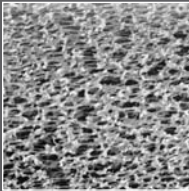


BEVPOR PS



- Removal ratings from 0.2 to 1.2 micron
- Repeatedly integrity testable
- Cartridge can be regenerated and sanitised for extended service life



- Low adsorption of protein, colour and flavour components
- Asymmetrical pore structure provides high capacity contaminant loading

Minimising the cost of microbiological stabilisation per unit volume whilst maintaining quality and product characteristics is a key requirement within beverage production. BEVPOR PS is an advanced membrane filter cartridge designed for the beverage industry to meet and surpass these criteria.

Specifically developed as a beverage grade cartridge, BEVPOR PS utilises an advanced polyethersulphone membrane configured to provide high flow and cost effective performance. The membrane has an asymmetric pore structure which provides graded filtration throughout its depth, resulting in increased capacity to hold contaminants. Componentry has been selected to maximise mechanical strength and chemical compatibility enabling the filter to withstand repeated chemical cleaning and sterilisation.

available formats



Technical Specifications

Materials of Construction

Filtration Membrane	: Polyethersulphone
Upstream Support	: Polyester
Downstream Support	: Polyester
Inner Support Core	: Polypropylene
Outer Protection Cage	: Polypropylene
End Caps	: Nylon
Endcap Insert (if applicable)	: 316L Stainless Steel
Standard o-rings/gaskets	: Silicone / EPDM
Capsule Body	: Nylon
Capsule Vent Seals	: Silicone

Food and Biological Safety

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

Effective Filtration Area

Up to 0.6 m² (6.3 ft²) per 250 mm (10" module).

Retention Characteristics

The retention characteristics of BEVPOR PS have been determined by a combination of controlled laboratory tests and in-use monitoring for a number of organisms. Bacterial challenge testing is carried out to methods specified in ASTM F838-83 (10⁷ organisms/cm² minimum)

Organism	Approx. cell size (Diameter x length µm)	Typical titre reduction organisms cm ²				
		0.2	0.45	0.65	0.8	1.2
<i>Pseudomonas aeruginosa</i>	0.5 - 1.0 x 1.5 - 5.0	10 ⁷	10 ⁵	10 ³	-	-
<i>Serratia marcescens</i>	0.5 - 0.8 x 0.9 - 2.0	10 ⁷	10 ⁵	10 ³	-	-
<i>Oenococcus oenos</i>	0.5 - 0.7 x 0.7 - 1.2	>10 ⁷	10 ⁵	10 ⁴	-	-
<i>Escherichia coli</i>	0.5 - 0.7 x 0.7 - 1.2	>10 ⁷	>10 ⁷	10 ⁷	-	-
<i>Lactobacillus brevis</i>	0.5 - 1.2 x 1.0 - 10.0	>10 ⁷	>10 ⁷	>10 ⁷	-	-
<i>Saccharomyces cerevisiae</i>	1.0 (Spherical Buds)	>10 ⁷	>10 ⁷	>10 ⁷	>10 ⁷	10 ⁷

Recommended Operating Conditions

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

Temperature		Maximum Forward dP	
°C	°F	(bar)	(psi)
20	68	5.0	73
40	104	4.0	58
60	140	3.0	44
80	176	2.0	29
90	194	1.0	15
>100 (steam)	>212 (steam)	0.3	4

Capsules may be operated up to a temperature of 40°C (104°F) at line pressures up to 5.0 bar (73 psig) for liquids and 4.0 bar (58 psi) in air/gas.

Cleaning and Sterilisation

BEVPOR PS cartridges can be repeatedly steam sterilised in situ or autoclaved at up to 130°C (266°F). They can be sanitised with hot water at up to 90°C (194°F) and are compatible with a wide range of chemicals. Capsules can be repeatedly autoclaved up to 130°C (266°F).

For detailed operational procedures and advice on cleaning and sterilisation, please contact the Technical Support Group through your usual **domnick hunter** contact.

Integrity Test Data

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

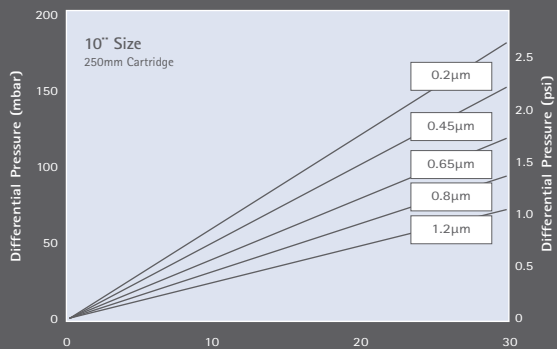
Micron Rating		0.2	0.45	0.65	0.8	1.2
Diffusional Flow Test Pressure	(barg)	1.7	1.4	1.0	0.8	0.6
	(psig)	25	20	15	12	9
Max Diffusional Flow	(ml/min)	16.0	16.0	16.0	16.0	16.0
	(K)	7.5	7.5	7.5	7.5	7.5
	(A)	6.1	6.1	6.1	6.1	6.1
	(B)	3.0	3.0	3.0	3.0	3.0
	(E)	1.4	1.4	1.4	1.4	1.4

Recommended Rinse Volume

Prior to use - 5 litres per 10" cartridge.

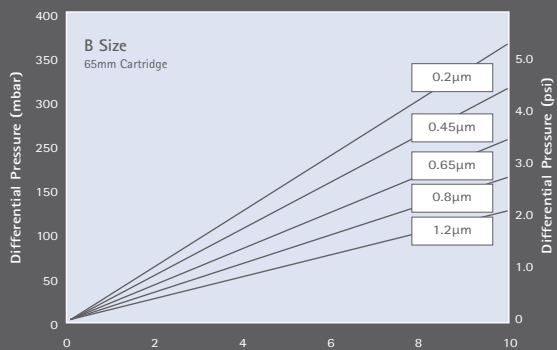
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Cartridge Flow Rates



Flow (L / min) for liquid at 1 cp @ 20°C

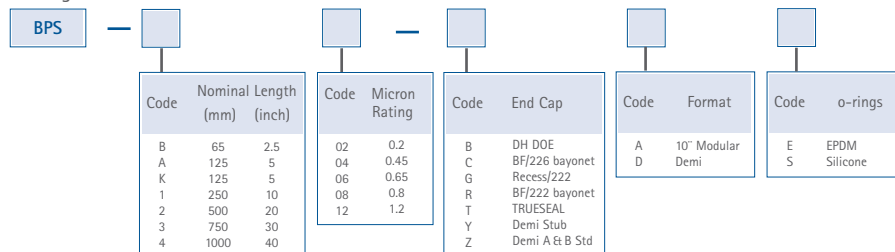
For K size for a given flow rate multiply 10" size differential pressure by 2



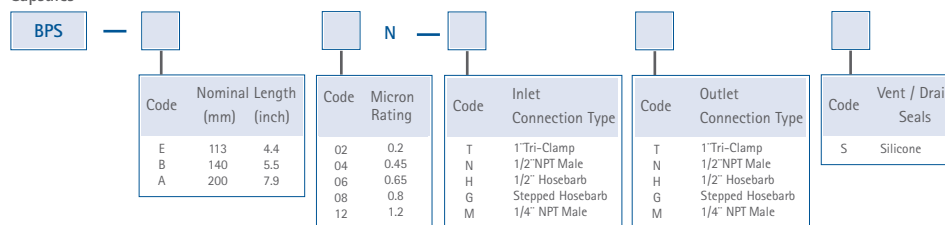
Flow (L / min) for liquid at 1 cp @ 20°C

For A size for a given flow rate divide B size differential pressure by 2
For E size for a given flow rate multiply B size differential pressure by 2

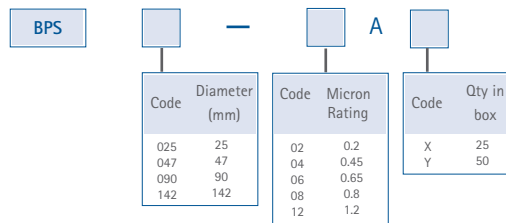
Cartridges



Capsules



Discs



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