

PROTEINS WHEY WHEAT WATER EGGS BEER
BRINE MILK JUICES WINE BEVERAGES



Membrane Filtration



MEMBRANE FILTRATION UNITS REDA

With over 30 years of experience in the processes of preparation and processing for liquids food industry, REDA offers cutting-edge technology for the membranes filtration for the dairy, wine, fruit juice and beverage industries.

The membrane filtration units of REDA integrate the range of automatic centrifugal discs separators and low temperature evaporators for the cold concentration.

Even in the field of membrane separation, REDA plants comply with the principles of construction, reliability and quality that REDA installations have throughout the world.

These units are designed to have low operating costs and easy maintenance, designed on preassembled and modular skid, optimized and minimized for easy installation and commissioning.

The solutions proposed by REDA are always flexible and based on a reliable and proven technology.



Nanofiltration

With Nanofiltration unit is possible concentration in continuous of dairy products before transport or for further more processing process. These units are therefore an optimal solution for the concentration of the product (typically, the concentration of whey, permeate from UF or milk), desalting and removal of water.



Filtration unit of reversal osmosis for milk of 25.000 l/h

Reverse Osmosis

The reverse osmosis membrane filtration unit are designed for continuous concentration of dairy products prior to transport or further processing. Typical applications are the concentration of whey, permeate of RO / NF / UF, white water and evaporated condensate.



Other applications

Ultrafiltration:

Whey: fractionation and protein concentration (for the production of WPC and WPI).
Milk: Milk protein standardization, concentration.
Brine: continuous purification.
Water: purification, continuous water purification for firming mozzarella.

Microfiltration:

Whey: microbiological stabilization.
Milk: processing for ESL milk production.
Brine: continuous purification.
Acqua: purification, continuous water purification for firming mozzarella.

Nanofiltration:

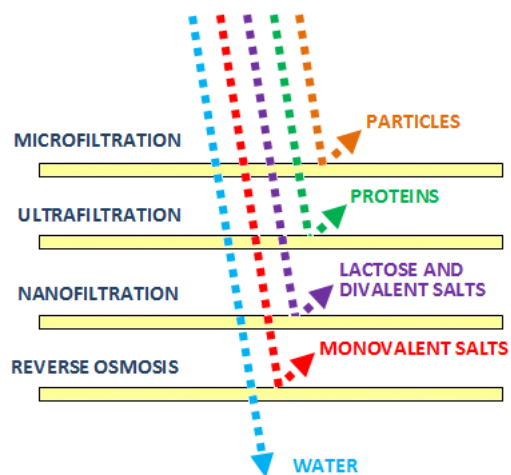
Whey: concentration / demineralization
Milk: pre-concentration

Reverse Osmosis:

Water: purification (ex. milk recovery of water push), polishing of RO or NF whey permeate or UF.
Whey: pre-concentration.
Milk: pre-concentration.



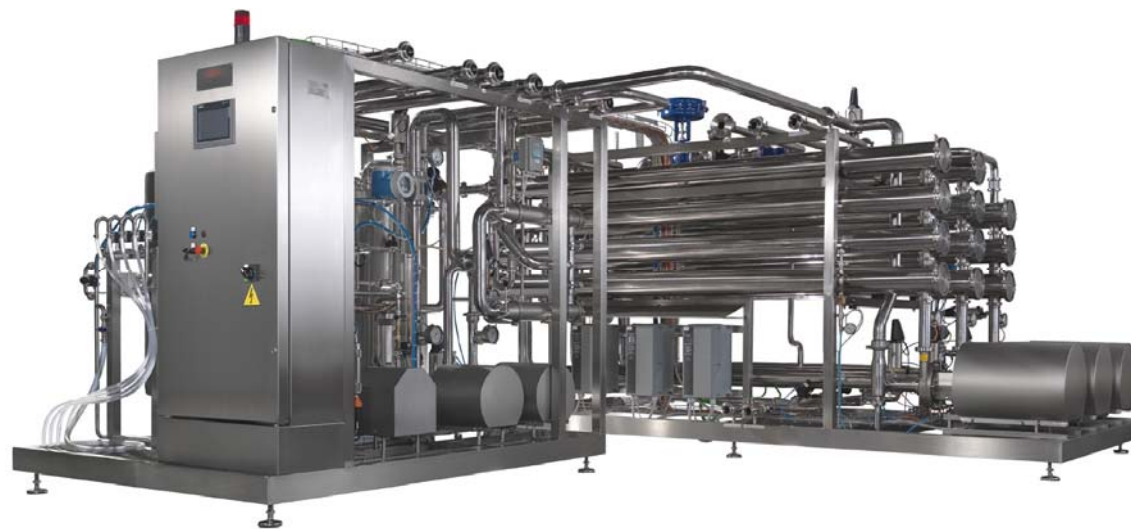
CROSS FLOW FILTRATION



Ultrafiltration

Specifically we propose Ultrafiltration units designed for the continuous concentration of whey or milk before subsequent treatments.

Other typical applications are the production of WPC (whey protein concentrate) or MPC (milk protein concentrate) and the standardization of the protein in milk for cheese production.



Ultrafiltration unit for whey of 18.000 l/h

TECHNICAL DATA

Operating characteristics

The membrane filtration units offered by REDA are manufactured according high hygienical standards and are available in both manual and automatic versions, with possibility of automatic disinfection with chemical agents. They are generally supplied completely pre-assembled on a stainless steel frame for maximum simplicity on installation.

In the automatic version, the production process, the filling of the housing and the fouling are constantly controlled by level and pressure sensors mounted in line while the process of sanitizing and cooling is controlled by proper temperature sensors and by the dedicated software.

Automation and Control



The REDA filtration units are fully automated to ensure always safe operability, with management and control by PLC with operator interface via touch screen. The PLC functions include monitoring of the unit, activating functions and phases, the setting of the parameters and alarm management .

During production, REDA units only require regular monitoring of process values. The control system includes process alarms that are essentials for the protection of the plant itself.

The automation of the control system REDA is available from a basic level , which includes in any case the automatic control of essential functions, up to a level of total automation including the collection of data for functional reports as well as for the full traceability of default information .

The washing and sanitizing cycles of the using membranes are also automated and can be customized according to specific applications .

MEMBRANE TYPES AND CONFIGURATION

MATERIALS	Polymeric	
	Ceramic	
GEOMETRICAL CONFIGURATION	Spiral wound	
	Plate and frame	
	Hollow fibre/tubular	