



# CAPSFLOW CATALOG





# CAPSFLOW INDEX



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# PP Capsule Filters

## Description and use

PP capsule filters are composed of polypro-pylene membrane. The product shows excellent chemical compatibility, high throughput, low pressure drop characteristics, which have a wide range of applications such as pre-filtration of vaccine production and pharmaceutical water, blood and plasma component separation etc.



## Typical Applications

- Vaccine pre-filtration
- Pharmaceutical water pre-filtration
- Blood and plasma component separation

## Features

- High efficiency, and high throughput
- Excellent chemical compatibility

## Dimensions

Length	2"(65mm)
	4"(103mm)
	5"(118mm)
	10"(266mm)
OD	87mm
Filtration area	0.08m <sup>2</sup> /2"
	0.14m <sup>2</sup> /4"
	0.17m <sup>2</sup> /5"
	0.44m <sup>2</sup> /10"

## Construction of Materials

- Filter Media: PP
- Media Support: PP
- End Caps: PP
- Inner Core: PP
- Outer Cage: PP
- Sealing Material: Silicone

## Use Condition

Max. Operating DP      5Bar(73psi) @ 20°C (68°F)

## Quality

- Comply with 21CFR210.3(b)(6)on "Non fiber" release regulations
- Biocompatibility:Comply with USP<88>
- Material of construction comply with FDA regulations for food and beverage contact use as detailed in the USCodeof FederalRegulations 21CFR
- Manufactured in a clean room environment



1/2"-5/8" Hose Barb



3/4"Tri-Clamp



1.5"Tri-Clamp

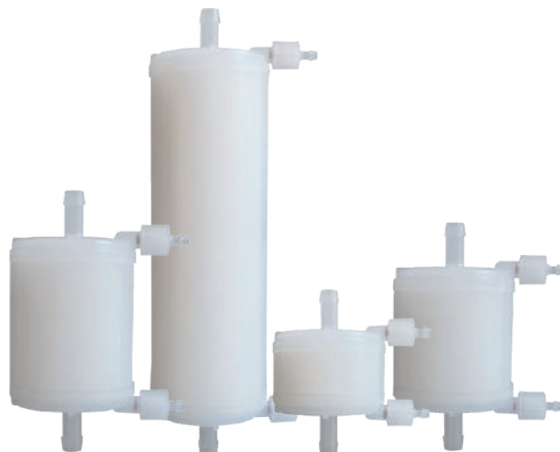
## ORDERING INFORMATION

Product Type	Membrane Type	Membrane pore size	Application	Sterilization	Size	Fittings	Vent/Drain	Revision
CIS = Capsule InT Filter SL	PP = Polypropylene	0010=0.1µm 0022=0.22µm 0045=0.45µm 0100=1µm 0300=3µm 0500=5µm 1000=10µm 2000=20µm 5000=50µm	C = Chem P = Premier	N = Not Sterile	XS = 2" SL = 4" LL = 5" TE = 10"	2B5 = 1/2" HB/5/8" HB 5TC = 1.5" TC T34 = 3/4" Tri-Clamp	HH = HB/HB	0 = Bag label 1 = Housing label

# PES Capsule Filters

## Description and use

PES Capsule Filters are researched and developed for sterile filtration process with reliable and stable sterilization performance. It's designed with external vent valve structure that can remove Gas-liquid quickly and efficiently. Its built-in sterile grade hydrophilic polyethersulfone (PES) membrane has the characteristics of high flow rate, high contaminant holding capacity and excellent chemical compatibility, ensuring its wide range of applications such as bioburden and bacteria removal in the culture medium, intermediate solution, buffers and other upstream and downstream processes. The PES Capsule Filters can help shorten process time, reduce production costs and improve economic benefits.



## Features

- Reliable bacteria retention abilities
- High flow rate and large filtration area
- Excellent chemical compatibility
- Excellent ability to deal with plugging liquid
- 100% Integrity Test

## Typical Application

- Culture medium sterile filtration
- Buffer filtration
- Intermediate products filtration
- Pre-ultrafiltration filtration
- Terminal products sterile filtration

## Construction Materials

- Filter Membrane: PES
- Membrane Media Support: Polypropylene
- Capsule: Polypropylene
- Inner Core: Polypropylene
- Outer Cage: Polypropylene
- Sealing Material: Silicone

## Bio-safety

Endotoxin Comply with USP<85>, endotoxin content <0.25EU/ mL

Biocompatibility Comply with USP<87>USP<88>

## Performance

Max. Operating Temperature	50 °C
Max. Operating DP	5Bar@20°C
	3Bar@50°C

## Quality

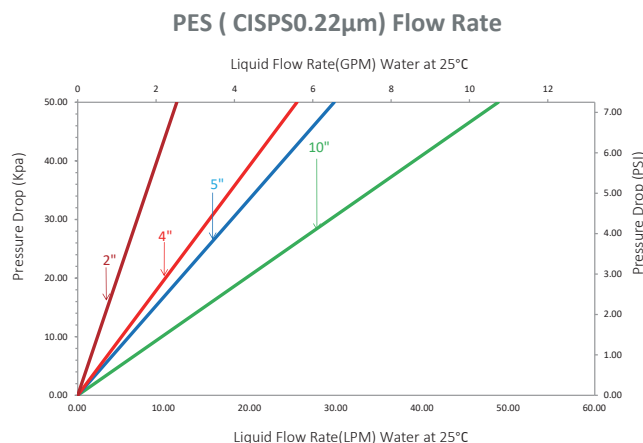
Fiber release Comply with 21CFR210.3(b)(6) on "Non fiber" release regulations

### Bacteria Retention

According to ASTM test method, it passed  $10^7$ CFU/cm<sup>2</sup> Defective Pseudomonas (ATCC19146) retention test

Autoclaving 121°C -30min-3Cycles

Gamma irradiation 35 kGy



# Integrity Test

## CISPS

Removal rating	Bubble point $\geq$ (water)	Diffusion flow $\leq$ (10"Ø69mm)
0.22 $\mu$ m	3.2 Bar	25ml/min@2.76bar

## CIDPS

Removal rating	Bubble point $\geq$ (water)	Diffusion flow $\leq$ (10"Ø69mm)
0.22+0.22 $\mu$ m	3.2Bar	20ml/min@2.76bar
0.45+0.22 $\mu$ m	3.2Bar	25ml/min@2.76bar
0.65+0.22 $\mu$ m	3.2Bar	25ml/min@1.70bar
0.65+0.45 $\mu$ m	2.1Bar	25ml/min@1.70bar



2in(HB)

Filtration Area: 0.11m<sup>2</sup>



4in(HB)

Filtration Area: 0.22m<sup>2</sup>



5in(HB)

Filtration Area: 0.27m<sup>2</sup>



10in(HB)

Filtration Area: 0.71m<sup>2</sup>



2in(TC)



4in(TC)



5in(TC)



10in(TC)

## ORDERING INFORMATION

Product Type	Membrane Type	Membrane pore size	Application	Sterilization	Size	Fittings	Vent/Drain	Revision
CIS = Capsule InT Filter SL	PS = PES	0022=0.22 $\mu$ m	***S = Ster Grade	N = Not Sterile S = Sterile-R	XS = 2" SL= 4" LL = 5" TE = 10"	HBA = H B 5TC = 1.5" TC T34 = 3/4"Tri-Clamp	HH = HB/HB	0 = Bag label 1 = Housing label

## ORDERING INFORMATION

Product Type	Membrane Type	Membrane pore size	Application	Sterilization	Size	Fittings	Vent/Drain	Revision
CID = Capsule InT Filter DL	PS = PES	2222=0.22/0.22 $\mu$ m 0422=0.45/0.22 $\mu$ m 0622=0.65/0.22 $\mu$ m 0604=0.65/0.45 $\mu$ m	***S = Ster Grade	N = Not Sterile S = Sterile-R	XS = 2" SL= 4" LL = 5" TE = 10"	HBA = H B 5TC = 1.5" TC T34 = 3/4"Tri-Clamp	HH = HB/HB	0 = Bag label 1 = Housing label

# PTFE Capsule Filters

## Description and use

PTFE capsule filters are designed for sterile filtration processes and have reliable and stable sterilization performance, which is very suitable for small batch validation and laboratory critical validation.

PTFE is composed of hydrophobic polytetrafluoroethylene (PTFE) membrane. The product shows excellent resistance to organic, inorganic chemical corrosion and natural hydrophobic characteristics, which have a wide range of applications such as: sterile filtration of compressed gas, vent air, strong corrosive and oxidizing liquids, organic solvents etc.



## Typical Applications

- Compressed gas or vent air sterilization filtration
- Solvent and disinfectant filtration
- Strong corrosive and oxidizing liquid sterilization filtration
- Inlet and outlet filtration of single-use bioreactor
- Inlet and outlet filtration of single-use mixing and storage bag

## Dimensions

Length / Filtration area	2"(65mm) / 0.12m <sup>2</sup>
	4"(103mm) / 0.21m <sup>2</sup>
	5"(118mm) / 0.26m <sup>2</sup>
	10"(266mm) / 0.65m <sup>2</sup>
OD	87mm

## Quality

- Comply with 21CFR210.3(b)(6) on "Non fiber" release regulations
- According to ASTM test method, it passed 10<sup>7</sup>CFU/cm<sup>2</sup> *Brevundimonas diminuta* (ATCC19146) retention test
- Endotoxin: Comply with USP<85>, endotoxin content <0.25EU/ mL
- Biocompatibility: Comply with USP<87>USP<88>
- Autoclaving: 121 °C -30min-5 Cycles

## Features

- Validated and reliable bacteria retention capability
- High flow rate and low extractables
- Available in various connector types
- Excellent chemical compatibility
- Resistance to corrosion, oxidation, organic solvents
- 100% integrity tested

## Construction of Materials

- Filter Media: Hydrophobic PTFE
- Media Support: PP
- End Caps: PP
- Inner Core: PP
- Outer Cage: PP
- Sealing Material: Silicone

## Use Condition

Max. Operating DP 2.5Bar(36psi) @ 20°C (68°F)

## Integrity Test Parameters(with PTB)

Bubble Point (BP) Water ≥1100mbar@IPA: Water 60:40  
Intrusion (WIT) ≤1 ml / min@2760mbar



1/2"-5/8" Hose Barb



3/4"Tri-Clamp



1.5"Tri-Clamp



## ORDERING INFORMATION

Product Type	Membrane Type	Membrane pore size	Application	Sterilization	Size	Fittings	Vent/Drain	Revision
CIS = Capsule InT Filter SL	PT = PTFE phobic	0010=0.1µm 0022=0.22µm 0045=0.45µm 0100=1µm	S = Ster Grade	N = Not Sterile E = Sterile-EtO	XS = 2" SL= 4" LL = 5" TE = 10"	2B5= 1/2"HB/5/8" HB 5TC = 1.5" TC T34 = 3/4"Tri-Clamp	HH = HB/HB	0 = Bag label 1 = Housing label

## ORDERING INFORMATION

Product Type	Membrane Type	Membrane pore size	Application	Sterilization	Size	Fittings	Vent/Drain	Revision
CID = Capsule InT Filter DL	PT = PTFE phobic	2222=0.22/0.22µm	S = Ster Grade	N = Not Sterile E = Sterile-EtO	XS = 2" SL= 4" LL = 5" TE = 10"	2B5= 1/2"HB/5/8" HB 5TC = 1.5" TC T34 = 3/4"Tri-Clamp	HH = HB/HB	0 = Bag label 1 = Housing label

# Disc Capsule Filter

## Description and use

Disc capsule filters are made of polytetrafluoroethylene which have excellent resistance to organic and inorganic chemical corrosion properties along with natural hydrophobicity. It can be widely used in sterile ventilation processes such as biotechnology, pharmaceuticals, laboratories etc. It's easy to use and operate, the lightweight design (only 20g) makes the structure very stable and reliable and will not appear hose bending to adversely affect ventilation.



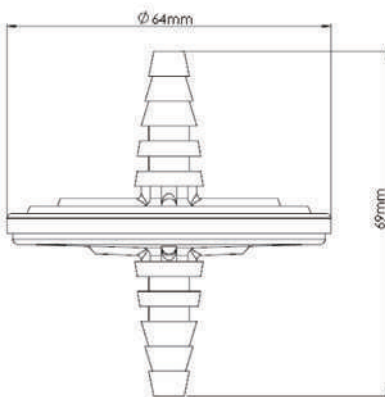
## Typical Applications

- Sterile ventilation of culture containers and CO2 incubators
- Sterile ventilation of fermenters and storage tanks
- Autoclave steam sterilization air exchange
- Removal of gas particles

## Dimensions

Outer Diameter	64mm
Length	69mm
Inlet/Outlet	1/4" - 1/2" HB

## Drawing



## Features

- PTFE components provide broad chemical compatibility
- Natural hydrophobicity, strong resistance property to chemical corrosions
- High flow rate and low extractables
- Lightweight structure, easy to install and dismantle
- 100% Integrity Test

## Construction of Materials

Housing	PP
Media	Hydrophobic PTFE

## Performance

Max. Operating Pressure	3 Bar@20°C
Autoclaving	125°C -30min-60cycles
Filtration Area	20cm <sup>2</sup>

### ORDERING INFORMATION

PN	Pore size	Package	Sterilization
VF50ASPPT002AX01	0.22µm	10/pk	YES
VF50ASPPT004AX01	0.45µm	10/pk	YES
VF50ANPPT002AC01	0.22µm	100/pk	NO
VF50ANPPT004AC01	0.45µm	100/pk	NO

# Capsule Filters

## Description and use

GVS Capsule Filters are ready-to-use units for critical applications and low flows of gases and liquids. All filter units consist of a durable polypropylene housing and various filter media. The housing units are thermal welded and all capsule filters have many connection options. They are manufactured in a cleanroom environment and wrapped in double sealed packaging to avoid any possible contamination.



## Typical Applications

- Pharmaceutical
- Lab use
- Biopharma
- Underground water analysis
- Microelectronics
- Chemical
- Ink-jet
- DNA/RNA extractions

## Features

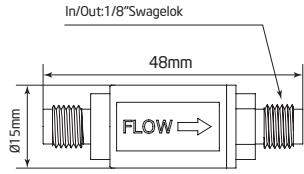
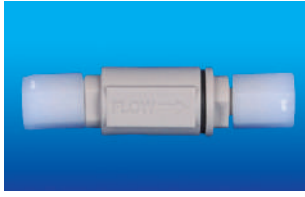
- Multi connections
- Encapsulated Filter
- Robust design and construction
- Choice of filter media options

## Construction of Materials

Media	PP, PES, Hydrophilic PTFE, Hydrophobic PTFE, Nylon 66, GF
Support	PP
Housing	PP
Sealing	Thermal welding

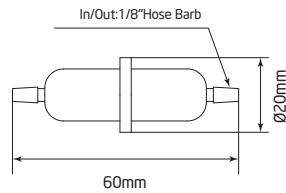
### ORDERING INFORMATION

Product Type	Code	Media	PP	PES	Hydrophilic PTFE	Hydrophobic PTFE	Nylon66	Glass Fiber
CXD=Multi-purp. Capsule Filt.	BDG FCD HAD HDH	G = PP	0010 = 0.1µm	0010 = 0.1µm	0010 = 0.1µm	0001 = 0.01µm	0010 = 0.1µm	0045 = 0.45µm
	CCH FFD HAE HEA	A = PES	0022 = 0.22µm	0022 = 0.22µm	0022 = 0.22µm	0002 = 0.02µm	0022 = 0.22µm	0100 = 1µm
	DCF FFE HAHS HEB	D = Hydrophilic	0045 = 0.45µm	0045 = 0.45µm	0045 = 0.45µm		0045 = 0.45µm	0300 = 3µm
	EBE FFF HAHL HED	PTFE	0100 = 1µm	0065 = 0.65µm			0065 = 0.65µm	0500 = 5µm
	EBF FFI HAJ HFD	T = Hydrophobic	0300 = 3µm	0800 = 0.8µm				1000 = 10µm
	EBI GAB HBA HFE	PTFE	0500 = 5µm	1200 = 1.2µm				2000 = 20µm
	EBG GCA HBB HFJ	C = Nylon 66	1000 = 10µm					
	FBG GCB HBC HGB	S = GF	2000 = 20µm					
	FBI GCE HCC IDBL		3000 = 30µm					
	FAF GFG HCG IDBS		5000 = 50µm					
	FBH HAC XEE							
	FBJ							



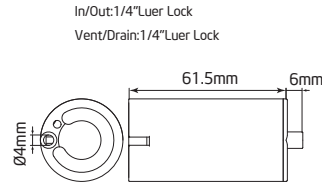
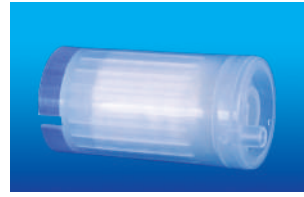
Filtration Area: 1.2cm<sup>2</sup>

Code:BDG



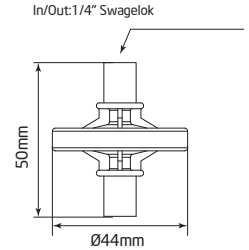
Filtration Area: 10cm<sup>2</sup>

Code:CCH



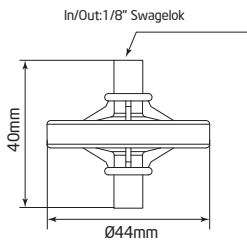
Filtration Area: 27.6cm<sup>2</sup>

Code:DCF



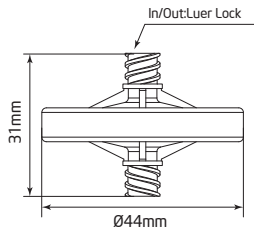
Filtration Area: 7.1cm<sup>2</sup>

Code:EBE



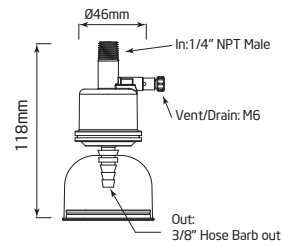
Filtration Area: 7.1cm<sup>2</sup>

Code:EBF



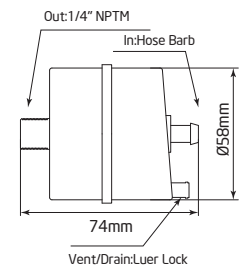
Filtration Area: 7.1cm<sup>2</sup>

Code:EBG



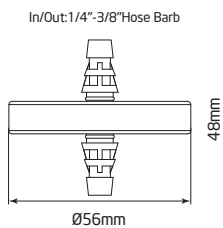
Filtration Area: 161.7cm<sup>2</sup>

Code:EBI



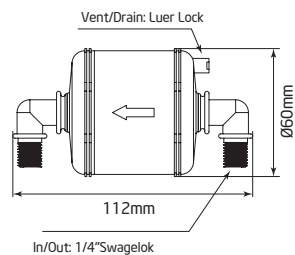
Filtration Area: 291.6cm<sup>2</sup>

Code:FAF



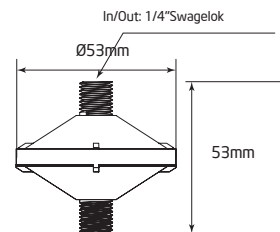
Filtration Area: 13.8cm<sup>2</sup>

Code:FBH



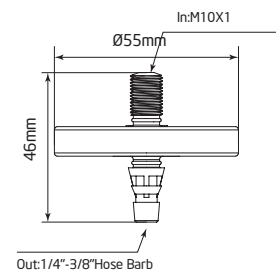
Filtration Area: 478.8cm<sup>2</sup>

Code:FBJ



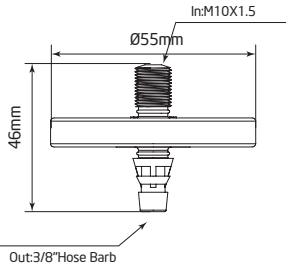
Filtration Area: 11.9cm<sup>2</sup>

Code:FCD



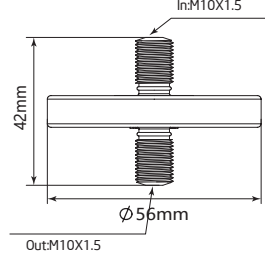
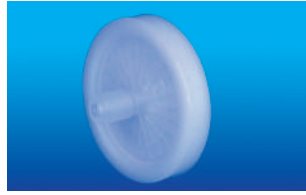
Out: 1/4\"/>

Code:FFD



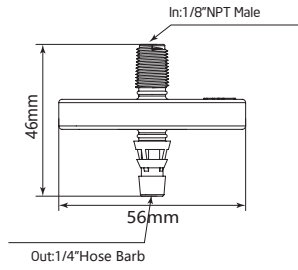
Filtration Area: 13.8cm<sup>2</sup>

Code:FFE



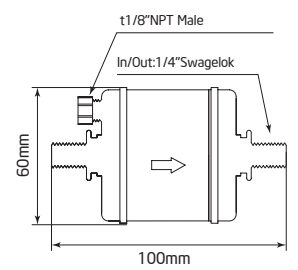
Filtration Area: 13.8cm<sup>2</sup>

Code:FFF



Filtration Area: 13.8cm<sup>2</sup>

Code:FFI

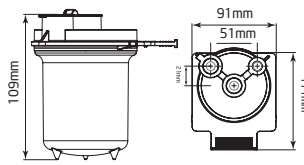


Filtration Area: 345.6cm<sup>2</sup>

Code:GAB



In/Out:O-rings quick connect  
Vent/Drain:O-rings quick connect

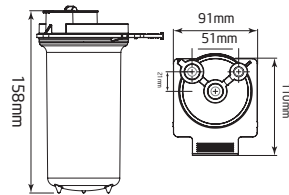


Filtration Area: 930.5cm<sup>2</sup>

Code:GCA

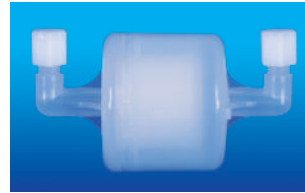


In/Out:O-rings quick connect  
Vent/Drain:O-rings quick connect

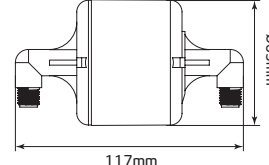


Filtration Area: 1869.1cm<sup>2</sup>

Code:GCB



In/Out: 1/4\"/>

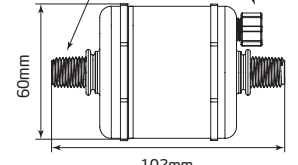


Filtration Area: 519.8cm<sup>2</sup>

Code:GCE

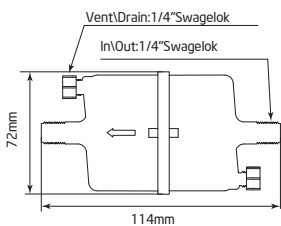


Vent/Drain:1/8\"/>



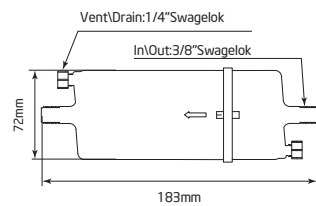
Filtration Area: 345.6cm<sup>2</sup>

Code:GFG



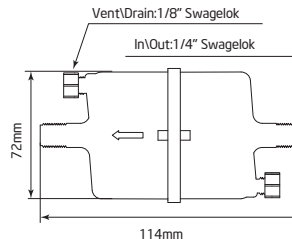
Filtration Area: 914.7 cm<sup>2</sup>

Code:HAC



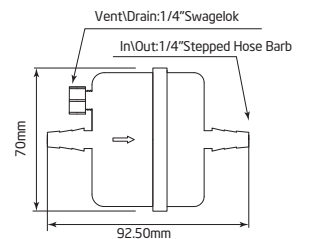
Filtration Area: 1845.3 cm<sup>2</sup>

Code:HAD



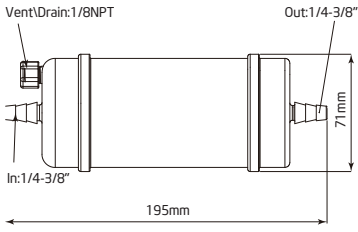
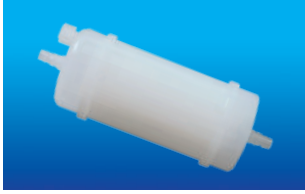
Filtration Area: 914.7 cm<sup>2</sup>

Code:HAE

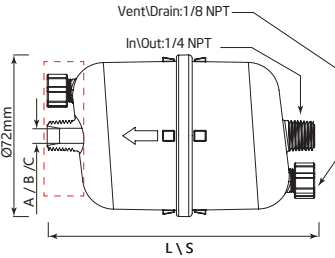


Filtration Area: 465.6 cm<sup>2</sup>

Code:HAHS

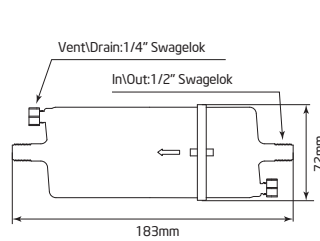


Code:HAHL



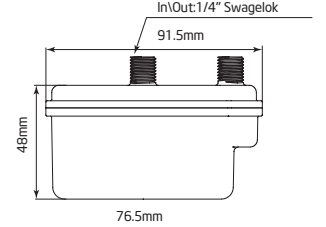
Filtration Area: 1058 cm<sup>2</sup>

Code:HAJ



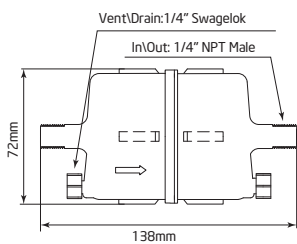
Filtration Area: 1845.3 cm<sup>2</sup>

Code:HBA



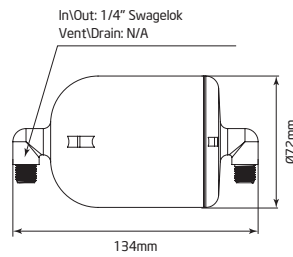
Filtration Area: 486cm<sup>2</sup>

Code:HBB



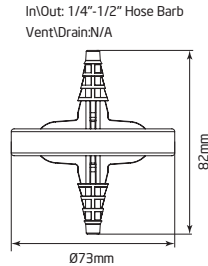
Filtration Area: 1058cm<sup>2</sup>

Code:HBC



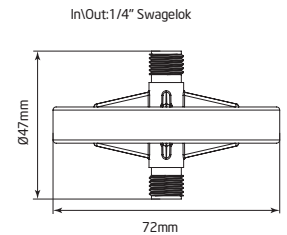
Filtration Area: 930.5cm<sup>2</sup>

Code:HCC



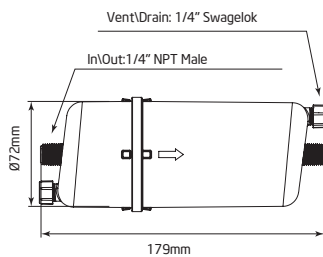
Filtration Area: 26.4cm<sup>2</sup>

Code:HCG



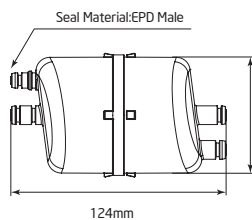
Filtration Area: 26.4cm<sup>2</sup>

Code:HDH



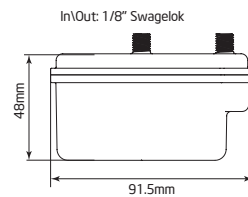
Filtration Area: 2041.6cm<sup>2</sup>

Code:HEA

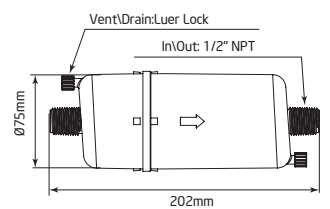


Filtration Area: 914.7 cm<sup>2</sup>

Code:HEB

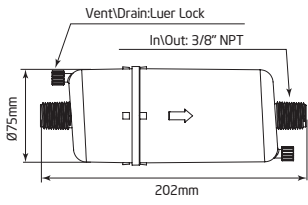
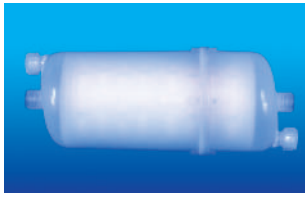


Code:HED



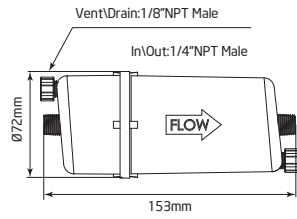
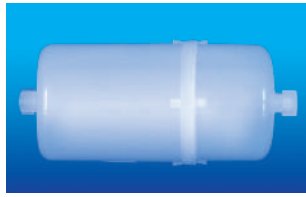
Filtration Area: 1845.3 cm<sup>2</sup>

Code:HFD



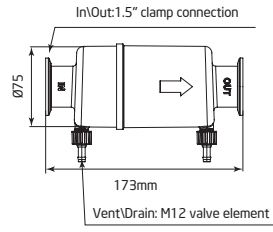
Filtration Area: 1845.3 cm<sup>2</sup>

Code:HFE



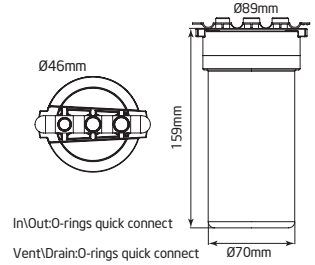
Filtration Area: 1656 cm<sup>2</sup>

Code:HFJ

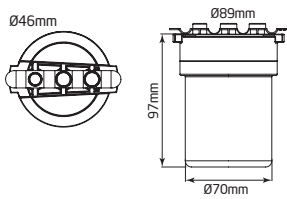


Filtration Area: 1559 cm<sup>2</sup>

Code:HGB

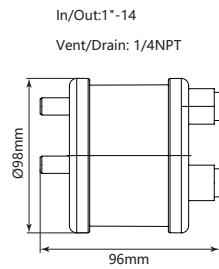


Code:IDBL



In\Out:O-rings quick connect  
Vent\Drain: O-rings quick connect

Code:IDBS



Code:XEE



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## PRODUCT COLLECTION - Capsflow

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