

# Series PP

## *Penguin Pleated* Filter Cartridges



### Recommended Applications:

- Water Purification
- Etchants
- Colloid Removal
- Solvents
- Pharmaceuticals
- Food and Beverages
- Photographic and Plating Solutions
- Printed Circuit Boards
- Chemicals: Ethers, Ketones, Acids  
Esters, Alcohols, Bases, and Solvents
- Magnetic Coatings
- Metal Finishing
- Biologicals
- Microorganisms/Bacteria Retention

### Features:

- Nominal and Absolute Particle Retention Ratings
- Superior Flow Characteristics
- High Dirt Holding Capacity
- Many Lengths and Cartridge Styles
- Low Clean Differential Pressure Drops

Penguin pleated cartridge filters are an alternative to string wound or spun molded filters. These filters are economical, multi-use, premium quality products that are available in various micron ratings ranging from 50 micron nominal down to .10 micron absolute. End cap configurations include DOE (double open end, flat gasket) and SOE (single open end, external double 222 O-ring/button end cap). Filter medias available include self-bonded fine diameter polypropylene fibers as well as membranes constructed of polypropylene, nylon, or PTEF.

Penguin pleated cartridge filters contain no surfactants or binders that can break down, leach out, or permit the typical problems of channeling and media migration. Maximum effective open surface areas allow for high flow rates at reduced pressure losses as well as high dirt holding capacity, long service life, large throughputs, and lower operating costs. Penguin pleated cartridge filters may be used as either prefilters or as final filters for bulk and point-of-use filtration. They are most appropriate for use when high efficiency filtration and economy are crucial.

# Series PP

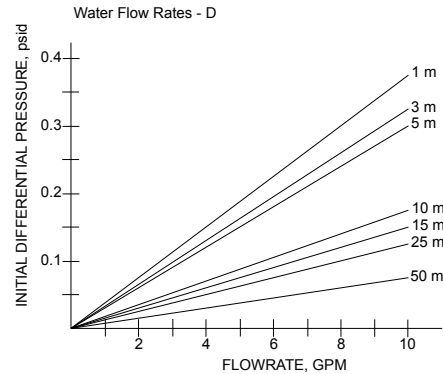
## Penguin Pleated Filter Cartridges

Plating Solutions  
Photographic Solutions  
Chemicals  
Metal Finishing  
Printed Circuit Boards

Water Purification  
Food & Beverages  
Bottled Water  
Cosmetics  
Magnetic Coatings

### Style D - Nominal Polypropylene Media

Our Penguin Nominal Polypropylene pleated cartridge is an economical, multi-use, premium depth type filter that is available in retention ratings from 1 to 50 microns. It is specifically designed to provide highly efficient particle removal in aqueous liquids. The uniformity and density of the continuous fine microfibers within the filter matrix allows for superior flow rates, lower pressure drops, higher contaminant holding capacity, and longer operational life.

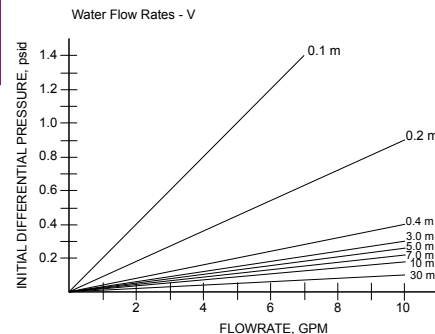


Water Purification  
Inks & Pigments  
Chemicals & Solvents  
Plating Solutions  
Pharmaceuticals

Etchants  
Food & Beverages  
Isotonic Salt Solutions  
Photographic Solutions

### Style V - Nominal Submicronic Polypropylene Media

Our Penguin Style V Polypropylene pleated cartridge is available in nominal retention ratings down to 0.1 micron and offered in a variety of lengths and styles. All polypropylene construction with virtually no extractables, allows for wide chemical compatibility and application to a broad range of fluids and applications. A ninety-eight percent average nominal efficiency rating makes this filter a low cost alternative to the membrane filter cartridge.

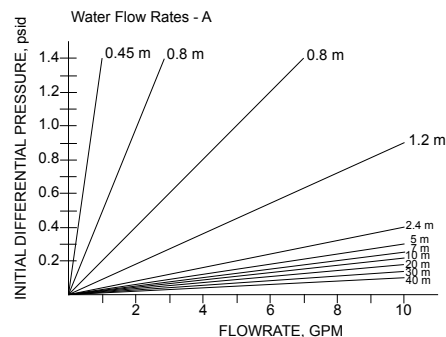


Water Purification  
Inks & Pigments  
Chemicals & Solvents  
Plating Solutions  
Pharmaceuticals  
Petrochemicals

Etchants  
Food & Beverages  
Isotonic Salt Solutions  
Photographic Solutions  
Biologicals

### Style A - Absolute Polypropylene Media

Our Penguin Absolute Polypropylene pleated cartridge is integrity testable by "bubble point" method to assure retention at the rated level, product integrity, and effectiveness in operation. This cartridge is absolute rated and is available in particle retention ratings of 0.45 to 40 microns. It may be used as either a low cost prefilter alternative to the more expensive membrane cartridge filter or as a final filter only, in some selected applications. Immediately rinses to 18 megohms.

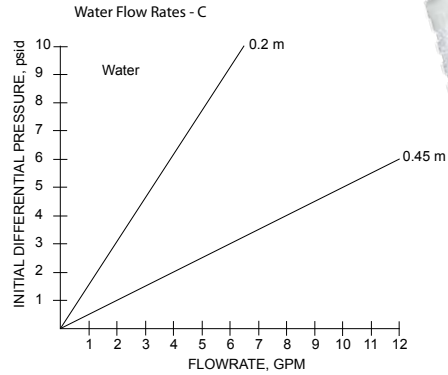


# Series PP

Acids	Photolithographic Solutions
Alcohols	Biologicals
Etchants	Pharmaceuticals
Bases	Microorganism Removal
Solvents	Bacteria Retention

## Style C - Absolute Submicronic Polypropylene Membrane

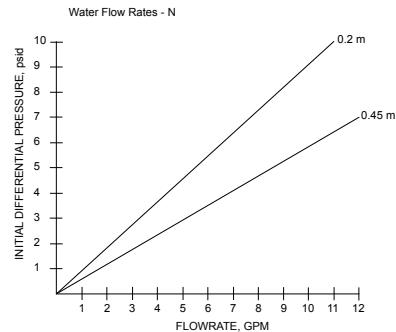
Our Penguin Style C pleated cartridge is an absolute rated, 100% polypropylene filter. It provides maximum chemical compatibility, performance, and economy in controlling contaminants in critical processes. Our submicronic polypropylene cartridge is designed for removal of particulates, colloids, and microorganisms from solvents and corrosive chemicals. It also offers high security for bulk and point-of-use filtration. It is inherently hydrophobic (natural barrier to water) and is available in absolute ratings of 0.1 and 0.2 microns.



Ultrapure Water	Photolithographic Solutions
Ethers & Keytones	Beverage Clarification
Colloid Removal	Bottled Waters & Soft Drinks
Alcohols & Wines	Microorganism Removal
Deionized Water	Halogenated Solvents
Bacteria Retention	Alkaline & Weak Acid Solutions

## Style N - Absolute Nylon Membrane

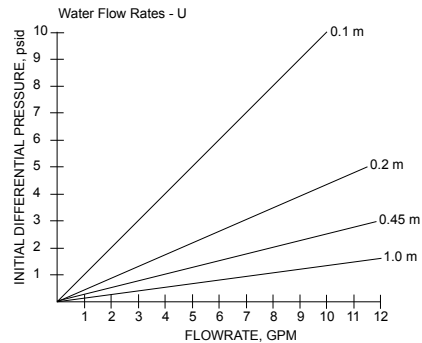
Our Penguin Nylon Pleated cartridge is an absolute rated filter designed for removal of microorganisms and particulates in aqueous liquids and solvents. Our nylon cartridge provides excellent final filtration for a variety of ultrapure water requirements as well as clarification/cold sterilization of beverages. This is a high flow, high throughput filter that is available in absolute bacterial retentive ratings of 0.2 and 0.45 microns. This filter is considered hydrophilic and therefore wets instantly with water.



Bases	Highly Concentrated Acids
Colloid Removal	Microorganism Removal
Aggressive Solvents	Highly Corrosive Chemicals
Esters	Alcohols
Photoresists	Keytones
Chlorinated & Fluorinated Solvents	

## Style U - Absolute Teflon Membrane

Our Penguin Teflon pleated cartridge is an absolute rated filter which offers the greatest assurance of filtration performance and chemical compatibility under severe process conditions. This filter is designed for the removal of particulates, colloids, and microorganisms for aggressive solvents and highly corrosive chemicals. It is inherently hydrophobic and is available in absolute ratings of 0.1, 0.2, 0.45, and 1 micron.



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## Penguin Pleated Filter Cartridges

### End Cap Configuration

Various end cap configurations are available including black industrial grade vinyl, FDA acceptable blue, DOE flat gasket, and SOE external double 222 O-ring/button end cap.



### Packaging

Length	Number of Cartridges Per Case					
	Style					
	D	V	A	C	N	U
9 3/4"/10"	40	16	16	16	16	16
19 1/2"/20"	20	16	16	16	16	16
29 1/4"/30"	20	12	12	12	12	12
39"/40"	20	12	12	12	12	12

### Nomenclature

PP	D	10	10	BK	B
Penguin Pleated Cartridge	Filter Media/ Membrane	Micron Rating	Length	End Cap	Gasket or O-ring Material
	D=Nominal Polypropylene	0.1A	93 = 9 3/4"	BK=black industrial grade vinyl (Style D only)	No symbol = Style D
	V=Nominal Submicronic Polypropylene	0.1	10 = 10"	BL=blue, FDA acceptable (Style D only)	B = buna-N
	A=Absolute Polypropylene	0.2A	19 = 19 1/2"	F=DOE flat gasket	E = EPR
	C=Absolute Submicronic Polypropylene	0.2	20 = 20"	M=SOE external double	V = viton
	U=Absolute Teflon	0.4A	29 = 29 1/4"	222 O-ring/button end cap	S = silicon
	N=Absolute Nylon	0.45A	30 = 30"		
		0.4	39 = 39"		
		0.8A	40 = 40"		
		1			
		3			
		5			
		10			
		15			
		25			
		30			
		50			
		A = Absolute			

Not all combinations available. Contact factory.