

# Membrane Solutions for the Lab

*Tools enabling Innovation*

**MMS**  
Membrane Systems



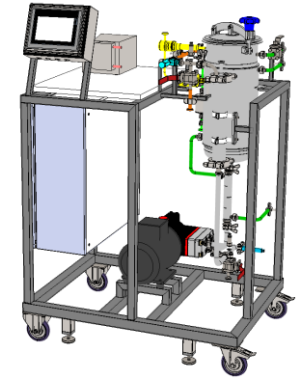
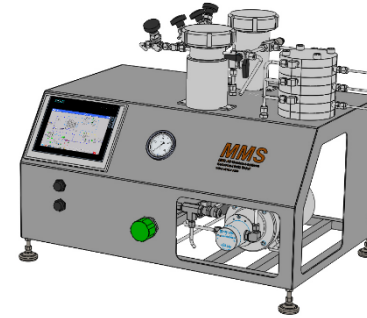
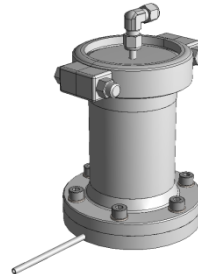
FS: Flat sheet

SW: Spiral wound

Cer: Ceramic

HF: Hollow fibre

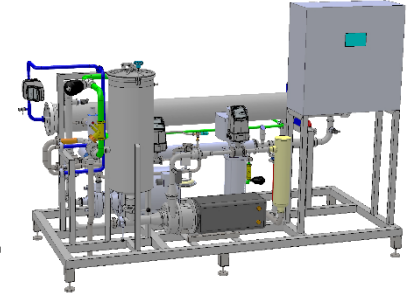
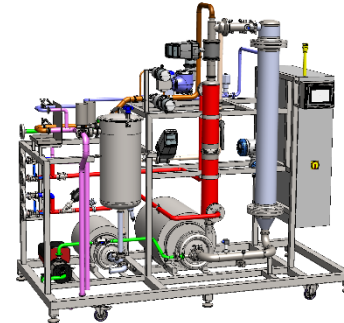
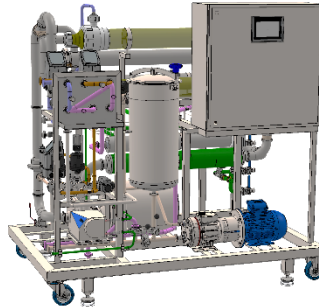
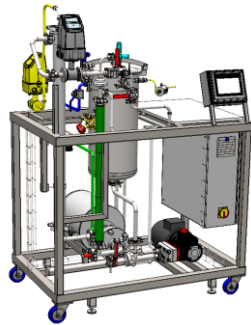
Tub: Tubular



System	Mem HPLC	Mem Tester	Triple System	SW18
<b>Operation mode</b>	Batch	Batch	Batch	Batch
<b>Membrane type</b>	FS	FS	FS	SW, optional Cer/HF/Tub/FS
<b>Feed volume</b>	50 – 300 ml	50 – 300 ml	200 – 800 ml	2 – 20 l
<b>Dead volume</b>	5 ml	10 ml	50 ml	0.8 – 1.0 l
<b>Pressure rating</b>	40 bar (60 bar optional)	40 bar	40 bar (60 bar optional)	40 bar (60 bar optional)
<b>Pressure Source</b>	HPLC pump	Compressed N <sub>2</sub>	Compressed N <sub>2</sub>	Pressure/circulation pump
<b>Crossflow source</b>	HPLC pump	Magnetic stirrer	Circulation pump	Pressure/circulation pump
<b>Heat exchanger</b>	n/a (external tank)	n/a	Tank with jacket	Tank with jacket & multitube
<b>Diafiltration</b>	n/a (only manual)	n/a (only manual)	Optional with N <sub>2</sub> and DF tank	Optional with DF pump
<b>Data logging</b>	n/a	n/a	SD card or USB	SD card or USB

# Membrane Solutions for the Pilot Plant

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System	SW25	SW40	HFC7 (low pressure)	SW80
<b>Operation mode</b>	Batch, optional continuous	Batch, optional continuous	Batch, optional continuous	Batch, optional continuous
<b>Automation</b>	Manual valve/pump control, optional semi-automatic	Manual valve/pump control, optional semi-automatic	Semi-automatic	Semi-automatic
<b>Membrane type</b>	SW, optional Cer/HF/Tub	SW, optional Cer/HF/Tub	Cer/HF, optional SW	SW, optional Cer/HF/Tub
<b>Feed volume</b>	20 – 200 l	200 – 1 000 l	200 – 1 000 l	500 – 10000 l
<b>Dead volume</b>	3 – 5 l	15 – 40 l	20 – 40 l	20 – 60 l
<b>Pressure rating</b>	40 bar (60 bar optional)	40 bar (60 bar optional)	6 bar	40 bar (60 bar optional)
<b>Pressure source</b>	Pressure pump	Pressure pump	Pressure pump	Pressure pump
<b>Crossflow source</b>	Circulation pump	Circulation pump	Circulation pump	Circulation pump
<b>Heat exchanger</b>	Multitube + on/off valve	Multitube + on/off valve	Multitube + on/off valve	Multitube + on/off valve
<b>Auto. diafiltration</b>	Optional with DF pump	Optional with DF pump	Optional with DF pump	Optional with DF pump
<b>Data logging</b>	SD card or USB	SD card or USB	SD card or USB	SD card or USB