GLOBAL FILTER
Filtration Group®

Validated Filtration Solutions to Industry Leaders®

GSPES-Series Serial-Layer Polyethersulfone

GSPES filter cartridges deliver extended service life and excellent retention. The serial-layer design makes the GSPES an ideal choice for the clarification or particulate-heavy solutions in a wide variety of food & beverage, pharmaceutical, biological, and high purity chemical applications. The GSPES series is available in 0.2, 0.45, & 0.65 micron ratings. The serial-layer design offers superior throughput volumes while protecting downstream sterilizing grade cartridges.

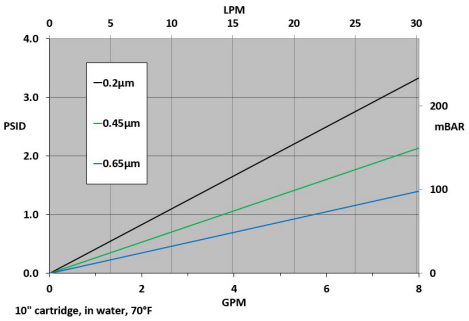
Each cartridge is flushed with 18 megaohm High Purity deionized water and is integrity tested to ensure the delivery of clean effluent with low extractables. Designed to tolerate repeated hot water sanitization and in-situ steam sterilization cycles for maximum service life.

Microbial Retention Performance

Rating	Challenge Microbe	Log Reduction Value (LVR)
.2µ	*Brevundimonas diminuta*	>8
.45µ	*Serratia marcescens*	>7
.65µ	*Sacchromyces cerevisiae*	>5

*Independtly tested in accordance with STM F838

Flow Rate vs Pressure Drop



Typical Applications

- Wine, Beer, & Spirits
- Bottled Water, Juices, & Soft Drinks
- Bulk Pharmaceutical Solutions
- Bulk & Fine Chemicals

Construction Materials

Membrane ..... Polyethersulfone
Support Media ..... Polypropylene
End Caps ..... Polypropylene
Center Core ..... Polypropylene
Outer Support Cages ..... Polypropylene
O-Rings/Gaskets ..... Buna, EPDM, Silicone Teflon® Encapsulated Viton®[1], Viton®, Teflon® Encapsulated Silicone[2]

Dimension (Nominal)

Length ..... 10 to 40 in (25.4 to 101.6 cm)
Outside Diameter ..... 2.7 in (7.06 cm)

Operating Conditions

Change Out ΔP (recommended) ..... 35 PSID (2.4 bar)
Temperature (max) ..... 176˚F (80˚C)
Differential Pressure (max) ..... 50 PSID at 68˚F (3.4 bar at 20˚C)

Sanitization/Sterilization

Filtered Hot Water ..... 185˚F (85˚C) for 30 min
Steam Sterilization ..... 250˚F (121˚C) for 30 min multiple cycles

Chemicals: Cartridges are compatible with most chemical sanitizing agents.

Note: Stainless steel insert option required for all cartridges being hot water sanitized or steam sterilized.

Toxicity

All polypropylene components meet the specifications for biological safety per USP Class VI – 121˚C for plastics.

Food Safety Compliance

Materials of construction comply with FDA regulations for food and beverage contact use as detailed in the US Code of Federal Regulations, 21CFR. Materials used to produce filter media and hardware are deemed safe for use in contact with foodstuffs in accordance with EU Directives 1935/2004, and/or 10/2011.

Ordering Information

GSPES	Rating(µ)	A	Length	C	End Cap Style	O-Rings/Gaskets	-	Adders
	0.2		10" (25.4cm)		2 = DOE Flat Gasket[1,2]	B = Buna-N		CS = 316SS Compression Spring
	0.45		20" (50.8 cm)		3 = 222 w/Fin	E = EPDM		I = Stainless Steel Insert
	0.65		30" (76.2 cm)		4 = 222 w/Flat Cap	S = Silicone		
			40" (101.6 cm)		6 = 226 w/Flat Cap	T = Teflon® Encapsulated Viton®[1]		
					7 = 226 w/Fin	V = Viton®		
					16 = 213 Internal O-Ring	Z = Teflon® Encapsulated Silicone[2]		
					28 = 222 3-Tabs w/ Fin			

1 - When ordering with DOE Flat Gasket, gasket style "T" is not available
2 - When ordering with DOE Flat Gasket, gasket style "Z" is not available

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