

# Pharmsteri™ PES Cartridge Filter

*PSTS series filters provide economical filtration for pharmaceutical and food and beverage applications*

PSTS series cartridge filters join our portfolio of filtration solutions that help ensure reliable product processing. Constructed of polypropylene components and a hydrophilic polyethersulfone (PES) membrane, Pharmsteri™ cartridge filters are economical and efficient for use in various pharmaceutical and food and beverage applications.

Our portfolio of Pharmsteri™ PES filters is 100% tested during manufacturing to ensuring high quality for sterility assurance. Various fitting sizes and types are available to provide design flexibility and versatility in a broad range of applications.

## APPLICATIONS

### Pharmaceutical

- Bioburden reduction of LVP/SVP
- Sterile filtration for LVP/SVP/API
- Bulk chemicals

### Food and Beverage

- Facility water
- Bottled water
- Soft drinks

## FEATURES & BENEFITS

Various fitting sizes and types available	Fits most stainless-steel housings, providing design flexibility and versatility in a broad range of applications
Optimized form factor	Allows high flow and low pressure drop, lowering cost of ownership
All components meet USP <88> Class VI Plastics Test	Provides biosafety insurance and global regulatory compliance



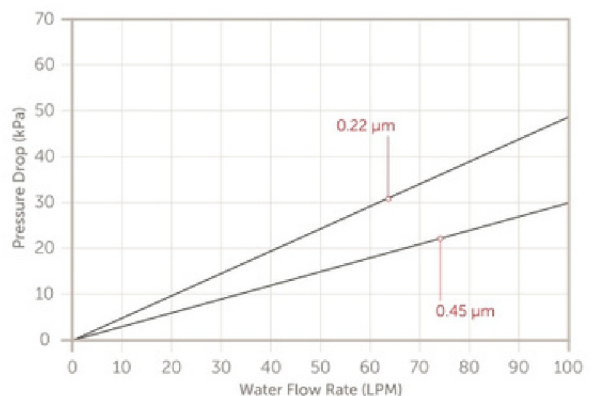
*Allows high flow and low pressure drop, lowering cost of ownership.*



## SPECIFICATIONS

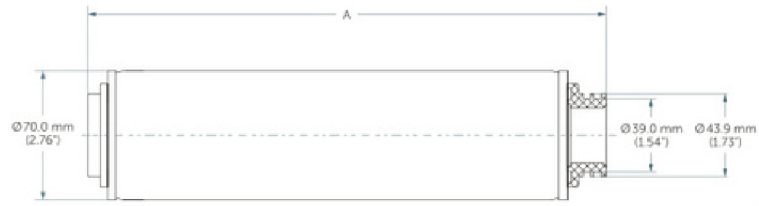
<b>Retention rating</b>	Single-layer: 0.22, 0.45, Dual-layer: 0.22+0.45 $\mu\text{m}$	
<b>Materials</b>	Media	Polyethersulfone (PES)
	Support	Polypropylene
	Sleeve, core, top, and end caps	Polypropylene
	O-ring	Silicone
<b>Sealing technology</b>	Thermal bonding without adhesives	
<b>Filtration area</b>	$\geq 0.6 \text{ m}^2 / 10''$ cartridge (Single-layer), $\geq 0.53 \text{ m}^2 / 10''$ cartridge (Dual-layer)	
<b>Integrity test</b>	Minimum bubble point at 25°C (77°F)	$\geq 3500 \text{ mbar}$
	Maximum diffusion flow at 2800 mbar at 25°C (77°F)	5" cartridge: $\leq 15 \text{ mL/min}$
		10" cartridge $\leq 30 \text{ mL/min}$
<b>Maximum operating conditions</b>	Maximum forward differential pressure	4.2 bar @ 25°C (77°F), 2.0 bar @ 80°C (176°F)
	Maximum operating temperature	80°C (176°F)
<b>Multiple sterilization cycles</b>	20 cycles of steam-in-place (SIP) sterilization or autoclave, 30 min at 127°C (261°F)	
<b>Endotoxin releasing</b>	$< 0.25 \text{ EU/mL}$ as determined by the LAL test	
<b>TOC</b>	$< 0.5 \text{ mg/L}$ after a water flush of 11 L/10" cartridge	
<b>Conductivity</b>	$\leq 1.3 \mu\text{S/cm}$ after water flush of 11 L/10" cartridge	
<b>Particle release</b>	Meets the requirements of WFI set by USP	
<b>NVR</b>	After autoclaving and 24-hours in 50% ethanol water with vibration (contact Entegris for details)	
<b>Material toxicity</b>	All components meet the requirements of the USP <88> Reactivity Test for Class VI Plastics	
<b>Bacterial challenge test</b>	Passed the bacterial challenge test using <i>Brevundimonas diminuta</i> (ATCC 19146) at a minimum challenge concentration $1 \times 10^7 \text{ CFU/cm}^2$ (0.22 $\mu\text{m}$ )	
<b>Indirect food additive</b>	Meets the FDA Indirect Food Additive requirements cited in 21 CFR 177-182	
<b>Food contact material</b>	(EU) No. 1935/2004, (EU) No. 10/2011	
<b>Quality</b>	Manufactured in accordance with ISO 9001 and ISO 13485 certified quality management system	

## PERFORMANCE DATA



## DIMENSIONS

### Code 0



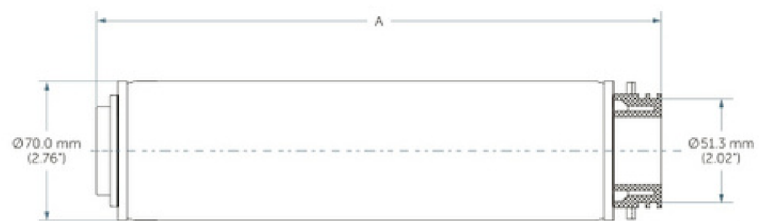
Length	Code 0 Dimension A
5"	148.0 mm (5.8")
10"	273.0 mm (10.7")
20"	517.5 mm (20.4")
30"	762.0 mm (30.0")
40"	1006.5 mm (39.6")

### Code 5



Length	Code 5 Dimension A
5"	—
10"	314.0 mm (12.4")
20"	558.5 mm (22.0")
30"	803.0 mm (31.6")
40"	1047.5 mm (41.2")

### Code 6



Length	Code 6 Dimension A
5"	150.5 mm (5.9")
10"	276.0 mm (10.9")
20"	520.0 mm (20.5")
30"	764.5 mm (30.1")
40"	1009.0 mm (39.7")



## DIMENSIONS

Code 7



Length	Code 7 Dimension A
5"	–
10"	316.5 mm (12.5")
20"	561.0 mm (22.1")
30"	805.5 mm (31.7")
40"	1050.0 mm (41.3")

## ORDERING INFORMATION

PART NUMBER	CONNECTION	LENGTH	O-RING	RETENTION RATING
PSTS022005S1	Code 0	5"	Silicone	0.22 µm
PSTS022010S1	Code 0	10"	Silicone	0.22 µm
PSTS022020S1	Code 0	20"	Silicone	0.22 µm
PSTS022030S1	Code 0	30"	Silicone	0.22 µm
PSTS022040S1	Code 0	40"	Silicone	0.22 µm
PSTS022510S1	Code 5	10"	Silicone	0.22 µm
PSTS022520S1	Code 5	20"	Silicone	0.22 µm
PSTS022530S1	Code 5	30"	Silicone	0.22 µm
PSTS022540S1	Code 5	40"	Silicone	0.22 µm
PSTS022605S1	Code 6	5"	Silicone	0.22 µm
PSTS022610S1	Code 6	10"	Silicone	0.22 µm
PSTS022620S1	Code 6	20"	Silicone	0.22 µm
PSTS022630S1	Code 6	30"	Silicone	0.22 µm
PSTS022640S1	Code 6	40"	Silicone	0.22 µm
PSTS022710S1	Code 7	10"	Silicone	0.22 µm
PSTS022720S1	Code 7	20"	Silicone	0.22 µm
PSTS022730S1	Code 7	30"	Silicone	0.22 µm



## ORDERING INFORMATION

PART NUMBER	CONNECTION	LENGTH	O-RING	RETENTION RATING
PSTS022740S1	Code 7	40"	Silicone	0.22 µm
PSTS045005S1	Code 0	5"	Silicone	0.45 µm
PSTS045010S1	Code 0	10"	Silicone	0.45 µm
PSTS045020S1	Code 0	20"	Silicone	0.45 µm
PSTS045030S1	Code 0	30"	Silicone	0.45 µm
PSTS045040S1	Code 0	40"	Silicone	0.45 µm
PSTS045510S1	Code 5	10"	Silicone	0.45 µm
PSTS045520S1	Code 5	20"	Silicone	0.45 µm
PSTS045530S1	Code 5	30"	Silicone	0.45 µm
PSTS045540S1	Code 5	40"	Silicone	0.45 µm
PSTS045605S1	Code 6	5"	Silicone	0.45 µm
PSTS045610S1	Code 6	10"	Silicone	0.45 µm
PSTS045620S1	Code 6	20"	Silicone	0.45 µm
PSTS045630S1	Code 6	30"	Silicone	0.45 µm
PSTS045640S1	Code 6	40"	Silicone	0.45 µm
PSTS045710S1	Code 7	10"	Silicone	0.45 µm
PSTS045720S1	Code 7	20"	Silicone	0.45 µm
PSTS045730S1	Code 7	30"	Silicone	0.45 µm
PSTS045740S1	Code 7	40"	Silicone	0.45 µm
PSTSD42605S1	Code 6	5"	Silicone	0.22+0.45 µm
PSTSD42710S1	Code 7	10"	Silicone	0.22+0.45 µm
PSTSD42720S1	Code 7	20"	Silicone	0.22+0.45 µm



**FOR MORE INFORMATION**

Please call your Regional Customer Service Center today to learn what Entegris can do for you. Visit [Argenpore.com](http://Argenpore.com) and select the [Contact Us](#) link to find the customer service center nearest you.

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