



International Filter Products

Revolutionary systems for your industry

CRT-PES Series PES Filter Cartridge

The CRT-PES Food Grade Cartridges are expertly tailored for filtration in food and beverage processes, offering high-performance with a hydrophilic PES membrane, known for low interaction with food components and a wide pH range compatibility (1-14). Their design, free from pre-wetting, enhances efficiency and reduces contamination risks, while delivering exceptional flow rates and chemical resistance. Thoroughly integrity-tested and pre-rinsed with pyrogen-free water, these cartridges ensure minimal downtime and low extractable content, aligning with stringent food safety standards. Free from animal-derived components and harmful additives, they comply with relevant food safety regulations, ensuring quality and safety in food processing applications.

Application

- Beverage Production
- Fats and Waxes
- Liquid Sweeteners
- Brewing and Wine
- Product Sterilization
- Food Grade Chemicals
- Biologics
- Water Purification
- Fermentation Broths
- Edible Oils Emulsions
- Proteins
- Serums

Part Number: CRT-PES-10-XXX-X2S / CRT-PES-10-XXX-X2S-5



**CRT-PES Series PES Cartridge - Food Grade
222 O-Rings Flat End Cap**



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Technical Data Sheet

Micron Rating:

- 0.10 μm
- 0.20 μm
- 0.45 μm
- 0.65 μm
- 0.80 μm
- 1.20 μm

Effective Filtration Area:

- 5-Inch; 3.75 ft^2 (0.35 m^2)
- 10-Inch; 7.5 ft^2 (0.7 m^2)
- 20-Inch; 15.0 ft^2 (1.4 m^2)
- 30-Inch; 22.5 ft^2 (2.1 m^2)

Materials of Construction:

Membrane: PES (Polyethersulfone)

Membrane Feature: Hydrophilic, Broad Chemical Compatibility, High Flow Rate

Media Supports: Polypropylene

Shell, Cage, Core, End Caps: Polypropylene

O-Rings: Silicone (Standard)

Sealing: Thermally Bonded

Operating Conditions:

Maximum Forward Differential Pressure: **Liquid:** 5.5 bar (80psi) at 77°F/25°C

Gas: 4.1 bar (60psi) at 77°F/25°C

Minimum Burst Pressure: 8.3 bar (120psi) at 77°F/25°C

Maximum Reverse Differential Pressure: 3.0 bar (44psi) at 68°F/20°C

Maximum Operating Temperature: 176°F/80°C at 0.7 bar (10psi)

[Contact International Filter Products for high-temperature application above 122°F/50°C operating temperature]



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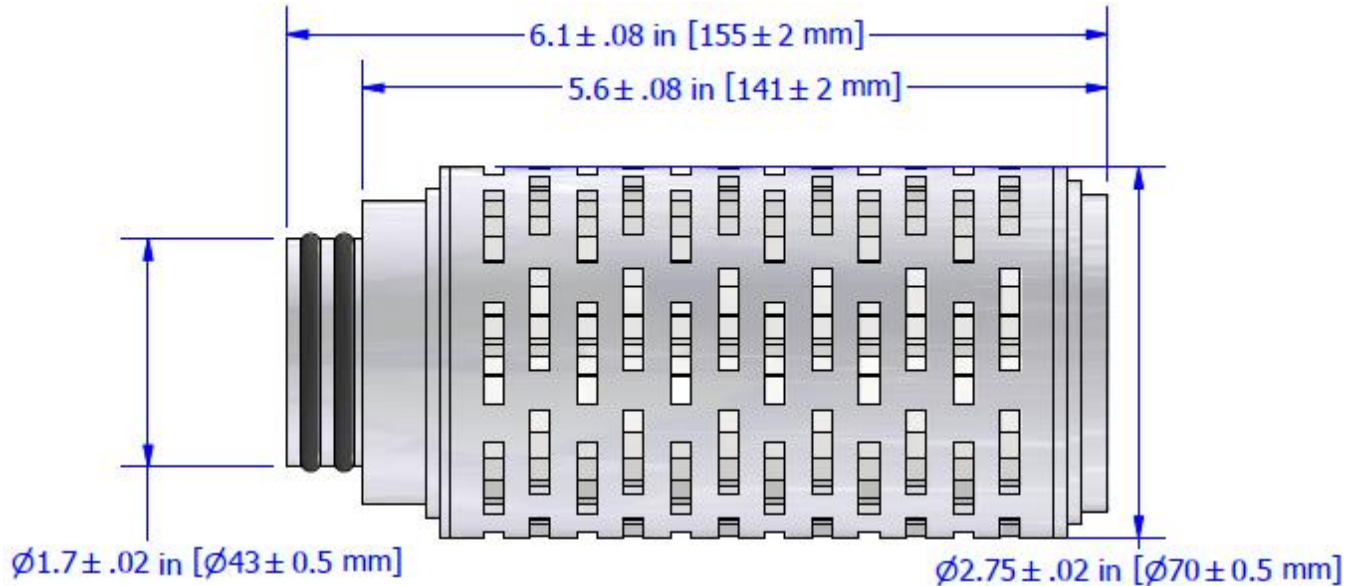


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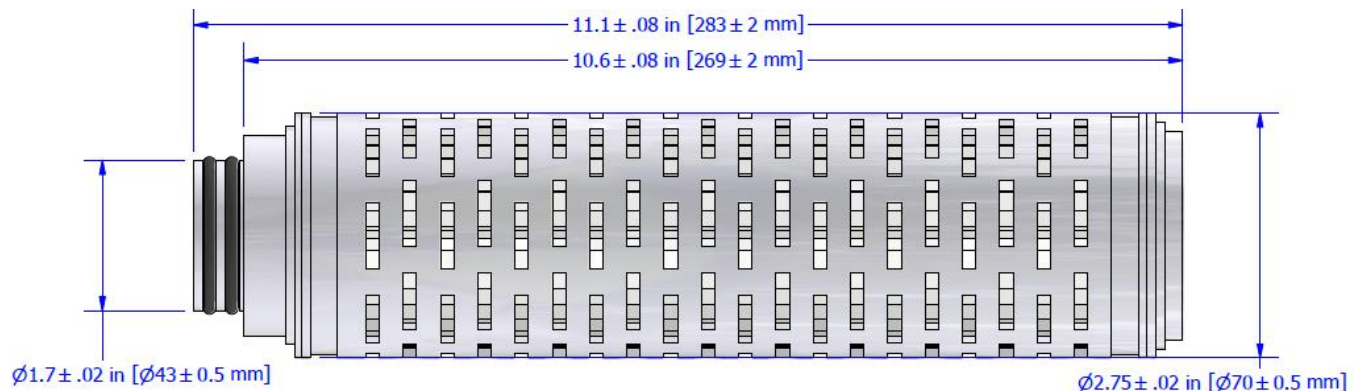
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Nominal Dimension:

Part Number: CRT-PES-05-XXX-X2X



Part Number: CRT-PES-10-XXX-X2X



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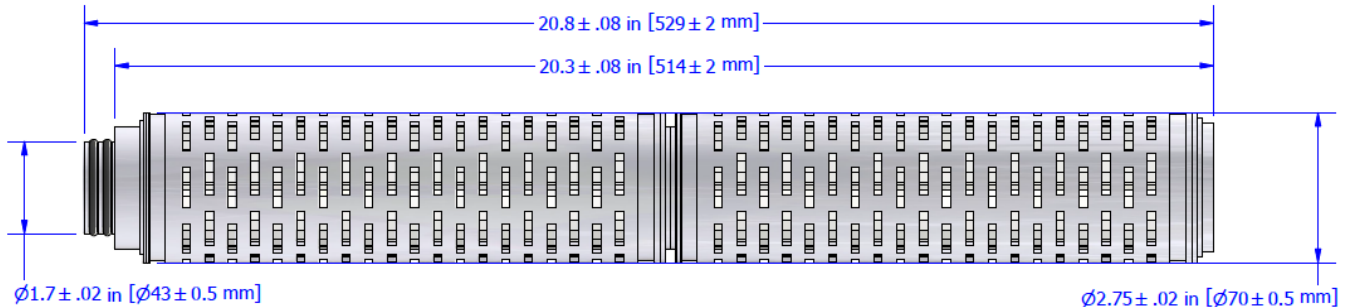
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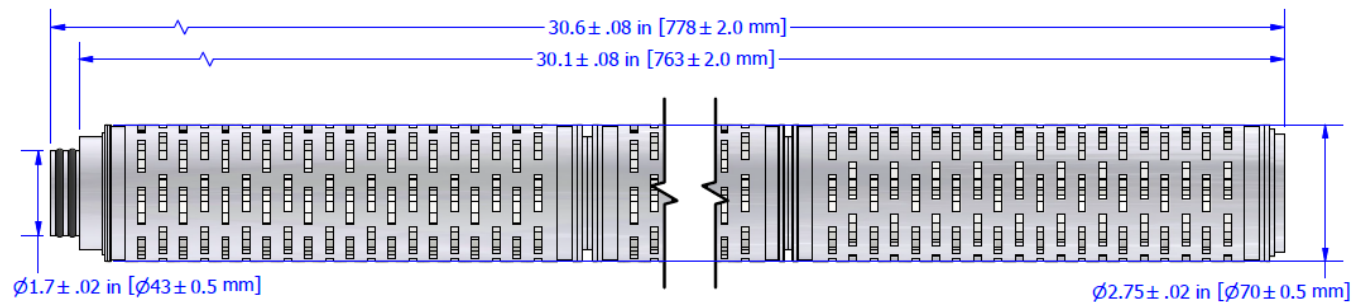
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Part Number: CRT-PES-20-XXX-X2X



Part Number: CRT-PES-30-XXX-X2X



Typical Filtered Volume:

- 5-Inch; 25L- 250L
- 10-Inch; 50L- 500L
- 20-Inch; 100L- 1,000L
- 30-Inch; 150L-1,500L



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Regulatory Compliance

Bacterial Retention:

Micron Rating	Challenge Organism	LRV
0.1 µm	B. diminuta	LRV 8
0.2 µm	B. diminuta	LRV 7
0.45 µm	S. marcescens	LRV 7
0.65 µm	L. brevis	LRV 7
0.8 µm	S. cerevisiae	LRV 7
1.2 µm	PSL Particle	

Filter Integrity:

Micron Rating	Minimum Bubble Point	
	Psi	bar
0.1 µm	61 psi	4.2 bar
0.2 µm	50 psi	3.4 bar
0.45 µm	26 psi	1.8 bar
0.65 µm	17.4 psi	1.2 bar
0.8 µm	14.5 psi	1.0 bar
1.2 µm	13 psi	0.9 bar

Physiochemical:

- USP Oxidizable Substances
- USP <645> Conductivity
- USP <643> Non-Volatile Residue
- Total Organic Carbon (TOC) Analysis

Cleanliness:

- USP <85> Bacterial Endotoxin Test
- USP <788> Particulate Matter
- 21 CFR 210.72 and 2010.3 (b) (6) Fiber Shedding

Biocompatibility:

- ASTM F756-17 Hemolysis
- USP <88> (USP Class VI Plastics) Biological Reactivity Tests, In Vivo
- USP <87> / ISO 10993-5, In Vitro Cytotoxicity





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USP Bacterial Endotoxins:

A representative sample from the lot is tested to confirm that an aqueous extraction of the product contains <0.25 EU/mL as determined by the Limulus Amebocyte Lysate (LAL) Test.

Sterilization:

- **Autoclave:** The filters can be autoclaved for up to 50 cycles at 125°C (257°F) for 30 minutes.
- **Steam-in-place:** The filters can be sterilized by steam-in-place procedure up to 30 cycles at 135°C (275°F) for 30 minutes at less than 0.3 bar differential pressure.
- **Sanitization:** The filters can be sanitized by hot water or common chemicals that are compatible with filter components.

Animal-derived Components:

No animal-derived material is intentionally added or used while manufacturing of IFP-CRT-PES Cartridges.

Food Contact Compliance:

Materials conform to the FDA 21 CFR Part 177 requirements, current EC1935 / 2004, and current USP Plastics Class VI - 121 °C.

RoHS:

Restriction of Hazardous Substances (RoHS 3) Directive 2015/863

REACH:

REACH (Registration, Evaluation, Authorization and Restriction of Chemicals) Article 57, Regulation No. 1907/2006)

Traceability:

For traceability and easy identification:

- A Certificate of Conformance is provided with each capsule.
- Each filter bag and box are labeled with the product part number, lot number, and identifying characteristics.

Each capsule is engraved and labeled with the product part number, lot number, and identifying characteristics.

Shelf Life:

The CRT-PES Food Grade cartridges have a shelf life of 5 years from the date of manufacture.



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CRT-PES Series PES Cartridge

(Food Grade)

Ordering Guide



[1]	[2]	[3]	[4]	[5]	[6]
Length	Micron Rating	End Modification	O-Ring / Gasket Material	Optional	Grade
<ul style="list-style-type: none"> 10 : 10-Inch 20 : 20-Inch 30 : 30-Inch 40 : 40-Inch 05 : 5-Inch 	<ul style="list-style-type: none"> 001 : 0.10 µm 002 : 0.20 µm 004 : 0.45 µm 006 : 0.65 µm 008 : 0.80 µm 010 : 1.2 µm 	<ul style="list-style-type: none"> 2 : 222 O-Ring Flat 6 : 226 O-Ring Fin 7 : 226 O-Ring Flat 0 : DOE Flat Gasket 	<ul style="list-style-type: none"> S : Silicone E : EPDM N : Buna-N PV : Teflon Encapsulated Viton PS : Teflon Encapsulated Silicone V : Viton 	<ul style="list-style-type: none"> -5 : Stainless Steel Insert 	<ul style="list-style-type: none"> -F : Food Grade

Example:

CRT-PES10002A2S-F

IFP CRT PES Cartridge (Food Grade), 0.2µm PES hydrophilic membrane (Sterilizing Grade), 10.0-inch Long, Filtration Area 0.7 m², 222 O-Rings with Flat, Silicone Double O-Rings.

Part Number

Description



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Special Configuration:

Layer Option:

- Single Layer
- Dual Layer

Micron Rating Option:

- 0.04 Micron
- 0.1 Micron
- 0.2 Micron
- 0.45 Micron
- 0.65 Micron
- 0.8 Micron
- 1.2 Micron

End Modification Option:

- 2 : 222 O-Ring Flat
- 6 : 226 O-Ring Fin
- 7 : 226 O-Ring Flat
- 0 : DOE Flat Gasket

O-Ring/Gasket Material Option:

- S : Silicone
- E : EPDM
- N : Buna-N
- PV : Teflon Encapsulated Viton
- PS : Teflon Encapsulated Silicone
- V : Viton

