

Ultrafiltration (UF) systems enable the selective concentration of whey protein up to 25% total solids and purities up to 82%.

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



The **MMS SwissFlow** UF systems enables the conversion of whey into higher value whey protein concentrates. The systems are designed to concentrate whey up to 25% TS, allowing for WPC 40 without diafiltration.

Additional **MMS** Whey Equipment

- Microfiltration for whey sterilisation prior to UF
- In-line denaturing of whey protein concentrates for ricotta production
- In-line denaturing and subsequent conditioning for WPC re-introduction into yogurt or cheese

Benefits

- Transforms waste into product
- Allows user to re-use whey proteins in existing product lines
- Reduces transportation costs
- Produces filtered lactose permeate
- Low energy requirements

Features

- Fully automated systems
- Supported by specialists
- CIP system included
- Complete solutions including tanks, pasteurizer, post and pre-treatment

Options

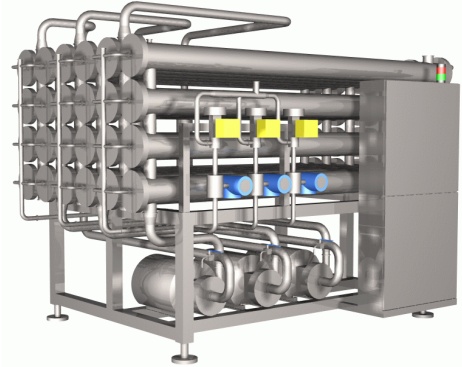
- Diafiltration for higher WPC purity
- Pre-treatment of whey with microfiltration
- On-line control of total solids
- On-line pH adjustment
- Remote access for system support and rapid troubleshooting
- CIP liquid heating
- Additional polishing step of permeate
- Scalable for more capacity



MMS produce a range of **SwissFlow** UF systems capable of handling feed rates from 1'000 – 25'000 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*.

The system options allows you to design the UF system to best fit into your infrastructure and workflow.



MMS System Type	Feed Capacity (l/h)	WPC 25 (l/h)	WPC 65 (l/h)	kW
SwissFlow UF-300	5000	1667	165	15
SwissFlow UF-450	7500	2500	250	20
SwissFlow UF-600	10000	3330	333	22
SwissFlow UF-900	15000	5000	500	28
SwissFlow UF-1500	25000	8300	830	50

Composition	Feed	WPC 25	WPC 65
Fat %	0.04	0.14	1.49
Protein %	0.64	1.88	18.62
Lactose %	4.21	4.3	5.55
Salt %	0.7	0.8	2.11
Total Solids %	5.55	7.12	27.8

Other Dairy Applications

- Whey & Lactose concentration
- Whey sterilisation
- Skimmed milk sterilisation
- Whole milk concentration
- Carbohydrate fractionation
- Lactose Hydrolysis

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