



**STA-RITE®**



For the Installation, Operation and Service of the

**STA-RITE®**

*enviroMAX*  
1 1 0 0

**Variable Speed Pool Pump**

Should the installer or owner be unfamiliar with the correct installation or operation of this type of equipment you should contact the distributor/manufacture for the correct advice before proceeding with the installation or operation of this product. The pump operator or owner must be provided with this owner's manual.



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# enviroMAX

1 1 0 0

The Sta-rite enviroMAX is the ideal pump for new or existing pools. Utilising advanced hydraulic design and the latest technology in permanent magnet, variable speed motors, the Sta-rite enviroMAX has the perfect combination of efficiency and performance. The Sta-rite enviroMAX delivers energy savings and the power when you need it. You will also have the peace of mind that you are doing your bit for the environment and reducing your carbon foot print.

- ▶ Variable speed pump, with 4 programmable speeds, allows you to effortlessly select the most efficient setting to meet you filtration, cleaning and water feature needs.
- ▶ Radial flux, brushless permanent magnet motor delivers high efficiency and low noise levels.
- ▶ Fault protected motor prevents damage by automatically shutting down the motor in the event of a locked rotor, under voltage, over voltage or over current condition and will automatically reduce the speed during an over temperature condition.
- ▶ Precision-fit internal components and superior hydraulic design deliver effortless performance, energy savings and extended pump life.
- ▶ A specially designed sound-dampening pump casing and base make pump operation incredibly quiet.
- ▶ Constructed of our durable, thermoplastic, composite resin, so you can be sure it will stand up to the harshest conditions.
- ▶ A heavy-duty construction and a motor rated for continuous operation make the enviroMAX a tough, long-lasting performer.
- ▶ The high-capacity trap holds a large amount of debris, so you clean less often.
- ▶ The Cam and Ramp™ lid is easy to remove and locks in place with a quarter turn, making inspection and cleaning a breeze.
- ▶ Quick-disconnect plumbing unions.

## Eco Select®

### The Eco Select® brand identifies our most eco-friendly products

As the global leader in pool and spa equipment, we've made a strong commitment to develop and offer the most environmentally responsible products available.

When you see the Eco Select® brand on one of our products, you'll know it is our "greenest" and most efficient product in that equipment category.

These products do the best job of saving energy, conserving water, reducing noise, or otherwise contributing to a more environmentally responsible equipment system. In every case, a product that earns the Eco Select brand is clearly our "greenest" and most efficient choice.





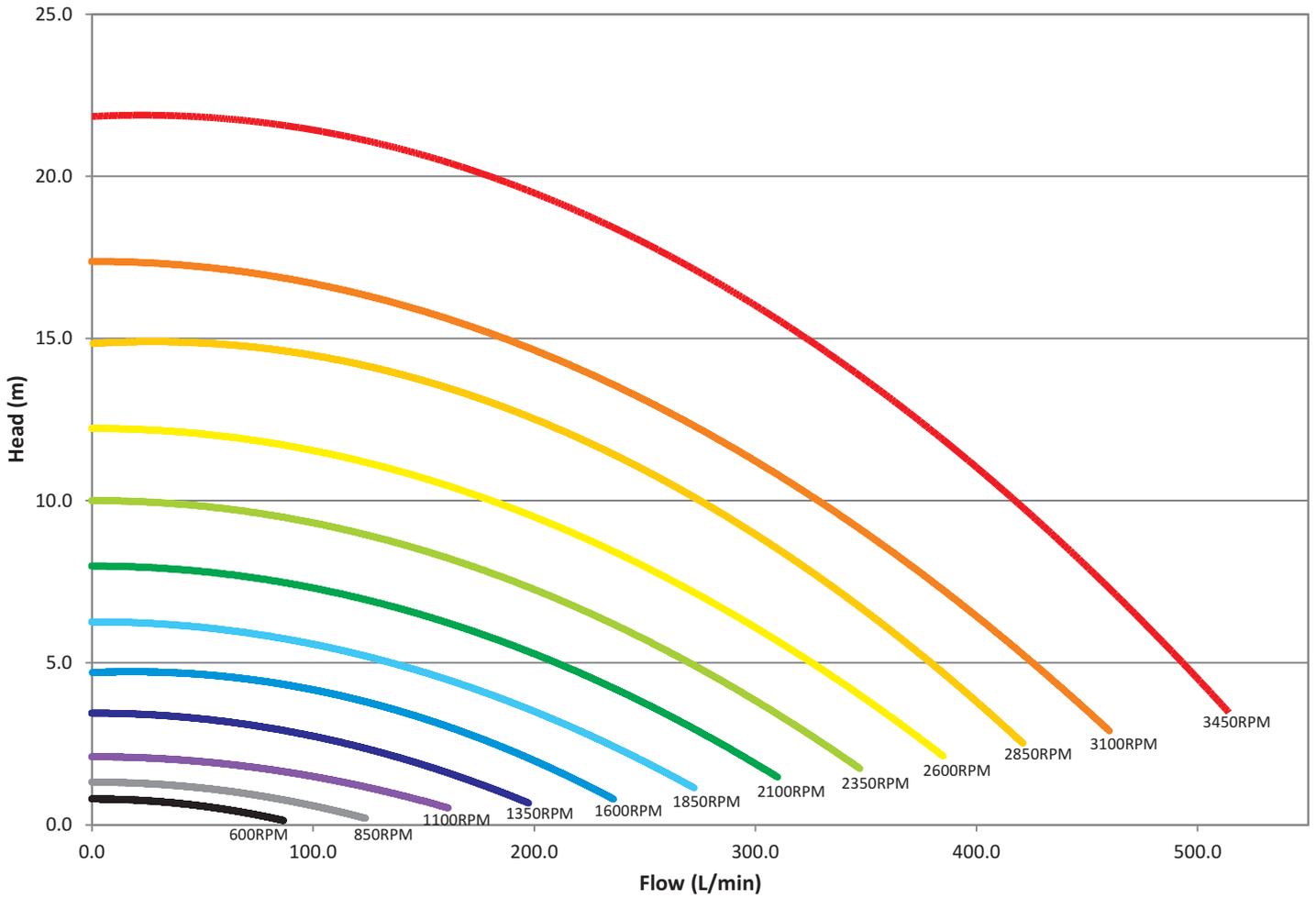
► **Model:** **enviroFLO 1100**

|                                     |   |
|-------------------------------------|---|
| <b>RPM:</b>                         | Step1 2600RPM (4 hours) default factory setting<br>Step2 2100RPM (4 hours) default factory setting<br>Step3 1600RPM (4 hours) default factory setting<br>Override / Adjustable Range: 600-3450RPM (2 hours) |
| <b>Electrical Rating:</b>           | 230-240V 50Hz single phase  |
| <b>Rated Current:</b>               | Step1 5.4A (max)<br>Step2 3.2A (max)<br>Step3 1.7A (max)<br>Override: 10.0A   |
| <b>Input Power (P1):</b>            | Step1 690W (max)<br>Step2 375W (max)<br>Step3 180W (max)<br>Override: 1375W (max)   |
| <b>Pump Power (P2):</b>             | Step1 550W (max)<br>Step2 300W (max)<br>Step3 145W (max)<br>Override: 1100W (max)   |
| <b>Maximum Ratings:</b>             | 3450RPM, P1 1375W, P2 1100W, 10.0A  |
| <b>IP Rating:</b>                   | IP25  |
| <b>Inlet (Suction):</b>             | ABS Barrel Union to suit 50mm PVC pressure pipe to AS/NZS 1477  |
| <b>Outlet (Discharge):</b>          | ABS Barrel Union to suit 50mm PVC pressure pipe to AS/NZS 1477  |
| <b>Max Working Pressure:</b>        | 260 kPa   |
| <b>Water Temperature Range:</b>     | 5°C – 40°C  |
| <b>Maximum Ambient temperature:</b> | 55°C  |
| <b>Recommended pH Range:</b>        | 7.2 - 7.8 (Guide Only)  |
| <b>Sound Power Level (Lwa):</b>     | Low: 69dB<br>Med: 63dB<br>High: 57dB<br>Override: 73dB  |
| <b>Motor:</b>                       | Radial flux, permanent magnet, DC   |
| <b>Protection:</b>                  | Mains over voltage, mains under voltage, over temperature, under temperature, locked rotor, over current, phase disconnect.?  |
| <b>Supply cord:</b>                 | 10A, H07RNF, 2m.  |

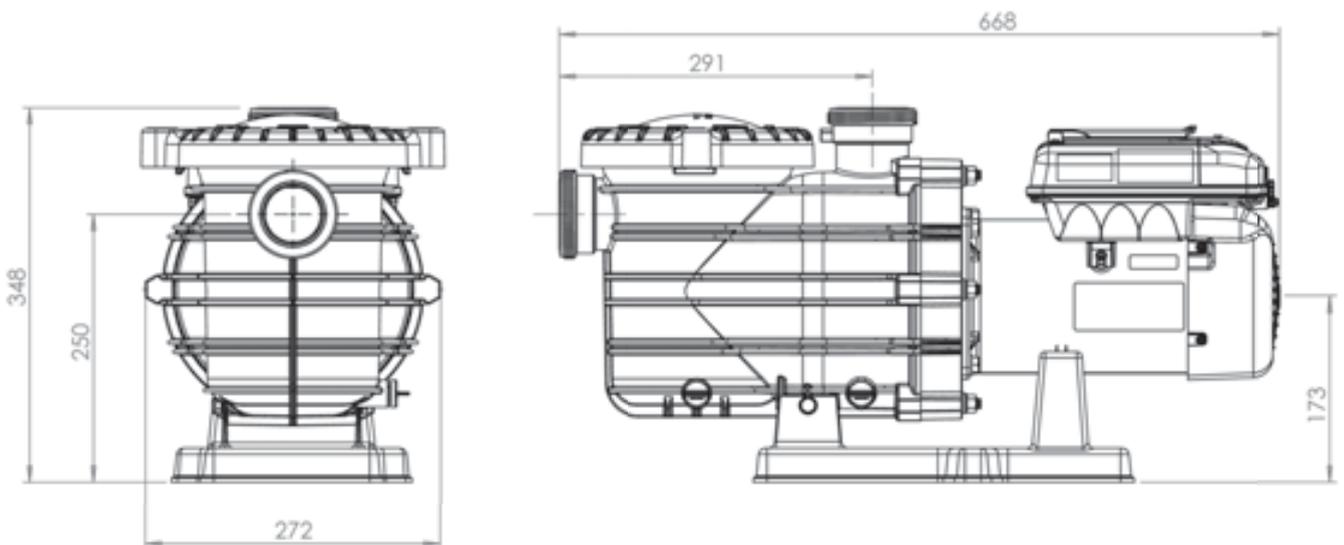


► Hydraulic Performance

Sta-rite enviroMAX Performance Chart



► Dimensions





The pump must be installed and serviced by a suitably qualified person in order to avoid hazard. Incorrectly installed or tested equipment may fail, causing severe injury or property damage.



These instructions are a guide only. Should you the installer or owner of the product be unfamiliar with the correct installation or operation of this product you should contact a suitably qualified person for advice.



Do not connect system to high pressure or mains water system.



This pump is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.



Children should be supervised to ensure that they do not play with the pump.



The enviroMAX is electrically connected. Ensure that it is isolated from electrical supply during installation and any subsequent service work.

## 1. Plan the position of the pump

- Have enough ventilation to keep ambient temperature below the motor's rated ambient temperature whenever the pump is running. If installed in an enclosure/pump house, the enclosure must have adequate ventilation (200sq.cm min, inlet & outlet) and air circulation Allow 200mm to keep rear of motor clear.
- Have adequate floor drainage to prevent flooding and be protected from excess moisture.
- Be solid, level, rigid and vibration free.
- To reduce vibration and pipe stress, bolt pump to mount. Fixing holes accept 12mm fasteners.
- Be within 2m of a power outlet for electrical connection (refer to AS/NZS 3000 for rules regarding connection of electrical equipment in pool zones).
- Allow adequate access for servicing pump and piping.
- Allow for 250mm of straight pipe on the suction and discharge.

## 2. Piping



**For best performance, allow pump suction inlet height to be as far below water level as possible and allow the use of short, direct suction pipe with minimum bends (to reduce friction losses).**

- Use only Australian Standard PVC pressure pipe. For best performance use at least 50mm diameter pipe for all connections to the pump. Never use a suction pipe smaller than pump suction connections (50mm) and use larger pipe for long suction distances.
- To avoid stress on the pump, support both suction and discharge pipes independently. Place these supports as close to the pump as possible.
- To avoid a strain left by a gap at the last connection, start all piping at the pump and run pipe away from the pump.

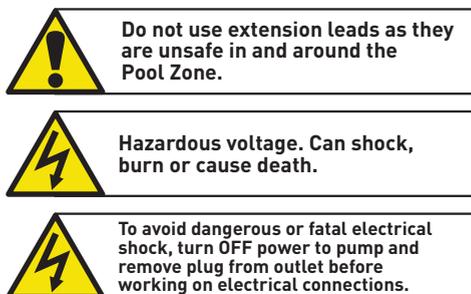


### 3. Pool Outlets



- a) The pump suction system must provide protection against hazard of suction entrapment or hair entrapment/entanglement. The pool outlet piping must be in accordance with the latest AS1926.3 standard
- b) Suction outlet covers and skimmers must have been tested and found to comply with the latest AS1926.3 standard or ASME/ANSI specification for Suction Fittings.

### 4. Electrical



- a) Electrical installation shall be in accordance with the national wiring rules (AS/NZS 3000) taking into account its ratings (Class I, IPX5). The pump is supplied with a standard Australian 10 amp plug and 2 metres of cord. Select the correct Pool Zone for installation.
- b) An RCD with maximum rated residual current of 30mA is required for the power supply to the pump. Additionally, if a suitable socket outlet is not available a weatherproof socket must be installed by an electrician in a suitable location. RCD tripping indicates an electrical problem. If RCD trips and will not reset have a qualified electrician inspect and repair electrical system.
- c) Incorrect voltage can cause fire or seriously damage pump and voids warranty.
- d) Voltage at pump must not be more than 6% above or 10% below motor nameplate rated voltage or pump may overheat, causing overload tripping and reduced component life. If voltage is less than 90% or more than 106% of rated voltage when pump is running at full load, consult the power company.

### 5. Equipotential bonding

If equipotential bonding is required (refer to local statutes and regulations), connect all metal parts of the swimming pool or spa structure and to all electrical equipment, metal conduit, and metal piping in accordance with the wiring rules. Run a wire from the equipotential bonding terminal on the pump to the pool bonding structure.

The enviroMAX is double insulated to water circuit.



NEVER run pump dry. Running pump dry may damage seals, causing leakage and flooding. Fill pump with water before starting motor.



Freezing conditions will damage the unit, as water expands as it freezes. Ensure that the enviroFLO is located so that it is not prone to freezing, or ensure that the product is disconnected and dried of water during cold conditions.



Trapped air in system can cause explosion. Ensure all air is out of the system before operating or testing equipment



Fire and burn hazard. Modern motors run at high temperatures. To reduce the risk of fire, do not allow leaves, debris, or foreign matter to collect around the pump motor. To avoid burns when handling the motor, let it cool for at least 20 minutes before trying to work on it.



Small children using pool must ALWAYS have close adult supervision



Pump suction is hazardous and can trap and drown or disembowel bathers. Do not use or operate pump, pool/spas if a suction outlet cover is missing, broken, or loose. Follow the guidelines below for a pump installation which minimises risk to users of pool and spas.



NEVER tighten or loosen trap lid while pump is operating.

## 1. Priming the pump



**It is not necessary to lubricate the o-ring.  
The original equipment O-ring contains a  
permanent internal lubricant.**

- a) Before removing trap lid, SWITCH OFF POWER SUPPLY to pump.
- b) CLOSE SHUT-OFF VALVES on suction and discharge pipes, if present.
- c) Remove the trap lid (turn anti-clockwise)
- d) Fill trap tank with water.
- e) Check the lid o-ring and sealing surface, ensure there is no dust or debris on either, and replace the lid (turn clockwise to tighten by hand only - no wrenches!).
- f) Open the shut-off valves on the suction and discharge pipes, if present.
- g) Release all air from filter, pump and piping system (refer filter owner's manual). In a flooded suction system (water source higher than pump), pump will prime itself when suction and discharge valves are opened and air is released.
- h) Switch on power to the pump to start.
- i) Pump should start to prime now. Priming time will depend on vertical height of suction lift and horizontal length of suction piping but is generally between 30 seconds to 3 minutes under normal installation conditions.
- j) The enviroFLO will start slowly but ramp up to 2850RPM speed for the first 3 minutes to assist priming. It will then switch to the selected speed (Step1).

**\* Should the pump not prime, ensure that all valves are open, lint trap is clear of debris and suction and suction pipe end is submerged in water, and that there are no leaks in suction pipe. See troubleshooting guide.**



2. Control panel overview

Navigation Overview

- +, - keys Increase/decrease selected value.
- Pressing any key following a change accepts the current value displayed inside the setting.

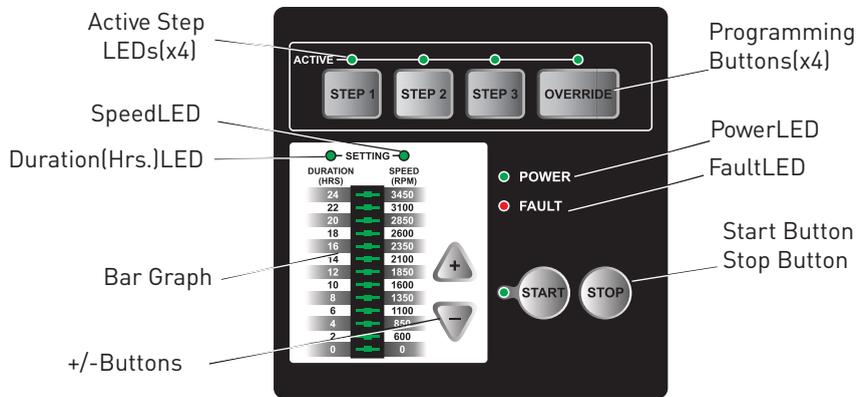


Figure 3: Control Panel

**!CAUTION**

If power is connected to the enviroMAX motor, pressing any of the following buttons referred to in this section could result in the motor starting. Failure to recognize this could result in personal injury or damage to equipment.

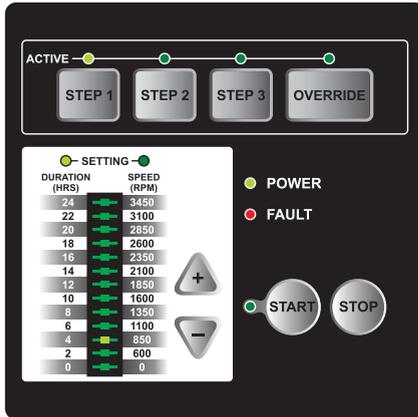
**Note:** The START button must be pressed for the pump to operate. The START LED will illuminate after the button has been pressed indicating the pump is capable of operating. Pressing the stop button will turn off the START LED and stop the motor if running.



### 3a. Operating the pump - Speed selection

The Sta-rite enviroFLO comes pre-programmed with the following default speeds:

|  | Press for high speed  | Press for medium speed   | Press for low speed  | Override  |
|--|---|--|--|---|
|  | <b>2600RPM</b>  | <b>2100RPM</b>   | <b>1600RPM</b>   | <b>3100RPM</b>  |
|  |   |  |  |   |
|  | <ul style="list-style-type: none"> <li>Operating some water features such as jets or waterfalls.</li> <li>Solar heating</li> <li>Manual vacuum</li> </ul> | <ul style="list-style-type: none"> <li>Cleaning with an automatic suction cleaner</li> </ul> | <ul style="list-style-type: none"> <li>Filtration and water circulation</li> </ul> | <ul style="list-style-type: none"> <li>Backwashing filter.</li> </ul> |



#### Start/Stop buttons



Press Start to turn start pump. Press Stop to stop pump. If power is removed, motor will return to STEP1. Motor will remember ON/OFF state.

### 3b. Operating the pump - Variable Speed Adjustment

If the default speed settings do not perfectly match the particular installation, they can be adjusted as follows: (To ensure the pump performs according to the energy rating label it is recommended to use the default low speed setting of 1600RPM, for pool filtering).

1.

Press Stop, then the Step# button, corresponding to the speed you wish to change. Firstly the LED above duration is lit (you can press +,- buttons to change duration in 2 hour segments). Press again so that the LED above "SPEED" is lit.

2.

Press '-' to decrease speed by one level with 600rpm as the minimum limit.

Press '+' to increase speed by one level with 3450rpm as the maximum limit.

The speed setting will be automatically saved.

**Note:** If power is cycled to the pump and the user does not press the STOP key, the pump will automatically start and run the programmed default schedule shown in the chart above. This feature ensures that the pump will re-start in the event of a power outage. The pump will start on STEP 1.

**Note:** The pump must be Stopped (Press STOP Key) when programming the DURATION and SPEED of the STEP 1, STEP 2, and STEP 3 keys. OVERRIDE DURATION and SPEED can be programmed when the pump is either stopped or running.

**Note:** The pump can only be set to operate on a 24-hour schedule. If a user attempts to program a schedule with a combined duration for all three steps greater than 24 hours, the pump software will retain the current STEP time duration only, and will zero out the other two STEP time settings. As an example, if STEP 1 equals eight (8) hours, STEP 2 equals nine (9) hours, and STEP 3 equals eight (8) hours – for a combined 25 hours – the pump will retain the setting for the current Step being programmed and zero out the remaining two.



### 3c. Operating the pump - Operating the enviroMAX from the control panel

1. Press the **START** key and the pump will run the programmed 24 hour duration schedule. The **START** event will be stored. Should a power outage occur, the pump will automatically re-start at **STEP 1** when power is restored.
2. The pump will always run the PRIMING sequence when it starts from the OFF state, including when it automatically restarts following a power outage. The default Prime setting is defined in the "Priming" section, see page 9.
3. The pump then starts running in **STEP 1** at the programmed **DURATION** and **SPEED**. The "**ACTIVE LED**" for **STEP 1** will switch **ON**. The **DURATION** and **SPEED** setting LEDs along with the respective bar graph LED will blink back and forth every **three (3) seconds**.
4. This sequence will then repeat for **STEP 2** and then **STEP 3** without the pump stopping.
5. At the end of **STEP 3**, the pump will wait if necessary for the completion of the 24-hour schedule. During this waiting period (if applicable), all of the "active step LEDs" will remain OFF. However, the START LED will still be illuminated. After completion of the 24 hour schedule, the system restarts at **STEP 1** and this cycle will repeat indefinitely until the user presses the **STOP** key.

**Note:** Pressing a STEP key other than for the STEP currently running will cause an immediate transition to the newly selected STEP. The pump will continue with the programmed schedule from that point forward.

**Note:** If STOP is pressed during normal schedule operation, the 24 hour schedule will stop. When START is pressed again, the 24 hour schedule will start from STEP 1.

**Note:** If power is lost while the pump is running a 24 hour schedule, upon restoration of power the pump will start the 24 hour schedule from STEP 1.

**Note:** If an automation input (provided from an external source) is detected, the pump will start running on the STEP 1, STEP 2, STEP 3, or OVERRIDE speed corresponding to the digital input. Upon removing the digital input (provided from an external source), the pump will stop and the user will need to press START to begin the 24 hour schedule operation. However, if START was already pressed prior to receiving a digital input, then the pump will resume running the 24 hour schedule once the digital input is removed.

**Note:** Pressing STOP at any time turns the pump OFF and clears the start time for the 24 hour schedule.

### 3d. Operating the pump - Override

The enviroMAX is equipped with an **OVERRIDE** feature, which can be engaged to temporarily run at higher or lower speeds ranging between 600 to 3450 RPM. Once the **OVERRIDE** duration has elapsed, the pump will automatically return to the programmed schedule.

1. Pressing the **OVERRIDE** key while the pump is running will cause the pump to start running in the **OVERRIDE** mode at the programmed **DURATION** and **SPEED**. The "active LED" for **OVERRIDE** will illuminate. The **DURATION** and **SPEED** setting LEDs along with its respective bar graph LED will blink back and forth at **three (3) second intervals**.
2. The **UP (+) / DOWN (-)** arrows allow the user to configure **OVERRIDE DURATION** and **SPEED**. These settings can be changed while the pump is running. These settings are stored each time the **UP (+) / DOWN (-)** arrows are pressed.

**Note:** When the **OVERRIDE** duration ends, the pump resumes the 24 hour schedule at the point in the currently programmed 24 hour schedule where it normally would be running at that time. The **OVERRIDE** duration will not affect the start or stop times of the 24 hour schedule. For example, if **OVERRIDE** runs during a period overlapping with a later part of **STEP 1** and an early part of **STEP 2**, the start time of **STEP 3** is not affected.

**Note:** Pressing/Holding **OVERRIDE** key for more than three (3) seconds will cancel **OVERRIDE** mode.

**Note:** During the **OVERRIDE** mode, the pump will not start with the priming sequence.

**Note:** It is recommended that you do not set the **OVERRIDE** duration to 0 HRS. Setting the **OVERRIDE** duration to 0 HRS will not allow you to change the duration setting while the motor is running. The motor will have to be stopped in order to change the **OVERRIDE** settings if the duration is set to 0 HRS.



### 3e. Operating the pump - Schedule advance

The **Schedule advance** mode allows the user to press the **START** button at one time of the day, with the 24-hour schedule starting at a different time of day. The pump can run in the **Schedule advance** mode (by using the **OVERRIDE** button) and upon completion will begin the programmed 24 hour schedule at **STEP 1 DURATION** and **SPEED**.

The following steps should be followed to set Schedule Advance mode:

1. With the pump stopped, press and hold the **START** key for more than **three (3) seconds**. The START LED will blink at a rate of one second per pulse. The DURATION setting LED and respective bar graph LED will remain turned ON until the **Schedule advance** mode is complete.

2. Press the **UP (+) or DOWN (-)** arrows to set the desired delay time after which the 24-hour schedule should start. The **Schedule advance mode** will automatically start after the desired delay time is selected. The Schedule advance mode can be cancelled by pressing the **STOP** key.

**Note:** The **OVERRIDE** button will still function when the Schedule Advance mode is active. This will allow the user to run the pump during the period of the Schedule Advance mode.

**Note:** While the pump is in the Schedule Advance mode, if a user presses **STEP 1, STEP 2, STEP 3** or the **START** key, the system will start the normal schedule and the Schedule Advance mode will be canceled.

**Note:** While the pump is in the Schedule Advance mode, if a user presses the **STOP** key, then the Schedule Advance mode is canceled.

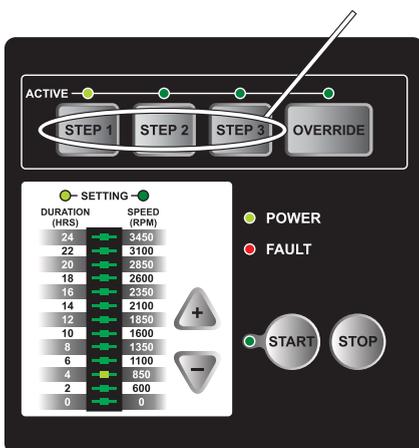
**Note:** If power is lost while the pump is in the Schedule Advance mode, then the 24-hour schedule will automatically start when power is restored.

## !DANGER

Do not perform any maintenance on the motor while the motor is in Schedule Advance Mode. The motor may start without warning. This event could cause death or serious personal injury.

### 3f. Operating the pump - Key lockout

**HOLD DOWN SIMULTANEOUSLY (3 seconds)**



The enviroMAX user interface has a “key lockout” feature to prevent unwanted changes to the settings.

To lock the keys, hold down the “**STEP 1, STEP 2, and STEP 3**” buttons all at the same time for at least three seconds. The “active LEDs” for STEP 1, STEP 2, and STEP 3 will blink for 30 seconds indicating that the keypad is locked.

The user can unlock the keys by holding down the same three STEP buttons for at least three seconds. The “active LEDs” for STEP 1, STEP 2, and STEP 3 will illuminate temporarily indicating the keypad is unlocked.

**Note:** While operating in “key lockout” mode the motor can still be stopped by pressing the stop key. If no input is present the motor will remain stopped. If the motor is being controlled by an automation control system input the motor will only temporarily stop for 4 minutes.



**3g. Operating the pump - Time out**

The “**time out**” feature that will allow the user to temporarily stop the pump for maintenance work without disrupting the 24 hour schedule (i.e., for backwashing the filter). If the pump is currently running, the user can press and hold the **START** button for more than **three (3) seconds** and the pump will stop and remain off until the user presses and holds the **START** button again for more than **three (3) seconds**. The **START** and **OVERRIDE** buttons will blink once every second indicating that the “time out” feature is enabled. These LEDs will stop blinking once this feature is cancelled.

**TEMPORARY STOP WITH AUTOMATION CONTROL SYSTEM INPUT**

**!CAUTION**

Temporary stop functionality only works while the pump is being controlled by an automation input. If the motor is being controlled by the integrated key pad and **STOP** is pressed, the motor will stop and remain stopped.

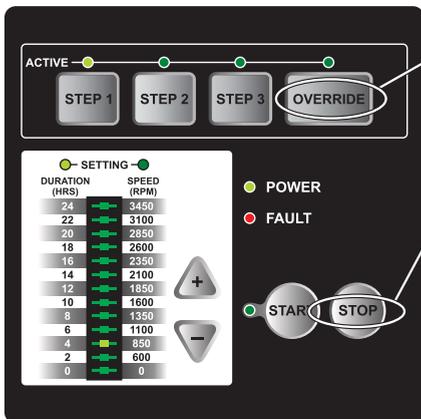
The pump has a “**temporary stop**” feature that will immediately stop the pump when being controlled by an automation input. The user can press the **STOP** button while the pump is running and the pump will stop and stay off for four (4) minutes. Once this time has elapsed, the pump will return to normal operation and accept an input from an automation input source.

**Note:** If the pump is operating from automation input, the ‘0 RPM’ LED of the bar graph will blink once every second indicating the “temporary stop” feature has been activated. After the specified time period, the pump will return to normal operation and accept an input from any automation input source. Refer to page 14 for additional details on automation control system inputs.

**3h. Operating the pump - Reset factory defaults**

The enviroMAX user interface has a “**Reset to Factory Defaults**” feature to restore the schedule settings back to the original values programmed at the factory. The user must press and hold the **STOP** and **OVERRIDE** buttons for **three (3) seconds** to reset the settings back to factory defaults. All of the UI bar graph LED’s will flash three (3) times to confirm the settings were restored to factory defaults.

**HOLD DOWN SIMULTANEOUSLY (3 seconds)**





4. External control

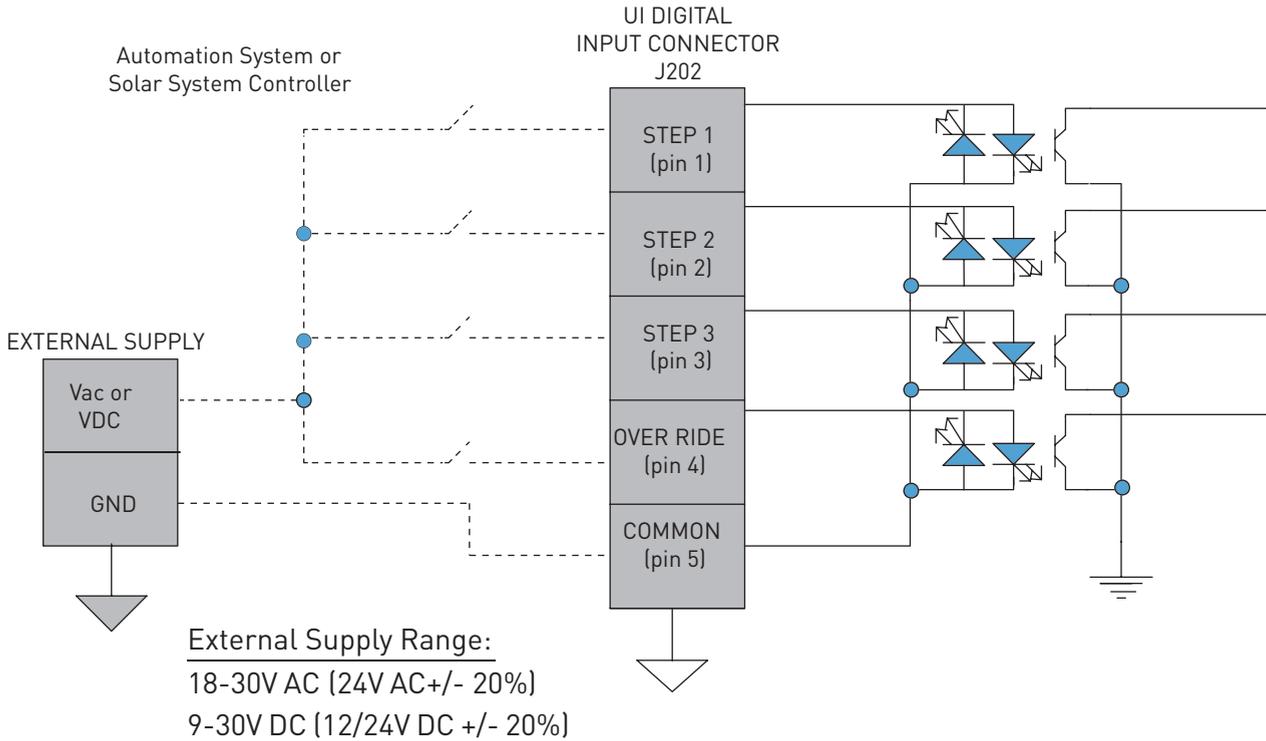


Figure 6: Wiring Diagram for Automation Control System Inputs

**!CAUTION**

Access to these terminals is in close proximity to the mains connectors which carry line voltage capable of causing personal injury or damaging the equipment if contact is made. Power should be turned off when accessing this area.

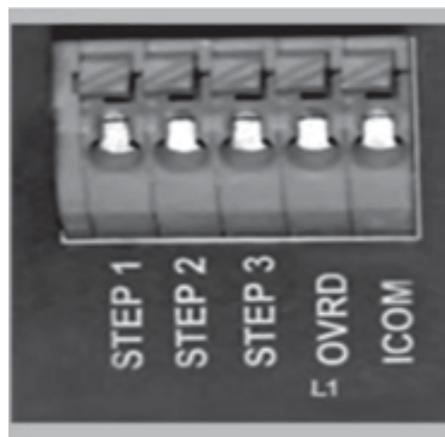


Figure 7: Automation Control System Input Connector



To avoid dangerous or fatal electrical shock hazard, turn OFF power to pump and remove plug from power outlet before working on pump.



Do not operate pump with trap basket missing or damaged.

- It is essential for the longevity of the pump that regular service and maintenance be carried out. The Sta-rite enviroMAX incorporates high velocity moving parts and is pumping water containing harsh pool chemicals. Some parts which will wear during the normal operation and expected life of the pump.

## FREQUENCY

Once per week

Once per month

## CHECK

✓ Inspect trap basket, and empty of any leaves and other debris. Leaves and other debris that collects in basket will choke off water flow through the pump and reduce efficiency and performance. See below instructions on cleaning the trap.

✓ Check the pump to ensure no water is leaking from inlet and outlet joints, whilst pump is operating. If leaks are noticed, clean and grease the o-rings or replace if necessary.

✓ Clean area around pump and ensure there are no leaves or debris which could become a fire hazard or choke the motor fan.

✓ Check that there are no leaks from under the pump. If there are, this could be a sign of a leaking mechanical seal. Call a Pentair Service Agent immediately, to prevent damage to the motor.

✓ Check pump and motor for insects and pest infestations and ensure that motor fins are clean of dust and dirt. Clean if necessary.

### Follow instructions below to clean trap:

1. Switch off power to pump, close valves in suction and discharge, and release all pressure from system before proceeding.
2. Remove trap cover (turn counter clockwise). If necessary, tap handles gently with a rubber mallet.
3. Remove strainer basket and clean. Ensure all holes in basket are clear, flush basket with water and replace in trap with large opening at pipe connection port (between ribs provided). If basket is replaced backwards, the cover will not fit on trap body.  
To clean transparent cover, use water and neutral soap only. Do not use solvents.
4. Clean and inspect lid o-ring; reinstall on trap. Clean O-ring groove on trap body and replace cover. To help keep cover from sticking, tighten hand tight only.
5. Prime pump (refer priming instructions).



To avoid dangerous or fatal electrical shock hazard, turn OFF power to pump and remove plug from power outlet before working on pump.

The power supply cord has a type 'Y' attachment and if service is required to the power cord, it must be replaced with the specialised power cord assembly by Pentair Water service agent or similarly qualified personnel in order to avoid a hazard. Warranty is void if unauthorised modifications are made to any component.

► TROUBLESHOOTING GUIDE

| SYMPTOM   | CAUSE   | REMEDY  |
|---|---|---|
| <p><b>Low water pressure, low flow from pump.</b></p> | <p><b>Suction leaks / lost prime.</b></p>                         | <ul style="list-style-type: none"> <li>▶ Pump must be primed; make sure that the pump casing and strainer are full of water. Refer priming instructions.</li> <li>▶ Make sure there are no leaks in suction piping and ensure all o-rings are present and clean.</li> <li>▶ Make sure suction pipe inlet is well below the water level to prevent pump from sucking air.</li> <li>▶ Suction lift of 3 to 6 metres will reduce performance. Suction lift of more than 6 metres will prevent pumping and cause pump to lose prime. In either instance, move the pump closer (vertically) to water source. Ensure that the suction pipe diameter is large enough.</li> </ul> |
|   | <p><b>Low speed setting.</b></p>                                  | <ul style="list-style-type: none"> <li>▶ Check speed setting. Refer to speed selection section of this manual. Reset to default if necessary.</li> </ul>  |
|   | <p><b>Clogged pipe / strainer / impeller / filter system.</b></p> | <ul style="list-style-type: none"> <li>▶ Ensure trap is not clogged with debris; clean basket and/or filter.</li> <li>▶ Make sure that the impeller is not clogged. This should be checked by qualified personnel only.</li> <li>▶ Pump may be trying to push too high a column of water. If so, a higher pressure pump is required.</li> </ul>   |



▶ TROUBLESHOOTING GUIDE (continued)

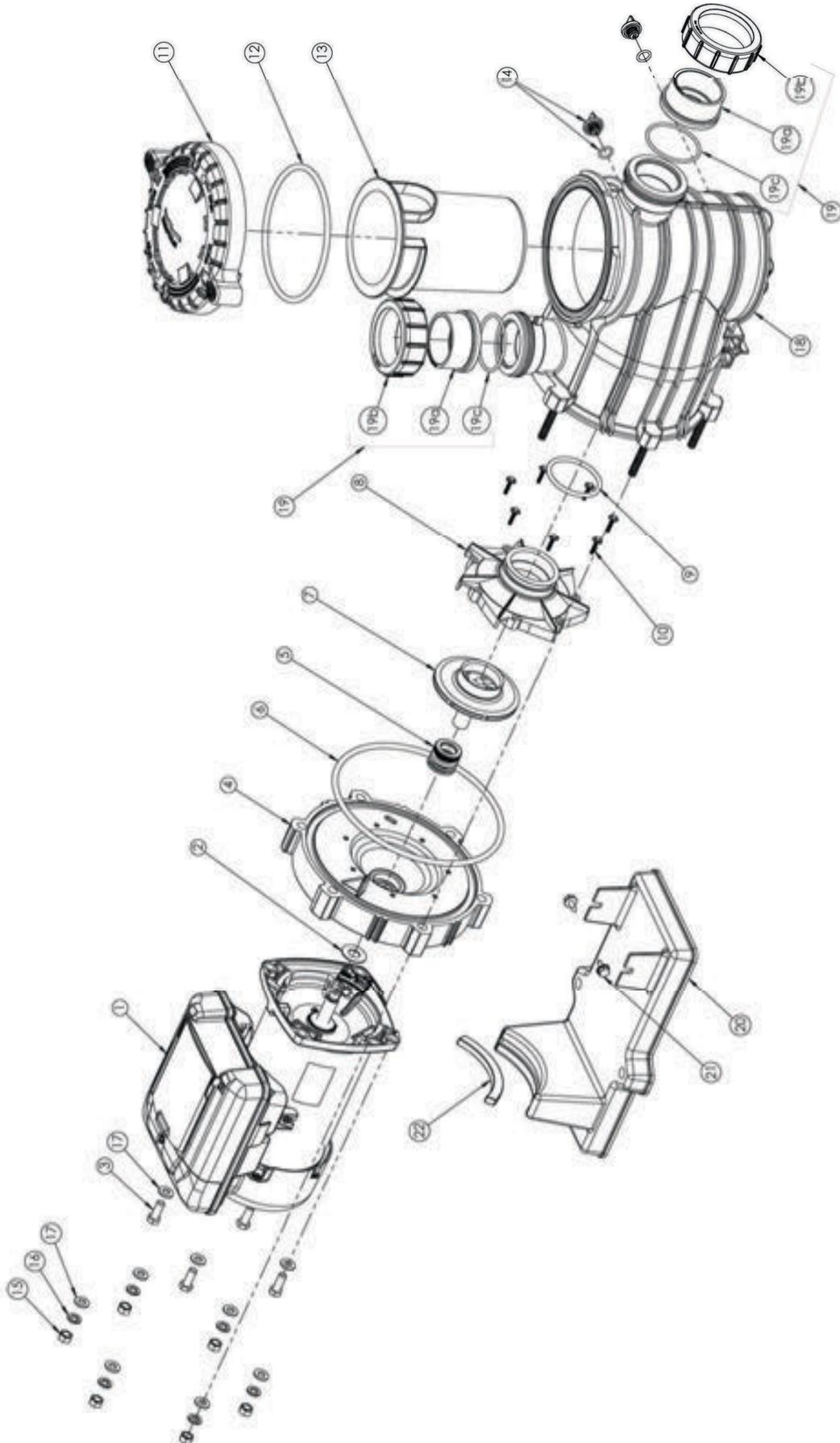
| SYMPTOM   | CAUSE  | REMEDY  |
|---|--|---|
| <b>No water coming from pump (pump is working).</b>     | <b>Air ingress to system.</b>  | ▶ Prime the pump. Check that there are no air leaks in the suction piping or fittings. Ensure the strainer lid is airtight and fitted securely. Ensure all o-rings are present. |
| <b>Pump does not work.</b>                              | <b>Motor fault.</b>  | ▶ Refer to motor fault codes.   |
|   | <b>No power at outlet.</b>   | ▶ Use another electrical appliance that is known to work to check power outlet.   |
|   | <b>Blown fuse / Circuit breaker.</b>   | ▶ Check and call electrician if necessary.  |
| <b>Pump running too slow.</b>                           | <b>Low speed setting.</b>  | ▶ Check speed setting. Refer to speed selection section of this manual. Reset to default if necessary.  |
|   | <b>Motor high temperature limit exceeded.</b>  | ▶ Ensure motor fins are clean and fan is intact and free from blockages. Ensure adequate ventilation and reduce ambient temperature.  |
| <b>Pump running at incorrect speed.</b>                 | <b>Duration incorrectly set.</b>   | ▶ Change duration of desired speed/step to make sure it's not "0".  |
|   | <b>Pump in priming mode.</b>   | ▶ Wait for priming cycle to complete. (3 minutes)   |
| <b>Water leaking from between the casing and motor.</b> | <b>Casing bolts are not tightened sufficiently; worn mechanical seal requires replacing.</b> | ▶ Switch off the power to the pump. Tighten the casing bolts or replace the mechanical seal as required.  |

Should problems persist, contact your nearest Pentair Water Service Agent.



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| No.       | Description                                       | Qty | Part Number                                       |
|-----------|---|-----|---|
| 1         | MOTOR   | 1   | 801927, (405697)                                  |
| 2         | SLINGER   | 1   | See Motor   |
| 3         | SCREW 3/8"UNC x 1" HEX SS                         | 4   | See Motor Fasteners Kit                           |
|           | MOTOR FASTENERS KIT (INCLUDES ITEM 3x4)           | 1   | 801279  |
| 4         | SEAL PLATE  | 1   | C3-184P   |
| 5         | MECHANICAL SEAL                                   | 1   | 801428  |
|           | MECHANICAL SEAL (25 PACK)                         |     | 800900  |
| 6         | O-RING PUMP CASING                                | 1   | 1660500   |
| 7         | IMPELLER  | 1   | 801426  |
| 8         | DIFFUSER  | 1   |   |
| 9         | O-RING DIFFUSER                                   | 1   | See Diffuser and O-Ring Kit                       |
| 10        | SCREW 8/32" x 22mm SS PHILLIPS HEAD               | 7   |   |
|           | DIFFUSER & O-RING KIT (INCLUDES ITEM 8, 9 & 10x7) | 1   | 801423  |
| 11        | LID   | 1   | 17307-0111  |
| 12        | O-RING LID  | 1   | 35505-1440  |
| 13        | BASKET  | 1   | C8-58P  |
| 14        | DRAIN PLUG & O-RING                               | 2   | U178-920P   |
| 15        | NUT 3/8" SS                                       | 6   |   |
| 16        | WASHER SPRING M10 SS                              | 6   | See Pump Fasteners Kit                            |
| 17        | WASHER 3/8" x 3/4" x 184 SS                       | 10  | See Pump Fasteners Kit<br>See Motor Fasteners Kit |
|           | PUMP FASTENERS KIT                                | 1   | 801280  |
| 18        | PUMP CASING                                       | 1   | See Pump Casing Assembly                          |
|           | PUMP CASING ASSEMBLY                              |     | C176-71P  |
| 19        | BARREL UNION KIT (INCLUDES 19a, 19b & 19c) x2     | 1   | 801245  |
| 19a       | COLLAR UNION 2" SLIP                              | 2   |   |
| 19b       | COLLAR UNION 2"                                   | 2   | See Barrel Union Kit                              |
| 19c       | ORING-Collar Union                                | 2   |   |
| 20        | BASE  | 1   |   |
| 21        | SCREW 5/16-14" x 1"                               | 2   | See Pump Base Kit                                 |
| 22        | MOTOR PAD   | 1   |   |
|           | BASE KIT (INCLUDES 19, 20 & 21)                   | 1   | 801281  |
| not shown | DRIVE   |     | 801926  |
|           | FAN   |     | 801921  |
|           | COWL  |     | 801924  |
|           | CONTROL COVER                                     |     | 801925  |
|           | TERMINAL COVER                                    |     | 801919  |

# STA-RITE®



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## IMPORTANT

Please attach your sales invoice/docket here as proof of purchase should warranty service be required. Please do not return Warranty Form to Pentair Australia  
- please retain for your records.

Purchased From .....

Purchase Date..... Serial No..... Model No.....



Head Office  
Pentair AU/NZ: 1-21 Monash Drive,  
Dandenong Sout, Vlc 3175

Australia  
National customer service: Phone : 1300 137 344  
Fax : 1800 006 688  
National dealer locator: Phone : 1800 664 266

Email: au.sales@pentair.com  
Web: www.pentairpool.com.au

New Zealand  
National customer service: Phone : 0800 654 112  
Fax : 0800 806 642  
National dealer locator: Phone : 0800 664 269

Email: nz.sales@pentair.com  
Web: www.pentair.co.nz

International Australia/New Zealand  
Phone : +61 3 9709 5800  
Fax : +61 3 9709 5888

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No responsibility will be taken for errors, omissions or changes in product descriptions, specifications.  
Pentair Australia reserves the right to change specifications.