

# BEVPOR MS Bottled Water

Filter Cartridges



BEVPOR MS 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 0.2 $\mu$ m grade provides complete sterility in accordance to ASTM F838-05 requirements. Combined with hydrophilic properties for easy integrity testing, BEVPOR MS filters provide assured performance throughout their service life.

BEVPOR MS filters have been designed to provide a cost-effective 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

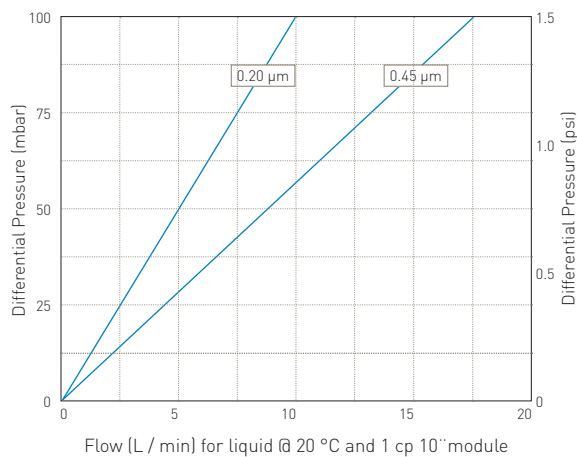
## Benefits

Ensures the safety of the water prior to bottling

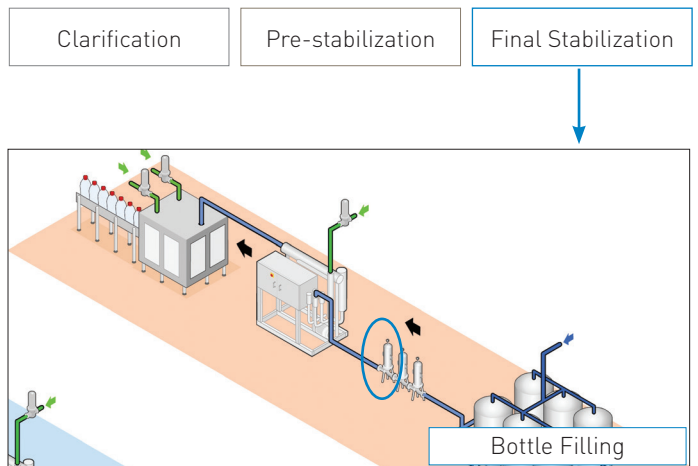
Protects the purity and essential characteristics of the source water

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		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" (250mm) Up to 0.6m<sup>2</sup> (6.45ft<sup>2</sup>)

### Cleaning and Sterilization

BEVPOR MS 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 MS filters have been validated to provide sterile effluent after bacterial challenge testing following ASTM F838-05 methodology on 10" cartridges with more than 10<sup>7</sup>cfu per cm<sup>2</sup> using *Brevundimonas diminuta*.

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

Organism	LRV when challenged with a minimum of 10 <sup>7</sup> cfu per cm <sup>2</sup>	
	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

When expressed as titre reduction "FR" equates to >10<sup>7</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	
	0.20	0.45
Test Pressure (barg)	2.4	1.7
Test Pressure (psig)	35.0	25.0
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

BMS	-		-		-	A	-	
Code	Length (Nominal)	Code	Micron	Code	End Cap (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)			G	Recess 222			
4	40" (1000 mm)			R	BF / 222 Bayonet			

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