QUICKSALT

20/40/60

USER'S GUIDE

PLEASE NOTE THE REGISTRATION DATA OF THE EQUIPMENT YOU HAVE PURCHASED, WHICH CAN BE FOUND ON THE SIDE LABEL.

QUICKSALT60

QUICKSALT40

QUICKSALT20

These data will be of use if you wish to ask any question, services, or part replecement.

Please have your model and serial numbers available for your supplier.

The part list can be found on page 24 of this manual.

MODEL.....

REF.....

VOLTAGE.....

SERIAL NUMBER.....

POOL VOLUME (GALLONS).....

INSTALLATION DATE.....

Please refer to our website for the latest manual version and additional information.

CONTACT

info@quicksaltusa.com | **www.quicksaltusa.com**

IMPORTANT

This electronic equipment must be installed by qualified personnel. Follow the installation and operating instructions carefully. Improper handling and/or installation of the equipment could result in serious risks to property, severe personal injury and even death.

Throughout the manual you will find two types of information to which you should pay particular attention:

DANGER

Risk of electric shock, explosion or any other risk that endangers people. Strictly follow the directions when observing this indication.

INFORMATION

Relevant information for the optimal functioning of the equipment. Follow the advice provided in the sections where this symbol is displayed to get the best results with your **QUICKSALT** equipment.

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Safety Instructions

Do not attempt to install the equipment yourself if you do not have the knowledge of electricity and hydraulic installation.

The electrical installation must be carried out in such a way that the equipment can only be started while the filtration pump is running. To do this, connect the power supply of the **QUICKSALT** equipment to the same contactor device that controls the pump.

The **QUICKSALT** control unit does not contain elements that can be replaced or repaired by the user. Therefore, do not open or tamper with this element, as there is a risk of electric shock.

To avoid the risk of damage, do not allow children to handle this equipment.

Do not use the equipment if you notice that any of the cables (power supply or cell) are damaged. Disconnect it immediately and contact your service representative if this happens.

Make sure that the power cord of the equipment is well protected and there is no risk of being trapped by tools such as a lawnmower or similar.

Do not use roll-up cable extenders to connect **QUICKSALT** equipment to the mains. Contact your official service if you need to extend the power cord.

The cell must always be installed on a horizontal pipe. Never install the unit on a vertical pipe.

The equipment must be installed at a minimum distance of 10 feet from the pool vessel, so that under no circumstances can it be accessed by a person inside the pool.

If you are going to use acid to lower the pH of the water, follow the product manufacturer's instructions very carefully.

1. Description of the System

QUICKSALT is a salt chlorinator for swimming pools, very easy to use and install.
The product range allows you to select the right model for your pool based on size and chlorine production requirements.

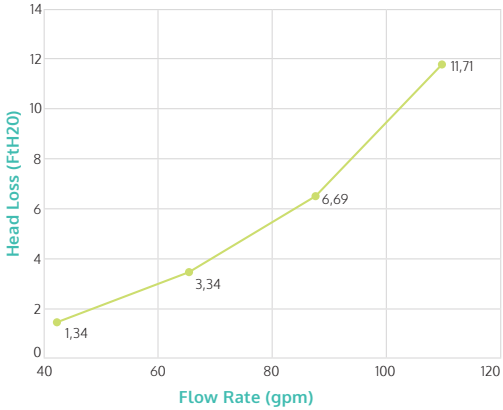
The **QUICKSALT** output chlorination system manufactures hypochlorous acid (HClO), which is a strong disinfecting and bactericidal agent. With the use of salt chlorination, you can keep your pool water in perfect condition without adding chemicals.

Chlorine production can be adjusted via the control interface. In addition, the equipment will notify you of any incident that may occur by means of an audible alarm, indicating the reason on the screen and stopping its operation safely.

It also has a system that will alert you if salt is required to be added to the water so that you can optimize its performance and cell life.

1.1. Technical Specifications

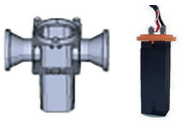
	QUICKSALT20	QUICKSALT40	QUICKSALT60
Maximum production (in 24h)	0,80lbs (0,36Kg)	1,32lbs (0,60Kg)	1,85lbs (0,84Kg)
Pool volume (gal) up to	20000	40000	60000
Power supply (VAC)	110/220	110/220	110/220
Consumption (W)	112,5	187,5	263
Cell current (A)	3,75	6,25	8,75
Weight	8,80lbs (4Kg)	8,80lbs (4Kg)	8,80lbs (4Kg)



2. Installation

Open the box carefully so as not to damage any parts, and make sure the contents are as follows:

QUICKSALT control unit



Housing and Electrolytic cell

Racord and mounting clamps

Installation Template

Water flow sensor (flow switch)

Temperature Kit (sold separately)

Pass-through kit (sold separately)

2.1. Tools

Below you will find the necessary tools for the electrical and hydraulic installation of your **QUICKSALT** equipment:

- Cleaner and glue for PVC pipes
- Cutting saw suitable for PVC
- Allen key set.
- Set of screwdrivers and tools needed for electrical connection to the control and protection panel of the pump.

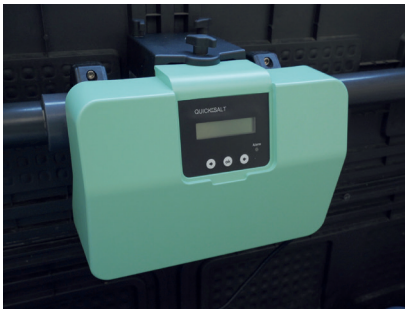
Unless you are sure that the PVC pipes do not contain water when you cut and/ or drill them. Use a battery-powered drill and not one that requires connection to the mains.

2.2. Mounting options

QUICKSALT allows you two mounting configurations, depending on your preferences and the space available in your installation:

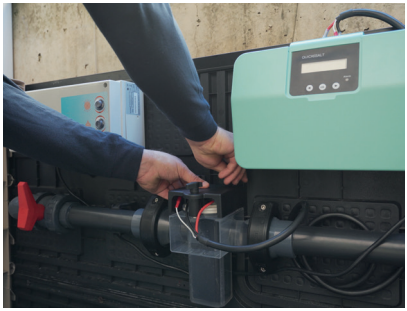
TYPE A Installation:

The cell and the electronic control unit are assembled together.



TYPE B Installation:

The cell and the electronic control unit are mounted separately. Hang the control unit on the wall with the rear supports, and use the cable extender (optional kit).



2.3. Hydraulic installation

Security warning
It is always preferable that the pool is empty before installing the equipment. However, if your pool is full and you do not wish to empty it, you should carefully follow the instructions below:

1) Turn the filter selector valve to the "close" position.

2) Close the supply valves and, if available, the return valves as well.

3) Disconnect the power supply in the area where the equipment is to be installed, through the general electrical panel.

4) Keep in mind that you will have to cut a section of pipe and it is likely that this section is full of water. Make sure you have the means to collect this water when cutting

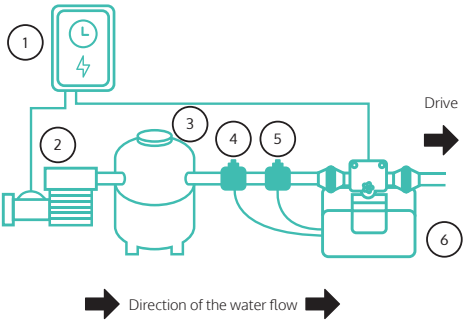
5) Do not, under any circumstances, use power tools to cut the PVC pipe. Use a hand saw.

If your installation does not have valves to close the water flow, you must drain the pool before installing the equipment, otherwise all the water in the pool could be drained through the cut of the pipe.

Please first identify the following elements in your pool installation:

- Pump control panel (1)
- Filtration pump (2)
- Filter (3)
- Water flow sensor – Flow switch (4)
- Temperature sensor (5) – Optional Kit
- QUICKSALT chlorinator (6)

Please note that the **QUICKSALT** chlorinator must always be installed after the pump and filter. That is to say, on the drive. It is very important that you identify the direction of the water flow so that the elements are placed in the following order:



Attention: Make sure you have a long enough length of pipe to install the electrolysis cell and flow sensor.

The measures required for each of these elements are as follows:

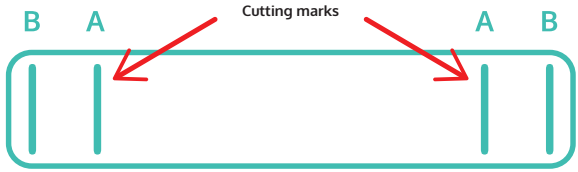
- Electrolysis cell: **Minimum 14 inches.**
- Flow sensor: **Minimum 4 inches.**

Both elements must be installed in the same pipe. It is important that the water flows first through the flow sensor, and then through the electrolysis cell.

Never install the flow sensor after the cell, as it would be damaged.

2.3.1. Cutting and gluing of accessories

Cut the pipe to the proper length to install the electrolysis cell. To do this, you can use the supplied template and follow the steps below:



1) Place the template horizontally along the pipe where you want to install the equipment.

2) Using a permanent marker, mark 4 lines on the tube through the slots in the template.

3) Remove the template and cut the PVC pipe **at the two points marked A.** Pay attention and make sure you cut the correct points (the two lines on the inside).

4) Apply cleaner between the ends resulting from the cut, and the points marked as B. Also clean the fittings to be glued. Be sure to choose the right ones for your pipe (two sets of sizes are provided: 11/3" and 2").

5) Apply PVC glue all around the cut pipe and the fitting to be glued, and press the fitting into the pipe until it stops.

6) Repeat the operation with the fitting and pipe on the opposite side.

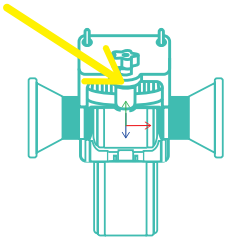
7) Wait for the glue to harden. The waiting time will depend on the glue used, please refer to the product instructions carefully.

You can then install accessories to mount the flow sensor to the pipe. To do this, glue the tee fitting to the upper part of the pipe.

2.3.2. Assembly of the cell

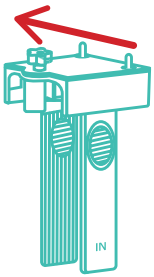
Once the accessories have been glued, the cell can be assembled. Please follow the steps below:

1) The orientation of the cell housing must always be vertical. Note that the tab marked in the following picture is facing away from the wall, i.e. towards you. The control unit will be embedded on this side, assuming you choose mounting type A (cell and control unit in one block).



2) On the inside of the housing, you will notice that there are two baffles marked IN and OUT. These deflectors can be interchanged with each other.

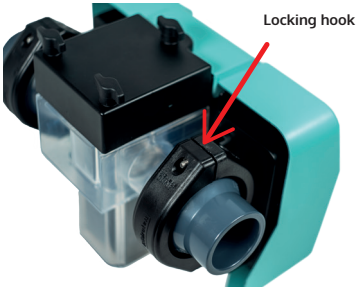
Choose the correct position according to your hydraulic system, so that water enters the cell through the deflector marked "IN" and exits through the one marked "OUT".



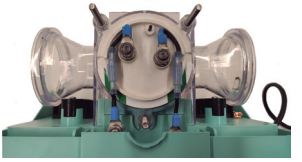
Note: **The arrow in the picture above indicates the correct direction of the water flow.**

3) Place the cell beaker in its location, making sure that the joints of both ends are correctly placed in their housing.

4) Place the locking hooks between the fittings and the cell inlet/outlet. Tighten them with an Allen key to ensure watertightness.



5) Check that the cell is properly installed inside the housing, including the O-ring between the round cell cover and the housing.



6) Depending on where you want to locate the control unit, proceed as follows:

Attention: **Please, ensure that the connection cables between the cell and the control unit, are placed over the green mark.**

- **MOUNTING A** - (cell and control unit mounted together)

  a) Insert the control unit into the front housing of the cell.

  b) Connect the 3 cables through the aerial connectors on the top of both elements.

  c) Place the top cover and tighten the 3 threaded knobs firmly.

- **MOUNTING B** - (wall-mounted control unit)

  a) Install the control unit on the wall, through the anchoring accessories located at the back of the control unit. Make sure there is no excessive distance so that the extension cable allows you to connect correctly.

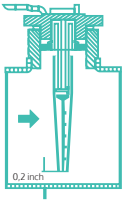
  b) Connect the extension cable between the cell and control unit wires.

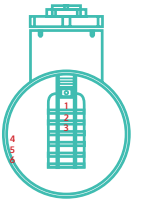
  c) Place the top cover of the cell and tighten the 3 threaded knobs firmly.

2.3.3. Mounting the flow sensor

Once the fittings are glued, as shown in section 2.3.1, mount the flow sensor on the tee fitting as shown below:

1) Depending on the flow rate of the filtration pump and the diameter of the pipe, trim the sensor paddle to the appropriate position if necessary, as shown in the table below:





Paddle length	Water flow (Gall/min)			
	11/2"		2"	
	*Close	**Open	*Close	**Open
1	60	53	134	112
1+2	45	40	102	85
1+2+3	38	34	85	72
1+2+3+4	29	28	58	53
1+2+3+4+5	19	18	43	40
1+2+3+4+5+6	16	15	40	36

* Close by flow rise
** Open by flow decrease

Note: An excessively long paddle in a high water flow would reduce the life of the sensor. On the other hand, a too short blade at a too low flow rate would not allow the correct detection of the flow rate.

2) Add Teflon tape to the threads of the flow sensor to ensure proper sealing.

3) Insert the flow sensor into the collar, threading it in and ensuring that it is mounted so that the arrow on the sensor marks the correct direction of water flow.

4) Connect the jack connector from the Flow Switch to its socket, placed on the left side of the unit.

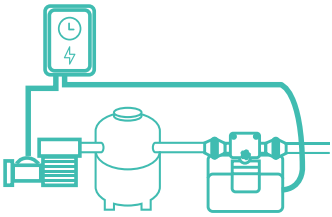
Note: Before proceeding with the electrical installation, we suggest that you check that the hydraulic installation has been done correctly and that there are no leaks or drips. To do this, open the valves in your system again, move the selector valve to the "filtration" position and start the pump. If you do not see a problem, continue with the next section.

2.4. Electrical Installation

2.4.1. Connection to the switchboard

Once you have checked that the hydraulic installation does not present any losses, you can connect your QUICKSALT chlorinator to the electrical control panel.

Attention: Disconnect the power supply to the panel before handling it. Never open the switchboard without having disconnected the power from the main switchboard. There is a danger of electrocution.



The electrical connection must be made in such a way that the **QUICKSALT** chlorinator is started only when the filtration pump is in operation. Therefore, be sure to carefully choose the right contactor output.

1) For safety reasons, it is very important to check if the earthing is in good condition. If you do not have one, you will have to install a specific grounding rod for the electrical panel, to which you can connect the grounding cables of the **QUICKSALT** chlorinator, filtration pump and any other element with an earth connection located in your pool installation.

2) Check that the switchboard has the appropriate protection elements for its installation: Thermal circuit breaker, differential switch and motor protection for the filtration pump.

3) Connect the power cable of your **QUICKSALT** equipment to the panel, respecting the phase, neutral and ground connections. Do not leave the cable on the floor of the installation, but ensure that it is well protected and anchored to the wall. If the distance is insufficient and you need to extend it, do not use a roll-up extender. Consult your electrician or service technician if in doubt

2.4.2 Bonding connection

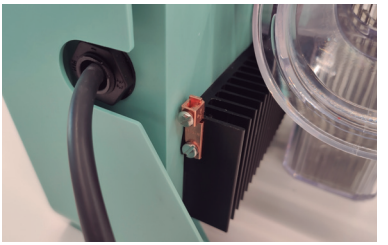
The Bonding connection ensures that all pool components are at the same electrical potential. If the Bonding connection is required in your area (see NEC codes), a Bonding connection socket is available where you must connect a rigid copper cable, whose section must be

USA: rigid copper cable 8 AWG.

Canada: rigid copper cable 6 AWG

Connect the switchboard of your **QUICKSALT** equipment to the common bonding connection point of your pool's electrical installation. The connector is located at the rear of the unit.

Your **QUICKSALT** saline chlorinator is already installed. Please read carefully the following sections detailing how to perform the start-up.



3. Starting up

3.1. Preparation of the pool water

3.1.1. How to add salt to your pool

The **QUICKSALT** salt chlorinator requires a small concentration of common salt (NaCL) to work properly. The recommended concentration is between 3300ppm and 8000ppm with the most common concentration being 4000ppm.

We recommend the use of specific salt for salt chlorinators, which you will find in shops specializing in swimming pool products.

Note: **Use only pool-specific salt of greater than 99% purity, with no iodine content.**

To calculate the salt to incorporate in your pool, the following example is shown:

POOL 35 FEET (10.6M) LONG, 13 FEET (4M) WIDE AND 5 FEET (1.5M) DEEP ON AVERAGE

The amount of salt to be incorporated will be 0.25 lb/ft^3 (4Kg/m^3) to obtain a concentration of 4000ppm.

35 x 13 x 5 = 2275 ft^3 x 0.25 = 568 lb of salt to be incorporated.

10 x 4 x 1.5 = 60m^3 x 4 = 240 Kg of salt to be incorporated.

Add the salt directly to the vessel of the pool. It is recommended to add it progressively, in 2-3 times, waiting for it to dissolve before adding a new quantity.

Note: **You can speed up the dissolution by running the filtration pump, but it is highly recommended not to let salt accumulate in the pool drain, to avoid damaging the pump. We recommend that you pour the salt near the edges of the pool.**

Important: **If you are going to start the pump before the salt is completely dissolved, we recommend that you stop the QUICKSALT equipment. To do this, press and hold the button, OK, until you see the message "stand-by" on the screen.**

3.1.2. Chemical balance of water

You should keep in mind that much of the effectiveness of your **QUICKSALT** chlorinator will depend on the pH of the water being within the proper range: between 7.2 and 7.6.

It is common that the pH tends to increase with the use of the salt chlorinator, so it should be analyzed periodically and adjusted if necessary.

Another fundamental parameter is the concentration of free chlorine, which is a disinfectant that we obtain thanks to the **QUICKSALT** chlorinator. Its regulation will be carried out by adjusting the production of the equipment and the hours of operation. How you can make such an adjustment is detailed in later sections.

The most important recommended chemical parameters are shown below. We suggest analyzing them periodically, but especially and regularly, the values of free chlorine and pH.

Parameter	Minimum Value	Maximum Value
PH	7,2	7,6
FREE CHLORINE (mg/l)	0,5	2,5
COMBINED CHLORINE (mg/l)	--	0,6
ISOCIANURIC ACID (mg/l)	--	<75
OZONE (vessel) (mg/l)	--	0
ALKALINITY (mg/l)	100	160
HARDNESS (mg/l)	150	250

Once your pool water has the right concentration of salt, and the main chemical parameters within its recommended range, you can start your **QUICKSALT** chlorinator.

The following section details how to configure and adjust it for optimal operation.

4. Operation

Chlorine production runs continuously every time it is connected to the mains, i.e. every time the filter pump is started. Production will therefore stop when the filtration pump stops.

The size of your pool, and the hours of filtration per day, and the season of the year in which it is located, determine to a great extent the percentage of production at which the equipment will be configured to achieve a production around 2 ppm of Cl2 per day to keep the water disinfected and in perfect condition for a pleasant use by the users, a good starting point would be 60% and from here adjust the appropriate one.

Note: **You can adjust the chlorine production according to the season, and can reduce the production when the water is colder and therefore the demand for chlorine decreases.**

4.1. Choosing the QUICKSALT model

There are 3 models of **QUICKSALT** chlorinator, according to their maximum production capacity.

	QUICKSALT20	QUICKSALT40	QUICKSALT60
POOL VOLUME UP TO	20.000 GALLONS	40.000 GALLONS	60.000 GALLONS
MAXIMUM PRODUCTION (in 24h)	0,80lbs (0,36Kg)	1,32lbs (0,60Kg)	1,85lbs (0,84Kg)

4.2. Navigation

In the central part of the control unit, you will find the control panel, which consists of a two-line LCD display and a button panel with 3 keys: Left, OK and right.

Use the buttons to navigate through the menu to make settings, as shown below:

- **Left arrow:** Go back in the navigation, and reduce the value to be adjusted (e.g. % of production).
- **OK:** Selection of the value to be adjusted during navigation. Confirm a setting.
- **Right arrow:** Access to the menu. Increase of the value you want to adjust.

The following table shows the full contents of the settings you can make. Please read the following sections carefully to learn more about their functionality.

Main Screen
Display of equipment status and production

Settings Menu
Production
Cleaning
Language
Audible alarm

4.3. Main Screen

It shows the status of the equipment, and its current production:

- **First line:** Chlorine production in %, and the voltage at which it is operating.
- **Second line:** Equipment status: "OK" will be displayed in case the equipment is working without any incidence. In the event of an alarm or warning, you will be notified in this area of the screen.

Prod:	100%	17.0V
Status:	OK	70°F

Note: **Temperature is only shown with the optional Temperature Kit.**

4.4. Settings Menu

By pressing the right button, you will access the configuration menu.

If you want to make a setting, first go to the screen where the parameter you want to change is displayed. Press OK, place the cursor on the parameter to be modified, and press OK again. When you see the value blinking, you can change it. Once set, press OK again to confirm.

Production	100%
Cleaning(h):	2

Language:	ENG
Audible alarm	OFF

Exit

4.4.1. Production

Allows you to regulate production of chlorine, between 0 and 100% in 10% increments. This is useful to adjust the chlorine concentration of your pool, without having to decrease the hours of filtration.

4.4.2. Cleaning

The **QUICKSALT** chlorinator has a cell self-cleaning system, which prevents lime deposits on the surface of the electrodes.

Depending on the hardness of the water in your pool, you can set the unit for more frequent cleaning (decrease the time between cleanings) or increase it.

This value can be adjusted from 2h (very hard water) to 8h (soft water).

Note that more frequent self-cleaning cycles mean shorter electrolysis cell life.

4.4.3. Language

Allows you to select the language of the equipment menus.

4.4.4. Audible Alarm

It is possible to activate or deactivate the acoustic warning, in case of an alarm.

Please note that if the warning is silenced, the unit will also display the alarm on the screen and stop production. If you disable this option, regular monitoring is recommended to check that there are no operating incidents.

5. Maintenance

This electrolysis equipment does not require any specific maintenance while the cell is within its useful life. However, here are some tips that will help you to function optimally and prolong the life of your cell:

Avoid using the equipment with too low salt concentrations. The performance of the cell decreases, and so does the life of the cell. Check the salt concentration regularly. In any case, the equipment will inform you of a low concentration if it occurs.

Make a periodic visual check of the cell, especially the space between the electrodes. There is no need to dismantle it, just check through the cup for incrustations. If that happens, you may need to adjust the self-cleaning system to a higher frequency (decrease the time between cleanings).

When the cell has reached its useful life, you will notice that the equipment shows a lack of salt warning, and the production is limited to low percentages. If you are confident that the salt levels are adequate, the cell may be exhausted.

Other reasons why your **QUICKSALT** equipment may show a warning for lack of salt:

- Very low water temperature
- Incrustations between electrodes.

In case of incrustations, decrease the time between cleanings. If that is not enough to remove them, it should be dismantled and cleaned with 10% dilute muriatic acid.

Caution: extreme precautions if you have to handle acid. Use appropriate protective equipment (goggles, mask, gloves).

Make a periodic overview of the equipment: Note that the cables are in good condition, free of rust and other damage.

If you have an automatic pH regulation system, never place the acid tank under the equipment, and make sure that it is well covered.

5.1. Winterizing

It is recommended not to use the electrolysis equipment in low water temperatures below 50 F (10°C), as cell life is reduced in these conditions. Please, switch off or select the "stand-by" status when the temperature is lower than 50°F.

With the Temperature Kit (sold separately) the Quicksalt automatically detects the temperature and displays it on the screen. In cold water conditions bellow 50° F (10 °C) the Quicksalt automatically stops its chlorine output and a warning message will appear on the screen. When the temperature exceeds 59° F (15°C),

production is restored again. This feature extends the lifespan of the Cell.

Additionally, a pass-through kit (sold separately) is available, which allow you to continue running water through the plumbing without the Electrolytic Cell in place.

It can be useful in case your installation does not have a plumbing by-pass system, and it is necessary to remove the cell system from the installation for maintenance purposes.

6. Warnings and Alarms

The unit will display a warning if the salinity conditions of your pool water are outside the optimum operating range. In the event of a warning, production does not stop*, but it is advisable for the user to take corrective action as soon as possible.

Message	Cause	Corrective Action
Lack of salt	Lack of salt in the water	Add more salt
	Incrustations in the cell	Reduce the time between cleanings. Manual cleaning of the cell if necessary
	Depleted Cell	Replace the electrolysis cell with a new
Excess salt	Excess salt in the water	Add water from the network to lower the salt concentration
*Water too cold	Water temperature bellow 50° F (10 ºC). Stop production.	When the temperature exceeds 59° F (15 °C), production is restored again.
Cleaning	The equipment is performing a cleaning cycle	None

*Quicksalt will stop production if Water too cold is detected.

An alarm is considered to be any serious incident that may compromise the safety of the installation or the equipment itself. If this happens, the equipment stops automatically, displaying an acoustic warning and a message on the screen. User action is required to correct the issue. Press OK to resume production once the problem has been resolved.

Message	Cause	Corrective Action
No flow	Filtration pump stopped, or speed too low	Check the correct operation of the pump. Increase its speed if necessary
	Filter selector valve in wrong position	When the chlorinator is running, the selector valve must be in the "filtration" position
	Air accumulation in the upper part	Let it expel itself. Purge if necessary
Open circuit	The cell electrodes are misplaced	Place the electrodes correctly, one per vessel slot.
	Disconnected or damaged cell cable	Check the cell connections, especially that the connectors have good contact
	Unsalted pool water	Adding salt to the water
Short circuit	Misplaced cell electrodes	Check that there are no electrodes touching each other
	Badly connected cell wires, or wires that make bad contact	Check the cable connections
	Internal equipment failure	Contact your technical service
Temperature	Ambient temperature too high	Try to install the equipment in a ventilated place and avoid direct sunlight

If you are unable to locate the cause of the problem, do not hesitate to consult your technical service.

7. Warranty

This equipment has a 2-year warranty on its control units.

In the electrolysis cells, the warranty will be two years as long as they have not exceeded the hours of use of the cells, depending on the model selected.

The electrolysis cell of the **QUICKSALT** equipment has an approximate life of **10.000** hours of use. Please note that this duration is achieved under ideal conditions:

- Salt concentration not less than 4000ppm.
- Configuration of time between cleanings, 4h or more.
- Water temperature of the water above 63°F.

Proof of purchase is required for warranty service. If a written proof of the purchase is not given, the manufacturing data will be the determinant of the date of installation of the product. The warranty covers any manufacturing defect of the equipment, which causes it to malfunction. Damage caused by corrosion, excess humidity, handling of the equipment, poor installation, or any other problem unrelated to the operation of the equipment itself is not covered. It is limited to the first retail purchaser and is not transferable.

In case of failure of the equipment, it must be checked and repaired by the manufacturer or by an authorized technical service.

Always use original QUICKSALT spare parts. If you use other parts or components that are not authorized, you will lose the guarantee of the equipment.

7.1. Part list and spare parts

Check Quicksalt package, it must contain these following items.

Also, these items are available for spare parts.

Part Description	Quantity	Picture	Spare part reference
QUICKSALT control unit	1		QS-Control
Electrolysis cell	1		*Cell-RP35QS-10K *Cell-RP25QS-10K *Cell-RP15QS-10K
Cell housing	1		QS-Vaso
Racord	2		101N976
Mounting clamps	2		101N910
Installation Template	1		QS-Template
Cell cable extender	1		CA4-EX-QS
Flow switch	1		Kit sonda agua
Water temperature K (optional)	1		Kit sonda NTC/2
Pass through Kit (optional)	1		QS-Passthrough
QUICKSALT - user's guide.	1		QS-Manual

*Note: Select the suitable cell model for Quicksalt adquired.

QUICKSALT

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