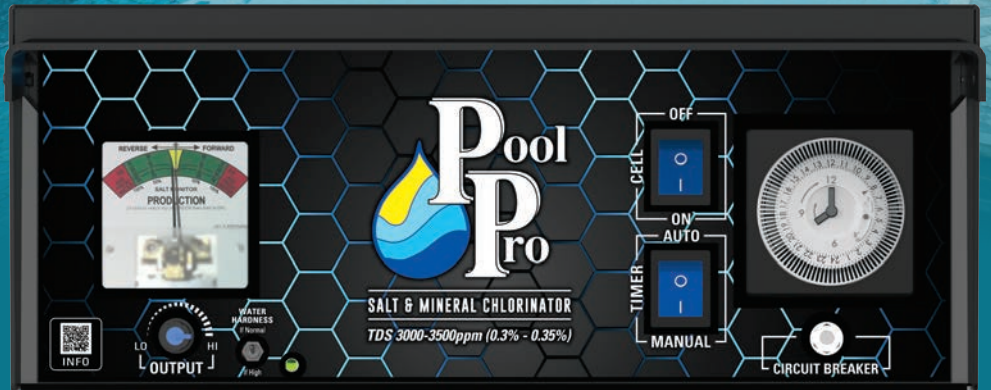




SALT & MINERAL CHLORINATOR

CPP/CPPS SERIES



USER MANUAL & OPERATION GUIDE



ONLINE
MANUAL

TABLE OF CONTENTS

1.	Important Warnings and Safety Instructions	3
1.1	Important Warnings	3
1.2	Important Safety Instructions	3
1.3	Important Water Balance Information	3
2.	General Overview	4
2.1	Recommendations and Helpful Hints	4
2.2	Contents	4
2.3	Tools Needed	4
3.	Pool Preparation	5
4.	Power Pack & Cell Electrode Installation	6 - 7
4.1	Power Pack Installation	6
4.2	Cell Electrode Installation	6
4.3	Installation Diagram	7
5.	Power Pack Operation	8 - 9
5.1	Timer Switch	8
5.2	Cell Switch	8
5.3	Circuit Breaker	8
5.4	AC Socket (Pump Outlet)	8
5.5	Junction Box	8
5.6	Output Control Knob	8
5.7	Flashing LED (CPPS model only)	8
5.8	Production Output Display Meter	9
5.9	Water Hardness Switch (CPPS model only)	9
5.10	Start Up Procedure	9
6.	Timer Setting	10 - 11
7.	Applying a Chlorinator Skin/Front Sticker (CPPS model only)	12
8.	Chlorinator Maintenance	13 - 14
8.1	Inspecting and Cleaning the Cell Electrode	13
8.2	Inspecting and Cleaning the Power Pack	14
9.	Chlorinator Troubleshooting	14 - 15
10.	Schematics and Part Numbers	16 - 17
11.	Specification Table	18
12.	Warranty and Product Registration	19 - 20
13.	Technical Support	20

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 Pack 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 qualified person, in order to avoid a hazard. The product shall be installed according to AS/NZS 3000 wiring rules. It shall be installed outside the pool zone.

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 Pro Professional.



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



DO NOT PLUG UNIT IN IF CARTON HAS BEEN WET.



CHLORINE GAS BUILD-UP 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 energised when the pool pump is OFF or water is not flowing through the unit.

1.3 Important Water Balance Information



- **Only add chemicals in the method and quantities as indicated on the packaging provided or advised by your local Pool Pro Professional. If in doubt of any results you achieve, do not hesitate to consult with your local Pool Pro Professional.**
- Check your salt levels with your local Pool Pro Professional before installing your unit.
- Salt levels should ideally be 3000-3500ppm and no more than 4000ppm.
- **NEVER ADD SALT DIRECTLY TO THE SKIMMER BOX.** This high concentration of salt will pass through your filtration, pump and other pool equipment.
- Salt levels above 4000ppm may overload the unit and cause excessive heat.
- For all new pool installations please seek advice from your pool builder before adding salt as some new surfaces request no salt to be added when initially completed.
- The Pool Pro unit is designed for use with swimming pool water balanced in accordance with the Langlier Saturation Index with a pH range of 6.8-7.8.
- For best performance and operation of your Pool Pro 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 the most accurate results. See page 5 for a list of recommended water chemistry levels.

2. GENERAL OVERVIEW

Congratulations on your recent purchase of your Pool Pro Salt & Mineral 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. Pool Pro reserves the right to change the specifications of the hardware and software described herein at any time without prior notice.

Please remember that your Pool Pro Salt & Mineral 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.

There are two types of designs in the Pool Pro Range:

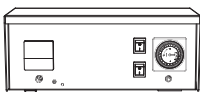
- A standard model known as CPP which is a non-reversing design and calcium build up needs to be manually cleaned periodically from the electrode plates.
- A reverse polarity model known as CPPS which is a reversing design and automatically changes direction every 6-10hrs (depending on your setting). This change of polarity causes the calcium to dislodge and keep the Cell plates clean. Please note occasional cleaning of the electrode plates may be necessary.

**Thank you again for choosing a Pool Pro Salt & Mineral Chlorinator.
We wish you many happy years of swimming in your crystal clear pool.**

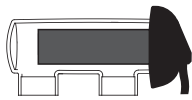
2.1 Recommendations and Helpful Hints

- Read and keep your manual in a safe place.
- Increase chlorine production when temperature goes up.
- Increase chlorine production when number of swimmers increases.
- Use Stabiliser (Cyanuric Acid) to stabilise chlorine in Pool.
- Decrease production when temperature goes down (during winter).
- Take pool water sample to your local Pool Pro Professional at least twice a month.

2.2 Contents



Power Pack



Cell Housing & Electrode



Acrylic Cover &
2 x Black Plastic Rivets



2 x Skins (CPPS Model Only)



2x50/40
Reducing Bushes



2 x Green Wall
Plugs with Screws

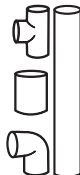


User Manual

2.3 Tools Needed



Drill with 7.0mm drill bit



Basic PVC fittings



Hacksaw



PVC Primer & PVC
Cement "Type P"
for pressure pipes



No.2 Phillips head screwdriver

3. POOL PREPARATION

Consult your local Pool Pro Professional to correctly balance your pool water. Follow instructions on the packaging of each chemical. Always add chemicals to water, never add water to chemicals.

	Recommended Values	To Increase Value	To Decrease Value	Test Frequency
pH	Concrete: 7.2 – 7.6 Fibreglass/Vinyl: 7.0 – 7.2	Add Pool Pro pH Increaser (Soda Ash)	Add Pool Pro Hydrochloric Acid	Weekly
Free Chlorine	1 – 3ppm	Increase the chlorine output on the chlorinator unit	Add Pool Pro Chlorine Out and decrease the chlorine output on the chlorinator unit	Weekly
T.A. (Total Alkalinity)	Concrete: 80 – 150ppm Fibreglass/Vinyl: 80 – 120ppm	Add Pool Pro pH Buffer	Add Pool Pro Hydrochloric Acid	Fortnightly
Calcium Hardness	Concrete: 250 – 300ppm Fibreglass/Vinyl: 150 – 200ppm	Add Pool Pro Hardness Raiser	Add Pool Pro Calcium Remover	Fortnightly
Stabiliser	30 – 60ppm	Add Pool Pro Stabiliser or Pool Pro Rapid Stabiliser	Contact your Pool Pro Professional for advice	Fortnightly
Salt	3000 – 3500ppm	Add Pool Pro Ultrafine or Premium Pool Salt	Partially empty the pool and refill it	Fortnightly

This is a guide only, does not constitute and should not be used as an alternative to specific professional advice. Pool Pro and The POPS Group Pty Ltd accept no liability for any damage, loss or harm associated with the use of this guide.

Important Notes

- **TIP 1:** If you turn the Output Control Knob fully clockwise and the Meter needle reaches the top of the GREEN then you have enough salt. **DO NOT ADD ANY MORE SALT.**
- **TIP 2:** If you turn the Output Control Knob fully clockwise and the Meter needle reaches the RED then you have either just enough salt (if just reaches RED) or too much salt (if it goes in to the RED). **DO NOT ADD ANY MORE SALT.**
- 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 of salt per 1,000L (1m³) of pool water. A 50,000L (50m³) new pool needs approximately 175kg of salt to achieve 3000ppm.
- The unit can operate on mineral/magnesium chloride salts, allow an extra 20-30% on the ppm for these types of salts.
- Salt should always be added to the shallow end of the pool and brushed until thoroughly dissolved. Do not let the salt settle on the pool floor as this may cause damage or staining 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.
- Low salt levels (<1500ppm) will destroy the coating on the Cell and void the warranty.
- The Pool Pro 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 Pool Pro 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 the most accurate results.

4. POWER PACK & CELL ELECTRODE INSTALLATION

4.1 Power Pack Installation



- The Pool Pro Power Pack has an Ingress Protection Rating of IP23 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 Power Pack and Control Board.
- When mounting the Power Pack on a post it is recommended to install a flat panel at least the size of the Power Pack to act as a waterproof backing plate.
- Mount the Power Pack with the Green Plugs and Mounting Screws provided.
- Fit the Black Plastic Rivets that hold the Acrylic Front in place as follows:
 - Remove the outer plastic tube from the inner pin on both rivets.
 - Align the Acrylic Front and insert the outer tube on both sides.
 - Insert the inner pin that will expand the tube and hold the Acrylic Front in place.



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

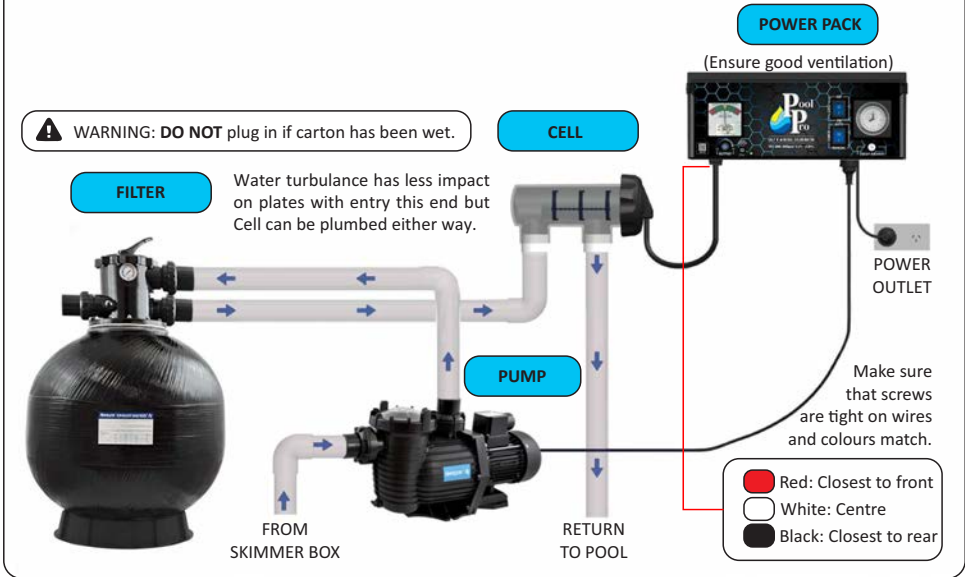
4.2 Cell Electrode Installation



- 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.
- Direction of water flow though 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.
- Fit the Cell Electrode and ensure Cell Locking Ring is firmly tightened by hand (DO NOT use a tool to tighten).
- Connect the leads from the Cell Electrode to the Junction Box under the Power Pack ensuring the colours match that indicated on the Junction Box (RED - closest to the front, WHITE - in the middle and BLACK - closest to the rear).
- Plug the Power Pack 3 pin plug into a suitable weatherproof RCD protected 10amp outlet and then plug the pump into the 3 pin AC Socket located at the bottom of the Power Pack.

4. POWER PACK & CELL ELECTRODE INSTALLATION

4.3 Installation Diagram



Important Notes



- The pump rating must not exceed 5amps.
- Saltwater may damage Junction Box and electrical components in the Power Pack.
- DO NOT use a drill to tighten Junction Box screws - this may strip them - use a hand held screw driver.

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 installer's 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. POWER PACK OPERATION

5.1 Timer Switch

This switch position determines whether the unit is manually turned on or automatically controlled by the Timer.

- **Auto Position** - the time clock controls the operating hours. See section 6 for Timer Setting.
- **Manual Position** - the unit is on and both the pump AC Socket and Cell will be powered up.

5.2 Cell Switch

This switch position determines whether the Cell is turned on or off when power is supplied to it from the above Timer Switch.

- **OFF Position** - even if the Timer Switch is powered on there will still be no power to the Cell.
- **ON Position** - if Timer Switch is powered on then there will be power to the Cell.
- **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.

5.3 Circuit Breaker

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 then you must allow for a flow switch mechanism to control the electrical supply to the Power Pack, so as to prevent gas build-up if the pump stops.

5.5 Junction Box

The Junction Box allows rectified DC voltage to be coupled to the Cell. This is where the Cell cable is connected to the Power Pack.

5.6 Output Control Knob

Simply turning the BLACK Output Control Knob counter clockwise decreases output and clockwise increases it. Always leave it in a position where the Production Output Display Meter needle is in the GREEN (never in the RED).

5.7 Flashing LED (CPPS model only)

This LED serves a double function. It shows that there is power to the Main Control PCB and also flashes every one second to indicate all is OK with the power it is receiving. The flashing 1 second pulse is normal and not a fault indicator.

5. POWER PACK OPERATION

5.8 Production Output Display Meter

- When the unit is turned on full (Black Output Control Knob fully clockwise) the needle should reach the top of the GREEN, this shows that the water has the correct conductivity and the salt level is correct.
- If the needle is slightly low (in the GREEN area below 90% mark), it may be that the water is very cold, more salt may be needed or possibly a faulty Cell (see Troubleshooting). In cold months it is normal to operate as low as 50% and more salt is not needed.
- If the needle reaches the RED then you have either just enough salt (if just reaches RED) or too much salt (if it goes in to the RED). If unsure refer to your nearest Pool Pro Professional for a water test before adding more salt.

CPP (STD) Meter



CPPS (REV) Meter

5.9 Water Hardness Switch (CPPS model only)

- This switch is only available in the reverse polarity models (self cleaning). The micro-processor will automatically change direction of the current flow approximately every 10 hours (in the **IF NORMAL** position) and 6 hours (in the **IF HIGH** position) approximately, even if the power is interrupted.
- You should always start off by running on the **IF NORMAL** position but if you have hard water (high calcium) and the build-up on your electrode takes place too quickly, then you can shorten the reversing hours by setting the switch to the **IF HIGH** position.
- The platinum coating on the Cell plates may not last as long on the hard setting as a percentage of the wear on the coating is related to the number of current switches.

5.10 Start Up Procedure

- Ensure 10amp wall outlet supply switch is turned "OFF".
- Water Hardness Switch in "IF NORMAL" position (or "IF HIGH" if required - see 5.9).
- "OUTPUT" Control Knob turned fully counter clockwise.
- Cell Switch in the "OFF" position.
- Timer Switch in the "MANUAL" position.
- Turn the 10amp wall outlet supply switch "ON".
- The pump should start up and prime.
- Allow the pump to run for 2 minutes and repair any leaks if needed.
- Turn the Cell Switch to "ON" and slowly turn the "OUTPUT" Control Knob clockwise until the meter needle reaches the top of the GREEN indicator.
- Set the Timer to run 6-10 hours in the summer and 3-6 hours in the winter. Refer to section 6 Timer Setting for further details.
- Now turn the Timer Switch to "AUTO" and leave it here to run automatically.

All Pool Pro Self Cleaning models are controlled by a Micro-Chip controller that performs several functions, including the change of current direction and water sensing.

6. TIMER SETTING



Your Pool Pro unit comes with a simple to operate quartz mechanical Timer which has a built in battery back up function.

This area of set up is critical and we recommend you take time to read it and understand why we recommend certain settings.

Obviously sunlight and higher bather loads in summer dissipate more chlorine than in winter. That is why you need to check your chlorine reading regularly and adjust your settings when required.

It is recommended to run the unit for 2 periods every day (early morning and evening) when the sun extracts the least amount of chlorine from the pool, giving it time to do its work.

Summer Settings



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

Winter Settings



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

Important Notes



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.

WARNING: ALWAYS TURN THE CLOCK FACE CLOCKWISE, NEVER ANTI-CLOCKWISE.
You will strip plastic gears and damage the Timer.

6. TIMER SETTING

To adjust the time of the clock, simply hold the outside of the white segments and turn the dial until the clock reads the right time and the number near the timer on/off arrow is close to the same number.



This time is set at 8:00am and the dial pointer shows the 8:00 position as does the clock face hands

The Timer comes on where the pins that are pressed out reach the black dial pointer (in this case it will be from 6 – 10am and 4 – 8pm)



When black adjustable segment pins reach this dial pointer (in AUTOMATIC position) the Power Pack turns: **ON** if pins pressed out
OFF if pins pulled in

With black Lever in this position Power Pack is **ON**

With black Lever in this position Power Pack is in AUTOMATIC and the timer setting turns it ON/OFF

With black Lever in this position Power Pack is **OFF**

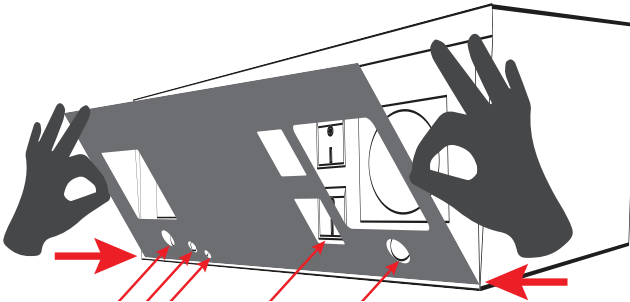
Your Timer is simple to use, easy to understand and a reliable well known design. It has a battery back up function if you operate your pool equipment from a low tariff supply that turns off at times. It does require at least 12 hours charging at first but simply leave it alone and it will charge itself as required.

7. APPLYING A CHLORINATOR SKIN/FRONT STICKER (CPPS MODEL ONLY)

1. Remove the two Rivet Clips and the Acrylic Cover, and set them aside (see below diagrams).
2. Gently wipe the existing skin/sticker to remove any dust/dirt/oils, ensure it is clean & dry.



3. Remove the backing of the new sticker to reveal the adhesive. Hold the sticker taut (but not over-stretched) at each end and place it squarely over the top of the existing sticker. Ensure you apply it evenly, pushing out air bubbles as you go. Tip: Begin placing the bottom edge first to ensure it fits over the knobs and switches.



4. Rub a soft dry cloth over the new sticker including all edges, ensuring it has properly & fully adhered to the chlorinator, and ensuring there are no air bubbles.
5. Re-install the Acrylic Cover. Push in the Rivet Clips to secure the Acrylic Cover.
6. Ensure all settings on the chlorinator are correct.

8. CHLORINATOR MAINTENANCE

Maintenance of your Pool Pro Salt & Mineral Chlorinator is simple and easy. While water chemistry will always be the most important form of maintenance there are also other pointers to take note of.

- **DO NOT** cover the Power Pack with towels or similar as it has air vents that need air circulation.
- Keep the chlorinator off at all times during backwash cleaning of your filter by turning the Cell Switch to the OFF position. Please remember to turn it on once done and return the unit to AUTO mode.
- Check Power Pack Junction Box screws are tight and Cell leads are in sound condition at least once a year.

8.1 Inspecting and Cleaning the Cell Electrode

Reverse Polarity cells (CPPS models) should not normally require cleaning, however, in areas with very hard water a calcium deposit might form on the lower areas of the Cell, the sensor or the sides of the Cell plates. This will NOT affect the operation of your chlorinator, however you can use **Pool Pro Cell Cleaner** to clean the Cell.

Standard cells (CPP models) should be checked every two weeks for calcium build up. Clean at least every 4-8 weeks (or as required) using **Pool Pro Cell Cleaner**. **IMPORTANT:** Excessive calcium build up is not a chlorinator problem but rather a water balance issue.

Chlorinator Cells must be cleaned before scale/calcium builds up to the point where the electrode gaps in the Cell are bridged as this may cause damage and affect operation. Check the Cell frequently to prevent the accumulation of pool debris that for any reason may have bypassed 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 seated in the Cell Housing. For cleaning, please follow these steps:

- Switch off the wall outlet switch as this ensures the pump and Pool Pro 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 **Pool Pro 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. Using 5 parts of water will make a more aggressive solution but will not damage the Cell. You can use **Pool Pro Cell Cleaner** and if you do then follow the instructions supplied on the product label.
- Allow the cleaning solution to dissolve the calcium deposits for 10 minutes. Dispose of the cleaning solution at an approved Council Depot and never into storm water or sewage drains.
- **TIP:** Returning this mix to your pool only returns the calcium you just removed. You can reuse the solution until exhausted then dispose of it. Always store the solution safely (refer to product label).
- Do not scratch or bend the cell 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.
- Turn on the wall outlet switch and the pump, the chlorinator will return to the mode it was in before.
- Turn on the unit and confirm chlorine output and timer settings on the Power Pack.

WARNING



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. CHLORINATOR MAINTENANCE

8.2 Inspecting and Cleaning the 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, in order to avoid a hazard. If the chlorinator is to be hard wired, then a qualified electrician must complete the installation.

The Pool Pro Power Pack has air vents to allow internal components to remain cool. A special oil is applied to the inside of the unit during production to stop 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. Ensure the power is off when you spray. Allow adequate time for the spray to dry before turning power on again.

9. CHLORINATOR TROUBLESHOOTING

9.1 Not operating at all – no lights

Potential Cause	Remedy
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 and turned on but still no power	Test wall outlet with a working appliance
Wall outlet working but still no power	Press Timer Switch to MANUAL
Timer Switch in MANUAL still no lights	If you have checked all of the above then there is an internal fault - call for service

9.2 Not operating at all - some lights

Potential Cause	Remedy
When Timer Switch in MANUAL everything works but nothing works in AUTO	<ol style="list-style-type: none"> 1. Incorrect setting of Timer -see Timer Setting (sec. 6) 2. Faulty Timer - call for service
When in MANUAL only the pump works	<ol style="list-style-type: none"> 1. Press in Circuit Breaker on Power Pack 2. Make sure Cell Switch is ON
Circuit Breaker stays out in a tripped state	Faulty Circuit Breaker -call for service
Circuit Breaker looks OK but Cell Switch light not coming on	Faulty Cell Switch or Circuit Breaker - call for service
Circuit Breaker resets but trips again	<ol style="list-style-type: none"> 1. Excessively high salt-check salt and lower if needed 2. Short across Cell plates - remove Cell and check the plates for any metal lying across plates 3. Faulty rectifiers, transformer or Cell cable -call for service
Cell Switch illuminated ON but no output on Display Meter	<ol style="list-style-type: none"> 1. Try adjusting the output Control Knob 2. If green LED is not flashing once every second then call for service 3. Check Cell lead connection at the Junction Box, repair if damaged or return for service
Green LED flashing but still no output-faulty parts	<ol style="list-style-type: none"> 1. Check Cell lead connection at the Junction Box - repair if needed 2. Faulty PCB, return for service 3. Faulty rectifiers, transformer or internal wiring. Return for service
Green LED flashing but still no output-low or no water flow	Ensure sufficient water flow 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 your local Pool Pro Professional for any of the above.
Green LED is not flashing	<p>Make sure Cell Switch is ON, Timer Switch is in Manual and Circuit Breaker is not tripped. Reason could be:</p> <ol style="list-style-type: none"> 1. Faulty PCB, return for service 2. Faulty rectifiers, transformer or internal wiring, return for service

8. CHLORINATOR TROUBLESHOOTING

9.3 Green LED near the Soft/Hard switch flashing

Potential Cause	Remedy
This is not a fault but purely an indicator	This indicates power is supplied to the PCB and is normal

9.4 Low output reading on the Salt Meter

Potential Cause	Remedy
Output Control Knob not turned up	Turn the Knob clockwise, the reading should increase
Low salt level	Check salt level (sec. 3)
Build up of calcium on the Cell plates	Calcium acts as an insulator and needs to be removed. See Cleaning of Cell Electrode (sec. 7.2)
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
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 1 direction but OK in other	Clean the cell (sec. 7.2) or Cell may have run its life in 1 direction

9.5 Sign of melting or burning of the Junction Box

Potential Cause	Remedy
Screws not adequately tightened during installation	If melted then return for service, otherwise tighten as required.

9.6 Power Pack only works in one direction

Potential Cause	Remedy
Faulty Rectifiers, Transformer or PCB	Return unit for service

9.7 Timer is not functioning properly

Potential Cause	Remedy
Incorrect timer settings	Make sure Timer Switch is set to AUTO and black lever in the centre of Timer is set to time clock position and not "I" or "O". Refer to Timer Setting in this manual (sec. 6)

9.8 Pool pump outlet not functioning properly or pump always on

Potential Cause	Remedy
Pump not plugged into chlorinator	Check pump is plugged into the bottom of the Power Pack and not directly in to the wall outlet. Make sure you are set in AUTO mode and not MANUAL for normal running

9.9 Cell not cleaning, excessive calcium build up on Cell or Power Pack not changing direction

Potential Cause	Remedy
Excessively high calcium, change of direction time set too high or faulty PCB	<ol style="list-style-type: none"> 1. See Calcium Hardness (sec. 3) and adjust water accordingly 2. Change Water Hardness Switch to IF HIGH (sec. 5.9) 3. Manually reverse direction (sec. 5.2 - Cell Switch Changing Direction). Failure for this to work could indicate a faulty PCB - return for service

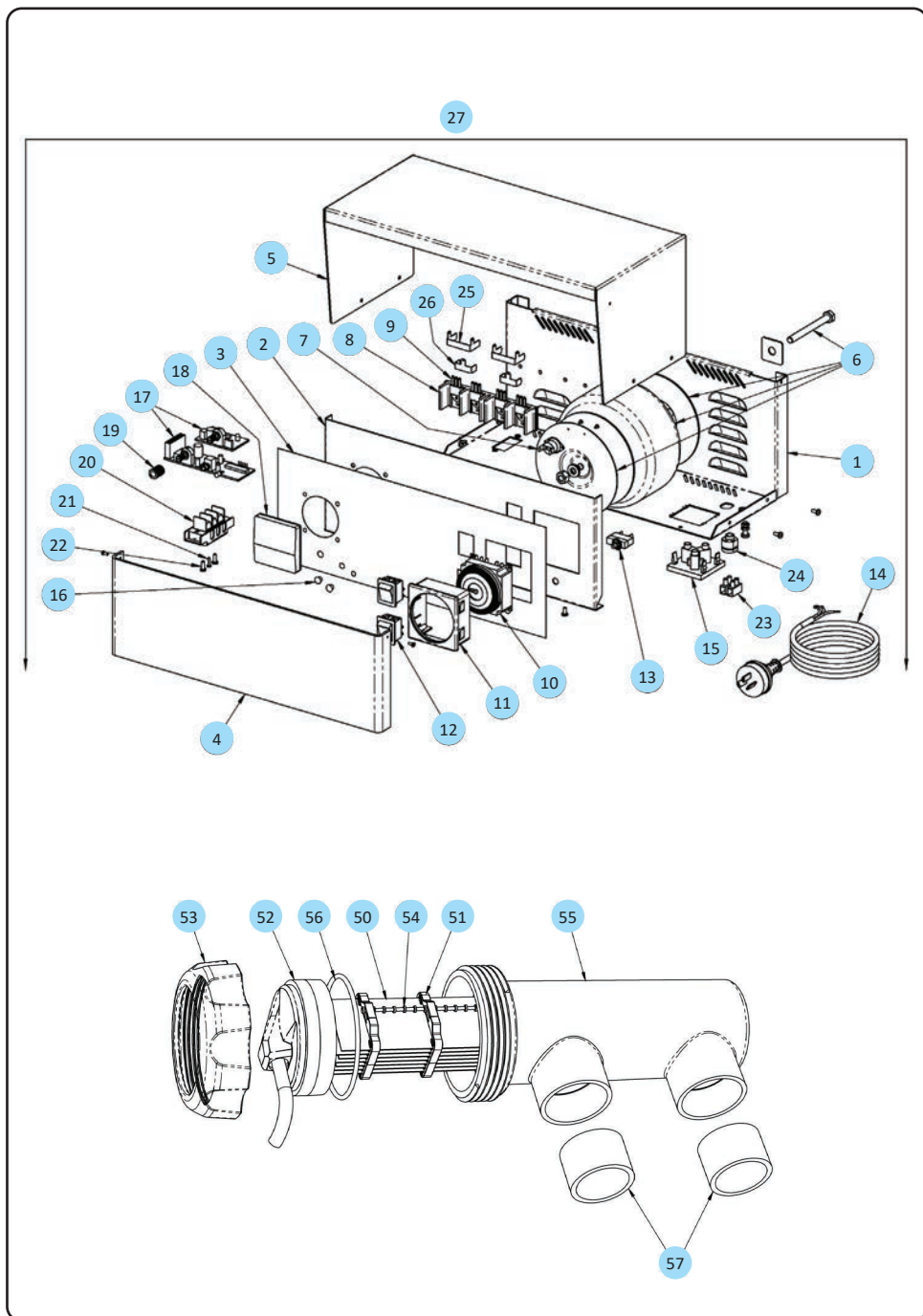
9.10 Low or No Chlorine Output

Potential Cause	Remedy
Unit not working correctly	Go through Troubleshooting from 8.2
Unit not set correctly	Check basic settings such as Output Control and Timer running hours
Salt level is too low	Check Salt (sec. 3)
pH is too high	Check pH (sec. 3)
Stabiliser is too low	Check Stabiliser (sec. 3)
Cell at the ends of its life	If full output is not reached then it could be a failing Cell

9.11 Timer loses time when mains power removed

Potential Cause	Remedy
Battery life expired	Replace Timer - return for service

10. SCHEMATICS AND PART NUMBERS



10. SCHEMATICS AND PART NUMBERS

#	CODE	DESCRIPTION
1	PPN00037	CPP/CPPS ALUMINIUM CHASIS
2	PPN00039-1	CPP/CPPS FRONT COVER BLACK
3	PPN00060	CPP/CPPS FRONT STICKER
4	PPN00033	CPP/CPPS ACRYLIC FRONT
5	PPN00038	CPP/CPPS TOP CASE LID
6	PPN00022	CPP/CPPS TRANSFORMER 220VA FOR 20G/HR MODEL
6	PPN00023-1	CPP/CPPS TRANSFORMER 340VA FOR 30G/HR MODEL
6	PPN00024-1	CPP/CPPS/NEPTUNE TRANSFORMER 440VA FOR 40G/HR MODEL
7	PPN00027	CPP/CPPS THERMOSTAT 100°C
8	PPN00040	CPP/CPPS HEAT SINK 90MM 40G/HR MODEL
8	PPN00041	CPP/CPPS HEAT SINK 30MM UP TO 30G/HR MODELS
9	PPN00025	CPP/CPPS SCR 65AMP FLAT BACK
10	PPN00028-1	OLD STYLE CPP/CPPS STANDARD TIMER - BOSCHE MECHANICAL
10	PPS0051	OLD STYLE CPP/CPPS DIGITAL TIMER - FRONTIER QUARTZ
10	PPN00414	NEW STYLE CPP/CPPS STANDARD TIMER - QUARTZ BOSCHE MECHANICAL BATTERY B/UP
11	PPN00029	CPP/CPPS TIMER - BRACKET HOUSING
12	PPN00026	CPP/CPPS ROCKER SWITCH
13	PPN00018	CPP/CPPS CIRCUIT BREAKER 3AMP 20&30G/HR MODELS
13	PPN00019	CPP/CPPS CIRCUIT BREAKER 5AMP 40G/HR MODEL
14	PPN00011	CPP/CPPS POWER CORD-AU
15	PPN00001	CPP/CPPS AC SOCKET SQUARE - PUMP OUTLET
16	PPN00072	CPP PLASTIC RIVET WHITE
17	PPN00172	CPP PCB STANDARD WITH 4&6 PIN CONNECTOR
17	PPN00030	CPPS PCB REVERSE POLARITY
18	PPN00003	CPP METER STANDARD
18	PPN00002	CPPS METER REVERSE POLARITY
19	PPN00035	CPP/CPPS KNOB FOR POTENTIOMETER
20	PPN00020	CPP/CPPS JUNCTION BOX COMPLETE WITH COVER
21	PPN00160	CPP/CPPS JUNCTION BOX SCREW - CENTRE SMALL
22	PPN00159	CPP/CPPS JUNCTION BOX SCREW - OUTER LARGE
23	PPN00021	CPP/CPPS TERMINAL BLOCK 2 PIN

#	CODE	DESCRIPTION
24	PPN00034	CPP/CPPS CABLE GROMMET 6N-4
25	PPN00042	CPP/CPPS SCR BRIDGE LONG
26	PPN00043	CPP/CPPS SCR BRIDGE SHORT
27	PPEC2000PP-C	CPP POWER PACK COMPLETE CPP20
27	PPEC3000PP-C	CPP POWER PACK COMPLETE CPP30
27	PPEC4000PP-C	CPP POWER PACK COMPLETE CPP40
27	PPRP2000PP-C	CPPS POWER PACK COMPLETE CPPS20
27	PPRP3000PP-C	CPPS POWER PACK COMPLETE CPPS30/CPPS30C
27	PPRP4000PP-C	CPPS POWER PACK COMPLETE CPPS40/CPPS40C
27	PPRP5000COMM	CPPS POWER PACK COMPLETE CPPS50C
57	PPN00670-1	CPP/CPPS PVC - REDUCING BUSH 50X40MM
50	PPCC20EC	CPP20 REPLACEMENT CELL-5 PLATES 200MM, SOLID PLATE CATHODE/ANODE
50	PPCC30EC	CPP30 REPLACEMENT CELL-7 PLATES 200MM, SOLID PLATE CATHODE/ANODE
50	PPCC40EC	CPP40 REPLACEMENT CELL-9 PLATES 200MM, SOLID PLATE CATHODE/ANODE
50	PPCC20RP	CPPS20 REPLACEMENT CELL-5 PLATES 200MM, REVERSE POLARITY
50	PPCC30RP	CPPS30 REPLACEMENT CELL-7 PLATES 200MM, REVERSE POLARITY
50	PPCC40RP	CPPS40 REPLACEMENT CELL-9 PLATES 200MM, REVERSE POLARITY
50	PPCC50RP-C	CPPS50 REPLACEMENT CELL-13 PLATES 200MM, REVERSE POLARITY
51	PPN00455	CPP/CPPS CELL CLIP 9 PLATE BLUE CRYSTAL- NO ROD
52	PPSCCAP	CELL CAP (C/W CABLE, COVER, CAP, BRASSWARE, WASHERS, RESIN FILLED)
53	PPN00492	CELL CAP LOCKING RING
54	PPN00260	CPP/CPPS CELL SPACER (RODS ONLY) BLACK
54	PPN00322	CPP/CPPS CELL SPACER (RODS ONLY) BLUE
55	PPN00465	CPP/CPPS CRYSTAL CLEAR CELL HOUSING - SMOKEY
56	OR925M	CPP/CPPS O-RING CELL HOUSING
57	PPN00670-1	CPP/CPPS PVC - REDUCING BUSH 50X40MM

11. SPECIFICATION TABLE

Domestic Models available:

MODEL NUMBER	VOLTS (Vac) Input	AMPS* (Aac) Input	VOLTS* (Vdc) Output	AMPS* (Adc) Output	Chlorine* (g/hr) @3500 ppm salt	Power* Consumption (Watts)	Frequency (Hz)	Weight (kg)	Dimensions (cm)
CPP20	210 – 265	1.02	6.60	20	20	222	50	9.5	41Lx35Wx19H
CPP30	210 – 265	1.35	6.60	30	30	304	50	11.3	41Lx35Wx19H
CPP40	210 – 265	1.97	6.60	40	40	425	50	13.2	41Lx35Wx19H
CPPS20	210 – 265	1.02	6.60	20	20	222	50	9.75	41Lx35Wx19H
CPPS30	210 – 265	1.35	6.60	30	30	304	50	11.32	41Lx35Wx19H
CPPS40	210 – 265	1.97	6.60	40	40	425	50	13.56	41Lx35Wx19H

Commercial Models available:

MODEL NUMBER	VOLTS (Vac) Input	AMPS* (Aac) Input	VOLTS* (Vdc) Output	AMPS* (Adc) Output	Chlorine* (g/hr) @3500 ppm salt	Power* Consumption (Watts)	Frequency (Hz)	Weight (kg)	Dimensions (cm)
CPPS30C	210 – 265	1.35	6.60	30	30	304	50	11.42	41Lx35Wx19H
CPPS40C	210 – 265	1.97	6.60	40	40	425	50	13.66	41Lx35Wx19H
CPPS50C**	210 – 265	1.38	8.94	25	50	382	50	14.66	41Lx35Wx19H

* – all readings taken at 240Vac and in 3500ppm saltwater with a temperature of 28°C.

** – the configuration of this unit is based on a series/parallel cell.

AC Socket / Pump Outlet: Rated for 8amps - max is 1.5kW (2hp)

Chlorine Production

MODEL NUMBER	PER HOUR			OVER 8 HOURS		
	Chlorine Output	Cal. Hypo. Equivalent (65%)	Sod. Hypo. Equivalent (12.5%)	Chlorine Output	Cal. Hypo. Equivalent (65%)	Sod. Hypo. Equivalent (12.5%)
CPP20 CPPS20	20g	31g	160ml	160g	248g	1.28L
CPP30 CPPS30/ CPPS30C	30g	46g	240ml	240g	368g	1.92L
CPP40 CPPS40/ CPPS40C	40g	62g	320ml	320g	496g	2.56L
CPPS50C	50g	77g	400ml	400g	616g	3.20L

CPP is a standard manual cleaning model

CPPS is a self cleaning model

12. WARRANTY & PRODUCT REGISTRATION

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

- 12.1 The Pool Pro Power Pack and Electrolytic Cell will be repaired at no charge for a period of three (3) years 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. The warranty applicable to commercial application is limited to 12 months from the date of installation unless a commercial model is purchased then this is 24 months.
- 12.2 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.
- 12.3 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.
- 12.4 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.
- 12.5 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.
- 12.6 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.
- 12.7 Products sold by the manufacturer are designed for use with swimming pool water balanced in accordance with the Langelier Saturation Index (AS 3633-1989) with a pH range of 6.8-7.8. Chlorine level should not exceed 4ppm and the salt level should not exceed 4000ppm.
- 12.8 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 maintained at all times.
- 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 or Junction Box.
- Run in a commercial installation (these have a 1 year warranty on Power Pack and Cell unless a commercial model is purchased then this is 24 months).
- 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.

This unit is for use in domestic swimming pools only where the correct size unit produces enough chlorine in approximately 8 hours. Extended periods to gain more chlorine production voids the Warranty.

Keep your original purchase invoice and serial number in a safe place.

12. WARRANTY & PRODUCT REGISTRATION

Submitting a Warranty Claim

Please contact your original place of purchase, local distributor or Pool Pro directly to submit your warranty/service claim, or visit www.poolpro.com.au/serviceclaim. When making a warranty claim, please note the following information MUST be provided or your claim may not be approved.

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

We keep extensive production and sales records so this information will expedite the processing of your claim. Pool Pro reserves the right to modify any model without notice.

Registering Your Product

Please register your product online at www.poolpro.com.au/product-registration within 30 days from date of purchase, or any warranty claim may be voided.

13. TECHNICAL SUPPORT

Technical Support

For product support please contact your local distributor or contact Pool Pro directly by emailing service@poolpro.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 Pool Pro Professional for comprehensive advice.

This guide includes subject(s) that should only be performed by or under the direction and advice of your local Pool Pro 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 as a result of any user's reliance on such content.

Repairs should only be carried out by qualified persons or Pool Pro appointed agents.

Pool Pro reserves the right to refuse warranty if any damage caused to the chlorinator or auxiliary pool equipment that is not a result of a manufacturer's defect.

**Should you require further information visit
www.poolpro.com.au**