

LSta80-PLC



DIMENSIONS

Dimensions*	1300 x 600 x 800 mm (L x B x H)
Weight	approx. 200 kg
Material (wetted parts)	Stainless steel (group 316), PTFE, PVDF, PEEK and FEP
IP protection class	IP 54

ELEKTRICAL DATA

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

Storage tank	approx. 7,5 l (tempering via double jacket)
Test-cell for flat sheet membranes	85 cm ² (stackable up to 3 membranes)
Temperature range	up to 60 °C at 80 bar
Pressure range	up to 80 bar
Flow rate (feed)	25 - 100 l/h at max. 80 bar membrane pump with EPDM membrane
Pulsation damping	Dynamic; over entire pressure range
Dead volume	approx. 220 ml
Feed & Bleed peristaltic pumps**	Refill pump: max. 15 l/h Discharge pump: max. 10 l/h adjustable
pH stabilization pump**	max. 0,9 l/h adjustable (peristaltic pump)

System control via PLC
(type Simens S7 / Profinet)

Safety shut-offs and dry run protection (p,T)
Constant volume flow control (concentrate)
Constant pressure control
Constant temperature control

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

(The specified technical data are maximum values. They do not coincide all at the same time!)

OPTIONS

Extension test-cell (up to three membranes)

Permeate flow measurement

Conductivity measurement for concentrate

Data acquisition

pH-value measurement for concentrate

MF / UF – converter kit***

Extension to Dead-End-mode

Mobile rack

PLC extension package

e.g. set-up of 10 automated, freely adjustable test steps
e.g. Feed & Bleed mode
e.g. pH-stabilization

SENSORS

MEASURING RANGE

QUANTITY

Pressure 0 - 100 bar (3 pieces)

Volume flow (feed)
(magnetic-inductive flow-meter) 25 – 100 l/h at 80 bar
Minimum conductivity 5µS/cm (1 piece)
(20 µS/cm for purified water)

Volume flow (permeate)**
(magnetic-inductive flow-meter) 25 – 100 l/h at 80 bar
Minimum conductivity 5µS/cm (1 piece)
(20 µS/cm for purified water)

Level control
(in storage tank) Guided microwave (1 piece)

Temperature
(PT 100) 0 - 100 °C
Temperature compensation (1 piece)
included

Conductivity measurement in concentrate** 1 µS/cm – 2 S/cm (1 piece)

pH-measurement concentrate**

pH-glas electrode in PVDF flow through vessel (1 piece)

FILED OF USE

Experiments with different membrane materials and / or spacer

Experiments for optimization of process parameters in industrial applications

Long-term tests to examine the membranes long-term behavior

Concentration experiments

Cleanability experiments of membranes

* including control cabinet: 600 x 400 x 800 mm (L x B x H)

**optional available

*** set of pressure sensors and pressure regulation valve (with quick coupling) are included

Schematic view of LSta80-PLC

