



Filtros TETPOR® LIQUID

Filtros de PTFE para líquido en gran variedad de industrias

Los filtros TETPOR® LIQUID son particularmente aptos para la esterilización y eliminación de partículas en químicos especialmente agresivos

Esto incluye ácidos, bases y disolventes para una gran variedad de industrias de procesamiento. Los filtros TETPOR® LIQUID usan una membrana única de PTFE de alta seguridad con gran capacidad de retención de suciedad gracias a su alto volumen de huecos. Gracias a esta membrana, los filtros tienen una vida útil larga con bajas caídas de presión. Esto hace que los filtros TETPOR® LIQUID sean superiores frente a sus competidores en rendimiento, resistencia y durabilidad.

Los filtros TETPOR® LIQUID consiguen altas tasas de fluido gracias a su diseño de construcción superior y su densidad de pliegues optimizada.

Regulaciones

Los materiales farmacéuticos se han manufacturado de acuerdo con cGMP, se han enjuagado con agua purificada y se han validado antes de su envío.

Los materiales farmacéuticos se ajustan a los requerimientos relevantes de:

- 21CFR Parte 177
- USP Plastics Class VI
- 121°C y equivalentes ISO10993

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Principales Beneficios

- Resistencia química superior gracias a la membrana de PTFE en combinación con el soporte físico de polipropileno
- Comprobados y revisados antes de su distribución para garantizar su integridad
- Validados según la metodología ASTM F838 – 05
- Amplio rango de configuraciones de tapas y juntas
- Amplia compatibilidad química
- Resistentes y duraderos

Aplicaciones

- Filtrado y esterilización en gran variedad de industrias de procesamiento
- Filtrado de partículas en químicos agresivos

Aplicaciones Técnicas Maquinsa, S.L. dispone de una zona de manipulación bajo norma ISO 9001/2015 y en la que se manipulan los materiales bajo las normas BPF (GMPs).

Bajo demanda podemos fabricar y manipular nuestros productos en sala blanca bajo norma. Nuestras plantas pueden ser auditadas a su requerimiento.

Relacionados



Sensores Parker
SciLog®



Sistemas de Laboratorio
Automáticos



Carcasas para Filtros
Parker

TETPOR LIQUID Filters

- liquid filters
- PTFE

TETPOR LIQUID filters are particularly suitable for sterilization and particulate removal from aggressive chemicals (including acids, bases and solvents) within a wide range of critical processing industries.

The superior performance, strength and durability of TETPOR LIQUID filters stems from the use of a single layer, high security PTFE membrane, which has a high dirt holding capacity due to its high voids volume. This results in low pressure drops and long service life.

High flow rates are achieved due to the optimized pleat pack density and the superior design construction of TETPOR LIQUID filters.

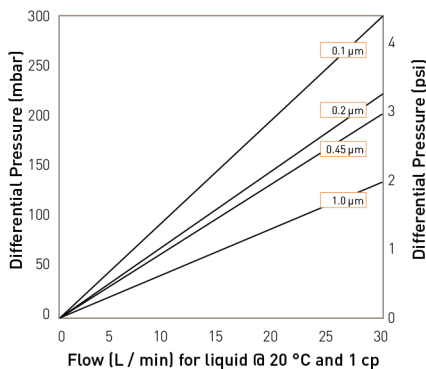
Features and Benefits

- Superior chemical resistance of PTFE membrane combined with polypropylene hardware
- Integrity tested prior to despatch
- Validated to ASTM F838-05 methodology
- Comprehensive range of end cap configurations for retrofitting

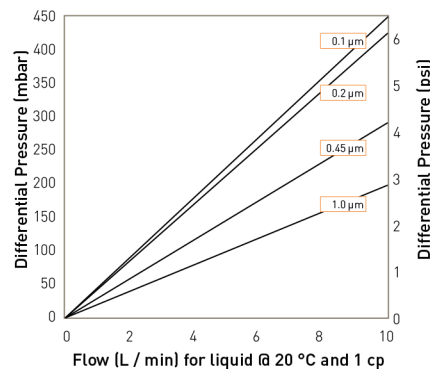


Note: TETPOR is a registered trademark of Parker Hannifin Corporation.

Performance Characteristics



For K size for a given flow rate multiply 10" size differential pressure by 2



For A size for a given flow rate divide B size differential pressure by 2
For E size for a given flow rate multiply B size differential pressure by 2

10" Size (250 mm) Cartridge

B Size (65 mm) Cartridge and Capsule

Specifications

Materials of Construction

- Filtration Membrane: PTFE
- Upstream Support: Polypropylene
- Downstream Support: Polypropylene

Filter Cartridges

- Inner Support Core: Polypropylene
- Outer Protection Cage: Polypropylene
- End Caps: Polypropylene
- End Caps Insert: 316L Stainless Steel

**Not available in B endcap variant*

- Standard o-rings/gaskets: Viton

MURUS Disposable Filter Capsules

- Core: Polypropylene
- Sleeve: Polypropylene
- End Caps Insert: 316L Stainless Steel
- Standard o-rings/gaskets: Silicone
- Capsule Body: Polypropylene
- Capsules Vent Seals: Silicone

DEMICA Filter Capsules

- Core: Polypropylene
- Sleeve: Polypropylene
- End Caps: Polypropylene
- Capsule Body: Polypropylene
- Capsules Vent Seals: Silicone
- Filling Bell: Polycarbonate

Syringe Filters

- Body: Polypropylene

Effective Filtration Area (EFA)

10" (250 mm):	0.77 m ²	{8.28 ft ² }
K Size:	0.36 m ²	{3.87 ft ² }
A Size:	0.25 m ²	{2.69 ft ² }
B Size:	0.12 m ²	{1.29 ft ² }
E Size:	0.06 m ²	{0.64 ft ² }
Syringe ø50 mm:	14.50 cm ²	{2.25 in ² }

Sterilization

	Autoclave		Steam-in-Place	
	Cycles	Temp	Cycles	Temp
			(30 min.)	
Cartridges	120	142 °C [287.6 °F]	120	142 °C [287.6 °F]
MURUS	5	130 °C [266 °F]	-	-
DEMICA	10	135 °C [275 °F]	-	-
Syringe	1	130 °C [266 °F]	-	-

TETPOR LIQUID filter cartridges can be sanitized with hot water at up to 90 °C (194 °F) and are compatible with a wide range of chemicals.

For detailed operational procedures and advice on cleaning and sterilization, please contact the Technical Support Group through your usual Parker domnick hunter contact.

Biological Safety

Materials conform to the relevant requirements of 21CFR Part 177 and current USP Plastics Class VI - 121 °C and ISO10993 equivalents.

Recommended Operating Conditions

Filter Cartridges

Up to 70 °C (158 °F) continuous operating temperature and higher short-term temperatures during CIP to the following limits:

Temperature		Max. Forward dP	
°C	°F	(bar)	(psi)
20	68	5.0	72.5
40	104	4.0	58.0
60	140	3.0	43.5
80	176	2.0	29.0
90	194	1.7	24.6

MURUS Disposable Filter Capsules

Up to 25 °C (77 °F) @ 5.5 barg (79.7 psig)

Up to 60 °C (140 °F) @ 2.8 barg (40.6 psig)

Parker Hannifin certify that this product complies with the European Council Pressure Equipment Directive (PED) 97/23/EC Article 3, Paragraph 3 - Sound Engineering Practice (SEP). This product is intended for use with Group 1 & 2 Dangerous and Harmless Liquids and Group 2 Harmless Gases at the operating conditions stated in this document : In compliance with PED Article 3, Paragraph 3, SEP, this product does not bear the CE mark.

DEMICA Filter Capsules

Up to 40 °C (104 °F) at line pressures up to 5.0 barg (72 psig).

Performance Characteristics

TOC / Conductivity

The filtrate quality from a 10" (250 mm) TETPOR LIQUID conforms to the requirements of current USP <643> (TOC) and USP <645> (conductivity).

Endotoxins

Aqueous extracts from the 10" (250 mm) TETPOR LIQUID contain < 0.25 EU / ml when tested in accordance with the Limulus Amoebocyte Lysate test.

Non-Volatile Extractables (NVE)

Total NVEs extracted in the first 5 litre flush of purified water for a 10" (250 mm) cartridge are <5 mg.

Pharmaceutical Validation

A full validation guide is available upon request from Laboratory Services Group (LSG).

Oxidizable Substances

TETPOR LIQUID filter cartridges meet current USP and EP quality standards for sterile purified water for oxidizable substances following a <1 litre water flush.

Integrity Test Data

All filters are integrity testable to the following limits when wet with 60 / 40 IPA / Water and using air as the test gas.

Micron Rating		0.1	0.2	0.45	1.0
Filter Cartridges / MURUS / DEMICAP / Syringe Filters					
Min. Bubble Point	(barg)	1.3	1.0	0.7	-
	(psig)	18.8	14.5	10.1	-
Filter Cartridges / MURUS / DEMICAP / Syringe Filters					
Diffusional Flow	(barg)	1.0	0.8	0.4	-
Test Pressure	(psig)	14.5	11.6	5.8	-
Filter Cartridges / MURUS / DEMICAP / Syringe Filters					
Max. Diffusional Flow (10")		27.0	18.0	18.0	-
(ml / min)	(K)	12.7	8.5	8.5	-
	(A)	9.0	6.0	6.0	-
	(B)	4.5	3.0	3.0	-
	(E)	2.3	1.5	1.5	-

Retention Characteristics

TETPOR LIQUID filter cartridges are validated by bacterial challenge testing with *Brevundimonas diminuta* to current ASTM F838-05 methodology (10⁷ organisms / cm² EFA minimum) with typical in-house challenge levels being 10¹¹ organisms per 10" (250 mm) filter cartridge.