



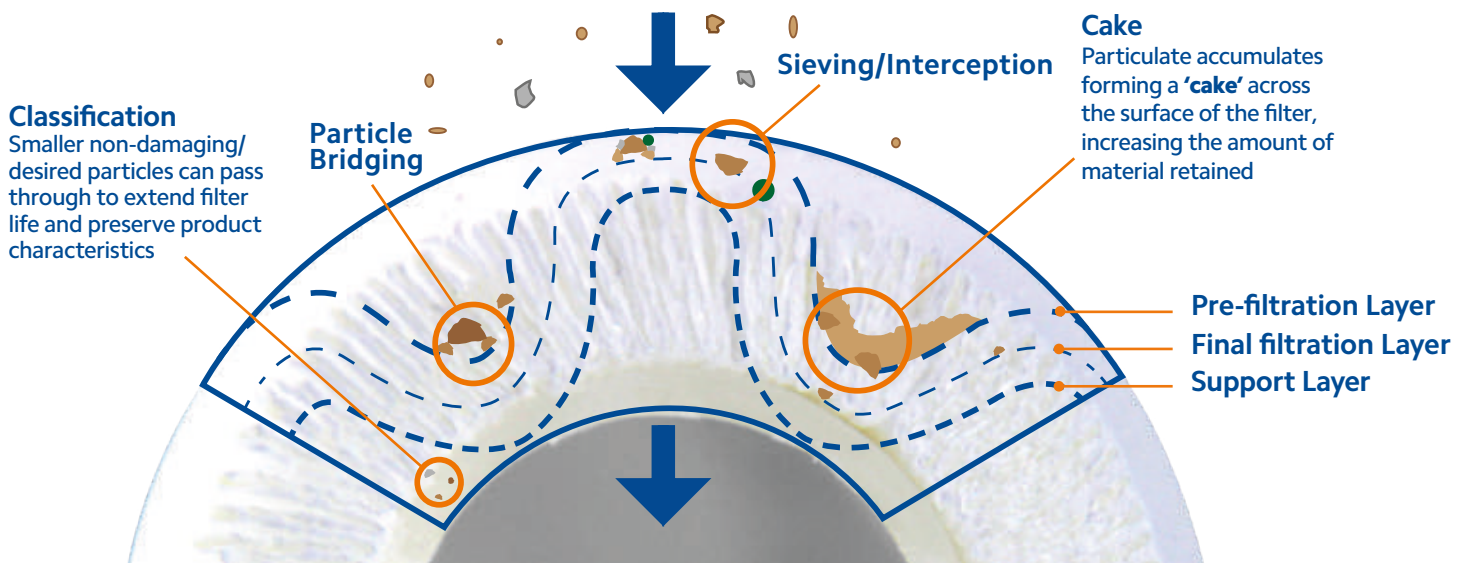
# Pleated Filtration

[www.fileder.co.uk](http://www.fileder.co.uk)

# 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.

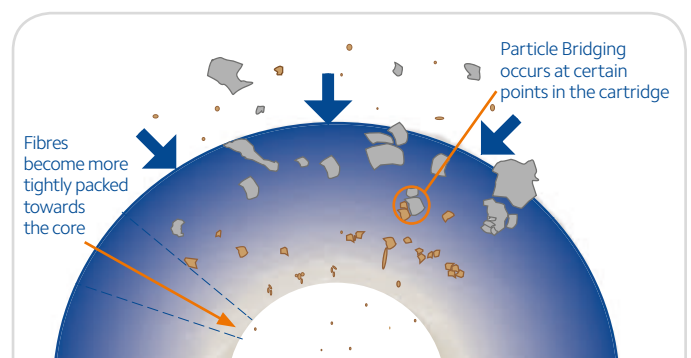


## Surface Filtration Technology

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.

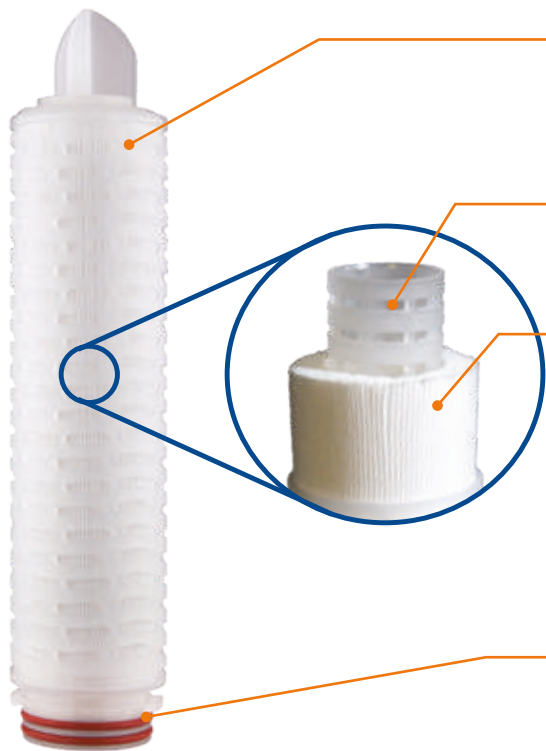
**Advantage:** Economic to produce.

**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.



## Outer support cage

- Provides product strength and rigidity.
- Protects the pleat pack, ensuring media integrity.
- New outer cage design with increased void volume.

## Inner support cage

- End-caps are bonded to the support core for product security and strength, ensuring no bypass and enabling integrity testing.

## Media

- Pleated construction increases surface area, delivering high flow rates, low initial clean pressure drop and optimised dirt holding.
- Designed with an optimum balance of filtration media and void volume, the pleat pack is engineered to ensure that the entire surface area of the cartridge is used.

## Thermally bonded end-cap

- No adhesive ensures no leaching of additives.
- Numerous end-caps and seals available to suit various housings (refer to pages 32 and 33).

## 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

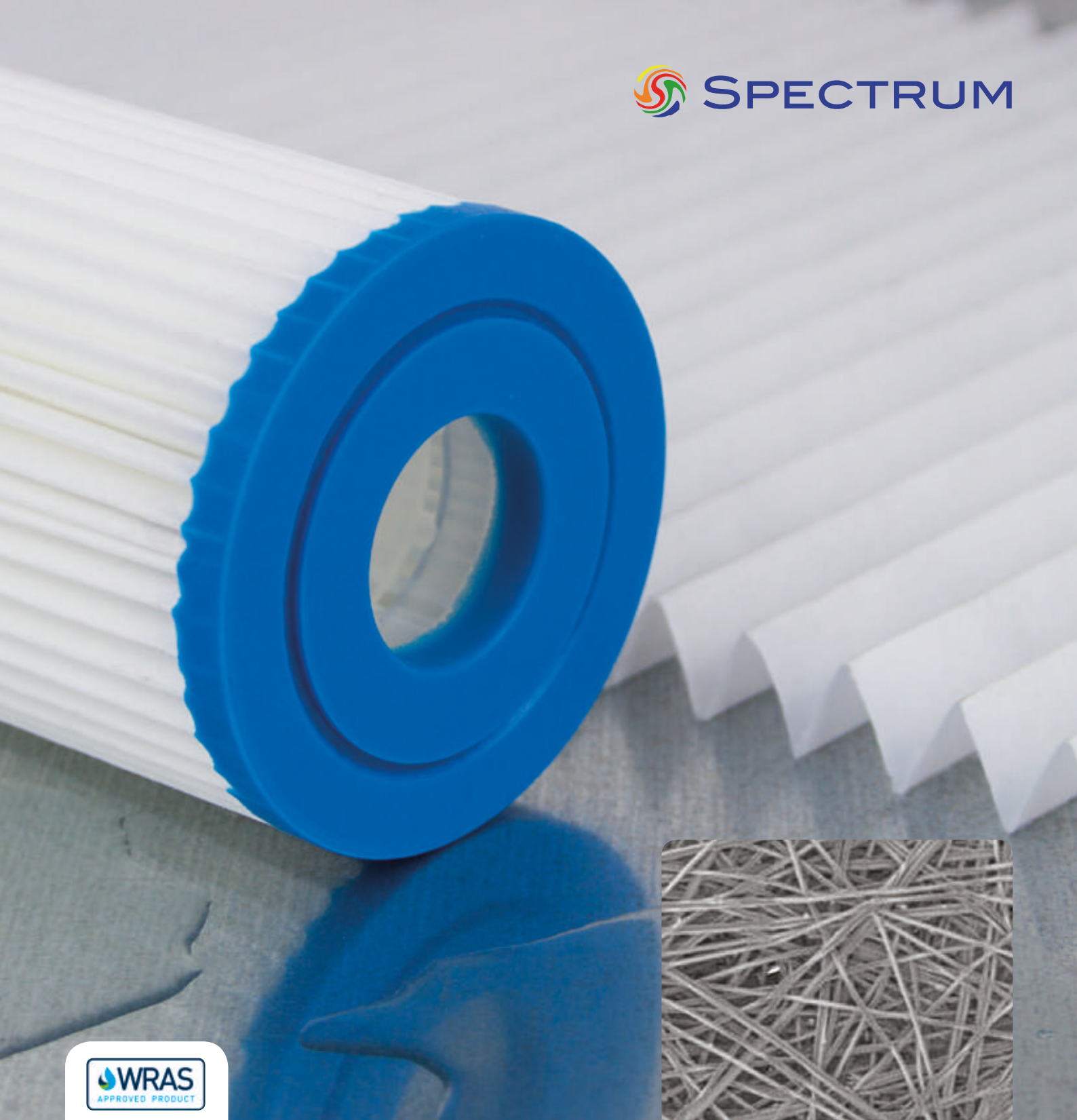
- Product traceability
- Stock management integration

## Packaging

### Four Protective Layers

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



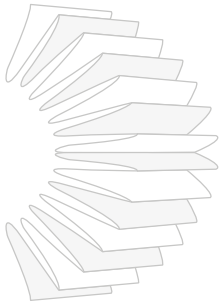


# Pleat<sup>2</sup>

0.5-50 micron

Delivering high efficiency filtration, the mono layer media of the Pleat<sup>2</sup> delivers economical filtration with high surface area and high flow potential, whilst maintaining a low pressure drop. Vinyl plastisol end-caps eliminate the need for gaskets and maintain the integrity of the pleat

pack, further supported by the tough inner polypropylene core. Resilient polyester media, used in a variety of applications from borehole and river water to harsher chemicals. For improved efficiency and classification capabilities refer to the SPECTRUM Premier Pleats.



Standard diameter 69 mm  
**= 1380 mm**  
 Length of media

Large diameter (BB) 115 mm  
**= 4840 mm**  
 Length of media

Based on a 9¾" filter cartridge.

With almost 7 times the surface area of a cylindrical cartridge, the pleated construction maximises the amount of filtration media, optimising service life. The pleat pack integrity is maintained with thermally welded seams and vinyl plastisol end-caps, introducing no additives, binders or glues.

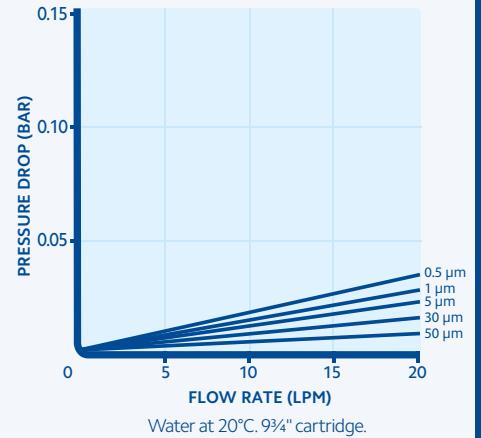
## Specification

**Efficiency**  
90%

**Max. Operating Temperature**  
38°C

**Surface Area**  
0.35 m<sup>2</sup> per 9¾"  
1.21 m<sup>2</sup> per 9¾"BB

**Max. Operating Pressure Differential**  
4 bar at 21 °C



## Materials of Construction

**Filter Media**  
Polyester

**Core**  
Polypropylene

**End-cap**  
Vinyl Plastisol

## Compliance

BS6920 Approved  
 FDA Compliant Materials  
 WRAS Approved  
 Regulation (EC) 1935/2004  
 Regulation (EU) No10/2011

## Configurations

**Micron (µm)**

0.5 1 5 10 20 30 50

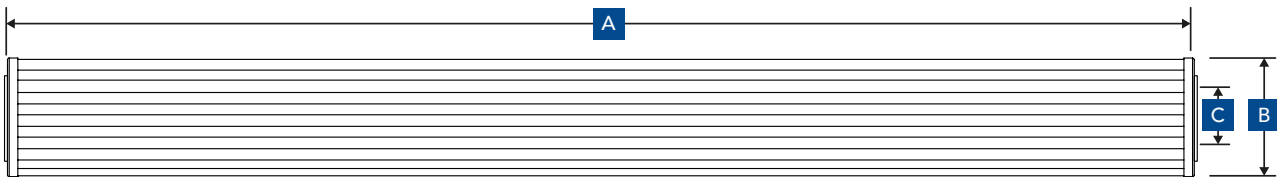
**Length (")**

4¾ 9¾ 20 30 40

**Diameter**

Standard Large = BB

## Dimensions & Packaging



Length (")	A (mm)	B (mm)	C (mm)	Packaging	
				Box Qty	Box Weight (kg)
4¾	124	69	29	18	2
9¾	248	69	29	9	2
20	508	69	29	9	3
30	762	69	29	9	4
40	1016	69	29	9	6
9¾BB	248	115	29	4	2
20BB	508	115	29	4	3

## Part Number

Code	Micron	Length
SPE	0.5, 1, 5, 10, 20, 30, 50	4¾, 9¾, 20, 30, 40
		9¾BB, 20BB

e.g. SPE-1-93/4