

CAPSULE AND CARTRIDGE FILTERS

CAPSULE FILTERS

STRING BOUND FILTER CARTRIDGE

MELT BLOWN FILTER CARTRIDGE

PLEATED POLYPROPYLENE FILTER CARTRIDGE

PLEATED MEMBRANE FILTER CARTRIDGE



CAPSULE AND CARTRIDGE FILTERS

6.1 CAPSULE FILTERS

CHM® CapFIL capsule filters

CHM® CapFIL capsule filters have been specially designed for simple, quick, and efficient particles or bacteria filtration of aqueous or solvent solutions and gases used in laboratory, pilot-plant and small-scale applications. They are ready to use filters, eliminating the need to disassemble, clean and reassemble filter housings.

CHM® CapFIL Filter Capsules contain no adhesives, binders, or surfactants. Thanks to its serial layer filter design the CapFIL increase their throughput and extend their working life.

All capsules containing membrane media are pre-flushed with purified water to reduce extractables. The all-polypropylene construction provides excellent chemical compatibility and superior flow per unit area as compared to other membrane cartridges.

Features:

- Combine a full range of filter media: Polypropylene, Polyethersulfone (PES) Polytetrafluoroethylene (PTFE) and Nylon membranes and pore size ratings to cover the numerous applications.
- Offer high reliability, security and convenience for small to medium batch processing applications
- All the materials used in the CapFIL manufacturing process meets the USP Class VI Plastics biological reactivity tests.
- Manufactured in a Clean Room Environment

CHM® Capfil PES (polyethersulfone)

CapFIL PES hydrophilic membrane is specially designed to provide efficient filtration for critical aqueous solutions. The CapFIL PES provides absolute bacteria retention, low extractables, low protein binding and an excellent high flow, with low pressure drop in a wide range of biological fluids.

Applications:

- Food and beverage
- Tissue culture media
- Enzymes
- Aqueous solutions
- Chemical and reagent purification
- Immunological
- Cosmetic products

TECHNICAL SPECIFICATIONS

Filter media	Polyethersulfone (PES)
Housing	Polypropylene
Pore size (µm)	0.1, 0.2, 0.45, 0.8, 1.0, 3.0, 5.0
Max. Pressure (bar)	4.1
Biosecurity	According to UPS class VI
Wetting Characteristics	Hydrophilic
Sterilization	By autoclaving (max 134 °C) or gamma-radiation

CHM® Capfil PTFE (polytetrafluoroethylene)

CapFil PTFE is made with hydrophobic PTFE (polytetrafluoroethylene) membranes designed for filtrations of aggressive chemical solutions and organic solvents. It offers minimal extractable in a wide range of fluids and applications.

Applications:

- Venting
- Gas filtration
- Aggressive solvents, corrosive chemicals and gases.
- Solvent resistant capsule
- Water, chemical and reagent purification

TECHNICAL SPECIFICATIONS	
Filter media	PTFE
Housing	Polypropylene
Pore size (µm)	0.1, 0.2, 0.45, 0.8, 1.0, 3.0, 5.0
Max. Pressure (bar)	4.1
Biosecurity	According to UPS class VI
Wetting Characteristics	Hydrophobic
Sterilization	By autoclaving (max 134 °C) or gamma-radiation

CHM® Capfil PP (polypropylene)

CapFil PP is all-polypropylene construction capsule filter (with polypropylene membrane and polypropylene housing). This combination allows to be used with a wide range of solutions at various pH and temperatures.

Applications:

- Cosmetics and personal care
- Sample preparation
- Solvents
- Food and beverages
- Water, chemical and reagent purification
- Inks and pigments

TECHNICAL SPECIFICATIONS	
Filter media	Polypropylene (PP)
Housing	Polypropylene
Pore size (µm)	0.1, 0.2, 0.45, 1.0, 3.0, 5.0, 10.0, 20.0, 50.0
Max. Pressure (bar)	4.1
Biosecurity	According to UPS class VI
Wetting Characteristics	Hydrophobic
Sterilization	By autoclaving (max 134 °C) or gamma-radiation

CHM® Capfil NYLON

CapFil NY is made with nylon membrane combined with a glass microfiber prefilter in a polypropylene housing. This combination allows to be used with heavily loaded and aqueous solutions, including virus suspensions, enzymes, buffers and biological suspensions.

Applications:

- Cosmetics and personal care
- Food and beverages
- Water, chemical and reagent purification
- Virus suspensions
- Enzymes and buffers

TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATIONS	
Filter media	Nylon with glass microfiber prefilter
Housing	Polypropylene
Pore size (µm)	0.1, 0.2, 0.45, 0.8, 1.0, 3.0, 5.0
Max. Pressure (bar)	4.1
Biosecurity	According to UPS class VI
Wetting Characteristics	Hydrophobic
Sterilization	By autoclaving (max 134 °C) or gamma-radiation



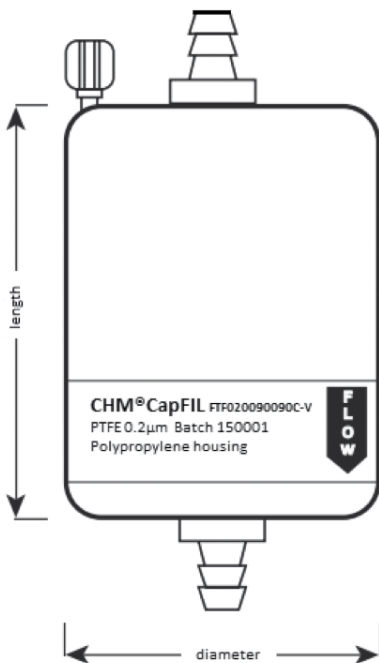
CHM® Capfil order information

The variety of available sizes, mix of connectors, media and housing allow the final user to create the optimum configuration that suits with the required application.

Select the available media between:

- High flow PES to use with both liquids and dry gases
- Hydrophobic PTFE membrane is an excellent choice for aggressive chemical and air/gas stream filtration
- Hydrophilic nylon for aqueous solutions
- Polypropylene depth media for heavy duty fine filtration

ORDER INFORMATION									
CF	XX	XXX	-	XXX	XXX	XX	-	X	X
Capsule	Membrane	Pore size		Diameter	Length	Connectors		Units/box	Sterile
Filter	PE-Polyethersufone	001-0.1 µm		067-67 mm	046-46 mm	A-1/4"NPT male		V-25	-- non sterile
CapFil	TF-PTFE	002-0.2 µm		090-90 mm	090-90 mm	B-1/2"NPT male		K-50	S Sterile
	NY-Nylon	004-0.45 µm			112-122 mm	C-3/8"hose barb		H-100	
	PP-Polypropylene	008-0.8 µm			165-165 mm				
		012-1.2 µm							
		030-3 µm							
		050-5 µm							
		100-10 µm							
		200-20 µm							
		500-50 µm							



e.g. CFPE004067090C-VS is Capfil of polyethersulfone, pore size of 0.45 µm, diameter 67mm, length 90mm, with 3/8" hose barb connector. Pack of 25 units Sterile.



6.2 STRING WOUND FILTER CARTRIDGES

String wound filter cartridges are used in pre-filter applications. They are manufactured with high quality materials (FDA listed), providing high flow rate and low pressure drop. Its enhanced design provides improved dirt-holding capacity over standard fiber wound cartridges.

Features:

- Wide application range and excellent chemical compatibility
- Different media: Polypropylene, Bleached cotton, Glass fiber
- Without odor, foam or adhesives
- Long lifecycle
- Large surface area enhance wound cartridges filtering effect

Applications:

- Food and beverages
- PCB industry
- Chemicals and solvents
- RO water pre-filtration
- Drinking water filter
- Petrochemical
- Electronics and semiconductor

TECHNICAL SPECIFICATIONS

Filter media	Polypropylene microfiber 100%	Bleached cotton	Glass fiber
Core	Polypropylene	SUS	SUS
Length (mm) (*)	250, 500, 750 and 1000		
Micron rating (µm)	1, 5, 10, 20, 30, 50, 75 and 100		
Max. differential pressure (bar)	3.0 at 25°C		
Max. operating temperature (°C)	60	150	150
Inside diameter (mm)	28 and 30		
Outside diameter (mm)	62 and 65		

(*) Other sizes available under request

ORDER INFORMATION

CW	XX	XXX	-	XX	XX	XXX	X	X	-	X
Cartridge	Membrane	Pore size		Internal diameter	Outside diameter	Length	End cap type	Seal material		Units/box
Filter	PP-Polypropylene	001-1 µm		28-28 mm	62-62 mm	250-250 mm	A-222/Flat end	V-Viton		K-50
Wounded	BC-Bleached Cotton	005-5 µm		30-30 mm	65-65 mm	500-500 mm	B-222/Fin	S-Silicon		H-100
		010-10 µm				750-750 mm	C-226/Flat end	E-EPDM		
		020-20 µm				-1M-1000 mm	D-226/Fin	N-NBR		
		030-30 µm								
		050-50 µm								
		075-75 µm								
		100-100 µm								

6.3 MELT BLOWN FILTER CARTRIDGES

Melt blown depth filter cartridges are constructed of pure polypropylene fibers. CHMLAB offers a comprehensive range of melt blown filter elements for almost every fluid application and flow capacity to support manufacturing industries. The term 'Melt blown' means the filter has been manufactured under melt blown technology using a computer controlled process where fibers are collected in a graded pore structure about a molded core.

Features:

- Economical & longer life cycle
- Depth filter cartridges are constructed of 100% pure polypropylene fibers
- Made of FDA grade PP material without binders, additives or lubricants
- Non-fiber releasing, suitable in relative high temperatures
- Available in a wide selection of micron ratings from 1 to 100 µm

Applications:

- Food and beverages
- PCB industry
- Chemicals and solvents
- RO water pre-filtration
- Waste water treatment
- Petrochemical
- Electronics

TECHNICAL SPECIFICATIONS

Filter media	Polypropylene microfiber 100%
Core	Polypropylene
Length (mm)(*)	250, 500, 750 and 1000
Micron rating (µm)	1, 3, 5, 10, 20,30, 50, 75, and 100
Max. differential pressure (bar)	3.0 at 25°C
Max. operating temperature (°C)	70
Inside diameter (mm)	28, 30
Outside diameter (mm)	60, 63

(*) Other sizes available under request

ORDER INFORMATION

CM	XX	XXX	-	XX	XX	XXX	X	X	-	X
Cartridge	Membrane	Pore size		Internal diameter	Outside diameter	Length	End cap type	Seal material		Units/box
Filter	PP-Polypropylene	001-1 µm		28-28 mm	60-60 mm	250-250 mm	A-222/Flat end	V-Viton		K-50
Melt Blown		003-3 µm		30-30 mm	63-63 mm	500-500 mm	B-222/Fin	S-Silicon		H-100
		05-5 µm				750-750 mm	C-226/Flat end	E-EPDM		
		010-10 µm				-1M-1000 mm	D-226/Fin	N-NBR		
		020-20 µm								
		030-30 µm								
		050-50 µm								
		075-75 µm								
		100-100 µm								

6.4 PP PLEATED FILTER CARTRIDGES

Pleated filter cartridges offer superior dirty holding capacity and high removal due to their multiple layered construction. All polypropylene components and thermal bonded manufacturing enable the smallest contaminant extraction and higher durability. CHM® pleated filter cartridges provides a long life cycle to use in critical filtration applications within food, pharma, biotech, etc.

Features:

- Superior holding capacity
- High removal efficiency
- Long life cycle
- 100% polypropylene fibers
- No adhesives and resins minimizes contamination from media extraction

Applications:

- Food and beverages
- Paint and coatings
- Chemicals and solvents
- RO water pre-filtration
- Waste water treatment
- Petrochemical
- Electronics

TECHNICAL SPECIFICATIONS

PLEATED PP Filter Cartridge	
Filter media	Polypropylene microfiber 100%
Core	Polypropylene
Micron rating (µm)	1, 3, 5, 10, 20,30, 50, 75 and 100
Max. Differential pressure (bar)	3.0 at 25°C
Max. Operating Temperature (°C)	70
Inside diameter (mm)	33
Outside diameter (mm)	70
Lenght (mm)(*)	250, 500, 750 and 1000

(*) Other sizes available under request

ORDER INFORMATION

CP	XX	XXX	-	XX	XX	XXX	X	X	-	X
Cartridge	Membrane	Pore size		Internal diameter	Outside diameter	Length	End cap type	Seal material		Units/box
Filter	PP-Polypropylene	001-1 µm		33-33 mm	70-70 mm	250-250 mm	A-222/Flat end	V-Viton		K-50
Pleated PP		002-2 µm				500-500 mm	B-222/Fin	S-Silicon		H-100
		06-6 µm				750-750 mm	C-226/Flat end	E-EPDM		
		08-8 µm				-1M-1000 mm	D-226/Fin	N-NBR		
		001-1 µm					E-Flat gasket			
		002-2 µm					double open			
		003-3 µm								
		005-5 µm								
		010-10 µm								
		020-20 µm								
		030-30 µm								
		050-50 µm								
		060-60 µm								

6.5 PLEATED MEMBRANE FILTER CARTRIDGES

Pleated membrane cartridge filters from CHM® offer the ultimate in product safety and purity for absolute filtration with pore sizes from 0.05 to 5 micron (depending on the media).

Available in the main membranes PTFE, Polyethersulfone (PES), Nylon 66 and PVDF for maximal chemical compatibility. CHM® pleated membrane filters are ideal for a wide range of high purity and final filtration applications.

CHM® Nylon filter cartridge

CHM® hydrophilic nylon pleated cartridge filter are uniquely constructed for superior performance with Nylon media. The pleat technology maximizes the useful surface area of the filter while maintaining proper flow paths between media pleats. The membrane offers broad chemical compatibilities & contains no surfactants. This CHM® cartridge filters are manufactured with nylon and polypropylene support media, both materials are chemically inert non-shedding and biologically safe according to FDA, USP and EEC requirements for pharmaceutical and food contact use. Thermoplastic sealing technologies are used in the cartridge construction eliminating the need for potentially contaminating adhesives.

Features:

- Better performance for high temperature-resistance, acid and base resistance
- Hydrophilic membrane with high flow
- Non-fiber releasing according to pharmaceuticals and food industry requirements
- 100% integrity tested
- Flushed with ultrapure water

Applications:

- Pharmaceutical
- Food and Beverage
- Semiconductor
- Pre-filtration

TECHNICAL SPECIFICATIONS

Filter media	Nylon 66 membrane
Core	Polypropylene
Support	Polypropylene fiber
Micron rating (µm)	0.22 and 0.45
Length (mm)	250, 500, 750 and 1000
Inside diameter (mm)	28
Outside diameter (mm)	69
Max. Differential pressure (bar)	2.1 at 25°C
Max. Operating Temperature (°C)	70

(*) Other micron rates available under request

CHM® PTFE filter cartridge

CHM® hydrophobic PTFE pleated cartridge filters are uniquely constructed with polytetrafluoroethylene media. PTFE membranes offer broad chemical compatibility with minimal extractables in a wide range of fluids and applications and contains no surfactants. The inherently hydrophobic PTFE membrane is ideally suited for the filtration of compressed air and other process gases. The pleat technology maximizes the useful surface area of the filter while maintaining proper flow paths between media pleats. These CHM® cartridge filters are manufactured with PTFE and polypropylene support media, both materials are chemically inert non-shedding and biologically safe according to FDA, USP and EEC requirements for pharmaceutical and food contact use. Thermoplastic sealing technologies are used in the cartridge construction eliminating the need for potentially contaminating adhesives.

Features:

- Better performance for high temperature-resistance, acid and base resistance
- Hydrophobic membrane with high flow
- Low pressure drop, long service life, high flow rate
- 100% integrity tested
- Non fiber-releasing

Applications:

- Fermentation tank
- Vent filter of hold tank
- Semiconductor
- Gas purification
- Acid, solvent and base filtration

TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATIONS	
Filter media	PTFE membrane
Core	Polypropylene
Support	Polypropylene fiber
Micron rating (µm)(*)	0.22 and 0.45
Length (mm)	250, 500, 750 and 1000
Inside diameter (mm)	28
Outside diameter (mm)	70
Max. Differential pressure (bar)	2.1 at 25°C
Max. Operating Temperature (°C)	90

(*) Other micron rates available under request

CHM® PVDF filter cartridge

CHM® hydrophobic PVDF pleated cartridge filters are uniquely constructed with polyvinylidene fluoride media. PVDF membranes offer broad chemical compatibility with low extractable levels, high protein binding and high chemical inertness. The pleat technology maximizes the useful surface area of the filter while maintaining proper flow paths between media pleats. These CHM® cartridge filters are manufactured with PVDF and polypropylene support media, both materials are chemically inert non-shedding and biologically safe according to FDA, USP and EEC requirements for pharmaceutical and food contact use. Thermoplastic sealing technologies are used in the cartridge construction eliminating the need for potentially contaminating adhesives.

Features:

- Hydrophobic membrane with small adsorption
- Reinforced PVDF filter membrane and deflector layer
- 100% integrity tested
- Flushed with ultrapure water

Applications:

- Pharmaceutical
- Food and Beverage
- Petrochemical
- Pre-filtration
- Oxidizing gas and liquid

TECHNICAL SPECIFICATIONS

Filter media	PVDF
Core	Polypropylene
Support	Polypropylene fiber
Micron rating (µm)(*)	0.22 and 0.45
Length (mm)	250, 500, 750 and 1000
Inside diameter (mm)	28
Outside diameter (mm)	70
Max. Differential pressure (bar)	2.1 at 25°C
Max. Operating Temperature (°C)	90

(*) Other micron rates available under request

CHM® PES filter cartridge

CHM® hydrophilic PES pleated cartridge filters are uniquely constructed with polyethersulphone media. PES membranes offer broad chemical and contains no surfactants, it allows easy integrity testing for all applications where daily control is required. The pleat technology maximizes the useful surface area of the filter while maintaining proper flow paths between media pleats. These CHM® cartridge filters are manufactured with PES and polypropylene support media, both materials are chemically inert non-shedding and biologically safe according to FDA, USP and EEC requirements for pharmaceutical and food contact use. Thermoplastic sealing technologies are used in the cartridge construction eliminating the need for potentially contaminating adhesives.

Features:

- Hydrophilic membrane with high flow
- No-fiber releasing according to pharmaceuticals and food industry requirements
- 100% integrity tested
- Flushed with ultrapure water
- Excellent performance of chemical compatibility

Applications:

- Pharmaceutical
- Food and Beverage
- Petrochemical
- Biological industry
- Chemical

TECHNICAL SPECIFICATIONS

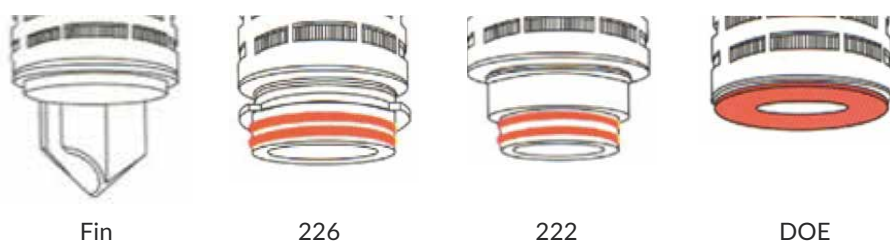
Filter media	PES
Core	Polypropylene
Support	Polypropylene fiber
Micron rating (µm)(*)	0.22 and 0.45
Length (mm)	250, 500, 750 and 1000
Inside diameter (mm)	28
Outside diameter (mm)	70
Max. Differential pressure (bar)	2.1 at 25°C
Max. Operating Temperature (°C)	90

(*) Other micron rates available under request

CHM® membrane cartridge filter order information

ORDER INFORMATION										
CM	XX	XXX	-	XX	XX	XXX	X	X	-	X
Cartridge	Membrane	Pore size		Internal diameter	Outside diameter	Length	End cap type	Seal material		Units/box
Filter	NY-nylon	.01-0.01 µm		28-28 mm	69-69 mm	250-250 mm	A-222/Flat end	V-Viton		U-1
Pleated	TF-PTFE	0.1-0.1 µm			70-70 mm	500-500 mm	B-222/Fin	S-Silicon		V-5
membrane	PV-PVDF	0.2-0.22 µm				750-750 mm	C-226/Flat end	E-EPDM		
	PE-PES	0.45-0.45 µm				-1M-1000 mm	D-226/Fin	N-NBR		
		0.6-0.65 µm					F-SOE	T-Teflon		
		001-1 µm					G-DOE			

End cap configuration



SOE: Single Open End
DOE: Doble Open End

CHM® Stainless Steel Filter Housing

Sanitary stainless steel filter housings are specifically designed for liquid and air/gas filtration applications of the bio-pharmaceutical industry, food and beverage. Manufactured in AISI 316 L. Typical application areas for stainless steel housings include bioreactors, autoclaves, freeze dryers and process tanks.

