



MZE SMART membrane cell electrolysis system with Marathon technology

MZE 250 SMART

Art. no.: 0546-028-00



Description

Membrane cell electrolysis system with Marathon technology and demand-based control.

Constant operation of the system at optimum efficiency due to continuous self-optimization.

- Constant product concentration during the operating time.
- Reduction of energy consumption by up to 15%
- System-friendly operation due to a reduction of startup and shutdown processes
- Lower product temperatures on average, resulting in a considerably higher service life of the system

Five year full warranty on system, provided dinosolit salt is used and a dinotec maintenance contract is signed.

The patented process for the return of unsaturated brine (based on the principle of industrial chlor-alkali electrolysis) offers enormous advantages:

- No carryover of salt into the product:
- Operation that makes efficient use of energy and raw materials
- Ratio chloride/chlorine: approx. 1/1.4

Compact design on stainless steel frame for producing a highly active, long-term stable and fresh disinfection solution based on hypochlorite. Peak demand periods are covered by a product storage tank.

Control and monitoring of operating parameters via dinotecNET+ system with central 5.7 colour touch screen. Intra-system archiving of trend curves and event logs.

Increased operational safety due to optional remote access and remote monitoring.

Query and remote control of all important operating parameters via Internet or wireless connection.

Process control:

- Piping mounted on front side for direct visual monitoring
- Integrated flow monitoring and control of brine, softened water and dilution water
- pH control of return brine
- Highly efficient gas separator
- Hydrostatic level measurement in product tank

Control technology:

- Based on dinotecNET+ with 5.7" touch screen
- Intelligent control and optimization system
- Query, regulation, control and monitoring of all operating parameters
- BUS technology with two-wire connection
- Clear text display of all operating conditions and control states
- pH control of return brine
- Chlorine gas monitoring (optional)
- Level sensor for hydrostatic level measurement in product tank with on-site display

Notes:

- Free access for loading the salt dissolving tank to be provided
- Process water according to drinking water regulations with the following restrictions:
Fe <=0.1 mg/l
Mn <=0.05 mg/l
SiO2 <=5 mg/l
- Backflow preventer, air valve or pipe separator: Local public utilities can stipulate the installation of a backflow preventer, air valve or pipe separator in front of the fresh water connection for the membrane cell electrolysis system.

Technical data**System-specific connections:**

Connected load	2.0kVA, 1 x 230V/50Hz
Fresh water consumption	approx. 20 l/h
Fresh water supply pressure	mind. 2 bar, max. 6 bar
Fresh water temperature	10°C to 20°C

Process technology

Production output (depending on local operating conditions)	<ul style="list-style-type: none"> • approx. 249g active chlorine/h, • max. 5.9 kg/day
Product concentration	about 1 to 1.5% - corresponds to water hazard class 1
Energy demand	approx. 3.4 kg/1 kg chlorine
Salt demand	approx. 1.7 kg/1 kg chlorine
Hydrogen pipe	min. d50 x 4.3 – continuously rising
Mounting frame	<ul style="list-style-type: none"> • high-alloy stainless steel 1.4301 • additional special passivation of profile surface • Frame for wall mounting
Length of pipe to product tank	< 5 m
Dimensions (wxhxd):	1000 x 1150 x 460 mm
Mass/weight	approx. 70 kg

Power module

(integrated on mounting plate)	
Dimensions (wxhxd):	500 x 300 x 50 mm
Mass/weight	approx. 85 kg

Specifications for installation room

Supply air port for installation room:	min. 800 cm ²
Permissible room temperature	+10 to +30 °C
Required ceiling height	min. 2.3 m

Application

For an efficient production of a low-chloride, highly concentrated chlorine solution with long-term stability.

Quality

Operating salt to DIN 973.

To avoid product contamination, the tablet salt used for filling the salt dissolving tank of the electrolyser and the water softener must meet the following specifications:

NaCl	min. 99.9%
Water-insoluble particles	< 0.01 %
Bromide	< 75mg/kg
Hardness components Ca, Mg in total (calculated as Ca)	< 50mg/kg
Sulphate	< 400mg/kg
Iron	< 2mg/kg
Manganese	< 1mg/kg

Supplementary information

Preliminary works by customer

- Cable laying
- Electrical mains connection
- Water supply
- Sewer connection
- Installation place
- Proper ventilation of installation room
- Heat load to be observed; if necessary cooling measures are to be taken to ensure the room temperature is permanently below the maximum
- Free drain (without counter pressure) of NaOCl and unsaturated brine into the respective tanks must be ensured.
- Exhaust air pipe for hydrogen to be laid to enhance flow (e.g. pipe elbows - no angles); must be routed to the outside

Accessories

[3041-011-90](#)

Salt saturation tank 200 l
with sieve tray for tablet salt, cover incl. salt chute

[3041-051-90](#)

Salt saturation tank 500 l
with sieve tray for tablet salt, material: PE

[3041-056-00](#)

Salt chute for 500l tank
to be placed on the salt saturation tank

[3041-059-00](#)

Salt chute for 1000/2000l tank
to be placed on the salt saturation tank

[3041-130-90](#)

Salt saturation tank 1000 l
with sieve tray for tablet salt, material: PE

[3041-200-00](#)

Salt saturation tank 2000 l
with sieve tray for tablet salt, material: PE

[3044-011-90](#)

Product tank 200l
PE, discharge nozzle DN20 (recommended for MZE
250)

[3044-014-90](#)

Work tank 1000 l
PE, discharge nozzle DN20
incl. level control LC2, w/o bus cable

[3044-051-90](#)

Product tank 500l
PE, discharge nozzle DN20 (recommended for MZE
500-1000)

[3044-101-90](#)

Product tank 1000l
PE, discharge nozzle DN20 (recommended for MZE
1500-5000)

May also be of interest



[0546-015-01](#)

MZE 125 SMART

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Subject to technical changes. Errors excepted.

Photos of items may be different.

Do you have any questions? Our hotline will be happy to help.

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Simply enjoy the best water!