



PROCESS FILTERS FOR ENERGY

PURELIFE KSA COMPANY | We partner for the filtration future

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REFINERY & PETROCHEMICAL

Filtration Solutions for Complex Refinery Applications

Maximize contaminant removal, minimize maintenance downtime and extend the life of equipment with customized filtration solutions.

BENEFITS OF PURELIFE SYSTEMS FILTRATION SOLUTIONS

MAXIMIZE REFINING EFFICIENCY AND PERFORMANCE!

Fluid streams that are free of contaminants will help achieve more efficient reactions for a higher quality end-product and minimal product waste. PureLife filtration solutions are engineered to maximize contaminant removal for a truly streamlined operation. Filtration solutions that PureLife customized remove contaminants from feed streams and fluid recirculation processes to improve refining efficiency.

EXTEND THE LIFE OF CAPITAL EQUIPMENT

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IMPROVE AVAILABILITY AND RELIABILITY OF OPERATIONS!

A custom-designed filtration system can seriously impact the availability & reliability of operations. Our advanced filtration solutions are designed to meet the most demanding petroleum applications, while reducing the frequency of filter maintenance activities. The result is better availability and reliability of operations, with lower operating costs. Filter elements are available in a wide variety of materials including polyester, polypropylene, cotton, nylon, Teflon®, Nomex®, metals, micro-fiberglass, resin-bonded cellulose, and more.

ENGINEERED TO MEET YOUR RIGOROUS PLANT

Properly designed and implemented filtration equipment is paramount for the protection of your critical processes. That's why we take the time to understand your challenges and unique application needs. Then, we draw on over three decades of experience, best-in-class resources and technology to develop a solution that best suits your needs.

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REFINERY & PETROCHEMICAL FILTRATION APPLICATIONS

With 10+ years' experience in innovative filtration technology, PureLife design and manufacture advanced filtration solutions for a variety of refining applications.

Catalyst Protection - Stop water and solid particulates from deactivating catalyst beds and plug stream nozzles, which reduces reactor efficiency. Amine Sweetening & Tail Gas Treating Units

Liquid hydrocarbons and particulates from the amine system can cause contactor fouling and foaming.

Final Products Filtration - Stop contaminants, such as rust, scales, solids, and suspended water, from damaging equipment and lowering product specifications.

Glycol Contactor Protection - Prevent hydrocarbons or amine aerosols and solids from contaminating the glycol system, which can result in foaming, solvent losses, and off-specification gas.

Compressor Protection - Prevent condensable hydrocarbons, water and solids from reducing the viscosity of lube oil and damage pistons due to increased friction.

Molecular Sieve Drier Protection - Increase cycle time between regeneration of the molecular sieve drier and extend the bed life.

Refinery Fuel Gas - Protect burners and combustors from liquids and solids which cause fouling and plugging. Low NOx burners are very sensitive to plugging.

Condensate Dewatering - Provide hydrocarbon condensate with low water content to avoid corrosion problems in export pipelines and prevent off-specification final product.

Stabilization Plant Protection - Prevent free water and solids from entering the fractionation column, which could result in corrosion and salts and solids deposits.

Rich Amine Treatment - Improve the reliability of the amine regenerator by removing liquid hydrocarbons and solids.

Amine and Sulfur Recovery - Prevent carryover amine from contaminating catalyst at the sulfur recovery unit and carry over hydrocarbons and treating chemicals from causing foaming in amine contactors.

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ADDITIONAL PETROCHEMICAL FILTRATION APPLICATIONS

- Amine Contactor Protection Boiler Feed Water.
- Feedstock Filtration.
- Hydraulic and Lubricating Fluids
 Oily Water Treatment.
- Polymer Process Water Filtration Pre-filtration of Reactor Feed.
- Streams Production.
- Transfer Protection Quench Water Filtration.
- Turbo Machinery Protection Wastewater Treatment.







FILTRATION AND SEPARATION SOLUTIONS FOR POWER GENERATION

Maximize the performance of power generators. Manage operational costs. Improve your bottom line.

As our population continues to increase, so the demand for efficient power generation products and solutions will increase. Filtration is a critical element of power generation systems. Whether enhancing the efficiency of equipment or protecting components from damage, you need contaminant removal solutions designed specifically to achieve consistently high performance. Drawing on our filtration design and manufacturing experience in Power Generation, we have engineered filtration solutions that result in efficient, cost-effective operations whatever your application.



PURELIFE KSA



BENEFITS OF PURELIFE FILTRATION SOLUTIONS

- Engineered to meet demanding processing needs
- Maximize operating efficiency and performance
- Reduce downtime with rapid filter replacement
- Meet environmental safety regulations
- Extend the life of capital equipment

REFINERY & PETROCHEMICAL FILTRATION APPLICATIONS



Engineered to meet demanding processing needs

With thousands of different filter elements for a wide variety of filtration applications and a full line of housings including cyclones, filter separators, particulate filters and coalescers, you can be confident that we have the right solution to maintain and enhance your operational performance.

To meet the most demanding gas and petroleum applications, filter elements are available in a wide variety of materials including Polyester, Polypropylene, Cotton, Nylon, Teflon®, Nomex®, Metals, Microfiberglass, Resin-bonded cellulose.

Maximize operating efficiency and performance

We partner with you to maximize efficiencies and improve maintenance operations with our custom-designed high-performance oil & gas filtration solutions for the production, processing, transportation, refining and storage of the entire gas and liquid hydrocarbon value chain within the industry.

Reduce downtime with rapid filter replacement

As a one-source supplier for all your filtration and separation needs, Pure Life can quickly replace over 40,000 OEM cartridge part numbers to ensure your operations run smoothly.

Meet environmental safety regulations

Environmental safety is essential. You can be confident that our systems are guaranteed to meet all industry regulations by maximizing the removal of solid and hydrocarbon contaminants.

Extend the life of capital equipment

Contaminants can cause long-term damage to equipment, such as turbines and compressors, which leads to expensive maintenance and compromises process performance. Our filtration solutions are designed to maximize contaminant removal and separation to lower the risk of equipment failure and ultimately extend the life of equipment. It also eliminates the costs of unscheduled maintenance and downtime.



OIL & GAS FILTRATION APPLICATIONS

With 10+ years of experience in innovative filtration technology for Oil & Gas, Pure Life engineers' solutions for major critical process applications.

REFINERY & PETROCHEMICAL FILTRATION APPLICATIONS

Amine Sweetening. Remove or separate liquid hydrocarbons and particulates from the amine system to prevent contactor fouling and foaming.

Compressor Outlet Gas. Remove fine aerosols and low surface tension liquids lube oils from the compressor outlet to protect downstream equipment.

Compressor Protection. Remove finely dispersed liquid droplets and solids which can reduce the viscosity of lube oil, resulting in damaged pistons due to increased friction.

Condensate Filtration. Remove solid contaminants in hydrocarbon condensate to avoid corrosion in pipelines and protect downstream equipment.

Condensate Pipeline Dewatering. Reduce water content in hydrocarbon condensate to avoid corrosion in pipelines and remove solid contaminants.

Condensate Stabilization. Remove water and solid contaminants from condensate.

Flow Meters & Meter Runs. Remove liquids and solid contaminants to protect high efficiency meters for accurate custody transfer.

Fractionation

Removal of solids and liquids separation to protect fractionation columns.

Fuel Gas Filtration. Prevents fouling and off-spec fuel gas to compressor's turbines and burners.

Gas Re-Injection. Prevent plugging in the down-hole formation by removing liquid hydrocarbons, glycol and solid contaminants.

Glycol Dehydration. Maintain reliability of glycol regenerator, reduce contactor foaming, and preserve gas specification.

HC Condensate Separation. Remove water and solid contaminants from condensate.

Injection Water. Remove solid contaminants and microorganisms which can foul injection wells.

Inlet Separation. Bulk solids and liquids removal as pre-treatment for downstream equipment.

Lube Oil Filtration. Removal of solid contaminants to prevent wear on critical rotating equipment components.

Molecular Sieve Protection. Removal of fine aerosols for protection of molecular sieve to extend the life and improve performance of of costly molecular sieve absorbents.

Produce water. Remove solid and hydrocarbon contaminants to prevent environmental problems associated with surface disposal and plugging during re-injection.

Turbine & Generation Protection. Remove lube oil contaminants and prevent build-up on turbine blades.

Wastewater Treatment. Removal of contaminants from wastewater before disposal to meet environmental regulations.



PRODUCTS

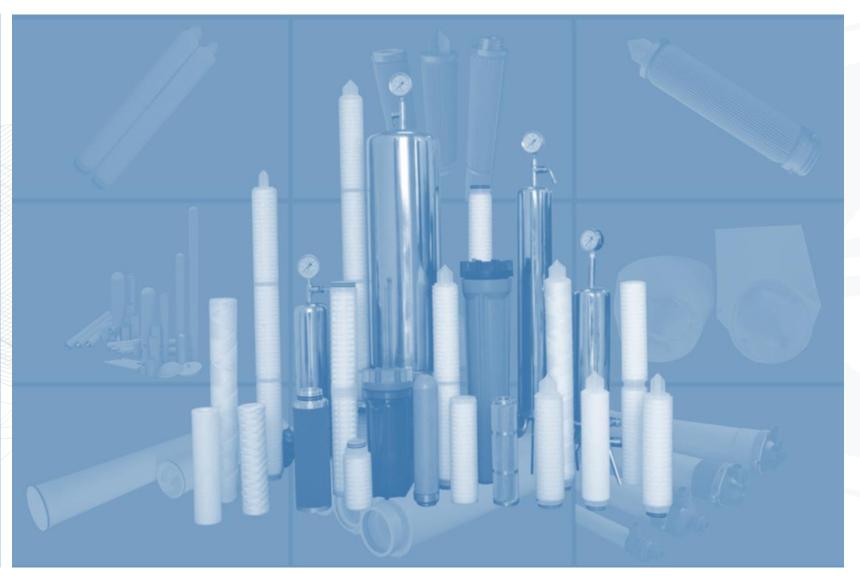
Downstream Oil & Gas Product Selection Matrix

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





Generally, Filter media can be divided into two categories:

- Surface Filter Media.
- Depth Filter Media.

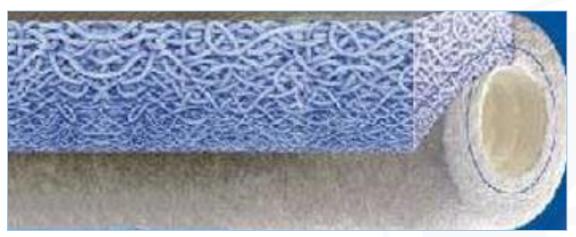
In Depth Filtration, even particles smaller than the pores of the filter can be retained within the depth media of the filter.

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.

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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.

PurFloTM 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)

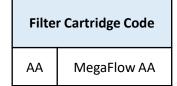
Lengths: 10" (25.4 cm), 20" (50.8 cm), 30" (76.2 cm), 40" (102 cm), 50"

(127 cm)

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





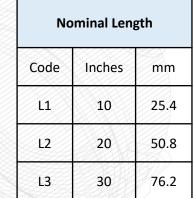


Micron

Rating







L4

L5



Outside Diameter		
Code	Inches	m
000.0		m
D1	2	5.
DI	2	1
D2	2 3/8	6
D2	2.1/2	6.
D3	2 1/2	4
D4	2 5/8	6.
υ4	2 3/8	7



Filter Media	
Code	Material
А	Polypropylene
В	Cotton
С	Polyester
D	Nylon
E	Acrylic
F	polyphenylene sulphide
G	Glass Fiber



Centre Core	
Code	Material
х	Polypropylene
Υ	304 SS
Z	316 SS

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

PurFloTM 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



Filter Cartridge Code	
AC	MegaFlow AC



Micron Rating

Code

10

20

25

- MF -



μm	O
0.5	
10	
20	
25	

Nominal Length		
Code	Inches	mm
L1	9.875	25.1
L2	20	50.8

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 μ m.
- 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).

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

PurFloTM MegaFlow® AD Cartridges





Filter Cartridge Code	
AD	MegaFlow AD



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



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



Outs	ter	
Code	Inches	mm
DO	2	5.1
SO	2 3/8	6

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.

PurFloTM MegaFlow® AE Cartridges Series



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)

Filter Cartridge Code		
ΑE	MegaFlow AF	



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



Nominal Length			
Inches	mm		
10	25.4		
20	50.8		
30	76.2		
40	102		
50	127		
	10 20 30 40		



Gasket / O ring		
Code Material		
V	V Silicone	
W elastomer		
Х	nitrile	
Υ	fluorocarbon	
Z	EPDM	

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)

PurFloTM MegaFlow® AF Cartridges Series



Ordering Information | PureLife Part numbers



Filt	er 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		
150	150		

200

200



	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	
Х	nitrile	
Υ	fluorocarbon	
Z	EPDM	

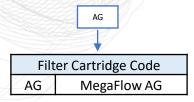
CHARACTERISTICS

- 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

PurFloTM MegaFlow® AG Cartridges Series



Ordering Information | PureLife Part numbers



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

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)

- MF -

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)



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



fluorocarbon

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

PurFloTM 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

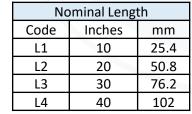


Filter Cartridge Code		
AH MegaFlow AH		



Micron Rating			
Code	μm		
1	1		
3	3		
5	5		
10	10		
15	15		
20	20		
40	40		
70	70		





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.

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

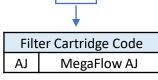
Diameter: 2 ½ " / 64 mm

Double open end with flat gasket

- MF -

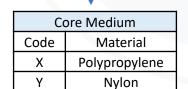
PurFloTM MegaFlow® AJ Cartridges Series





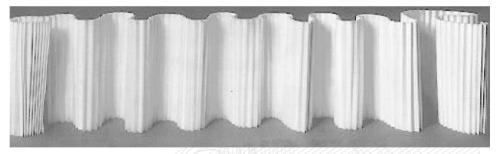


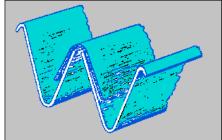
•			
Nominal Length			
Code	Inches	mm	
L1	10	25.4	
L2	20	50.8	
L3	30	76.2	
L4	40	102	



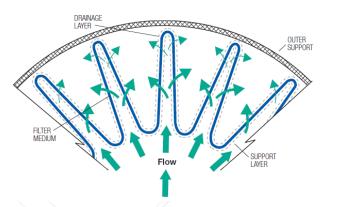


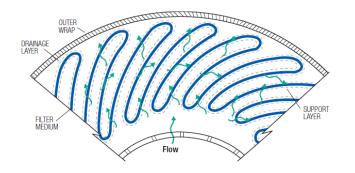
A filter cartridges of pleat type filtration media are made generally from medium sheets that laid over as below shapes to increase the surface filtration area as below pictures:





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.

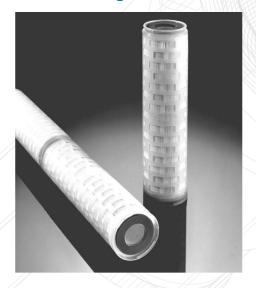
While the right side of the picture which is also a pleat type but the filtration sheet is bended to have more filtration media in same area and finally get more service life-cycle from the traditional pleated type. As shown above, both fan-pleat type (left side) and bended pleated type filtration, the 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.

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.

PurFloTM HighFlow® AA Cartridges Series



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

Ordering Information | PureLife Part numbers





Micron Rating

Code

20

30 50



μm

20 30

50

▼	

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



Core Medium			
Code Material			
Υ	Polypropylene		
Z	SS		

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.

PurFloTM HighFlow® AC Cartridges Series



PRODUCT SPECIFICATIONS

Materials of Construction:

Filter Media:

Two options are available: Spunbonded Polyester (for 50 μ m 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.

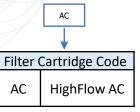
Dimensions (nominal):

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

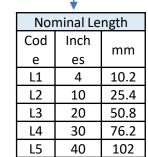
Lengths: 4" (10.2 cm), 10" (25.4 cm), 20" (50.8 cm), 30" (76.2 cm) and

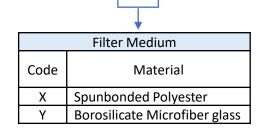
40" (102 cm)

- HF -



▼		
Micron Rating		
Code	μm	
10	1	
30	3	
100	10	
300	30	
500	50	





Gasket/O-ı	ring Material
Code	Material
Α	Silicon
В	Buna N

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.

PurFloTM HighFlow® AD Cartridges Series



PRODUCT SPECIFICATIONS

Materials of Construction:

Filter Media: Borosilicate Microfiber glass with Acrylic Binder

- HF -

Support Material & hardware: Polypropylene

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

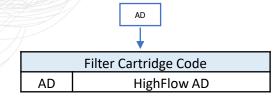
Silicone Elastomer, etc.

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)



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		



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 lifecycle 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.

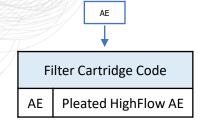
Dimensions (nominal):

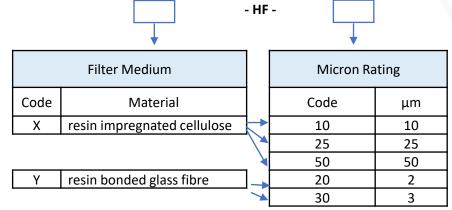
Outside Diameter: 3 ¾" (9.53 cm)

Lengths: 40" (102 cm).

PurFloTM HighFlow® AE Cartridges Series Ordering Information | PureLife Part numbers







<u> </u>				
Gasket/O-ring				
Material				
Code	Material			
Α	Silicon			
В	Buna N			

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 lifecycle due to high surface filtration per cartridge.
- Different removal ratings are available from 1 to 50 μm.

PurFloTM 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

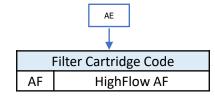
Sealing: Epoxy Bond

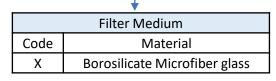
O-ring: Buna N

Dimensions (nominal):

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

Length: 38 3/4" (98.4 cm)





Υ	Polyester



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

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".

PRODUCT SPECIFICATIONS

Materials of construction:

Filter medium, support and end caps: Polypropylene O-ring: Ethylene propylene, Fluorocarbon elastomer and Nitrile

Dimensions (nominal):

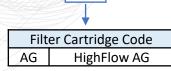
Cartridge length: 20" (508 mm), 40" (1016 mm) and 60" (1524 mm)

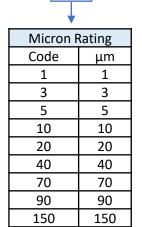
Cartridge max. OD: 6.3" (160 mm)

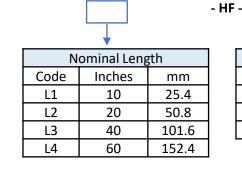
Medium OD: 5.9" (150 mm) Medium ID: 3.5" (89 mm)

PurFloTM HighFlow® AG Cartridges Series









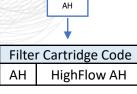


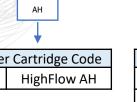
CHARACTERISTICS

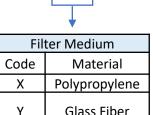
- High-Capacity Polypropylene Filter Cartridges
- Pleated high flow and high-capacity filter cartridges with 6" outside diameter.
- In-to-outside flow direction to retain the contaminants inside the filter cartridge.
- Filtration media made of different materials to be compatible with many chemicals, 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".

PurFloTM HighFlow® AH Cartridges Series









Micron Rating		
Code	μm	
20	2	
60	6	
100	10	
200	20	
400	40	
700	70	
900	90	

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):

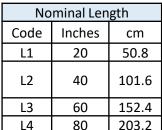
Cartridge length: 20" (508 mm), 40" (1016 mm), 60" (1524 mm) and 80"

(2032 mm)

- HF -

Cartridge OD: 6" (152 mm)

Ordering Information | PureLife Part numbers



gth	Gasket/O-ring Materia		
cm	Code	Material	
50.8	В	Buna N	
101.6	S	Ethylene	
		Propylene	
152.4	U	Silicon	
203.2	Z	Fluor elastomer	



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.

PurFloTM Coreless® AA Cartridges Series



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

Material

Polypropylene



Code

-	CL	-



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

Υ	Nylon

Z	polyphenylene sulfide (PPS)

500	50
100	10
200	20
,	

100	10
200	20
500	50
-	



•			
Nominal Length			
Code	Inches	cm	
L1	20	50.8	
L2	40	101.6	
		<u> </u>	

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.

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" /

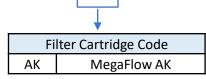
1016 mm

Diameter: 2 ½ " / 64 mm Double open ended (DOE)

PurFloTM Coreless® AC Cartridges Series



Ordering Information | PureLife Part numbers





<u> </u>		
Micron Rating		
Code	μm	
5	5	
10	10	
20	20	
40	40	

- CL -



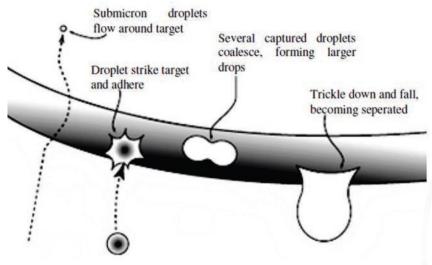


In many applications, liquid aerosols carry over need to be eliminated/separated from either liquid or gas stream to protect the downstream equipment. The separation of such droplets/aerosols of liquid is called coalescence. Thus, from the application point of view, the coalescing can be either liquid/gas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

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

PRODUCT SPECIFICATIONS

Features

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

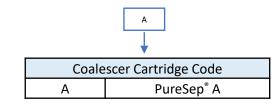
Advantages

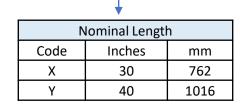
- High solids removal efficiency
- Fewer cartridges changeouts needed.
- Consistent liquid removal
- Reduced liquid losses.
- Efficiently protecting downstream equipment.

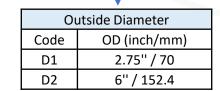
Benefits

- Lower operating and maintenance costs
- Lower maintenance cost.

Ordering Information | PureLife Part numbers







- PS -

PurFloTM PureSep® A Coalescers



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.

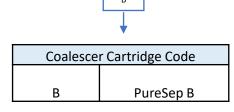
PurFloTM PureSep® B Coalescers

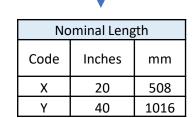


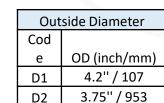
It can be utilized in many liquid applications such as:

- 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







- PS -





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 $150-200~\mu m$ removal ratings to a low & precise removal as low as $2~\mu m$.

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.



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 μ m 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.

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-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)

PurFloTM PureMesh® A Cartridge Series



Ordering Information | PureLife Part numbers



Metallic Cartridge Code		
Α	PureMesh A	

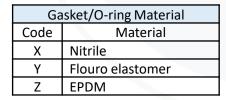


n Rating
μm
3
5
10
15
20
25
30
40
60
80



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



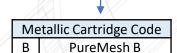


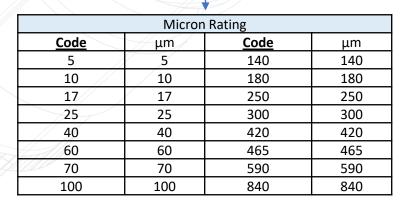
CHARACTERISTICS

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 μ m 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.

PurFloTM PureMesh® B Cartridge Series

Ordering Information | PureLife Part numbers





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)



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			
Χ	Nitrile			
Υ	flouro elastomer			
Z	EPDM			

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.

PRODUCT SPECIFICATIONS

Materials of Construction:

Filter Media: 316 low carbon stainless steel powder

End Configurations: DOE, NPT, etc

Gaskets/O-rings1: Nitrile, Fluorocarbon elastomer, Ethylene Propylene, etc.

Dimensions (nominal):

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

- PM -

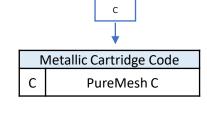
Standard Lengths: 10" (25.4 cm), 20" (50.8 cm), 30" (76.2 cm)

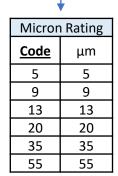
Maximum Temperature and Pressure: 250°F (121°C) at 150 psid (10.3 bard)

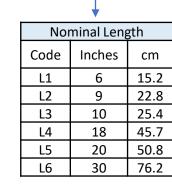
PurFloTM PureMesh® C Cartridge Series

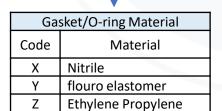


Ordering Information | PureLife Part numbers









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.

PurFloTM PureMesh® D Cartridge Series



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-rings1: Nitrile, Fluorocarbon elastomer, Ethylene Propylene, etc.

Dimensions (nominal):

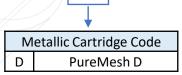
Outside Diameter: 2 1/2"

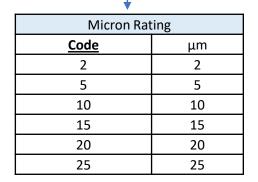
Standard Lengths: 10" (25.4 cm), 20" (50.8 cm), 30" (76.2 cm), 40" (102 cm)

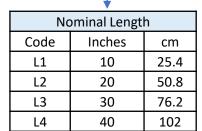
Maximum Temperature: 1250°F (677°C).

- PM -

Ordering Information | PureLife Part numbers







★			
Gasket/O-ring Material			
Code Material			
Х	Nitrile		
Υ	flouro elastomer		
Z	Ethylene Propylene		





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)				
	Filt	ration pressure:1.03-1.7	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	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 Stainless Steel or Plastic (PE/PP)			
Nack material				
Filtration pressure: 1.03-1.72 (Kg / sq.cm)				



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.

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.

PurFloTM CMB® Cartridge Series



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

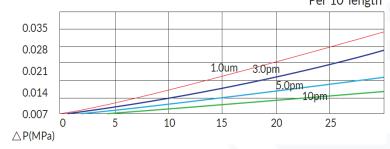
APPLICATIONS

- 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.

 Per 10"length



- CMB



Ordering Information
PureLife Part numbers

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

Α.	<u> </u>				
	No	minal Len	gth		
	Code	Inches	mm		
	L1	10	254		
	L2	20	508		
	L3	30	763		
	L4	40	1016		
	L5	50	1270		
	L6	70	1778		

	
	OD
Code	mm
W	45
Χ	55
Υ	63.5 (2.5")
Z	115 (4.5")

	/			
ID			Inr	16
Code	mm		Code	Ī
Α	20		C1	Ī
В	28		C2	I
C	30	I		

<u> </u>			
Inn	er Core		
Code	core		Code
C1	no core		S1
C2	with core		S2
•			S3

Surface				
Code	Description			
S1	Flat			
S2	Orange			
S3	Embossing			
S4	Point			

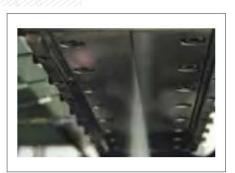
Melt blown - Process Description

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



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.



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



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



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

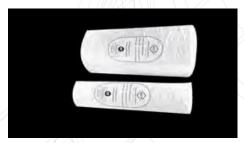


5- the non woven fiber web transferred to calender by net screen and will be pressed by calender, rolling up the completed meltblown fabric rolls.

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.

PurFloTM 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

Configuration: Double Open End (DOE)



- PPW -

Ordering Information | PureLife Part numbers



30

50

75

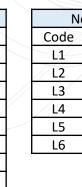
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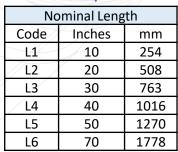
30

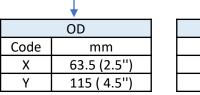
50

75

100







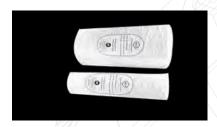
ID	
Code	mm
Α	28
В	30

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

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.



PurFloTM TPP® Cartridge Series Polypropylene Pleated Filter Cartridge

SPECIFICATIONS

Item	Specification	
Temprature	<60°C,(△p:0.03MPa)	
	<90°C,(△P: 0.02MPa)	
Flow Rate	0.3T/H • 10"	
(60°C)	0.1 MPa/0.1 MPa inpouring	
△p (MAX)	0.06MPa/0.06MPa outpouring	
Steam Slerilizing	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

Code

L1

L2

L4



Micron Rating		
μm		
0.2		
0.45		
1		
5		
10		
20		





10

20

30

40

	+		,	
No	minal Len	gth	0-	ring
de	Inches	mm	Code	m

254

508

763

1016

- TPP -

Code	mm
Х	Silicon
Υ	EPDM
Z	Viton



Media		
Code	Media	
C1	PP	
C2	PTFE	
C3	PESU	

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.

PurFloTM CTO® Cartridge Series | Activated Carbon Filter Cartridge

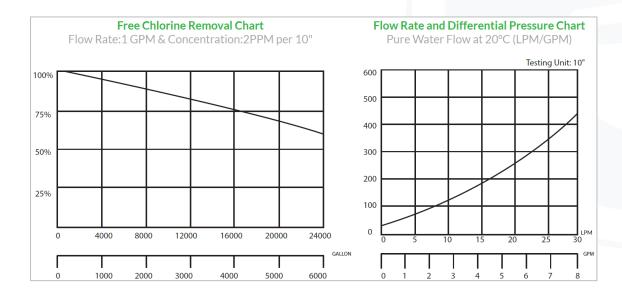




APPLICATIONS

- 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



Filtration Efficiency Value

Specific Surface Area: m2/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



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

OD		
Code mm		
X 63.5 (2.5'')		
Υ	115 (4.5'')	

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.

PurFloTM 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			

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 Teflon coated separators. Synthetic separators provide excellent chemical compatibility and can also be cleaned and reused.

PurFloTM 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:

	Inside Diameter				
Designation	Sealing End		Mounting End		
Code	in.	mm	in.	mm	
В	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

Facet VCS, HCS, CFCS, FCS and VFCS Series

compatible with synthetic style separators.

Velcon V W and HV and HVS Series Other vessels manufactured to be

- **Power Generation**
- turbine lube and hydraulic oil
- Pulp & Paper

Vessels:

lube and hydraulic oil

PECO 1 10 Series

Racor RVFS Series

Electricity Transmission



Replacement For:

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



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:

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: Thymopetidum, 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

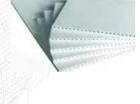
- Concentration & purification for nanometre & submicron particles
- Fuel cell
- Solar cell
- Enrichment of rare metal

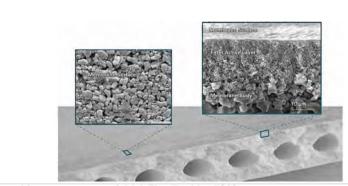
CHARACTERISTICS

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.

PurFloTM CFM® Ceramic Membranes Ceramic Flat Membrane

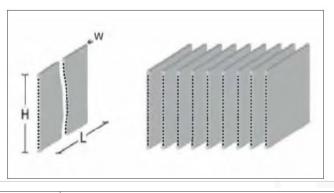
Drinking Water			Sewage
Ground Water	Surface Water	Sea Water	Municipa
2.5	2.5	4.0	1.5
2 - 10			
20-60	5 - 40	5 - 35	5 - 35
7500	5000	6000	2000
	2.5	2.5 2.5 2-1 20-60 5-40	2.5 2.5 4.0 2-10 20-60 5-40 5-35





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



		Sewage		
Fields of Application	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)			

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.

PurFloTM 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

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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 a-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 tern premature.

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 (m²)
				
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







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



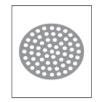
Model: CRM2519 OD: 25 mm Channel Qty.: 19 Length: 1178 mm Area: 0.23 m2



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



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



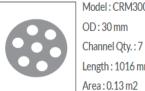
Model: CRM4061 OD:40 mm Channel Qty.: 61 Length: 1500 mm Area: 0.72 m2



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

Model: CRM3007

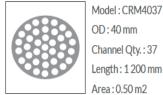
Model: CRM2537



Length: 1016 mm Area: 0.13 m2 Model: CRM4019 OD: 40 mm



Channel Qty.:19 Length: 1000 mm Area: 0.36 m2



Channel Qty.: 37 Length: 1200 mm Area: 0.50 m2

CRH | Ceramic Membrane Housing

- Load Qty.: 1, 3, 7, 1 2, 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.



THANK YOU

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