

# FluoroPV Filter Cartridges

PVDF Membrane·Sterile Liquid Filter

**FluoroPV** Filter Cartridges are composed of a unique hydrophilic polyvinylidene fluoride (PVDF) membrane characterized by low extractable and protein binding. They are suitable for the sterilized filtration of pharmaceutical liquids including ophthalmic liquids, biological and other diluted preservative solutions.

## Features and Benefits

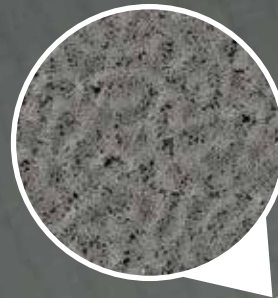
- Low extractable and protein binding
- Broad chemical compatibility and temperature resistance
- Excellent durability proven by testing forward/reverse pulse up to 100x

## Quality Standards

- Bacterial quantitative retention of  $10^7$  CFU/cm<sup>2</sup> Brevundimonas Diminuta(ATCC 19146) according to ASTM F838 methodology .
- 100% Integrity testing in manufacturing .
- Each filter is fully traceable with unique serial number .
- Manufactured in a facility which 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 Amebocyte Lysate (LAL),USP<85>.
  - Non-fiber Releasing :Component materials meet the criteria for a " Non-fiber-releasing filter " as defined in 21 CFR 210.3(b)(6).
  - Component Material Toxicity :Meet the requirement of USP <87> In Vitro 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 meet the USP<788>for large volume Injections .
  - Indirect Food Additive: All component materials meet the FDA Indirect Food Additive requirements cited in 21 CFR 177-182.

## Typical Applications

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



Sterile Filtration

Bio-burden Reduction

Pre-Filtration

All-Fluorine Filters

Capsule Filters

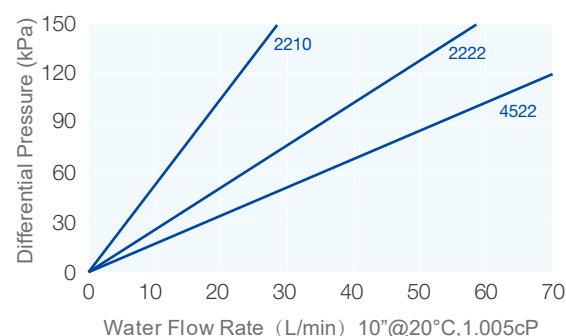
## Materials of Construction

<b>Filter Media</b>	LHPVND: Single-Layer Hydrophilic PVDF Membrane DLHPVNDR: Double-Layer Hydrophilic PVDF Membrane
<b>Support</b>	Polypropylene
<b>Cage/Core/End Caps</b>	Polypropylene

## Operating Conditions

<b>Max. Operating Pressure</b>	6.9 bar (100 psi) at 25 °C 4.0 bar (58 psi) at 60 °C 2.4 bar (35 psi) at 80 °C
<b>Max. Differential Pressure</b>	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
<b>Effective Filtration Area</b>	0.58m <sup>2</sup> / Φ 69-10 inch

## Flow Rate Characteristics



## Sterilization

<b>Inline Steam Sterilization (LHPVND &amp; DLHPVNDR)</b>	Up to 100 forward cycles and 50 reverse cycles (135 °C for 30 min < 0.3 bar per cycle) .
<b>Autoclave (LHPVND &amp; DLHPVNDR)</b>	up to 400 cycles (130°C for 30min per cycle)

## Integrity Test Data

<b>Bubble Point</b>	BP : ≥ 0.32 MPa(water), LHPVND (0.22 μm)
<b>Diffusion Flow</b>	DF : ≤ 20 ml/min/10" @ 0.28 MPa, LHPVND (0.22 μm)

## Ordering Information

LHPVND	Removal Ratings	End Cap	Nominal Length	Seal Material	-P
[Single-Layer]	0010=0.10μm	HSF=226 /Fin (PBT Insert)	05= 5"	S=Silicone	
	0022=0.22μm	HSC=226 /Flat (PBT Insert)	10=10"	E=EPDM	
	0045=0.45μm	HTF=222 /Fin (PBT Insert)	20=20"	V=Viton	
	0065=0.65μm	HTC=222 /Flat (PBT Insert)	30=30"	P=PFA/Viton	
	0100=1.0μm	DOE=Double Open End	40=40"		
<b>DLHPVNDR</b>	2222=0.22+0.22μm				
[Double-Layer]	4522=0.45+0.22μm				
	6545=0.65+0.45μm				
	2210=0.22+0.1μm				
	4545=0.45+0.45μm				
	6522=0.65+0.22μm				
	6510=0.65+0.1μm				
	4510=0.45+0.1μm				