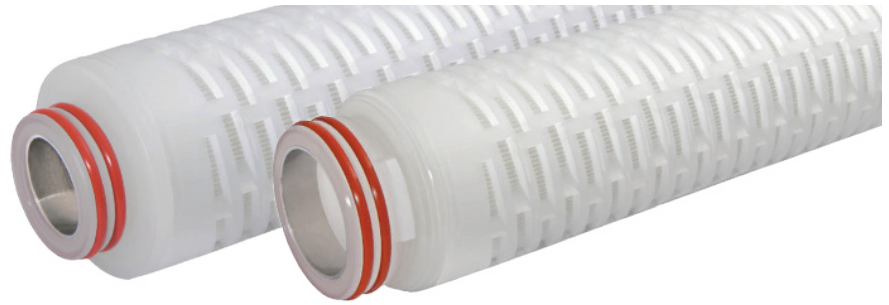
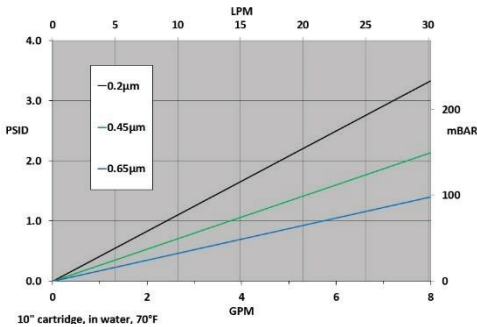


## GSPES-Series Serial-Layer Polyethersulfone

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.



### Flow Rate vs Pressure Drop



### Typical Applications

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

### Operating Conditions

**Change Out  $\Delta P$  (recommended)**...35 PSID  
**Temperature (max)**.....176°F (80°C)  
**Differential Pressure (max)**.....50 PSID

### Construction Materials

**Membrane**..... Polyethersulfone  
**Support Media**..... Polypropylene  
**End Caps**..... Polypropylene  
**Center Core**..... Polypropylene  
**Outer Support Cage**..... Polypropylene  
**O-Rings/Gaskets**..... Buna, EPDM, Silicone, Viton®, Teflon® Encapsulated Viton®

### Sanitization/Sterilization

**Filtered Hot Water**.....85°C for 30 min  
**Steam Sterilization**.....121°C for 30 min., Multiple cycles

**Chemicals:** Cartridges are chemically compatible with most chemicals and sanitizing agents.

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

### Dimensions

**Length:** 10 to 40 inches (25.4 to 101.6 cm) nominal  
**Outside Diameter:** 2.70 inches (7.0 cm) nominal

### 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 2002/72/EC, 1935/2004, and/or 10/2011.

### Ordering Information

GSPES	Rating (µ)	A	Length	C	End Cap Style	O-Rings/Gaskets	-	Adders
	0.2		10" (25.4 cm)		2 = DOE Flat Gasket	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®		
					7 = 226 w/ Fin	V = Viton®		
					16 = 213 Internal O-Ring	Z = Teflon® Encapsulated Silicone		
					28 = 222 3-tabs w/ Fin			

DISCLAIMER: Filtration data presented is representative of performance observed in controlled laboratory testing. It is not given as a warranty, specification or statement of fitness for use. Specific performance can vary widely depending on contaminant type, fluid properties, flow rates and environmental conditions. It is recommended that users conduct thorough qualification testing to assure the product functions as required. For additional technical support, a product Validation Guide is available upon request.

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