

# Dairy-Pro®

Sanitary Spiral Wound Elements

Advanced Membrane Filtration for Dairy Processing



*Filtration for a Better Future®...*

# Blister Resistant, Energy Efficient, Robust Higher Productivity

## Over 40 Years of Experience in Dairy Filtration

Koch Membrane Systems (KMS) is a global leader in innovative membrane filtration technologies. We've combined our 40 years of dairy industry experience with unmatched engineering and technical expertise to design Dairy-Pro® sanitary spiral wound elements specifically for demanding dairy filtration applications.

## Improved Blister Resistance, Longer Operating Life

Dairy-Pro elements utilize a blister resistant design and cross flow filtration technology to improve energy efficiency, reduce operating costs, increase productivity, and decrease contamination risk. They are constructed to tolerate harsh cleaning requirements extending their operating life and optimizing every step of dairy membrane processing.

### Dairy-Pro Technologies

- Microfiltration (MF)
- Ultrafiltration (UF)
- Nanofiltration (NF)
- Reverse Osmosis (RO)

### Benefits of Dairy-Pro Products

- Blister Resistant
- Energy Efficient Operation
- High Productivity
- Long Operating Life
- Robust Construction
- FDA, 3-A, EU, and Halal Compliant



## A Dairy-Pro for any Application

	Benefits	Applications	Membrane Type
<b>MF</b>	<ul style="list-style-type: none"> <li>• Cleaner Protein Separation</li> <li>• High Temperature Capability up to 85°C (185°F)</li> <li>• Blister Free</li> </ul>	<ul style="list-style-type: none"> <li>• Whey Defatting</li> <li>• Casein Concentration</li> <li>• Brine Clarification</li> <li>• Native Whey, Casein Separation</li> </ul>	<ul style="list-style-type: none"> <li>• MF-0.1 – 0.1 Micron</li> </ul>
<b>UF</b>	<ul style="list-style-type: none"> <li>• Increased Throughput up to 15%*</li> <li>• Lower Energy Consumption by 25%*</li> <li>• Blister Free</li> <li>• Chlorine Tolerant HpHT</li> </ul>	<ul style="list-style-type: none"> <li>• Whey Protein Concentrate</li> <li>• Whey Protein Isolate</li> <li>• Milk Protein Concentrate</li> <li>• Brine Clarification</li> </ul>	<ul style="list-style-type: none"> <li>• 3K Dalton (NEW)</li> <li>• 5K Dalton</li> <li>• 7.5K Dalton (NEW)</li> <li>• 10K Dalton</li> <li>• 70K Dalton (NEW)</li> </ul>
<b>NF</b>	<ul style="list-style-type: none"> <li>• Lower Energy Consumption by 15%</li> <li>• Blister Resistant</li> <li>• CIP Temperatures up to 60°C (140°F)</li> <li>• BAND-TITE® Reinforcement Straps for Easy Installation and Removal</li> </ul>	<ul style="list-style-type: none"> <li>• Whey Concentration</li> <li>• Whey Demineralization</li> <li>• High Solids Concentrate                             <ul style="list-style-type: none"> <li>– Whey and Milk Protein Concentrate</li> <li>– Whey Protein Isolate</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• NF-150 – 150 Dalton (NEW)</li> <li>• NF-200 – 200 Dalton</li> </ul>
<b>RO</b>	<ul style="list-style-type: none"> <li>• Lower Energy Consumption by 15%</li> <li>• Blister Resistant</li> <li>• CIP Temperatures up to 60°C (140°F)</li> <li>• Pressure Capability up to 800 psi (55 bar)</li> <li>• BAND-TITE Reinforcement Straps for Easy Installation and Removal</li> </ul>	<ul style="list-style-type: none"> <li>• Milk, Whey, and UF Permeate Concentration</li> <li>• NF or RO Permeate Polishing</li> <li>• Evaporator Condensate Polishing</li> </ul>	<ul style="list-style-type: none"> <li>• RO</li> </ul>

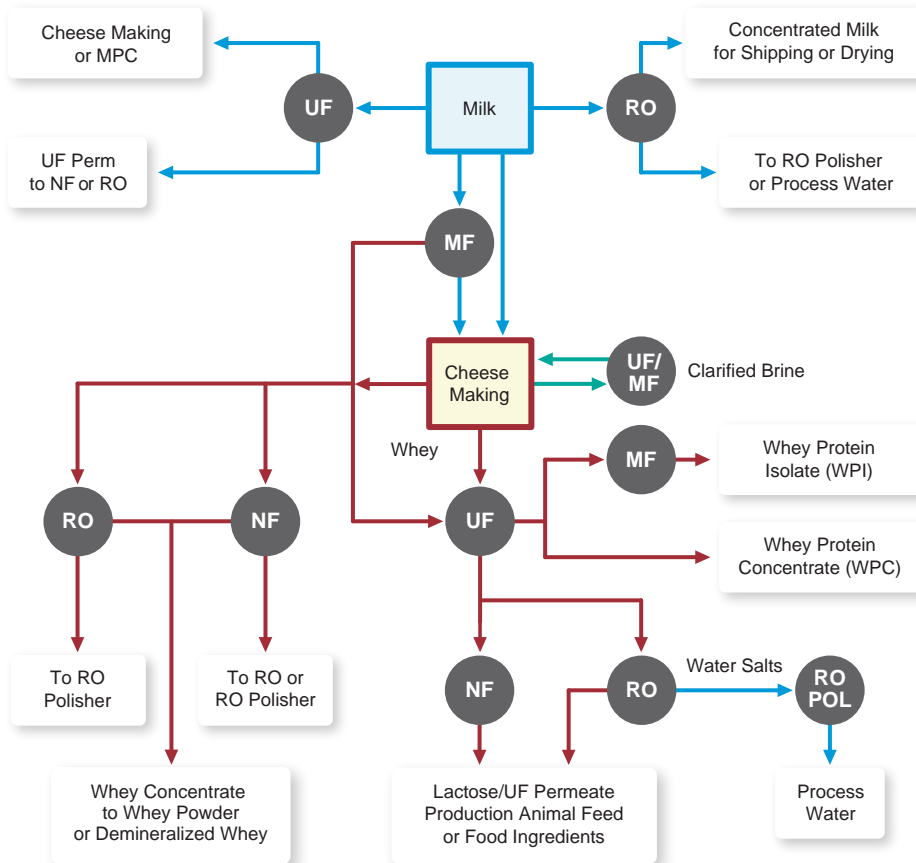
\* Not yet available with HpHT elements.

# Filtration, Purification, Separation

## KMS Elements Have Processed Over 5 Trillion Pounds (2.3 Trillion Liters) of Dairy Products

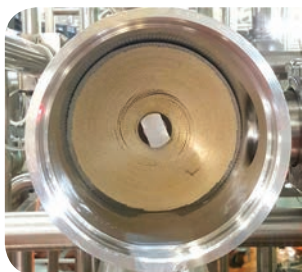
Dairy-Pro® elements benefit every step of dairy processing. Whether your application is the filtration, purification, concentration or separation of milk, whey, or protein, Dairy-Pro elements are energy efficient and will demonstrate high throughput. See where you can use Dairy-Pro to improve your productivity and results.

### A Dairy-Pro Membrane for Every Process



### BAND-TITE Technology for NF and RO

BAND-TITE® Technology, consisting of our patented reinforcement Teflon bands, prevents element unwinding and its consequences.



Standard Element



BAND-TITE Element as removed from housing

### Benefits of BAND-TITE NF and RO elements

- Proper size element diameter for ease of loading and unloading
- Excellent element integrity
- Effective cleaning
- Long membrane life
- No more ineffective cleaning leading to reduced productivity, and poor permeate quality
- No more unwinding and channeling



## Koch Membrane Systems

Koch Membrane Systems (KMS) is a global leader in membrane filtration technologies with over 50 years of membrane experience and 20,000 system installations worldwide. We manufacture our membranes in our state of the art facility in the US and we apply them in our systems.

Koch Membrane Systems is part of Koch Industries, Inc. (KII). Based in Wichita, Kansas, KII is one of the largest private companies in America. It owns a diverse group of companies involved in refining, chemicals and biofuels; forest and consumer products; fertilizers; polymers and fibers; process and pollution control equipment and technologies; electronics; information systems; commodity trading; minerals; energy; glass; ranching; and investments. With a presence in about 60 countries, Koch companies employ more than 120,000 people worldwide.

Many industries.  
Countless products.  
One focus.



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