

1 Overview – MMS Laboratory System

The MMS MemHPLC is a laboratory membrane screening device for *microfiltration*, *ultrafiltration*, *nanofiltration* and *reverse osmosis* operations. The unit is a high pressure stainless membrane cell unit which can be operated with an HPLC pump.

The compact cross flow membrane system can be operated at a wide range of pressures up to 40 bar (optional 60 bar). The driving pressure is delivered by a HPLC pump which should be supplied by the customer.

A basic setup is shown below in Figure 1.

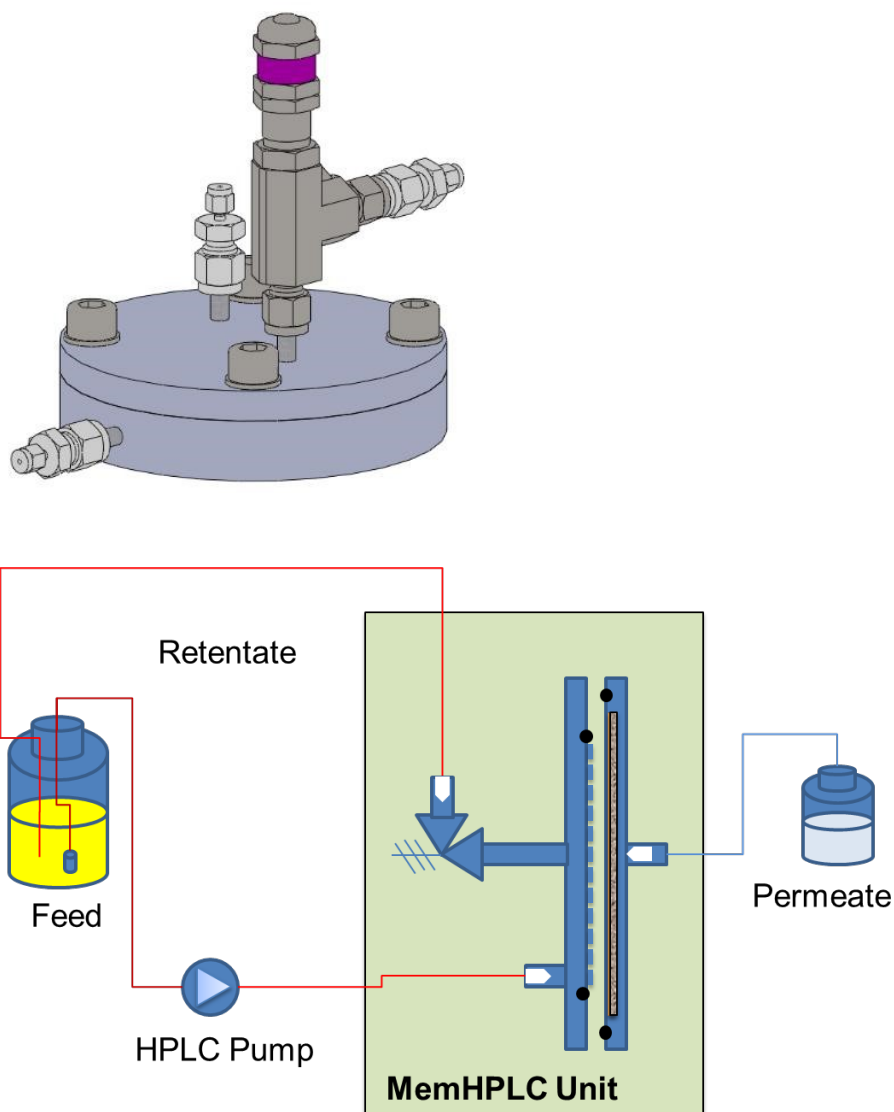


Figure 1. Schematic of MemHPLC Unit set-up

2 Unit Specifications

HPLC Cell Unit	1 x HPLC Cell with permeate spacer 1 x pressure holding valve
Membrane area	~28 cm ²
Membrane type	Flatsheet membranes from any membrane supplier
System dead volume	<5 mL
Permeate flowrate	F _p = 0.5 – 2.5 ml/min (for flux values of 10-50 Lm ⁻² h ⁻¹)
Working pressure	0.3 – 40 bar Driving pressure created by HPLC pump from customer side
Working temperature	5 – 80°C
Tubing	All pipes and fittings of 316 L if not otherwise stated
Gaskets, Seals & O-rings	FPM
Space requirement	200 x 200 x 200 (L x W x H)
Weight	approx. 2 kg
Documentation	All supplied documentation will be in English or German <ul style="list-style-type: none"> • Operating manual for Cell