Dairy Application 104

Membrane Systems



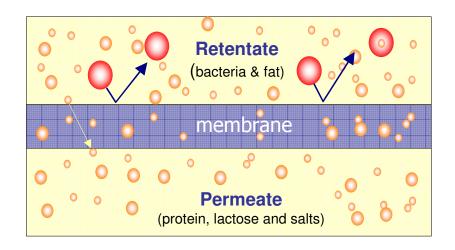
Cold Sterilisation Systems

The MMS Microfiltraion (MF) systems enable 99.9% reduction of bacteria.

The *SwissFlow* MF systems from *MMS* are proven and tested systems for the sterilization of skim milk.



The **MMS** SwissFlow MF systems enables the reduction of bacterial count in permeate by a physical barrier. The operation is conducted at low operating temperatures (50 °C) producing near to native product quality. The systems are designed for minimum dead volumes, and offer high permeate yields. The retentate can be further heat treated to recover all the value in your milk.



Benefits

- 99.9% reduction of bacteria
- Produces a native skim milk
- Extremely low fat content in skim milk
- Low operating temperatures
- Long membrane lifespan
- Cheese production without the need for Lysozyme or nitrate

Features

- Fully automated systems
- Supported by specialists
- Automated CIP and system sterilisation
- Complete solutions including tanks, post and pre-treatment possible

Options

- Pre-treatment of skim milk with pasteurization
- Recuperation of heat
- Heat sterilisation of retentate
- Remote access for system support and rapid troubleshooting
- CIP liquid heating
- Scalable for more capacity
- Treatment of permeate with further *SwissFlow* equipment (UF/NF/RO)



Membrane Systems

MMS

Cold Sterilisation Systems

The system options allow you to design the MF system to best fit into your infrastructure and workflow.

MMS produce a range of **SwissFlow** MF systems capable of handling feed rates from 5'000 – 24'000 l/h. The capacity of the system is a function of several parameters, including feed quality and level of permeate yield. With our specialists we will enable you to select the correct system for your product and processing requirements.

MMS enable a process from the conceptual phase to be developed, designed, constructed, installed and implemented by our customers, *successfully.*



| MMS System Type | Feed capacity (m ³ /h) | kW | |
|-------------------|-----------------------------------|-----|--|
| SwissFlow MF 575 | 5 - 7.5 | 60 | |
| SwissFlow MF 1012 | 10 - 12 | 90 | |
| SwissFlow MF 1517 | 15 - 17 | 120 | |
| SwissFlow MF 2024 | 20 - 24 | 150 | |

Other Dairy Applications

- Additional MMS Membrane Equipment
- Ultrafiltration for skim milk protein concentration
- Ultrafiltration for whole milk concentration
- Reverse Osmosis for milk concentration
- ESL pasteurizer system

- Whey & Lactose concentration
- Milk protein concentration
- Whey protein concentration
- Whole milk concentration
- Carbohydrate fractionation
- Lactose Hydrolysis

In-line whey protein denaturation

