AQUA PAK

# SERIE SUPRA6

RECIRCULATING MOTOR PUMP FOR SWIMMING POOLS

V1.0

03/03/2025

**Abstract**

Thank you for choosing the AQUA PAK SUPRA6 series swimming pool motor pump.

This instruction manual will guide you through the correct installation process and help you maintain your equipment in optimal condition. We strongly recommend following the instructions provided here.

Please keep this manual in a safe place for future reference.

The information contained in this document may change without notice.

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# 1. SAFETY AND WARNINGS

### WARNING

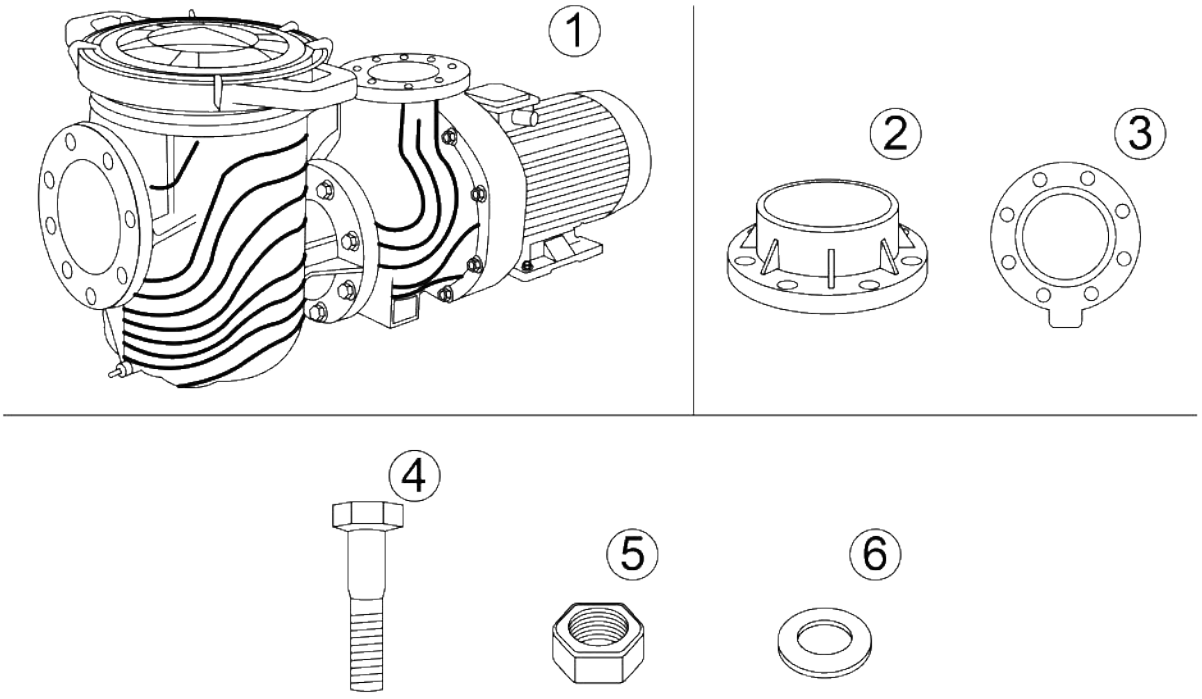
- This motor pump is not designed for use by individuals (including children) with reduced physical, sensory, or mental abilities, or those lacking experience or knowledge, unless they are supervised or trained by a responsible person to safely operate the motor pump.
- For proper protection and startup of three-phase motor pumps, it is recommended to use a suitable device (Enerwell starter) that includes at least the following protections: phase drop, current imbalance, and voltage imbalance.
- If the power cable is damaged, DO NOT operate the motor pump. Contact your authorized dealer for a replacement to avoid risks to personnel or equipment.
- Children should always be supervised to ensure they do not approach the motor pump.

# 2. PACKAGING CHECK

When receiving the motor pump, ensure that the packaging materials are intact.

After unpacking, verify that all materials are complete, undamaged, and match your order.

Inspect the pump and its accessories for any signs of damage, such as scratches, impacts, or cracks.




| No. | Description | Quantity |
|---|---|---|
| 1 | Motor pump | 1 |
| 2 | 6" backflanges | 2 |
| 3 | Packaging | 2 |
| 4 | Screws | 16 |
| 5 | Nuts | 16 |
| 6 | Washers | 32 |

**NOTE**
If you find missing or damaged equipment, contact your authorized distributor.

# 3. INSTALLATION

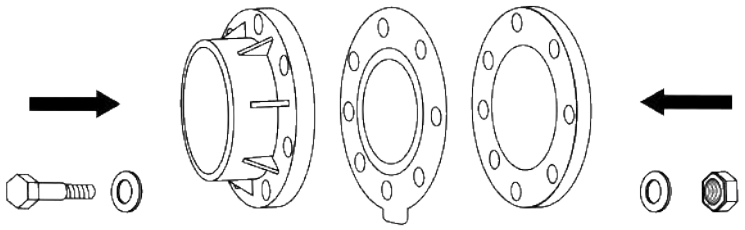
- The location where the motor pump is to be installed must be sheltered, well-ventilated, and free from heat sources (such as boilers, direct sunlight, etc.), flooding, and must have an effective drainage system.
- The motor pump must always be installed in a horizontal position on a stable base, secured with screws in the foot holes, to minimize undesirable noise and vibrations. It should also be placed in an easily accessible area for maintenance.
- Always ensure that the data plate of the motor pump is visible and accessible for possible consultation or wiring modifications, but never leave electrical connections exposed. It is recommended that the motor pump and its electrical installations not be placed in high-traffic areas to avoid interference with its operation and prevent accidental contact.

**CAUTION**
IMPORTANT! TO REDUCE THE RISK, DO NOT ALLOW CHILDREN TO PLAY NEAR THE MOTOR PUMP.

## 3.1. HYDRAULIC INSTALLATION

### SUCTION PIPE

- Attach the packing and counterflange to the suction of the motor pump, securing them with screws, 1 nut, and 2 washers (1 on each side) per hole.



- Apply sufficient PVC glue inside the counterflange connection and on the surface of the end of the pipe. Insert the pipe firmly and ensure that the bond is effective.
- The length of the suction pipe should be as short as possible, but its diameter must be adequate. A smaller diameter pipe at the suction of the motor pump may cause insufficient flow, leading to heating and possible cavitation.
- The diameter of the suction pipe must be at least equal to the suction diameter of the motor pump. However, it is more advisable to install a pipe with a larger immediate diameter. For example, if the motor pump has a 6" suction diameter, it is recommended to install an 8" diameter suction pipe.

**NOTE**
When increasing the diameter of the pipe to the next immediate size, it is recommended to install a pipe section that is 5 times the diameter of the pipe to be installed. This helps avoid turbulence and ensures a more adequate flow towards the suction of the motor pump.

- For motor pump installations with negative suction (when the motor pump is above the pool water level), it is important that the suction pipe is installed with a continuous upward slope. This slight inclination

ensures that any air bubbles present are expelled, preventing air pockets (chambers) that can interrupt the continuous flow and minimizing the risk of cavitation and/or dry running.

- Ensure that all joints (couplings, nipples, union nuts, pipes, hoses, etc.) are properly tightened and sealed, free of leaks or air inlets. Loose joints or cracks in the suction line can significantly affect the motor pump's performance, causing deviations from the planned flow and pressure.
- The length and route of the suction pipe should be as short and straight as possible, minimizing the number of fittings (elbows). Fewer direction changes and keeping the suction pipe closer to the water level will reduce pressure losses due to friction.

**DISCHARGE PIPE**

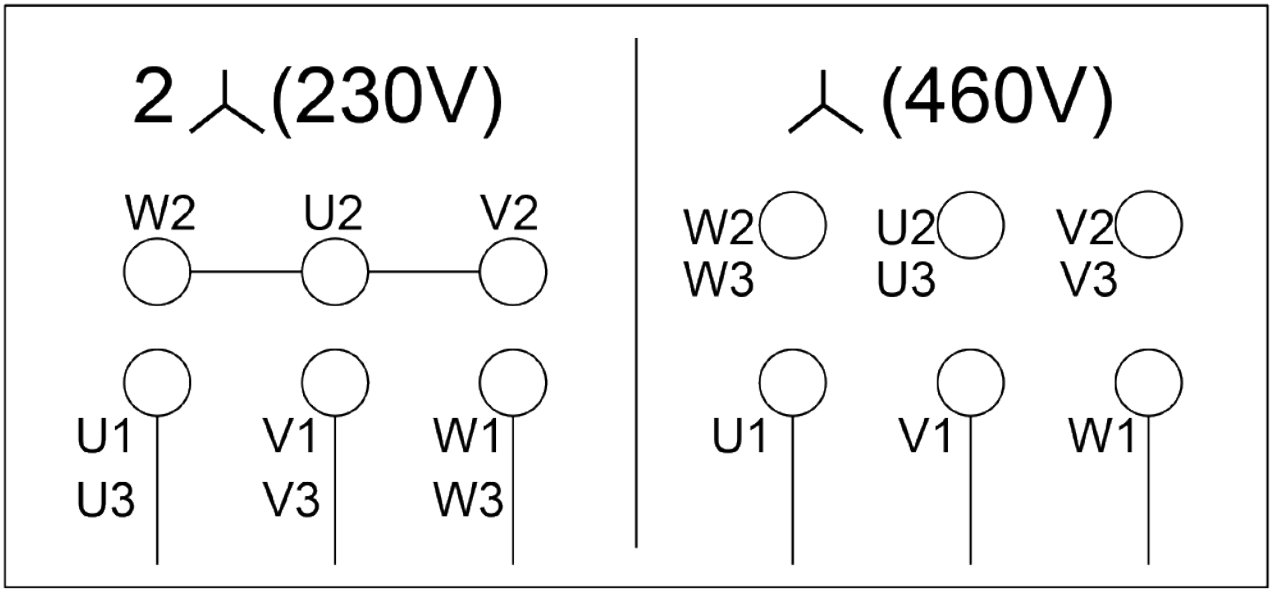
- Attach the packing and counterflange to the discharge of the motor pump, securing it with screws, 1 nut, and 2 washers (1 on each side) per hole.
- Apply sufficient PVC glue inside the counterflange connection and on the end surface of the pipe. Insert the pipe firmly and ensure the bond is effective.
- The diameter of the discharge pipe must be at least equal to the diameter of the motor pump's discharge. It is more advisable to use the next larger size. For example, if the motor pump has a 6” discharge diameter, it is recommended to install an 8” discharge pipe.
- To further reduce friction losses, ensure the return nozzle tubing is connected to a closed loop (LOOP).
- When assembling the system, avoid creating traps or obstructions in the hydraulic installation, as these can affect the system's efficiency, prevent complete draining of the pipes, and disrupt the proper operation of the filtering system.

## 3.2. ELECTRICAL INSTALLATION

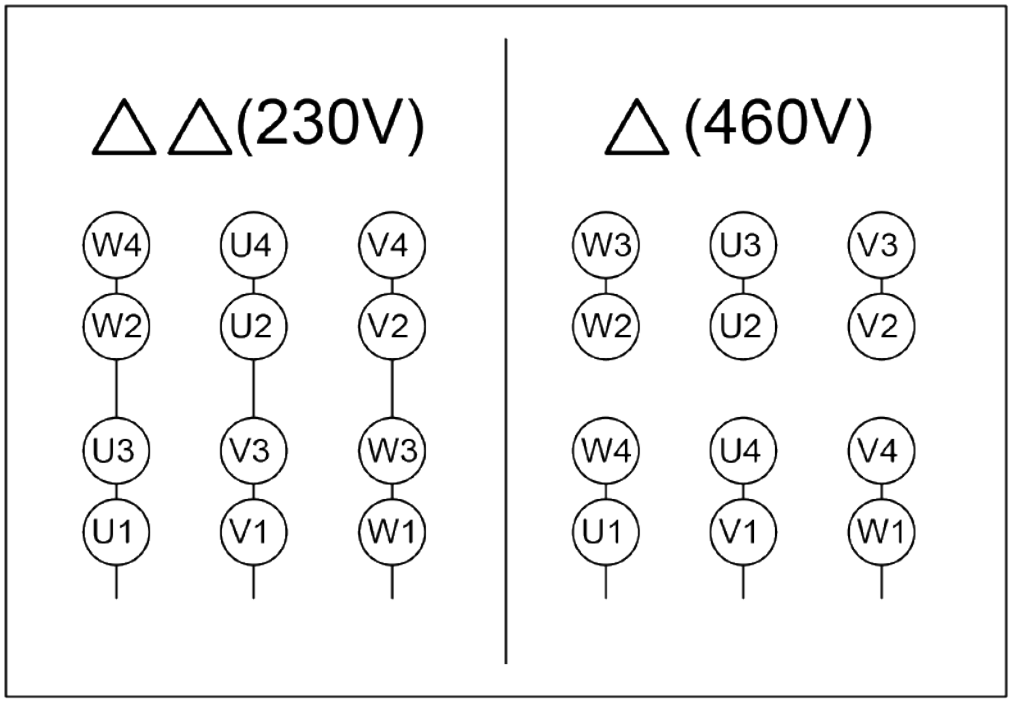
### ELECTRICAL DIAGRAMS

According to the power rating of your motor pump, follow the corresponding wiring diagram:

5 Hp and 10 Hp motor pumps:




15 Hp, 20 Hp and 25 Hp motor pumps:



**STEP BY STEP**

- Ensure that electrical components are securely fixed and well protected to prevent deterioration, and keep them out of children's reach.
- Verify that the supplied voltage matches the specifications on the motor plate.
- Adhere to the electrical standards and regulations for your country.
- Confirm that the power cable gauge is appropriate.

**NOTE**
For longer cable lengths, special attention should be given to selecting the correct cable gauge to avoid exceeding the maximum allowable voltage drop.

- A cable that is too thin can cause heating and premature motor damage. If in doubt, consult a qualified electrician.
- It is recommended not to bury the cable, as it may be damaged by vehicles, lawn mowers, or other equipment over time.
- To ensure protection against electric shock, the installation must be carried out by qualified personnel. The following is recommended:
  - The system’s electrical protection should include a thermomagnetic switch with fast trip due to current leakage to ground, with a trip sensitivity of 30 mA, and must not exceed this value.
  - The power cable must meet electrical standards.
  - Ensure that the cable is properly grounded.
- Replace the power cord immediately if damaged.

**CAUTION**
RISK OF ELECTRIC SHOCK: Connect the electrical ground circuit to the physical ground receptacle (of the facility) and protect it with a fault circuit breaker. Contact qualified personnel to verify the proper functioning of the fault circuit protection.

## 3.3. FLEXIBLE FLANGES

Make sure your kit code SBRI-FLEXR-6 (sold separately) includes the following:

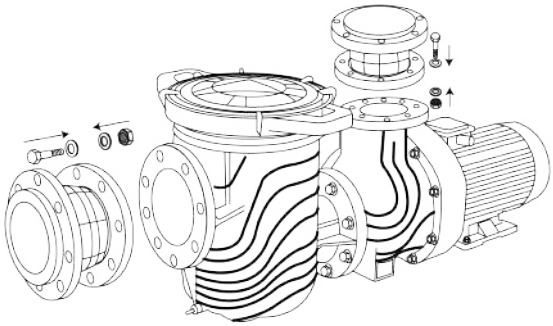
1. 2 flexible flanges
2. 16 screws
3. 32 washers

> **NOTE**
> If any items are missing, please contact your authorized dealer.

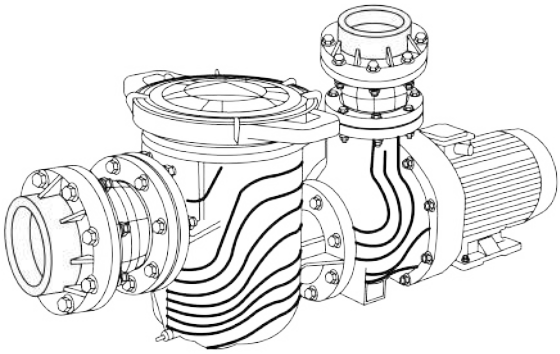
We recommend using our flexible flanges to minimize vibrations in the pipe, thereby extending the motor pump's lifespan.

For installation, follow the next steps:

1. Attach each flexible flange to the suction and discharge of the motor pump, securing them with the screws, nuts, and washers.



2. At the other end of the flexible flanges, attach the counter flanges provided with your motor pump, and securely fasten them with the screws, nuts, and washers.



> **NOTE**
> When installing the flexible flanges, it is unnecessary to use the gaskets included with the motor pump.

# 4. START-UP

### PREVIOUS RECOMMENDATIONS

**WARNING**

- Check that the motor pump shaft rotates freely.
- Verify that the supply voltage and frequency match the motor pump's data plate.
- Ensure the motor's direction of rotation is consistent with the indication on the fan cover.
- If the motor does not start, consult the problem-solving guide (*POSSIBLE FAULTS, CAUSES AND SOLUTIONS [13]*).

**CAUTION**

IMPORTANT! Prime the suction pipe (fill the water pipe) before starting the motor pump.

### OPERATION

- Before starting the motor pump, confirm that the suction and discharge connections are properly secured and free from leaks.

  **CAUTION**

  - It is essential that you complete the entire installation, including connecting the pipes, before supplying power to the motor pump.
  - IMPORTANT! The motor pump should NEVER operate dry.

- Check that there are no obstacles in the pipes.
- Fully prime the suction pipe:
  1. Remove the prefilter cover.
  2. Fill the pipe, pump body, and pre-filter completely with water.
  3. Replace the prefilter cover and ensure it is tightly sealed.
- Allow a reasonable amount of time for the pipe to self-prime.
- NEVER operate the motor pump with the valves closed.
- It is recommended that you verify the amperage is consistent with the motor pump's data plate.
- NEVER operate the multi-pass filter valve with the motor pump turned on.

# 5. MAINTENANCE AND CLEANING

The SUPRA6 motor pump does not require a specific maintenance or cleaning schedule.

However, it is recommended to periodically check the suction prefilter to ensure that it filters the pool's sediment effectively. Cleaning the prefilter is essential to avoid obstructions that may reduce the motor pump's performance and priming capacity.

**NOTE**
SUPRA6 models feature an integrated pre-filter.

Follow these steps to clean the pre-filter:

1. Turn off the motor pump and disconnect the power supply.
2. Close the system valves (inlet and outlet of the motor pump).
3. Open the prefilter cover.
4. Remove the pre-filter, empty it and clean it carefully.
5. Replace the pre-filter.
6. Securely close the prefilter cover, ensuring the gasket is positioned correctly to create a hermetic seal.
7. Reopen the valves. The motor pump should never operate with the valves closed.
8. Restart the motor pump.

If the motor pump will remain inactive for an extended period, it is recommended to disassemble, clean, and store it in a dry, ventilated area.

# 6. POSSIBLE ANOMALIES, CAUSES AND SOLUTIONS

| ANOMALY | POSSIBLE CAUSE | SOLUTION |
|---|---|---|
| The motor pump does not turn on | Incorrect voltage | Check that the voltage supplied to the motor is in accordance with the data plate specifications of the equipment. |
| | No voltage is coming | Ensure that the circuit switch is closed and the motor pump switch is turned on. |
| | False contacts | Readjust all wiring connections. |
| | Thermal protection activated: | Allow the motor to cool down, after which it will start automatically. |
| The motor pump does not give the correct flow | Clogged or leaking pipe | Ensure there is an adequate distance between the suction and discharge pipes in the pool to prevent air bubbles from entering the suction pipe. |
| | | Inspect the suction pipe for blockages or incomplete priming. |
| | | Verify that the motor pump body is free of any obstructions that could affect the flow. |
| | | Check for any leaks in the connections between the motor pump and the pipe. |
| | Limited piping | Ensure that the suction pipe diameter is not smaller than the suction diameter of the motor pump. |
| | Very high suction level | Reduce the suction level of the motor pump. |
| | Low voltage | Check that the voltage supplied to the motor pump is adequate. |
| | | Avoid using electrical extensions. |
| | Clogged pool accessories | Clean pool accessories such as the skimmer, bottom drain, pre-filter, filter, etc. |
| The motor pump makes noise | Semi-closed or fully closed valves | Check that the valves are fully open. |
| | Closed filter valve | Ensure that the filter valve is not in the closed position. |
| | Limited piping | Verify that the suction pipe diameter is not smaller than the suction diameter of the motor pump. |
| | Vibrations in the equipment | Secure the motor pump to an immovable base using screws through the holes in the motor pump's foot. |
| | Obstructions in the motor pump body | Inspect the motor pump body to ensure nothing is obstructing its flow. |
| | Possible pipe leaks | Check for leaks in the joints (couplings, nipples, union nuts, etc.). |
| | Clogged pool accessories | Clean pool accessories such as the skimmer, bottom drain, pre-filter, and filter. |
| Problems with pipe priming | If it has a pre-filter and it has leaks | Check that the pre-filter cover is completely closed |
| | Suction pipe disconnected | Ensure that the suction pipe is properly connected to the pool. |
| | Very high suction level | Reduce the suction level of the motor pump. |
| | Possible pipe leaks | Verify that there are no leaks in the joints (couplings, nipples, union nuts, etc.). |
| | Air intake through the accessories: sweeper hose, skimmer, bottom drain | Check that the accessory pipes are not leaking and are free of air intake. |
| | Semi-closed or fully closed valves | Make sure the valves are fully open. |

# 7. USES AND PROHIBITIONS

**USES**

Water circulation in filter systems for swimming pools.

Installation in roofed, ventilated and dry spaces, protected against heat sources

Use with properly sized, clog-free and well-sealed pipes.

**PROHIBITIONS**

Do not install in places exposed to direct rain, intense sun or excessive heat.

Prohibited for use by untrained people, especially minors

Do not use cables that are damaged, poorly calibrated or without adequate grounding.

Do not operate with closed or partially closed valves, as this causes damage to the system.