



Mode: On  
 ■■■■■■■■■■■■ 7%  
 Chlorine Set: 19%  
 Status: Ok 19.5°C



# H<sub>2</sub>flo<sup>®</sup>

*Pool Equipment*

*Premium  
Salt Water Chlorinator*

## ***Operating Salt Level***

Mineral salts 3500–4000mg/L  
 Sodium salts 3500–6000mg/L

For model details, refer to back of power pack.  
 For owner's manual and warranty details, refer to [www.poolsystems.com.au](http://www.poolsystems.com.au)



**PoolSystems**

*pool • spa • lifestyle™*

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# STATEMENT

- A. This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and maintenance shall not be made by children without supervision.
  
- B. The appliance must be permanently connected to fixed wiring according to the national wiring rules. The appliance must be installed, maintained and serviced by a qualified licensed electrician. Equipotential bonding must be carried out.
  
- C. Means of disconnection from the supply mains having a contact separation in all poles that provide full disconnection under overvoltage category III conditions must be incorporated in the fixed wiring in accordance with the wiring rules.
  
- D. The appliance should be supplied through a residual current device RCD having a rated residual operating current not exceeding 30ma.
  
- E. Parts containing live parts, except parts supplied with safety extra-low voltage not exceeding 12V, must be inaccessible to a person, in the bath or spa.
  
- F. Parts incorporating electrical components, except remote control devices, must be located or fixed so that they cannot fall into the bath or spa.
  
- G. If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified person in order to avoid a hazard.

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# INSTALLATION

H<sub>2</sub>flo CHLORINATORS must be installed by a qualified person (Pool Retailer, Pool Service person or Pool Builder ).

Position the chlorinator power module at least 1m above ground and at least 2m from the pool edge.

Mount the stainless steel bracket to a solid structure with the screws provided and fit the power module over the two raised pins on the bracket, secure with the 2 locking clips provided.

Protect the chlorinator module and cell housing from direct sunlight and rain where possible for extended life.

Connect the mains plug from the chlorinator power pack into a RCD protected 240V mains 10A outlet

Connect the cell cable connector into the connector on the bottom of the power pack

Connect the mains plug from the pump into the pump outlet on the bottom of the chlorinator power pack.



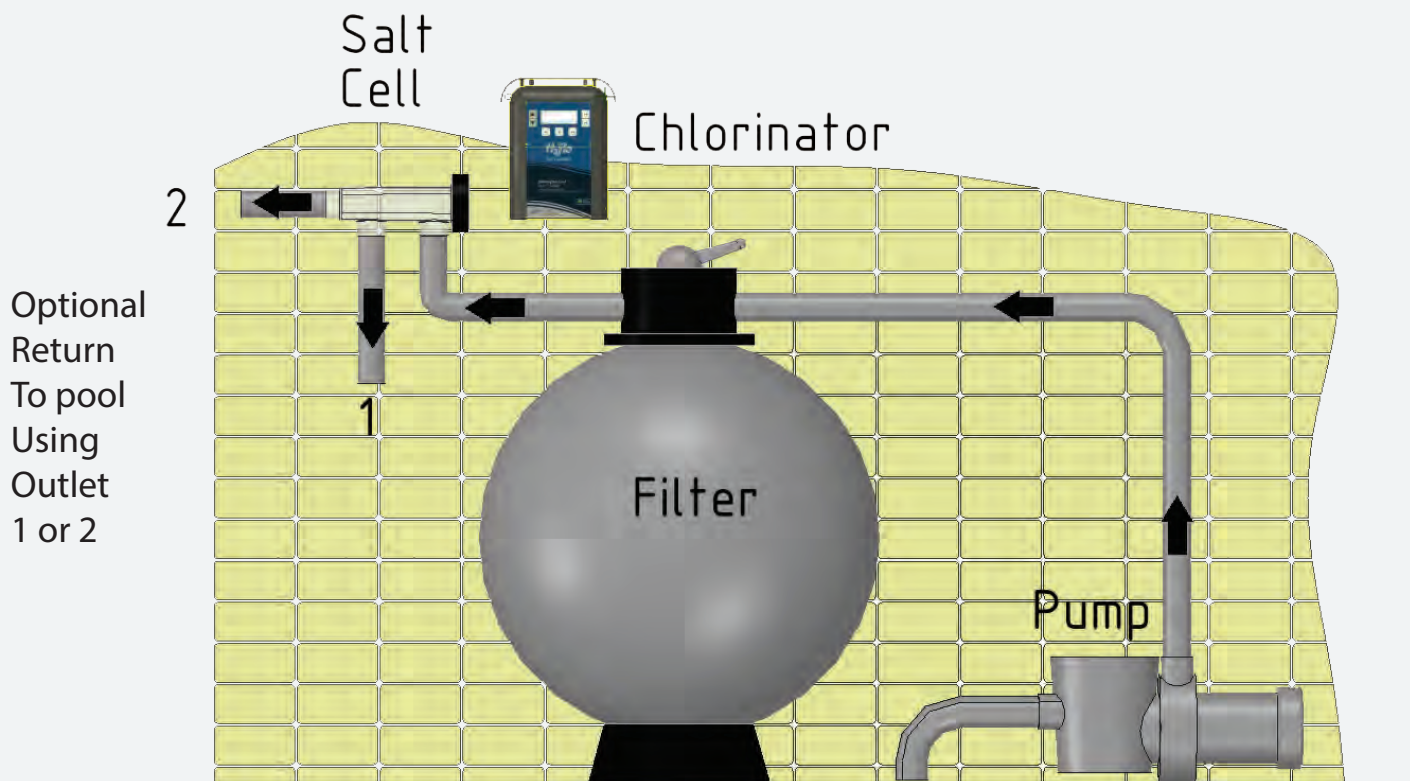
# PLUMBING

Plumbing should be performed by a qualified pool industry service technician or Plumber where possible.

## Warning: Do Not apply Priming Fluid to the Clear Cell Housing

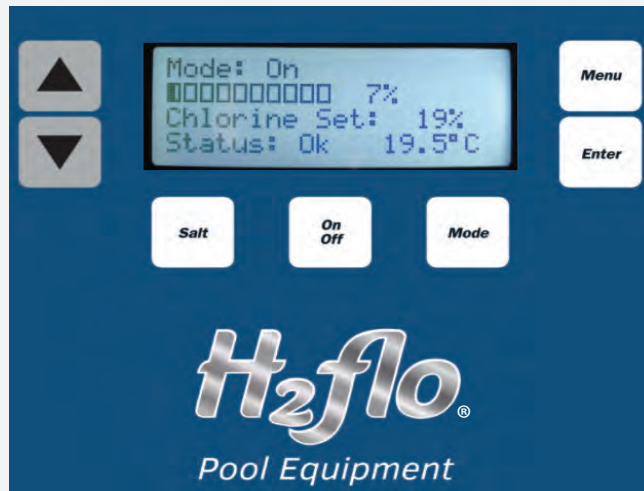
All pipe work should be primed with priming fluid before glue is applied, any high pressure PVC glue will work, make sure both surfaces are well coated before joining the connections as you will only have a few seconds before the glue bond will take.

Piping from the Filter to the Cell should enter the pipe connection closest to the cell head as per the image below as this is where the water sense probe has been installed during manufacture. NOTE: When plumbed from the other direction and used with variable speed pumps which have very low flow rates which may not allow water to cover the probe causing the chlorinator to display Priming Cell error.



Optional  
Return  
To pool  
Using  
Outlet  
1 or 2

# CONTROLS



Toggles the chlorinator OFF then back ON when connected to the mains power



Press to enter or exit the main menu or to exit sub menus ( PAGE 7 )



Press to enter a selected menu or confirm a setting



Selects different modes of operation, ( PAGE 7 )  
Press to select  
ON  
TIMER  
SUPERCHLORINATE  
BOOST  
SPA  
BACKWASH



Will turn the pump ON and measure your salt or mineral ( PAGE 9 )



Increase button is used to navigate menus, modify settings or increase the chlorine output



Decrease button is used to navigate menus, modify settings or decrease the chlorine output

# MENU

Pressing the MENU button will take you into the main menu list, by using the up/down arrows you can scroll through the list, then press the enter button to enter the function you wish to modify, pressing the MENU button again will exit you from the sub menu

## SUB MENU

CLOCK	Use the up/down buttons to enter the time of day (0-24hrs)
CHLORINE OUTPUT	Use the up/down buttons to set the chlorine output, this can also be performed from the working screen as the chlorinator is functioning
TIMER	Use the up/down buttons to move the cursor above or below each block where you would like the chlorinator & pump, or pump only to operate, then by pressing the enter button you can toggle between <input type="checkbox"/> No operation 'C' Chlorinator & Pump operation 'P' Pump only operation
PUMP PROTECTION	Use the up/down buttons to set between 3-10 minutes or you can set this function OFF. Pump protection is activated when there's no water flowing across the cell/electrode
CELL CLEANING	Use the up/down buttons to change the time between cell reversals, a shorter time will remove more calcium for pools that have high levels, set for a longer time for pools that don't have calcium issue's ( long reversal times will extend cell life, see page 11, CELL LIFE )
BRIGHTNESS	If your screen is too bright for the area installed you can dim the backlight with the up/down buttons
SYSTEM INFO	Total Hrs = Hours the power module has operated Cell Hrs = Hours the cell has operated Polarity = What direction the electrical current is flowing Unit size = What size your chlorinator is SW Version = What your software version is

# MODE

Pressing the MODE button will toggle you through the different operational modes the chlorinator can be set too.

These MODES are,

ON	Sets the chlorinator and pump to operate 24/7
Timer	Sets the chlorinator and pump or pump only to operate at the timer blocks that have been set
SUPERCHLORINATE	Sets the chlorinator and pump to operate @100% for 24hrs only, then reverts back to TIMER mode
BOOST	Sets the chlorinator and pump to operate for 6hrs then reverts back to TIMER mode
SPA	Sets the chlorinator to operate @ 10% output and pump on NOTE: This mode will operate 24/7 until you manually set the chlorinator mode back to TIMER
BACKWASH	Backwash is explained on ( PAGE 8 )



# BACKWASH

## For Sand and Diatomaceous Earth Filters

The Backwash function has been added to simplify how the pump is operated as you adjust the Multi Port Valve into its different positions during a backwash.

**NOTE: NEVER OPERATE THE FILTER LEVER WHILE THE PUMP IS OPERATING**

**WARNING: THE PUMP WILL START AND STOP AUTOMATICALLY**

Enter the BACKWASH function by pressing the MODE button until BACKWASH is displayed

The screen will now display.....**SET VALVE TO BACKWASH AND PRESS ENTER**..... rotate the filter valve to backwash, pressing enter will start the pump and you will see the dirty water exit the waste pipe through the sight glass installed on your filter.

The screen will now display.....**PRESS ENTER TO FINISH BACKWASH**.....press enter once the water in the waste pipe has become clear, this will stop the pump so you can rotate the filter valve.

Chlorinator will now display.....**SET VALVE TO RINSE AND PRESS ENTER**.....rotate the filter valve to RINSE, pressing enter will start the pump, once water is flowing allow the pump to operate for at least 30 seconds or as per the filter manufacturers recommendations to clean the last contaminates from the filter.

Chlorinator will now display.....**PRESS ENTER TO FINISH RINSE CYCLE**.....press enter, the chlorinator will display.....**SET VALVE TO FILTER AND PRESS ENTER**....press enter, the backwash is now complete and the chlorinator will automatically revert back to the TIMER mode.

# SALT

## Recommended Salt Concentration

For Sodium Chloride Salts	3500 – 6000 mg/L
For Mineral/Magnesium Chloride Salts	3500 – 4000 mg/L

Pressing the SALT button will start the salt measurement, the chlorinator will start the pump as the measurement requires good water flow through the cell, this also allows the water temperature to be taken as it forms part of the equation.

**Water temperature at the cell should be allowed to stabilize for at least 5 minutes before a measurement is taken**

The measurement will take approx 30 seconds and display a result in mg/L, the result will continue to be updated every few seconds over 1 minute then revert back to the previous mode automatically or by pressing SALT will cancel the salt test .

Salt levels under 2000mg/L cannot be measured by the chlorinator and salt levels above 8000mg/L will be more inaccurate

### PLEASE NOTE:

The salt measurement is meant to be a guide only as many factors will vary the result, for more accurate measurements a sample of pool water should be taken to your local pool shop or be performed by your local pool service technician

# WATER QUALITY

Your water BALANCE should be kept within the following levels for trouble free operation

## pH

**Measurement Interval – once a week**

7.2 – 7.8 Controlling your pH is most important so that you have good active levels of chlorine throughout the water , high pH above 8.0 will reduce the effectiveness of chlorine

When pH is high, Adding Hydrochloric acid will lower the pH

When pH is low, Adding Sodium bicarbonate will raise the pH

## Stabiliser

**Measurement Interval – Every 4 – 6 weeks**

Stabiliser level should be kept between 30-70 mg/L, levels higher than this aren't required. Stabiliser should be measured by your pool shop every 4-6 weeks but most importantly in summer when the UV levels are highest.

## Chlorine

**Measurement Interval – once a week**

Chlorine (Free Chlorine) should be measured once weekly and kept between 2 – 3 mg/L for effective disinfection, adjust the chlorinator output percentage or the pump run time to either increase or decrease this level as required.

## Total Alkalinity

**Measurement Interval – every 4-6 weeks**

80-150mg/L

## Calcium Hardness

**Measurement Interval – every 3 months**

175-300mg/L

# TROUBLESHOOTING

Before troubleshooting, remove power from the chlorinator by turning off at the wall or removing the mains plug, wait 10 seconds then re-apply power, this will reset all functions.

PROBLEM	CAUSE	REMEDY
Priming Cell	Requires water across the CELL to complete the circuit before the chlorinator will display OK and start chlorination	Make sure that the pump is primed with water and operating correctly Make sure correct Valves are in the open position and water is flowing through the cell
Chlorine output will not reach 100%	Salt level is not high enough	Salt level should be as per recommendations on page 9 of this handbook
	Water temperature is low	Winter water temperatures can get very low, for every 1°C below 28°C the chlorinator output can drop by 2%
	Cell has too much calcium deposit on plates	Clean the cell in a 1/9ltr ratio of Hydrochloric acid & water or a cleaning solution available from any pool store
	Cell could be at end of life	If salt conditions are correct and the cell won't achieve its full output you may require a new Cell
Cell Life	How long will my Cell last	At 4hr reversals the cell can last approx 13,000hrs+ and at 12hr reversals approx 18,000hrs+
No Chlorine measured in the water	PH is far too High	Add Hydrochloric acid according to the label to reduce the PH between 7.2-7.8
	No Stabiliser in the water	Add Stabiliser until you have 30-70mg/L
	Chlorinator isn't operating long enough or at high enough output	Increase operating hours or percentage output

PROBLEM	CAUSE	REMEDY
Calcium build on Cell is high	Cell cleaning cycle time is set too high	Enter the cell cleaning function in the menu and reduce the time between cleaning cycles
Salt measurement is not correct	Too much calcium on the cell when measuring	Clean the cell in a 1/9ltr ratio of Hydrochloric acid & water or a cleaning solution available from any pool store
Salt measurement accuracy		A 10% margin of accuracy is all that can be achieved without using professional probes & solutions for calibration
Salt measurement displays cell at end of life	Salt cell is nearing the end of its life	Only replace when cell has completely failed, salt measurements will continue to be more inaccurate the longer cell is used past 10,000hrs, measurements should then be taken ONLY by your local pool store or service technician until a new cell is installed
Pump is always ON	The Pump may have been connected to the mains before the chlorinator  If the chlorinator is in the "on" or "spa" mode it will operate continuously	Make sure the pump is plugged into the 240V socket on the chlorinator  Make sure the chlorinator MODE is set to TIMER
Chlorinator display doesn't show the temperature	Dirty connection	Remove the cell plug/cable from the chlorinator power module, apply some INOX or Vaseline to the contacts attached to the cable and re-install several times to help clean the contacts
High Salt	Salt level is above 6000mg/L	Discharge water from the pool through the waste position on the Multi Port Valve and re-fill to reduce the salt level to 6000mg/L or below

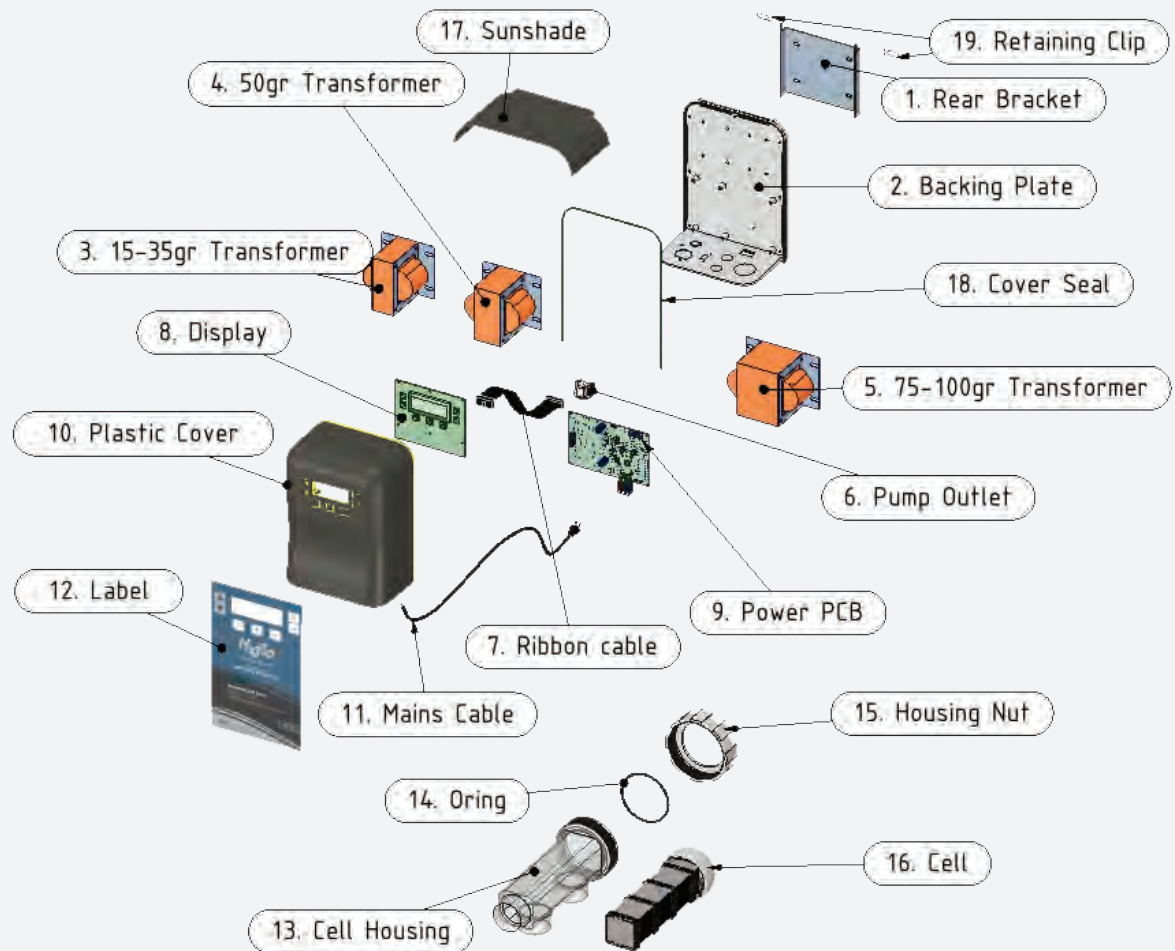
PROBLEM	CAUSE	REMEDY
Chlorinator won't go above 80% and displays high salt	The chlorinator has a protection feature that will limit your output to 80% when your salt level gets too far above 7000mg/L	Discharge water from the pool and re-fill to reduce the salt level to 6000mg/L or below
Water/Condensation on screen	Small amounts of moisture can sometimes be absorbed during the manufacturing process on the inner surface of the plastic	Allow to operate and the moisture will be expelled from the chlorinator, normally within 24hrs
Error Code 'Terr' (Temperature Error)	Multi way connector dirty or loose connection  Sensor failure at Cell  5 Volt Regulator failure on Main Pcb	Disconnect and Reconnect multi way plug under power pack  Return for repair  Return for repair
Error Code 'Cell EOL' (END OF LIFE)	Cell above 10,000hrs usage Cell is nearing the end of it's useful life	Once the Cell can no-longer achieve 100% for the desired salt level a new cell will be required  Also see CELL LIFE on Page 11
Pump Fail  ( When activated pump is locked out for 30min, to bypass select another Mode or reset power at 240V wall switch )	No Water present at Cell sensor  Pump may be stopping intermittently, faulty pump or overheating	Check pump can supply pool water  Check pump operation

## SPECIFICATION TABLE

MODEL NUMBER	H2F021	H2F022	H2F023	H2F024	H2F025	H2F026	H2F027	H2F028
VOLTAGE AC INPUT	240	240	240	240	240	240	240	240
AMP AC INPUT	0.5A	0.6A	0.7A	1.0A	1.1A	1.35A	1.50A	1.95A
VOLTAGE DC OUTPUT	8.0V	8.0V	8.0V	8.0V	8.0V	11V	12V	16V
AMPS DC OUTPUT	8.5A	11A	13.5A	15.7A	18.5A	17A	20A	20
CHLORINE @3500mg/L PRODUCTION Grams/HR @6000mg/L	15 17	20 22	25 27	30 33	35 38	50 57	75 82	100 110
POWER CONSUMPTION (Watts)	86	124	140	153	185	265	360	433
FREQUENCY (Hz)	50/60	50/60	50/60	50/60	50/60	50/60	50/60	50/60
WEIGHT (KG)	8.6	9.5	9.8	10.2	10.5	11.5	12.5	13.5
DIMENSION (CM)	30H 22W 15D	30H 22W 15D	30H 22W 15D	30H 22W 15D	30H 22W 15D	30H 22W 15D	30H 22W 15D	30H 22W 15D

Pump Outlet Rating for all Model sizes is  
**MAXIMUM 1.5Kw (2HP)**

# PARTS



Part No	Description
1.	Rear Bracket
2.	Backing Plate
3.	15-35gr Transformer
4.	50gr Transformer
5.	75-100gr Transformer
6.	Pump Outlet
7.	Ribbon Cable
8.	Display
9.	Power PCB
10.	Plastic Cover
11.	Mains Cable
12.	Label
13.	Cell Housing
14.	Oring
15.	Housing Nut
16.	Cell
17.	Sunshade
18.	Cover Seal
19.	Retaining Clips



## WARRANTY

- H<sub>2</sub>flo Chlorinators are not available for sale on the internet, therefore any purchase on the internet automatically voids the stated warranty.
  - H<sub>2</sub>flo Chlorinators must be installed by a qualified person (pool retailer, pool service person or pool builder) otherwise warranty claims will be void.
  - Before contacting H<sub>2</sub>flo Chlorinators for warranty issue, please check the troubleshooting guide on pages 11-13.
  - The majority of issues can be resolved while the unit remains in position. Please don't remove the unit unless you have already rung the H<sub>2</sub>flo Chlorinator help line on 0429 295 746.
  - In very limited situations, you may be advised to return the unit or parts of the unit. This should only be done with the express approval in advance from H<sub>2</sub>flo Chlorinators on 0429 295 746.
- 
- Your H<sub>2</sub>flo Chlorinator carries the following warranty should a fault occur due to faulty materials or manufacture.
  - POOL SYSTEMS warrants the original purchaser of the control panel and cell electrode, whether personal or commercial use, for a period of (see warranty period below), from the date of purchase should the purchaser disclose that this particular equipment failed due to faulty materials or manufacture.
  - The equipment under warranty claim must be returned to H<sub>2</sub>flo Chlorinators for repair or replacement.
  - The warranty does not apply to any material supplied or workmanship performed by others in the process of installing the equipment. Nor does it apply if the equipment has been repaired or altered by anyone other than H<sub>2</sub>flo Chlorinators personnel or POOL SYSTEMS Representative. This warranty does not apply if the equipment has been subject to misuse or misapplication.
  - The warranty applies to materials and manufacture only. This warranty does not cover an act of God, i.e. storm and tempest, lightning strike, floods, tsunami, earthquake etc.
  - POOL SYSTEMS or its agent will replace at no charge, all parts, which show faulty materials or manufacture faults. The foregoing constitutes the entire liability of POOL SYSTEMS to the original owner of the equipment.
  - There are no other warranties, expressed or implied, including but not limited to the implied warranties of merchantability or fitness for a particular purpose other than those contained herein.
  - In no event will POOL SYSTEMS PTY LTD be liable to the original or subsequent owners either directly or as an indemnitor, or any direct, incidental or consequential loss, damage or economic loss, damage or injury to any person or property arising out of or relating to the equipment or any parts supplied in the equipment, except as expressly stated herein.
  - No other person, or company or organisation is authorised to make any warranties, guarantees or representations, or allowed to allow any exceptions to the warranty, or assume any other liability or obligation on behalf of POOL SYSTEMS PTY LTD in connection with the equipment. This warranty shall not extend to any expenditure incurred.

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

### Warranty Period

Domestic	Power Pack	4 Years
	Cell Electrode	4 Years or 10,000hrs, whichever comes first
Commercial	Power Pack	4 Years
	Cell Electrode	4 Years or 10,000hrs, whichever comes first

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# NOTES

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# *H<sub>2</sub>flo*®

*Pool Equipment*

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