

Reverse osmosis systems enable the concentration of whey or lactose up to 18% total solids at low energy requirements reducing waste streams in cheese factories.

The **SwissFlow** RO systems from **MMS** are proven and tested systems for the concentration of whey and lactose.



The **MMS Swissflow** RO systems enable the reduction of high BOD waste streams, by producing clean water and a concentrated whey/lactose stream for animal feed. The concentrate whey/lactose reduces whey volumes by 4 fold, resulting in a substantial reduction in transportation costs.

The System options allows the design of the RO system to best fit into your infrastructure and workflow.



Benefits

- Transforms waste into animal feed
- Reduces waste streams
- Reduces transportation costs
- Produces clean water
- Low energy requirements

Features

- Fully automated systems
- Supported by specialists
- CIP system included
- Complete solutions including tanks, pasteurizer, etc

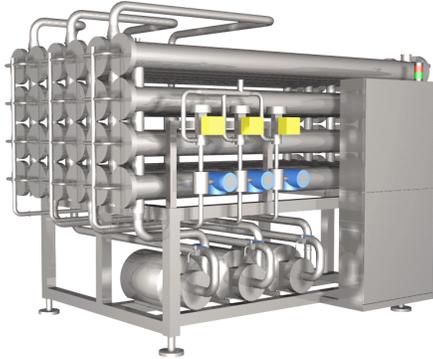
Options

- On-line control of total solids
- On-line pH adjustment
- Remote access for system support and rapid troubleshooting
- CIP liquid heating
- Additional polishing step of permeate
- Direct injection of peroxide
- Re-use of permeate for cleaning
- Scalable for 30% more capacity



MMS produce a range of **SwissFlow** RO systems capable of handling feed rates from 1'000 – 20'000 l/h. The capacity of the system is a function of several parameters, including feed concentration, level of retentate concentration and operating temperature. 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	Capacity (l/h) (12% TS)	Capacity (l/h) (15% TS)	Capacity (l/h) (18% TS)
SwissFlow RO-100	2100	1250	850
SwissFlow RO-200	4300	3250	1700
SwissFlow RO-400	9300	7100	4800
SwissFlow RO-900	22500	18000	12700
SwissFlow RO-1200	30000	24000	17000

Composition	Feed	Retentate	Permeate
Fat %	0.04	0.16	0
Protein %	0.45	1.81	0.0
Lactose %	3.5	13.9	0.06
Salt %	0.6	2.35	0.02
TS %	5.41	18.0	0.09

- Other Dairy Applications:**
- Whey protein concentration
 - Whey sterilisation
 - Skimmed milk sterilisation
 - Skimmed milk concentration
 - Whole milk concentration
 - Carbohydrate fractionation
 - Lactose Hydrolysis