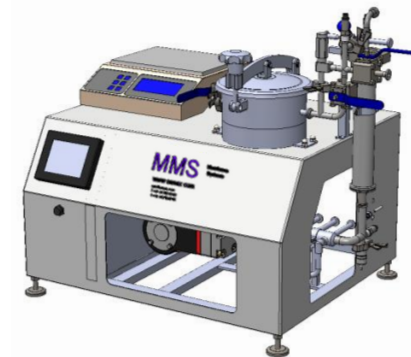


# Membrane Solutions for the Laboratory

*Tools enabling Innovation*

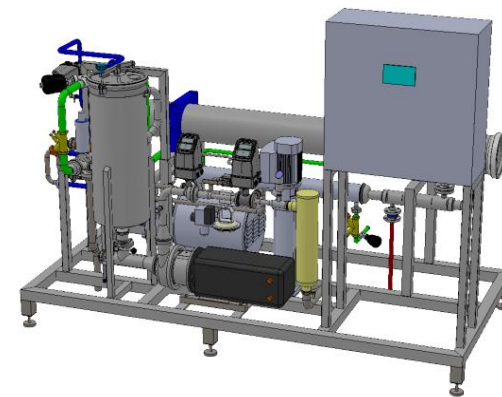
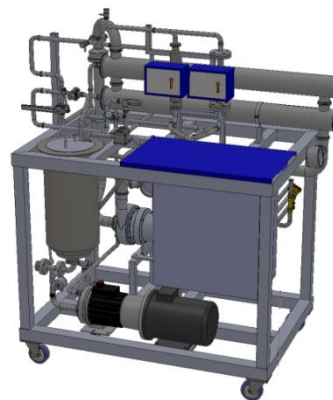
**MMS**  
Membrane Systems



System	Mem HPLC	Mem Tester	Triple System	SW18
<b>Membrane and Module Types</b>	Polymer (flat sheet disc)	Polymer (flat sheet disc) Ceramic (disc)	Polymer (flat sheet disc) Ceramic (disc)	Spiral wound modules 1812 Hollow fibre modules 1" Ceramic elements Ø 10 mm Tubular on request
<b>Membrane Area</b>	28 cm <sup>2</sup>	28 cm <sup>2</sup>	28 – 84 cm <sup>2</sup>	0.3 m <sup>2</sup> (spiral wound)
<b>Feed Volume</b>	50 – 300 ml	50 – 300 ml	200 – 700 ml	2 – 20 l
<b>Dead Volume</b>	5 ml	10 ml	50 ml	0.5 – 0.8 l
<b>Pressure Rating</b>	40 bar (60 bar optional)	40 bar (60 bar optional)	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>Key Features</b>	<ul style="list-style-type: none"> <li>➤ Plugs into any HPLC device</li> <li>➤ Crossflow filtration unit</li> <li>➤ Wide range of membranes</li> </ul>	<ul style="list-style-type: none"> <li>➤ Crossflow by magnetic stirrer</li> <li>➤ Unique design for low volume operation</li> <li>➤ Wide range of membranes</li> </ul>	<ul style="list-style-type: none"> <li>➤ HMI &amp; data logging</li> <li>➤ Rapid screening of 1 – 3 membranes simultaneously</li> <li>➤ Speed control for variable crossflow velocity</li> <li>➤ Jacketed tank</li> </ul>	<ul style="list-style-type: none"> <li>➤ HMI &amp; data logging</li> <li>➤ Speed control for variable crossflow velocity</li> <li>➤ Multitube heat exchanger</li> <li>➤ For all membrane types</li> </ul>

# Membrane Solutions for the Pilot Plant

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System	SW25	SW40	SW80
<b>Membrane and Module Types</b>	Spiral wound modules 2540 / 2538 Hollow fibre modules 3" Ceramic elements Ø 25 mm Tubular modules on request	Spiral wound modules 3840 / 3838 Hollow fibre modules 4 – 6" Ceramic – various modules / elements Tubular modules on request	Spiral wound modules 8038 Hollow fibre modules 6" Ceramic – various modules / elements Tubular modules on request
<b>Membrane Area</b>	1.7 – 2.2 m <sup>2</sup> (spiral wound)	3.5 – 7 m <sup>2</sup> (spiral wound)	16 – 34 m <sup>2</sup> (spiral wound)
<b>Feed Volume</b>	10 – 100 l	200 – 1 000 l	500 – 10 000 l
<b>Dead Volume</b>	3 – 4 l	12 – 15 l	60 – 80 l
<b>Pressure Rating</b>	40 bar (60 bar optional)	40 bar (60 bar optional)	40 bar (60 bar optional)
<b>Pressure Source</b>	High pressure pump	High pressure pump	High pressure pump
<b>Crossflow Source</b>	Circulation pump	Circulation pump	Circulation pump
<b>Key Features</b>	<ul style="list-style-type: none"> <li>➤ HMI &amp; data logging</li> <li>➤ Speed control for variable crossflow velocity</li> <li>➤ Multitube heat exchanger</li> <li>➤ For all membrane types</li> </ul>	<ul style="list-style-type: none"> <li>➤ HMI &amp; data logging</li> <li>➤ Speed control for variable crossflow velocity</li> <li>➤ Multitube heat exchanger</li> <li>➤ For all membrane types</li> </ul>	<ul style="list-style-type: none"> <li>➤ HMI &amp; data logging</li> <li>➤ Speed control for variable crossflow velocity</li> <li>➤ Multitube heat exchanger</li> <li>➤ For all membrane types</li> <li>➤ Suitable for continuous production</li> </ul>