
- Cost-saving
- Easy connection with sanitary flange
- On-line connection to automatic integrity tester Available in multiple choice of media and ratings

Typical Application

- Sterile filtration of air and liquid in pharmaceutical and biological products
- Sterile air feed

Construction Materials

- Hydrophobic Filter membrane: PTFE,
- Hydrophilic Filter membrane: PES, NYLON
- Media Support: Polypropylene
- End Caps: Polypropylene
- Inner Core: Polypropylene
- Outer Cage: Polypropylene
- Filter sealing without glue in housing

Traceability

Each capsule is marked with a unique part number, batch number and serial number to enable full traceability.

Toxicity

All components meet the specifications for biological safety per USP class VI 121 °C for plastic.

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. Rohs 2011/65/EU compliance.



Size

- 2.5" (84 mm)
- 5" (159 mm)

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Filtration Area

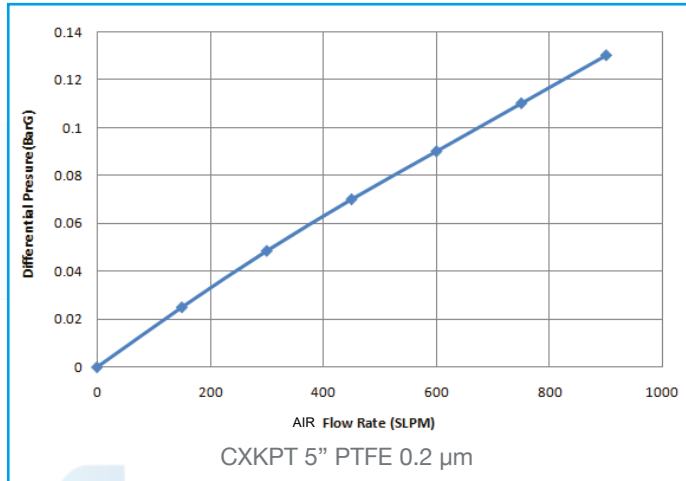
CXKPT (PTFE), CXKPS (PES)

- 2.5" : 600 cm²
- 5" : 1700 cm²

CXKNY (NYLON)

- 2.5" : 700 cm²
- 5" : 2100 cm²

Typical Air Flow Rate



Maximum Operating Conditions

CXKPT (PTFE) 0.2 µm:

- Maximum Pressure: 5.8 barg @ 40 °C
- Maximum Differential Pressure: 5 barg @ 40 °C

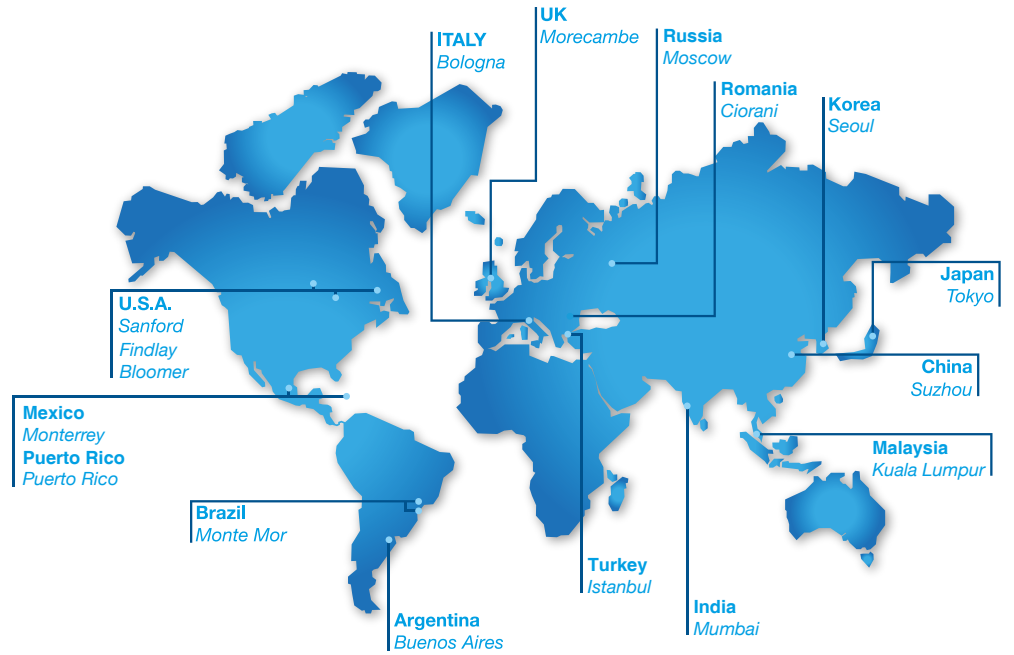
Performance data

	CXKPT			CXKPS			CXKNY			
Filter membrane	PTFE (Hydrophobic)			PES (Hydrophilic)			NYLON (Hydrophilic)			
Membrane pore size	0,05 µm	0,1 µm	0,2 µm	0,45 µm	0,1 µm	0,2 µm	0,45 µm	0,1 µm	0,2 µm	0,45 µm
Flow rate 2,5" Liquid 1 cP *	2lpm @ 6psid	3.1lpm @ 6psid	5.9lpm @ 6psid	7.5lpm @ 5psid	5lpm @ 5psid	5lpm @ 2.6psid	4lpm @ 8.5psid	5lpm @ 5.5psid	5lpm @ 3.5psid	
Flow rate 5" Liquid 1 cP *	5lpm @ 6.5psid	5lpm @ 4psid	5lpm @ 1.9psid	5lpm @ 4psid	5lpm @ 2.2psid	5lpm @ 1.3psid	5lpm @ 4.6psid	5lpm @ 3.4psid	5lpm @ 2.8psid	
Max Operating Parameter Pressure Forward/Reverse (bar)	6.5/3.5	6.5/3.5	6.5/3.5	6.5/3.5	6.5/3.5	6.5/3.5	6.5/3.5	6.5/3.5	6.5/3.5	
Integrity Test specification Bubble point (bar)	2.7 (IPA)	1.6 (IPA)	1.4 (IPA)	0.5 (IPA)	1.8 (IPA)	3.6 (WATER)	2.6 (WATER)	4.5 (WATER)	3.3 (WATER)	1.9 (WATER)
N. SiP sterilization cycles	100 cycles @ 126 °C			50 cycles @ 126 °C			50 cycles @ 126 °C			

* CXKPT (PTFE - Hydrophobic) IPA Wetted membrane

ORDERING INFORMATION

Product Type	Membrane Type	Membrane pore size	Application	Sterilization	Size	Fittings in / out	Vent/Drain	Revision
CXK = Capsule SIP Filter	PT = PTFE phobic PS = PES NY = NYLON	0005 = 0.05µm (PT only) 0010 = 0.1µm 0020 = 0.2µm	X = Steaming in place	N = Not Sterile	SS = 2.5" LL = 5"	2TC = 2" TC	SS = St/St HH = HB/HB SH = St/HB HS = HB/St	0 = Rev.0



WORLDWIDE

EUROPE

Italy Office
Headquarters
GVS S.p.A.
Via Roma 50
40069 Zola Predosa (BO) - Italy
Tel. +39 051 6176311
gvs@gvs.com

Russia
GVS Russia LLC.
Profsoyuznaya Street, 25-A, office 102
117418, Moscow
Russian Federation (Russia)
Tel. +7 495 0045077
gvsrussia@gvs.com

United Kingdom
GVS Filter Technology UK
Vickers Industrial Estate
Mellishaw Lane, Morecambe
Lancashire LA3 3EN
Tel. +44 (0) 1524 847600
gvsuk@gvs.com

Romania
GVS Microfiltrazione srl
Sat Ciorani de Sus 1E - Comuna Ciorani
Prahova România
Tel. (+40) 244 463044
gvsro@gvs.com

Turkey
GVS Türkiye
Nidakule Merdivenköy Mahallesi
Bora Sokak No:1 Kat:7 - 34732 Istanbul
Tel. +90 216 504 47 67
gvsurkey@gvs.com

ASIA

China
GVS Technology (Suzhou) Co., Ltd.
Fengqiao Civil-Run Sci-Tech Park,
602 Changjiang Road,S.N.D.
Suzhou, China 215129
Tel. +86 512 6661 9880
gvschina@gvs.com

GVS YIBO Medical Devices Co. Ltd.
17, Zhongshan East - Yuyao city,
315403 Zhejiang Province, China
Tel. +86 574 6257 5697

Japan
GVS Japan K.K.
KKD Building 4F, 7-10-12 Nishishinjuku
Shinjuku-ku, Tokyo 160-0023 Japan
Tel. +81 3 5937 1447
gvsjapan@gvs.com

Korea
GVS Korea Ltd
#315 Bricks Tower
368 Gyungchun-ro(Gaun-dong),
Namyangju-si, Gyunggi-do,
Tel: +82 31 563 9873
gvsukorea@gvs.com

India
GVS Filter India Pvt Ltd
Unit No 35 & 36 on First Floor
Ratna Jyot Industrial Premises Irla Lane,
Irla Vile Parle, Mumbai 400056, India

Malaysia
GVS Filtration Sdn.Bhd
Lot No 10F-2B, 10th Floor, Tower 5 @ PFCC
Jalan Puteri 1/2, Bandar Puteri
47100 Puchong, Selangor, Malaysia

AMERICA

U.S.A.
GVS North America
63 Community Drive
Sanford, ME 04073 - USA
Tel. +1 866 7361250
gvsusa@gvs.com

GVS Filtration Inc.
2150 Industrial Drive
Findlay, OH. 45840 - USA
Tel. +1.419.423.9040
gvsfiltration@gvs.com

2200 W 20th Avenue
Bloomer, WI 54724 - USA
Tel. +1.715.568.5944
gvsfiltration@gvs.com

Puerto Rico
GVS Puerto Rico, LLC
98 Carr 194 - Fajardo,
Puerto Rico, 00738-2988, USA
Tel. +1.787.355.4100
gvspuertorico@gvs.com

México
GVS Filter Technology de Mexico
Universal No. 550, Ynmsa Aeropuerto Apodaca
Industrial Park, Ciudad Apodaca, Nuevo León,
C.P. 66626 - México
Tel. +52 81 2282 9003
gvmex@gvs.com

Argentina
GVS Argentina S.A.
Francisco Acuña de Figueroa 719 Piso:11 Of: 57
1416 Buenos Aires - Argentina
Tel. +54 11 48614750
gvsarg@gvs.com

Brazil
GVS do Brasil Ltda.
Rodovia Conego Cyriaco Scaranello Pires 251
Jardim Chapadão, CEP 13193-580
Monte Mor (SP) - Brasil
Tel. +55 19 38797200
gvs@gvs.com.br

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