

Clariflow® -XP and -XL Cartridges

Dual layer polyethersulfone (PES) membrane for extra performance in biological applications

Extra protection and extended life are what make Clariflow -XP & -XL filter cartridges ideal for the clarification of particulate-laden biological and pharmaceutical solutions.

A double-layered configuration of PES membrane (0.45 or 0.65 μm over 0.2 μm) provides for a built-in pre-filter which decreases the potential for premature fouling as may be seen with competitive 0.2 μm rated filters. In addition, the non-fiber-releasing membrane offers superior flow and will provide typical microbial retention of up to $10^7/\text{cm}^2$ organisms (*B. diminuta*) per HIMA guidelines.

Clariflow -XP and -XL cartridges are manufactured under cleanroom conditions, and each is preflushed with deionized water and integrity tested before shipment to ensure quality.



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Benefits

- Excellent flow rates shorten processing time
- Extended on-stream life reduces change-out frequency
- Steamability allows reuse to minimize filtration costs
- Integrity testable to ensure reliability

Applications

Pre-filtration/Clarification of:

- Serum/Culture Media
- Vaccines
- Fermentation Broth
- Diagnostic Reagents
- Ophthalmic Solutions



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Liquid Flow Rates*

Product	Water Flow Rate
Clariflow XP (0.45/0.2µm)	2.0gpm/psid (10.98 lpm/100mbar)
Clariflow XL (0.65/0.2µm)	2.3gpm/psid (12.63 lpm/100mbar)

*For fluids with viscosity of 1 cP, per 10-inch (250mm) cartridge equivalent

Materials of Construction

Membrane: Polyethersulfone
 Support Layers: Polypropylene
 Structure: Polypropylene

Effective Filtration Area

5.5 ft² (0.5 m²) per nominal
 10-inch (250 mm) cartridge

Integrity Tested

All elements are integrity tested by a diffusive flow method during manufacture.

Biological Safety

All components meet USP-XXIV Class VI-121°C criteria and are thermally bonded to assure integrity and reduce extractables

Maximum Differential Pressure

Forward:
 80 psid (5.5 bar) @ 75°F (24°C)
 40 psid (2.8 bar) @ 180°F (82°C)
 Reverse:
 50 psid (3.4 bar) @ 75°F (24°C)

Steam Sterilizable and Sanitizable:

Cartridges may be steamed or autoclaved for up to 20 one-hour cycles @ 135°C (275°F). Cartridges may also be chemically sanitized in place using common sanitizing agents.

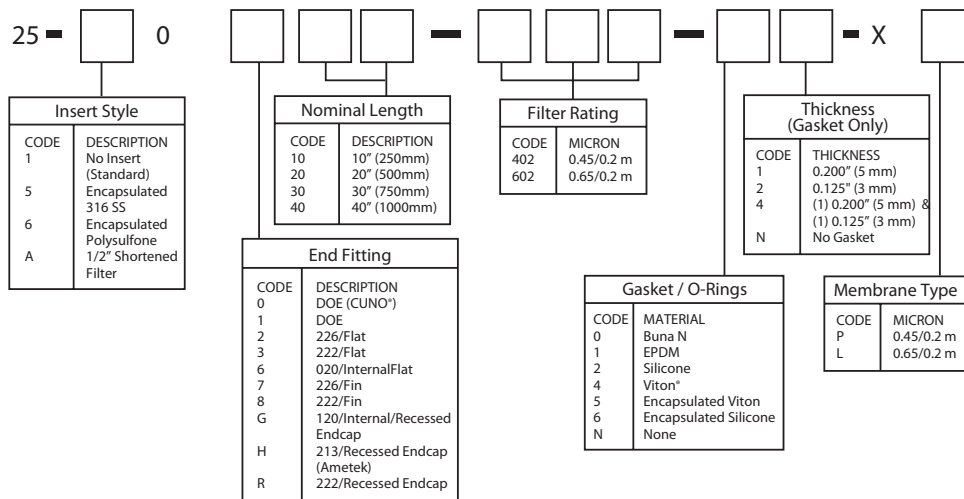
Integrity Test Values

Product/Filter Rating	Bubble Point*		Diffusional Flow		
	psig	bar	cc/min	Test Pressure	
				psig	bar
Clariflow XP (0.45/0.2µm)	45	3.1	20	32	2.2
Clariflow XL (0.65/0.2µm)	45	3.1	20	32	2.2

* Tested in Deionized Water.

Ordering Information

Each cartridge is identified with a product number, pore size, and lot number for traceability.



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