

Microflow XL-E Brine Crossflow Microfiltration Systems Easy Choice for Cheese Makers

Description

The Microflow XL-E Brine systems are specifically designed to meet needs and requirements of brine purification in modern cheese plants. Clarification is achieved without the need for filter aids or centrifuge. The fully automated Microflow system provides an environmentally friendly solution for longer brine life, with a reliable microbial stabilization which reduces the risk of cheese contamination from spoilage or pathogenic microorganisms during the brine salting process.

The system utilizes Pall's proven high area, hollow fiber membranes with unique mechanical strength and excellent chemical resistance, which allow high productivity and repeated exposure to aggressive cleaning regimes. When coupled with the user friendly software with cycle programming and a compact footprint, the Microflow XL-E Brine series is the easy solution for reliable cheese brine regeneration.

Cost Savings Benefits

With Pall's extensive experience in crossflow filtration of food and dairy streams and dedication to simplified process design and control logic, the Microflow XL-E Brine system incorporates unique features which enable dairies to perform clarification at low operating costs while providing constant and high brine filtrate quality.

These include:

- PVDF membranes with high mechanical strength for longer service life
- High area, high flow modules for more compact and more economical systems
- Backpulse capability for increased system productivity
- Hollow fiber membrane with 1.4 mm open channel for optimized cleaning
- Fully automated production and cleaning cycles for unattended operation and reduced labour and downtime
- Transparent module housing to confirm filtrate quality and enhance troubleshooting capabilities
- On board tanks, for easy cleaning, concentration and integration
- User friendly interface and automated chemical dosing for reliable operation



Microflow XL-E Brine system

Microflow XL Brine Membranes

The Microflow XL Brine modules incorporate Pall's proven symmetric hollow fiber membranes. These large diameter, high flow modules feature 21.5 m² (231 ft²) of filtration area, at least double that of typical competitive hollow fiber modules.

The module components include:

Component	Description
Membranes	PVDF
Potting	Epoxy Resin
Sleeve	Polypropylene
Housing	Transparent polysulphone
Seals	Ethylene Propylene copolymer

Microflow XL-E Brine System Components

The Microflow XL-E Brine systems are fully automated, modular systems available with 2 or 3 crossflow modules. All product wetted components are constructed of 316L stainless steel. Piping manifold, membranes, pumps and instruments are mounted on a mobile frame, which includes the following:

- Stainless steel pre-filter screen for large particles
- On board concentration/cleaning tank
- Feed pump with 316L stainless steel cover
- Circulation pump with 316L stainless steel cover
- Filtrate reservoir
- Reverse filtration (back flush) pump
- Magnetic flow meter with batch control
- CIP function with 1 µm water filter and temperature control
- Automatic chemical dosing
- Store programmable logic control (PLC) with touch screen
- Pressure, temperature and dry run protection

Compliance

The Microflow XL-E Brine systems are manufactured in accordance with European Pressure Directives and each system is supplied with a CE mark.

The Microflow XL modules have been qualified for compliance to specific regulatory standards for products coming into contact with foodstuffs. Please contact Pall for details.

Operating Conditions

Brine filtration	
Inlet Pressure	0.5 to 3.5 bar (7 to 50 psi)
Temperature	0 to 25 °C (32 to 77 °F) and typically 4 to 15 °C (39 to 59 °F)
Maximum temperature for cleaning	65 °C (150 °F)

Standard Filtration Skid Specifications

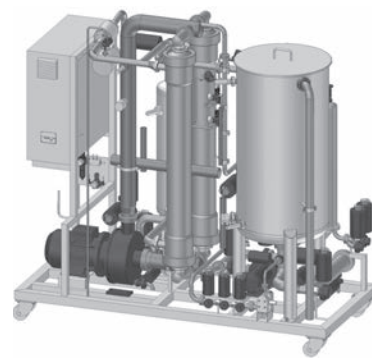
Model Characteristics	Microflow XL-E Brine	
	XL2E	XL3E
Number of modules	2	3
Filtration surface area	43 m ² (463 ft ²)	64.5 m ² (694 ft ²)
Length	2.2 m (7.22 ft)	2.3 m (7.55 ft)
Width	1.0 m (3.28 ft)	1.0 m (3.28 ft)
Height	2.1 m (6.89 ft)	2.1 m (6.89 ft)
Weight (empty)	670 kg (1477 lb)	720 kg (1587 lb)
Raw brine tank	300 L (79.25 gal)	
Filtrate brine tank	42 L (11.09 gal)	
Connection type	DIN 11851	
Raw brine inlet	DN 50	
External bleed outlet	DN 40	
Filtrate brine outlet	DN 40	DN 50
Concentrate outlet	DN 40	
Water inlets	DN 25	
Chemicals inlet	DN 15	
Wattage	7 kW	11 kW



XL-E Front View



XL-E Side Views



XL-E Rear View