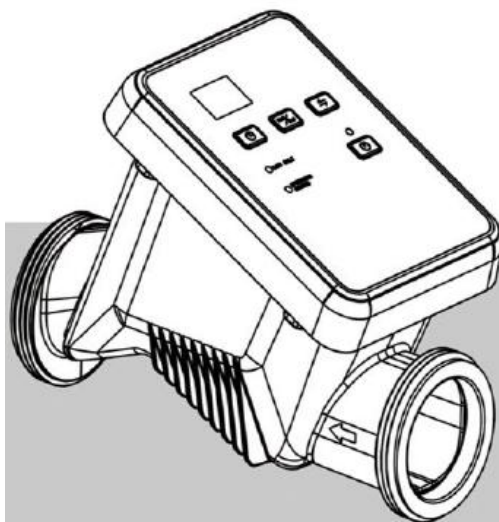
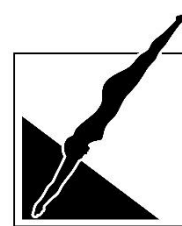




RC

SALT CHLORINATOR

Read carefully and
keep for future reference



CPA SRL

Via Don Demetrio Castelli 71, 12060 Roddi (CN)
Tel: 0173.615693 | 0173.620643
info@cpa-piscine.it

WARNING

Thank you for choosing the RC generator. To ensure the best experience with the product and to help prevent malfunctions, please read the entire contents of this manual carefully before assembling and using the generator. It is strongly recommended to follow this manual strictly for your own safety and for the correct operation of the device. Failure to observe this warning may result in serious consequences.

IMPORTANT NOTICE

1. Installation and maintenance must be carried out by a qualified electrician. Failure to do so may result in electric shock, serious injury, property damage, and life-threatening consequences.
2. Before carrying out any maintenance or operation, make sure that the generator is disconnected from the power supply, all machinery is switched off, and the power is turned off.
3. Installation personnel must read this manual carefully before installation. In the event of improper or incorrect operation, please contact the nearest authorized dealer or technical assistance service.
4. If any parts are damaged, please purchase replacement parts from the manufacturer or an authorized dealer.
5. This equipment is not suitable for persons with reduced physical abilities (including children), or lacking appropriate experience and knowledge, unless they are supervised and instructed regarding the use of the generator by a person responsible for their safety.
6. This equipment may be used by children aged 8 years and older and by persons with reduced physical, sensory, or mental capabilities, or lacking appropriate experience and knowledge, provided they are supervised and instructed concerning the safe use of the generator and understand the associated risks. Children must not play with the generator. Cleaning and maintenance of the generator must not be carried out by unsupervised children.
7. The power cable cannot be replaced. If it is damaged, the generator must be replaced.
8. The generator must be installed in a well-ventilated area to ensure proper cooling. Do not install it in an area where it may be exposed to moisture or rain.

SOMMARIO

1. DESCRIZIONE DEL PRODOTTO	3
2. CARATTERISTICHE:	3
3. ESPLOSO COMPONENTI	4
4. DIMENSIONI	5
5. PANNELLO DI CONTROLLO	ERRORE. IL SEGNALIBRO NON È DEFINITO.
6. ISTRUZIONI PER L'INSTALLAZIONE	6
7. ISTRUZIONI D'USO	ERRORE. IL SEGNALIBRO NON È DEFINITO.
8. IMPOSTAZIONE DELLO STATO DI FUNZIONAMENTO (TEMPO DI FUNZIONAMENTO, PRODUZIONE DI CLORO, TEMPO DI CICLO AUTOPULENTE)	7
9. ANOMALIE	9
10. LE CONDIZIONI OPERATIVE	9
11. OPERAZIONI DI MANUTENZIONE ORDINARIA	10
12. CODICE DI ERRORE E SOLUZIONI CORRISPONDENTI	11

1. PRODUCT DESCRIPTION

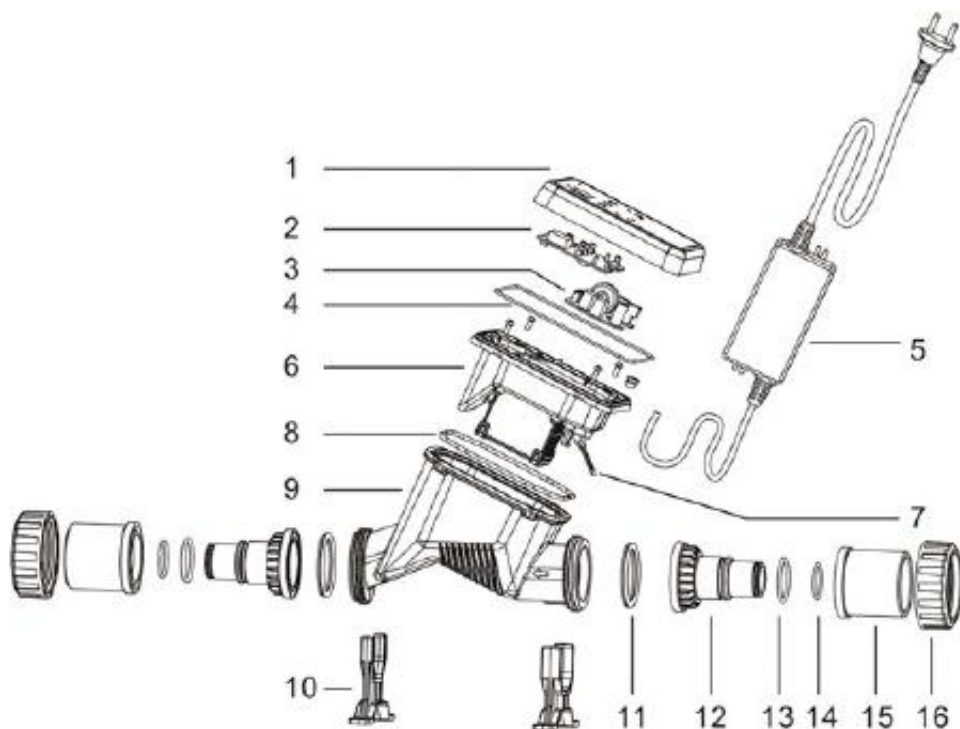
The salt generator uses advanced microcomputer technology. It is both multifunctional and easy to use. It includes automatic reset functions (self-cleaning, scale removal) and malfunction alarms. The chlorine concentration can be adjusted according to your needs, achieving both efficiency and environmental friendliness.

2. FEATURES:

1. The controller and generator are integrated, allowing for easier installation and space saving.
2. The water inlet and outlet are designed on the same axis, reducing the need for pipe adjustments.
3. The generator is designed for easy access to the titanium electrode plate, enabling simple installation and maintenance.
4. The water flow protection function effectively extends the service life of the unit.
5. The generator includes water level detection and operates only when water is detected.
6. The generator includes a salt level alarm: when the salt level is too low, an audible alarm is activated to ensure proper disinfection.
7. When the generator is switched on, the last saved operating setting is automatically restored. Automatic restart occurs when the system powers on again after a power failure during operation.
The last operating setting memory corresponds to the condition before a system failure or to the active system settings before the error occurred.
8. The generator includes a water temperature monitoring function. When the temperature falls outside the optimal range (10°C to 45°C), an alarm is activated. This helps extend the lifespan of the machine.
9. The self-cleaning function of the titanium plate effectively extends the lifespan of the cell.
10. Operating time setting function: the user can set the generator operating time according to the actual condition of the pool water, thereby saving energy.
11. One-touch factory reset function.
12. Voltage and current monitoring function: when the preset value is exceeded, an audible alarm is activated.
13. Electrode fault monitoring function: when a circuit fault occurs, an audible alarm is activated.
14. After the power supply has been turned off and then restored, the polarity reversal function is forcibly activated during restart. This ensures an extended lifespan of the titanium plate.

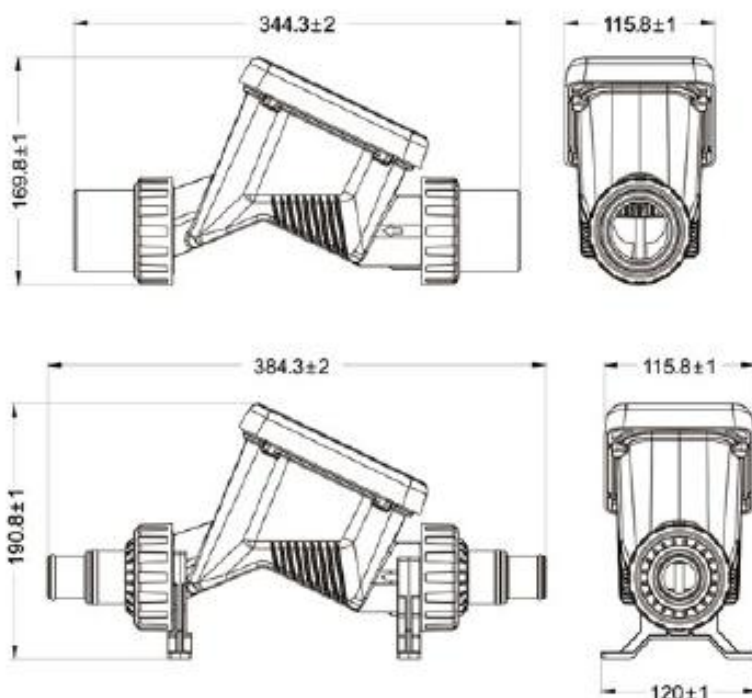
Item Code	Model	Power Input	Power Output	Chlorine Output	Ideal Salinity	Recommended Pool Volume
1075197	RC7	100-240 V ac 50Hz/60Hz	24V dc	7.5 g/h	2700-4500 ppm	11-22 m ³

3. SPARE PARTS



Ref.	Description	Ref.	Description
1	Cover	9	Cell
2	Control panel	10	Base support
3	Electrical circuit board	11	50 mm O-ring gasket
4	Cover O-ring gasket	12	32/38 connector
5	Power supply	13	38 mm O-ring gasket
6	Titanium plate	14	32 mm O-ring gasket
7	Flow sensor	15	50 mm or 1.5" glue socket fitting
8	Cell O-ring gasket	16	Nut

4. DIMENSIONS



5. CONTROL PANEL



1. LED display: displays the water temperature or an error code, if present.
2. Operating time adjustment with five different settings: selectable between 4, 6, 8, 12, and 24 hours.
3. Low salinity alarm: green indicator light when the salt concentration is within the normal range; red indicator light when it is below the operating range. If the light is red, add salt to the system.
4. Status indicator: when the green light is on, the generator is operating correctly; when the red light is on, an error is present. Check the error code to resolve the issue.
5. Chlorine generation setting: chlorine production can be set to HALF or FULL mode.
6. Self-cleaning cycle duration setting: selectable between 4, 8, and 12 hours, depending on water hardness. The harder the water, the shorter the cycle time should be set.
7. Power indicator LED: red when switched off and green when switched on.
8. ON/OFF button: used to switch the generator on or off.

6. INSTALLATION INSTRUCTIONS

1. Before use, ensure that the pipe used for the bypass installation is the same size as the generator connections. The unit is supplied with two types of connection fittings: one for 50 mm or 1.5" pipe, and another for flexible hose with an internal diameter of 32 mm or 38 mm.
2. Before use, make sure that the valves on the pipes connected to the generator are closed.
3. Before installation, clean any debris from the pipes and connection fittings.
4. The generator must be installed on the bypass section of the piping before the return line to the pool for the water treatment process. An adjustable valve must be installed on the main pipeline (as shown in Figure 1).
5. Before installing the generator, ensure that the water flow matches the direction indicated on the generator; otherwise, the unit will not operate.
6. Use a specific PVC adhesive to connect rigid pipes to the generator. For flexible hose connections, use a hose clamp.
7. The generator must be installed in a well-ventilated area to promote heat dissipation.
8. The generator power supply must be connected to a power line equipped with a residual current device (RCD) in compliance with the electrical safety regulations in force in the country of installation, and connected in parallel with the filtration pump. The power supply must be fixed to a wall using screws or wall plugs.
9. There are two ways to install the generator:
 - Figure 1 shows the recommended horizontal installation.
 - Figure 2 shows the installation using flexible hose for above-ground pools.

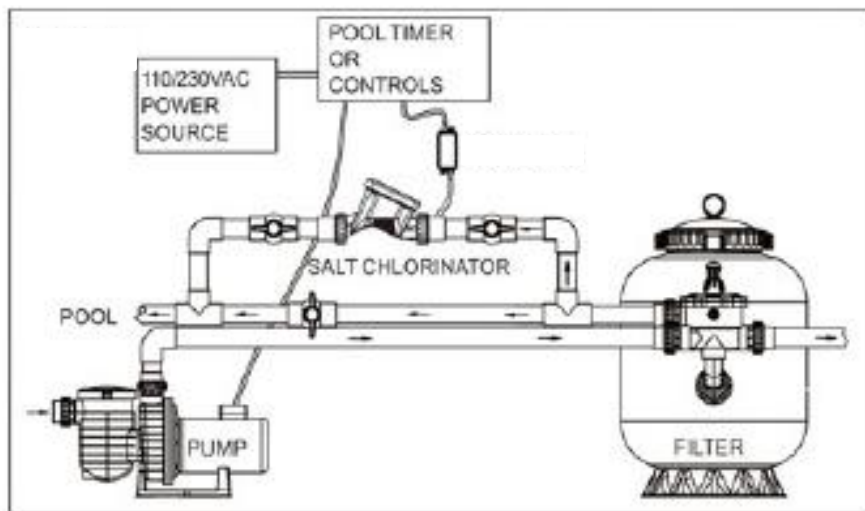


Figura 1 - by-pass installation scheme

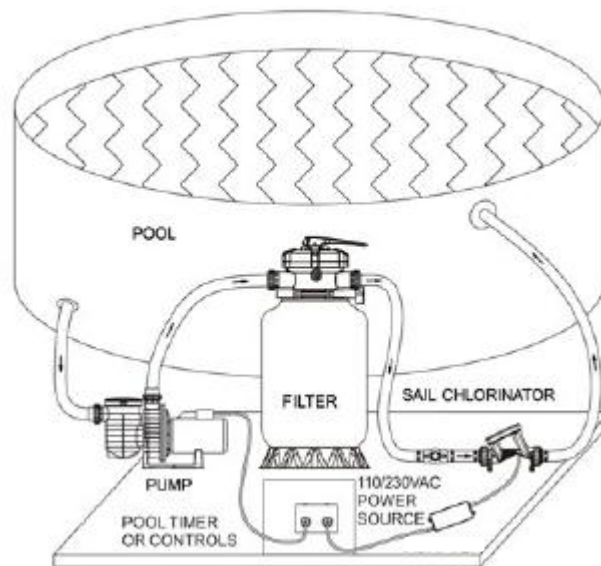


Figura 2 - installation scheme

7. USE INSTRUCTION

PREPARATION BEFORE USE AND START-UP

- Ensure that the salt concentration in the pool water is within the normal operating range of 2700–4500 ppm. Refer to the section regarding water and salt mixing and maintenance in this manual to adjust the salt concentration correctly: see the “Operating Conditions” paragraph.
- Once the unit has been installed and connected, open the valve connecting the generator to the bypass and partially close the valve on the main pipeline.
- Start the pump and make sure that:
 - the water flow passes through the salt generator;
 - there are no water leaks at any connection point;
 - the water flow sensor is operating correctly. The water flow must meet the following conditions: $2 \text{ m}^3/\text{h} \leq Q \leq 15 \text{ m}^3/\text{h}$.
- When the transformer is connected to the power supply, the device is powered.
- By pressing the ON/OFF button  the power indicator turns red while the generator starts automatically, and green when the generator is already operating. Press the button again to stop operation if necessary.

8. OPERATING STATUS SETTINGS (Operating Time, Chlorine Production, Self-Cleaning Cycle Time)

OPERATING TIME SETTING

- Im The operating time can be set to: 4 hours / 6 hours / 8 hours / 12 hours / 24 hours per day. Setting 04 means the unit operates for 4 hours from the set time, stops for 20 hours, then runs again for 4 hours, stops for 20 hours, and repeats the cycle. Setting 06 means the unit operates for 6 hours from the set time, stops for 18 hours, then runs again for 6 hours, stops for 18 hours, and repeats the cycle. Setting 08 means the unit operates for 8 hours from the set time, stops for 16 hours, then runs again for 8 hours, stops for 16 hours, and repeats the cycle. Setting 12 means the unit operates for 12 hours from the set time, stops for 12 hours, then runs again for 12 hours, stops for 12 hours, and repeats the cycle.

Setting 24 means continuous operation from the set time onward.

The factory default setting is 24.

- o Operating Instructions

Press the button  to display the current operating time setting.

Press the button again to adjust the operating time setting; the display will cycle through:

04 → 06 → 08 → 12 → 24.

Each press displays the next operating time setting.

After selecting the desired operating time value, the display flashes for 5 seconds showing the current setting, then automatically saves it.

If no further settings are made within 10 seconds after pressing the button, the display returns to showing the water temperature.

CHLORINE GENERATION SETTING

- o Setting Values

The unit has two chlorine generation modes: HALF and FULL.

HALF (HA): the generator produces 2.5 g/h, operating at 50% of its maximum capacity.

The HA setting is suitable when the pool is not in use and economical operation is desired.

FULL (FU): the generator produces 5 g/h, operating at 100% capacity.

The factory default chlorine output setting is FU.

- o Operating Instructions

Press the button  to display the current chlorine output setting (FU or HA).

Press the button again to change the setting.

The value is saved automatically, and after 10 seconds the display returns to showing the water temperature.

SELF-CLEANING CYCLE

- o The self-cleaning function prevents calcium buildup on the electrode, keeping it in good operating condition.

The self-cleaning cycle has 3 settings:

4h, 8h, and 12h, which reverse polarity every 4, 8, or 12 hours respectively.

The display shows "--" during polarity reversal mode.

The factory default self-cleaning cycle time is 4 hours.

- o Operating Instructions

Press the button  to display the current self-cleaning cycle setting (default setting: 04).

Press the button again to change the setting.

The value is saved automatically, and after 10 seconds the display returns to showing the water temperature.

PARAMETER CHECK

- Version number: press  and hold the button for 3 seconds to display the software version number.
- Operating voltage: press  and hold the button for 3 seconds to display the operating voltage.

9. MALFUNCTIONS

- Low salinity alarm: the green light is on when the salt concentration is optimal. When it is low, the red light flashes and the unit stops operating. The red light is accompanied by an audible alarm and error code E5.
- Operating status indicator: when the unit is connected to the power supply and the red light is on, the generator is not operating and is in standby mode. When the green light is on, the unit is in normal operating condition. In case of a malfunction, the red light flashes with an audible alarm; it is necessary to check the error code to resolve the issue.
- Reminder 1: when the unit stops operating due to a power outage, it automatically saves the current settings. If the generator was active, it will automatically restart when power is restored. If it was off, it remains off. At this point, it is possible to press the button , allowing the unit to resume operation based on the last saved settings.
- Reminder 2: the pump operating time must be the same as the generator operating time.
- Reminder 3: when an audible alarm is triggered, it is necessary to check the error code and resolve the issue according to the instructions.

10. OPERATING CONDITIONS

CALCOLO DELLA QUANTITÀ DI ACQUA DELLA PISCINA:

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

- Rectangular pool: length (m) × width (m) × average depth (m) = pool water volume (m³)
- Circular pool: diameter (m) × diameter (m) × average depth (m) × 0.785 = pool water volume (m³)
- Oval pool: length (m) × width (m) × average depth (m) × 0.893 = pool water volume (m³)
- Chamfered pool: pool area (m²) × 0.85 = pool capacity (m³)

TYPE OF SALT

The purer the salt, the better the salt generator performs. Higher purity also extends the lifespan of the generator. Sodium chloride (NaCl) should be at least 99.6% pure. The ideal salt is granular, dehydrated food-grade sea salt.



Using rock salt may reduce the lifespan of the generator due to impurities.

Do not use calcium chloride; only sodium chloride must be used.

Avoid anti-caking agents (sodium cyanide, also known as YPS, is toxic and corrosive), as these products may discolor the pool and damage equipment.

Salt treatment tablets may be used, but they dissolve very slowly in water

ADDING THE CORRECT AMOUNT OF SALT

Most pools already contain a certain amount of salt; its concentration varies depending on the water source and disinfectant used. A portable NaCl tester or salinity pen can be used to measure salt concentration.



The optimal salt concentration for normal operation of the RC salt generator is 3500 ppm (3.5 kg of salt per cubic meter of water).

When using the EC salt generator for the first time, add salt to the pool according to the following guidelines:

- Use a salinity meter to check the current salt concentration.
- Add the appropriate amount of salt, ensuring 3.5 kg of salt per cubic meter of pool water.

Salt concentration (ppm) corresponds to 1 gram of salt in 1 ton of water. For example, if a 100 m³ pool has a salt concentration of 850 ppm, this corresponds to 850 g per ton of water.

It to be added (grams) = pool water volume × (operating salt concentration – current salt concentration)
Example: 100 × (3500 – 850) = 2650 grams.

1. Correct method for adding salt
 - Turn on the pool circulation pump and allow water to circulate.
 - Switch off the salt generator.
 - Measure the current salt concentration of the pool.
 - Calculate the required amount of salt using the corresponding table.
 - Add salt along the edge of the pool so it dissolves quickly and evenly. Do not allow salt to accumulate at the bottom; mix the water if necessary to ensure complete dissolution.
2. Reducing salt concentration

The only way to reduce salt concentration is to dilute it by replacing part of the pool water with fresh water.

11. ROUTINE MAINTENANCE

To ensure proper operation of the generator, the electrolytic cell must be inspected at intervals of less than three months. Follow the instructions below:

- A. Turn off the generator and close the inlet and outlet valves of the bypass hydraulic circuit, then wait 5–10 minutes.
- B. Carefully remove the electrode from the plastic cell.
- C. After removal, check for flake-like deposits, debris, or light-colored layering on the internal surface; if present, rinse with clean water.
- D. If white calcified deposits are present on the titanium plates of the electrode, immerse it in diluted hydrochloric acid (4:1) for a few minutes to remove scale..

WARNING

Wear rubber gloves and eye protection when handling hydrochloric acid for safety.

- E. Do not use metal or plastic brushes to remove deposits or scale. If cleaning is not possible using the methods above, replace the electrode.

12. ERROR CODES AND CORRESPONDING SOLUTIONS

Error	Cause	Note	Solution
E2	Water operating temperature out of range	Water temperature is outside the 10–45°C range	First check whether error code E7 is present. If yes, check whether the temperature sensor is connected; if it is connected, replace the sensor. If E7 is not present, ensure that the water temperature is within the operating range.
E3	Flow switch malfunction	The flow switch is not correctly detecting water flow through the device	Ensure water flow is $\geq 2 \text{ m}^3/\text{h}$. If not, increase flow. If the flow switch is damaged, replace it.
E5	Salt concentration too low	Normal salt concentration range is 2700–4500 ppm	Use a salinity meter to check pool salt concentration. If below 2700 ppm, add salt to the pool. When the salt level returns within the normal range, press and hold the button for 3 seconds. The alarm will clear and the generator will resume operation automatically.
E7	Water temperature sensor malfunction	Fault must be cleared manually	Turn off the generator and check whether the temperature sensor is properly connected. If connected, replace the sensor.
E8	Input voltage too high or too low	Fault must be cleared manually	Replace the power supply hardware.
E9	Output current too high	Fault must be cleared manually	Contact the supplier for repair or replacement.
EA	Electrode malfunction	Fault must be cleared manually	After shutting off the water pump, closing both circuit valves, and turning off the generator, ensure salt concentration is above 2500 ppm: 1) Check for visible white scale on the titanium plate; if present, remove and soak in hydrochloric acid until fully dissolved, then rinse with clean water. 2) Check whether electrode connectors are loose or disconnected and reconnect if necessary. 3) Check whether the titanium plate is corroded; if so, replace it. 4) If no issues are found, contact the supplier.
EC	Device detection circuit malfunction	Fault must be cleared manually	Turn the device off and restart it; if the error does not reappear, the generator will operate normally. If the error persists, contact the supplier for repair or replacement of the detector.

NOTE

- CPA srl excludes any liability for failure to comply with current safety regulations applicable to the specific technical sectors covered by this document.
- The information contained in this manual may be subject to change at the discretion of the author, without prior notice, in line with modifications to the product described herein. It is the customer's responsibility, at the time of ordering, to verify that the product still corresponds to the specifications in this document.