



# International Filter Products

*Revolutionary systems for your industry*

## CRT-PES Series PES Filter Cartridge

CRT-PES cartridges stand as the pinnacle of excellence for microelectronics applications, specifically tailored for the purification of deionized (DI) water and aqueous-based chemicals. Distinguished by their unique mirrored anisotropic PES (Polyethersulfone) membrane, these cartridges offer an extraordinary blend of exceptionally high flow rates and extended on-stream lifespan, all while consistently delivering the removal of both organic and inorganic particulates. What truly sets CRT-PES apart is its ingenious fusion of a hydrophilic PES membrane with a high-purity, all-polypropylene support structure, ensuring minimal ionic and organic extractables, broad chemical compatibility, and resistance to particle shedding. Each cartridge undergoes meticulous fabrication within a clean room environment, pre-flushed with ultrapure 18 megohm-cm DI water, and rigorous 100% integrity testing in an ISO-certified facility. The benefits include outstanding retention capabilities, rapid flow rates, versatile chemical compatibility, and extended operational life, making CRT-PES the optimal choice for uncompromising performance and reliability in microelectronics processes.

### Application

- Buffered Oxide Etch
- Point-of-Use Deionized Rinse
- Electroplating of Copper
- Product Sterilization
- Bulk DI water systems
- Nickel Plating
- Dilute Hydrofluoric Acid
- Ultrapure Water
- HDD Cleaning Processes

**Part Number: CRT-PES-10-XXX-X6S / CRT-PES-10-XXX-X6S-5**



**CRT-PES Series PES Cartridge - Chemical Grade  
226 O-Rings with Fin**



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## Technical Data Sheet

### Micron Rating:

- 0.10  $\mu\text{m}$
- 0.20  $\mu\text{m}$
- 0.45  $\mu\text{m}$
- 0.65  $\mu\text{m}$
- 0.80  $\mu\text{m}$
- 1.20  $\mu\text{m}$

### Effective Filtration Area:

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

### 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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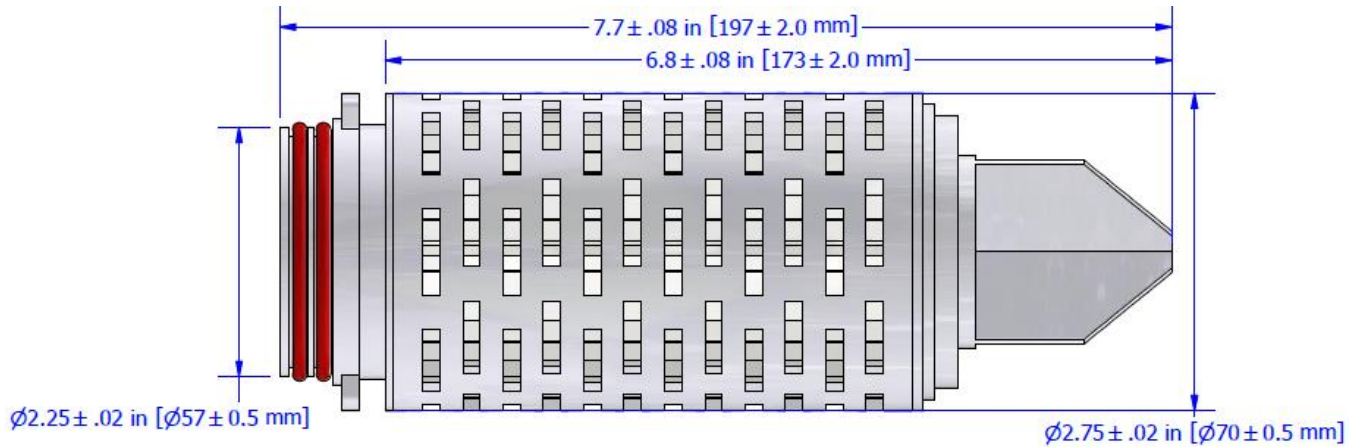


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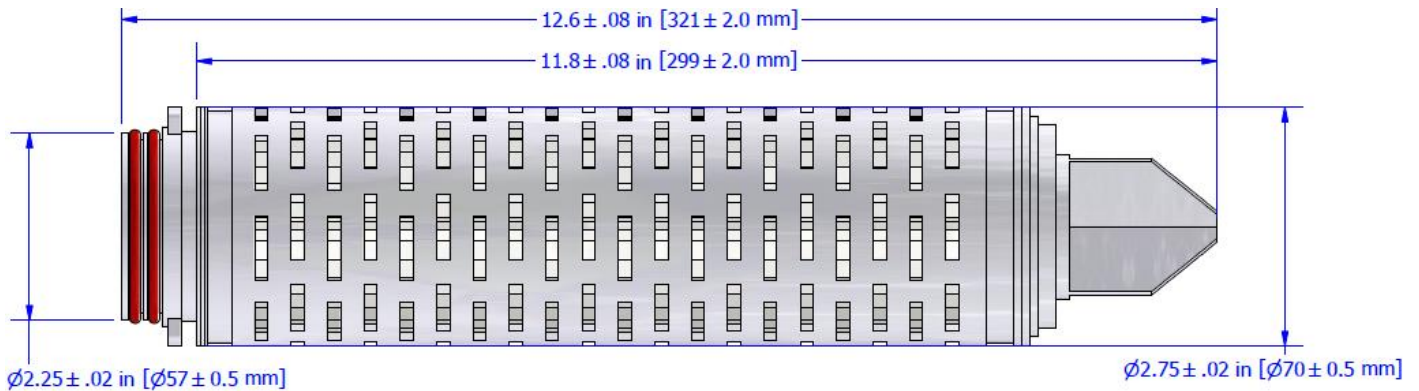
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**Nominal Dimension:**

**Part Number:** CRT-PES-05-XXX-X6X / CRT-PES-05-XXX-X6X-5



**Part Number:** CRT-PES-10-XXX-X6X / CRT-PES-10-XXX-X6X-5



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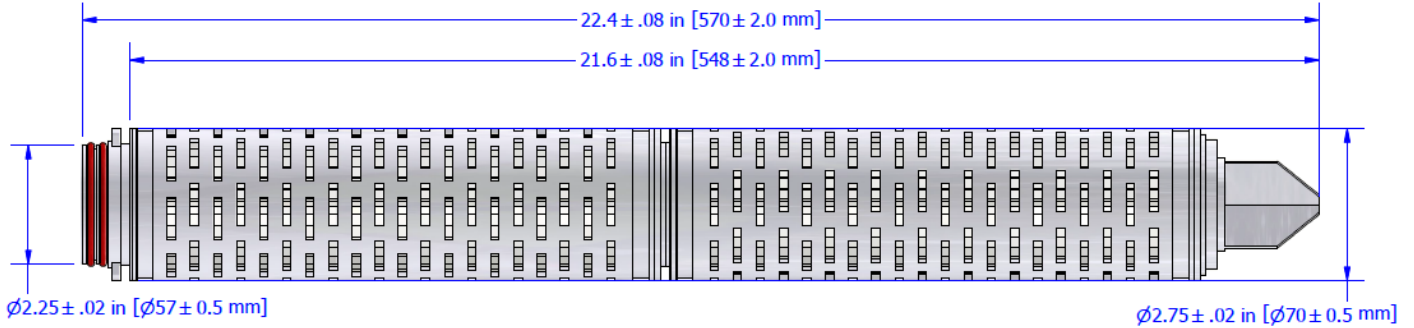
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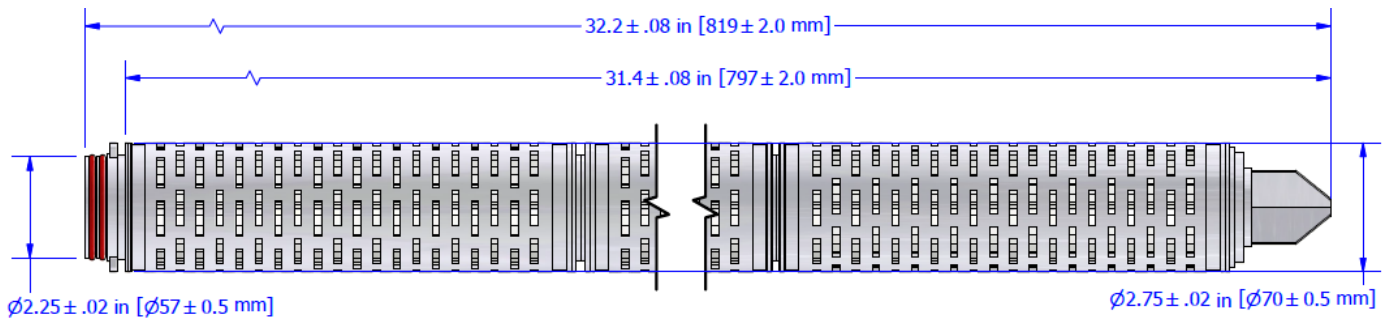
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## Part Number: CRT-PES-20-XXX-X6X / CRT-PES-20-XXX-X6X-5



## Part Number: CRT-PES-30-XXX-X6X / CRT-PES-30-XXX-X6X-5



### Typical Filtered Volume:

- 5-Inch; 25L- 200L
- 10-Inch; 50L- 400L
- 20-Inch; 100L- 800L
- 30-Inch; 150L-1,200L



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## Performance Attributes:

Water flow rates		
Micron rating	gpm/psid	Lpm/100mbar
0.10 µm	1.8	9.9
0.20 µm	3.7	20
0.45 µm	4.8	26
0.65 µm	8.9	49
0.80 µm	9.5	52
1.20 µm	16.8	92

### Sterilization:

**Autoclave:** The filters can be sterilized by autoclaving for up to 50 cycles at 125 °C (257 °F) for 30 minutes.

**Steam-In-Place:** The filters can also 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 also be sanitized by hot water or common chemicals that are compatible with filter components.

### Cleanliness (particle shedding):

**Dry-packed:** <1 particles/ml >0.2µm after 6gal @ 1gpm

Data as from open bag and installed, no additional installation flushing.

### Resistivity Rinse-up:

Resistivity rinse-up to background minus 0.2megohm-cm of feed after 20gal @ 1gpm.

### Animal-Derived Components & TSE/BSE Risk:

No animal-derived material is intentionally added or used during the manufacture of this product.

### Shelf Life:

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





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## CRT-PES Series PES Cartridge

(Chemical 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"> <li>10 : 10-Inch</li> <li>20 : 20-Inch</li> <li>30 : 30-Inch</li> <li>40 : 40-Inch</li> <li>05 : 5-Inch</li> </ul>	<ul style="list-style-type: none"> <li>001 : 0.10 µm</li> <li>002 : 0.20 µm</li> <li>004 : 0.45 µm</li> <li>006 : 0.65 µm</li> <li>008 : 0.80 µm</li> <li>010 : 1.2 µm</li> </ul> <p>Note: All final membranes are sterilizing grade.</p>	<ul style="list-style-type: none"> <li>2 : 222 O-Ring Flat</li> <li>6 : 226 O-Ring Fin</li> <li>7 : 226 O-Ring Flat</li> <li>0 : DOE Flat Gasket</li> </ul>	<ul style="list-style-type: none"> <li>S : Silicone</li> <li>E : EPDM</li> <li>N : Buna-N</li> <li>PV : Teflon Encapsulated Viton</li> <li>PS : Teflon Encapsulated Silicone</li> <li>V : Viton</li> </ul>	<ul style="list-style-type: none"> <li>-5 : Stainless Steel Insert</li> </ul>	<ul style="list-style-type: none"> <li>-C : Chemical Grade</li> </ul>

**Example:**

**CRTPE10002A6S-C**

IFP CRT PES Cartridge, 0.2µm PES hydrophilic membrane (Sterilizing Grade), 10.0-inch Long, Filtration Area 0.7 m<sup>2</sup>, 226 O-Rings with Fin, 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

