


**CERTAIN-PORE**
**CES Type**
**Major Applications**

Liquid sterilizing grade filter for food &amp; beverage

Beer, Wine, Japanese Sake, Mineral water, Vinegar, Soy sauce, Syrup, Flavor and Fragrance, General water for industrial use and water for beverages

**Quality standards**

- **Adaptable Food Sanitation Standard**
  - FDA 21 CFR
  - EC No.1935/2004, EU No.10/2011 \*\*Applicable Gaskets and O-ring materials are silicone only.
- **Heat sterilization durability** \*Code7 only
  - Hot water  
90°C (194°F) x 30 minutes x 150 cycles
  - Steam  
135°C (275°F) x 30 minutes x 50 cycles
- Integrity tested by diffusion test
- Traceability by lot number

**Features**

- Bacteria challenge tests are conducted using bacteria indicator for respective pore size.
- Asymmetric hydrophilic polyethersulfone membrane
- Excellent durability for heat stress

**Advantages**

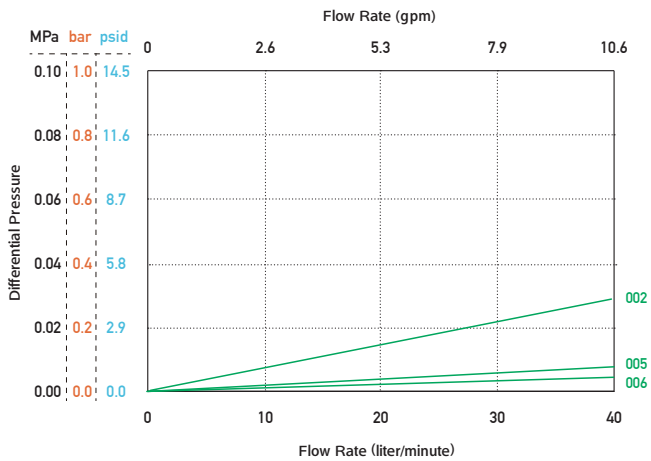
- Stable sterilizing properties
- Water flow and integrity test can be performed without hydrophilization
- Low pressure drop and reduced filtration time
- Can be used repeatedly by sterilizing and flushing

**Specifications**

| Grades                      | 002   | 005                  | 006                  |
|-----------------------------|---|----------------------|----------------------|
| Micron Ratings (μm)         | 0.2   | 0.45                 | 0.65                 |
| E.F.A.                      | 0.77m <sup>2</sup> /250mm   |                      |                      |
| Media                       | Polyethersulfone (PES) Membrane   |                      |                      |
| Materials Core/Cage/Support | Polypropylene   |                      |                      |
| End Cap                     | Polypropylene   |                      |                      |
| Maximum ΔP                  | 0.49MPa at 40°C (71psi at 104°F)  |                      |                      |
| Maximum Operating Temp      | 80°C (176°F)  |                      |                      |
| Length                      | 125/250/500/750 mm  |                      |                      |
| Dimensions                  | O.D.  |                      |                      |
|                             | 70.0mm  |                      |                      |
| I.D.                        | 26.9 (for 3, 4)/26.1 (for F)/29.5 (for 7) mm                                |                      |                      |
|                             | Diffusion standard<br>(Wetting liquid: Pure water)<br>per 250mm size filter | 0.20MPa:<br>20ml/min | 0.15MPa:<br>25ml/min |

## Differential Pressure vs Flow Rate

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



## Microbial removal performance

| Grades | Biological Indicator                                | LRV* |
|--------|---|------|
| 002    | <i>Brevundimonas diminuta</i> (ATCC19146)           | >7   |
| 005    | <i>Lactobacillus brevis</i> (IFO3345)               | >7   |
|        | <i>Alicyclobacillus acidoterrestris</i> (ATCC49025) | >7   |
| 006    | <i>Lactobacillus brevis</i> (IFO3345)               | 7    |

\*LRV represents Log Reduction Value (Refer to JIS K3835)

\*Challenge bacteria count is more than  $1 \times 10^7$  CFU/cm<sup>2</sup>.

## Ordering Information

| Length   | Product Type | Micron Rating                                  | Gasket/O-Ring                      | End Cap Code   | Packaging Code                                |
|--|--------------|--|------------------------------------|--|---|
| <b>2 5 0 L</b>   | <b>-CES-</b> | <b>0 0 2</b>                                   | <b>S</b>                           | <b>7</b>   | <b>B</b>                                      |
| 125 = 125mm<br>250 = 250mm<br>500 = 500mm<br>750 = 750mm |              | 002 = 0.2 μm<br>005 = 0.45 μm<br>006 = 0.65 μm | S = Silicone<br>N = NBR<br>V = FKM | F = Flat Gaskets<br>3 = 2-222 O-Ring + Fin<br>4 = 2-222 O-Ring<br>7 = 2-226 O-Ring + Fin | A = 1pc<br>B = 6pcs<br>C = 10pcs<br>F = 25pcs |

## End Cap Code



\*The contents of the catalog are subject to change without notice.

\*The performance data listed in the catalog are Typical values obtained under specific conditions based on our tests.

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Manufacturing is based on our Quality Management Systems that meet ISO9001 standards.

Scope  
 Design, Development, manufacture, and sales of filter cartridges, housings and filtration equipment.



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IMS CM009

9th Issue  
 CES200704LE