

BEVPOR MH BOTTLED WATER Filter Cartridges



BEVPOR MH filters provide full retention to industry regulated, water contaminating organisms to ensure the micro-biological safety of bottled water.

The inert and highly asymmetric PES membrane provides validated microbial retention to regulated, contaminating organisms. The 0.2µm grade provides complete sterility in accordance to ASTM F838-05 requirements. Combined with hydrophilic properties for easy integrity testing, BEVPOR MH filters provide assured performance throughout their service life. The incorporation of an active pre-filter layer, combined with an increased filtration area provides high water flow rates, greater resistance to blockage and maximized service lifetimes.

BEVPOR MH filters have been designed to provide the optimum solution to the microbial sterilization and stabilization of bottled water by providing increased process control with increased operational efficiency.

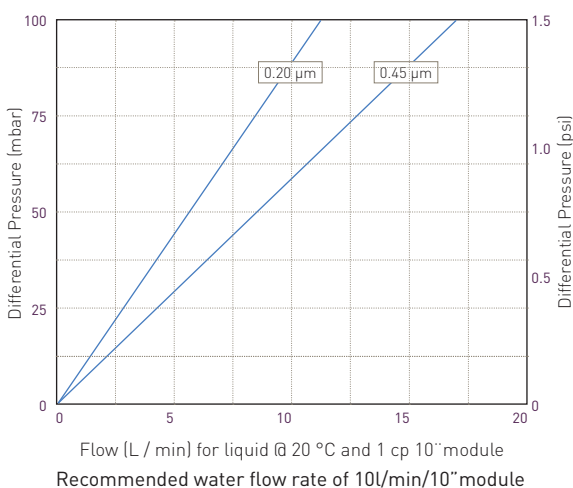
Features

- Validated retention to industry regulated organisms
- Inert materials of construction
- Easily integrity tested in situ
- Integral depth pre-filtration layer
- High filtration area

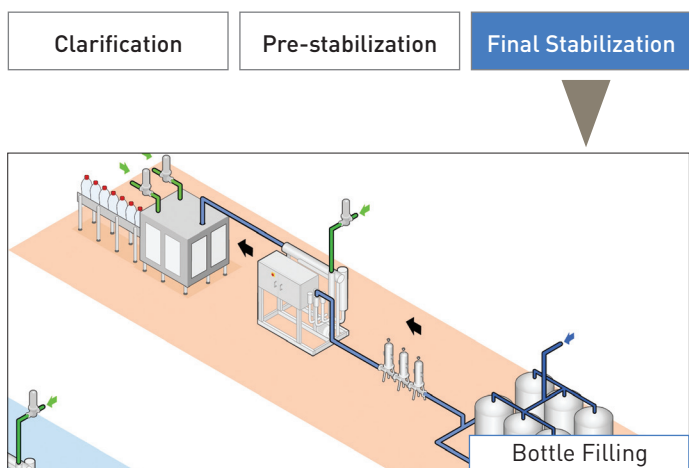
Benefits

- Ensures the safety of the water prior to bottling
- Protects the purity and essential characteristics of the source water
- Assures performance of the filtration
- Increased throughput to blockage

Performance Characteristics



Filtration Stage



BEVPOR MH BOTTLED WATER



Specifications

Materials of Construction

| | |
|--------------------------|----------------------|
| ■ Filtration Membrane: | 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 /EPDM |

Food Contact Compliance

Materials conform to the relevant requirements of 21CFR Part 177, current EC1935 / 2004 and current USP Plastics Class VI - 121 °C and ISO10993 equivalents.



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

BEVPOR MH cartridges can be repeatedly steam sterilized in situ or autoclaved at up to 130 °C (266 °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

0.2µm BEVPOR MH filters have been validated to provide sterile effluent after bacterial challenge testing following ASTM F838-05 methodology on 10" cartridges with more than 10⁷cfu per cm² using *Brevundimonas diminuta*.

In addition, challenges with the following EU regulated organisms have been performed.

| Organism | LRV when challenged with a minimum of 10 ⁷ cfu per cm ² | |
|--------------------------------|---|------|
| | 0.20 | 0.45 |
| <i>Serratia marcescens</i> | FR | FR |
| <i>Escherichia coli</i> | FR | FR |
| <i>Enterococcus faecalis</i> | FR | FR |
| <i>Clostridium perfringens</i> | FR | FR |
| <i>Pseudomonas aeruginosa</i> | FR | FR |
| <i>Brevundimonas diminuta</i> | FR | 5 |

*FR - Fully retentive during challenge

Integrity Test Data

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

| Diffusional Flow Test Parameters | Micron Rating | |
|---------------------------------------|---------------|------|
| | 0.20 | 0.45 |
| Test Pressure (barg) | 2.4 | 1.7 |
| Test Pressure (psig) | 40.6 | 25.0 |
| Max Diffusional Flow per 10" (ml/min) | 21.0 | 21.0 |

Manufacturing Traceability

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

Ordering Information

| | | | | | | | |
|------------|------------------|----------------------|---------|----------------------|-------------------|------|----------------------|
| BMH | - | <input type="text"/> | - | <input type="text"/> | A | - | <input type="text"/> |
| Code | Length (Nominal) | Code | Micron | Code | Endcap (10 inch) | Code | O-rings |
| 1 | 10" (250 mm) | 02 | 0.20 µm | C | Fin / 226 Bayonet | S* | Silicone |
| 2 | 20" (500 mm) | 04 | 0.45 µm | D | Fin / 222 | E | EPDM |
| 3 | 30" (750 mm) | | | E | Flat Top / 222 | | |
| 4 | 40" (1000 mm) | | | R | BF / 222 Bayonet | | |

*Silicone o-rings supplied as standard

VSH & HSL range of Sanitary Beverage Housings



- Multi and single elements
- Designed specifically for the food and beverage industry
- 0.4µM Ra internal, 0.25µM Ra external
- High quality crevice free construction
- Available for up to 30 round filters
- Sanitary vent, tri-clamp connections as standard
- Sanitary body closure as standard