

# Elite Connect Cellguard



**EN** Instruction Manual

**m<sup>3</sup>**  
**60-200**

**Premium**  
**18.000**

**pH**  
**ORP**  
**PPM**

**g/L**  
**°C**

**VSP**

  
**Wi Fi**

Salt Chlorinator for swimming pools

## Elite Connect Cellguard

12 gr Cl<sub>2</sub>/hr  
24 gr Cl<sub>2</sub>/hr  
32 gr Cl<sub>2</sub>/hr  
42 gr Cl<sub>2</sub>/hr

## Elite Connect Cellguard Low Salt (LS)

12 LS gr Cl<sub>2</sub>/hr  
24 LS gr Cl<sub>2</sub>/hr  
32 LS gr Cl<sub>2</sub>/hr

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The short manual included with this product only contains essential information on safety measures that must be implemented during installation, maintenance and start-up.



The full manual can be read and downloaded as a PDF file using the QR or from the following website: [www.astralpool.com](http://www.astralpool.com). All assembly, electrical installation and maintenance tasks are to be carried out by authorised, qualified technicians who have carefully read all the installation and service instructions.

## GENERAL CHARACTERISTICS

- Once you've installed your salt electrolysis system, you need to dissolve some salt in the water. The salt electrolysis system consists of two elements: an electrolysis cell and a power source. The electrolysis cell contains a number of titanium plates (electrodes), so that when an electric current is passed through them and the salt solution passes through them, free chlorine is produced.
- Maintaining a certain level of chlorine in the pool water guarantees its quality. The salt electrolysis system will produce chlorine when the pool's recirculation system (pump and filter) is running.
- The power supply has several safety devices, which are activated in the event of abnormal system operation, as well as a control micro-controller.
- Salt electrolysis systems have an automatic cleaning system for the electrodes that prevents the formation of incrustations on them.



## SAFETY WARNING AND RECOMMENDATIONS

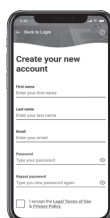
- Installation and manipulation should only be performed by suitably qualified technicians.
- Applicable standards for prevention of accidents and for electrical installations must be respected.
- During installation, bear in mind that electrical disconnection of the equipment requires a switch or circuit breaker compliant with IEC 60947-1 and IEC 60947-3 standards that ensures an omnipolar cut-off, directly connected to the power supply terminals and with a contact separation in all poles, providing total disconnection under overvoltage category III conditions, in an area that meets the safety requirements of the site. The switch must be located in the immediate vicinity of the equipment and must be easily accessible. Additionally, it must be marked as the equipment's disconnection element.
- The equipment must be powered by a residual current device (RCD) not exceeding 30 mA. The equipment must be earthed.
- The installation must comply with the requirements of IEC / HD 60364-7-702 and national standards applicable to swimming pools.
- The manufacturer accepts no responsibility for assembly, installation or start-up, nor for any manipulation or addition of components other than when carried out at the manufacturer's premises.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or who lack experience or knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children must be supervised to ensure that they do not play with the appliance.
- If the power cable is damaged, it must be replaced by the manufacturer, by their after-sales service or by a similarly qualified technician in order to avoid any type of danger.
- The magnetic stirrer must only be used with the supplied chlorinator and must only be powered by safety extra-low voltage (SELV), as indicated on its electrical rating label.
- Salt electrolysis systems operate at 230 Vac – 50/60 Hz. Do not attempt to alter the power supply to operate at any other voltage.
- Ensure that all electrical connectors are securely plugged in, to avoid bad connections leading to overheating.
- Before installing or replacing any system component, ensure that the system has been disconnected from the power supply and that no water is flowing through it. Only use genuine replacement parts.
- Because the equipment generates heat, it is important to install it in a well-ventilated area. Do not install near flammable materials.
- Despite the equipment having an IP32 protection rating, it must never be installed in areas at risk of flooding.
- This equipment is intended to be permanently connected to the water supply and should not be connected using a temporary hose.
- This equipment comes with a mounting bracket; see installation instructions.

## Connection with Fluidra Pool

1. Download and install the FLUIDRA POOL app.



2. Create a user account and set up the pool parameters.



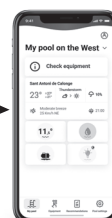
3. Activate pairing mode on the equipment.



By pressing home menu for 5 sec



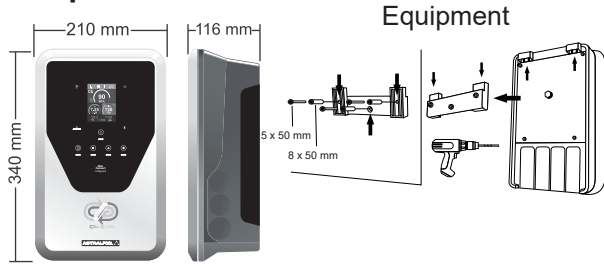
4. Press Add Equipment and follow the FLUIDRA POOL instructions.



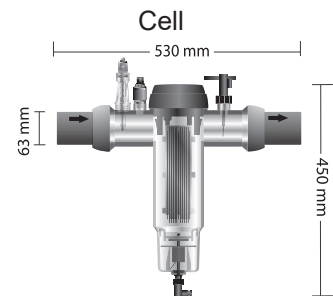


All assembly, electrical installation and maintenance work is to be carried out by authorised, qualified technicians who have carefully read all the installation and maintenance instructions.

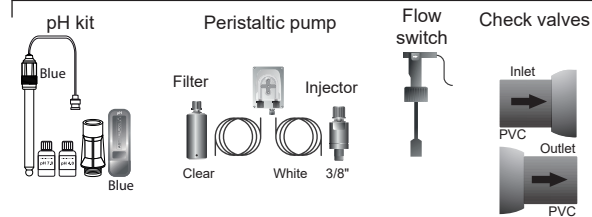
## Components and installation



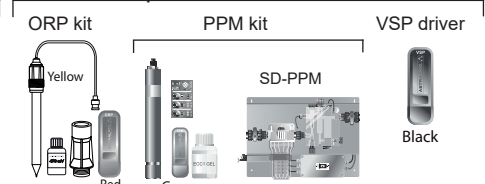
**CAUTION:** Always install upright on a rigid surface in a dry, ventilated area. We recommend installing the equipment where it will be protected from the weather. Avoid creating corrosive atmospheres.



### Included accessories



### Optional accessories

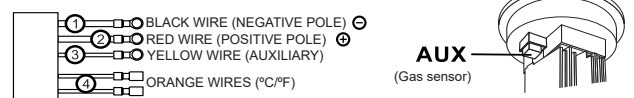


For further information on installation and wiring, see full manual.

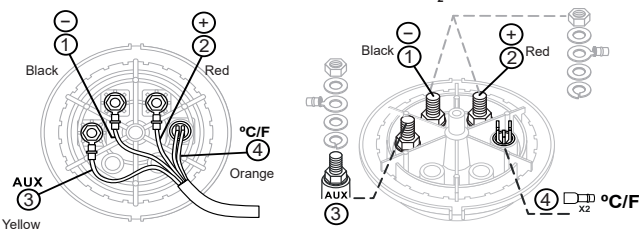
## Electrolysis cell electrical connections



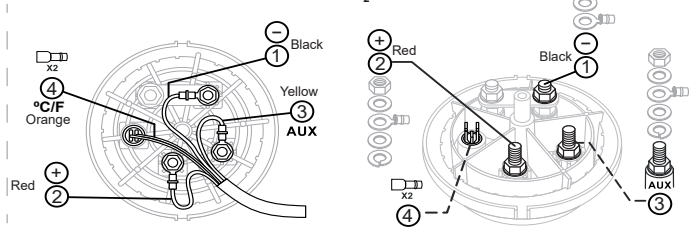
**Caution:** CellGuard electrodes operate without polarity inversion, so take care to ensure correct electrical connection of the positive (⊕: red wire) and negative (⊖: black wire) polarity of the electrode.



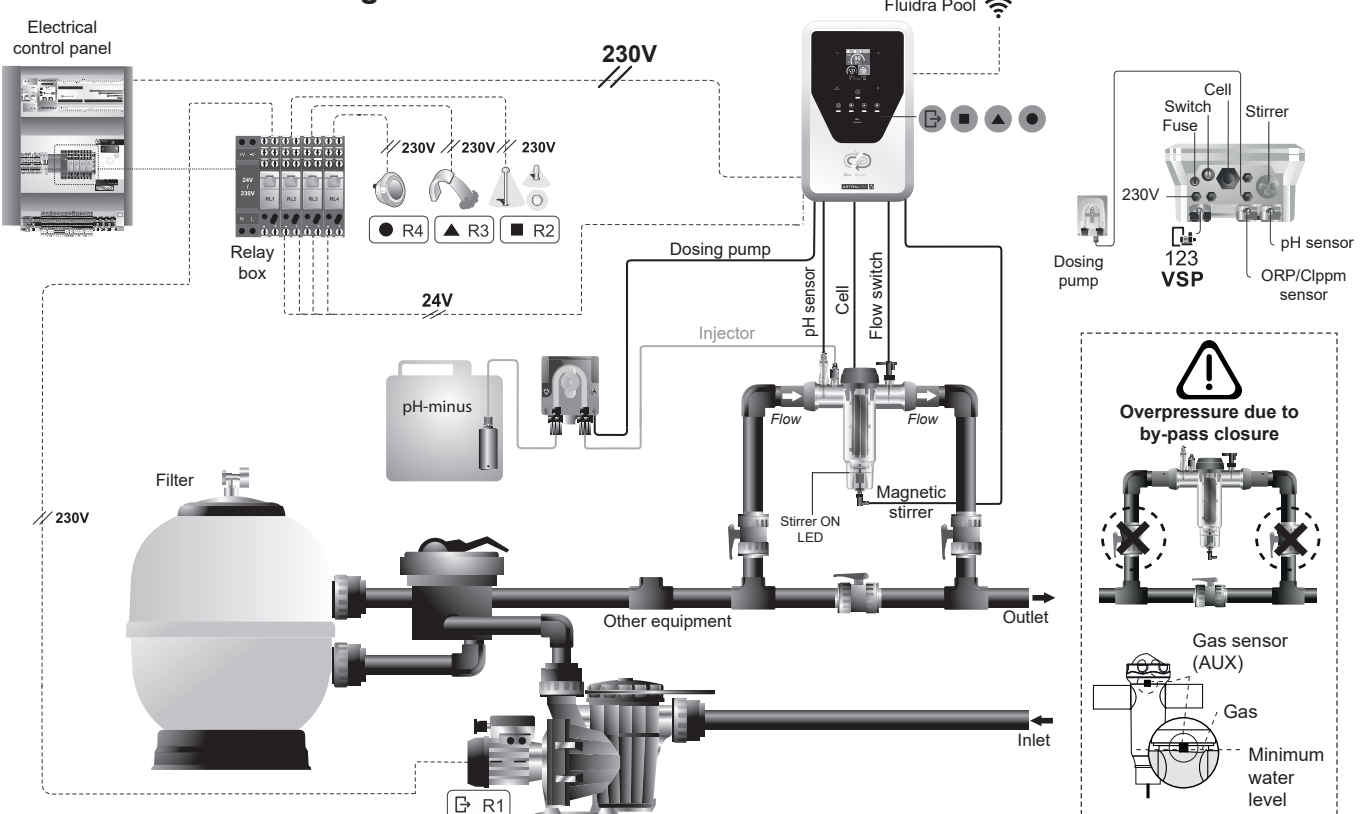
12, 24, 32, 12LS, 24LS, 32LS gr Cl<sub>2</sub>/hr



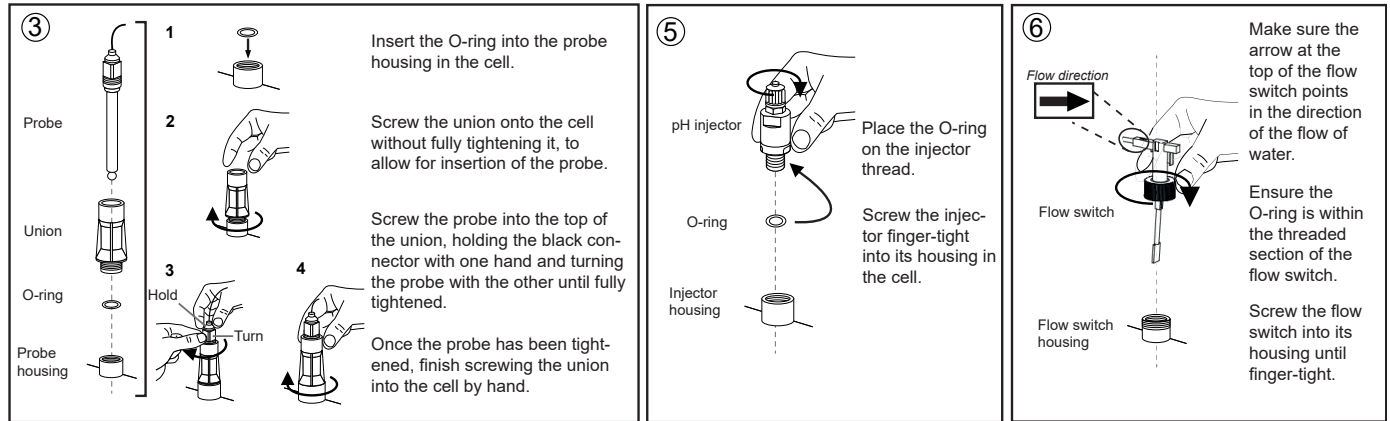
42 gr Cl<sub>2</sub>/hr



## General installation diagram



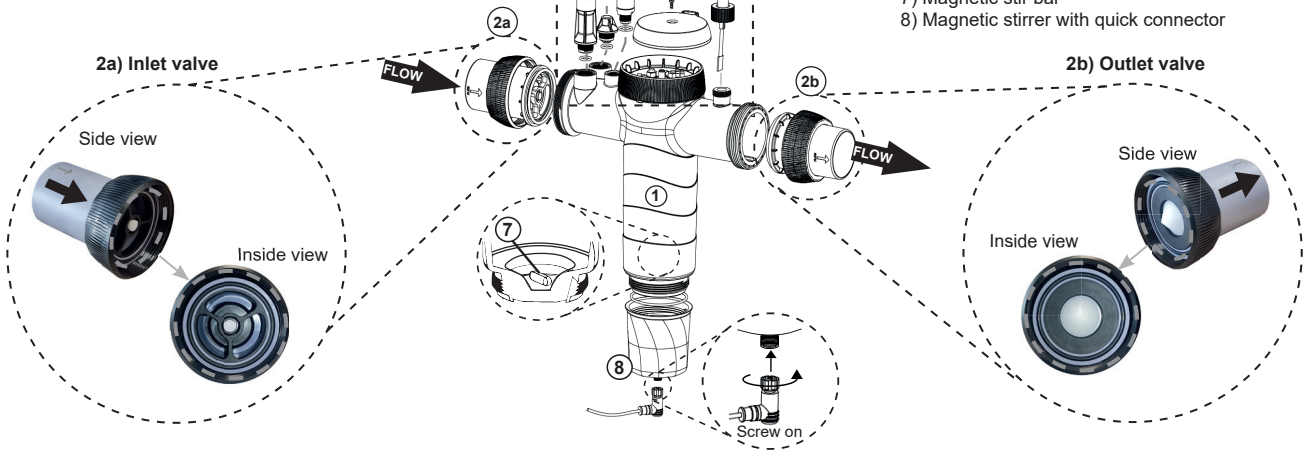
## Cell components



**Caution:** When installing the CellGuard cell, make sure the inlet (2a) and outlet (2b) check valves are correctly positioned. An arrow on the outer part of the valves indicates direction of flow.

### Components

- 1) Cell
- 2) a) Inlet check valve  
b) Outlet check valve
- 3) pH sensor
- 4) ORP sensor (optional)
- 5) Injector
- 6) Flow switch
- 7) Magnetic stir bar
- 8) Magnetic stirrer with quick connector



## Valve Installation

### Pipe



### Reducer



### Valve



### Hydraulic connecting pipe

We recommend installing the cell in a by-pass. Installation can be done using either D50 or D63 piping.

### D63-50 pipe reducer

Supplied with the cell.  
For use when the hydraulic installation uses D50 pipes.

### Check valve

When installing the CellGuard cell, make sure the inlet and outlet check valves are correctly positioned.

An arrow on the outer part of the valves indicates direction of flow.

2a) Inlet valve



2b) Outlet valve

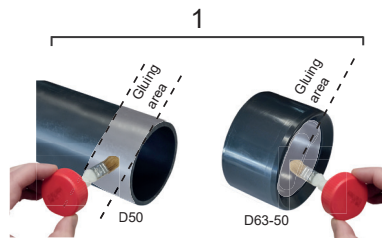


**Caution:** Excess adhesive when gluing the check valves can block the retention system, preventing the flow of water through the cell. Once the parts have been glued, clean off the excess glue to avoid blocking the valves.

It is advisable to first glue the D63-50 reducer to the D50 pipe. If the pipe diameter is 63 mm, glue the valve directly to the pipe.

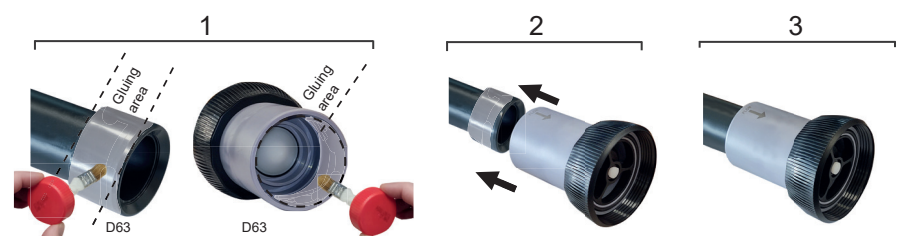
### Gluing the pipe to the reducer

1. Apply a thin layer of adhesive to the gluing area on the outer face of the D50 pipe and the inner face of the D63-50 reducer.
2. Join the pipe and reducer in a quick, even movement without twisting.

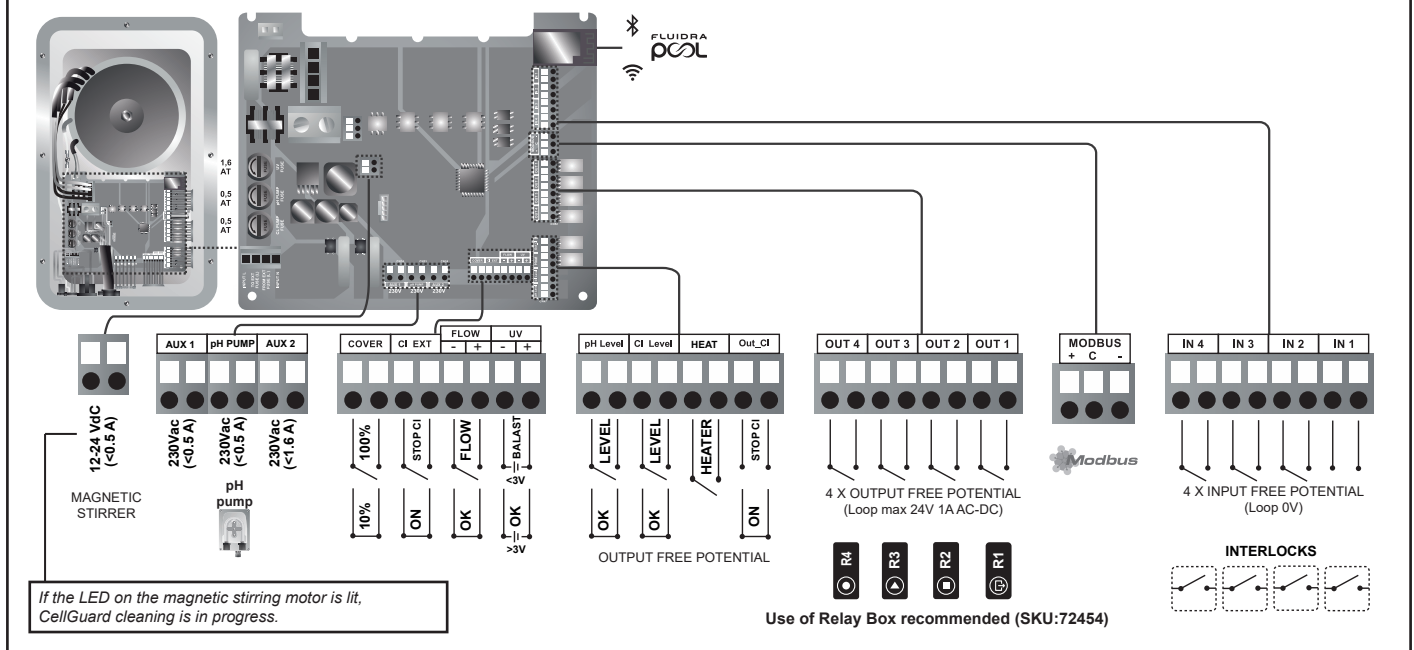


### Gluing the check valve

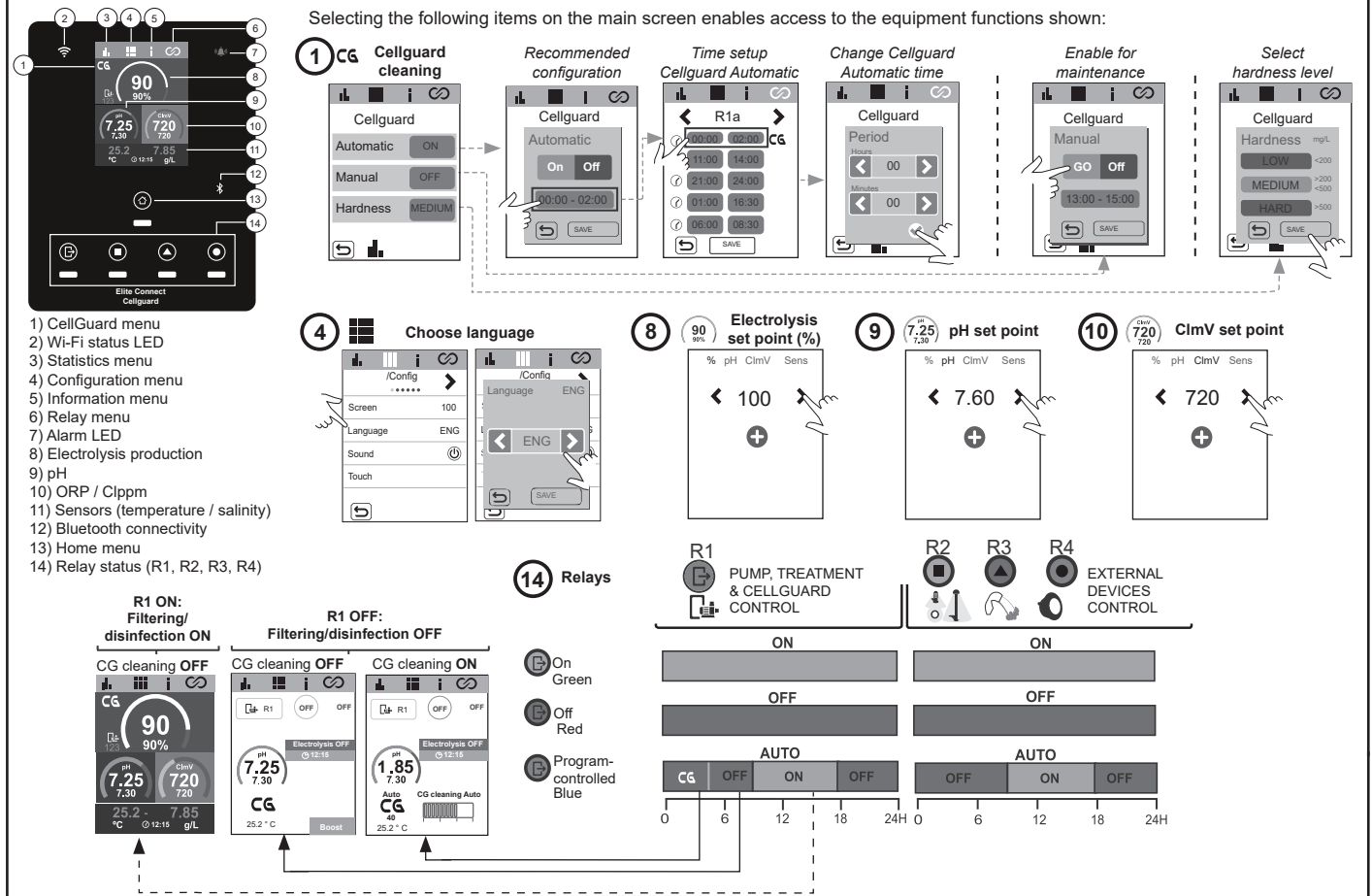
1. Apply a thin layer of adhesive to the gluing area on the outer face of the pipe and the inner face of the check valve.
2. Join the pipe and valve in a quick, even movement without twisting.



## Electronic board connections



## Main screen and functions



### Initial Start-Up

1. Add salt to the pool water. Although the system has an operating range of 4–12 g/L (LS 1–5 g/L), the optimum salt concentration is 5 g/L (Low Salt 1.5 g/L).
2. If the pool is to be used immediately, chlorine treatment should be carried out. Initial dose: 2 mg/L trichloroisocyanuric acid.
3. Before starting the operating cycle, disconnect the power supply and run the filter pump for 24 hours to ensure complete dissolution of the salt.
4. Start the saline electrolysis system, setting production at a level within the recommended range of free chlorine (0.5–2 ppm).
5. Launch "CellGuard Manual" from the CG menu to check whether the components (magnetic stirrer, pH sensor, flow switch, valves, etc.) have been installed correctly. There is no need to carry out cleaning after this check has been completed.

### Pool water balance

The water must be maintained within the following parameters:

- Total alkalinity between 80 and 150 mg/L (ppm)
- pH between 7.2 and 7.6
- Free chlorine between 0.5 and 2 mg/L (ppm)
- Chlorine stabiliser between 25 and 30 mg/L (ppm).

In pools that are exposed to strong sunshine or intensively used, it is advisable to maintain a level of 25–30 mg/L of stabiliser (isocyanuric acid).

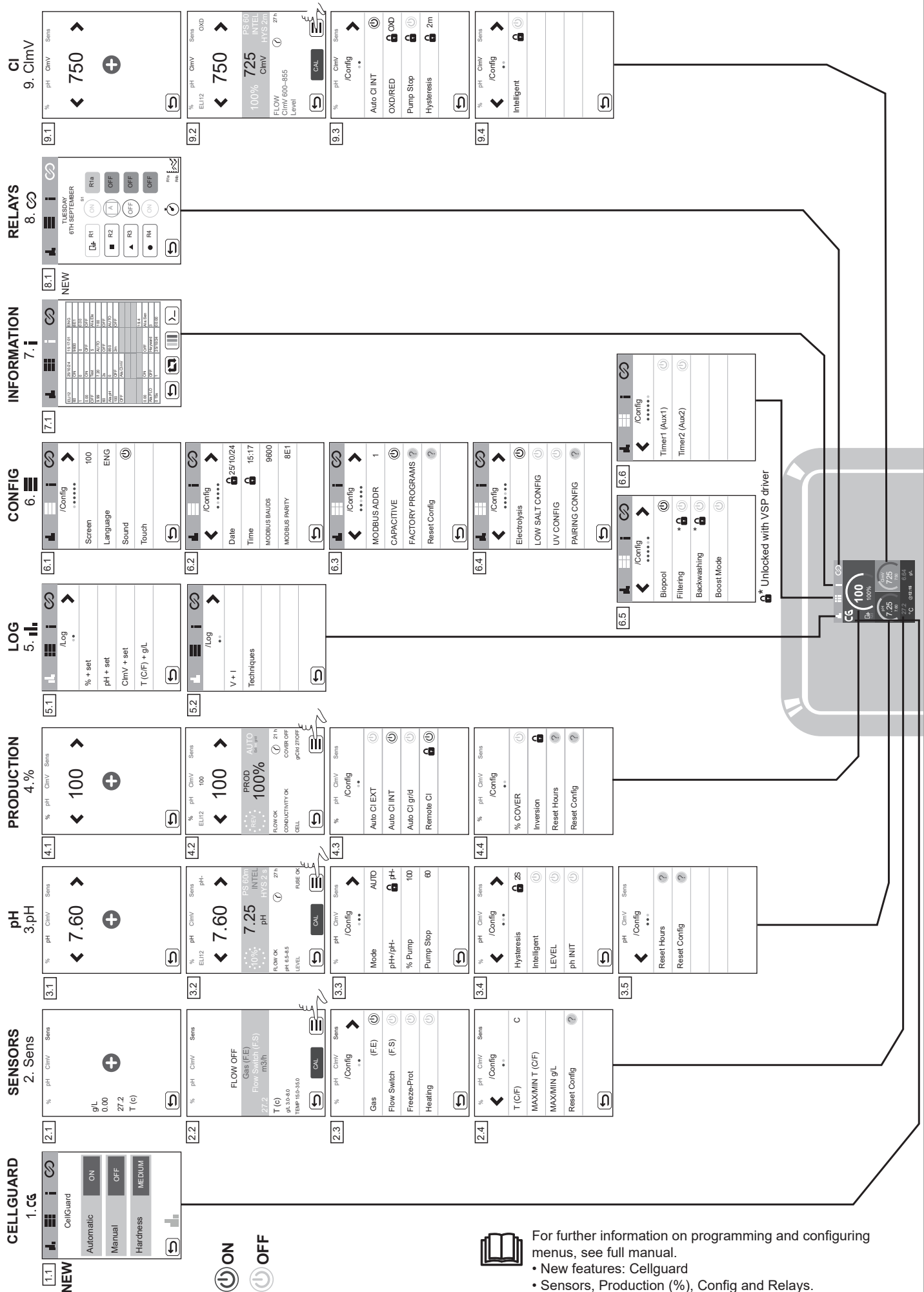


See full manual for further information on:

- CellGuard cleaning and menu
- Installation and calibration of pH, ORP, ppm, g/L and temperature sensors
- Electrolysis configuration

- Maintenance of the electrolysis cell and peristaltic pumps
- pH and ClmV/Clppm menu

## User interface / functions

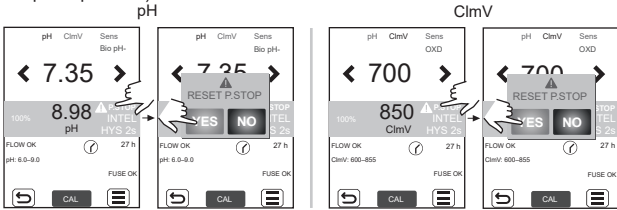
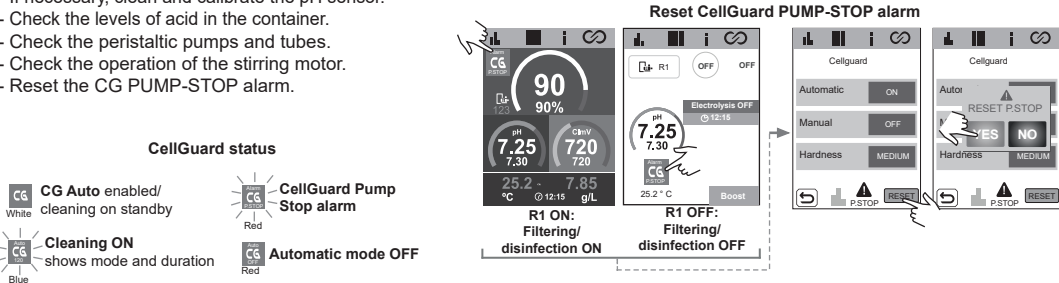


## Basic troubleshooting



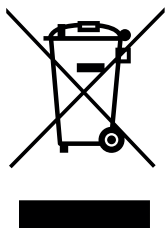
See full manual for information on:

- Configuring the alarms

| Message                                                                  | Solution                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                |               |                |          |            |            |         |            |            |
|--------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|---------------|----------------|----------|------------|------------|---------|------------|------------|
| <b>FLOW alarm</b><br><b>Gas sensor (F.E)</b><br><b>Flow Switch (F.S)</b> | The flow alarm will appear if the cell is not completely flooded (electrode gas sensor), or if there is no water flow (paddle flow switch sensor).<br>- Check the pump, filter and backwash valve. Clean if necessary.<br>- Check the paddle flow switch sensor and electrode gas sensor wiring connections.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                |               |                |          |            |            |         |            |            |
| <b>STOP CL alarm</b>                                                     | The STOP CL alarm may appear for one of three reasons:<br>Cl EXT = Stopped by an external controller<br>- Check the external controller (ORP/ppm) and the reading.<br>- If there is no external controller, disable the AUTO CL EXT function, or production will not start.<br>Cl INT = Stopped by the value of ClmV or Clppm in the device.<br>- Check the level of chlorine in the pool using a photometer or a test strip.<br>- If necessary, clean and calibrate the ORP/ppm sensor.<br>Auto CL g/d = Stopped because the user-set limit for grams of chlorine per day has been reached.<br>- Choose whether or not to enable this function                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                |               |                |          |            |            |         |            |            |
| <b>(mV) Low/High alarm</b>                                               | Low or high alarms appear if the reading is not within established safety limits. High and low ClmV safety limits cannot be changed. <table border="1"><tr><td>Mode</td><td>ORP low alarm</td><td>ORP high alarm</td></tr><tr><td>Standard</td><td>ClmV &lt; 600</td><td>ClmV &gt; 855</td></tr><tr><td>Biopool</td><td>ClmV &lt; 300</td><td>ClmV &gt; 855</td></tr></table><br>- Check the level of chlorine in the pool using a photometer or a test strip.<br>- If necessary, clean and calibrate the ORP sensor.<br>- If the free chlorine value is low and the total chlorine value is high, reduce the chloramines by superchlorinating with sodium hypochlorite.<br>- If the chlorine ppm value is high and the mV reading is low, check cyanuric acid concentration. Should the values be above 60 ppm, partially drain the pool. Increase daily filtering.<br>- If the deviation is high during the calibration process (± 60 mV in the 470 mV solution), the equipment will report an error in the measurement, which could arise due to deterioration of the sensor or the calibration solution. | Mode           | ORP low alarm | ORP high alarm | Standard | ClmV < 600 | ClmV > 855 | Biopool | ClmV < 300 | ClmV > 855 |
| Mode                                                                     | ORP low alarm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ORP high alarm |               |                |          |            |            |         |            |            |
| Standard                                                                 | ClmV < 600                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | ClmV > 855     |               |                |          |            |            |         |            |            |
| Biopool                                                                  | ClmV < 300                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | ClmV > 855     |               |                |          |            |            |         |            |            |
| <b>pH Low/High alarm</b>                                                 | Low or high alarms appear if the reading is not within established safety limits. These safety limits cannot be changed. If the high pH alarm appears, the pH pump will be switched off for safety reasons. <table border="1"><tr><td>Mode</td><td>Low pH alarm</td><td>High pH alarm</td></tr><tr><td>Standard</td><td>pH &lt; 6.5</td><td>pH &gt; 8.5</td></tr><tr><td>Biopool</td><td>pH &lt; 6.0</td><td>pH &gt; 9.0</td></tr></table><br>- Check the pH of the pool using a photometer or a test strip.<br>- If necessary, clean and calibrate the pH sensor.<br>- The pH of the pool must be manually reduced to 8.45 (standard mode) or 8.95 (biopool mode) for the pump to start dosing again.<br>- If the deviation is high during the calibration process (± 1 pH unit), the equipment will report an error in the measurement, which could arise due to deterioration of the sensor or the calibration solution.                                                                                                                                                                                  | Mode           | Low pH alarm  | High pH alarm  | Standard | pH < 6.5   | pH > 8.5   | Biopool | pH < 6.0   | pH > 9.0   |
| Mode                                                                     | Low pH alarm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | High pH alarm  |               |                |          |            |            |         |            |            |
| Standard                                                                 | pH < 6.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | pH > 8.5       |               |                |          |            |            |         |            |            |
| Biopool                                                                  | pH < 6.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | pH > 9.0       |               |                |          |            |            |         |            |            |
| <b>Cell alarm</b>                                                        | The cell alarm will appear when the devices detect that the electrode is at the end of its life (passivated).<br>Estimated lifetime of electrodes = 18,000 h. If necessary, replace the electrode.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                |               |                |          |            |            |         |            |            |
| <b>Low/High temperature sensor alarm</b>                                 | - The temperature alarm will appear when the temperature values are out of range.<br>- When the water temperature is very low, the equipment will not reach 100% production due to low conductivity.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                |               |                |          |            |            |         |            |            |
| <b>g/L Low/High alarm</b>                                                | - Like the temperature alarm, this alarm will appear when the g/L salt values are out of range.<br>- Normally, when the g/L value is too low or too high it will affect the output of the device due to the conductivity of the water.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                |               |                |          |            |            |         |            |            |
| <b>PUMP-STOP alarm</b>                                                   | When the PUMP-STOP FUNCTION is activated (default 60 min), the system stops the dosing pump after a programmed time without having reached the pH set point.<br>- Check the pH of the pool using a photometer or a test strip.<br>- If necessary, clean and calibrate the pH sensor.<br>- Check and adjust the alkalinity of the water (consult your pool specialist).<br>- Check the levels of acid in the container. <div><div>Reset the PUMP-STOP alarm</div><div></div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                |               |                |          |            |            |         |            |            |
| <b>CellGuard PUMP-STOP alarm</b>                                         | The alarm will appear if the algorithm detects anything unusual during the cleaning process.<br>- If necessary, clean and calibrate the pH sensor.<br>- Check the levels of acid in the container.<br>- Check the peristaltic pumps and tubes.<br>- Check the operation of the stirring motor.<br>- Reset the CG PUMP-STOP alarm. <div><div>CellGuard status</div><div></div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                |               |                |          |            |            |         |            |            |

**PLEASE NOTE:** This instruction manual contains essential information about the safety measures to adopt during the installation and commissioning. Hence, it is essential, that both the installer and the user read these instructions before installing and using the equipment.

Keep this manual for future reference about operating this device.



Treatment of electrical and electronic devices at the end of their useful life (applicable in the EU only)

Products marked with this symbol cannot be thrown out with domestic rubbish when they reach the end of their useful life. The user is responsible for depositing this type of refuse in a recycling point for electrical and electronic waste. Proper treatment and recycling of this type of waste makes an essential contribution to the conservation of the environment and general health. For more precise information on the collection points for this type of waste, contact your local authorities.

This manual contains instructions related to the operation and maintenance of salt electrolysis systems, as well as of the SD-CellGuard ORP, SD-PPM and SD-VSP drivers. To achieve the best performance from the salt electrolysis systems, follow the instructions below:

## 1 General Characteristics

Once you've installed your salt electrolysis system, you need to dissolve some salt in the water. This saline water circulates through the electrolysis cell located in the filter system.

The salt electrolysis system consists of two elements: an electrolysis cell and a control unit. The electrolysis cell contains a number of titanium plates (electrodes), so that when an electric current is passed through them and the salt solution passes through them, free chlorine is produced.

Maintaining a certain level of chlorine in the pool water guarantees its quality. The salt electrolysis system will produce chlorine when the pool's filtering system (pump and filter) are running.

The control unit has several safety devices, which are activated in the event of abnormal system operation, as well as a control micro-controller.

Salt electrolysis CellGuard systems include an automatic pH controller (SD pH driver) and an automatic cleaning system for the electrodes that prevents the formation of incrustations on them. Automatic ORP and PPM controllers can also be added to the equipment via their respective SD drivers.

## 2 Safety Warnings and Recommendations

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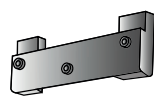
- Installation and manipulation should only be performed by suitably qualified technicians.
- Applicable standards for prevention of accidents and for electrical installations must be respected.
- During installation, bear in mind that electrical disconnection of the equipment requires a switch or circuit breaker compliant with IEC 60947-1 and IEC 60947-3 standards that ensures an omnipolar cut-off, directly connected to the power supply terminals and with a contact separation in all poles, providing total disconnection under overvoltage category III conditions, in an area that meets the safety requirements of the site. The switch must be located in the immediate vicinity of the equipment and must be easily accessible. Additionally, it must be marked as the equipment's disconnection element.
- The equipment must be powered by a residual current device (RCD) not exceeding 30 mA. The equipment must be earthed.
- The installation must comply with the requirements of IEC / HD 60364-7-702 and national standards applicable to swimming pools.
- The manufacturer accepts no responsibility for assembly, installation or start-up, nor for any manipulation or addition of components other than when carried out at the manufacturer's premises.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or who lack experience or knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children must be supervised to ensure that they do not play with the appliance.
- If the power cable is damaged, it must be replaced by the manufacturer, by their after-sales service or by a similarly qualified technician in order to avoid any type of danger.
- The magnetic stirrer must only be used with the supplied chlorinator and must only be powered by safety extra-low voltage (SELV), as indicated on its electrical rating label.
- Salt electrolysis systems operate at 230 Vac – 50/60 Hz. Do not attempt to alter the power supply to operate at any other voltage.
- Ensure that all electrical connectors are securely plugged in, to avoid bad connections leading to overheating.
- Before installing or replacing any system component, ensure that the system has been disconnected from the power supply and that no water is flowing through it. Only use genuine replacement parts.
- Because the equipment generates heat, it is important to install it in a well-ventilated area. Do not install near flammable materials.
- Despite the equipment having an IP32 protection rating, it must never be installed in areas at risk of flooding.
- This equipment is intended to be permanently connected to the water supply and should not be connected using a temporary hose.
- This equipment comes with a mounting bracket; see installation instructions.

3 Contents

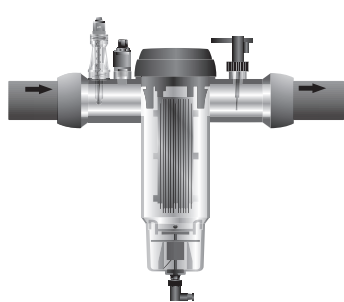
Control unit



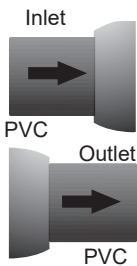
Wall mount



Cell



Check valves

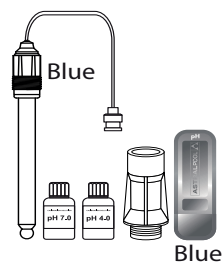


63-50 mm  
reducer  
x2



PVC

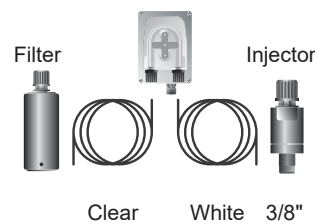
pH kit



Flow switch



Peristaltic pump

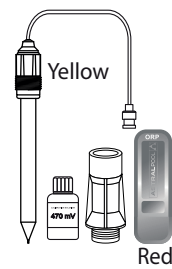


Connector and  
magnetic stir bar

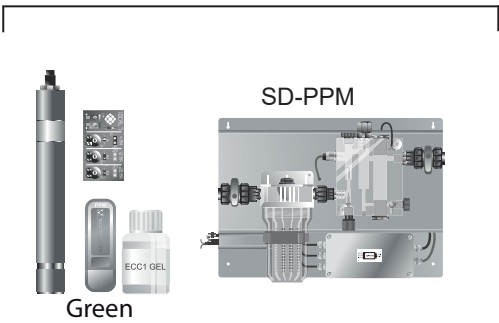


Optional accessories

CellGuard ORP kit



PPM kit



VSP driver

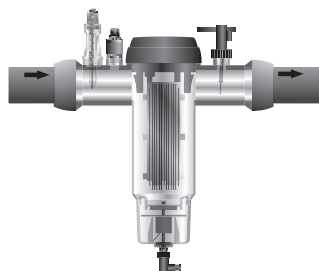


Black

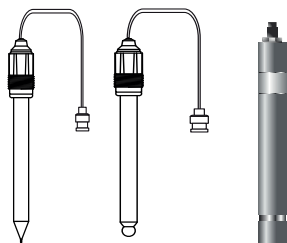
## 4 Description



| Power Supply                       | MODEL                                               |                 |                |                |
|------------------------------------|-----------------------------------------------------|-----------------|----------------|----------------|
| Description                        | 12 / 12LS                                           | 24 / 24LS       | 32 / 32LS      | 42             |
| Operating voltage                  | 230 Vac 50/60 Hz.                                   |                 |                |                |
| Consumption (A ac)                 | 0.6 A                                               | 0.95 A          | 1.0 A          | 1.1 A          |
| Fuse (5x20 mm)                     | 2 AT                                                | 3.15 AT         | 4 AT           | 4 AT           |
| Output (Adc)                       | 12 A (2 x 6A)                                       | 24 A (2 X 12 A) | 32 A (2 x 16A) | 42 A (6 X 7 A) |
| Production (g Cl <sub>2</sub> /h)  | 10–12                                               | 20–24           | 25–32          | 32–42          |
| m <sup>3</sup> Pool (16–24 °C)     | 60                                                  | 100             | 160            | 200            |
| m <sup>3</sup> Pool (+25 °C)       | 50                                                  | 80              | 120            | 160            |
| Salinity                           | LS: 1 -5 g/L<br>Standard: 4 - 12 g/L                |                 |                |                |
| Ambient temperature                | max. 40 °C                                          |                 |                |                |
| Surround                           | ABS                                                 |                 |                |                |
| Polarity inversion                 | No                                                  |                 |                |                |
| Production control                 | 0–100%                                              |                 |                |                |
| Magnetic stirrer                   | Yes                                                 |                 |                |                |
| Flow sensor (gas)                  | Configuration menu: active-inactive                 |                 |                |                |
| Flow switch sensor                 | Configuration menu: active-inactive                 |                 |                |                |
| Control Production by cover        | Configuration menu (10–100%). Volt-free contact.    |                 |                |                |
| External Production Control        | Config menu 2 states (0, set%). Volt-free contact.  |                 |                |                |
| Electrode diagnostics              | Yes                                                 |                 |                |                |
| pH safety stop                     | Yes, setting 1–120 min                              |                 |                |                |
| Salinity test (qualitative)        | Yes, in real time (minimum production required 30%) |                 |                |                |
| Salt alarm indicator               | High and low.                                       |                 |                |                |
| Config. Menu System                | Colour LCD touchscreen                              |                 |                |                |
| Remote control (cable)             | 4 digital – 4 relay                                 |                 |                |                |
| Modbus & Fluidra Pool (compatible) | Yes                                                 |                 |                |                |

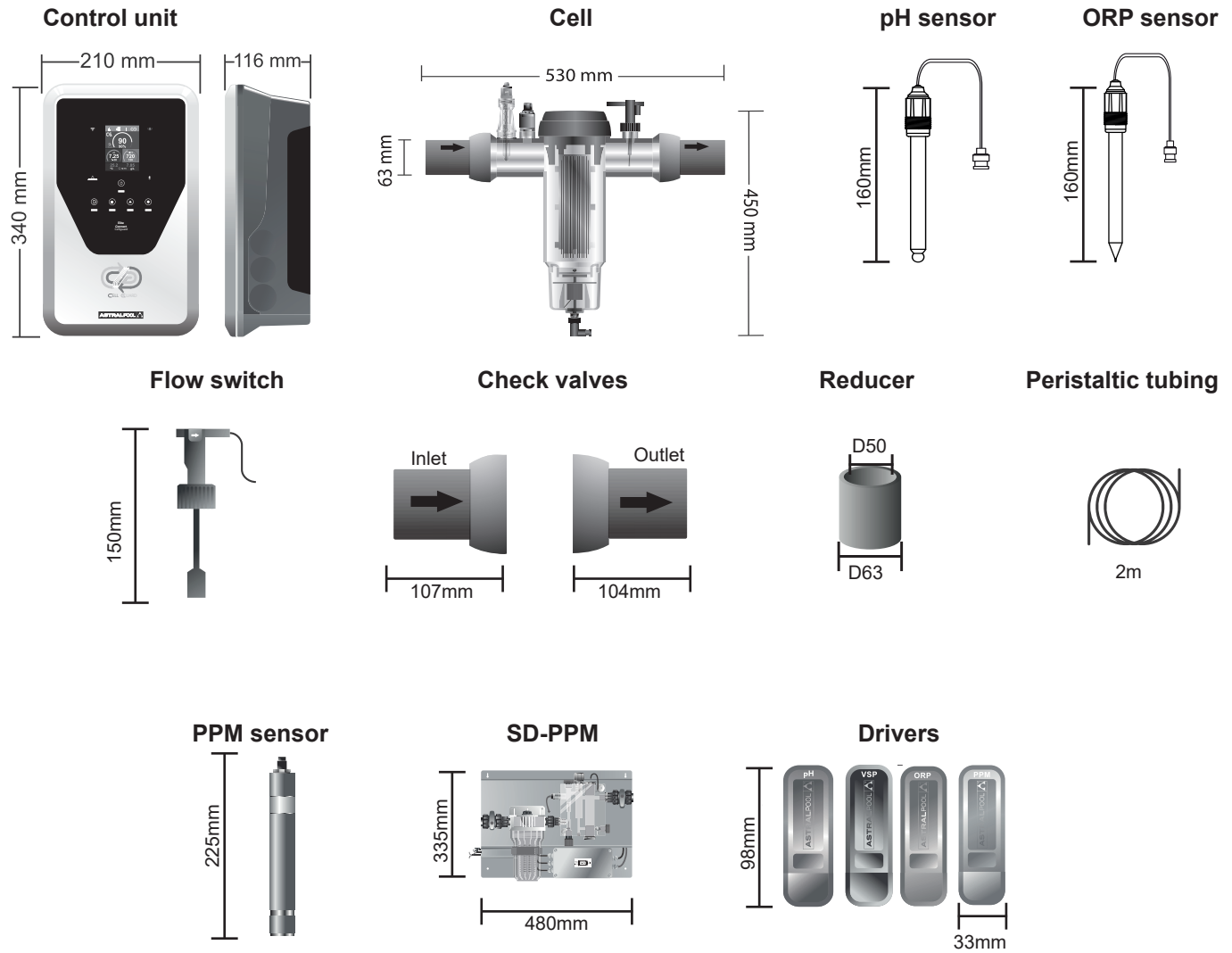


| Electrolysis Cell                  | MODEL                   |           |           |    |
|------------------------------------|-------------------------|-----------|-----------|----|
| Description                        | 12 / 12LS               | 24 / 24LS | 32 / 32LS | 42 |
| Electrodes                         | Premium Grade: 18,000 h |           |           |    |
| Min. flow rate (m <sup>3</sup> /h) | 2                       | 4         | 6         | 8  |
| Number of electrodes               | 5 / 8 LS                | 7 / 10 LS | 7 / 12 LS | 13 |
| Material                           | Methacrylate derivative |           |           |    |
| Connection to piping               | PVC gluing Ø 63 mm      |           |           |    |
| Maximum pressure                   | 1 kg/cm <sup>2</sup>    |           |           |    |
| Operating temperature              | 15–40 °C max            |           |           |    |

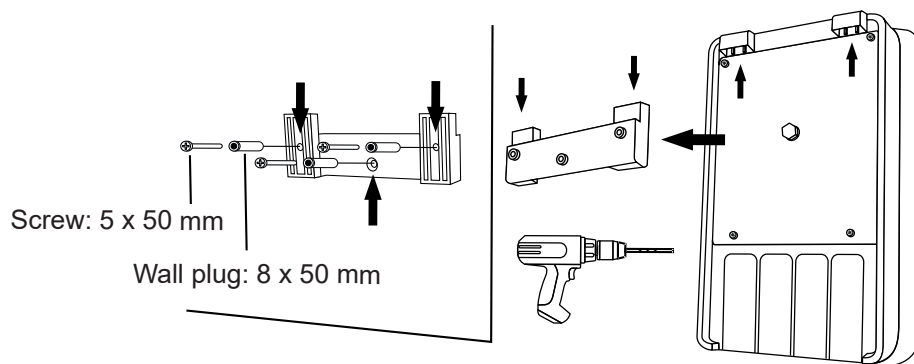


| pH/ORP/Clppm Sensors     | MODEL                                                 |  |
|--------------------------|-------------------------------------------------------|--|
| Description              | AP SD-pH, AP SD-ORP, AP SD-PPM                        |  |
| Measurement range        | 0.00–9.99 (pH) / 000–999 mV (ORP) / 0.00–5.00 (Clppm) |  |
| Control range            | 7.00–7.80 (pH) / 600–850 mV (ORP) / 0.30–3.50 (Clppm) |  |
| Biopool control range ON | 6.50–8.50 (pH) / 300–850 mV (ORP) / 0.30–3.50 (Clppm) |  |
| Accuracy                 | ± 0.01 pH / ± 1 mV (ORP) / ± 0.01 (Clppm)             |  |
| Calibration              | Automatic (pH-ORP solutions, ppms electronic board)   |  |
| Control outputs (pH)     | One 230V / 500mA output (connection for dosing pump)  |  |
| pH and ORP sensors       | Glass body, single joint                              |  |
| Clppm sensor             | PVC body + diaphragm.                                 |  |

## 5 Dimensions



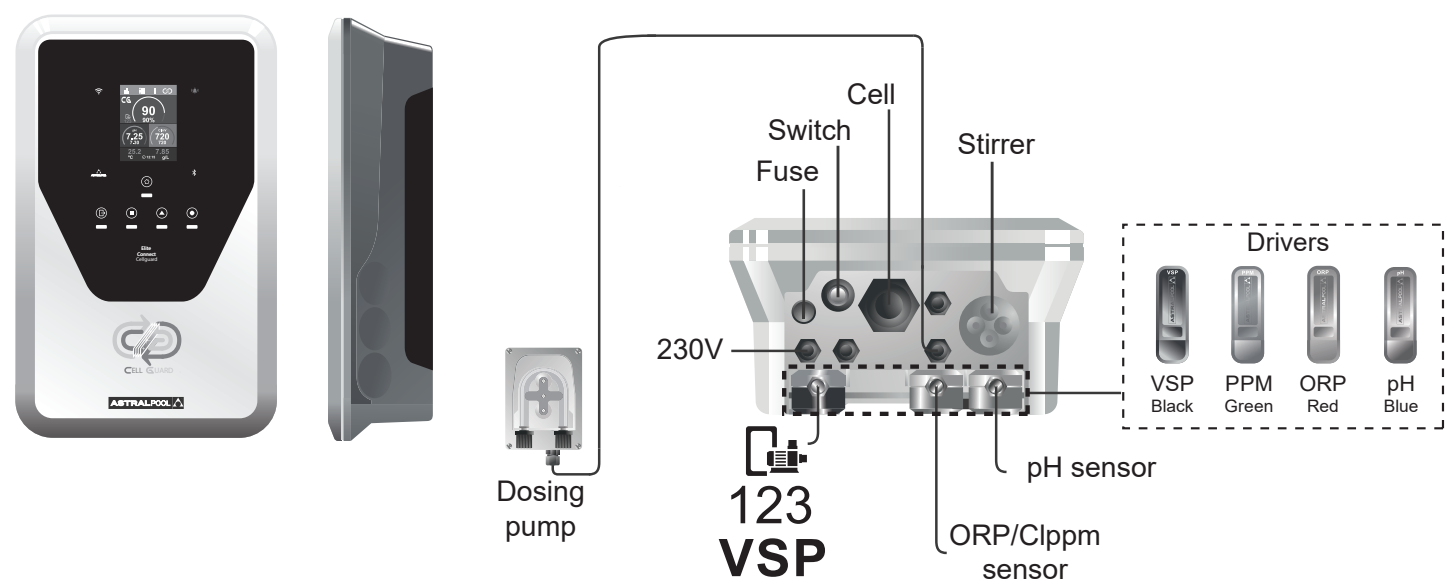
## 6 Control Unit Installation



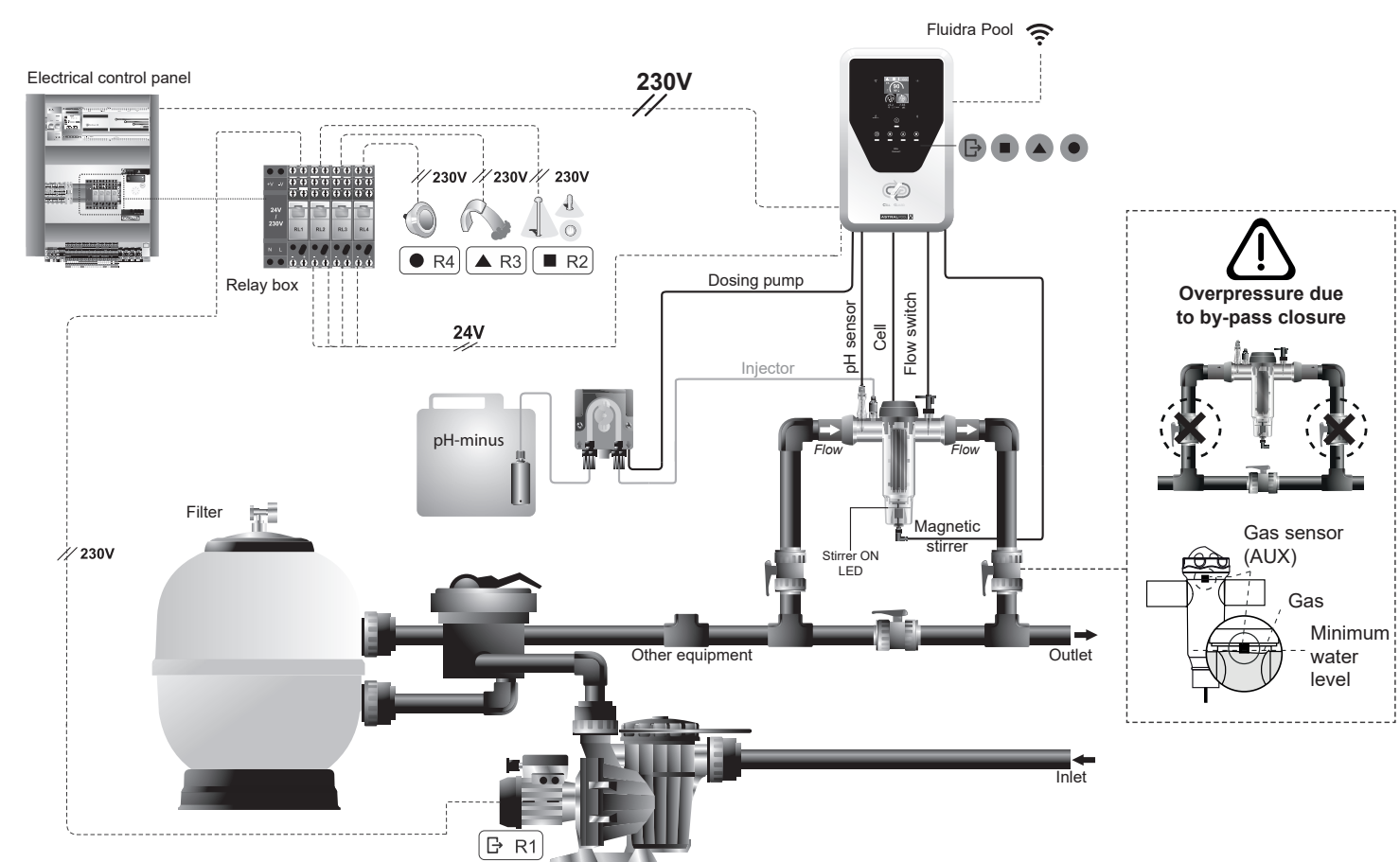
Always install the system's control unit **VERTICALLY** and on a rigid surface (wall), as shown in the recommended installation diagram. To ensure that the equipment remains in good condition, it should always be installed in a dry, well-ventilated location. The equipment must not be installed outdoors. The **POWER SUPPLY** should preferably be installed far enough away from the electrolysis cell to prevent it from being accidentally splashed with water.

It is important to avoid the formation of corrosive atmospheres due to pH reducers (specifically, those based on hydrochloric acid, "HCl"). Do not install the system close to areas where these products are stored. We strongly recommend that products based on sodium bisulphate or dilute sulphuric acid be used. The control unit must be connected to the mains in the control panel of the filter system, such that the pump and the system are connected simultaneously.

# 7 Connection



# 8 Installation Diagram



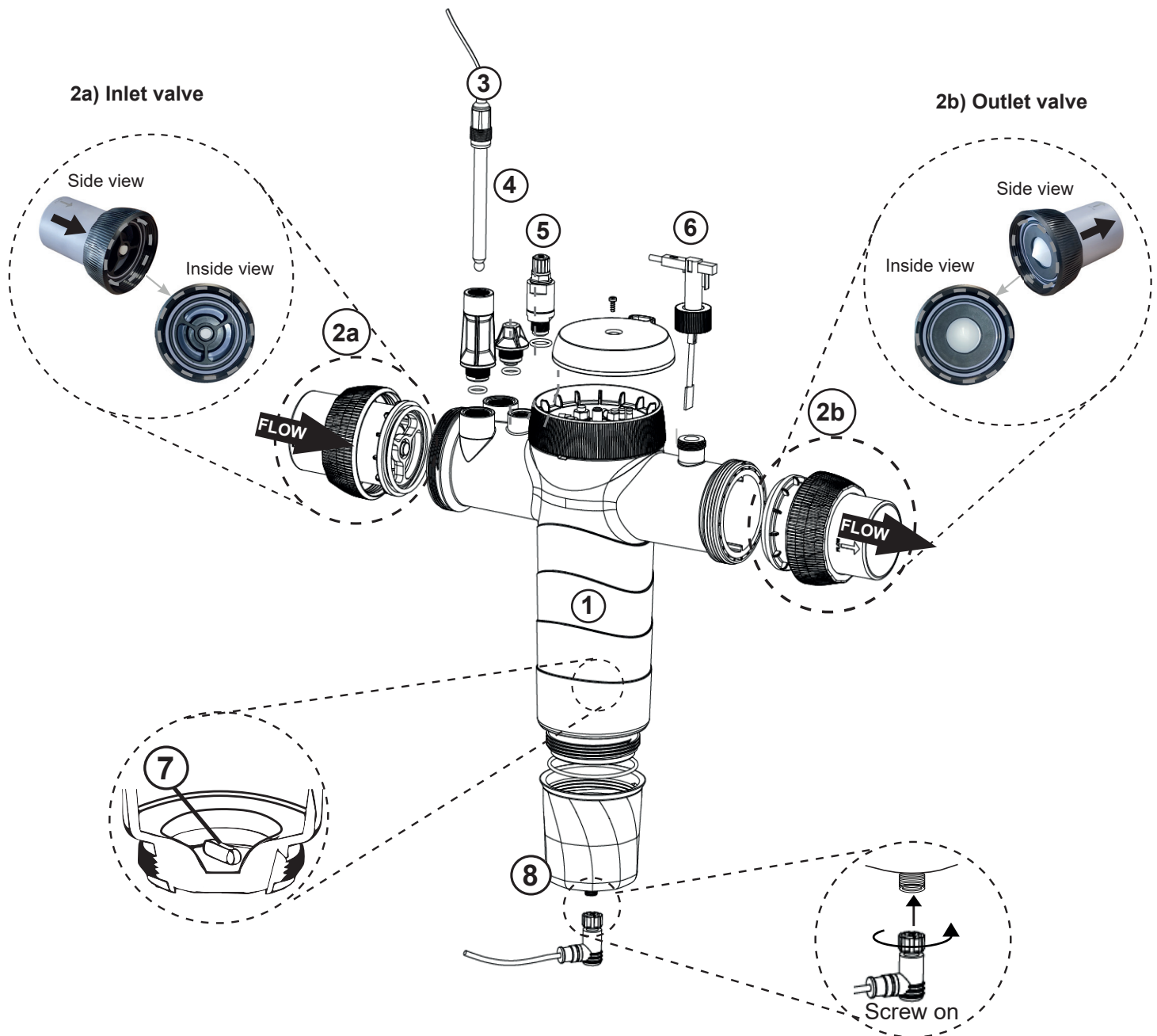
## 9 Cell Components



**Caution:** When installing the Cellguard cell, make sure the inlet (2a) and outlet (2b) check valves are correctly positioned. An arrow on the outer part of the valves indicates direction of flow.

### Components

- 1) Cell
- 2) a) Inlet check valve  
b) Outlet check valve
- 3) pH sensor
- 4) ORP sensor (optional)
- 5) Injector
- 6) Flow switch
- 7) Magnetic stir bar
- 8) Magnetic stirrer with quick connector



## 10 Valve Installation

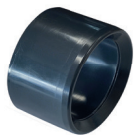
**Caution:** Excess adhesive when gluing the check valves can block the retention system, preventing the flow of water through the cell. Once the parts have been glued, clean off the excess glue to avoid blocking the valves.

### Pipe



D50  
PVC

### Reducer



D63-50  
PVC

### Valve



D63  
PVC

### Check valve

When installing the Cellguard cell, make sure the inlet and outlet check valves are correctly positioned.

An arrow on the outer part of the valves indicates direction of flow.

2a) Inlet valve



Flow direction

2b) Outlet valve



Flow direction

### Hydraulic connecting pipe

We recommend installing the cell in a by-pass. Installation can be done using either D50 or D63 piping.

### D63-50 pipe reducer

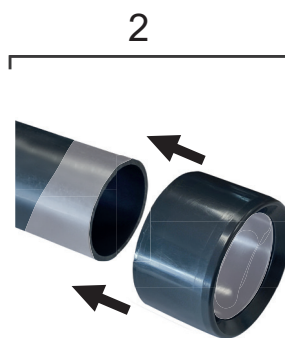
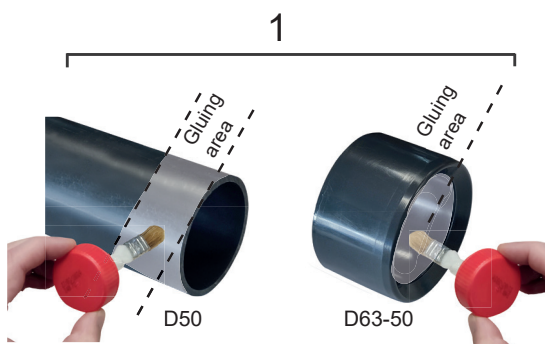
Supplied with the cell.

For use when the hydraulic installation uses D50 pipes.

It is advisable to first glue the D63-50 reducer to the D50 pipe. If the pipe diameter is 63 mm, glue the valve directly to the pipe.

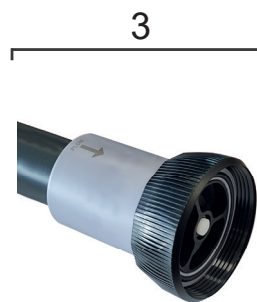
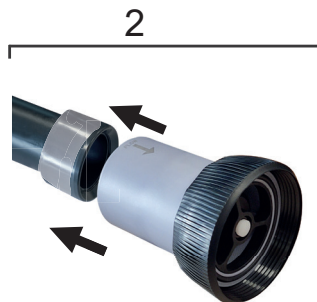
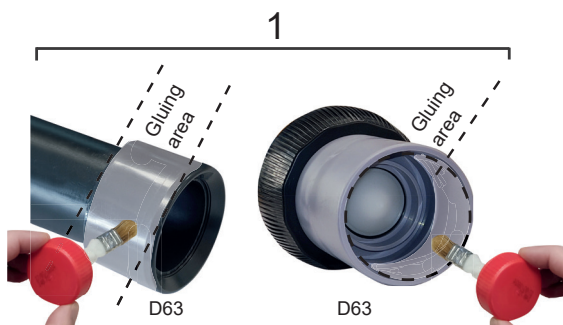
### Gluing the pipe to the reducer

1. Apply a thin layer of adhesive to the gluing area on the outer face of the D50 pipe and the inner face of the D63-50 reducer. 2. Join the pipe and reducer in a quick, even movement without twisting.



### Gluing the check valve

1. Apply a thin layer of adhesive to the gluing area on the outer face of the pipe and the inner face of the check valve. 2. Join the pipe and valve in a quick, even movement without twisting.



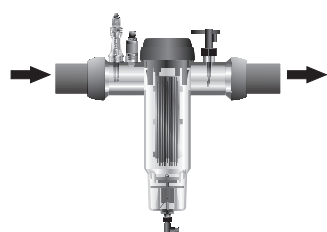
## 11 Electrolysis Cell Installation

The electrolysis cell is made of a transparent polymer inside which the electrodes are housed. The electrolysis cell should be installed in a place protected from the weather and **always behind the filtration system** and any other devices in the installation such as heat pumps, control systems, etc.

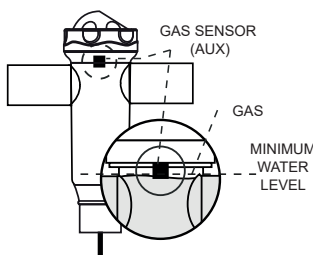
The installation should allow the user easy access to the installed electrodes.

The electrolysis cell must always be installed at a point in the pipes that can be isolated from the rest of the installation by two valves (a by-pass), allowing maintenance work to be performed without having to partially or completely drain the pool.

Before proceeding with the final installation of the system, the following should be taken into account:

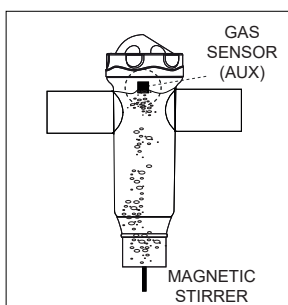


The flow direction indicated on the valves connected to the cell must be taken into account. The recirculation system must ensure the minimum flow given in the Technical Specifications Table in section 4.

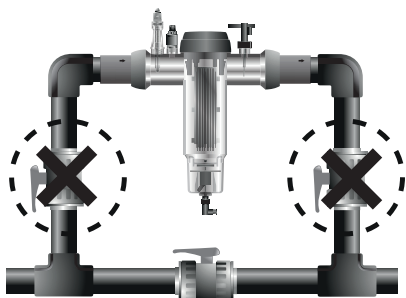
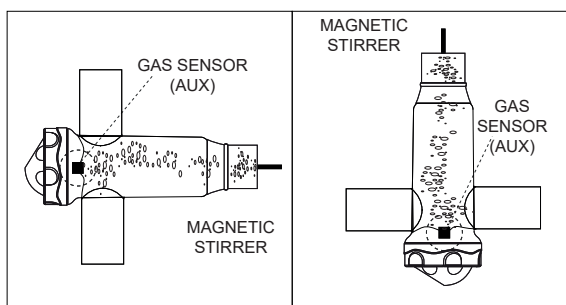


The gas detector (flow detection system) is activated when there is little or no water recirculation (flow) through the cell. Electrolysis gas not being discharged generates a bubble that electrically isolates the auxiliary electrode (electronic detection). Therefore, when the electrodes are introduced into the cell, the gas detector (auxiliary electrode) must be located in the upper part of the cell.

**ADEQUATE installation**



**INADMISSIBLE installation**



**CAUTION:** Should the flow switch be disabled or faulty, the gas sensor will not work correctly, with the resulting risk of cell rupture if the cell's inlet and outlet valves are closed simultaneously. Although this is unlikely to happen, it can be avoided by blocking the return valve to the swimming pool once the equipment is installed, so that it may not be accidentally manipulated.

# 12 Electrolysis Cell Connections

Make the interconnection between the electrolysis cell and the control unit according to the following diagrams.

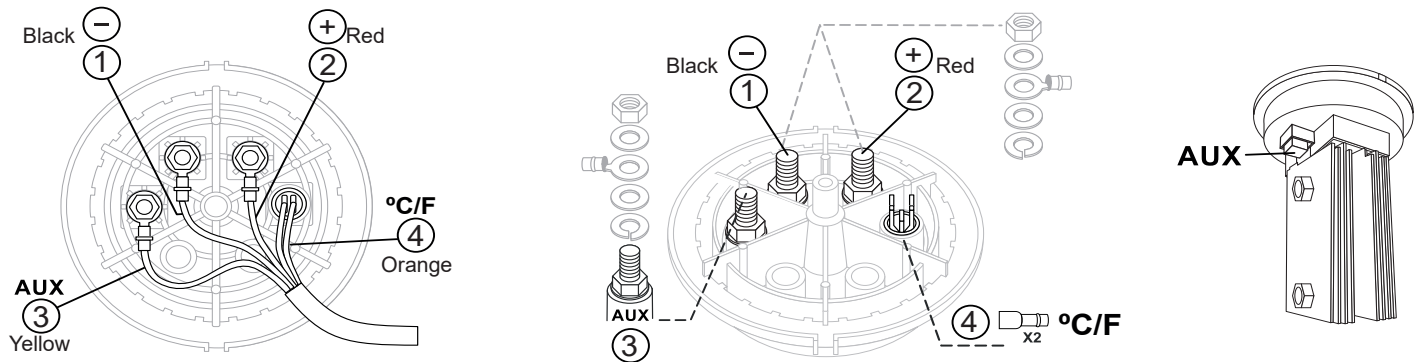
Due to the relatively high current flowing through the electrolysis cell cables, under no circumstances should the length or cross-section of the cables be changed without first consulting your authorised distributor. The cell-to-control unit connecting cable must never exceed the maximum length recommended in this manual:

MOD.12 (6 A), 7.5 m; MOD.24 (12 A), 7.5 m; MOD.32 (16 A), 3.0 m; MOD.42 (6 A), 16 m

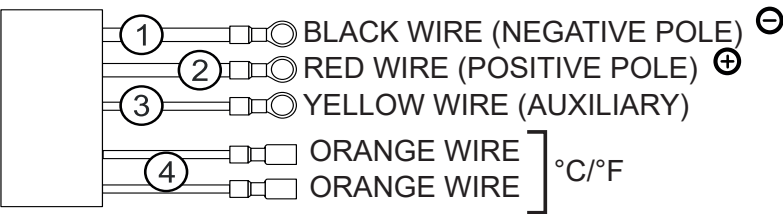
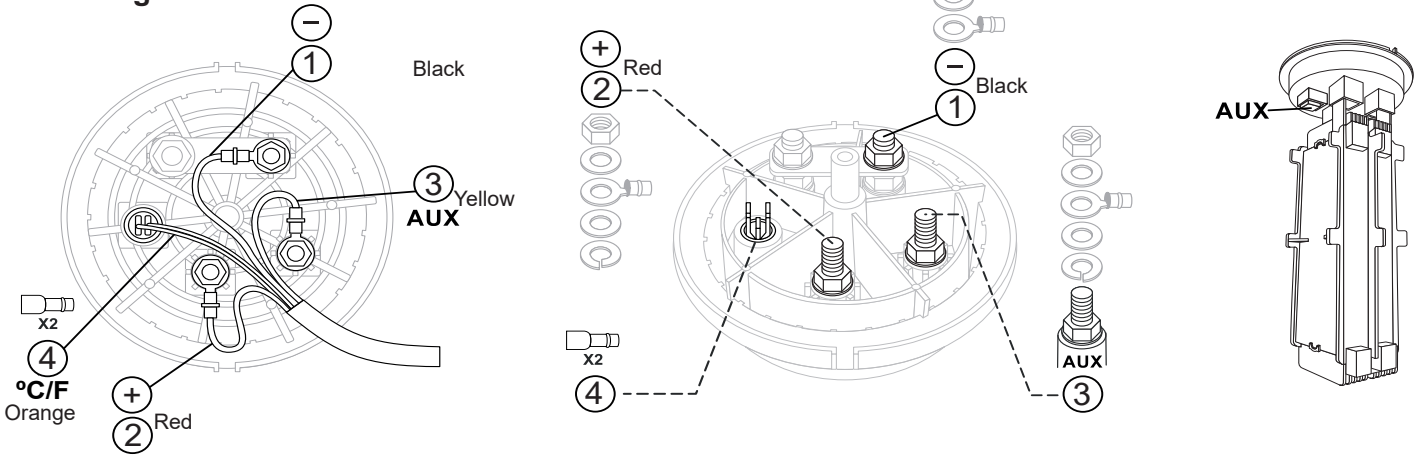


**CAUTION:** CellGuard electrodes operate without polarity inversion, so take care to ensure correct electrical connection of the positive (⊕: red wire) and negative (⊖: black wire) polarity of the electrode.

## 12, 24, 32, 12LS, 24LS, 32LS gr Cl<sub>2</sub>/hr



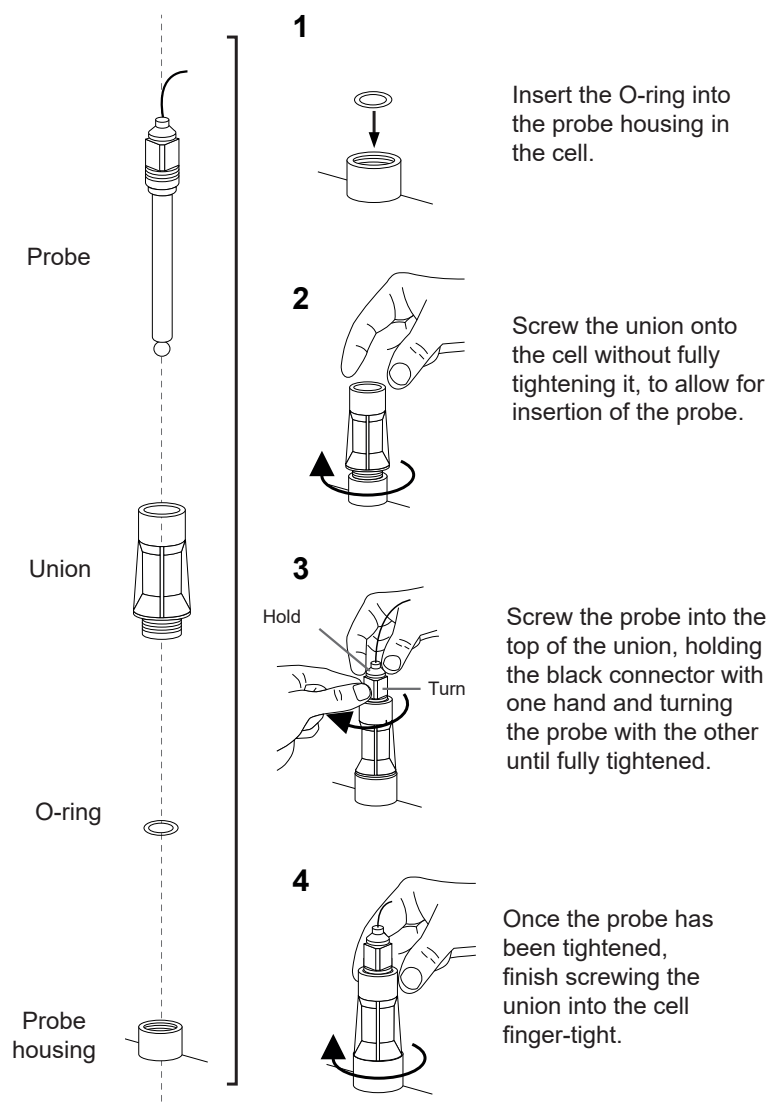
## 42 gr Cl<sub>2</sub>/hr



## 13 Cell Components Installation

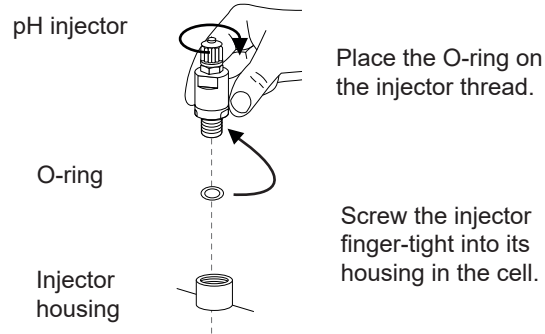
### pH/ORP Sensor Installation

Component 3 and component 4 (optional)



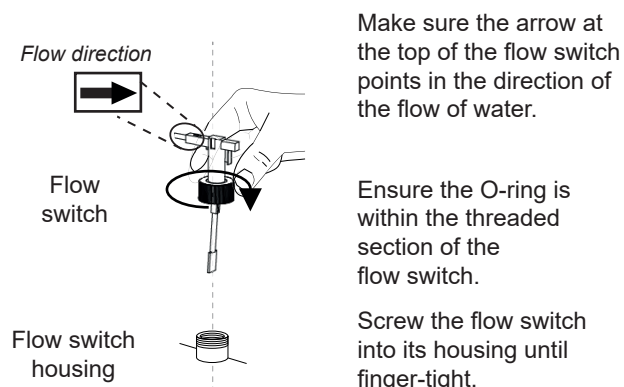
### pH Injector Installation

Component 5



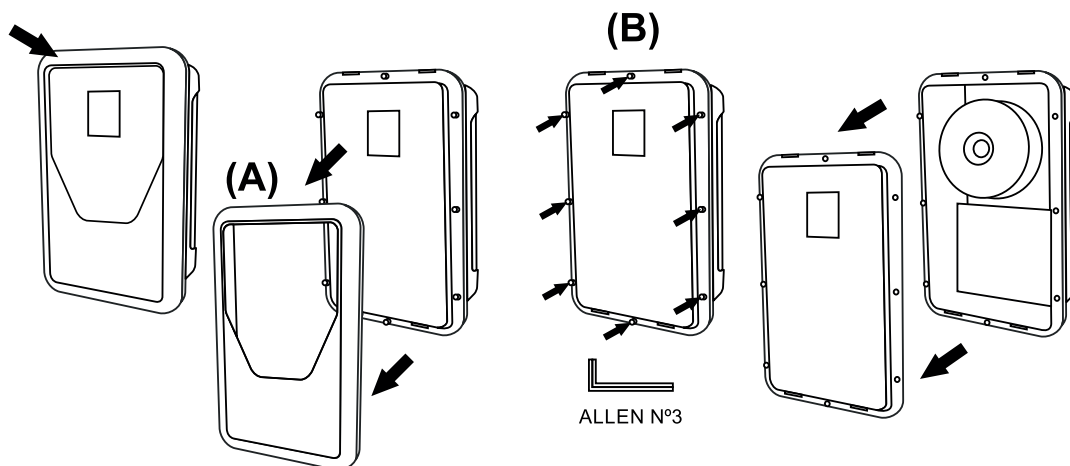
### Flow Switch Installation

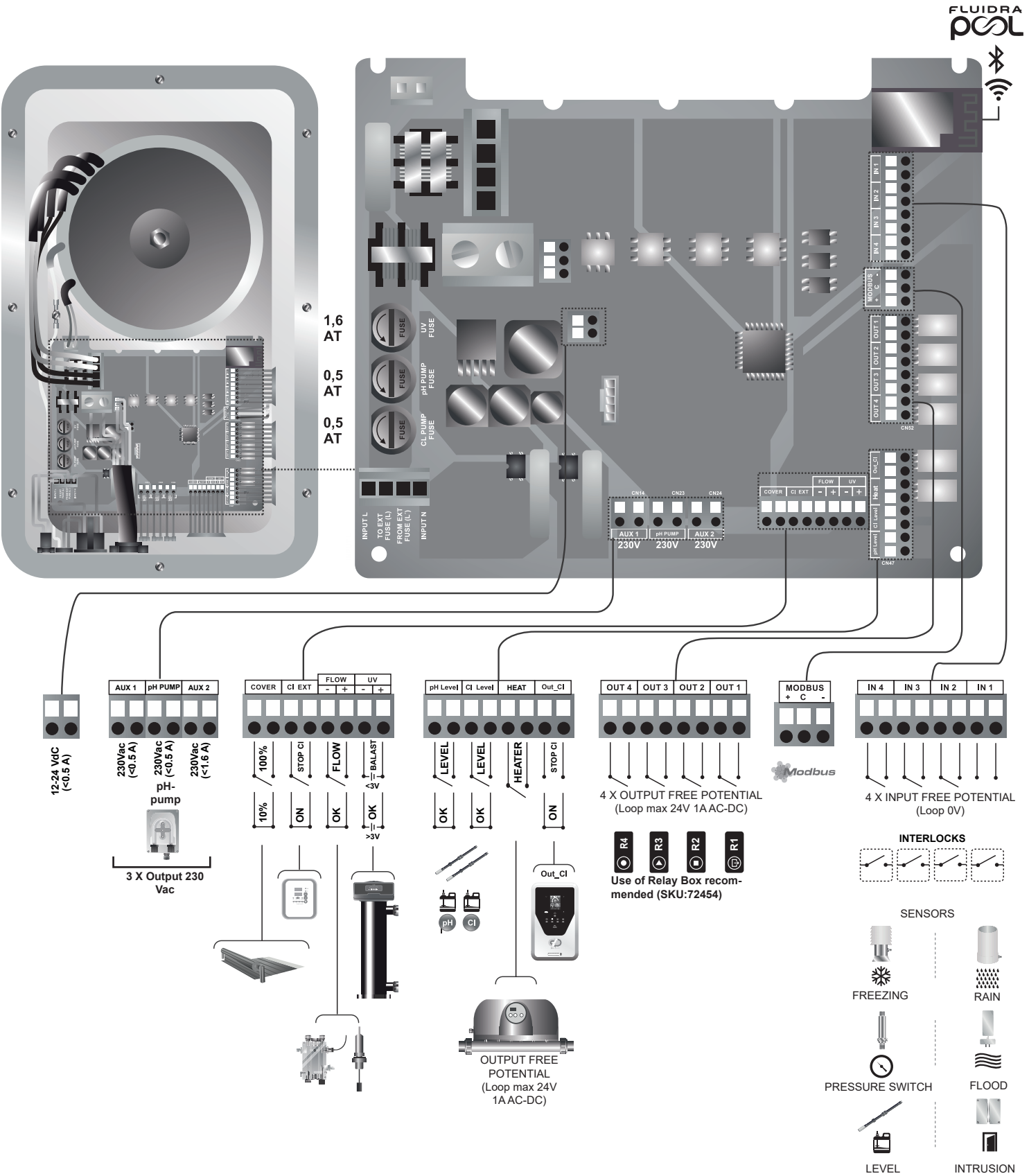
Component 6



## 14 Front cover removal

1. Remove the trim panel (A) from the front cover.
2. Unscrew the front cover fixing screws (B).
3. Pull off the front cover.

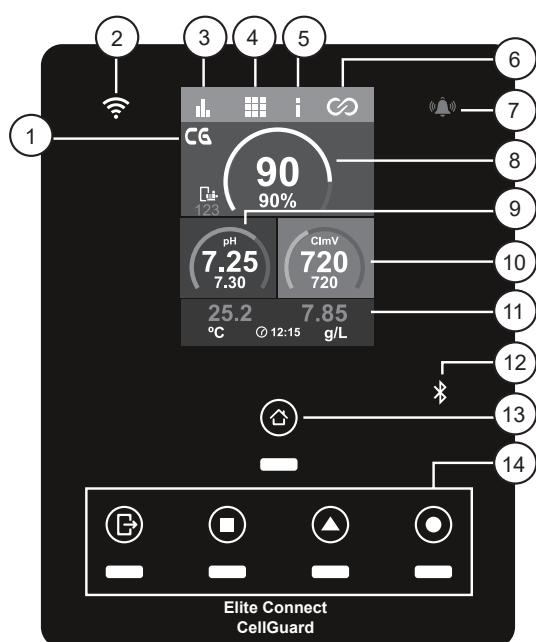




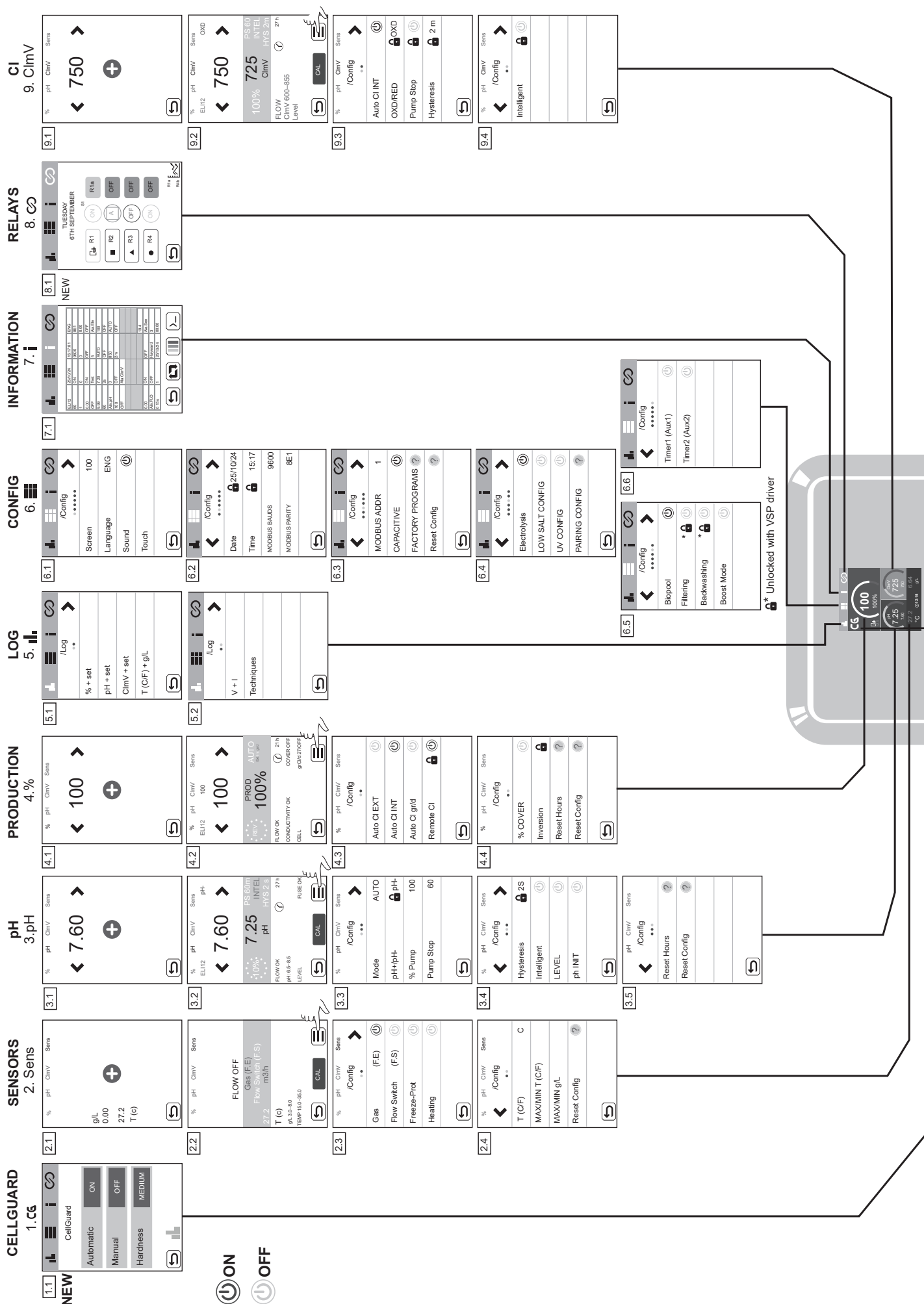
## 16 Initial Start-up

1. Ensure that the filter is 100% clean, and that the pool and installation are free of copper, iron and algae, and that any heating equipment installed is compatible with the presence of salt in the water.
  2. Balance the pool water. This will allow us to achieve a more efficient treatment with a lower concentration of free chlorine in the water, and to extend the operating life of the electrodes with less lime scale in the swimming pool.
    - a) The pH should be 7.2–7.6
    - b) Total alkalinity should be 60–120 ppm.
  3. Measure the pool water's level of hardness and select it in the equipment using the CellGuard menu.
    - Low: <200 mg/L
    - Medium: 200–500 mg/L
    - Hard: >500 mg/L
  4. Although the system can operate in a salinity range of 4–12 g/L (Low Salt 1–5 g/L), you should try to maintain the recommended optimum salt level of 5 g/L (Low Salt 1.5 g/L), adding 5 kg (Low Salt 1.5 kg) per m<sup>3</sup> of water if the water did not previously contain salt. Always use common salt (sodium chloride), without additives such as iodides or anti-caking agents, and of a quality fit for human consumption. Never add salt through the cell. Add directly to the pool or in the equalisation basin (away from the pool sump).
  5. When salt is added, and if the pool is to be used immediately, chlorine treatment should be carried out. As an initial dose, 2 mg/L of trichloroisocyanuric acid may be added.
  6. Before starting the operating cycle, disconnect the control unit and run the filter pump for 24 hours to ensure complete dissolution of the salt.
  7. Then start up the saline electrolysis system, setting the salt electrolysis production level so that the free chlorine level is maintained within the recommended range (0.5–2 ppm).
- N.B.: to determine the level of free chlorine, a test kit must be used.
8. In pools that are exposed to strong sunshine or intensively used, it is advisable to maintain a level of 25–30 mg/L of stabiliser (isocyanuric acid). Under no circumstances should a level of 75 mg/L be exceeded. This will help to prevent the destruction of free chlorine in the water by sunlight.
  9. Start CellGuard in Manual mode from the CG menu to check whether the components (magnetic stirrer, pH sensor, flow switch, valves, etc.) have been correctly installed. There is no need to carry out cleaning after this check has been completed (Stop CG).

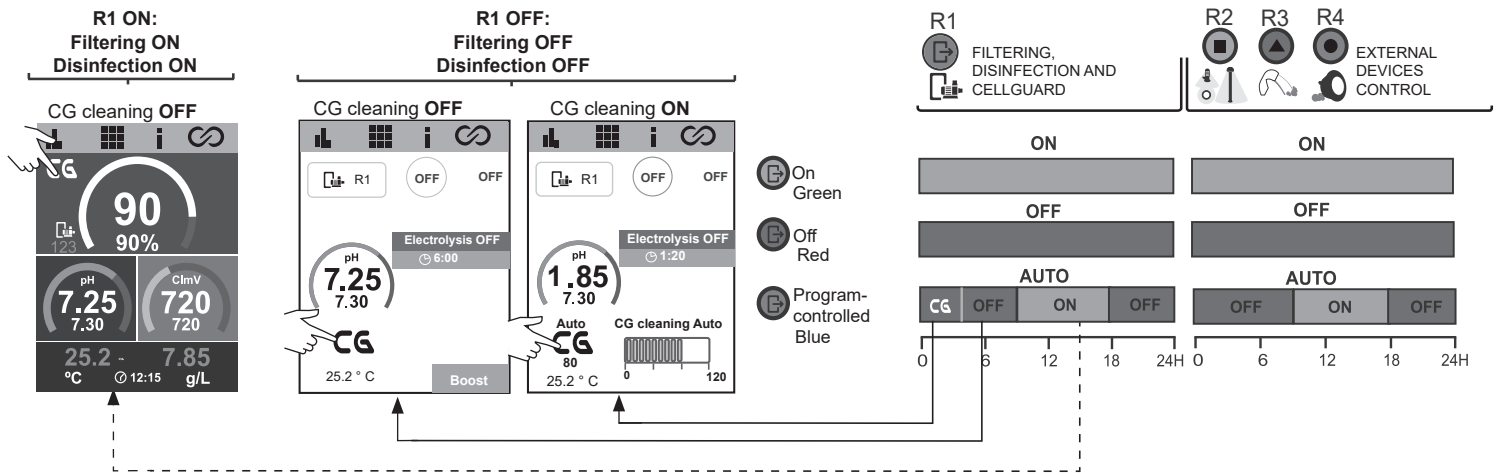
## 17 Cover and Functions



- 1) CellGuard menu
- 2) Wi-Fi status LED
- 3) Statistics menu
- 4) Configuration menu
- 5) Information menu
- 6) Relay menu
- 7) Alarm LED
- 8) Electrolysis production
- 9) pH
- 10) ORP / Clppm
- 11) Sensors (temperature / salinity)
- 12) Bluetooth connectivity
- 13) Home menu
- 14) Relay status (R1, R2, R3, R4)



## 19 CellGuard Menu



### Default configuration

CellGuard

Automatic ON

Manual OFF

Hardness MEDIUM

**Automatic:** recommended operation

**Manual:** maintenance

**Hardness:** select the pool water's level of hardness

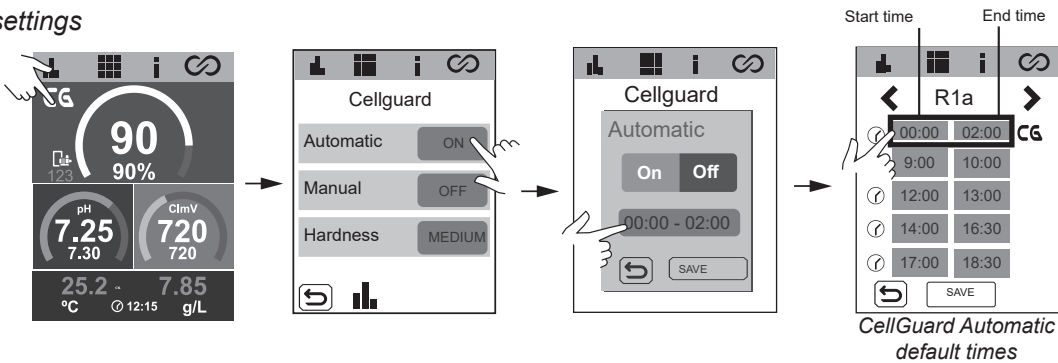
### Automatic CG cleaning

Enabled by default, this is the recommended setting. The automatic CG function regularly cleans the electrodes according to a CG algorithm and variables such as water hardness and programmed production. CG requires a set time range to be reserved for use should its algorithm indicate the need for it (default range is 00:00 to 02:00, programmable for between 2 and 8 hours' cleaning).

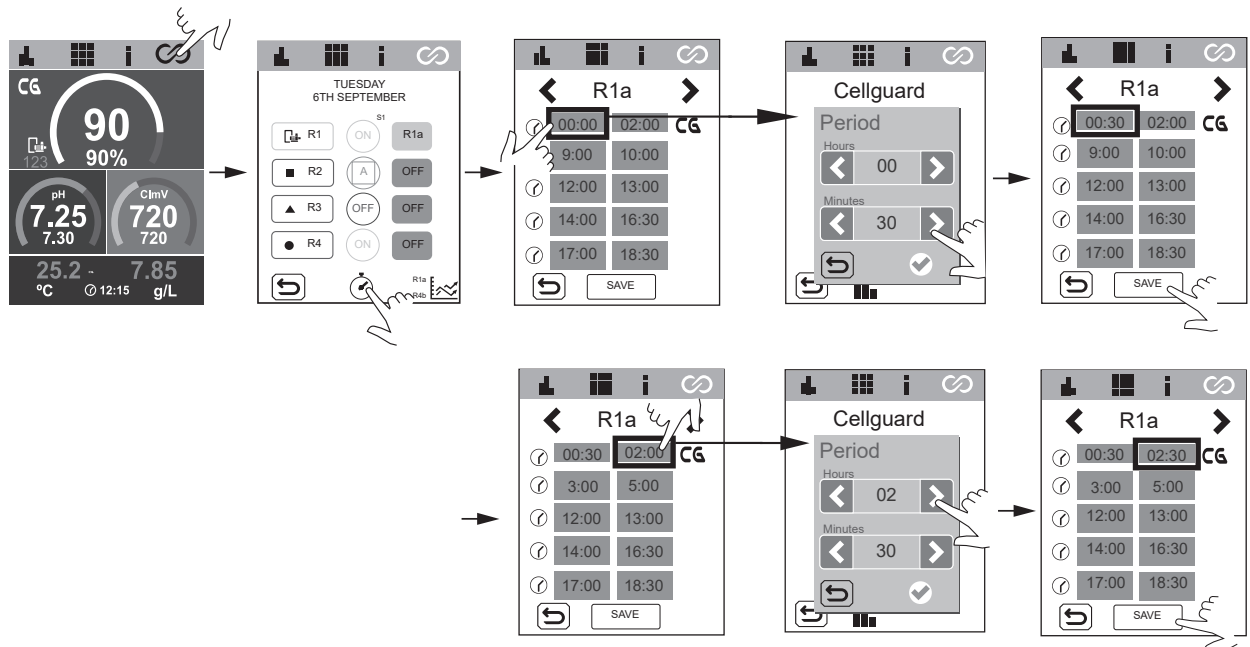
The CG reserved time range can be programmed from the CG menu (option 1) or the relay menu (option 2). The times set for CG and R1 a-b-c cannot be the same or overlap. Furthermore, there must be a gap of at least 30 minutes between the end of filtering and the start of CG cleaning.

### CG time settings

#### Option 1



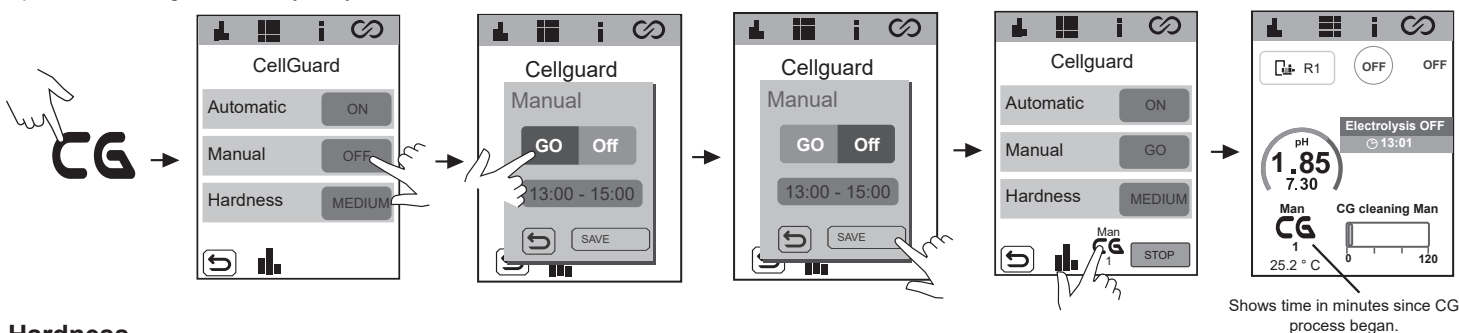
#### Option 2



## 19 CellGuard Menu

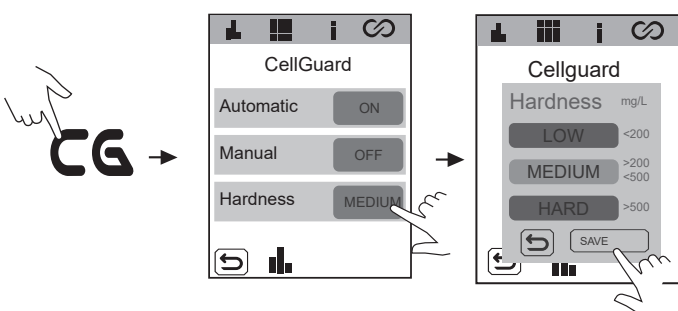
### Manual cleaning

Disabled by default. We recommend enabling it only for electrode maintenance. On selecting this option, the cleaning process begins immediately, its duration the same as that set for CG (default setting: 2 h). If cleaning is turned on during a filtering operation, magnetic stirring will begin immediately and pH Minus dosing will be delayed by 15 minutes.

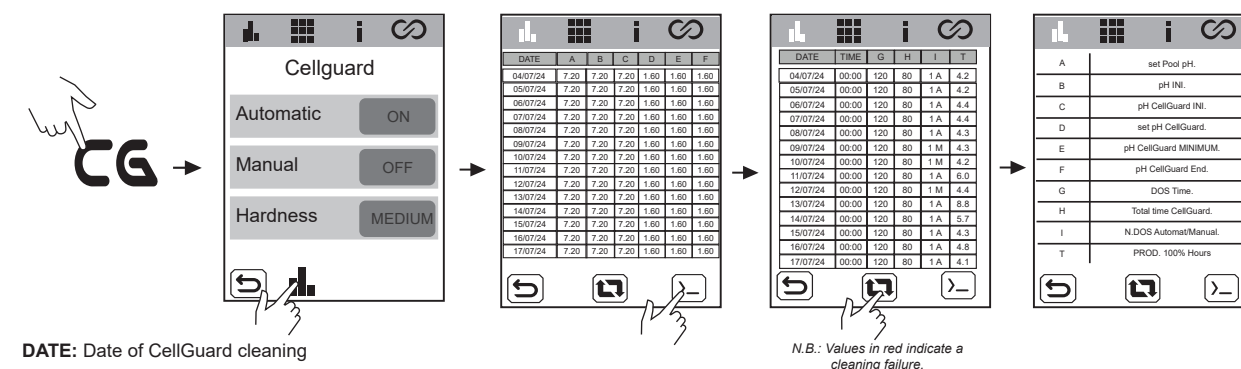


### Hardness

To ensure effective cleaning, it is very important to measure the pool water hardness. Users can select the hardness in the CG menu using the scale displayed.



### CellGuard log



**DATE:** Date of CellGuard cleaning

**TIME:** CellGuard cleaning start time

**A) set Pool pH.:** Pool's pH set point

**B) pH INI.:** pH value at end of filtering (R1a-b-c)

**C) pH CellGuard INI.:** pH value at start of CellGuard cleaning

**D) set pH CellGuard.:** CellGuard pH set point (target pH during CellGuard cleaning)

**E) pH CellGuard MINIMUM.:** Minimum pH value reached during cleaning

**F) pH CellGuard End.:** pH value at end of cleaning

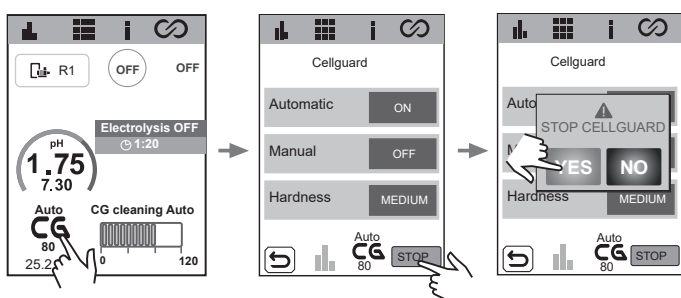
**G) DOS Time.:** pH Minus dosing time during cleaning

**H) Total Time CellGuard.:** Total duration of CellGuard cleaning

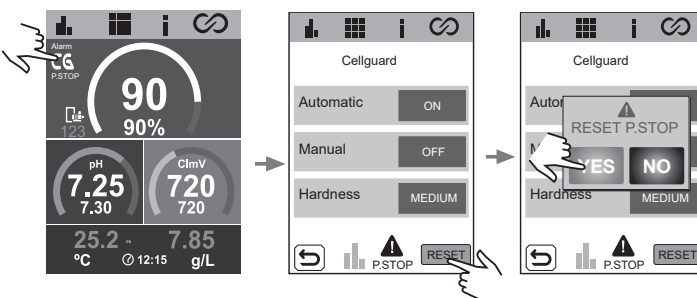
**I) N.DOS Automat/Manual.:** Number of dosing cycles to reach CellGuard pH set point (minimum pH) Cleaning mode: A - Automatic/M - Manual.

**J) PROD. 100% Hours:** Cumulative hours equivalent to 100% electrolysis production since last CellGuard cleaning (4 h at 100% = 8 h at 50%)

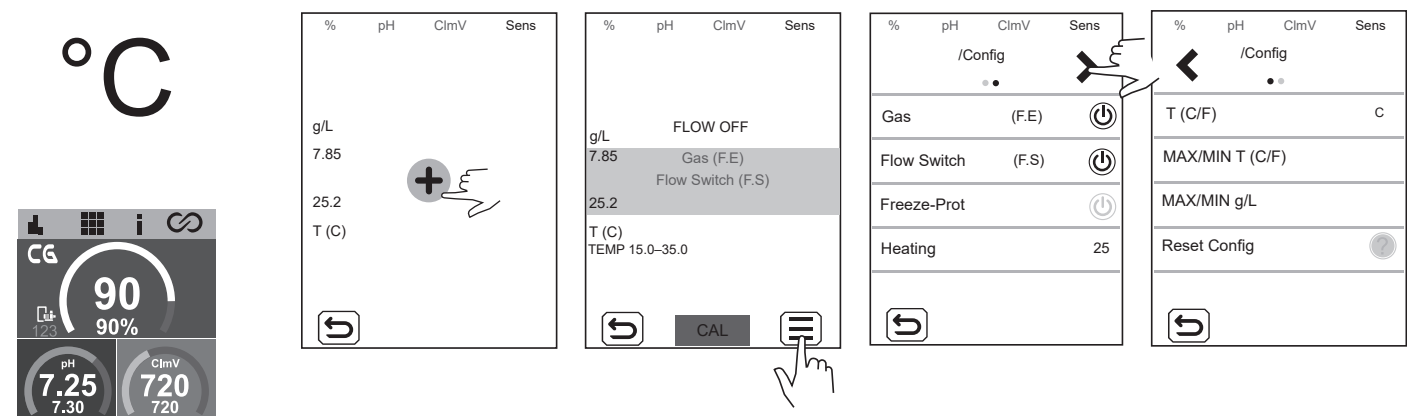
### STOP CellGuard in progress



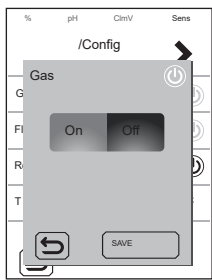
### RESET CellGuard pump stop



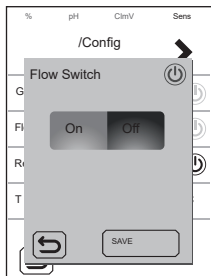
20 Sensor Configuration



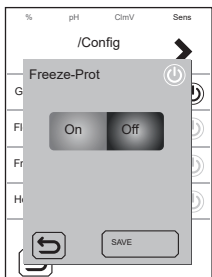
**Gas:** Enable/disable gas sensor detection. This function will be active whenever saline electrolysis is activated.



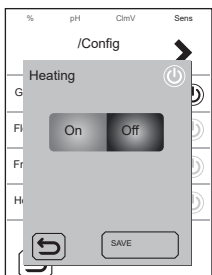
**Flow switch:** Enable/disable flow switch sensor detection.



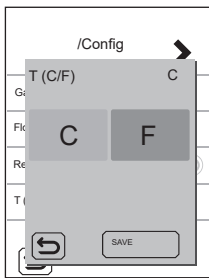
**Freeze-Prot:** Prevents water from freezing in the pipes. Filtering is switched on if the water temperature drops below the set value (of 1–5 °C). Once the temperature has increased to the set point, filtering stops.



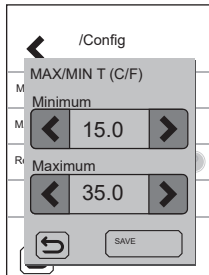
**Heating:** The heater activates automatically to maintain the desired temperature of the water (default value: 25 °C). The temperature can be set within the range 6–50 °C.



**T (C/F):** Temperature scale selection – Fahrenheit or Celsius.

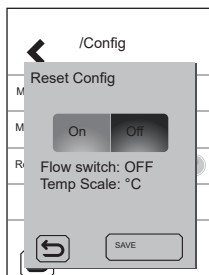


**MAX/MIN T (C/F):** Sets the maximum/minimum value of the temperature alarm. If the temperature of the pool water is above or below the set range, the temperature alarm will be triggered.



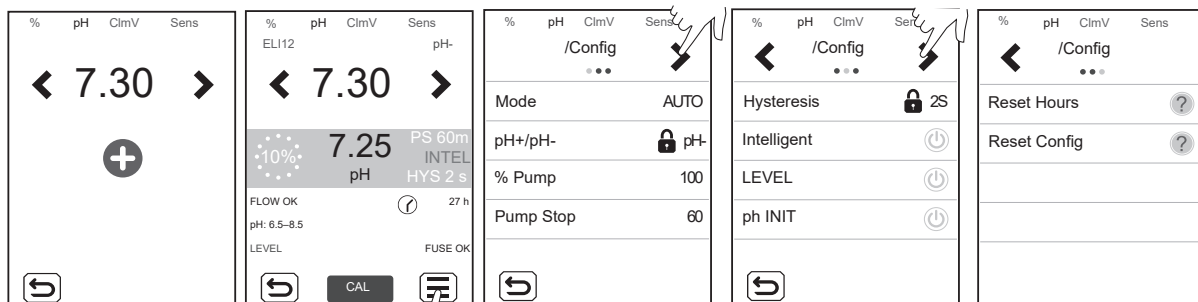
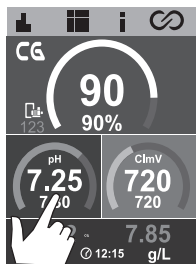
**Reset Config:** If activated, equipment settings will revert to factory defaults. A message appears showing the values to be changed.

- Flow switch: OFF
- Temp Scale: °C

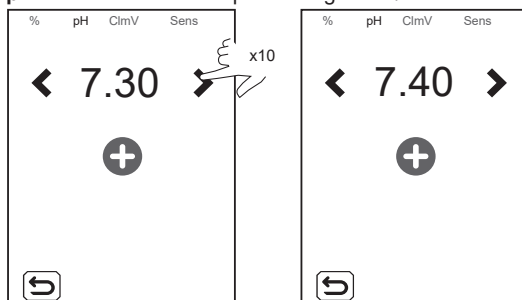


## 21 pH Configuration

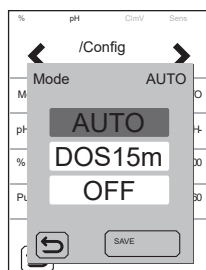
# pH



**pH:** Establishes the set point using the < / > arrows



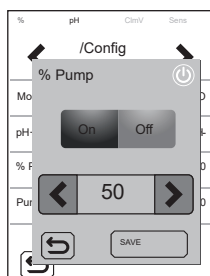
**Mode:** Sets the pump working mode.



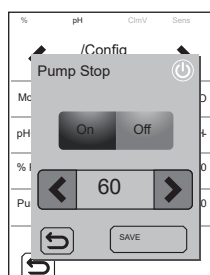
- **AUTO:** This function will switch the pump on when the pH value is above the set point.
- **DOS15m:** With this function, pH Minus is dosed for 15 minutes, regardless of the pH value of the water. It is useful during start-up.
- **OFF:** The pump will never be switched on.

**pH-:** Sets the pH product to be used. When electrolysis is enabled, the non-modifiable value is pH-.

**% Pump:** Sets the working period of the pump for each minute of dosing. E.g. 50% = 30 s on 30 s off.



**Pump Stop:** The pH has a safety system (PUMP STOP FUNCTION) which acts on the dosing pump and prevents the following:



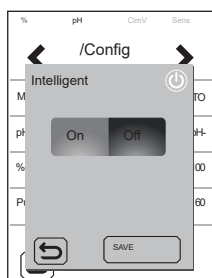
- Damage caused by dry running the pump (depleted pH Minus product).
- Overdosage of pH Minus product (damaged or aged sensor).
- pH regulation problems due to high alkalinity of the water (freshly filled pool, high carbonate levels).

When the PUMP STOP FUNCTION is ON (by default), the system stops the dosing pump after a time set in minutes without having reached the pH set point.

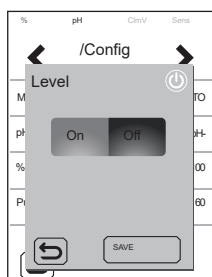
**To reset the PUMP STOP alarm, see section 29.3.**

**Hysteresis:** Time (2 s) that the pump continues dosing when the measurement reaches the desired set point (value cannot be changed).

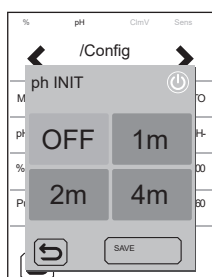
**Intelligent:** Smart pH- dosing function for more precise regulation. The working cycle of the pump is updated dynamically depending on the pH measurement.



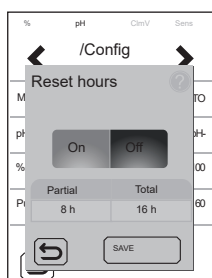
**LEVEL:** Function for the use of a liquid level sensor (pH-). It will stop the pump dosing if the liquid level is below the level sensor.



**pH INIT:** pH reading stabilisation time. After switching on the equipment or changing the status of RELAY1 to ON / AUTO-ON, a time of 1min/2min/4min can be set to obtain a stable pH reading.



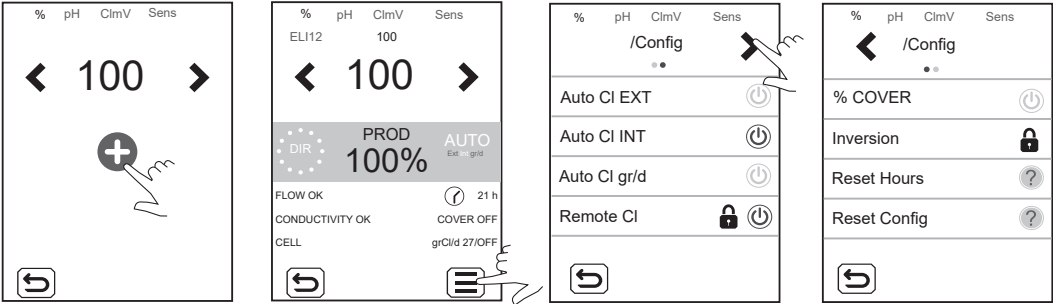
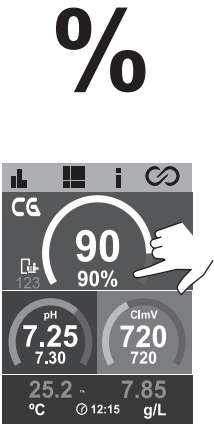
**Reset Hours:** Resets the pH pump partial hours value.



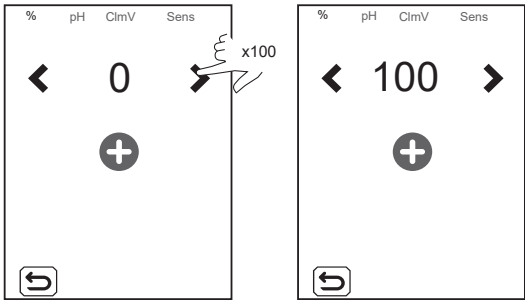
**Reset Config:** Resets the default configuration parameters. A message appears showing the values to be changed.

- Mode: AUTO
- % Pump: 100%
- PS: 60m
- HYS: 2s
- Intelligent: OFF
- LEVEL: OFF
- Set: 7.20

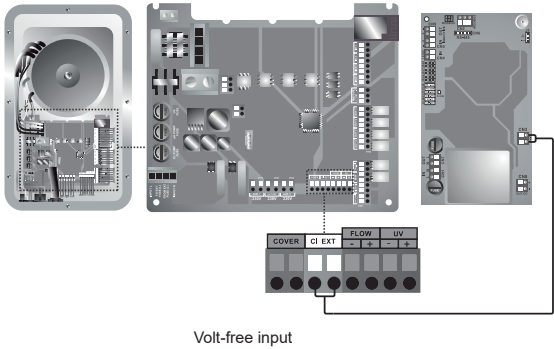
22 Electrolysis Configuration



**Production:** Establishes the set point using the < / > arrows

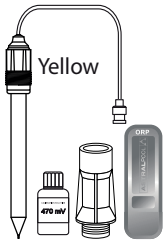


**Auto CI EXT:** Stop/start production based on the reading given by an external controller. The external controller will send a signal (volt-free input) to start/stop production by the equipment. Do not activate this function if you do not have an external controller, or the appliance will not start producing chlorine and will display a CI EXT alarm.

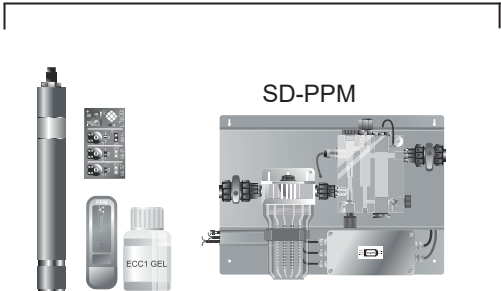


**Auto CI INT:** Starts/stops production based on mV or ppm reading. Only available with SD-CellGuard ORP or SD-PPM.

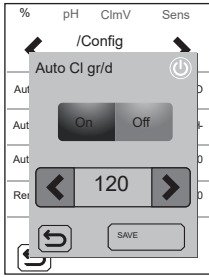
CellGuard ORP kit



PPM kit

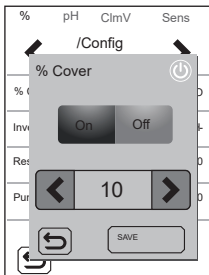


**Auto Cl gr/d:** This lets you set the device's daily grams of chlorine limit per day.



**Remote Cl:** This option cannot be disabled. It allows you to install two or more devices in parallel.

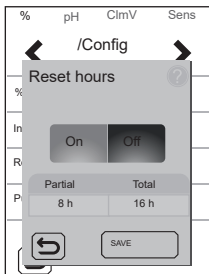
**% Cover (automatic cover):** Sets the % production limit (10–90%) when the pool is covered.



**Inversion:** Disabled by default. The CellGuard cell operates without polarity inversion.

**Reset Hours:** Displays the total / partial hours of chlorine production.

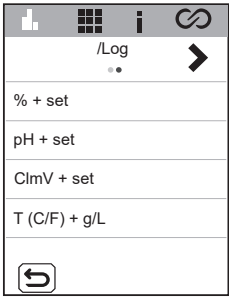
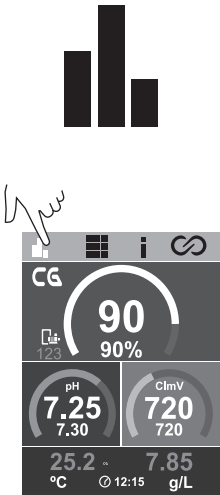
- **Partial hours:** This value shows the hours elapsed since the last reset. It is advisable to reset the partial hours when the electrode is replaced by a new one.
- **Total hours:** This value shows the hours since the equipment was first switched on. This value cannot return to 0 h.



**Reset Config:** To return to the default settings. A message appears showing the values that will be changed.

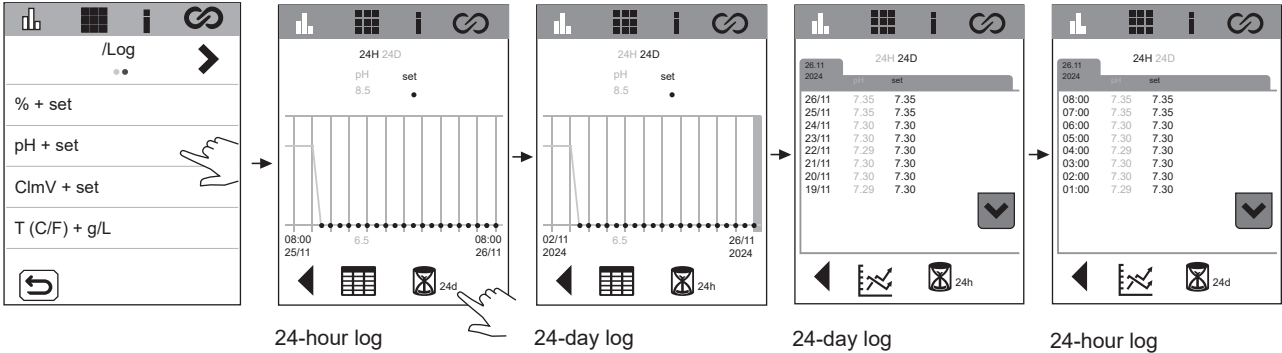
- **Auto CL EXT:** OFF
- **Auto CL INT:** ON
- **Auto CL g/d:** OFF
- **Remote Cl:** ON
- **% Cover:** OFF→10%
- **Set:** 0%

23 Log menu

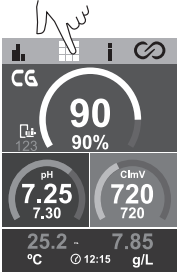


- % + set: Production and set point.
- pH + set: pH measurement and set point.
- ClmV + set: ClmV measurement (depending on the slot installed) and set point.
- T(°C) + g/L: Water temperature and salinity.
- Techniques: Records 24 hours/24 days of ClmV and pH readings.

The statistics show a history of the production parameters – pH, ClmV, T – during device operation. You can choose between displaying statistics for the last 24 hours or the last 24 days.



## 24 Configuration Menu



| /Config      | /Config           | /Config          | /Config         | /Config     | /Config       |
|--------------|-------------------|------------------|-----------------|-------------|---------------|
| Screen 100   | Date 25/10/24     | MODBUS ADDR 1    | Electrolysis    | Biopool     | Timer1 (Aux1) |
| Language ENG | Time 15:17        | CAPACITIVE       | LOW SALT CONFIG | Filtering   | Timer2 (Aux2) |
| Sound        | MODBUS BAUDS 9600 | FACTORY PROGRAMS | UV CONFIG       | Backwashing |               |
| Touch        | MODBUS PARITY 8E1 | Reset Config     | PAIRING CONFIG  | Boost Mode  |               |
|              |                   |                  |                 |             |               |

\* Unlocked with VSP driver

**Screen:** Sets the screen brightness.

**Language:** Language selection. Available languages: ESP, FRA, NED, ITA, POR, DEU, POL, ENG.

**Sound:** Enable/Disable device's sound.

**Touch:** Touchscreen calibration.

**Date:** Set day/month/year (equipment date). Not configurable if the device is connected to Fluidra Pool.

**Time:** Set time. Not configurable if the device is connected to Fluidra Pool.

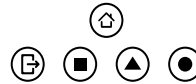
**Modbus Bauds:** Sets the MODBUS speed to 9600 or 19200.

**Modbus Parity:** Sets between 8E1, 8N1, 8N2.

- 8E1: 8 bits, PAR parity, 1 stop bit.
- 8N1: 8 bits, no parity, 1 stop bit.
- 8N2: 8 bits, no parity, 2 stop bits.

**Modbus Addr:** Configurable MODBUS address (default 2).

**Capacitive:** Enable/disable capacitive buttons.



**Factory Programs:** Restores default relay timing.

- |                      |                      |                      |                      |
|----------------------|----------------------|----------------------|----------------------|
| - R1a: 04:00 - 08:00 | - R2a: 08:00 - 14:00 | - R3a: 10:00 - 13:00 | - R4a: 03:00 - 06:00 |
| 21:00-24:00          | - R2b: 10:00 - 13:00 | 18:00 - 21:00        | - R4b: 08:00-24:00   |
| - R1b: 08:00 - 21:00 |                      | - R3b: 12:00 - 22:00 |                      |
| - R1c: 16:00 - 21:00 |                      |                      |                      |

**Reset Configuration:** Restores default values:

- **Screen:** 90
- **Language:** English
- **Sound:** Enabled
- **Reset** to tactile calibration factory values.
- **Date and Time:** 01/01/2025 0000
- **Modbus:**
  - Baud: 9600
  - Parity: 8E1
  - Addr: 2

**Electrolysis:** Enabled by default in electrolysis devices. This function switches the electrolysis function on/off.

**Low Salt Config:** Enabled by default in low salinity devices, disabled in devices for standard salinity or without electrolysis. This function resets the g/L by indicating on the main display that the device is a low salt (LS) system. **Do not activate this function if the device is not a low salt system. Otherwise, the g/L measurement will not be correct.**

**UV Config:** Enabled by default in the Neolysis system. Displays lamp hours and ballast status.

**Pairing configuration:** to connect to the Fluidra Pool app. Alternatively, it can be activated by pressing the Home menu for 5 seconds.

### Connection with Fluidra Pool

1. Download and install the FLUIDRA POOL app.



2. Create a user account and set up the pool parameters.



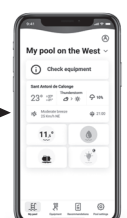
3. Activate pairing mode on the equipment.



By pressing home menu for 5 sec



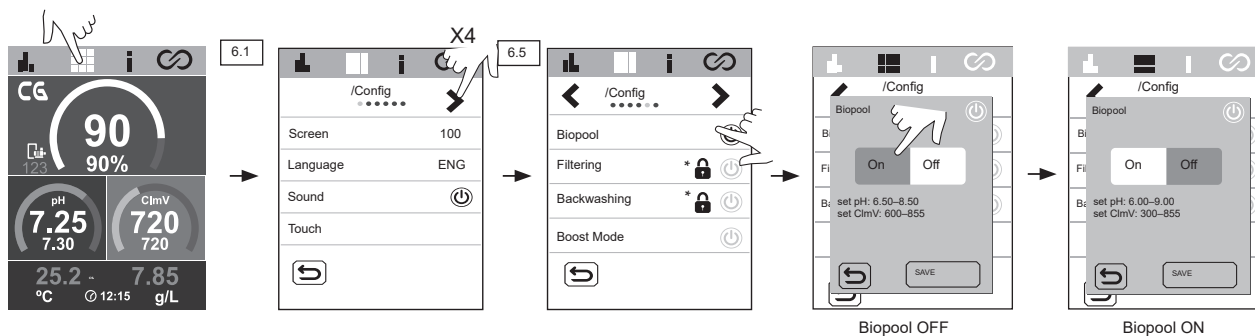
4. Press Add Equipment and follow the FLUIDRA POOL instructions.



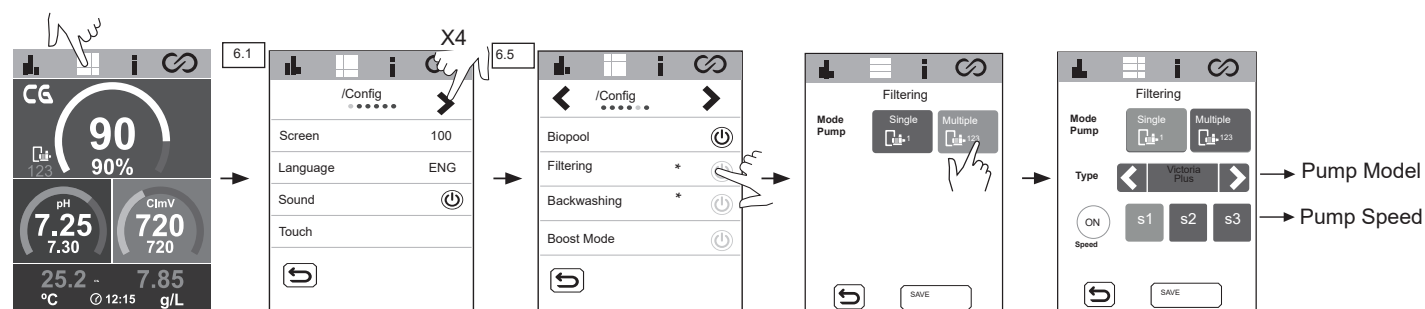
**Biopool:** Increased range of pH and ClmV settings.

**pH:** STANDARD = 6.50–8.50 / BIOPOOL = 6.00–9.00

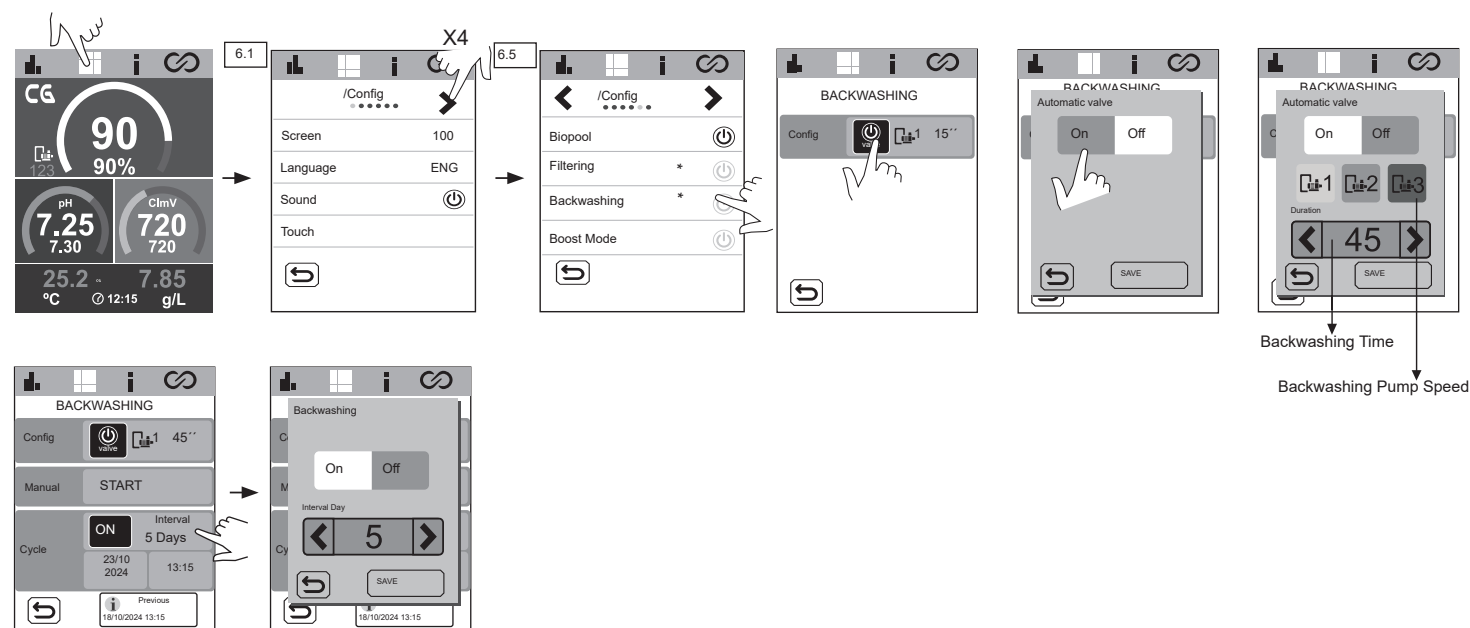
**ClmV:** STANDARD = 600–855 / BIOPOOL = 300–855



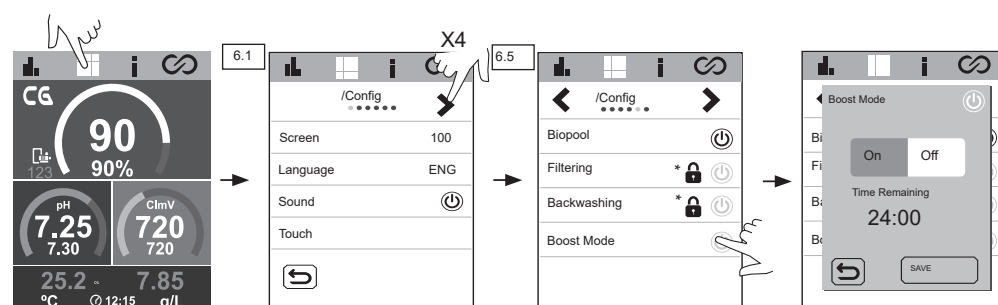
**Filtering:** This function can only be enabled with the VSP driver (optional accessory). Variable speed pump control.



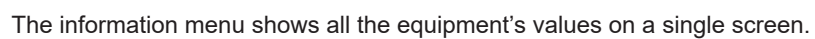
**Backwashing:** Filter cleaning can be selected manually or cleaning cycles can be programmed. To programme backwashing periods, you can select their speed, frequency and duration. At the top of the menu you can check the date that backwashing was last carried out.



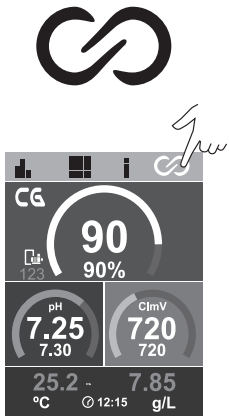
**Boost (Shock) Mode:** Activates maximum filtering (100%) for 24 hours. After this time, it reverts to the programmed filtering mode.



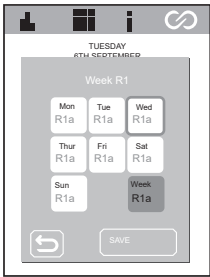
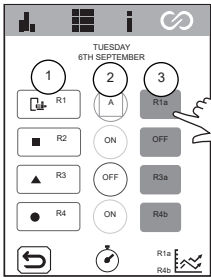
For configuring one additional auxiliary relay with associated timers (e.g. flocculant dosing pumps, lighting, BW, etc.). This function allows selection among manual, automatic, cycles and BW (backwashing) options.



26 Relay Menu (Fluidra Pool)



Allows relay programs to be modified and interlocks to be set if necessary.

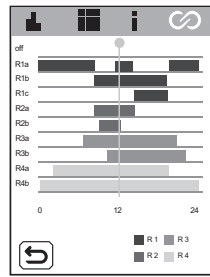
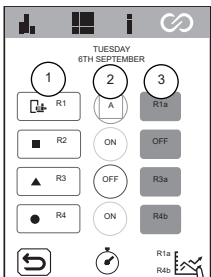


- 1) Relay selection
- 2) Relay mode
  - Automatic mode (programmed)
  - Relay on
  - Relay off
- 3) Select the programs.



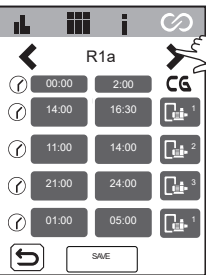
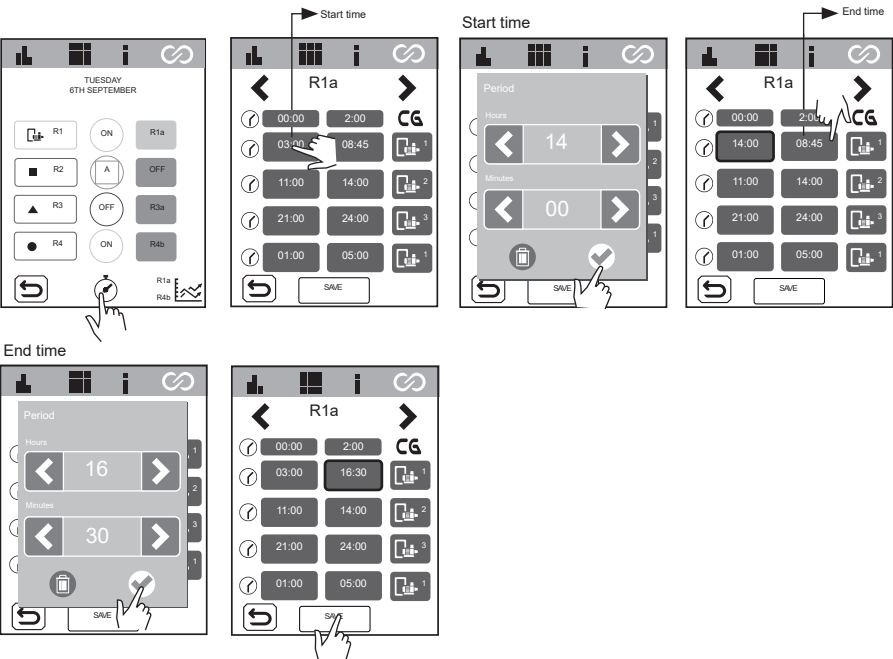
Program modification:

Relays R1–R4 have 9 different configurable programs:

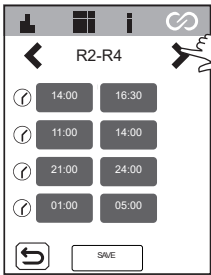


- R1: R1a, R1b, R1c
- R2: R2a, R2b, R2c
- R3: R3a, R3b, R3c
- R4: R4a, R4b, R4c

Each program has 4 time slots to be configured.

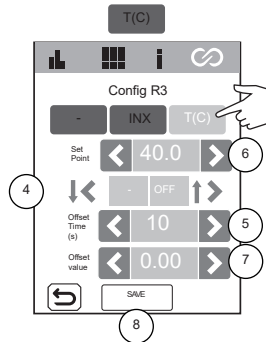
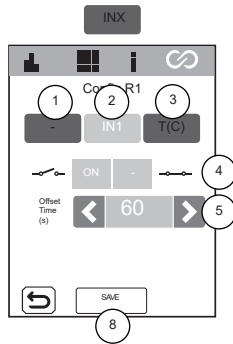
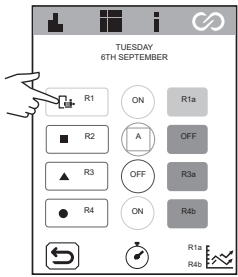


If the optional VSP driver is connected, several speeds can be set up (S1,S2,S3) with R1 (R1a-c).



R2–R4 only allow a single set speed.

## Relay interlocking:



1) No interlocking.

2) Digital interlocking selection (IN1, IN2, IN3, IN4).

3) Analog interlocking selection: temperature.

4) Digital input status

No interlocking.

ON When the contact is open/closed, the relay will switch to ON.

OFF When the contact is open/closed, the relay will switch to OFF.

AUTO When the contact is open/closed, the relay mode will switch to AUTO.

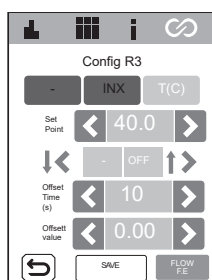
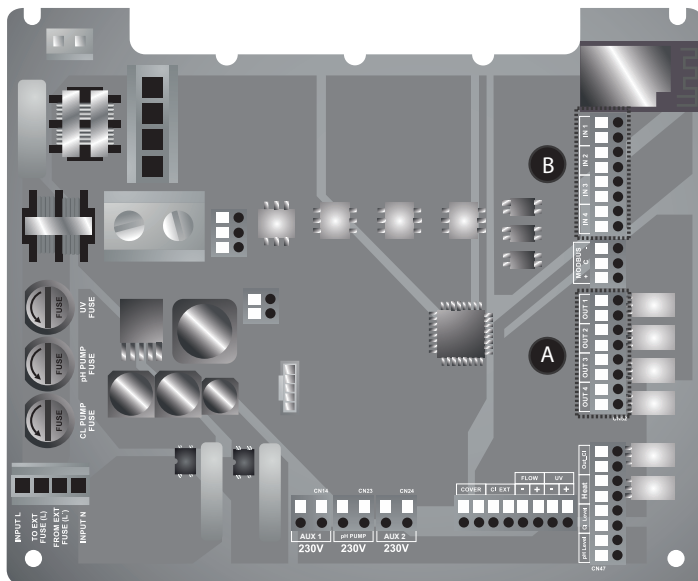
5) Time OFFSET configuration: 0 ... 999 s.

Time range to set relay status  
ON / OFF / AUTO.

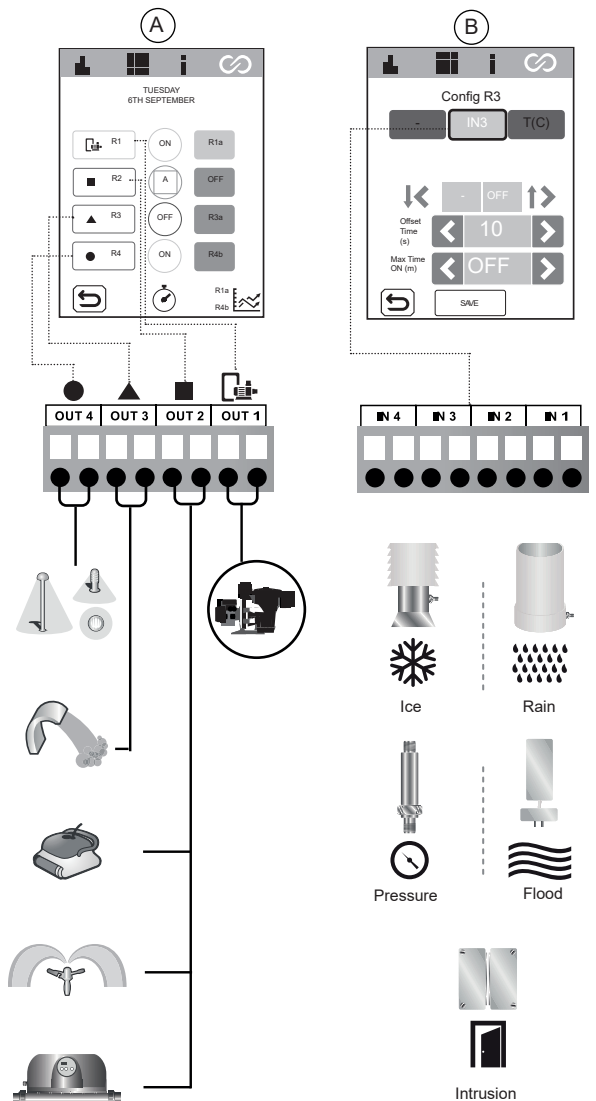
6) Temperature set point value configuration: 0 ... 40°.

7) OFFSET value configuration: 0 ... 10°.  
Temperature range for setting relay status  
ON / OFF / AUTO.

8) Save changes.

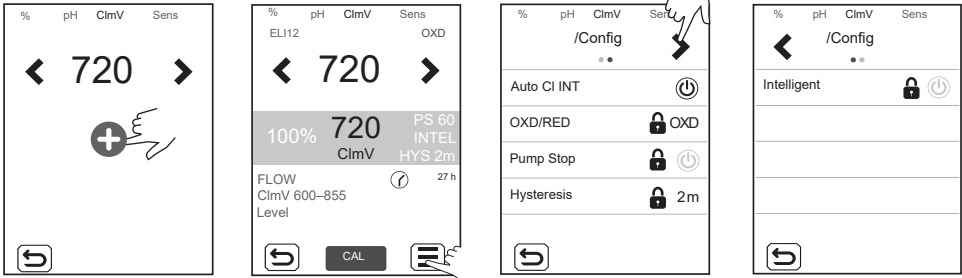
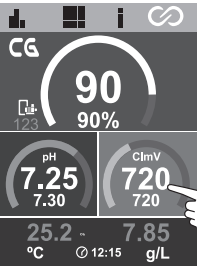


This function stops relay safety interlocking  
when a flow (FS) or gas (FE) alarm appear.

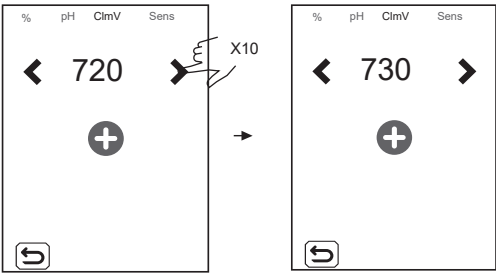


27 ClmV Configuration

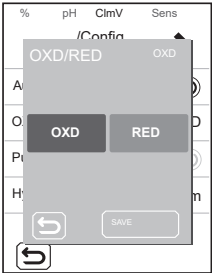
ClmV



ClmV: Establishes the set point using the < / > arrows

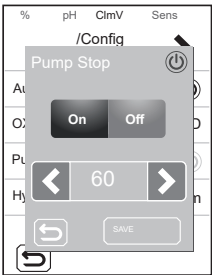


**OXD/RED:** Oxidiser/Reducer configuration.



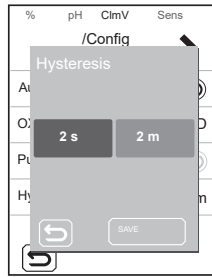
**Pump Stop:** ClmV has a safety system (**PUMP STOP FUNCTION**) which acts on the dosing pump and prevents the following:

- Damage caused by dry running the pump (depleted CI product).
- CI product overdose (damaged or old sensor).

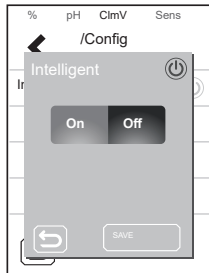


When the **PUMP STOP FUNCTION** is activated, the system stops the dosing pump after a time set in minutes without having reached the CI set point.

 **Hysteresis:** Time during which the pump continues dosing when the measurement reaches the desired set point.



 **Intelligent:** Smart ClimV dosing function for more precise control. The working cycle of the pump is updated dynamically depending on the measurement.



## 28 Sensor Calibration (pH, ORP, ppm, g/L, temperature)

### Fast pH Calibration

'Fast' mode allows routine recalibration of the sensor when there are small errors in its readings **with no need to remove the sensor or use calibration solutions**.

#### PROCEDURE:

1. Ensure that R1  (filtration) is turned on. Manual: ON (green) / Auto: ON (azul)
2. Ensure that the sensor is immersed in water and that the filter system is running.
3. Use a pH kit to measure the existing pH of the water in the pool.
4. Follow the procedure shown in the pictures below:



This alarm will appear if there is a large deviation ( $\pm 1$  pH unit) during calibration.

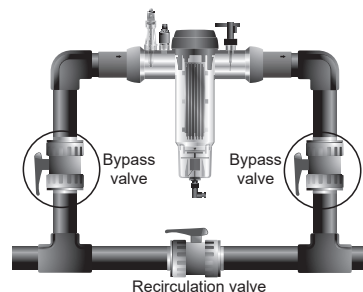
### Standard pH Calibration

'Standard' mode allows precise calibration of the sensor using two control solutions with pH 7.0 and pH 4.0. However, this requires that the sensor be removed from the installation.

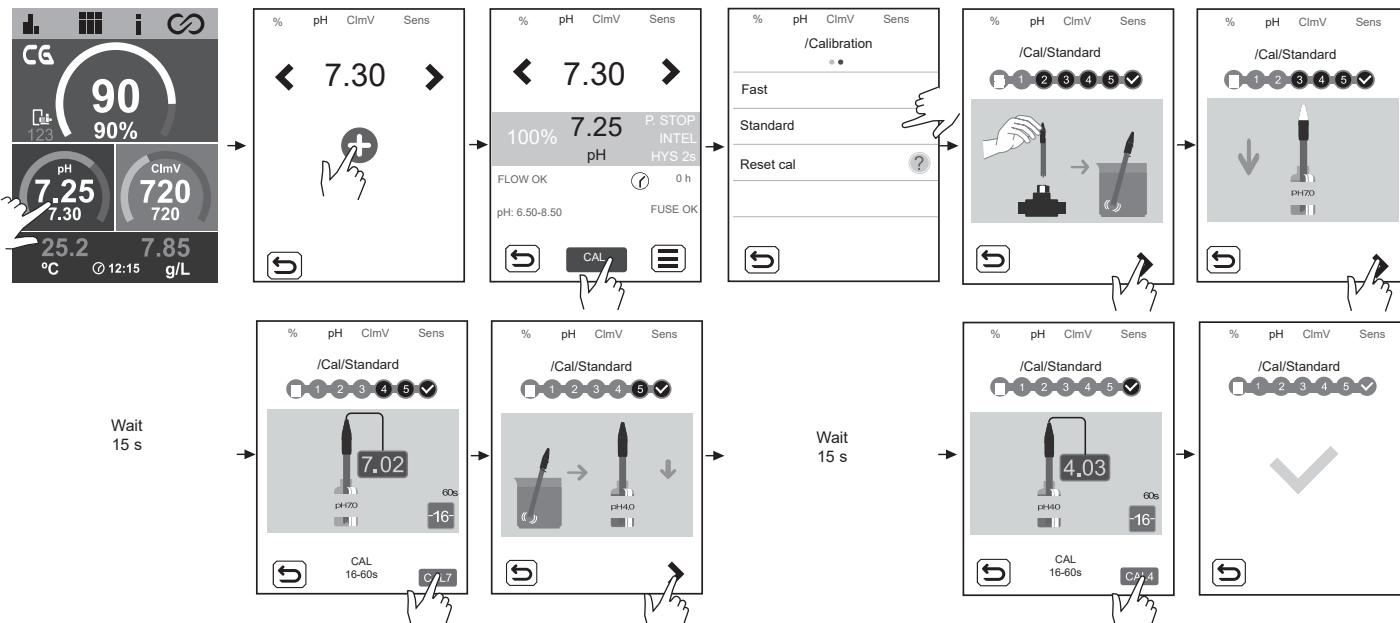
**IMPORTANT:** Follow the steps below to perform the standard calibration of the pH sensor:

#### PROCEDURE:

1. Ensure that R1  (filtration) is turned on. Manual: ON (green) / Auto: ON (azul)
2. Stop the equipment production (production = 0%)
3. Close the bypass valves
4. Open the recirculation valve
5. Unscrew the flow switch to equalize the internal pressure of the cell with the ambient pressure, thus avoiding possible damage to the pH sensor during extraction
6. Remove the sensor and wash it with tap water
7. Follow the procedure shown in the following images:



**Note:** After completing the calibration, screw the pH sensor back in and then the flow switch. Open the bypass and close the recirculation valve. Increase production to the desired value.



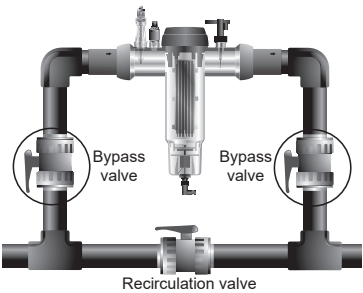
# Standard ClmV Calibration (ORP)

Frequency of calibration of the controller is to be determined for each particular application. However, we recommend calibration at least once a month while the swimming pool is in use. The ClmV has an automatic calibration system for ORP sensors based on the use of a 470 mV reference solution.

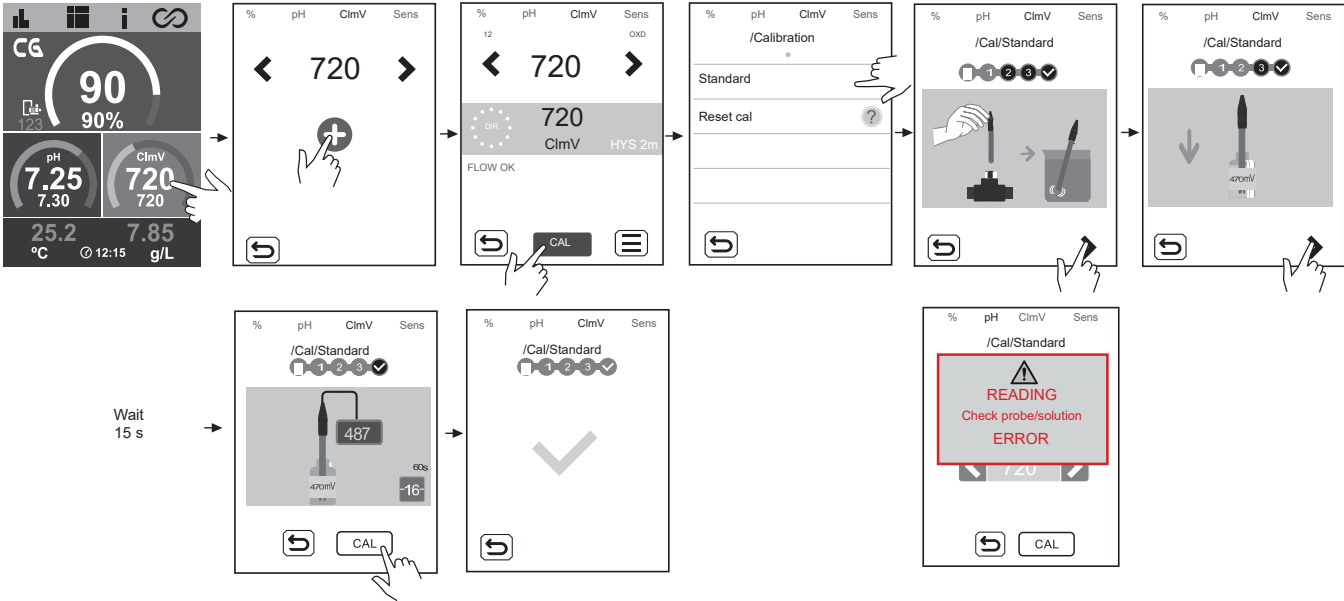
**IMPORTANT:** Follow the steps below to perform the standard calibration of the ORP sensor:

**PROCEDURE:**

- 1. Ensure that R1 (filtration) is turned on. Manual: ON (green) / Auto: ON (azul)
- 2. Stop the equipment production (production = 0%)
- 3. Close the bypass valves
- 4. Open the recirculation valve
- 5. Unscrew the flow switch to equalize the internal pressure of the cell with the ambient pressure, thus avoiding possible damage to the ORP sensor during extraction
- 6. Remove the sensor and wash it with tap water
- 7. Follow the procedure shown in the following images:



**Note:** After completing the calibration, screw the ORP sensor back in and then the flow switch. Open the bypass and close the recirculation valve. Increase production to the desired value.



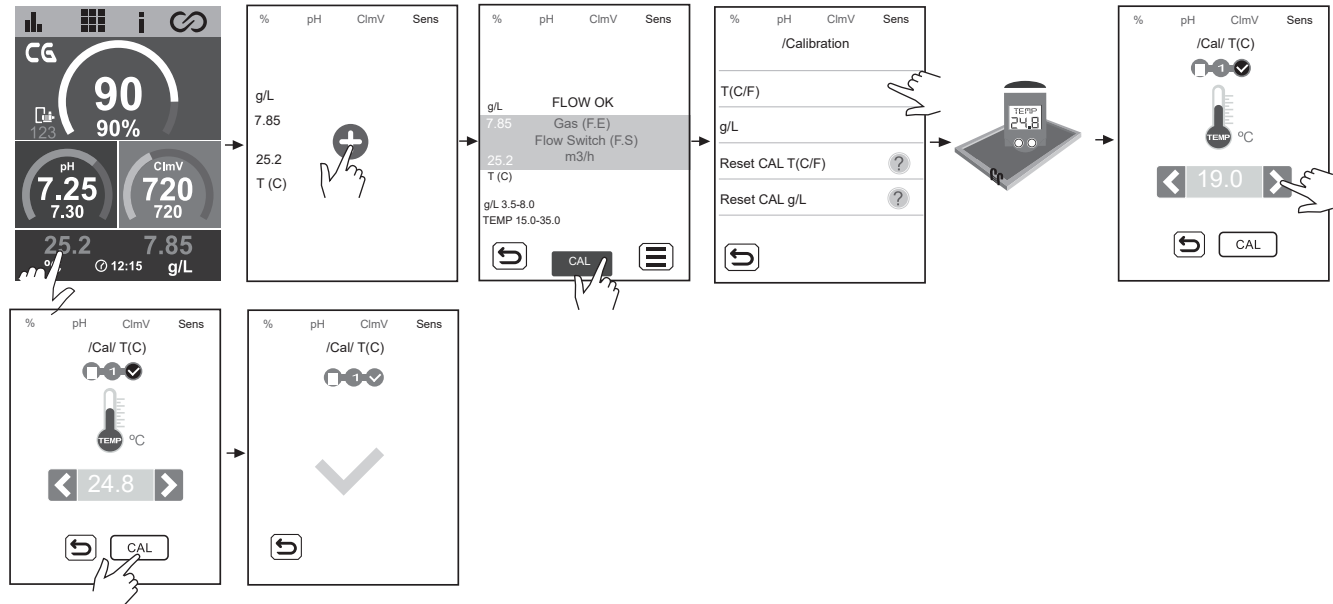
This alarm will appear if there is a large deviation ( $\pm 60$  mV in a 470 mV solution) during calibration.

# Temperature (°C/°F) Calibration

Temperature calibration makes it possible to adjust the value in the event of small temperature deviations.

**PROCEDURE:**

- 1. Ensure that R1 (filtration) is turned on. Manual: ON (green) / Auto: ON (azul)
- 2. Use an external temperature sensor to measure the current value of the pool water.
- 3. Follow the procedure shown in the pictures below:

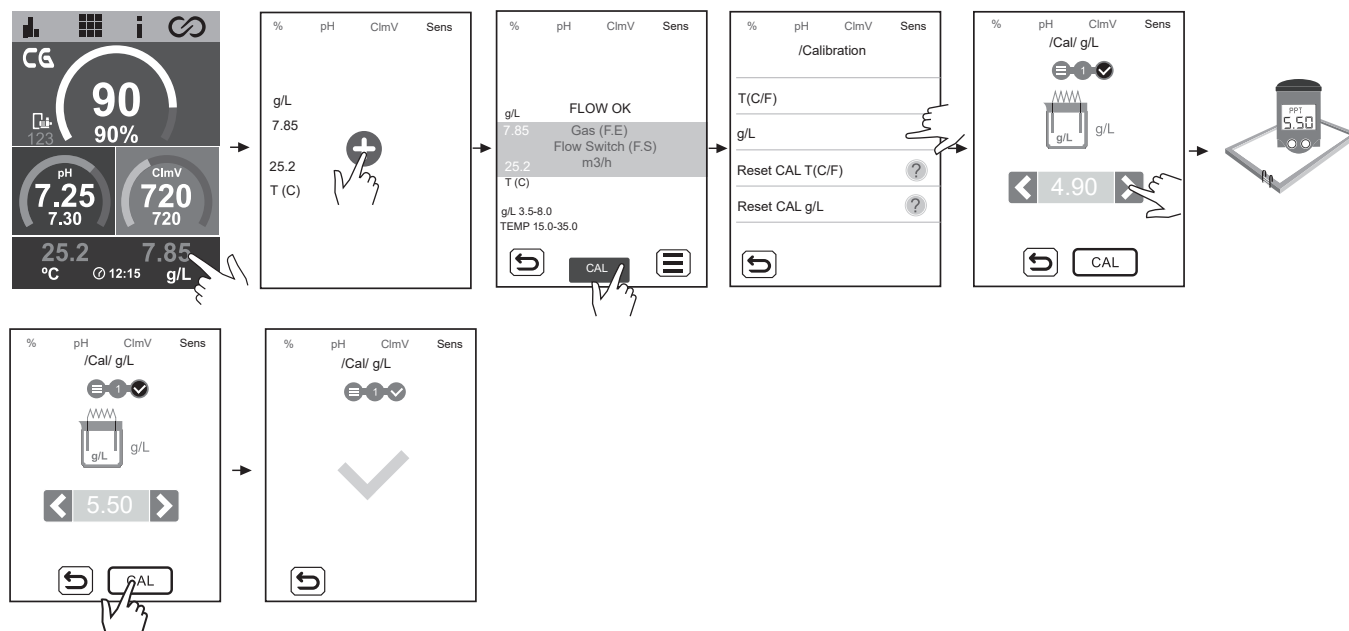


## g/L Calibration

g/L calibration makes it possible to adjust the value in the event of small deviations.

### PROCEDURE:

1. Ensure that R1  (filtration) is turned on. Manual: ON (green) / Auto: ON (azul)
2. Use a portable salinity meter to measure the current value of the pool water.
3. Follow the procedure shown in the pictures below:

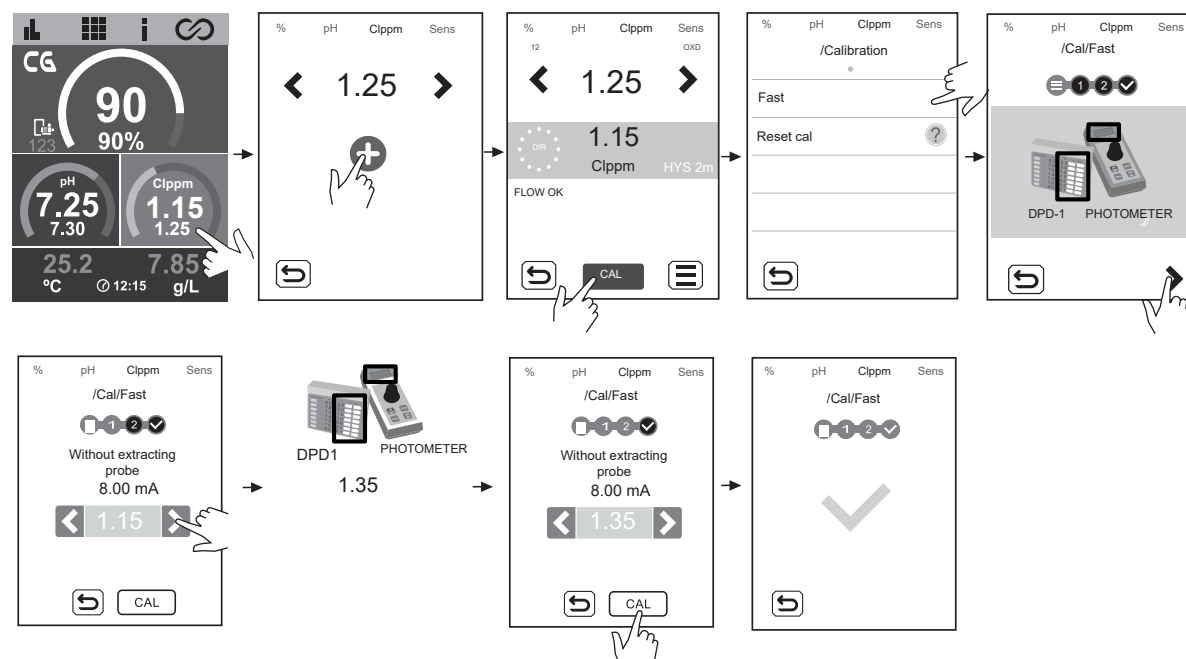


## Fast Clppm Calibration (PPM)

'Fast' mode allows routine recalibration of the sensor when there are small errors in its readings **with no need to remove the sensor or use calibration solutions**.

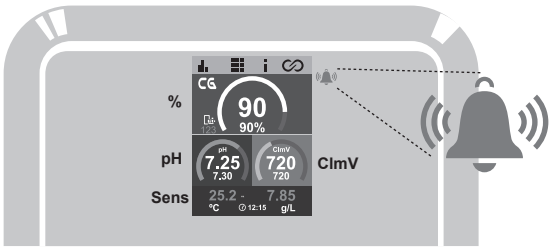
### PROCEDURE:

1. Ensure that R1  (filtration) is turned on. Manual: ON (green) / Auto: ON (azul)
2. Ensure that the sensor is immersed in water and that the filter system is running.
3. Use a measuring kit or a photometer to measure the existing DPD-1 value of the pool water.
4. Follow the procedure shown in the pictures below:



# 29 Alarms

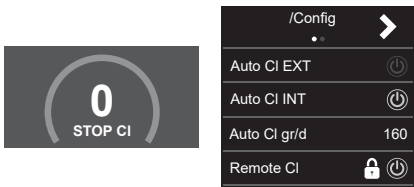
The red LED on the control panel signals an alarm.



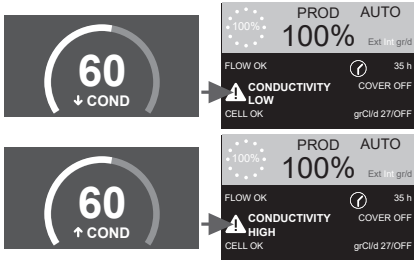
- Ext Text in grey = Option disabled
- Int White text = Option enabled
- grd Text in red = Alarms

## 29.1 Electrolysis Alarms

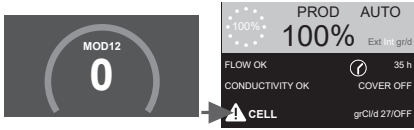
### STOP CL alarm



### Conductivity alarm

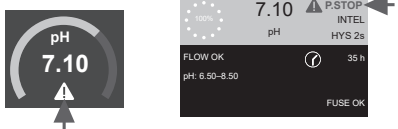


### Cell alarm

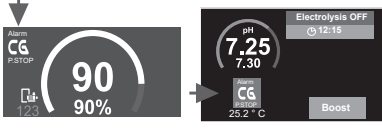


## 29.3 pH Alarms

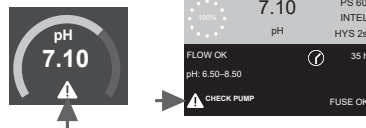
### Pool Pump Stop alarm



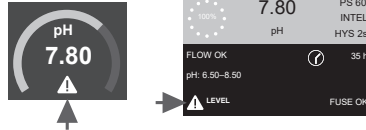
### CellGuard Pump Stop alarm



### Check Pump alarm



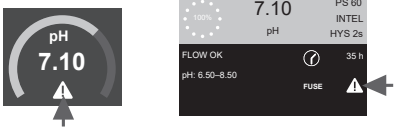
### Level alarm



### pH low/high alarm

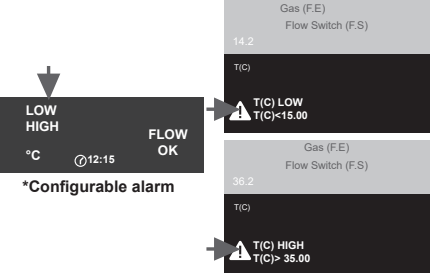


### Fuse alarm

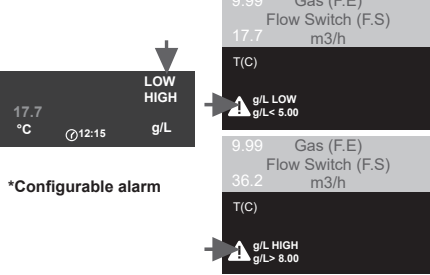


## 29.2 Sensor Alarms

### Temperature alarm



### g/L alarm

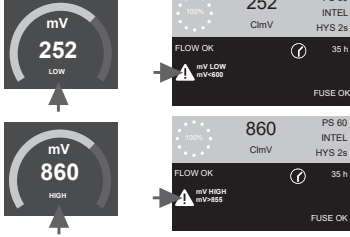


### Flow switch/inductive sensor alarm

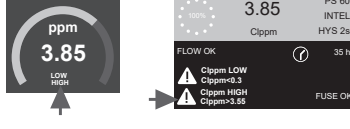


## 29.4 ClmV/Clppm Alarms

### mV low/high alarm



### ppm low/high alarm



29.1 Electrolysis Alarms

Electrolysis – STOP Cl alarm

The **STOP Cl** alarm may appear for one of three reasons:

- **CL EXT** = Stopped by an external controller
- **CL INT** = Stopped by the value of ClmV or Clppm in the device. A ClmV or Clppm driver is required.
- **Auto CL gr/d** = Stopped for reaching the limit (set by the user) for grams of chlorine per day.

How to check the CL STOP ALARM

Electrolysis – Conductivity alarm

The conductivity alarm will appear when % of production cannot reach the set production.

Temperature and grams of salt are the two factors that determine the conductivity of water.

↓ Salt level = ↓ **Conductivity**      ↑ Salt level = ↑ **Conductivity**  
↓ Temperature = ↓ **Conductivity**      ↑ Temperature = ↑ **Conductivity**

Electrolysis – Cell alarm

The cell alarm will appear when the devices detect that the electrode is at the end of its life (passivated).

**Estimated lifetime of electrodes = 18,000 hours**

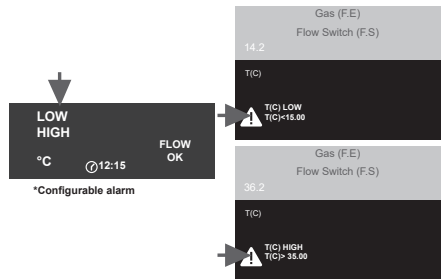
Verification of the number of electrode hours:

**Partial hours:** This value shows the hours elapsed since the last reset. It is advisable to reset the partial hours when the electrode is replaced by a new one.

**Total hours:** This value shows the hours since the device was first switched on. This value cannot return to 0 h.

29.2 Sensor Alarms

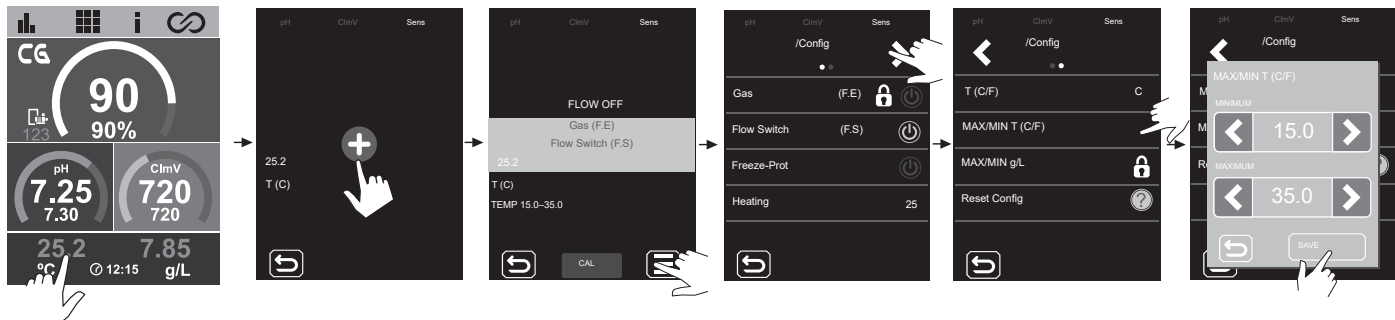
Sensors – Temperature alarm



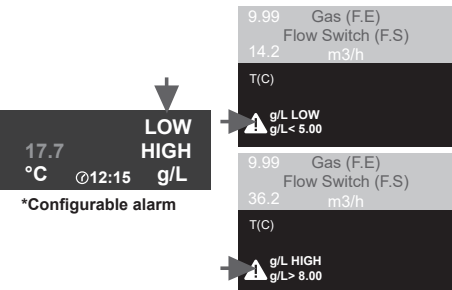
The temperature alarm will appear when temperature values are outside the range set by the user.

When electrolysis is activated, if the water temperature is very low the equipment will not reach 100% production due to low conductivity.

Temperature sensor – temperature range configuration (max/min).



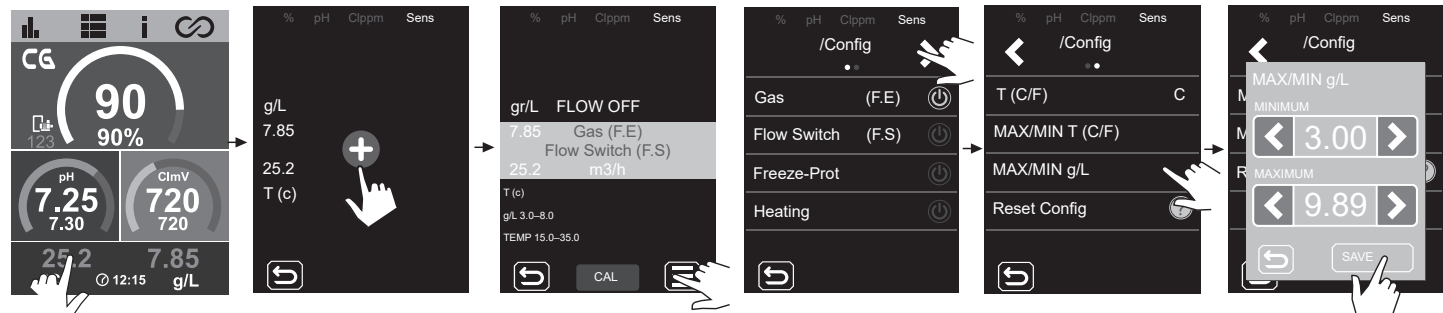
Sensors – g/L alarm



- Like the temperature alarm, this alarm will appear when the g/L salt values are out of range.

Normally, when the g/L value is too low or too high it will affect production by the equipment due to the conductivity of the water.

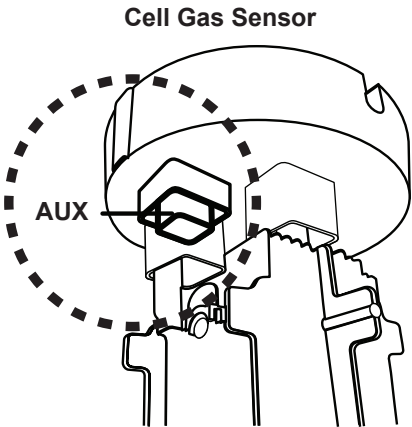
g/L alarm configuration (max/min)



Sensors – Flow switch/inductive sensor alarm

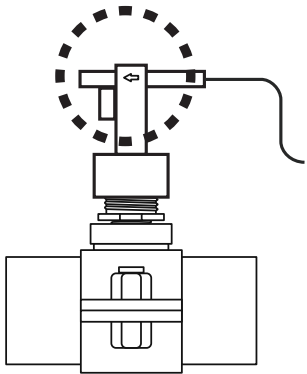


The flow alarm will appear if the cell is not completely flooded (electrode gas sensor) or if there is no water flow (paddle flow switch or inductive sensor).



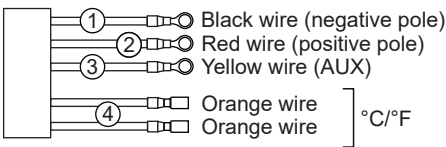
Cell gas appears if there is no recirculation (flow) of water through the cell or if the flow is too low. If the electrolysis gases are not adequately removed through the electrolysis cell, the generated gas bubble electrically isolates the auxiliary electrode (electronic detection). Therefore, when placing the electrodes in the cell, the level sensor (auxiliary electrode) will have to be placed in the highest area of the cell.

Paddle flow switch or inductive sensor

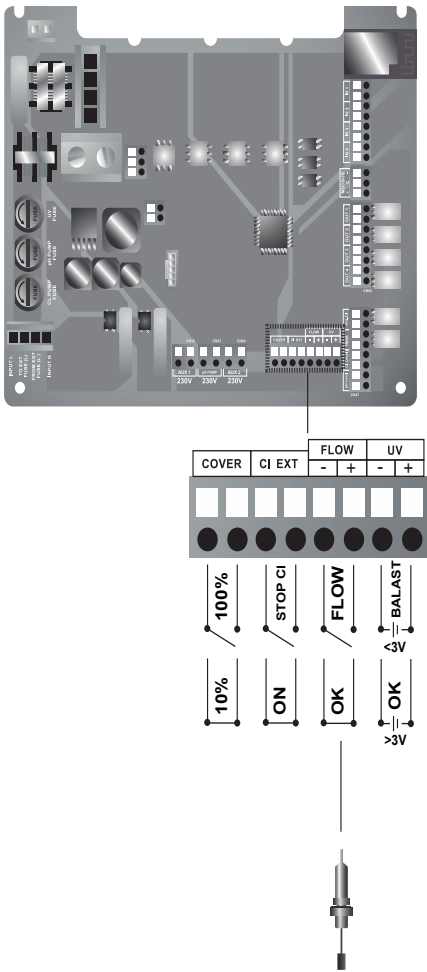


When the contact connected to this input is open (external flow detector idle) and [FS] is activated in the equipment, the electrolysis system switches off due to the flow alarm.

Connecting the gas flow sensor to the device

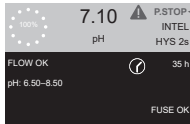


Connecting the flow switch sensor to the main board



## 29.3 pH Alarms

### pH – Pool Pump-Stop alarm

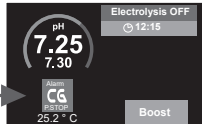
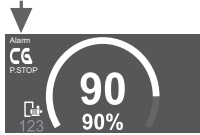


The pool's PUMP-STOP function is factory-set to 60 minutes.

The in-built pH system has a safety feature (PUMP-STOP) that acts on the dosing pump and prevents the following situations.

- Damage caused by dry running of the pump (depleted pH Minus product).
- Overdosage of pH Minus product (damaged or aged sensor).
- pH regulation problems due to high alkalinity of the water (freshly filled pool, high carbonate levels).
- When the PUMP-STOP FUNCTION is ON (default), the system stops the dosing pump after a programmed time without having reached the pH set point.

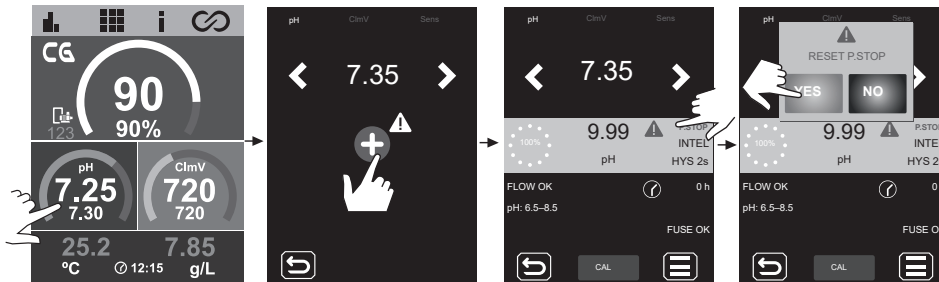
### pH – CellGuard Pump-Stop alarm



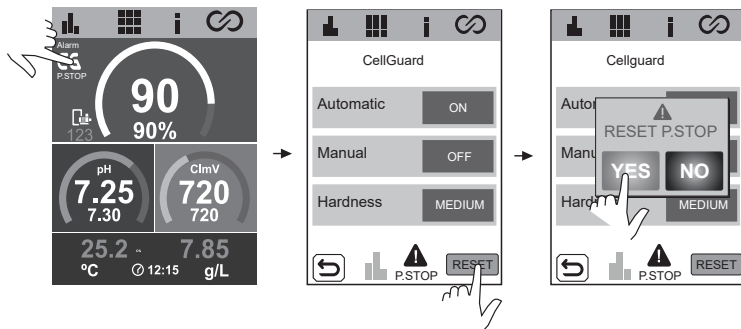
### Resetting the alarm

After resetting the PUMP-STOP alarm, the pump will restart if the pH value is above 0.02 of the set point and below 9.0.

#### Resetting pool Pump-Stop



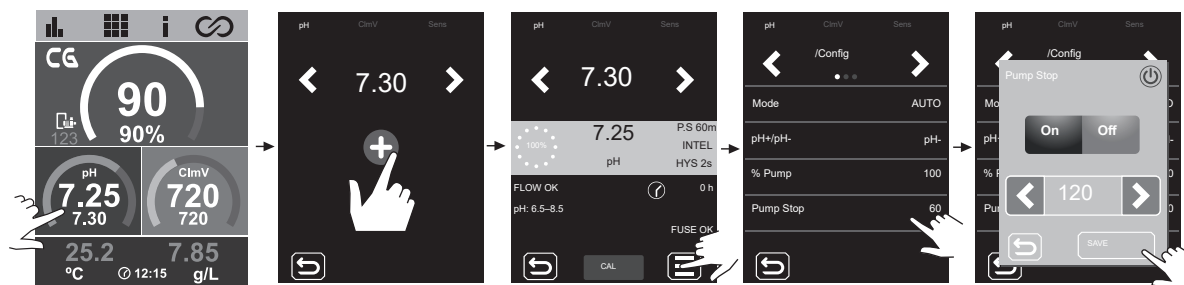
#### Resetting CellGuard Pump-Stop



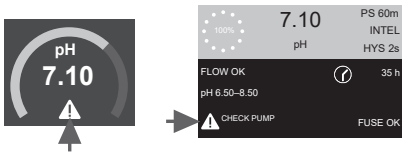
### PUMP-STOP function configuration

ON – OFF.

Value: 0...120 min.

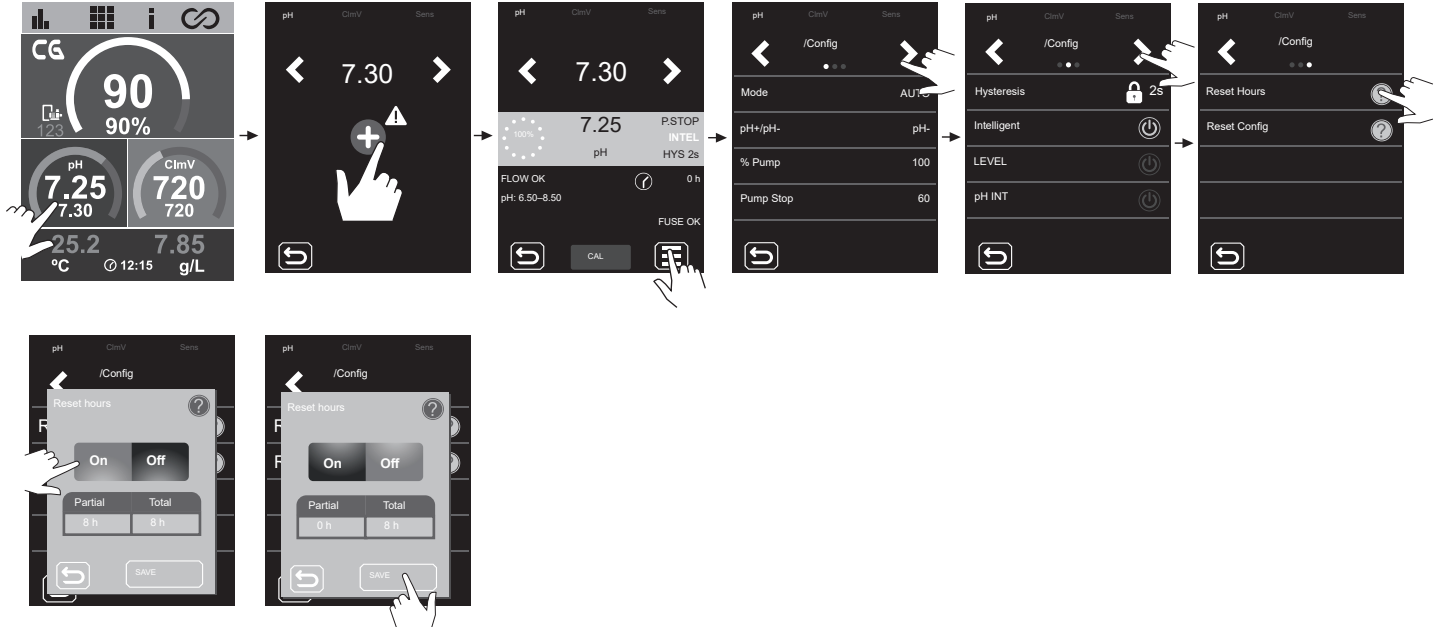


## pH - Check Pump alarm

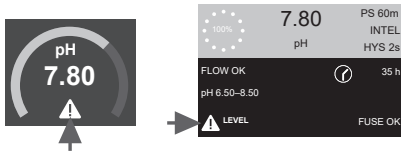


- The Check Pump alarm is a visual warning to check the condition of the peristaltic tubing.
- This alarm will appear every 500 hours (not configurable value) but will not affect the starting/stopping of the pump.
- To clear the alarm, reset the pump's partial dosing hours to zero.

## Restart dosing pump hours



## pH - Level sensor alarm (container)

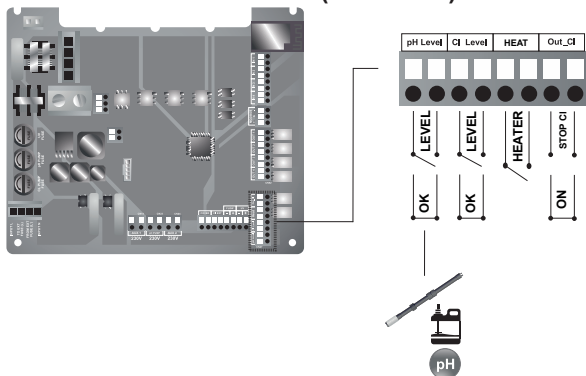


The level sensor is an electronic device that measures the height of liquid in a tank or other container. Generally, this type of sensor functions as an alarm, indicating the low level alarm.

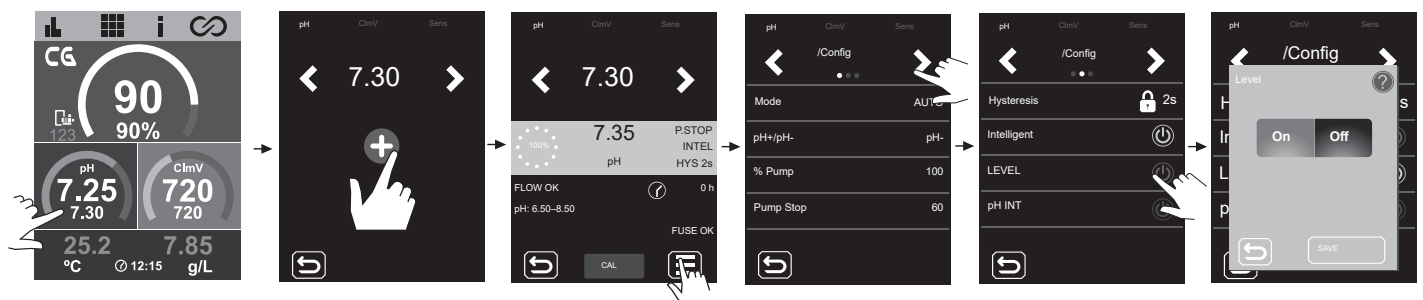
Operating logic:

- Level above the set level = closes the contact
- Level below set level = opens contact and displays level alarm.

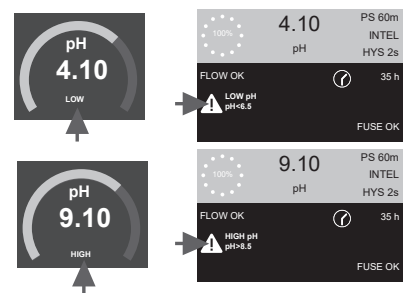
## Level sensor connection (container)



## Level sensor ON/OFF (container)



pH – Low/high alarm



Low or high alarms appear if the pH reading is outside the set values. These values cannot be modified.

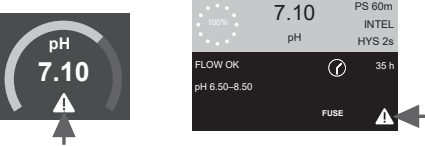
If the high pH alarm appears, the pH pump will be switched off according to the safety values set.

**Standard mode**  
pH > 8.5 = pH HIGH ALARM = Pump off  
pH < 6.5 = pH LOW ALARM

**Biopool mode**  
pH > 9.0 = pH HIGH ALARM = Pump off  
pH < 6.0 = pH LOW ALARM

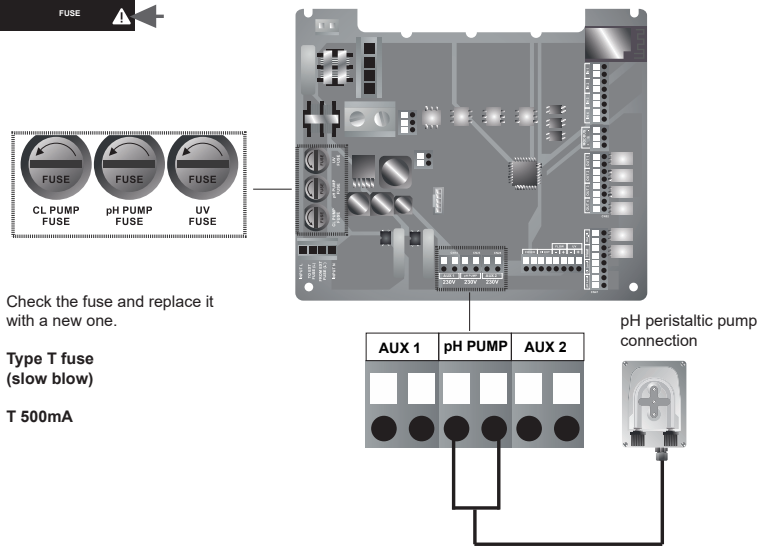
The pH of the pool must be manually reduced to 8.45 (standard mode) or 8.95 (biopool mode) for the pump to start dosing again.

pH – Fuse alarm



This alarm will appear when the internal fuse of the board is blown.

Connecting the pH pump and checking the fuses



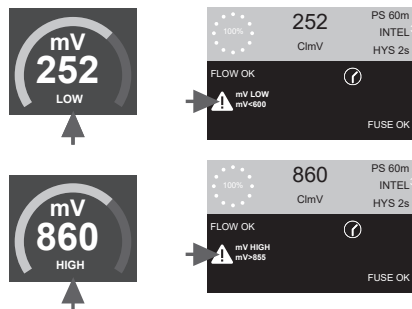
Check the fuse and replace it with a new one.

Type T fuse  
(slow blow)

T 500mA

## 29.4 ClmV/Clppm Alarms

### mV – Low/high alarm



- Low or high alarms appear if the reading is not within established safety limits. High and low ClmV values cannot be changed.

- If the ClmV high alarm appears, dosing will stop. For saline electrolysis equipment, production will stop.

**The factory-set ranges are:**

**Standard:**

**ClmV > 855 = ORP HIGH ALARM = Dosing is stopped**

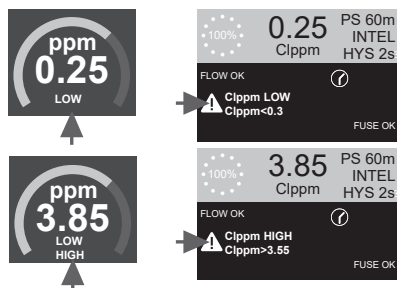
**ClmV < 600 = ORP LOW ALARM**

**Biopool:**

**ClmV > 855 = ORP HIGH ALARM = Dosing is stopped**

**ClmV < 300 = ORP LOW ALARM**

### ppm – Low/high alarm



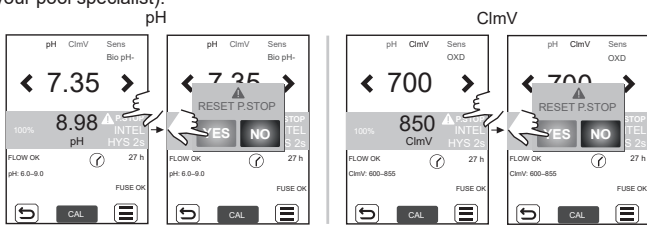
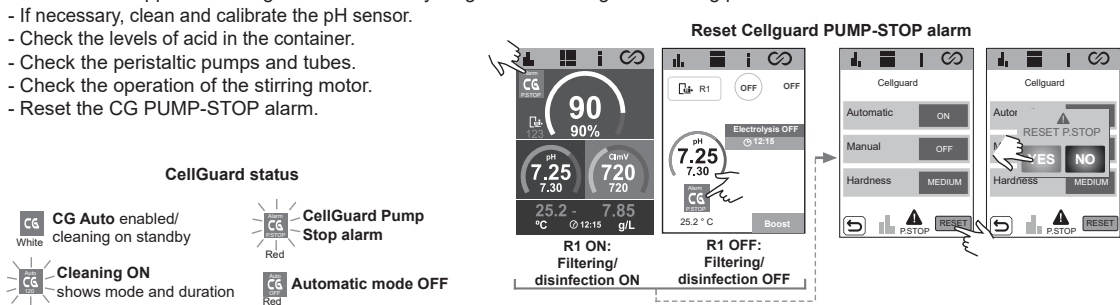
- Low and high alarms appear if the reading is outside the set values. High and low Clppm values cannot be modified.

- If the high Clppm alarm appears, electrolysis will stop.

**Clppm > 3.55 = HIGH PPM ALARM = Electrolysis is stopped**

**Clppm < 0.3 = LOW PPM ALARM**

## 30 Basic Troubleshooting

| Message                                                                  | Solution                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                |               |                |          |            |            |         |            |            |
|--------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|---------------|----------------|----------|------------|------------|---------|------------|------------|
| <b>FLOW alarm</b><br><b>Gas sensor (F.E)</b><br><b>Flow Switch (F.S)</b> | The flow alarm will appear if the cell is not completely flooded (electrode gas sensor), or if there is no water flow (paddle flow switch sensor).<br>- Check the pump, filter and backwash valve. Clean if necessary.<br>- Check the paddle flow switch sensor and electrode gas sensor wiring connections.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                |               |                |          |            |            |         |            |            |
| <b>STOP CL alarm</b>                                                     | The STOP CL alarm may appear for one of three reasons:<br>CI EXT = Stopped by an external controller<br>- Check the external controller (ORP/ppm) and the reading.<br>- If there is no external controller, disable the AUTO CL EXT function, or production will not start.<br>CI INT = Stopped by the value of ClmV or Clppm in the device<br>- Check the level of chlorine in the pool using a photometer or a test strip.<br>- If necessary, clean and calibrate the ORP/ppm sensor.<br>Auto CL g/d = Stopped because the user-set limit for grams of chlorine per day has been reached.<br>- Choose whether or not to enable this function                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                |               |                |          |            |            |         |            |            |
| <b>(mV) Low/High alarm</b>                                               | Low or high alarms appear if the reading is not within established safety limits. High and low ClmV safety limits cannot be changed. <table border="1"><thead><tr><th>Mode</th><th>ORP low alarm</th><th>ORP high alarm</th></tr></thead><tbody><tr><td>Standard</td><td>ClmV &lt; 600</td><td>ClmV &gt; 855</td></tr><tr><td>Biopool</td><td>ClmV &lt; 300</td><td>ClmV &gt; 855</td></tr></tbody></table><br>- Check the level of chlorine in the pool using a photometer or a test strip.<br>- If necessary, clean and calibrate the ORP sensor.<br>- If the free chlorine value is low and the total chlorine value is high, reduce the chloramines by superchlorinating with sodium hypochlorite.<br>- If the chlorine ppm value is high and mV reading is low, check cyanuric acid concentration. Should the values be above 60 ppm, partially drain the pool. Increase daily filtering.<br>- If the deviation is high during the calibration process (± 60 mV in the 470 mV solution), the equipment will report an error in the measurement, which could arise due to deterioration of the sensor or the calibration solution. | Mode           | ORP low alarm | ORP high alarm | Standard | ClmV < 600 | ClmV > 855 | Biopool | ClmV < 300 | ClmV > 855 |
| Mode                                                                     | ORP low alarm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | ORP high alarm |               |                |          |            |            |         |            |            |
| Standard                                                                 | ClmV < 600                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ClmV > 855     |               |                |          |            |            |         |            |            |
| Biopool                                                                  | ClmV < 300                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ClmV > 855     |               |                |          |            |            |         |            |            |
| <b>pH Low/High alarm</b>                                                 | Low or high alarms appear if the reading is not within established safety limits. These safety limits cannot be changed. If the high pH alarm appears, the pH pump will be switched off for safety reasons. <table border="1"><thead><tr><th>Mode</th><th>Low pH alarm</th><th>High pH alarm</th></tr></thead><tbody><tr><td>Standard</td><td>pH &lt; 6.5</td><td>pH &gt; 8.5</td></tr><tr><td>Biopool</td><td>pH &lt; 6.0</td><td>pH &gt; 9.0</td></tr></tbody></table><br>- Check the pH of the pool using a photometer or a test strip.<br>- If necessary, clean and calibrate the pH sensor.<br>- The pH of the pool must be manually reduced to 8.45 (standard mode) or 8.95 (biopool mode) for the pump to start dosing again.<br>- If the deviation is high during the calibration process (± 1 pH unit), the equipment will report an error in the measurement, which could arise due to deterioration of the sensor or the calibration solution.                                                                                                                                                                              | Mode           | Low pH alarm  | High pH alarm  | Standard | pH < 6.5   | pH > 8.5   | Biopool | pH < 6.0   | pH > 9.0   |
| Mode                                                                     | Low pH alarm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | High pH alarm  |               |                |          |            |            |         |            |            |
| Standard                                                                 | pH < 6.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | pH > 8.5       |               |                |          |            |            |         |            |            |
| Biopool                                                                  | pH < 6.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | pH > 9.0       |               |                |          |            |            |         |            |            |
| <b>Cell alarm</b>                                                        | The cell alarm will appear when the devices detect that the electrode is at the end of its life (passivated).<br>Estimated lifetime of electrodes = 18,000 h. If necessary, replace the electrode.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                |               |                |          |            |            |         |            |            |
| <b>Low/High temperature sensor alarm</b>                                 | - The temperature alarm will appear when the temperature values are out of range.<br>- When the water temperature is very low, the equipment will not reach 100% production due to low conductivity.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                |               |                |          |            |            |         |            |            |
| <b>g/L Low/High alarm</b>                                                | - Like the temperature alarm, this alarm will appear when the g/L salt values are out of range.<br>- Normally, when the g/L value is too low or too high it will affect the output of the device due to the conductivity of the water.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                |               |                |          |            |            |         |            |            |
| <b>PUMP-STOP alarm</b>                                                   | When the PUMP-STOP FUNCTION is activated (default 60 min), the system stops the dosing pump after a programmed time without having reached the pH set point.<br>- Check the pH of the pool using a photometer or a test strip.<br>- If necessary, clean and calibrate the pH sensor.<br>- Check and adjust the alkalinity of the water (consult your pool specialist).<br>- Check the levels of acid in the container. <div><div>Reset PUMP-STOP alarm</div><div></div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                |               |                |          |            |            |         |            |            |
| <b>CellGuard PUMP-STOP alarm</b>                                         | The alarm will appear if the algorithm detects anything unusual during the cleaning process.<br>- If necessary, clean and calibrate the pH sensor.<br>- Check the levels of acid in the container.<br>- Check the peristaltic pumps and tubes.<br>- Check the operation of the stirring motor.<br>- Reset the CG PUMP-STOP alarm. <div><div>CellGuard status</div><div></div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                |               |                |          |            |            |         |            |            |

## 31 Maintenance

### Electrolysis Cell Maintenance

The cell should be maintained in suitable condition to ensure long-lasting operation. The CellGuard system has an automatic electrode cleaning algorithm to avoid the build-up of lime scale on the electrodes; therefore, it should not be necessary to clean them on the outside. However, if it does become necessary to clean the interior of the cell, proceed as follows:

Option A: Start a Manual CellGuard cleaning

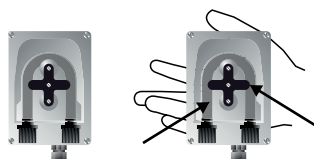
Option B:

1. Disconnect the 230 Vac power supply from the equipment.
2. Unscrew the retaining nut situated at the end where the electrodes are located, and remove the electrode pack.
3. Use a diluted hydrochloric acid solution (one part acid to 10 parts water), submerging the electrode pack in this solution for a maximum duration of 10 minutes.
4. NEVER SCRAPE OR BRUSH THE CELL OR THE ELECTRODES.

### pH/ORP Sensor Maintenance (3–12- month Maintenance)

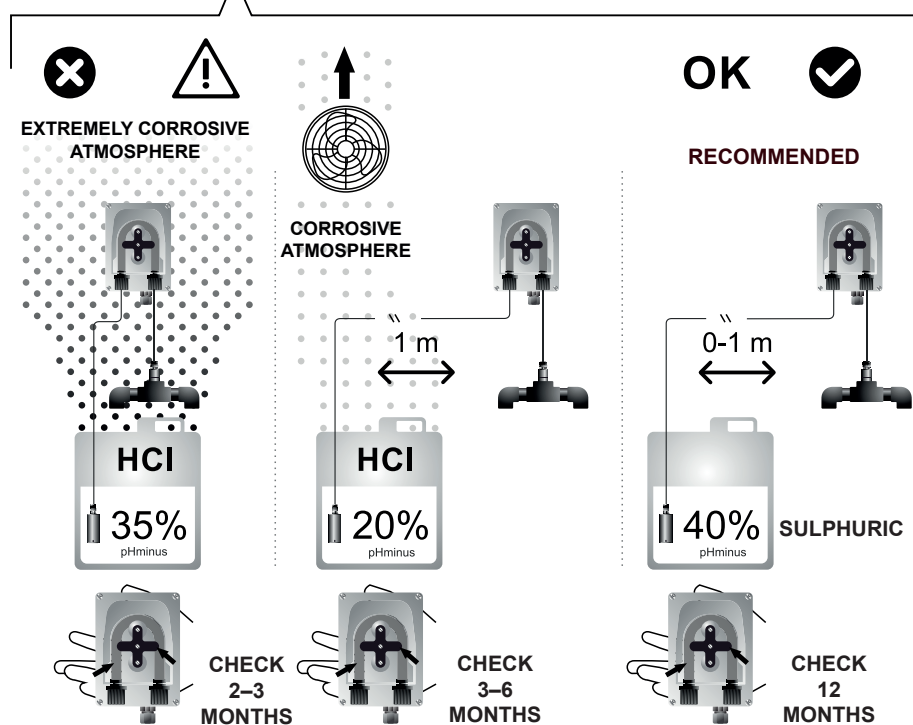
1. Ensure that the sensor membrane is always damp.
2. If a sensor is not going to be used for an extended period of time, keep it in a storage solution.
3. When removing all possible dirt off the sensor, avoid using abrasive materials that could scratch the measurement surface.
4. Sensors are consumable items that must be replaced after a certain period of use.

### Pipe Maintenance (3–6-month Maintenance)

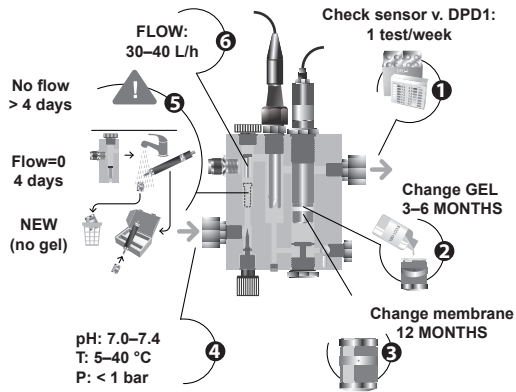


CHECKING THE TUBE AND ROTOR

### pHminus (ACID): 2–12 MONTHS

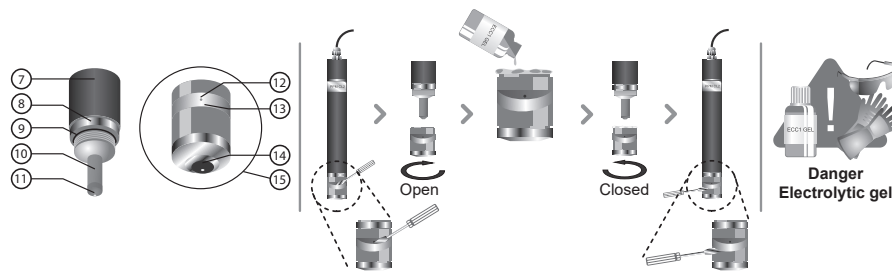


## Ppm CHLORINE Sensor Maintenance



- 1) Check sensor v. DPD1: once/week
- 2) Change gel: every 3–6 months
- 3) Change membrane: every 12 months
- 4) pH: 7.0...7.4  
Temperature: 5...40 °C  
Pressure: 1 bar max.
- 5) No FLOW for more than 4 days → store the sensor with a new membrane (without gel).
- 6) FLOW: 30...40 L/h

If calibration is not possible, because the reading is too low, then the sensor electrode [11] should be sanded with the paper supplied in the installation kit (blue paper), and the membrane and electrolyte should also be replaced as described below:



### PROCEDURE

- Use a small screwdriver or similar tool to remove the transparent cover [13] protecting the bleed hole [12], and move it to one side so that the bleed hole [12] is accessible.
- Unscrew the membrane head [15] from the sensor body [7].
- **IMPORTANT:** Never unscrew the membrane head [15] without the bleed hole [12] being open, as the vacuum that would be created could damage the membrane, rendering it unusable.
- Use the special sandpaper supplied to clean only the sensor electrode [11]. To do this, place the special sandpaper on a smooth surface, hold it in place by pressing on a corner, and holding the sensor vertically, drag the tip of the sensor over the sandpaper two or three times.
- Fit a new membrane, if necessary.
- Fill the head [15] with the supplied electrolyte.
- Slide the transparent cover [12] to one side.
- Holding the electrode body [7] vertical, screw on the head [15], allowing the excess electrolyte to drain through the bleed hole [12].
- Press the transparent cover [13] until it snaps back into position and the bleed hole [12] is closed.
- The gasket [9] is initially resistant when the head [15] is screwed on, which makes for a perfect seal.
- When the membrane head [15] is completely screwed on, the sensor electrode [11] must not knock against the membrane [14], as this would damage the membrane and render it unusable.
- The lifetime of the membrane will depend very much on the quality of the water, being one year approximately in normal conditions of use. Heavy contamination of the membrane must be avoided at all times.
- As a general rule, the electrolyte should be replaced at least once every three months.
- After replacing the membrane and/or electrolyte, keep the electrode polarised for at least 1 hour before recalibrating it. Recalibrate again approximately 24 hours after start-up.

If the sensor needs to be stored or transported, follow the procedure below:

Procedure for storing the sensor and period of non-use:

- The sensor must be stored correctly when the equipment is not being used or if the system will have no flow for more than 4 days.
- Use a small screwdriver or similar tool to remove the transparent cover [13] protecting the bleed hole [12], and move it to one side so that the bleed hole [12] is accessible.
- Unscrew the membrane head [15] from the sensor body [7].
- Rinse the active parts of the sensor [10,11] with distilled water, removing any remaining electrolyte, and allow them to dry.
- Once dry, screw the membrane head [15] carefully onto the sensor body. The membrane [14] must not touch the sensor's electrode [11], as this would damage it and render it unusable.

Reusing the sensor after prolonged storage:

- Clean the sensor electrode [11] as described above with the special sandpaper provided.
- Replace the membrane head [15] with a new one, following the procedure described above.

## 32 Warranty

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### GENERAL CONSIDERATIONS

- According to these provisions, the seller guarantees that the product covered by this warranty conforms to its specifications at the time of delivery.
  - The warranty period of the product is that which is determined by the legal requirements of the country in which the product was acquired by the consumer.
- Specific warranties:
- \* The electrodes are covered by a 5-YEAR (1) or 15.000-hour warranty (whichever comes first), without extensions.
  - \* The pH sensor is covered by a 2-YEAR warranty, without extensions.
  - \* The ORP sensor is covered by a 1-YEAR warranty, without extensions.
  - \* The PPM sensor is covered by a 2-YEAR warranty, without extensions, with the exception of the membrane.
  - \* These specific warranty periods are particularly subject to the limitations set out in the "LIMITATIONS" section.
- The Warranty period will be calculated from the date of delivery to the purchaser.
  - If the Product is found to be non-compliant and the purchaser informs the seller during the Warranty Period, the seller shall repair or replace the Product, at its own expense, at a location that they deem appropriate, unless this proves impossible or involves a disproportionate effort.
  - If the Product cannot be repaired or replaced, the purchaser may request a proportional reduction in the price, or, if the non-compliance is sufficiently important, the termination of the sales contract.
  - Parts replaced or repaired under this warranty will not extend the warranty period of the original Product, although they will be covered by their own warranty.
  - In order for this warranty to be effective, the purchaser will provide proof of the date of purchase and delivery of the Product.
  - When more than six months have passed from the delivery date of the Product to the purchaser, and if the purchaser claims a compliance failure of said Product, the purchaser shall provide evidence of the origin and the existence of the alleged fault.
  - This Warranty Certificate does not limit or prejudice any consumer rights under national laws in force.

### SPECIFIC CONDITIONS

- For this warranty to be effective, the purchaser shall strictly adhere to the Manufacturer's instructions included in the documentation provided with the Product, whenever these are applicable according to the Product range and model.
- When a schedule is set for the replacement, maintenance or cleaning of certain Product parts or components, the warranty will only be valid if said schedule has been followed correctly.

### LIMITATIONS

- This warranty will only be applicable for sales to consumers. By "consumer", we refer to any individual who acquires the Product for any purpose that falls outside his or her professional activity.
- No guarantee is offered for normal product wear, nor for any fungible parts, components, materials or consumables.
- The warranty does not cover instances where the Product: (1) has been misused; (2) has been inspected, repaired, maintained or manipulated by unauthorised personnel; (3) has been repaired or maintained with non-original parts or (4) has been incorrectly installed or commissioned.
- When compliance failure of the Product is due to incorrect installation or commissioning, this warranty will only be effective if such installation or commissioning process is included in the sales contract of the Product and has been performed by the seller, or under the seller's responsibility.
- Damages or fault in the Product due to any of the following causes:
  - 1) Inadequate system programming and/or calibration in the pH/ORP/PPM sensors on the part of the user.
  - 2) Explicit use of unauthorised chemical products.
  - 3) Exposure to corrosive environments and/or temperatures below 0 °C and above 50 °C.
  - 4) Operation at a pH greater than 8.5.
  - 5) Operation in water whose salinity is below 3 g/L (ELITE CONNECT CELLGUARD) or 0.75 g/L (ELITE CONNECT CELLGUARD LS) of sodium chloride (salt).

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Technical Information - Informations techniques - Información técnica -  
Informazioni tecniche - Technische Informationen - Informações técnicas -  
Technische informatie - Technické informace - Teknisk information - Teknisk information -  
Informacje techniczne - Műszaki információk - Τεχνικές πληροφορίες - Teknik bilgiler

|           |                 |            |            |        |
|-----------|-----------------|------------|------------|--------|
| Models    | 12 / 12 LS      | 24 / 24 LS | 32 / 32 LS | 42     |
| Input     | 230V ac 50/60Hz |            |            |        |
| Consume   | 0.60 A          | 0.95 A     | 1.00 A     | 1.10 A |
| Work Temp | 15 – 40 °C      |            |            |        |
| IP level  | IP32            |            |            |        |

|               |                             |                            |
|---------------|-----------------------------|----------------------------|
| Bluetooth     | Freq. Band: 2400-2483.5 MHz | RF Output Power: 11.23 dBm |
| WI-FI 2.4 GHz | Freq. Band: 2400-2483.5 MHz | RF Output Power: 19.91 dBm |

**SIMPLIFIED EU DECLARATION OF CONFORMITY.**

I.D. Electroquímica S.L. hereby declares that the Elite Connect Cellguard devices are in conformity with Directives 2014/53/EU, 2011/65/EU + 2015/863.  
The full text of the EU Declaration of Conformity can be found on the following website: ([www.astralpool.com](http://www.astralpool.com)).

**DÉCLARATION DE CONFORMITÉ SIMPLIFIÉE DE L'UE.**

I.D. Electroquímica S.L. déclare par la présente que les appareils Elite Connect Cellguard sont conformes aux directives européennes 2014/53/EU et 2011/65/EU + 2015/863.  
Vous pouvez accéder au texte intégral de la déclaration de conformité de l'UE en cliquant sur le lien suivant : ([www.astralpool.com](http://www.astralpool.com)).

**DECLARACIÓN UE DE CONFORMIDAD SIMPLIFICADA.**

Por la presente, I.D. Electroquímica S.L. declara que los equipos Elite Connect Cellguard son conformes con las Directivas 2014/53/EU y 2011/65/EU + 2015/863.  
El texto completo de la declaración UE de conformidad está disponible en la dirección de internet siguiente: ([www.astralpool.com](http://www.astralpool.com)).

**DICHIARAZIONE SEMPLIFICATA DI CONFORMITÀ UE.**

I.D. Electroquímica S.L. dichiara che l'apparecchiatura Elite Connect Cellguard è conforme alle Direttive 2014/53/EU e 2011/65/EU + 2015/863.  
Il testo completo della Dichiarazione di Conformità UE è disponibile sul seguente sito web: ([www.astralpool.com](http://www.astralpool.com)).

**VEREINFACHTE EU-KONFORMITÄTSERKLÄRUNG.**

I.D. Electroquímica S.L. erklärt hiermit, dass die Elite Connect Cellguard -Geräte mit den Richtlinien 2014/53/EU und 2011/65/EU + 2015/863 konform sind.  
Den vollständigen Text der EU-Konformitätserklärung finden Sie auf der folgenden Website: ([www.astralpool.com](http://www.astralpool.com)).

**DECLARAÇÃO DE CONFORMIDADE UE SIMPLIFICADA.**

A.I.D. Electroquímica S.L. declara que o equipamento Elite Connect Cellguard está em conformidade com as Diretivas 2014/53/EU e 2011/65/EU + 2015/863.  
O texto integral da Declaração de Conformidade UE pode ser consultado no seguinte website: ([www.astralpool.com](http://www.astralpool.com)).

**VEREENVOUDIGDE EU-CONFORMITEITSVERKLARING.**

I.D. Electroquímica S.L. verklaart hierbij dat de Elite Connect Cellguard -apparatuur in overeenstemming is met de Richtlijnen 2014/53/EU en 2011/65/EU + 2015/863.  
De volledige tekst van de EU-verklaring van overeenstemming vindt u op de volgende website: ([www.astralpool.com](http://www.astralpool.com)).

**ZJEDNODUŠENÉ EU PROHLÁŠENÍ O SHODĚ.**

Společnost I.D. Electroquímica S.L. tímto prohlašuje, že zařízení Elite Connect Cellguard je v souladu se směrnicemi 2014/53/EU a 2011/65/EU + 2015/863.  
Úplné znění EU prohlášení o shodě naleznete na této internetové stránce: ([www.astralpool.com](http://www.astralpool.com)).

**FÖRENKLAD EU-FÖRSÄKRAN OM ÖVERENSSTÄMMELSE.**

I.D. Electroquímica S.L. försäkrar härmed att Elite Connect Cellguard-utrustningen överensstämmer med direktiven 2014/53/EU och 2011/65/EU + 2015/863.  
Den fullständiga texten till EU-försäkrans om överensstämmelse finns på följande webbplats: ([www.astralpool.com](http://www.astralpool.com)).

**FORENKLET EU-OVERENSSTEMMELSESESKLÆRING.**

I.D. Electroquímica S.L. erklærer hermed, at Elite Connect Cellguard -udstyret er i overensstemmelse med direktiverne 2014/53/EU og 2011/65/EU + 2015/863.  
Den fulde ordlyd af EU-overensstemmelseserklæringen kan findes på følgende websted: ([www.astralpool.com](http://www.astralpool.com)).

**UPROSZCZONA DEKLARACJA ZGODNOŚCI UE.**

I.D. Electroquímica S.L. niniejszym oświadczam, że urządzenia Elite Connect Cellguard spełniają wymagania dyrektyw 2014/53/EU i 2011/65/EU + 2015/863.  
Pełny tekst deklaracji zgodności UE można znaleźć na następującej stronie internetowej: ([www.astralpool.com](http://www.astralpool.com)).

**EGYSZERŰSÍTETT EU-MEGFELELŐSÉGI NYILATKOZAT.**

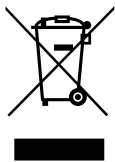
Az I.D. Electroquímica S.L. kijelenti, hogy az Elite Connect Cellguard berendezés megfelel a 2014/53/EU és a 2011/65/EU + 2015/863 irányelveknek.  
Az EU-megfelelőségi nyilatkozat teljes szövege az alábbi weboldalon található: ([www.astralpool.com](http://www.astralpool.com)).

**ΑΠΛΟΥΣΤΕΥΜΕΝΗ ΔΗΛΩΣΗ ΣΥΜΜΟΡΦΩΣΗΣ ΕΕ.**

Η Ι.Δ. Electroquímica S.L. δηλώνει διά του παρόντος ότι ο εξοπλισμός Elite Connect Cellguard συμμορφώνεται με τις οδηγίες 2014/53/EU και 2011/65/EU + 2015/863.  
Το πλήρες κείμενο της δήλωσης συμμόρφωσης ΕΕ είναι διαθέσιμο στον ακόλουθο ιστότοπο: ([www.astralpool.com](http://www.astralpool.com)).

**BASİTLEŞTİRİLMİŞ AB UYGUNLUK BEYANI.**

İ.D. Electroquímica S.L. işbu belge ile Elite Connect Cellguard ekipmanının 2014/53/EU ve 2011/65/EU + 2015/863 sayılı Direktiflere uygun olduğunu beyan eder.  
AB Uygunluk Beyanının tam metni aşağıdaki web sitesinde bulunabilir: ([www.astralpool.com](http://www.astralpool.com)).



- For recycling information, please contact the seller.
- Pour obtenir des informations sur le recyclage, veuillez contacter votre vendeur.
- Para obtener información del reciclaje, póngase en contacto con el vendedor.
- Per informazioni sul riciclaggio, contattare il venditore.
- Für Informationen zum Recycling wenden Sie sich bitte an den Verkäufer.
- Para informações sobre a reciclagem, contacte o vendedor.
- Neem voor recyclinginformatie contact op met de verkoper.
- Informace o recyklaci získáte od prodejce.
- För information om återvinning, var god kontakta säljaren.
- For information om genbrug, kontakt venligst sælger.
- Informacji na temat recyklingu udziela sprzedawca.
- Újrahasznosítással kapcsolatos információkért forduljon az eladóhoz.
- Για πληροφορίες σχετικά με την ανακύκλωση, επικοινωνήστε με τον πωλητή.
- Geri dönüştürme bilgileri için lütfen satıcıyla iletişime geçin.



**Elite Connect Cellguard**



Made in Spain by  
I.D. Electroquímica, S.L.  
AstralPool

A Fluidra Brand | [www.astralpool.com](http://www.astralpool.com)

FLUIDRA S.A.

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(BARCELONA)