



# TurboClean® Beverage Microfiltration Elements



TurboClean® Beverage MF elements are designed for clarification of products such as wine and vinegar. They feature a polyvinylidene fluoride (PVDF) microfiltration (MF) membrane, a parallel feed spacer, polysulfone components and a rugged TurboClean® hard shell. The patented TurboClean hard shell offers a safe and sanitary operating system with none of the stagnant areas created by the brine seals of fibreglassed membrane elements where bacterial growth is often found. With 60% less bypass flow than net-wrapped elements, TurboClean elements deliver energy savings, the most effective cleaning and sanitizing and the best performance.

## MEMBRANE CHARACTERISTICS

|                               |         |
|-------------------------------|---------|
| <b>Membrane</b>               | PVDF MF |
| <b>Nominal Pore Size (µm)</b> | 0.2     |

## DESIGN INFORMATION

| <b>Model</b>                   | <b>Membrane Area<br/>m² (ft²)</b> | <b>Feed Spacer<br/>Thickness (mil)<sup>a</sup></b> |
|--------------------------------|-----------------------------------|----------------------------------------------------|
| <b>TurboClean® Bev 8040-MF</b> | 26.9 (290)                        | 47                                                 |

<sup>a</sup> This model has a TurboClean sanitary outer wrap and parallel feed spacers. This model includes anti-telescoping devices (ATDs) attached to the ends of the element and one interconnector. A brine seal is not included and is not required.

## OPERATING PARAMETERS

|                                      |                                                          |
|--------------------------------------|----------------------------------------------------------|
| <b>Maximum Operating Pressure</b>    | 10.3 bar (150 psi)                                       |
| <b>Maximum Operating Temperature</b> | 50°C (122°F)                                             |
| <b>Cleaning pH Range<sup>1</sup></b> | 1.0 – 12.0                                               |
| <b>Cleaning Chlorine Tolerance</b>   | 200 ppm (sanitization) at pH ≥ 10.5                      |
| <b>Maximum Pressure Drop</b>         | 1.4 bar (20 psi) per element; 6 bar (80 psi) per housing |

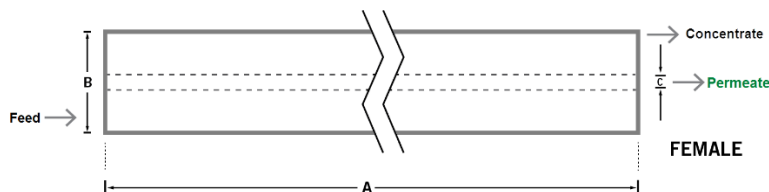
<sup>1</sup> Refer to temperature and pH limits in our Membrane Cleaning Guides.

## PHYSICAL DIMENSIONS

| Model                   | Element Weight<br>kg (lb) <sup>b</sup> | Dim. A<br>mm (inches) | Dim. B<br>mm (inches) | Dim. C <sup>c</sup><br>mm (inches) | Permeate Tube |
|-------------------------|----------------------------------------|-----------------------|-----------------------|------------------------------------|---------------|
| TurboClean® Bev 8040-MF | 16 (36)                                | 1,016 (40.0)          | 201 (7.9)             | 28.6 (1.125)                       | Female        |

<sup>c</sup> Shipping weight is dependent on packaging material and quantity shipped.

<sup>d</sup> Dimension "C" is the Inner Diameter.



## IMPORTANT INFORMATION

**Start-up:** MANN+HUMMEL Water & Fluid Solutions recommends flushing elements for 30 minutes at low pressure and discarding permeate during the flush prior to operation. For a more detailed start-up procedure, please see Element Start-Up Guide – System Start-Up (TSG-O-005).

**Cleaning:** TurboClean® membrane elements must be cleaned periodically to ensure proper operation and to prevent membrane damage. Please see our Membrane Cleaning Guides.

**Storage:** TurboClean membrane elements must be stored appropriately to ensure proper operation and to prevent membrane damage. Please see Element Storage Guides (TSG-O-009 & TSG-O-010).

**Regulatory:** This model uses FDA (CFR Title 21) compliant materials.

## CUSTOMIZABLE SPECIALTY ELEMENTS

MANN+HUMMEL Water & Fluid Solutions offers a full range of membranes and element designs for challenging water and process applications. Technologies include low-fouling RO, submerged UF, continuous high temperature, ultra-high pressure, unique sanitary designs and more. Contact us to customize a product that satisfies your specific requirements.

## Contact



info@lennotech.com Tel. +31-152-610-900

www.lennotech.com Fax. +31-152-616-289