

## Pall® BB Final Beer Filter Cartridges

For clear, fresh and cold stabilized beer

### Description

The new Pall BB Final Beer filter cartridges have been especially designed and qualified for the brewing industry for secure and reliable removal of harmful beer spoilage microorganisms. The Supor® medium is a highly efficient polyethersulfone membrane which, in combination with the construction of the BB Final Beer filter, ensures excellent service life and filtration results.

This new filter cartridge, due to the high mechanical strength and improved titer reduction increases the potential for filtration to replace pasteurization for final beer treatment.

The AB style cartridges are available in single open ended (SOE) configurations to fit in sanitary housings to ensure effective microbial removal and assembly integrity.

The BB Final Beer filter is THE choice for microbiological stabilization prior to beer being sent to filling machines.

### Characteristics and Advantages

- Filter materials preserve the organoleptic properties of the product
- Fixed pores, non-shedding membrane, adhesive and surfactant free
- Reliable removal of specific beer spoilage microorganisms as a function of the retention rate
- Broad chemical compatibility
- Repeated sterilization capability for economical operation
- Easy to wet with cold water for integrity test purposes

### Quality

Stringent quality controls during the manufacturing process and test procedures assure the high quality standard of all Pall filters and fulfill the special requirements of the brewing industry.

Manufacture is carried out according to procedures within a Quality Management System certified to ISO 9001. Each individual filter is integrity tested during manufacture.

### Food Contact Compliance

- The materials of construction meet 21 CFR 170-199
- The filters meet the requirements for food contact use, European Regulation (EC) Number 1935/2004 for slightly alcoholic beverages such as beer



### Typical Titer Reduction<sup>1</sup>

Microbial Removal Rating	Test Organism	Titer Reduction
0.45 µm	<i>Lactobacillus brevis</i>	≥10 <sup>7</sup>
	<i>Pediococcus damnosus</i>	≥10 <sup>7</sup>

<sup>1</sup> The typical titer reduction is determined in laboratory liquid challenge tests on 254 mm (10") new filter.

### Traceability

In order to ensure traceability each filter cartridge is marked on the cage with the part number and batch number. In addition, every filter cartridge bears an individual number. Product name, microbial removal rating, part number and batch number are indicated on the packing label.

### Technical Data

All construction parts of the BB Final Beer filter are thermo-plastically welded, that means no adhesives are used.

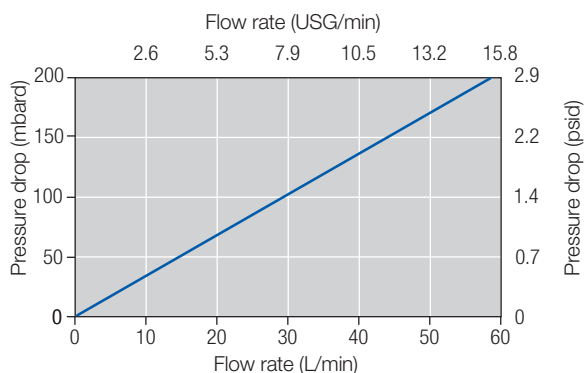
Materials of Construction	
End Caps	Polypropylene
Cage	Polypropylene
Drainage / Support non-woven	Polypropylene
Filter membrane	Polyethersulfone (Hydrophilic)
Core	Polypropylene
Adaptor	Polypropylene incorporating a stainless steel ring
O-ring seals	Silicone elastomer <sup>2</sup>

<sup>2</sup> The seal materials employed meet FDA requirements for food contact use as detailed in 21 CFR Section 177.2600.

## Available Sizes

Nominal Length	Nominal Filter Area
254 mm (10")	0.6 m <sup>2</sup> (6.5 ft <sup>2</sup> )
508 mm (20")	1.2 m <sup>2</sup> (12.9 ft <sup>2</sup> )
762 mm (30")	1.8 m <sup>2</sup> (19.4 ft <sup>2</sup> )
1016 mm (40")	2.4 m <sup>2</sup> (25.8 ft <sup>2</sup> )

## Typical Flow Rate / Pressure Drop 20 °C (68 °F)



Typical flow rate per 254 mm (10") filter for clean water (new and unused)

## Ordering Information

This is a guide to the part numbering structure only, for availability of specific options, please contact Pall.

**Example Part Number: AB 4 BB 7 W H32**

(Refer to bold references in the tables below)

Part Number: **AB**  **BB**  **W** **H32**  
Table 1      Table 2

**Table 1: Length**

Code	Description
1	254 mm (10")
2	508 mm (20")
3	762 mm (30")
4	1016 mm (40")

## Maximum allowable Differential Pressure

The maximum allowable differential pressure in the forward flow direction for the BB Final Beer filter is shown in the table below.

Temperature	Max. allowable Differential Pressure <sup>3</sup>
Up to 40 °C (104 °F)	5 bard (72.5 psid)
Up to 80 °C (176 °F)	3 bard (43.5 psid)

<sup>3</sup> In fully compatible fluids which do not chemically attack, soften or adversely affect the filter in any way.

## Sterilization and Sanitization

The BB Final Beer filters can be repeatedly steam-sterilized or be sanitized with hot water.

Medium	Temperature	Cumulative Time/Cycles <sup>4</sup>
Steam	125 °C (257 °F)	50 hours/150 cycles
Hot water	85 °C (185 °F)	50 hours/100 cycles

<sup>4</sup> Measured under laboratory test conditions. The actual cumulative time depends on the process conditions.

**Table 2: Adaptor**

Code	Description
7	Bombfin with bayonet lock and double 226 O-rings
8	Bombfin, plug-in style with double 222 O-rings
28	Bombfin with bayonet lock and double 222 O-rings



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Please contact Pall Corporation for product applicability to specific National legislation and/or Regional Regulatory requirements for water and food contact use.

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