

Laboratory Membrane Test Unit (LSta05)



DIMENSION

Dimensions	1000 x 1200 x 1800 mm (L x B x H)
Weight	approx. 200 kg
Material (wetted parts)	PVDF, FEP, PP and stainless steel (group V4A)

ELECTRICAL DATAN

Connection for power supply	400 V / 50 Hz / 3-phase / 16 A-CEE
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DATA

Storage tank	approx. 25 l (group V4A, heatable via double jacket)
Pressure tube for	tube- / ceramic-membrane
Field of use	MF/UF
Temperature range	up to 55 °C at 5 bar up to 70 °C (pressureless)
Pressure range	0,2 – 5 bar
Volume flow (feed)	200 – 2400 l/h
Mounting device for	different module geometries and/or serial connection of up to four modules
PLC controlled backwash unit	filtrate backwashing via backwash unit

Feed & Bleed

discharge: via controlled valve (manual)
refill: automated via level sensor

System control via PLC

Trockenlauf- und Sicherheitsabschaltung (p, T)
Regelung auf Druck
Regelung auf Volumenstrom

The system control via PLC guarantees the performance of long-term test and an independent and safe operation even without a data logging system.

(Die angegebenen technischen Daten sind Maximalwerte und treffen nicht alle gleichzeitig zu!)

SENSORS	MESURING RANGE	QUANTITY
Pressure	0 - 6 bar	(2 pieces)
Volume flow (feed) (magnetic-inductive flow meter)	240 - 6000 l/h Minimum conductivity 10 μ S/cm (20 μ S/cm for purified water)	(1 piece)
Volume flow (permeate) (magnetic-inductive flow meter)	3,6 - 108 l/h Minimum conductivity 5 μ S/cm (20 μ S/cm for purified water)	(1 piece)
Level sensor (im Vorlagebehälter)	guided microwave	(1 piece)
Temperature (PT 100)	0 - 100 °C	(1 piece)

FIELD OF USE

Experiments to analyze membrane sections

Investigation of fouling behavior over the entire membrane length

Investigation of cleanability over the entire membrane length

Experiments to compare different membrane materials and/or module geometries

Long-term test to investigate the membrane long-term behavior

Feed & Bleed experiments

Schematic view of the Laboratory Membrane Test Unit (LSta05)

