# BEVPOR PH Cider

Filter Cartridges

BEVPOR PH cider filters protect the unique characteristics of cider by removing yeast and other spoilage organisms to ensure microbial stability during cold stabilization.

The inert and highly asymmetric PES membrane provides validated microbial retention to typical spoilage organisms, whilst protecting the cider's organoleptic qualities to preserve a fresh taste and a long shelf-life once packaged.

The incorporation of an active prefilter layer, combined with an increased filtration area provides high cider flow rates, greater resistance to blockage and maximized service lifetime.

BEVPOR PH filters have been designed to provide the optimum solution to cider stabilization by providing increased process control with maximized operational efficiency.

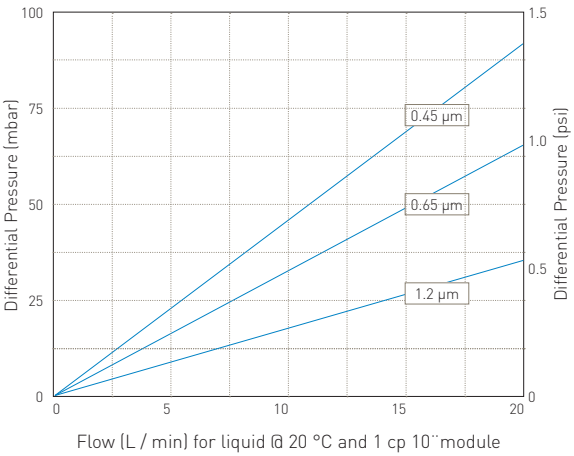
## Features

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

## Benefits

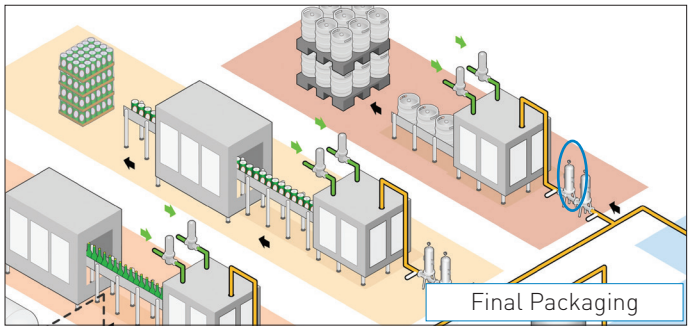
- Ensures effective microbial stabilization of cider
- Preserves the organoleptic qualities of the cider
- Assured filtration performance
- Increased throughput to blockage
- High cider flow and maximized operational efficiency

## Performance Characteristics




## Filtration Stage

Clarification | Pre-stabilization | Final Stabilization



# BEVPOR PH Cider

## 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 |
| O-rings: | Silicone / EPDM |

### Food Contact Compliance

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

### 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 $m^2$ (8.61 $ft^2$)

### Cleaning and Sterilization

BEVPOR PH 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

The retention characteristics of BEVPOR PH filters have been validated by challenges performed with the following organisms.

| Organism | LRV when challenged with a minimum of $10^7$ cfu per $cm^2$ | | |
|---|---|---|---|
| | 0.45 | 0.65 | 1.2 |
| *Saccharomyces cerevisiae* | FR | FR | FR |
| *Brettanomyces bruxellensis* | FR | FR | FR |
| *Lactobacillus brevis* | FR | FR | - |
| *Acetobacter oeni* | FR | FR | - |
| *Pseudomonas aeruginosa* | 9.1 | 8.9 | - |
| *Serratia marcescens* | FR | FR | - |

**FR - Fully retentive during challenge*

*When expressed as titre reduction "FR" equates to >$10^7$ per 10˝ module.*

### 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 0.45 | 0.65 | 1.2 |
|---|---|---|---|
| Test Pressure (barg) | 1.4 | 1.0 | 0.6 |
| Test Pressure (psig) | 20.0 | 15.0 | 8.7 |
| Max Diffusional Flow per 10˝ (ml /min) | 21.0 | 21.0 | 16.0 |

### 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

BPH - [ ] [ ] - [ ] A [ ]

| Code | Length (Nominal) | |
|---|---|---|
| 1 | 10˝ | (250 mm) |
| 2 | 20˝ | (500 mm) |
| 3 | 30˝ | (750 mm) |
| 4 | 40˝ | (1000 mm) |

| Code | Micron | |
|---|---|---|
| 04 | 0.45 | µm |
| 06 | 0.65 | µm |
| 12 | 1.2 | µm |

| Code | End Cap (10 inch) |
|---|---|
| C | Fin / 226 Bayonet |
| D | Fin / 222 |
| E | Flat Top / 222 |
| R | BF / 222 Bayonet |

| Code | O-rings |
|---|---|
| S | Silicone |
| E | EPDM |

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