POOL PRO
SALT WATER CHLORINATOR

INSTALLATION & OPERATING INSTRUCTIONS
MODELS: CPP & CPPS

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

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

2. GENERAL OVERVIEW

Congratulations on your recent purchase of your Pool Pro Salt Water 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 anytime without prior notice.

Please remember that your Pool Pro Salt Water 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 & 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-lOhrs (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.

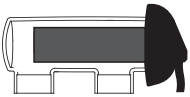
Thank you again for choosing a Pool Pro Salt Water Chlorinator. We wish you many happy years of swimming in your crystal clear pool.

2.1 Recommendations and Helpful Hints

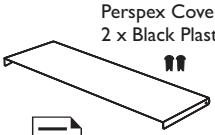
- Read and keep your manual in a safe place.
- Increase chlorine production when temperature goes up.
- Increase chlorine production when number of swimmers increases.
- Use Stabiliser (Cyanuric Acid) to stabilise chlorine in Pool.
- Decrease production when temperature goes down - (during winter).
-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

2.2 Contents

Pool Pro Power Pack



Pool Pro Cell Housing & Electrode



Perspex Cover with 2 x Black Plastic Rivets

2x50/40 Reducing Bushes

2 x Green Wall Plugs with Screws

The Installation & Operating Instructions

2.3 Tools Needed

Drill with 7.0mm drill bit

Basic PVC fittings

Hacksaw

PVC Primer and Glue

No.2 Phillips head screwdriver

3. POOL PREPARATION

Before operating your Pool Pro unit please read the following:

- 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.

Handy Tips

- The colder the water the lower your output but this does not mean you need more salt. There will always be less chlorine demand in colder water.
- We recommend 3.5kg per 1000 litres (1 cubM) of pool water and a 50 000 litre (50 cubM) new pool needs approximately 175kg of salt.
- The unit can operate on mineral/magnesium chloride salts and you should 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 allowed to dissolve. Do not let the salt settle on the floor of the pool as this may cause damage to the surface. Use your pool brush to mix the salt into the water.
- Running the pump will mix the water and help the salt to dissolve.
- Only run the pump in the first 8 – 12 hours (ensure the Cell is switched off) to allow the salt to dissolve.
- If you turn the dial fully clockwise and the needle on the display meter 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).

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

4. POWER PACK & CELL ELECTRODE INSTALLATION

4.1 Power Pack Installation

- The Pool Pro Power Pack has a 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.

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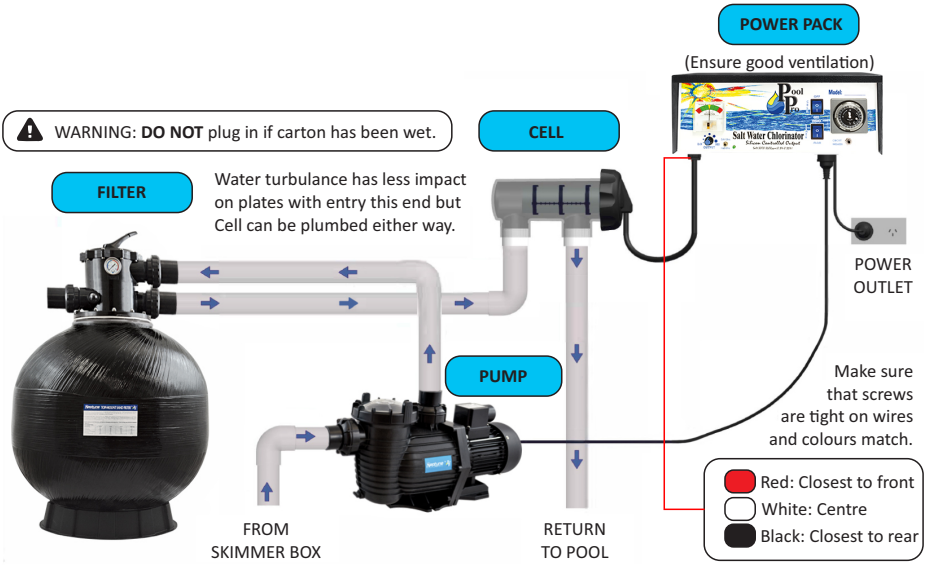
4. POWER PACK & CELL ELECTRODE INSTALLATION

4.3 Installation Diagram



Important Notes

- **The pump rating must not exceed 8amps**.
- 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.

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

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.

5.8 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 Hard/Soft 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 **SOFT** position) and 6 hours (in the **HARD** position) approximately, even if the power is interrupted.
- You should always start off by running on the **SOFT** 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 **HARD** 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".
- Hard/Soft Switch in "SOFT" position (or "HARD" 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 sec. 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.

Should you require further information visit
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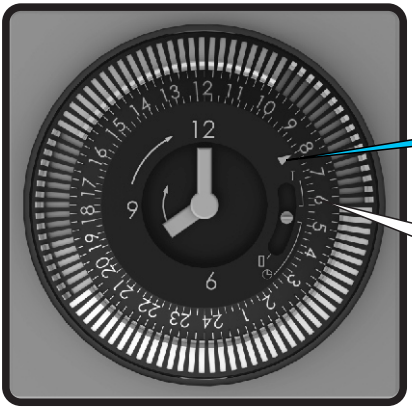
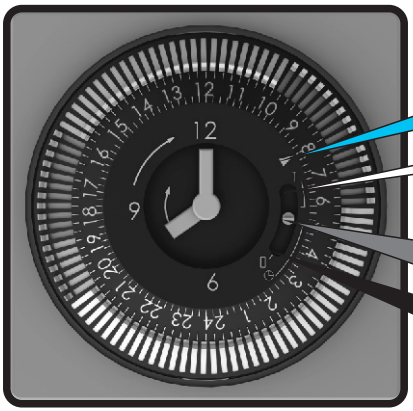
6. TIMER SETTING

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 White dial pointer (in this case it will be from 6 – 10am and 4 – 8pm)



When White 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 White Lever in this position power pack is **ON**

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

With White 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. WATER CHEMISTRY

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.

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. Following is a list of recommended water chemistry levels.

7.1 Chlorine — Measurement Interval: Once a week

Ideal Chlorine (Free Chlorine) Levels: 2 - 3ppm (2 - 3mg/L) and no more than 4ppm (4mg/L).

Adjust the chlorine output by turning the Output Control Knob clockwise to increase and anti-clockwise to decrease (NEVER run unit with the Meter needle in the RED). Running the unit for longer or shorter hours can achieve the same result.

7.2 Salt — Measurement Interval: Every 4 – 6 weeks

Ideal Salt Levels: 3000-3500ppm and no more than 4000ppm.

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

The salt level SHOULD NOT go below 3000ppm. Operating the unit with too little salt in the pool will cause damage to your Cell.

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

The unit will operate with good stability on higher salt levels but it is still advisable to run at the correct level to prevent damage should the Output Control Knob be turned up by accident. Salt levels above 4000ppm may overload the unit and cause excessive heat.

Important Notes

- NEVER ADD SALT DIRECTLY TO THE SKIMMER BOX. This high concentration of salt will pass through your filtration, pump and other pool equipment.
- HANDY TIP 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.
- HANDY TIP 2: If you turn the Output Control Knob fully clockwise and the display 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 per 1000 litres of pool water and a 50,000 litre new pool needs approximately 175kg of salt to achieve 3000ppm.
- The unit can operate on mineral/magnesium chloride salts and you should 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 floor of the pool 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.

7.3 pH — Measurement Interval: Once a week

Ideal pH Levels:
- Concrete Pools: 7.4 – 7.6
- Fibreglass/Vinyl Pools: 7.0 – 7.2

A pH of 8.0 makes your chlorine only about 26% efficient so that is why it is critical to keep your pH in range.
A correct pH level must be maintained to prevent problems such as black spot, staining, cloudy water, etc. An incorrect pH level can damage the surface finish and walls of your pool.

- When pH is high you can add **Pool Pro Hydrochloric Acid** to lower the pH.
- When pH is low you can add **Pool Pro pH Increaser** – sodium carbonate (soda ash) to increase the pH.

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

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

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

- When Total Alkalinity is high you can add **Pool Pro Hydrochloric Acid** (a little at a time) to lower the Total Alkalinity.
- When Total Alkalinity is low you can add **Pool Pro pH Buffer** – sodium bicarbonate (buffer/baking soda) to raise the Total Alkalinity.

7.5 Calcium Hardness — Measurement Interval: Every 3 months

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

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

7.6 Stabiliser — Measurement Interval: Every 4 – 6 weeks

Ideal Stabiliser Levels: 30 – 70ppm

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

THE MOST IMPORTANT NOTICE AND WARNING

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

8. CHLORINATOR MAINTENANCE

Maintenance of your Pool Pro Salt Water Chlorinator is simple and a saltwater chlorinator has to be one of the most productive pieces of equipment on your swimming pool so it requires some basic maintenance.

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

- **DO NOT** cover the Power Pack with towels or similar. There are vents that could be closed and these need air to keep the unit cool.
- To extend the life of your unit we always recommend installation in an under cover area away from the elements.
- Placing the unit in a closed shed or similar environment with chemicals, fertilisers and other corrosives will damage the unit and could void your warranty.
- 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 that the 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 Power Pack

Little or no maintenance is normally required with the Pool Pro 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 small air vents to allow internal components to remain cool in hot weather. It has a special oil spray applied to the inside of the unit during production to stop the insects from entering the unit. To help assist in keeping the insects away, apply a surface spray periodically on the wall or post that the unit is mounted on. **DO NOT** spray directly into the Power Pack and make sure the power is off when you spray. Allow adequate time for the spray to dry before turning power on again.

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

8.2 Inspecting and Cleaning the Cell Electrode

Reverse Polarity cells (CPPS models) should not normally require cleaning, however, in areas with very hard water all calcium may not be removed. A calcium deposit might form on the lower areas of the Cell, the sensor or the sides of the Cell plates. This will 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.

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

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

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

For cleaning, please follow these steps:

- Switch 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 instruction supplied.
- 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.
  HANDY TIP: Returning this mix to your pool only returns the calcium you just removed, so you may be better off reusing the solution until exhausted then disposing of it. Always store this solution in a safe method as advised on the container.
- Do not scratch or bend the 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 and 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.

9. CHLORINATOR TROUBLESHOOTING

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

9.1 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

9.2 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

9.3 Not operating at all - some lights

Potential Cause	Remedy
When Timer Switch in MANUAL everything works but nothing works in AUTO	1. Incorrect setting of Timer – see Timer Setting (sec. 6) 2. Faulty Timer – call for service
When in MANUAL only the pump works	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	1. Excessively high salt – check salt and lower it 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	1. Try adjusting the output Control Knob 2. If green LED is not flashing once every second then internal fault – 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	1. Check Cell lead connection at the Junction Box – repair if needed 2. Faulty PCB 3. Faulty rectifiers, transformer or internal wiring All above is 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	Make sure Cell Switch is ON, Timer Switch is in Manual and Circuit Breaker is not tripped Reason could be: 1. Faulty PCB 2. Faulty rectifiers, transformer or internal wiring 1– 2 above is return for service

9.4 Low output reading on the Salt Meter

Potential Cause	Remedy
Output Control Knob not turned up	Turn the Knob clockwise and the reading should increase
Low salt level	Check salt level (sec. 7.2)
Build up of calcium on the Cell plates	Calcium acts as an insulator and needs to be removed See Cleaning of Cell Electrode (sec. 8.2)
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
The Cell could be damaged or at the end of its life	Damaged coating will reduce Cell life and reduce output. If all conditions are correct then Cell could be at the end of its life
Level low in one direction but OK in the other	Cell may need cleaning (sec. 8.2) or the Cell may have run its life in one direction

9.5 Sign of melting or burning of the Junction Box

Potential Cause	Remedy
The screws were not adequately tightened during installation	If melted then it will need replacing otherwise tighten as required Return for service if melted

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 White 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 that 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	1. See Calcium Hardness test (sec. 7.5) and adjust water accordingly 2. Change the Hard/Soft Switch to HARD (sec. 5.9) 3. Manually try reverse direction (sec. 5.2 - Cell Switch Changing Direction). Failure for this to work could indicate a faulty PCB - return for service

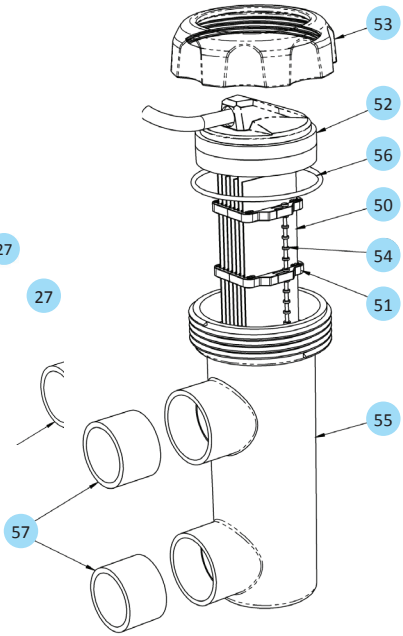
9.10 Low or No Chlorine Output

Potential Cause	Remedy
Unit not working correctly	Go through Troubleshooting from 9.2
Unit not set correctly	Basic settings such as Output Control and Timer running hours need to be checked
Salt level is to low	Check Salt guide (sec. 7.2)
pH is too high	Check pH guide (sec. 7.3)
Stabiliser is too low	Check Stabiliser guide (sec. 7.6)
Cell at the ends of its life	If full output is not reached then it could be a failing Cell

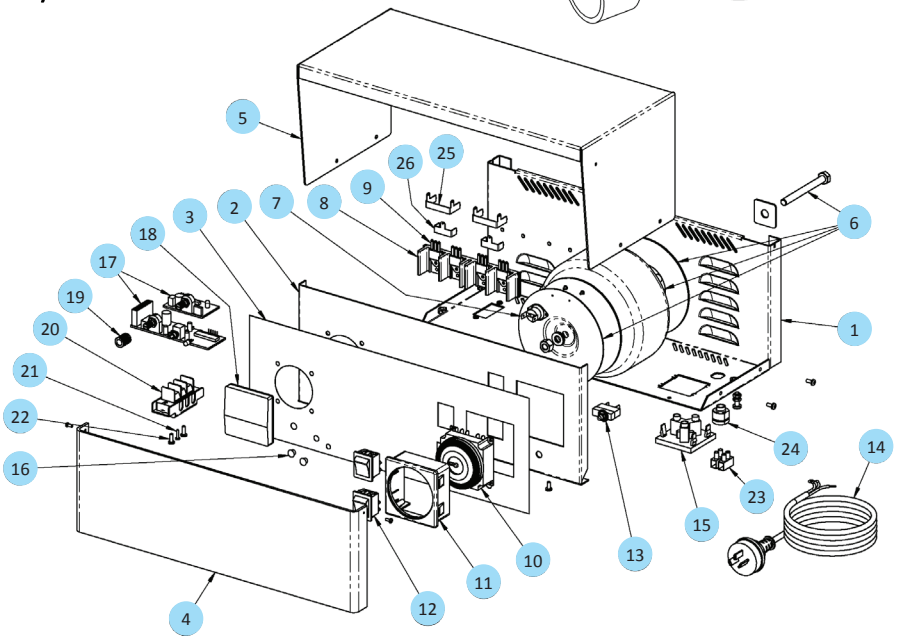
9.11 Timer loses time when mains power removed

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

ELECTRODE CELL PARTS



CPP/CPPS MODELS



CPP/CPPS POOL PRO MODELS

POWER SUPPLY SCREWS AND COMPONENTS (SHOWN IN SCHEMATIC)

PARTS LIST

ITEM No	CODE	DESCRIPTION
1	PPN00037	CPP/CPPS ALUMINIUM CHASIS
2	PPN00039	CPP/CPPS FRONT COVER WHITE
3	PPN00060	CPP/CPPS FRONT STICKER - POOL PRO
4	PPN00033	CPP/CPPS ACRYLIC FRONT
5	PPN00038	CPP/CPPS TOP CASE LID
6	PPN00022	CPP/CPPS TRANSFORMER 220VA FOR 20G/HR MODEL (INCL. RUBBER SPACERS, METAL PLATE, BOLT, LOCK WASHER, NUT)
6	PPN00023-1	CPP/CPPS TRANSFORMER 340VA FOR 30G/HR MODEL (INCL. RUBBER SPACERS, METAL PLATE, BOLT, LOCK WASHER, NUT)
6	PPN00024-1	CPP/CPPS/NEPTUNE TRANSFORMER 440VA FOR 40G/HR MODEL (INCL. SPACERS, PLATE, BOLT, LOCK WASHER, NUT)
7	PPN00027	CPP/CPPS THERMOSTAT 100DEGC
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 TIMER - BOSCHE MECHANICAL
10	PPS0051	OLD STYLE CPP/CPPS TIMER - FRONTIER QUARTZ LCD DISPLAY TM619
10	PPN00414	NEW STYLE CPP/CPPS TIMER - QUARTZ BOSCHE MECHANICAL BATTERY B/UP (SUITS GRASSLIN)
11	PPN00029	CPP/CPPS TIMER - BRACKET HOUSING SURROUND
12	PPN00026	CPP/CPPS ROCKER SWITCH - ILLUMINATED ON/OFF
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
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
27	PPRP4000PP-C	CPPS POWER PACK COMPLETE CPPS40

ELECTRONIC CELL PARTS (SHOWN IN SCHEMATIC)

PARTS LIST

ITEM No	CODE	DESCRIPTION
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	OR925	CPP/CPPS O'RING VITON
57	PPN00670-1	CPP/CPPS PVC - REDUCING BUSH 50X40MM

POWER SUPPLY SCREWS AND COMPONENTS (NOT SHOWN IN SCHEMATIC)

PARTS LIST

CODE	DESCRIPTION
PPN00050	EARTH SCREW S/S
PPN00051	EARTH NUT S/S
PPN00049	WASHER FOR EARTH SS/S
PPN00047	WASHER FOR TRANSFORMER BOLT
PPN00443	PLASTIC RIVET BLACK 5MM X 9.5MM
PPN00046	BLIND RIVET 3.2X6.4
PPN00045	BLIND RIVET 3.2X10
PPN00036	CABLE TIE 3MM
PPN00560	GREEN WALL PLUGS
PPN00217	SCREWS WALL SS 5X25
PPN00068	PACKAGE FOAM
PPN00048	WASHER FOR PCB POTENTIOMETER
PPN00186	SLEEVE - CPP/CPPS
PPN00401	PVC HEAT SHRINK PIECE 630MM W
PPN00053	SCREW STAINLESS (HEAT SINK & GREY LID CONNECTION)
PPN00054	SCREW STAINLESS (JUNCTION BOX CLAMPING)
PPN00052	SCREW STAINLESS (SCR CONNECTION)
PPN00055	SCREW STAINLESS (TERMINAL BLOCK CONNECTION)
PPN00057	SCREW STAINLESS (TIMER BRACKET)
PPN00079	CARTON BOX WHITE 440X360X215
PPN00067	CARTON BOX POWER PACK BROWN
PPN00078	427X212X192 CARTON CELL DIVIDERS 350X140X-205MM

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

	PER HOUR			OVER 8 HOURS		
MODEL NUMBER	**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	1.28Lt
CPP30 CPPS30	30g	46g	240ml	240g	368g	1.92Lt
CPP40 CPPS40	40g	62g	320ml	320g	496g	2.56Lt
CPPS50	50g	77g	400ml	400g	616g	3.20Lt

CPP is a standard manual cleaning model
CPPS is a self cleaning model

12. WARRANTY

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

12.1 The Pool Pro Power Pack will be repaired at no charge for a period of 24 Months 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 Electrolytic Cell carries a 1 year repair / replacement + 4 years pro-rata warranty (based on a percentage of the recommended retail price nominated by the manufacturer).
*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 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 approx. 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

Claiming Warranty on your Pool Pro Salt Chlorinator

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

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

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

13. TECHNICAL SUPPORT

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

Pool Pro Contact Details

P – 1800 143 788
F – 1800 778 820
E – service@poolpro.com.au
W – www.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.

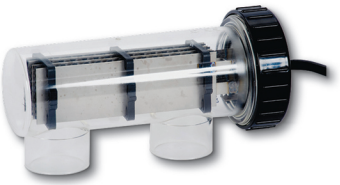
Should you require further information visit www.poolpro.com.au

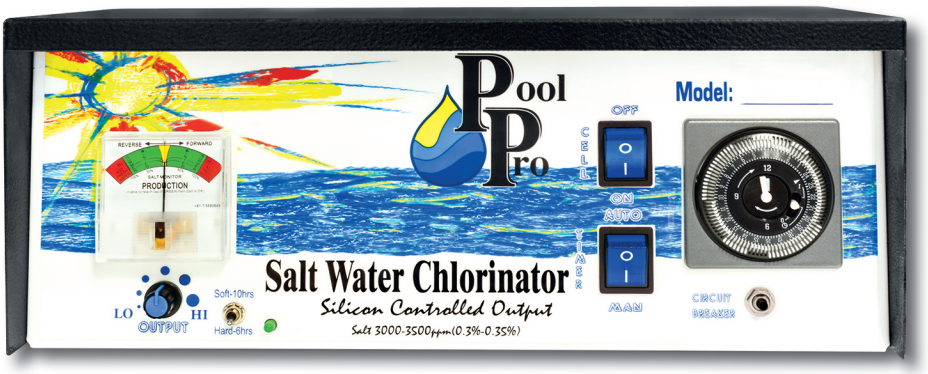
14. NOTES

POOL PRO SALT WATER CHLORINATORS

- Australian Made heavy duty and reliable chlorinator, manufactured for Australian conditions.
- Low Salt only 3000 - 3500ppm required.
- Standard and Self Cleaning models available.
- Comes with a simple to operate quartz mechanical Timer which has a built in batter back up function.
- 20 amp (55,000L), 30amp (80,000L), 40 amp (100,000L) and 50 amp (140,000L). These pool litres are approximate and depend on location and climate.
- **Warranty:** Non-commercial household installations, are 2 yrs on power pack and 5yrs pro rata on the cell.

AVAILABLE IN	CODE
20 AMP - Standard - up to 55,000L	CPP20
30 AMP - Standard - up to 80,000L	CPP30
40 AMP - Standard - up to 100,000L	CPP40
20 AMP - Self Cleaning - up to 55,000L	CPPS20
30 AMP - Self Cleaning - up to 80,000L	CPPS30
40 AMP - Self Cleaning - up to 100,000L	CPPS40
50 AMP - Self Cleaning - up to 140,000L	CPPS50C
Replacement cells also available from your local Pool Pro Stockist.	





AVAILABLE FROM YOUR
LOCAL POOL PRO STOCKIST

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