

POOLEX

Neolyser



-  Manuel d'installation et d'utilisation
-  Installation and user manual
-  Manual de usuario y instalación
-  Manuale d'installazione e d'uso
-  Installations und Gebrauchsanleitung
-  Installatie en gebruikershandleiding

 *Cher client,*

Nous vous remercions pour votre achat et pour la confiance que vous accordez à nos produits.

Nos produits sont le résultat d'années de recherche dans le domaine de la conception et de la production de matériel pour piscine et spa. Notre ambition, vous fournir un produit de qualité aux performances hors normes.

Nous avons réalisé ce manuel avec le plus grand soin afin que vous puissiez tirer le meilleur de votre électrolyseur Poolex.

 *Dear customer,*

Thank you for your purchase and for the trust you place in our products.

Our products are the result of years of research in the field of design and production of pool and spa equipment. Our ambition, to provide you with a quality product with exceptional performance.

We have created this manual with the greatest care so that you can get the best out of your Poolex electrolyser.

 *Estimado(a) cliente,*

Gracias por su compra y por la confianza que deposita en nuestros productos.

Nuestros productos son el resultado de años de investigación en el campo del diseño y la producción de equipos para piscina y spa. Nuestra ambición es ofrecerle un producto de calidad con unas prestaciones fuera de lo común.

Hemos realizado este manual con el máximo cuidado para que pueda sacar el máximo provecho de su electrolizador Poolex.

 *Gentile cliente,*

Grazie per il vostro acquisto e per la fiducia che riponete nei nostri prodotti.

I nostri prodotti sono il risultato di anni di ricerca nel campo della progettazione e produzione di attrezzature per piscina e spa. La nostra ambizione, fornire un prodotto di qualità con prestazioni superiori.

Abbiamo realizzato questo manuale con la massima cura affinché possiate trarre il meglio dal vostro elettrolizzatore Poolex.

 *Sehr geehrter Kunde,*

Vielen Dank für Ihren Einkauf und Ihr Vertrauen in unsere Produkte.

Unsere Produkte sind das Ergebnis jahrelanger Forschung im Bereich der Entwicklung und Herstellung von Schwimmbad- und Spa-Geräten. Unser Ziel ist es, Ihnen ein Qualitätsprodukt mit außergewöhnlicher Leistung zu bieten.

Wir haben dieses Handbuch mit größter Sorgfalt erstellt, damit Sie das Beste aus Ihrem Poolex-Elektrolyseur herausholen können.

 *Geachte klant,*

Wij danken u voor uw aankoop en voor het vertrouwen dat u in onze producten plaatst.

Onze producten zijn het resultaat van jarenlang onderzoek op het gebied van ontwerp en productie van zwembad- en spa-apparatuur. Onze ambitie om u een kwaliteitsproduct met uitzonderlijke prestaties te leveren.

We hebben deze handleiding met de grootste zorg gemaakt, zodat u het beste uit uw Poolex-elektrolysator kunt halen.

! PLEASE READ CAREFULLY !

These installation instructions form an integral part of the product.

They must be provided to the installer and kept in a safe place by the user.

If you lose the manual, please refer to the website :

www.poolex.fr

The warnings and guidelines contained in this manual must be carefully read and understood as they provide important information concerning the safe handling and operation of the chlorinator. Keep this manual handy for future reference.

Installation must be performed by a qualified professional in accordance with regulations in force and the manufacturer's instructions. Errors made during installation can cause physical injuries to people and animals, as well as mechanical damage for which the manufacturer shall not be held liable.

After unpacking the chlorinator, please check the contents for any damage.

Before plugging in the chlorinator, ensure that the instructions provided in this manual are compatible with actual installation conditions and do not exceed the maximum authorised limits for the product in question.

In the event of a defect and/or malfunction, electrical power must be shut off and no attempts to repair the fault should be made. Repairs must be carried out by an authorised technician using original spare parts. Non-compliance with the aforementioned clauses can negatively impact the safe operation of the chlorinator.

In order to guarantee the efficiency and proper functioning of the chlorinator, it must be regularly maintained in accordance with the instructions provided.

In the event the chlorinator is sold or transferred to another party, please ensure that all technical documentation is given to the new owner together with the equipment.

This chlorinator is designed exclusively to treat swimming pools. Any other use is considered inappropriate, incorrect and potentially dangerous.

All contractual and extra-contractual liability on the part of the manufacturer / distributor shall be considered null and void in the event of damage caused by errors in installation or operation, or due to non-compliance with the instructions provided in this manual, or the standards in force for the installation of equipment discussed in this document.

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1. SAFETY INSTRUCTIONS

Installation and maintenance of any upstream electrical components must be performed by a qualified electrician. Failing to do so may result in electric shock, serious injury, property damage, and even death.

Prior to any maintenance or operation, ensure that the salt chlorinator and any other devices are shut down and the main power supply is off.

The salt chlorinator's external power adaptor must be connected to a main power supply separate from the filtration system (no feedback contrai), equipped with a 30mA residual current device and an earthing system.

The salt chlorinator must be plugged into an outlet located in a well-ventilated area to prevent overheating. Do not plug the salt chlorinator into an outlet where it could be damaged by humidity or rain.

The person responsible for the installation must read this manual carefully. In the event of a malfunction or erroneous operation, please contact the nearest authorised reseller or technical support.

If a part is damaged, ensure a replacement is purchased from the manufacturer or an authorised reseller.

NON-COMPLIANCE WITH THESE WARNINGS CAN RESULT IN PROPERTY DAMAGE, ELECTRIC SHOCK, COMPLICATIONS, SERIOUS INJURIES, OTHER INJURIES AND EVEN DEATH.

WARNING - To avoid the risk of injury, do not allow children to operate this device.

WARNING - Intensive use of the pool, or periods of high temperature, may require an increased level of chlorine production in order to maintain adequate levels of free chlorine.

If used in an indoor swimming pool, under cover or cover, check the chlorine level regularly ($\leq 3\text{ppm}$) and ventilate regularly.

2. DESCRIPTION

1. Package contents

- ✓ Control box with sensor + Flow and temperature detector
- ✓ Power supply unit
- ✓ 2 D50 nuts for the sensor
- ✓ Cleaning plug
- ✓ Earth connection on D50 connection collar
- ✓ Screws and cables
- ✓ Winterisation tube

Additional option: ORP probe kit with calibration solution [ref. CL-SORP2].

To complete the installation and use your chlorinator, you will also need:

- + a cable and an independent earth connection stake,
- + compatible hydraulic pipes,
- + and salt that complies with standard EN 16401.

If you wish to connect your cover and/or filter pump to the controller, you will also need a small screwdriver (PH00 or PH0).

For maintenance, you will need a specific descaling product for swimming pool electrolysis cells.

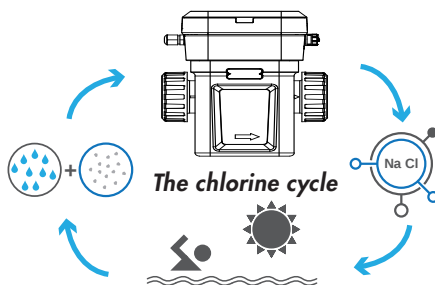
2. General characteristics

This salt chlorinator allows you to adjust the disinfectant production rate to suit your needs, ensuring efficiency and environmental friendliness. It produces either at programmed times (time mode) or continuously when it detects water flow (normal mode) or in order to reach the programmed ORP target value (ORP mode, if optional). In addition to these simplified settings, it includes functions such as cell self-cleaning and self-diagnosis of any errors, which are indicated by an alarm and an error code. For example, the electrolyser signals with an alarm if the salinity level is too low, there is insufficient water flow or the temperatures are inadequate (see "List of error codes and their solutions", page 57).

3. Operating principle

Salt chlorination of a pool works by using salt electrolysis to disinfect the water; this electrochemical process converts the salt present in the water into a disinfectant (hypochlorite ions).

Once this process is complete, hypochlorite turns back into salt after coming into contact with organic material (bacteria, cells) or under the effect of UV rays or other sources of light, starting the cycle over again.



DESCRIPTION

In order to maintain a good level of disinfectant in the water, the following guidelines must be respected:

- A proper concentration of salt in the water: **3.5 g/l**
- Adequate filtration time. As a reminder, a good estimate is:

$$\text{Filtration Time} = T_{\text{water}} / 2$$

- A good water balance with a pH between 7.0 and 7.8 (for more information see Taylor watergram)
- Regular cleaning of your pool to remove any plant debris
- In case of frequent use, consider using the boost function.

CAUTION - Salt treatment by electrolysis alone will not make up for green water. If algae appears, for example as a result of hot weather or heavy use, chlorine pebbles may need to be added. To do this, do not put the chlorine directly into the skimmer, but rather into a floating diffuser.

**The more protected the pool, the lower the chlorine requirement.
The more people use the pool, the higher the chlorine requirement.**

Three operating modes are available:

- Control based on water flow (with mode *b3*)
- Time-based control (modes *c0*, *P4*, *Pb*, *PB*, *b1* and *b2*)
- ORP-based control (automatic) – *If ORP kit option*

When flow control is selected, chlorine production depends on the operation of the circulation pump. When the flow rate is detected, production is triggered. Depending on the operation of your circulation pump, this mode can also be automated.

When time control is selected, chlorine production depends on the programmed time.

When ORP control is selected, chlorine production is automatically adapted to the needs of your water according to the targeted ORP value.

ORP (oxidation-reduction potential), or redox, is an indicator of water quality based on the concentration of free chlorine in the water. The ORP sensor, connected to the controller, allows you to check your water's needs in real time. The controller receives the ORP value of your water and adjusts the chlorine production. According to the WHO, an ORP value of 650 mV guarantees disinfected water. Your controller allows you to choose a value between 600 mV and 800 mV. Preferably choose a value between 650 mV and 750 mV.

The pH (hydrogen potential) is an indicator of water quality based on its acidity. The pH sensor is connected to the controller, which adjusts the pH injection time - via the dosing pump. A good pH should be neutral, i.e. 7.

DESCRIPTION

4. Operating limits

⚠ The circulation pump must be running for the electrolyser to operate!

The filtration time must be long enough and adapted to your pool. Set the filtration time so that it is always running for at least a quarter of an hour before the chlorinator starts up, for the entire production time and again for a quarter of an hour after the end of the production time.

If insufficient flow is detected while the device is supposed to be operating, Néolyser immediately stops chlorine production and triggers the E3 alarm. Only mode b3 does not trigger the E3 alarm when flow is insufficient. However, production stops in all cases: the absence of flow in b3 automatically triggers standby mode. Production resumes when sufficient flow is detected again.

As with any swimming pool, take care to maintain a good chemical balance in the water, including pH, alkaline content and calcium levels. When using an electrolyser, you need to maintain good levels of salt (2700 to 4500 ppm) and stabiliser (20 to 50 ppm) to avoid corrosion or scaling. Check your water at least once a week to check the values of the basic parameters. To be on the safe side, have your pool water tested by a professional at least twice a season.

Your pool shop can not only supply you with the chemicals you will need, but can also advise you on the procedures to follow to adjust the chemical properties of the water. Let them know that you are using a salt-based chlorinator.

Temperature also has a major effect on the correct use of the chlorinator:

- Water temperatures below 15°C will render the system inoperative.
- Water temperatures above 32°C will reduce the effects of hypochlorite. If these high temperatures persist, we recommend adding chlorine pebbles, not directly into the skimmer, but rather into a floating diffuser.

5. List of actions to avoid

- ✗ Do not use fertiliser near your pool. Fertilisers are one of many sources containing nitrates or phosphates, causing a high demand for chlorine in the pool water and deposits on the cell.
- ✗ Never use pure acid to adjust the pH. Deposits of by-products can damage the cell.
- ✗ Do not add any chemicals to the water (including salt) when the chlorinator is running. Switch off the chlorinator before adding and wait at least 24 hours after adding, with circulation running, before restarting the appliance.
- ✗ Do not add any chemical product (including salt) directly to the skimmers. It must be added evenly and away from the suction.
- ✗ Do not allow salinity levels to fall below 2.7 g/l (2700 ppm).

DESCRIPTION

6. Recommended rate tables

Check your values and correct them at least once a week.

Parameter	Target values	Comments
ORP (oxidation-reduction potential) <i>If ORP option</i>	650 to 750 mV	The controller allows you to choose a value between 400 mV and 800 mV. However, it is recommended not to go below 650 mV and not to go above 750 mV. Too high a redox can irritate the skin and respiratory tract, and damage your equipment. Redox levels that are too low encourage the growth of bacteria and algae, leading to the appearance of green water.
Salinity	2,2 - 5 g/l	Once the salt is dissolved in the water (+/- 24 to 48h), salt concentration will only vary slightly over the course of the season.
pH level	7.0 to 7.4	Please note, a pH above 7.8 suppresses the disinfecting properties of hypochlorite.
Free chlorine concentration	From 0.5 to 3.0 ppm	Measurements must be taken from around the return inlets when the chlorinator is switched on, preferably in the morning and out of direct sunlight.
! important ! Stabilizer rate (Cyanuric Acid)	From 20 to 50 ppm	Hypochlorite is a relatively unstable disinfectant. With too low a level of stabilizer, the hypochlorite will turn back into salt too quickly without having had enough time to disinfect. Conversely, with too high a level of stabilizer, the hypochlorite will be blocked. Be careful, if the level of stabilizer is much too high, the pool will have to be partially drained to add water without stabilizer.
Other possible parameter checks		
Total alkalinity content (TAC)	From 80 to 150 ppm	This level measures the concentration of mineral salts (carbonates, bicarbonates, hydroxides) in the water. It stabilizes / buffers the water balance. High TA levels interfere with the effects of pH regulation and scale deposits may begin to appear.
Hardness (TH)	From 150 to 300 ppm	Water hardness represents the amount of calcium carbonate present in your water.

CAUTION - The presence of iron in your water (ferruginous water) may lead to rust deposits on your pool and require the use of a metal sequestrant. Please consult to a professional about this.

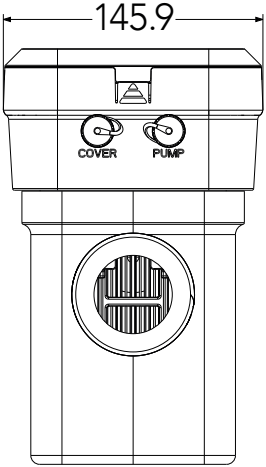
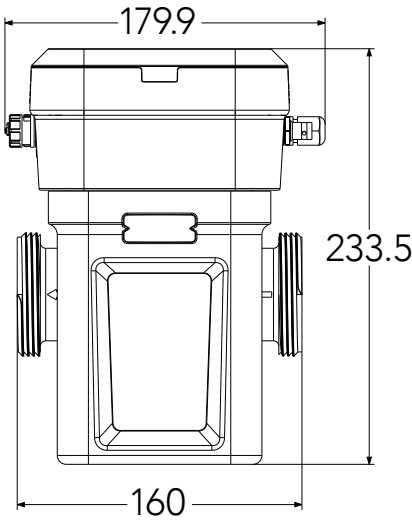
NOTE: If the pool remains cloudy and the previous tests are correct, check for the presence of phosphates and nitrates, which generally contribute to high chlorine demand: if the tests are positive, carry out a shock treatment with an oxidising agent.

DESCRIPTION

7. Technical specifications

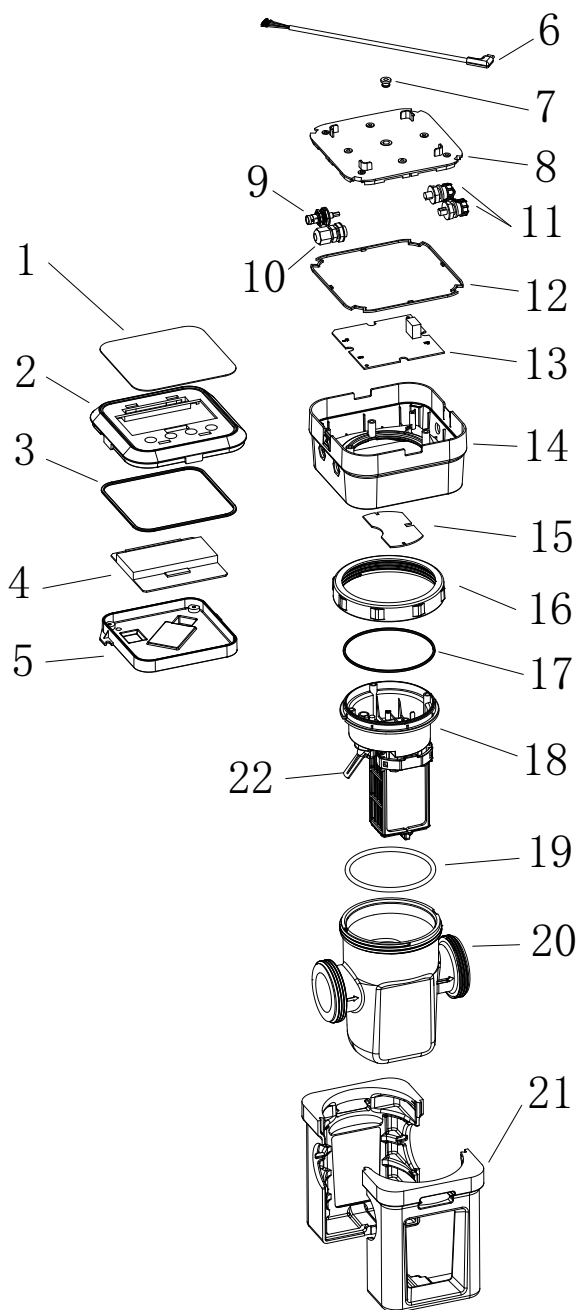
	NÉOLYSER				
Model	4	6	10	15	20
Maximum volume treated (m³)	20	30	50	75	90
Salt concentration (g/l)	2,7 to 4,5 or 2700-4500ppm				
Power supply	100-240 V ~ 50/60 Hz				
Maximum input current (A)	2			2,5	
Output current (A)	2,75			6,35	
Output voltage (Vdc)	24				
Maximum power	66 W			152,4 W	
Maximum pressure (MPa)	0,20				
Water operating temperature	15 to 45 °C				
Air operating temperature	0 to 55 °C				
Maximum hypochlorite production (g/h)	4	6	10	15	20
Cell life	10 000 h				
Cell connections	D50 (1.5") to glue				
Temperature sensor	Integrated				
Flow sensor	Integrated				
Cell maintenance	YES by polarity inversion (adjustable for 4h, 8h or 12h)				
Cover mode	YES (manual or automatic)				
BOOST mode	YES (3 modes)				
ORP mode	YES (option)				

8. Dimensions (en mm)



DESCRIPTION

9. Exploded view



1. Top layer
2. Control panel
3. Silicone seal
4. PC board
5. Control base
6. Type C data cable
7. Gland connector
8. Panel mount
9. BNC connector
10. PG7 gland
11. 2-pin TY12 connector
12. Control cover silicone seal
13. Main control board
14. Main body
15. Driver board
16. Large nut
17. Silicone seal for electrolyser
18. Set of electrodes
19. O-ring
20. Transparent shell
21. EPP protection
22. Flow switch

3. INSTALLATION

CAN ONLY BE INSTALLED IN A SWIMMING POOL EQUIPMENT ROOM.

1. Location

The salt electrolysis system must be connected to an independent (non-slave) power supply and equipped with a 30 mA residual current device, located in a technical room, protected from rain and more than 3.5 m from the pool. If the residual current device trips, check the integrity of the system before resetting it. If in doubt, consult a professional. Do not install in a location where water can easily accumulate, to prevent damage to electronic components caused by humidity or rain. The chlorinator must be installed in a well-ventilated area to help it cool down. Where possible, install the chlorinator away from direct sunlight.

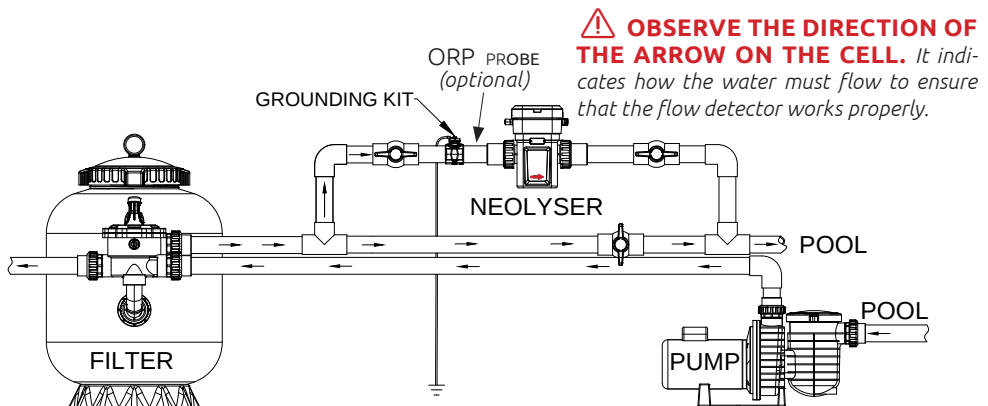
2. Preliminary operations

1. Ensure that you have turned off the electricity and water supply. The valves on the pipes connected to the unit must be closed.
2. Prepare pipes (not supplied) that are compatible with the unit's connections (D50).
3. Clear away anything that might get in the way.
4. Grease the connection joints.

3. Hydraulic installation

The cell must be installed on the return pipe to the pool from the water treatment system. If a heating system is present, install the electrolyser downstream of it. **The electrolyser must be the last component in the circuit.**

An installation without a bypass is possible if your pump has a flow rate of less than 10 m³/h, but a bypass is strongly recommended in order to **regulate the flow rate** and isolate the chlorinator during maintenance. **If the flow rate of your pump is greater than 10 m³/h, then bypassing becomes compulsory.**



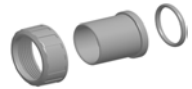
INSTALLATION

Neolyser can be installed either vertically or horizontally. The screen can be rotated 90° for easy reading regardless of the position chosen.



Procedure:

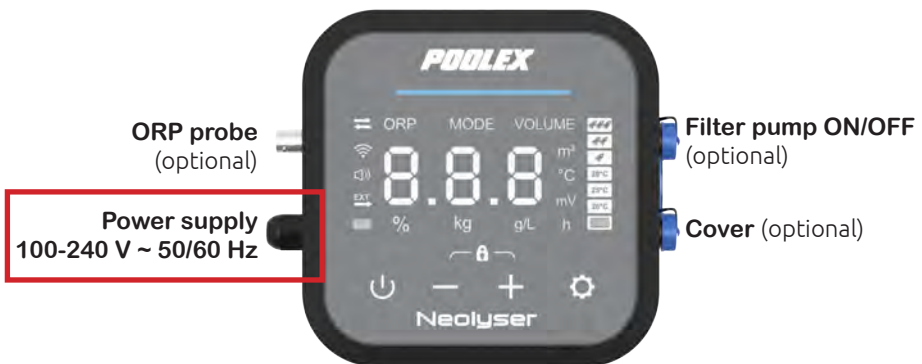
1. Connect the cell to the supplied D50 connectors to be glued.
2. Glue the connectors to the pipes using special PVC glue.
3. Just upstream of the cell, on the same pipe, install the earthing device with its support collar:
 - a. Drill a 25 mm hole in the pipe.
 - b. Assemble the connection collar with the earthing device, remembering to include the sealing ring.
 - c. Close the connection collar around the pipe at the location of the drilled hole. Ensure that the direction of flow is correct.



4. Electrical connection

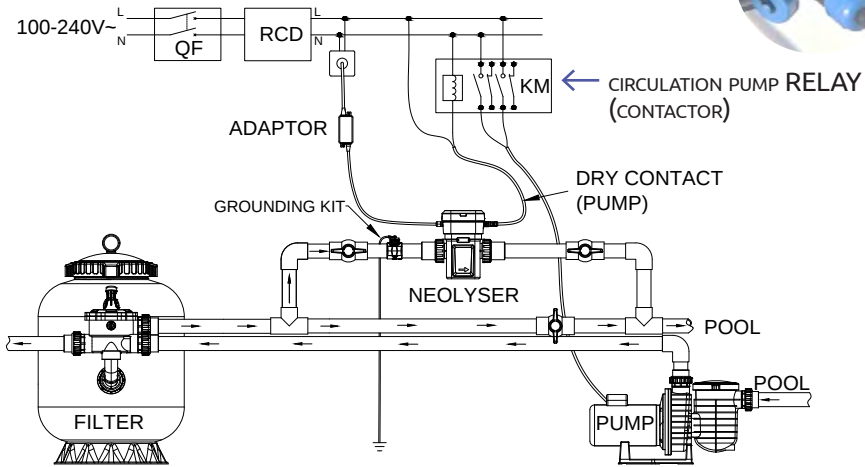
SWITCH OFF THE POWER SUPPLY TO THE APPLIANCE WHEN WORKING ON THE ELECTRICAL SYSTEM.

1. Install your earth connection cable and connect it to the appropriate device.
2. Connect Néolyser to the power supply unit provided.



INSTALLATION

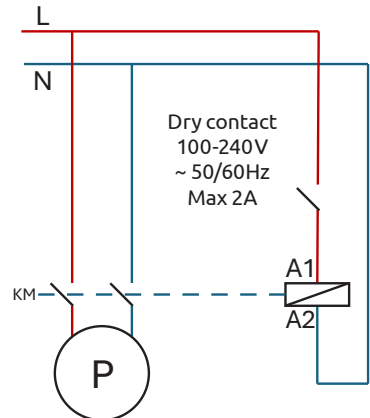
3. If your **circulation pump** is equipped to be connected to a relay (contactor), you can use the adapter provided to connect your pump's relay to Néolyser:



ONLY THE RELAY OF AN ON/OFF CIRCULATION PUMP CAN BE CONNECTED TO THE DRY CONTACT OF NÉOLYSER.



- Open the adapter: unscrew it anticlockwise (hold both black ends),
- Unscrew the gland (blue part with a rounded end) to enlarge the opening,
- Pass the wires from the circulation pump through the opening, then through the entire adapter,
- Tighten the wires using the screws and a small screwdriver (PH00 or PH0),
- Close the adapter and tighten the gland to ensure it is watertight,
- Connect the adapter to the controller.



INSTALLATION

4. If your cover is equipped to be connected to an electrolyser, you can use the adapter provided to connect it to the controller:



- Open the adapter: unscrew it anticlockwise (hold both black ends),
- Unscrew the gland (blue rounded part) to enlarge the opening,
- Pass the wires from the circulation pump through the opening, then through the entire adapter,
- Tighten the wires using the screws and a small screwdriver (PH00 or PH0),
- Close the adapter and tighten the gland to ensure it is watertight,
- Connect the adapter to the controller.

5. ORP option

The ORP option [ref. CL-SORP2] allows Néolyser to automatically adjust chlorine production to your water's needs based on the target ORP value. ORP (oxidation-reduction potential of water), or redox, is an indicator of water quality based on the concentration of free chlorine in the water.

CAUTION! The probe tip must always be kept submerged. When not in use, leave it in a little water to preserve it. Failure to follow this instruction may prematurely destroy the electrolyte contained in the probe.

The ORP probe must be calibrated before installation. To do this:

- Activate the ORP option (see "Change settings", page 48).
- Immerse the probe head in the calibration solution.
- Press the settings button several times until "ORP" and "CAL" flash simultaneously.
- Wait 10 minutes (calibration time). When calibration is successful, the ORP value is displayed on the screen. Otherwise, the screen displays "- -".

To install the ORP sensor, unscrew the cap and use the D50 support collar provided in the kit: the tip of the sensor must be permanently submerged in the pool water, upstream of the electrolyser. Once connected, remember to open the valves to allow water to circulate.



Once installation is complete only, open the valves and switch on the power.

4. USE

1. All you need to know about salt for electrolyzers

1. Salt level required

The system can operate in a wide range of salinities, from a minimum of 2700 ppm (parts per million) up to 4500 ppm. However, the ideal salt concentration is around 3000 ppm.

To achieve this level of salinity, add around 3 kg of salt, standard EN 16401, per 1m³ of water (or 0.481oz/gallon i.e. 481 ounces of salt per 1,000 gallons of water).

If the salinity level is too low, error code E5 will be displayed to warn you what action to take. If you have correctly set the volume of your pool, the control box will recommend the amount of salt to add. We still recommend that you check your settings regularly.

2. What type of salt should you use?

Only use sodium chloride (NaCl) that complies with **standard EN 16 401**. This standard applies to salt for electrochlorination systems and requires NaCl without additives. The purer the salt, the better the performance of the electrolysis cell.

Therefore, do not use stabilised chlorine (prefer hypochlorite) or antiblocking agent salt (sodium cyanide, aka YPS, which is toxic and corrosive). This type of salt can change the colour of the pool lining and the inside of the equipment. Hypochlorite is preferable.

3. How do you test water salinity?

Your chlorinator will warn you if it detects an unsuitable salt level. However, it is advisable to **check its calibration once a season**. You can opt for special salt chlorinator test strips or a salinometer. In both cases, it's advisable to run the filter a few hours before taking the measurement and to use a water sample taken as deep as possible in the pool.

Test strip results are often given in ppm. Don't worry about the conversion:

1 ppm = 1 mg/l = 0.001 g/l. For example, 3500 ppm = 3.5 g/l.

4. How can you restore the optimum salt concentration in your water?

- If the salinity is less than 3 g/l, add salt according to the following formula and procedure:

Quantity of salt to be added in kg = (3.5 - salinity) x volume of pool

1. Add the salt to the pool around the edge of the pool.
2. Run the circulation pump for 24 hours so that the salt is evenly distributed in the pool. Then you can start your chlorinator.

If the salinity is below 2.7 g/l, Néolyser will estimate the amount of salt to add according to your settings.

- If the salinity is higher than 4 g/l, you need to remove or replace a head of water according to the following formula and procedure:

***Height of water to be removed in m =
(1 - 3.5/salinity) x volume of pool / surface area of pool***

ex. : $H = (1 - 3.5/4.2) \times 24 \text{ m}^3 / 15 \text{ m}^2 = 0.27 \text{ m} = 27 \text{ cm}$.

USE

With this formula, your water will have the ideal salinity after the calculated height has been removed. If you want to keep the same height of water in your pond, replace it little by little and re-test the salinity as you go along. Continue to remove and replace water as long as the salinity is above 4 g/l.

DO NOT ADD CHEMICALS OR SALT DIRECTLY INTO THE SKIMMER. THIS COULD DAMAGE THE CELL. IF THE ELECTROLYSIS CELL HAS ALREADY BEEN INSTALLED, IT MUST NOT BE SWITCHED ON UNTIL THE SALT HAS BEEN ADDED AND COMPLETELY DISSOLVED.

Do not throw the plastic salt bag into the water, as the chemicals and inks on the bag can interfere with the balance of the water. Make an opening in the bag, then empty it completely. Once emptied, dispose of the bag in a special container if it can be recycled.

3. Tips for choosing your settings

- The more **protected** the pool, the lower the chlorine requirement. 
- The more the pool is **used**, the greater the need for chlorine. 
- The **warmer** the water, the greater the need for chlorine. 
- The **smaller** the pool, the lower the chlorine requirement. 

To choose your operating mode, refer to the table opposite:

Criteria	 10~20°C / 	 20~25°C	 25~28°C	 ≥28°C	 ≥28°C / 	 ≥30°C / 	 ≥32°C / 
Mode		<i>P4</i>	<i>P6</i>	<i>P8</i>	<i>b1</i>	<i>b2</i>	<i>b3</i>
Production	25 %	50 %	75 %	100 %	150 %	300 %	600 %
Daily duration	2h	4h	6h	8h	12h	24h (1x)	24h

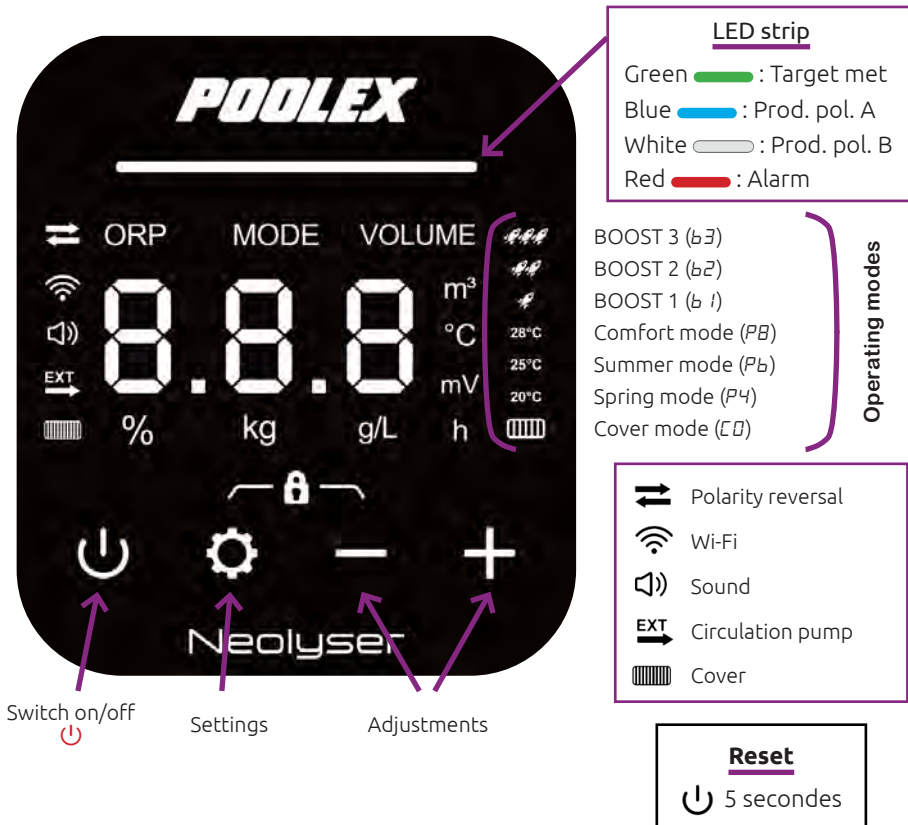
To choose your **polarity inversion time**, refer to the table opposite:

Hydrotimetric title (TH)	Th < 20°f	Th < 40°f	Th > 40°f
Polarity inversion time	12h	8h	4h

Hydrotimetric title, or water hardness, is an indicator of the mineral content of the water, which can lead to limescale deposits. The more calcareous your water, the greater the need for cleaning. To do this, reduce the polarity inversion time as indicated in the table above.

The recommended **ORP setpoint** (if option) is between 650 mV and 700 mV.

4. Using the control panel

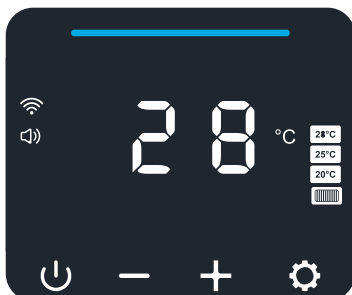


EN

1. Unlock the screen

To lock or unlock the screen, press and hold the and buttons simultaneously. The lock icon disappears when the screen is unlocked. It locks automatically after 5 minutes of inactivity.

2. View settings and status values



When Néolyser is switched on, it displays one parameter at a time. Use the and buttons to switch between parameters in the following order:



Water temperature
↓
Salinity
↓
Polarity reversal time
↓
Operating mode

3. Change settings

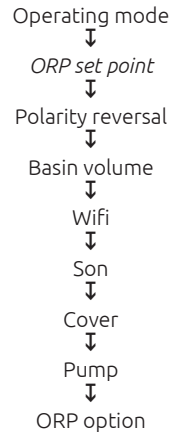
To change the settings, press the settings button . The indicator for the editable setting will flash. Pressing the settings button  again will take you to the next setting.

Use **+** the **—** and buttons to change the setting value. Numeric values increase with the **+** button and decrease with the **—** button. Binary values (on/off) are activated with the **+** button and deactivated with the **—** button.

To exit the parameter modification interface, press and hold the settings button .

When the ORP option is enabled, ORP mode slides between **b3** and **CO** modes. When ORP mode is selected, Néolyser automatically triggers when the ORP value measured by the probe is below the selected set point.

Editable settings



Settings	Min.	Max.	Step	Default value	Comment
Operating mode	CO	b3		PB	See "Tips for choosing your settings", page 46
Polarity reversal time	4h	12h	4h	4h	- Limits scaling of the cell. - The harder your water is, the shorter the polarity reversal time should be.
Basin volume (in m³)	5	200	5	Depending on model	- Allows you to adjust the volume of water in your pool so that the electrolyser can calculate the amount of salt to add for you. - For greater accuracy, consider the water level rather than the height of the pool. - Although this parameter accepts a value of up to 200 m³, please respect the maximum recommended volume.
Wifi				Off	Allows you to control and monitor Néolyser from a smartphone.
Son				On	When active, Néolyser emits an audible signal each time it is pressed and when it detects an error.
Cover				Off	These options enable you to detect the position of a compatible cover and control your circulation/filtration pump from the mobile application associated with Néolyser.
Pump				Off	
ORP option				Off	
ORP set point (in mV)	600	800	5	650	When the ORP option is enabled, ORP mode slips between b3 and CO modes. When ORP mode is selected, Néolyser automatically activates when the ORP value measured by the probe is lower than the selected set point.

5. Remote control

1. Download and install the Poolex application

About the Poolex app:

To control your heat pump remotely, you need to create a Poolex account.

The Poolex application lets you control your pool equipment remotely, wherever you are. You can add and control several devices at once. Appliances compatible with Smart Life or Tuya (depending on the country) are also compatible with the Poolex application.

With the Poolex application, you can share the devices you've set up with other Poolex accounts, receive real-time operating alerts and create scenarios with several devices, based on the application's weather data (geolocation essential).

Using the Poolex application also means taking part in the continuous improvement of our products.

The Poolex app is available on iOS and Android.

Search for "Poolex" in the App Store or Google Play, or scan the QR code below to download the app:

Please note: check the compatibility of your phone and your OS version before installing the app.



2. Pairing Neolyser

Wifi must be accessible in the technical room. If you need help, ask your dealer for advice. You may need to install [WifiLink](#).

To pair your device:

1. Check that your wifi is activated and compatible with the application:

The Poolex application only supports 2.4 GHz WiFi networks.

*If your WiFi network uses the 5GHz frequency, go to your home WiFi network interface to **create a second 2.4 GHz WiFi network** (available for most Internet boxes, routers and WiFi access points).*

2. Launch the Poolex application, create an account if necessary, and log in.
3. Start pairing on your device:

Turn on Wi-Fi (see "Change settings", page 48) : > >

When the device is ready to be paired, the Wi-Fi icon flashes.

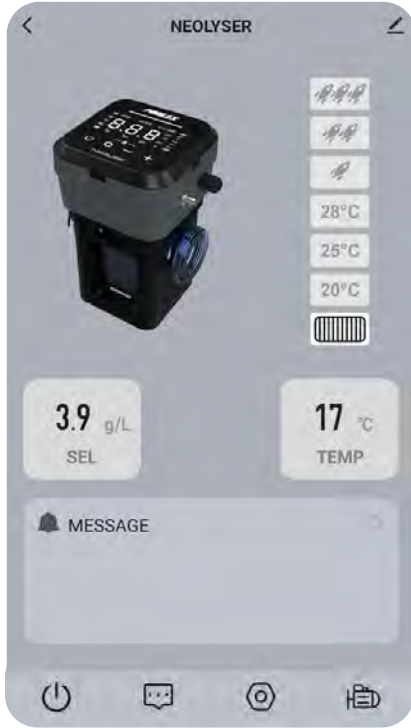
4. The Poolex application detects the device and prompts you to add it to your account. Confirm.



USE

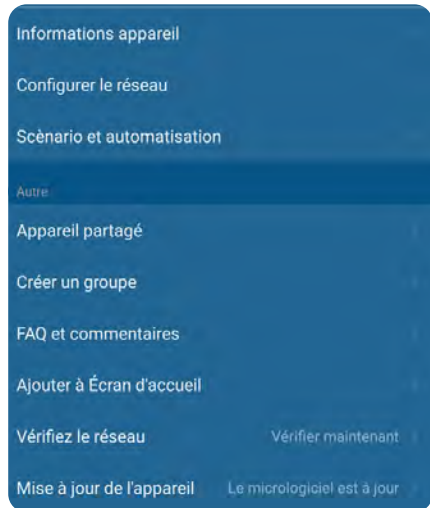
3. Explore the interface

The Néolyser interface on Poolex displays essential information on the home page:



- + operating mode (touch control),
- + water salinity,
- + water temperature,
- + if option, ORP value,
- + status or alarm in the "message" box.

The  button provides access to following settings:



 Return to the previous page.

 Switch device on/off: if off, appears in red  + message "OFF".

 View: history of alarms encountered; salinity, temperature, ORP and consumption curves (1 value/hour); cell history (usage time, energy).

 Configure the device:
→ Polarity reversal time, pool volume, start time
→ ORP option: activation and setpoint adjustment

 Set up or switch off the circulation pump

If Néolyser detects an error, the error code, its name and the time it occurred are displayed in a box at the bottom of the application's main screen. Click on this box to view the page listing current and past alerts. If the salinity is too low, this page will also tell you how much salt you need to add based on your settings.

When the system is switched off, the box displays "OFF"; in standby mode, it displays "STAND BY". When the pool cover is closed, the message "POOL COVER" is displayed.

USE

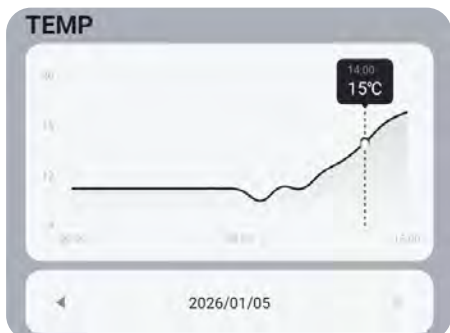
4. Use the application

To change the settings, click on ⚙️.



The message tab  provides access to the history of triggered alarms, the history of data recorded in graph form (salinity, temperature, consumption, and, where applicable, ORP), as well as cell information (lifespan, energy).

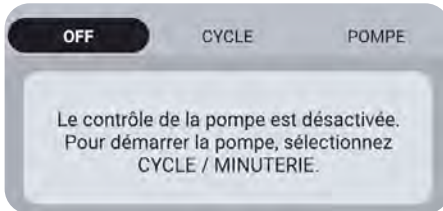
The graphs remain available for 7 days and are generated from one measurement saved per hour. Click on a graph to display the details of the point in question (time and value recorded).



USE

If you have connected your **circulation pump** to Néolyser, click  to configure it, then

- OFF to switch off your circulation pump;
- CYCLE to select the duration and frequency of operation of your circulation pump; or (if optional) automate the operation of your circulation pump according to the ORP value;
- TIMER to set up to 3 switch-off or switch-on times.
Note: the 3 operating periods must not overlap.



5. ENTRETIEN

1. General maintenance

Periodic servicing is very important to ensure that your appliance operates correctly over the long term. These operations must be carried out systematically and meticulously, following the advice below.

- Check that the suction and discharge pipes are free of impurities. Impurities can damage the pump body pipe and cause a fault in the discharge.
- Check the condition of your filter regularly: clogging can cause a drop in flow.
- If necessary, check that the ORP sensor is not clogged.
- Clean the electrolyser cell once or twice a season.
- Check the level of stabiliser (Cyanuric acid) at a concentration of 20 to 50 ppm.
- Check for the presence of phosphates and nitrates, which generally contribute to high chlorine demand: if the tests are positive, carry out a shock treatment with an oxidising agent.
- Don't use fertiliser near your pool. Fertilisers are one of many sources containing Nitrates or Phosphates, causing a high demand for chlorine in the pool water and deposits on the cell.

2. Cleaning the cell

1. Principe

To maintain maximum performance, inspect the cell at least every 3-4 months: there should be no debris jamming the flow sensor or between the plates.

The cell has a built-in polarity reversal prevention function. In most cases, this self-cleaning will keep the cell at peak efficiency and help prevent scale build-up, however :

THE CELL MUST BE CLEANED MANUALLY 1 OR 2 TIMES PER SEASON.

2. Disassembly

Never unscrew the control box bracket, as this will invalidate the warranty.

1. Switch off all electrical power and close the water inlet and outlet valves.
2. Disconnect the cable linking the cell to the controller. Make sure it cannot fall into the water.
3. Unscrew the threaded nuts around the PVC fittings connecting the cell to the pipework.
4. Drain off any residual water (allow to drain into a container before returning it to the pool).
5. Remove the cell completely from the fittings. DO NOT pull or carry the cell by its cable.

3. Cleaning

Always use a specific descaling product for pool chlorinator cells and scrupulously follow the manufacturer's instructions for use and safety.

Using an unsuitable product or one that is too concentrated (pure acid) can cause visible and irreversible damage to the cell, which is not covered by the warranty and can be potentially dangerous.

WHEN CLEANING THE CELL, ALWAYS WEAR APPROPRIATE PROTECTIVE EQUIPMENT SUCH AS RUBBER GLOVES AND EYE PROTECTION.

Always work in a well-ventilated area. Acid splashes can cause serious injury and/or material damage.

NEVER ADD WATER TO ACID.

1. Dismantle the cell as described above.
2. Plug one end of the cell with a cleaning plug (supplied). Hold the cell in a vertical position, with the plug facing downwards.
3. Pour the descaler directly into the cell until it covers the plates.
4. Wait 10 to 20 minutes, shaking the tube regularly.
5. Check that no scale remains. Repeat the operation if necessary.
6. When there is no more scale, rinse the cell and its wiring with clean water.
7. Wipe the wiring with a soft cloth, then reinstall the cell and its wiring.
 - If necessary, refer to "Hydraulic installation", page 41.

3. Wintering

1. Active wintering

When temperatures are low, very little chlorine is needed. If you actively winterise your pool, using the cover function will be sufficient.

However, if the water temperature drops below 15°C, the chlorinator will not produce chlorine and will go into error (EL). This feature extends the life of the cell.

If the water temperature continues to fall until it freezes, the cell will be damaged by the icy water, as will your pool's plumbing.

Before the first frost, it is advisable to carry out passive winterisation as a precaution.

2. Passive winter storage

In areas subject to severe or prolonged periods of freezing cold, before the first frost, be sure to drain all the water from the pump, filter, supply and return lines.

As a precaution, dismantle the cell (see "Disassembly", page 53) by closing the bypass to isolate the circuit, then store your cell in a dry place.

3. Spring restart

When operating the pool after a long period of inactivity, do not start the chlorinator until the chemical properties of the water, in particular pH and salt concentration, have been rebalanced and restored to their ideal level. See "Recommended rate tables", page 38, for more details.

This is also a good time to check all the other parameters.

WARNING: if you leave the pool after wintering with **green water**, the chlorinator will not be able to make up for the green water. It may be necessary to add a pinch of chlorine from time to time. To do this, do not put the chlorine directly into the skimmer, but rather into a floating diffuser. Make sure you switch off the chlorinator beforehand to avoid damaging the cell.

6. TROUBLESHOOTING



In the event of **green water** (after wintering, very high temperature), the chlorinator will not be able to restore the water. It may be necessary to **add a pinch of chlorine** from time to time. To do this, do not put the chlorine directly into the skimmer, but rather into a **floating diffuser**.

IF YOU NEED TO DO A CHLORINE SHOCK TREATMENT, BE SURE TO SWITCH OFF THE CHLORINATOR BEFOREHAND TO AVOID DAMAGING THE CELL.

1. Checks on the entire system

Although our chlorinator is manufactured with the utmost care, it may break down.

IN THE EVENT OF A FAULT AND/OR MALFUNCTION, THE POWER SUPPLY MUST BE DISCONNECTED AND NO ATTEMPT MUST BE MADE TO REPAIR THE FAULT.

Repair work may only be carried out by an authorised technical assistance service using original spare parts.

Failure to comply with the above clauses may have a negative influence on the safe operation of the electrolyser.

However, other factors inherent to the chlorinator may affect treatment performance. In the event of a problem with the quality of your water (e.g. water starting to turn green), please check the following points:

- ✓ Check that the electrical socket is still plugged in.
- ✓ Check that the power supply is still on and that the earth leakage protection has not tripped (or the circuit breaker upstream). If in doubt, call in a professional.
- ✓ Check that the water parameters are correct. See "Recommended rate tables", page 38, for more details.
- ✓ Check that the water flow rate is between 10 m³/h and 30 m³/h.
- ✓ Check that the filtration time is long enough: **(T°water)/2**
- ✓ Check that the filtration time includes the operating time of your chlorinator: allow a margin of a quarter of an hour on the filtration time before and after the operating time of your chlorinator.

For optimum treatment, we advise you to select the production rate according to the temperature of your water, and to use BOOST mode if conditions make this necessary (high temperature or high use). Depending on your use and your pool (volume, exposure to vegetation, sunlight, etc.), you may need to change the rate up or down.

TROUBLESHOOTING

2. List of error codes and their solutions

When your chlorinator encounters a problem that prevents it from working, it warns you of the nature of the problem by means of an error code. Refer to the table below to find the nature of the error and the solutions adapted to each situation.

Code error	Description	Solution
<i>EL</i>	Low water temperature alarm (winter mode)	The operating temperature of the water is 15-45°C. When the water temperature falls below 15°C, winter mode is activated and chlorine production stops. When the water temperature returns to normal, the fault display will automatically clear. 1. Check that the actual water temperature is normal (15-45°C). 2. If the actual water temperature is normal, replace the temperature sensor.
<i>EH</i>	High water temperature alarm	The operating temperature of the water is 15-45°C. When the water temperature exceeds 45°C, chlorine production stops. When the water temperature returns to normal, the fault display will automatically clear. 1. Check whether the actual water temperature is above 45°C. 2. If the actual water temperature is normal, replace the temperature sensor.
<i>E3</i>	Insufficient water flow	The normal operating range of the flow sensor is between 10 m³/h and 30 m³/h. 1. Check whether there is water or air in the cell. 2. Check that the water inlet and outlet valves are open. 3. If your circulation pump has an adjustable speed, check that the speed is adapted to the Néolyser flow rate requirements. 4. Check and clean the pipes, filter and pump to ensure sufficient flow. 5. Check the direction of flow indicated on the flow sensor. 6. Remove the flow sensor and test its operation by hand: press the flow switch and observe whether the controller detects the flow. If the flow is still not detected, replace the flow sensor. 7. Otherwise, please contact your dealer.

TROUBLESHOOTING

Code error	Description	Solution
<i>E5</i>	Salinity too low	This error message suggests that the salt concentration in the pool is below 2700 ppm. The screen displays the error code and the amount of salt to be added according to your settings (changing every 5 seconds). 1. Check that the salinity of the water is between 2700 and 4500 ppm. (The ideal salt concentration is around 3500 ppm). → If the salinity is outside the normal range, follow the procedure "How can you restore the optimum salt concentration in your water?", page 45. Also, when this alarm occurs, Néolyser calculates for you the amount of salt to add according to your settings. 2. If the salinity is normal, check whether the remaining life of the cell (titanium plate) is less than 10%. → See "Using the control panel", page 47. → If the accumulated operating time of the cell is close to 10,000 h, replace the cell. 3. If not, please contact your dealer.
<i>E7</i>	Abnormal water temperature	1. Check that the temperature sensor is correctly connected. 2. If it is, replace the sensor.
<i>ER</i>	Electrode failure	1. Check that the salinity of the water is between 2700 and 4500 ppm. (The ideal salt concentration is around 3500 ppm). 2. Check that the electrode is properly connected. 3. Replace the cell. 4. If not, please contact your dealer.
<i>E3</i>	Reminder to replace the electrolysis cell	1. Press the "OK" button for 5 seconds to delete it. 2. Replace the cell. 3. Then, on the history interface (see "Using the control panel", page 47), press and hold the "OK" button for 5 seconds to reset the cell life counter.

Note: Error codes may appear without affecting the correct operation of your chlorinator. For example, *E3* may appear if Néolyser detects that your circulation pump has stopped, even if the flow returns in time for hypochlorite production. In this case, simply ignore the warning.

7. WARRANTY

The Néolyser chlorinator is guaranteed to be free from material and manufacturing defects, for normal use and non-commercial application, for a period of **five (5) years** or **10,000 hours** of operation.

Probes are consumable components not covered by the warranty.

The date on which the guarantee comes into effect is the date of the last invoice.

The guarantee does not apply in the following cases:

- Malfunction or damage resulting from installation, use or repair not in accordance with safety instructions.
- Malfunction or damage resulting from an unsuitable chemical environment in the pool.
- Malfunction or damage resulting from conditions unsuitable for the intended use of the device.
- Damage resulting from negligence, accident or force majeure.
- Malfunction or damage resulting from the use of unauthorized accessories.

Repairs carried out during the warranty period must be approved in advance and carried out by an authorised technician. The warranty will lapse if the appliance is repaired by a person not authorised by Poolstar.

Warranty parts will be replaced or repaired at Poolstar's discretion. Defective parts must be returned to our factory within the warranty period to be covered. The warranty does not cover unauthorised labour or replacement costs. The return of the defective part is not covered by the warranty.

Dear customer,

A question? A problem? Or simply register your warranty, find us on our website:

<https://assistance.poolstar.fr/>



Thank you for your trust and support. Happy bathing!

Your personal information is processed in accordance with the French Data Protection Act of 06 January 1978 and will not be shared with 3rd parties.

POOLEX



Assistance technique - Technical support -
Asistencia técnica - Assistenza tecnica -
Technische unterstützung - Technische bijstand

www.assistance.poolstar.fr

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