

# SW25 System

*Tools enabling Innovation*

## Membrane Solutions for the Pilot Plant

### Pilot Membrane System

The MMS SW25 System is an easy to use pilot membrane device for microfiltration, ultrafiltration, nanofiltration and reverse osmosis operations.

Applications such as fractionation, purification and concentration of molecules can be tested.

The pilot system SW25 can be equipped with different types of modules for test applications up to 40 bar.

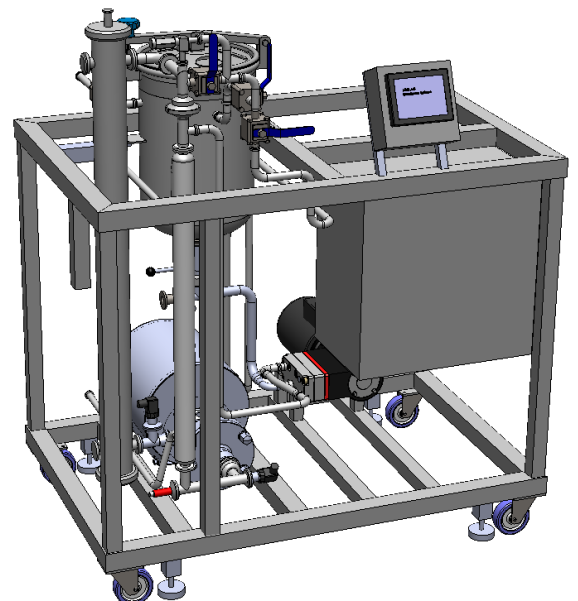
### Key Features

- Batch operation mode
- Speed control of pressure & circulation pumps for variable membrane crossflow velocity
- High operating pressures
- Testing of spiral wound, ceramic, hollow fibre and tubular elements (wide range of membranes available)
- Multitube heat exchanger for temperature regulation
- HMI with touch screen and data logging

### Further Information

MMS AG Membrane Systems  
Im Grossherweg 11  
8902 Urdorf  
Switzerland

T: +41 44 735 59 00  
F: +41 44 735 59 01  
info@mmsx.com  
www.mmsx.com



# SW25 System

*Tools enabling Innovation*

## Applications

### Food & Extract Sector

- Protein fractionation & concentration
- Extract fractionation & concentration
- Hydrolysate fractionation & concentration
- Sugar fractionation & concentration
- De-alcoholization of beer and wine
- Soya milk de-bittering

### Bio-Pharmaceutical Sector

- Fermentation broth clarification
- Enzyme & protein concentration
- Peptide concentration & de-salting
- API purification & concentration
- Oligosaccharide purification & concentration
- Solvent recovery or exchange

### Natural Oils Sector

- De-waxing
- De-colourization
- Purification
- Concentration
- Oil/water separation

### Aroma and Colorant Sector

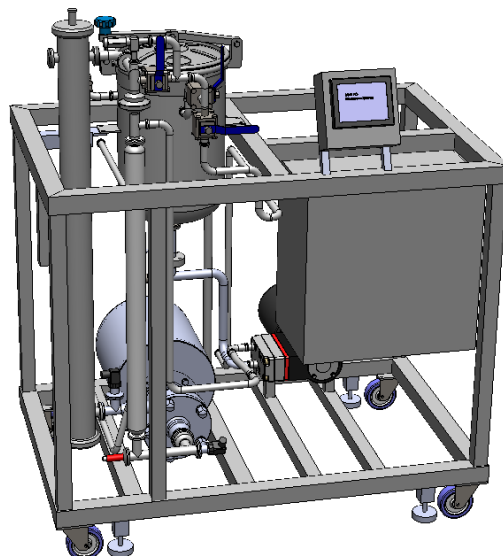
- Herbal extract fractionation & concentration
- Natural colour purification & concentration
- Aroma sterilization
- Aroma concentration
- Evaporator condensate treatment

### Chemical Sector

- Acid/caustic recovery
- Catalyst separation
- Solvent exchange & recovery
- Polymer purification & concentration
- Condensate water purification

### Biofuels Sector

- Organic acid clarification & purification
- Organic acid concentration
- Sugar clarification & concentration
- Ethanol purification
- Condensate water recovery

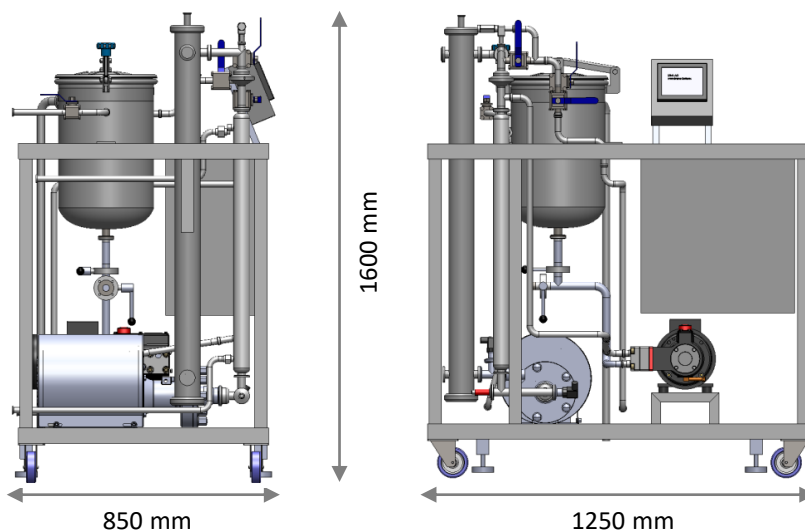


# SW25 System

*Tools enabling Innovation*

## Specifications

Membrane type	Spiral wound 2540 module, other membrane types available
Membrane area	approx. 1.8 – 2.2 m <sup>2</sup> per spiral module
Membranes available	See Options
Heat exchanger	0.1 m <sup>2</sup>
Feed specifications	Liquids, particle size below 50 – 100 µm
Feed tank volume	30 l
System dead volume	4 - 6 l (depending on configuration)
Working pressure	3 - 40 bar
Working temperature	5 - 80 °C (polystat required, not included), temperature limited by membrane
Cross-flow	6000 l/h
Installed power	approx. 3 kW (400/50Hz)
Space requirement	1250 x 850 x 1600 mm (L x W x H)
Weight	250 kg
Frame	Stainless steel (304), on wheels
Tubing	All tubing and fittings of material 316L
Seals & O-Rings	EPDM or PTFE
Components	All components in contact with product are made of 316L if not otherwise stated
Mode of operation	Manual, with alarms
Instruments	2 x Pressure transducers (0 – 50 bar) 1 x Temperature transducer (0 – 100 °C) 1 x Flow meter (magnetic), on permeate side
HMI	Touch panel for process control



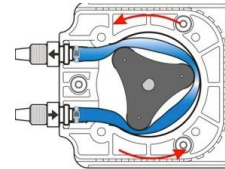
# SW25 System

*Tools enabling Innovation*

## Options

### Diafiltration Kit

A peristaltic pump, integrated into the control unit, can be used for continuous diafiltration process.



### Feed & Bleed Kit

The system can be used in continuous operation mode.

### Solvent Module Kit

A housing suitable for the solvent stable module is available. The seals, O-rings and membranes for pump will be delivered in solvent stable polymer.



### Purged Tank Kit

The process tank is modified to allow for nitrogen purging operations.



### High Pressure Kit - PN60

System components allow for an operating pressure up to 60 bar.

### Different Modules

The system is equipped with a housing for one spiral wound module 2540/2538. Other modules types can be installed such as hollow fibre, ceramic, tubular or flat cell.



- SW** Spiral wound modules 2540/2538
- HF** Hollow fibre modules 3"
- Ceram** Ceramic 25 mm elements
- Tub** Tubular modules (on request)
- Flat Cell** Flat sheet membranes

