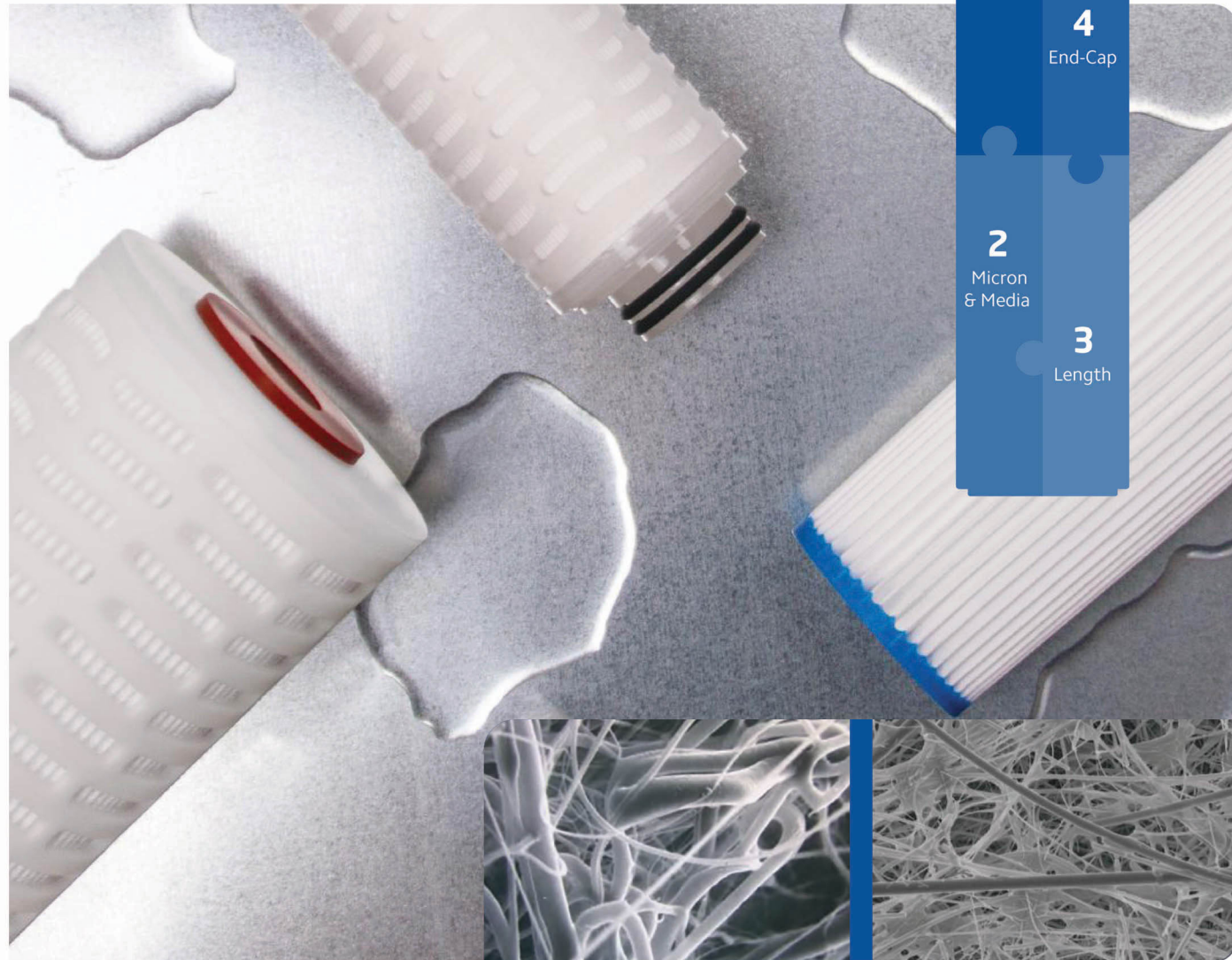


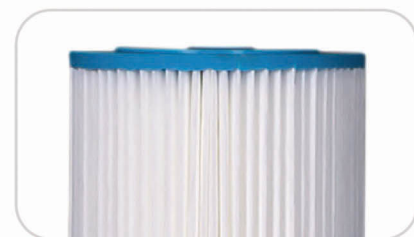
# How to Select your Pleated Filter

Four simple steps are all it takes to select a pleated filter.



## 1 Filtration Grade

Select the filtration grade suitable for your application.



### Standard

An entry level mono layer WRAS approved general grade filter.



### Premier

Multi-layered, high efficiency superior cartridge for precise classification.

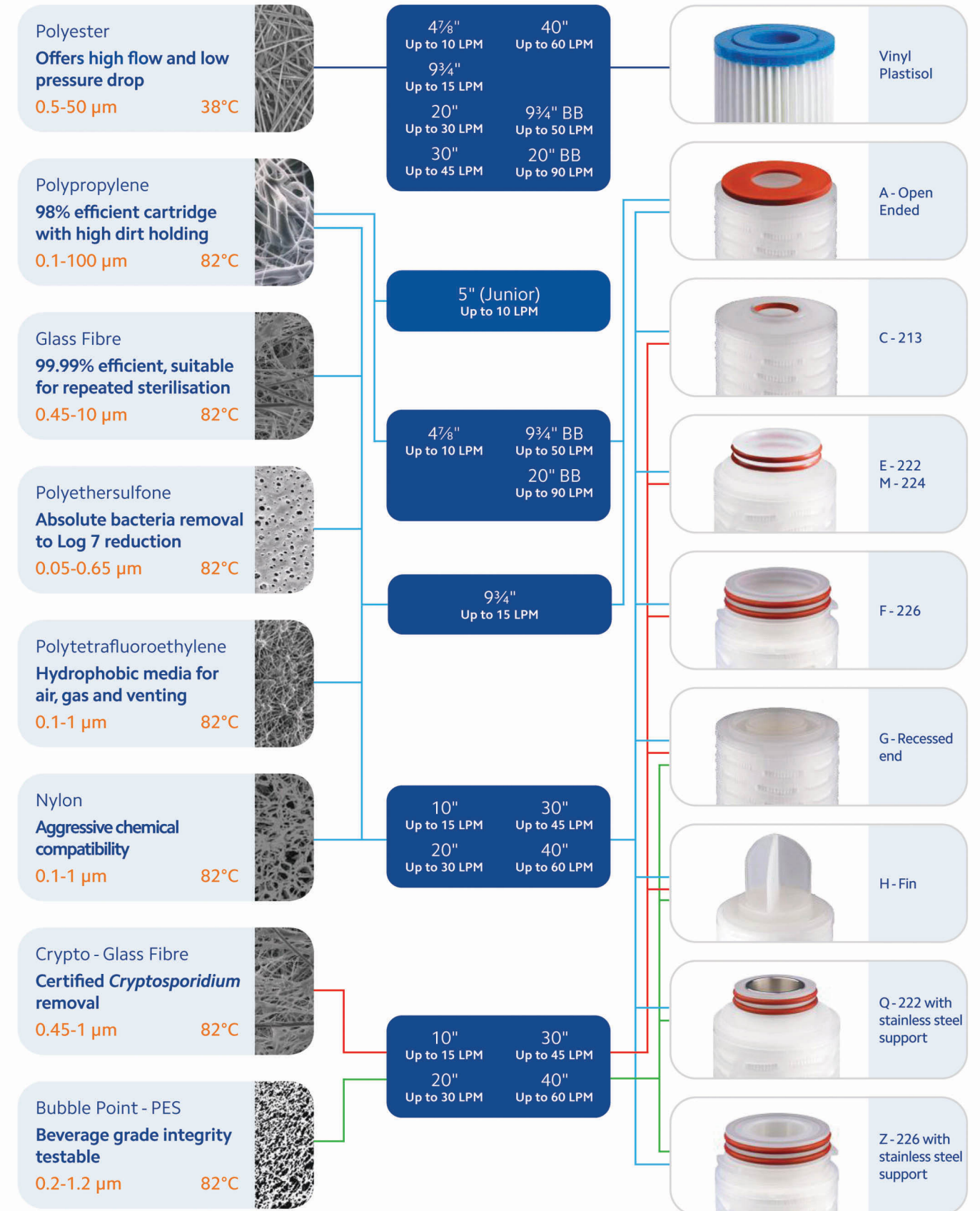


### Specialist

Targeted filtration for specific industry requirements.

## 2 Micron & Media

Select media based on required performance, micron and suitability.



## 3 Length

Choose the cartridge length based on the expected flow rate of the application.

## 4 End-Cap

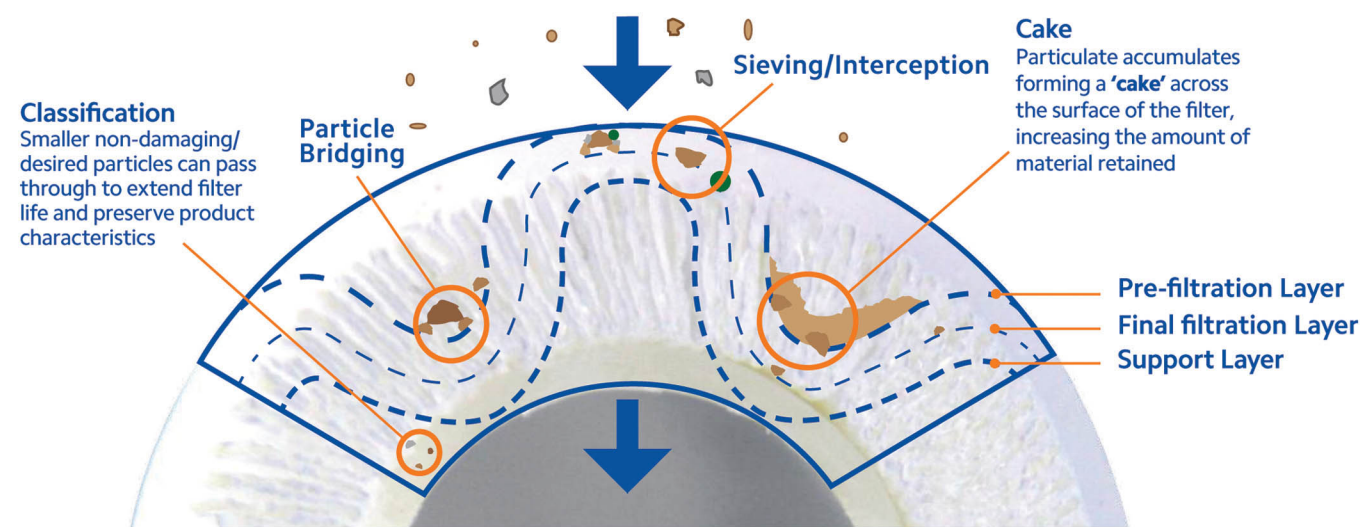
Select an end-cap based on suitability for an existing housing or the required seal.



## Pleated Technology

Pleated filters are widely used as effective surface filtration due to their excellent flow rates and high efficiency.

Pleating dramatically increases available surface area whilst maintaining high dirt loading and low pressure drops. Much of the media used in pleated cartridges also has some depth characteristics, thanks to its multi-layer construction, thereby aiding particle retention and classification.

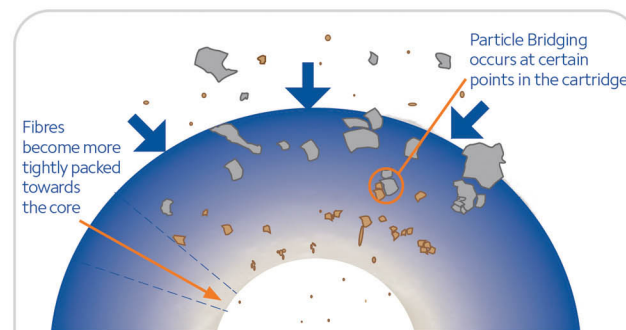


### Surface Filtration Technology

Pleated filters are the ideal technology of choice over depth filtration for retention of known or uniformly sized particles.

The Standard (SPE) range of cartridges features a single layer media, which filters on the principles of direct interception and 'caking' where multiple particles accumulate across the media pore. Over time this leads to partial closure, which can increase efficiency and the chance to target finer particles.

The entire Premier range includes support and pre-filtration layers providing an element of depth characteristics. These layers retain larger particles, ensuring the specified micron rating of the cartridge can be utilised for exacting classification.



### Depth Filtration Technology

The fibres become more tightly packed throughout a depth cartridge, progressively reducing the size of particles that can pass through the filter.

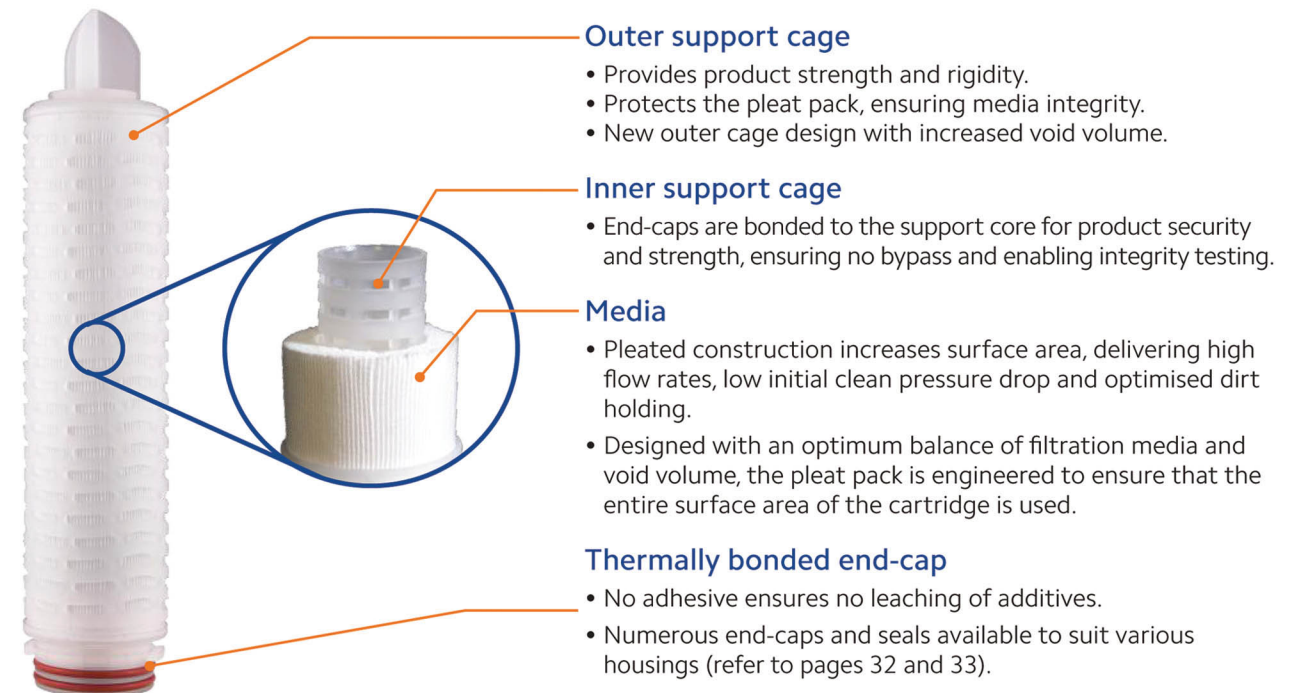
**Advantage:** Economic to produce.

**Disadvantage:** Higher pressure drop means a shorter service life compared to pleated cartridges.

## Premier Pleat Construction

The Premier Pleat, Crypto and Bubble Point ranges are all constructed with a rigid inner core and outer polypropylene cage. Offering protection for the pleat pack, the cage also allows a variety of end-caps to be thermally bonded to the cartridge. This secure construction technique prevents bypass, creating a seal strong enough for repeated steam or chemical sterilisation as well as cartridge integrity testing.

Developments in 2018 see a new outer cage design that increases its void volume by over 10%. Whilst maintaining cartridge strength, increasing the open area allows a more uniform distribution of flow across the entire pleat pack ensuring low pressure drop and maximised dirt holding capacity.



## Identification

### Lot Coded

- Laser etched lot code on membrane and Crypto cartridges
- Traceable back to raw materials

### QR Code

- Links directly to further information for each product

### Barcode

- Product traceability
- Stock management integration

## Packaging

### Four Protective Layers

- Vacuum sealed inner packaging
- Tough outer polybag layer provides additional protection
- Individual product boxes
- Heavy duty outer carton

## Efficiency

The removal efficiency of a filter is dependent on the criteria at which it is tested, along with the size and type of particulate challenge. The below table shows the efficiency of each PPP when using particle count analysis with AC Fine and AC Coarse Test Dust at various particulate challenges.

		Challenge Particulate Size										
		0.1 μm	0.2 μm	0.45 μm	1 μm	3 μm	5 μm	10 μm	20 μm	30 μm	50 μm	100 μm
Cartridge Micron Rating	0.1 μm	95%	96%	98%	99%	99%	99%					
	0.2 μm	93%	95%	97%	98%	98%	99%					
	0.45 μm	82%	88%	96%	97%	98%	99%	99%				
	1 μm	80%	82%	94%	96%	97%	98%	99%	99%			
	3 μm				86%	96%	97%	98%	98%	99%		
	5 μm					90%	96%	97%	98%	99%	99%	
	10 μm							97%	98%	98%	99%	99%
	20 μm								91%	97%	98%	99%
	30 μm									97%	97%	98%
	50 μm										96%	97%
100 μm											95%	

### Standard Diameter

With over 2000 possible configurations, the 70mm diameter range has the greatest diversity of micron ratings, lengths and end-caps available.



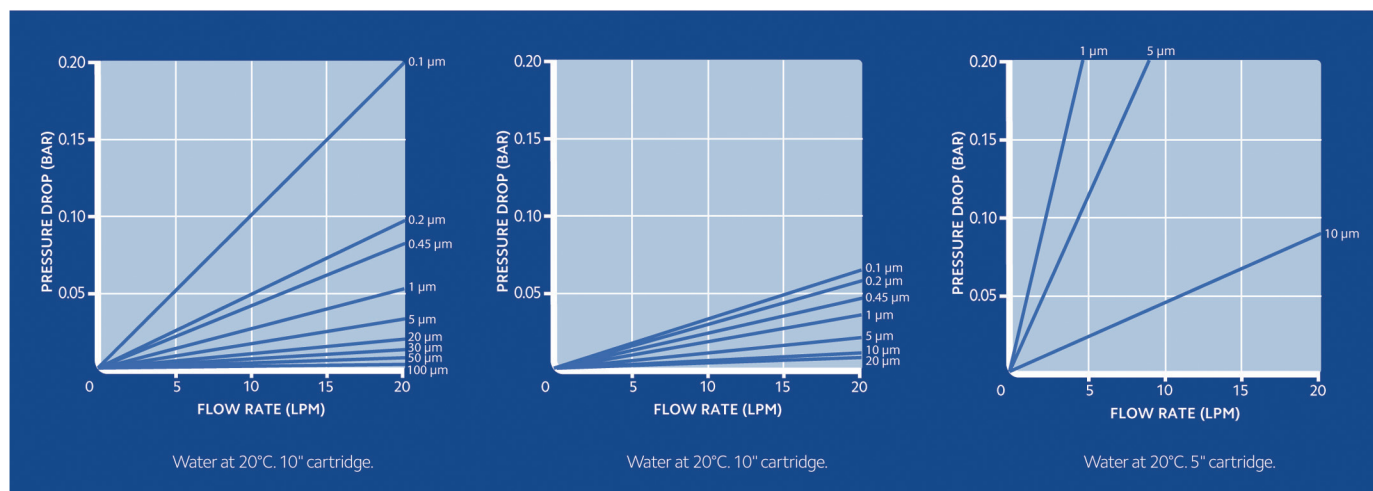
### Large Diameter

The PPP-BB, in 9¾" and 20", offers compact high efficiency filtration for flow rates up to 3 times the equivalent 70mm diameter cartridge.



### Junior

Designed to retrofit Filterite LMO, Advanta and Nuclepore housings.



## Materials of Construction

<b>Filter Media</b> Polypropylene	<b>Core</b> Polypropylene
<b>Support Media</b> Polypropylene	<b>Cage</b> Polypropylene
<b>End-cap</b> Polypropylene Polypropylene with stainless steel ring (Q and Z)	<b>Seal</b> Silicone (as standard)

## Compliance

MOP & NPC

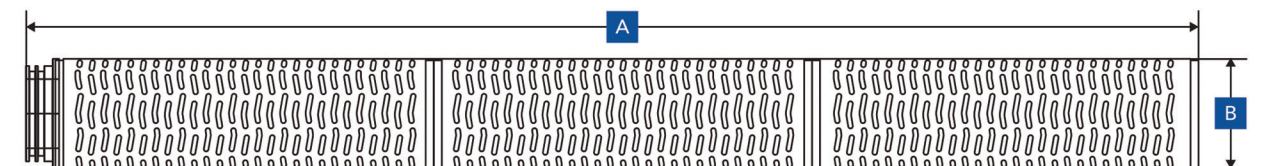
## Configurations

<b>Micron (μm)</b>	0.1 0.2 0.45 1 3 5 10
	20 30 50 100
<b>Length (")</b>	4¾ 9¾ 10 20 30 40
	5 = Junior
<b>End-cap</b>	AA CG EG EH FG FH MG
	MH QG ZH 120
<b>Seal</b>	S = Silicone E = EPDM V = Viton®
<b>Diameter</b>	Standard Large = BB

## Specification

<b>Efficiency</b>	95-99%
<b>Max. Operating Temperature</b>	82°C
<b>Max. Sterilising Cycles</b>	5 x 20 min cycles at 120°C Requires stainless steel encapsulated end-caps Q (222) and Z (226). Not applicable for Junior and Large Diameter cartridges.
<b>Surface Area</b>	0.56 m <sup>2</sup> per 10" 1.55 m <sup>2</sup> per 10"BB 0.26 m <sup>2</sup> per Junior
<b>Max. Operating Pressure Differential</b>	6 bar at 21°C

## Dimensions & Packaging



Length (")	A (mm)					B (mm)	Packaging	
	AA	CG	EG/FG/MG/QG	EH/FH/MH/ZH	120		Box Qty	Box Weight (kg)
4¾	125	114	-	-	-	70	18	2
5 (Junior)	-	-	-	-	136	55	18	4
9¾	248	-	-	-	-	70	9	4
10	-	241	270	310	-	70	9	4
20	508	506	520	560	-	70	9	7
30	750	-	770	810	-	70	9	10
40	1000	-	1020	1060	-	70	9	14
9¾BB	248	-	-	-	-	115	4	3
20BB	508	-	-	-	-	115	4	6

## Portable Particle Counter



## End-Caps

### Pleated Cartridge Configurations

Where product codes indicate an optional end-cap is available, a choice can be made from the following styles. End-cap variations are made to suit housing

designs and application requirements, which dictate the reliability and integrity of the seal, along with the ease of cartridge change out.



**AA**  
Double Open Ended

Open-end gaskets, for use with housings containing a knife edge seal mechanism.



**CG**  
213 with Closed Recess

Single internal O-ring, seals onto housings that have a spigot.



**EG / MG**  
222/224 with Closed Recess

Double external O-rings seal into female housing receiver with a closed, recessed end, which is for housings with spigots.



**EH / MH**  
222/224 with Fin Adaptor

Double external O-rings seal into female housing receiver whilst the Fin locates into housing plate holes to maintain vertical orientation.



**FG**  
226 with Closed Recess

Bayonet type tabs lock into female housing receiver whilst the recessed end locates into housings with spigots.



**FH**  
226 with Fin Adaptor

Bayonet type tabs lock into female housing receiver whilst the Fin locates into housing plate holes to maintain vertical orientation.

### Stainless Steel Encapsulated End-Caps



**QG**  
222 with Closed Recess

Suitable for high temperature housings, the QG configuration is suitable for repeated sterilisation and offers one of the best seals possible with its double O-ring fitting and stainless steel insert.



**ZH**  
226 with Fin Adaptor

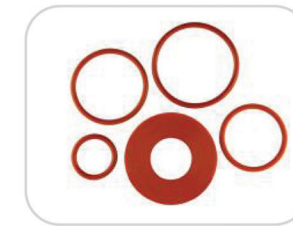
Suitable for multi-round high temperature housings, the ZH configuration provides the most positive seal with double O-rings and twin locking tabs. The encapsulated stainless steel insert makes the Z fitting suitable for repeated sterilisation.

## Seals

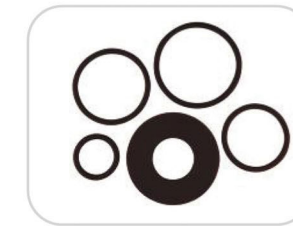
### Pleated Cartridge Configurations

Providing a water-tight seal between the housing and cartridge, O-rings and gaskets are essential to the integrity of the filter and come in a range

of materials, including Silicone, EPDM, Teflon® and Viton® to suit most applications.



Silicone



EPDM



Teflon®



Viton®

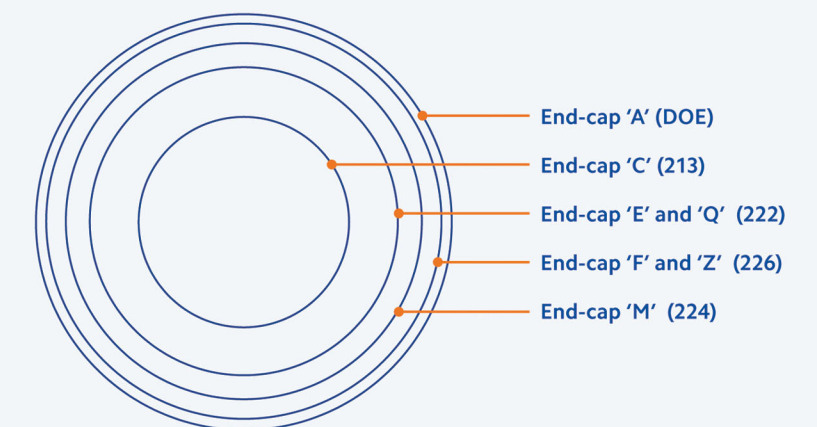
### Chemical Compatibility

The below table details the different compatibility of each O-ring within different applications. (Source: Cole-Parmer)

	Silicone	EPDM	Teflon	Viton®
Beer	Excellent	Excellent	Excellent	Excellent
Whisky & Wine	Excellent	Excellent	Excellent	Excellent
Deionised Water	Fair	Excellent	Excellent	Excellent
Alcoholic Methyl	Excellent	Excellent	Excellent	Fair
Aromatic Hydrocarbons	Poor	Poor	Excellent	Excellent
Sodium Hydroxide	Excellent	Good	Excellent	Poor
Hydrochloric Acid	Poor	Poor	Excellent	Excellent
Synthetic Hydraulic Oil	Good	Excellent	Excellent	Excellent

### O-ring Sizing

This actual size chart is a useful aid in identifying common replacement O-rings. Place your current O-ring onto the chart to match the size required.





**PAP**  
PETRO ARTAN PART

## TruDepth Premier Spun Polypropylene 1-50 micron

With higher efficiency and a longer service life than both the Economic and Standard spun, the PSP is the most versatile and adept cartridge in the TruDepth range. The deep grooved construction significantly increases the surface area, maximising the dirt holding

capacity of the cartridge whilst the integral support core increases pressure and temperature operating conditions. Available with a range of end-caps for added seal security and operator ease for fitting in multi-round housings.

### Key Features

- Deep-grooved finish for highest surface area and lowest pressure drop
- End-cap options for secure sealing
- A 4mm thick polypropylene core increases strength and temperature performance

### Typical Applications

- Food and Beverage
- Chemical manufacture
- Incoming water

### Specification

- Efficiency 85%
- Max. Operating Temperature 71°C
- Max. Operating Pressure Differential 2.5 bar at 21°C

### Materials of Construction

**Filter Media**  
Polypropylene

**Core**  
Polypropylene

**End-cap (Optional)**  
Polypropylene

**Seal**  
Silicone (as standard, when end-caps specified)

### Compliance

MOP & NPC

### Configurations

#### Micron (µm)

1 5 10 20 50

#### Length (")

9¼ 9½ 20 30 40

#### End-cap

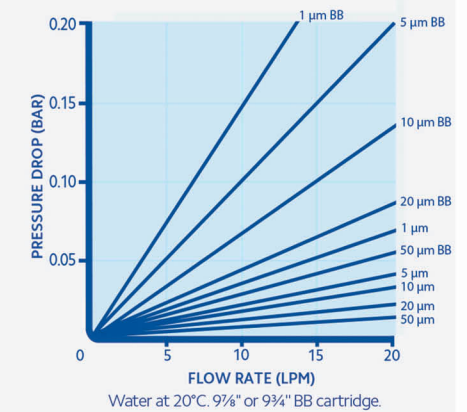
EH ES FH MH MS XK

#### Seal

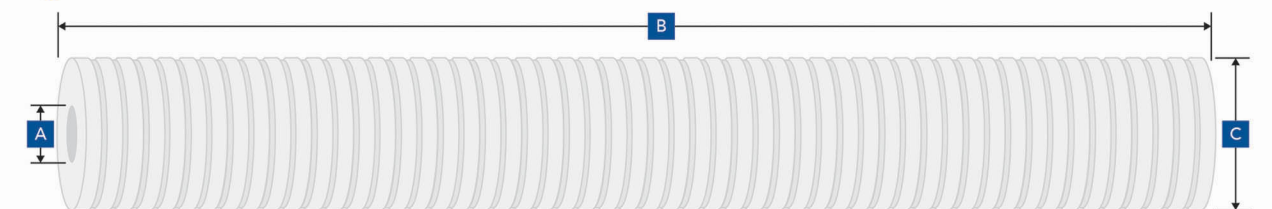
S = Silicone E = EPDM V = Viton®

#### Diameter

Standard Large = BB



### Dimensions & Packaging



Length (")	Dimensions (mm)						C
	A	Blank	EH/MH	ES/MS	FH	XK	
9½	28	250	317	278	322	310	63
20	28	508	575	536	580	568	63
30	28	762	829	790	834	822	63
40	28	1016	1083	1044	1088	1076	63
9¼BB	30	248	-	-	-	-	115
20BB	30	508	-	-	-	-	115

Packaging	
Box Qty	Box Weight (kg)
15	4
15	8
15	12
15	16
4	2
4	4

### Desktop Particle Counter

