

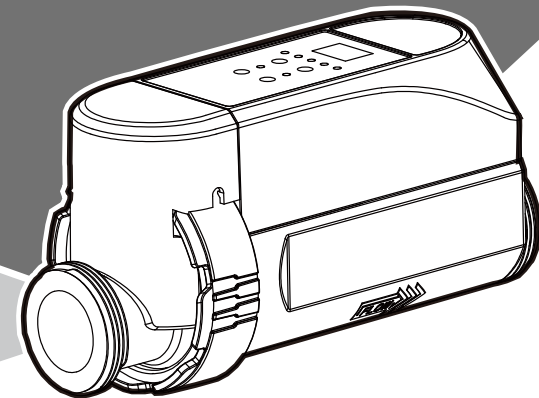
BARACUDA®

THE TRUSTED NAME IN POOL CARE

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ZenQua™

Saltwater Chlorinator

Installation & Operating Instructions



500-6470 T12ECO3_BOOKLET_VER.A

BARACUDA®

THE TRUSTED NAME IN POOL CARE

Thank you for choosing a Baracuda product.

This product has been manufactured using modern production methods and extensive quality assurance procedures, because our goal is to ensure that you, the customer, are satisfied with our products.

Fluidra is continually striving to further develop and improve its range of products; we therefore reserve the right to make alterations to the form, technical specifications and equipment level of our standard equipment.

The information in this manual is therefore subject to change.



DECLARATION OF CONFORMITY

This product range conforms to the relevant Compulsory Specifications.

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1 IMPORTANT SAFETY INSTRUCTIONS

WARNING

First of all, thank you for choosing ZenQua saltwater chlorinator. For your best experience of the product, prevent the occurrence of accidents, please carefully read the whole content of this manual before the assembly and the use of the salt chlorinator. Please strictly follow the manual for your own safety and operation of the salt chlorinator. Neglecting the safety warning may cause serious consequences such as : grievous injury, property loss and may even cause life safety threatening consequences.

These Safety Warnings contain all the essential information to ensure safe usage of the appliance.

Please read the complete user manual carefully before using the appliance.

Carefully follow the safety regulations described in this manual:

- The appliance is intended to be used for pools and spas for a specific purpose; it must not be used for any purpose other than that for which it was designed.
- Failure to follow the instructions can cause damage to the equipment and, in extreme cases, to people.
- Any assembly, installation, maintenance or repair intervention on these devices must be performed by qualified technical personnel. Always use the required personal protection.
- Before handling the appliance, check that it is switched off and isolated.
- Upon receipt of the product, ensure that it is functional and complete. In case of problems, contact a qualified technician.
- The equipment must be installed according to the manufacturer's instructions and in compliance with local and national regulations. The installer is responsible for compliance with national installation regulations.
- Before starting the installation, check that the electrical data indicated on the system label are compatible with the existing electrical network.
- This appliance is not intended for use by people (including children) with reduced physical, sensory or mental capabilities, or lack of experience and 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.
- This product may only be assembled and installed in pools compliant with standards IEC/HD 60364-7-702 and required national rules. The installation should follow standard IEC/HD 60364-7-702 and required national rules for swimming pools. Consult your local dealer for more information.
- In case of problems or anomalies during operation, disconnect the power supply from the device and contact the after-sales service.
- If the power cord is damaged, it must be replaced by qualified professionals to avoid any hazard.

- The appliance shall be connected to an alternating current supply (see data on the appliance's label) with an earth connection, protected by a residual current device (RCD) with a rated residual operating current that does not exceed 30 mA.
- Do not operate with wet hands.
- A disconnecter must be fitted to the fixed electrical installation in accordance with the installation regulations.

NOTICE

1. The installation and the maintenance must be done by a licensed electrician. Or else there would be risk of electrocution, grievous injury, property loss and may even cause life-threatening consequences.
2. Before any maintenance or operation, ensure that the saltwater chlorinator is power-unplugged, all machinery are turned off and power source is turned off.
3. The external power adapter of the chlorinator must be installed to a power source that contains a leakage switch protection.
4. The chlorinator should be installed in a well-ventilated area, to help the chlorinator to cool down. Do not install in an area where the electronic component of the chlorinator could be damaged by moisture and rain.
5. Installation personnel must carefully read this manual before installation. If any improper or mistaken operation occurs, please contact the nearest authorized dealer or contact technical support department.
6. When parts are damaged, please prioritize the purchase of the replacement part from the manufacturer or authorized dealer.

2 PRODUCT SUMMARY

Saltwater chlorinator uses the most advanced microcomputer technology. It is both multi-functional and easy to operate. It contains functions such as self-cleaning and malfunction alarm. You can set the chlorine production to match your need, to achieve the goal of efficiency and environmental friendliness.

Product distinguishing features:

- 2.1 The controller and the chlorinator are integrated for easier installation and more space-saving.
- 2.2 Water inlet and output are designed on the same axis to decrease the need for pipe arrangement.
- 2.3 The detachable movable structure is designed to facilitate the cleaning and maintenance of the titanium plate.
- 2.4 Users can choose different chlorine production levels and can also select chlorine production levels according to needs, which is energy-saving and environmentally friendly.
- 2.5 Low salt prompt and fault alarm function.
- 2.6 Water temperature protection (10~45°C) and water shortage protection functions. It effectively extends the lifetime of the generator.
- 2.7 Water level detection. The chlorinator only operates when the sensor detects the presence of water.
- 2.8 It automatically starts up when powered on and initiates the last work setting from system memory.

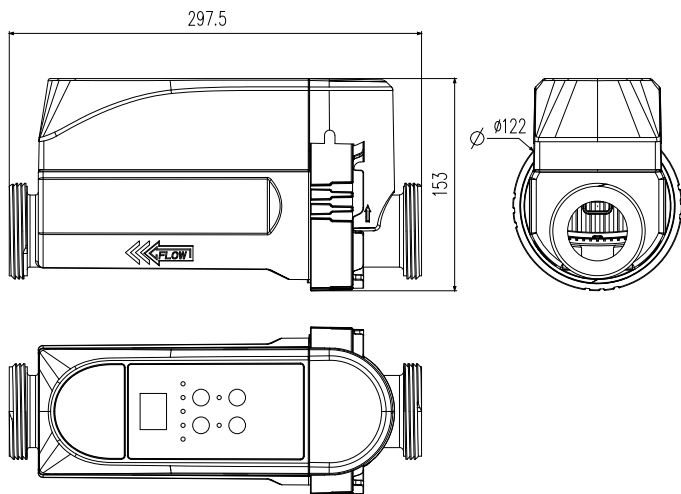
WARNING

Automatic power on means that if there is a power shortage occurs during operation, the unit will automatically power on after the system restores power.

Memorizing the last operation setting means memorizing the system setting before power shortage or system failure, including the "Boost" state, and resetting the "Boost" state timer.

Model	Chlorine production	Recommended pool volume (m ³)
77795	8g/h	≤ 35m ³
77796	12g/h	≤ 50 m ³
77797	16g/h	≤ 68 m ³
77798	20g/h	≤85 m ³
77799	30g/h	≤127 m ³

3 PRODUCT SIZE



4 INSTALLATION INSTRUCTION

- 4.1 Before using, please ensure that the pipe used for installation is the same size as the saltwater chlorinator. The nominal diameter of the connection pipe of the chlorinator is : 1.5" (metric: $\varnothing 50\text{mm}$; imperial: 1.5" / $\varnothing 48\text{mm}$).
- 4.2 Before using, please ensure that the valve of the pipe connecting to the chlorinator is turned off.
- 4.3 Before installation, please clean any clutter or oil of the pipes and the connection joint.
- 4.4 The saltwater chlorinator should be installed on the bypass pipe of the water treatment pipe to the pool. An adjust valve must be installed on the main pipe (as shown on Diagram 1 or Diagram 2).
- 4.5 Before installation, please ensure that the water flow is consistent with the direction the chlorinator indicates.
- 4.6 When connecting the pipes to the chlorinator, please use glue specialized for PVC.
- 4.7 The operating power of the chlorinator uses the external power adapter, input (AC110~220V/50~60Hz), output DC24V/5A.
- 4.8 The external power adapter of the chlorinator must be installed to a power source that contains a leakage switch protection.

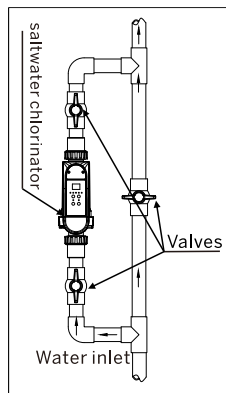


Diagram 1

- 4.9 Do not install the chlorinator in a direct sunlight. The salt chlorinator must be installed far away from the chemical storage, specially from acid because it can corrode the electronics inside the unit.

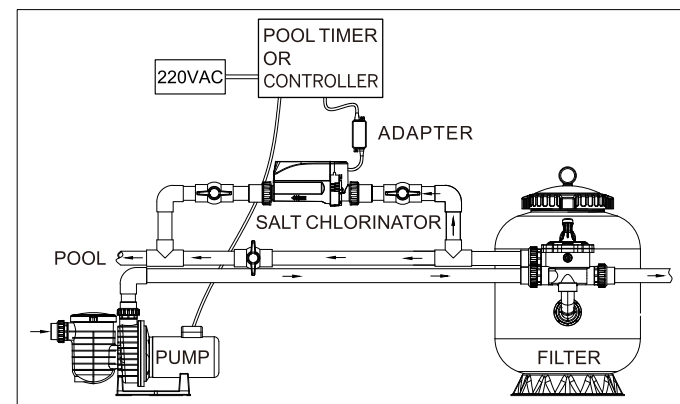


Diagram 2

5 OPERATING INSTRUCTION

- 5.1 After the saltwater chlorinator is connected, open the inlet and outlet valves connected to the chlorinator pipeline, and adjust the valve of the main pipe appropriately according to the actual water flow to ensure that sufficient water flows through the chlorinator.
- 5.2 Before operation, ensure that the salt concentration of the pool water is within the normal operating range, otherwise the lifetime of the titanium plates will be reduced.
- 5.3 Close the electricity leakage switch to activate the display. Press the ON/OFF button, the indicator light will turn from red to green, and the chlorinator will start operating.

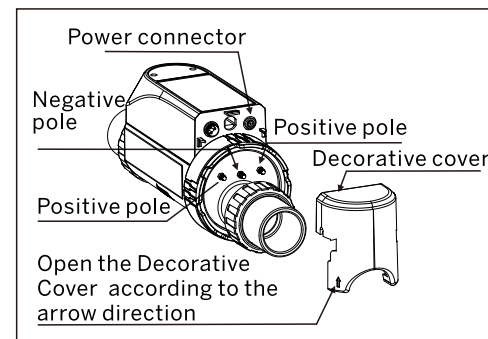


Diagram 3

NOTE

The chlorinator can only work when the water level sensor detects there is enough water.

5.4 By pressing the button "+" or "-", users can adjust the chlorine production level from 1 to 5, level 1 is the smallest and level 5 is the highest. The higher the level, the more chlorine is produced.

5.5 To speed up chlorine production, press the "BOOST" button. The chlorinator would operate at maximum capacity for 8 hours, then return to the original preset state.

5.6 Parameters check: press the "🔔" acceleration key multiple times while the chlorinator is off to look up different parameters below:

5.6.1 Temperature of MOS tube

5.6.2 Water temperature

5.6.3 Input voltage

5.6.4 Version number

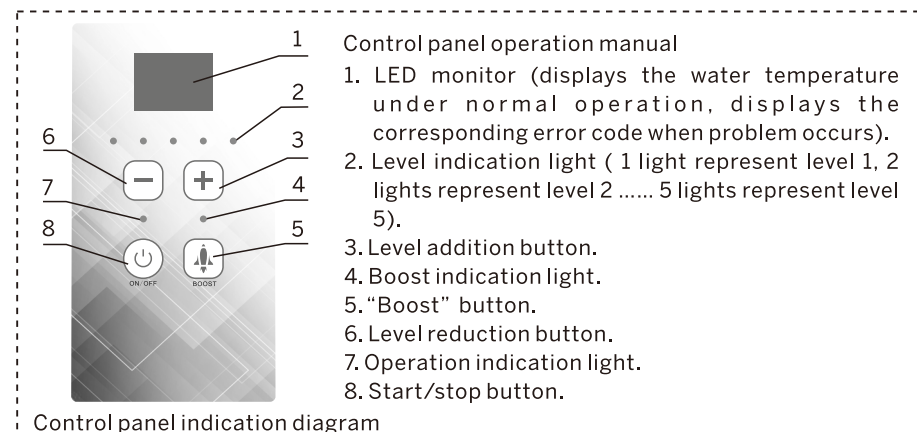
5.6.5 Time period of continuous operation: The system automatically exits the inquiry after 3 seconds.

5.7 Continuous operating time setting: In the shutdown state, press the button "🔔" 5 times to switch to the continuous operating time setting page. Press the "+" and "-" keys to set the operating time, ranging from (1-24) hours. For example, if you set "12", the chlorinator will stop running after working continuously for 12 hours, and then restart after stopping for 12 hours, and so on.

NOTE

The chlorinator is preset to continuous operation for 12 hours; if 24-hour non-stop operation is needed, the time setting for continuous operation would have to be set at 24; the system automatically exits the setting after 3 seconds.

5.8 When the chlorinator reports a malfunction or warning, press "🔔" acceleration key to clear it and resume normal operation. After the fault is resolved, the chlorinator can operate again.



6 ERROR CODE AND CORRESPONDING SOLUTIONS

Error code	Reason of error	Remark	Solution
E1	The temperature of the MOS tube is too high	After the malfunction is solved, the fault will be eliminated automatically, and the chlorine production will resume automatically.	First check whether there is an E6 fault code. If there is no E6 fault code, press the "BOOST" to eliminate the error code and then downshift.
E2	The water temperature is beyond the normal range	The normal range of operating temperature is 10-45 °C	First check if E7 error code is present, if it is, check if the temperature sensor is attached. If it is, please change the sensor; if E7 error code is not present. Please check that the water is within the range of operational temperature.
EH	Water temperature above 45°C will cause the chlorinator stop working.	Normal operating water temperature range: 10-45°C	Check whether the water temperature above 45°C, otherwise the temperature sensor may be damaged. If the water temperature is too high, add tap water to cool it down.
EL	Water temperature is below 10°C, but the chlorinator is still working.	Normal operating water temperature range: 10-45°C	Use a thermometer to check whether the water temperature is lower than 10°C. If not, the temperature sensor may be damaged, replace the temperature sensor in time.
E3	No water	Normal operation requires enough water in the chlorinator	First, check if the water level detector is attached. If it is, check if water is lacking or air is present. If water is present, wash the water level detector.
E5	The salt concentration is too low	Normal salt concentration range is 2700-4500ppm	First use a salinity meter to check the salt concentration in the pool. If the salt concentration level in the pool is below 2700ppm, add salt to the pool. When the salinity level of the pool reaches the normal operation salinity level, the error code should disappear. And the machine should function again.
E6	MOS tube NTC thermistor malfunctioned	The error code will automatically be eliminated after the malfunction is solved.	Contact the supplier to repair or replace the controller circuit board.

E7	Water temperature sensor malfunctioned	The malfunction must be removed manually	First check if the corresponding temperature sensor is attached, if it is please replace the sensor.
E8	The input voltage is too high or too low	The malfunction must be removed manually	Please change the hardware of the power supply.
EA	Electrode malfunction	The malfunction must be removed manually	First check if the electrode is attached. If it is, please change the electrode.

EXTRA : THE OPERATING CONDITION AND MAINTENANCE OF THE SALTWATER CHLORINATOR

1. The mixture and maintenance of water and salt.

1.1 The calculation of the amount of water:

Knowing the capacity of the pool is the first step in adding salt to the pool.

Rectangular pool: length (meter) x width(meter) x average depth (meter) = pool water capacity (cubic meter).

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

Ellipse pool: length (meter) x width(meter) x average depth(meter) x 0.893 = pool water capacity (cubic meter).

Beveled pool : pool volume (cubic meter) x 0.85 = pool water capacity (cubic meter).

1.2 The type of salt

The purer the salt, the more the advantageous of the saltwater chlorinator would operate. This will also extend the lifetime of the chlorinator. The Sodium Chloride (NaCl) in the salt should be at least 99.6%. Best if the salt is dehydrated granular food grade sea salt.

WARNING

- Please do not use rock salt, its impurity may shorten the lifetime of the chlorinator.
- Do not use Calcium Chloride as salt, only sodium chloride can be used.
- Avoid using anti-blocking agent (sodium cyanide, aka YPS, is poisonous and corrosive) salt, this kind of salt may change the color of the pool surface and the equipment inside.
- Can use water treatment salt pills, but it takes a very long time to melt in the water.

1.3 Adding the right amount of salt

Most pools contain a certain amount of salt, the concentration of the salt in water will vary depending on the water source and the sterilizing agent used. Users can use hand-held NaCl tester or salinity pen to test the current salt concentration of the pool.

TIPS

The best operating salt concentration level of the ZenQua saltwater chlorinator is 3500ppm (3.5kg of salt per cubic meter).

When operating the ZenQua saltwater chlorinator for the first time. Add salt to the pool following the steps below:

- Use a salinity meter to check the original salt concentration in the pool.
- Add appropriate amount of salt , ensure that for each cubic meter of water add 3.5kg of salt.

The concentration of salt (ppm value) can be seen as the gram of salt within 1 ton of water. If the current salt concentration of a 100m³ pool is 850ppm (can be taken as 850g in 1 ton of water), how much salt is needed for the chlorinator to normally operate ?

Salt needs to be added (unit: gram) = water in the pool x (normal operation salt concentration – the current pool salt concentration) = 100 x (3500-850) = 265000 gram.

1.4 The correct way of adding salt

- Turn on the circulation pump of the pool, and let the water circulation begin.
- Turn off the saltwater chlorinator.
- Test the current salt concentration of the pool.
- Calculate the amount of salt needed to add to the pool according to the corresponding chart.
- Add salt to the pool round the edge of the pool, so that it can quickly and evenly dilute into the water. Do not let salt accumulate on the bottom of the pool. Stir the water on the bottom of the pool if necessary, so the salt can be completely dissolved.
- Run the circulation pump for 24 hours, so the salt can evenly distribute in the pool.
- 24 hours later, test the salt concentration of the pool again to see if it has reached optimum level.
- When the salt concentration of the pool has reached the desired level, turn on the salt chlorinator and other equipment. Once the chlorinator initiates, please set your desired level of chlorine production.

1.5 Decrease the concentration of salt .The only way to decrease the concentration of salt is to drain a part of the pool's water and replace it with fresh water.

1.6 In order to reduce the loss of chlorine caused by UV radiating in outdoor pool water,cyanuric acid with a dose of 20-100mg /L can be used as the chlorine stabilizer.

2. The maintenance of saltwater chlorinator

2.1 The maintenance of the electrolysis cell

To ensure the smooth operation of the saltwater chlorinator, the electrolysis cell should be checked every three months or after cleaning the filter, whichever comes first. Follow the steps below to complete the check:

- A. Before removing the electrolysis cell, close the inlet and output valve after shutting down the saltwater chlorinator for 5 – 10 minutes.
- B. After removal of the electrolysis cell, check whether there are flaky deposits, debris, light colored layering in the inner surface, and clean it with clean water.
- C. If there are white calcified substance on the titanium plate. Submerge the titanium plate into 4:1 water and hydrochloric acid solution to remove the calcified substance. Please wear rubber gloves and eye protection for safety.
- D. If there are major sediments that cannot be removed by yourselves, please contact the distributor or manufacturer for professional suggestion.