

CERTAIN-PORE

ZCES (D) Type



Major Applications

Liquid sterilizing grade filter for food and beverage
 Example: Beer, Wine, Japanese Sake, Mineral water, Vinegar, Soy sauce, Syrup, Flavor and Fragrance; General water for industrial use and water for beverages.

Quality standards

- Compliant food hygiene standards
 FDA 21 CFR
 EC No.1935/2004, EU
 No.10/2011

Features

- Bacteria challenge tests are conducted using bacteria indicator for respective pore size

Advantages

- Stable sterilizing properties

- Heat sterilization durability
 - Hot water 90°C (194°F) x 30 minutes x 150 cycles
 - Steam 135°C (275°F) x 30 minutes x 50 cycles

- Asymmetric hydrophilic polyethersulfone membrane

- Low pressure drop and reduced filtration time

- CIP durability
 - 3% NaOH 80°C (176°F) x 30 minutes x 50 cycles

- Wide filtration area by RAMP construction

- Long service life

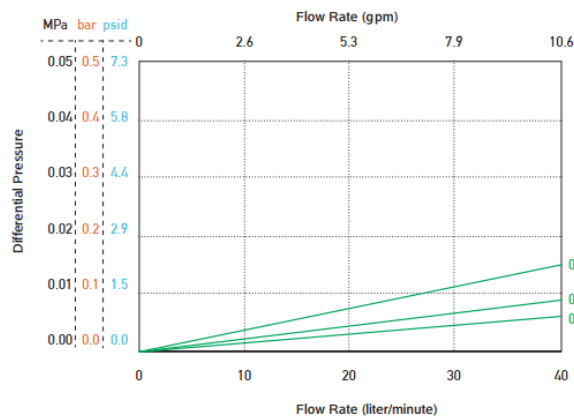
- Integrity test by diffusion test
- With pre-filter to inhibit the loading of colloidal suspended material
- Reusable
- Traceability by lot number
- Excellent durability for heat stress

Specifications

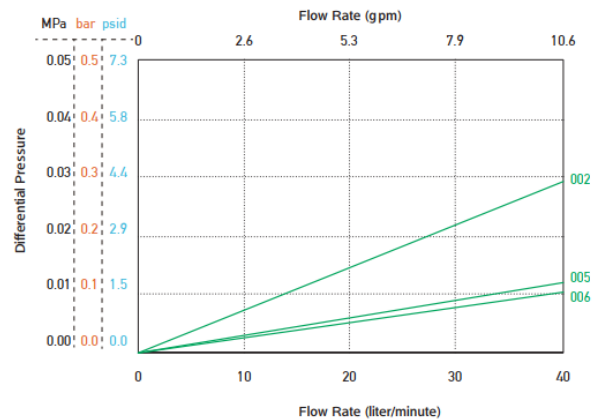
Grades		ZCES-002	ZCES-005	ZCES-006	ZCESD-002	ZCESD-005	ZCESD-006
Micron Rating (um)		0.2	0.45	0.65	0.2	0.45	0.65
E.F.A (m2/250L)		0.97	0.97	0.97	0.55	0.71	0.7
Materials	Media	Polyethersulfone (PES) Membrane					
	Core/Cage/Support	Polypropylene					
	End cap	Polypropylene					
Maximum ΔP		0.49MPa at 20°C (71 psi at 68°F)					
Maximum Operating Temp		80°C (176°F)					
Dimensions	Length	125/250/500/750/1000mm					
	O.D.	70.0mm					
	I.D.	26.1 (for F)/26.9 (for 3, 4)/29.5 (for 7) mm					
Diffusion standard (Wetting liquid: Pure water) per 250mm size filter		0.20MPa: 25ml/min	0.15MPa: 31ml/min	0.10MPa: 19ml/min	0.20MPa: 13ml/min	0.15MPa: 23ml/min	0.10MPa: 13ml/min

Differential Pressure vs Flow Rate

ZCES
Fluid: Refined Water 20°C (68°F) / Cartridge Length: 250mm



ZCESD
Fluid: Refined Water 20°C (68°F) / Cartridge Length: 250mm



Microbial removal performance

Grade	Biological Indicator	LRV*
002	<i>Brevundimonas diminuta</i> (ATCC 19146)	> 7
005	<i>Escherichia coli</i> (ATCC11775)	> 7
	<i>Lactobacillus brevis</i> (IFO3345)	> 7
	<i>Alicyclobacillus acidoterrestris</i> (ATCC49025)	> 7
006	<i>Lactobacillus brevis</i> (IFO3345)	7
	<i>Saccharomyces cerevisiae</i> (NBRC10217)	> 7

*LRV represents Log Reduction Value (Refer to JIS K3835)
 *Challenge bacteria count is more than 1×10^7 CFU/cm².

Ordering Information

Length	Product Type	Micron Rating	Gasket/O-Ring	End Cap Code	Packaging Code
2 5 0 L	Z C E S D	0 0 2	S	F	B
125 = 125mm 250 = 250mm 500 = 500mm 750 = 750mm 1000 = 1000mm	ZCES = Non pre-layer ZCESD = With Pre-layer	002 = 0.2 μm 005 = 0.45 μm 006 = 0.65 μm	Silicone	F = Flat Gaskets 3 = 2-222 O-Ring + Fin 4 = 2-222 O-Ring 7 = 2-226 O-Ring + Fin	A = 1pc B = 6pcs C = 10pcs F = 25pcs

End Cap Code

