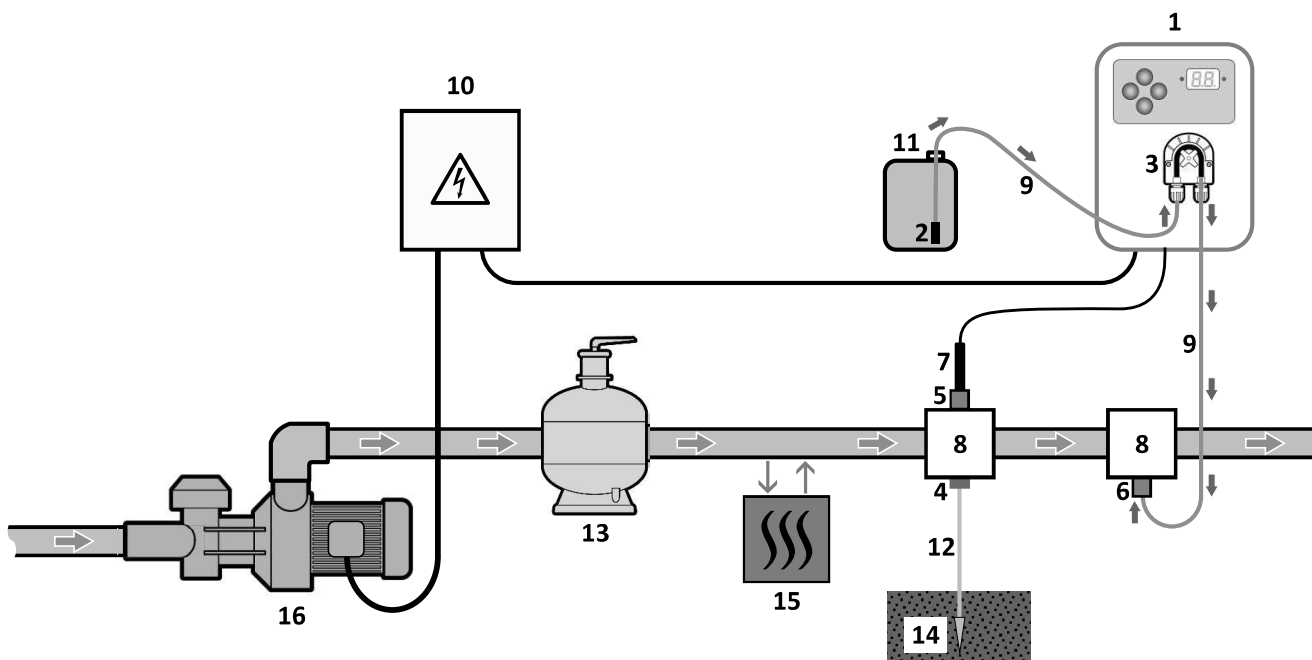


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## 1. INSTALLATION DIAGRAM



- The chlorine container must be 2 meters away from any electrical equipment.
- It is essential to use anti-scale liquid chlorine. Any damage to the equipment due to crystallization of scale cannot be covered by the warranty.



- 1 : Electronics unit
- 2 : Filter with ballast
- 3 : Peristaltic pump
- 4 : Pool Terre *(optional)*
- 5 : Probe holder
- 6 : Injection connector
- 7 : ORP probe
- 8 : Bracket
- 9 : Semi-flexible tubing

### **ELEMENTS NOT SUPPLIED :**

- 10 : Electrical power supply
- 11 : Chlorine container
- 12 : Copper cable
- 13 : Filter
- 14 : Ground rod
- 15 : Heat pump
- 16 : Filtration pump

## 2. DETAILS ABOUT THE ORP CHECK

The amount of chlorine required can vary depending on several conditions :

- Covered pool (by sheeting, cover or panels)  
→ *Low chlorine requirement (because there is no UV).*
- Sudden rise in the number of people using the pool  
→ *Very large amounts of chlorine needed, but on a temporary basis.*
- Indoor pool or sheltered pool  
→ *Reduced need for chlorine (because of low exposure to external pollution), but which tends to increase depending on the frequency of use of the swimming pool.*

Given this range of possible configurations, chlorine production must be managed according to requirements. The ORP check enables you to react to each of these situations.

The ORP measurement (in mV), reflecting the oxidation (or reduction) potential of the water, is a major indicator of the pool's water quality.

According to the WHO, an ORP measurement of 650 mV guarantees disinfected water that is itself capable of disinfecting. Despite the use of this value as a reference, this can only be on a theoretical level, because ORP measurements can easily vary depending on the following parameters :

- The pH.
  - The type of chlorine (stabilised or non-stabilised).
  - The presence of dissolved elements that can affect the water (metals, phosphates, surfactants).
  - The cleanliness of the filter.
  - The presence of stray currents.
  - The presence of flocculant (deposit on the ORP probe).
- The ORP measurement : - is not a measurement of free chlorine levels.  
- varies according to free chlorine levels and all elements in the water.



### **ESSENTIAL PREREQUISITES FOR AN OPTIMAL ORP CHECK :**

- Stable pH (*with a pH regulator*).
  - Stabilizer level between 20 and 30 ppm.
  - Earthing of the pipe where the ORP probe is installed (*with a Pool Terre kit*).
  - Balanced water profile (free chlorine levels at 1 ppm, and pH at 7.2).
  - ORP setpoint adjusted according to the ORP measurement displayed (*a value between 500 and 700 mV can be considered as correct*).
- The use of sulphates is permitted, provided they remain at levels below 360 ppm.
- **The use of copper sulphates is strictly forbidden.**
- **The use of borehole water is strictly prohibited.**
- When using a chemical (flocculant, waterline cleaning, sequestrant), check the ORP measurement before and after use of this product. If the ORP measurement drops sharply, stop the electronics unit for a few days, until the effects of the product on the ORP measurement disappear.
- Influence of chloramines on the ORP measurement : as chloramine levels tend to increase, the ORP measurement tends to decrease.

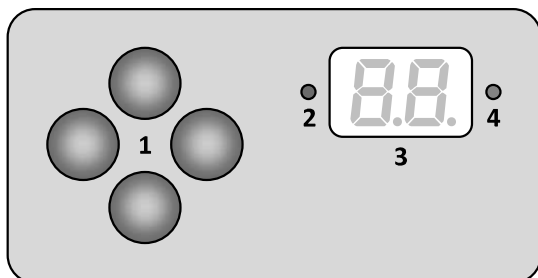


**The ORP check in no case eliminates the need to regularly check free chlorine levels.**

## 3. ELECTRONICS UNIT

### 3.1. Interface and indicators

Visual of the non-contractual interface :



**1 : CONTROL KEYS**

**2 : RED LED**

If lit continuously : electronics unit powered off.

If flashing : alarm activated.

**3 : SCREEN**

If display flashing : information awaiting confirmation, or alarm.

DESCRIPTION OF THE DEFAULT DISPLAY		
Setting	Displayed value	Meaning
ORP measurement	From 00 to 99	From 0 to 99 mV
	From 10 to 99	From 100 to 990 mV

**4 : GREEN LED**

If lit continuously : electronics unit in operation.

If flashing : peristaltic pump on.

### 3.2. Basic operations

- Switching on and off : long press on the left-hand key.
- Selecting a value or data : top and bottom keys.
- Confirmation of an entry / Entering a menu : right-hand key.
- Cancelling an entry / Returning to the previous menu : left-hand key.

### 3.3. Meaning of the menus

MENU	FEATURE
da	Setting the chlorine dosage
na	Manual chlorine injection
ca	Calibrating the ORP probe
ad	ORP measurement adjustment
SE	Setting the ORP setpoint
dd	Adjustment of the time between each chlorine injection (dilution time)
d5	Setting the chlorine dosing start delay
cc	Specification of the concentration rate of chlorine used

## 3.4. Features

### 3.4.1. Setting the chlorine dosage

→ The chlorine dosage is the volume injected x times until the ORP measurement is equal to the ORP setpoint.

- **Possible settings :** from  $01$  to  $99$  (i.e. from 10 to 990 mL, in steps of 10 mL).
- **Default setting :**  $50$
- **Recommended setting :** according to the table below.

VOLUME OF THE POOL	DOSAGE
1 m <sup>3</sup>	$01$ (i.e. 10 mL)
10 m <sup>3</sup>	$10$ (i.e. 100 mL)
30 m <sup>3</sup>	$30$ (i.e. 300 mL)
50 m <sup>3</sup>	$50$ (i.e. 500 mL)
60 m <sup>3</sup>	$60$ (i.e. 600 mL)
100 m <sup>3</sup>	$80$ (i.e. 800 mL)
120 m <sup>3</sup>	$99$ (i.e. 990 mL)

- 1) Press and hold down the right-hand key, until the menu  $PR$  flashes.
- 2) Press the top or bottom key x times until the menu  $da$  flashes.
- 3) Confirm by pressing the right-hand key.
- 4) Select a dosage with the top/bottom keys.
- 5) Confirm by pressing the right-hand key : the selected dosage freezes briefly.
- 6) Press on the left-hand key : the default display reappears.

### 3.4.2. Manual chlorine injection

- **Functions :**
  - Priming of the peristaltic pump and filling of semi-rigid pipes.
  - Instant injection of chlorine, for a fixed period.
  - Means of checking the correct operation of the peristaltic pump.
- **Possible settings :** from  $01$  to  $60$  (i.e. a duration of 1 s to 60 s, in steps of 1 s),  
then from  $11$  to  $95$  (i.e. a duration of 1 min 10 s to 9 min 50 s, in steps of 10 s).
- **Default setting :**  $60$

- 1) Press and hold down the right-hand key, until the menu  $PR$  flashes.
- 2) Confirm by pressing the right-hand key.
- 3) Select an injection duration with the top/bottom keys.
- 4) Confirm by pressing the right-hand key : the peristaltic is running, and the timer countdown is displayed in real time.  
→ To stop the injection : press the left- or right-hand key.
- 5) Press on the left-hand key : the default display reappears.

### 3.4.3. Calibrating the ORP probe



**To ensure an optimal ORP check, it is imperative that the ORP probe is calibrated :**

- when first commissioning the equipment.
- at the start of each season when it is commissioned.
- each time the probe is replaced.

- 1) Turn off the filtration (and therefore the electronics unit).
- 2) → If the probe is already installed :
  - a) Remove the probe from the probe holder, without disconnecting it.
  - b) Remove the probe holder nut and replace it with the stopper supplied.
 → If the probe is not already installed :  
 Connect the probe to the electronics unit.
- 3) Insert the probe into the ORP 475 mV calibration solution.
- 4) Wait a few moments, without touching the probe.
- 5) Turn on the electronics unit.
- 6) Press and hold down the right-hand key, until the menu **PR** flashes.
- 7) Press the top or bottom key x times until menu **CR** flashes.
- 8) Confirm by pressing the right-hand key : the message **47** flashes.
- 9) Press on the right-hand key.
- 10) Wait until one of the messages below is displayed.
- 11) → If the message **Ch** is displayed : calibration was successful.
  - a) Press 3 times on the left-hand key : the default display reappears.
  - b) Rinse the probe under running water.
  - c) Drain the probe without wiping it.
  - d) Install the probe into the probe connector.
 → If the message **Er** is displayed : the calibration failed.
  - a) Press 3 times on the left-hand key : the default display reappears.
  - b) Visually check the condition of the probe.
  - c) Try the calibration again, several times if necessary. If the calibration still fails, change the probe and recalibrate.

### 3.4.4. ORP measurement adjustment

→ The adjustment of the ORP measurement requires a measuring device (not supplied) to obtain an actual ORP value.

- **Prerequisite :** the ORP measurement must be between 400 and 800 mV.
- **Possible settings :** from - to + 100 mV compared to the ORP measurement, in steps of 10 mV.
- **Default setting :** ORP measurement.

- 1) Press and hold down the right-hand key, until the menu **PR** flashes.
- 2) Press the top or bottom key x times until menu **Ad** flashes.
- 3) Confirm by pressing the right-hand key.
- 4) Select a value with the top/bottom keys.
- 5) Confirm by pressing the right-hand key.
  - If the message **Ch** is displayed : the adjustment was successful.  
 Press 2 times on the left-hand key : the default display reappears.
  - If the message **Er** is displayed : the calibration has failed.
    - a) Press 2 times on the left-hand key : the default display reappears.
    - b) Visually check the condition of the ORP probe.
    - c) Try the adjustment again, several times if necessary. If the adjustment still fails, replace the ORP probe and carry out a calibration of the ORP probe.

### 3.4.5. Setting the ORP setpoint

- **Possible settings :** from **20** to **90** (from 200 to 900 mV, in steps of 10 mV).
- **Default setting :** **57**.

- 1) Press and hold down the right-hand key, until the menu **PR** flashes.
- 2) Press the top or bottom key x times until menu **SE** flashes.
- 3) Confirm by pressing the right-hand key.
- 4) Select a setpoint with the top/bottom keys.
- 5) Confirm by pressing the right-hand key : the selected setpoint freezes briefly.
- 6) Press on the left-hand key : the default display reappears.

### 3.4.6. Adjustment of the time between each chlorine injection (dilution time)

- **Possible settings :** from 05 to 60 (i.e. from 5 to 60 min, in steps of 1 min).
- **Default setting :** 15

- 1) Press and hold down the right-hand key, until the menu **PA** flashes.
- 2) Press the top or bottom key x times until the menu **dd** flashes.
- 3) Confirm by pressing the right-hand key.
- 4) Select a time limit with the top/bottom keys.
- 5) Confirm by pressing the right-hand key : the selected time limit freezes briefly.
- 6) Press on the left-hand key : the default display reappears.

### 3.4.7. Setting the chlorine dosing start delay

- **Possible settings :** from 05 to 60 (i.e. from 5 to 60 min, in steps of 1 min).
- **Default setting :** 15

- 1) Press and hold down the right-hand key, until the menu **PA** flashes.
- 2) Press the top or bottom key x times until the menu **d5** flashes.
- 3) Confirm by pressing the right-hand key.
- 4) Select a time limit with the top/bottom keys.
- 5) Confirm by pressing the right-hand key : the selected time limit freezes briefly.
- 6) Press on the left-hand key : the default display reappears.

### 3.4.8. Specification of the concentration rate of chlorine used

- **Possible settings :** from 05 to 48 (i.e. from 5° to 48°, in steps of 1°).
- **Default setting :** 36

- 1) Press and hold down the right-hand key, until the menu **PA** flashes.
- 2) Press the top or bottom key x times until the menu **CC** flashes.
- 3) Confirm by pressing the right-hand key.
- 4) Select a rate with the top/bottom keys.
- 5) Confirm by pressing the right-hand key : the selected rate freezes briefly.
- 6) Press on the left-hand key : the default display reappears.

## 3.5. Alarms

Flashing display	Fault detected	Immediate automatic action	Checks and solutions	Dismissal
<b>RL</b>	Series of unsuccessful attempts to correct the ORP	Stop the chlorine dosage	<ul style="list-style-type: none"> <li>• Check the ORP measurement in the swimming pool with a recent analysis kit.</li> <li>• Check the pH corrector container is not empty.</li> <li>• Check the condition of the filter with ballast and injection connector.</li> <li>• Carry out a manual chlorine injection.</li> <li>• Check all the settings : <ul style="list-style-type: none"> <li>- Setting the chlorine dosage.</li> <li>- Calibrating the ORP probe.</li> <li>- ORP measurement adjustment.</li> <li>- Setting the ORP setpoint.</li> <li>- Adjustment of the time between each chlorine injection (dilution time).</li> <li>- Setting the chlorine dosing start delay.</li> <li>- Specification of the concentration rate of chlorine used.</li> </ul> </li> </ul>	Press on the right-hand key
<b>R5</b>	Deviation of + or - 400 mV between the ORP measurement and the ORP setpoint for 48 hours			

## 4. GUARANTEE

Before contacting your dealer, please have the following to hand :

- your purchase invoice.
- the serial no. of the electronics unit.
- the installation date of the equipment.
- the parameters of your pool (salinity, pH, chlorine levels, water temperature, stabilizer level, pool volume, daily filtration time, etc.).

Every effort and all our technical experience has gone into designing this equipment. It has been subjected to quality controls. If, despite all the attention and expertise involved in its manufacture, you need to make use of our guarantee, it only applies to free replacement of the equipment's defective parts (excluding shipping costs in both directions).

### **Guarantee period (proven by date of invoice)**

Electronics unit : 2 years.

ORP probe : depending on model.

Repairs and spare parts : 3 months.

The periods indicated above correspond to standard guarantees. However, these can vary depending on the country of installation and the distribution network.

### **Scope of the guarantee**

The guarantee covers all parts, with the exception of wearing parts that must be replaced regularly.

The equipment is guaranteed against all manufacturing defects within the strict limitations of normal use.

### **After-sales services**

All repairs will be performed in the workshop.

Shipping costs in both directions are at the user's own expense.

Any downtime and loss of use of a device in the event of repairs shall not give rise to any claim for compensation.

In all cases, the equipment is always sent at the user's own risk. Before taking delivery, the user must ensure that it is in perfect condition and, if necessary, write down any reservations on the shipping note of the carrier. Confirm with the carrier within 72 hours by recorded letter with acknowledgement of receipt.

Replacement under guarantee shall in no case extend the original guarantee period.

### **Guarantee application limit**

In order to improve the quality of their products, the manufacturer reserves the right to modify the characteristics of the products at any time without notice.

This documentation is provided for information purposes only and is not contractually binding with respect to third parties.

The manufacturer's guarantee, which covers manufacturing defects, should not be confused with the operations described in this documentation.

Installation, maintenance and, more generally, any servicing of the manufacturer's products should only be performed by professionals.

This work must also be carried out in accordance with the current standards in the country of installation at the time of installation. The use of any parts other than original parts voids the guarantee ipso facto for the entire equipment.

### **The following are excluded from the guarantee :**

- Equipment and labour provided by third parties in installing the device.
- Damage caused by installation not in compliance with the instructions.
- Problems caused by modifications, accidents, misuse, negligence of professionals or end users, unauthorised repairs, fire, floods, lightning, freezing, armed conflict or any other force-majeure events.

Any equipment damaged due to non-compliance with the instructions regarding safety, installation, use and maintenance contained in this documentation will not be covered by the guarantee.

Every year, we make improvements to our products and software. These new versions are compatible with previous models. The new versions of hardware and software cannot be added to earlier models under the guarantee.

### **Implementation of the guarantee**

For more information regarding this guarantee, contact your dealer or our After-Sales Service. All requests must be accompanied by a copy of the purchase invoice.

### **Legislation and disputes**

This guarantee is subject to French law and all European directives or international treaties in force at the time of the claim, applicable in France. In case of disputes concerning its interpretation or execution, the High Court of Montpellier (France) shall have exclusive jurisdiction.