

MemTester

Tools enabling Innovation

Membrane solutions for the laboratory

Membrane Test Cell

The MemTester unit allows for quick and simple testing of all membrane processes such as Microfiltration, Ultrafiltration, Nanofiltration and Reverse Osmosis applications.

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

The MemTester is an ideal laboratory tool for screening membranes from low to high pressure applications.

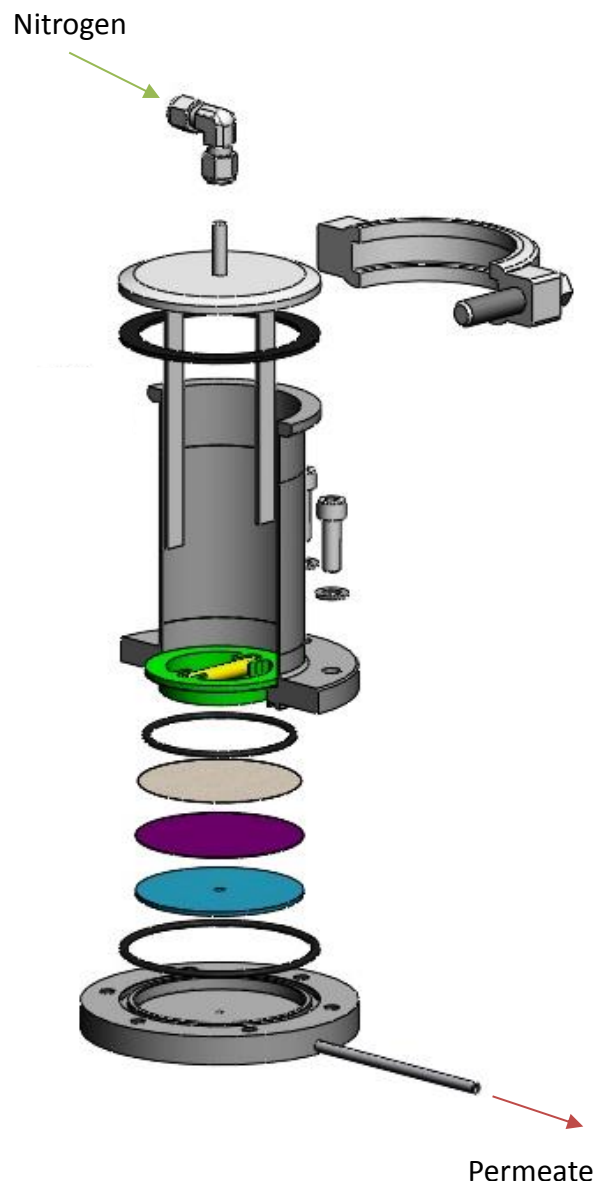
Key Features

- Crossflow is created by magnetic stirrer
- Unique stirrer design for low volume operation
- High operating pressures
- Wide range of membranes available
- Allows for testing of ceramic membranes

Further Information

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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

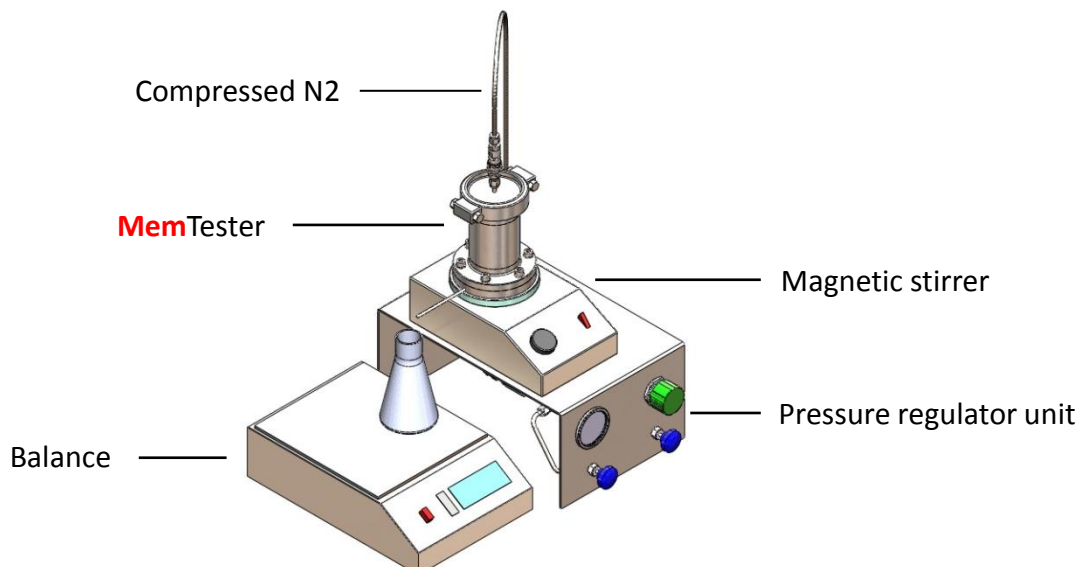
- Herbal extract fractionation & concentration
- Natural colour purification & concentration
- Aroma sterilization
- Aroma concentration
- Evaporator condensate treatment

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

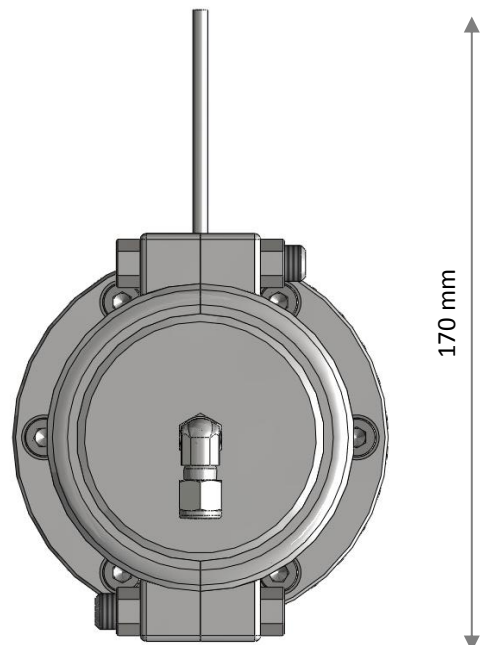
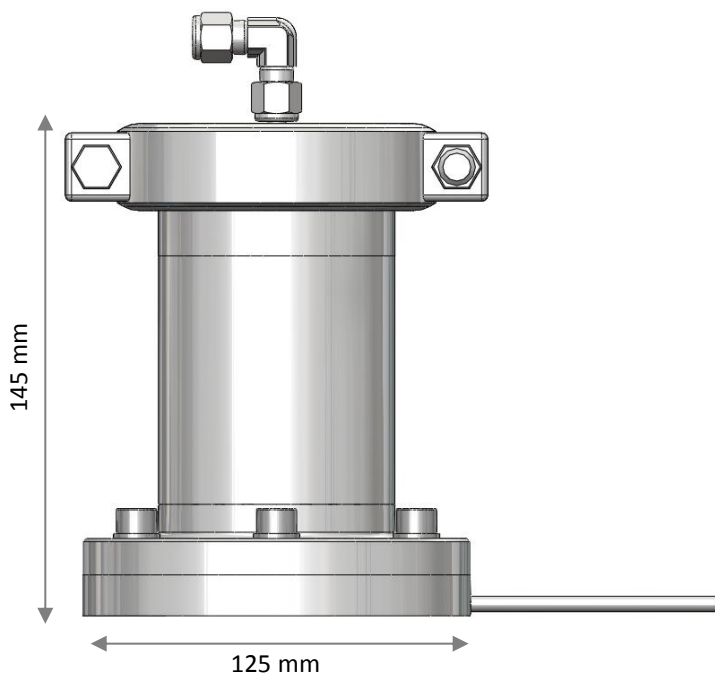
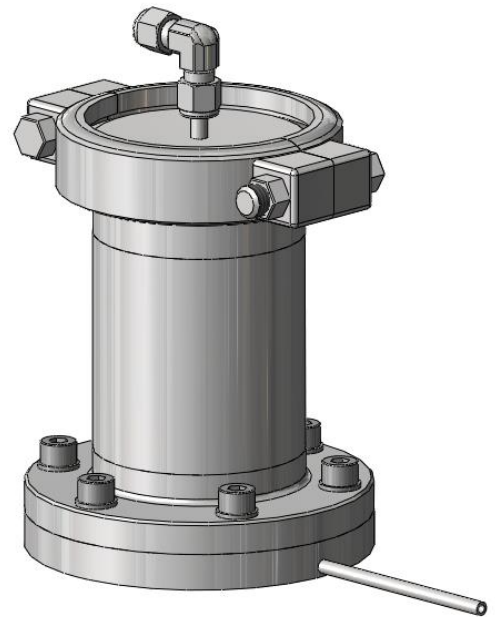


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Specifications

Dimensions (L x W x H)	130 x 130 x 145 (mm)
Weight	~1 kg
Membrane area	28 cm ²
Channel diameter	2 mm equivalent
Crossflow velocity	0.5 – 1 m/s, equivalent
Cell body	Stainless steel 316L
Cell hold up volume	10 ml
Permeate spacer	Stainless steel 316L
O-rings	EPDM (others on request)
Pressure rating	PN40, (PN64 on request)
Temperature rating	90°C



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Options

Balance

A balance with a range of 0-1000 g and resolution of 0.1 g can be added as an option for permeate flow measurement



Magnetic Stirrer

A magnetic stirrer with 100 W power can be added as an option



Pressure regulator Unit

A compressed N₂ regulator unit allows for easy and safe regulation of the operating pressure for the MemTester. The regulator unit includes a safety valve, inlet and outlet valves



Additional Memtester units

Additional MemTester units can be connected to the same pressure regulator.



Membrane Sheets

Microfiltration	0.05, 0.1, 0.2, 0.45 µm
Ultrafiltration	2.5 kDa, 3.5 kDa, 5 kDa, 10 kDa, 20 kDa, 50 kDa, 100kDa
Nanofiltration	150 Da, 300 Da, 1000 Da
Reverse Osmosis	90%, 93% and 99% NaCl rejection
Nanofiltration - Solvent	150 Da, 200 Da, 300 Da
Ceramic - Microfiltration	0.1, 0.2, 0.45, 0.8, 1.4 µm
Ceramic - Ultrafiltration	15 kDa, 50kDa
Ceramic - Nanofiltration	1000 Da, 700Da, 500 Da

