

INSTALLATION AND OPERATING INSTRUCTIONS

Viron Series Salt Chlorinator +pH Control



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Warning: The appliance is not intended for use by young children or infirm persons without supervision. Please ensure that young children are supervised to ensure that they do not play with the appliance.

Controller must be installed according to AS 3000 wiring rules.

If the supply cord is damaged it must be replaced by AstralPool or its service agent or a similar qualified person in order to avoid a hazard.

1.0 INTRODUCTION

Congratulations on your purchase of the Viron series salt chlorinator. The correct pH balance of your pool water significantly increases the effectiveness of the chlorine in the water and if not maintained at the correct level, can cause harm to the interior finish of your swimming pool or spa and reduce the disinfection time of the chlorine.

The purpose of the Viron pH series chlorinators is to significantly reduce the level of daily and weekly maintenance required to keep your pool and spa sparkling clean and healthy to swim in.

These installation and operating instructions will guide you through installation, operation and maintenance of your new chlorinator. Regular maintenance will ensure many years of trouble free operation.

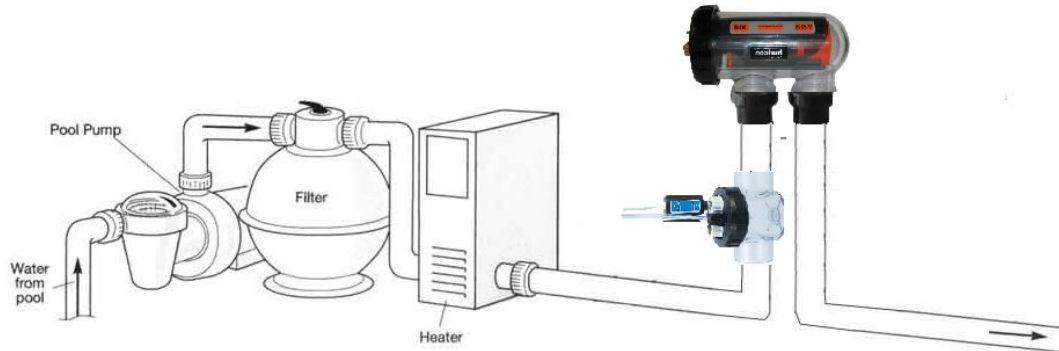
2.0 INSTALLATION

2.1 Mounting the Controller: Choose a location that is preferably out of direct sunlight, near the filter system. The controller should be located 1 metre above ground level to prevent rain splash back or sprinkler system damage to the underside of the controller. The controller must be mounted on a vertical surface/wall. If mounted on a post, a flat sheet 20mm larger than the controller housing must be used.

- Mount the wall bracket using the screws provided on a secure wall.
- Glue mixing cell for probe and acid injection point into plumbing line after filter and gas heater (if installed) but prior to chlorinator cell. **Mixing cell must be plumbed to ensure probe is horizontal to water flow.**
- Glue Chlorinator cell into line as per drawing below after filter, heater, solar (if installed) and after sensor T price.
- Plug the pH sensor into the underside of the controller in the location marked "pH"
- Plug filter pump 3 pin plug into underside of Controller
- Connect 4 wire cell cable ensuring matching colours.
- Remove cap from pH sensor and screw firmly into mixing cell installed in the plumbing. Do Not Overtighten.
- The cell **must** be installed with the barrel unions underneath and the cell should be horizontal. Both 40mm and 50mm fittings have been provided. Make sure that the o'rings are correctly fitted and the unions are done up tightly. Flow direction through the cell is critical – refer to label on housing.
- Hang Controller on wall bracket and plug power supply lead into 3 pin 10 amp outlet.



- NEVER MIX CHEMICALS
- CHEMICALS MUST BE STORED IN ACCORDANCE WITH RELEVANT STANDARDS AND DANGEROUS GOODS CODES. CONSULT YOUR AUTHORISED BUILDER OR POOL SHOP TECHNICIAN FOR ADVICE.
- WHEN HANDLING ACID, SAFETY GLOVES AND GOGGLES SHOULD ALWAYS BE USED
- FOR BEST RESULTS, USE OF NEAT ACID IS RECOMMENDED



2.2 CONNECTING THE PVC ACID TUBE

Before installing the unit in position on the wall or post, the length of the PVC tubing provided should be measured and taken into consideration. Ensure the controller and cell are close enough for the power supply lead to reach the cell and sufficient PVC tube exists to connect acid container and cell. To avoid loss of water from the system, close all stop valves before cutting any lines.

Thread the PVC tube through the hole in the cap or shoulder of the chemical container and fit the non-return or check valve and the weight. Ensure that the non-return valve is fitted correctly. Drop the weight, with the non-return valve into the bottom of the container.

Connect the other end of the PVC tube to the inlet of the acid pump on the front of the controller.

Connect the remaining hose from the outlet of the acid pump on the underside of the controller. The remaining end of the PVC hose should be pushed through the cable gland in the top of the cell so that it passes through the cell and 20mm – 30mm down the return pipework.

TIP: Soaking the ends of the PVC tubing in hot water or gentle heating with a lighter makes it easier to push onto the barb. When installing acid container in a filter enclosure, which has no ventilation, it is recommended that the hole in the cap of the container is cut or drilled to fit tightly around the tubing, so that fumes from the acid will not corrode the equipment. It will be necessary to drill a second hole in the cap fitted tightly with a length of tubing which should then be vented outside the filter enclosure. This procedure is recommended only where the filter enclosure has no ventilation and is to protect the equipment.

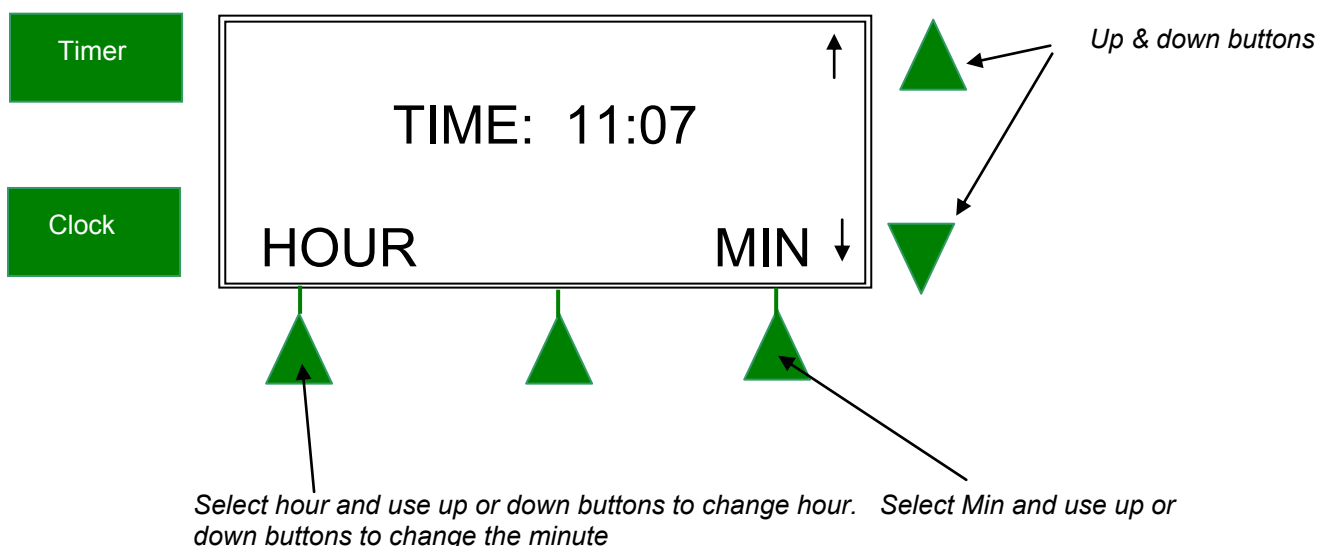
3.0 STARTING YOUR CHLORINATOR

Your Chlorinator Controller operation can be divided into 4 areas;

- MAINTENANCE – selects specialised functions of your chlorinator and initial set up of Chlorinator to suit your pool and spa.
- SET – selects changes in Chlorine Product and pH of your pool and spa water
- CLOCK & TIMER buttons – sets current time and filtration, chlorine production and pH monitoring and adjustment times from Monday to Friday and Weekends
- Pool and Spa Mode – Allows selection of pool mode where controller will produce chlorine suitable for pool and Spa Mode, where chlorine production and acid dosing is reduced to suit a smaller volume of water in the Spa.

3.1 SET UP

- Press “**Pool Mode**” button until **Manually Off** appears and then Press “**Clock**” Button
- Select “**Day**” and use buttons adjacent to LCD screen to set the current day, hour and minute. The clock is a 24 hour clock.



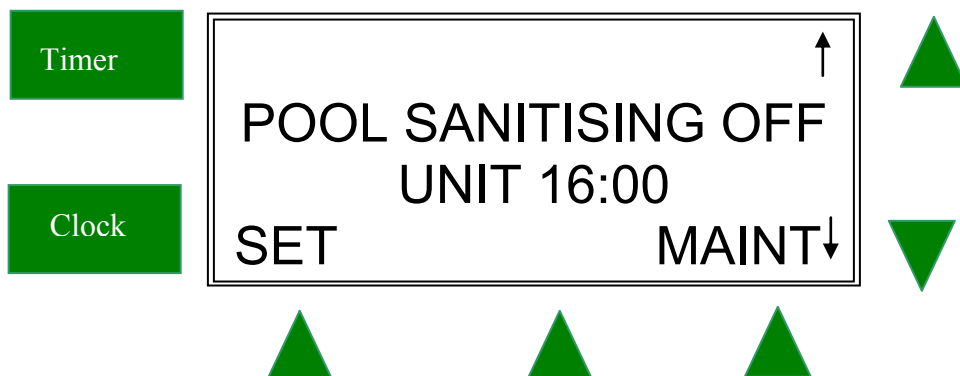
3.2 SETTING TIMERS

Your Viron Series chlorinator has 4 timers per day enabling you to set different periods in which your filtration pump, pH control and chlorine production will operate. Timers are set by entering a start time, and a **RUN** time for how long you want to operate. To set timers, do the following:

- Press the **TIMER** button.
- Press **HOUR** button to set the hour for the timer selected and use the Up/Down arrows to change the time.
- Press **MIN** button to select the minutes for the timer selected and use the Up/Down arrows to change the time. Press the **NEXT** button to select the **RUN** time or another time and set as required. Note: The RUN time represents the number of hours you want the unit to operate for.
- When finished, press the **NEXT** button a number of times to scroll through the other times until you return to normal display. This saves your new settings.
- Select **Auto Sanitising** by pressing the **POOL** mode button. The **POOL** mode button has three settings, manually **ON** which turns on system indefinitely, manually **OFF** which turns system off indefinitely, and **AUTO** model which sets the controller on timer clock mode. In **AUTO** mode the LCD screen will display the date and pool sanitiser message.

3.3 TIMER RECOMMENDATIONS:

AstralPool recommend that you use two timers, one for the morning and one for the evening and typically for periods of 2-5 hours for each. Your Viron Series chlorinator is most effective if running in the early morning or evening when it is cooler (strong sunlight consumes more chlorine). As a default, the control is set to come on at 08:00 hours and 16:00 hours both for periods of 4 hours.

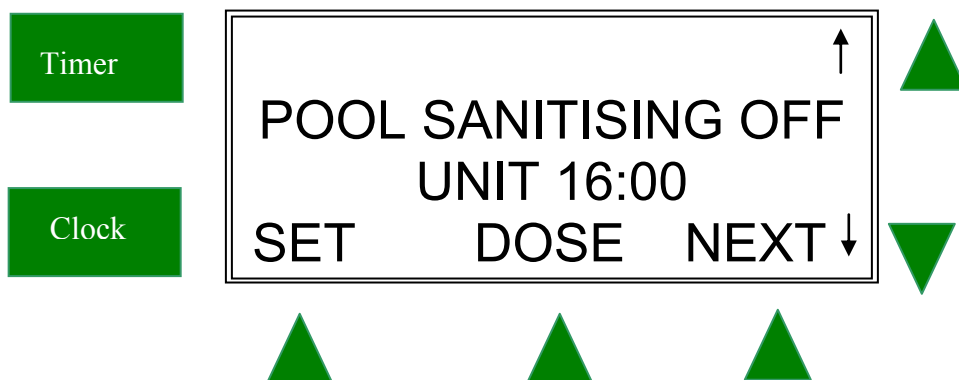


4.0 OPERATING FUNCTIONS ACCESSED THROUGH MAINTENANCE PROGRAM

Press **MAINT**

To backwash your filter press **BWASH** and then the up or down arrows to select the backwash time. You can press **ABORT** at any time to finish the back wash. To rinse the filter, you can select **BWASH** again and then select the time. Using this feature will ensure your sand filter is backwashed for the correct time. Note: Ensure pump is off when changing the position of the backwash valve on your filter. As a guide, sand filters should be backwashed for 2 to 3 minutes, and then rinsed for 1 minute.

Press **MAINT**



- i. Dose will allow you to override the time clock and allow the following:
 - a. Sanitise until the first timer tomorrow morning. This allows for additional circulation of the swimming pool water after treatment or cleaning. Can be used to provide a shock dose of chlorine production.
 - b. Manually prime Acid Pump. This allows for the clear PVC tube to be filled with Acid on initial start up or after changing or refilling the Acid Container. The priming period is for 300 seconds but can be stopped at any time. Should the tube not be completely filled with Acid after 300 seconds repeat the process.
 - c. Manually Dose Acid. Selecting this function allows you to manually dose acid for a predetermined time. Should your pool professional recommend the addition of Acid to your pool, select this function and press the up (or down) arrow to select the quantity of acid in litres you wish to dose. Press **ACCEPT**. The controller will then ask you what mode you wish the unit to revert to at the completion of Acid dosing, "AUTO", "ON" or "OFF". In normal circumstances you will select "AUTO" which puts the unit back into time clock operation.

- ii. **INSTALL** allows the unit to be set up for your pool or spa. This should only be selected in the initial start up of your Chlorinator. Select **INSTALL** and the following will occur:
 - a. **TIMER ENABLED** – this function will turn your timer on or off. If the chlorinator is not connected to an external timer clock or Genus Remote Control system Press **ACCEPT**. If an external timeclock is used to operate the chlorinator and filter pump then change to disabled.
 - b. **FAST COMMS** – set standard to YES, this option will only need to be changed if using a older version Hurlcon controller (no touchscreen)
 - c. **VARIABLE SPEED PUMP** – select YES if you have an AstralPool 3 speed pump. This will allow you to program the speed of the pump as part of the timer setting in the chlorinator.
 - d. **FLUSH AFTER TIMER** – select YES and your pump will come on momentarily after the timers have finished to flush any residual chemicals from the mixing cell.
 - e. **PUMP FLOW CHECK** – If active this function will monitor the flow sensor inside the chlorinator cell. If the presence of water flow is not detected for over 5 minutes, power to the pump outlet will be shut down to prevent your pump running dry.
 - f. **ENABLE LIGHT** – Your SM series chlorinator has an output to operate a single AstralPool ARC LED light.
 - g. **CELL REVERSAL PERIOD** – Standard setting is 4 hours. This should not be changed without consulting with your local AstralPool dealer or service department.
 - h. **REVERSE CELL?** – This feature can be used to perform a manual reverse of your chlorinator cell – designed for use by your pool technician only.
 - i. **SET POOL WATER VOLUME**, select **YES** and then use up or down arrows to change the volume of your pool. Press **ACCEPT**
 - j. **SET SPA WATER VOLUME**, select **YES** if your have a SPA attached to your pool and then set volume. Press **ACCEPT**
 - k. **RESET SYSTEM?** – **SELECT NO** (This option will revert your chlorinator back to factory settings. It should only be used if your SM series chlorinator enters an error that cannot be cleared)

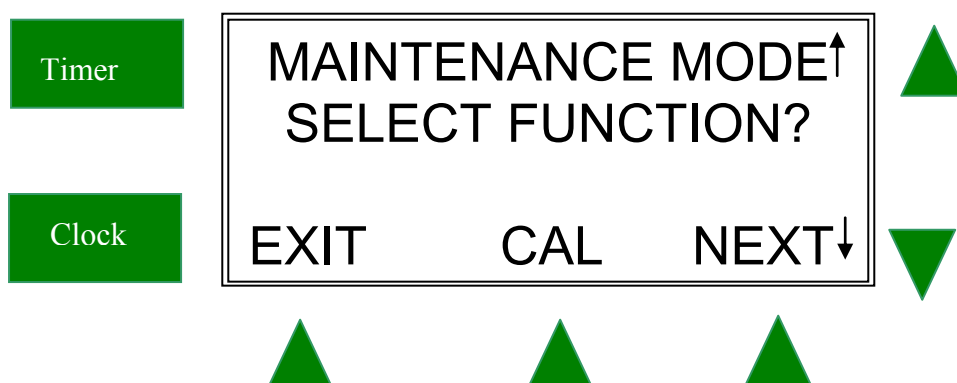
Cycle through **POOL MODE** button to select **Auto**, **Manually ON** or **Manually OFF**.

AUTO will allow the unit to operate your filter pump, chlorine production and pH adjustment on the timer periods you have selected. If you have not changed the timer periods, the default timer turns the filter pump and unit on at 08:00 hours for a period of 4 hours and then again at 16:00 hours for a further period of 4 hours. This is the default setting from the factory.

5.0 CALIBRATION OF PH SENSOR/PROBE:

From time to time, the pH sensor will require cleaning and calibration. Typically, calibration should take place one every 6 to 12 months.

To Calibrate, Press **MAINT** and next until **CAL** appears on the LCD. Select **CAL** to commence the process.



CAL

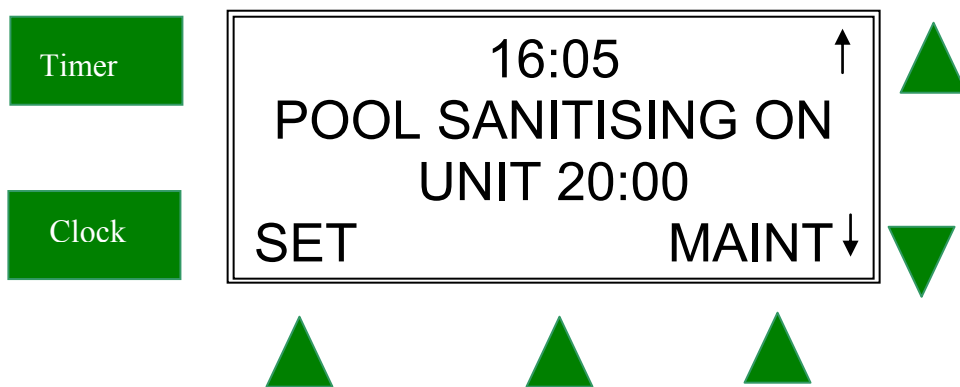
The pH probes/sensor has been factory calibrated. However it is a good practice to check the adjustment for the probe periodically (every 6 months or earlier if required). The probe should be cleaned first (refer under Maintenance page for cleaning) and allowed to settle down for about 4-5 minutes before adjusting/calibrating. Calibration solution is available via AstralPool as a spare part.

When the controller is in Manual Off mode, remove the pH probe from the pipe line (shut off the filter pump and close any isolation valves to avoid water spill), clean the probe (see under Maintenance) and place it in a 7.5 pH Easy cal Solution (available from AstralPool). Press **MAINT** and then next until **CAL** is displayed. The unit will ask CHANGE PH CALIBRATION, select YES. Select NO to Filter Pump on?

The display will indicate that the system is measuring pH. When the pH is displayed, press the **UP** or **DOWN** buttons to get the display to indicate the same value as the buffer (7.5) and then press **ACCEPT**

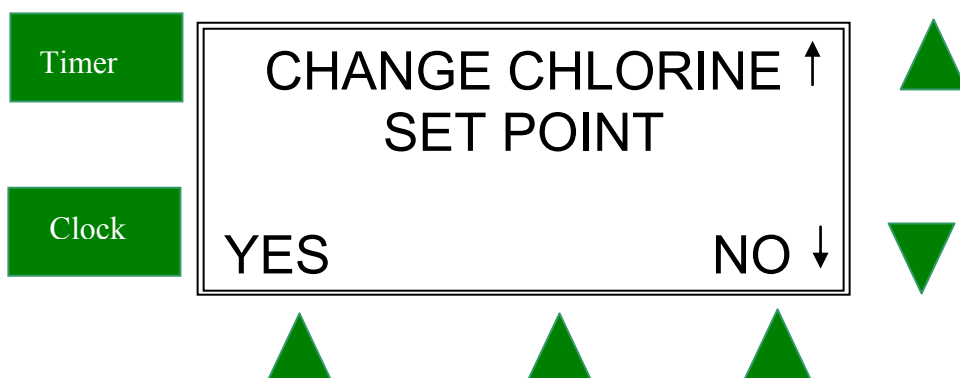
6.0 OPERATION

During operation, adjustments are made by the SET button.

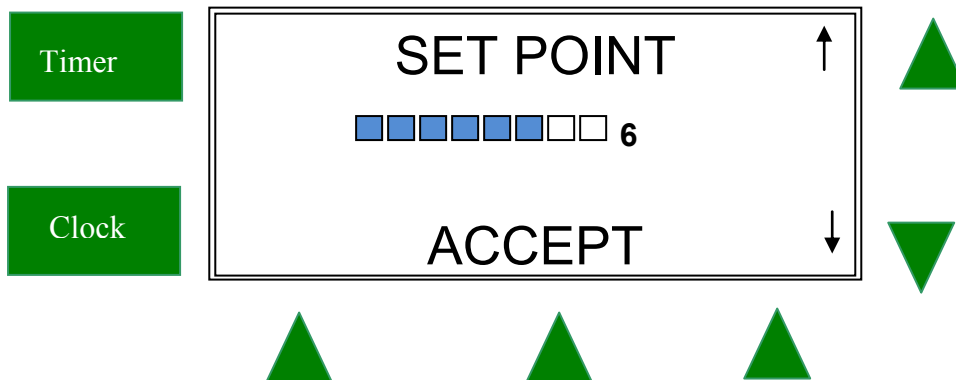


6.1 ADJUSTING CHLORINE OUTPUT

Press the **SET** button to change the chlorine output and the pH of your Pool



Press YES to change the output



Use the up and down buttons to change the Set Point between 0 and 8. 0 chlorine output should only be used when there is no salt in the water. In summer, the chlorine should be set between 6 and 8 and you should regularly check your chlorine level in your swimming pool to determine if the output should be increased or decreased. Rely on your pool professional for advice on the recommended chlorine level in your pool.

As a guide the free chlorine level should be between 1.0 ppm and 3.0 ppm.

6.2 ADJUSTING PH SET POINT

Continue through the **SET** menu to change the pH balance of your pool.

As a guide the pH in your pool should be set between 7.2 and 7.8. This will be determined by the type of pool you have, (Concrete, Fibreglass, Vinyl Liner) and you should rely on your pool builder or pool professional to recommend the correct pH Set Point. Use the up and down arrows to set your pH value.

Once the pH value is set your LCD screen will return to the operating information screen which will cycle through the current status of the chlorinator, the chlorine output setting (between 0 and 8) and the pH set point.

7.0 GENERAL OPERATION/POOL CHEMISTRY

7.1 Setting the Right Chlorine Output and Filtration Time

Your Viron chlorinator must be run every day to ensure that your pool is correctly sanitised. As the sun dissipates chlorine, running times are higher in the summer compared to the winter. AstralPool recommend that you initially run your chlorinator at maximum output on level 8.

Summer

You should set your Chlorinator to operate for 8 to 10 hours per day. Ideally, run it for 4-5 hours in the morning (say 8-12pm) and 4-5 hours in the evening (say 6.00-11pm).

In extremely hot weather it may be necessary to extend the running time if you find that the free chlorine level is too low.

Winter

You should set your Chlorinator to operate for 6 to 8 hours per day. Again, running it in the morning and evening is preferable. A lower chlorine output level may be selected.

Checking Chlorine Level.

Ideally, check your Chlorine level after the morning operating period. The free chlorine residual level should be somewhere between 1 and 3 parts per million. Increase or decrease the output of the Chlorinator to get the right residual chlorine level. It may also be necessary to adjust the operating period if you are running at minimum or maximum output.

7.2 Stabiliser

Sunlight rapidly dissipates the amount of free chlorine in your pool. Chlorine stabiliser greatly reduces this effect.

Without stabiliser, you may need to run your Chlorinator and filtration system up to 16 hours per day longer!!!

Keep the Stabiliser reading between 30 and 60ppm.

7.3 pH Level

You should keep your pH level between 7.0 and 7.4 for fibreglass pools and 7.2 to 7.8 for other pools.

7.4 Total Alkalinity

The ideal range is between 80 and 120 ppm.

7.5 Salt Level

Salt level should be maintained around 4,000ppm but should never be allowed to fall below 3,000ppm. Although salt is not consumed by the Chlorinator, salt is lost during backwashing, and when your pool overflows due to rain or splashing. The correct salt level is important to cell life and the effective operation of your chlorinator.

A typical pool of around 50,000 litres requires 200kg of salt to initially set-up the pool to 4,000ppm.

A low salt level warning is indicated on your E Series CSD Chlorinator if the salt level drops. If Low Salt is indicated, check again in 24 hours and then if it is still indicated, add two 25kg bags of salt to the shallow end of your pool. Run the filtration system for approx. 6 hours to help mix the salt in the pool. It can take up to a day for the salt to fully dissolve.

If the low salt light is still on, then you should get your pool water tested. If the Salinity is above 4000ppm then you may need to have your Chlorinator checked.

Warning: Some people recommend that you put salt directly in the skimmer box. This is a very bad practice as it allows very high concentrations of salt to be passed through your filtration and other pool equipment.

7.6 ACID Handling

Hydrochloric Acid should be handled with extreme care. Refer to Material Safety Data Sheets on Hydrochloric Acid. Do not inhale Acid fumes. Do not spill and handle with extreme care during transport. Use protective gloves and goggles.

In the case of spillage wash down with fresh water immediately. Keep out of reach of children.

8.0 MAINTENANCE OF PH SENSING AND DOSING

8.1 Acid Pump squeeze tube must be lubricated every 6 months or more often in commercial applications. Use only the recommended lubricant RC Tube Lube available from AstralPool or any other compatible silicone lubricant, otherwise damage to the tube is possible.

Depending upon usage, the squeeze tube may need replacement after 12 months on a domestic installation, and earlier on a commercial installation. Before replacing the tube make sure that any stop valves in the filter system are closed. Otherwise water loss may occur.

(To replace the tube, remove controller draw, remove retaining screws from the pump head and pull the tube free. Disconnect the squeeze tube from the barbs and reconnect the new squeeze tube after lubricating the same, making sure that the new tube is correctly connected to the PVC tubing as per instructions. Reposition the squeeze tube in the unit as before, replace the pump head and retaining screws.) **DO NOT OVERTIGHTEN THE RETAINING SCREWS.**

8.2 The probes/sensors, which are sensitive instruments. To maintain their accuracy they should be cleaned periodically by household detergent abrasive like Jiff. Jiff is the preferred option. The ORP probe tip can be contaminated (generally observed by a copper or brownish coating – this should always look shiny silver) which will give a false reading to the Controller causing no dosing/over dosing of chemical. As the pH sensor tip is made of glass, please take care, for even a hair line crack can cause the sensor to read incorrectly causing malfunction. After cleaning the sensors/probes, wash with water, allow 5-10min. to settle and check calibration or re-calibrate if necessary.

8.3 Swimming Pool Applications and the use of Cyanuric Acid

USE OF A SUN SCREEN CHEMICAL (CYANURIC ACID) FOR OUTDOOR POOLS IS RECOMMENDED. CHECK WITH YOUR LOCAL POOL SHOP AND USE THE CORRECT DOSAGE. ENSURE YOUR POOL WATER IS WELL BALANCED WITH THE CORRECT pH, TDS, TA AND STABILISER LEVELS AND FREE FROM PHOSPHATES.

9.0 Fault Indication and trouble shooting

Fault Indication	Potential Cause	Remedy
No Flow	Pump turned off/disconnected or valves closed	Ensure valves/pump on
	Sense wire disconnected from cell	Connect sense wire to cell
Low salt	Salt level in pool has dropped too low	See section 7.5 above
	Pool water temperature is low	Increase salt level or raise water temperature
	Cell has failed	Call a technician
Display blank	No Power to Controller	Plug in controller and ensure mains power available
	Fuse blown	Call a technician
Low/No chlorine production	Cables not connected to cell	Connect cables
	Timer period too short	Increase timer period
	Chlorine output level too low	Increase chlorine output
	Filter needs backwashing	Backwash filter
	Pool stabiliser too low	Get Stabiliser between 30 and 60 ppm
	Salt level too low	Increase salt to above 4000ppm
	Water Temperature below 15 deg	Increase water temperature or salt level
	Excessive Salt Level (Above 10,000 ppm)	Chlorinator cuts out on overload, reduce salt level to 4000 ppm
Clock loses time when mains power removed	Battery life expired	Call a technician
pH too high	Probe/sensor malfunction	Clean and Calibrate probe/sensor

10.0 WARRANTY

AstralPool Australia Pty Ltd (ABN 97 007 284 504) ("AstralPool") provides the following warranty in relation to its Viron series salt chlorinator ("Product").

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

The benefits of this warranty are in addition to any rights and remedies imposed by Australian State and Federal legislation that cannot be excluded. Nothing in this warranty is to be interpreted as excluding, restricting or modifying any State or Federal legislation applicable to the supply of goods and services which cannot be excluded, restricted or modified.

WARRANTY

AstralPool warrants that, subject to the exclusions and limitations below, the Product will be free from defects in materials and workmanship during the warranty period. The warranty periods are set out below and commence 30 days after the date of purchase (to allow for installation). The warranty period may vary for different parts of the Product.

Parts	Warranty Period
Control box including PCB's	5 years pro rata 0% payable of invoice total year 1 20% payable of invoice total year 2 40% payable of invoice total year 3 60% payable of invoice total year 4 80% payable of invoice total year 5
pH Probe, dosing motor/gearbox and associated tubing/fittings	12 months
Chlorinator cell electrode	5 years

If a defect appears in the Product before the end of the warranty period and AstralPool finds the Product to be defective in materials or workmanship, AstralPool will, in its sole discretion, either:

- (a) replace or repair the Product or the defective part of the Product free of charge; or
- (b) Cause the Product or the defective part of the Product to be replaced or repaired by an Authorised AstralPool Service Agent free of charge.

AstralPool reserves the right to replace defective parts of the Product with parts and components of similar quality, grade and composition where an identical part or component is not available.

Goods presented for repair may be replaced by refurbished goods of the same type rather than being repaired. Refurbished parts may be used to repair the goods.

WARRANTY CLAIMS

1. If a fault covered by warranty occurs, the customer must first contact AstralPool at the contact address listed below, or an Authorised AstralPool Service Agent.
2. Any warranty claim must be accompanied by:
 - (a) proof of purchase;
 - (b) full details of the alleged defect; and
 - (c) appropriate documentation (such as historical and maintenance records).

3. The customer must make the Product available to AstralPool or its Authorised AstralPool Service Agent for inspection and testing. AstralPool or its Authorised AstralPool Service Agent will attend the premises where the Product is installed for inspection and testing. If the Product is installed:

- (a) outside a capital city metropolitan area; and
 - (b) is not within a 20 km radius of an Authorised AstralPool Service Agent;
- then the customer may have to pay a travel fee.

4. If such inspection and testing finds no defect in the Product, the customer must pay AstralPool's usual costs of service work and testing. If such inspection and testing finds a defect that is not covered by this warranty, the customer must pay AstralPool's usual costs of service work plus any parts and labour required to repair the Product, unless recoverable from AstralPool on the failure of any statutory guarantee under the ACL.

Exclusions

The warranty will not apply where:

- (a) the customer is in breach of the Terms and Conditions of Sale;
- (b) the Product was used for a purpose other than one it was intended for;
- (c) the Product was repaired, modified or altered by any person other than AstralPool;
- (d) the Product has not been installed, maintained and/or operated in complete compliance with the installation and operating instructions and any instructions by AstralPool;
- (e) the Product has been subject to accident, negligence, alteration, abuse or misuse.

The warranty does not extend to:

- a) normal wear and tear;
- b) weather and other environmental conditions including but not limited to storm, flood, and/or heat wave damage; or
- c) service and maintenance items.

Examples of exclusions include but are not limited to:

- cleaning and calibration of probes

Commercial Installations

On commercial installations, such as health clubs, motels/hotels and hydrotherapy facilities, the warranty is limited to parts and in field labour (within capital city metropolitan areas or 20 km radius of Authorised AstralPool Service Agents) for a period of 12 months from the date of purchase plus 30 days to allow for installation.

LIMITATIONS

AstralPool makes no express warranties or representations other than set out in this warranty.

The repair or replacement of the Product or part of the Product is the absolute limit of AstralPool's liability under this express warranty.