

ENERGY PROCESS FILTERS

Depth media, pleated elements, coalescing cartridges, metallic filters, filter bags and ceramic membrane systems.
Application-led selection for refinery, petrochemical, oil, gas and power-generation duties.

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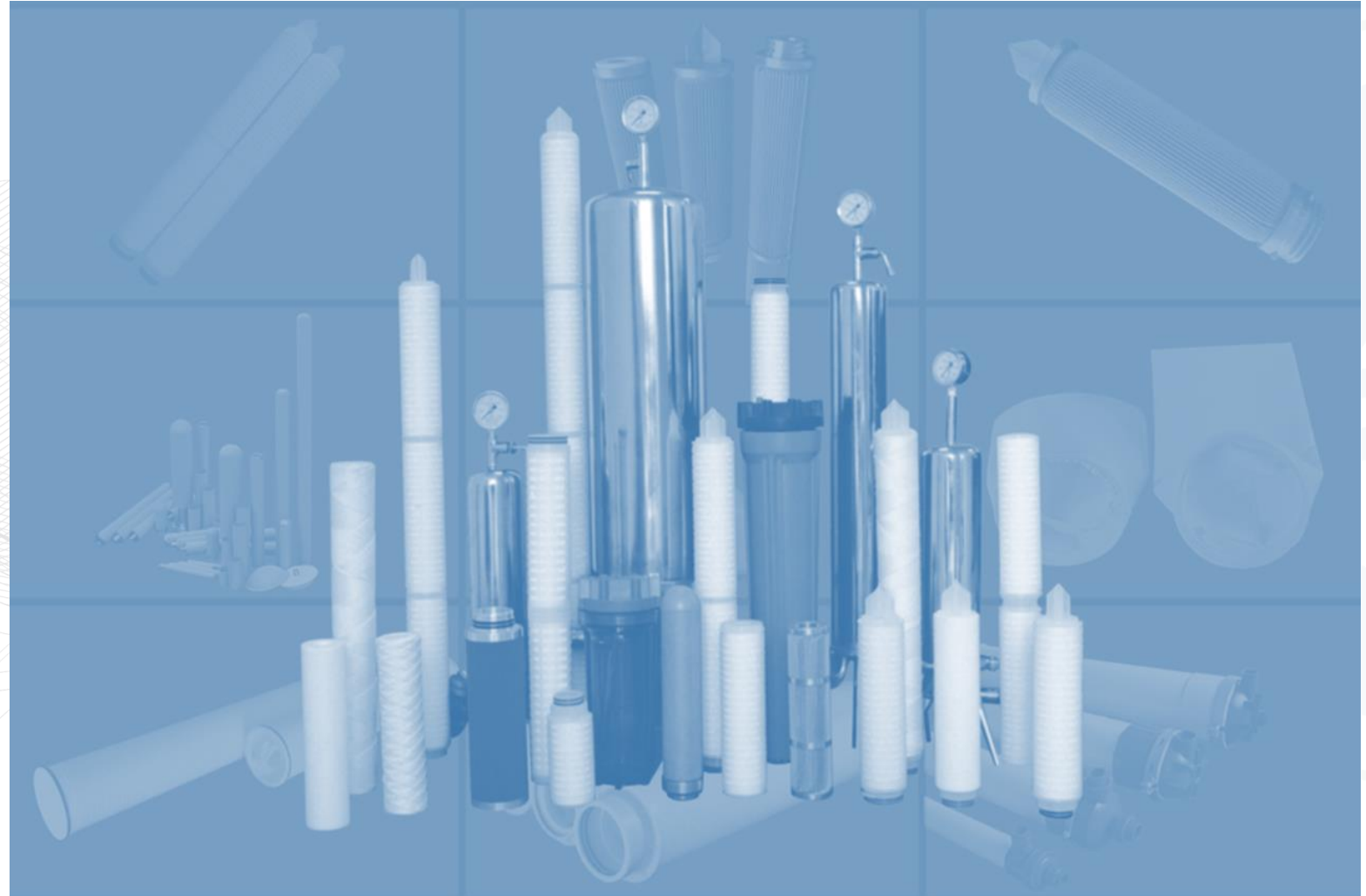
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DOWNSTREAM OIL & GAS PRODUCT SELECTION MATRIX

Through decades of experience in the O&G industry, we understand that there are many unique needs. Applications and contaminants vary, and we approach every filter cartridge selection differently.

We base our solutions on the specific need and collaborate closely with each customer.

- Depth Media Cartridge Series
- Pleated Media Cartridge Series
- Coreless Type Cartridge Series
- Coalescing Cartridge Series
- Metallic Cartridge Series
- Liquid Filter Bag Series





DEPTH MEDIA CARTRIDGE SERIES

DEPTH MEDIA CARTRIDGE SERIES

Generally, Filter media can be divided into two categories:

- Surface Filter Media.
- Depth Filter Media.

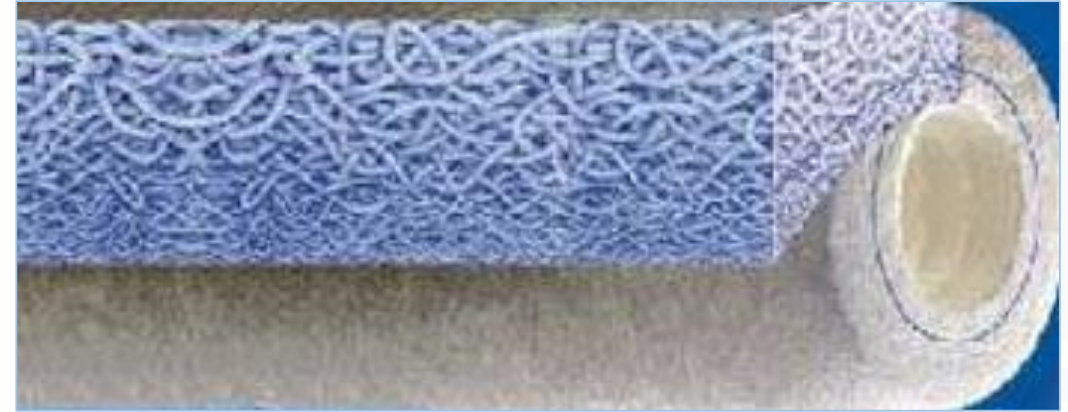
In Depth Filtration, even particles smaller than the pores of the filter can be retained within the depth media of the filter.

In depth type filtration:

- Depth filter catches contaminant within the internal structure of the medium.
- Pores and flow paths are distributed throughout thickness of the medium

Advantages of depth type media:

- Contaminant is caught internally as well as on the surface.
- Alternate flow paths yield higher dirt holding capacity.
- Very thin filters can possess a significant amount of depth.



Depth type media

Filter Media of Depth type filtration:

Depth type filters are widely used for different applications and industries. Thus, the filter media can be made of many polymers and other materials compatible with many streams such as polypropylene, nylon, cotton, polyester, acrylic, polyphenylene sulphide (PPS) and many other media.

DEPTH MEDIA CARTRIDGE SERIES

CHARACTERISTICS

- High contaminant-holding capacity
- Graded pore structure for efficient removal of a wide range of particle sizes
- Cost savings from long service filter life
- Diverse range of removal ratings
- Wide chemical compatibility
- Suitable for liquid and gas filtration
- Various cartridge sealing options.
- Numerous cartridge configurations
- Utilized widely in different industries: Food and beverage, air and gas, oil production, chemicals, etc.

PurFlo™ MegaFlow® AA Cartridges



Pure Life portfolio of depth filter cartridges had a series of cartridges which can be utilized for many applications in liquid and gas filtration for water, Energy, Pharmaceuticals and O&G industries.

PRODUCT SPECIFICATIONS

Materials of Construction:

Filter Media:

Cotton, glass fibre, polypropylene, polyester, nylon, acrylic, polyphenylene sulphide (PPS).

Centre Core:

Polypropylene, 304 stainless steel, 316 stainless steel.

Dimensions (nominal):

Outside Diameter: 2" (5.1 cm), 2 3/8" (6.0 cm), 2 1/2" (6.4 cm),

Inside Diameter: 1" (2.5 cm)

Lengths: 10" (25.4 cm), 20" (50.8 cm), 30" (76.2 cm), 40" (102 cm), 50" (127 cm)

DEPTH MEDIA CARTRIDGE SERIES

Product Specifications | Ordering Information | Pure Life Part numbers
Example (AA-1-MF-L1D1-BX)

AA			- MF -							
Filter Cartridge Code		Micron Rating	Nominal Length			Outside Diameter		Filter Media	Centre Core	
AA	MegaFlow AA	1	Code	Inches	mm	Code	Inches	m m	Code	Material
		2	L1	10	25.4	D1	2	5. 1	A	Polypropylene
		3	L2	20	50.8	D2	2 3/8	6	B	Cotton
		5	L3	30	76.2	D3	2 1/2	6. 4	C	Polyester
		10	L4	40	102	D4	2 5/8	6. 7	D	Nylon
		20	L5	50	127				E	Acrylic
		30							F	polyphenylene sulphide
		40							G	Glass Fiber
		50								
		70								
		100								
		150								

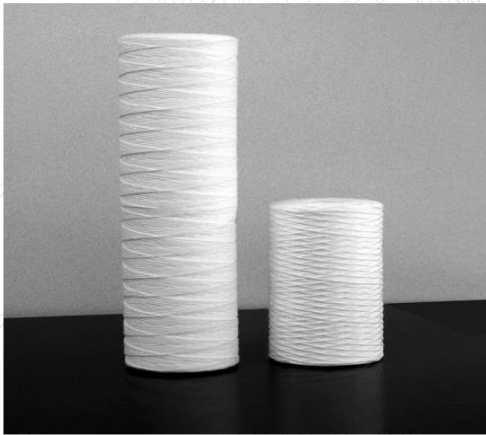
DEPTH MEDIA CARTRIDGE SERIES

CHARACTERISTICS

Large Diameter String Wound Filter Cartridges

- Polypropylene fibre
- Removal ratings from 0.5 to 25 µm
- Available in 25.1 cm (9.875 in) and 50.8 cm (20 in) lengths
- High contaminant-holding capacity

PurFlo™ MegaFlow® AC Cartridges



PRODUCT SPECIFICATIONS

Materials of construction

- Filter media: Polypropylene
- Core: Polypropylene

Dimensions (nominal)

- Outside diameter: 11.3 cm (4.438 in)
- Inside diameter: 2.8 cm (1.09 in)
- Lengths: 25.1 cm (9.875 in), 50.8 cm (20 in)

Ordering Information | PureLife Part numbers

AC

↓

Filter Cartridge Code	
AC	MegaFlow AC

↓

Micron Rating	
Code	µm
5	0.5
10	10
20	20
25	25

- MF -

↓

Nominal Length		
Code	Inches	mm
L1	9.875	25.1
L2	20	50.8

DEPTH MEDIA CARTRIDGE SERIES

CHARACTERISTICS

Depth Filters for High Temperature and Aggressive Fluids

- All PTFE for compatibility with a wide range of process fluids
- Available in retention ratings of 0.5, 1, 3, 10, or 25 μm .
- Fits into most standard housings.
- May be used as a final filter in many applications, or to provide superior protection for membrane final filters.
- Filter cartridge assembly (filter media and core) are made of PTFE (Fluoropolymer) which is compatible with nearly all chemicals up to 365°F (185°C). Primary exceptions are fluorine, chlorine, and oxygen at temperatures in excess of 212°F (100°C).

PurFlo™ MegaFlow® AD Cartridges



PRODUCT SPECIFICATIONS

Dimensions (nominal)

- Outside Diameter: 2 1/2" (6.35 cm), DOE only
- 2 13/16" (7.14 cm), SOE
- Lengths: 10" (25.4 cm), 20" (50.8 cm), 30" (76.2 cm), 40" (102 cm)

Ordering Information | PureLife Part numbers

AD

↓

Filter Cartridge Code	
AD	MegaFlow AD

↓

Micron Rating	
Code	μm
5	0.5
10	1
30	3
100	10
25	25

- MF -

↓

Nominal Length		
Code	Inches	mm
L1	10	25.4
L2	20	50.8
L3	30	76.2
L4	40	102

↓

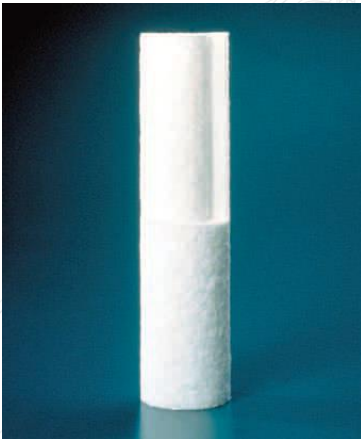
Outside Diameter		
Code	Inches	mm
DO	2	5.1
SO	2 3/8	6

DEPTH MEDIA CARTRIDGE SERIES

CHARACTERISTICS

- Graded pore structure filters which enhance dirt-holding capacity
- Easy and safe cartridge incineration and disposal
- Fully made of polypropylene construction
- No binders, adhesives or surfactants
- Plastic and metal spring assembly end configurations are available.

PurFlo™ MegaFlow® AE Cartridges Series



Ordering Information | PureLife Part numbers

AE	
Filter Cartridge Code	
AE	MegaFlow AE

Micron Rating	
Code	µm
1	1
5	5
10	10
20	20
30	30
40	40
50	50

- MF -		
Nominal Length		
Code	Inches	mm
L1	10	25.4
L2	20	50.8
L3	30	76.2
L4	40	102
L5	50	127

Gasket / O ring	
Code	Material
V	Silicone
W	elastomer
X	nitrile
Y	fluorocarbon
Z	EPDM

PRODUCT SPECIFICATIONS

Materials of construction

Filter media: Polypropylene

End caps: Polypropylene

Gaskets/O-rings: Silicone elastomer, nitrile, fluorocarbon, EPDM

Dimensions (nominal)

Outside diameter: 6.4 cm (2.5 in)

Inside diameter: 2.7 cm (1.07 in)

Lengths: 25.4 cm (10 in), 50.8 cm (20 in), 76.2 cm (30 in), 102 cm (40 in) and 127 cm (50 in)

DEPTH MEDIA CARTRIDGE SERIES

CHARACTERISTICS

- Continuous gradient pore structure media utilizes for prefiltration and final filtration.
- Polypropylene media construction.
- Thermally bonded structure – no adhesives.
- Both plastic and metal spring assembly end configurations are available.

PRODUCT SPECIFICATIONS

Filter grades: different grades are available ranges from 1 to 200 μm .

Materials of construction

Filter media: Polypropylene

Hardware: Polypropylene

Gaskets/O-rings: Silicone elastomer, nitrile, fluorocarbon, EPDM

Dimensions (nominal)

Outside diameter: 6.4 cm (2.5 in)

Lengths: 25.4 cm (10 in), 50.8 cm (20 in), 76.2 cm (30 in), 99.1 cm (39 in) and 102 cm (40 in)

PurFlo™ MegaFlow® AF Cartridges Series



Ordering Information | PureLife Part numbers

AE	
↓	
Filter Cartridge Code	
AF	MegaFlow AF

↓	
Micron Rating	
Code	μm
1	1
5	5
10	10
20	20
30	30
40	40
50	50
70	70
100	100

- MF -		
↓		
Nominal Length		
Code	Inches	mm
L1	10	25.4
L2	20	50.8
L3	30	76.2
L4	40	102

↓	
Gasket / O ring	
Code	Material
V	Silicone
W	elastomer
X	nitrile
Y	fluorocarbon
Z	EPDM

DEPTH MEDIA CARTRIDGE SERIES

CHARACTERISTICS

- Polypropylene of all filter cartridge components.
- Different absolute removal ratings are available from 0.5 to 70 microns.
- no adhesives, binders or surfactants used during the production.
- Graded pore structure media which provides pre and final filtration in the same cartridge
- Spiral wound depth filter cartridge

PurFlo™ MegaFlow® AG Cartridges Series



Ordering Information | PureLife Part numbers

AG	
↓	
Filter Cartridge Code	
AG	MegaFlow AG

↓	
Micron Rating	
Code	μm
1	1
3	3
5	5
10	10
20	20
40	40
70	70

- MF -

↓		
Nominal Length		
Code	Inches	mm
L1	4	10.2
L2	10	25.4
L3	20	50.8
L4	30	76.2
L5	40	102

↓	
Gasket / O ring	
Code	Material
V	Silicone
W	EPDM
X	nitrile
Y	fluorocarbon

PRODUCT SPECIFICATIONS

Materials of construction

Filter media: Polypropylene

Hardware: Polypropylene

Support material: Polypropylene

Gaskets/O-rings: Silicone elastomer, EPDM, nitrile & fluorocarbon elastomer

Dimensions (nominal)

Outside diameter: 6.6 cm (2.6 in)

Lengths: 10.2 cm (4 in), 25.4 cm (10 in), 50.8 cm (20 in), 76.2 cm (30 in), 102 cm (40 in)

DEPTH MEDIA CARTRIDGE SERIES

CHARACTERISTICS

- Continuously graded pore structure
- High contaminant dirt holding capacity.
- no binders used.
- Available in many removal ratings from 1 to 70 µm
- Long service life cycle.
- Fully made of polypropylene.
- Maximum temperature 82 C

PurFlo™ MegaFlow® AH Cartridges Series



PRODUCT SPECIFICATIONS

Materials of construction:

Medium: Polypropylene

Core: Polypropylene

Gasket: rubber

Micron Ratings: Ranges from 1 µm to 70 µm

Configurations:

Nominal length: 10" / 254 mm, 20" / 508 mm, 30" / 762 mm and 40" / 1016 mm

Diameter: 2 ½" / 64 mm

Double open end with flat gasket

Ordering Information | PureLife Part numbers

AG	
↓	
Filter Cartridge Code	
AH	MegaFlow AH

↓	
Micron Rating	
Code	µm
1	1
3	3
5	5
10	10
15	15
20	20
40	40

- MF -		
↓		
Nominal Length		
Code	Inches	mm
L1	10	25.4
L2	20	50.8
L3	30	76.2
L4	40	102

DEPTH MEDIA CARTRIDGE SERIES

CHARACTERISTICS

- Continuously graded pore structure
- High contaminant dirt holding capacity.
- no binders used.
- Available in many removal ratings from 1 to 40 µm
- Long service life cycle.
- Fully made of nylon media with two options cores: glass filled polypropylene core or glass filled nylon cores
- Widely applications in aromatics, solvents, hydrocarbon etc.

PurFlo™ MegaFlow® AJ Cartridges Series



PRODUCT SPECIFICATIONS

Materials of construction:

Medium: Nylon

Core: two options are available upon request: glass filled Polypropylene or nylon

Dimensions (Nominal length)

10" / 254 mm, 20" / 508 mm, 30" / 762 mm and 40" / 1016 mm

Diameter: 2 ½" / 64 mm

Double open end with flat gasket

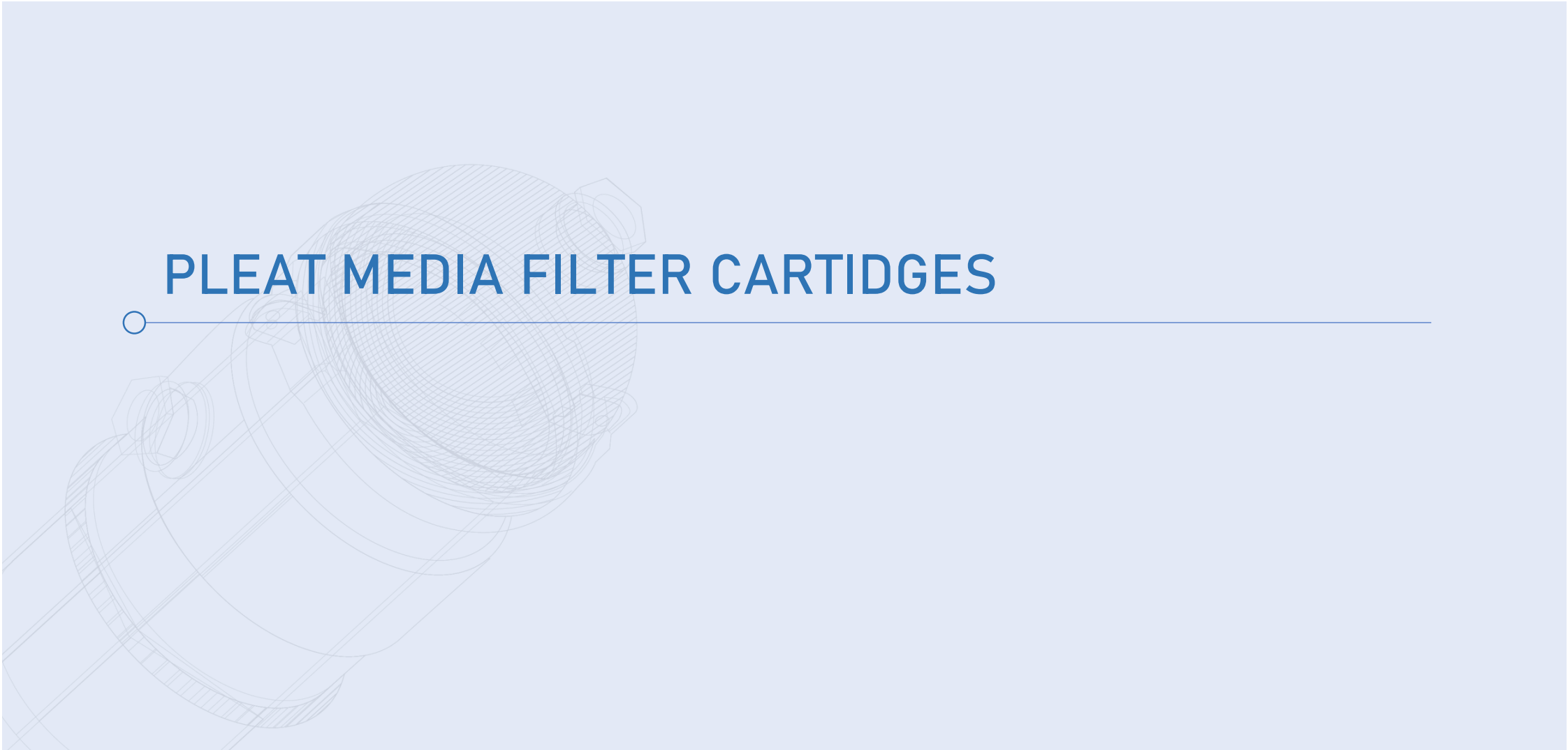
Ordering Information | PureLife Part numbers

AJ	
↓	
Filter Cartridge Code	
AJ	MegaFlow AJ

↓	
Micron Rating	
Code	µm
5	5
10	10
20	20
40	40

- MF -		
↓		
Nominal Length		
Code	Inches	mm
L1	10	25.4
L2	20	50.8
L3	30	76.2
L4	40	102

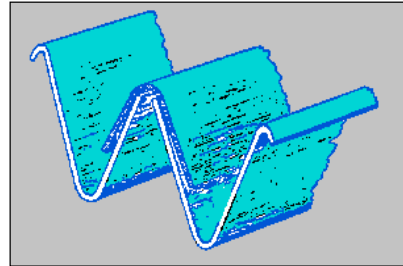
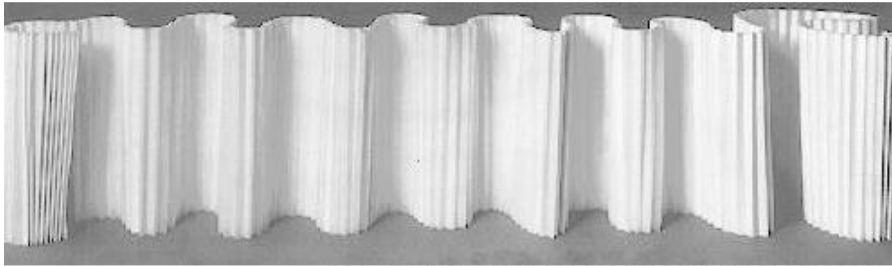
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Core Medium	
Code	Material
X	Polypropylene
Y	Nylon



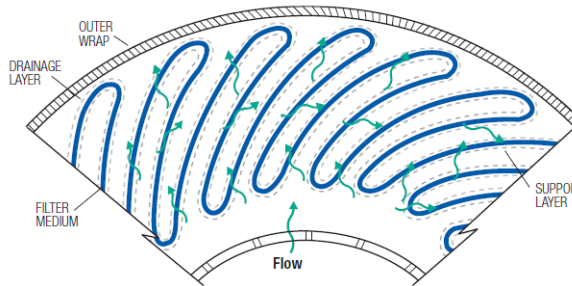
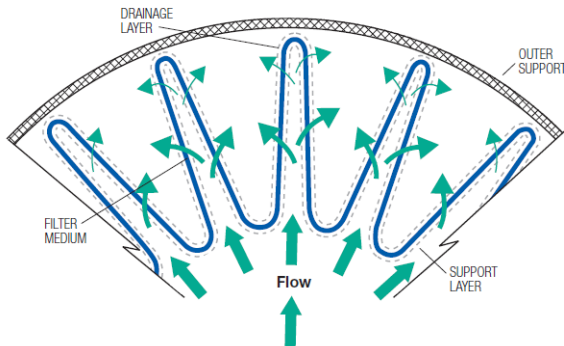
PLEAT MEDIA FILTER CARTIDGES

PLEAT MEDIA FILTER CARTIDGES

A filter cartridges of pleat type filtration media are made generally from medium sheets that laid over as below shapes to increase the surface filtration area as below pictures:



The laid-over sheet which is mainly the filtration media captures the particles generally inside the filter assembly, as the flow pattern in pleated type filter cartridges are inside-to out flow as per below picture:



The left side picture is the traditional fan pleat filter cartridge type where the filtration sheet is manufactured in a way to have the "V-shape" of the media to allow the untreated fluid passes through the media and get out from the other side (outside – drainage layer) leaves the contamination trapped on the surface of the media as arrows shown.

While the right side of the picture which is also a pleat type but the filtration sheet is bended to have more filtration media in same area and finally get more service life-cycle from the traditional pleated type. As shown above, both fan-pleat type (left side) and bended pleated type filtration, the filtration media is designed in "V-shape" inside the filter assembly and the flow rate in in-outside direction.

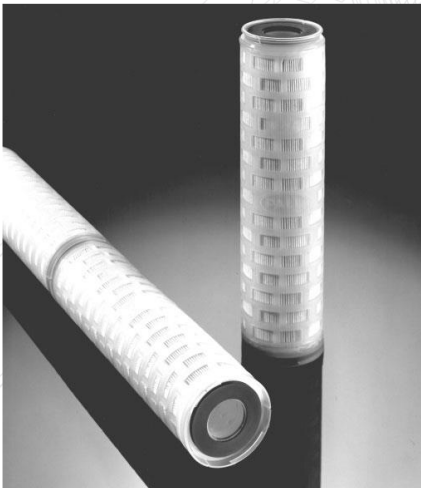
Compared to previously mentioned type which is the depth type media, the surface filtration media increase the filtration area by 5 to 10 times more than the depth media for similar cartridges length.

PLEAT MEDIA FILTER CARTIDGES

CHARACTERISTICS

- Pleated high area filter cartridges made of cellulose media with fixed pore structure.
- Compatible with many chemicals, solvents and solutions.
- Available in different removal ratings.
- Long service life cycle due to high surface area per cartridge.

PurFlo™ HighFlow® AA Cartridges Series



Ordering Information | PureLife Part numbers

AA	
↓	
Filter Cartridge Code	
AA	HighFlow AA

↓	
Micron Rating	
Code	μm
20	20
30	30
50	50

- HF -

↓		
Nominal Length		
Code	Inches	mm
L1	10	25.4
L2	20	50.8
L3	30	76.2
L4	40	102

↓	
Core Medium	
Code	Material
Y	Polypropylene
Z	SS

PRODUCT SPECIFICATIONS

Materials of Construction:

Media: Epoxy Impregnated Cellulose

Hardware: Polypropylene or Stainless Steel

Gaskets: many options are available: Buna N, Ethylene Propylene

Dimensions (nominal):

Outside Diameter: 23/4" (70 mm), 21/2" (64 mm)

Length: 10" (254 mm), 20" (508 mm), 30" (762 mm), 40" (1020 mm)

Configuration: DOE with stainless steel hardware

PLEAT MEDIA FILTER CARTIDGES

CHARACTERISTICS

- Pleated high area filter cartridges made of Spunbonded Polyester or micro fibre glass media with fixed pore structure.
- Compatible with many chemicals, solvents and solutions.
- Available in many removal ratings.
- Polypropylene hardware & netting.
- Different sealing (gasket / O-ring) material are available.

PurFlo™ HighFlow® AC Cartridges Series



Ordering Information | PureLife Part numbers

AC				- HF -							
Filter Cartridge Code		Micron Rating		Nominal Length		Filter Medium		Gasket/O-ring Material			
AC	HighFlow AC	Code	µm	Code	Inches	mm	Code	Material	Code	Material	
		10	1	L1	4	10.2	X	Spunbonded Polyester	A	Silicon	
		30	3	L2	10	25.4	Y	Borosilicate Microfiber glass	B	Buna N	
		100	10	L3	20	50.8					
		200	20	L4	30	76.2					

PRODUCT SPECIFICATIONS

Materials of Construction:

Filter Media:

Two options are available: Spunbonded Polyester (for 50 µm grade only) and Borosilicate Microfiber glass with Acrylic Binder for all other grades.

Support Material: Spunbonded Polyester

Netting: Polypropylene

Hardware: Polypropylene

Gaskets/O-rings: Silicone Elastomer, Buna N, etc.

Dimensions (nominal):

Outside Diameter: 2 3/5" (6.6 cm)

Lengths: 4" (10.2 cm), 10" (25.4 cm), 20" (50.8 cm), 30" (76.2 cm) and 40" (102 cm)

PLEAT MEDIA FILTER CARTIDGES

CHARACTERISTICS

- Pleated high area filter cartridges made of micro fibre glass media with fixed pore structure.
- Compatible with many chemicals, lube oils, etc
- Available in many 3-micron removal rating only.
- Polypropylene hardware.
- Different sealing (gasket / O-ring) material are available.

PurFlo™ HighFlow® AD Cartridges Series



Ordering Information | PureLife Part numbers

AD	
Filter Cartridge Code	
AD	HighFlow AD

Nominal Length		
Code	Inches	mm
L1	10	25.4
L2	20	50.8
L3	27	68.6
L4	30	76.2
L5	36	91.4
L6	40	102

- HF -	
Gasket/O-ring Material	
Code	Material
A	Silicon
B	Buna N

PRODUCT SPECIFICATIONS

Materials of Construction:

Filter Media: Borosilicate Microfiber glass with Acrylic Binder

Support Material & hardware: Polypropylene

Gaskets/O-rings: different options are available: Buna N (standard), Silicone Elastomer, etc.

Dimensions (nominal):

Outside Diameter: 2 3/5" (6.6 cm)

Lengths: 10" (25.4 cm), 20" (50.8 cm), 27" (68.6 cm), 30" (76.2 cm), 36" (91.4 cm) and 40" (102 cm)

PLEAT MEDIA FILTER CARTIDGES

CHARACTERISTICS

- Pleated high area filter cartridges with two options of filtration media: resin impregnated cellulose, and resin bonded glass fibre, with a steel core to support the filter media internally and protected by steel endcaps externally.
- Internally fixed O-ring at end caps to provide positive sealing.
- Compatible with many chemicals, acids, water, hydrocarbons in refinery and petrochemicals plants applications.
- Can be utilized for gas and liquids streams with longer service life-cycle due to high surface filtration per cartridge.

PRODUCT SPECIFICATIONS

Materials of Construction:

Filter Media: two options are available: resin impregnated cellulose, and resin bonded glass fibre.

Core and endcaps: 316 L stainless steel

Gaskets/O-rings: different options are available: Buna N (standard), Silicone Elastomer, etc.

Dimensions (nominal):

Outside Diameter: 3 ¾" (9.53 cm)

Lengths: 40" (102 cm).

PurFlo™ HighFlow® AE Cartridges Series

Ordering Information | PureLife Part numbers



AE	
Filter Cartridge Code	
AE	Pleated HighFlow AE

- HF -	
Filter Medium	
Code	Material
X	resin impregnated cellulose
Micron Rating	
Code	µm
10	10
25	25
50	50
20	2
30	3
Y	resin bonded glass fibre

Gasket/O-ring Material	
Code	Material
A	Silicon
B	Buna N

PLEAT MEDIA FILTER CARTIDGES

CHARACTERISTICS

- Pleated high area filter cartridges with two options of filtration media: Polyester (for 50 µm grade) and Borosilicate Microfiber glass (for other grades) with a stainless-steel core & endcaps to support the filter media and protected by polypropylene outage netting.
- Internally fixed O-ring at end caps to provide positive sealing.
- Compatible with many chemicals, acids, water, hydrocarbons in refinery and petrochemicals plants applications.
- Can be utilized for gas and liquids streams with longer service life-cycle due to high surface filtration per cartridge.
- Different removal ratings are available from 1 to 50 µm.

PurFlo™ HighFlow® AF Cartridges Series



PRODUCT SPECIFICATIONS

Materials of Construction:

Filter Media:

Borosilicate Microfiber glass with Acrylic Binder for all grades except 50 µm
Polyester for 50 µm grade only.

Support Material: Polyester

Core & End Caps: Steel

Outside Netting: Polypropylene

Sealing: Epoxy Bond

O-ring: Buna N

Dimensions (nominal):

Outside Diameter: 3 3/4" (9.5 cm)

Length: 38 3/4" (98.4 cm)

Ordering Information | PureLife Part numbers

AE	
Filter Cartridge Code	
AF	HighFlow AF

Filter Medium	
Code	Material
X	Borosilicate Microfiber glass

Y	Polyester
---	-----------

- HF -	
Micron Rating	
Code	µm
10	1
30	3
100	10
300	30
50	50

PLEAT MEDIA FILTER CARTIDGES

CHARACTERISTICS

- High-Capacity Polypropylene Filter Cartridges
- Pleated high flow and high-capacity filter cartridges made of polypropylene with 6" outside diameter.
- In-to-outside flow direction to retain the contaminants inside the filter cartridge.
- Compatible with many chemicals, acids, water, hydrocarbons in refinery and petrochemicals plants applications.
- Different removal ratings are available from 1 to 150 µm.
- Different lengths are available 20", 40" and 60".

PurFlo™ HighFlow® AG Cartridges Series



AE

Filter Cartridge Code	
AG	HighFlow AG

Micron Rating	
Code	µm
1	1
3	3
5	5
10	10
20	20
40	40
70	70
90	90

Nominal Length		
Code	Inches	mm
L1	10	25.4
L2	20	50.8
L3	40	101.6
L4	60	152.4

- HF -

Gasket/O-ring Material	
Code	Material
X	Ethylene propylene
Y	Fluorocarbon elastomer
Z	Nitrile

PRODUCT SPECIFICATIONS

Materials of construction:

Filter medium, support and end caps: Polypropylene

O-ring: Ethylene propylene, Fluorocarbon elastomer and Nitrile

Dimensions (nominal):

Cartridge length: 20" (508 mm), 40" (1016 mm) and 60" (1524 mm)

Cartridge max. OD: 6.3" (160 mm)

Medium OD: 5.9" (150 mm)

Medium ID: 3.5" (89 mm)

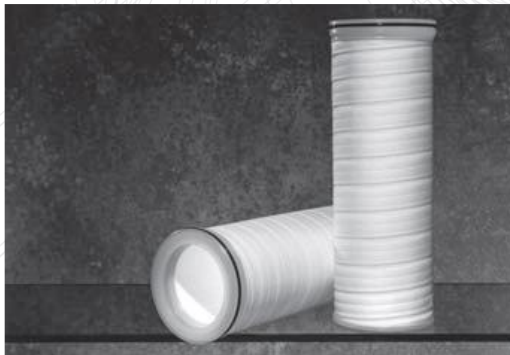
Ordering Information | PureLife Part numbers

PLEAT MEDIA FILTER CARTIDGES

CHARACTERISTICS

- High-Capacity Polypropylene Filter Cartridges
- Pleated high flow and high-capacity filter cartridges with 6" outside diameter.
- In-to-outside flow direction to retain the contaminants inside the filter cartridge.
- Filtration media made of different materials to be compatible with many chemicals, acids, water, hydrocarbons in refinery and petrochemicals plants applications.
- Different removal ratings are available from 2 to 90 µm.
- Different lengths are available 20", 40", 60 and 80".

PurFlo™ HighFlow® AH Cartridges Series



AH	
Filter Cartridge Code	
AH	HighFlow AH

- HF -	
Filter Medium	
Code	Material
X	Polypropylene
Y	Glass Fiber

Micron Rating	
Code	µm
20	2
60	6
100	10
200	20
400	40
700	70
ann	an

Nominal Length		
Code	Inches	cm
L1	20	50.8
L2	40	101.6
L3	60	152.4
L4	80	203.2

Gasket/O-ring Material	
Code	Material
B	Buna N
S	Ethylene Propylene
U	Silicon
Z	Fluor elastomer

PRODUCT SPECIFICATIONS

Materials of construction:

Filter medium: two options are available: Polypropylene & Glass fibre.

Support material: Polypropylene & Polyester/Nylon

Endcaps: glass filled polypropylene and glass filled acetal

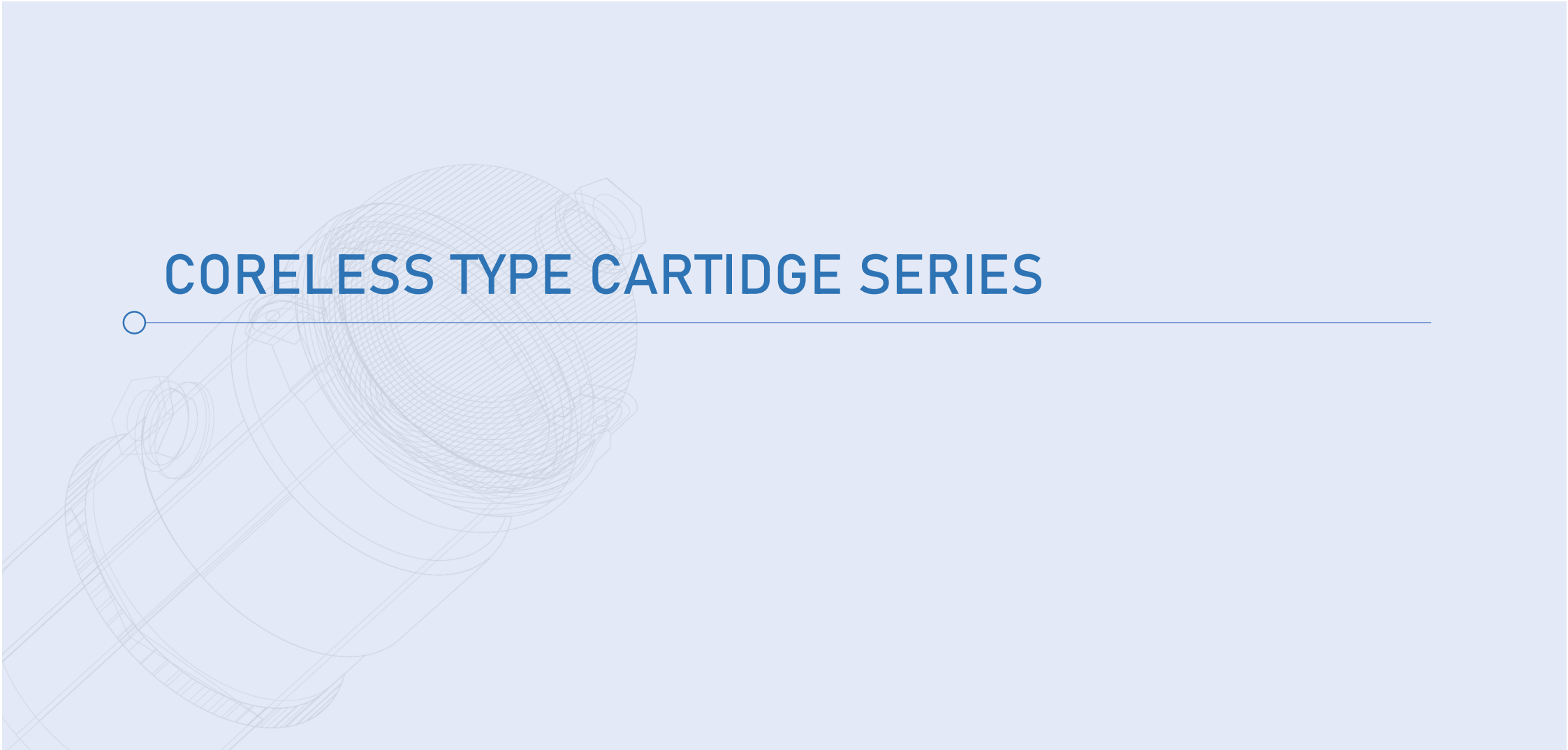
Dimensions (nominal):

Cartridge length: 20" (508 mm), 40" (1016 mm), 60" (1524 mm) and 80" (2032 mm)

Cartridge OD: 6" (152 mm)

Ordering Information | PureLife Part numbers

CORELESS TYPE CARTIDGE SERIES



CORELESS TYPE CARTIDGE SERIES

CORELESS TYPE CARTIDGE SERIES

As the name stated, the “coreless” type filter cartridges are didn’t have built-in core to support the filtration media for each filter cartridge as above types of depth & pleated. “Coreless” cartridges are economical choice for high flow applications as only usable part of the cartridge are disposed of. The filter media needs to be inserted in a core and when the replacement of the filters is required, the core will be reuse for new filter cartridge and only used filters will be replaced, so this type of filters will reduce significantly the waste disposal and thus consider an environmentally friendly, also reduce stock holding volumes as well.

Other benefits of utilizing Pure Life Coreless type cartridges will be reducing operation cost as smaller system may require due to high dirt holding capacity and large diameter of some coreless cartridge series. Also, the coreless filter cartridges can be widely used in different Energy applications as the media is made of different polymers and resins and compatible with many solutions, acids, hydrocarbon etc.

As clearly shown from above picture for coreless type cartridge, the filter sealing is independent of housing seal and the media need a core which is normally a stainless steel to be inserted into the cartridge :



CORELESS TYPE CARTIDGE SERIES

CHARACTERISTICS

- Large diameter media 6" and thus consider a cost-effective solution for high flow applications.
- High contaminant dirt holding capacity.
- Capable to be used for many applications as the media can be made of polypropylene, nylon or polyphenylene sulfide (PPS) with different grades.
- Available in many removal ratings from 5 to 50 µm
- Long service life cycle.
- Less waste materials, lower cost of disposal and more environmentally friendly.

PurFlo™ Coreless® AA Cartridges Series



AA

Filter Cartridge Code	
AA	Coreless AA

PRODUCT SPECIFICATIONS

Materials of construction:

Medium: Polypropylene, nylon or polyphenylene sulfide (PPS)

Dimensions:

Nominal length: 20" / 508 mm and 40" / 1016 mm

Diameter: 6"

Double open ended

Ordering Information | PureLife Part numbers

Ex. AA-Z-CL-100-L2

Filter Medium	
Code	Material
X	Polypropylene

Y	Nylon
---	-------

Z	polyphenylene sulfide (PPS)
---	-----------------------------

- CL -

Micron Rating	
Code	µm
50	5
100	10
200	20
400	40
500	50

100	10
200	20
400	40

100	10
200	20

Nominal Length		
Code	Inches	cm
L1	20	50.8
L2	40	101.6

CORELESS TYPE CARTIDGE SERIES

CHARACTERISTICS

- Continuously graded pore structure
- High contaminant dirt holding capacity.
- no binders or adhesive used.
- Available in many removal ratings from 1 to 40 µm
- Long service life cycle.
- Fully made of polyphenylene sulfide (PPS) media with 316 L stainless steel core
- Widely applications in aromatics, solvents, hydrocarbon up to 205 C.

PurFlo™ Coreless® AC Cartridges Series



PRODUCT SPECIFICATIONS

Materials of construction:

Medium: polyphenylene sulfide (PPS)

Core: 316 L stainless steel core

Micron Ratings: Ranges from 1 µm to 40 µm

Configurations:

Nominal length: 10" / 254 mm, 20" / 508 mm, 30" / 762 mm and 40" / 1016 mm

Diameter: 2 ½" / 64 mm

Double open ended (DOE)

Ordering Information | PureLife Part numbers



Filter Cartridge Code	
AK	MegaFlow AK



Micron Rating	
Code	µm
5	5
10	10
20	20
40	40

- CL -



Nominal Length		
Code	Inches	mm
L1	10	25.4
L2	20	50.8
L3	30	76.2
L4	40	102



COALESCING CARTRIDGE SERIES

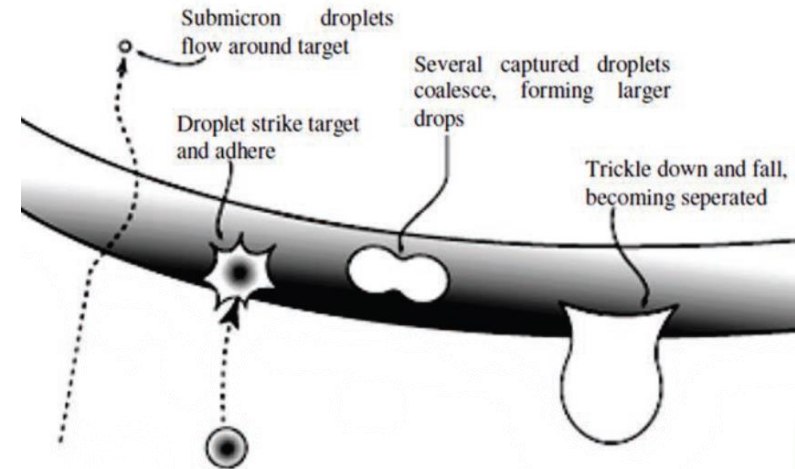
COALESCING CARTRIDGE SERIES

In many applications, liquid aerosols carry over need to be eliminated/separated from either liquid or gas stream to protect the downstream equipment. The separation of such droplets/aerosols of liquid is called coalescence. Thus, from the application point of view, the coalescing can be either liquid/gas or liquid/liquid coalescing.

Many factors affect the sizing and selecting the proper coalescer media to get an efficient separation.

For liquid/gas coalescing, the coalescer cartridge that Pure Life can supply is capable to eliminate both solid and liquid contamination carried over with gas stream to very low levels. In some cases, when the solid content is high, a prefiltration step is required to eliminate the solid before the gas stream enters the coalescer cartridges.

While the liquid/liquid coalescing process is required a prefiltration for the continuous liquid stream to eliminate also the solid before entering the coalescing cartridges. The prefiltration is achieved by installing a proper particulate filter to retain the particles carried over with liquid stream, as the coalescing media is designed to attract the liquid droplets and enlarge them to get bigger droplet and then separate the two miscible liquids by specific gravity difference between the continuous phase (mainstream which needs to be contaminant-free) and dispersant phase (the liquid stream needs to be separated from continuous phase).



Coalescing steps

Thus, as stated above and clearly shown in the picture. The various steps of coalescing are:

- Collection of droplets
- Small droplets coming together to form larger ones.
- Rise or fall of the enlarged droplets.

COALESCING CARTRIDGE SERIES

CHARACTERISTICS

The PureSep® A Liquid/Gas coalescing cartridge are designed to efficiently give a solid & liquid free gas stream. The clean, aerosol free gas is critical to equipment reliability and optimized operations in many applications such as the refinery and chemical industries.

PureLife's PureSep® A liquid/gas coalescers provide high-efficiency liquid & solid removal from contaminated gases reducing maintenance and operating costs.

- It can be utilized in many gas applications such as:
- Minimizing foaming tendencies in sweetening & dehydration units
- Minimizing amine and glycol losses downstream of gas sweetening & dehydration units
- Cleaning dirty fuel gas and instrument gas
- Protecting catalysts, desiccants and adsorbents
- Removing lube oil from ammonia gas
- Protecting compressors and turbines

PurFlo™ PureSep® A Coalescers



PRODUCT SPECIFICATIONS

Features

- High Effective Filtration Area
- High efficiency media and drainage layers

Advantages

- High solids removal efficiency
- Fewer cartridges changeouts needed.
- Consistent liquid removal
- Reduced liquid losses.
- Efficiently protecting downstream equipment.

Benefits

- Lower operating and maintenance costs
- Lower maintenance cost.

Ordering Information | PureLife Part numbers

A					- PS -			
↓		↓			↓		↓	
Coalescer Cartridge Code		Nominal Length			Outside Diameter			
A	PureSep® A	Code	Inches	mm	Code	OD (inch/mm)		
		X	30	762	D1	2.75" / 70		
		Y	40	1016	D2	6" / 152.4		

COALESCING CARTRIDGE SERIES

The PureSep® B Liquid/Liquid coalescing cartridge are designed to efficiently give a continuous liquid stream with few ppms of undesirable liquid phase by effectively coalescing the dispersant/ undesirable liquid droplets or aerosols through the media fibers then drain it out by drainage layer once bigger droplet formed, while the continuous phase will leave the coalescer cartridges with few ppms of dispersed phase.

PureLife's PureSep® B liquid/Liquid coalescers provide high-efficiency undesirable liquid removal from the continuous liquid phase by forcing the emulsified liquids to pass through a multi layers coalescing media designed for accumulating the droplets and drainage it out by means of specific gravity differences in both liquids.

PurFlo™ PureSep® B Coalescers



It can be utilized in many liquid applications such as:

- Removal of carried-over caustic from refinery fuels downstream of caustic treating processes.
- Separation of oil from water.
- Separation of water from hydrogen peroxide working solutions.
- Removal of carried-over amine from hydrocarbon downstream.
- Removal of oil from ammonia.
- Separation of pyrolysis gas from quench water in ethylene plants.
- Removal of water from refined products, including gasoline, diesel, jet, and LPG
- Separation of water from hydrocarbon condensates, refinery intermediates, naphtha, propane and propylene.
- Removal of oil from sour water to protect sour water stripping (SWS) as well as downstream sulfur plant and water treatment operations.

Ordering Information | PureLife Part numbers

B

↓

Coalescer Cartridge Code	
B	PureSep B

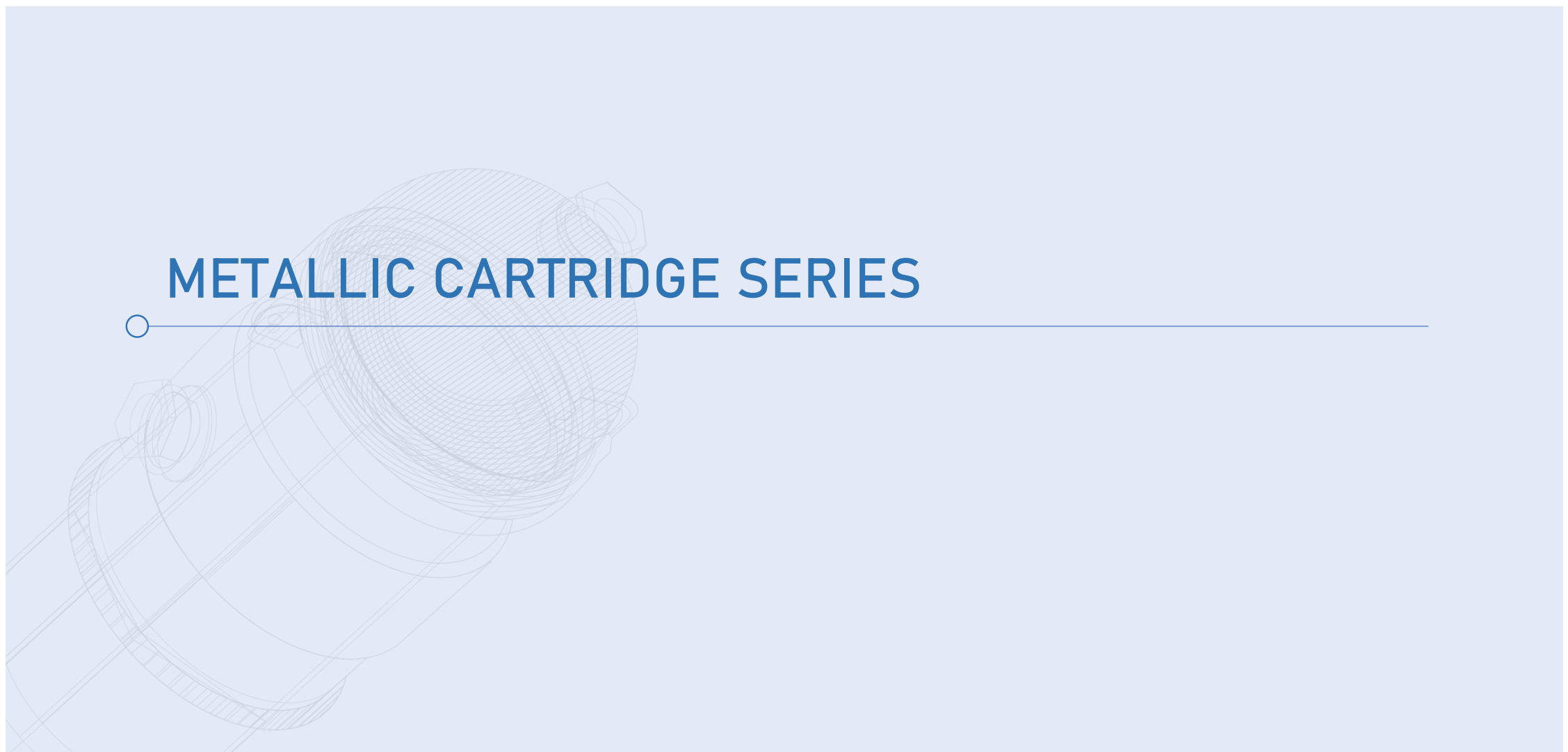
↓

Nominal Length		
Code	Inches	mm
X	20	508
Y	40	1016

- PS -

↓

Outside Diameter	
Code	OD (inch/mm)
D1	4.2" / 107
D2	3.75" / 953



METALLIC CARTRIDGE SERIES

METALLIC CARTRIDGE SERIES

In some applications such as polymer filtration and other critical applications, a metallic filters type cartridges need to be considered. The metallic series cartridges are cleanable filters where once high differential pressure hit the recommended value, the used filters will be cleaned “regenerated” as per manufacturer recommendations and then it can be reused again and so on.

The metallic cartridge series made combinations of power metals such as standard 316 stainless steel powder, Monel, Iron Aluminide and other alloys. The metallic filters can be utilized for high temperature and high-pressure applications where the polymeric type filters can’t be utilized. Many factors are determined the selection of suitable metallic type of cartridges to be selected for specific applications, such as: compatibility, operating temperatures, operating pressures, type of contamination, and so on.

The metallic filters are ranging from mesh layers of 150 – 200 μm removal ratings to a low & precise removal as low as 2 μm .

For the cleaning process of the used metallic cartridges, the cartridges will undergo a series of cleaning processes includes removal of organic and inorganic contamination then followed with integrity tests to check if the regenerated cartridges could be reuse or not, such process includes oxidation, internal and external hydro jetting, acid or base solution cleaning, etc.



METALLIC CARTRIDGE SERIES

CHARACTERISTICS

This type of metallic filters are depth type filters made of sintered metal fiber media which is highly effective in removing hard and deformable gel-type contaminants.

It is available in removal rating ranges from 1 to 80 μm made of 316 L stainless steel and other alloys as well. PureMesh® A cartridges can withstand high temperature and high differential pressure than many other types of filters it contains up to 90% porous in the media, thus the dirt holding capacity is high and this led to longer service life cycle compared to media.

PurFlo™ PureMesh® A Cartridge Series



PRODUCT SPECIFICATIONS

Materials of Construction:

Filter Media: Sintered (metallurgically bonded) stainless steel fibres.

Filter Material: 316 stainless steel

End Configurations: DOE, NPT, etc

Gaskets/O-rings: Nitrile, Fluorocarbon elastomer, EPDM, etc.

Dimensions (nominal):

Outside Diameter: 2.5" (6.4 cm)

Standard Lengths: 10" (25.4 cm), 20" (50.8 cm), 30" (76.2 cm), 40" (102 cm)

Maximum Temperature and Pressure: 250°F (121°C) at 150 psid (10.3 bard)

Ordering Information | PureLife Part numbers

A

Metallic Cartridge Code

A	PureMesh A
---	------------

Micron Rating

Code	μm
3	3
5	5
10	10
15	15
20	20
25	25
30	30
40	40
60	60

Nominal Length

Code	Inches	mm
L1	10	25.4
L2	20	50.8
L4	30	76.2
L6	40	102

- PM -

Gasket/O-ring Material

Code	Material
X	Nitrile
Y	Flouro elastomer
Z	EPDM

METALLIC CARTRIDGE SERIES

CHARACTERISTICS

This type of metallic filters are surface-type filters made of wire mesh metallic fibres media which is suitable with low contamination systems. It is available in removal rating ranges from 6 to 800 µm standard made of 316 L stainless steel and other alloys are available. PureMesh® B cartridges can withstand high temperature and high differential pressure than many other types of filters it contains up to 90% porous in the media, thus the dirt holding capacity is high and this led to longer service life cycle compared to media.

PurFlo™ PureMesh® B Cartridge Series

Ordering Information | PureLife Part numbers

B

Metallic Cartridge Code

B

PureMesh B

Micron Rating

Code	µm	Code	µm
5	5	140	140
10	10	180	180
17	17	250	250
25	25	300	300
40	40	420	420
60	60	465	465
70	70	590	590
100	100	840	840

PRODUCT SPECIFICATIONS

Materials of Construction:

Filter Media: wire mesh layers of stainless steel (other alloys are available).
 Filter Material: 316 stainless steel
 End Configurations: DOE, NPT, etc
 Gaskets/O-rings1: Nitrile, Fluorocarbon elastomer, EPDM, etc.

Dimensions (nominal):

Outside Diameter: 2.5" (6.4 cm)
 Standard Lengths: 10" (25.4 cm), 20" (50.8 cm), 30" (76.2 cm), 40" (102 cm)
 Maximum Temperature and Pressure: 250°F (121°C) at 150 psid (10.3 bard)

- PM -

1 -

Nominal Length		
Code	Inches	mm
L1	10	25.4
L2	20	50.8
L4	30	76.2
L6	40	102

Gasket/O-ring Material	
Code	Material
X	Nitrile
Y	fluoro elastomer
Z	EPDM

METALLIC CARTRIDGE SERIES

CHARACTERISTICS

This type of metallic filters are depth-type filters made of 316 low carbon stainless steel powder sintered together in an inert environment. These filters offer broad temperature and chemical compatibility with the added economy of being repeatedly cleanable. These filters are used in many applications within the chemical process industry and in many aggressive environments, where critical filtration levels are required.

Standard 316 stainless steel cartridges are capable of withstanding a minimum collapse differential pressure of 50 psid for outside-in flow direction to 600°F and 50 psid in the reverse flow direction.

PurFlo™ PureMesh® C Cartridge Series



PRODUCT SPECIFICATIONS

Materials of Construction:

Filter Media: 316 low carbon stainless steel powder

End Configurations: DOE, NPT, etc

Gaskets/O-rings: Nitrile, Fluorocarbon elastomer, Ethylene Propylene, etc.

Dimensions (nominal):

Outside Diameter: 2 3/8" and 1 1/2"

Standard Lengths: 10" (25.4 cm), 20" (50.8 cm), 30" (76.2 cm)

Maximum Temperature and Pressure: 250°F (121°C) at 150 psid (10.3 bard)

Ordering Information | PureLife Part numbers

c

↓

Metallic Cartridge Code	
C	PureMesh C

↓

Micron Rating	
Code	μm
5	5
9	9
13	13
20	20
35	35
55	55

- PM -

↓

Nominal Length		
Code	Inches	cm
L1	6	15.2
L2	9	22.8
L3	10	25.4
L4	18	45.7
L5	20	50.8
L6	30	76.2

↓

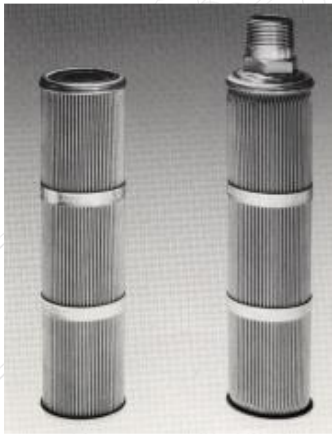
Gasket/O-ring Material	
Code	Material
X	Nitrile
Y	flouro elastomer
Z	Ethylene Propylene

METALLIC CARTRIDGE SERIES

CHARACTERISTICS

This type of metallic filters is a depth-type filters composite of both sintered matrix of 316L stainless steel powder within the pore structure of stainless-steel wire mesh. Thus, these types of filters are matrix of above mentioned PureMesh® A & B types. It is designed to withstand high temperature up to 677 C. PureMesh® D filters are having high porous media and thus can be utilized for many applications with high quality downstream.

PurFlo™ PureMesh® D Cartridge Series



Ordering Information | PureLife Part numbers

c	
Metallic Cartridge Code	
D	PureMesh D

Micron Rating	
Code	µm
2	2
5	5
10	10
15	15
20	20

- PM -

Nominal Length		
Code	Inches	cm
L1	10	25.4
L2	20	50.8
L3	30	76.2
L4	40	102

Gasket/O-ring Material	
Code	Material
X	Nitrile
Y	fluoro elastomer
Z	Ethylene Propylene

PRODUCT SPECIFICATIONS

Materials of Construction:

Filter Media: 316L stainless steel powder within the pore structure of stainless-steel wire mesh

End Configurations: DOE, NPT, etc

Gaskets/O-rings: Nitrile, Fluorocarbon elastomer, Ethylene Propylene, etc.

Dimensions (nominal):

Outside Diameter: 2 ½"

Standard Lengths: 10" (25.4 cm), 20" (50.8 cm), 30" (76.2 cm), 40" (102 cm)

Maximum Temperature: 1250°F (677°C).

LIQUID FILTER BAG SERIES



LIQUID FILTER BAG SERIES

LIQUID FILTER BAG SERIES

Bag filters are widely used in the industry for cleaning or de-oiling applications such as wastewater stripper prefiltration, diesel fuel cleaning, Wax, Ink, cooking oil recycling, etc. The bag filters are considered low-cost filtration solution compared to other types of filters such as pleated or depth media mentioned above.

The bag filters are made of polymers such as polypropylene, polyester and other media to be used in different application and be compatible with many solutions.

Bag filters can be classified based on materials as below:

**Mesh Materials:**

- nominal rated 1 up to 1200 μm
- high tensile strength
- surface filtration

Felt Materials:

- rated 1 up to 200 μm .
- glazed outside inhibit fibre migration.

Polypropylene Microfiber:

- high dirt loading
- adsorption of forming substances
- available absolute rated 3–100 μm @ 98% Efficiency.

For proper selection of suitable bag filters for specific application, the first point needs to be considered is the compatibility, then the contamination type need to be removed, and other factors that are important to select the suitable type of bag filters, PureLife's technical support team can be approached to study case-by-case for proper sizing and selection of the bag filters.

LIQUID FILTER BAG SERIES

Monofilament Nylon/Polyester Mesh Filter Bag

Item	1# filter bag	2# filter bag	3# filter bag	4# filter bag
Size (mm)	180*450	180*810	105*230	105*380
Size (inch)	7"*17"	7"*32"	4"*9"	4"*15"
Tolerance	≤0.3-0.8(mm)			
Bag Area (sq.m)	0.25	0.5	0.09	0.16
Material	100% nylon mesh / 100% polyester mesh			
Nack material	Stainless Steel or Plastic (PE/PP)			
Filtration pressure:1.03-1.72 (Kg / sq.com)				
Nylon Mesh Filter Bag works < 140 °C , Polyester Mesh Filter Bag works < 130 °C				

Polypropylene / Polyester Felt Filter Bag

Item	1# filter bag	2# filter bag	3# filter bag	4# filter bag
Size (mm)	180*450	180*810	105*230	105*380
Size (inch)	7"*17"	7"*32"	4"*9"	4"*15"
Tolerance	≤0.3-0.8(mm)			
Bag Area (sq.m)	0.25	0.5	0.09	0.16
Material	100% PP Media / 100% PE Media / 100% Aramid Media / 100% PTFE Media			
Nack material	Stainless Steel or Plastic (PE/PP)			

INDUSTRIAL FILTERS



Melt-Blown PP Filter Cartridge

Melt blown cartridge is formed by melting pure polypropylene with heat. This type of cartridge filter is suitable for pre-filtration, and it's usually used as a “guard filter” upstream the ultra-filtration membrane.

INDUSTRIAL FILTERS

CHARACTERISTICS

- The filter cartridge consists of three layers of heat-melted polypropylene. Compared to mono-layer filters, its life lasts much longer, therefore, the maintenance cost is reduced drastically.
- Using the light heating way for PP fibre, it can reduce the filtering resistance a lot and increase the water flow.
- As the filter cartridge is only made from polypropylene, it provides resistance to chemical reagents and organic solvents.

PurFlo™ CMB® Cartridge Series



Item	Specification
Temperature	<60°C, (ΔP: 0.03MPa) <90°C, (ΔP: 0.02MPa)
Flow Rate	0.05-0.09 m2 per 10 inch
(60°C) AP(MAX)	0.1MPa/0.1MPa inpouring 0.06MPa/0.06MPa outpouring
Hot-Water Sterilizing	70°C/30min
PH	1-13

Ordering Information PureLife Part numbers

Micron Rating	
Code	μm
1	1
5	5
10	10
20	20

Nominal Length		
Code	Inches	mm
L1	10	254
L2	20	508
L3	30	763
L4	40	1016

OD	
Code	mm
W	45
X	55
Y	63.5 (2.5")
Z	115 (4.5")

- CMB -

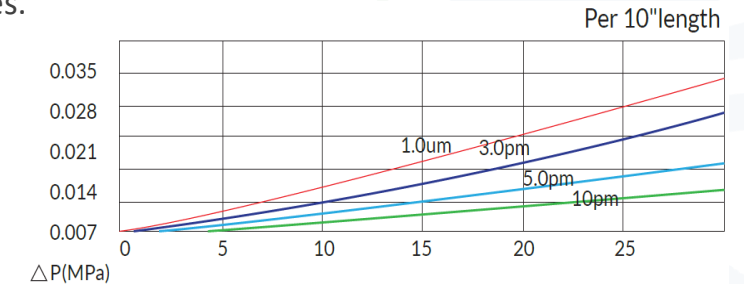
ID	
Code	mm
A	20
B	28
C	30

Inner Core	
Code	core
C1	no core
C2	with core

Surface	
Code	Description
S1	Flat
S2	Orange
S3	Embossing
S4	Point

APPLICATIONS

- Filtering for plating solutions of electronic products, wastewater, liquid medicine and pure water.
- Pre-filtering for various ultra filtration.
- Filtering water for medical purposes, and water treatment in chemical field.
- Filtering water used in the Food & beverage production.
- Pre-filtering before RO and UF, as long as various other treatment for industrial purposes.



INDUSTRIAL FILTERS

Melt blown - Process Description

Melt blown is produced in a process where polypropylene granules are melted, and molten polymer is extruded through spinnerets.

The continuous filaments are cooled and deposited on to a conveyor belt to form a uniform web. The calendaring uses heat and high pressure applied through rollers to weld the fibre webs together at speed. This results in a soft, uniform, melt blown **material**.



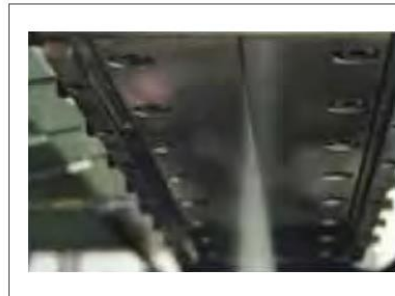
1- Infunde the grainy type polypropylene into the pond



2- Polypropylene is conveyed to the inside of the machine body and melt



3- Cut off the egdges on both sides, eventually become a non woven coiled material.



4- The melt pp will be delivered to the spinning pump and spin, fine draw, the melt pp changes into superfine filber. the temperature of the superfine fiber is cooled by the side cold air and it will be further stratched during cooling.



4- the stretched superfine fiber is transferred to the web former. forming the embryonic from of non woven pp meltblown fabric.



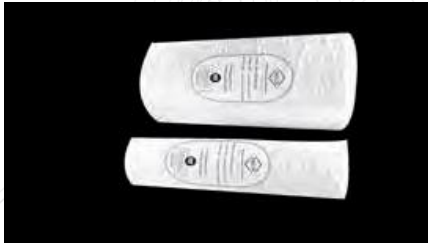
5- the non woven fiber web transferred to calender by net screen and will be pressed by calender, rolling up the completed meltblown fabric rolls.

INDUSTRIAL FILTERS

CHARACTERISTICS

PP String Wound filter cartridge consists of a core winded tightly with PP textile fibre in order to form filters that may vary in filtration precision, according to the density of the string during winding. This type of filter can remove the suspended particles in liquids. Pure Life String Wound filters provide high quality depth filtration. It can also be manufactured by many types of material in order to meet different needs or types of liquids.

PurFlo™ PPW® Cartridge Series | PP Yarn Filter Cartridge



APPLICATIONS

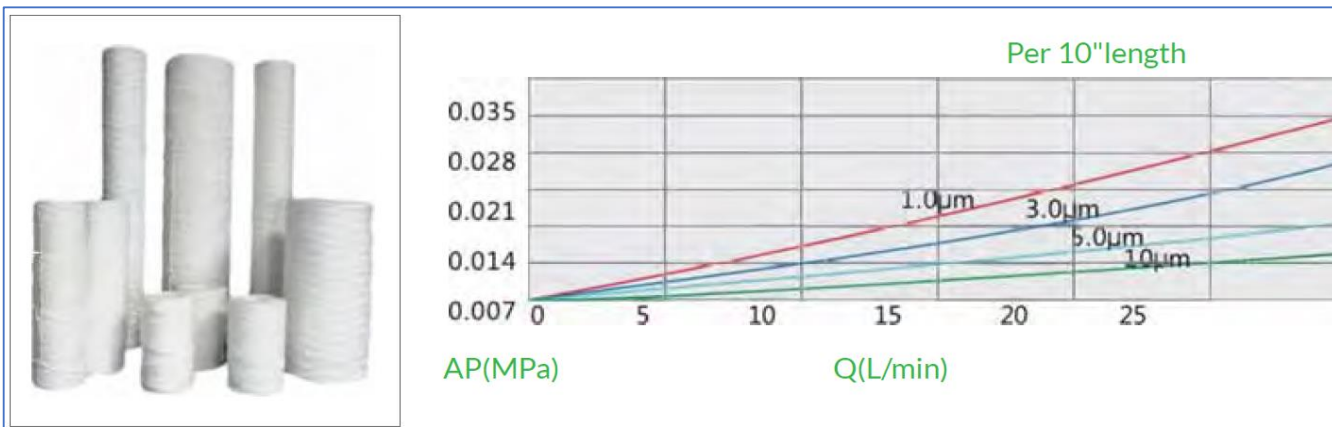
- Food & beverage industry.
- Cosmetics industry.
- Pharmaceutical industry.
- Fishing industry.
- Processed water.
- Reverse Osmosis Pre-treatment.
- Water-based solutions.
- Solar heating industry.
- Petrochemical industry.

PHYSICAL PROPERTIES

- Filtering medium: Polypropylene
- Core: Polypropylene, stainless steel
- Filtering grades: 1, 5, 10, 25, 50 µm
- Length (inches): 10", 20", 30", 40", 50", 70"
- OD: 60 mm
- ID: 28 mm
- Maximum operating temperature: 80°C
- Differential pressure for replacement: 1.2 bar at 20°C

INDUSTRIAL FILTERS

Configuration: Double Open End (DOE)



Ordering Information | PureLife Part numbers

↓

Micron Rating	
Code	µm
1	1
5	5
10	10
20	20
30	30
50	50
75	75
100	100

↓

Nominal Length		
Code	Inches	mm
L1	10	254
L2	20	508
L3	30	763
L4	40	1016
L5	50	1270
L6	70	1778

↓

OD	
Code	mm
X	63.5 (2.5")
Y	115 (4.5")

↓

ID	
Code	mm
A	28
B	30

↓

Inner Core Media	
Code	Media
C1	Polypropylene
C2	304 SS
C3	316 SS
C4	Stainless iron

- PPW -

INDUSTRIAL FILTERS

CHARACTERISTICS

The filtering media is combined with ultra fibre membrane (belongs to depth filtration) and a guidance layer, which offers high resistance to pollutants. The end caps, outer shell and inner core are all made of pure polypropylene.

Pleated layers can enlarge the permitted concentration of pollutants, increase the fluid flow and expand the filter's life. All the parts are sealed into a complete unit via sweating soldering without any adhesive.



PurFlo™ TPP® Cartridge Series
Polypropylene Pleated Filter Cartridge

SPECIFICATIONS

Item	Specification
Temperature	<60°C, (Δp : 0.03MPa) <90°C, (ΔP: 0.02MPa)
Flow Rate	0.3T/H • 10"
(60°C)	0.1 MPa/0.1 MPa inpouring
Δp (MAX)	0.06MPa/0.06MPa outpouring
Steam Sterilizing	121°C/30min

APPLICATIONS

- Electronic industry: Pre-filtering ultrapure water.
- Food & beverage industry: Filtering mineral water, liquor, juice, etc.
- Medical industry: Filtering liquid medicine, gas, etc.
- Chemical industry: Filtering organic solvents.

Ordering Information | PureLife Part numbers

Micron Rating		Nominal Length			O-ring		Media	
Code	μm	Code	Inches	mm	Code	mm	Code	Media
02	0.2	L1	10	254	X	Silicon	C1	PP
045	0.45	L2	20	508	Y	EPDM	C2	PTFE
10	1	L3	30	763	Z	Viton	C3	PESU
50	5	L4	40	1016				
100	10							

INDUSTRIAL FILTERS

CHARACTERISTICS

Activated carbon is a porous material, which can absorb organic compounds. Therefore, it is widely used as a filtration solution for decolouration, deodorization and de-oiling, in order to absorb those undesirable contamination particles in filtered liquids. Absorbability depends on the filter method, fluid flow rate, contact time, contact area with active carbon, etc.

Taking all these facts into consideration our filters are well designed to offer efficiency and improve the filtration quality that the medium offers.

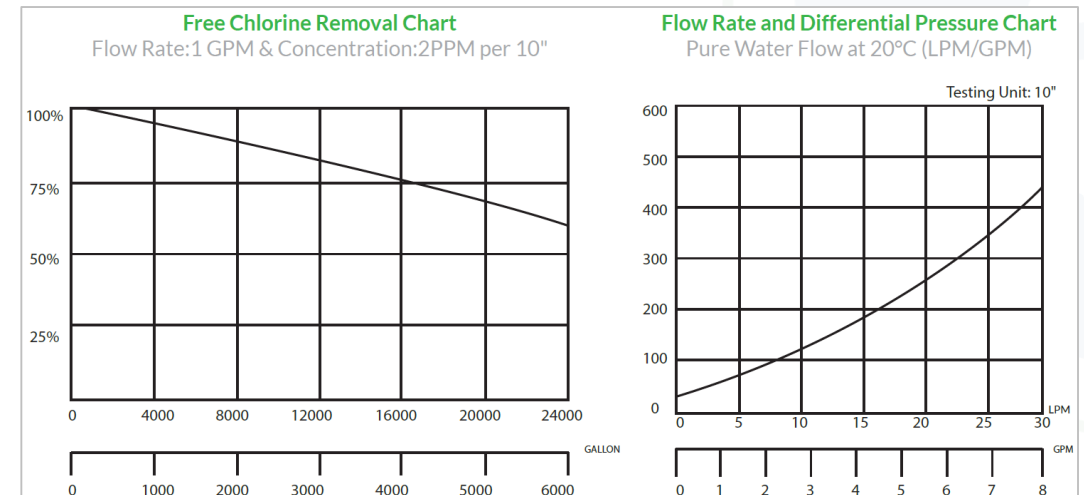
PurFlo™ CTO® Cartridge Series | Activated Carbon Filter Cartridge



APPLICATIONS

- Water filtration in medical industry.
- Surface preparation in electroplating solutions.
- To get rid of the oil and aromatics in liquids.
- To get rid of the free chlorine and VOC in liquids.
- To get rid of odours, sediments or organic pigments in liquids.
- To get rid of organic chemicals.

SPECIFICATIONS



INDUSTRIAL FILTERS

Filtration Efficiency Value

Specific Surface Area: m ² /g	850
Adsorptive Value of Benzene: mg/g	270
Adsorptive Value of Iodine: mg/g	800
Decolor Value of Methylene Blue: mg/g	100
Thickness: mm	2



Media / Material of Construction

Activated Carbon Type	Coconut Shell Based Activated Carbon
	Polyester
Inner Core	Polypropylene
Coating Layer of Inner Core	Polyester
Outer Carrier Net	Polyethylene
Endcap	PPR (Food Grade)

Operating Parameters

Pore Size	5UM
Maximum Operating Temperature	52°C (125 F)
Maximum Differential Pressure	3.45Bar(50 psid)
Recommended Change-out Differential Pressure	2.07Bar(30 psid)
Breaking-out Differential Pressure	5.17Bar(75 psid)

Ordering Information | PureLife Part numbers

- CTO -

Length	
Code	mm
L1	250
L2	254 (10")
L3	500
L4	508 (20")

OD	
Code	mm
X	63.5 (2.5")
Y	115 (4.5")

INDUSTRIAL FILTERS

CHARACTERISTICS

Pure Life 'PartCon' cartridge series designed to have a high pleated surface area to remove particulate contamination for gas streams.

This filter can also be used as a cost-effective means of removing solid contamination during start up or after "pigging". The filter offers ideal protection from unwanted contamination and will remove particles of 0.3 microns and larger. This will help ensure optimum protection of compressors, valves, instrumentation and metering equipment.

PurFlo™ PartCon® Cartridge Series | PureLife PartCon HF filter



SPECIFICATIONS

Cartridge Dimensions		Operating Characteristics	
Nominal length	1016 mm (40")	Differential Pressure*	Operating Temperature
Outer diameter	152.4 mm (6")	Recommended change-out 1 bar d	80°C
Inner diameter	100 mm (4")	Maximum 1 bar d	80°C

Materials of Construction	
Media	Resin-impregnated cellulose
Hardware	Stainless Steel
Cartridge Seal	Nitrile

INDUSTRIAL FILTERS

CHARACTERISTICS

Pure Life Synthetic Separators are used in conjunction with Pure Life coalescers. The Pure Life SS is hydrophobic and repels water droplets that form while passing through the liquid/liquid coalescers. They perform exceptionally well in a broad range of liquid applications and are more efficient and cost less than coated separators. Synthetic separators provide excellent chemical compatibility and can also be cleaned and reused.

PurFlo™ SuperSep® Cartridge Series | PureLife Synthetic Separators

Specifications

- Media: hydrophobic synthetic mesh
- Core: steel (galvanized or tin plated)
- End caps: steel (galvanized or tin plated)
- Gaskets: buna-n



Sealing & mounting end configurations and operating parameters:

Designation Code	Inside Diameter		Mounting End	
	Sealing End			
	in.	mm	in.	mm
B	17/32	13	3 1/2	89
D	3 1/2	89	3 1/2	89

Max Temp. [F]	pH Range
240	5 - 9

- Recommended change-out DP is 15 psid
- Normal flow direction is outside to inside

APPLICATIONS

- General Industrial
- chemicals, resins, solvents, hydraulic
- oils, lube oils
- Petroleum Refining
- hydrocarbon feed stocks, fuels, crude,
- condensates, distillates
- Pipelines and Petroleum Terminals
- diesel, gasoline, kerosene, LNG, LPG
- Power Generation
- turbine lube and hydraulic oil
- Pulp & Paper
- lube and hydraulic oil
- Electricity Transmission



Replacement For:

- Filter-Fab
- Filter-Mart
- Racor SS Series
- Velcon SO Series
- Others

Vessels:

- Facet VCS, HCS, CFCS, FCS and VFCS Series
- PECO 1 10 Series
- Racor RVFS Series
- Velcon V W and HV and HVS Series
- Other vessels manufactured to be compatible with synthetic style separators.

CERAMIC MEMBRANES

PureLife portfolio for ceramic membranes contains a different type, dimensions and many applications where the ceramic membranes can be utilized.

Below are the applications for food & beverage, pharmaceutical, energy, etc. where the ceramic membranes can be used:

CERAMIC MEMBRANES

Fermentation & Pharmaceuticals

- Intermediates: Erythromycin, Cephalothin, Streptomycin, Lincomycin, Vancomycin, Spectinomycin, Clavulanic acid, Kasugamycin, Oxytetracycline, Natamycin, Statins, Phenylglycine, I nosine & Guanosine, Cytidylic acid, Nisin, Penicillin-G, etc.
- Amino acid: Aspartame, Threonine, L-Lysine, Glutamic, Arginine, Valine, Tryptophan, Glycin, Isoleucine, Glutamine, Theanine, Proline, etc.
- Organic acid/Polyatomic alcohol: Citric, L-Lactic, Itaconic acid. Succinic acid. Propanediol, Glycerol
- Vitamin: VC, VB2, VB1 2
- Enzyme: Phytase, Amidase, etc.
- Biochemical: Thymopetidium, Interferon vaccine. Papain, Chymosin, Dehydrogenase, Mannanase, Blood products, etc.

Wastewater Treatment

- Oily water: Emulsion from Cold-rolled steel plant and Banknote works, Cutting fluid, Degreasing fluid, etc.
- Dye wastewater, CMP wastewater
- Latex water, Fishmeal wastewater
- Mine drainage water, laundry water
- Landfill leachate water, Steam condensate

Water Supply & purification

- Turbid surface water treatment
- Drinking fountain
- Military water supply unit
- Emergency water supply unit



Petroleum & Chemical

- Recovery & Enrichment of nanometre catalyst: Caprolactam, Acetamido phenol, Resorcinol, Melamine,
- Sodium methoxide, etc.
- Recovery of PTA mother liquid
- Recovery of ABS & VCM wastewater
- CRBR primary brine refinery
- Deep processing of coal
- Treatment of produced & frac water for oil well.
- Recovery of used oil

Food & Beverage

- Tea: Green/Red/Oolong instant tea powder, Polyphenols, etc.
- Dairy: Foremilk, Buffer milk, Protein standard, Whey
- Alcohol; Wine, Beer, Fruit wine, Health wine, etc.
- Fruit juice: Apple, Red berry, Pineapple, Lemon, Garlic, Carrot, etc.
- Sweetener: Cane sugar, Beet sugar, HFCS55, Sativoside, etc.
- Brewage: Soy sauce, Vinegar
- Herbal extraction: Protein, Peptide, Oligosaccharide, Pectin, Flavone, Pigment, etc.

New Energy & New Materials

- Concentration & purification for nanometre & submicron particles
- Fuel cell
- Solar cell

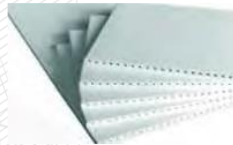
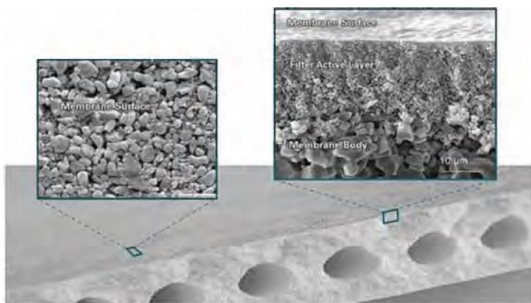
CERAMIC MEMBRANES

CHARACTERISTICS

CFM Systems® (Ceramic Flat Membrane) combines the advantages of an asymmetric inorganic filter and submerged flat membrane filtration. The advanced design enables an unprecedented technical and economical water treatment in various fields of application.

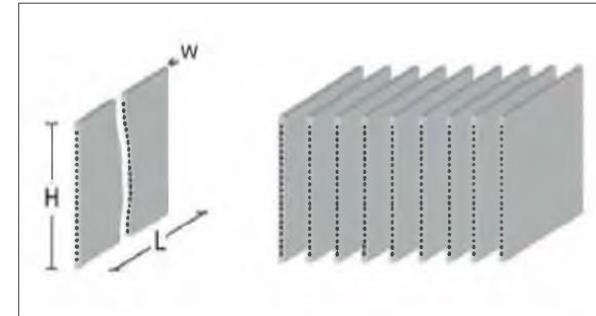
PurFlo™ CFM® Ceramic Membranes Ceramic Flat Membrane

Fields of Application	Drinking Water			Sewage
	Ground Water	Surface Water	Sea Water	Municipal
Max. Operating Pressure (bar)	2.5	2.5	4.0	1.5
PH Range	2 - 10			
Operation Temperature Range (C)	20-60	5 - 40	5 - 35	5 - 35
Permeability (l /m2*h*bar)	7500	5000	6000	2000



APPLICATIONS

Legth L (mm)	530	water Channel (mm)	
width w (mm)	6.5	No. of Filtered water	21
Height H (mm)	110	Channels	
Inner Diameter of Filtered	3.0	Filter Area per Plate (m2)	0.12



Fields of Application	Drinking Water			Sewage
	Ground Water	Surface Water	Sea Water	Municipal
Core Treatment Targets	Removal of inorganic oxidized and adsorbed compounds	Removal of suspended solids, micro-organism	suspended solids, micro-organism	Removal of suspended solids, micro-organism
Membrane Structure	Asymmetric design			
Material of Membrane	a-AL ₂ O ₃			
Filter Active Layer	InOxi (Fe/Mn) InOx i - Ads	Org-Rem org-Ads	Org-Rem	BioSys
Material of Filter Active Layer (Nano-coating)	a-AL ₂ O ₃ /ZrO ₂ (modified depending on removal targets)			
Average Pore Size (nm)	200 (other sizes on request)			

CERAMIC MEMBRANES

CHARACTERISTICS

Pure Life is a solution provider for membrane filtration & separation technology in process industry. Pure Life has been focusing on MF/UF ceramic membranes filtration technology, which has been widely applied for solid-liquid separation in food & beverage, petrol chemical, pharmaceutical, and wastewater treatment.

Pure Life can act as an OEM manufacturer to design and make MF/UF/NF membrane filtration machines as per customer's requirement. Pure Life can offer for full range membrane product from MF/UF ceramic membrane, Zeolite Pervaporation membrane, Lab pilot unit Scaled-up membrane filtration system.

PurFlo™ CEM® Ceramic Membranes Ceramic Element Membrane



MEMBRANE SEPARATION LEADING TECHNOLOGY

Ceramic Membrane Separation Technology

Basic theory of ceramic membrane separation technology is the sieve effect of porous media.

Membrane is operated as the "Cross Flow Filtration" mode, under pressure driven, the micro components can be separated, concentrated and purified. CRM ceramic membrane has filtration accuracy down to nanometre size, which has been proved to be an advanced and revolutionary separation technology for modern process industry.

Advantages of ceramic membranes »

- Resistance to strong acid, caustic, and oxidation
- Resistance to organic solvent
- Thermo stability, running temperature up to 150°C
- High abrasive resistance, not sensitive to mechanical particles
- Fine separation accuracy with narrow pore size distribution
- High strength, long work life
- High flux, backwash ability, high efficiency
- High performance of antifouling and antimicrobial
- Easy operation with low maintenance cost

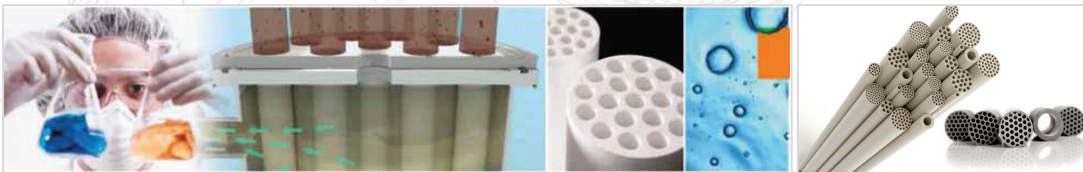
CERAMIC MEMBRANES

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PurFlo™ CEM® Ceramic Membranes Ceramic Element Membrane



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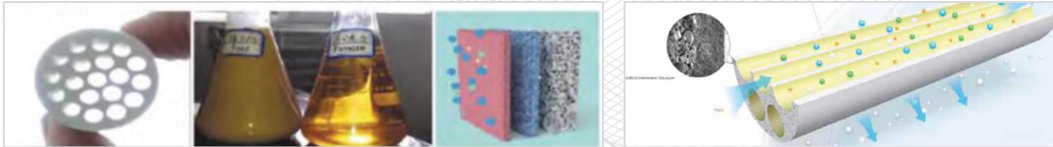
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CERAMIC MEMBRANES

WHAT IS "CROSS FLOW FILTRATION"?

"**Cross Flow Filtration**" (also known as tangential flow filtration) is a type of filtration (a particular unit operation). "Cross Flow Filtration" is different from dead-end filtration in which the feed is passed through a membrane, the solids being trapped in the filter and the filtrate being released at the other end. "Cross Flow Filtration" gets its name because the majority of the feed flow travels tangentially across the surface of the filter, rather than into the filter. By "Cross Flow Filtration", the feed stream is separated into two streams: permeation and retentate.



Advantage of "Cross Flow Filtration"

The principal advantage of "Cross Flow Filtration" is that the filter cake (which can blind the filter) is substantially washed away during the filtration process, increasing the length of time that a filter unit can be operational. It can be a continuous process, unlike batch-wise dead-end filtration.

EXCELLENT QUALITY CREATED BY PURE LIFE

The senior experts of pure Life apply advanced recipe, unique technique, high quality raw material, and special equipment to manufacture high performance CRM ceramic membranes. All the products are controlled by precise manufacturing management and strict quality control system. CRM ceramic membranes are at international advanced level and have noticeable more advantages compared with other domestic ceramic membranes.

High Purity

Raw material is imported α -Al₂O₃, ZrO₂, whose purity is higher than 99%.

High Strength

Membrane support is stronger, it can't be broken easily. Membrane layer has high abrasion resistance to keep longer working life.

High Accuracy

Narrow distribution of pore size. The mean filtration accuracy can be nanometre size.

High Accuracy

Narrow distribution of pore size. The mean filtration accuracy can be nanometre size.

High Flux

Though the membrane layer is relatively thicker, the flux can be kept stable for long period.

High Specifications

CRM membrane can be operated in acid, caustic, oxidant, and solvent at high

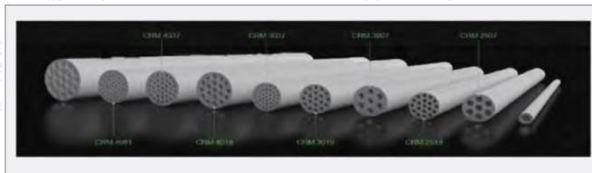
CERAMIC MEMBRANES

CEM MF/UF | Ceramic Membrane Elements

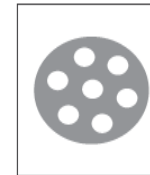
CRM ceramic membranes are sintered under high temperature in multi-channel tubular construction. Membrane elements appear pure white like beautiful jade. Now Pure Life has various models of MF/UF ceramic membrane with full range of pore size, diameter, length and channel quantity. Pure Life can also offer customization for membrane manufacturing according to customer's need or process requirement.

CRM Model	OD (MM)	Channel qty	Length (mm)	Area (m ²)
2507	25	7	1178	0.15
2537	25	37	1178	0.3
2519	25	19	1178	0.23
3007	30	7	1016	0.13
3019	30	19	1016	0.24
4019	40	19	1000	0.36
3037	30	37	1016	0.35
4037	40	37	1200	0.5
4061	40	61	1500	0.72

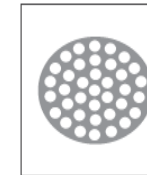
Ordering Information | PureLife Part numbers



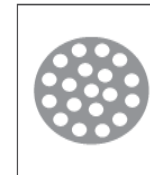
CRM 3U 19 50
Tube OD (mm) — | |



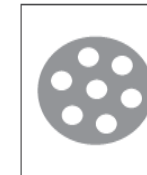
Model : CRM2507
OD : 25 mm
Channel Qty. : 7
Length : 1178 mm
Area : 0.15 m²



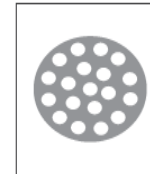
Model : CRM2537
OD : 25 mm
Channel Qty. : 37
Length : 1178 mm
Area : 0.30 m²



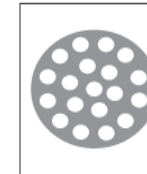
Model : CRM2519
OD : 25 mm
Channel Qty. : 19
Length : 1178 mm
Area : 0.23 m²



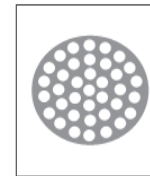
Model : CRM3007
OD : 30 mm
Channel Qty. : 7
Length : 1016 mm
Area : 0.13 m²



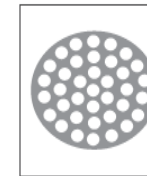
Model : CRM3019
OD : 30 mm
Channel Qty. : 19
Length : 1016 mm
Area : 0.24 m²



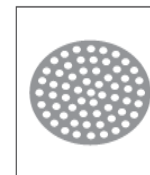
Model : CRM4019
OD : 40 mm
Channel Qty. : 19
Length : 1000 mm
Area : 0.36 m²



Model : CRM3037
OD : 30 mm
Channel Qty. : 37
Length : 1016 mm
Area : 0.35 m²



Model : CRM4037
OD : 40 mm
Channel Qty. : 37
Length : 1200 mm
Area : 0.50 m²



Model : CRM4061
OD : 40 mm
Channel Qty. : 61
Length : 1500 mm
Area : 0.72 m²

CERAMIC MEMBRANES

CRH | Ceramic Membrane Housing

- Load Qty.: 1, 3, 7, 12, 19, 37, 61, 91, 99, 138
- Membrane Model: Length 250 ~ 1 500 mm / OD 25, 30, 40,
- 52 mm Body Material: SUS304, SS316L, Ti, PP, UPVC, etc.
- Seal Type: O-rings, Single-cone, Double-cone, Packing
- Seal Material: EPDM, Fluorine, Silicon, etc.
- Connection Type: Flange, Clamp, Union
- Pressure Rating: 1.0 MPa, 1.6 Mpa

CRP | Multi-functional Membrane Pilot Machine

This pilot machine can be used for testing purpose for liquid separation / clarification / concentration by MF / UF / NF / RO membrane process.

- Compact design
- Less holding volume
- Easy operation & disassembly
- Full membrane range
- Pressure adjustability
- Sanitary material



CRS | Industrial Membrane Separation Systems

Pure Life, based on the ceramic membrane, has accumulated plentiful experience in industrial application of membrane technologies. Pure Life has provided the customers with professional technologies and product service and have customized the exclusive membrane systems in response to their industrial features and individual needs.

Wide application value enhancement

The only reason for Pure Life to exist is to serve our customers and we regard customer's needs as the motivation for Pure Life's development. We stick to the customer-cantered and customer-oriented principle and create long-term values together with our customers to achieve win-win and mutual development.

Advantages of ceramic membrane separation

Compared with traditional filtration methods (Filter Press, Centrifuge, Flocculation, Polymeric membranes etc.):

- Reduce waste discharge, recycle valuable components
- Save energy consumption, reduce carbon emissions
- Simplify process, reduce investment and cost
- Enhance product quality, increase profit
- Increase efficiency, reduce labour cost
- Membrane integrated process offers reliable insurance for post NF, chromatograph, crystallization, evaporation
- Best choice for ultra fine separation in harsh conditions in process industry

FOCUS ON MEMBRANE SYSTEM WIN-WIN COOPERATION

Pure Life focuses on CRM ceramic membrane system and constantly improve product quality and technology levels.

Pure Life strives to provide customers with high quality and preferential membranes and technical support.

We are looking forward to win-win cooperation and mutual development with our customers and business partners.



Technical selection & enquiry

Confirm the fluid, flow rate, filtration or membrane requirement, operating pressure and temperature, connection arrangement, dimensions, materials and required documentation.

Published portfolio data supports initial selection. The technical offer and selected model drawing govern the final configuration and operating limits.

CONTACT PURELIFE

Sales@purelife-filters.com