

POOLEX

MODULYSER



-  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.

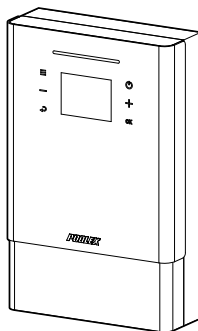
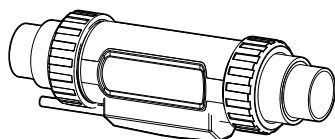
If used in an indoor swimming pool, under cover or cover, check the chlorine level regularly (≤ 3 ppm) and ventilate regularly.

2. DESCRIPTION

1. Package contents

- ✓ Control box
- ✓ Cell
- ✓ 2 D63 nuts for the cell
- ✓ 2 D50/D63 reducers to be glued on*
- ✓ 2 D50 saddle clamps
- ✓ Cleaning plug
- ✓ Flow switch and temperature sensor
- ✓ Earth plug
- ✓ Fixing template
- ✓ Screws and cables

Additional options: ORP probe with calibration solution, D63 support collars, wintering tube.



To be able to finish the installation and use your chlorinator, you also need :

- + an earth cable,
- + Compatible hydraulic hoses,
- + salt that complies with standard EN 16401,
- + and the tools to screw the control box support screws into your wall.

If you want to connect your cover and/or filtration pump to the controller, you'll also need a small flat screwdriver (blade of 2 mm maximum).

For maintenance, you'll need a specific descaling product for pool chlorinators.

* The gearboxes are stored in the nuts during packing. If necessary, pull a little to remove them.

2. General characteristics

This salt water chlorinator lets you adjust the rate of disinfectant production to suit your needs, with a view to efficiency and respect for the environment. It produces either at programmed times (time mode) or continuously as soon as it detects the presence of water flow (normal mode) or so as to reach the programmed ORP target value (ORP mode, if optional). In addition to these simplified settings, it includes functions such as self-cleaning of the cell and self-diagnosis of any errors signalled by an alarm and an error code. For example, the chlorinator will give an alarm if the salinity level is too low, if there is a lack of water flow or if the temperature is inadequate (see "List of error codes and their solutions", page 86).

DESCRIPTION

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).

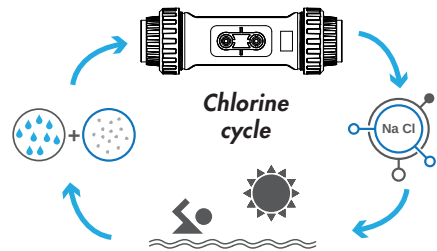
Once this process is complete, hypochlorite turns back into salt after coming into contact with organic material (bacteria, cells) or under the effect of UV rays or other sources of light, starting the cycle over again.

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:

- Water flow control (manual)
- Time control (programmed)
- ORP control (automatic) – *If option kit ORP*

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.

DESCRIPTION

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.

4. Operating limits

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 minimum production time.

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.

DESCRIPTION

5. 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.

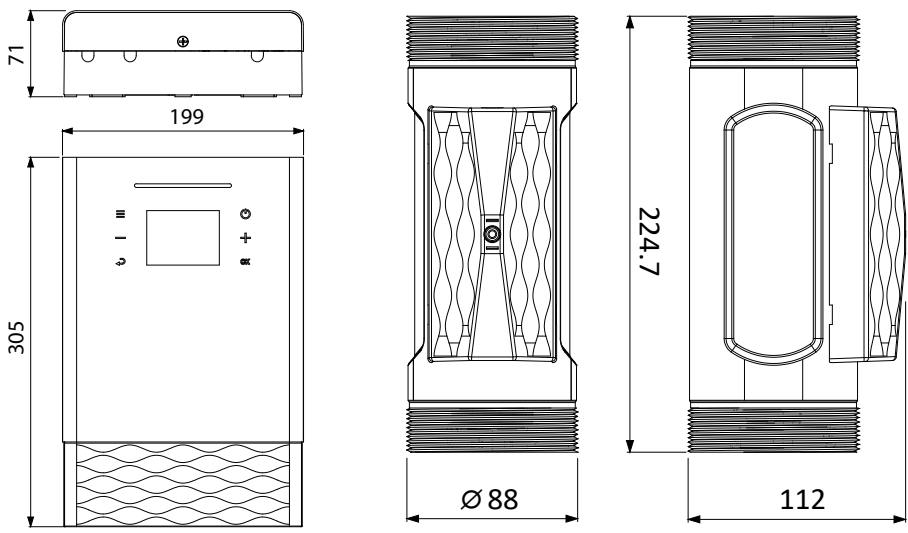
NOTE: If the pool remains cloudy and the previous tests are correct, check for the presence of phosphates and nitrates, which generally contribute to high chlorine demand: if the tests are positive, carry out a shock treatment with an oxidising agent.

DESCRIPTION

6. Technical specifications

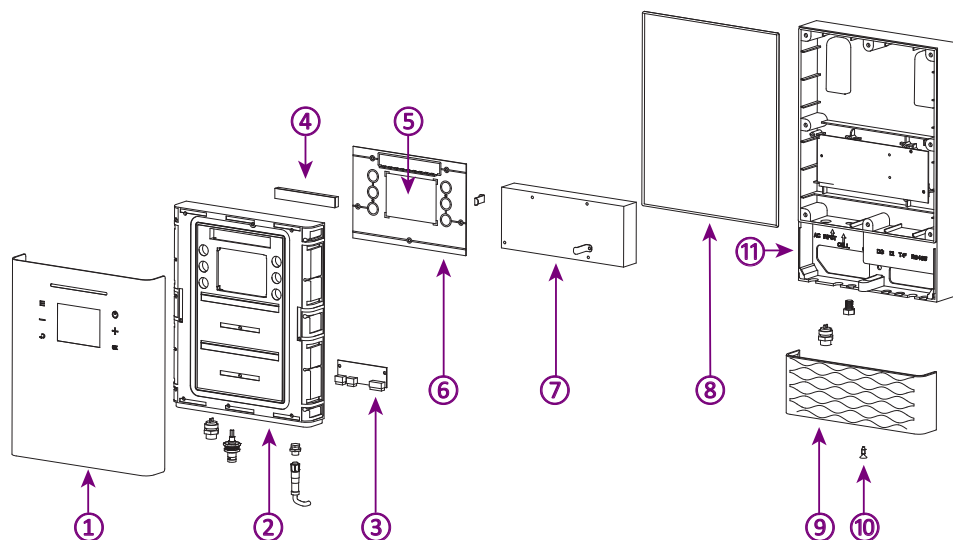
	MODULYSER			
Model	10	15	20	25
Maximum volume treated (m ³)	50	75	90	110
Salt concentration (g/l)	2,7 to 4,5			
Power supply	100-240 V ~ 50/60 Hz			
Output voltage (Vdc)	12	24	24	29
Maximum input current (A)	2.5	2.5	2.5	3.5
Maximum power	66 W	120 W	120 W	174 W
Maximum pressure (MPa)	0,20			
Water operating temperature	15 to 45 °C			
Air operating temperature	0 to 45 °C			
Maximum hypochlorite production (g/h)	10	15	20	25
Cell life	10 000 h			
Number of plates	3	4	5	6
Cell connections	D63 mm and 63/50 (2.5"/1.5") reducer to glue			
Temperature sensor	YES			
Flow sensor	YES			
Cell maintenance	YES by polarity inversion (adjustable for 2h, 4h, 6h or 8h)			
Cover mode	YES (manual or automatic)			
BOOST mode	YES (48h)			

7. Dimensions (in mm)



DESCRIPTION

8. Exploded view



- | | |
|------------------|---------------------------|
| 1. Front panel | 7. AC/DC transformer |
| 2. Housing front | 8. Housing gasket |
| 3. Cable support | 9. Wire cover panel |
| 4. LED strip | 10. Cover retaining screw |
| 5. Screen | 11. Housing base |
| 6. Control board | |

3. INSTALLATION

CAN ONLY BE INSTALLED IN A SWIMMING POOL EQUIPMENT ROOM.

1. Location

The salt chlorinator power supply must be installed on an independent power source equipped with 30 mA residual current protection, in a technical room, sheltered from the rain and more than 3.5 m from the pool. If the differential protection is triggered, check the integrity of the system before resetting. If in doubt, call in a professional. Do not install in a place where water can easily accumulate, to prevent damage to the electronic components caused by damp or rain. The chlorinator should be installed in a well-ventilated area to help it cool down. As far as possible, install the chlorinator away from direct sunlight.

2. Preliminary operations

1. Make sure you have switched off the electricity and water supply. The valves on the pipes connecting to the cell must be closed.
2. Check that the hoses used (not supplied) are compatible with the cell.
3. Clean up any clutter.
4. Grease the connection joints.
5. Choose a location on the wall for the controller: this location must be accessible, solid and close enough to the cell and a power supply. Allow sufficient space under the unit for the connections.
6. Use the template supplied to mark the locations of the controller support screws: each circle indicates the location of a screw.
7. Fit the controller support screws. Allow the screws to protrude by 5 to 7 mm.
8. Place the controller on the screws so that the screws are positioned in the notches provided on the back of the controller.

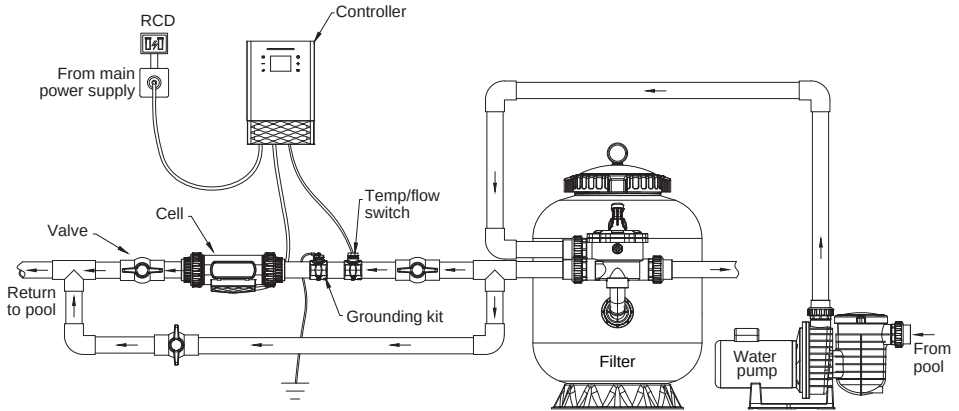
3. Hydraulic installation

The cell must be installed on the return pipe to the pool from the water treatment system, as shown in the diagram below. If there is a heating system, install the chlorinator downstream from it. **The chlorinator must be the last element 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.**

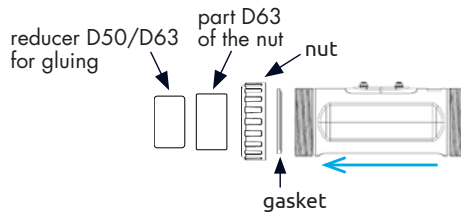
The Modulyser cell can be installed either vertically or horizontally. Horizontally, the connections must be under the cell.

INSTALLATION

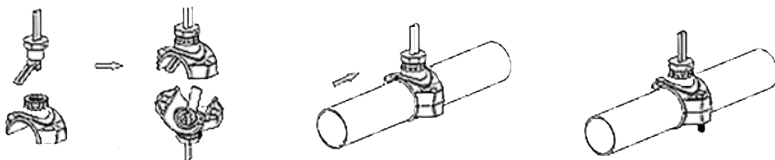
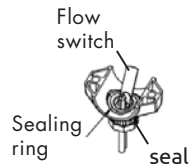


4. Hydraulic connection

1. Connect the cell to your hydraulic system using the D63/D50 glue-on reducers, O-rings and spacers supplied. Glue the reducers to the nuts and pipework.
2. Use special PVC glue to connect the pipes to the fittings.



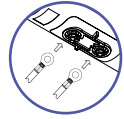
3. Just upstream of the cell, on the same pipe, install the temperature and flow sensor and the earthing device, as shown in the diagram above. To do this, use the support clamps.
4. For each clamp :
 - a. Drill a D25mm hole in the pipe.
 - b. Assemble the saddle clamp with the sensor or earthing device, not forgetting the sealing ring.
 - c. Close the clamp around the pipe where the hole was drilled with attention to the flow direction.



INSTALLATION

5. Electrical connection

1. Install your earth cable and connect it to the appropriate device.
2. *If you haven't already done so, use the two circular wiring terminals with the insulating armature to connect the cell to the control box: secure the rings with the nuts under the cell cover.*
3. Connect the controller to each component of the installation as shown in the diagram below.



4. If your cover, circulation pump or/and pH pump is equipped to be connected to an electrolyser, you can connect them to the controller via the supplied terminals:

**SWITCH OFF THE POWER SUPPLY TO THE DEVICE
WHEN HANDLING THE MAINS SUPPLY.**



- a. Fix the wires under the terminal screws using a small flat screwdriver (2 mm).
- b. Connect the terminals to the controller.

4. COMMISSIONING

1. First start-up

1. Once the installation is complete, open the valves and switch on the power.
2. When you first start up, your chlorinator will display "WELCOME" for 5 seconds.
3. Next, choose the language of the appliance (French, English or Spanish): use the +/- buttons to move from one option to another, then confirm with the OK button.
4. You can return to the previous screen at any time using the back arrow $\leftarrow$.
5. Finally, enter the volume of your pool (the amount of water it contains): use the +/- buttons to increase/decrease the value by 5m^3 , then confirm with the OK button. The chlorinator will then calculate the amount of salt you need to add.

REMARKS:

- Although the chlorinator allows you to adjust the volume of the pool up to 200m^3 , we strongly recommend that you respect the "maximum volume treated" announced in the "General characteristics", page 51.
- To find out the salinity of your water, start up the Modulyser and wait a few minutes. If the salinity is too low, Modulyser will tell you how much salt to add.

2. 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 1m^3 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.

COMMISSIONING

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, Modulyser will estimate the amount of salt to add according to your settings. See "Using the alarm system", page 28.

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

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.

COMMISSIONING

3. Tips for choosing your settings

To choose your **treatment and/or filtration time**, refer to the table opposite:

Water temperature	10°C ≤ t° < 20°C or indoor pool	20°C ≤ t° < 25°C	25°C ≤ t° < 28°C	t° ≥ 28°C	t° ≥ 28°C or heavy traffic	t° ≥ 30°C or heavy traffic
Processing time	2h	4h	6h	8h	12h	24h BOOST
Filtration time	5h to 10h	10h to 12h	12h to 16h	16h to 24h	24h	24h

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

Water hardness (TH)	Th < 30°F	Th < 40°F	Th < 50°F	Th > 50°F
Polarity inversion time	8h	6h	4h	2h

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 **pH setpoint** should be chosen between 6.8 and 7.6. We advise you to set your dosing pump with a set point between 7.0 and 7.3.

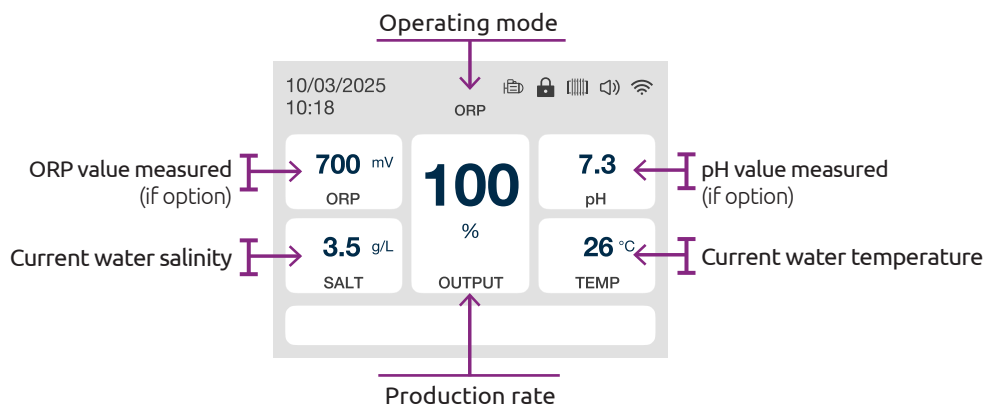
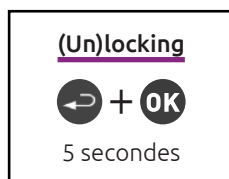
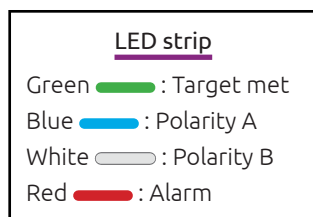
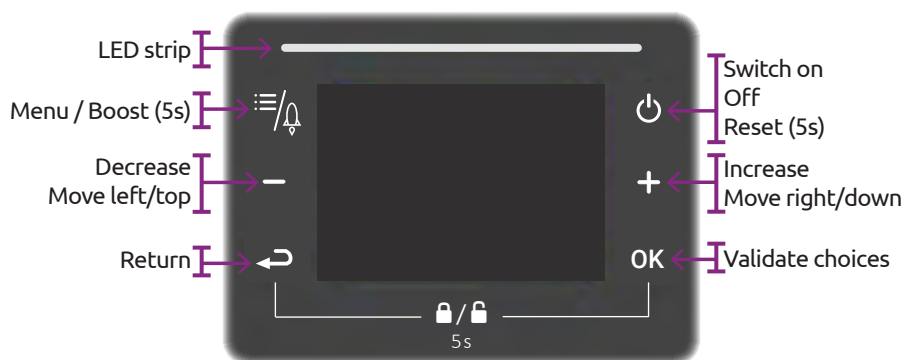
The recommended **ORP setpoint** is between 650 mV and 700 mV.

4. 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).

5. USING THE CONTROLLER

1. Understanding the control panel



If an option is not activated, the corresponding box disappears.

USING THE CONTROLLER

2. Setting the production rate

On the main screen, use the +/- buttons to increase/decrease the production rate by 20%. As a reminder, depending on the model chosen, the maximum production rate of your chlorinator can be 10 g/h, 15 g/h, 20 g/h or 25 g/h.

In normal mode, as your chlorinator produces continuously as soon as it detects the presence of water flow, you will need to take into account the setting of your circulation pump to decide on the appropriate rate for your needs, as well as the following criteria:

- 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. ↘

Model	10	15	20	25
100%	10	15	20	25
80%	8	12	16	20
60%	6	9	12	15
40%	4	6	8	10
20%	2	3	4	5

Production table in g/h

In time mode, you can also take production time into account.

In ORP mode, the operation of your chlorinator is automated according to the ORP value read by the ORP sensor and the chosen ORP setpoint (target value).

Note: When coverage is detected (in auto mode) or selected (in manual mode), the production rate is blocked at 20%. If the model chosen is suitable for the size of your pool, this rate is sufficient when the pool is covered.

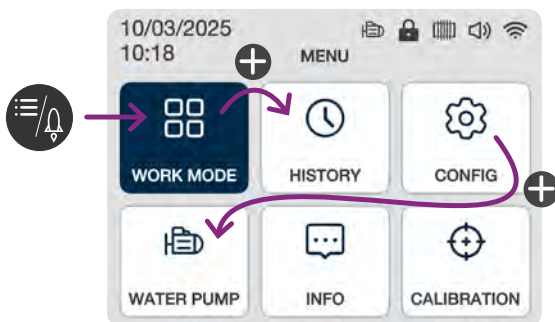
3. Go to menu

To access the menu, press the  button. Selected items appear in blue.

To navigate the menu, use the +/- buttons to move from one box to another.

To enter a menu category, confirm your choice with the OK button.

Once you have entered a menu category, press the back arrow  to return to the menu. To return to the main screen, press the back arrow .



USING THE CONTROLLER

4. Setting the operating mode

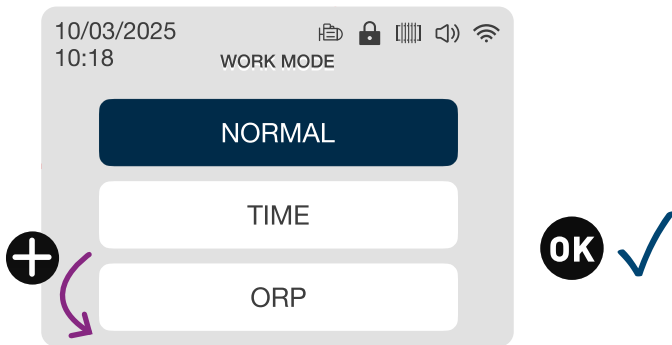
Select the first category from the  menu and confirm (OK). You arrive in the operating mode selection interface. You can choose:

- either normal mode: your chlorinator works as soon as it detects flow,
- or time mode: set your operating range (duration and start time),
- ORP mode (optional): install the ORP sensor and activate the ORP option; Modulyser operates automatically to reach and maintain the chosen target ORP value.

1. Navigating the mode selection and parameter-setting interfaces

The selected mode is the one highlighted in grey. Use the +/- buttons to select one or other, then confirm (OK) to enter the settings interface for the selected mode.

The operating mode settings interface is divided into several pages. Use the +/- buttons to modify the value of the selected parameter (+/- on a grey background). Use the OK button to move from one parameter to another and then from the last parameter on the page to the arrow at the bottom of the screen. When the arrow is selected (it now appears in red), use the +/- buttons to move from one page to the next. Press OK again to move from the arrow to the first parameter on the page displayed. Using the back arrow  in the operating mode settings interface takes you back to the operating mode selection interface.



Operating mode selection interface

Note: If the ORP option is not activated, the ORP box will not appear.

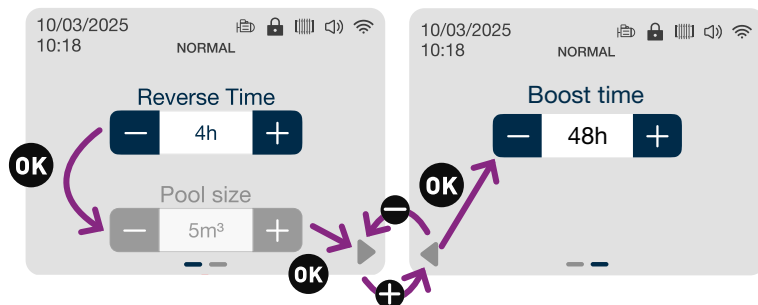
USING THE CONTROLLER

2. Normal mode

In normal mode, your chlorinator works as soon as it detects flow.

You can change :

- the polarity inversion time: this limits the scaling of the cell; the harder your water, the shorter the polarity inversion time,
- the volume of the pool,
- the duration of BOOST mode.



Normal mode settings interface

Parameter	Min.	Max.	Step	Comment
Polarity inversion time	4h	8h	2h	- Limits cell scaling - The harder your water is, the shorter the polarity inversion time should be
Pool volume	5 m ³	200 m ³	5 m ³	- Allows you to adjust the volume of water in your pool so that the chlorinator calculates the amount of salt to add. - For greater accuracy, use 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: - 10 g/h model: 50 m³, - 20 g/h model: 90 m³, - 15 g/h model: 75 m³, - 25 g/h model: 110 m³.
BOOST time	24 h	48 h	24 h	- This is the operating time during which the boost mode will remain activated once it has been selected. - As a reminder, your chlorinator only works when it detects a flow. If necessary, consider adjusting the setting of your circulation pump so that its operating time is longer than the boost time.

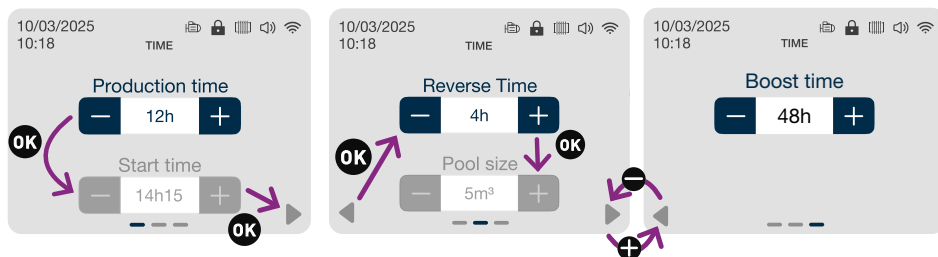
USING THE CONTROLLER

3. Time mode

In time mode, set your operating range.

You can change :

- the polarity inversion time: this limits the scaling of the cell; the harder your water, the shorter the polarity inversion time,
- the volume of the pool,
- production time,
- the start-up time,
- the duration of BOOST mode.



Time mode settings interface

Parameter	Min.	Max.	Step	Comment
Production time	1h	24h	1h	- Allows you to set a hypochlorite production time that is shorter than the running time of your circulation pump. ⚠ The circulation pump must be running for the chlorinator to work!
Start time			15 min	- Set the time you want hypochlorite production to start. - Check your circulation pump settings to make sure the chlorinator detects water flow during the programmed time slot.
Polarity inversion time	4h	8h	2h	- Limits cell scaling - The harder your water is, the shorter the polarity inversion time should be
Pool volume	5 m ³	200 m ³	5 m ³	- Allows you to adjust the volume of water in your pool so that the chlorinator calculates the amount of salt to add. - For greater accuracy, use the water level rather than the height of the pool. - Although this parameter accepts a value of up to 200 m ³ , please respect the maximum recommended volume: - 10 g/h model: 50 m³, - 20 g/h model: 90 m³, - 15 g/h model: 75 m³, - 25 g/h model: 110 m³.
BOOST time	24 h	48 h	24 h	- This is the operating time during which the boost mode will remain activated once it has been selected. - As a reminder, your chlorinator only works when it detects a flow. If necessary, consider adjusting the setting of your circulation pump so that its operating time is longer than the boost time.

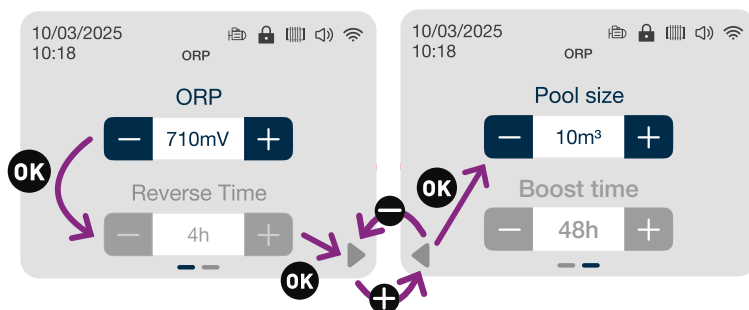
USING THE CONTROLLER

4. ORP mode

In ORP mode, set your ORP value target.

You can change :

- the target ORP value (generally 650 mV),
- the polarity inversion time: this is used to limit scaling of the cell; the harder your water, the shorter the polarity inversion time,
- the volume of the pool,
- the duration of BOOST mode.



ORP mode configuration interface

Parameter	Min.	Max.	Step	Comment
Target ORP value			10 mV	- It defines the target value aimed at by the ORP probe to decide whether or not to activate production. - Recommended value: 650 mV
Polarity inversion time	4h	8h	2h	- Limits cell scaling - The harder your water is, the shorter the polarity inversion time should be
Pool volume	5 m³	200 m³	5 m³	- Allows you to adjust the volume of water in your pool so that the chlorinator calculates the amount of salt to add. - For greater accuracy, use 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: - 10 g/h model: 50 m³, - 20 g/h model: 90 m³, - 15 g/h model: 75 m³, - 25 g/h model: 110 m³.
BOOST time	24 h	48 h	24 h	- This is the operating time during which the boost mode will remain activated once it has been selected. - As a reminder, your chlorinator only works when it detects a flow. If necessary, consider adjusting the setting of your circulation pump so that its operating time is longer than the boost time.

USING THE CONTROLLER

5. Using boost mode

BOOST mode allows you to exceptionally increase chlorine production - for in-depth cleaning - without changing your usual settings. It can be useful after heavy rain, particularly intense use or very hot weather to disinfect the pool effectively. When activated, your chlorinator produces hypochlorite at 100% of its capacity. If necessary, remember to adjust the setting on your circulation pump so that its operating time is longer than the duration of the boost mode, i.e. 24 or 48 hours, depending on the setting.

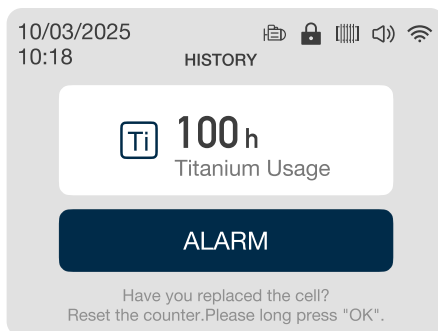
To activate the boost mode, press the  button for 5 seconds from the main screen. To set the duration of the boost mode, set the operating mode.

Once the boost procedure is completed, your electrolyser automatically resumes its usual operation according to your settings.

6. View history

The history is designed to make it easier for you to maintain your chlorinator.

To view the history, select the second category from the menu  and confirm (OK).



The first box in the history gives the total number of hours the cell has been in use. **It must be reset each time the cell is replaced.** To reset the cell counter, press the OK button for 5 seconds (in this interface only), then confirm (OK) or cancel (←). A cell is designed to operate for 10,000 hours. The controller will give you a T3 alarm if you reach this ceiling.

The second box, "Alarm", contains the error code history. Press OK to enter it.

See "List of error codes and their solutions", page 86, for more information on error codes.

USING THE CONTROLLER

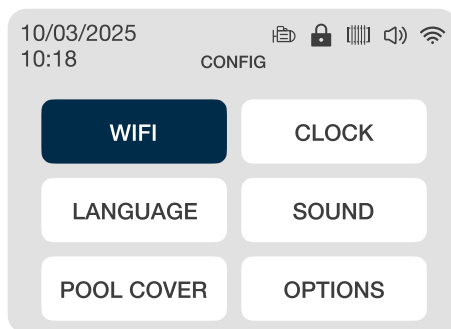
7. Configuring the device

To configure the device, select the third category  from the menu and confirm (OK). You arrive in the sub-menu Configuration. Use the +/- buttons to move from one box to another and validate (OK) to enter the configuration page that interests you.

In this menu, you can :

- activate/deactivate wifi and start pairing,
- change the time and date,
- change the device language (French, English or Spanish)
- activate/deactivate the sound,
- set the cover function,
- activate/deactivate the ORP and pH options.

To return to the main menu, use the back arrow .

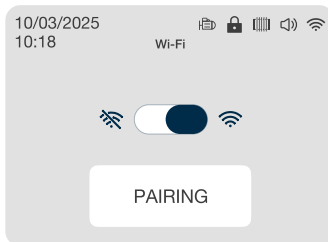


Configuration submenu

When you are on one of the pages of a device configuration parameter, use the back arrow  to return to the Configuration submenu.

1. Activate/deactivate wifi and start pairing

At any time, the icon at the top right of the screen indicates whether Wi-Fi  is enabled. If Wi-Fi is not enabled, the icon will not appear. To change this setting, use the +/- buttons: the  button enables Wi-Fi and the  button disables Wi-Fi. When you activate Wi-Fi for the first time, you must pair the electrolyser with your phone in order to control your electrolyser from the Poolex app. See the next chapter, "Using the controller", page 63, for more information on pairing and the app.

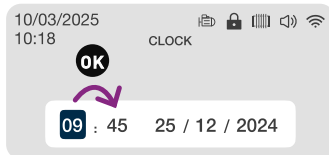


USING THE CONTROLLER

2. Setting the time and date

Modify the selected value (grey background) using the +/- buttons. Confirm to move on to the next value. The format is [hour : minutes _ day / month / year].

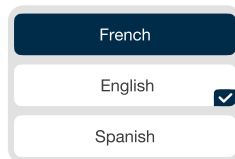
With this setting, the history of any errors encountered will be dated correctly.



3. Change language

The small tick indicates the active language. To change the language, use the +/- buttons to select the language you want, then press OK to confirm.

Three languages are available: French, English and Spanish.



4. Sound on/off

At any time, the icon at the top right of the screen indicates whether the sound is enabled (speaker icon) or disabled (speaker icon with an X). To change this setting, use the +/- buttons: the + button enables the sound and the - button disables the sound.



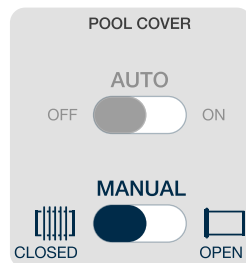
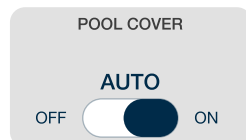
5. Setting the cover function

The cover function can be controlled automatically or manually. For the chlorinator to automatically detect the opening and closing of the cover, your cover must be fitted with a specific connection and linked to the controller. See "Electrical connection", page 59.

An icon at the top right of the screen indicates whether the cover is closed (closed cover icon) or open (open cover icon).

The + button moves the selected indicator to the right and the - button moves the selected indicator to the left. When automatic cover mode is disabled, manual mode appears. In this mode, you can specify whether the cover is open or closed. To switch between settings, confirm (OK).

When the cover is closed, the production rate is blocked at 20%. In fact, if the model you choose is adapted to the size of your pool, this rate is sufficient when the pool is covered.



6. Activate/deactivate ORP and pH options

The + button moves the selected indicator to the right and the - button moves the selected indicator to the left. To switch between settings, confirm (OK).



Note: Activation of these optional functions requires specific connections. See "Electrical connection", page 59, for more information.

USING THE CONTROLLER

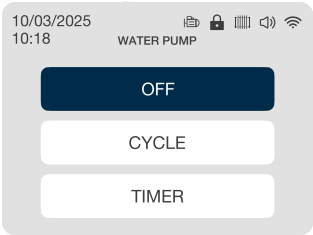
8. Programming the filtration pump (optional)

The filter pump can be activated directly or programmed in regular cycles or according to one to three timers.

When the pump function is active, the  icon is visible and fixed. When the pump is running, the  icon flashes.

1. Deactivate the circulation pump

Menu > Water pump > OFF



The linkage of the pump is disabled. If you need to start the pump, select CYCLE/TIMER to start the pump

- To deactivate the filter pump, go to the menu , use the  and  arrows to select the "Water pump" menu  then confirm your selection by clicking  (OK).
- Use the  and  arrows to select "OFF". Confirm  (OK).

2. Programming on a regular cycle

Menu > Water pump > CYCLE

- Go to the menu , use the  and  arrows to select the "Water pump" menu  then confirm your selection by clicking  (OK).
- Use the  and  arrows to select "CYCLE". Confirm  (OK).
- Use the  and  arrows to change the value of the cycle time and frequency parameters. Confirm  (OK).

Parameter	Description
Duration Run Time  15min 	Pump running time during a cycle. The running time can be neither less than 15 minutes nor more than 120 minutes (2h). The step between two available values is 15 minutes.
Frequency Interval Time  2h 	Time interval between filter pump stop and restart. It must be between 0 and 24 hours. The step between two available values is 1 hour.

In the "CYCLE" menu, you can also activate the "Self-check" function. If enabled, this function automatically keeps the filter pump running if the ORP value is incorrect.



USING THE CONTROLLER

3. Programming by timers

Menu > Water pump > TIMER

START	END	ENABLE
07:00	08:00	OFF ☒ ON
08:00	09:00	OFF ☐ ON
09:00	10:00	OFF ☐ ON

Each timer has a start time, an end time and an activate function.

- Go to the menu , use the  and  arrows to select the 'Water pump' menu  then confirm your selection by clicking  (OK).
- Use the  and  arrows to select "TIMER". Confirm  (OK).
- Use the  and  arrows to select a cycle to modify. The line of the selected cycle is framed. Confirm  (OK).
- The "start" box is selected. Use the  and  arrows to change the time in increments of 15 minutes, or press  (OK) to move on to the next box. If you change the start time, the end time is automatically adjusted to set a time slot of at least 15 minutes; conversely, if you change the end time, the start time is automatically adjusted to set a time slot of at least 15 minutes.
- When you are on the "activate" parameter, use the  and  arrows to change the ON/OFF value of the button. Then press  (OK) to confirm the line.

9. Use the ORP option (summary)

Preparation:

- Purchase the ORP probe with calibration solution as an option.
- Activate the ORP option: see "Activate/deactivate ORP and pH options", page 71.
- Activate ORP mode: see "Setting the operating mode", page 65.

Installation:

- Connect the ORP probe to the controller.
- Calibrate the ORP sensor: see "Perform ORP calibration", page 74.
- Dip the ORP probe into the water in your pool (basin or pipework).

Maintenance:

- Regularly check that the sensor is not clogged.
- Recalibrate the sensor at least once a season.

USING THE CONTROLLER

10. Perform ORP calibration

Before the first use, or when you change a probe, it is necessary to calibrate each probe. The calibration solution is supplied for the first use. The correction enables the probes to be calibrated without having to use a calibration solution.

1. Calibrate the ORP sensor

Menu > Calibration > Calibration > ORP probe calibration

- Go to the menu , use the  and  arrows to select the "Calibration"  menu. Confirm  (OK).
- Use the  and  arrows to select the "ORP sensor calibration" menu.
- Follow the instructions on the screen:
 - 1 - Rinse the ORP probe.
 - 2 - Immerse the probe head in the buffer solution (470 or 475 mV).
 - 3 - Confirm  (OK).
- A 10-minute countdown starts while the calibration takes place.
Keep the probe in the buffer solution during calibration.

2. ORP correction

Menu > Calibration > Correction > ORP correction

The ORP of the water used for this step needs to be known. This can be done, for example, using an ORP tester.

- Rinse the ORP probe.
- Immerse the ORP probe in this water and confirm  (OK).
- Wait a minute.
- Use the  and  arrows to enter the ORP value measured.
- Confirm  (OK) then use the back arrow () to exit this menu.

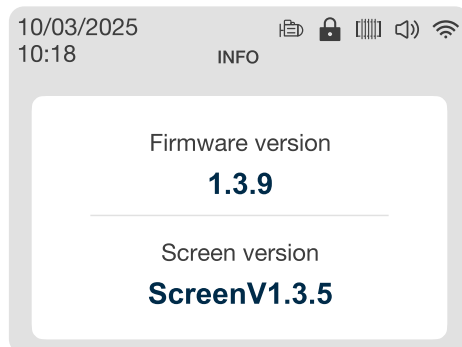
11. Reset the device

To reset the device, go to the main screen. From the main screen, press the OK button for 5 seconds, then confirm (OK). The device will restart as if it had been started for the first time (see "First start-up", page 60) and the parameters will return to their default values.

Parameter	Mode	Production rate	Production time	Reverse polarity	Pool volume	Device language
Default value	Normal	100 %	flow-weighted	4h	5 m ³	French

12. View version information

The fifth category in the menu  provides information about the internal software and screen versions.



6. REMOTE CONTROL

1. Downloading and installing 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.

iOS :

Scan or search for «Poolex» in the App Store to download the app:



Check the compatibility of your phone and the version of your OS before installing the application.

Android :

Scan or search for Poolex in the Google play to download the app:



Check the compatibility of your phone and the version of your OS before installing the application.

REMOTE CONTROL

2. Pairing your combination chlorinator

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

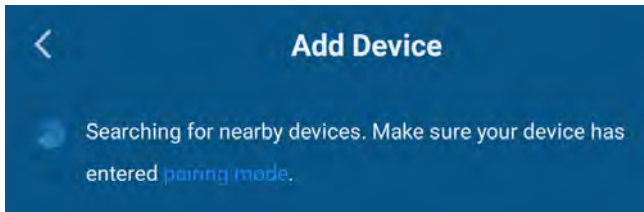
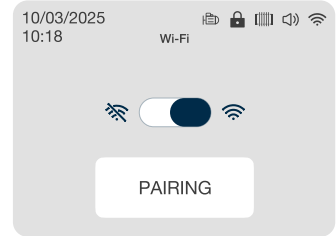


To start pairing (coupling mode) of your device, follow the steps below:

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).

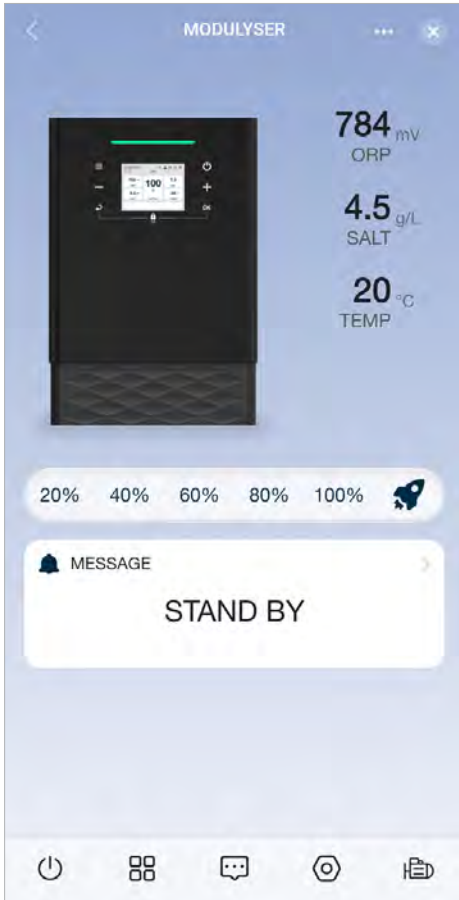
2. Launch the Poolex application and create an account.
3. Start pairing on your device:
 - a. In the configuration  menu, enter the wifi settings.
 - b. Use the  button to activate wifi, then press OK to select the "Pairing" button.
 - c. Confirm (OK) again to start pairing.
4. On your application, go to the «Add a device» tab.



Your combined chlorinator will appear in this tab on the application when pairing is launched. Select it and confirm the addition.

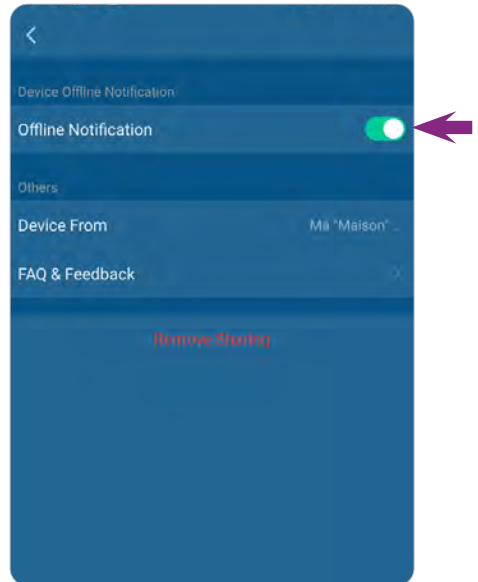
REMOTE CONTROL

3. Interface



Modulyser's remote control interface shows you the operating status of your chlorinator right from the start. At a glance, you can see whether it is producing and at what rate, as well as the temperature and salinity of the water. Any alarms are displayed at the bottom of the screen.

If you wish, you can activate notifications to be alerted immediately: click on the three small dots *** in the top right-hand corner to access the page below.



< Return to the previous page.

-  Switch device on/off: if off, appears in red  + message "OFF".
-  Modify the operating mode: normal, time or ORP.
-  View messages: history of alarms encountered, temperature, salinity, ORP and consumption curves (1 value/h), cell history.
-  Configure the device: production rate, polarity inversion time, pool volume, cover
+ (if time mode) start time and production time
+ (if ORP) target ORP value
-  Set or switch off the water pump

REMOTE CONTROL

4. Changing the production rate

It's best to set the production rate in the configuration tab .

But you can also use the settings bar on the home screen:



When the target is reached, Modulyser pauses. See "Changing the production rate", page 79, for more information on how to choose your production rate.

Remember: if coverage is detected (auto mode) or selected (manual mode), the production rate is locked at 20%. If your cursor remains stuck at 20%, check the coverage configuration.

To activate BOOST mode, click on the rocket icon . The production rate will then automatically increase to 100% for the configured duration. Click on the rocket icon again to deactivate BOOST mode even if the set time has not elapsed.

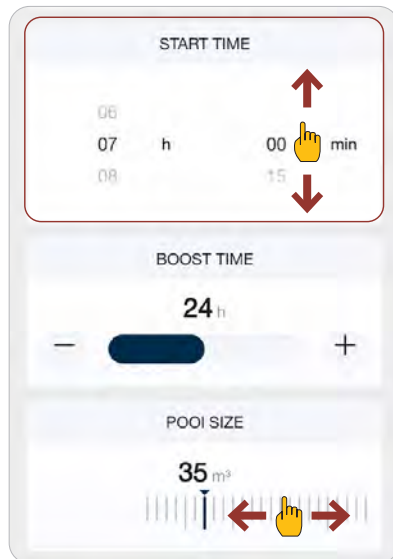
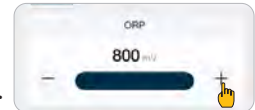
5. Configuring the device

To change the **operating mode**, click on  then either Normal or Time or, if you have activated the option, ORP.

The **configuration menu**  adapts to the chosen mode.

The parameters framed in red below are specific to time mode.

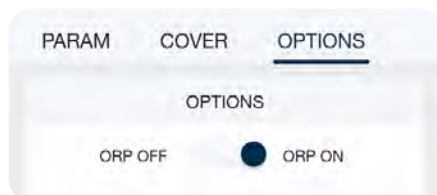
ORP mode must be selected to configure the target ORP value.



Refer to the chapter "Using the controller", page 63 to 75, for more information on the criteria to take into account when configuring your chlorinator.

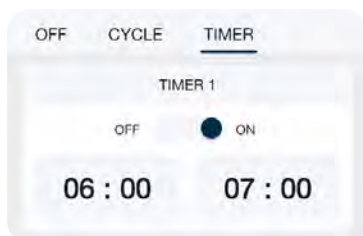
REMOTE CONTROL

You can also change the options settings via the application.



If you have connected your circulation pump to Modulyser, click on  to configure it, then,

- OFF to switch off your circulation pump,
- CYCLE to select the duration and frequency of operation of your water pump; or to automate the operation of your water pump,
- TIMER to set up to 3 stop or start times.



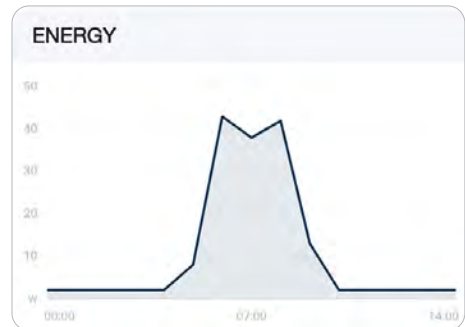
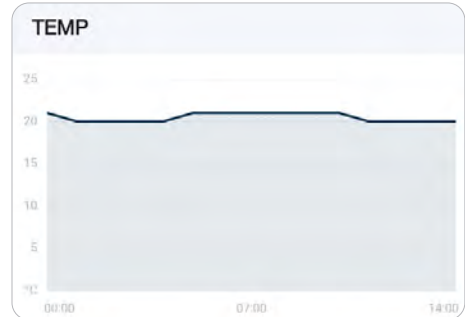
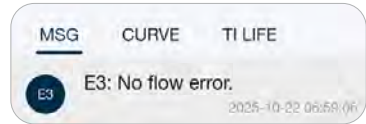
REMOTE CONTROL

6. View historical data

The message tab  gives you access to the history of alarms triggered, the history of recorded data and the lifetime of your cell.

The data history provides you with daily curves of salinity, water temperature, your ORP value and energy consumption generated by the use of your device.

The curves remain available for 7 days and are formed from one saved measurement per hour. Click on a curve to display details of the point affected (time and value read).

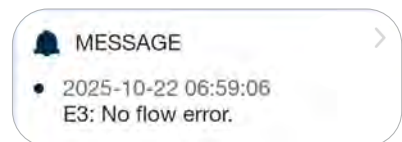


7. Using the alarm system

If an error is detected by Modulysér, the error code, its name and the time when it occurred are displayed in an insert at the bottom of the application's main screen.

Click on this box to go to the page listing current and past alerts.

If the salinity is too low, this page will also tell you how much salt to add according to your settings.



7. MAINTENANCE

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

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.

MAINTENANCE

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 57 and onwards.



MAINTENANCE

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, as a precaution, you should dismantle the cell (see "Disassembly", page 82) by closing the bypass to isolate the circuit.

Store your cell in a dry place.

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 82) 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 54, 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.

8. 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 54, 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: **Filtration time = (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
E1	Overheating protection	1. Press the "OK" button for 5 seconds to clear the fault alarm, then reduce the production rate. 2. Install the controller in an area with good ventilation and heat dissipation.
EL	Low water temperature alarm (winter mode)	The operating water temperature is 15-45°C. When the water temperature falls below 15°C, the system switches to winter mode and stops producing chlorine. When the water temperature returns to normal, the fault display will be cleared automatically. 1. Check that the actual water temperature is normal (15-45°C). 2. If the actual water temperature is normal, replace the temperature sensor.
EH	High water temperature alarm	The operating water temperature is between 15 and 45°C. When the water temperature exceeds 45°C, chlorine production stops. When the water temperature returns to normal, the fault display will be cleared automatically. 1. Check whether the actual water temperature is above 45°C. 2. If the actual water temperature is normal, replace the temperature sensor.
E3	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 Modulysers' 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
E5	Salinity too low	This error message suggests that the salt concentration in the pool is below 2700 ppm. 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 61. Also, when this alarm occurs, Modulyser 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 "View historical data", page 81. → If the accumulated operating time of the cell is close to 10,000 h, replace the cell. 3. If not, please contact your dealer.
E6	Abnormal temperature in the electronics	1. Press the "OK" button for 5 seconds to clear the fault alarm. 2. If the fault occurs again, replace the power supply board.
E7	Abnormal water temperature	1. Check that the temperature sensor is correctly connected. 2. If it is, replace the sensor.
E8	Abnormal input voltage prompt	1. Unplug the power outlet from the appliance. 2. Wait 10 seconds before reconnecting the device. 3. If the error persists, have an electrician check the power line. If they find nothing, contact the customer service.
EA	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.
E9	Abnormal control box temperature	1. When the temperature of the control box is below 78°C, the fault can be cleared automatically: press the "OK" button for 5 seconds to clear the fault alarm, then reduce the production rate. 2. Install the controller in a place with good ventilation and heat dissipation. 3. Replace the PC board.
E10	Abnormal temperature sensor in the control box	1. Press the "OK" button for 5 seconds to clear the fault alarm. 2. Replace the PC card.

TROUBLESHOOTING

Code error	Description	Solution
T1	Calibrate the ORP probes	See "Calibrate the ORP sensor", page 74.
T3	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 "View historical data", page 81), press and hold the "OK" button for 5 seconds to reset the cell life counter.
EP	Output power anomaly	The controller should be installed in a well-ventilated, heat-dissipating location away from direct sunlight. 1. Wait for the controller temperature to drop. → If it automatically resumes normal operation, it means that the power supply was under high temperature protection. → If it cannot resume operation, the power supply is damaged or has reached the end of its service life. 2. In the second case, replace the power supply.

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

9. WARRANTY

The Modulyser 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

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