

Klearfil™

Absolute Rated Pleated Depth Filters



A range of absolute rated cartridge filters are manufactured, featuring the latest developments in melt blown polypropylene filter media technology; Klearfil™ cartridges are based on a robust all polypropylene construction, offering removal ratings from 0.5 to 75 micron absolute.

The combination of up to eight separate filtration layers provides true depth filtration, within a pleated cartridge construction. This design reduces fouling of the filter surface area caused by a broad spectrum of contaminants.

Klearfil™ cartridges are ideally suited for the filtration of process fluids that contain contaminants with a wide range of particle sizes. The graded multi-layer polypropylene media provides pre-filtration of the process fluid prior to the absolute rated final layer.

The unique design of the Klearfil™ cartridge helps to achieve lower running costs and a smaller process footprint. Klearfil™ is highly resistant to integrity failure caused by steam sterilisation and has excellent chemical compatibility characteristics.

Typical Applications

- Pharmaceuticals and bio-processing
- Foods and beverages
- Process water systems
- Fine chemicals
- Cosmetics
- Inkjet

Ordering Information

Product Code: **1** **2** **3** **4** **5** **6** **7**

1: Pre-Filter		2: Pore rating		3: Version		4: Length (Nominal)		5: End Fitting		6: Seals		7: Additional	
K	Klearfil™	P5	0.5µm	R	Rinsed	1	10" (254mm)	A	Code 3	A	Ethylene Propylene	A	N+U
		01	1µm	S	Standard Hard Cage	2	20" (508mm)	B	Code 7	B	Silicone	N	Non-steamable (no insert)
		02	2µm			3	30" (762mm)	C	Code 8	C	Viton®	P	Pharma Grade
		03	3µm			4	40" (1016mm)	F	N SOE	D	Nitrile	U	Unbranded
		05	5µm			5	5" (125mm)	G	G DOE (short)	E	FEP Encap. Viton®		
		10	10µm					H	G SOE	G	FEP Encap. Silicone		
		15	15µm					J	216 (218), fin	J	DOE PTFE		
		20	20µm					K	Code 2				
		30	30µm					L	223, fin (no lugs)				
		40	40µm					M	DOE				
		75	75µm					S	Code 28, fin (3 lugs)				
								T	223, flat (no lugs)				
								U	224, fin				
								V	226, fin				
								Y	BS832, flat				

Features and Benefits

- Graded multi-layer media
- Guaranteed removal ratings
- Suitable for steam and hot water sanitisation
- Full traceability
- Controlled manufacturing environment

Specifications

Materials of Manufacture

Filter media:	Polypropylene
Support layers:	Polypropylene
Inner core:	Polypropylene
Outer support:	Polypropylene
End fittings:	Polypropylene
Support ring:	Stainless steel

Cartridge Dimensions (Nominal)

Diameter:	70mm (2.8")
Length:	1 module (short): 125mm (5")
	1 module: 254mm (10"), 508mm (20")
	2 modules: 762mm (30"), 1016mm (40")

Cartridge Treatment

Standard:	Cleaned without further treatment
Flushed:	Flushed with pyrogen-free water
Rinsed:	Ultra-clean, pulse flushed to give a system resistivity of 18MΩ.cm

Gaskets and O-Rings

Ethylene Propylene, FEP encapsulated, Silicone, Viton®, Nitrile or Polypropylene felt

Maximum Differential Pressure

Normal flow direction at:

20°C (68°F):	6.0 bar (87psi)
80°C (176°F):	4.0 bar (58psi)
100°C (212°F):	3.0 bar (44psi)
120°C (248°F):	2.0 bar (29psi)
125°C (257°F):	1.5 bar (22psi)

Reverse flow direction at:

20°C (68°F):	2.1 bar (30psi)
80°C (176°F):	1.0 bar (15psi)
100°C (212°F):	0.5 bar (7psi)

Operating Temperature

Maximum continuous: 80°C (176°F)

Sterilisation

In situ steam 80 x 30 minute cycles at 130°C (275°F)
Hot water 200 x 20 minute cycles at 85-90°C (185-194°F)

Extractables

Minimum total extractables. Please refer to the Klearfil™ Validation Guide.

Integrity Testing

Klearfil™ filter cartridges are batch tested for integrity using the Bubble Point Test. Please contact us for procedural details.

Clean Water Flow Rates

- Typical clean water flow rate:
A 254mm (10") Klearfil™ single cartridge exhibits the flow-ΔP characteristics indicated below, for solutions with a viscosity of 1 centipoise.
- Other solutions:
For solutions with a viscosity of greater than 1 centipoise, multiply the indicated differential pressure by the viscosity in centipoise.

