

# ZenCap® Z-Series Full-size Capsule Filters

PureFlo® Z-Series Full-size Capsule Filters are gamma-stable and ideally suited for integration into single-use applications. These filters feature an asymmetric hydrophilic PES membrane that demonstrates exceptional capacity and flow performance in liquid applications. The Z-Series Full-size Capsule filters offer full-scale filtration in a variety of applications in the biopharmaceutical industry. The Z-Series product family has been designed for easy pre- and post-use integrity testing, assuring easy wetting for quick and accurate integrity test results.

The compact design and available inlet and outlet fittings allow efficient integration of Z-Series Full-size Capsule Filters into a wide range of single-use systems. Z-Series Full-size Capsule Filters provide biopharmaceutical manufacturers with a filtration solution configured to meet their process needs.



Typical Uses	
Applications	Process Fluids*
Prefiltration Bioburden Reduction Sterile Filtration	WFI Buffer Cell culture medium Bulk drug substance Final drug product

\*Chemical compatibility information available upon request.

<b>Materials of Construction: (Standard Option)</b>	Media: Polyethersulfone (PES) Media Supports: Polyester Cage, Core, and Shell: Polypropylene End Caps: Nylon O-Rings: Silicone
<b>Fitting Connections:</b>	See ordering guide for the availability. (Custom adaptors available upon request)
<b>Nominal Dimensions:</b>	Length: 10", 20", 30", 40" Diameter: 3.54" (90 mm)
<b>Effective Filtration Area (Single-layer)</b>	10" - 0.65 m <sup>2</sup> (2.13 ft <sup>2</sup> ); 20" - 1.3 m <sup>2</sup> (4.26 ft <sup>2</sup> ); 30" - 1.95 m <sup>2</sup> (6.40 ft <sup>2</sup> ); 40" - 2.6 m <sup>2</sup> (8.53 ft <sup>2</sup> )
<b>Operating Conditions</b>	Maximum Operating Pressure: Liquid: 5.5 bar (80 psi) at 72°F
	Maximum Forward Differential Pressure: 5 bar (72 psi) at 72°F/22°C
	Maximum Reverse Differential Pressure: 3 bar (44 psi) at 72°F/22°C
	Maximum Operating Temperature: 80°C (176°F)
<b>Integrity Testing*</b>	0.1 µm (see ordering guide for grades) 60% isopropyl alcohol bubble point ≥ 1.6 bar (23 psi) using air at 22°C
	0.2 µm (see ordering guide for grades) Water bubble point ≥ 3.5 bar (50 psi) using air at 22°C
<b>USP Class VI</b>	All components or raw materials used in this product conform to the requirements of USP Class VI Biological Reactivity Tests for Plastics.
<b>USP Cleanliness</b>	Effluent from this product meets the requirements for a "non-fiber releasing" filter as defined by 21 CFR 210.3 (b) (6) and the harmonized requirements set forth by the USP <788>, EP, and JP for Particulate Matter in Injections.
<b>Bacterial Endotoxins</b>	An aqueous extraction of this product contains <0.25 EU/ml as determined by the Limulus Amebocyte Lysate (LAL) Test.
<b>Bacterial Retention</b>	0.1 µm and 0.2 µm grades are quantitatively retentive towards <i>Brevundimonas diminuta</i> (ATCC #19146) at a minimum challenge level of 10 <sup>7</sup> CFU per cm <sup>2</sup> of filtration area, consistent with ASTM F838-05.
<b>Sterilization</b>	This product can be autoclaved up to 25 cycles at 125 °C (257 °F) for 30 minutes. This product is compatible with gamma irradiation up to 50 kGy.

\*All filters are 100% integrity tested.



# ZenCap® Z-Series Full-size Capsule Filters

## Z-Series Full-sized Capsule Filters Ordering Guide

Filtration Media Grades		
SINGLE LAYER	DUAL LAYER	
PES (S)	PES with built-in (fine) PES prefilter (ZS)	PES with built-in (coarse) PES prefilter (XS)
S004 = 0.04 µm S010 = 0.1 µm S020 = 0.2 µm S045 = 0.45 µm S065 = 0.65 µm S080 = 0.8 µm S120 = 1.2 µm	ZS010 = 0.1 µm ZS020 = 0.2 µm ZS045 = 0.45 µm	XS010 = 0.1 µm XS020 = 0.2 µm

Uniform particle size distribution

Wide particle size distribution

Lowest contaminant load

Highest contaminant

Capsule Series	Configuration	Length	Filter Media Grades	Vents/Drain	Inlet Fitting	Outlet Fitting
LZ=  Z-Series ZenCap Full Size Capsule	I = In-line T = T-line	1 = 10" 2 = 20" 3 = 30" 4 = 40"	Select from Filtration Media Grades (Above)	<u>I-Line:</u> F = 1/4" Bleed valve G = 1/4" Bleed valve (near inlet only) H = 1/4" Bleed valve (near outlet only)  <u>T-Line:</u> A = 1/4" Bleed valve drain B = 1/2" Sanitary vent, 1/4" Bleed valve drain D = 1/2" Sanitary vent, 1/4" Bleed valve vent/drain G = 1/4" Bleed valve vent/drain	3H 4H 4Q  5H 6H 8H MT RM RT TC	3H = 3/8" hose barb (multi) 4H = 1/2" hose barb (multi) 4Q = 1/2" male quick coupling (for plastic latch) 5H = 9/16" hose barb (multi) 6H = 3/4" hose barb (multi) 8H = 1" (25 mm) hose barb MT = 1/2" tri-clamp RM = 1/2" tri-clamp with SS insert RT = 1.5" tri-clamp with SS insert TC = 1.5" tri-clamp
LZ	T	1	S020	G	5H	5H
<b>Example - (LZT1S020G5H5H): Z Series ZenCap, 0.2 µm PES membrane, 9/16" Hose barb (multi) inlet/outlet, bleed valve upstream vent/drain.</b>						

Custom adapters are available upon request.



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