

Dairy Processing Solutions

Veolia Water Technologies has served the dairy industry since 1985 and is a pioneer of membrane technology for sanitary applications.

WATER TECHNOLOGIES

Veolia Water Technologies provides solutions through products, services and programs designed to meet the unique needs of the dairy industry. Our solutions are designed to optimize:



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Our blister-free spiral wound membranes offer best in class whey demineralization with low contamination risk, ensuring your product quality and high yield. Our materials are in compliance with FDA and EU food contact regulations, and also have halal and kosher certifications.

Our sanitary membranes protect your product quality and brand image, while ensuring increased product safety. We align with global standards and invest to ensure that our sanitary, food and beverage membrane technologies meet your regulatory requirements.

All Dairy Membranes Feature:

- Blister-free construction
- High performance membrane
- Enhanced packaging for extended shelf life
- Membrane fold reinforcement
- Controlled tension caging system

Customer Benefits:

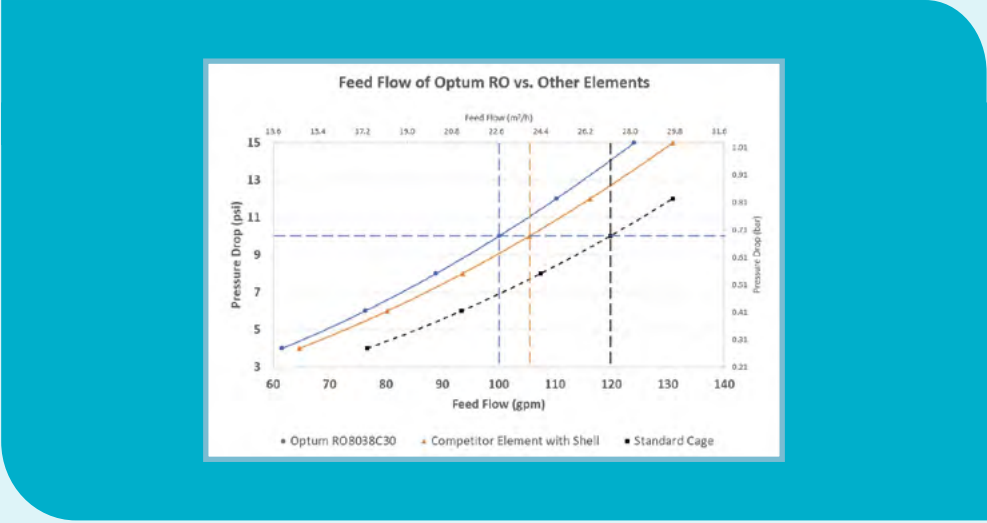
- Process compliance with USDA, FDA, EU, Halal & Kosher
- Increased value of products
- Minimized product losses
- Better production safety



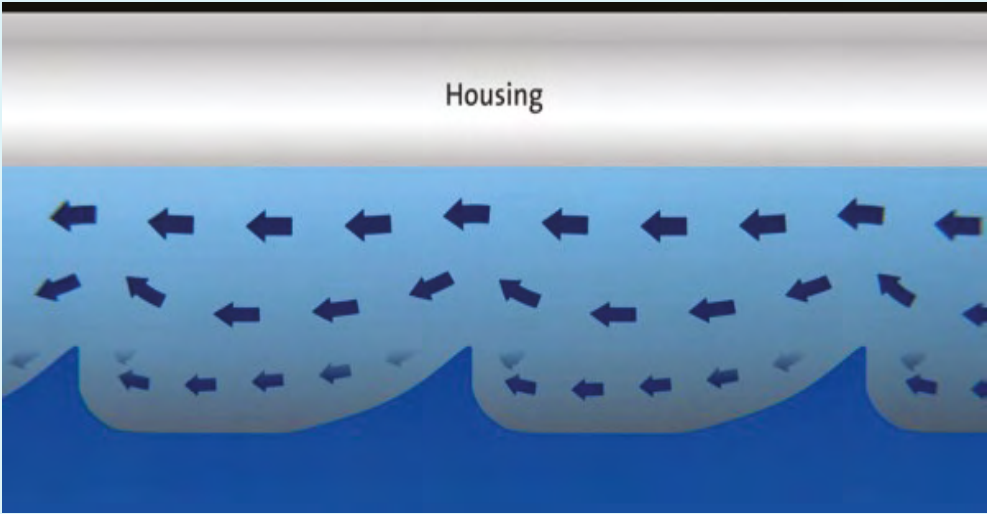
Veolia continues to innovate with the Optum reverse osmosis element that improves energy efficiency to reduce costs and deliver against multiple environmental, health and safety initiatives.

- Reduce energy consumption and carbon footprint of the recirculation pump by up to 9% versus other shelled elements and up to 25% versus standard cage elements
- Improve employee ergonomics with 10-20% less force required during installation and removal
- Reduce plastic waste versus other shelled elements. In a plant with 200 elements, using Optum RO elements for 10 years will keep over 1,100 lbs (500 kg) of plastic out of landfills

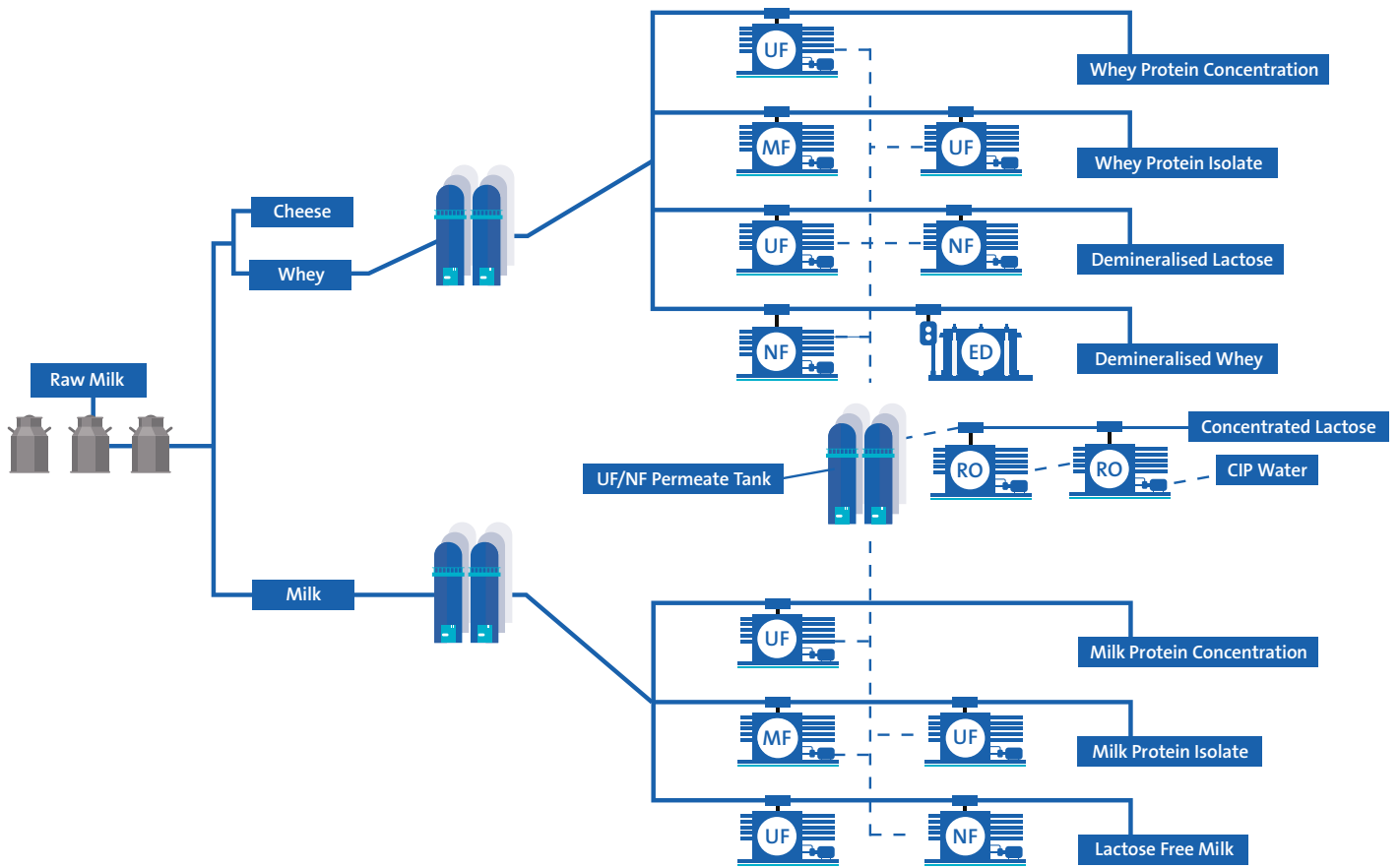
If you would like to discuss your specific needs,
please visit our website.



Patented sanitary geometry creates turbulence and a small amount of local flow reversal near the surface of the shell that reduces fluid bypass versus competitor elements with shells and standard cage-wrapped elements



Dairy Process Map



Dairy And Cheese Applications			
Application	Product Name	Membrane Type	
Lactose and Whey Protein Concentration, Skim Milk Concentration, Condensate of Whey (COW) Water, & Polished Water	Optum RO	Reverse Osmosis	
Hot Condensate of Whey (COW) Water Recovery	Duratherm* STD	Reverse Osmosis	
NF/RO Permeate Recovery, Condensate of Whey (COW) Water Recovery, & Polished Water	Polisher RO	Reverse Osmosis	
Hot Water Sanitizable Elements - Lactose and Whey Demineralization	Dairy HWS	Reverse Osmosis/ Nanofiltration	
Whey Demineralization, Lactose Concentration, Lactose Demineralization, & GOS Purification	Dairy DK Dairy DL	Nanofiltration Nanofiltration	

Fact sheets (including part numbers and specs) for these products are available on the Document Library on our website.



The dairy industry has gone through a fascinating evolution

Milk and cheese producers have long struggled with efficiency and the associated disposal of byproducts. Over many years, new membrane technologies and product improvements have been introduced that allowed dairy producers to capitalize on new efficiencies and create valuable byproducts such as whey protein power, infant formula, and food ingredients in addition to the longstanding milk and cheese.

Learn how Veolia is helping customers solve their greatest challenges by visiting our website.

Water Technologies & Solutions

1985

Desal (1985-1998)

- Patented Manufacturing Techniques
- Dursan* cage with precise tensioning to maintain element integrity
- Improved Fold Reinforcement to prevent leaks and withstand daily CIPs

Osmonics (1998-2003)

- 8" sanitary housing for dairy applications were developed for greater efficiencies.

GE (2003-2017)

- Invested in the manufacturing capacity of food-grade membrane technologies. This investment tripled the capacity for the production of world-class membranes
- Automation equipment added to element rolling process for consistent product quality

Veolia (2017-present)

- Launched blister-free construction of membranes to lower contamination risk and protein loss
- Introduced shelled ends by use of two engineered sleeves
- Contributing to reduced energy consumption and carbon footprint with improved ergonomics





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Veolia Water Technologies

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