

## MEMBRACart XP MQX Filter Cartridges For Final Beer Filtration

**MEMBRACart XP** filter cartridges are hydrophilic membrane filters designed for secure and reliable removal of beer spoilage microorganisms in the brewing industry.

### Description

MEMBRACart XP filter cartridges are constructed from an inert polyethersulfone membrane which, in combination with the robust construction enables excellent mechanical strength and exposure to repeated hot water, chemical and steam sanitization cycles for long service life.

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

#### Features

Inert polyethersulfone (PES) filter material

Cartridges resistant to numerous sanitization cycles

Hydrophilic membrane

Validated with beer spoiling microorganisms

Individually serialized cartridges

Integrity testable

Multiple adaptor options

#### Benefits

- Maintaining organoleptic characteristics of the filtered product
- Wide range of chemical compatibility

- Economical operation
- Consistent filtrate quality

- Easy to wet and integrity test

- Increased process safety
- Reliable reduction of microorganisms

- Full traceability

- Brand protection
- Documentation for quality records

- Easy installation into sanitary housings

### Quality

- Cartridges produced in a controlled environment
- Manufactured according to ISO 9001:2015 certified Quality Management System

### Food Contact Compliance

Please refer to the Pall website <http://www.pall.com/foodandbev> for a Declaration of Compliance to specific National Legislation and/or Regional Regulatory requirements for food contact use.



MEMBRACart MQX Filter Cartridges

### Microbial Removal Performance

Test Organism	Titer Reduction <sup>1</sup>
<i>Lactobacillus brevis</i>	≥ 10 <sup>7</sup>
<i>Pediococcus damnosus</i>	≥ 10 <sup>7</sup>

<sup>1</sup> Challenges were performed at a level of ≥10<sup>5</sup> per cm<sup>2</sup> of effective filtration area on new and unused filters.

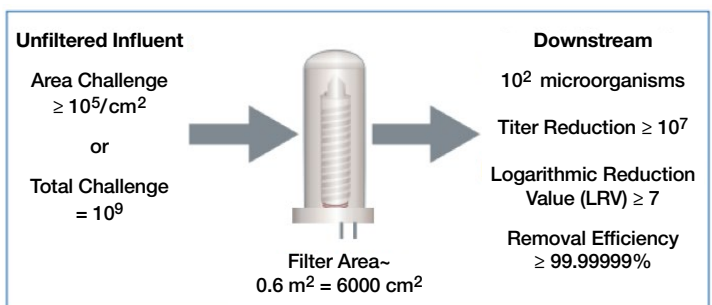


Figure 1: Titer Reduction (TR) definition

$$TR = \frac{\text{Total number of organisms influent to the } 10'' \text{ filter}}{\text{Number of colonies recorded downstream}}$$

## Materials of Construction

Component	Description
Filter medium	Polyethersulfone (hydrophilic)
Support and drainage	Polypropylene
Core, Cage, End Cap and Fin End	Polypropylene
Adaptor	Polypropylene with internal stainless steel reinforcing ring
O-ring seal	Ethylene propylene rubber or Silicone elastomer

## Technical Information

Nominal Length	Nominal Filter Area
254 mm (10 in.)	0.6 m <sup>2</sup> (6.5 ft <sup>2</sup> )
508 mm (20 in.)	1.2 m <sup>2</sup> (13 ft <sup>2</sup> )
762 mm (30 in.)	1.8 m <sup>2</sup> (19.5 ft <sup>2</sup> )
1016 mm (40 in.)	2.4 m <sup>2</sup> (26 ft <sup>2</sup> )

### Operating Characteristics in Compatible Fluids<sup>2</sup>

The maximum allowable differential pressure in a forward flow direction for MEMBRACart XP filters is shown in the table below.

Temperature	Max. Allowable Differential Pressure
Up to 40 °C (104 °F)	500 kPa (5 bard) (72.51 psid)
40 °C to 80 °C (104 °F to 176 °F)	300 kPa (3 bard) (43.51 psid)

<sup>2</sup> Compatible fluids are defined as those which do not swell, soften or attack any of the filter components.

### Sterilization and Sanitization

Media	Temperature	Maximum Cumulative Time/Cycles
Steam	125 °C (257 °F)	50 hours / 150, 20 minute cycles
Hot water	85 °C (185 °F)	50 hours / 100, 30 minute cycles
Peracetic acid (PAA), 325 ppm PAA (1275 ppm H <sub>2</sub> O <sub>2</sub> to give 1600 ppm of total peroxides)	ambient	2000 hours
Potassium metabisulfite (KHSO <sub>3</sub> ) 1%	ambient	1000 hours
Sodium hydroxide (NaOH) 2%	50°C (122 °F)	400 hours
Sodium hydroxide (NaOH) 2%	80°C (176 °F)	200 hours



+1-866-905-7255 **Food and Beverage toll free**  
foodandbeverage@pall.com

**Corporate Headquarters**  
Port Washington, NY, USA  
+1-800-717-7255 toll free (USA)  
+1-516-484-5400 phone

**European Headquarters**  
Fribourg, Switzerland  
+41 (0)26 350 53 00 phone

**Asia-Pacific Headquarters**  
Singapore  
+65 6389 6500 phone

## Pressure Drop vs Liquid Flow Rate<sup>4</sup>

29.5 lpm @ 100 mbar per 254 mm cartridge (3.6 gpm @ 1 psi per 10 in. cartridge)

<sup>4</sup> Typical initial clean media differential pressure (dP) per 254 mm (10 in.) cartridge for water at 20 °C (68 °F); viscosity 1 centipoise. For 508, 762 mm and 1016 mm configurations divide the differential pressure by 2, 3, and 4 respectively.

## Ordering Information

### Cartridge Part Number

AB  MQX  W   
Table 1      Table 2      Table 3

This is a guide to the Part Numbering structure only. For specific options, please contact Pall.

### Table 1: Nominal Length

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

### Table 2: Adaptor

Code	Description
3	SOE – single open end with flat closed end and external 222 O-rings
7	SOE – single open end with fin end, 2 locking tabs and external 226 O-rings
8	SOE – single open end with fin end and external 222 O-rings
28	SOE – single open end with fin end, 3 locking tabs and external 222 O-rings

### Table 3: O-Ring Seal Material

Code	Description
H4	Silicone Elastomer
J	Ethylene Propylene Rubber

Visit us on the Web at [www.pall.com/fodandbev](http://www.pall.com/fodandbev)

Pall Corporation has offices and plants throughout the world. To locate the Pall office or distributor nearest you, visit [www.pall.com/contact](http://www.pall.com/contact).

The information provided in this literature was reviewed for accuracy at the time of publication. Product data may be subject to change without notice. For current information consult your local Pall distributor or contact Pall directly.

*IF APPLICABLE* Please contact Pall Corporation to verify that the product conforms to your national legislation and/or regional regulatory requirements for water and food contact use.

© Copyright 2023, Pall Corporation. Pall, and are trademarks of Pall Corporation. ® Indicates a trademark registered in the USA.

FBDSMEMBRAMQXEN  
DECEMBER 2023