

# Sterisel<sup>®</sup>

## User Manual for Sterisel Salt Water Chlorinator



pool  
CONTROLS

Head Office: 20 Abrams Street,  
Balcatta, WA 6021

Email: [sales@poolcontrols.com.au](mailto:sales@poolcontrols.com.au)

Email: [service@poolcontrols.com.au](mailto:service@poolcontrols.com.au)

Sales/Service Ph: 1300 550 010

Facsimile: 1300 895 231

Web: [www.poolcontrols.com.au](http://www.poolcontrols.com.au)



# Contents

<b>Manufacturers' Warranty</b>	<b>2</b>
<b>Introducing the Sterisel</b>	<b>4</b>
<b>How it Works</b>	<b>5</b>
<b>Initial Pool Balance</b>	<b>6</b>
<b>Installation Guide</b>	<b>8</b>
<b>Sterisel Front Panel</b>	<b>8</b>
<b>Status Indicator, Warnings and Safety Shutdowns</b>	<b>9</b>
<b>Maintenance</b>	<b>10</b>
<b>Troubleshooting</b>	<b>10</b>

## **IMPORTANT**

***If the power cord is damaged the unit must be returned to Pool Controls for repair.***

***Always read the instructions and warnings on chemical containers before using chemicals.***

**Serial Number.....**

**Date of Installation.....**

**Installed by.....**



# Manufacturer's Warranty

Pool Controls products 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 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 under this warranty are in addition to other rights and remedies under a law in relation to the goods.

**Pool Controls** warrants all components of the Sterisel to be free from defects in material and/or workmanship for a period of 2 years from the original date of purchase or installation.

## **Additional Pro-rata Warranty on Multi-electrodes and Cells**

**Pool Controls** warrants the Sterisel Electrode (Cell) to be free from defects in material and/or workmanship for a period of 2 years, followed by 36 months pro-rata warranty.

## **WARRANTY OBLIGATIONS OF POOL CONTROLS**

If a defect in workmanship or materials in any Pool Controls product covered by this warranty is discovered during the term of the warranty, and provided the warranty holder follows the procedure set out below, Pool Controls will, at its option, repair or replace that item.

## **PROCEDURE FOR CLAIMING UNDER THIS WARRANTY**

In order to claim under this warranty, the warranty holder must:

- Contact Pool Controls Service as soon as possible after the discovery of the defect and in any event, within the relevant warranty period;
- Provide proof of purchase and confirm date of installation;
- Confirm that the installation was completed by a suitably qualified technician, as set out in the installation manual; and
- If required, arrange for the relevant Pool Controls' product to be returned to Pool Controls for repair, and the warranty holder is responsible for the cost and risk of any freight or transportation to and from Pool Controls.

## **CALL OUT FEES**

- If the Pool Controls product needs to be serviced, replaced or repaired at a place other than Pool Controls' premises, a call out fee will be charged to cover the cost of travel by an authorised Pool Controls technician. Please note that this call out

fee will NOT be charged when the relevant Pool Controls product is returned to Pool Controls for repair.

- If an authorised Pool Controls technician repairs or replaces a Pool Controls Product and this warranty does NOT apply, a fee for labour and parts supplied will be charged in addition to the call out fee.
- If the Pool Controls product needs to be returned for repairs under this warranty, the warranty holder is responsible for the cost and risk of any freight or transportation to and from Pool Controls.

## **WARRANTY EXCLUSIONS**

- This warranty extends to the original owner only, beginning on the date of installation and is not enforceable by any other party without the prior written consent of Pool Controls.
- Pool Controls is not responsible for any cost of freight or transportation to or from its Service Department.
- Pool Controls is not liable under this warranty if the installation of the Pool Controls product was not carried out by a suitably qualified technician.
- To the extent permitted by law, Pool Controls is not liable for any incidental or consequential loss incurred in connection with the removal or replacement of the Pool Controls product under this warranty.
- To the extent permitted by law, Pool Controls disclaims all other warranties, either express or implied, including, but not limited to, implied warranties of merchantability and fitness for a particular purpose with regard to Pool Controls products, parts and/or any accompanying written materials.

## **REGISTER YOUR WARRANTY NOW**

Go to [www.poolcontrols.com.au](http://www.poolcontrols.com.au), click on the warranty registration tab and fill in your details.

## **CONTACT POOL CONTROLS**

Pool Controls is based at 20 Abrams Street, Balcatta, Western Australia. We also have service technicians based in NSW, Queensland and Victoria.

- Service Email: [service@poolcontrols.com.au](mailto:service@poolcontrols.com.au)
- Service Phone: 1300 550 010

# Introducing the Sterisel

## What's in the box?

The Sterisel Box contains the following components:

- Mounting brackets; top and bottom
- Sterisel Salt Cell
- Sterisel Power Supply and Mains Cable
- Mounting hardware (raw plugs, screws and paper template)

## How it works:

The Sterisel is a salt chlorinator, which works by putting a dc current through an electrolytic cell in a flow of salt water. Salt is made up of sodium and chloride ions. Electrolysis of salt produces chlorine gas, which dissolves almost instantly to form free chlorine in the water. This free chlorine is a highly effective sanitiser for your pool.

The Sterisel constantly adds a dose of chlorine to the water when it is operating. The amount of chlorine added depends upon the cell output and the running time.

## Initial pool balance

Before you begin using the Sterisel make sure your pool water is balanced as follows:

### Salt

There should be between 3000 and 5000ppm of salt in the pool ideally 4000ppm. This is achieved by adding 4kg of salt for every 1000 litres (1m<sup>3</sup>) of pool volume. Note that this amount of salt will take time to dissolve.

**Note: keep salt below 7500ppm to avoid overloading the cell and causing shutdown.**

### Chlorine

If it is a new installation, add enough chlorine (liquid or granular) to achieve a reading of 3ppm on an appropriate test kit.

### Stabiliser

If the pool is outdoors, it is vital that stabiliser (also known as cyanurate and cyanuric acid) be added and maintained at 40ppm to 60ppm. This compound reduces chlorine destruction due to sunlight. However, too much stabiliser will reduce the effectiveness of chlorine and can result in poor quality water so ensure stabiliser does not exceed 80ppm.

### pH

For chlorine to be effective, the pH must be within a certain range. This is usually between 6.8 (fibreglass/liner pools) or 7.2 (concrete/plaster) and 7.8.

Adjust pH down with acid – powder, liquid sulphuric or liquid hydrochloric. Be very careful with acid as it can be harmful and corrosive.

### Total Alkalinity (TA)

Total alkalinity is also known as carbonate hardness or TA for short. The recommended level is between 80 and 120ppm.

TA is related to pH in that it stops the pH from varying quickly with small additions of acidic or alkaline chemicals. When the TA is low it is almost impossible to control the pH. To raise the TA, buffer (sodium bicarbonate) is added. This must be done slowly as buffer will also cause the pH to rise. As an approximate rule every increase of 20ppm of TA will also cause a 0.1 rise in pH. Once buffer is added it should be left to mix in the pool for a few hours before reducing the pH.

# Installation Guide

## Choosing a good location

The Sterisel is manufactured from weather resistant materials and is designed for operation in full sun and rain. However, your Sterisel will benefit if it is protected from the weather.

The Sterisel should not be mounted in areas where chemicals are stored (eg acid and chlorine) as vapours from these chemicals are corrosive and may damage the electronic controls within the units.

Insect intrusion (particularly ants) can cause problems with all equipment. Ensure that the pool equipment area is kept free of insects as much as possible. Insect intrusion is not covered under the warranty.

## Installing the Sterisel Power Supply Unit

Locate the Power Supply Unit close to the filtration equipment so that it may be connected easily. Connect the Power Supply to the mains power outlet of the pool area or controller and make sure this outlet meets all applicable Australian Standard at the time of installation.

Mount the Sterisel Power Supply Unit at least 1.5m above the ground and at least 3m from the pool water. A mounting template has been provided that shows you where to place screws on either a wall or post.

## Installing the Sterisel Cell

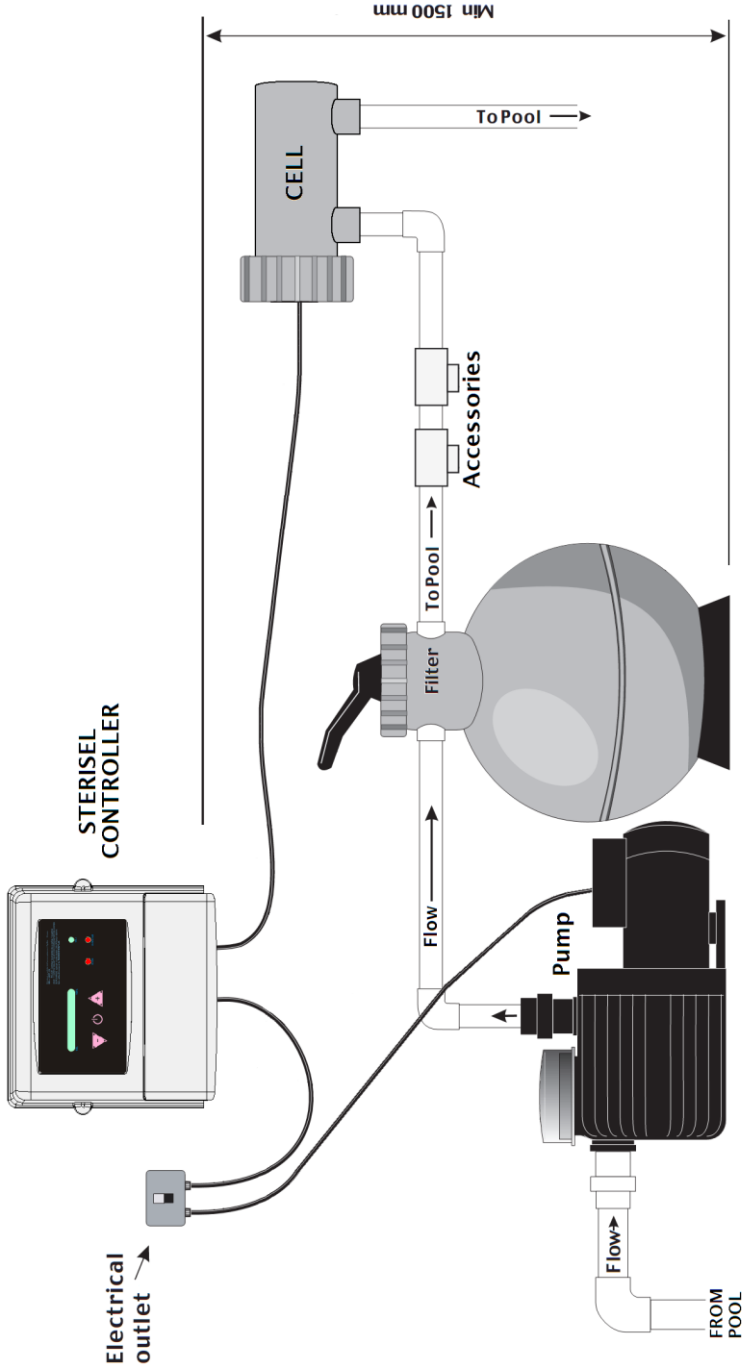
The Sterisel cell housing assembly should be plumbed into the pool return line after all other accessories (and prior to any heating take-offs).

Remember that the cell will need to be removed from its housing periodically for cleaning – do not place it where its removal will be obstructed.

Note any water flow direction on the cell housing.

Connect the cell cable to the cell connector on the base of the Sterisel Power Supply. Ensure that all 3 connections (2 for cell power and 1 for gas sensing) are colour matched and not loose. .





# INSTALLATION DIAGRAM 1

# Sterisel Front Panel

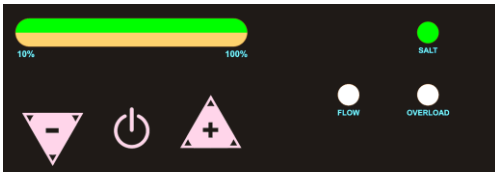
The Sterisel has 3 buttons to make adjustments:

- (on/off)
- + (increase)
- - (decrease)

The LED bar meter usually shows the amount of chlorine being produced by the Cell as a percentage of its maximum. The Output Control turns the Cell on or off over a short period of time. The Output setting determines how long the ON time is – for example if the Output setting is 60% the Cell will be ON for 60% of the period and OFF for 40% of the period. To adjust the output, simply press the INCREASE or DECREASE buttons. The LED bar will change to a point meter (in red) while any adjustment is being made to indicate output from 10% to 100%. The LED bar meter will return approximately 10 seconds after any adjustment is made.

## Status Indicators, Warnings and Safety Features

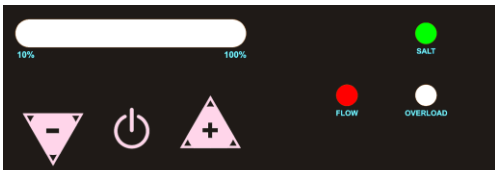
Illustrated below are the possible status indicators, warnings and safety features that may be observed on the Sterisel Unit in various circumstances.



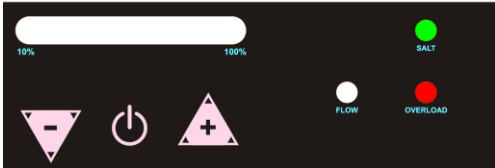
Normal Operation  
Cell at full current and salinity above minimum. Note that the Cell current can be green or orange depending on polarity.



Low Salinity  
Salt alarm is red and Cell current is less than maximum. Add salt and/or check Cell.



Flow Fault detected.  
Cell has been turned off. Turn off, then on again to clear and restart.



Overload detected, Cell has been turned off. Turn off, then on again to clear and restart.

## Maintenance

Like all equipment the Sterisel will look better and last longer if it is maintained and operated in accordance with these instructions.

### Sterisel Power Supply

The Gemini Power Supply has been design for operation in full sun and weather. However, it will benefit from being under cover.

There is little maintenance required, however – some Do's and Don'ts –

#### Don't:

- Install it in a small sealed enclosure (so it does not overheat)
- Install it in a very hot unventilated shed (so it does not overheat)
- Allow insects to nest in the unit (because they will prevent it from functioning)
- Install chemical drums under or close to the unit (to prevent corrosion)
- Forget about the unit once installed – it should be checked regularly to ensure that it is working for you

#### Do:

- Install it as per the instructions
- Check it regularly
- Make sure the pool balance is checked regularly

## Trouble-shooting

Before requesting service, you may wish to run through the check list below but feel free to call Pool Controls Service on 1300 550 010 or log a service call via our website – [www.poolcontrols.com.au](http://www.poolcontrols.com.au).

### If there appears to be low or no Chlorine Residual:

1. Check stabiliser level is 40ppm – 60ppm. Add if necessary and wait for it to dissolve.
2. Have you added any chemical additives recently?
3. Check pool for phosphates and remove if necessary
4. If the unit is not running at all, check the fuse.
5. Are the operating hours sufficient?
6. Is the Chlorine Output set to 100%?
7. Is there enough salt in the water? (4000ppm)
8. Is the temperature of the water low?
9. Is the Cell scaled heavily?

If either unit is not running at all **check the fuse** in the bottom of the units.

## Cell Cleaning

The Cell is self-cleaning, however, some conditions such as very hard water can cause the cell to become scaled over time.

The Cell uses an electronic means (polarity reversal) to remove scale from its cathodes. This system works very well in most pools unless there is extreme hardness and/or mineral levels. Even in the extreme cases where scaling does occur the rate at which it occurs is far slower than for normal Cells.

If scale has become thick enough to nearly bridge between the Cell electrodes, it is time to clean the Cell. Cells can be cleaned in a solution of hydrochloric acid.

***Please read the warnings and instructions on the acid container.***

To make the acid solution, add 1 part hydrochloric acid to 4 parts water in a suitable container. This solution can be used a number of times so a re-useable container with a lid can be used, but make sure it is stored safely.

Alternatively a commercial Cell Cleaning solution can be used according to the manufacturer's instructions.

The pump controller should be turned off so that any AutoMode functions cannot turn it back on until after the Cell is clean and back in its housing.

Remove the Cell from its housing and immerse in the acid solution. Note that it may foam up and overflow the sides of the container – so take care!

The Cell should not take longer than a few minutes to clean. It may also be possible to remove some or most of the scale with a jet of water.

***Never use a stiff brush or hard implement to clean the cell because this will damage the coating.***