



IFP PES Pleated Filter Cartridge

IFP PES Pleated Cartridge Filter uses FDA approved raw materials to ensure excellent and economic performance. The asymmetric Polyethersulfone membrane has advantages on high-flux and high capacity. The Optimized structure of cartridge filters can take full advantage of the excellent performance of asymmetric PES membrane. These features ensure the highest process efficiency and minimize filtration costs. IFP PES Cartridge is manufactured, tested, and packaged in a cleanroom to ensure product cleanliness. A validation guide for compliance with regulatory requirements is available.

Application

Bio-burden reduction

Acids and Bases

Solvents

High viscosity filtration

Buffers

Biologicals

Particle removal

High flux filtration

Culture Media

IFP PES Pleated Filter Cartridge with different End Modification

Cartridges are available in the following lengths:

- 10 – Inch
- 20 – Inch
- 30 – Inch
- 40 – Inch



Nominal 10-inch cartridge

Fin End Cap



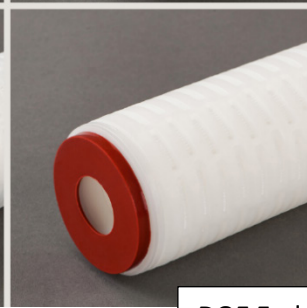
226 O-Ring



222 O-Ring



DOE End Cap





Technical Data Sheet

Popular Configuration:

Part Number	End Modification	Standard O-Ring
CRT- PES -__-____- A2S	222 O-Rings, Flat	Silicone
CRT- PES -__-____- A3S	222 O-Rings, Fin	Silicone
CRT- PES -__-____- A6S	226 O-Rings, Fin	Silicone
CRT- PES -__-____- A7S	226 O-Rings, Flat	Silicone
CRT- PES -__-____- A0S	Double Open Ended (DOE)	Silicone
❖ The blank spaces are for filter length micron rating code. Find the codes below.		

PES Micron Rating:

Element Length Code	Micron Rating Code
10: 10-Inch	001: 0.1 µm
20: 20-Inch	002: 0.2 µm
30: 30-Inch	004: 0.45 µm
40: 40-Inch	006: 0.65 µm
	010: 1.0 µm

Materials of Construction

- Filter Media: Polyethersulfone
- Supports: Polypropylene
- Cage/End Caps: Polypropylene
- Core: Polypropylene

Effective Filtration Area:

6.67 ft² (>0.62 m²) Per 10-Inch Cartridge Element

Nominal Dimensions:

- Lengths: 10.0 inch (25.4 cm), 20.0 inch (50.8 cm), 30.0 inch (76.2 cm) and 40.0 inch (101.6 cm)
- Inside Diameter: 1.3" (33mm)
- Outside Diameter: 2.7" (68.5mm)





Operating Conditions:

Maximum Forward Differential Pressure: 5.2 bar (75.4 psi) at 77°F/25°C

Maximum Reverse Differential Pressure: 2.1 bar (30.5 psi) at 77°F/25°C

Maximum Operating Temperature: 179.6°F/82°C

Recommended Replacement Pressure: 2.4 bar (34.8 psi)

Filtration Efficiency:

≥ 99.98%

Integrity Data:

Pore Size	Min. Bubble Point @ 25°C	Max. Diffusion @ 25°C
0.1 µm	≥4.0 bar	≤ 35 ml/min at 3.2 bar (46.4 psi)
0.2 µm	≥3.0 bar	≤ 35 ml/min at 2.4 bar (34.8 psi)
0.45 µm	≥1.8 bar	≤ 35 ml/min at 1.4 bar (20.3 psi)
0.65 µm	≥1.2 bar	≤ 35 ml/min at 1.0 bar (14.5 psi)
1.0 µm	≥0.9 bar	≤ 35 ml/min at 0.7 bar (10.1 psi)

Flow Rate:

The filters are tested with pure water at 20°C [per 10-inch cartridge]

Pore Size	Flow Rate	Pressure Drop
0.1 µm	5 L/min	0.05 bar (0.7 psi)
0.2 µm	8 L/min	0.05 bar (0.7 psi)
0.45 µm	15 L/min	0.05 bar (0.7 psi)
0.65 µm	20 L/min	0.05 bar (0.7 psi)
1.0 µm	35 L/min	0.05 bar (0.7 psi)

Regulatory Compliance:

- ASTM D6394SP0112
- FDA 21 CFR 177.1655
- ISO 10993-Part 1,5
- EN 285:2006+A2:2009
- Regulation (EC) NO 1935/2004

USP Bacterial Endotoxins:

The filters were tested to confirm that an aqueous extraction of this product contains <0.25 EU/ml as determined by the Limulus Amebocyte Lysate (LAL) Test

Non-Fiber Releasing:

This filter meets the criteria of “non-fiber releasing” filter that defined in 21CFR.210.3 (b) (6).

Oxidizable Substances:

Effluent of sterilized sample filters is negative after a water flushing 1000 ml per 10”.

Extractable Substances:

Sample filters are immersed in DI Water for 24 hours at 25°C. Extractable substance is usually equal to or less than 40mg per 10”.





Sterilization:

This filter maintains integrity following multiple cycles of in-situ steam or autoclave

Autoclave	150 cycles at 124°C (255°F) for 30 minutes
	100 cycles at 134°C (273°F) for 30 minutes
Steam In-Place	150 cycles at 124°C (255°F) for 30 minutes Pressure drop: ≤0.5 bar (7.25 psi)
	100 cycles at 134°C (273°F) for 30 minutes Pressure drop: ≤0.5 bar (7.25 psi)

Special Configuration:

Size Option:

- 10-inch [Filtration Area: 6.67 ft²]
- 20-inch [Filtration Area: 13.34 ft²]
- 30-inch [Filtration Area: 20.01 ft²]
- 40-inch [Filtration Area: 26.68 ft²]

Micron Rating Option:

- 0.1 Micron
- 0.2 Micron
- 0.45 Micron
- 0.65 Micron
- 1.0 Micron

Seal Option:

- Silicone
- EPDM

End Modification:

- 222 O-Rings, Flat
- 222 O-Rings, Fin
- 226 O-Rings, Flat
- 226 O-Rings, Fin
- 222 O-Rings, Fin with 316L SS Insert
- 226 O-Rings, Fin with 316L SS Insert
- DOE Flat Gasket

Insert Option:

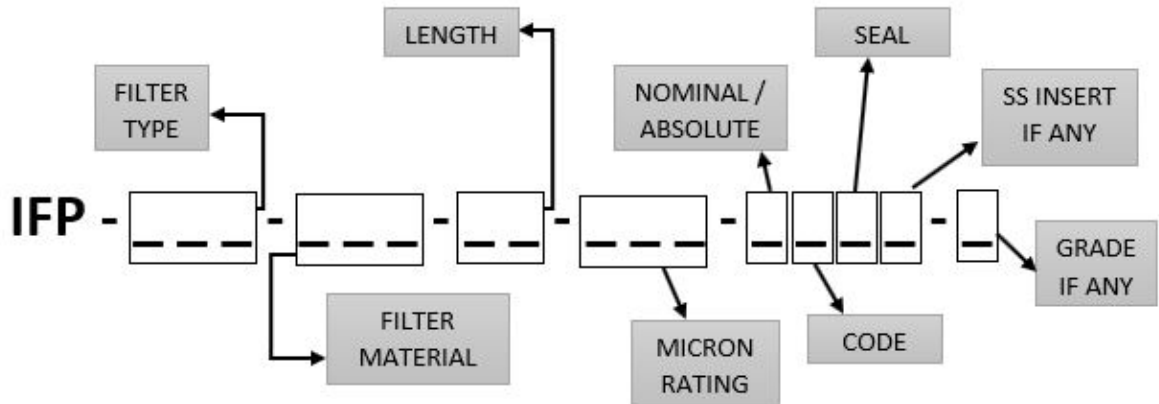
- Polypropylene
- Polysulfone
- 316L Stainless Steel





Ordering Information:

FILTER PART NUMBER



Filter Type	Filter Material	Length	Micron Rating	Absolute / Nominal	End Modification Code	Seal	Insert	Grade
CRT: Cartridge	PES: Polyethersulfone	10: 10-Inch 20: 20-Inch 30: 30-Inch 40: 40-Inch	001: 0.10 µm 002: 0.20 µm 004: 0.45 µm 006: 0.65 µm 010: 1.0 µm	A: Absolute N: Nominal	0: DOE 2: 222/Flat 3: 222/Fin 6: 226 Fin 7: 226/Flat	S: Silicone E: EPDM V: Viton N: NBR F: Teflon	5: SS Insert	B: Biological PH: Pharma SG: Sterilizing E: Electronic