ZODIAC®

Ei² iQ

m³ 40-110

8.000h

pH

ORP

g/L
ºC

WiFi

USER MANUAL **EN**

Salt chlorinator for swimming pools

Models

Ei2 12 / Ei2 pH EVO 12
Ei2 20 / Ei2 pH EVO 20
Ei2 25 / Ei2 pH EVO 25

FLUIDRA pool

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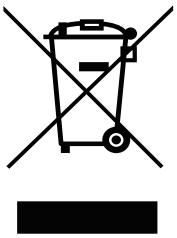
CE

Ver.20250409

CONTENTS

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. To achieve the best performance from the salt electrolysis systems, follow the instructions below:

① General Information

1.1 | 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 control unit. The electrolysis cell contains a number of activated 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 filtration system (pump and filter) is 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 systems have an automatic cleaning system for the electrodes that prevents the formation of incrustations on them.

1.2 | Safety Warnings and Recommendations

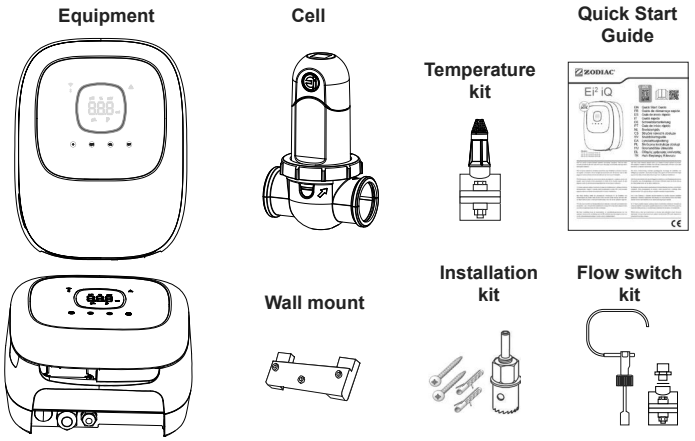
- Installation and manipulation should only be performed by suitably qualified technicians.
- Applicable standards for prevention of accidents and for electrical installations must be respected.
- During installation, bear in mind that electrically disconnecting the equipment requires a switch or circuit breaker according to standards IEC 60947-1 and IEC 60947-3 which 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 fulfils 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 setting up, nor for any manipulation or addition of components other than when carried out in the manufacturer's installations.
- 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 similar qualified technician in order to avoid any type of danger.
- Do not attempt to alter the control unit to operate at any other voltage.
- Ensure that all electrical connectors are properly tightened, 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.
- Although the equipment has an IP rating, under no circumstances must it 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.

Keep this instruction manual for future reference.

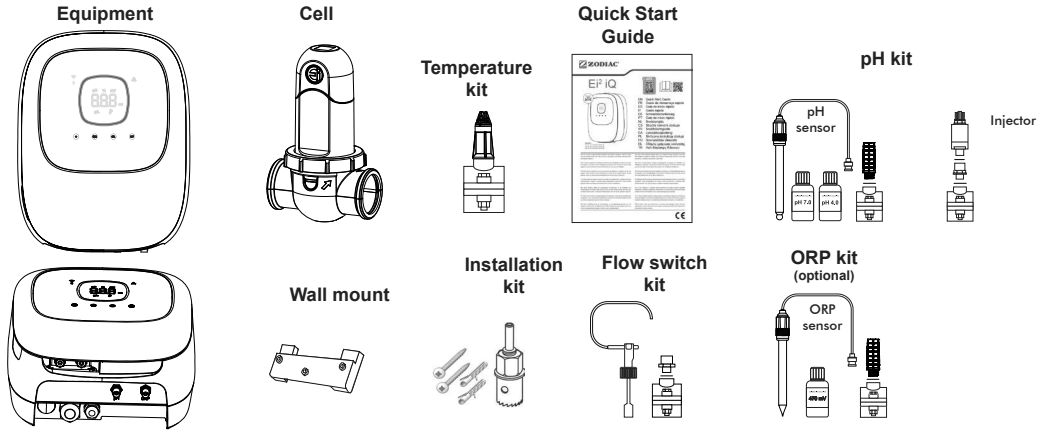
Please read the instruction manual before proceeding with the installation of the equipment.

1.3 | Contents

Ei2 iQ 12
Ei2 iQ 20
Ei2 iQ 25



Ei2 iQ 12 pH evo
Ei2 iQ 20 pH evo
Ei2 iQ 25 pH evo



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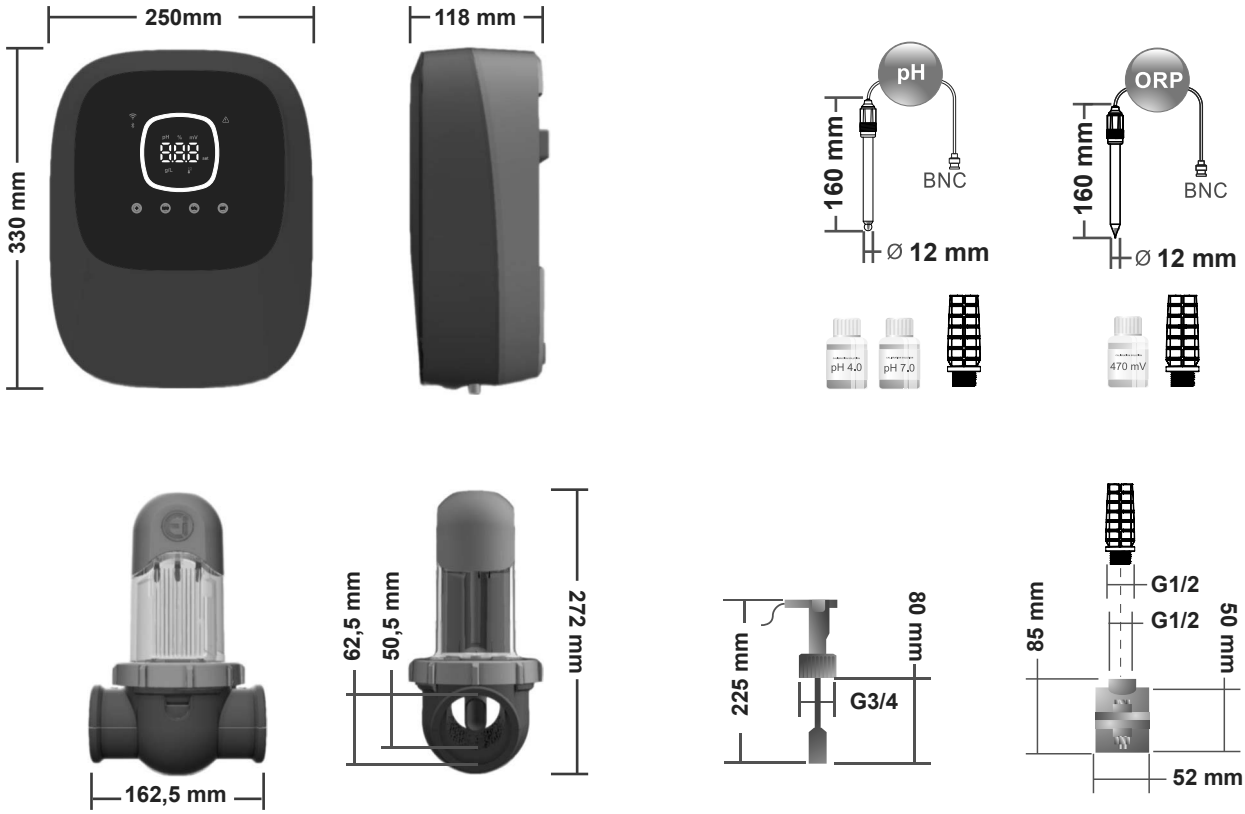
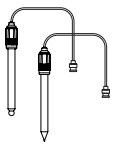
1.4 | Dimensions



Control unit	MODEL		
Description	**12**	**20**	**25**
Operating voltage	230 Vac 50/60 Hz.		
Consumption (A AC)	0.45 A	0.65 A	0.85 A
Fuse (5x20 mm)	2 A	3.15 A	3.15 A
Output (A DC)	2.5 A	4.0 A	5.0 A
Production (g Cl2/h)	10–12	16–20	20–25
m^3 pool (16–24 °C)	50	90	110
m^3 pool (>25 °C)	40	75	90
Salinity	4–8.5 g/L (5 g/L recommended)		
Ambient temperature	40 ºC max.		
Surround	ABS		
Polarity inversion	2 h, 3 h, 4 h, 7 h and test 2 min (software)		
Production control	0-100% (10 production levels)		
Cell flow sensor (gas)	Yes (default: ON)		
Flow switch sensor	Yes (default: ON)		
Control Production by cover	Configuration menu (10–90%). Volt-free contact.		
External Production Control	Yes. Volt-free contact.		
Electrode diagnostics	Yes		
pH safety stop (PumpStop)	Yes, software setting 1–120 min		
Salinity indicator	Yes, g/L		
Temperature indicator	Yes, 0–50 ºC (ºC/ºF)		
Salt alarm indicator	Yes. High and Low LED		
Temperature alarm indicator	Yes. High and Low LED		
Config. Menu System	Yes		
Modbus	Yes		
WI-FI	Yes		

Electrolysis cell	MODEL		
Description	**12**	**20**	**25**
Electrodes (self-cleaning activated titanium)	8,000 h		
Min. flow rate (m^3/h)	5	6	8
Number of electrodes	6	11	11
Material	Methacrylate derivative		
Connection to piping	Quick Fix PVC Ø 50 mm / Ø 63 mm		
Maximum pressure	1 kg/cm^2		
Operating temperature	15–40 °C max		
Temperature sensor	Yes		



pH and ORP sensors	MODEL
Description	pH - mV (ORP)
Measurement range	0.00–9.99 pH / 000–999 mV (ORP)
Control range	7.00–7.80 pH / 600–850 mV (ORP)
Biopool control range ON	6.50–8.50 pH / 300–850 mV (ORP)
Accuracy	± 0.01 pH / ±1 mV (ORP)
Calibration	Automatic (pH-ORP solutions)
Control outputs (pH)	One 230V / 500mA output (connection for dosing pump)
pH and ORP sensors	Glass, single joint

IP rating	IP44	
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

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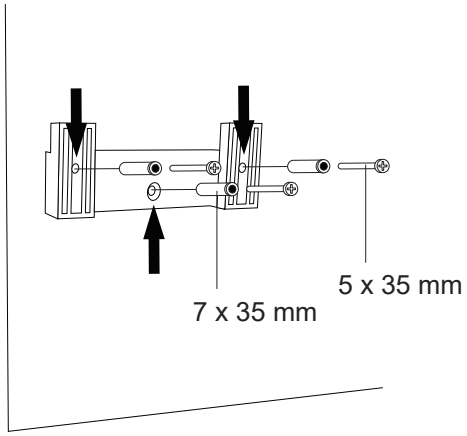
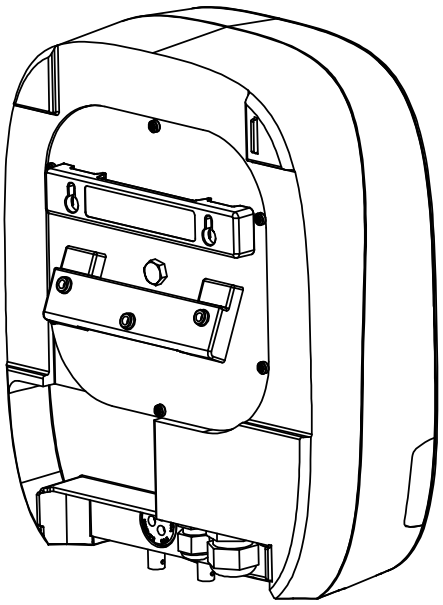
2.1 I Wall-Mounted Equipment

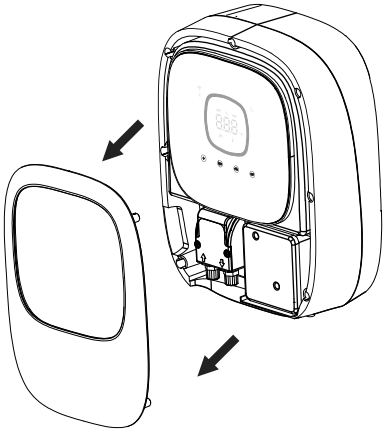


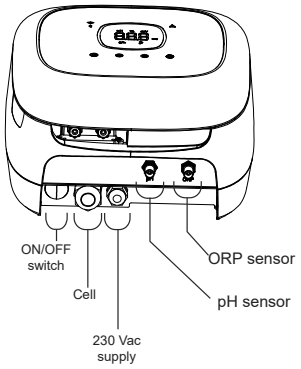


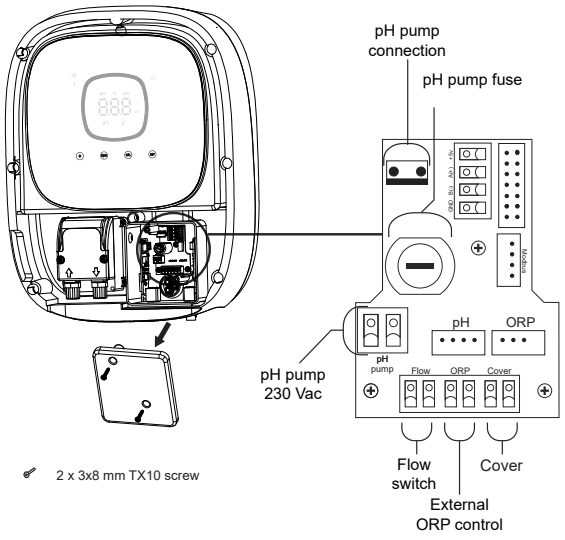
- The control unit must always be installed in a VERTICAL position on a smooth wall surface. It should also be far enough away from the cell to prevent it from being accidentally splashed with water.
- The cell must always be installed in a VERTICAL position above the ground, as shown on the recommended installation diagram.
- To guarantee that the equipment remains in good condition, it should always be installed in a dry, well-ventilated location in the pump house. Installing the control unit outdoors is not recommended.
- 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.

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 salt chlorinator close to where these products are stored. To reduce pH, we strongly recommend that products based on sodium bisulphate or dilute sulphuric acid be used.

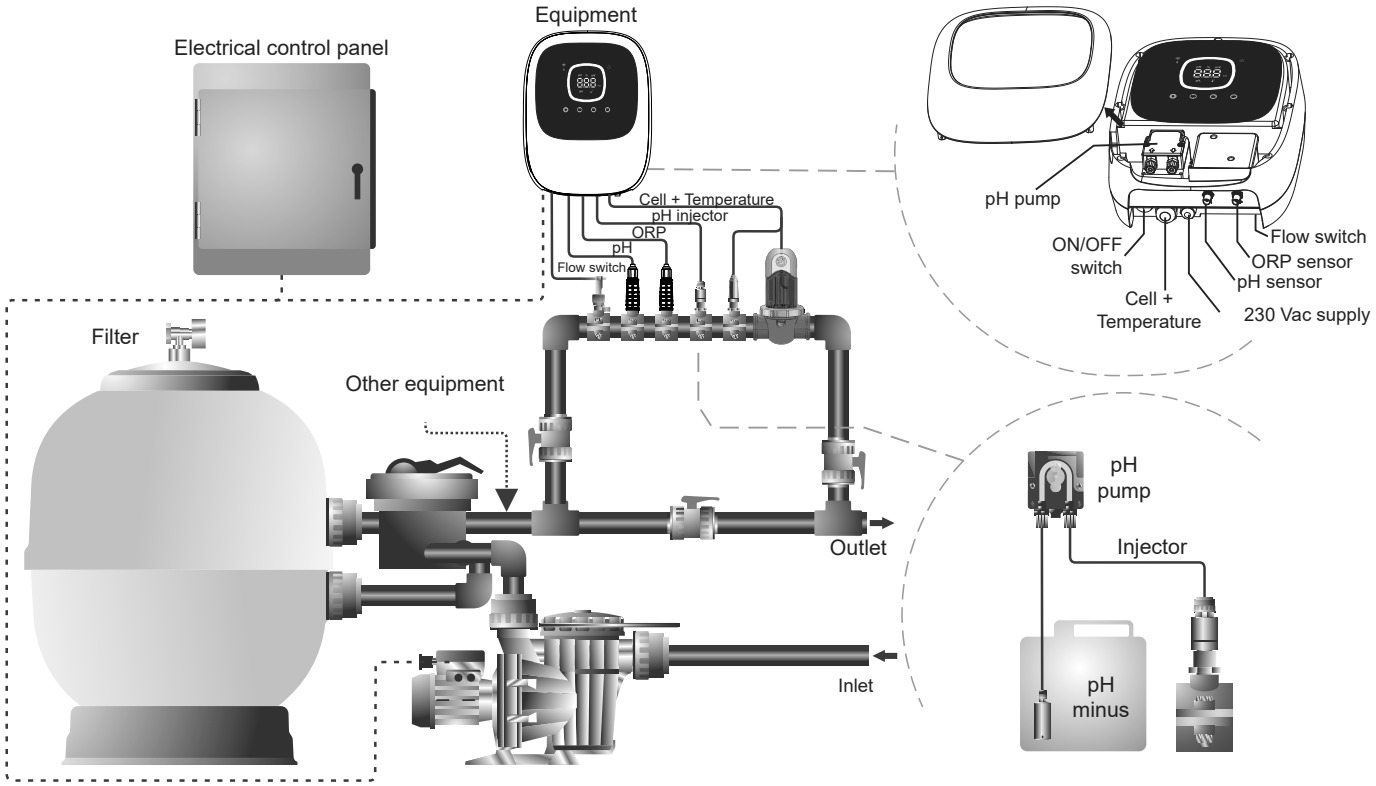
2.2 | Information on Connections







2.3 | Installation Diagram



N.B.: This layout shows an installation for an Ei2 evo model including all the options.
The layout may vary according to the particular model.

2.4 | Electrolysis Cell Installation

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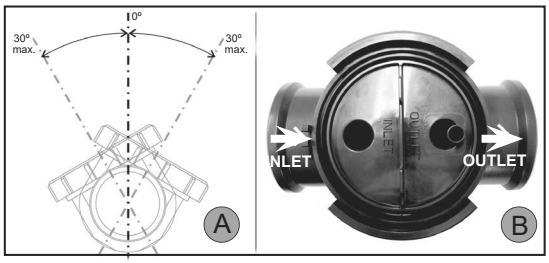
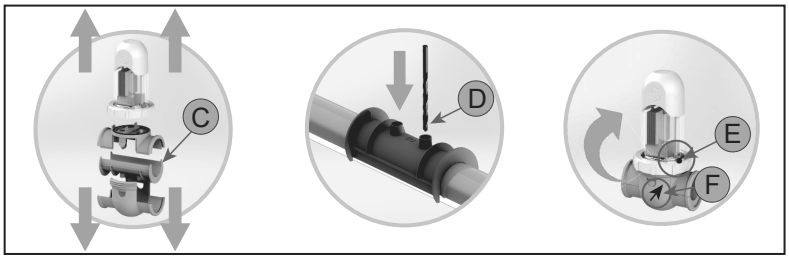
1. The cell must be installed in a horizontal tube to ensure that the water flows through it at an angle or inclination not exceeding 30º (A).
2. Note the direction of water circulation. (B)



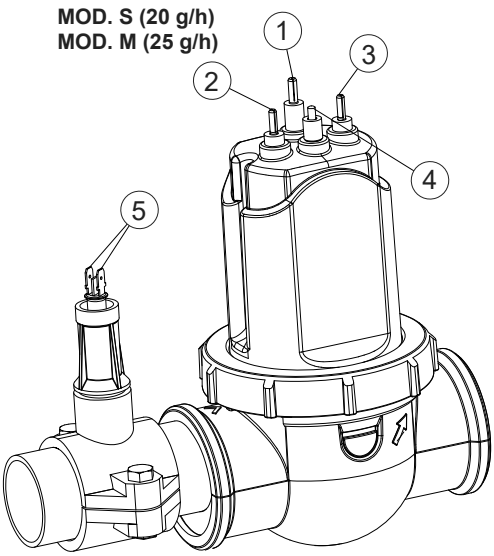
3. Remove the cell. (C)
4. Place the EU pipe adapter (DN50 mm) upside-down in the desired location on the pipe (D). Using a drill bit or punch, mark the location of the holes to be drilled in the pipe, remove the adaptor and make the holes using the provided hole saw.
5. Hook the lower and upper parts of the cell's sleeve into the tube at the level of the holes, bearing in mind the direction of the water flow (C).
6. Position the high, transparent part of the cell (position indicator present), place the clamping ring over the upper sleeve thread, aligning point (E) of the sleeve with the arrow on the sleeve (F) and then fully tighten by hand **(without using any tools)**.

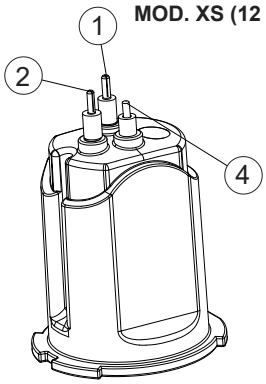


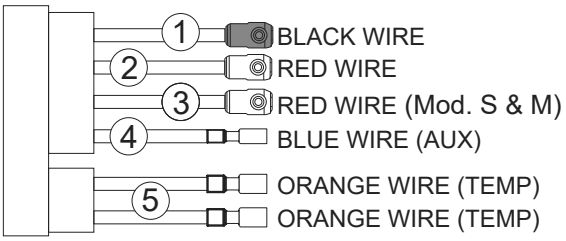
2.5 | Connecting the Electrolysis Cell

Interconnect the electrolysis cell and the control unit according to the following diagrams.

Due to the relatively high current flowing through the electrolysis cell wires, under no circumstances should the length or cross-section of the wires be changed without first consulting your authorised distributor.







2.6 | Installing the pH/ORP sensor, injector, flow switch and temperature probe

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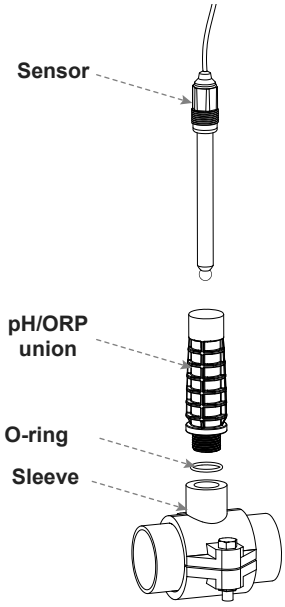
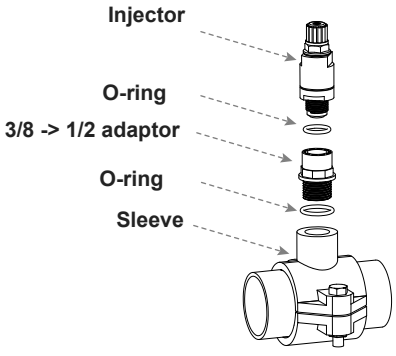
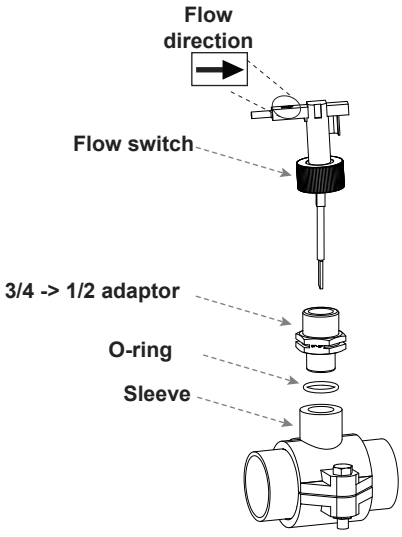
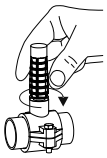


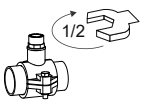




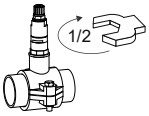


1) Make sure the O-ring is on the union. Screw the union into the sleeve by hand.

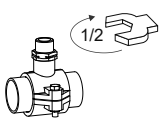
2) Screw the pH/ORP sensor into the union by hand.



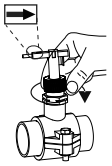
1) Make sure the O-ring is on the adaptor. Screw the adaptor into the sleeve by hand and tighten it with a spanner.



2) Screw in the injector by hand and tighten it with a spanner.



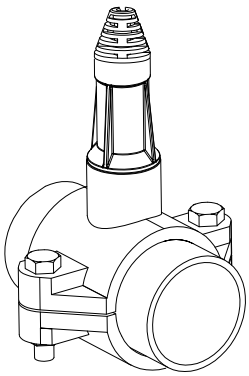
1) Make sure the O-ring is on the adaptor. Screw the adaptor into the sleeve by hand and tighten it with a spanner.

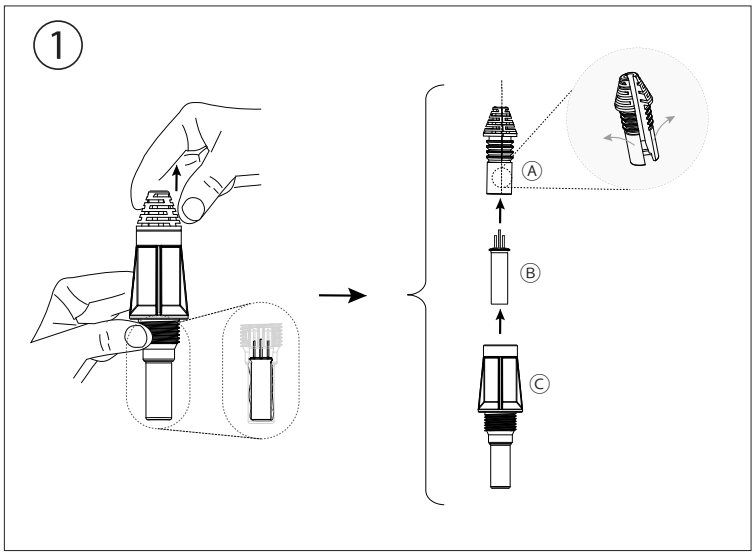


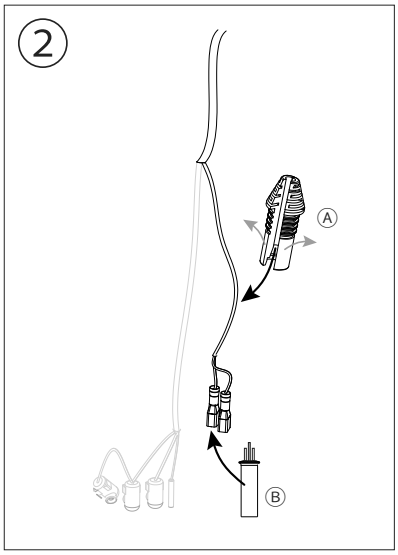
2) Make sure the arrow at the top of the flow switch points in the direction of the flow of water.

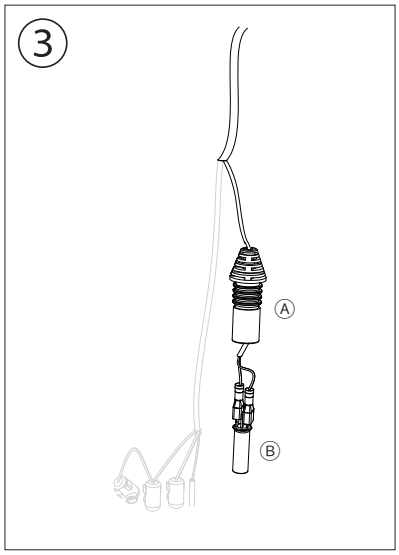
Screw the flow switch onto the adaptor by hand.

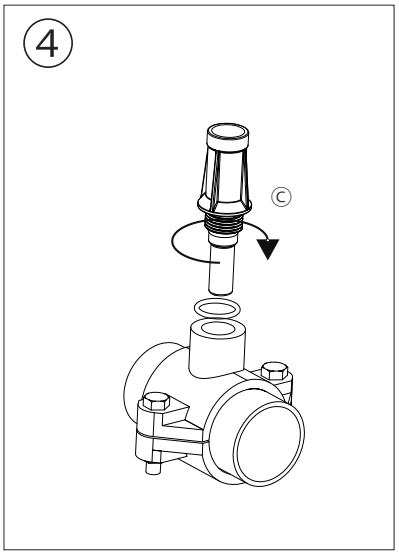
- Installing the NTC temperature probe

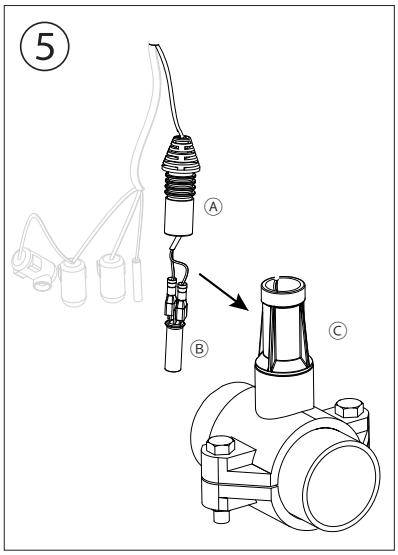


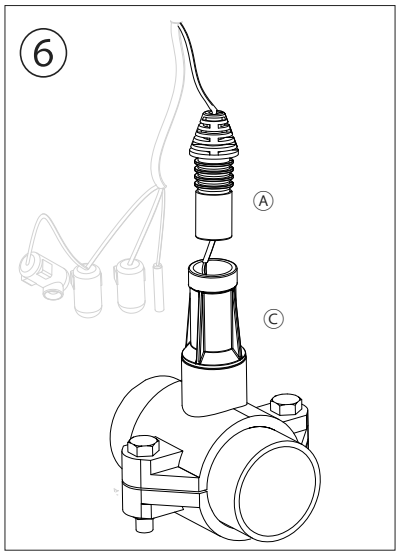


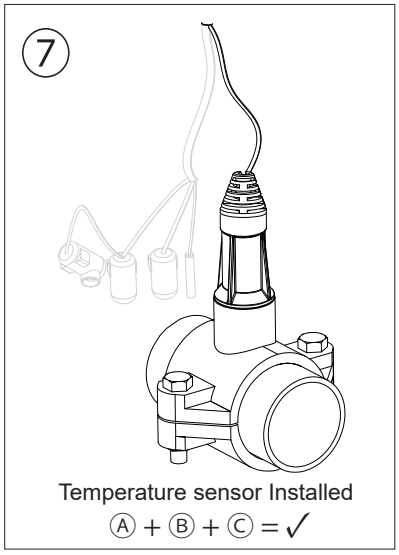












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2.7 | Initial Start-up

1. Ensure that the filter is 100% clean, and that the pool and installation is 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 limescale in the swimming pool.
   a) The pH should be 7.2–7.6
   b) Total alkalinity should be 60–120 ppm.

3. Although the system can operate within a salinity range of 4–8.5 g/L, you should try to maintain the recommended optimum salt level of 5 g/L, adding 5 kg per m^3 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).

4. 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.

5. Before starting the operating cycle, disconnect the control unit and run the filter pump for 24 hours to ensure complete dissolution of the salt.

6. Then start up the saline electrolysis system, setting the salt electrolysis production level so that the free chlorine level is maintained within the recommended levels (0.5-2 ppm).

N.B.: to determine the level of free chlorine, a test kit must be used.

7. 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.

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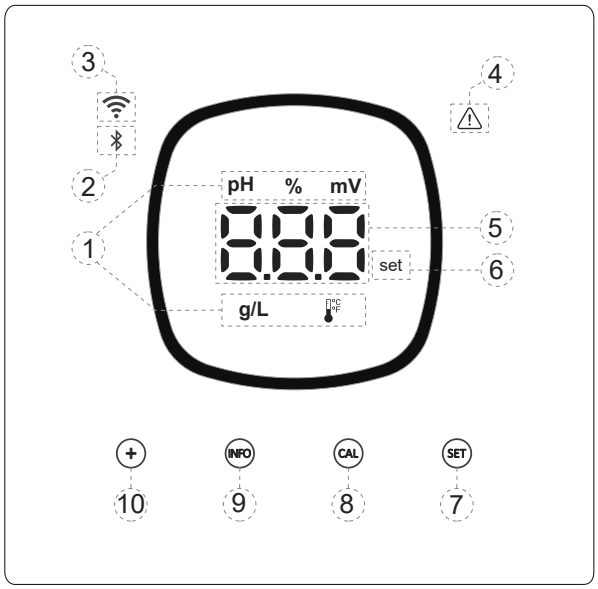
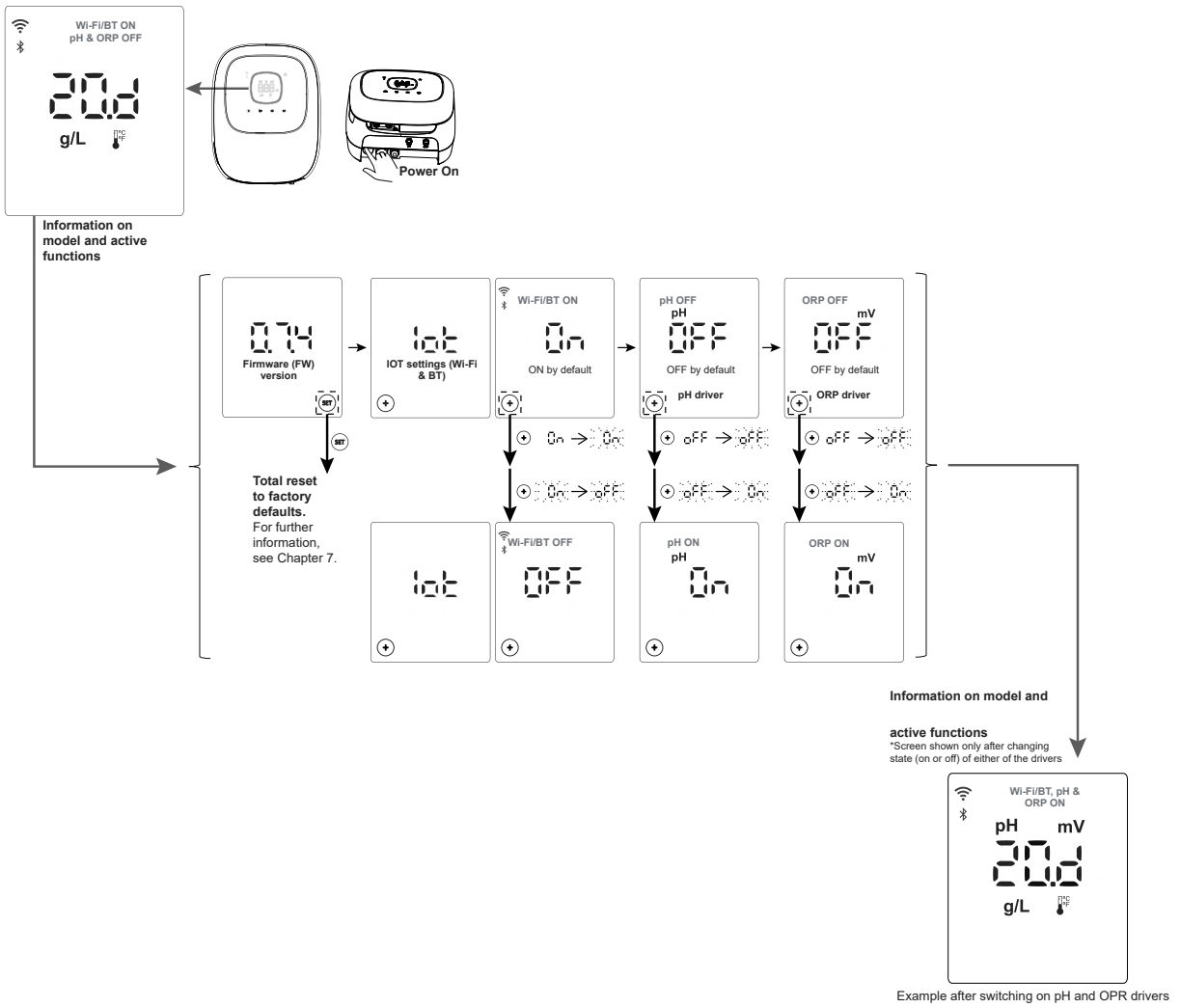
③ User Interface

3.1 | Description of the Cover



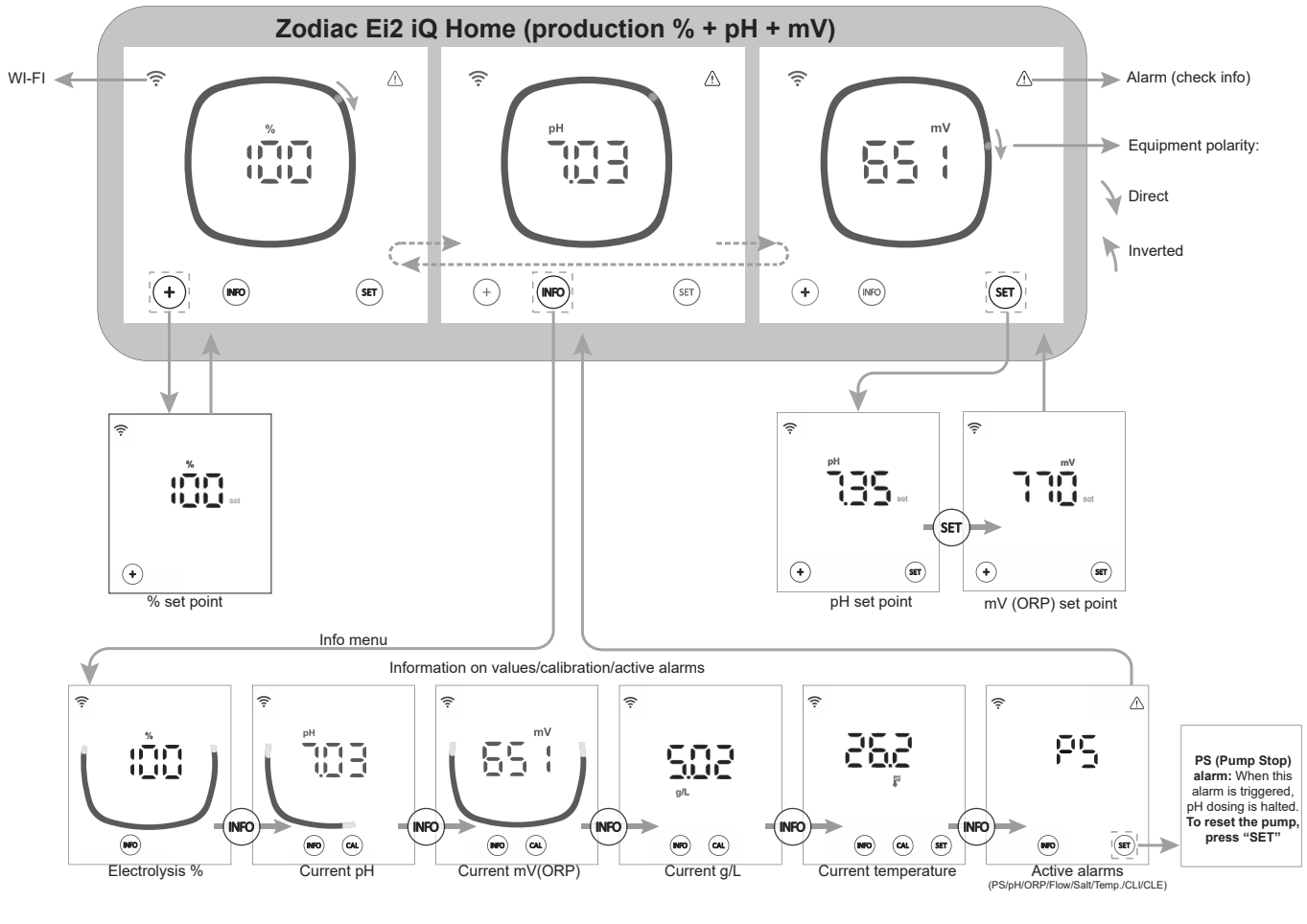
1) Information on active functions of the equipment: pH, % production, ORP, salinity (g/L) and temperature
2) Bluetooth indicator (pairing with Fluidra Pool)
3) Wi-Fi status indicator
4) Alarm indicator
5) Values display: % production, pH, ORP, salinity (g/L) and temperature
6) Set point indicator
7) Access to pH and mV (ORP) set point menu
8) Calibration key
9) Access to info/configuration menu (press for 5 sec)
10) Direct access for changing production set point/changing a value or a parameter

3.2 | Starting Sequence, Turning Wi-Fi/BT and the pH/ORP Drivers On/Off



Example after switching on pH and OPR drivers

3.3 | Navigation Description



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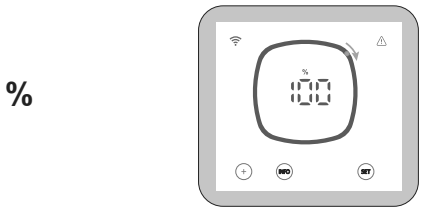
3.4 | Home Screen Information

By default, the Home screen cycles through the pool water's main values (%, pH, mV), allowing its condition to be checked at a glance.
Temperature and salinity g/L are shown by default on a second plane (factory setting: INF OFF). The user may choose to view these on the Home screen by activating INF ON in the Configuration menu.

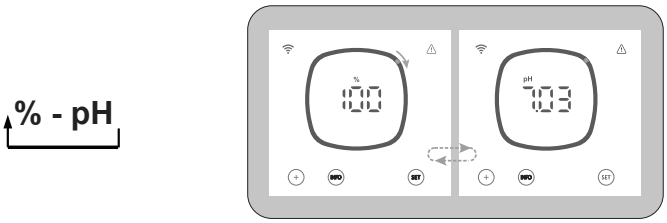
Parameters shown vary according to equipment version:

A) INF OFF

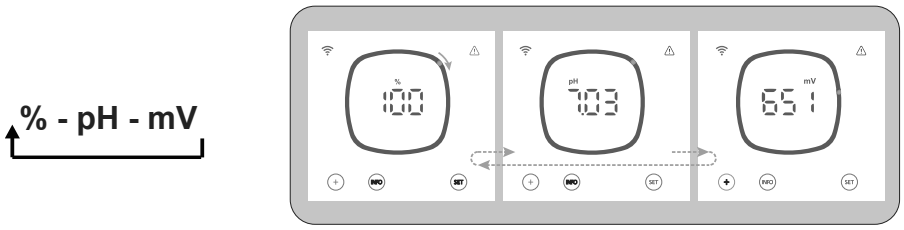
1. Model Ei2 iQ: shows only the equipment's current level of production (%).



2. Model Ei2 iQ evo pH: cycles between current production (%) and pool pH.



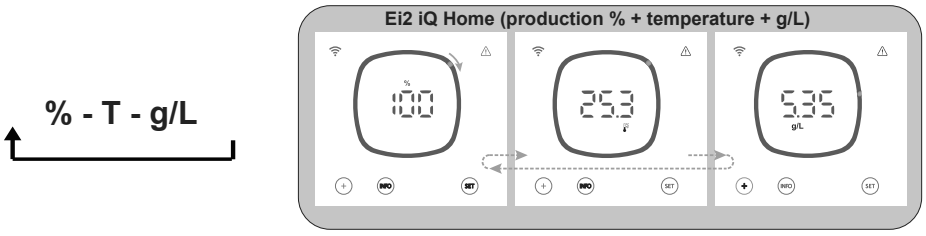
3. Model Ei2 iQ evo pH/ORP: cycles between current production (%), pool pH and mV (ORP).



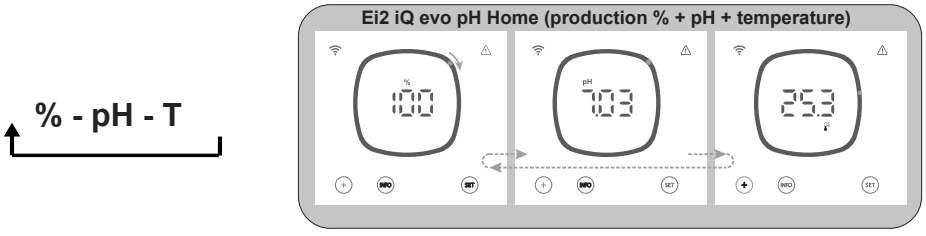
B) INF ON

Info mode can be switched on from the Config menu. With Info mode ON, the equipment will always show 3 variables on the Home screen according to equipment model.

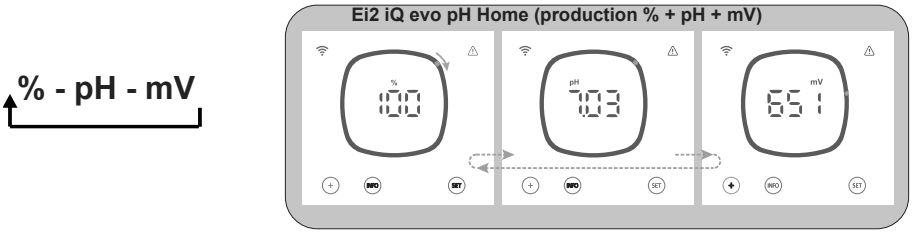
1. Model Ei2 iQ: cycles between current production (%), temperature and g/L.



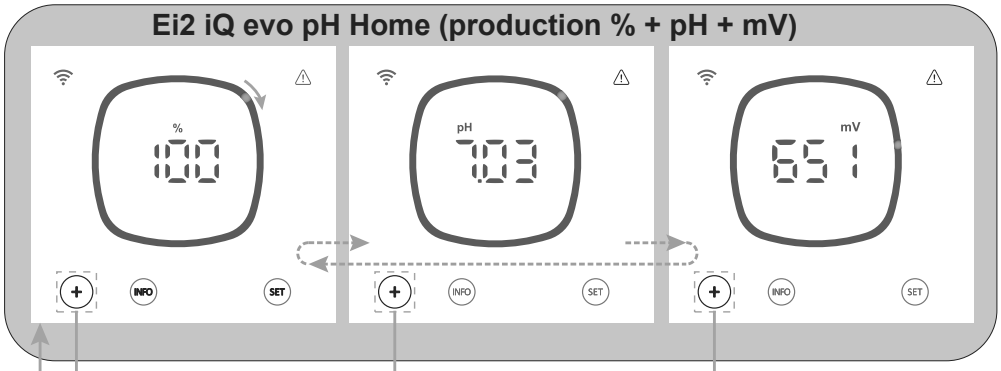
2. Model Ei2 iQ evo pH: cycles between current production (%), pH and temperature.

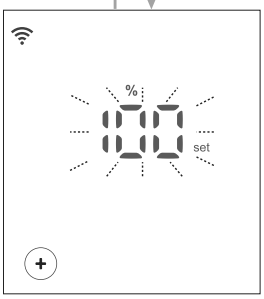


3. Model Ei2 iQ evo pH/ORP: cycles between current production (%), pH and mV (ORP).



4.1 | Changing Production (%) Set Point



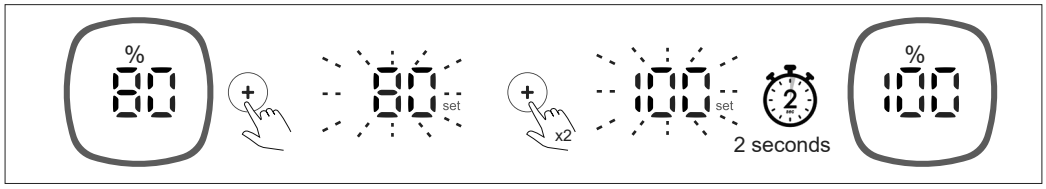


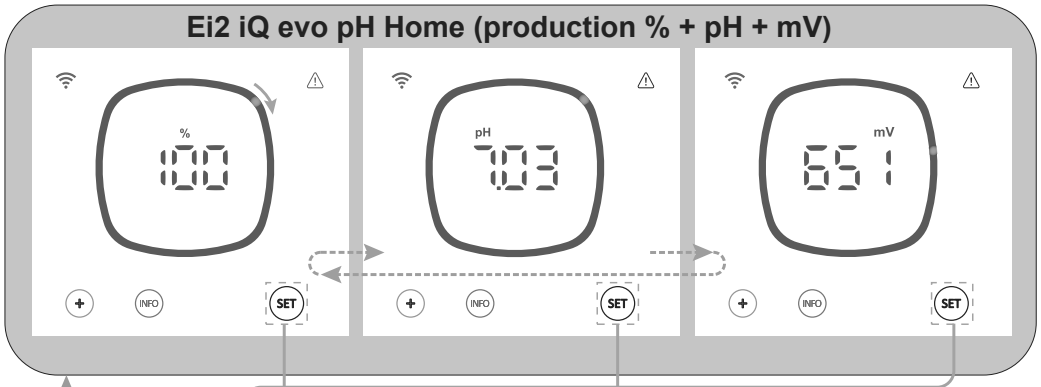
To change the production set point, follow the steps below.

- **Access change mode:** press the (+) key. The current value of the set point will begin to flash.
- **Change the set point**: the new set point is set using the (+) key.
- **Saving the set point:** once the new set point has been selected, the equipment will save it automatically after 2 seconds of inactivity, returning to the Home screen.

EN

Example of production set point change:





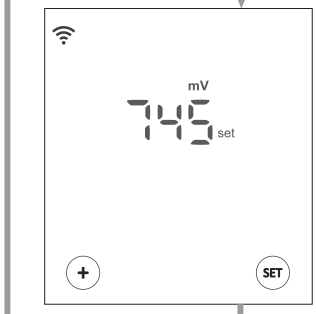
To change the pH/ORP set point, follow the steps below.

Changing the pH set point

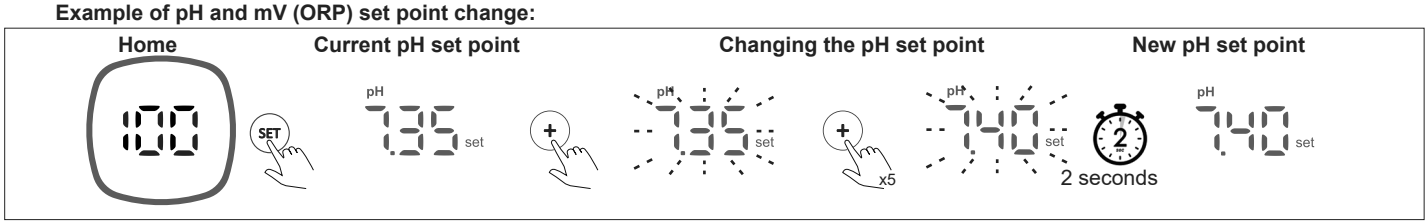
- **Access change mode:** press the SET key; the current pH set point will be shown on the equipment's display. Press the key and the set point will begin to flash.
- **Change the set point**: the new set point is set using the + key.
- **Saving the set point:** once the new set point has been selected, the equipment will save it automatically after 2 seconds of inactivity.

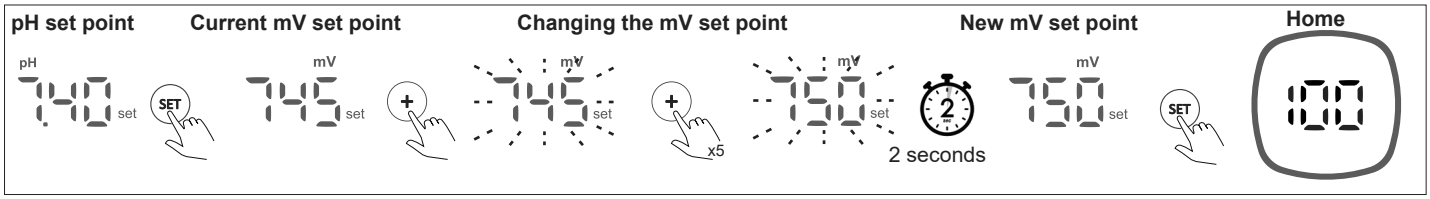
Changing the mV (ORP) set point

- **Access change mode:** press the SET key; the set point will be shown on the equipment's display. Press the + key and the set point will begin to flash.
- **Change the set point**: the new set point is set using the + key.
- **Saving the set point:** once the new set point has been selected, the equipment will save it automatically after 2 seconds of inactivity.
- **Back to the Home menu:** press the SET key to return to the equipment's Home menu.



Example of pH and mV (ORP) set point change:



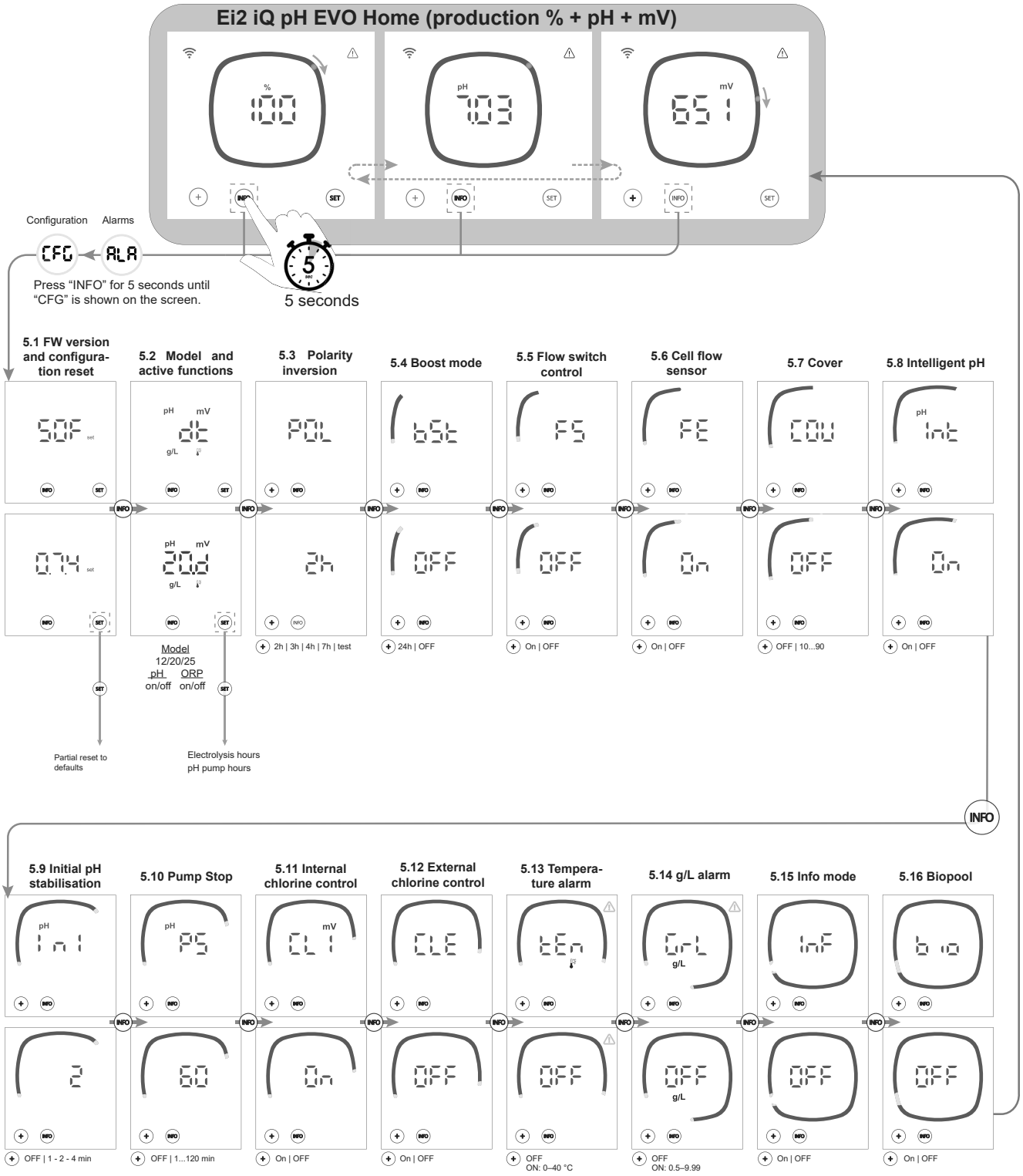


EN

⑤ Configuration Menu

All equipment settings can be reviewed and changed in the configuration menu.

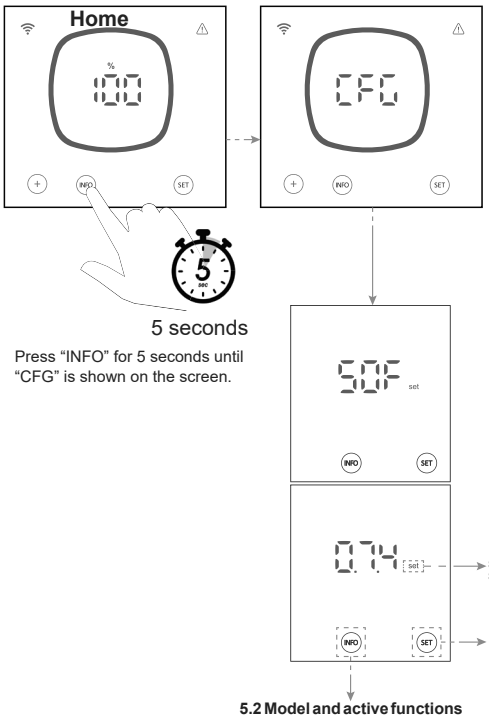
To access the configuration menu, press the “Info” key on the equipment’s home screen for 5 seconds until “CFG” is shown on the screen, and release the key.



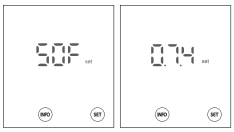
N.B.: Values shown on the screens are the default settings.

EN

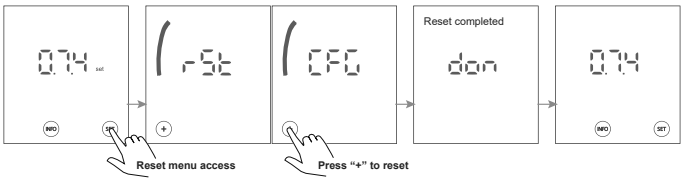
5.1 | FW Version and Configuration Reset



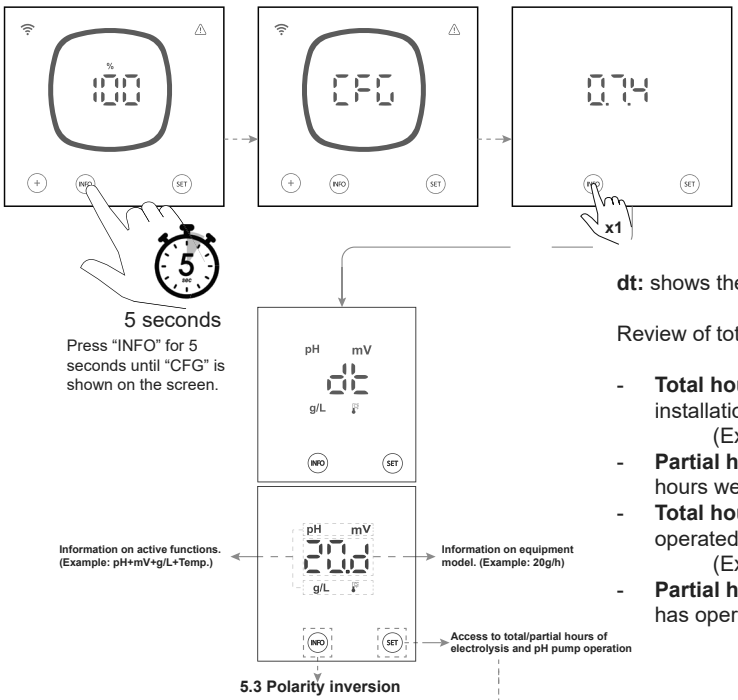
SOF: shows the equipment’s firmware version.



Configuration reset: The equipment allows all settings to be reset to their default value. To do so, while the firmware version information is being shown press the “INFO” key followed by the “+” key. Once resetting is complete, the equipment will show “don”.



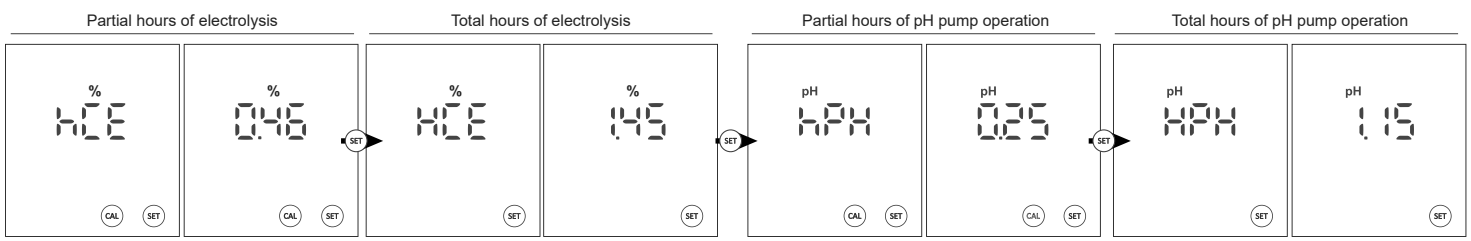
5.2 | Model, Active Functions and Hours of Operation



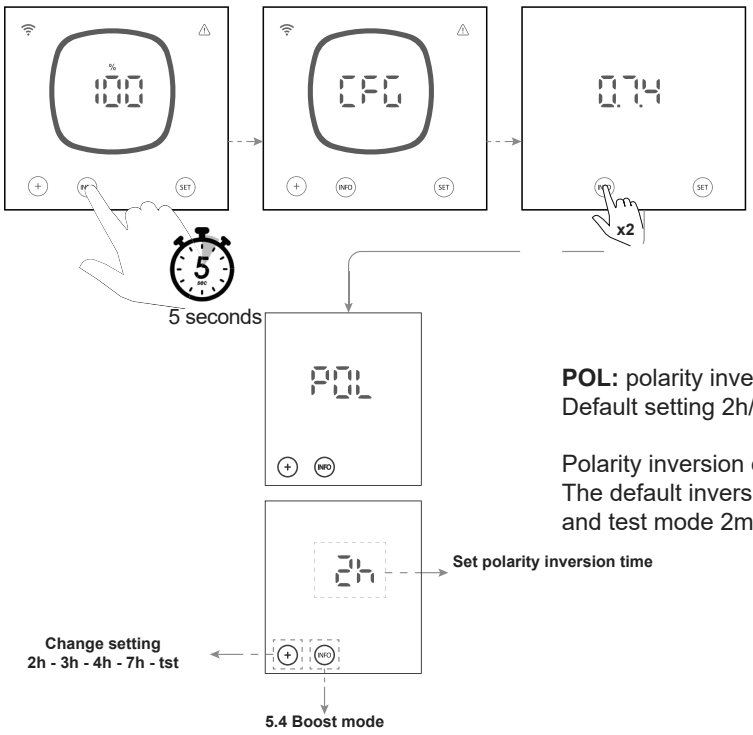
dt: shows the equipment model (Ei2_12/20/25) and active functions (pH, mV, T, g/L).

Review of total and partial hours of electrolysis and pH pump operation

- **Total hours of electrolysis:** Shows the number of hours of electrolysis since installation of the equipment. Information is shown in thousands.
  (Example: 0.09 = 90 hrs | 1.20 = 1,200 hrs - 12.5 = 12,500 hrs)
- **Partial hours of electrolysis:** shows the number of hours of electrolysis since the hours were last reset.
- **Total hours of pH pump operation:** shows the number of hours the pH pump has operated since its installation. Information is shown in thousands.
  (Example: 0.05 = 50 hrs | 0.60 = 600 hrs)
- **Partial hours of pH pump operation:** shows the number of hours the pH pump has operated since the hours were last reset.



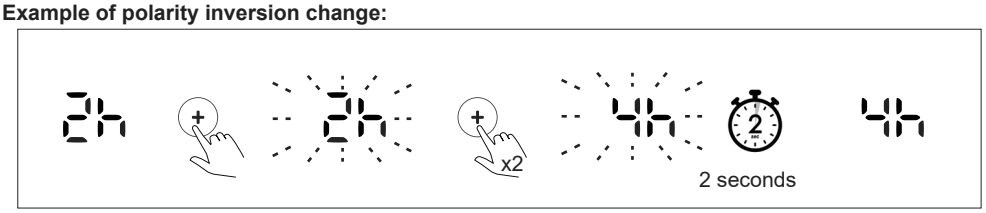
5.3 | Polarity Inversion



POL: polarity inversion time.
Default setting 2h/2h.

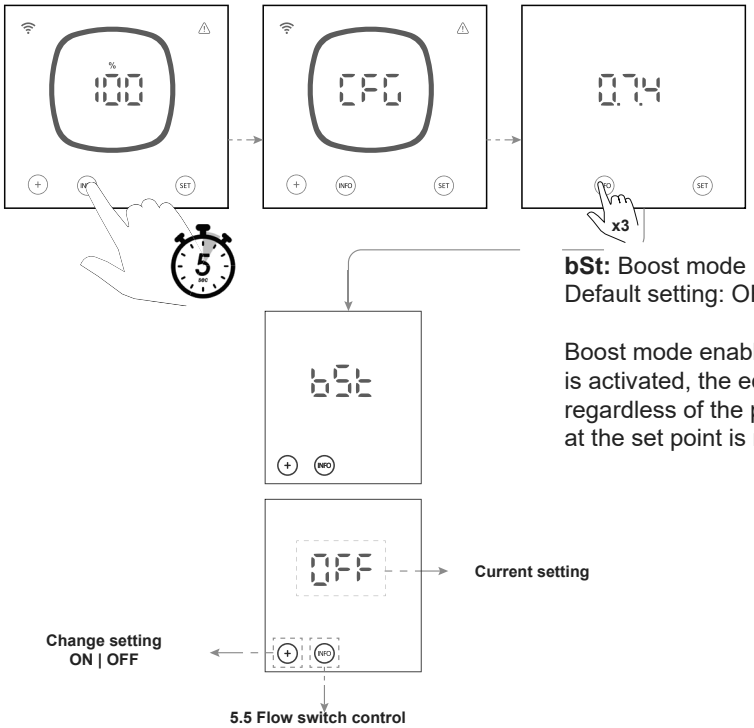
Polarity inversion enables the removal of lime accumulated on the electrodes. The default inversion time is 2h/2h but is configurable (2h/2h, 3h/3h, 4h/4h, 7h/7h and test mode 2min/2min).

Example of polarity inversion change:



EN

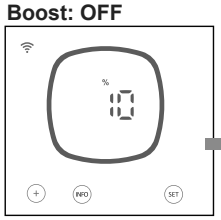
5.4 | Boost Mode



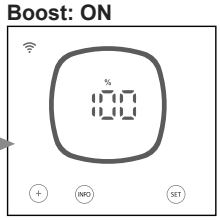
bSt: Boost mode
Default setting: OFF

Boost mode enables a rapid increase in pool chlorine level. When boost mode is activated, the equipment will operate for 24 hours at a 100% production level regardless of the production set point. After 24 hours of operation, production level at the set point is resumed.

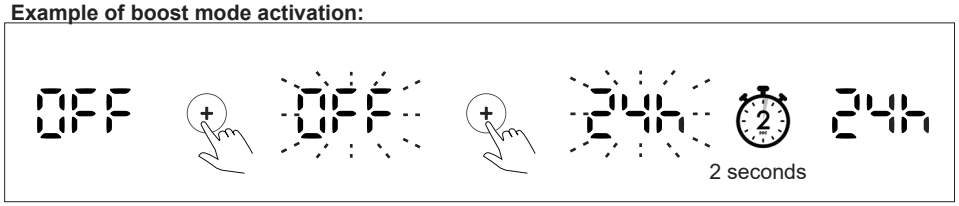
% set: 10%
Boost: OFF



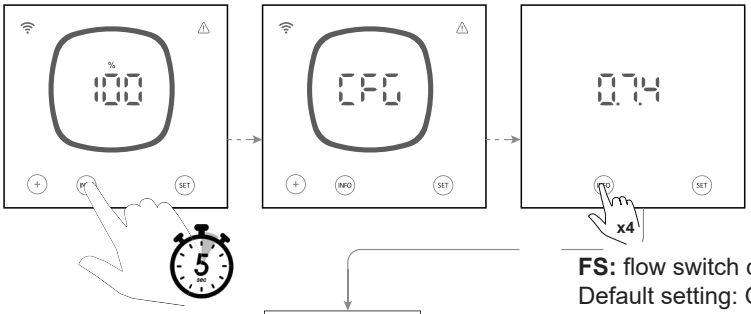
% set: 10%
Boost: ON



Example of boost mode activation:

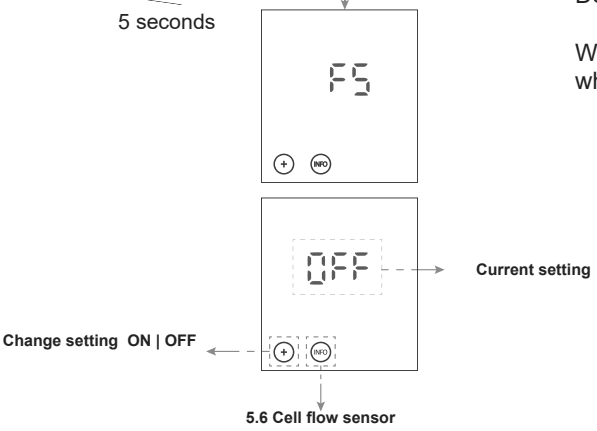


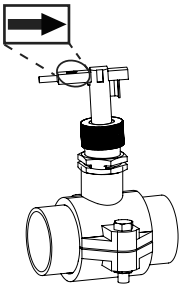
5.5 | Flow Switch Control



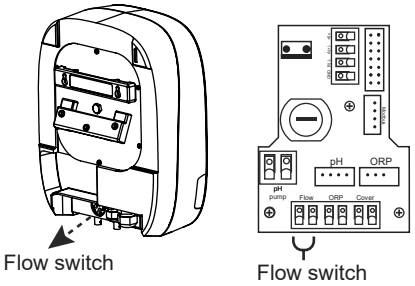
FS: flow switch control.
Default setting: ON.

When this function is enabled, the equipment will stop chlorine production when the sensor does not detect any flow.

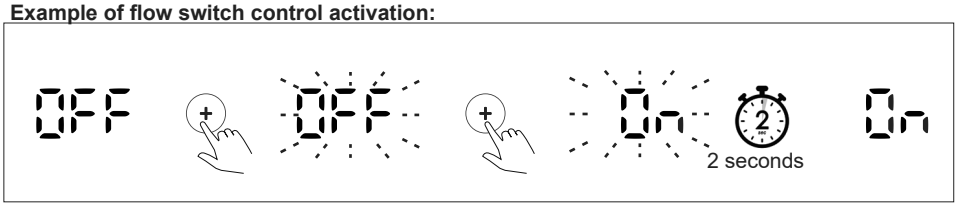




If FS is ON and the system does not detect any water flow, the equipment displays the FS alarm and electrolysis production is stopped immediately.

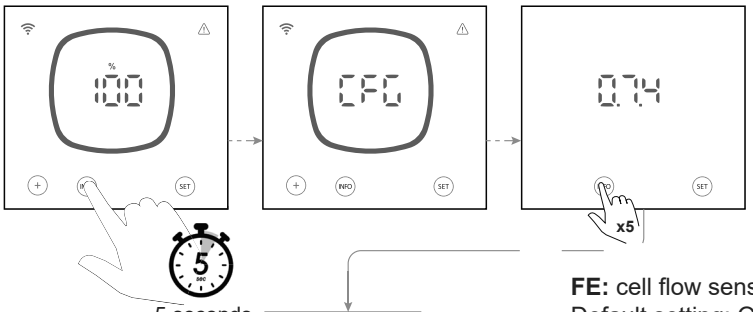


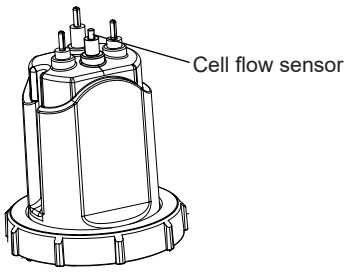
Example of flow switch control activation:



EN

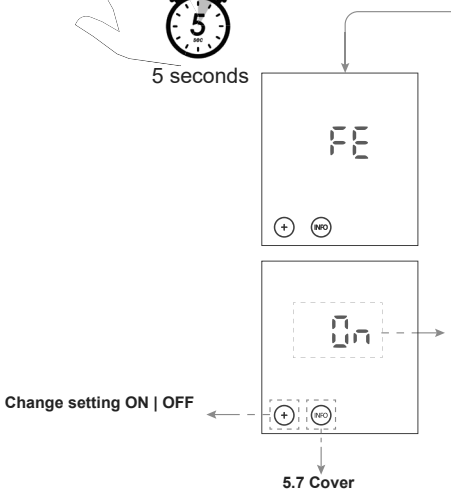
5.6 | Cell Flow Sensor (Flow Gas)



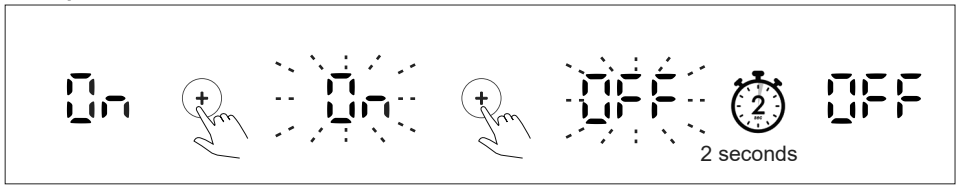


FE: cell flow sensor (flow gas).
Default setting: ON.

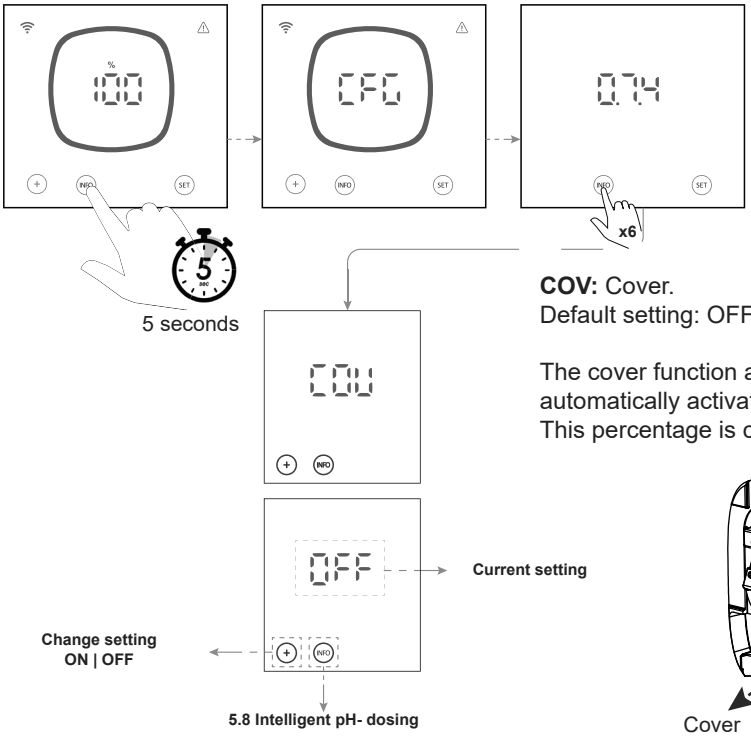
The cell flow detection system is activated when there is little or no water recirculation (flow) through the cell. Non-removal of electrolysis gas generates a bubble that electrically isolates the auxiliary electrode (electronic detection). Therefore, when the electrodes are introduced into the cell, the gas detector (auxiliary electrode) must be located in the upper part of the cell.
See the recommended installation diagram in section 2.3 of this manual.



Example of cell flow sensor deactivation

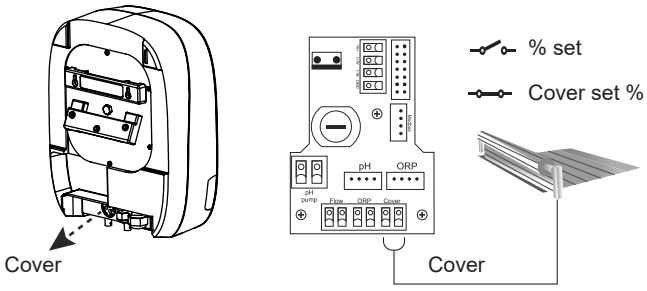


5.7 | Cover

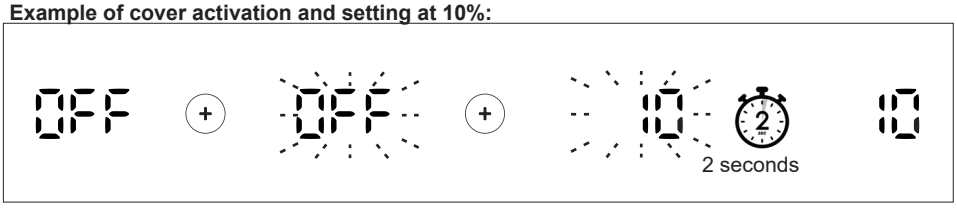


COV: Cover.
Default setting: OFF

The cover function allows configuration of a production set point so that this is automatically activated when the pool cover is closed for the winter.
This percentage is configurable (10–90%).

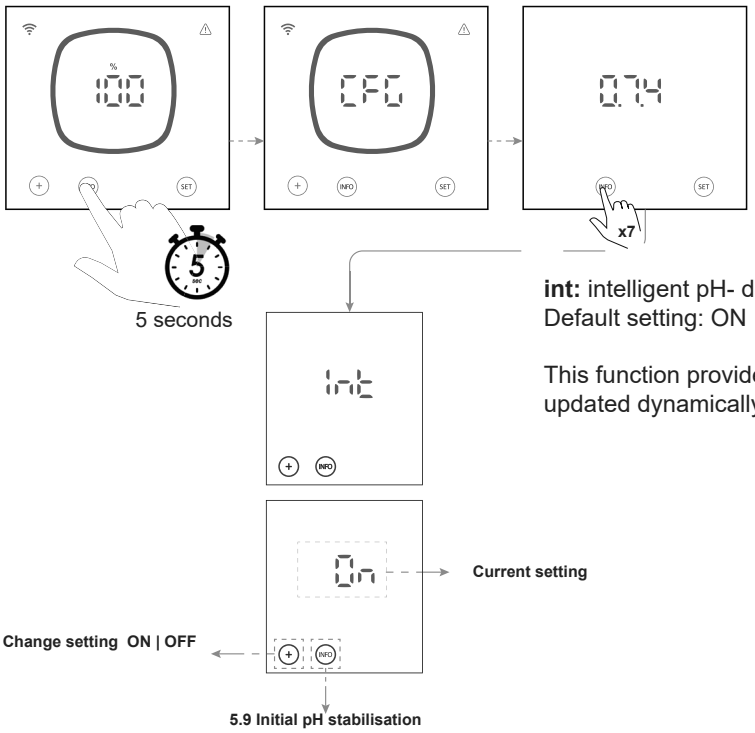


Example of cover activation and setting at 10%:



EN

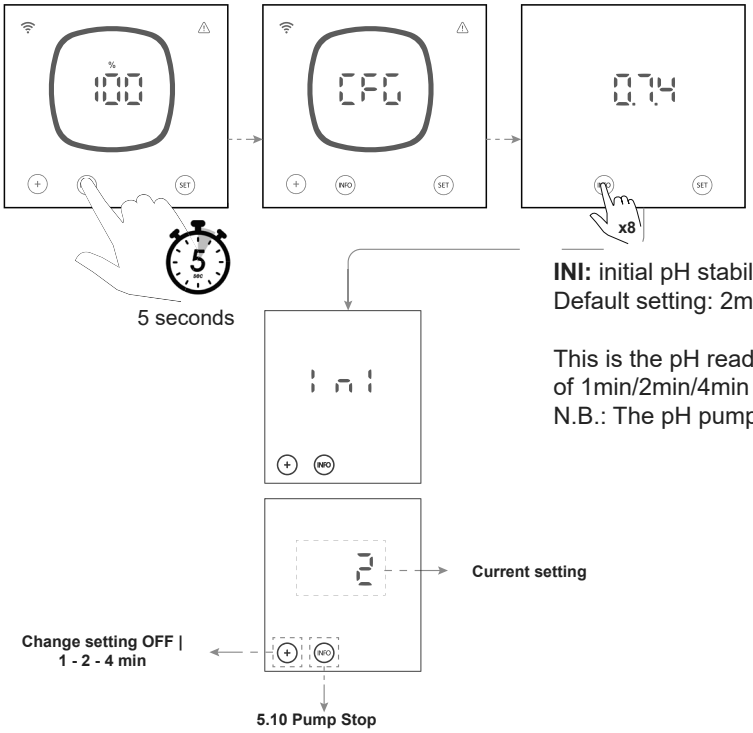
5.8 | Intelligent pH- Dosing



int: intelligent pH- dosing.
Default setting: ON

This function provides more precise pH control. The working cycle of the pump is updated dynamically depending on the measurement.

5.9 | Initial pH Stabilisation

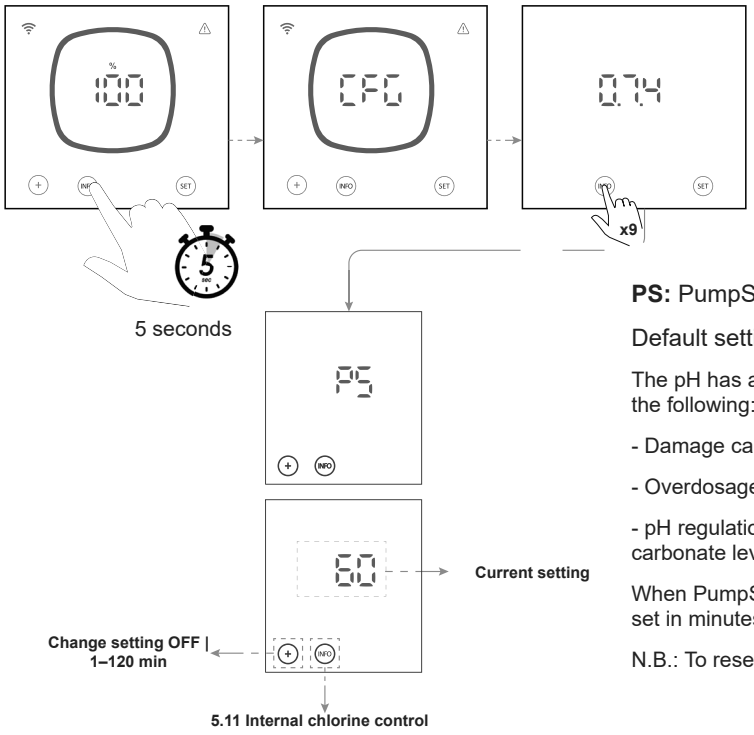


INI: initial pH stabilisation.
Default setting: 2min.

This is the pH reading stabilisation time. After switching on the equipment, a time of 1min/2min/4min can be set to obtain a stable pH reading.
N.B.: The pH pump will not dose during the stabilisation period.

EN

5.10 | PumpStop



PS: PumpStop.

Default setting: 60min.

The pH has a PumpStop safety system which acts on the dosing pump and prevents the following:

- Damage caused by dry running the pump (depleted pH-minus product).

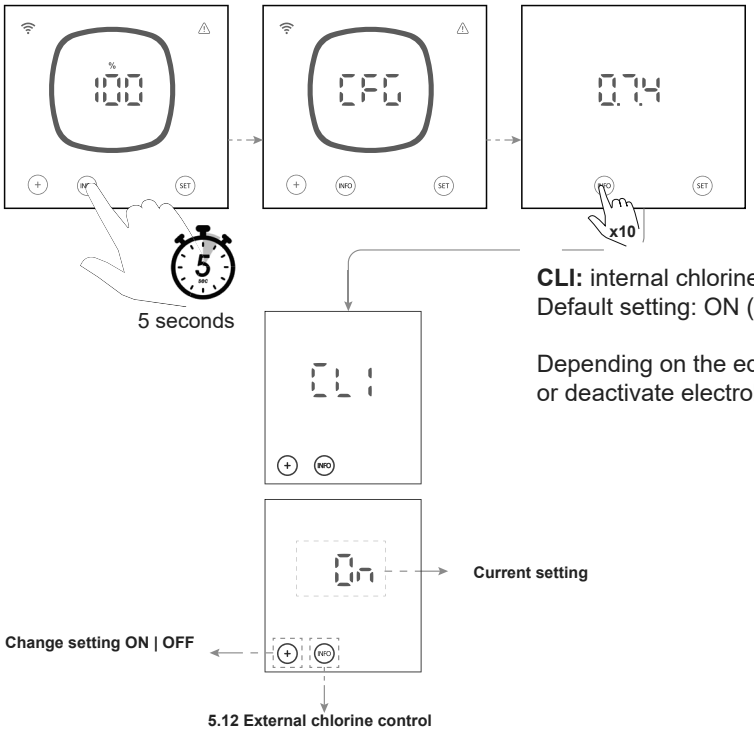
- Overdosage of pH Minus product (damaged or aged sensor).

- pH regulation problems due to high alkalinity of the water (freshly filled pool, high carbonate levels).

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

N.B.: To reset the PumpStop alarm, see chapter 6.5 PumpStop Alarm.

5.11 | Internal Chlorine Control

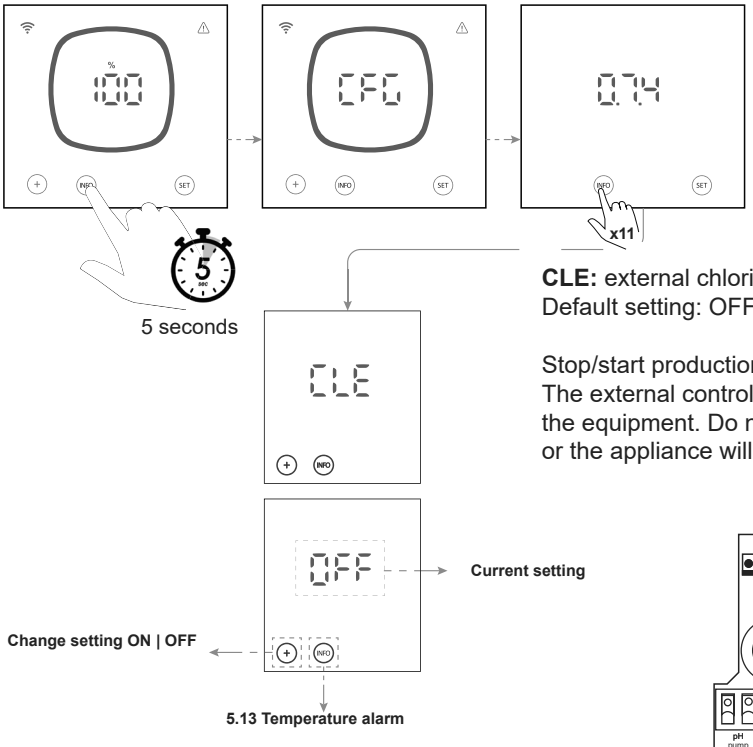


CLI: internal chlorine control.
Default setting: ON (version Ei2 EVO with ORP kit)

Depending on the equipment's ORP reading function, the equipment will activate or deactivate electrolysis to adjust it to the previously configured ORP set point.

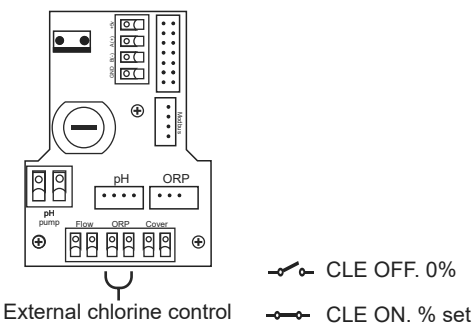
EN

5.12 | External Chlorine Control

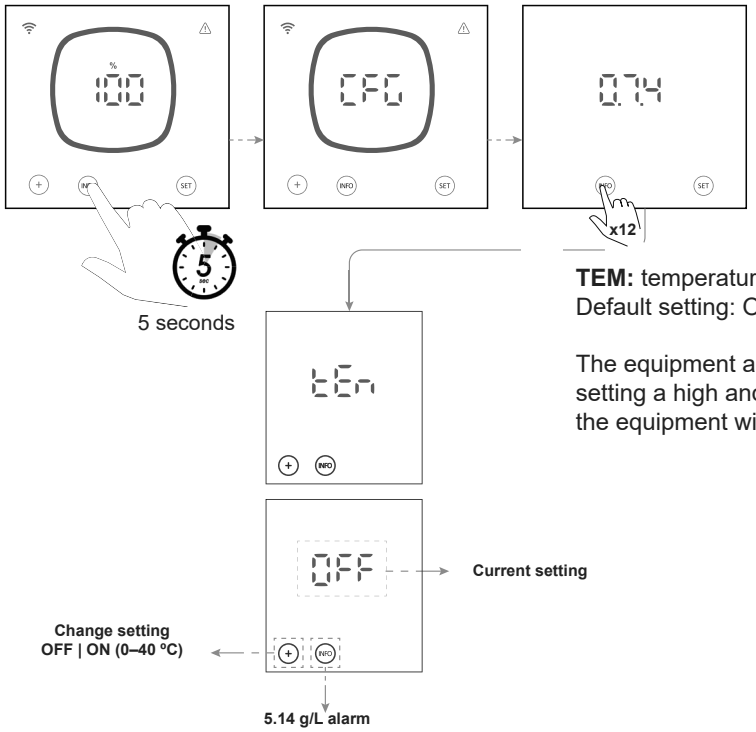


CLE: external chlorine control.
Default setting: OFF

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 CLE alarm.



5.13 | Temperature Alarm

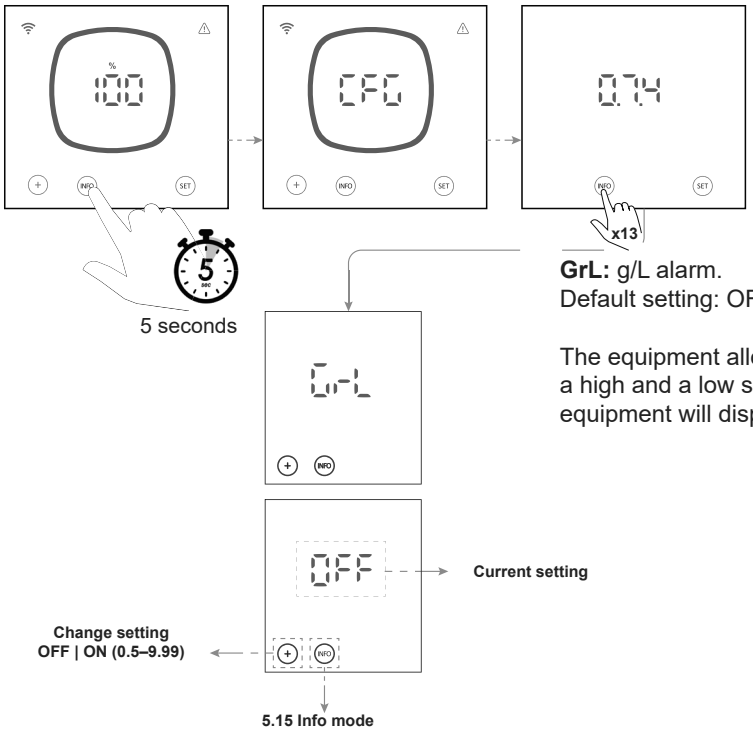


TEM: temperature alarm.
Default setting: OFF

The equipment allows for the operating temperature range to be configured, setting a high and a low temperature value. When the temperature is out of range, the equipment will display an alarm.

EN

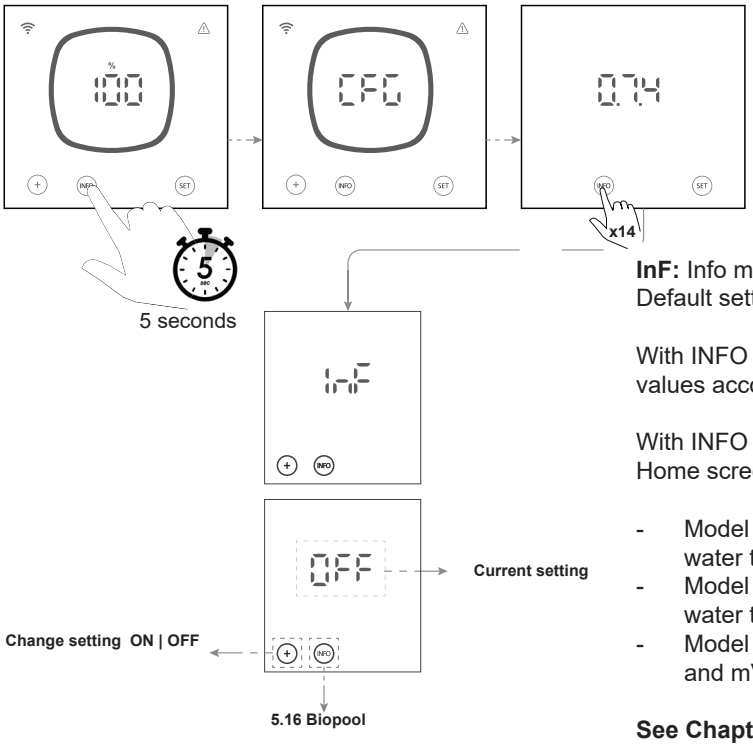
5.14 | g/L Alarm



GrL: g/L alarm.
Default setting: OFF

The equipment allows for the operating salinity range to be configured, setting a high and a low salinity g/L value. Should the salinity be out of range, the equipment will display an alarm.

5.15 | Info Mode



InF: Info mode.
Default setting: OFF

With INFO mode OFF, the equipment's Home screen will only display major values according to the equipment version installed (%, pH and ORP).

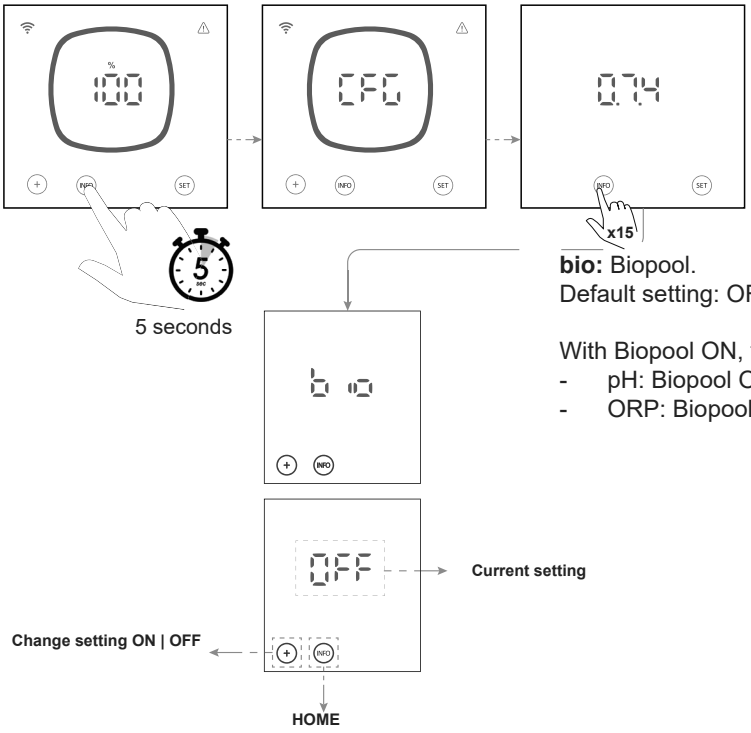
With INFO mode ON, the equipment will always show 3 variables on the Home screen.

- Model Ei2 iQ: cycles automatically between current production (%), water temperature and pool's g/L reading.
- Model Ei2 iQ evo pH: cycles between current production (%), pH and water temperature.
- Model Ei2 iQ evo pH/ORP: cycles between current production (%), pH and mV (ORP).

See Chapter 3.4 of this manual.

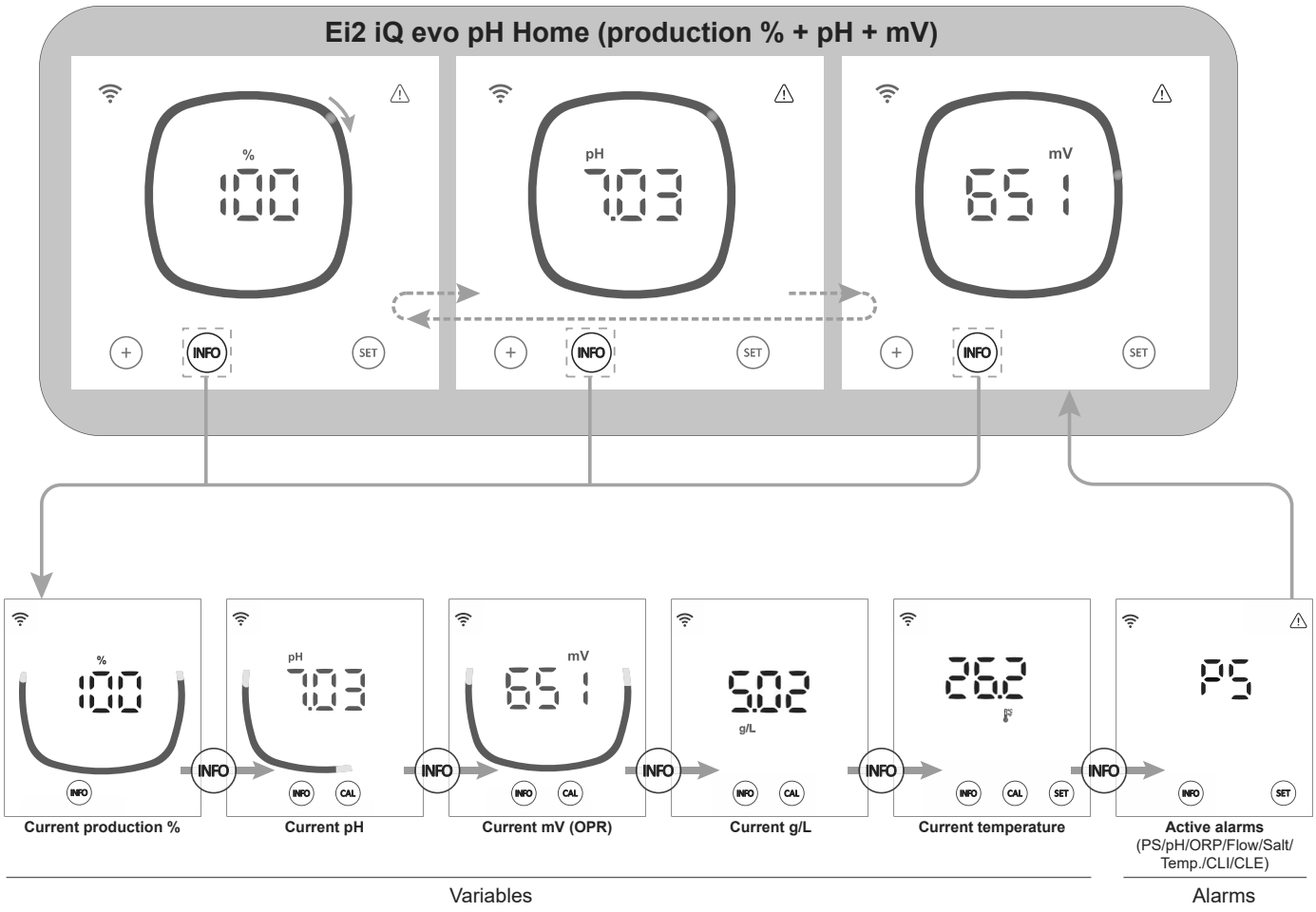
EN

5.16 | Biopool



bio: Biopool.
Default setting: OFF

With Biopool ON, the pH and ORP set point range is increased.
- pH: Biopool OFF 7.00–7.80 / Biopool ON 6.50–8.50
- ORP: Biopool OFF 600–850 / Biopool ON 300–850



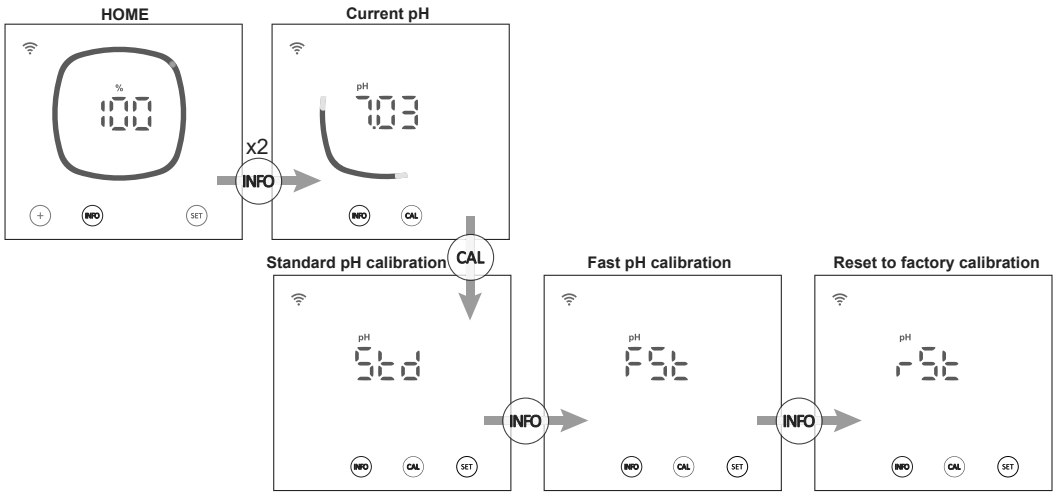
EN

The “INFO” key is used to navigate between current values.
The “CAL” key is used to access pH, ORP, TEMP and g/L calibration.

The following variables and alarms can be viewed from the Info menu:

Variables	Alarms
Production %	pH high/low
pH	mV(ORP) high
mV (ORP)	PumpStop
Salinity (g/L)	Conductivity high/low
Temperature (ºC/ºF)	Cell
	Temperature high/low
	Salinity high/low
	Flow switch
	Cell flow (flow gas)

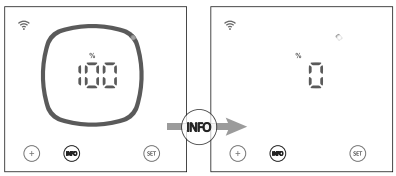
6.1 | Calibrating the pH Sensor



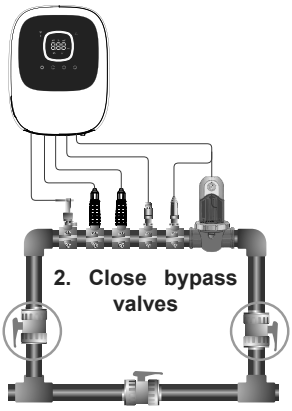
From the pH calibration menu, the equipment allows standard calibration, fast calibration or resetting the current calibration to factory settings:

- **Standard pH calibration**

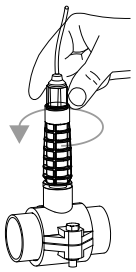
Standard calibration mode allows precise calibration of the sensor using two calibration solutions with pH 7.0 and pH 4.0. However, this requires that the sensor be removed from the installation.



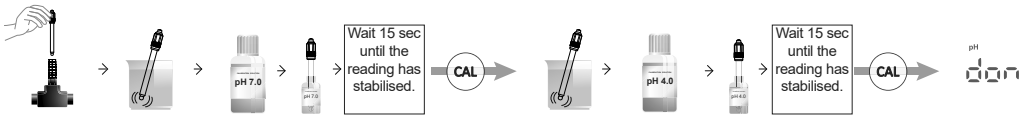
1. Set production % at 0%

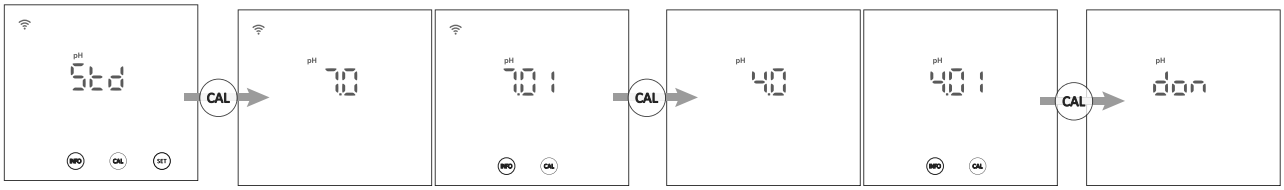


2. Close bypass valves



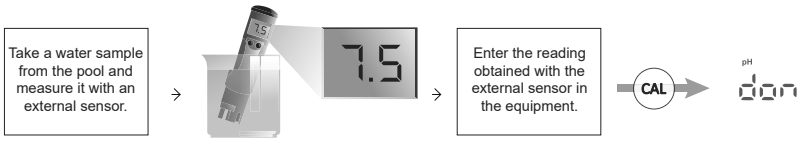
3. Remove pH sensor

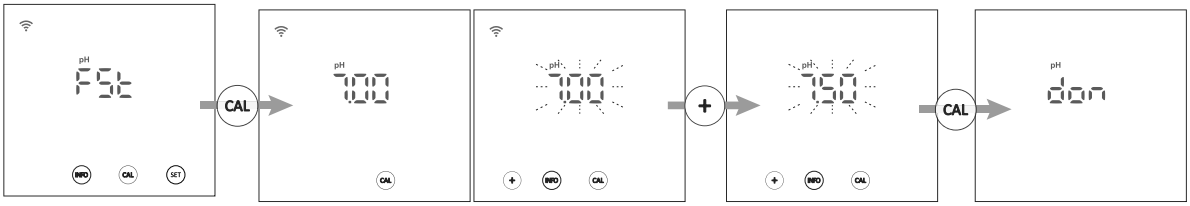




- **Fast pH calibration**

Fast calibration 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. For this type of calibration you need to know the current pH of the pool water, which can be read using an external sensor.

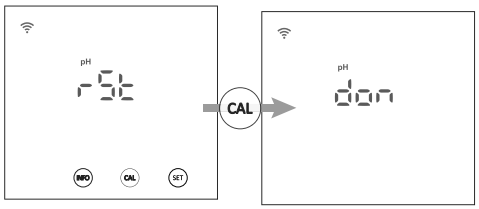




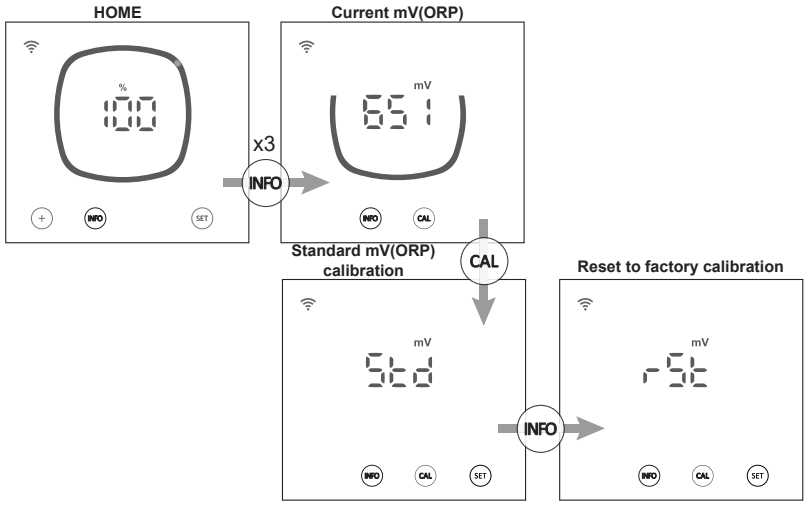
EN

- **Reset to default calibration values**

Resetting calibration values to default values deletes any previous calibration (STD or FST) from the equipment.



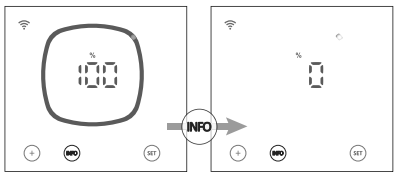
6.2 | Calibrating the mV (ORP) Sensor



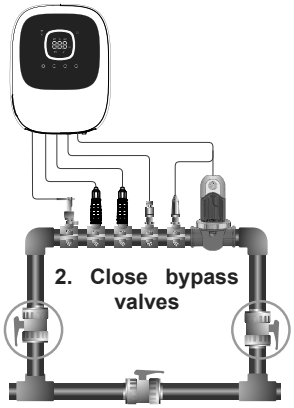
From the mV(ORP) calibration menu, the equipment allows standard calibration or resetting the current calibration to factory settings:

- **Standard mV(ORP) calibration**

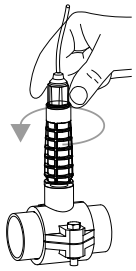
Standard calibration mode allows precise calibration of the sensor using a 470 mV calibration solution. However, this requires that the sensor be removed from the installation.



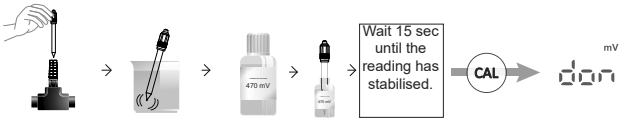
1. Set production % at 0%

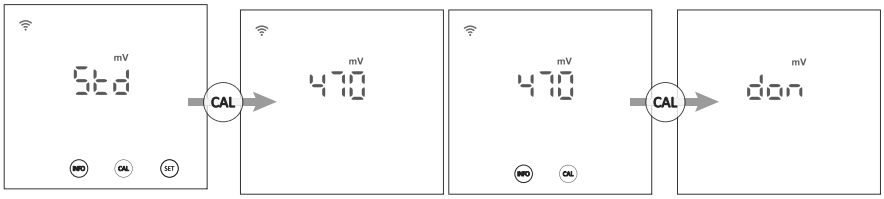


2. Close bypass valves



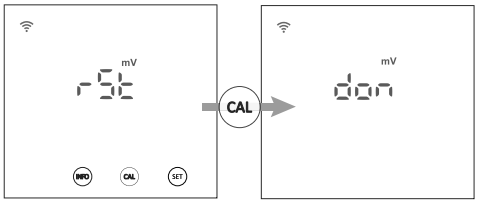
3. Remove ORP sensor





- **Reset to default calibration values**

Resetting calibration values to default values deletes any previous calibration from the equipment.



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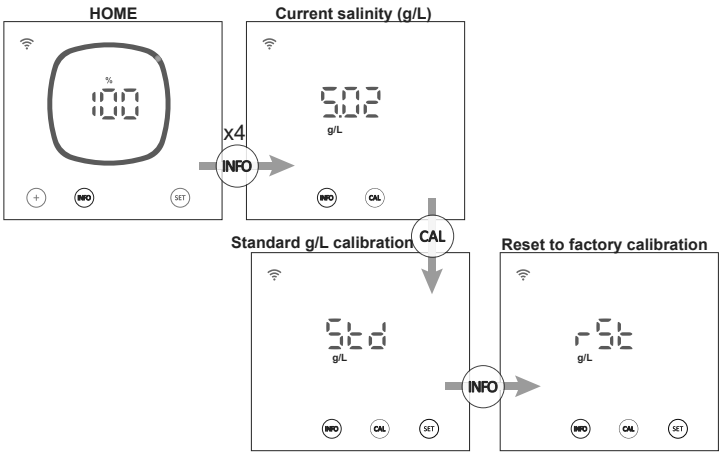
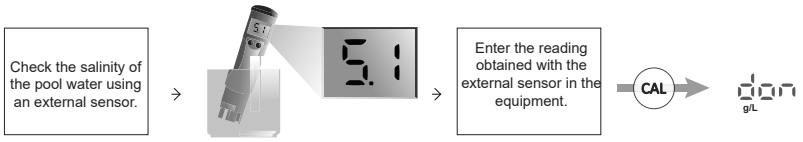
6.3 | Calibrating the Salinity (g/L)

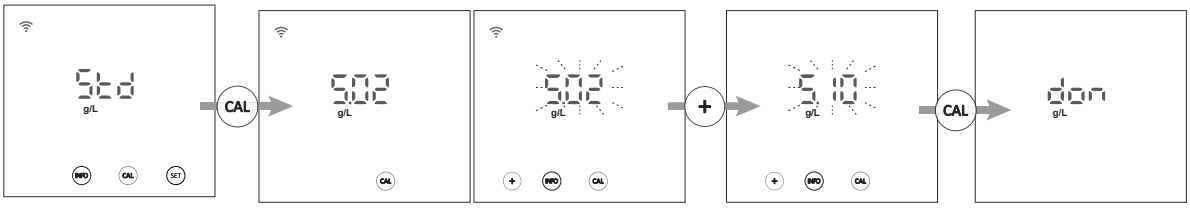


From the salinity calibration menu, the equipment allows standard calibration or resetting the current calibration to factory settings:

- **Standard salinity (g/L) calibration**

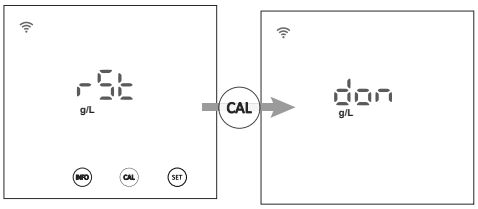
Salinity (g/L) calibration mode allows routine recalibration to correct small errors in readings. For this you need to know the current salinity of the pool water, which can be read using an external sensor.





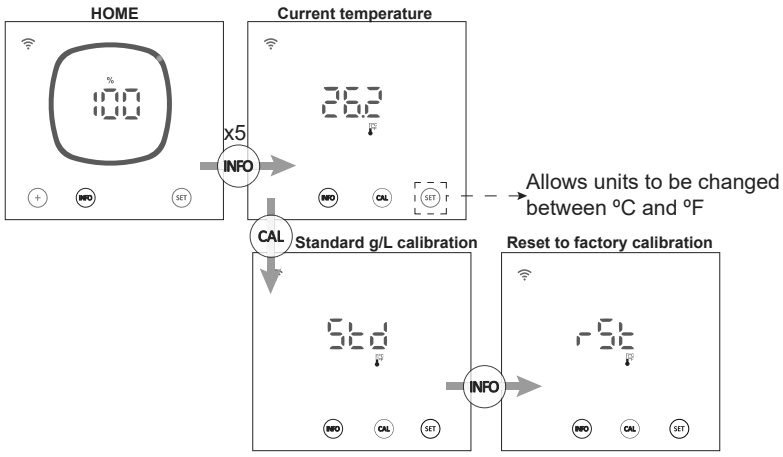
- **Reset to default calibration values**

Resetting calibration values to default values deletes any previous calibration from the equipment.



EN

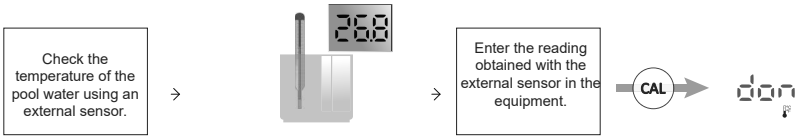
6.4 | Calibrating the Temperature

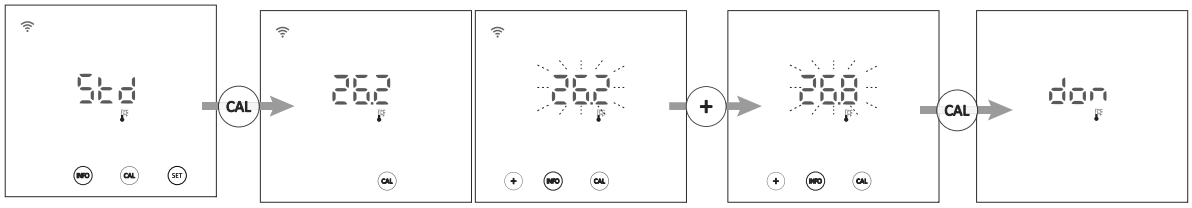


From the temperature calibration menu, the equipment allows standard calibration or resetting the current calibration to factory settings:

- **Standard temperature calibration**

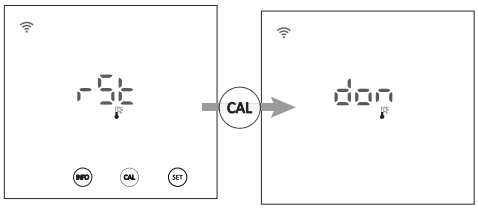
Temperature calibration mode allows routine recalibration to correct small errors in readings. To know the current temperature of the pool water, you can use an external sensor.





- **Reset to default calibration values**

Resetting calibration values to default values deletes any previous calibration from the equipment.

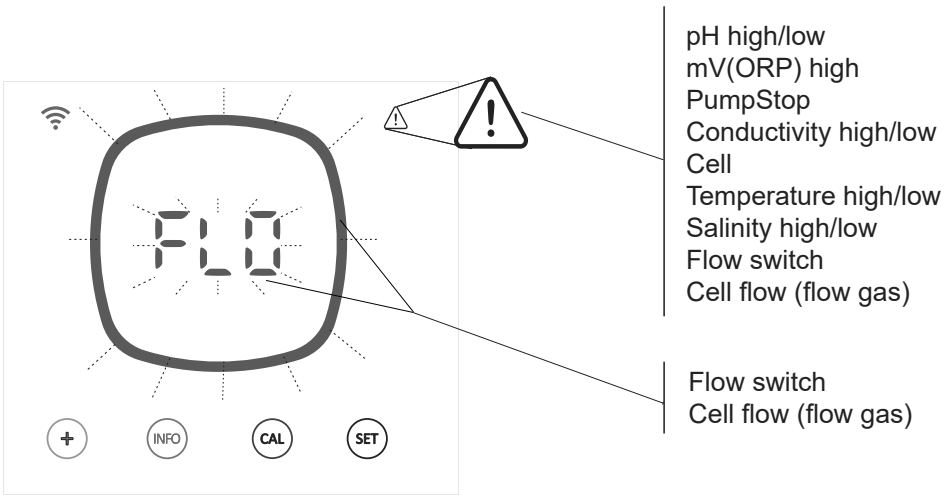


EN

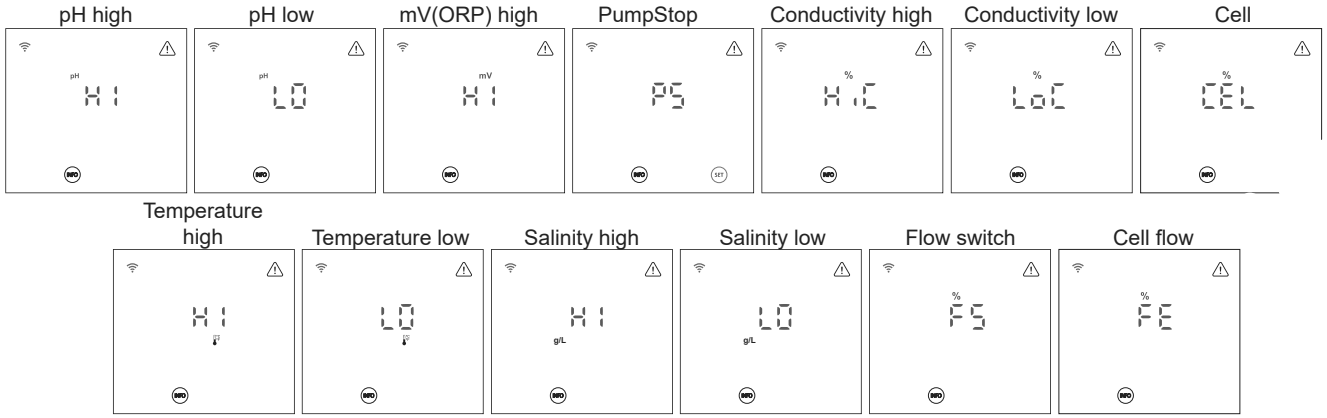
6.5 | Alarm Information

When the equipment has an active alarm, an alarm signal appears on the Home screen.
In addition to this signal, if it is a flow alarm (FS or FE) the circle on the Home screen will flash. To check the remaining alarms, access the alarm menu.

Indication of alarms on the Home screen

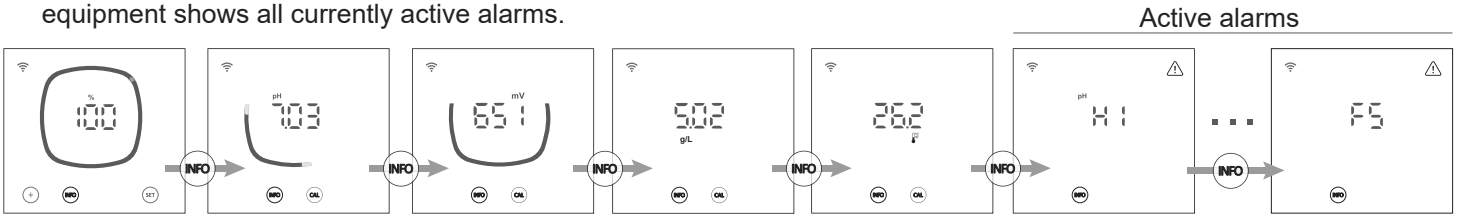


Active alarm displays

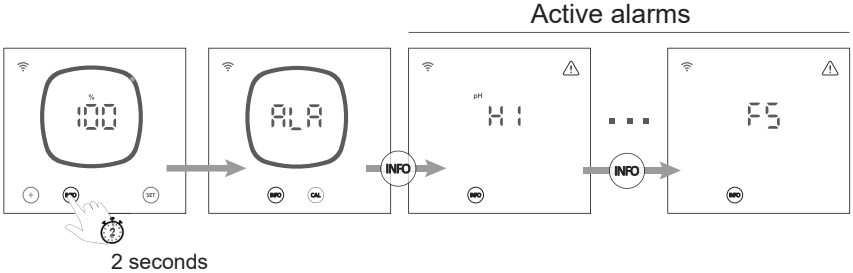


There are two options for checking active alarms:

- **Using the INFO menu:** from the equipment's Home screen, press the "INFO" key to access the INFO menu and navigate through this menu using the "INFO" key. After displaying %, pH, mV(ORP), g/L and temperature values, the equipment shows all currently active alarms.

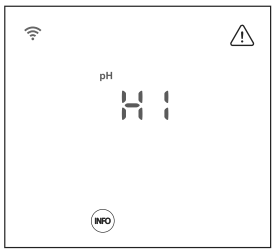


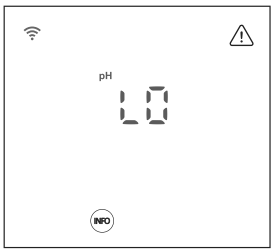
- **Using the Alarms menu:** to access the Alarms menu, press and hold the "INFO" key on the Home screen for 2 seconds until the screen shows "ALA"; release the key. All currently active alarms will then be shown on the screen.



EN

- pH high/low alarm





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

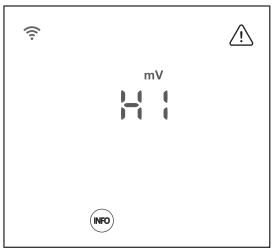
If the high pH alarm appears, the pH pump will be switched off according to the safety values set.

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.

- mV(ORP) high alarm



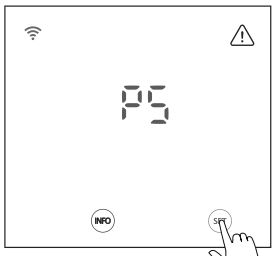
- ORP high alarms appear if the reading is not within established safety limits. The mV(ORP) high limit cannot be changed.

If the mV(ORP) high alarm appears, production will cease.

Standard mode
mV(ORP) > 855 = ORP HIGH ALARM = Dosing is stopped

Biopool mode
mV(ORP) > 855 = ORP HIGH ALARM = Production is stopped

- PumpStop alarm



Reset PumpStop alarm

The pH has a PumpStop safety system which acts on the dosing pump and prevents the following:

- Damage caused by dry running the pump (depleted pH-minus product).

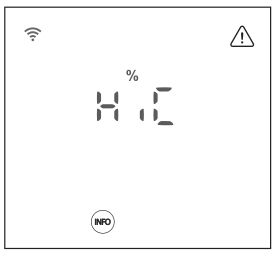
- Overdosage of pH Minus product (damaged or aged sensor).

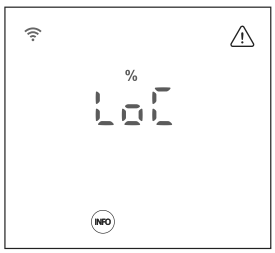
- pH regulation problems due to high alkalinity of the water (freshly filled pool, high carbonate levels).

When PumpStop is ON (default: 60min), the system stops the dosing pump after a time set in minutes without having reached the pH set point.

To reset the PumpStop alarm, press the “SET” key while the alarm is displayed.

- Conductivity high/low alarm



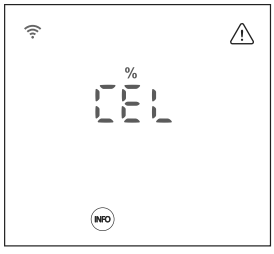


- The conductivity alarm will appear when production % cannot reach the set production due to high or low conductivity.

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

HiC: conductivity high (salt and/or temperature ↑ ↑)
LoC: conductivity low (salt and/or temperature ↓ ↓)

- Cell alarm

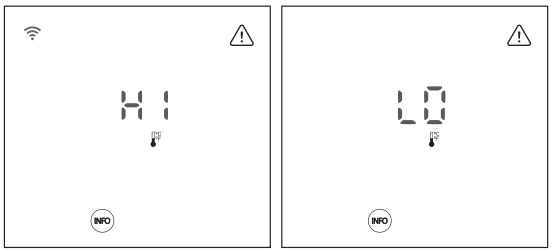


- The cell alarm will appear when the devices detect that the electrode is at the end of its life (passivated).

Once the passivated electrode has been replaced by a new one, the equipment will automatically reset the cell alarm after a complete polarity cycle (direct + inverse).

Estimated lifetime of electrodes = 8,000 hours

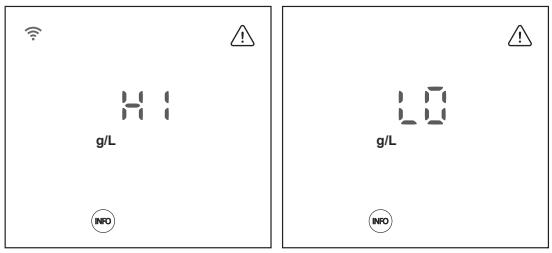
- Temperature high/low alarm



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

When the water temperature is very low, the equipment might not reach 100% production due to low conductivity.

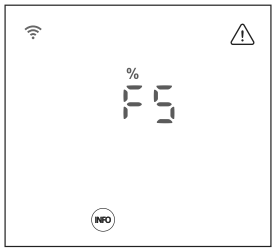
- Salinity high/low alarm

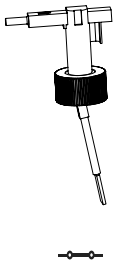


The salinity alarm will appear when salt g/L values are out of range.

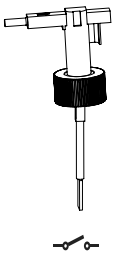
Normally, when the g/L value is too low or too high it will affect production by the equipment due to the conductivity of the water.

- Flow-switch alarm





Flow OK = production % OK

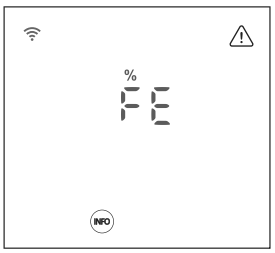


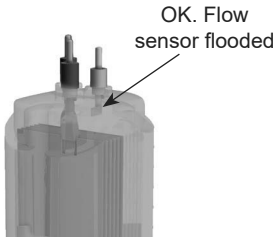
No flow = FS ALARM

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.

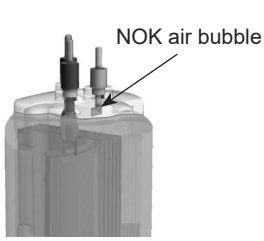
EN

- Cell flow alarm (flow gas)





Flow OK = production % OK



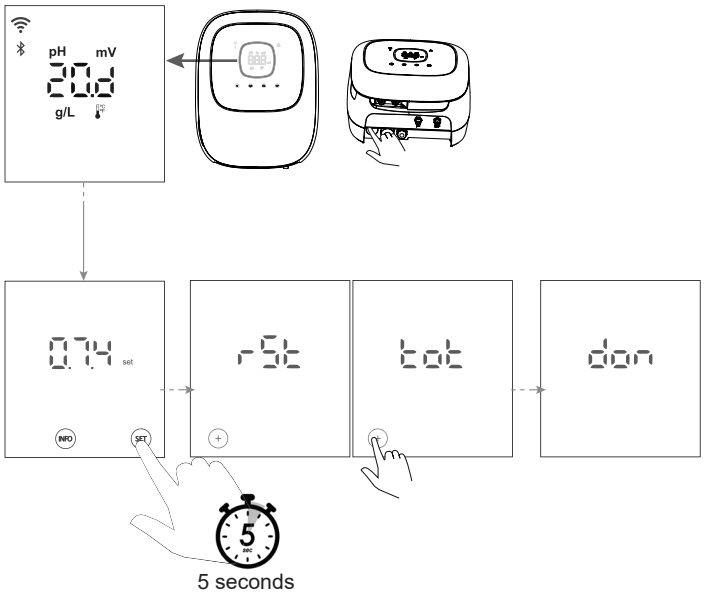
No flow = FE ALARM

The cell flow alarm is activated when there is little or no water recirculation (flow) through the cell.
Non-removal of electrolysis gas generates a bubble that electrically isolates the auxiliary electrode (electronic detection).

⑦ Total/Partial Resets

As we have seen in chapters 3.2 and 5.1, the equipment has two types of reset, total and partial.

- **Total reset (3.2):** All general parameters plus all Config menu settings are reset.



	Parameter	Value
General parameters	pH set	7.20
	mV (ORP) set	750
	% set	0
	pH driver	ON
	mV (ORP) driver	OFF
	pH calibration	Factory calibration
	mV (ORP) calibration	Factory calibration
	Temperature calibration	Factory calibration
	g/L calibration	Factory calibration
	Wi-Fi/BT	ON
Config menu	Polarity inversion	2h
	Boost	OFF
	Flow switch	OFF
	Cell flow	ON
	Cover	OFF
	Intelligent pH	ON
	pH initialisation time	OFF
	PumpStop	ON (60min)
	Internal chlorine control (CLI)	ON
	External chlorine control (CLE)	OFF
	Temperature alarm	OFF
	g/L alarm	OFF
	Info mode	OFF
	Biopool	OFF

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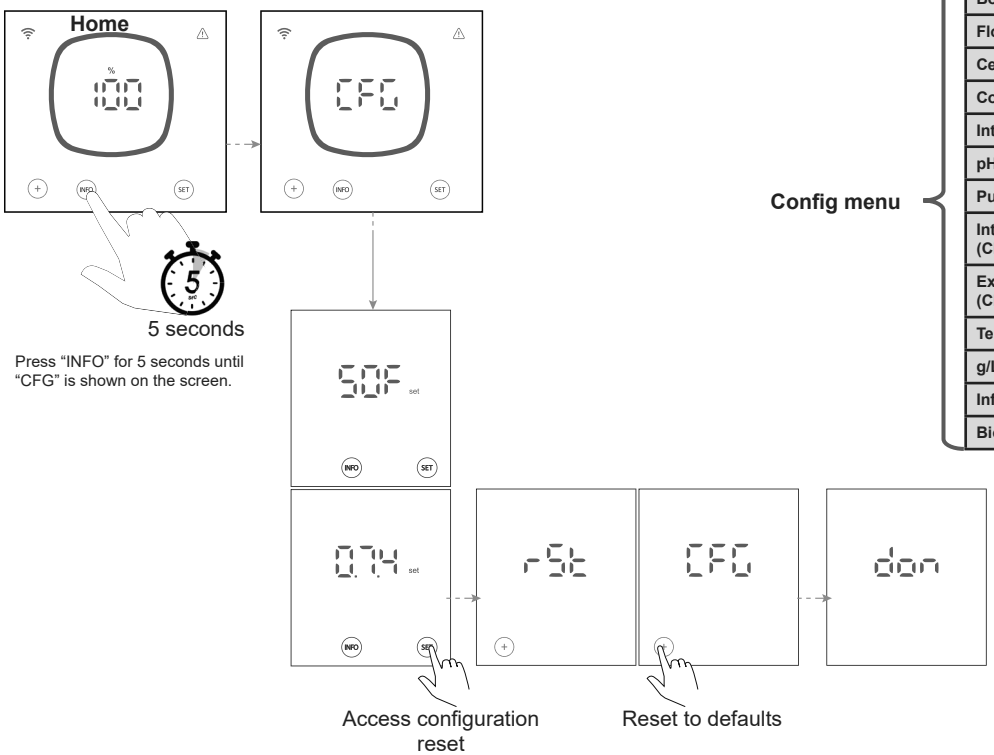
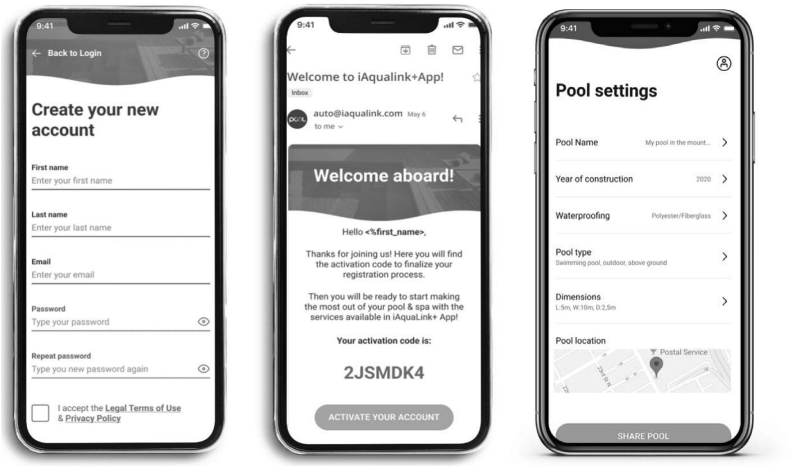
- **Partial reset (Config menu) (5.1):** only the Configuration menu settings are reset to default values.

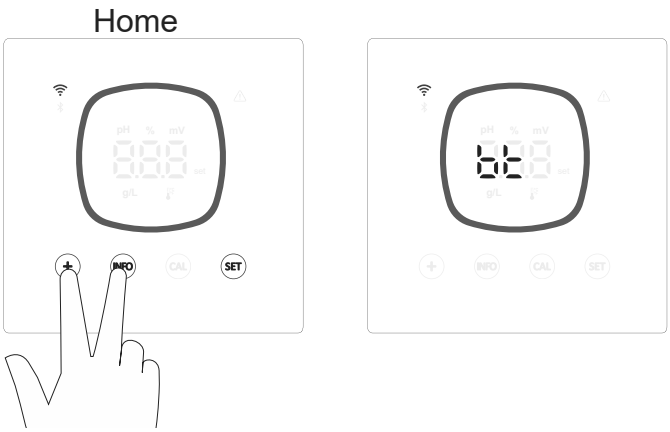


	Parameter	Value
Config menu	Polarity inversion	2h
	Boost	OFF
	Flow switch	OFF
	Cell flow	ON
	Cover	OFF
	Intelligent pH	ON
	pH initialisation time	OFF
	PumpStop	ON (60min)
	Internal chlorine control (CLI)	ON
	External chlorine control (CLE)	OFF
	Temperature alarm	OFF
	g/L alarm	OFF
	Info mode	OFF
	Biopool	OFF

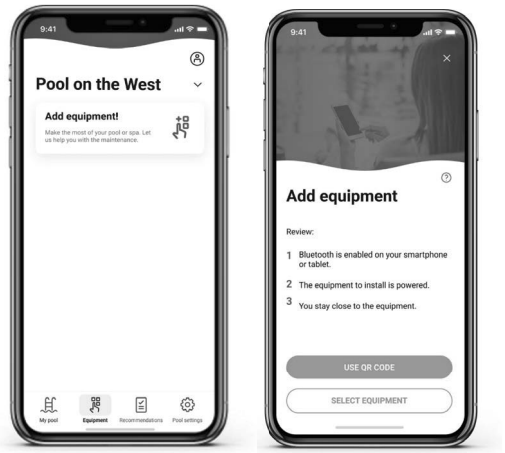
1) Download and install the FLUIDRA POOL app.



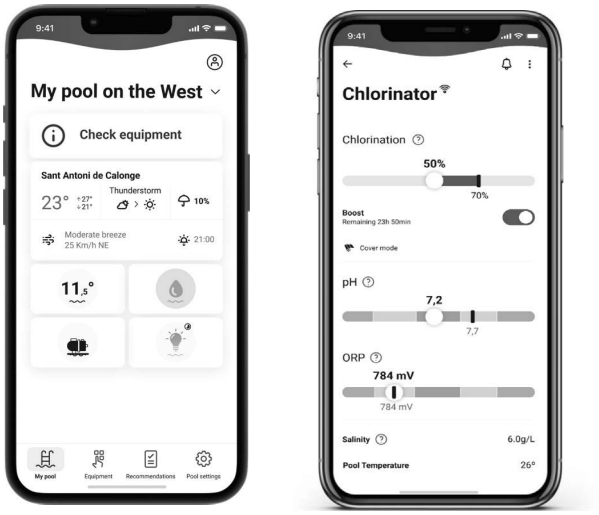
2) Create a user account and set up a new installation.



3) Enter the pairing mode from the Home screen (press "+" and "INFO" simultaneously for 5 seconds).
"bt" will be displayed on the screen and flash next to a Bluetooth symbol.



4) Press "Add equipment" and follow the FLUIDRA POOL instructions.



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⑨ Maintenance

9.1 | Electrolysis Cell Maintenance

The cell should be maintained in suitable condition to ensure long-lasting operation. The saline electrolysis system has an automatic electrode cleaning system to avoid the build up of limescale on the electrodes; therefore, it should not be necessary to clean them. Should it be necessary to clean the interior of the cell, proceed as follows:

1. Disconnect the 230 Vac power supply from the equipment.
2. Remove the quick connectors from the electrodes and remove the electrode pack.
3. Use a diluted hydrochloric acid solution (1 part acid to 10 parts water), submerging the electrode pack in this solution for a maximum of 10 minutes.
4. NEVER SCRAPE OR BRUSH THE CELL OR THE ELECTRODES.

Saline electrolysis system electrodes consist of titanium strips coated in noble metal oxides. The electrolysis processes that occur on their surface cause their progressive wear; therefore, to increase their useful life, the following points should be taken into account:

5. Even though saline electrolysis systems are SELF-CLEANING, prolonged operation of the system at pH values over 7.6 in hard water may produce an accumulation of limescale on the surface of the electrodes. This limescale progressively deteriorates the coating, causing a reduction in their useful life.
6. Frequent cleaning/washing of the electrodes (as described above) will shorten their useful life.
7. Prolonged operation of the system in waters with salinity below 3 g/L will cause a premature deterioration of the electrodes.
8. Frequent use of algaecide products with a high copper content may create copper deposits on the electrodes, progressively damaging the coating. Remember that the best algaecide is chlorine.

Electrodes
The system will display the word “CEL” to indicate a malfunction of the electrolysis cell electrodes. This malfunction is normally due to the electrode passivation process, occurring once they have reached the end of their useful life. However, and despite being a self-cleaning system, this malfunction may be the result of the formation of excessive incrustations on the electrodes, when the system operates in very hard waters and with high pH values.

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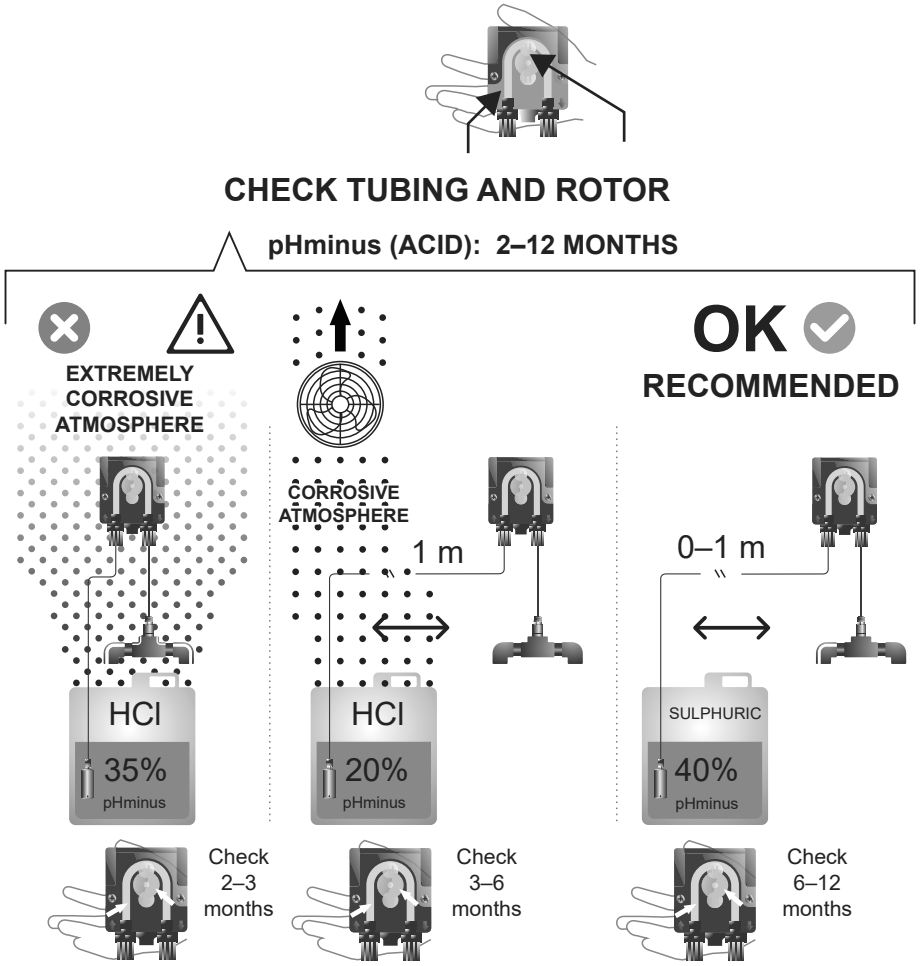
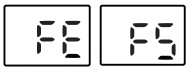
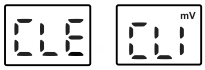
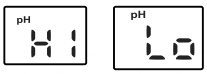
9.2 | pH/ORP Sensor Maintenance (2–12-Month Maintenance)

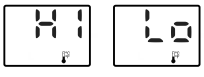
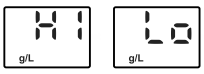
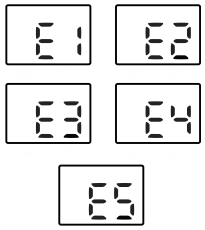
1. Regular visual inspections are recommended to check that the sensors are in good condition.
2. Ensure that the sensor membrane is always damp.
3. If a sensor is not going to be used for an extended period of time, store it in a storage solution.
4. To clean a sensor, do not use abrasives that could score its surface.
5. Should the dirt not come off using a soft damp cloth, a cleaning solution may be used.
6. Sensors are consumable items that must be replaced after a certain period of use.


CHECK TUBING AND ROTOR
pHminus (ACID): 2–12 MONTHS
EXTREMELY CORROSIVE ATMOSPHERE
CORROSIVE ATMOSPHERE
1 m
OK
RECOMMENDED
0–1 m
HCl
35%
pHminus
HCl
20%
pHminus
SULPHURIC
40%
pHminus
Check 2–3 months
Check 3–6 months
Check 6–12 months

<table>
<tr><th>Message</th><th>Solution</th></tr>
<tr><td>Flow alarm
- Gas sensor (FE)
- Flow sensor (FS)
  </td><td>The flow alarm will appear if the cell is not completely flooded (electrode gas sensor), or if there is no water flow (flow switch sensor).
• Check the pump, filter and backwash valve. Clean if necessary.</td></tr>
<tr><td>STOP CL alarm
  </td><td>The STOP Cl alarm may appear for one of three reasons:
CLE = Stopped by an external controller.
• Check the external controller (ORP/ppm) and the reading.
• If there is no external controller, disable the CLE function (CLE=off), or production will not start.

CLI = Stopped by the value of ClmV or Clppm in the device.
• Check the level of chlorine in the pool using a photometer or a test strip.
• If necessary, clean and calibrate the ORP/ppm sensor.</td></tr>
<tr><td>ORP (mV) – High alarm
  </td><td>Low or high alarms appear if the reading is not within established safety limits.

High ClmV safety limits cannot be changed.
<table><tr><td>Mode</td><td>ORP high alarm</td></tr><tr><td>Standard</td><td>ClmV > 855</td></tr><tr><td>Biopool</td><td>ClmV > 855</td></tr></table>• Check the level of chlorine in the pool using a photometer or a test strip.
• If necessary, clean and calibrate the ORP sensor.
• If the free chlorine value is low and the total chlorine value is high, reduce the chloramines by superchlorinating with sodium hypochlorite.
• If chlorine ppm are 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.
• 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.</td></tr>
<tr><td>pH Low/High alarm
  </td><td>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><tr><td>Mode</td><td>Low pH alarm</td><td>High pH alarm</td></tr><tr><td>Standard</td><td>pH < 6.5</td><td>pH > 8.5</td></tr><tr><td>Biopool</td><td>pH < 6.0</td><td>pH > 9.0</td></tr></table>• Check the pH of the pool water using a photometer or a test strip.
• If necessary, clean and calibrate the pH sensor. For further information on sensor maintenance, see sections 6.1, 6.2 and 8 of this manual.
• 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.
• 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.</td></tr>
<tr><td>PUMP-STOP alarm
  </td><td>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.
• Check the pH of the pool using a photometer or a test strip.
• If necessary, clean and calibrate the pH sensor.
• Check and adjust the alkalinity of the water (consult your pool specialist).
• Check the levels of acid in the container.</td></tr>
<tr><td>Cell alarm
  </td><td>The cell alarm will appear when the devices detect that the electrode is at the end of its life (passivated). Estimated lifetime of electrodes = 8,000–10,000 h
• If necessary, replace the electrode.</td></tr>
<tr><td>Low/High TEMPERATURE sensor alarm
  </td><td>• The temperature alarm will appear when temperature values are outside the range set by the user. (The temperature alarm is OFF by default.)
• When the water temperature is very low, the equipment will not reach 100% production due to low conductivity.</td></tr>
<tr><td>Low/high g/L alarm
  </td><td>• Like the temperature alarm, this alarm will appear when the g/L salt values are outside the range set by the user. (The g/L alarm is OFF by default.)
• 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.</td></tr>
<tr><td>Alarms E1–E5
  </td><td><table><tr><td>E1</td><td>When the calibration time is longer than 5 min without user intervention</td></tr><tr><td>E2</td><td>When the deviation between readings during the calibration process is higher than the permissible range (e.g. faulty sensor)
• Temperature: Deviation ±20 °C
• pH: Deviation ±1 pH unit
• ORP: Deviation ±60 mV in 470 mV solution</td></tr><tr><td>E3</td><td>-</td></tr><tr><td>E4</td><td>Unable to calibrate T, fast pH and salinity (g/L) when filtering is OFF</td></tr><tr><td>E5</td><td>Triggered when calibration cannot be performed if:
• Temperature: There is no NTC.
• Salinity g/L: Production is below 30%.
• pH/ORP: No driver, or system is initialising.</td></tr></table></td></tr>
</table>

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⑪ Technical Specifications and Features

Standard operating voltage
230V AC, 50/60 Hz.
Cable: 3 x 1.0 mm2, length 2 m.
MOD. 12 0,45 A
MOD. 20 0,65 A
MOD. 25 0,85 A

Fuse
MOD. 12 2 A T (5x20 mm)
MOD. 20 3.15 A T (5x20 mm)
MOD. 25 3.15 A T (5x20 mm)

Output voltage
MOD. 12 23.0 VDC / 2.5 A
MOD. 20 24.0 VDC / 4.0 A
MOD. 25 24.0 VDC / 5.0 A

Production
MOD. 12 10–12 g
MOD. 20 16–20 g
MOD. 25 20–25 g

Minimum recirculation flow
MOD. 12 5 m^3/h
MOD. 20 6 m^3/h
MOD. 25 8 m^3/h

Number of electrodes
MOD. 12 6
MOD. 20 11
MOD. 25 11

Net weight (including packaging)
MOD. 12 13 kg
MOD. 20 15 kg
MOD. 25 16 kg

Control system
- Microprocessor
- Touch control buttons and operational indicator LEDs
- I/O control: 3 voltage-free contact inputs for automatic cover status, ORP/residual chlorine controller, and external flow
- Output to cell: production control (10 discrete levels)
- Salinity / temperature range:
4–8.5 g/L / 15–40 ºC
Integrated pH/ORP controller (only in Evo and Evo + ORP kit models)
- Non-isolated Modbus
- pH pump control 220 V / 0.5 A output (Evo models only)

Self-cleaning
Automatic, by inverting the polarity

Operating Temperature
0–50 ºC
Refrigeration by natural convection

Material
- Control unit
ABS
- Electrolysis cell
Methacrylate derivative Clear

pH sensor
Body: plastic (blue)
pH range 0 -12
Solid electrolyte

ORP sensor
Body: plastic (yellow)
Range 0–1000 mV
Solid electrolyte

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⑫ Warranties

GENERAL CONSIDERATIONS

- In accordance with these conditions, the seller guarantees that the product covered by this guarantee conforms to its specifications at the moment of its 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.
- The warranty period will be calculated from the date of delivery to the purchaser.

Specific warranties:

* The electrodes are covered by a 2-YEAR warranty, without extensions.
* The pH sensor are covered by a 2-YEAR warranty without extensions.
* The ORP sensor are covered by a 1-YEAR warranty without extensions.
* These specific warranty periods are particularly subject to the limitations set out in the "LIMITATIONS" section.

- If the Product fails compliance and the purchaser informs the seller during the Warranty Period, the seller shall repair or replace the Product, at their own expense, in the place 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 compliance failure is sufficiently important, 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 must provide proof of the date of purchase and delivery of the Product.
- When more than six months have elapsed since 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 existence of the alleged fault.
- This Warranty Certificate does not limit or prejudice any consumer rights under other 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 made to consumers. By "consumer", we refer to any individual who acquires the Product for any purpose that falls outside their professional activity.
- No guarantee is offered for normal product wear and tear, nor for any fungible or consumable parts, components or materials.
- 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.
- Damage or faults in the Product due to any of the following causes:

1. Inadequate system programming and/or calibration in the pH/ORP sensors on the part of the user.
2. Explicit use of unauthorised chemical products.
3. Exposure to corrosive environments and/or temperatures below 0 ºC or above 50 ºC.
4. Operation at a pH greater than 7.6
5. Operation at salinities below 3 g/L of sodium chloride and/or temperatures below 15 ºC or above 40 ºC.

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(BARCELONA)