ULTRAFILTER
THE FILTRATION MANUFACTURER
Kronsbein ultrafilter ®

PF-PVDF

PVDF Membrane Sterile Liquid Filters

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Ultrafilter BeLux
Beta Solutions B.V.
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PF-PVDF

PF-PVDF:

PF-PVDF Filter Cartiges are composed of a unique hydrophilic polyvinylidene flouride (PVDF) membrane characterized by low extractable and protein binding. They are suitable for the sterilized filtration of qpharmaceutical liquids including ophtalmic liquids, biological and other diluted preservative solutions.

FEATURES AND BENEFITS:

- Low extractable and protein binding
- Broad chemical compatibility and temperature resistance
- Excellent durability proven by testing forward/reverse pulse up to 100x

QUALITY STANDARDS:

- Bacterial quantitative retention of 10^7 CFU/cm^2 Brevundimonas Diminuta (ATCC 19146) according to ASTM F838 methodology.
- 100% integrity testing in manufacturing
- Each Filter is fully tracable with unique serial number
- Manufactured in a facility with adheres to ISO 9001:2015 practices.
- Full Regulatory Compliance with following:
  - Bacterial Endotoxin: Aqueous extraction of autoclaved filter contains <0.25 EU/ml as determined by Limulus Amebcyte Lysate (LAL), USP <85>.
  - Non-fiber Releasing: Component materials meet the criteria for a "Non-fiber-releasing filter" as defined in 21CFR 210.3(b)(6).
  - Component Material Toxitx: Meet the requirement of USP <87> in Vito Cytotoxicity Test; Meet the criteria of USP <88> Biological Reactivity Test for Class VI-121°C plastics
  - TOC/Conductivity at 25°C: Autoclaved filter effluent meet the USP<643> for total organic carbon and USP<645> for water conductivity per WFI requirements after a UPW flush of specified volume.
  - Particle Shedding: Autoclaved filter effluent meets the USP<788> for large volume injections.
  - Indirect Food Additive: All component materials meet tge FDA Indirect Food Additive requirements cited in 21 CFR 177-182.

APPLICATIONS:

- Antibiotics
- Aggresive Solvents
- Biological Agents
- Blood Products
- Chemicals
- Cold and Hot WFI
- Ophthalmic Solutions
- Sanitizing Agents

TECHNICAL DATA:

MATERIALS OF CONSTRUCTION	
Filter Medium	PF-PVDFSL: Single-Layer Hydrophilic PVDF Membrane PF-PVDFDL: Double-Layer Hydrophilic PVDF Membrane
Cage | Support	Polypropylene
Core | Endcaps	Polypropylene

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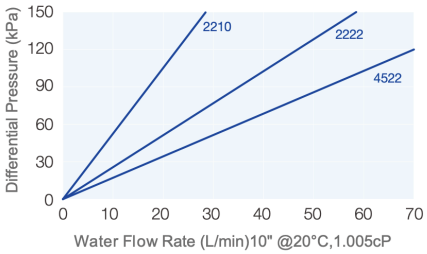
OPERATING CONDITIONS	
Maximum Operating Pressure	6.9 bar (100 psi) at 25 °C 4.0 bar (58 psi) at 60 °C 2.4 bar (35 psi) at 80 °C
Max. Differential Pressure	Forward 6.9 bar (100 psi) at 25 °C 4.0 bar (58 psi) at 60 °C 2.4 bar (35 psi) at 80 °C Reverse 3.0 bar (44 psi) at 25 °C 1.0 bar (15 psi) at 80 °C
Effective Filtration Area	0.58m² / 68-10 inch

Flow Rate Characteristics



STERILIZATION	
Inline Steam Sterilization (PF-PVDFSL & PF-PVDFDL)	Up to 100 forward cycles and 50 reverse cycles (135°C for 30 min. < 0.3 bar per cycle)
Autoclave (PF-PVDFSL & PF-PVDFDL)	Up to 400 cycles (130°C for 30 min. per cycle)

INTEGRITY TEST DATA	
Blubble Point	BP: ≥ 0.32 MPa (water), PF-PVDFSL (0.20 µm)
Autoclave (PF-PVDFSL & PF-PVDFDL)	DF: ≤ 20 ml/min/10"@ 0.28 MPa, PF-PVDFSL (0.20 µm)

ORDERING INFORMATION

PF-PVDF

	REMOVAL	NOMINAL LENGTH	END CAP	SEAL MATERIAL
PF-PVDFSL	001 = 0.10 µm	05 = 5"	2 = Code 2	A = EPDM
	002 = 0.20 µm	10 = 10"	3 = Code 3	B = Silicone
	004 = 0.45 µm	20 = 20"	7 = Code 7	C = Viton
	006 = 0.65 µm	30 = 30"	8 = Code 8	D= Nitrile
	010 = 1.00 µm	40 = 40"	MF = DOE	E = FEP Viton
			UF = UF	F = FEP Silicone
PF-PVDFDL	0202 = 0.20 + 0.20 µm			
	0204 = 0.20 + 0.45 µm			
	0604 = 0.65 + 0.45 µm			
	0201 = 0.20 + 0.10 µm			
	0404 = 0.45 + 0.45 µm			
	0602= 0.65 + 0.20 µm			
	0601 = 0.65 + 0.10 µm			
	0401 = 0.45 + 0.10 µm			

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