# **Ceramic Membrane Crossflow Vinegar Filtration System**





Nominal 1,000 gal/hour capacity model shown

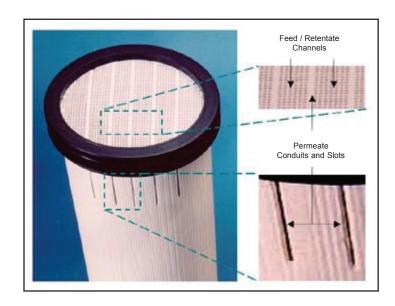
The Star Filters Ceramic Membrane System is an ideal way to lower your vinegar filtration costs. The filtration system utilizes highvelocity "crossflow" across the membrane surface. The advanced-technology ceramic membranes deliver superior performance, durability, and cost-effectiveness. The robust filter design and high efficiency can help solve your tough filtration challenges. The filter achieves outstanding clarity and long shelf life while eliminating the need for labor-intensive processing. In addition, the membrane system is capable of handling a much higher concentration of product, squeezing out the maximum yield and reducing haulable waste. Available membrane pore sizes are 0.5 µm, 0.2 µm, 0.01 µm, and 0.005 µm. Systems are available from 50 gal/hr to 5,000 gal/hr capacities.

#### **Features and Benefits**

- Eliminates use of diatomaceous earth and bentonite clay
- · High surface area to unit volume
- · Compact design
- · Extended life with durable ceramic
- Outperforms spiral and hollow fiber technology
- · Chemically stable
- Broad pH range of 2-13
- · Immune to chlorine attack
- · Steam sterilizable
- Back flushable
- · High and sustainable flux rates
- · Easy, less frequent membrane cleaning
- System payback in less than one year on savings over traditional processing
- System can be easily koshered
- Fluid temperatures to 350° F
- Typical concentrations of 25:1 or better

#### **Fluid Streams Processed**

- Cider vinegar
- Corn vinegar
- · Wine vinegar
- White vinegar



### **Membrane Filtration**

- 1. Filter has 1800+ channels
- Some channels are converted to permeate conduits
- 3. Permeate conduits allow the entire filter diameter to be effectively utilized
- 4. Patented membrane approach results in higher process flux

## **Specifications**

**Filter Sizes:** 5.6" Diameter, 34" Long (120 ft<sup>2</sup> surface area)

1.05" Diameter, 12" Long (1.5 ft<sup>2</sup> surface area)

Standard Membrane Pore Sizes (microns): 0.5 µm, 0.2 µm, 0.01 µm, 0.005 µm

Operating Parameters: Maximum TMP of 60 psi

Maximum inlet pressure 85 psi

Maximum differential pressure 30 psi Maximum backpulse pressure 100 psi

# Small-Scale Rental Units Available for Performance Evaluation!



PortableTest Unit

The Hilliard Corporation reserves the right to change specifications and dimensions at any time.

Please contact the factory for the most current information.



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