

CRYPTOCLEAR PES Food and Beverage

Filter Cartridges



CRYPTOCLEAR PES utilizes the unique properties of a microbially retentive polyethersulphone membrane that provides absolute retention of *Cryptosporidium parvum* oocysts to meet the specific needs of the food, beverage and potable water industries.

CRYPTOCLEAR PES membrane has an asymmetrical pore structure with a high voids volume which offers unrivalled retention capacity resulting in higher throughputs and higher flow rates than symmetrical membranes.

The microporous membrane is inherently hydrophilic and can be integrity tested repeatedly, providing a valuable quality assurance tool that fits well into a HACCP framework.

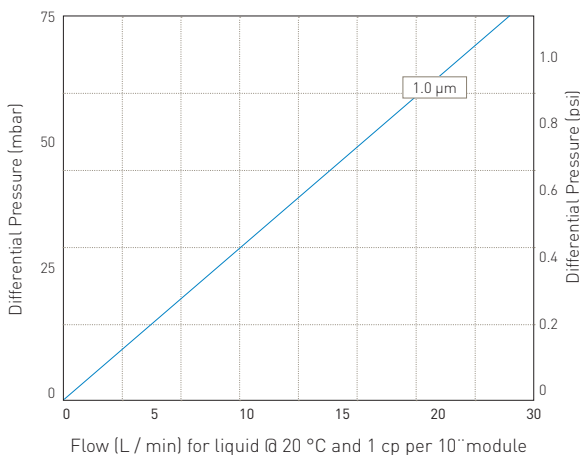
Features

- Specifically designed and independently tested for the removal of *Cryptosporidium parvum* oocysts
- Easily integrity tested in-situ
- Strong, robust construction for repeated cleaning and sanitization in-situ

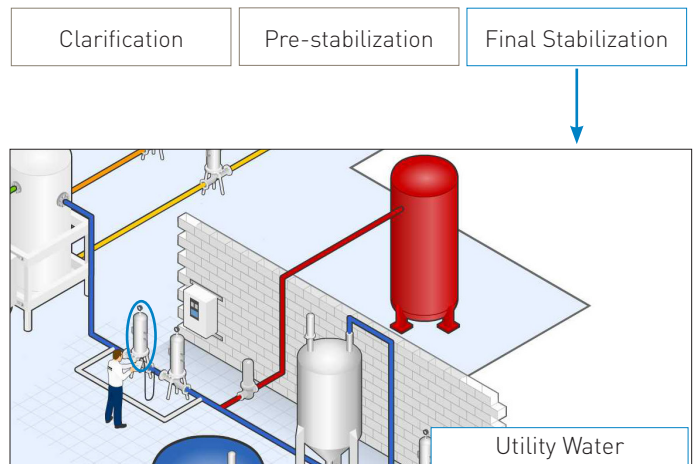
Benefits

- Eliminates the threat of *Cryptosporidium* infection from the water supply
- Assured filtration performance
- Extended service life from the membrane filter reduces the cost of filtration

Performance Characteristics



Filtration Stage



Specifications

Materials of Construction

| | |
|--------------------------|----------------------|
| ■ Filtration Media: | Polyethersulphone |
| ■ Prefilter Layer: | Polyester |
| ■ Upstream Support: | Polyester |
| ■ Downstream Support: | Polyester |
| ■ Inner Support Core: | Polypropylene |
| ■ Outer Protection Cage: | Polypropylene |
| ■ End Caps: | Nylon |
| ■ End Cap Insert: | 316L Stainless Steel |
| ■ Standard o-rings: | Silicone |

Food Contact Compliance

Materials conform to the relevant requirements of FDA 21CFR Part 177, current EC1935 / 2004 and current USP Plastics Class VI - 121 °C. CRYPTOCLEAR PES is listed as a WRAS Approved Product.

WRAS - Water Regulations Advisory Scheme BS6920 Test of Effect on Water Quality.



Recommended Operating Conditions

Up to 70 °C (158 °F) continuous operating temperature and higher short-term temperatures during CIP to the following limits:

| Temperature | | Max Forward dP | |
|--------------|--------------|----------------|-------|
| °C | °F | (bar) | (psi) |
| 20 | 68 | 5.0 | 72.5 |
| 40 | 104 | 4.0 | 58.0 |
| 60 | 140 | 3.0 | 43.5 |
| 80 | 176 | 2.0 | 29.0 |
| 90 | 194 | 1.0 | 14.5 |
| >100 (steam) | >212 (steam) | 0.3 | 4.0 |

Effective Filtration Area (EFA)

10" (250 mm) Up to 0.8 m² (8.61 ft²)

Cleaning and Sterilization

CRYPTOCLEAR PES cartridges can be repeatedly steam sterilized in-situ or autoclaved at up to 142 °C (287.6 °F). They can be sanitized with hot water at up to 90 °C (194 °F) and are compatible with a wide range of chemicals. Please refer to our Clean-in-Place support guide or contact your local Parker representative for more information.

Retention Characteristics

The removal efficiencies of CRYPTOCLEAR PES cartridges have been determined from tests conducted by Thames Water Utilities Limited on live *Cryptosporidium oocysts*.

| Product | Micron | Retention |
|-----------------|--------|-----------|
| CRYPTOCLEAR PES | 1.0 | 100% |

Integrity Test Data

All filters are flushed with purified water prior to despatch. They are integrity testable to the following limits:

| Micron Rating | | 1.0 |
|-----------------------|---------------------|------|
| Diffusional Flow | (barg) | 0.6 |
| Test Pressure | (psig) | 9.0 |
| Max. Diffusional Flow | (10 ⁻¹) | 21.0 |
| | (ml / min) | |

Manufacturing Traceability

Each filter cartridge displays the product name, product code and lot number. Additionally, each module displays a unique serial number providing full manufacturing traceability.

Ordering information

ZCCS

| Code | Length (Nominal) | Code | Micron | Code | End Cap (10 inch) |
|------|------------------|------|---------|------|-------------------|
| K | 5" (125 mm) | 100 | 1.00 µm | C | BF / 226 Bayonet |
| 1 | 10" (250 mm) | | | D | Fin / 222 |
| 2 | 20" (500 mm) | | | E | Flat Top / 222 |
| 3 | 30" (750 mm) | | | G | Recess / 222 |
| 4 | 40" (1000 mm) | | | R | BF / 222 Bayonet |

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