ECR series salt chlorine generator

Installation and User Manual

◆ECR2 ◆ECR4

◆ECR6 ◆ECR8 ◆ECR10

Please read this manual carefully before use

First of all, thank you very much for choosing ECR series salt chlorine machine. In order to give you the best product experience and prevent possible accidental injuries, please read the entire contents of this manual carefully before installing and using this product, and strictly abide by the relevant requirements of the manual.

Ignoring safety warnings may result in serious consequences, such as serious injury, property damage, or even life-threatening consequences.

Important notes

1. Installation and maintenance work must be performed by staff who have obtained a special electrician qualification certificate. Otherwise, there may be risks of electrocution, property damage, and even life safety threats.

2. Before performing any maintenance or operation, please ensure that the power switch is turned off, disconnect the power supply, and unplug the power plug.

3. The external power adapter of the salt chlorine generator must be installed on a power supply with a leakage protection switch.

4. The salt chlorine generator should be installed in an environment with good ventilation and heat dissipation as much as possible, which is conducive to the heat dissipation of electrical components. Try to avoid installing it in a humid or rainy location to reduce immeasurable damage.

5. The installer must read this manual carefully before installation. If any improper or erroneous operation occurs, please contact the nearest authorized dealer or contact technical support.

6. When parts are damaged, please give priority to purchasing the parts from the manufacturer or authorized dealer and replacing them.

1. Product Overview

The ECR series salt chlorine generator adopts intelligent control technology, operates at low salt content, automatically recognizes salt concentration, produces chlorine efficiently, self-diagnoses, and is easy to install and operate. The 2-level gear adjusts chlorine production, cycle working time, electrode self-cleaning cycle, operation LED light display and other functions, and has a comprehensive protection system such as water level, overload, high temperature, electrolytic cell generator electrode short circuit, etc. You can set the chlorine output according to your needs to achieve high efficiency, energy saving and environmental protection.

Features:

1. The operation buttons and the generator are integrated and designed together, making the structure compact, easier to install and more space-saving.
2. The water inlet and outlet are designed on the same axis to reduce water flow loss and achieve the best effect.
3. Designed with a detachable titanium plate movable structure, which is easy to clean, install and maintain.
4. The maximum chlorine production is 10g/hour
5. It has water level detection and protection function, which can effectively extend the service life.
6. Water temperature monitoring function: When the water temperature exceeds the range of 10°C-45°C, an alarm will be triggered to effectively protect the equipment.
7. Low salinity alarm, when the salinity is too low, the alarm will be triggered to ensure effective disinfection.
8. It automatically starts up when powered on and can remember the last working status.
9. The self-cleaning function of the titanium plate effectively extends the life of the battery.

Automatic power-on means that if there is a power outage during operation, the system will automatically power on when the power is restored. When power is restored, the system will automatically turn on. The last operating settings stored correspond to the conditions before the power outage or the system settings before the power outage.

2. Product model

Model	Chlorine production	Input power	Salt concentration	The output voltage	power	Applications
ECR2	2g/h	AC110~230V 50~60Hz	1000-3500ppm	DC24V	12W	≤10m³
ECR4	4g/h				24W	10-18m³
ECR6	6g/h				36W	13-27m³
ECR8	8g/h				48W	18-35m³
ECR10	10g/h				60W	23-45m³

3. Product structure
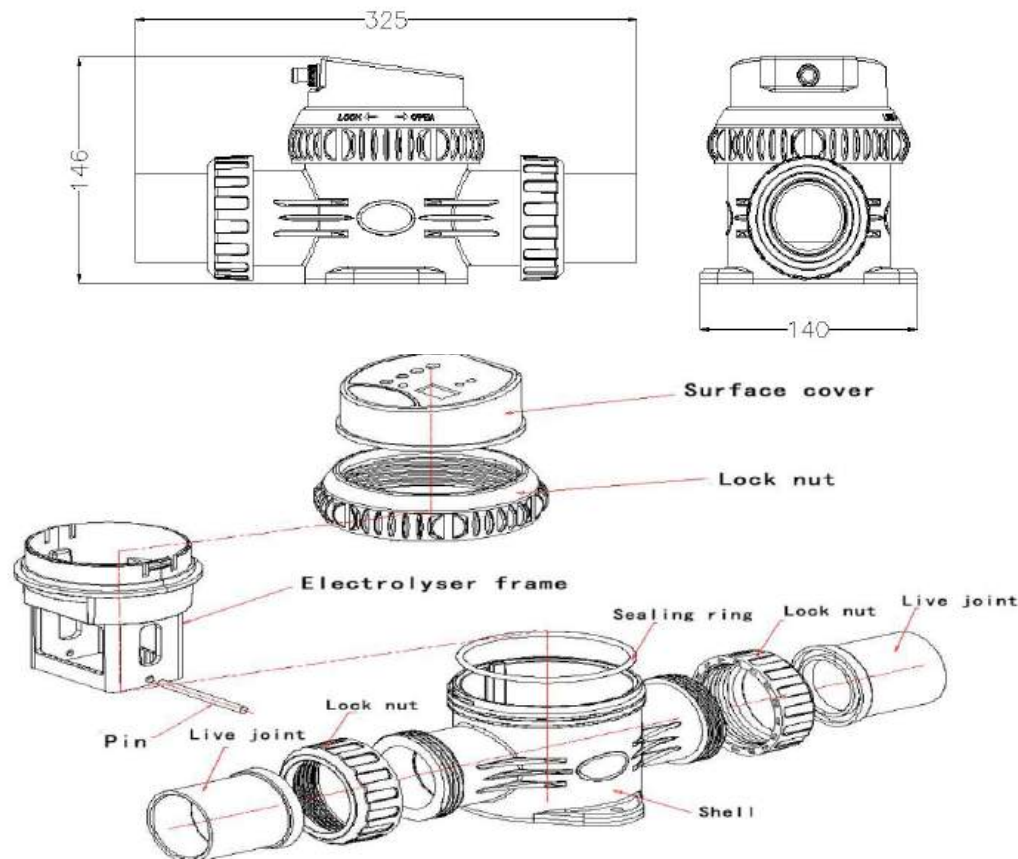
4. Installation Guide

1. Before use, please ensure that the pipe used for installation is the same size as the salt water chlorinator. The device is equipped with two interfaces. One interface is suitable for Φ50mm and 1.5" inch pipes.

2. Before use, please ensure that the valve of the pipe connected to the salt chlorine machine is closed.

3. During the water treatment process, the salt chlorine machine should be installed on the bypass pipe before the final return to the swimming pool, and an adjustable valve must be installed on the main pipe (as shown in Figure 1 or 2).

4. Before installation, please clean the debris or oil on the pipes and connections.

5. Before installing the salt chlorine machine, please ensure that the water flow is consistent with the direction indicated on the salt chlorine machine.

6. When connecting the pipeline to the salt chlorine machine, please use PVC special glue.

7. The salt chlorine machine should be installed in a well-ventilated place to facilitate heat dissipation of the electrical control device.

8. The external power adapter of the salt chlorine machine must be installed on a power supply with a leakage protection switch (110-240V - 50/60Hz), and the power supply should be the same as the pump.

9. There are two ways to install the salt chlorine machine, as shown in Figure 1, vertical installation, as shown in Figure 2 for horizontal installation.
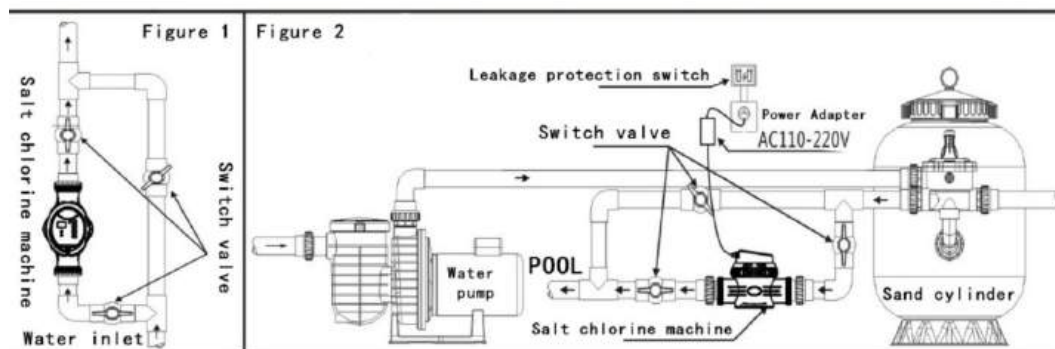
5. Control panel button function description
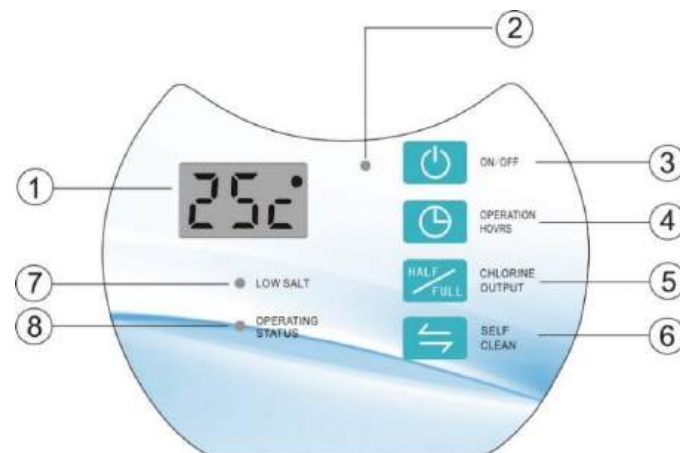
① LED display: Displays the water temperature during normal operation, and displays the corresponding error code when an error occurs.

②Power indicator light: The red light is on when power is on, and the green light is on when starting up.

③OFF key: Start or pause the device.

④Running time settings: There are 5 time settings in total, 4 hours, 6 hours, 8 hours, 12 hours and 24 hours.

⑤Chlorine production output setting: There are two gears to choose from, half power 50% and full power 100%.

⑥Self-cleaning cycle time settings: 4 hours, 6 hours and 8 hours.

⑦ Low salt alarm: When the red light flashes, it indicates that the salinity is low and salt needs to be added to the pool water.

⑧Running status indicator light: When the red light flashes, it indicates a fault. Please check the error code and solve the fault according to the instructions.

⑨ LED status indicator light (see structure diagram): When the red light flashes, it is a fault state. Check the fault code and issue troubleshooting instructions.

6. User Guide

Preparations before use and commissioning

1. Make sure the salt concentration of the pool water is within the normal operating range (1000-3500PPM). Please refer to Water and Salt Mixing and Maintenance in this manual to adjust the salt concentration.

2. After the equipment is installed and connected, close the valve on the main pipeline, open the valve connected to the salt chlorinator, and turn on the leakage protection switch.

3. Start the water pump and ensure that there is water flow through the salt water chlorinator, that there is no water leakage at all connections and that the water flow switch is closed ((the water flow must meet the following conditions: 2.5m3/h<water flow<15m3/h).

4. The device's adapter is connected to the power source and the power is turned on.

5.Press the on/off ⏻ button, the power indicator light will show red first, and then the device will start automatically. After operation, the power indicator light automatically turns green, and the device can operate normally.

Operating status settings (operating time, chlorine output, self-cleaning cycle time)

6. Operation time setting

A. About the setting value

The device has 5 run time settings: 4 hours, 6 hours, 8 hours, 12 hours and 24 hours.

① Setting 04 means that starting from the set time, the equipment will run for 4 hours, stop for 20 hours, then run for 4 hours, stop for 20 hours, and repeat.

② Set 06, which means starting from the set time, the equipment will run for 6 hours, stop for 18 hours, then run for 6 hours, stop for 20 hours, and repeat.

③ Set 08, which means that starting from the set time, the equipment will run for 8 hours, stop for 16 hours, run for another 8 hours, stop for 18 hours, and repeat.

④ Setting 12 means that starting from the set time, the device will run for 12 hours, stop for 12 hours, and then run for 12 hours again.

⑤ Set 24, it will run continuously from the set time. The factory default setting is 24.

B. Operation instructions

Press the running time 🕐 button, and the display will show the current working time setting. The working time can be adjusted according to the actual needs of swimming. Adjust the operating time setting, and the display will show 04, 06, 08, 12, and 24 in sequence. (Each time it is pressed, the display will show the next operating time setting). Once the operating time value is set, the display will flash the current set value for 5 seconds and then save the current value. The display will show the currently set value for 5 seconds and then save automatically. If no setting is made after pressing the running time 🕐 button for 10 seconds, the display of the current water temperature will resume again.

7. Chlorine production setting

A. About setting values

This device has two chlorine production output settings, HALF and FULL.

HALF (HA) refers to the equipment running at 50% power, that is, salt chlorine generators with model chlorine of 2g/h, 4g/h, 6g/g, 8g/h and 10g/h. When setting HALF (HA)), the corresponding chlorine outputs are 1g/h, 2g/h, 3g/g, 4g/h and 5g/h respectively. The HA setup is suitable for swimming pools with small pool capacities, or to operate under energy-saving operating conditions when the pool is not in use.

FULL (FU) means that the equipment is running at 100% power, that is, the salt chlorine generator with model chlorine of 2g/h, 4G/h, 6g/g, 8g/h and 10g/h, when setting FULL (FU)), the corresponding chlorine outputs are 2g/h, 4g/h, 6g/g, 8g/h and 10g/h respectively.

FULL (FU) means the salt chlorinator is producing chlorine at 100% of its capacity.

The default setting for chlorine output is FU.

B.Operation method

Press the ![button] button，displays the currently set chlorine production output (FU or HA), Press the ![button] buttonto switch the chlorine outpu.

After the chlorine production volume outputs the set value, the current set value is automatically saved. If the button ![button] is not pressed for another 10 seconds ,it will resume displaying the water temperature again.

8. Self-cleaning cycle time

A. About the setting value

The self-cleaning function prevents calcium buildup on the electrode and keeps the electrode in good operating condition.

There are 3 settings for the self-cleaning cycle time: 4 hours, 6 hours and 8 hours.

The default setting for self-cleaning time is 4 hours.

B. Operation instructions

Press the ![button] button，the currently set self-cleaning cycle time (default 04) will be displayed. Press the ![button] button again to change cycle time settings，The display will show 04, 06 and 08 in sequence. After the self-cleaning cycle time setting value is determined, the display will flash to show the current setting value. Then automatically save the current

settings. If the ![button] button is not pressed within 10 seconds to set, the water temperature will be displayed again.

7. Fault codes and troubleshooting methods

Error code	Fault content	Remark	Solution
E2	Indicates that the water temperature exceeds the normal temperature range	◆Normal working water temperature range: 10～45℃	◆First check whether there is an E7 fault code. If so, confirm whether the corresponding temperature sensor is connected. If it is connected, please replace the sensor; ◆If there is no E7 fault code, make sure it works within the set water temperature range.
E3	Indicates no water	◆Sufficient water should flow through the inside of the salt chlorine machine generator for normal operation	◆First confirm whether the water level probe is connected. If it is connected, check whether there is lack of water or air. If there is water, clean the water level probe.
E5	Indicates low salt content	◆The normal working range of salt concentration is 1000-3500ppm	◆First use a salinity meter to detect the salt concentration in the swimming pool. When the salt concentration in the swimming pool is <1000ppm, add an appropriate amount of salt to the swimming pool. After the salinity of the pool water reaches the normal range of the machine, the fault code will be automatically cleared and the machine will start working normally.
E6	Indicates controller internal temperature failure	◆Fault display must be cleared manually	◆First check whether the corresponding temperature sensor is connected. If it is connected, please replace the sensor.
E7	Indicates water temperature sensor failure	◆Fault display must be cleared manually	◆First check whether the corresponding temperature sensor is connected. If it is connected, please replace the sensor.
E8	Indicates that the control output current is too large	◆Fault display must be cleared manually	◆Please contact the supplier to repair or replace the controller.
EA	Indicates that the electrode is working abnormally	◆Fault display must be cleared manually	◆First check whether the electrode is connected. If it is connected, please replace the electrode.
EB	Indicates an abnormality in the system detection circuit	◆Fault display must be cleared manually	◆Power off and restart. If the fault is no longer reported, it can start normally. If this fault occurs multiple times, please contact the supplier to repair or replace the controller.

The use environment and maintenance of salt chlorine

1. Operation status and maintenance of salt water chlorinator.

1.1 Calculation of water volume:

Rectangular pool: length (meter) x width (meter) x average depth (meter) = swimming pool capacity (cubic meters)

Circular pool: diameter (meter) x diameter (meter) x average depth (meter) x 0.785 = swimming pool water capacity (cubic meters).

Elliptical pool: length (meter) × width (meter) × average depth (meter) × 0.893 = swimming pool water capacity (cubic meters) capacity (cubic meters).

Inclined pool: pool volume (cubic meters) × 0.85 = swimming pool water capacity (cubic meters).

1.2. Types of salt

The higher the purity of the salt, the greater the performance advantages of the ECR salt chlorine generator and its service life. The purity of sodium chloride (NaCl) in salt should be at least 99.6%. It's best to use dehydrated, granular, food-grade solar salt.

A. Do not use rock salt. The impurities it contains may shorten the service life of the salt chlorine generator.

B. Calcium chloride (CaCl2) must not be used as salt, only sodium chloride (NaCl) can be used.

C. Avoid using salt as an anti-caking agent (sodium cyanide NaCN, also known as YPS, which is toxic and corrosive). This salt may cause the color of the swimming pool surface and swimming pool equipment.

D. Water-treated salt pills can be used, but they may take longer to dissolve in water.

1.3. Add appropriate amount of salt

Most pool water contains a certain amount of salt, and the concentration of salt in the pool water will vary depending on the water source and disinfectant used. The existing salt concentration in your pool can be measured using reliable methods such as a handheld NaCl tester or a salinity pen. The normal working salt concentration of the ECR series salt chlorine generator is 2000ppm (that is, the total salt content in 1 cubic meter of water is 2kg).

⚠️ **TIPS** When using the ECR series salt chlorine generator for the first time, you need to add salt to the swimming pool. The steps are:

A. Use a salinometer and other equipment to detect the existing salt concentration in the swimming pool;

B. Add an appropriate amount of table salt to ensure that the total salt content per cubic meter of water in the swimming pool is 2kg. The ppm value of salt concentration can be regarded as the grams of salt content in 1 ton of water. For example, the existing salt concentration in a 100m³ swimming pool is 850ppm (can be regarded as 850g of salt per ton of water). To make the ECR series salt chlorine produce How many grams of salt do you need to add to the normal operation of the device? The amount of salt to be added (unit: grams) = swimming pool water volume × (normal working salt concentration - current swimming pool salt concentration) = 100 × (2000-850) = 1150 grams.

During the daily operation of the ECR series salt chlorine generator, swimmers will take away part of the water and salt in the swimming pool. After running for a period of time, if the machine shows that the salt level is too low, salt should be added to the level of the salt chlorine generator. Normal working salt concentration (i.e. 2000ppm).

1.4. The correct way to add salt is:

A. Turn on the circulating water pump of the swimming pool to circulate the pool water.

B. Turn off the power to the salt chlorine generator.

C. Measure your pool's existing salt concentration.

D. Calculate the amount of salt to add according to the table.

E. Slowly pour salt along the periphery of the swimming pool to dissolve it quickly and evenly in the pool water. Do not let the salt accumulate at the bottom of the pool. If necessary, stir the bottom of the pool to completely dissolve the salt.

F. Run the circulating water pump for 24 hours so that the salt is evenly distributed throughout the pool.

G. After 24 hours, re-measure the salt concentration in the swimming pool to see if it reaches the target adjustment value.

H. When the salt concentration of the swimming pool has reached all of your adjusted values, turn on the power supply and equipment of your salt chlorine generator, put it in working condition, and set the relevant functions according to your needs.

1.5 Reduce salt concentration

The only way to reduce the salt concentration is to drain some of the pool water and refill it with some fresh water.

1.6 Reduce chlorine loss

For outdoor swimming pools, in order to reduce the loss of chlorine in the water caused by ultraviolet rays from the sun, it is necessary to
Add cyanuric stabilizer to the pool water, the dosage should be 20-100mg/L.

2. Maintenance of salt chlorine generator
2.1 Maintenance of electrolyzer

TIPS In order to ensure that the salt chlorine generator is in optimal working condition, it is recommended to open and inspect the electrolyzer every 3 months or after cleaning the filter. The steps are as follows:

A. Before removing the electrolytic tank, the power supply to the salt chlorine generator must be turned off for 5-10 minutes, and the valves at the water inlet and outlet must be closed.

B. After removing the electrolytic tank, check whether there are flake sediments, debris, light-colored hard skin and other dirt on the inner wall of the electrolytic tank, and clean it with clean water.

C. If you see white calcification deposited on the titanium sheet, it must be removed by soaking it in a 4:1 water and hydrochloric acid solution. Be sure to wear rubber gloves and pay attention to protecting your eyes and other body parts.

D. If there is serious dirt that cannot be removed by yourself, please consult your seller for a professional cleaning solution

	Warranty card
Customer Information	
Product information	
accident details	