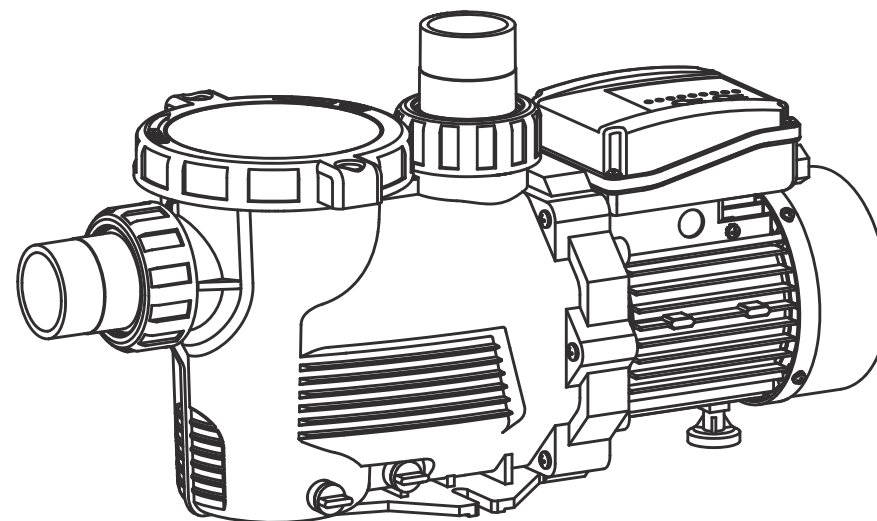




# Swimming Pool Pump

User Manual



Web: [www.aquastrong.it](http://www.aquastrong.it)  
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**24 MONTHS**  
LIMITED WARRANTY

Model: PSP100T-LV / PSP150T-LV / PSP200T-LV / PSP300T-LV



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## 12. Technical data of pumps

Technical date	PSP100T-LV	PSP150T-LV	PSP200T-LV
Mains voltage/frequency	115V/60HZ		
Rate current	10.5 A	15.5 A	18 A
Discharge NPT in	2in	2 in	2in
HP	1 HP	1.5 HP	2 HP
Protection/insulation	IPX5/ Class F		
Max. Flow rate	6100 GPH	8100 GPH	8917 GPH
Max. Head	62 ft	65 ft	70 ft
Power cord lenght (ft)	6.5 ft		
Maximum Ambient Temperature	104°F (40°C)		
Maximum Liquid Ambient Temperature	122°F (50°C)		

Technical date	PSP300T-LV
Mains voltage/frequency	115V/60HZ
Rate current	20 A
Discharge NPT in	2in
HP	3 HP
Protection/insulation	IPX5/ Class F
Max. Flow rate	9350 GPH
Max. Head	75 ft
Power cord lenght (ft)	6.5 ft
Maximum Ambient Temperature	104°F (40°C)
Maximum Liquid Ambient Temperature	122°F (50°C)

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 the appliance in a safe way and understand the hazards involved.

Children shall not play with the appliance.

Cleaning and user maintenance shall not be made by children without supervision.



Attention!

If the appliance or the supply cord is damaged, it must be repaired by manufacturer, its service agent or qualified person.

Meaning of crossed -out wheeled dustbin:

Do not dispose of electrical appliances as unsorted municipal waste, use separate collection facilities.

Contact your local government for information regarding the collection systems available.

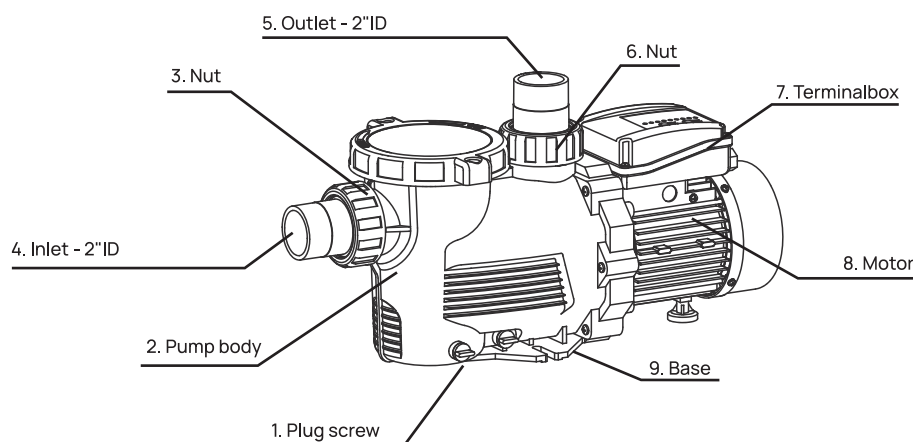
## 1. General

This manual provides information relating to the installation, utilization and maintenance of our pumps  
We recommend that you read it attentively and keep it for future consultation.

These swimming pool pumps are for permanently installed pools they must be fixed horizontal, self-priming centrifugal pumps. Installing a non-return device will result in immediate priming. For the pumps to function correctly, the water temperature must not exceed 95°F. The materials used in our pumps have undergone stringent hydraulic test and electrical inspections.

Read this manual carefully before installing the pump. The pump must be installed in accordance with the standards in effect

We decline all responsibility for the consequences of failure to comply with the installation instructions . We recommend that you comply with the electrical connection diagrams to avoid overloading the pump motor.



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 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 appliance  
The pump must not be used when people are in the water.

## 9. Servicing

Our pumps require no particular servicing ult is nevertheless recommended to clean the pre-filter periodically  
This is a simple operation, close the suction and delivery valves loosen the black nuts and remove the pre-filter cover, withdraw the filtering basket and clean it -Examine the pre-filter cover gasket and replace it if damaged .  
If the pump is not used over the winter period, it must be emptied (by removing the drain plug) to avoid damage through freezing, cleaned and stored in a dry and well aired place. In the event of failure, do not try to repair the pump, contact our technical service.

Do be sure to disconnect the pump from electric supply before any servicing is carried out.

## 10. Problems and Solutions

1. POSSIBLE FAULTS
2. Pump does not prime
3. Low flow rate
4. Pump makes noise
5. Pump does not start
6. Motor makes noise but does not start

BLEFAULTS					CAUSES	SOLUTIONS
1	2	3	4	5		
×	×				Air entry	Verity watertightness of connectors and seals
×					Bad watertightness of cover	Clean the cover and verify the seals
×	×				Excessive suction height	Set pump at a suitable level
×	×		×		Incorrect voltage	Verify the vlogate specified on the nameplate and that of the mains
×					No water in prefilter	Fill prefilter with water
	×				Filter clogged	Clean filter
	×	×			Diameter of section line smaller than required	Correctly dimension section line
	×				Discharge clogged	Inspect filter and discharge line
		×			Incorrect pump attachment	Attach pump correctly
		×	×		Refuses in pump No tension	Clean pump and inspect the filter Reset the fuses
				×	Motor blocked	Call the technical service

## 11. Guarantee

Our pumps are guaranteed against any material or manufacturing defects for a period of 2 years from the date of delivery .Wear parts, gaskets, cover and filtering basket are not covered by this guarantee. The guarantee is dependent upon compliance with the assembly and/or maintenance manual. Presentation of the purchase invoice will be demanded if application of the guarantee is involved. The sole obligation of the vendor under this guarantee will be to replace or repair free of charge the product or item acknowledged defective by the vendor's services. All other expenses shall be borne by the buyer. For a product to benefit from this guarantee, it must first be submitted to the vendors after sales service, whose agreement is.

Please ask professional people to install the swimming pool pump.

## 6. Check before First Starting the Pump

1. Check that the mains power voltage and frequency correspond to those indicated on the identification plate affixed to the pump
2. Check that the pump shaft turns freely
3. Unscrew the pre-filter cover and fill the pump with water up to the lower level of the suction pipe.
4. Screw firmly the pre-filter cover back in place.
5. If the motor does not start, or if no water is extracted, refer to the table of possible failures and remedies on the following pages.
6. NEVER OPERATE THE PUMP WHEN NOT FILLED WITH WATER or with water inlet sucked.

## 7. Starting the Pump

After filling the pump with water, open all the suction and delivery valves and start the motor.  
Wait for self-priming to take place. The pump is correctly primed when the water level is just below the transparent cover.

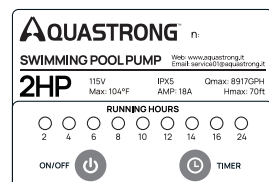
## 8. Timing Instruction

1. Calculate the appropriate pump run time based on the size of the pool.
2. Wait until the time you want the pump to start.
3. Press the timer button to choose the running time. Then click the ON button.
4. The pump will run for the set hours each day at the current time.

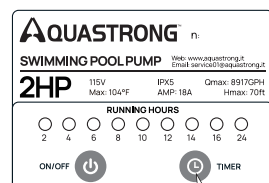
**Tip. No functional difference between the indicator light flashing red or green.**

Example:

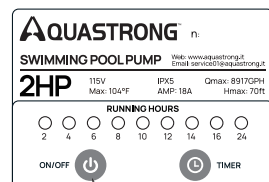
The pumps are scheduled to run for ten hours a day from 10:00 p.m. to 8:00 a.m next day.



Step 1: Wait until 10:00 p.m. when you want the pump to start. Plug in the 220v power supply and see the indicator light flashing.



Step 2: Press the timer button to choose "10" which is the running time.



Step 3: Press the ON/OFF button, and from now on the pump will run for 10 hours every night starting at 10 p.m.

## 2. Pump Fixing

### ⚠ Caution:

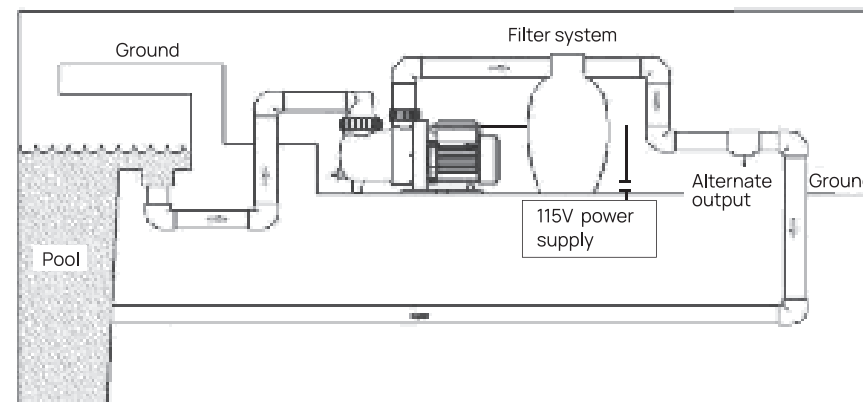
Make sure the pump and terminal connections are protected from moisture and possible flooding.

Installation of the pumps is only authorized in swimming pools and basins that comply with the standards in effect.

The pumps are usually installed between the skimmer and the pool filter. They must be positioned as close as possible to the water level to minimize the suction distance and reduce head losses. It is recommended not to install the pump more than 10 ft above the water level. Independently of the height of the pump above the water and the capacity of the chosen model, priming can take several minutes.

The pump must be mounted on a firm base and can be bolted to the ground by attaching holes in the base with the bolt. The pump must be installed with the shaft in the horizontal position and the pre-filter cover on the top. Make sure that the transparent cover is accessible so that it can be removed with the filtering basket for cleaning. Pumps must be installed in a dry, well-ventilated place, and sheltered from the rain.

If in doubt, contact your specialist supplier or a qualified electrician.



## 3. Wiring Instruction

### Electrical Requirements

1. Install all equipment in accordance with the National Electrical code and all applicable local codes and ordinances.
2. A means for disconnection must be incorporated in the fixed wiring in accordance with the wiring rules.

### ⚠ WARNING



**RISK OF ELECTRICAL SHOCK OR ELECTROCUTION.** The Pool Pump must be installed by a licensed or certified electrician or a qualified service professional in accordance with the National Electrical Code and all applicable local codes and ordinances. Improper installation will create an electrical hazard which could result in death or serious injury to users, installers, or others due to electrical shock, and may also cause damage to property.

Always disconnect power to the pump at the circuit breaker before servicing the pump. Failure to do so could result in death or serious injury to service people, pool users, or others due to electric shock and/or property damage.

Read all servicing instructions before working on the pump.

## Wiring Overview and Installation

All electrical wiring MUST be in conformance with all applicable local codes, regulations, and the National Electric Code® (NEC®). Contact a qualified electrician if you cannot verify that the circuit is protected by a GFCI. The unit 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 the reset button. Power should be restored. The GFCI is defective if the GFCI fails to operate in this way. If the GFCI interrupts power to the pump without the test button being pushed, a ground current is flowing, indicating the possibility of an electric shock. Stop using this pump. Disconnect the pump and ask a qualified professional to correct the problem before using.

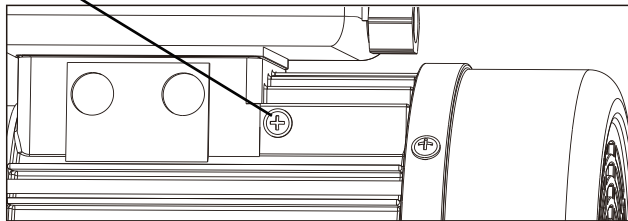
The pump accepts 220V, 60Hz single phase input power. The terminal block connections are capable of handling up to 16AWG solid or stranded wire. There are also fast-on type quick connectors, however, check the local electrical codes for the desired connection method. The connections must be permanently made to the grounding terminal (see Figure 4) in the field wiring compartment according to the local electrical code.

The drive will operate on 2-phase Line-Line-Ground electrical systems as well as Line-Neutral-Ground systems. This pump must be permanently connected by a circuit breaker as specified in the local electrical code.

### ⚠ WARNING: RISK OF ELECTRIC SHOCK.

1. Be sure all electrical breakers and switches are turned off before wiring motor. Always wait five (5) minutes after disconnecting the power from the pump before opening or servicing the drive.
2. Choose a wire size for the pump in accordance with the current National Electrical Code and all applicable local codes and ordinances. When in doubt use a heavier gauge (larger diameter) wire. Be sure the wiring voltage is within the operating range.
3. Be sure all electrical connections are clean and tight.
4. Cut wires to the appropriate length so they do not overlap or touch when connected to the terminal board.
5. Permanently ground the motor using the ground screw located on the inside rear of the controller interface (see Figure 4). Use the correct wire size and type specified by the current National Electrical Code. Be sure the ground wire is connected to an electrical service ground.
6. Bond the motor to all metal parts of the pool structure and to all electrical equipment, metal conduit, and metal pipping within 5 ft (1.5 M) of the inside walls of the swimming pool, spa or hot tub in accordance with the current National Electrical Code. UL requires use of a solid copper bonding conductor not smaller than 8 AWG. See Figure 4.
7. The pump should be permanently connected to either a circuit breaker, 2-pole timer or 2-pole relay. If AC power is supplied by a GFCI circuit breaker, use a dedicated circuit breaker that has no other electrical loads.

### Grounding terminal



## 4. Installation of the pipes

If plastic pipes are used, they must be sealed using Teflon tape.

The diameter of the delivery and suction pipes must be greater than or equal to that of the pump inlet and outlet ports. Try to limit head losses by minimizing the length of the suction pipe and avoiding bends and twisted pipe routings as much as possible. Unions must be new and perfectly clean to guarantee absolute tightness.

The delivery and suction pipes must not, under any circumstances, induce mechanical loads on the pump.

It is recommended to install suction and delivery valves in order to isolate the pump.

## 5. Electrical Installation

The user shall inspect and make sure about the effectiveness of protective earthing of the building installation. In such a case, an authorized qualified person shall inspect the building installation.

It is obligatory for the pump's electrical power supply to have a residual current device (RCD) having a rated residual operating current not exceeding 30 mA.

The power cable must comply with type H05RN-F 3X0.75mm.

Single-phase pump motors have a built-in thermal protection device.

Never work on a pump without first checking that the electrical power is switched off.

### ⚠ Caution

The pump must be located in Zone 2 (usually at least 2 meters away from the pool), and the power supply connection for the pump must be located in Zone 3 (usually at least 35 meters away from the pool) according to the requirements stated in the International Standard: Electrical Installations of Buildings Part 7, Requirements for special installations or locations - Swimming pools and other basins (IEC 60364-7-702).

In spite of the earthing terminal, the swimming pool pumps must have their equipotentiality terminal connected to the equipotentiality terminal in the electric wiring before they are put into use. The equipotentiality terminal is marked with the symbol below. If you have any doubt, please contact your electric specialist.



The 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 30mA.

The electrical installation should comply with the national wiring rules.

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.

The pumps can be operated continuously.

There must be an all-pole disconnection switch directly connected to the supply terminals and shall have a contact separation in all poles.

If you have any doubt, please contact your electric specialist.

Please ask professional people to install the swimming pool pump.