AQUA SOLIS

SALT AND MINERAL CHLORINATOR



INSTALLATION & OPERATING INSTRUCTIONS

TABLE OF CONTENTS

1. IMPORTANT WARNINGS & SAFETY INSTRUCTIONS 3
2. GENERAL OVERVIEW 4
3. POOL PREPARATION 6
4. POWER PACK AND CELL INSTALLATION 7
5. POWERPACK OPERATION 10
6. TIMER SETTING 14
7. WATER CHEMISTRY 15
8. CHLORINATOR MAINTENANCE 18
9. SYSTEM TROUBLESHOOTING 20
10. WARRANTY 22
11. TECHNICAL SUPPORT 23
12. NOTES 24

1. IMPORTANT WARNINGS & SAFETY INSTRUCTIONS

1.1 Important Warnings



This manual contains important information about the installation, operation, and safe use of this product. This information should be given to the owner and/or operator of this equipment. When installing and using this electrical equipment, basic safety precautions should always be followed. Failure to follow safety warnings and instructions in this manual can result in serious injury and/or damage to your equipment. Read and follow all warning notices and instructions which are included in this manual.

The Power Supply internally contains live components. There is a danger of electric shock if opened. If the power cord is damaged then it should be replaced by the manufacturer, their agent or similar.

1.2 Important Safety Instructions



To reduce the risk of injury, do not permit young children to use this product unless they have been trained by the person responsible for their safety and they acknowledge their ability to use such equipment. To reduce the risk of accidents or incidents, service on the unit should only be performed by your local pool Professional.

1.3 General Warnings



When mixing acid with water, **ALWAYS ADD ACID TO WATER. NEVER ADD WATER TO ACID.**



DO NOT PLUG UNIT IN IF THE CARTON HAS BEEN WET.



GAS BUILDUP CAN OCCUR WITH IMPROPER WIRING: To reduce the risk of personal injury the Power Pack is designed so that the Electrolytic Cell will only receive power when the pool pump is on. Otherwise, dangerous chlorine gas build-up can occur. If the pump is not installed to the AC Socket (pump outlet) on the Power Pack, then the installer must ensure that the Electrolytic Cell is never energized when the pool pump is OFF, or water is not flowing through the unit.

2. GENERAL OVERVIEW

Congratulations on your recent purchase of your AQUASOLIS™ Series Salt Chlorinator.
Please take a moment to read through the entire manual before installing your new unit.
Your chlorinator must be installed and operated as specified.

While every effort has been made to ensure that the information contained in this guide is accurate and complete, no liability can be accepted for any errors or omissions. Aquasolis reserves the right to change the specifications of the hardware and software described herein at any time without prior notice.

Please remember that your AQUASOLIS Series Salt Chlorinator is not designed to chemically maintain your pool water and keep it balanced, but rather to produce chlorine from a mild salt solution within the water. We encourage regular water testing, balancing and correction if, and when required to maintain the recommended balanced levels of your pool water. This is a vital part of a complete maintenance program and will ensure trouble-free performance as well as a healthy and sparkling clean pool.

The models available are 15, 15LS 25, 25LS, 35, and 35LS. All are reverse polarity units designed to automatically change direction every 7 hours. **See 5.13 Modifying the Polarity Change Times** to change the reversing times from 4 – 10 hours. This change of polarity causes the calcium to dislodge and keep the cell plates clean. Please note that occasional cleaning of the electrode plates may still be necessary in pools with high or extremely hard calcium.

Thank you again for choosing an AQUASOLIS Series Salt Chlorinator.
We wish you many happy years of swimming in your crystal-clear pool.



AQUASOLIS Chlorinator



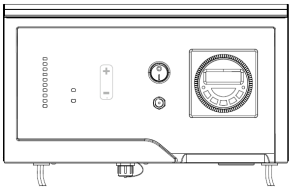
Cell Housing with Cell

2. GENERAL OVERVIEW

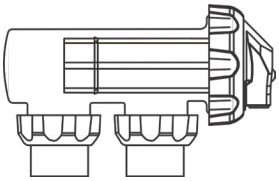
2.1 Recommendations and Helpful Hints

- This manual is available online only, so keep a short cut link to it on your smart devise.
- Read the manual to optimize and safely operate your chlorinator.
- To stop the sun from removing chlorine, it is recommended to use stabiliser in the swimming pool.
- Maintain your salt levels between 3500-4000ppm and 1200ppm - 1800ppm for AQUASOLIS15LS, AQUASOLIS25LS and AQUASOLIS35LS Freshwater/Ultra-Low Salt models, for optimum performance.
- Decrease the output when the water temperature goes down (less than 15°C) to extend cell life as high chlorine levels are not needed in winter.
- Increase chlorine production when temperature goes up again.

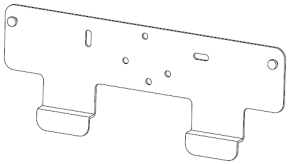
2.2 Contents



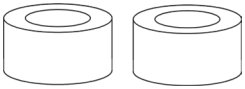
Power Pack



Cell & Cell Housing
With Unions



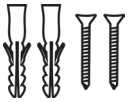
Wall Mounting
Bracket with Level



2 x 50/40
Reducing Bushes



Installation &
Warranty Card



2 x Green Wall
Plugs with Screws

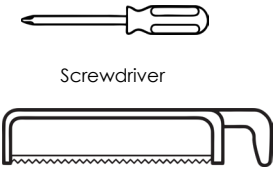
2.3 Tools Needed



Drill with 6mm bit



Basic PVC Fittings



Screwdriver

Hacksaw



PVC Glue &
Primer

3. POOL PREPARATION

Before operating your AQUASOLIS Series Salt Chlorinator, please read the following:

Check your salt levels in your pool before starting your unit.

Salt levels and mineral levels should ideally be 3000-4000ppm (3500ppm ideal) and 1200ppm - 1800ppm (1500ppm ideal) for AQUASOLIS15LS, AQUASOLIS25LS and AQUASOLIS35LS Freshwater/Ultra-Low Salt models. No more than 4500ppm for regular models and 2500ppm for Low Salt models. To achieve this salt level with minerals, you may need to add 20-30% more product to the pool water. Contact your local pool Professional for further assistance.

Salt levels above 6000ppm may overload the unit and cause excessive heat and void your warranty. We recommend you lower the output by 10% for every 500ppm over 4500ppm. You could also drain your pool water to achieve the optimum output. You will save more in electricity saving than the costs of the water loss.

For all new pool installations please seek advice from your pool builder or your local pool Professional before adding salt, as some new surfaces request no salt to be added when initially completed.

NEVER ADD SALT/MINERALS DIRECTLY TO THE SKIMMER BOX. This high concentration of either salt or minerals will pass through your filtration, pump and other pool equipment.

Handy Tips:

The colder the water the lower your output but this does not mean you need more salt. There will always be less chlorine demand in colder water.

We recommend adding 3.5kg of pool salt per 1000 litres of pool water, a 50,000lt new pool needs approximately 175kg of salt. For the FRESHWATER/ULTRA-LOW SALT SYSTEM Models: AQUASOLIS15LS, AQUASOLIS25LS and AQUASOLIS35LS, we recommend 1.5kg per 1000 litres of pool water.

The unit can operate on mineral/magnesium chloride salts, and you should allow an extra 20-30% of the product to achieve the correct salt level for these types of salts.

Salt should always be added to the shallow end of the pool and allowed to dissolve. Do not let the salt settle on the floor of the pool as it may cause damage to the surface. Use your pool brush to mix the salt into the water.

Running the pump will mix the water and help the salt to dissolve.

Only run the pump in the first 8-12 hours (ensure the cell is switched off) to allow the salt to dissolve.

If you press the Increase Button (+) until all 10 LEDs are ON, then wait 5 seconds and if all 10 LEDs remain ON then you have enough salt. DO NOT ADD ANY MORE SALT. If only 9 are ON, then your salt is at 90% of the required level.

4. POWER PACK AND CELL INSTALLATION

4.1 Power Pack Installation



The Salt Chlorinator has an Ingress Protection Rating of IP34 enabling it to be installed outdoors. Regulations require that the Power Pack shall be installed outside the pool zone. The Power Pack shall be installed according to AS/NZS 3000 wiring rules.

The Power Pack should be installed in a well-ventilated position ideally away from sunlight and rain to prolong life and at least 1m above ground to prevent run-off water entry.

Ensure that the Power Pack is not stored near chemicals, fertilisers or in a closed unventilated shed with similar products as the fumes will cause excessive corrosion and damage to the internals of the Power Pack and may void warranty.

When mounting the Power Pack on a post it is recommended to install a flat panel at least the same size to act as a waterproof backing plate.



Mount the Power Pack with the Mounting Bracket, Green Plugs and Screws provided.

The Power Pack should be mounted no further than 1.5 metres from the Chlorinator Cell for ease of operation.

4.2 Cell Electrode Installation



Connect the Cell Housing horizontally in the return line to the pool (use reducing bushes supplied if 40mm PVC pipe) using high pressure PVC glue. The Cell Housing can be mounted vertically but provision must be made for a gas trap.

The direction of water flow through the Cell Housing is not critical although we do recommend entry from the closed end of the Cell Housing and exit from the end closest to the Cell Locking Ring. The reason is to cause less water hammer over time on the cell plates.

Check that the O-ring is clean, greased with silicone grease (**DO NOT** use petroleum-based jelly) and securely located in the Cell Housing.

Ensure Cell Locking Ring is firmly tightened by hand (**DO NOT** use a tool to tighten).

Connect the cell lead from the Power Pack to the Cell Cap, ensuring a firm fitment to prevent water entry.

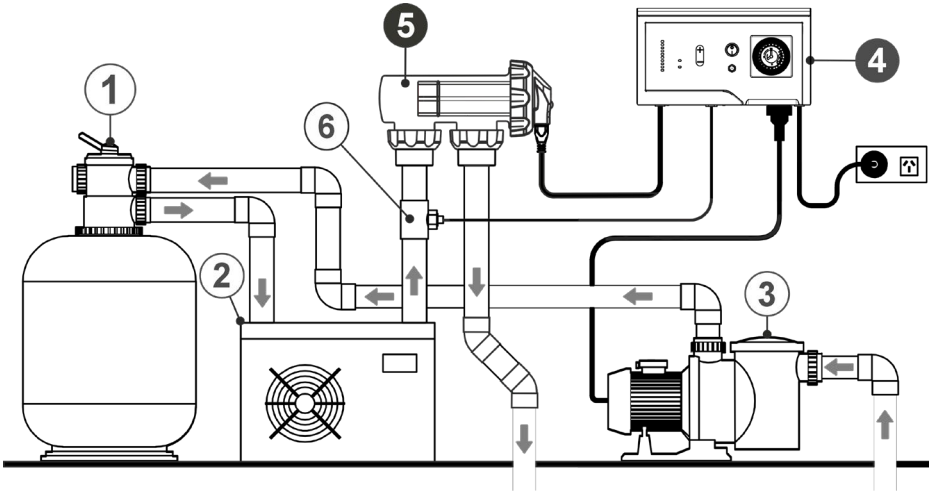
The cell comes pre-packaged with a Velcro harness for transit and packaging purposes. After installation, ensure the cable hangs freely and is not secured using the Velcro harness or any other fastening device to prevent heat buildup and potential damage to the cable.

Plug the Power Pack 3 pin plug into a suitable weatherproof RCD protected 10amp outlet.

FOR UNITS WITH A TIMER: Plug the pump into the 3 pin AC Socket located at the bottom of the Power Pack.

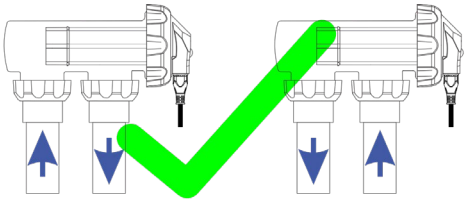
4. POWER PACK AND CELL INSTALLATION

4.3 Installation Diagram

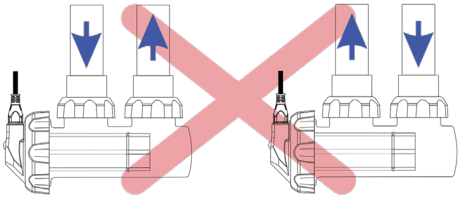


1 • Pool Filter
2 • Heat Pump
3 • Pool Pump
4 • CDS+ Series Salt Chlorinator
5 • VX Series Cell Housing
6 • Flow Switch (if installed)

4.4 Cell Installation



NONE OF THESE INSTALLS BELOW WILL WORK:



NEVER UPSIDE DOWN LIKE THESE TWO ABOVE (no matter the flow)

4. POWER PACK AND CELL INSTALLATION

Important Notes:

The pump rating must not exceed 8.7 – 9 amps (depending on your model – see label on Power Pack). Saltwater may damage electrical components in the Power Pack if splashed on it.

WARNING:

We **DO NOT** recommend the use of valves on the inlet or outlet of the cell housing. If you do use a valve, then it is important to ensure that the valve cannot deadhead (lock closed) while the pump is running. It is the installers responsibility to ensure some form of flow control is installed in this instance and it disables the pump.

ALWAYS ensure that pipe work and equipment do not allow gases generated from the cell to collect and build up in any part of the installation.

It is **RECOMMENDED** that the Cell Housing be installed horizontally to create a natural gas trap that acts as a safety device. Installation in any other way may cause explosion, injury, or death if the installer does not allow for gas removal.

The Cell Housing must be installed in the **RETURN** pipework to the pool. It must always be installed after the filter, gas heater, solar heating, or heat pump.

DO NOT apply priming fluid to the cell Housing, it is not needed and may react with the plastic.

5. POWERPACK OPERATION

5.1 Timer "Mode" Button

This button on the timer moves a black line on the Timer LCD face to the following modes:

- **AUTO** – the unit is in AUTO mode and the Timer controls the operating hours. See Section 6 for Timer Setting.
- **ON** – the unit is ON, and both the pump AC Socket and Cell (providing Cell Switch in ON) will be powered up.
- **OFF** – the unit is OFF, and both the pump AC Socket and Cell will be OFF.
- **BOOST MODE:** – The unit is currently in BOOST mode, which activates the chlorinator for an extended period based on the user-defined chlorination time.

5.2 Cell Switch

This switch position determines whether the cell is turned ON or OFF when power is supplied to it from the timer.

- **O** – pressing the switch in at the "O" position turns the Cell OFF in all models. For units with a Timer the pump is controlled by the Timer not the Cell Switch.
- **I** – pressing the switch in at the "I" position turns the Cell ON in all models. The backlight on the Cell Switch will light up. For units with a Timer This will only work if the Timer is turned ON.
- **Changing Direction** – while the unit is running you can change direction by turning OFF the cell switch, wait 3 seconds then turn it ON again. The direction should change. If it does not, then repeat this again and it should change direction. Please note, "+/-" LED is ON: cell is in Forward direction and "+/-" LED is blinking: cell is in Reverse direction.

5.3 Circuit Breaker

The Circuit Breaker only operates the Cell circuit and not the pump circuit. A circuit breaker is an automatically operated electrical switch designed to protect an electrical circuit from damage caused by overcurrent, overload, or short circuit. It can be reset by pressing the button in after it has tripped. It may be damaged if you supply excessively high levels of salt through the cell.

5.4 AC Socket (Pump Outlet)

The AC Socket allows the pump to be electrically operated and controlled by the Power Pack.
WARNING: If you fail to control the pump this way you must install a flow switch mechanism to control the electrical supply to the Power Pack, to prevent gas build-up if the pump stops or a valve is closed.

5.5 Cell Lead

The proprietary Cell Lead comes complete with moulded gold plated/brass connectors and is connected to the cell via a watertight plug top.

5.6 Output LEDs

There are ten green chlorine production indicating LED's. Each indicator corresponds to 10% of chlorine Production. Each solid LED represents 10% and a blinking LED represents 5%. If you require 55% setting you will have LED 1-5 (i.e., 10% to 50%) is solid ON and LED 6 (60%) will blink.

5. POWERPACK OPERATION

5.7 Decrease Button (-)

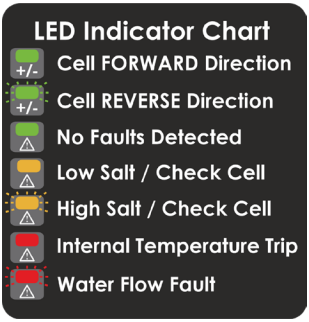
A single press of this button decreases chlorine production by approximately 5%. To turn OFF chlorine production it is necessary to press the button several times to make sure all chlorine indicator LEDs are off.

5.8 Increase Button (+)

A single press of this button increases chlorine production by 5%. When all ten lights are ON the chlorine production is 100%.

5.9 LED Indicator Chart

A Swing tag is attached to the power pack cell cable for quick reference. There are two LEDs on the front of the power pack that indicate various states, conditions, and faults. These are as follows:



"+/-" LED is SOLID GREEN: Chlorinator Cell is outputting in the Forward Direction.

"+/-" LED is BLINKING GREEN: Chlorinator Cell is outputting in the Reverse Direction.

⚠ WARNING LED is SOLID GREEN: No faults detected, and everything should be functioning normally.

⚠ WARNING LED is SOLID ORANGE: LOW SALT – have your pool water tested by your local pool shop; check for calcium build-up on the Cell, insufficient water flow over the Cell, Cell plates are worn meaning the Cell is reaching the end of its life, check Power Pack Cell Cable Plug connection to the cell.

⚠ WARNING LED is BLINKING ORANGE: HIGH SALT – have your pool water tested by your local pool shop; high salt causes excessive heat and wastes electricity. You can save on power by keeping your salt within range. Turn output down by 10% per 500ppm that the water is over salted or drain pool water and add fresh water. NOTE: Either of these two actions will save electricity that would cost more than the cost of the water.

⚠ WARNING LED is SOLID RED: INTERNAL TEMPERATURE TRIP – check that your salt level is not too high. The fault will reset once the transformer cools down.

⚠ WARNING LED is BLINKING RED: WATER FLOW FAULT – check for air cavities in the cell chamber causing the gas sensor on the cell cap to not be in the water, raise the speed of the pump or check that pump is working, remove any air locks, check valves and skimmer/pump baskets, check flow switch (if applicable). It may take a few minutes for this indicator to reset. At any stage that the Water Flow LED is ON pressing either the INCREASE or DECREASE buttons will try to start up the unit again.

5. POWERPACK OPERATION

5.10 Chlor Boost

The AQUASOLIS Series Salt and Mineral Chlorinator can be set to "Chlor Boost" (Chlorine Boost) for 24 hours by default and automatically sets the chlorine output to 100% during that time. To enter chlor boost hold the "+" and "-" buttons in simultaneously for approximately 3-5 seconds. After releasing the buttons, the LED's 2 and 4 will flash on for 5 seconds to indicate the unit has entered "Chlor Boost". It you wish to change the "Chlor Boost" time setting you can do so by pressing the "+" or "-" buttons this will cause the unit to cycle through settings.

Pressing "+" will have the effect of increasing the hours from 24 up to 28, 32, 36 and back to 4, 8, 12, 16, 20, 24 hours respectively. Pressing "-" will have the effect of decreasing the hours from 24 to 20, 16, 12, 8, 4 and then back up to 36, 32, 28 and 24 hours respectively.

LED's 1 through to 10 will turn on for 5 seconds and then off for 1 second to indicate that "Chlor Boost" has been activated.

To turn off "Chlor Boost" at any time before its running time, press and hold the "+" and "-" buttons together for 3-5 seconds. The unit will indicate that it is deactivating "Chlor Boost" by causing the "flow fault" LED (LED 12) to flash three times and then the unit will revert to its normal function with LED indicating regular output.

5.11 Start Up Procedure

- Plug the Power Pack 3-pin plug into a suitable weatherproof RCD-protected 10-amp outlet and then plug the pump into the socket at the base of the AQUASOLIS Chlorinator.
- Ensure the Cell is connected and make sure the Cell Cable is inserted fully into the connections on the Cell Cap.
- Turn the 10-amp wall outlet supply switch to "ON".
- Ensure the Cell Switch is turned ON and the timer is in ON mode.
- The pump should start up and prime.
- LED's 1and 7, will light up for 0.5 seconds. These indicate the gas sensor activation (LED 1) and number of reversing hours (LED 7).
- LED 2 & 5 will light up for 0.5 seconds (indicates 25g model; Different LEDs will light up based on the model size).
- The last saved output set point is displayed on the ten output LED.
- The Indicator LED should be SOLID GREEN.
- Either the "Forward" or "Reverse" LED status will be displayed on the "+/-" LED.
- Ensure that once you have performed the initial start-up you reset the timer to "AUTO" mode.
- Run the chlorinator for 6-10 hours per day in the summer and 3-6 hours per day in the winter.

5.12 Temporary Change of Polarity

- Start with the unit "ON" and identify if it is operating in the "Forward" or "Reverse" direction.
- Turn the unit OFF at the Cell Switch.
- Wait 3-5 seconds and then turn the Cell Switch ON.
- The polarity should change and the direction LED "+/-" should display the opposite direction.
- Is this does not work then perform the OFF – WAIT 3 SEC – ON process again.
- The unit will stay in this direction for 2 minutes and then revert to the original direction.

The polarity will change every 7 hours in normal operation (factory set). This polarity change can be permanently set to between 4 and 10 hours if required. Only lower this time if the Cell is not cleaning (mainly due to very high calcium levels).

5. POWERPACK OPERATION

5.13 Modifying the Polarity Change Times

IMPORTANT: The platinum coating on the cell plates may not last as long with quicker change over times as a percentage of wear on the coating is related to the number of polarity changes.

To Permanently set the polarity change frequency, follow the directions below:

- Start with the unit "OFF".
- Press and hold the "DECREASE" button.
- Turn the unit "ON".
- Release the button and the selected reversing time will display. The default will be set to 7 hours, and LED 7 will display. If LED 4 displays, this indicates that the reversing time is 4 hours and this can be increased by increments of 1 hour which will correspond with the number of LED's displayed. If LED 1, 2 and 3 display this means the reversing period is 10 hours.
- To change the reversing hours, press the "DECREASE" or "INCREASE" button to switch from one reversing hour to another.
- Once you have selected the reversing time you require, turn the unit "OFF". The new setting will apply next time you turn the unit "ON".

6. TIMER SETTING

Summer Settings

Ideally, run for 4 hours in the morning (6am-10am) and 4 hours in the evening (4pm-8pm). For a smaller pool you can run less hours. In extreme weather it may be necessary to run longer hours. Contact your local pool Professional for further assistance.

Winter Settings

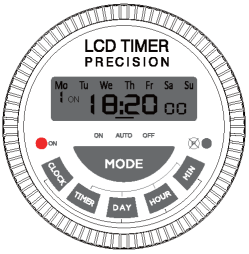
In winter you should lower your running time by up to 50% of your summer setting depending on your free chlorine levels. Ideally, you should run 2-3 hours in the morning and 2-3 hours in the evening. This preserves and extends the life of your equipment.

IMPORTANT: The Timer Switch will override the timer when it is in the Manual position. For timer settings to control the unit, the Timer Switch needs to be in the AUTO position.

Setting your Aquasolis Timer

These are the functional Buttons and display on your timer:

TIMER	Program review and setting programs
MODE	To select "ON/AUTO/OFF/BOOST" Modes
CLOCK	To adjust the current DAY and TIME
DAY	To adjust the day of the week
HOUR	To adjust the hour
MIN	To adjust the minute
Ⓟ	Reset Timer's settings
LED	To indicate ON/OFF status



HOW TO RESET THE TIMER & PERFORM SOFTWARE VERSION CHECK

Press the Ⓟ button with a sharp-pointed tool for about 3 seconds to reset the Timer before programming. Resetting the Timer will achieve the following:

1	It shows the software version.	U1-9
2	It resets the TIMER mode back to 2-7 (default setting).	2-7
3	It resets the TIME and DAY of the clock to default value (i.e.: Mo 00:00) and clears all timer events.	Mo 0:00 00

SETTING DAY AND TIME

This Timer has a 24-hour clock. Days, Hours, and Minutes are individually set by pressing a combination of the CLOCK button and the corresponding DAY/HOUR/MIN button, as follows:

4	DAY: Press and Hold the CLOCK button, then repeatedly press the DAY button until the correct day is displayed.	Th 0:00 00
5	HOUR: Press and Hold the CLOCK button, then repeatedly press the HOUR button until the correct hour is displayed.	Th 19:00 28
6	MINUTE: Press and Hold the CLOCK button, then repeatedly press the MINUTE button until the correct minute is displayed.	Th 19:46 28

6. TIMER SETTING

SETTING EVENT #1		
7	Press the TIMER button once, and the timer displays "1 ON" plus a series of - - : - - *Note:* This represents the "Program #1 "ON" time.	
8	Press the DAY button once, and all the days of the week will appear at the top of the screen, and "0 : 0 0 " will appear as the time. Press the HOUR button until the LCD screen displays the exact hour required for the system to turn ON. Press the MIN button until the LCD screen displays the exact minute required for the system to turn ON.	
9	Press the TIMER button again, and the timer displays "1" and "OFF" plus a series of - - : - - . This represents the "Program #1 "OFF" time. Repeat step 8 above to set your required OFF time.	
SETTING EVENT #2		
Note: If you do not want to use timer 2, then leave both ON and OFF at 00:00.		
10	Press the TIMER button once again, and the timer displays "2 ON" plus a series of - - : - - . *Note:* This represents the "Program #2 "ON" time.	
11	Follow steps 8 and 9 to set your required "ON" and OFF" times.	 
12	Press the CLOCK button, and your settings are saved, and the real-time is displayed.	
13	Press the MODE button until the solid line on the lower part of the LCD is above the AUTO label on the timer front. Your TIMER is now set.	

MODE ON / TIMER AUTO / OFF MODE

This setting is displayed above the MODE button and can be changed by pressing the MODE button.



The bar on the LCD moves as follows: AUTO ⟶ ON ⟶ AUTO ⟶ OFF ⟶ BOOST ⟶ AUTO

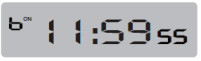
This sequence can start from anywhere.

AUTO-MODE: The Timer will switch ON and OFF on the set time frames. Outside the set timeframe, the Timer is OFF but in AUTO mode.

ON-MODE: The Timer is always ON. The user must press the MODE button to turn the Timer OFF or take it to AUTO mode. The LCD screen will not switch off when the Timer switches off at the set time.

OFF-MODE: The Timer is always OFF. The Timer will not switch on at the next set time. The user must manually press the MODE button to take the Timer to AUTO or ON mode.

BOOST MODE: The user presses the MODE button until BOOST mode is activated, indicated by the "bON" display. When activated, BOOST mode turns on the chlorinator for an additional boost in chlorination time and displays as shown. The unit will turn on for 12 hours and immediately commence counting down. BOOST mode time can be adjusted from 1-72 hours by pressing the hour button. Once BOOST mode is completed, the Timer will return to AUTO mode. At any time, you can stop BOOST mode by pressing the MODE button. During the BOOST mode, you can check the timer setting at any time by pressing the TIMER button.



Note: BOOST mode timer stops counting down when the main power is off, and "bOFF" will display on the left side of the screen.



DISPLAY OFF

If the screen stays idle for 30 seconds during TIMER adjustment, it goes to the default screen. If the TIMER remains idle for 60 seconds on the default screen, the display will switch OFF. This only happens when the main power to the TIMER is off, and the TIMER is being powered by the internal battery.

REPLACING THE BATTERY - A licensed electrician or approved specialist is required to install or remove the button/coin battery



NOTE TO THE ELECTRICIAN: The power supply requires tools to open and access the timer battery case. The battery is a 3V Lithium CR2032 battery. The battery life is expected to be over 5 years and the timer will work, even with a flat battery, provided there is mains power to the timer.

WARNING: KEEP REPLACED BATTERY OUT OF REACH OF CHILDREN. Swallowing can lead to chemical burns, perforation of soft tissue, and death. Severe burns can occur within 2 hours of ingestion. Seek medical attention immediately.



CAUTION: THERE IS A RISK OF EXPLOSION IF THE BATTERY IS REPLACED BY AN INCORRECT TYPE.

DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS ON THE REPLACEMENT BATTERY PACK.

7. WATER CHEMISTRY



The AQUASOLIS Salt Chlorinator unit is designed for use with swimming pool water balanced in accordance with the Langelier Saturation Index with a pH range of 6.8-7.8.

As previously advised, for best performance and operation of your AQUASOLIS Salt Chlorinator unit, certain water balances must be maintained within your swimming pool. Have your water tested regularly. Transport the test water in an opaque container and have the test done as soon as possible for best results.

7.1 Chlorine — Measurement Interval: Once a week

Ideal Chlorine (Free Chlorine) Levels: 1-3ppm (1-3mg/L) and no more than 4ppm (4mg/L). Adjust the chlorine output by pressing [+] to increase the required output set point in 15% increments up to 100%. Pressing [-] will decrease the output in 15% increments to 0%. Running the unit for longer or shorter hours can achieve the same result.

7.2 Salt — Measurement Interval: Every 4-6 weeks

Ideal Salt Levels: 3500-4000ppm and no more than 4500ppm. For the FRESHWATER/ULTRA- LOW SALT SYSTEM Model: AQUASOLIS15LS, AQUASOLIS25LS and AQUASOLIS35LS, the ideal Salt reading is 1200-1800ppm (1500ppm ideal).

Although salt is not consumed by the Chlorinator, salt is lost during backwashing, pool overflow, splashing and on bathers that use it. The correct salt level allows for the most efficient production levels and electricity consumption.

The salt level **SHOULD NOT** go below 3000ppm or 1200ppm for the AQUASOLIS15LS, AQUASOLISC25LS, and AQUASOLIS35LS models. Operating the unit with too little salt in the pool will cause damage to your Cell.

Salt is the essential element by which your unit operates. Not enough salt means not enough chlorine - this simple rule governs the total operation of your AQUASOLIS Series Salt Chlorinator unit, and insufficient salt will damage your Cell. Use Ultrafine Salt or Premium Salt to keep optimum salt levels.

The unit will operate with good stability on higher salt levels, but it is still advisable to run at the correct level to prevent damage. Salt levels above 4500ppm may overload the unit and cause excessive heat.



NEVER ADD SALT DIRECTLY TO THE SKIMMER BOX. This high concentration of salt will pass through your filtration, pump, and other pool equipment.

HANDY TIP: The colder the water, the lower your output, but this does not mean you need more salt. There will always be less chlorine demand in colder water.

We recommend 3.5kg per 1000 litres of pool water and a 50,000lt new pool needs approximately 175kg of salt. For the FRESHWATER LOW SALT SYSTEM Models: AQUASOLIS15LS, AQUASOLIS25LS and AQUASOLIS35LS, we recommend 1.5kg per 1000 litres of pool water.

The unit can operate on mineral/magnesium chloride salts, and you should allow an extra 20-30% more product to achieve the correct TDS for your unit to run efficiently.



Salt should always be added to the shallow end of the pool and allowed to dissolve. Do not let the salt settle on the floor of the pool as this may cause damage to the surface. Use your pool brush to mix the salt into the water. Running the pump will mix the water and help the salt to dissolve.

Low salt levels (<1000ppm) will destroy the coating on the Cell and void the warranty.

7. WATER CHEMISTRY

7.3 pH — Measurement Interval: Once a week

Ideal pH Levels: Concrete Pools: 7.4 - 7.6
Fibreglass/Vinyl Pools: 7.2 - 7.4

A pH of 8.0 results in your chlorine only been about 26% efficient, which is why it is critical to keep your pH in range.

A correct pH level must be maintained to prevent problems such as black spot, staining, cloudy water, etc. An incorrect pH level can damage the surface finish and walls of your pool.

When pH is high you can add Hydrochloric Acid to lower the pH.
When pH is low you can add pH Increaser - sodium bicarbonate (soda ash) to increase the pH.

7.4 Total Alkalinity — Measurement Interval: Every 4-6 weeks

Ideal Total Alkalinity Levels: Concrete Pools: 80 - 150ppm
Fibreglass/Vinyl Pools: 80 - 120ppm

Total Alkalinity should not be confused with pH, although the two are closely related. Total Alkalinity determines the speed and ease of pH change, it is measured in ppm. You should use a test kit which includes a test for Total Alkalinity. Low Total Alkalinity can cause unstable pH levels. This causes an inability to keep the pH constant and may cause staining, etching and corrosion of metals. High Total Alkalinity will cause constantly high pH levels.

When Total Alkalinity is high you can add Hydrochloric (a little at a time) to lower the Total Alkalinity. When Total Alkalinity is low you can add pH Increaser - sodium bicarbonate to raise the Total Alkalinity.

7.5 Calcium Hardness — Measurement Interval: Every 3 months

Ideal Calcium Hardness Levels: Concrete Pools: 250 - 300ppm
Fibreglass/Vinyl Pools: 150 - 190ppm

In addition to pH and Total Alkalinity, Calcium Hardness must be kept in balance so that your pool water does not become too corrosive or end up scaling the surface of your pool. These conditions are symptoms or swimming pool water that is unbalanced.

7.6 Stabiliser — Measurement Interval: Every 4-6 weeks

Ideal Stabiliser Levels: 30 - 60ppm

The importance of pool Stabiliser cannot be over emphasised. It is essential in helping retain chlorine in your pool. Chlorine is rapidly dissipated by sunlight and the use of Stabiliser will reduce this dissipation dramatically. Without Stabiliser, it may be necessary to run the unit for longer hours.



THE MOST IMPORTANT NOTICE AND WARNING:

Only add chemical in the method and quantities as indicated on the packaging provided or advised by your local pool Professional. Also, if in doubt of any results you achieve then do not hesitate to consult with your local pool Professional.

8. CHLORINATOR MAINTENANCE

Maintenance of your AQUASOLIS Series Salt Chlorinator is simple. Your unit must be one of the most productive pieces of equipment on your swimming pool, so it requires some basic maintenance.

While water chemistry will always be the most important form of maintenance there are also other hints and pointers to take note of.

DO NOT cover the Power Pack with towels or similar. There are vents that could be closed and these need air to keep the unit cool.

To extend the life of your unit we always recommend installation in an undercover area away from the elements.

Placing the unit in a closed shed or similar environment with chemicals, fertilisers and other corrosives will damage the unit and could void your warranty.

Always keep the chlorinator off whilst backwashing your sand filter. Please remember to turn it on once backwash is done and return the unit to AUTO mode if using the timer model.

Check that the plug connections on the Cell and the base of the unit are tight and are in sound condition at least once a year.

8.1 Inspecting and Cleaning the Cell Electrode

Reverse Polarity cells should not normally require cleaning, however, in areas with very hard water all calcium may not be removed. A calcium deposit might form on the lower areas of the cell, the sensor, or the sides of the cell plates. This will affect the operation of your chlorinator; however, you can use Cell Cleaner to clean the Cell.

All salt chlorinator cells must be cleaned before scale/calcium builds up to the point where the electrode gaps in the Cell are bridged. If the Cell has an excessive calcium deposit, this may damage the electrode coating, as the bridging causes a rubbing on the place coating, and this will affect the operation.

Check the Cell to prevent the accumulation of pool debris that for any reason may have by-passed the pool filter, particularly after backwashing.

Check that the O-ring is clean, greased with silicone grease (**DO NOT** use petroleum-based jelly) and securely located in the Cell Housing.

For cleaning, please follow these steps:

Switch the timer from "AUTO" to "OFF" as this ensures the pump, and the unit will not turn on.

Unscrew the Cell Locking Ring and remove the electrode for inspection. If calcium build-up is present, immerse the electrode in Cell Cleaner.

A solution can be made by mixing 1-part hydrochloric acid to 10 parts of water. If excessive build up is present a stronger solution may be used to remove the calcium.

8. CHLORINATOR MAINTENANCE

Using 5 parts of water will make a more aggressive solution but will not damage the Cell. You can use Cell Cleaner and if you do then follow the instruction supplied.

Allow the cleaning solution to dissolve the calcium deposits for about 10 minutes. Dispose of the cleaning solution at an approved Council Depot and never into storm water or sewage drains.



HANDY TIP:
Returning this mix to your pool only returns the calcium you just removed, so you may be better off reusing the solution until exhausted then disposing of it. Always store this solution in a safe method as advised on the container.

Do not scratch or bend the electrode plates in the Cell Housing. Ensure that the O-ring is clean, greased and properly seated.

Rinse the electrode in clean water and re-fit the electrode in the Cell Housing, ensuring that the Cell Locking Ring is hand tight and secure.

When mixing acid with water, **ALWAYS ADD ACID TO WATER. NEVER ADD WATER TO ACID.**
Eye Protection, mask and gloves should be worn when cleaning the cell.

8.2 Inspecting the Power Pack

Little or no maintenance is normally required with the AQUASOLIS Series Salt Chlorinator Power Pack.

Ensure the Power Pack 3 pin plug plugs into a suitable weatherproof RCD protected 10amp outlet. Ensure that the pump plugs into the 3 pin AC Socket located at the bottom of the Power Pack. Check all plugs and cords for damage. If damaged, then it should be replaced by the manufacturer, their agent or similar qualified person, to avoid a hazard.

If the chlorinator is to be hard wired, then a qualified electrician must complete the installation.

The AQUASOLIS Series Salt Chlorinator Power Pack has air vents to allow internal components to remain cool in hot weather. The AQUASOLIS Series Salt Chlorinator has a special oil spray applied to the inside of the unit during production to stop the insects from entering the unit. To help assist in keeping the insects away, apply a surface spray periodically on the wall or post that the unit is mounted on. DO NOT spray directly into the Power Pack and make sure the power is off when you use a spray. Allow adequate time for the spray to dry before turning power on again.

9. SYSTEM TROUBLESHOOTING



If you suspect for any reason your AQUASOLIS Series Salt Chlorinator is not performing or running as it should be, here are some handy troubleshooting tips that may assist you.

	Fault Indication	Potential Cause	Remedy
9.1	NO OPERATION AT ALL – NO LIGHTS	Not plugged into power point or power point not turned on.	Check that unit power cord goes into wall outlet and outlet is turned on.
		Plugged into power point but still no power.	Test wall outlet with a working appliance.
9.2	POWER AND DIRECTION LIGHTS ON – NO OUTPUT LIGHTS	Cell is not connected.	Ensure that the cell plug is securely fitted into the cell cap.
		Output is set too low.	Adjust output with the Output (+) button and lights should increase.
		Excessive buildup in the Cell.	See cleaning of the cell electrode (Sec 8.1).
		Low salt level.	Check salt level (Sec 7.2).
		The cell could be damaged or at the end of its life.	Damaged coating will reduce cell life and reduce output. If all conditions are correct, then Cell could be at the end of its life.
		Faulty control PCB or Faulty Main Power supply PCB.	Call for service.
9.3	WATER FLOW LED IS BLINKING RED	Low or no water flow.	Ensure sufficient water flows through chlorinator cell. Check that the pump is on and running. Look for air pocket – perform backwash if needed. Check skimmer and pump baskets are clean and securely tightened. Check for suction leaks. Seek advice from a pool professional for any of the above.
		Cell is not connected.	Check Cell and brass pins and cell connections and tighten if needed.
9.4	LOW OUTPUT READING	Output set too low.	Adjust output with the (+) button and output lights should increase.
		Low salt level.	Check salt level (sec 7.2).
		Buildup of calcium on the Cell plates.	Calcium acts as an insulator and needs to be removed. See Cleaning of Cell Electrode (Sec 8.1).
		Water temperature is low.	Winter water temperature can be very low. For every 1°C below 28°C the output can drop 2-3%.
		Insufficient water flow through the Cell.	Check water flow and ensure a full chamber of water is passing over the Cell. You may need to backwash your filter.

9. SYSTEM TROUBLESHOOTING

		The Cell could be damaged or at the end of its life.	Damaged coating will reduce cell life and reduce output. If all conditions are correct, then Cell could be at the end of its life.
		Level low in one direction but OK in the other.	Cell may need cleaning (Sec 8.1), or the Cell may have run its life in one direction.
9.5	WARNING LED IS SOLID RED – INTERNAL TEMPERATURE TRIP	Salt level may be too high.	Check Salt guide (Sec 7.2). The fault will reset once the transformer cools down.
9.6	WARNING LED IS BLINKING ORANGE – HIGH SALT WARNING	Salt level is too high.	Check salt guide (Sec 7.2).
9.7	WARNING LED IS SOLID ORANGE – LOW SALT WARNING	Salt level is too low.	Check salt guide (Sec 7.2).
9.8	CELL FORWARD LED IS ONLY "SOLID" GREEN OR ONLY "FLASHING" IE- POWER PACK ONLY WORKS IN ONE DIRECTION	Faulty Main Power Supply PCB or Relay.	See Changing polarity (Sec 5.12). If unit still only operates in one direction contact service department.
9.9	POOL PUMP OUTLET NOT FUNCTIONING PROPERLY OR PUMP ALWAYS ON	Pump not plugged into chlorinator.	Check that pump is plugged into the bottom of the power pack and not directly into the wall outlet.
9.10	CELL NOT CLEANING, EXCESSIVE CALCUIM BUILD UP ON CELL OR POWER PACK NOT CHANGING DIRECTION	Excessively high calcium, change of direction time set too high or faulty Main Power Supply PCB.	1. See calcium hardness test (Sec 7.5) and adjust water accordingly. 2. Manually try reverse direction (Sec 5.11 – Temporary Change of Polarity). Failure for this to work could indicate a faulty Main Power Supply PCB – contact service department. 3. Decrease the cell cleaning time (Sec 5.12)
9.11	LOW OR NO CHLORINE OUTPUT	Unit not working correctly.	Go through troubleshooting from 9.2.
		Unit not set correctly.	Check the output settings.
		Excessive calcium build-up on the Cell plates.	Calcium acts as an insulator and needs to be removed. See cleaning of Cell Electrode.
		Salt level is too low.	Check salt guide (Sec 7.2).
		pH is too high.	Check pH guide (Sec 7.3).
		Stabiliser is too low.	Check Stabiliser (Sec 7.6).
		Cell at the end of its life.	If full output is not reached, then it could be a failing Cell.

10. WARRANTY

THIS EQUIPMENT HAS BEEN MANUFACTURED AND TESTED TO THE HIGHEST STANDARD AND ACCORDINGLY CARRIES THE FOLLOWING WARRANTY.

10.1 The AQUASOLIS Salt Chlorinator Power Pack & Electrolytic Cell will be repaired for the warranted period (please consult your warranty card for this information), from the date of purchase should it be found, after examination, that the failure has been caused by faulty workmanship or materials. This is a back to base warranty.

10.2 Adverse operating conditions beyond the control of the manufacturer such as improper voltage or water pressure, excessive ambient temperature or any condition that adversely affects the performance of the equipment will render this warranty null and void.

10.3 Defective equipment must be returned to the manufacturer or dealer as soon as the purchaser becomes aware of the defect and all transport must be prepaid. Neither the manufacturer nor the dealer shall be responsible for any goods damaged in transit.

10.4 If after examination the equipment is found to be defective it will be repaired or replaced free of charge (other than transport costs which will be borne by the purchaser). However, if upon inspection of the equipment it is found that the terms of this warranty are not satisfied, then the usual charges of the manufacturer for repair or replacement will be made.

10.5 Any liability of the manufacturer pursuant to the Trade Practices Act 1974, as amended for a breach of a condition or warranty shall be limited to replacing or acquiring the equipment (or part thereof) where the same has been supplied.

10.6 The maximum liability incurred by the manufacturer shall not in any case exceed the contract price for the equipment or the product parts or components thereof claimed to be defective. Further, the manufacturer shall not be liable for any loss, damage or delay directly or indirectly caused by any malfunction of or defect of or failure of the equipment other than as expressly provided in this warranty.

10.7 Products sold by the manufacturer are designed for use with swimming pool water balanced in accordance with the Langelier Saturation Index with a pH range of 6.8-7.8. Chlorine level should not exceed 4ppm and the salt level should not exceed 4000ppm.

10.8 The manufacturer will not be held liable for damage caused by, but not limited to, corrosion, scaling, or stress.

The Warranty is void under the following circumstances:



- Installation is carried out incorrectly, by any person other than a person authorised by us to do so.
- The Power Pack or Cell is serviced by any person other than a person authorised by us to do so.
- Correct salt levels are not always maintained.
- The Power Pack is not protected from the elements.
- The Power Pack is not operated in a position/area with good ventilation.
- Water has been allowed to enter the Power Pack.
- Insect infestation or penetration by dust, sand, or other foreign particles inside the Power Pack.
- Damage beyond our control.
- Equipment that has been misused, neglected, damaged, repaired without authorisation or altered in any way.
- This warranty is applicable to workmanship and materials only.
- This warranty is not transferable under any circumstance.
- Keep your original purchase invoice and serial number in a safe place.

10. WARRANTY

Claiming Warranty on your **AQUASOLIS Series Salt Chlorinator**

When making a warranty claim, please note the following information MUST be provided or claim may not be approved.

- Model Number
- Power Pack Serial Number
- Cell Serial Number
- Proof of Purchase showing the Purchase Date and Purchased From
- Installation Date
- Installer
- Your Full Name
- Your Phone number
- Your Address details
- Details of the Issue

We keep extensive production and sales records so this information will expedite the processing of your claim.

Aquasolis reserves the right to modify any model without notice.

Register your product online:

11. TECHNICAL SUPPORT

For all warranty enquiries please contact your local distributor or contact Aquasolis directly and we will either direct you to your nearest authorised repairer or assist you with your enquiry.

Aquasolis contact details:

P - 1300 250 553

E - info@aquasolis.com.au W - www.aquasolis.com.au

DISCLAIMER

Information in this guide is intended to provide general information on a particular subject(s) in good faith and is not an exhaustive treatment of such subject(s). Its use is beyond the control of the author, contributor, publishers, and distributors and should not be relied upon without consulting your local Professional for comprehensive advice.

This guide includes subject(s) that should only be performed by or under the direction and advice of your local Professional and under no circumstances should the guide be used as a substitute for such professionals.

No representations or warranties are made that the content, advice, and recommendations in this guide are current, free from errors or omissions, or appropriate for the user's circumstances or abilities. No liability or responsibility is accepted for any loss suffered because of any user's reliance on such content.

12. NOTES


AQUA
SOLIS