



# Salt & Swim™

Chlorine Generator for  
Swimming Pools up to 90,000 litres

## Owner's Manual



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Model: SAS-AU

Hayward Pool Products (Australia) Pty Ltd  
Melbourne, Sydney, Brisbane, Perth  
[www.hayward-pool.com.au](http://www.hayward-pool.com.au)



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When installing and using this electrical equipment, basic safety precautions should always be followed, including the following:

- **READ AND FOLLOW ALL INSTRUCTIONS**
- TO REDUCE THE RISK OF DROWNING FROM HAIR AND BODY ENTRAPMENT, INSTALL A SUITABLY RATED SUCTION GUARD TO MATCH THE MAXIMUM FLOW RATE MARKED.
- WARNING - To reduce the risk of injury, do not permit children to use this product unless they are closely supervised at all times.
- WARNING – Risk of Electric Shock. Connect only to a power outlet protected by a Residual Current Device - RCD, with a residual operating current of 30mA as per AS/NZS 3000 Wiring Rules.  
  
WARNING – To reduce the risk of electric shock, have damaged cord(s) replaced immediately by the manufacture, its service agent or similarly qualified persons.
- WARNING – To reduce the risk of electric shock, install unit at least 3.5 metres horizontally from the inside walls of a pool or spa/hot tub and at a height from the ground not less than 0.45 metres and in accordance with AS/NZS 3000 wiring rules.
- Do not bury cord. Locate cord to minimize abuse from lawn mowers, hedge trimmers, and other equipment. Do not use an extension cord to connect the unit to the power outlet.
- **SAVE THESE INSTRUCTIONS**



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## Introduction

The Salt & Swim™ is an automatic chlorine generation system for pool sanitisation. **It is designed for swimming pools up to 90,000 litres only. The Salt & Swim is NOT to be used with above ground pools or with in-ground pools greater than 90,000 litres.**

The unit provides a linecord for input power and a receptacle for the filter pump. The SAS-AU will turn the pump on/off based on timer settings and produce chlorine only when the pump is running.

This SAS-AU model is designed for use with 40mm or 50mm pool plumbing and must be installed by a qualified installer. The Cell Vessel must be glued into the pool's plumbing system.

The Salt & Swim requires a low concentration of salt (sodium chloride) in the pool water. It automatically sanitises your pool by converting the salt into free chlorine which kills bacteria and algae in the water. Chlorine will revert back to sodium chloride after killing bacteria. These reactions will continuously recycle virtually eliminating the need to add sanitising chemicals to your pool.

The Salt & Swim can handle the purification needs of most residential swimming pools up to 90,000 litres. This unique low cost chlorine generator uses a replaceable electrolytic Cell (SAS-CELL) that is designed to produce 100Kg of 100% available chlorine over its lifetime.

Note that the actual amount of chlorination required to properly sanitise a pool varies due to bather load, rainfall, temperature, and the pool's cleanliness.

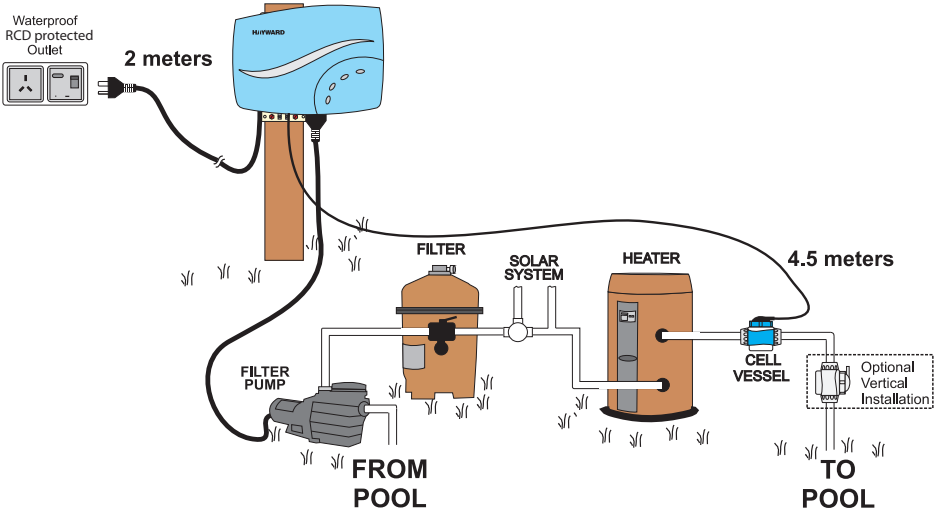
NOTE: Before installing this product as part of a saline water purification system in a pool or spa using natural stone for coping or for immediately adjacent patios/decking, a qualified stone installation specialist should be consulted regarding the appropriate type, installation, sealant (if any) and maintenance of stone used around a saline pool with electronic chlorine generator in your particular location and circumstances.

NOTE: The use of dry acid (sodium bisulfate) to adjust pool pH is discouraged especially in arid regions where pool water is subject to excessive evaporation and is not commonly diluted with fresh water. Dry acid can cause a buildup of by-products that can damage your chlorinator Cell.



## Installation

Remove power to the pool filter pump before starting this installation. Installation must be performed in accordance with local codes and AS/NZS 3000 Wiring Rules. The Control Box must be mounted a minimum of 3.5m horizontal distance (or more, if local codes require) from the pool, within 2 metres from a RCD protected outlet, and within 4.5 metres from where the Cell will be installed. Take care to protect the Cell Cap connector pins while handling the Salt & Swim unit during installation. If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.



## Preparing Pool Water

To prepare the pool water for Salt & Swim operation, the pool's chemistry must be balanced and salt must be added. This must be done BEFORE activating the Salt & Swim. Some adjustments to your pool chemistry may take several hours, so start the procedure well before you intend to operate the Salt and Swim.

To prepare your pool water, follow the instructions on the included Pool Chemistry Quick Start Guide and refer to page 8 of this manual.

**Adding Salt:** Add salt several hours or, if possible, 1 day prior to operating the Salt & Swim. Take care not to exceed the recommended salt level. Measure salt 6-8 hours after adding to the pool.

**NOTE:** If the pool does not have new water, add 1 litre of metal remover and 1 litre of non-copper based algaecide to the pool, per manufacturer's instructions. This ensures a quick, troublefree transfer to the Salt & Swim system.

## Salt & Swim Installation

Follow the step by step instructions located on the Installation Quick Start Guide. Refer to the following sections for more detailed information.



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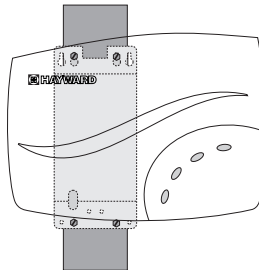
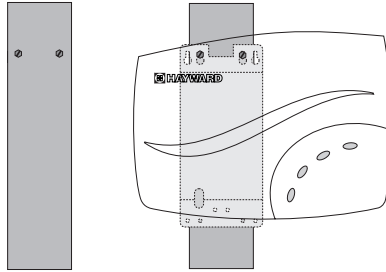
## Mounting the Salt & Swim Control Box

The Salt & Swim is contained in a raintight enclosure that is suitable for outdoor mounting. The Control Box must be mounted a minimum of 3.5 metres horizontal distance (or more, if local codes require) from the pool, within 2m from a RCD protected outlet, and within 4.5m from where the Cell is installed.

The Control Box is designed to mount vertically on a flat surface with the cables facing downward. Because the enclosure also acts as a heat sink (disperses heat from inside the box), it is important not to block the four sides of the Control Box. Do not mount Salt & Swim inside a panel or tightly enclosed area.

Before securing the Control Box to the intended location, make sure that the power cord will reach the RCD protected outlet and that the Cell cable will reach the location where the Cell Vessel will be installed. Refer to the diagram below.

Screw in top fasteners leaving 3.2mm space between screw head and surface Hang Control on fasteners



Screw in bottom fasteners securely.

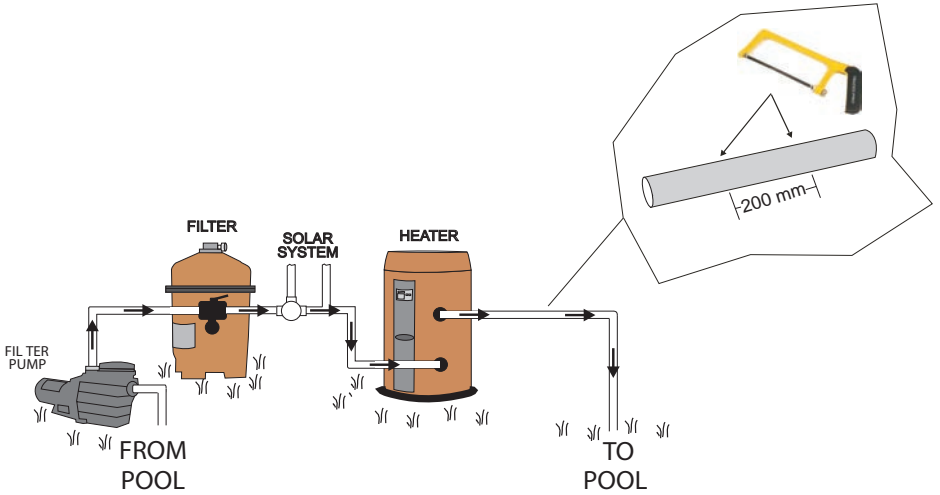
## Plumbing

The Cell Vessel is designed to install in 40mm or 50mm PVC pool plumbing only. The Cell Vessel must be installed on a 350mm run of straight pipe at the end of the return piping just before the water returns to the pool. All pool equipment should be upstream from the Cell Vessel. It must be located within 4.5m of where the Control Box is mounted. Also, there must be enough clearance to insert and remove the Cell from the Vessel after the Vessel is installed.

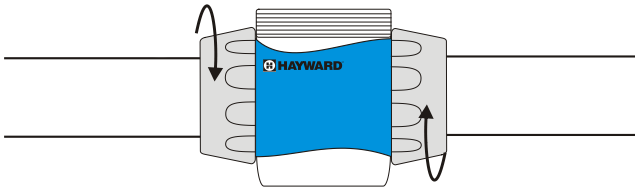


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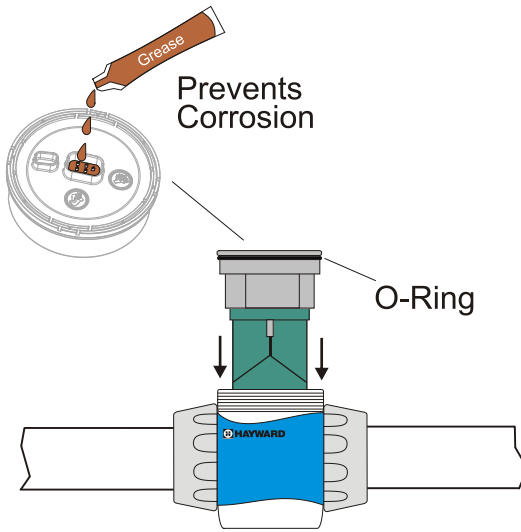
A minimum 200mm opening must be cut in the pool's plumbing to accept the Cell Vessel for 50mm plumbing or more if using the 40mm reducers to suit 40mm plumbing. With power removed to the pump and water drained from the pool plumbing, cut the pipe at the desired location.



After gluing the Cell Unions on to the cut pipe, position the Vessel in a manner where the Cell can be easily inserted and removed. Secure the Vessel by handtightening the Unions.



Remove the foam protector from the Cell. Fully cover Cell pins with supplied grease. Verify that the O-ring is attached to the Cell before inserting the Cell into the Cell Vessel as shown.

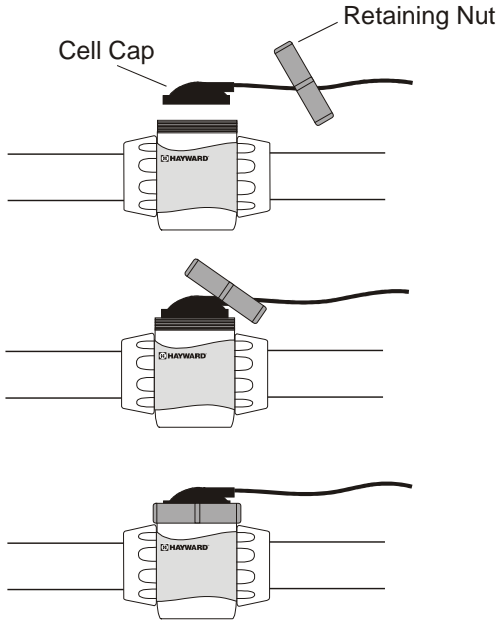




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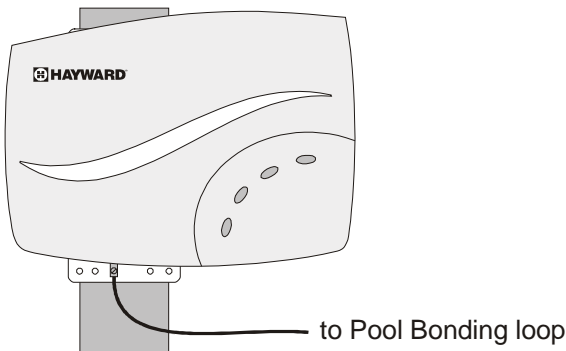
## Connect and Fasten Cell Cap

Slip the Cell Cap through the Retaining Nut as shown below. Plug the Cell Cap into the Cell and secure with the Retaining Nut. Run pump for 5 minutes and check for leaks.



## Bonding

Pool bonding or "equipotential bonding" ensures that all pool components around the pool are at the same electrical potential. If bonding is required at your location (see local codes and AS/NZS 3000 Wiring Rules), a bonding lug is provided at the bottom of the Salt & Swim enclosure. Run an eight gauge (8 AWG) solid copper wire from the bonding lug to your pool's existing bonding loop.







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## Filter Pump Connection

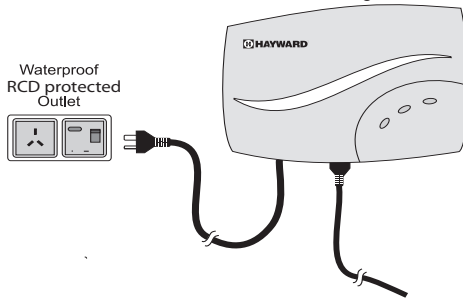
The filter pump plugs into the SAS-AU and is controlled based on schedule settings. Locate the receptacle on the underside of the Salt & Swim enclosure. Note that the rating for this output is 240 VAC, 50hz, 9A. Ensure that your pump does not exceed the rating.

## Flow Switch Calibration Procedure

**IMPORTANT:** Before going any further, the pool water must be balanced and salt must be added to your pool. If this has not already been done, refer to "Water Chemistry" section of this manual for information on how to prepare your pool water for Salt & Swim operation.

At start-up, or when a new Cell is installed, the Salt & Swim will run a Flow Switch Calibration procedure to ensure that the Cell's flow switch is properly initialized. This will occur just once when a new Cell is installed. After the flow switch is initialized, the Salt & Swim will not perform this procedure again until the Cell is replaced. The Flow Switch Calibration procedure will require the user to cycle the pump on and off. Follow the instructions below:

1. Plug the pump into the Salt & Swim.
2. Plug the Salt & Swim's linecord into a Residual Current Device (RCD) safety outlet or an outlet protected by an RCD. Follow local and AS/NZS 3000 Wiring Rules.



After being powered on for the first time, the Salt & Swim will run a diagnostic routine which can take up to 30 seconds. During this time, various LEDs will turn on and off. When finished, the Salt & Swim will display a blinking LOW WATER FLOW LED and a solid GENERATOR RESTING LED. Keep the Salt & Swim powered for the remainder of this procedure and go to Step 3.

3. Manually turn the filter pump ON using the RUN/STOP button (see page 13). Make sure that full flow is achieved (no air in the system) and run the pump for at least 15 seconds.
4. Turn the filter pump OFF.
5. The Salt & Swim should now display a solid LOW WATER FLOW and a solid GENERATOR RESTING LED. The Flow Switch Calibration procedure is complete. You can now turn on your filter pump and begin normal operation.

If the LOW WATER FLOW LED is still blinking after performing this procedure, refer to the Troubleshooting section of this manual.



## Water Chemistry

The table below summarises the levels that are recommended. It is important to maintain these levels in order to prevent corrosion or scaling and to ensure maximum performance from your Salt & Swim chlorine generator. Have your water tested or use pool water test strips. Your Authorised Salt & Swim Dealer or most pool stores can provide you with the chemicals and procedures to adjust the water chemistry as well.

Note that pool water emanating from wells and municipal water supplies, along with the introduction of environmental contaminants, can contain chemistries that are deleterious to the life expectancy of the Cell.

CHEMICAL	IDEAL LEVELS
Salt	2700 to 3400 ppm
Free Chlorine	1.0 to 3.0 ppm
pH	7.2 to 7.8
Cyanuric Acid (Stabilizer)	30 to 50 ppm
Total Alkalinity	75 to 125 ppm
Calcium Hardness	200 to 400 ppm
Metals	0 ppm
Saturation Index	-.2 to .2 (0 best)

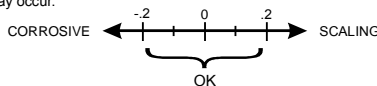
## Saturation index

The saturation index (Si) relates to the calcium and alkalinity in the water and is an indicator of the pool water "balance". Your water is properly balanced if the Si is  $0 \pm .2$ . If the Si is below  $-0.2$ , the water is corrosive and plaster pool walls will be dissolved into the water. If the Si is above  $+0.2$ , scaling and staining will occur. Use the chart below to determine the saturation index.

$$Si = pH + Ti + Ci + Ai - 12.1$$

°C	°F	Ti	Calcium Hardness	Ci	Total Alkalinity	Ai
12	53	.3	75	1.5	75	1.9
			100	1.6	100	2.0
16	60	.4	125	1.7	125	2.1
			150	1.8	150	2.2
19	66	.5	200	1.9	200	2.3
			250	2.0	250	2.4
24	76	.6	300	2.1	300	2.5
			400	2.2	400	2.6
29	84	.7	600	2.4	600	2.8
			800	2.5	800	2.9
34	94	.8				
39	103	.9				

*How to use:* Measure pool pH, temperature, calcium hardness, and total alkalinity. Use the chart above to determine Ti, Ci, and Ai from your measurements. Insert values of pH, Ti, Ci and Ai into the above equation. If Si equals .2 or more, scaling and staining may occur. If Si equals  $-.2$  or less corrosion or irritation may occur.





## Salt Level

Use the chart on page 10 to determine how much salt in pounds or (Kgs) need to be added to reach the recommended levels. Use the equations below (measurements are in feet/gallons and metres/ litres) if pool size is unknown.

	<b>Gallons</b> (pool size in feet)	<b>Litres</b> (pool size in metres)
Rectangular	Length x Width x Average Depth x 7.5	Length x Width x Average Depth x 1000
Round	Diameter x Diameter x Average Depth x 5.9	Diameter x Diameter x Average Depth x 785
Oval	Length x Width x Average Depth x 6.7	Length x Width x Average Depth x 893

The recommended salt level is between 2700-3400 ppm (parts per million) with 3200 ppm being ideal. If the level is low, determine the number of litres in the pool and add salt according to the chart on page 10. A low salt level will reduce the efficiency of the Salt & Swim and result in low chlorine production. A high salt level can cause the Salt & Swim to shutdown and may begin to give a salty taste to your pool (generally, the salt will begin to be tasted at a level of about 3500-4000 ppm). The salt in your pool is constantly recycled and the loss of salt throughout the swimming season should be small. This loss is due primarily to the addition of water because of splashing, backwashing, or draining (because of rain). Salt is not lost due to evaporation.

## Type of Salt to Use

It is important to use only sodium chloride (NaCl) salt that is greater than 99% pure. This is common food quality or water softener salt and is usually available in 20-25 kg bags labeled "Coarse Solar Salt" or "Pool Salt". It is also acceptable to use water conditioning salt pellets, however, it will take longer for them to dissolve. Do not use rock salt, salt with yellow prussiate of soda, salt with anti-caking additives, or iodised salt.

## How to Add or Remove Salt

For new plaster pools, wait 10-30 days (check with you local pool professional) before adding salt to allow the plaster to cure. Turn the circulating pump on and add salt directly into the pool. Brush the salt around to speed up the dissolving process--do not allow salt to pile up on the bottom of the pool. Run the filter pump for 24 hours with the suction coming from the main drain (use pool vac if there is no main drain) to allow the salt to evenly disperse throughout the pool.

The only way to lower the salt concentration is to partially drain the pool and refill with fresh water.

Always check stabiliser (cyanuric acid), when checking salt. These levels will most likely decline together. Use the chart on page 11 to determine how much stabiliser must be added to raise the level to 40 ppm.



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## POUNDS and (Kg) of SALT NEEDED FOR 3200PPM

Current salt level ppm	Gallons and (Litres) of Pool Water									
	8,000 (30,000)	10,000 (37,500)	12,000 (45000)	14,000 (52,500)	16,000 (60,000)	18,000 (67,500)	20,000 (75,000)	22,000 (82,500)	24,000 (90,000)	25,000 (93,500)
0	213 (97)	267 (121)	320 (145)	373 (170)	427 (194)	480 (218)	533 (242)	587 (267)	640 (291)	666 (303)
200	200 (91)	250 (114)	300 (136)	350 (159)	400 (182)	450 (205)	500 (227)	550 (250)	600 (273)	625 (284)
400	187 (85)	233 (106)	280 (127)	327 (148)	373 (170)	420 (191)	467 (212)	513 (233)	560 (255)	583 (267)
600	173 (79)	217 (98)	260 (118)	303 (138)	347 (158)	390 (177)	433 (197)	477 (217)	520 (236)	544 (246)
800	160 (73)	200 (91)	240 (109)	280 (127)	320 (145)	360 (164)	400 (182)	440 (200)	480 (218)	500 (227)
1000	147 (67)	183 (83)	220 (100)	257 (117)	293 (133)	330 (150)	367 (167)	403 (183)	440 (200)	459 (209)
1200	133 (61)	167 (76)	200 (91)	233 (106)	267 (121)	300 (136)	333 (152)	367 (167)	400 (182)	417 (190)
1400	120 (55)	150 (68)	180 (82)	210 (95)	240 (109)	270 (123)	300 (136)	330 (150)	360 (164)	375 (171)
1600	107 (48)	133 (61)	160 (73)	187 (85)	213 (97)	240 (109)	267 (121)	293 (133)	320 (145)	334 (152)
1800	93 (42)	117 (53)	140 (64)	163 (74)	187 (85)	210 (95)	233 (106)	257 (117)	280 (127)	292 (133)
2000	80 (36)	100 (45)	120 (55)	140 (64)	160 (73)	180 (82)	200 (91)	220 (100)	240 (109)	250 (114)
2200	67 (30)	83 (38)	100 (45)	117 (53)	133 (61)	150 (68)	167 (76)	183 (83)	200 (91)	209 (95)
2400	53 (24)	67 (30)	80 (36)	93 (42)	107 (48)	120 (55)	133 (61)	147 (67)	160 (73)	166 (76)
2600	40 (18)	50 (23)	60 (27)	70 (32)	80 (36)	90 (41)	100 (45)	110 (50)	120 (55)	125 (57)
2800	27 (12)	33 (15)	40 (18)	47 (21)	53 (24)	60 (27)	67 (30)	73 (33)	80 (36)	83 (37)
3000	13 (6)	17 (8)	20 (9)	23 (11)	27 (12)	30 (14)	33 (15)	37 (17)	40 (18)	42 (19)
3200	Ideal	Ideal	Ideal	Ideal	Ideal	Ideal	Ideal	Ideal	Ideal	Ideal
3400	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
3600+	Dilute	Dilute	Dilute	Dilute	Dilute	Dilute	Dilute	Dilute	Dilute	Dilute



**POUNDS and (Kg) OF STABILISER (CYANURIC ACID) NEEDED FOR 40 PPM**

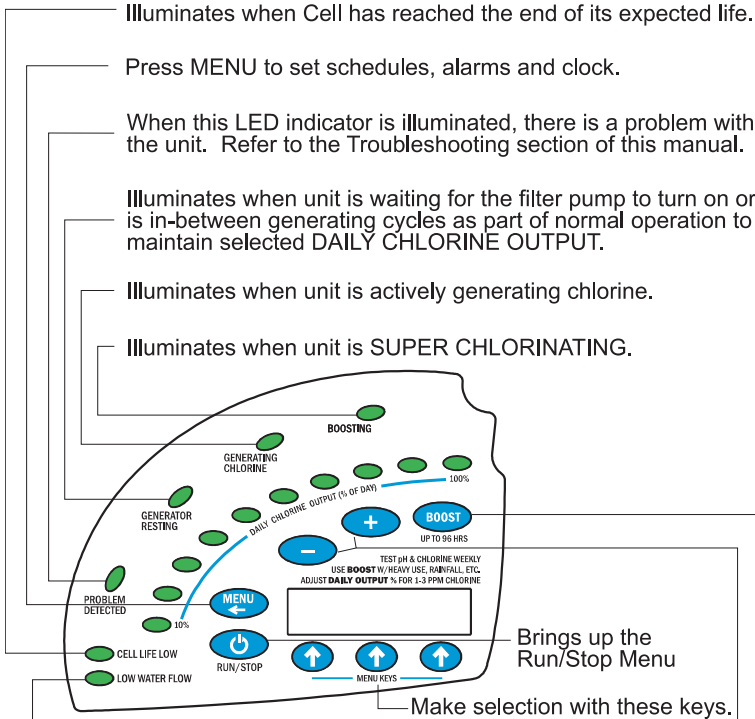
Current Stabiliser level (ppm)	Gallons and (Litres) of Pool Water									
	8,000 (30000)	10,000 (37500)	12,000 (45000)	14,000 (52500)	16,000 (60000)	18,000 (67500)	20,000 (75000)	22,000 (82500)	24,000 (90000)	
<b>0 ppm</b>	2.7 (1.2)	3.4 (1.5)	4.0 (1.8)	4.7 (2.2)	5.4 (2.5)	6.0 (2.7)	6.7 (3.0)	7.4 (3.4)	8.0 (3.6)	
<b>10 ppm</b>	2.0 (.9)	2.5 (1.1)	3.0 (1.4)	3.5 (1.6)	4.0 (1.8)	4.5 (2.0)	5.0 (2.3)	5.5 (2.5)	6.0 (2.7)	
<b>20 ppm</b>	1.3 (.59)	1.7 (.77)	2.0 (.90)	2.3 (1.1)	2.7 (1.3)	3.0 (1.3)	3.3 (1.5)	3.7 (1.6)	4.0 (1.8)	
<b>30 ppm</b>	0.7 (.31)	0.8 (.36)	1.0 (.45)	1.2 (.54)	1.4 (.64)	1.5 (.68)	1.7 (.77)	1.8 (.82)	2.0 (.91)	
<b>40 ppm</b>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	



## Operation

### Controls

The main controls and indicators are shown below.



Illuminates when there is no flow or low flow through the Cell. The pool filter pump could be in its "off" cycle. If this is not the case, refer to the Troubleshooting section in this manual. Blinks when performing the Flow Switch Calibration procedure.

Press (+) and (-) to increase or decrease the chlorine generation. The DAILY CHLORINE OUTPUT LEDs above these buttons will indicate the relative amount of chlorine being generated.

When you have an abnormally high bather load, a large amount of rain, a cloudy water condition, or any other condition which requires a large amount of purification to be introduced, press the BOOST button. This electronically "super chlorinates" (boosts chlorine generation output) the water for 24 hours (filter pump must be on during this time). To cancel super chlorinating, press the BOOST button again.



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## Before you Begin

The Salt & Swim does not have an ON/OFF switch . The unit is designed to be plugged into a RCD rated outlet at all times. There should be no need to remove power from the Salt & Swim unless pool components are being serviced or the pool will be closed.

When power is first applied to the Salt & Swim, an initialization routine will run for approximately 30 seconds. During this time, various LEDs will illuminate. This is perfectly normal and does not require any input from the user. When the routine is finished, the Salt and & Swim will begin normal operation.

## Controls

### MENU Button

Pushing the MENU button will give you the following options:

**SET CLOCK:** To set clock, press the corresponding MENU KEY under the "Set Clock" display. Use the MENU KEYS to set the correct day and time. Use the MENU button to go back to the default display.

**SET SCHEDULE:** To set a schedule for the pump, press the corresponding MENU KEY under the "Set Sched" display. You can set a daily, weekend or 24/7 schedule. Select the desired schedule with the corresponding MENU KEY. Use the MENU KEYS to set the desired START and END times. Use the MENU button (press repeatedly if necessary) to go back to the default display.

### RUN/STOP Button

Pressing the RUN/STOP button while the pump is idle will give you the following option:

Stop Schedule - This selection will turn the schedule off.

Pressing the RUN/STOP button while the pump is on will give you the following option:

Stop Schedule - This selection will turn the schedule off.



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## Daily Chlorine Output Adjustment ("+" / "-" Button)

This setting is used to control the amount of chlorine that the SAS-AU generates. Raise this setting to increase chlorine level and lower it to decrease chlorine level.

## BOOST Button

When you have an abnormally high bather load, a large amount of rain, a cloudy water condition, or any other condition which needs a large amount of purification to be introduced, use BOOST. This electronically "super chlorinates" (shocks) the water for 24 hours or more. At the end of the Boost time, the SAS-AU will return to its former pump schedule and daily chlorine output setting.

Pressing the BOOST button will give you the following options:

- 1 Day / 24 hour - The SAS-AU will run the pump and generate chlorine continuously for 24 hours then return it its previous settings.
- 2 Days / 48 hour - The SAS-AU will run the pump and generate chlorine continuously for 48 hours then return it its previous settings.
- 3 Days / 72 hour - The SAS-AU will run the pump and generate chlorine continuously for 72 hours then return it its previous settings.
- 4 Days / 96 hour - The SAS-AU will run the pump and generate chlorine continuously for 96 hours then return it its previous settings.

Use the MENU KEYS to make the desired selection.

## Indicator LED's

**GENERATING CHLORINE:** This LED is on steady during normal operation. When flashing, the pool water is too hot or cold to operate.

**GENERATOR RESTING:** Illuminates when the chlorinator is off.

**BOOSTING:** Illuminates during Super Chlorination. See description above.

**LOW WATER FLOW:** When illuminated, the flow switch has detected no flow and the SAS-AU has stopped generating chlorine. A flashing LED indicates a 15/60 second time delay period.

**PROBLEM DETECTED:** When flashing, the salt level is low (below 2700ppm) and SAS-AU is generating at low efficiency. When illuminated steady, the salt level is too low and SAS-AU has shut down. Before adding large quantities of salt, it is advisable to have your salt level professionally checked.

**CELL LIFE LOW:** A flashing indicator signifies that either the cell efficiency is reduced or that it is time for regularly scheduled cell inspection. In either case, inspect the cell and clean if necessary. When illuminated steady, cell efficiency is greatly reduced and the SAS-AU has stopped producing chlorine. Inspect, clean or replace if necessary.

## Display

The SAS-AU uses an LCD display to show information about its operating status. Depending on the





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current conditions (pump on/off, boosting, no flow, etc.) the information will vary. In addition to providing the current status, refer to the SAS-AU display for information when an indicator light is on.

If the water chemical levels are in the recommended range, there are three factors that you can control which directly contribute to the amount of chlorine the Salt & Swim will generate:

1. filter time each day (hours)
2. the DAILY CHLORINE OUTPUT setting
3. the amount of salt in the pool

The filter pump timer should be set so that all of the water in the pool passes through the filter at least once each day. For pools with high chlorine demand, the timer may have to be set longer to generate enough chlorine.

## Operation

You can adjust the amount of chlorine that is generated using the "+" and "-" button on the Salt & Swim unit. The DAILY CHLORINE OUTPUT LEDs will display the current setting. Push "+" to increase and "-" to decrease the current setting. Each DAILY CHLORINE OUTPUT LED represents 6 minutes of chlorine generation out of 1 hour. For example, if 5 LEDs are illuminated, the Salt & Swim unit will generate chlorine for  $5 \times 6 = 30$  minutes out of every hour of operation. During this time, the GENERATING CHLORINE LED will be lit. The unit will be idle for the remaining 30 minutes at which time the GENERATING CHLORINE LED will turn off and the GENERATOR RESTING LED will illuminate.

To find the optimum setting, start the operation with 5 DAILY CHLORINE OUTPUT LEDs illuminated. Test the chlorine level every few days and adjust up or down accordingly. It usually takes 2-3 adjustments to find the ideal setting for your pool and after that, it should only take minor, infrequent adjustments. Because the chlorine demand of the pool increases with temperature, most people find they have to adjust up at the peak of the summer and down during colder periods. The Salt & Swim automatically scales back to 12 minutes of output per hour (if set higher than 12 minutes) when the pool water is 10°C - 15°C. This protects the unit as well as prevents possible over-chlorination. The Salt & Swim stops generating when the pool water temperature drops below 10°C. This is usually not a problem because bacteria and algae stop growing at this temperature. You can override these automatic low temperature operations by switching to SUPER CHLORINATE for a day.

NOTE: After the ideal DAILY CHLORINE OUTPUT setting has been found, you may need to raise the setting when the pool water temperature increases significantly, when there is higher than normal bather load or when the Salt & Swim Cell ages. You may need to lower the setting when the pool water temperature decreases significantly or there are long periods of inactivity.

Prevent over-chlorination during cold weather: Check chlorine levels periodically. Most pools require less chlorine during cold weather and the DAILY CHLORINE OUTPUT should be lowered accordingly.

## Maintaining the Salt & Swim System

The replaceable Cell uses the same electronic self cleaning technology as the popular Hayward Turbo Cell. In most cases this self cleaning action will keep the Cell working at optimum efficiency. In areas where water is hard (high mineral content) and in pools where the water chemistry has been allowed to get "out of balance," the Cell may require periodic cleaning.



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## Servicing and Cleaning the Salt & Swim Cell

Unplug the Salt & Swim from the RCD protected outlet and remove power from the pump before attempting to remove the Cell. Unplug the Cell cord from the Cell. Remove the Cell from the Vessel by unscrewing the Retaining Nut and gently pulling the Cell out of Vessel. Once removed, look inside the Cell and inspect for scale formation (light colored crusty or flaky deposits) on the plates and for any debris which has passed through the filter and caught on the plates. If no deposits are visible, reinstall. If deposits are seen, use a high pressure garden hose and try to flush the scale off. If this is not successful, use a plastic or wood tool (do not use metal as this will scratch the coating off the plates) and scrape deposits off of plates. Note that a buildup on the Cell indicates that there is an unusually high calcium level in the pool (old pool water is usually the cause). If this is not corrected, you may have to periodically clean the Cell. The simplest way to avoid this is to bring the pool chemistry to the recommended levels as specified.

**Mild Acid Washing:** Use only in severe cases where flushing and scraping will not remove the majority of deposits. To acid wash, mix a 4:1 solution of water to muriatic acid (4 litres of water to 1 litre of muriatic acid) in a clean plastic container, . ALWAYS ADD ACID TO WATER - NEVER ADD WATER TO ACID. Be sure to wear rubber gloves and appropriate eye protection. Place the Cell in the container. The solution should reach the top of the Cell so that the cylindrical electronics compartment is not submerged. Soak the Cell for a few minutes and then rinse with a high pressure garden hose. If any deposits are still visible, repeat soaking and rinsing. Replace Cell and inspect again periodically.

## Winterizing

The Salt & Swim replaceable Cell will be damaged by freezing water just as your pool plumbing would. In areas of the country which experience severe or extended periods of freezing temperatures, be sure to drain all water from the pump, filter, and supply and return lines before any freezing conditions occur. The Control Box and plumbed in Cell Vessel are capable of withstanding any winter weather and should not be removed.

## Spring Start-up

DO NOT turn the Salt & Swim on until the pool water chemistry has been brought to the proper levels. This information can be found on page 8.



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## Troubleshooting

Visit [www.hayward-pool.com.au](http://www.hayward-pool.com.au) or call 1300POOLS1 for helpful information on operation, maintenance and troubleshooting your Salt & Swim Electronic Chlorine Generator.

### Common Problems and Solutions

The Salt & Swim's various LEDs show the operation status as well as alert the user to any problems that may have occurred. Some indications may require a combination of LEDs to illuminate. To aid in interpreting these indications, Hayward has created an interactive tool located at [www.hayward-pool.com.au](http://www.hayward-pool.com.au). Use this tool and the information below to identify and correct problems that may arise.

#### 1. Possible causes of little or no free chlorine residual

- DAILY CHLORINE OUTPUT adjustment setting is too low
- Low stabiliser (Cyanuric Acid)
- Filter pump time too short (8 hours for average size pools, more for large pools)
- Salt level too low (below 2400 ppm)
- Salt level too high
- Very warm pools increase chlorine demand--increase Output %, or filter run time
- Cold water below 10°C causes Salt & Swim to stop generating
- Cold water between 10°C - 15°C causes Salt & Swim to reduce output regardless of DAILY CHLORINE OUTPUT setting
- Excessive scaling on Cell.
- High level of Nitrogen in pool water.
- "Yellow Out" or similar treatment recently used. Some yellow algae treatments will use chlorine at a very high rate and deplete the residual free chlorine. Manually shock the pool if indicated in the directions on the algae treatment. It still may be a matter of days before the pool returns to "normal" and chlorine tests will show the desired 1-3ppm free chlorine reading.

#### 2. LEDs not on

Depending on current conditions, there should always be at least one LED illuminated when the Salt & Swim is powered. If no LEDs are on, check to make sure that the linecord is plugged in and that the RCD protected outlet is powered. If no power is detected, the RCD may have to be reset.

#### 3. GENERATOR RESTING LED blinking

The Salt & Swim has shut down because the temperature of the pool/spa water is too high (49°C) or too low (10°C). The system will not resume operation until the water temperature returns to normal. Note: This condition can sometimes happen if the pool/spa temperature is already high and the heater is running. The temperature coming out of the heater and into the Cell could possibly be high enough to shut down the Salt & Swim.

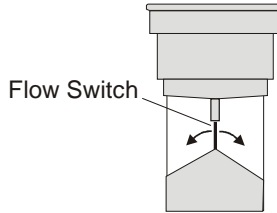


#### 4. LOW WATER FLOW LED illuminated

The Salt & Swim has sensed a low flow or no flow condition and has stopped generating chlorine.

- Verify that the filter pump is running and there are no obstructions or restrictions in the pool plumbing.
- Backwash the pool filter.
- Increase the speed of your variable speed pump

If the condition persists, remove the Cell from the Vessel and check that the flow switch is free to move in both directions. Refer to the diagram below.



#### 5. CELL LIFE LOW LED illuminated

The Cell has reached the end of its life. Replace as soon as possible

#### 6. PROBLEM DETECTED LED illuminated AND MAX LED blinking

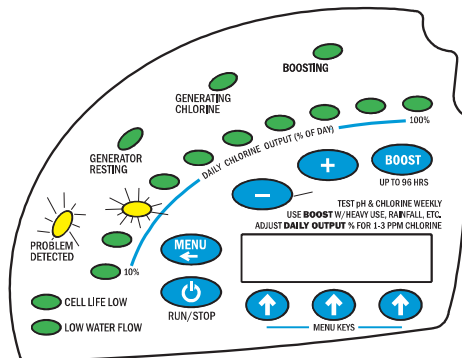
There is a communication error with the Cell. Check that the Cell cap is properly plugged in and that the wire to the Control Box is not cut or damaged.

#### 7. PROBLEM DETECTED LED illuminated AND MIN LED blinking

- The salt level may be too low. Adjust salt to recommended levels.
- Remove and inspect the Cell for scale. If the Cell is scaled, follow the directions on page 16 for Cell cleaning.

#### 8. PROBLEM DETECTED LED illuminated and DAILY CHLORINE OUTPUT LED is blinking

The Salt & Swim may display an error by illuminating the PROBLEM DETECTED LED and blinking one of the DAILY CHLORINE OUTPUT LEDs. There are ten DAILY CHLORINE OUTPUT LEDs that each indicate a different error. These LEDs are labeled with a number on the diagram below. Refer to the table on page 19 for their corresponding errors.





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## LED BLINKING

## POSSIBLE ACTIONS

MIN LED or LED 2	<ol style="list-style-type: none"><li>1. Recycle power to the Salt &amp; Swim by unplugging the linecord for two minutes and then plugging it back in.</li><li>2. Inspect the Cell. If dirty, follow the Cell cleaning procedure.</li><li>3. Check the salt level in the pool and verify the salt level is greater than 2600ppm but also less than 3400ppm.</li><li>4. Inspect the Cell Vessel and verify the Cell plates are fully covered by moving water.</li><li>5. Contact Hayward Technical Service.</li></ol>
LED 3	<ol style="list-style-type: none"><li>1. Recycle power to the Salt &amp; Swim by unplugging the linecord for two minutes and then plugging it back in.</li><li>2. Verify that the Salt &amp; Swim is receiving 240VAC input.</li><li>3. Contact Hayward Technical Service.</li></ol>
LED 4	<ol style="list-style-type: none"><li>1. Recycle power to the Salt &amp; Swim by unplugging the linecord for two minutes and then plugging it back in.</li><li>2. Contact Hayward Technical Service.</li></ol>
LED 5 or LED 6	<ol style="list-style-type: none"><li>1. Recycle power to the Salt &amp; Swim by unplugging the linecord for two minutes and then plugging it back in.</li><li>2. Check that the salt level in the pool is no greater than 3400ppm and/or the temperature does not exceed 40°C.</li><li>3. Inspect the Cell Vessel and verify the cell plates are fully covered by moving water.</li><li>4. Contact Hayward Technical Service.</li></ol>
LED 7	<ol style="list-style-type: none"><li>1. Recycle power to the Salt &amp; Swim by unplugging the linecord for two minutes and then plugging it back in.</li><li>2. Contact Hayward Technical Service.</li></ol>
LED 8	<ol style="list-style-type: none"><li>1. Recycle power to the Salt &amp; Swim by unplugging the linecord for two minutes and then plugging it back in.</li><li>2. Inspect the Cell. If dirty, follow the Cell cleaning procedure.</li><li>3. Inspect the Cell Vessel and verify the cell plates are fully covered by moving water.</li><li>4. Inspect the cable that connects the cell to the system. Make sure the cable is secure and undamaged.</li><li>5. Contact Hayward Technical Service.</li></ol>
LED 9	<ol style="list-style-type: none"><li>1. Recycle power to the Salt &amp; Swim by unplugging the linecord for two minutes and then plugging it back in.</li><li>2. Contact Hayward Technical Service.</li></ol>
MAX LED	<ol style="list-style-type: none"><li>1. Recycle power to the Salt &amp; Swim by unplugging the linecord for two minutes and then plugging it back in.</li><li>2. Inspect the cable that connects the cell to the system. Make sure the cable is secure and undamaged.</li><li>3. Contact Hayward Technical Service.</li></ol>
Low Water Flow	<ol style="list-style-type: none"><li>1. Recycle power to the Salt &amp; Swim by unplugging the linecord for two minutes and then plugging it back in.</li><li>2. Perform "Flow Switch Calibration" procedure.</li><li>3. Contact Hayward Technical Service.</li></ol>
Generator Resting	<ol style="list-style-type: none"><li>1. Recycle power to the Salt &amp; Swim by unplugging the linecord for two minutes and then plugging it back in.</li><li>2. Check that the pool temperature does is more than 10°C and less than 40°C.</li><li>3. Contact Hayward Technical Service.</li></ol>



# HAYWARD®

## Warranty – Standard Conditions

Hayward Pool Products (Australia) Pty Ltd (ACN 083 413 414) ("Hayward Pool Products (Australia)") distributes Hayward Pool Products in Australia and provides the following warranties:-

**STATUTORY RIGHTS** 1. The benefits to the consumer under this warranty are in addition to other rights and remedies of the consumer under the laws in relation to the goods and services to which the warranty relates; and 2. Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You may be 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 if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

**LIMITED WARRANTY** Hayward Pool Products (Australia) warrants that its products are free from defects in materials and manufacture for 12 months from date of supply by Hayward Pool Products (Australia) plus 90 days to allow for installation and supply (unless otherwise specified). Hayward Pool Products (Australia) will at its discretion, except in the circumstances described below, either replace or repair any product proven to be defective during the warranty period for either materials or manufacture or alternately pay the cost of repair or replacement within 90 days of the receipt of the defective product, barring unforeseen delays. This warranty is personal to the original purchaser and does not pass to any subsequent purchaser(s). To the extent permitted by law, Hayward Pool Products (Australia) will not be liable for products which fail or become defective during the warranty period as a result of freezing, accident, negligence, improper installation, water chemistry, misuse or lack of care. To the extent permitted by law, except as set out in this Warranty, Hayward Pool Products (Australia) excludes all statutory or implied conditions and warranties and any other liability it may have to the Customer (including liability for indirect or consequential loss) that may arise under statute or at law including without limitation for breach of contract, in tort (including negligence) or under any other cause of action. To the extent permitted by law, except as set out in this Warranty, Hayward Pool Products (Australia) limits its liability under any condition or warranty which cannot be legally excluded in relation to the supply of Goods and Services to: 1. Replacing the Goods or supplying equivalent Goods or Services again; 2. Repairing the Goods; 3. Paying the cost of replacing the Goods or of supplying equivalent Goods or Services again; or 4. Paying the costs of repairing the Goods.

**PRODUCTS REQUIRING QUALIFIED INSTALLATION** Some products due to their technical nature are only intended for sale by retail shops where local sales and technical support can be provided or as a part of a new Pool Installation. Where installation has not been carried out in accordance with this requirement, warranty labour and support will be the sole responsibility of the reseller supplying the product. Warranty claims for such products will be limited to replacement of parts only, with faulty goods being returned to place of purchase for processing. The following products as well as those that may be designated by Hayward Pool Products (Australia) from time to time, are not specifically intended for owner installation and are deemed to be technical products:-

- Heaters - All;
- Hayward Dosing and Chemistry Control;
- Hayward Pool and Spa Controls;
- Puresilk Dosing and Chemistry Control;

Claims made for warranty, labour or in-field support will not be accepted by Hayward Pool Products unless evidence is provided that installation has been completed in accordance with standard warranty conditions. Please refer to specific program document for details.

### Standard Warranty - Professional Sales and Installation

To the original purchaser only, on-site warranty is provided at the discretion of Hayward Pool Products and is available according to the following schedule, subject to the conditions of our standard warranty conditions.

Product	Sold and Installed by an approved installer	
	Parts and Bench Labour	In-Field Labour*
Salt Chlorinator - maximum pool volume 90,000 litres - Domestic use only • Control Box - SAS-AU • Electrolytic Cell - SAS-AU	1 Year 1 Year	1 Year 1 Year

### ELIGIBILITY TO CLAIM

1. Provide proof of purchase and installation by an Authorised/Qualified Professional Dealer.
2. Where Extended Warranty claim is made supply and installation must be completed by an Authorised/Qualified Professional Dealer or Builder, Warranty Certificate must be completed including Installer's full business details, copy of original receipt and signed by approved Partners Representative.
3. Where proof of purchase cannot be provided you will not be entitled to Extended Warranty Support.
4. Any item that has been Hard Wired to Power Supply cannot be serviced on site. Contact Hayward Pool Products Australia, Authorised Agent, or place of purchase for instruction.

\* On Site Support will only be provided for installations located within 25km of an Authorised Warranty Agent. Warranty does not cover damages resulting from incorrect installations or storage, improper operation, water chemistry or freezing.



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**WHAT TO DO IF YOU HAVE A WARRANTY CLAIM** The faulty product is to be returned to the place of purchase, or where installed by an approved agent to an authorised warranty agent. No returns will be received directly from end consumers by Hayward Pool Products (Australia). You are responsible for arranging removal of the defective product and arranging installation of the repaired or replacement product, all transportation (and any applicable insurance costs) of transporting the product to the supplier and transporting the replaced or repaired product from the supplier. All returns are subject to Hayward Pool Products (Australia)'s written approval and must be accompanied by either:-

1. A Field Inspection Report authorised by the Local Customer Service Manager or Authorised Agent; or
2. A "Return Goods Authorisation" form obtained from Hayward Pool Products (Australia) prior to shipment.

Unauthorised returns will not be accepted.

All Hayward Pool Products (Australia) warranty parts taken as an across the counter warranty exchange must be held for inspection until authorisation has been given by the Local Branch Customer Service Manager to dispose of them. Hayward Pool Products (Australia) reserves the right to provide replacement or credit for any items authorised under this warranty program. All claims must be accompanied by a copy of original purchase receipt, clearly stating date of purchase. All serial numbers must place the product within the warranty period or a proof of purchase is required. No claims in respect of the product can be made after the expiration of the warranty period.

Warranty service requests can be faxed to:  
**Hayward Pool Products (Australia) Pty Ltd (ACN 083 413 414)**  
**Fax: 1300 POOLS2 (1300 766571)**  
Or your local Hayward Pool Products Office.

A standard form is available to request warranty service. We will require:

- Installation contact information including address, daytime telephone numbers, home phone number, email etc.
- Complete model and serial number
- Proof of purchase (if the serial number was manufactured > 1 year ago).
- Evidence that purchase and installation was completed in one transaction, by the one business or organisation.
- Nature of problem including specific faults and error codes

Hayward Pool Product (Australia) Pty Ltd ABN 66 083 413 414  
Melbourne, Sydney, Brisbane, Perth  
PO Box 4384, Dandenong South, Victoria 3164  
**T (+61) 3 9792 2325 or 1300POOLS1**  
**F (+61) 3 9794 9945 or 1300 POOLS2**  
[www.hayward-pool.com.au](http://www.hayward-pool.com.au)

**REGISTER YOUR HAYWARD POOL PRODUCTS WARRANTY  
ONLINE TODAY AT: [www.hayward-pool.com.au](http://www.hayward-pool.com.au)**



**Hayward Pool Products (Australia) Pty Ltd.**

Melbourne-Sydney-Brisbane-Perth

email: [sales@hayward-pool.com.au](mailto:sales@hayward-pool.com.au) Website: [www.hayward-pool.com.au](http://www.hayward-pool.com.au)

P.O. Box 4384, Dandenong South, VIC, 3164

ABN 66 083 413 414

Sales Ph: 1300 POOLS1, Fx: 1300 POOLS2



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