

LHPVHBR Filter Cartridges

Positive-Charged Zeta PVDF Membrane Sterile Liquid Filter

LHPVHBR Filter Cartridges feature a modified PVDF membrane that removes a significant level of particles and endotoxins. They are suitable for the sterilized filtration of pharmaceutical liquids including ophthalmic liquids, biological and other diluted preservative solutions.

Features and Benefits

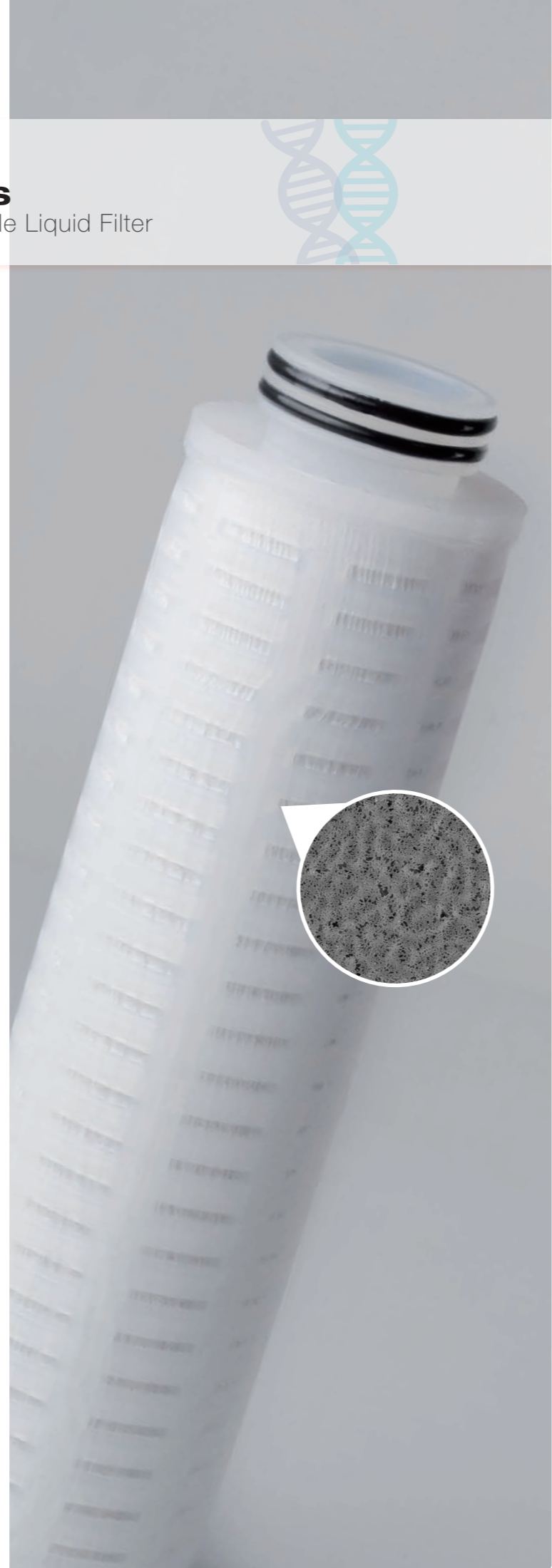
- Low extractable and protein binding
- Modified PVDF membrane with positive-charged Zeta particles absorbs small particles and endotoxins
- Broad chemical compatibility and temperature resistance
- Excellent durability proven by testing forward/reverse pulse up to 100x

Quality Standards

- Bacterial quantitative retention of 10^7 CFU/cm² 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



Materials of Construction

Filter Media	LHPVHBR: Single-Layer Positive-Charged Zeta PVDF Membrane DLHPVHBR: Double-Layer Positive-Charged Zeta PVDF Membrane
Support	Polypropylene
Cage/Core/End Caps	Polypropylene

Operating Conditions

Max. 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	0.58m ² / Φ 69-10 inch

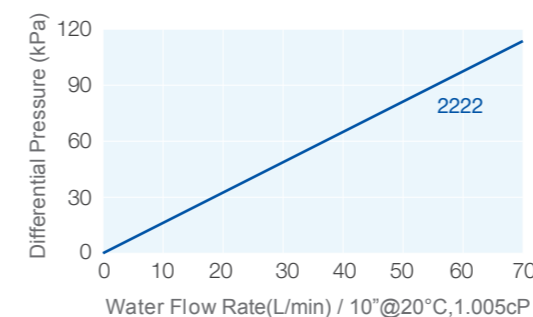
Sterilization

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

Integrity Test Data

Bubble Point	BP: ≥ 0.32 MPa(water) ,LHPVHBR(0.22 μm)
Diffusion Flow	DP: ≥ 20.0 ml/min,LHPVHBR(0.22 μm)

Flow Rate Characteristics



Ordering Information

LHPVHBR	Removal Ratings	End Cap	Nominal Length	Seal Material	-P
[Single-Layer]	0010=0.1μm	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	
DLHPVHBR	2222=0.22+0.22μm	DOE=Double Open End	40=40"		
[Double-Layer]	2245=0.22+0.45μm				
	6545=0.65+0.45μm				