Our systems drive down costs and enhance quality
**High-purity processing means better-tasting beverages.**

KMS offers a multitude of efficient solutions that help beverage manufacturers concentrate, clarify, and purify products, from the treatment of incoming water to the final product. From water to wine, it’s smart technology that’s behind the world’s favorite beverages.

**Juice Processing**

From processing golden, haze-free apple juice to ensuring excellent color passage in dark juices, KMS offers juice clarification technology for all juices and production requirements, providing significantly increased yields of higher-quality juice with less maintenance than conventional methods.

KMS membrane systems easily remove suspended solids, colloidal haze particles, microorganisms, and undesirable proteins, leaving a crystal clear, flavorful juice. Our systems offer filtered juice yields of 96-99%, producing more juice per bushel and higher profits per gallon without the need for diatomaceous earth (DE).

KMS juice clarification solutions are durable and long-lasting, which means optimal productivity, high flux, and high recovery.

Several of the world’s largest juice processors turn to KMS to help recover fruit solids and reduce bitterness in their juices. KMS has perfected a process that combines membrane separation and polymeric adsorption to remove limonin, hesperidins, and polyphenols from prime orange, grapefruit, tangerine, lemon, and lime juices, providing improved juice quality, consistency, and yield.

**How Can We Serve You?**

KMS offers more membrane products than any other manufacturer. We can help optimize your beverage process from start to finish, with superior technology.

**Tubular Membrane Technology**

For nearly half a century, we have designed and engineered robust tubular membranes that effortlessly handle high concentrations of suspended solids. Our SUPER-COR® membranes set new standards in reducing maintenance costs for juice processors industry-wide.
**Bottled Water**

KMS membrane systems offer superior pretreatment for beverage water, with hollow fiber ultrafiltration providing excellent purification in a compact package that resists particulate buildup. With KMS membrane systems, the water you produce will be clean and safe, with a reduced environmental impact.

**Wine**

KMS is a trendsetter in putting membranes to use in the wine industry, working closely with winemakers to enhance the organoleptic and aesthetic characteristics of their products. Using crossflow filtration with KMS membranes offers excellent throughput and eliminates the need for using DE or filter sheets. Now a gentle, one-step process can reduce your processing costs while boosting the wine’s quality and color intensity.

**Hollow Fiber Membrane Technology**

Hollow fiber cartridges operate efficiently, with fluid flowing through the center and permeate passing through the fiber wall to the outside of the membrane, a design that is highly flexible and easily handles large volumes for circulation, dead-end, and single-pass operations.
It’s all in the design, and SUPER-COR® membranes remain the unsurpassed solution for superior juice and beverage clarification. The SUPER-G® Series offers high-performance membranes for maximum beverage clarification.

**SUPER-COR Series**

Backed by years of proven performance and exceptional durability, SUPER-COR ultrafiltration modules, based on PVDF chemistry, enhance color, flavor, and stability without DE.

SUPER-COR microfiltration modules, based on PES chemistry, provide the highest molecular weight cut-off to allow color bodies to pass while retaining turbidity particles without a DE filter.

The result is higher yields, fewer maintenance concerns, and increased profit margins. Available in a variety of sizes, our latest models feature a robust backing structure to support the requirements of today’s juice processing plants, providing high flux and high recovery for all types of juices and production requirements.

**SUPER-G Series**

When industry required a super high-performance clarification solution, KMS answered the call with the SUPER-G family of products. Remarkably durable, these tubular membranes can achieve three times higher solids levels than the SUPER-COR line. Unmatched in the industry for beverage clarification, these modules enhance color, flavor, and stability without the need for DE. For all types of juice and production requirements, SUPER-G PVDF modules provide high flux and high recovery.

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**SUPER-COR and SUPER-G Modules**

<table>
<thead>
<tr>
<th>Application</th>
<th>Module</th>
<th>Membrane Material</th>
<th>Membrane Type</th>
<th>Diameter in. (cm)</th>
<th>Length ft. (m)</th>
<th>Surface Area ft² (m²)</th>
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</thead>
<tbody>
<tr>
<td>Light Juices</td>
<td>SUPER-COR</td>
<td>PVDF</td>
<td>HFM-180 UF</td>
<td>3.0 (7.6)</td>
<td>10 (3.0)</td>
<td>24.0 (2.23)</td>
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<tr>
<td></td>
<td>SUPER-COR XL</td>
<td></td>
<td></td>
<td>3.0 (7.6)</td>
<td>12 (3.7)</td>
<td>28.8 (2.68)</td>
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<tr>
<td></td>
<td>SUPER-COR XL PLUS</td>
<td></td>
<td>HFM-500 UF</td>
<td>4.3 (10.9)</td>
<td>12 (3.7)</td>
<td>54.7 (5.08)</td>
</tr>
<tr>
<td></td>
<td>SUPER-G</td>
<td>PVDF</td>
<td>HFM-513 UF</td>
<td>3.0 (7.6)</td>
<td>9.1 (2.8)</td>
<td>9.3 (0.86)</td>
</tr>
<tr>
<td>All Juices</td>
<td>SUPER-COR</td>
<td>PVDF</td>
<td>HFM-513 UF</td>
<td>3.0 (7.6)</td>
<td>10 (3.0)</td>
<td>24.0 (2.23)</td>
</tr>
<tr>
<td></td>
<td>SUPER-COR XL</td>
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<td>9.1 (2.8)</td>
<td>9.3 (0.86)</td>
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<tr>
<td>Dark Juices</td>
<td>SUPER-COR</td>
<td>PES</td>
<td>MFK-617 MF</td>
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<tr>
<td></td>
<td>SUPER-COR XL</td>
<td></td>
<td></td>
<td>3.0 (7.6)</td>
<td>12 (3.7)</td>
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<td></td>
<td>SUPER-COR XL PLUS</td>
<td></td>
<td>MFK-617 MF</td>
<td>4.3 (10.9)</td>
<td>12 (3.7)</td>
<td>54.7 (5.08)</td>
</tr>
</tbody>
</table>

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“We chose the SUPER-G tubular membranes because we wanted a filtration system that could maintain high flow rates. That meant choosing a robust membrane system that would not clog easily. The SUPER-G membranes have far exceeded our performance expectations.”

Abran Farias III
Juice Plant Manager
Peterson Farms
SUPER-COR® and SUPER-G® Systems

We can supply your operation with complete juice clarification solutions to meet a variety of processing requirements. The SUPER-COR and SUPER-G systems consist of modules designed in a series to maximize the ratio of membrane surface area to product volume, increasing juice throughput while minimizing energy usage. Easy to install, each system comes with pump, motor, controls, piping, valves, and instrumentation facilitating a simple, once-through batch process, up to 200 gpm (45 m³/hr).

The benefits are clear:
- Designed with plant and operators’ needs in mind
- Fully automated with integral clean-in-place and permeate transfer
- Automatic over-concentration protection feature prevents plugging
- High output, small footprint

SUPER-COR System

SUPER-G System

Systems and Service

As industry leaders in membrane technology, KMS engineers are perfectly suited to customize a filtration solution to your specifications. From concept to piloting to ongoing support, we have the experience to provide an exceptional outcome.

- Standard Systems
- Custom Engineered Systems
- Technical Support
- Piloting
- Service
- KMS ASSIST® Service and Maintenance Program

www.kochmembrane.com
KMS can help customers optimize their beverage water filtration process to insure quality, color, and taste while controlling costs and optimizing efficiency.

**TARGA® II Series**
Designed to meet the Safe Drinking Water Act and World Health Organization guidelines for drinking water, TARGA II hollow fiber membranes provide greater than 4-log removal of bacteria, viruses, cryptosporidium, and giardia. These products are also certified by UL under ANSI/NSF 61 Drinking Water System Components.

**TARGA II System**
The TARGA II hollow fiber system offers a cost-effective water solution for a variety of ultrafiltration applications, including drinking water, seawater pretreatment, industrial water treatment, and tertiary wastewater treatment. It features an optimized cartridge and rack design, resulting in one of the smallest footprints on the market. Its highly intelligent process controls can even handle variations in water quality and flow with minimal operator intervention.

**Clean, Safe Water**
Bottled water represents a huge sector of the beverage industry. In bottled water processing, pretreatment of raw water is crucial to the integrity of the final beverage water product.

**FLUID SYSTEMS® TFC® RO Series**
TFC elements can tackle the spectrum of requirements from the complex applications of seawater desalination to brackish waters, electronics and pharmaceutical water purification, to softening applications for power generation, beverage production, chemical processes, boiler feed requirements, and more.

**Reverse Osmosis system**
Our pre-engineered, packaged water treatment systems using reverse osmosis and nanofiltration technology offer optimum water treatment within a compact, skid-mounted package.
KMS is an established name in crossflow microfiltration (CMF) and has helped hundreds of wineries produce quality vintages for more than 20 years with a customized filtration approach.

KMS WINEFILTER Series
WINEFILTER microfiltration membrane cartridges deliver consistent results on all wine varieties, producing red, white, and rosé wines of a quality that was once only achievable with more labor intensive and less efficient filtration technologies.

- Flavor, aroma, color, and clarity maintained
- Fewer steps, less handling
- Wine loss can be reduced up to 70%
- Capable of unattended operation
- No DE, pad, or cartridge disposal costs
- No DE health hazard
- Membranes can exhibit long life under normal conditions

KMS WINEFILTER System
The WINEFILTER standard system is the company’s flagship product for the wine industry. The WINEFILTER system increases productivity by streamlining processes to improve efficiency, increase throughput, and reduce filtration steps and down time. At the same time, WINEFILTER systems are gentle on wine due to minimal oxygen pickup and heating. Features such as reverse flow result in long, sustained runs, reducing labor, material, energy, and maintenance costs.

For unattended, one-step continuous crossflow microfiltration, the frame mounted automatic and semi-automatic PLC-controlled WINEFILTER systems are preferred.

“\[The KMS system works great. It does everything we hoped it would do. I would highly recommend it to anyone in the market for such a system.\]”

Greg Bruni
Vice President
Executive Winemaker
Llano Estacado Winery

www.kochmembrane.com
For five decades, Koch Membrane Systems, Inc. has led the way in developing innovative membrane technologies that serve a diverse range of industries and applications around the globe. KMS provides solutions to markets including industrial and municipal water and wastewater, food and life sciences and industrial processes helping thousands of clients reduce their water footprint, increase productivity, and reduce costs. With an installed base approaching 20,000 systems throughout the world, KMS is setting the standard as a comprehensive membrane solutions provider.

KMS is based in Wilmington, Massachusetts, USA with factory direct representatives around the world and manufacturing locations in Wilmington, Massachusetts and Aachen, Germany.