
Translation of the original instructions

Chlorine dioxide system

EASYZON L 5

EASYZON L 10

EASYZON L 20

EASYZON L 40

EASYZON L 60

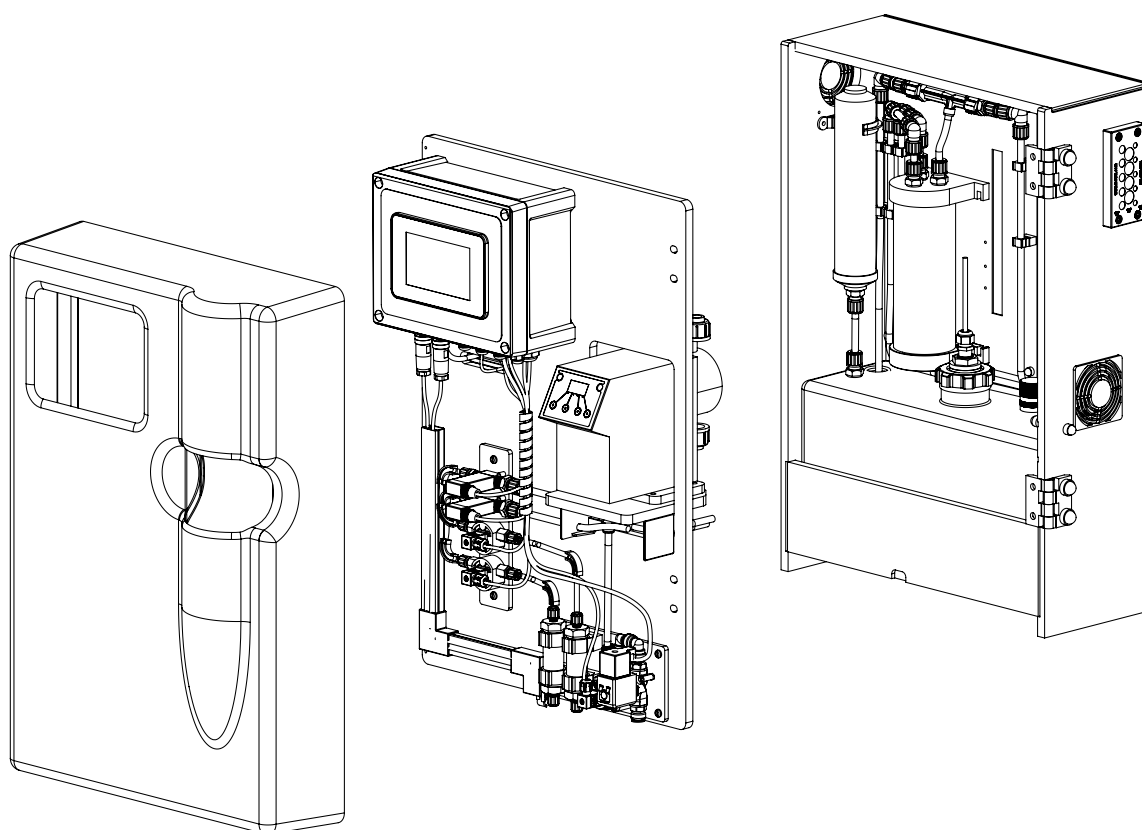


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1 About these operating instructions

This document:

- Is part of the product.
- Describes the safe and correct use of the product in all operating phases.
- Must be read completely before the product is commissioned.
- Must be read and applied by every person tasked with working on the product. This includes: installation, service, maintenance, repairs and transport.
- Must be kept for the duration of the service life of the product.
- Must be passed on to any subsequent owner of the product.

For better readability, these operating instructions sometimes refer to the product as "the system".

1.1 Target groups

Target group	Task
Operator	1. Keep these operating instructions available at the place of use of the product, including for later use. 2. Instruct employees to read and comply with these instructions, especially the safety instructions and warnings. 3. Comply with additional system-related specifications and regulations.
Qualified personnel Trained persons	► Read, observe and follow these operating instructions, in particular the safety instructions and warnings.

Table 1: Target groups and their tasks

1.2 General non-discrimination

For better readability, these operating instructions always use the masculine form when referring to persons. However, all genders are addressed equally.

1.3 Warnings

Warnings are intended to help you recognise risks and avoid negative consequences. They are structured as follows in these operating instructions:

Warning sign **SIGNAL WORD**

Type and source of danger

Consequences of non-compliance

- A safety precaution to be taken to eliminate the hazard.

Fig. 1: Design of warnings

Signal words

These operating instructions use the following signal words to emphasise the severity of possible injuries if the danger is ignored:



DANGER

Imminent danger

Non-compliance can result in death or serious injury.



WARNING

Possible danger

Non-compliance can lead to death or severe injuries.



CAUTION

Potentially hazardous situation

Non-compliance can result in minor injuries.



NOTE

Potentially hazardous situation

Non-compliance can result in damage to property or malfunctions.



INFORMATION

Information or recommendation

Simplifies handling or extends the service life of the product or system.

Warning signs used

These operating instructions use the following warning signs to indicate the type and source of danger:



General hazard



Danger from potentially-explosive substances



Danger of electric shock



Danger from poisonous substances



Risk of machine damage or malfunction

1.4 Action steps

Action steps are structured as follows:

- ✓ This prerequisite must be met before you can start with the action steps.

► Single step

Multiple steps in sequence are structured as follows:

1. First step

2. Second step

↳ Intermediate result of a step

▢ Overall result

1.5 References to intellectual property rights

These operating instructions must be treated confidentially. Only authorised persons should have access to this document. It may only be given to third parties with the written consent of Lutz-Jesco GmbH.

All documents are protected in the sense of the copyright law. It is forbidden to forward on and copy the documents, even in part, as well as to use and communicate their contents, insofar as this is not expressly conceded in writing. Violations are punishable and incur an obligatory payment of damages. Lutz-Jesco GmbH reserves all the rights for the practice of industrial property rights.

1.6 Notes for the operator

These operating instructions are a significant part of the system. The operator must ensure that operating personnel take note of these guidelines.

The operator is responsible for supplementing these operating instructions with any guidelines based on national regulations for health and safety at work and environmental protection, including responsibilities of supervision and consideration of special operational requirements, e.g. with regard to labour organisations, workflows and appointed personnel.

Besides the operating instructions and the obligatory regulations for Health and Safety at Work applicable in the country of use as well as in the place of use, the recognised specialist technical regulations for safe and professional work must also be observed.

The operator of the system is not allowed to make any changes or modifications to the system that could impair its safety. This also applies to the installation and setup of safety devices.

Any replacement parts to be used must meet the technical requirements specified by Lutz-Jesco GmbH. This is always guaranteed in the case of original spare parts. Only employ trained or instructed personnel. Clearly specify the responsibilities of the personnel for operating, servicing and repairing the system.

1.7 Instruction and training course assistance

As the operator, you are obligated to inform and/or instruct the operating personnel about existing provisions of law and accident prevention regulations as well as about existing safety regulations for the system. This includes taking into account the different technical quali-

fications of employees. The operating personnel must have understood the training and it must be ensured that the training is adhered to.

Only in this way can you ensure that your personnel work in a safety conscious and risk aware manner. This should be monitored on a regular basis. Therefore, you as operator should obtain written confirmation of attendance from every employee.

Examples of training topics can be found in this operating instructions. At the end of the operating instructions, you will also find a form to copy for the confirmation of attending the training.

If the operating personnel still require further training after the system has been delivered to the operator, please contact Lutz-Jesco GmbH regarding the agreement conditions.

1.8 Example of training course topics

For safety:

- Accident prevention regulations
- General safety precautions
- Action to be taken in an emergency
- Safety precautions for operating
- Safety devices
- Definition of symbols and signs

For operation:

- How to operate the controls
- Rectifying operating faults
- Understanding fault messages

For maintenance and service instructions:

- Inspecting/testing the system
- Cleaning the system and replacing spare parts

1.9 Cross-references

Cross-references are marked with an arrow.

Example: (→ Fig. 5)

1.10 Latest version

Please find the latest version of these operating instructions at www.lutz-jesco.com.

1.11 Copyright

The content of these operating instructions and the images contained in them are subject to the copyright protection of Lutz-Jesco GmbH.

2 Safety

The following warnings are intended to help you to eliminate the dangers that can arise while handling the product. Risk prevention measures always apply regardless of any specific action.

Safety instructions warning against risks arising from specific activities or situations can be found in the respective sub-sections.



DANGER

Mortal danger from electric shock!

Live parts can inflict fatal injuries.

- ▶ Disconnect the power supply before working on the system.
- ▶ Secure the system to prevent it from being switched on again.



DANGER

Danger of explosion due to ClO_2 gas!

The chemical precursors hydrochloric acid (HCl) and sodium chlorite (NaClO_2) immediately form high quantities of chlorine dioxide gas (ClO_2) when mixed. There is a risk of explosion due to self-decomposition if the concentration in the gas phase becomes too high.

- ▶ NEVER mix the two chemical precursors hydrochloric acid (HCl) and sodium chlorite (NaClO_2), except as part of chlorine dioxide preparation with the EASYZON system.
- ▶ Only use the correct concentration of 9% hydrochloric acid (by weight).
- ▶ Only use the correct concentration of 7.5% sodium chlorite (by weight).



DANGER

Danger to life from poisoning

Mixing sodium chlorite and hydrochloric acid outside the reactor will result in the formation of chlorine dioxide gas. Chlorine dioxide is a very toxic substance if inhaled and very irritant for the eyes, the res-

piratory organs and skin. Prevent the uncontrolled formation and release of chlorine dioxide gas by taking the following safety precautions:

- ▶ Avoid contact between sodium chlorite and hydrochloric acid outside the reactor.
- ▶ Mark clearly all material-conducting parts (e.g. collecting pans, chemical containers, suction lines, hoses, pumps) with a colour. Renew the damaged markings regularly.
- ▶ Prevent the mixing of hydrochloric acid and sodium chlorite outside the controlled processes by strictly separating the chemicals and not swapping suction lines/lances.
- ▶ Install a gas sensor or gas warning device that deactivates the system if chlorine dioxide is detected in the surrounding air.
- ▶ Install an emergency-off switch with which the system can be deactivated from a safe distance. The emergency-off switch should be located outside the room in which the chlorine dioxide system is located. It should be easy to recognise.
- ▶ Always wear sufficient personal protective equipment when in the vicinity of the system.
- ▶ Comply with the safety instructions outlined in the safety data sheets of the chemicals and observe the relevant safety precautions.



WARNING

Risk of release of toxic ClO_2 gas!

Accidental mixing of chemicals and/or careless spillage releases toxic ClO_2 gas.

- ▶ Never pour chemicals from one container into another container.
- ▶ Never use devices and chemicals interchangeably.
- ▶ Refill a precursor day tank with the same precursor canister.



CAUTION

Danger of devices switching on automatically!

You must be aware that the system and the dosing pumps are two separate devices in terms of on-site chlorine dioxide preparation.

- ▶ The EASYZON system operates automatically if the product tank is almost empty.
- ▶ The dosing pumps react automatically to the preparation and process conditions on site, e.g. to the input of the water meter signal and/or the input of the measurement and control system.



CAUTION

System damage due to incorrect maintenance!

Incorrect maintenance can lead to irreversible damage to equipment and the preparation process.

- Observe the planned maintenance intervals for the system and its components.

2.1 Risks due to non-compliance with the safety instructions

Failure to follow the safety instructions may endanger not only persons, but also the environment and the equipment.

The specific consequences can be:

- Failure of important functions of the product and the associated system
- Failure of required maintenance and repair methods
- Danger to persons
- Danger to the environment

2.2 Working in a safety-conscious manner

In addition to the safety instructions specified in these operating instructions, you must comply with additional safety regulations:

- Accident prevention regulations
- Safety and operating provisions
- Environmental protection provisions
- Applicable standards and legislation

2.3 Modifications

Modifications to the product (such as alterations, changes and structural redesign) are not permitted. The operator is liable for damage to property and personal injury caused by any modifications that it makes.

2.4 Warranty

The warranty period begins on the date of the invoice.

The following requirements must be met before you can make a warranty claim:

- The system must be installed and operated in accordance with the information provided in this document.
- Maintenance and repairs must be carried out by trained personnel at the specified intervals.
- Spare parts and maintenance sets are to be supplied by Lutz Jesco GmbH or authorised dealers and operators only.
- The feed water and environmental conditions must comply with the specifications detailed in this document.

Equipment	Warranty period
General	2 years

Equipment	Warranty period
Reactor vessel	3 years

Table 2: Warranty period

2.5 Obligations of the operating company

The operator of the product is obligated to:

- Make these operating instructions easily accessible and keep them close to the system at all times.
- Provide the user with instructions for the safe handling of chlorine dioxide and the associated reagents.
- Comply with all local regulations relating to the installation room, including fire, safety and accident prevention regulations.
- Prohibit any changes to the system and the installation that are not described in this document.
- Instruct users in the operation and basic maintenance of the system.
- Have the system serviced at regular intervals by authorised personnel.
- Provide personal protective equipment to all users of the system.

2.6 Personal protective equipment

Based on the degree of risk and the type of work you are carrying out, you must use corresponding personal protective equipment. Read the Accident Prevention Regulations and the Safety Data Sheets for the dosing media to find out what protective equipment you need.

The following protective equipment is recommended as a minimum:



Eye protection
Protective goggles



Protective clothing
Protective suit,
e.g. PVC apron



Protective gloves
Disposable nitrile/PVC
gloves



Safety shoes
PVC safety boots



Respirator mask

Table 3: Protective equipment required

Wear the protective equipment when performing the following tasks:

- Commissioning
- Work on pressurised dosing devices
- Shut-down
- Remedial and routine maintenance
- Disposal

2.7 Personnel qualification

Any personnel who work on the product must have special knowledge and skills.

Anybody who works with the product must meet the conditions below:

- Personal suitability for the respective activity
- Sufficient qualification for the respective activity
- Training into the handling of the device
- Knowledge of safety equipment and the way this equipment functions
- Knowledge of these operating instructions, particularly the safety instructions and sections relevant for the activity
- Knowledge of fundamental regulations regarding health and safety and accident prevention

All persons must have one of the following minimum qualifications:

- Trained as a specialist to work independently with the product
- Sufficient training to work on the product under the supervision and guidance of a qualified specialist

These operating instructions differentiate between the following user groups:

Qualified personnel

Thanks to their professional training, knowledge, experience and knowledge of the relevant specifications, qualified personnel are able to perform the job allocated to them and recognise and/or eliminate any possible dangers by themselves.

Trained electricians

Due to their professional training, knowledge and experience as well as knowledge of specific standards and provisions, trained electricians are able to do the electrical work assigned to them and to recognise and avoid any potential dangers by themselves.

They are specially trained for their specific working environment and are familiar with relevant standards and provisions.

They must comply with the legally binding regulations on accident prevention.

Trained persons

Trained persons have received training from the operator about the tasks they are to perform and about the dangers stemming from improper behaviour.

Trained persons have attended all trainings offered by the operator.

Qualification	Activities
Specialist staff	• Installation • Hydraulic installation • Commissioning • Shut-down • Troubleshooting • Maintenance • Repairs • Disposal
Trained electricians	• Electrical installation • Elimination of electrical faults • Electrical repairs
Trained persons	• Control • Storage • Transportation

Table 4: Personnel tasks

2.7.1 Personnel tasks

Incorrect handling of the product can cause severe personal injury and damage to property. Therefore, ensure that all work is carried out by qualified personnel only.

The following table shows which qualifications are required for the corresponding activities.

3 Intended use

3.1 Notes on product warranty

Any non-designated use of the product can compromise its function or intended protection. This leads to invalidation of any warranty claims!

Please note that liability is on the side of the user in the following cases:

- The product is operated in a manner that is not consistent with these operating instructions, particularly the safety information, action steps and the intended use.
- People operate the product who are not adequately qualified to carry out their respective activities.
- No original spare parts or accessories of Lutz-Jesco GmbH are used.
- Maintenance and inspection intervals are not adhered to as required or not adhered to at all.
- The device is commissioned before it or the corresponding system has been correctly and completely installed.
- Safety equipment has been bridged, removed or made inoperative in any other way.

3.2 Intended purpose

The chlorine dioxide system is intended for the following purpose: automatic production of a 0.05 to 0.15 wt.% diluted chlorine dioxide solution using sodium chlorite (7.5%), hydrochloric acid (8–10%) and dilution water of drinking water quality. The resulting solution can be used as a disinfectant for a wide range of applications, especially for drinking water and industrial processes.

4 Product description

4.1 Scope of delivery

Carefully check the delivery prior to installation and refer to the delivery note to ensure that the delivery is complete and to check for any transport damage. Contact the supplier and/or carrier regarding any questions concerning the delivery and/or transport damage. Do not operate defective products.

The scope of delivery includes:

- EASYZON L 5 / 10 / 20 / 40 / 60
- Wall mounting kit
- Wall mounting kit for pressure control valve
- Cold water hose 2m, Ø 8mm
- Adapter set for hose
- Connection hose for chemical suction lines (x2)
- Connection set Ø 6/12 mm
- Injection nozzle
- Operating instructions
- Suction set for priming/flushing
- Suction set for pump flushing

4.2 Optional accessories

The following optional accessories can be ordered:

- Rigid suction lance (500 mm)
- Rigid suction lance (1080 mm)
- Modbus RTU module
- Suction collecting pipe for dual pump
- Pulse distributor for water meter
- Suction pressure regulator

4.3 Required accessories

Accessories that are required for installation and are not supplied as standard by Lutz-Jesco GmbH:

- Chemical reagents
- Supply tanks and collecting pans
- Reagent suction lines

4.4 Rating plate

The rating plate clearly identifies the product and provides important information such as the manufacturer, product designation, year of manufacture and technical and safety-relevant data. The rating plate must be kept legible for the duration of the service life of the product.

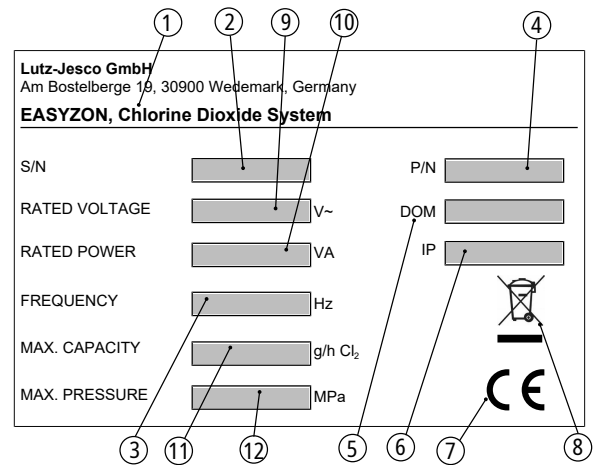


Fig. 2: Rating plate EASYZON

1 Product name	2 Serial number
3 Frequency	4 Part number
5 Production date	6 Protection class
7 Label showing conformity with applicable European directives	8 WEEE label
9 Nominal voltage	10 Rated output
11 Max. capacity	12 Max. pressure

4.5 Design and function

The product is a fully automatic batch system for producing a diluted chlorine dioxide solution ranging from 5 g/h to 60 g/h. It is intended for the following purpose: Automatic production of a 0.05–0.15% chlorine dioxide solution using sodium chlorite, hydrochloric acid and dilution water of drinking water quality. The resulting solution can be used as a disinfectant and oxidising agent for a wide range of water treatment applications.

The system consists of a plastic cabinet in which the instruments are mounted and the product tank (19) and reactor vessel are housed; these are protected by a plastic cover that can be secured with a padlock on a toggle latch.

The chemical precursors are safely drawn at a ratio of 1:1 from a drum or tank into a reactor vessel (21) by a vacuum created by a Venturi device (13). Each reactant is precisely measured and controlled through separate flow meters (7 and 8) and solenoid valves (9 and 10) so that the reaction produces a ≈ 2 wt.% ClO_2 solution, which is immediately diluted to a ready-to-use 0.05 to 0.15 wt.%, depending on the size of the system.

After a reaction time, the product enters a level-controlled product tank (20), which can have up to three outputs for one internal and two external dosing pumps if required. Any excess gas produced by the reaction process passes through the activated carbon filter (23) into the atmosphere. This process continues until the Batch tank full level is reached. The system then waits for an adjustable time before resuming production.

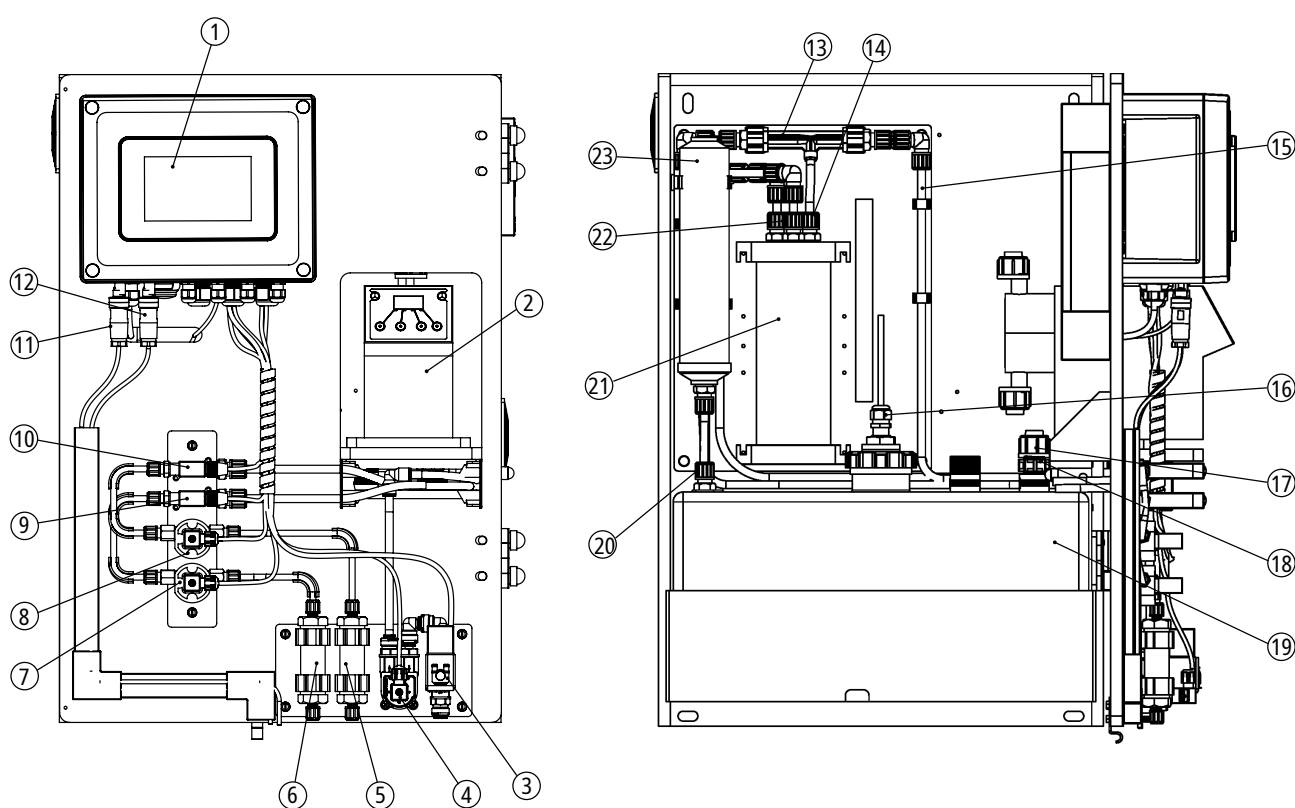


Fig. 3: System structure

1 Control panel	2 Internal dosing pump
3 Dilution water solenoid valve	4 Flow meter for the dilution water
5 Chlorite in-line strainer (Ø 4/6 mm)	6 Acid in-line strainer (Ø 4/6 mm)
7 Acid flow meter	8 Chlorite flow meter
9 Acid solenoid valve	10 Chlorite solenoid valve
11 Connection for empty detector (chlorite tank)	12 Connection for empty detector (acid tank)
13 Venturi	14 Product outlet on the reactor
15 Dilution water pipe	16 Triple level switch in the batch tank
17 Suction connection of the dosing pump	18 Non-return valve
19 Product tank	20 Batch tank inlet
21 Reactor vessel	22 Chemical inlet on the reactor
23 Air scrubber with activated carbon filter	

4.6 Process flow

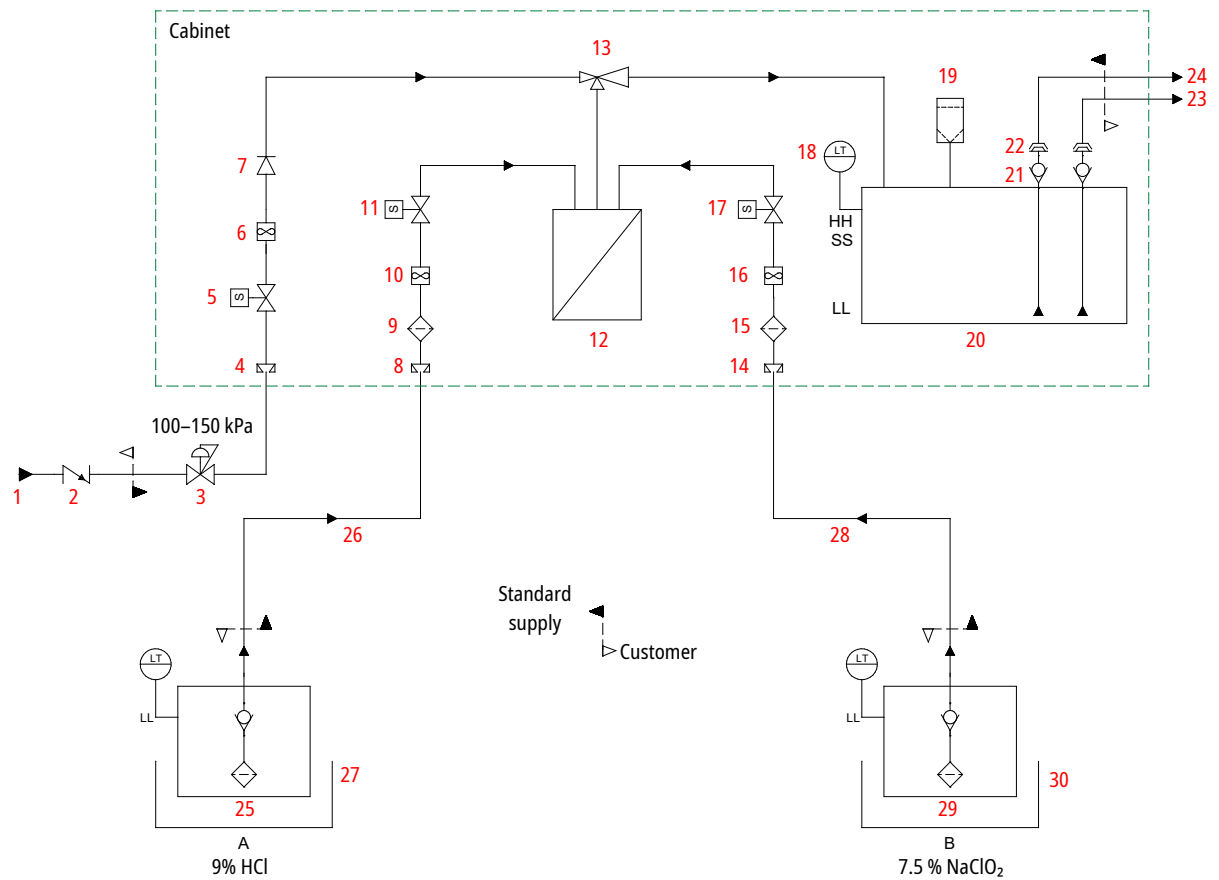


Fig. 4: Process flow

1 Water supply	2 Non-return valve
3 Pressure reducing valve	4 Water inflow, 8 mm outside connector
5 Water solenoid valve	6 Water flow meter
7 Non-return valve	8 Acid inlet DN4/6
9 Inline dirt trap	10 Acid flow meter
11 Acid solenoid valve	12 Reactor vessel
13 Ejector	14 Sodium chlorite inlet, DN4/6
15 Inline dirt trap	16 Sodium chlorite flow meter
17 Sodium chlorite solenoid valve	18 Level switch
19 Gas scrubber	20 Product supply tank, 8L
21 Non-return valve	22 Dosing pump suction connection, G5/8"
23 To dosing pump 1 suction	24 To dosing pump 2 suction
25 Acid storage tank	26 Acid suction line, DN4/6
27 Collecting pan	28 Sodium chlorite suction line, DN4/6
29 Sodium chlorite storage tank	30 Collecting pan

5 Technical data

		5L	10L	20L	40L	60L
Reagents						
A (8–10% HCl)*	wt.%	√	√	√	√	√
B (7.5% NaClO2)*	wt.%	√	√	√	√	√
Reagent temperature**	°C	10 – 30**				
Product performance (approx.)						
ClO ₂ capacity	g/h	5	10	20	40	60
ClO ₂ capacity	kg/d	0.12	0.24	0.48	0.96	1.44
ClO ₂ solution	l/h	10	10	20	26	40
ClO ₂ concentration	mg/l	500	1000	1000	1500	1500
ClO ₂ storage	l	8				
Process water inflow (drinking water quality)						
Usage	l/h	9.75	9.5	19	24	37
Discharge	bar	1.0 – 1.5				
Temperature	°C	5 – 30				
Surroundings						
Protection classification	IP	65				
Ambient temperature	°C	5 – 40				
Relative humidity	%	90 (non-condensing)				
Electrical specifications						
Supply voltage	V~	110 – 230 V				
Frequency	Hz	50 – 60				
Rated output	W	60 (without auxiliary equipment)				
Size specifications						
Dimensions	mm	670 x 460 x 333 (H x W x D)				
Weight	kg	23				
Connections						
Water inlet	-	8 mm (outside)				
Water inflow pressure-relief valve	-	Inlet: ½” BSP internal thread or 15 mm outside Outlet: 8 mm outside				
Pump suction side	-	G5/8				
Inlets for reagents	-	DN4/6				

Table 5: Technical data

*10% HCl and 7.5% NaClO₂ are the maximum permissible concentrations for use with the EASYZON L 5 - 60.

**Reagents with a temperature below 10°C can damage the solenoid valve seals, resulting in reagent overdosing and valve failure.

5.1 Materials in contact with media

5.1.1 Cold water feed

Description	Material
Pressure regulator	Brass/NBR/SS
Solenoid valve	Brass/FPM/SS
Flow meter	PVDF
Hose	LDPE (blue)
Push fittings	PP/SS/EPDM

Table 6: Cold water feed

5.1.2 Chemical precursor feed

Description	Material
Strainer	PP
Flow meter	PVDF
Solenoid valve	PVDF/FPM
Reactor vessel	PVC
Hose	PTFE (opaque/violet)
Hose clamp connector	PVDF/FPM

Table 7: Chemical precursor feed

5.1.3 Dilution water (generated solution)

Description	Material
Reactor vessel	PVC
Venturi injector	PVDF
Product tank	MDPE
Hose	PTFE (violet)
Hose clamp connector	PVDF/FPM
Tank level switch	PVDF
Pump suction/intake	PVC/FPM/ceramic

Table 8: Dilution water (generated solution)

5.1.4 Dosing pumps connected to EASYZON L

The material specification of the dosing pumps must be chemically resistant to a ClO_2 solution concentration ≥ 2000 mg/l.

See the following table for a suitable specification of the dosing pumps. Contact your equipment supplier for further information.

Description	Material
Pump head	PVC/PVDF
Diaphragms	PTFE
Suction/discharge valve housing	PVC/PVDF
Suction/discharge valve ball	Ceramic/PTFE
Suction/discharge valve seat	PVDF/FPM/PTFE/ceramic
Outer seal of suction/discharge valve housing	FPM/PTFE

Table 9: Dosing pumps connected to EASYZON L

5.1.5 Suction lances for chemical precursors

Each chemical tank suction lance connected to the relevant hose connection of the precursor substance must be chemically resistant to the precursor ($\rightarrow$ Chemical precursor specification [► 15]).

The following table provides specifications for suitable suction lances. Contact your equipment supplier for further information.

Description	Material
Foot valve housing	PVC/PVDF
Foot valve ball	Ceramic/PTFE
Foot valve seat	PVDF/FPM/PTFE/ceramic
Outer seal of the foot valve	FPM/PTFE

Table 10: Precursor suction lances

5.2 Dosing pump capacity

The dosing capacity of any dosing pump or any combination of dosing pumps connected to the EASYZON L must not exceed the maximum production rate of the EASYZON ($\rightarrow$ Technical data [► 14]).

5.3 Chemical precursor specification

In accordance with the Biocidal Products Regulation (BPR, Regulation (EU) 528/2012), the member states of the European Union may only use precursors for the generation of biocidal active substances produced "in situ" that are authorised under Article 95 of the regulation. These precursors must be sourced from a manufacturer or supplier listed in accordance with Article 95 of the BPR. Please ask your supplier to confirm conformity with the biocide ordinance (certificate or letter of access).

Description	Concentration, by weight
Hydrochloric acid (HCl) (conforming to EN 939)	9.0 %*
Sodium chlorite (NaClO_2) (conforming to EN 938)	7.5%*

* The technical data is determined by the concentration of the precursor. Tolerances of up to $\pm 10\%$ are permissible, but may affect the capacity specified.

5.4 Other data

Description	All models
Weight (empty)	23 kg

Table 11: Other data

6 Dimensions

All dimensions in millimetres (mm).

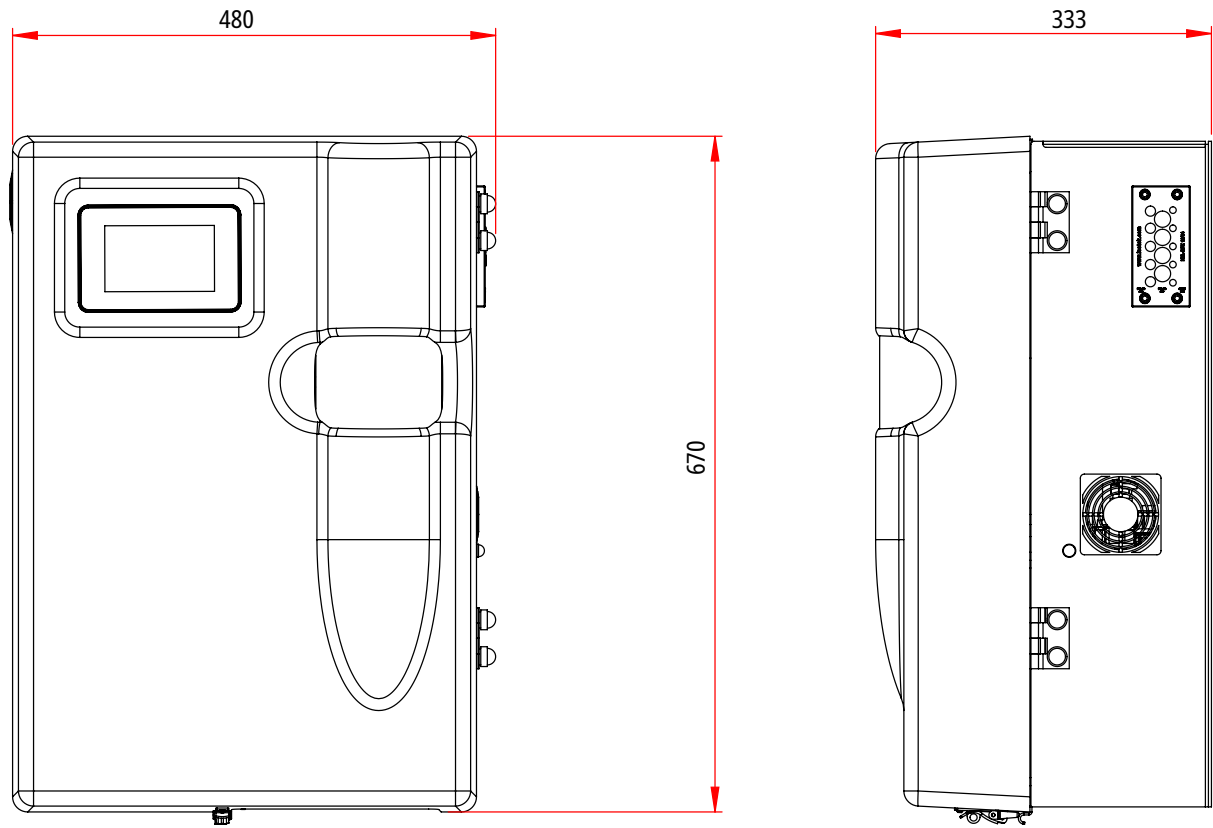


Fig. 5: Dimensions EASYZON L 5 – 60

7 Transportation and storage



CAUTION

Injury or harm to persons

The system is heavy. Improper transportation and delivery procedures can lead to injury or harm to personnel.

- ▶ Use a pallet truck to move the system into position.
- ▶ Wear the appropriate personal protective equipment.
- ▶ Only lift the system with two people.



NOTE

Risk of damage to the system

The system is heavy. Improper transportation and delivery procedures can lead to damage to the system.

- ▶ Use a pallet truck to move the system into position.
- ▶ Protect the equipment with suitable packaging during transportation and installation.

Transport conditions

- If the system has been in operation, you must decommission it properly (→ Shutdown and disposal [► 33]).
- Clean the system thoroughly before transporting it. The system must not contain any residues of chemical solutions.
- Ensure that you ship the system in suitable packaging, preferably in the original packaging.
- Use suitable lifting and transportation equipment.

Storage conditions:

- If the system has been in operation, you must decommission it properly (→ Shutdown and disposal [► 33]).
- Clean the system thoroughly before storing it. The system must not contain any residues of chemical solutions.
- Comply with the specifications pertaining to the ambient conditions (→ Technical data [► 14]).
- Use suitable lifting and transportation equipment to move the system into position.

8 Installation



DANGER

Incorrect installation can impair safety!

Incorrect installation can expose personnel and the surrounding environment to hazards.

- ▶ Adhere to the safety precautions and instructions for correct installation in these operating instructions.
- ▶ Only trained specialists may carry out installation or maintenance work.
- ▶ Seek assistance when lifting the system to mount it on the wall.
- ▶ The use of stickers, labels or tags to alert users to potential hazards is recommended.



WARNING

Risk of chemical exposure

Inappropriate installation can result in death or serious injury.

- ▶ NEVER mix the two chemical precursors hydrochloric acid (HCl) and sodium chlorite (NaClO_2), except as part of chlorine dioxide preparation with the EASYZON system.
- ▶ Only trained and qualified specialist personnel may carry out installation work.
- ▶ Wear protective gloves and goggles and have a respirator mask ready.
- ▶ All location conditions must be met to ensure safe and optimal operation of the system.

The local regulations and guidelines must be observed during installation.

8.1 Installation location

Location conditions

- There is adequate venting and lighting with sufficient protection from frost and direct sunlight.
- There is sufficient space for installation and maintenance work.
- The required warning signs are mounted in clearly visible locations.
- There is access to a permanent water supply (drinking water quality) for connection to the system.
- Temperature, humidity and water quality are within the specified limit values (ambient conditions → Technical data [► 14]).
- The location complies with all local regulations, including fire safety and accident prevention laws.
- The location is protected against unauthorised access.
- Smoking and open flames are prohibited in areas where sodium chlorite is stored and handled.
- The foundation for the installation of storage tanks/product tanks and collecting pans must be level and firm.

8.2 Mounting the system on the wall



CAUTION

Injury or harm to persons

The system is heavy. Improper installation can lead to injury or harm to personnel.

- ▶ Wear the appropriate personal protective equipment.
- ▶ Only lift the system with two people.

The EASYZON L system is supplied with a mounting set containing the necessary fixtures for securing the system onto a wall.

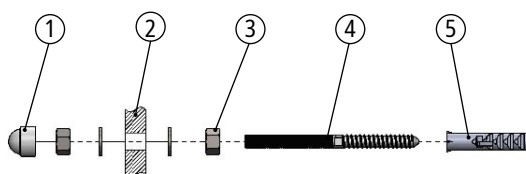


Fig. 6: Mounting set

1 Protective cap	2 Cabinet backboard
3 M8 hexagon clamping nut	4 M8 fixing bolt
5 Wall plug Ø12 mm	

NOTE! Make sure that the cabinet door can be opened fully so that maintenance work can be carried out easily.

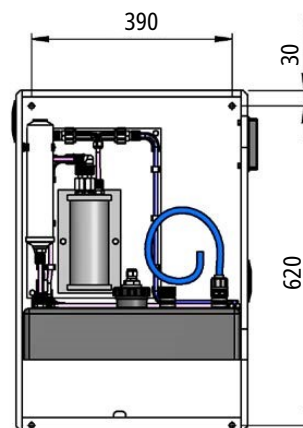


Fig. 7: Wall mounting

1. Install the plugs (5) and fixing bolts (4) into a smooth and vertical concrete wall, using the dimensions specified. Mount the EASYZON L on a wall or frame so that the centre of the operating panel is between 1600 and 1700 mm from the floor.
2. Lift the system onto the fixing bolt (4) in front of the hexagon nuts (3) and washers.
3. Secure the system with the remaining hexagon nuts (3) and washers. You can screw the nuts along the fixing bolt to position the system vertically.
4. Attach the protective caps and check the alignment with a spirit level.

🔧 Device mounted on the wall.

8.3 Operating water

Requirements

- The operating water must be of drinking water quality and comply with the specifications (→ Technical data [► 14]).
- Suitable backflow preventers that meet the requirements of IEC 61770 must be installed if the device is connected to a drinking water source.
- A booster pump is required if pressure and flow rate in the supply line are too low or irregular.
- A pressure reducing valve is supplied and should be set between 1.0 and 1.5 bar for optimal operation of the generator.

8.4 Site flow meter

- An on-site water meter can be installed and wired to the operating panel to provide an adjustable pulsed output for a dosing pump.
- Set the current value of the water meter on the "Pulse logic" screen.
- Adjust the settings on the "Pulse logic" screen to suit the pump and the desired dosing capacity (→).

8.5 Dosing pumps

- A dosing pump can be installed inside the cabinet on the pump compartment of the doors.
- There are two G5/8" suction lances with non-return valves on the product supply tank for connection to the suction side of the pumps.
- A double suction manifold is available for connecting up to four dosing pumps to the product supply tank.
- The material of the dosing pump and the dosing line must be suitable for use with 2000 ppm ClO₂.
- The dosing pump can be controlled via the EASYZON controller if a water meter is installed on site and is used for dosing control (→).

8.6 Tanks for reagents

- The suction lines for the reagents can be up to 25 m long so that the tanks can be placed in a safe location near the system.
- The storage tanks must be clearly labelled and located in well-ventilated areas.
- The storage tanks must be covered.

8.7 Suction lines for reagents

- The suction lines for reagents can be up to 25 m long so that the tanks can be placed in a safe location near the system.
- The material of the suction line must be compatible with the reagents used.
- The suction lines should be double-encapsulated and have adequate fixings and mechanical protection.

- If the reagents are below 10°C when they enter the system, the solenoid valve seals will be affected, leading to valve failures.
- Switched intakes can be connected directly to the EASYZON operating panel via the M12 bulkhead connectors.

8.8 Injection nozzle

- The EASYZON L scope of delivery includes an injection nozzle that connects the pump outlet to the ClO₂ injection nozzle.
- An injection/non-return valve should be installed at the valve inlet.
- Attach an identification sign and appropriate safety instructions at the injection nozzle.

8.9 Installation layout

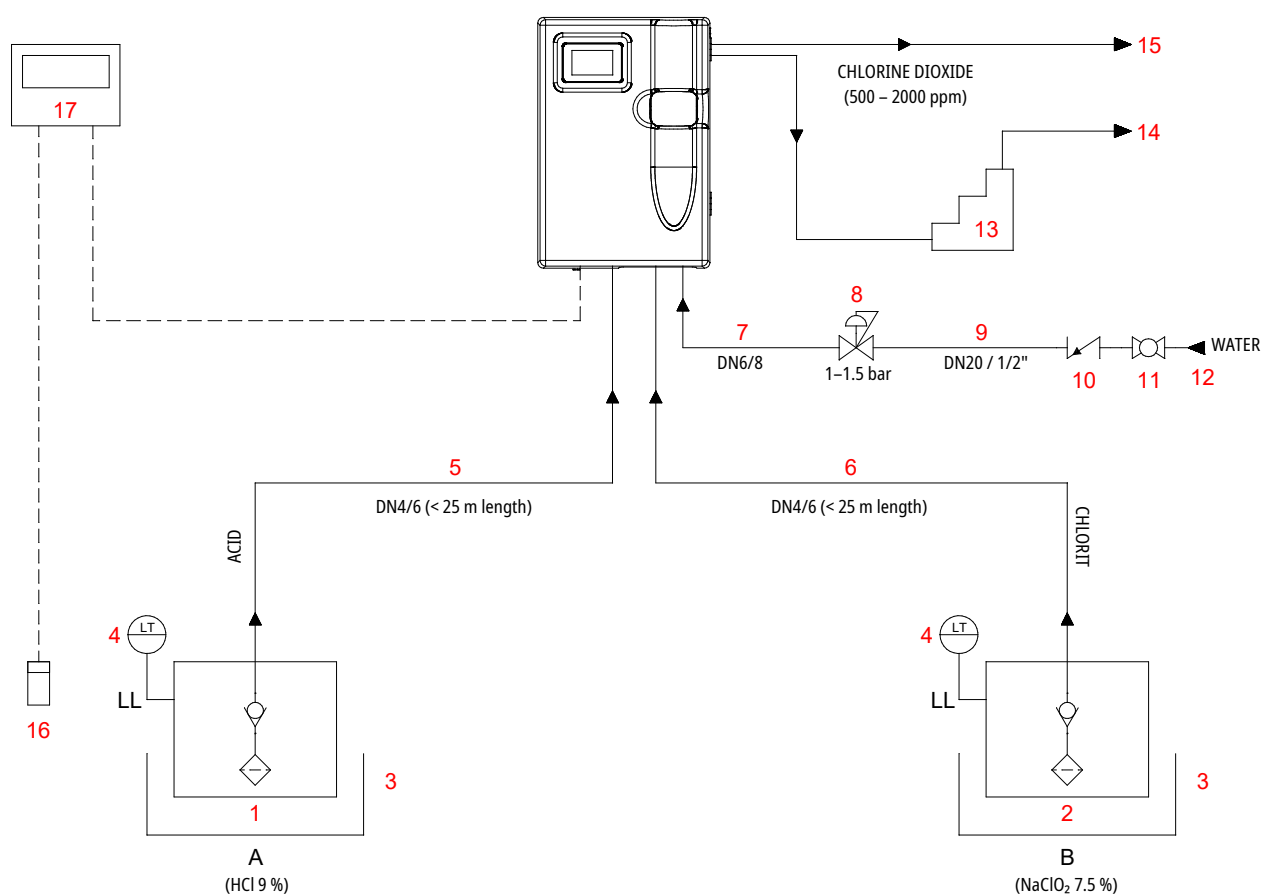


Fig. 8: Installation layout

No.	Description	Connection	Information	Standard scope of delivery
1	Acid storage tank	-	-	-
2	Sodium chlorite storage tank	-	-	-
3	Collecting pan	-	-	-
4	Reagent empty detector	M12, A code, 4-wire	Connect with the panel	-
5	Acid suction line	DN4/6 compression	Max. length 25 m	-
6	Sodium chlorite suction line	DN4/6 compression	Max. length 25 m	-
7	Water inflow hose	DN6/8 connector	Max. length 3 m	√
8	Pressure reducing valve	G1/2 inside / 8 mm outside	Set to 0.1-0.15 MPa	√
9	Water supply	-	> 0.2 MPa	-
10	Non-return valve	-	-	-
11	Shut-off valve	-	-	-
12	Water supply	-	-	-
13	External dosing pump	-	-	-
14	External dosing pump up to place of use	G5/8m tank connection	-	-
15	Internal dosing pump up to place of use	G5/8m tank connection	-	-
16	ClO ₂ gas sensor	-	-	-
17	ClO ₂ gas panel	-	-	-

8.10 Electrical installation



DANGER

Mortal danger from electric shock!

Only work on electrical systems while the device is disconnected from the power supply.

- ▶ Switch the system voltage-free.
- ▶ Secure the system to prevent it from being switched on again.
- ▶ Measure the absence of voltage in the system with a measuring instrument.
- ▶ Earth the system and then short-circuit it.
- ▶ Cover adjacent live parts.



CAUTION

System damage due to incorrect wiring!

Incorrect wiring can lead to irreversible damage to the system.

- ▶ Disconnect the power supply to the EASYZON before carrying out any electrical work.
- ▶ Study the supplied wiring diagrams and instructions before starting work.
- ▶ Ensure that only trained qualified personnel carry out electrical or maintenance work.

8.10.1 Connection to the power supply

The EASYZON is intended for use as a stationary system. The device is classified as IEC class 1 and must be grounded in accordance with local regulations.

Recommendations:

- Establish the connection to the mains network via an external isolating switch. This should be within reach of the device, clearly visible and clearly marked as an isolating device.
- To protect the final circuit, use a circuit-breaker that meets the requirements of IEC 60947-2, type C or K. This must be clearly labelled.
- Connect the cable cores in accordance with the local wiring regulations and the circuit diagram.

8.10.2 Wiring

Use the wiring diagram to connect external connections to the EASYZON controller. The inputs must be activated via the "Settings 1" screen.

8.10.3 Reagent empty switch

The connections for the empty switch of the storage tank are located on the underside of the operating panel. The switching inputs must be activated via the "Settings 1" screen. (M12, 4-pin, female, A-code)

Pin 2 = +24V

Pin 3 = Signal

LHS = Acid empty (N.C)

RHS = Chlorite empty (N.C)

8.10.4 Terminal connections

I.D	Description	I.D	Description
1	L Out	41	Remote control stop
2	N output	42	24 V
3	PE output	43	Start/Stop
4	L (110-230 VAC)	44	A FM
5	N	45	B FM
6	PE	46	24 V
7	N.C alarm relay	47	24 V
8	C alarm relay	48	Dilution A FM
9	N.O alarm relay	49	Dilution B FM
0	C replacement relay	50	0 V
11	N.O replacement relay	51	0 V
12	0 V	52	24 V
13	-	53	01 water solenoid valve
14	0 V	54	24 V
15	-	55	02 acid solenoid valve
16	0 V	56	24 V
17	0 V	57	03 chlorite solenoid valve
18	24 V	58	24 V
19	Water FM	59	04
20	0 V	60	24 V
21	0 V	61	05 B water solenoid valve
22	Flow switch	62	24 V
23	-	63	Blue LED
24	5 V	64	Red LED
25	5 V	65	24 V
26	24 V	66	0 V
27	Water meter of site	67	AO0
28	24 V	68	0 V
29	Float collecting pan	69	AO1
30	24 V	70	Temp +
31	Emergency-Off	71	T
32	24 V	72	-
33	acid empty	73	-
34	24 V	74	R-
35	chlorite empty	75	-
36	24 V	76	-

I.D	Description	I.D	Description
37	Tank empty	77	0 V
38	24 V	78	0 V

I.D	Description	I.D	Description
39	Tank full	79	+24 V SPS
40	24 V	-	

8.10.5 Wiring diagram

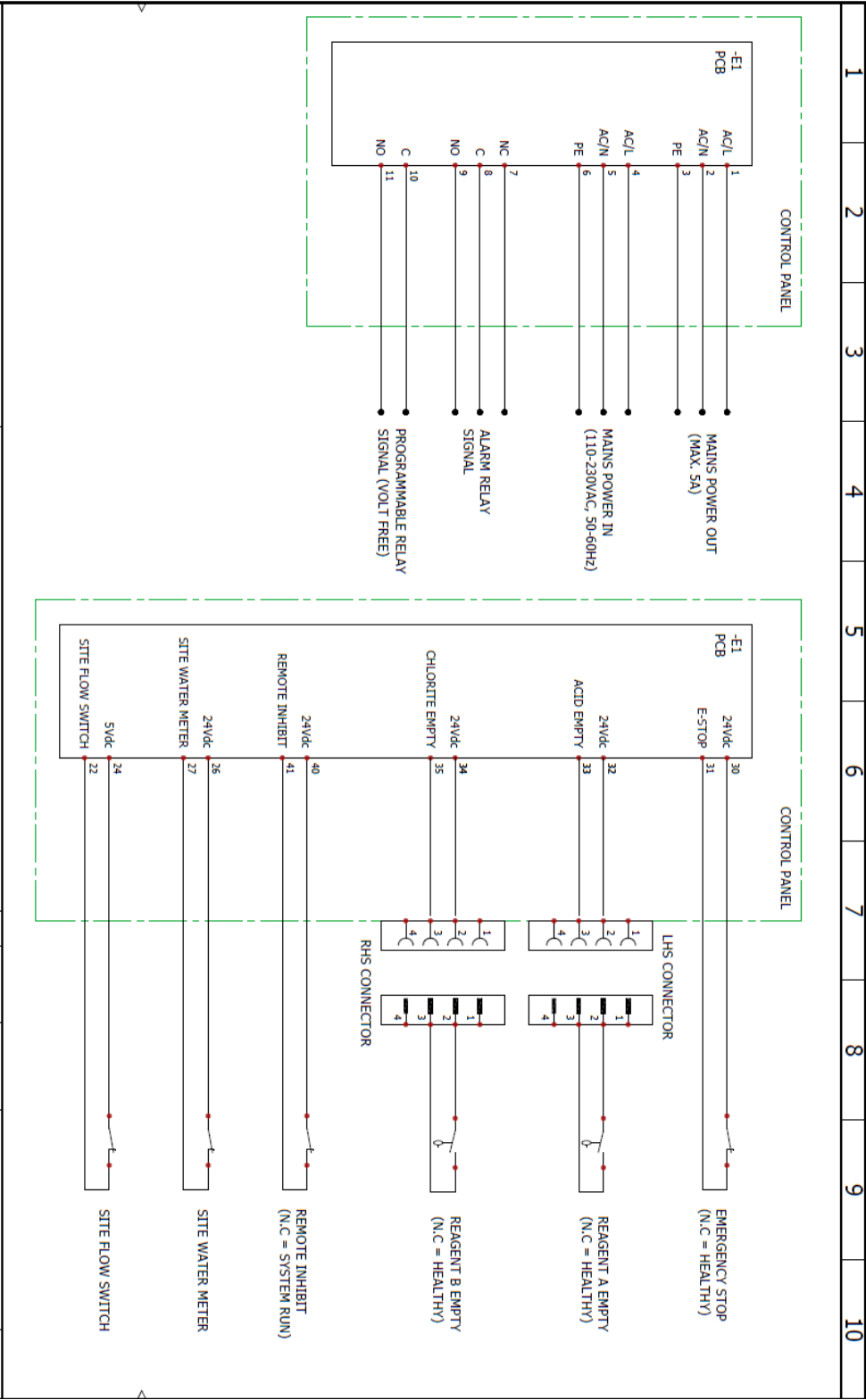


Fig. 9: Wiring diagram

9 Commissioning



DANGER

Danger of explosion due to ClO_2 gas!

The chemical precursors hydrochloric acid (HCl) and sodium chlorite (NaClO_2) immediately form high quantities of chlorine dioxide gas (ClO_2) when mixed. There is a risk of explosion due to self-decomposition if the concentration in the gas phase becomes too high.

- ▶ NEVER mix the two chemical precursors hydrochloric acid (HCl) and sodium chlorite (NaClO_2), except as part of chlorine dioxide preparation with the EASYZON system.
- ▶ Only use the correct concentration of 9 wt.% hydrochloric acid.
- ▶ Only use the correct concentration of 7.5 wt.% sodium chlorite.



DANGER

Danger to life from poisoning

Mixing sodium chlorite and hydrochloric acid outside the reactor will result in the formation of chlorine dioxide gas. Chlorine dioxide is a very toxic substance if inhaled and very irritant for the eyes, the respiratory organs and skin. Prevent the uncontrolled formation and release of chlorine dioxide gas by taking the following safety precautions:

- ▶ Avoid contact between sodium chlorite and hydrochloric acid outside the reactor.
- ▶ Mark clearly all material-conducting parts (e.g. collecting pans, chemical containers, suction lines, hoses, pumps) with a colour. Renew the damaged markings regularly.
- ▶ Prevent the mixing of hydrochloric acid and sodium chlorite outside the controlled processes by strictly separating the chemicals and not swapping suction lines/lances.
- ▶ Install a gas sensor or gas warning device that deactivates the system if chlorine dioxide is detected in the surrounding air.
- ▶ Install an emergency-off switch with which the system can be deactivated from a safe distance. The emergency-off switch should be located outside the room in which the chlorine dioxide system is located. It should be easy to recognise.
- ▶ Always wear sufficient personal protective equipment when in the vicinity of the system.
- ▶ Comply with the safety instructions outlined in the safety data sheets of the chemicals and observe the relevant safety precautions.



WARNING

Risk of release of toxic ClO_2 gas!

Accidental mixing of chemicals and/or careless spillage releases toxic ClO_2 gas.

- ▶ Never pour chemicals from one container into another container.
- ▶ Never use devices and chemicals interchangeably.
- ▶ Refill a precursor day tank with the same precursor canister.



CAUTION

Danger of devices switching on automatically!

You must be aware that the system and the dosing pumps are two separate devices in terms of on-site chlorine dioxide preparation.

- ▶ The EASYZON system operates automatically if the product tank is almost empty.
- ▶ The dosing pumps react automatically to the preparation and process conditions on site, e.g. to the input of the water meter signal and/or the input of the measurement and control system.



NOTE

Damage to the system due to incorrect installation

Failure to observe installation instructions (e.g. use of unsuitable tools, incorrect torque) can damage the system parts.

- ▶ Use suitable tools.
- ▶ Note the specified torque.

9.1 Checks before commissioning

		(□)
1	The equipment has been installed in accordance with the requirements described in the Installation [► 18] section.	
2	The conditions in the table with the technical data have been met.	
3	The reagents are of the correct type, in the correct concentration, and connected to the correct inlets.	
4	The hydraulic connections and valves are tight, both internally and outside the EASYZON.	
5	The water supply is insulated.	

9.2 System start

9.2.1 Basic settings

Configure the basic settings as described in the Operation [► 25] section.

Settings screen 1		(□)
6	Set up the system, reagent A, reagent B, and location name labels.	
7	Set the time in the service menu (note: with service login)	
8	Set the stop tag ("STOPPED" for direct dosing in the application, "TANK FULL" when filling an external tank).	
9	Determine the status of the installed connections (LINKED OUT = input not in use).	
Settings screen 2		
10	Set the operating mode – Batch mode ON/OFF	
11	Set the operating power in percent.	
12	Set the automatic "Restart delay time".	
Screen for maintenance		
13	Reset timer for "Service due" and "Reactor change".	
Screen for chemical consumption		
14	Reset chemical consumption counter.	
Screen for refilling chemicals		
15	Set the volume for the low filling level warning.	
16	Set the filling quantity of the reagent tanks.	

9.2.2 Suction line and system suction

The prime flush function is used to pre-fill the reagent suction lines and the reaction vessel. This should be done with water before proceeding with chemical reagents.

		(□)
17	Connect each SDR valve inlet (anti-siphon) to a hose and place these in a water tank located next to the reagent supply tank.	
18	Press the chemicals symbol on the home screen to open the "Chemical consumption" page.	
19	Press the "Prime" button to access the "Prime Flush" page.	
20	Open the water supply valve.	
21	Press and hold the "Flush" button for 10 seconds to fill the reaction vessel with water.	
22	Select the number of batch cycles to be performed – 10 cycles is the default setting.	
23	Press "Start" and let the EASYZON device start the countdown to 0 cycles.	
24	During batch mode of the system, set the pressure reduction valve to the operating pressure of the system (100 kPa 1.0 bar, see table with technical data).	
25	Check the system for air and water leaks.	

26	When the cycle count reaches 0, the suction lines and reaction vessels are filled with water.	
----	---	--

9.2.3 Setting up the SDR valve (anti-siphon)

The SDR valve must be set so that reagents cannot be sucked out of the supply tanks if the suction lines are damaged or not connected.

		(□)
27	Check that the valves are installed above or as close as possible to the reagent tanks in a position where they are protected from mechanical damage.	
28	Disconnect the suction lines at the EASYZON reagent inlets while they are still filled with water. If water comes out of the hose, turn the adjustment screw on the underside of the SDR valve clockwise until the water flow stops.	

9.2.4 Operation and chemical production

Check that the main system alarms and all external inputs are functioning properly.

		(□)
29	Check that the start/stop sensor, contact or batch control is working and that the system stops and starts production as intended.	
30	Check the following inputs: - Emergency-Off - Bund flooding - Reagent A empty - Reagent B empty - Remote stop - Tank low - Tank high	
31	Remove the reagent suction lines from the water tank and connect them to the reagent supply tanks.	
32	When ready and safe to do so, start the generation of chlorine dioxide by pressing the "ON" button on the home screen. The batch process can be monitored on the information screen.	
Commissioning completed		

10 Operation

10.1 HMI

The EASYZON is operated via a touchscreen HMI. To do this, only use your finger or a touchpen on the surface of the touchscreen.

The system is pre-configured. No settings other than those specified in the commissioning section need to be made (see Commissioning [► 23]).

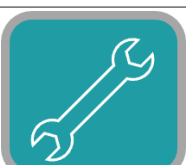
	Reagents – Volumes, information and flushing sequence
	Alarm and event log – Press “i” for a detailed alarm description and corrective measures.
	Process information – Display of process simulation and PLC I/O status.
	Main page for settings
	Maintenance screen

Table 12: Home screen icons

10.2 User rights

To change settings and access certain functions of the software, you must be logged in as a user. There are two different users, each with different rights.

Rights for the “Operator” (password = 002236):

- Access basic settings.
- Perform flushing cycles.
- Use the refill/reset function on the “Chemical consumption” screen.

Rights for the “Service”:

(Only for authorised service personnel)

- Access extended settings.
- Access maintenance functions.
- Access serial communication settings.
- Perform reagent calibration.

10.3 Login procedure

1. Press and hold the area in the top right-hand corner of the screen until the login window appears.

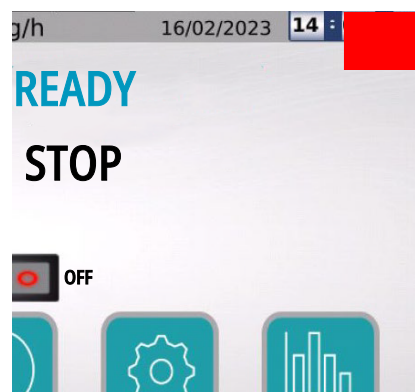


Fig. 10: Login procedure 1



Fig. 11: Login procedure 2

2. Select the user type and enter the password.

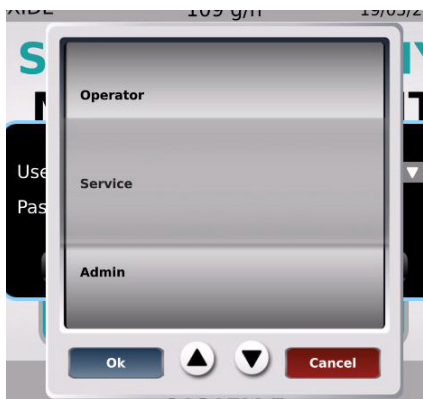


Fig. 12: Login procedure 3

10.4 Manual stop

Operation of the EASYZON can be interrupted manually to stop production. Press the On/Off switch on the home screen.

10.5 Remote stop

Operation can be remotely stopped by means of an external potential-free contact connected to the EASYZON operating panel. When activated, "Remote stop" is displayed on the screen. The input must be selected under "Settings 1" when in use.

10.6 Halted/tank full

When it is signalled to the EASYZON to stop production, or when the product tank is full, the HMI displays "TANK FULL".

If the product tank is not full or the system is ready for production, the "start delay" can be manually overridden on the screen.



Fig. 13: System ready

10.7 Emergency shutoff

In an emergency, the production process can be stopped immediately by an emergency-off switch connected to the main operating panel. When the switch is pressed, the entire power supply to the outputs is interrupted and a software alarm is triggered.

10.8 Low filling level warning

Warnings can be displayed when the reagent level in the storage tanks reaches a specified number of litres. This can be monitored remotely.

To set up the warning, enter the number of litres in the fields on either side of the text "Low filling level warning".

10.9 Refilling the reagent tank

- When replacing or refilling reagents, navigate to the "Refill chemicals" screen and confirm by selecting the "Refill tank" button.
- The filling volume can be changed by selecting the boxes under the text "FILLING VOLUME".
- Once you have refilled, the tank display returns to a 100% filling level and the refill date (DD/MM) is updated.

10.10 Controller communication

The controller supports the following communication protocols as standard:

- Modbus TCP
- E-mail
- VNC

A plug-in interface module is required for the following protocols:

- Modbus RTU (RS-485 module)

10.11 Programmable output

The voltage-free relay "O7" on the circuit board can be programmed via the "PLC I/O" screen to be activated under various conditions.

The output can be selected as one of the following outputs:

- Operation relay
- Alarm relay
- Water valves
- Reagent valves
- Pump pulse output

If you are logged in under the "Service" user name, navigate to the "PLC I/O" screen and press the free output to configure its operation.

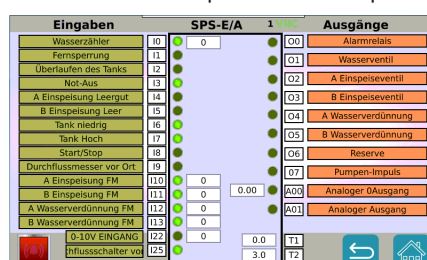


Fig. 14: Programmable output (1)



Fig. 15: Programmable output (2)

10.12 Pulse logic

A pulse water meter can be connected to the EASYZON controller to monitor water consumption and control a dosing pump. Configuration steps:

1. Connect a potential-free water meter to inputs 26 and 27 on the operating panel.
2. Connect the pulse input signal of a dosing pump to the EASYZON relay contacts 10 and 11.
3. Configure the water meter pulse input and pulse output on the "Pulse logic" screen.
4. Set the current water meter value on the "Pulse logic" screen.
5. Change output 7 (O7) on the "PLC I/O" screen to "Pump pulse" to activate the pulse relay output.
6. The "Amplify pulse" function can be used in circulation systems to send a pulse to the dosing pump if no water meter signal has been received within the set time.
7. Activate the "Low tank level" option to stop the dosing pump signal when the product tank is almost empty. This prevents the pumps from sucking in air.

8. A potential-free flow switch can be connected to terminals 24 and 22 to stop the dosing output if no flow is detected. Activate this function on the "Pulse logic" screen.

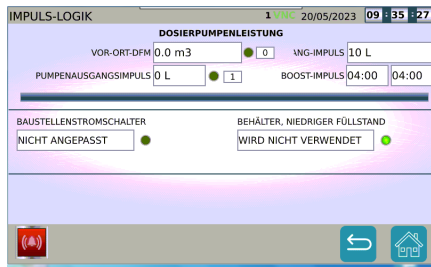


Fig. 16: Pulse logic

11 Maintenance

The EASYZON is designed for a long service life, but some parts are subject to wear due to normal operation. It is therefore necessary to regularly perform visual inspections and maintenance work.



ANGER

Danger of explosion due to ClO₂ gas!

The chemical precursors hydrochloric acid (HCl) and sodium chlorite (NaClO₂) immediately form high quantities of chlorine dioxide gas (ClO₂) when mixed. There is a risk of explosion due to self-decomposition if the concentration in the gas phase becomes too high.

- ▶ NEVER mix the two chemical precursors hydrochloric acid (HCl) and sodium chlorite (NaClO₂), except as part of chlorine dioxide preparation with the EASYZON system.
- ▶ Only use the correct concentration of 9 wt.% hydrochloric acid.
- ▶ Only use the correct concentration of 7.5 wt.% sodium chlorite.



ANGER

Danger to life from poisoning

Mixing sodium chlorite and hydrochloric acid outside the reactor will result in the formation of chlorine dioxide gas. Chlorine dioxide is a very toxic substance if inhaled and very irritant for the eyes, the respiratory organs and skin. Prevent the uncontrolled formation and release of chlorine dioxide gas by taking the following safety precautions:

- ▶ Avoid contact between sodium chlorite and hydrochloric acid outside the reactor.
- ▶ Mark clearly all material-conducting parts (e.g. collecting pans, chemical containers, suction lines, hoses, pumps) with a colour. Renew the damaged markings regularly.
- ▶ Prevent the mixing of hydrochloric acid and sodium chlorite outside the controlled processes by strictly separating the chemicals and not swapping suction lines/lances.
- ▶ Install a gas sensor or gas warning device that deactivates the system if chlorine dioxide is detected in the surrounding air.
- ▶ Install an emergency-off switch with which the system can be deactivated from a safe distance. The emergency-off switch should be located outside the room in which the chlorine dioxide system is located. It should be easy to recognise.
- ▶ Always wear sufficient personal protective equipment when in the vicinity of the system.
- ▶ Comply with the safety instructions outlined in the safety data sheets of the chemicals and observe the relevant safety precautions.



ARNING

Danger of contact with a ClO₂ solution!

If there is a leak in the system, a toxic ClO₂ solution can escape.

- ▶ The maximum permissible pressure of the dosing pump must not be exceeded under any circumstances.
- ▶ The entire system must remain leak-free during operation.



CAUTION

Danger of devices switching on automatically!

You must be aware that the system and the dosing pumps are two separate devices in terms of on-site chlorine dioxide preparation.

- ▶ The EASYZON system operates automatically if the product tank is almost empty.
- ▶ The dosing pumps react automatically to the preparation and process conditions on site, e.g. to the input of the water meter signal and/or the input of the measurement and control system.



ANGER

Mortal danger from electric shock!

Live parts can inflict fatal injuries.

- ▶ Disconnect the power supply before working on the system.
- ▶ Secure the system to prevent it from being switched on again.



CAUTION

Increased risk of accidents due to insufficient qualification of personnel!

The device may only be installed, operated and maintained by personnel with sufficient qualifications. Insufficient qualification will increase the risk of accidents.

- ▶ Ensure that all action is taken only by personnel with sufficient and corresponding qualifications.
- ▶ Prevent access to the system for unauthorised persons.



CAUTION

Danger from chemicals!

Only authorised service personnel may carry out scheduled maintenance work.

- ▶ Wear protective gloves and goggles and have a respirator mask ready.

11.1 Maintenance checks for users

Maintenance checks that must be carried out regularly by users once they have been trained by the operating company/authorised service personnel.

11.1.1 Refilling/replacing the reagent tank

- Replace/refill the reagent tanks as soon as they are empty.
- The filling level should be monitored to avoid interruptions in operation. Warning messages for low filling levels can be enabled in the software.
- The filling level counters of the tanks should be reset after replacing/refilling the reagents, see Operation [► 25].

11.1.2 Cleaning the PRV screen

- Check whether the supply to the PRV is interrupted.
- Unscrew the screen bowl and remove all residues from the screen mesh.
- If the screen needs to be cleaned too often, a pre-filter is recommended.

11.1.3 General

- Check for leaks.
- Check the state of the piping and components.
- In the event of leaks or damage to the system, notify the operator immediately.

11.2 Maintenance by authorised personnel

The EASYZON has a maintenance cycle of 4 years with intervals of 1 year each. After the 4th year has elapsed, the cycle starts again from the beginning. See Maintenance cycles [► 29] for the maintenance plan.

Contact the manufacturer of the dosing pump for maintenance procedures. Maintenance recommendation:

- Replace seals annually
- Replace diaphragms annually
- Maintain/replace suction and pressure valves annually
- Maintain/replace injection valve annually

11.3 Maintenance cycles

11.3.1 Available maintenance sets

- Maintenance set year 1 and 3
- Maintenance set year 2
- Maintenance set year 4
- Maintenance set pressure control valve/PRV
- Reactor module 5/10/20/40/60

11.3.2 Maintenance plan

Interval	Number	Content	Quantity
Year 1	18	O-ring (tank filler neck)	1
	12	O-ring (tank outlet lance)	2
	14	O-ring (tank outlet lance plug)	1
	17	Tank cover seal	1
	1	Inline screen	2
	3	Non-return valve (water meter)	1
	11	Non-return valve (tank outlet)	1
	5	Tank gas scrubber	1
Year 2	18	O-ring (tank filler neck)	1
	12	O-ring (tank outlet lance)	2
	14	O-ring (tank outlet lance plug)	1
	17	Tank cover seal	1
	1	Inline screen	2
	3	Non-return valve (water meter)	1
	11	Non-return valve (tank outlet)	1
	5	Tank gas scrubber	1
	4	Dilution water valve assembly	1
	-	Pressure control valve/PRV (must be ordered in addition to the maintenance set)	1
Year 3	18	O-ring (tank filler neck)	1
	12	O-ring (tank outlet lance)	2
	14	O-ring (tank outlet lance plug)	1
	17	Tank cover seal	1
	1	Inline screen	2
	3	Non-return valve (water meter)	1
	11	Non-return valve (tank outlet)	1
	5	Tank gas scrubber	1
Year 4	18	O-ring (tank filler neck)	1
	12	O-ring (tank outlet lance)	2
	14	O-ring (tank outlet lance plug)	1
	17	Tank cover seal	1
	1	Inline screen	2
	3	Non-return valve (water meter)	1

Interval	Number	Content	Quantity
	11	Non-return valve (tank outlet)	1
	5	Tank gas scrubber	1
	4	Dilution water valve assembly	1
	-	Test tube set (purple PTFE)	1
	19	Product tank inlet module	2
	13	Product tank outlet module	1
	-	Pressure control valve/PRV (must be ordered in addition to the maintenance set)	1
	6	Reactor module (must be ordered in addition to the maintenance set)	1

12 Troubleshooting

12.1 System warning

- System warnings are displayed on a yellow banner at the bottom of the screen.
- After a defined “alarm delay time”, some warnings cause a system error.
- Warnings are logged in the alarm history.



Fig. 17: System warning

12.2 System error

System errors are displayed on an orange banner at the bottom edge of the screen.

Once an error has been rectified, you can press the reset button to change the status to “error-free” and resume power generation.

Press the button to access the alarm summary.



Fig. 18: System error

Please click on the “Info” symbol in the alarm summary to display the cause and possible remedies for the error status.

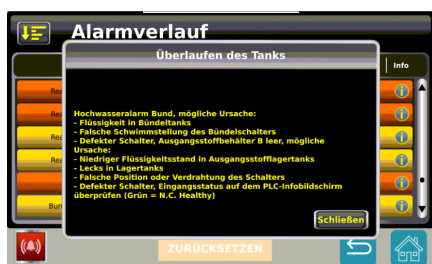


Fig. 19: System error info

12.3 Error messages

Error message	Possible cause	Remedy
Flooding of the collecting pan	Liquid leak in the reagent or storage tank.	Find and repair the source of the leak, empty the collecting pan.

Error message	Possible cause	Remedy
	The float switch of the collecting pan is stuck in the upper position or has an open circuit.	Repair or replace the collecting pan switch.
Emergency-Off	The emergency-off switch has been pressed.	Reset the emergency-off switch if it is safe to do so.
	Fault in the circuit or switch of the emergency-off switch.	Check and repair the switch wiring.
Tank almost empty	The product storage tank is leaking.	Find and repair the source of the leak.
	The filling level sensor is in the “open circuit” position.	Repair or replace the filling level switch.
	The demand of the application is too high for the output of the generator.	Reduce the demand of the application or increase the size of the generator.
	The output setting is too low.	Increase the output percentage in the settings.
Tank high	The water solenoid valves are leaking.	Find and repair the leak or replace the valve.
	Start/stop or filling level sensor is raised or in open switching position.	Repair or replace the filling level switch.
	There is a back-flow from the application into the product storage tank.	Eliminate the back-flow from the application.
Water flow error	Low water inlet pressure.	Adjust the PRV or increase the water pressure.
	Blockage of the PRV screen.	Clean the PRV filter.
	The water solenoid valve or connection is defective.	Repair or replace the solenoid valve.
	The water meter or wiring connection is faulty.	Repair or replace the water meter.
	There is a blockage in the system.	Remove all blockages.
Reagent A or B shortage	Low liquid level inside the reagent storage tanks.	Refill the reagent storage tanks.
	Air leak or blockages in the reagent suction lines.	Remove leak or blockage in the suction line.
	The Y-filter is blocked.	Clean the Y-filter and remove blockages.
	The flow meter or wiring connection is faulty.	Repair or replace the flow meter.
	Defective solenoid valve for reagent.	Repair or replace the solenoid valve.
	The water inlet pressure is low (low vacuum).	Adjust the water inlet pressure (200 - 300 kPa).

Error message	Possible cause	Remedy
Overdosing of reagent A or B	Faulty solenoid valve for reagent.	Repair or replace the solenoid valve.
	Reagent temperatures are below 10°C.	Install a heater or trace heating for the reagents.
Reagent A or B is empty	Low liquid level inside the reagent storage tanks.	Refill the reagent storage tanks.
	Leaking reagent storage tank.	Repair the source of the leak.
	The filling level sensor is in the "open circuit" position.	Repair or replace the filling level switch.
	Defective sensor or faulty cable connections.	Repair or replace the filling level switch.
A or B dilution water level low	Low water inlet pressure.	Adjust the PRV or increase the water pressure.
	Blockage of the PRV screen.	Clean the filter of the pressure reduction valve.
	The water solenoid valve or connection is defective.	Repair or replace water solenoid valve A or B.
	The water meter or wiring connection is faulty.	Repair or replace water flow meter A or B.
	There is a blockage in the system.	Remove all blockages.
Reactor temperature too high	Solenoid valve for reagent stuck in open position.	Remove the blockage inside the solenoid valve.
	Solenoid valve for reagent always energised.	Repair or replace wiring, circuit board or PLC.
	Temperature of reagents (must be >10°C).	Install heating or trace heating.
	Concentrated reagent chemicals were used without dilution.	Replace the reagents or adjust the dilution correctly.
	The temperature of the inflow water is too high.	Reduce the water inflow temperature.

Message	Reason
Service due	The maintenance counter has reached 0 months; maintenance is now due. Authorised personnel can reset this warning once maintenance has been completed.
Reactor change due	The maintenance counter has reached 0 months; a reactor change is now due. Authorised personnel can reset this warning once the reactor has been replaced.
Error in the reactor temperature sensor	The reactor temperature sensor is defective or not connected.
"XXXXXX" connection interrupted	The digital input has been deactivated and will not trigger any warnings or alarms. This is logged.

12.4 System messages

Message	Reason
Remote stop	The remote stop connection is open.
	The external control system has requested remote shutdown of the system.
Reagent A or B pre-empty	The reagent level has fallen below the value set on the "Chemical consumption" screen. Refill the reagent tanks and press the refill button to delete the warning. Set the warning level to 0 litres if this function is not being used.
Manual inhibit active	The system has been manually stopped using the ON/OFF button on the display.

13 Shutdown and disposal



CAUTION

Chemical residues may leak out!

The dosing system contains at least some residues of the chemical used.

- ▶ Flush the system sufficiently.
- ▶ Wear protective equipment in accordance with the current safety data sheet.

The EASYZON must be flushed with water before maintenance work and emptied during downtimes. The reagent suction lines must be safely disconnected from the system during downtimes.

13.1 Flushing the system

1. Remove the suction devices of the reagents from the supply tanks and place them into separate water tanks.
2. Press the beaker symbol on the home screen to access the "Chemical consumption" screen.
3. Press the "Prime" button to access the "Prime Flush" screen.
4. Select the number of batch cycles to be performed – 10 cycles is the default setting.
5. Press "Start" and let the EASYZON count down to 0 cycles.
6. When the cycles have reached 0, the suction lines and reaction vessel are filled with water. Repeat these steps until there is no more chlorine dioxide in the reaction vessel.

13.1.1 Reaction vessel & emptying the tank

1. Flush the system with water.
2. Allow the dosing pump to empty the supply tank into a container.
3. Refill the tank with water if chlorine dioxide is still present and allow the dosing pump to empty it again.
4. Make sure that all tank seals and connections are tight.
5. Disconnect the connecting brackets above the reaction vessel and the suction pipe of the ejector.
6. Open the white caps and loosen the fastening bolts of the reaction vessel.
7. Remove the reaction vessel from the EASYZON cabinet.
8. Carefully tilt the reaction vessel until all the liquid has emptied into a container. Chlorine dioxide may still be present.
9. Reinsert the reaction vessel and ensure that all connections are correct.

13.1.2 Neutralisation of chlorine dioxide

Chlorine dioxide may still be present in the solution drained from the reaction vessel and storage tank. Neutralise this with sodium thiosulphate and dilute with water before discharging it into the drain.

13.1.3 Disposal of old equipment

Observe the following instructions when disposing of an old device:

- You must dispose of the device in accordance with local laws and regulations. It should not be disposed of as domestic waste!

As the disposal regulations may differ from country to country, please consult your supplier if necessary.

In Germany, the manufacturer must provide free-of-charge disposal. However, this requires the device to have been safely returned along with a decontamination declaration.

14 EU declaration of conformity



(DE) EG-Konformitätserklärung

Hiermit erklären wir, dass das nachfolgend bezeichnete Gerät aufgrund seiner Konzipierung und Bauart sowie in der von uns in Verkehr gebrachten Ausführung den einschlägigen grundlegenden Sicherheits- und Gesundheitsanforderungen der aufgeführten EG-Richtlinien entspricht. Bei einer nicht mit uns abgestimmten Änderung am Gerät verliert diese Erklärung ihre Gültigkeit.

(EN) EC Declaration of Conformity

We hereby certify that the device described in the following complies with the relevant fundamental safety and sanitary requirements and the listed EC regulations due to the concept and design of the version sold by us.

If the device is modified without our consent, this declaration loses its validity.

(FR) Déclaration de conformité CE

Nous déclarons sous notre propre responsabilité que le produit ci-dessous mentionné répond aux exigences essentielles de sécurité et de santé des directives CE énumérées aussi bien sur le plan de sa conception et de son type de construction que du modèle que nous avons mis en circulation.

Cette déclaration perdra sa validité en cas d'une modification effectuée sur le produit sans notre accord explicite.

(ES) Declaración de conformidad CE

Por la presente declaramos que, dados la concepción y los aspectos constructivos del modelo puesto por nosotros en circulación, el aparato mencionado a continuación cumple con los requisitos sanitarios y de seguridad vigentes de las directivas de la U.E. citadas a continuación.

Esta declaración será invalidada por cambios en el aparato realizados sin nuestro consentimiento.

(NL) EU-overeenstemmingsverklaring

Ondergetekende Lutz-Jesco GmbH, bevestigt, dat het volgende genoemde apparaat in de door ons in de handel gebrachte uitvoering voldoet aan de eis van, en in overeenstemming is met de EU-richtlijnen, de EU-veiligheidsstandaard en de voor het product specifieke standaard. Bij een niet met ons afgestemde verandering aan het apparaat verliest deze verklaring haar geldigheid.

(PT) Declaração de conformidade CE

Declaramos pelo presente documento que o equipamento a seguir descrito, devido à sua concepção e ao tipo de construção daí resultante, bem como a versão por nós lançada no mercado, cumpre as exigências básicas aplicáveis de segurança e de saúde das directivas CE indicadas.

A presente declaração perde a sua validade em caso de alteração ao equipamento não autorizada por nós.

Bezeichnung des Gerätes:	Anlage zur Herstellung und Dosierung von Chlordioxid
Description of the unit:	Chlorine dioxide system
Désignation du matériel:	Dioxyde de chlore
Descripción de la mercancía:	Diocido de cloro
Omschrijving van het apparaat:	Installatie voor aanmaak en dosering van Chloordioxide
Designação do aparelho:	Instalações de produção e medição de dióxido de cloro
Typ:	EASYZON 5/10/20/40/60/125/250 L, EASYZON 125/250/500 M, EASYZON
Type:	125/250/500/1000/2000 M
EG-Richtlinien:	2014/35/EU, 2011/65/EU, 2014/30/EU
EC directives:	
Harmonisierte Normen:	EN 60335-1:2012+A15:2021, EN 63000:2018, EN 61000-6-4:2007+A1:2011, EN
Harmonized standards:	61000-6-2:2005+AC:2005, EN 61000-3-2:2014, EN 61000-3-3:2013

Dokumentationsbevollmächtigter: Lutz-Jesco GmbH
Authorised person for documentation:

Heinz Lutz
 Geschäftsführer / Chief Executive Officer
 Lutz-Jesco GmbH
 Wedemark, 13.02.2026

Lutz-Jesco GmbH
 Am Bostelberge 19
 30900 Wedemark
 Germany

Fig. 20: EU declaration of conformity EASYZON L 5-60

15 Decontamination declaration

Due to legal regulations for the protection of our employees and operating facilities, we need the completed and signed declaration of decontamination in order to process your return.

1. Copy this page and complete it **for each device separately!**
2. Attach the declaration to the outside of the packaging.
3. Return the device.

Decontamination declaration	
We forward the following device for repairs:	
Device designation:	Part no.:
Order no.:	Date of delivery:
Reason for repair:	
.....	
.....	
Medium dosed	
Description:	Irritant: ☐ Yes ☐ No
Properties:	Corrosive: ☐ Yes ☐ No
We hereby certify that the device has been thoroughly cleaned inside and out before being returned, contains no hazardous chemical, biological and radioactive agents and has been drained of oil. If the manufacturer has to perform additional cleaning, we shall be invoiced the costs incurred. We certify that the aforementioned information is correct and complete and that the device will be returned in accordance with legal requirements.	
Company / Address:	Phone:
.....	Fax:
.....	E-mail:
Customer no.:	Contact person:
Date, Signature:	

1. Copy this page and fill in all fields.
2. Pack the device together with the completed warranty claim.
3. Return the device.

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17 Confirmation of training instruction

You can use the following form as a copy template to record confirmation of training instructions.

Confirmation of training instruction

Topic of the training:

Date:

Training instructor:

Training instructor s signature:

No.	Name	First name	Signature
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

[illegible]

