

# BEVPOR PS Brewing

Filter Cartridges



BEVPOR PS beer filters protect the unique characteristics of beer 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 beer's organoleptic qualities to preserve a fresh taste and a long shelf-life once packaged. Combined with hydrophilic properties for easy integrity testing, BEVPOR PS filters provide assured performance throughout their service life.

BEVPOR PS filters have been designed to provide a cost effective solution to beer stabilization by providing increased process control with increased operational efficiency.

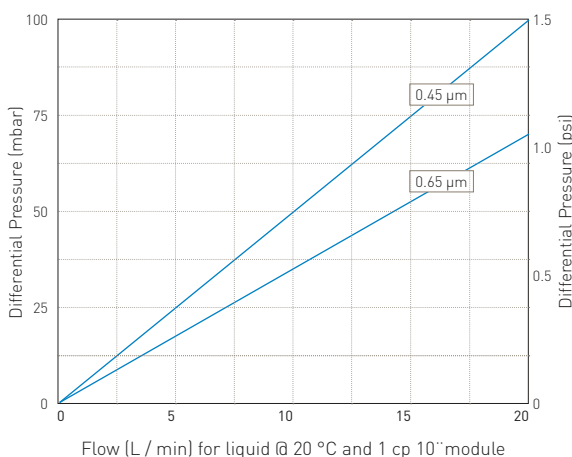
## Features

- Validated retention to spoilage organisms
- Inert material of construction
- Easily integrity tested in-situ

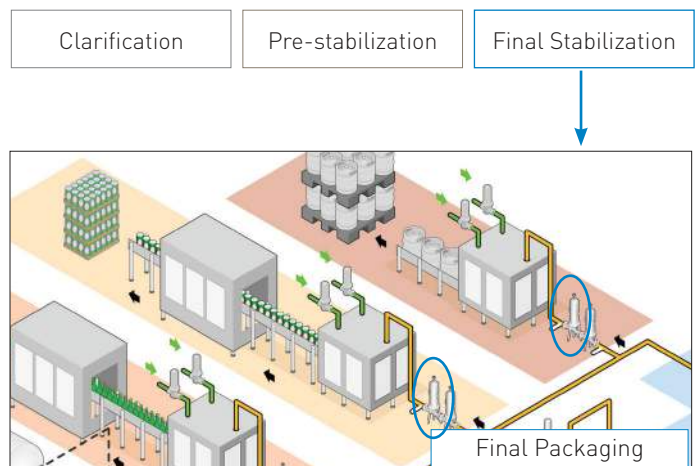
## Benefits

- Ensures effective microbial stabilization of beer
- Preserves the organoleptic qualities of the beer
- Assured filtration performance

## Performance Characteristics



## Filtration Stage



## Specifications

### Materials of Construction

|                          |                      |
|--------------------------|----------------------|
| ■ Filtration Membrane:   | Polyethersulphone    |
| ■ 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 °C | Temperature °F | Max Forward dP (bar) | Max Forward dP (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 0.6 m<sup>2</sup> (6.45 ft<sup>2</sup>)

### Cleaning and Sterilization

BEVPOR PS 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 PS filters have been validated by challenges performed with the following organisms.

| Organism                          | LRV when challenged with a minimum of 10 <sup>7</sup> cfu per cm <sup>2</sup> |      |
|-----------------------------------|---|------|
|                                   | 0.45  | 0.65 |
| <i>Saccharomyces cerevisiae</i>   | FR  | FR   |
| <i>Brettanomyces bruxellensis</i> | FR  | FR   |
| <i>Lactobacillus brevis</i>       | FR  | FR   |
| <i>Acetobacter oeni</i>           | FR  | FR   |
| <i>Pseudomonas aeruginosa</i>     | 9.1   | 8.9  |
| <i>Serratia marcescens</i>        | FR  | FR   |

\*FR - Fully retentive during challenge

When expressed as titre reduction "FR" equates to >10<sup>6</sup> 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 |
| Test Pressure (barg)                    | 1.4           | 1.0  |
| Test Pressure (psig)                    | 20.0          | 15.0 |
| Max Diffusional Flow per 10" (ml / min) | 16.0          | 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

|      |                  |      |         |      |                   |      |          |
|------|------------------|------|---------|------|-------------------|------|----------|
| BPS  | -                |      | -       |      | A                 |      |          |
| Code | Length (Nominal) | Code | Micron  | Code | End Cap (10 inch) | Code | O-rings  |
| 1    | 10" (250 mm)     | 04   | 0.45 µm | C    | Fin / 226 Bayonet | S    | Silicone |
| 2    | 20" (500 mm)     | 06   | 0.65 µm | D    | Fin / 222         | E    | EPDM     |
| 3    | 30" (750 mm)     |      |         | G    | Recess / 222      |      |          |
| 4    | 40" (1000 mm)    |      |         | R    | BF / 222 Bayonet  |      |          |

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