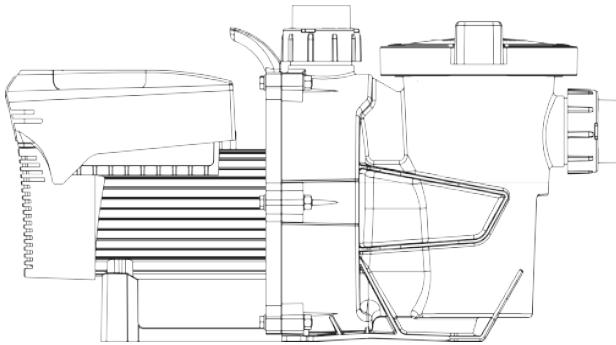


INSTALLATION & OPERATING MANUAL
Q4 LSV Variable Speed Pump

A COMPLETE GUIDE TO YOUR SWIMMING POOL PUMP



CONGRATULATIONS ON PURCHASE YOUR INSNRG SWIMMING POOL PUMP.

**THIS MANUAL HAS BEEN CAREFULLY
DEVELOPED TO GIVE YOU ALL THE
INFORMATION YOU NEED TO GET THE BEST
VALUE FROM YOUR PURCHASE.**

It is important that you read through the manual to identify the key areas you need to understand, particularly the following:

- Health and Safety Concerns
- Installation requirements
- How to operate the major features of the unit
- The importance of maintenance
- If you have a problem, what to trouble shoot before you contact your professional
- Finally, your entitlements under your product warranty.

Insnrgr have developed their product to provide you with the ultimate experience and are sure you will be delighted with your purchase.

THE IMPORTANT BITS

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SECTION 1

WE CARE ABOUT YOUR SAFETY

IMPORTANT WARNINGS

Warning – Please read and follow all instructions in this owner’s manual and on the equipment. Failure to follow instructions can cause severe injury and/or death.

 **WARNING**

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

 **WARNING**

If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

 **WARNING**

Failure to remove pressure test plugs and/or plugs used in winterization of the pool/spa from the suction outlets can result in an increase potential for suction entrapment as described above.

 **WARNING**

Failure to keep suction outlet components clear of debris, such as leaves, dirt, hair, paper and other material can result in an increase potential for suction entrapment as described above.

 **WARNING**

Suction outlet components have a finite life, the cover/grate should be inspected frequently and replaced at least every ten years or if found to be damaged, broken, cracked, missing, or not securely attached.

 **WARNING**

Never operate or test the circulation system at more than 50 PSI.

 **WARNING**

Never change the filter control valve position while the pump is running.



WARNING

All components of the filtration system including Pumps, Filters, Heaters must be positioned so to prevent being used as means of access to the pool by young children. To reduce risk of injury, do not permit children to use or climb on this product. Closely supervise children at all times.



WARNING - HAZARDOUS PRESSURE

Pool and Spa water circulation systems operate under hazardous pressure during start up, normal operation, and after pump shut off. Stand clear of circulation system equipment during pump start-up. Failure to follow safety and operation instructions could result in violent separation of the pump housing and cover, and/or filter housing and clamp due to pressure in the system, which could cause property damage, severe personal injury, or death. Before servicing pool and spa water circulation systems, all system and pump controls must be in the off position and filter manual relief valve must be in open position. Before starting system pump, all system valves must be set in a position that allows system water to return back to the pool. Do not change filter control valve position whilst system pump is operating. Before starting system pump, fully open filter manual air relief valve. Do not close filter manual air relief valve until a steady stream of water (not air) is discharged.



WARNING

This pump is to be supplied by an isolating transformer or supplied through a residual current device (RCD) having a rated residual operating current not exceeding 30 mA.



WARNING - RISK OF ELECTRIC SHOCK

All electrical wiring MUST be in conformance with applicable local codes, regulations, and the National Electric Code (NEC). Hazardous voltage can shock, burn, and cause death or serious property damage. To reduce the risk of electric shock, do NOT use an extension cord to connect unit to electric

supply. Provide a properly located electrical receptacle. Before working on any electrical equipment, turn off the power supply to the equipment.

 **WARNING**

To reduce the risk of electric shock replace damaged wiring immediately. Locate conduit to prevent abuse from lawn mowers, hedge trimmers and other equipment.

 **WARNING**

Electrical ground all electrical equipment before connecting to electrical power supply. Failure to ground all electrical equipment can cause serious or fatal electrical shock hazard.

 **WARNING**

Do NOT ground to a gas supply line.

 **WARNING**

To avoid dangerous or fatal electrical shock, turn OFF power to all electrical equipment before working on electrical connections

 **WARNING**

Failure to bond all electrical equipment to pool structure will increase risk for electrocution and could result in injury or death. To reduce the risk of electric shock, see installation instructions and consult a professional electrician on how to bond all electrical equipment. Also, contact a licensed electrician for information on local electrical codes for bonding requirements.

 **WARNING**

Risk of Electric Shock. Connect only to a branch circuit protected by a ground-fault circuit-interrupter (GFCI). Contact a qualified electrician if you cannot verify that the circuit is protected by a GFCI.

 **WARNING**

Risk of Electric Shock . The electrical equipment must be connected only to a supply circuit that is protected by a ground-fault circuit-interrupter (GFCI). Such a GFCI should be provided by the installer and should be tested on a routine basis. To test the GFCI, push the test button. The GFCI should interrupt power. Push reset button. Power should be restored. If the GFCI fails to operate in this manner, the GFCI is defective. If the GFCI interrupts power to the electrical equipment without the test button being pushed, a ground current is flowing, indicating the possibility of an electrical shock. Do not use this electrical equipment. Disconnect the electrical equipment and have the problem corrected by a qualified service representative before using.

 **CAUTION**

This pump is intended for use with permanently-installed pools and may be used with hot tubs and spas if so marked. Do not use with storable pools. A permanently-installed pool is constructed in or on the ground or in a building such that it cannot be readily disassembled for storage. A storable pool is constructed so that it is capable of being readily disassembled for storage and reassembled to its original integrity.

TO REDUCE THE RISK OF ENTRAPMENT HAZARDS:

- When outlets are small enough to be blocked by a person, a minimum of two functioning suction outlets per pump must be installed. Suction outlets in the same plane (i.e. floor or wall), must be installed a minimum of 1 metre (3 Feet) apart, as measured from near point to near point.
- Dual suction fittings shall be placed in such locations and distances to avoid “dual blockage” by a user.
- Dual suction fittings shall not be located on seating areas or on the backrest for such seating areas.
- The maximum water velocity through the suction outlet assembly and its cover for any suction
- Outlet must not exceed the suction fitting assembly and it’s cover’s maximum design flow rate. The suction outlet (drain) assembly and its cover must comply with the latest version of ANSI/ASME A112.19.8, the standard for Suction Fittings For Use in Swimming Pools, Wading Pools, Spas, and Hot Tubs, or its successor standard, ANSI/APSP-16.
- Never use Pool or Spa if any suction outlet component is damaged, broken, cracked, missing, or not securely attached.
- Replace damaged, broken, cracked, missing, or not securely attached suction outlet components immediately.
- In addition to the above instructions for two or more suction outlets per pump, they must be installed in accordance with latest Australian Standards, and follow all National, State, and Local codes applicable.

TYPES OF ENTRAPMENT HAZARDS:

SUCTION ENTRAPMENT HAZARD

Suction outlets and/or suction outlet covers which are, damaged, broken, cracked, missing, or unsecured can cause severe injury and/or death due to the following entrapment hazards:

Hair Entrapment

Hair can become entangled in suction outlet cover.

Limb Entrapment

A limb inserted into an opening of a suction outlet or suction outlet cover that is damaged, broken, cracked, missing, or not securely attached can result in a mechanical bind or swelling of the limb.

Body Suction Entrapment

A negative pressure applied to a large portion of the body or limbs can result in an entrapment.

Evisceration/ Disembowelment

A negative pressure applied directly to the intestines through an unprotected suction outlet or suction outlet cover which is, damaged, broken, cracked, missing, or unsecured can result in evisceration/ disembowelment.

Mechanical Entrapment

There is potential for jewelry, swimsuit, hair decorations, finger, toe or knuckle to be caught in an opening of a suction outlet cover resulting in mechanical entrapment.

SECTION 2

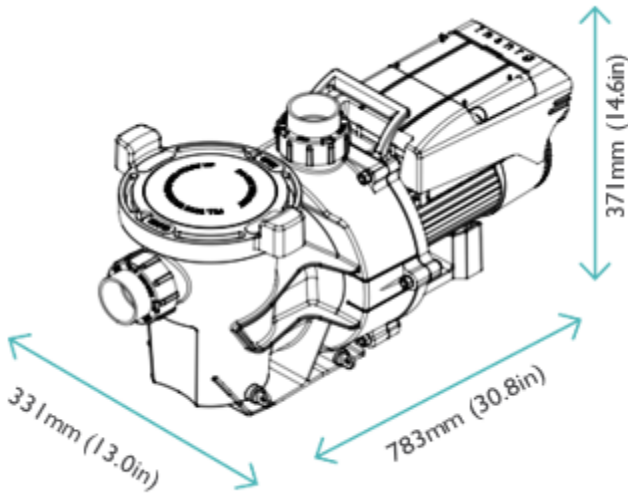
WE WANT YOU TO BE DELIGHTED WITH YOUR PURCHASE, CORRECT INSTALLATION WILL PROLONG LIFE AND MAXIMISE THE PERFORMANCE OF THIS UNIT.

Congratulations on your purchase of the Q4 Variable Speed Pump. This Pump represents a combination of the later technology and expertise from the Insnrg R & D team to create one of the most innovative swimming pool pumps. Insnrg Trained Dealers will ensure your Q4 LSV pump is installed to give you the optimum water flow for all your pool filtration and pool function requirements.

Insnrg Highly recommend the use of qualified service technicians to ensure the best performance as well as the health and safety of your family.

DIMENSIONS & PERFORMANCE CHARTS

MODEL	Q4 LSV Variable Speed Pump			
Speed	i	ii	iii	iv
(Factory setting) RPM	900	1125	1500	2000
Input Watts	135	250	802	1900
Volts	230	230	230	230
Flow Rate (lpm)	120	260	420	560
Head (m)	1.9	2.2	3.9	7.0
Current	0.6	1.1	3.5	8.5

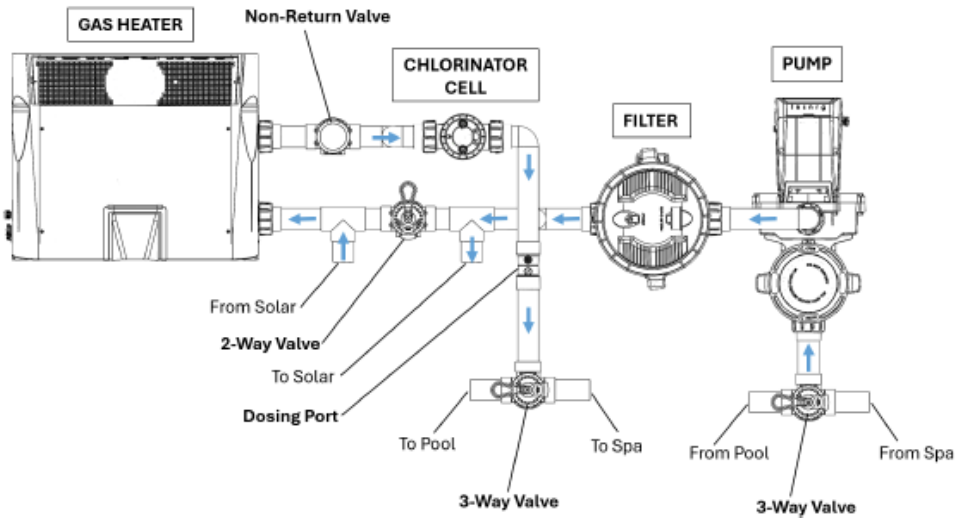


PUMP LOCATION AND CLEARANCES

For optimal performance of your new Insnrg Pump we recommend installing the pump within 30 cm (1 ft) above water level. If the pool pump needs to be elevated more than 1 m (3 ft) above the water level of the pool, then a check valve is recommended on the suction line to the pump.

If the pump is located below water level, isolation valves must be installed on both the suction and return lines to prevent the back flow of pool water during any routine or required servicing.

For electrical connection, install the pump such that any disconnecting means and/or junction boxes are within sight of the pump and at least 3.0 m (10 ft) horizontally from the edge of the pool and/or spa. Choose a location that will minimize the amount of elbows required in the PVC piping.



The pump must be placed on a solid foundation that will not vibrate. To further reduce the possibility of vibration noise, bolt the pump to the foundation, or place it on a rubber mat.

The pump foundation must have adequate drainage to prevent the motor from getting wet. The pump has been designed for use outdoors, however, to prolong the life of the pump any protection from the rain and sun will ensure a great result.

All motors generate heat when in operation, therefore, please ensure that the motor is installed with adequate ventilation around the motor. Do not install the motor directly onto a wall or fence, the Fan at the back requires at least 2" (50mm) of space to generate enough air-flow.

Provide access for future service by leaving a clear area around the pump. Allow plenty of space above the pump to remove the lid and basket for cleaning. If the equipment is under cover, provide adequate lighting.

TIPS ON INSTALLATION FOR BEST RESULTS

1. Minimise the amount of PVC Pipe and Fittings through your filtration system. The longer the pipe and the greater the number of fittings the more pressure is built into the system and the harder the Pump has to operate. This will eventually reduce the lifespan of the Pump as well as costing you more energy to operate.
2. Always use a minimum of 50mm (2") PVC Pipe on the Inlet of the Pump.
3. Where possible use a minimum of 50mm (2") PVC Pipe on the Outlet of the Pump.
4. Keep Pump clear of any debris, rubbish, other equipment, chemicals, walls etc. It is important that the circulation of air around the motor is clear to help reduce the running temperature and extend the lifespan of the pump.
5. Ensure that if any other equipment exists in your filtration system (ie Filter, Heater, Sanitiser etc) that you have thoroughly checked that the Pump Flow rate does not exceed the maximum flow rates for the other equipment. If it is not suitable, this will affect the performance of the Pump and the other equipment and most likely void any warranty claims on all items.

STARTING & PRIMING THE PUMP

Once your Insnrq High Performance Pump has been installed, it is now time to turn on and fill with water, a process known as ‘priming’ the Pump. If the Pump is not primed correctly, it could cause the Pump to ‘run dry’.

Note: Running the pump dry could cause a loss of pressure, resulting in damage to the pump case, impeller and seal.

Firstly, check where your Pump is installed in relation to the pool water level. If below the water level of the pool you need to check that the isolation valves on both the suction and return lines are returned to the ‘OPEN’ position. They must be OPEN before you start operating the Pump.

The pump strainer pot must be filled with water before the pump is initially started. Your Insnrq Pump has a unique feature that enables the Pump to be filled to a higher level, making the priming process quicker and easier. Follow the steps below to prime the pump:

1. Remove the pump lid and locking ring.
2. Fill the pump strainer pot with water, generally use a Bucket and/or Garden Hose.
3. Reassemble the pump lid and locking ring onto the strainer pot. The pump is now ready to prime.
4. Open the air relief valve on the filter and stand clear of the filter.
5. Turn on the pump.
6. When water comes out of the filter air relief valve, close the valve. The system should now be free of air and recirculating water to and from the pool.

Congratulations your pump is now primed and ready for operation.

SECTION 3

HAVE FUN AND GET THE MOST OUT OF YOUR PURCHASE

Your Insnrg Variable Speed Pump has many features that will benefit you in relation to superior water flow, minimise energy costs, reduced noise and easy operation via the use of Automation or Bluetooth control. The following section will outline the features you need to consider to ensure your pump operates at it's highest capabilities.

PUMP SPEED CONTROL AND MONITORING

PUMP CONTROLLER

The brains of your Insnrg Variable Speed Pump is situated in the Pump Control Box on the top of the Motor. This Box controls the numerous Features and Benefits that allow you to operate the majority of your pool equipment, all with the touch of a button. The following section will outline what functions are available and how to access and operate.

DISPLAY SCREEN

In almost all Installations in Australia and New Zealand the pump will be turned on and off from the Chlorinator or Automation Controller. The pump timer should NOT be used.

Set the pump Control to Manual ON and press the desired speed button. The pump will remember this speed selection and turn on, when the Chlorinator or automation controller activates it.

This display shows Four (4) major areas of Information:

- Operation Mode: Manual Off, Manual On, Auto Mode
- Speed of Pump is RPM
- Energy Use in Watts per Hour
- Energy Cost in Dollars per Year, based on Energy Cost entered in the Menu

This information is central to the operation of your Insnrg Variable Speed Pool Pump and more details are explained further in this Manual.

MENU

Turn Pump to OFF using Auto/On/Off Button. Press Enter to commence Menu operation. Use Up/Down and left/right arrows to navigate the Menu. When finished press Enter or Auto/On/Off Button. Menu settings will auto save after 30 seconds. **It is recommended that the Timers are turned Off if the pump is connected to an external timer control such as a salt chlorinator.**

IO BUTTON (OFF/AUTO/ON)

Depressing this Button will switch between the three main pump operation – Pump Power Off, Pump Timer Mode Active and Pump Continuously On.

IF YOUR PUMP IS POWERED BY AN EXTERNAL CONTROLLER SUCH AS A CHLORINATOR, SET THE PUMP IN MANUAL ON AND SELECT THE DESIRED SPEED. The Q4 Pump will remember this setting and allow the external device to turn off and on again according to the timers set in the external device. On start-up your display should show Pump “off”, two presses will turn the pump ON.

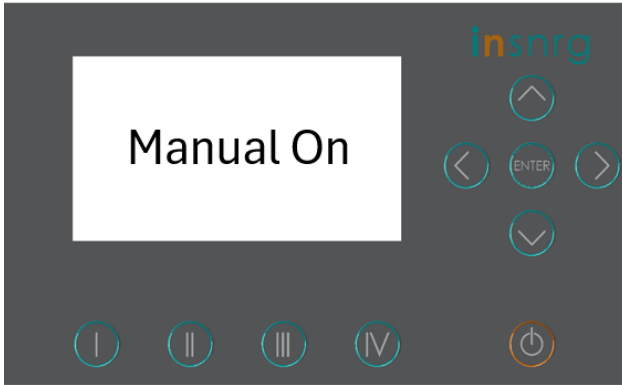
Continue to press the IO button will cycle the pump between Timer, Manual on, OFF and Auto (Timer Mode).

USUAL SET UP

In Australia and New Zealand, most pumps are plugged into an external controller such as a salt chlorinator which has timer functions. This external device (chlorinator) will determine the operating hours of the pump by turning it on (applying power) and turning it off. In these common installations simply turn the pump to Manual ON. There are 3 operating status options on the pump.

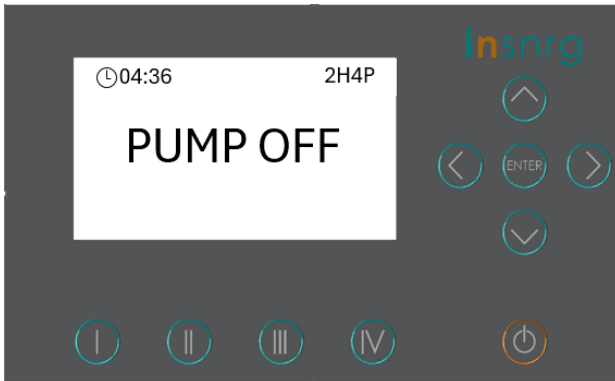
MANUAL ON (relies on external control to turn on and off).

With the external controller turned on (applying power to the Pump, press the IO button until the pump displays Manual ON.



PUMP OFF

The pump can be turned off by pressing the IO button. However, you should get into the practice of turning the pump off via the external controller (chlorinator). This will prevent the chlorinator dosing/producing chlorine without water flow which may damage the chlorinator cell or dose high concentrations of chemicals in stagnant water.

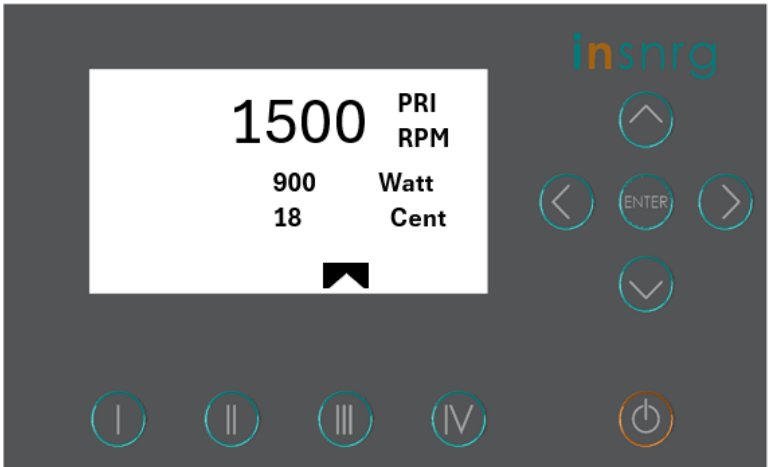
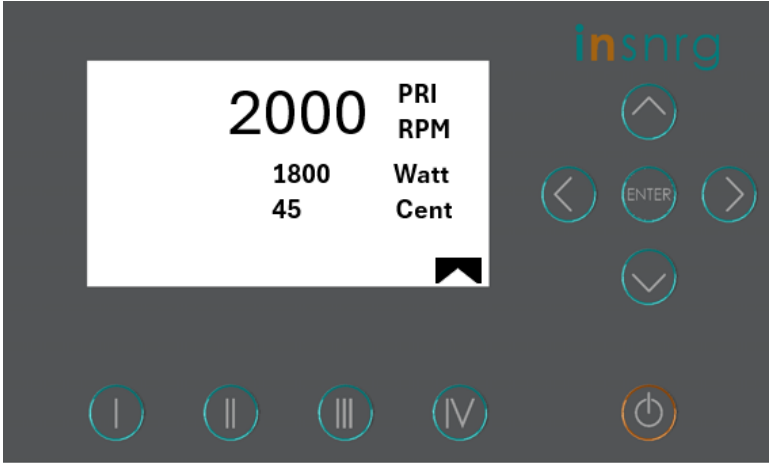


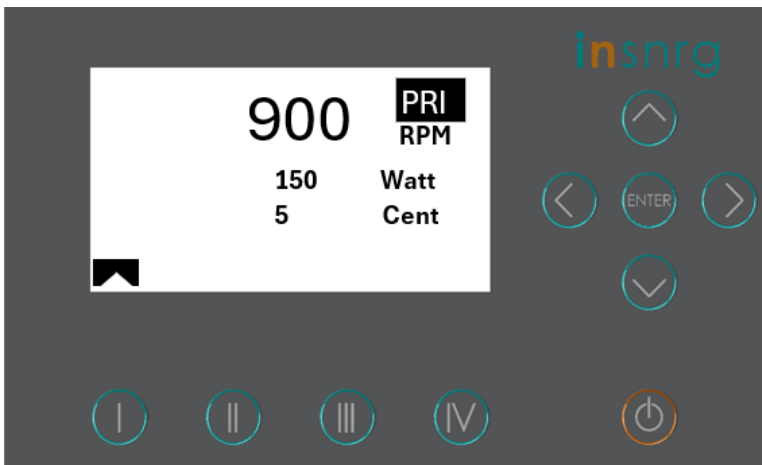
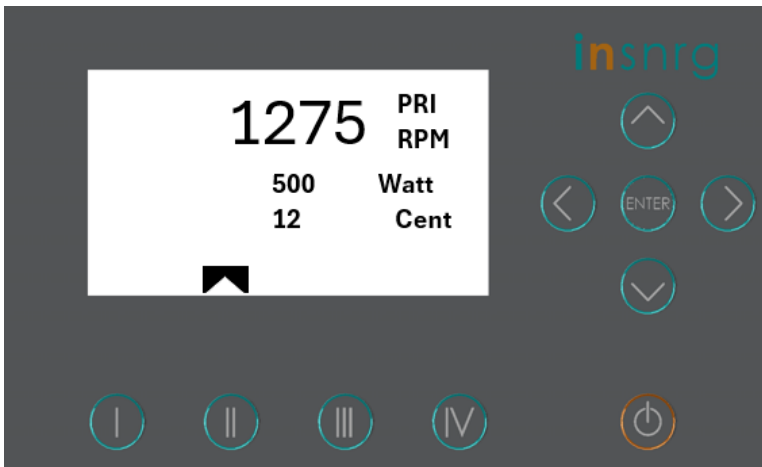
CHANGING SPEEDS

Your Insrgr Variable Speed Pool Pump has 4 programmed speeds that can be individually adjusted to exactly what your pool requires. These speeds can be allocated to different timer periods to allow the greatest flexibility. Changing speeds is simple, however, it is

important that you set to the correct flow rates and Insnrg highly recommend the use of qualified pool professionals to ensure you are getting the best performance and operating cost benefit.

Select each speed I, II, III, IV and adjust the speed to suit your pool.



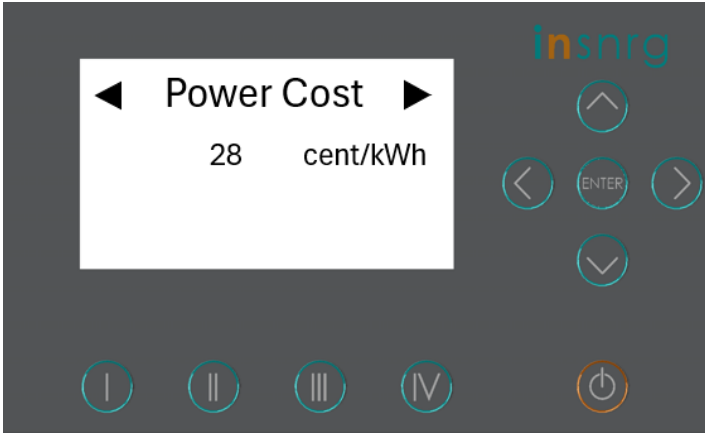


Select the Button that represents the Speed you wish to adjust. Once selected the speed will appear at the top of the screen, then press the “up” or “down” buttons to select the speed you want, changes are in 25 rpm increments. Once speed is selected this will be automatically saved. Continue this process to change the speeds you require.

POWER COST

Your pump will display the operating cost while operating at any speed. To do this accurately you may need to enter your current cost of power in kW/hour. The factory default setting is 28 cents per kW/hr.

To change the power cost press the ENTER button to enter the set up menu then press the right or left arrow and navigate to the POWER COST screen. Use the DOWN arrow to select the cost and change. Press the IO button to save and exit.

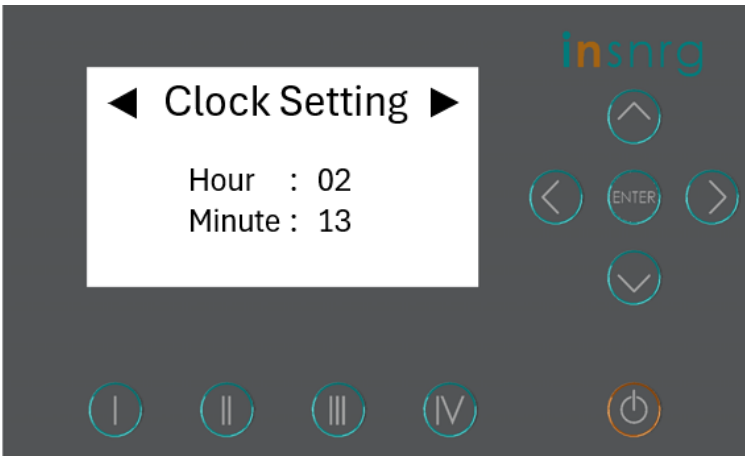


IN BUILT TIMER FUNCTION

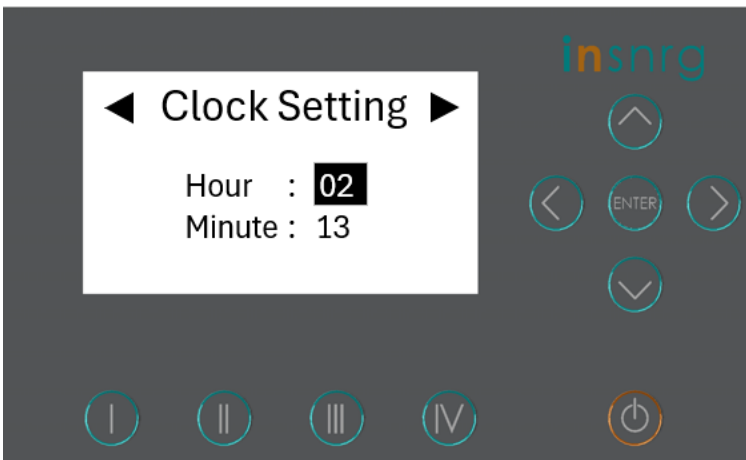
(Skip this section if pump is plugged into external chlorinator or automation controller).

The inbuilt Timers have been factory disabled. However, if the pump is NOT plugged into an external controller which sets the operating times, the inbuilt timers can be activated and used to set up to 4 timers each days.

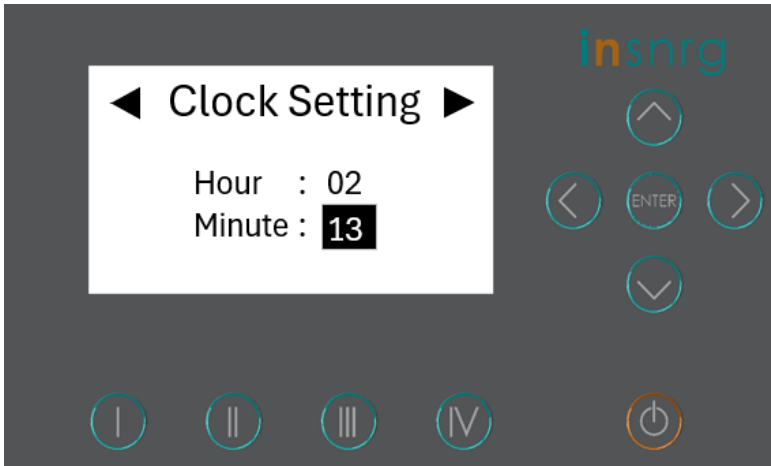
Step 1: Set the current time. Press the ENTER button and use the left or right arrow to navigate to Clock setting.



Use the Down button to select hour and the left right arrows to select the current hour.

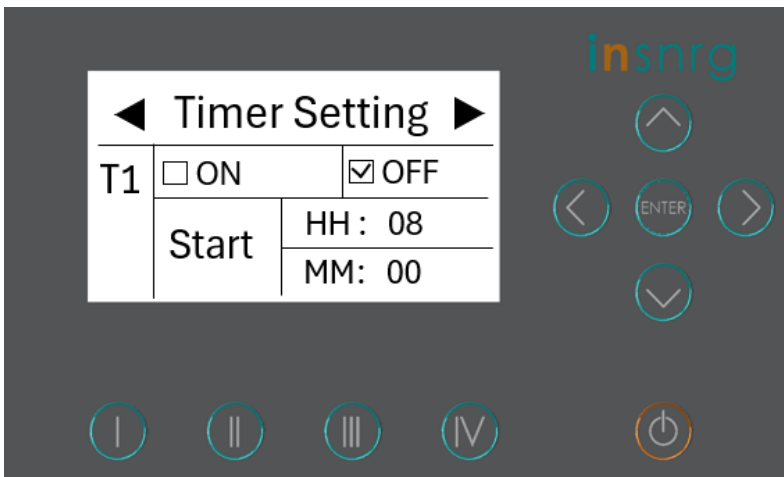


Use the down button to select minutes and change to the current minute.

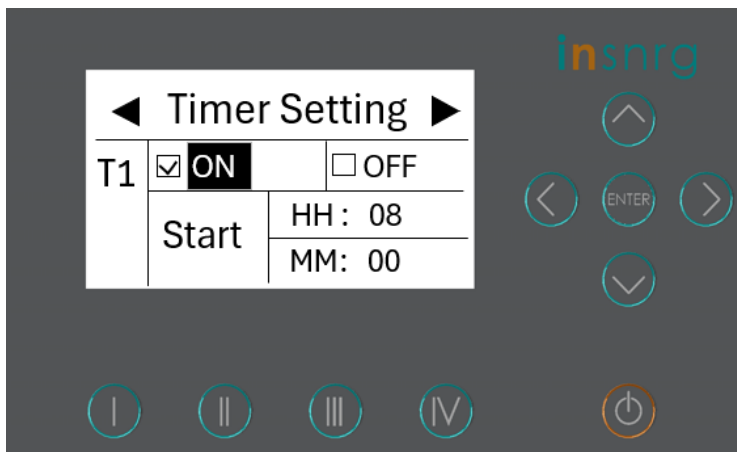


TIMER SETTING(S)

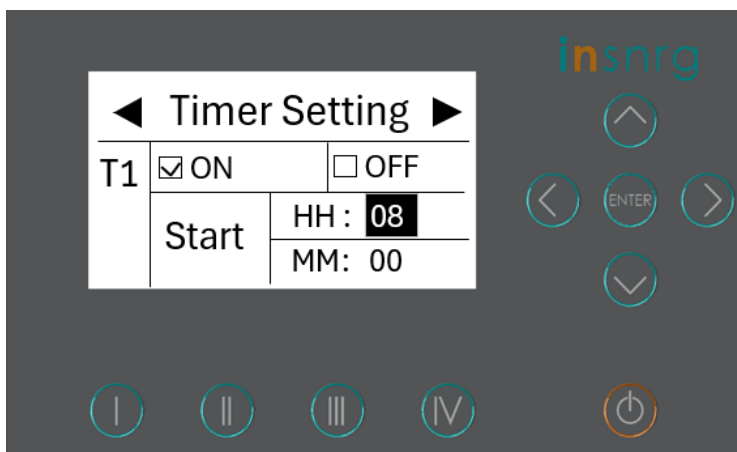
Now use the left and right arrows to navigate to the Timer Setting Menu. Use the down arrow to select ON or OFF. Navigate to the start hour and minute.

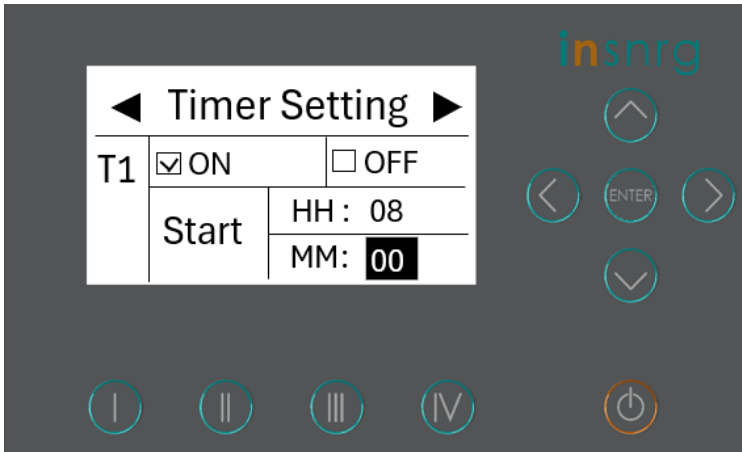


Turn T1 on.

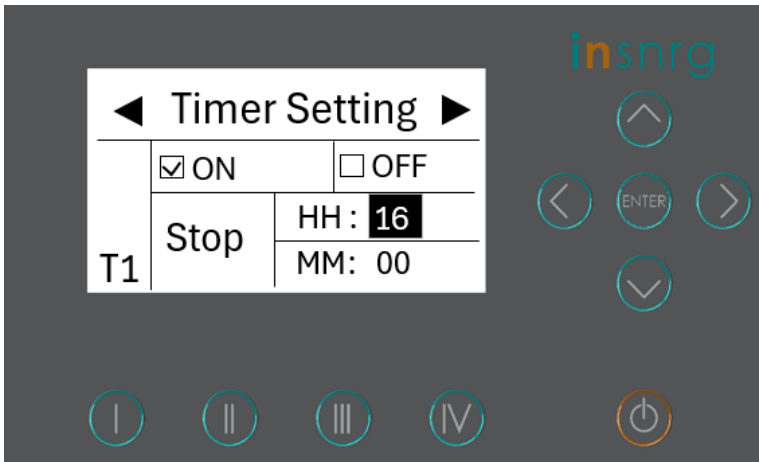


Select start hour and minute.





Now select the STOP time.

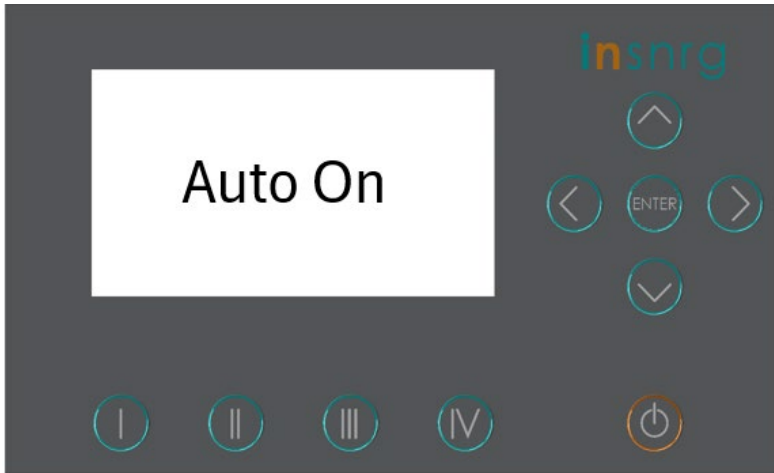


Repeat process through TIMER 2, 3 and 4 if desired.

TIMER (AUTO) OPERATION

Once you have set your timer START and STOP times press the IO button to exit the set up menu and return to the home screen.

It is now necessary to turn the Pump to AUTO. Press the IO button until the screen display looks like this.



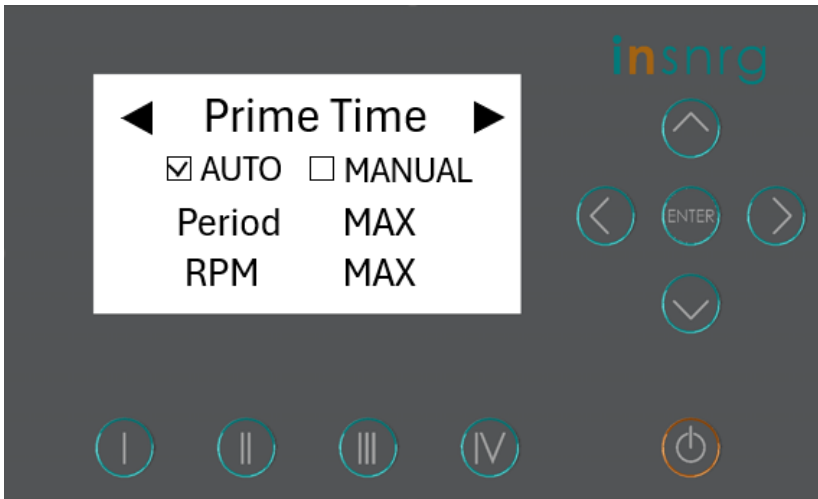
PRIMING SETTINGS

When the pump first starts it is good practice to start at near maximum speed to enable the pump to pull water into the basket. After priming the pump will return to the last set speed.

The pump has been set on AUTO PRIME. This means as soon as the pump is full of water at maximum speed it will automatically revert to the previous set speed. In most cases where the equipment and pump is holding prime, this process will only take about 5 seconds.

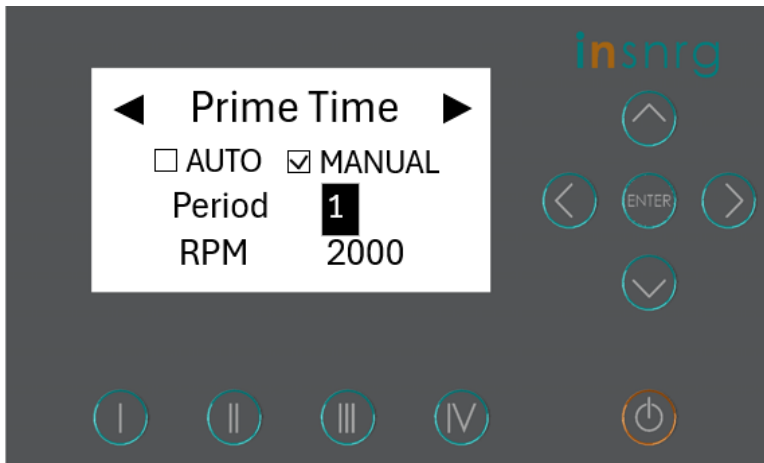
You can set a defined prime time and speed from 0 to 120 minutes and 600 to 2000 RPM.

To change the Prime setting press ENTER and use the left or right arrow to navigate to Prime Time menu. Use the down button and left right arrows to select AUTO or MANUAL.



If selecting a MANUAL prime time the sequence of screens will be as follows:

SETTING MANUAL PRIME TIME AND SPEED



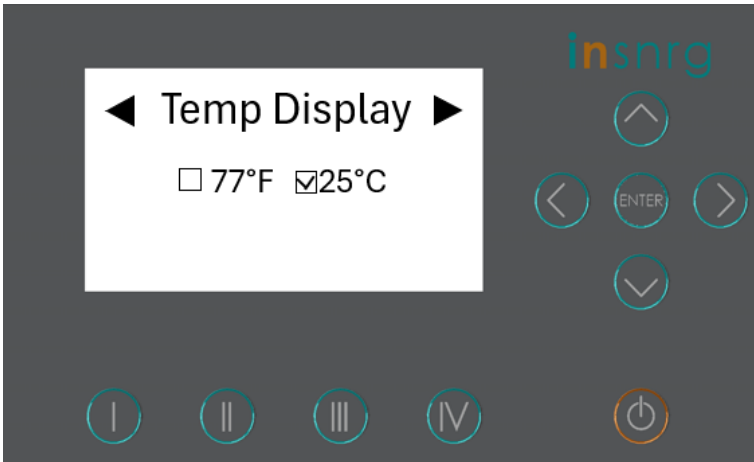
You can set a Prime time of 0 to 120 minutes and speed from 600 to 2000 RPM after which time the pump will

automatically return to the previous selected speed.

ANTI FREEZE

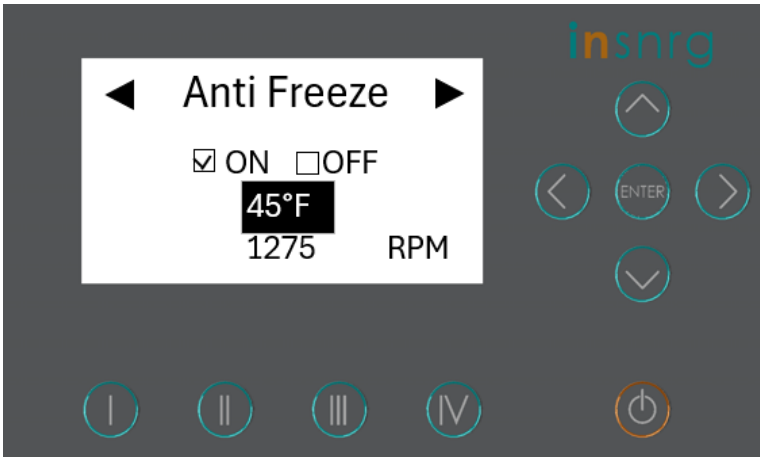
(Skip this section unless the pump is installed in an area where the pool water freezes in winter)

To enable this function you will require a 4k7 thermistor plugged into the data point on the rear of the controller. Once plugged in navigate to the Temp Display menu and choose degrees F or degrees C display.



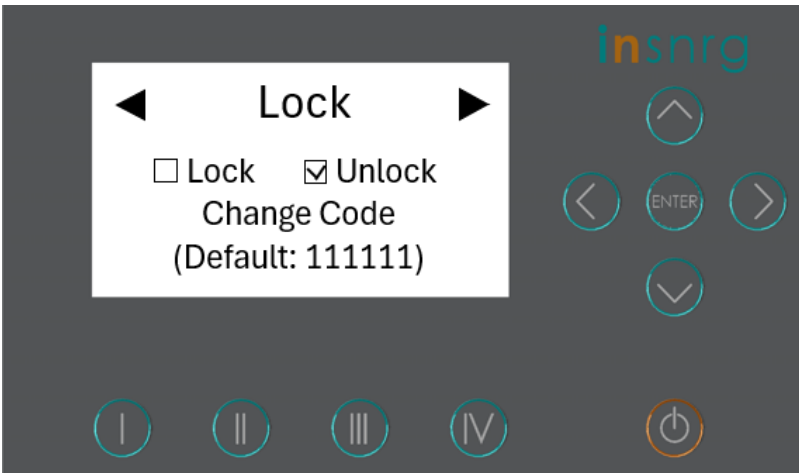
Now navigate to the Anti Freeze menu, select ON and then select the minimum temperature and operating speed of the pump. In conditions where freeze of water may happen in the pipework or pool it is recommended to start the pump when the temperature falls to around 42 degrees F or 4 degrees C.

If the thermistor is placed outside and sensing ground level temperature, the pump will then start at the selected temperature and at the selected speed to keep the pool water circulating and prevent water from freezing in the pipework and pump.



LOCK PUMP MENU

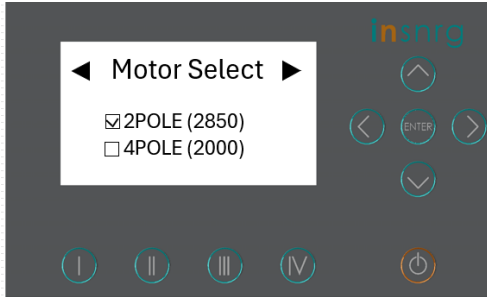
Using the lock menu may prevent unauthorized changes of pump speed and operating hours – and may be useful in commercial applications where minimum water flows and operating hours are required. Once navigating to the LOCK menu you can change the code and enter your own 6 digit code that prevents changes to the pumps settings.



ADDITIONAL MENUS (NOT USED)

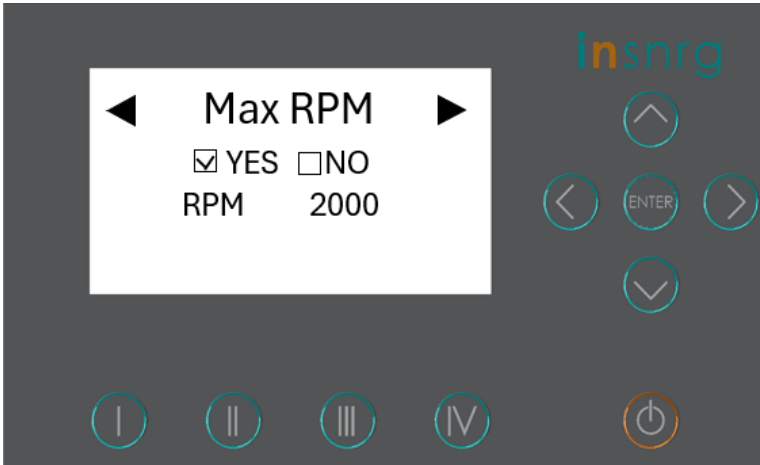
The variable speed controller is used on various Insnrg pump motors. It is set to the correct motor prior to assembly and leaving the factory.

menu or your warranty will be voided.



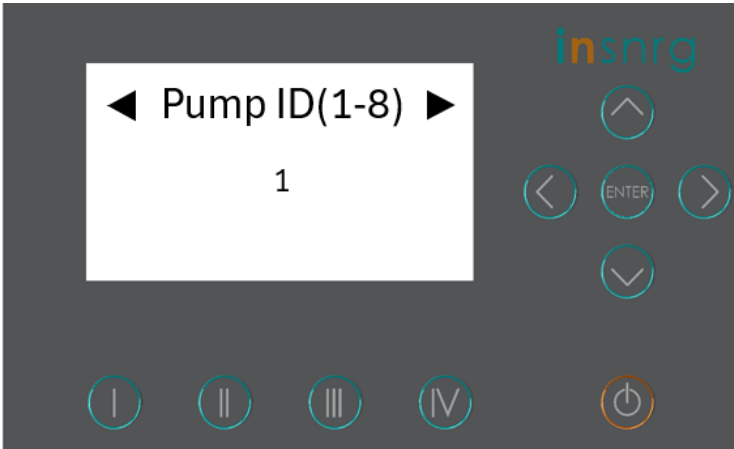
MAX RPM

Generally, the high speed of the pump is controlled by adjusting the RPM using the UP and DOWN arrow while the pump is running. Speed i. ii, iii, iv, can all be adjusted in 25 RPM increments. However, a Max RPM can be set in the MENU to prevent excessive flow or pressure on any given system.



PUMP ID

The pump can be given an ID from 1 to 8 when multiple Variable speed pumps are connected to an automation system. This feature is generally not used.



During

Wifi CONTROL

Select your preset pump speed (speeds i, ii, iii, iv) from your Smart Phone using Insnrg's inTouch App when your Q4 LSV Pump is connected to a Vi Chlorinator, Insnrg Relay Hub and inTouch Internet Portal. This feature allows you to select different pump speeds during each timer period or when you turn the pump manually on to operate for extended periods or backwash.

To set up this feature you will need an Insnrg inTouch Portal and download the inTouch App from [insnrg.com](https://www.insnrg.com).



Follow the instructions on the App to set-up an account and locate your Insnrg Device. Please note, if you have more than one Insnrg system they can all be set-up on the one account and all operate from this App.

Combined with Vi Chlorinator, the Insnrg inTouch Portal and Qi Pump, you can control your Insnrg Intouch Portal which will connect to your Wireless Router in the House. This will give you the ability to monitor and change anywhere you have access to Data.

You will now be able to operate your Insnrg Variable Speed Pump from your SMART device.

SECTION 4

OOPS, SOMETHING NOT RIGHT?

**Maintenance, Trouble Shooting,
Replacement Parts, Warranty &
Contact Section**

MAINTENANCE

Your new Insnrg Variable Speed Pump is one of the hardest working items in your household. It is designed to withstand harsh outdoor conditions and withstand high velocity water with chemicals. Some of these parts will wear in the normal course of use and require regular checks and maintenance. A well thought out pro-active maintenance schedule will identify faults early and extend the lifespan of your pump.

To protect against extremes of temperature, your unit is vented to allow expensive electronics to cool. Ants and some insects are often attracted to the warmer, dry environment inside the enclosure.

We recommend that, with power turned off, you spray a surface insecticide on the surfaces surrounding the control to prevent ant and insect ingress. Repeat every three months or as necessary.

WARNINGS

The Pump Controller has in built warning systems to advise of any issues that can be addressed to get the best performance from your Pump. They include the following:

1. **CURRENT TOO HIGH** 



Your Pump requires the correct connection to a mains power supply. This can vary according to your local power supply and the amount of electrical items installed on the line. If the Current is too High, your screen will show the display HIGH CURRENT.

2. OVER TEMPERATURE



Your Insnrg Variable Speed Pump has capability of measuring the Temperature of the Motor and outside conditions.

Should temperature reach above standard operating levels, the pump will stop until temperature drops and the below will

display on the screen.

It is important that the Pump Motor has sufficient ventilation to allow the motor cools by passing air across during normal operation. Check the area around the motor and remove any unnecessary items (i.e. pool toys, chemicals, leaves, builders' rubble etc.) that could cause blockage to air flow. If still shows on display, contact your local pool professional for assistance.

3. ANTI FREEZE

The Anti-Freeze feature of your Insnrg Variable Speed Pump prevents the swimming pool water from freezing and causing damage to your pool equipment.

Read the Anti-Freeze section in this manual for further details. Should the Anti-Freeze function become active; the display will show below.



The Anti-Freeze function will continue to operate until the temperature increases above the set level. Insnrg highly recommends that you allow the Anti-Freeze to operate to avoid expensive damage if water should freeze within your equipment. There is no further action required.

4. PRIME FAIL

The Prime Fail display below will only show when the Pump is set-up in Auto Prime mode (refer section in manual for further details).



Pump Motors require additional current at start-up to get running. Should the above display, the Pump has not been able to get enough current to operate on start-up. This could be due to too many electrical items on the one connection draining current from the Pump, or due to changes in your local supply. Suggest removing any unnecessary items and restart. If still shows display warning, contact your local pool professional for assistance.

MAINTENANCE PROGRAM

WHEN?	WHAT ARE YOU LOOKING FOR?	ACTIONS
Weekly	Check and Empty Basket. Check for water leaks.	Turn Pump off. Open lid, empty Leaves and other debris from basket. Secure basket and lid ensure O ring is in place. Re prime pump. Check there are no water leaks from underneath pump.
Quarterly	Check all O Rings	Isolate and turn off the Pump. Remove all Gaskets and turn over. You can also apply a silicon-based grease to extend the life. If stretched, dry or ill-fitting replacing O rings. Clean and grease with silicone-based grease.
Quarterly	Check around the unit for leaves/debris or signs of flooding.	Remove any debris that is restricting air circulation around the Pump. If in a flood prone location, rectify.
Quarterly	Check for any Insects/Ants etc	It is good practice to use a good quality surface spray around your equipment. Make sure all units are turned off and then spray around all units to eliminate any insect/ants etc
Quarterly	Check for any leaks	If you notice any water leaking from the pump. Check gaskets first and reseal. If continues, contact your local pool professional to assess and rectify.

WINTERISATION

Is it important to protect your Pump from freezing water conditions. As water freezes it expands and that can cause the internals of the Pump to break under the intense pressure of expanding water. It is up to you to monitor temperatures and take the following actions:

1. In mild climate areas, when temporary freezing conditions may occur, run your pump and filtering equipment all night to maintain water circulation and prevent freezing.
2. If freezing conditions are expected, take the following steps to reduce the risk of freeze damage. Freeze damage is not covered under warranty.

To prevent freeze damage, follow the procedures listed below:

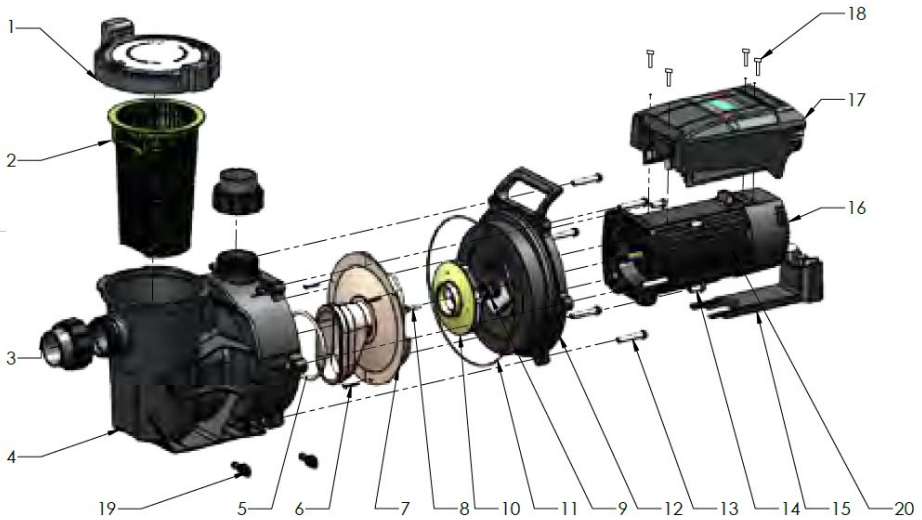
1. Shut off electrical power for the pump at the house circuit breaker.
 2. Drain the water out of the pump housing by removing the two thumb-twist drain plugs from the housing. Store the plugs in the pump basket.
 3. Cover the motor to protect it from severe rain, snow and ice.
- Once the freezing conditions are finished, it is important to reverse the above procedure and prime the pump for operation.

TROUBLESHOOTING

The chart below identifies some of the main issues you may encounter with your pump. This should assist with the majority of problems. Insnrg highly recommends regular checks and maintenance of your swimming pool equipment by a qualified pool professional. This will extend the life of your equipment and give you the best performance.

WHAT IS THE PROBLEM?	ACTIONS
<p>Pump will not Prime</p>	<ul style="list-style-type: none"> • Check that any Valves on the Suction and Return lines are open • Check skimmer basket is clean and empty of leaves • Check that Lid and O ring is correctly seated, clean and sealed • Check Unions and O rings on Suction and Return side of the Pump are correctly seated and sealed • Fill Wet End of Pump with water as high as possible • Check that water level in the Pool is high enough that water is drawing into the Skimmer • Remove any suction cleaners from the Skimmer Box
<p>Pump Lid O ring is damaged or dirty</p>	<ul style="list-style-type: none"> • Important that the O ring can fully seal and eliminate any air coming into the Pump. Replace if damaged.
<p>Too much Air in the Pump Basket</p>	<ul style="list-style-type: none"> • Check that any Valves on the Suction and Return lines are fully open • Check that Lid and Gasket is correctly seated and sealed • Check skimmer basket is clean and empty of leaves • Check Unions and Gaskets on Suction and Return side of the Pump are correctly seated and sealed • Fill Wet End of Pump with water as high as possible • Check that water level in the Pool is high enough that water is drawing into the Skimmer • Remove any suction cleaners from the Skimmer Box • Check for any debris in Diffuser or Impellor
<p>Debris in Diffuser or Impellor</p>	<ul style="list-style-type: none"> • Switch off power to Pump • Remove the Wet End from the Seal Plate • Remove the Diffuser • Clean out debris from Impellor • Once clean, reassemble and prime pump • If problem still occurs, contact your local pool professional.

REPLACEMENT PARTS OF PUMP



ITEM	CODE	DESCRIPTION	QTY
1	24101405005	PUMP LID CLAMP	1
1	24101407001	PUMP LID PC Clear	1
1	24C01602002	O RING PUMP LID	1
2	24101403001	PUMP, BASKET	1
3	15101603000	O RING UNION 50MM	2
3	21C01400001	LOCK NUT UNION TAIL 50MM	2
3	10C01405001	UNION TAIL 50MM GLUE IN	2
4	24101401001	PUMP VOLUTE	1
5	24C021602003	O RING DIFFUSER	1
6	10101014	6-20 X 1" PAN PHIL S/S316	3
7	24191491993	DIFFUSER	1
9	24101512	MECHANICAL SEAL 5/8"	1
10	24201012	IMPELLER Q4 2hp 175mm diameter	1
11	24C01602001	O RING SEAL PLATE	1
12	24201006	SEAL PLATE	1
13	10101010	3/8-16 unc X 2.3" S/S BOLT CAPTIVE WASHER	6
14	10101013	3/8-24UNF x 1" HEX S/S BOLT CAPTIVE WASHER	4
15	24101401004	MOTOR FOOT	1
16	24101405001	FAN COWL	1
17	24102509250	Controller Assembly VS 2.0 hp	1
18	24C01602003	COMMON - DIFFUSER ORING	1
19	152003	AIR BLEED VALVE ASSEMBLY PUMP	2
20	241040	Motor 2.0 hp 430v variable speed	1

WARRANTY

Australian Consumer Law

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 and Conditions

Insnrge Pty. Ltd. (hereinafter “the Company”) is pleased to warrant to the original retail purchaser that this product shall be free of manufacturing and material defects for a period of three (3) years from the original invoice date subject to the following conditions:

1. The product is purchased new from an authorised Insnrg dealership in Australia or New Zealand.
2. This warranty is not assignable and applies to the original retail purchaser only and the original receipt, invoice or any other proof of purchase must be retained and produced if requested by the Company.
3. Nothing in this warranty shall apply to any defects caused by misuse or abuse, neglect, accident, extremes of climate, dampness, humidity, running pump dry, reasonable fair wear and tear and/or any causes other than defects in manufacturing and materials. Pool water chemistry must be checked and maintained within Australian Standards. Pump must not be allowed to run dry.
4. Where a defect is identified, the Company must be notified as soon as possible.
5. If the product is bought as a demonstration, refurbished, ex-rental, discontinued or otherwise previously unboxed unit, the warranty applicable shall be limited to twelve (12) months only. Replacement parts are warranted for 12 months or until the 3-year warranty period expires.

WARRANTY CLAIM PROCEDURE

To exercise your rights under this warranty, you must:

As soon as you are aware of a defect, please report the following:

- Your name, address, email address and contact number.
- Model, and serial number of the product; and
- A detailed description of the defect.

By: Calling Insnrg on 1 800 635 781
 Contact us through our website www.insnrg.com
 Writing to us at sales@insnrg.com

On receipt of the above information, the Company will log a service call.

Depending on the model type, your location, how it is installed, and the defect reported, we will allocate a service to our in house technicians or delegate to one of our authorised service agents. This could include, but not limited to, return of product to the service agent, return of product to the company, or a visit by a service technician to your poolside.

If advised to return the product, place the defective product in secure packaging, clearly label it with your name, address, contact details and description of fault.

The Company will not be liable for any transportation costs, or in the event that a poolside call is arranged with an authorised service technician, costs of technician's travel time will be charged to you if the defect is found not to be covered by the consumer warranties.

In the case of returned product, the authorised service technician or will contact the purchaser when the product has been repaired and is ready for collection.

The Company will repair or replace at its absolute discretion your product at no cost for parts or labour in accordance with the terms stated in this warranty provided that the reported defect is able to be located by the technical staff assigned to the product. If the technical staff is unable to locate the defect, you may be liable to pay for the cost of the technician's travel time and labour.

We know that you will get many years of enjoyment from this product.

Insrg strives to provide you with innovative, high end pool equipment systems that clean, filter, sanitise and heat your pool and spa perfectly. And with so many appliances operating your pool we bring them all together to operate in synergy with our inTouch Automation App.

We pride ourselves on developing products that are specifically created for your backyard lifestyle. We are continuously developing new products and ideas to make pool ownership easier and fun.

Should you wish to keep updated with our progress and hear first hand our new products and developments, please feel free to stay in touch by using any or all of the below methods:

MAIL

57-59 Nantilla Road,
Clayton, VIC, 3168

LANDLINE

1800 INSRG (1800 467674)

WEBSITE

www.insrg.com

EMAIL

sales@insrg.com

InTouch APP

www.insrgapp.com



POOL AND SPA APPLIANCES