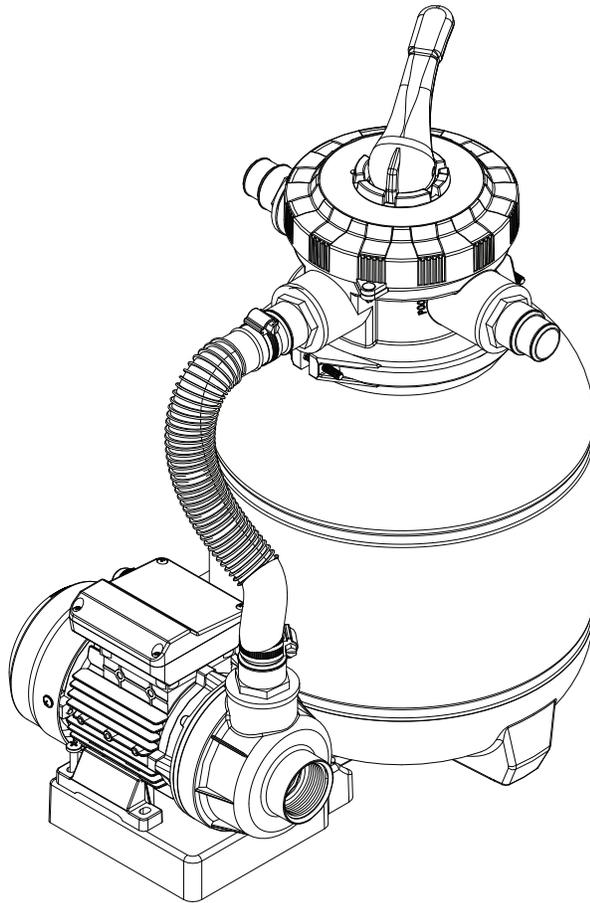




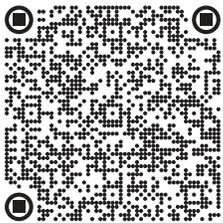
0.25HP 115V 1 SPEED 12" 7-WAY ABOVE GROUND POOL PUMP AND SAND FILTER SYSTEM

ITEM: 75030



INSTALLATION AND USER'S GUIDE

Full Installation and
User Guide and Instruction Video



⚠ DANGER

**Read all safety warnings and instructions.
Failure to follow the warnings and
instructions may result in electric shock,
fire and/or serious injury. Save all warnings
and instructions for future reference.**

CUSTOMER SERVICE

If you have any questions about ordering our pool pumps and replacement parts or pool products, please feel free to contact us using the following contact information:

Customer Service and Technical Support

Phone: (909) 628-0880

Email: customer@xtremepowerusa.com

Hours of Operation: Monday – Friday, 9AM – 4PM (CST)

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IMPORTANT SAFETY INSTRUCTIONS

IMPORTANT SAFETY INSTRUCTIONS

This guide provides instructions for installing and using the pump. If you have any questions about the equipment, please contact XtremepowerUS.

This guide contains important information about safely installing and operating this product. After installation, make sure to share this information with the owner/operator or leave it with them for their reference.

Legends and Symbols

When you come across the safety-alert symbol on your equipment or in this manual, pay attention to the following signal words and remain vigilant about the potential for personal injury.

-  **DANGER:** Ignoring these hazards can result in death, severe personal injury, or significant property damage.
-  **WARNING:** Indicates potential hazards that can result in severe personal injury, death, or significant property damage. Ignoring these warnings presents a real danger.
-  **CAUTION:** Indicates potential hazards that can result in minor or moderate personal injury, property damage, or actions that are unpredictable and unsafe. Ignoring these cautions presents a potential hazard.
-  **NOTE:** This label indicates important special instructions that are not directly related to hazards.

USE OF NON-XTREMEPOWERUS REPLACEMENT PARTS VOIDS WARRANTY

ATTENTION INSTALLER: This manual contains vital information regarding the installation, operation, and safe use of this variable speed pump. It is essential to provide this manual to the end user of the product. Failure to read and follow all instructions could lead to severe injuries.

 **DANGER** Failure to comply with all instructions and warnings may lead to severe bodily injury or even death. Having a qualified plumbing professional handle the pump installation is essential. Prior to using this pump, installers, pool operators, and owners must carefully review these warnings and all instructions provided in the owner's manual. It is essential to leave these warnings and the owner's manual with the pool owner for their reference and safety.

 **WARNING** For safety reasons, children should not be allowed to use this product.

IMPORTANT SAFETY INSTRUCTIONS

⚠ DANGER Risk of electrical shock. Connect this product solely to a branch circuit that is safeguarded by a ground-fault circuit interrupter (GFCI). If you are unable to confirm the presence of a GFCI protection on the circuit, please seek assistance from a qualified electrician.

⚠ WARNING Please note that this unit must only be connected to a supply circuit protected by a ground-fault circuit-interrupter (GFCI). The installation of a GFCI is the responsibility of the installer, and it should be regularly tested for proper functioning. To test the GFCI breaker, simply press the test button, which should interrupt power. Pressing the reset button should restore power. If the GFCI fails to operate as described, it is defective and should be replaced. If the GFCI interrupts power to the pump without pressing the test button, it indicates the presence of a ground current and the possibility of electric shock. In such cases, do not use the pump. Disconnect it immediately and seek the expertise of a qualified service representative to address and rectify the issue before resuming use (to test the GFCI breaker).

⚠ WARNING This pump is specifically designed for use with permanent swimming pools and, if appropriately marked, can also be used with hot tubs and spas. However, it should not be used with storable pools. A permanently installed pool is one that is built in or on the ground, or within a building, making it incapable of being easily disassembled for storage. On the other hand, a storable pool is designed to be disassembled and reassembled for storage while maintaining its original integrity. Please ensure that this pump is only used with permanent swimming pools and hot tubs or spas if appropriately indicated. Avoid using it with storable pools to prevent potential hazards and ensure optimal performance.

IMPORTANT SAFETY INSTRUCTIONS

GENERAL SAFETY

⚠️ WARNING

- This pump and sand filter system is not designed to be submersible.
- Do not attempt to open the inside of the drive or motor enclosure, as there is a capacitor bank that can retain a potentially dangerous electrical charge, even when the unit is not powered.
- Prior to servicing the pump and sand filter system, switch OFF the power by disconnecting the main circuit to the pump.
- Before working on the filter, release air pressure and disconnect power to the pump.
- The sand filter is designed to operate with water temperatures between 32.0°F to 113.0°F (0°C to 45°C). Operating the filter outside of this temperature range may cause damage.
- Exercise caution when installing and programming the pump to limit its performance potential when using old or questionable equipment due to its high flow rates.
- Note that electrical connection requirements may vary from country to country, state to state, and local municipalities. Install the equipment following the National Electrical Code and all relevant local codes and ordinances.
- This equipment is not intended for use by individuals (including children) with reduced physical, sensory, or mental capabilities, or those lacking experience and knowledge, unless they have received supervision or instruction regarding its safe usage from a responsible person.

⚠️ WARNING

- During installation, ensure proper drainage around the pump to prevent water from entering the electrical components.
- To ensure optimal performance, it is crucial to use the proper size pump for the specific application and install it correctly. Only through meticulous sizing and installation can the pump function as intended.
- The use of pumps that are improperly sized, installed, or employed for applications other than their intended purpose can lead to severe personal injury or even death. These risks encompass potential hazards such as electric shock, fire, flooding, suction entrapment, or critical injuries and property damage resulting from structural failures of the pump or other system components. It is essential to strictly adhere to the correct sizing, installation, and designated usage to mitigate these potential dangers and ensure the safety of all users and the surrounding environment.

IMPORTANT SAFETY INSTRUCTIONS

⚠ DANGER

The pump has the potential to generate significant levels of suction within the plumbing system's suction side. This heightened suction presents a considerable risk if individuals come too close to the suction openings. Being near these openings can result in severe injuries caused by the intense vacuum or may lead to entrapment and drowning.



SUCTION ENTRAPMENT HAZARD

⚠ WARNING

To minimize the risk of injury caused by suction entrapment hazards, please follow these safety guidelines:

- Use only properly installed and secured ANSI/ASME A112.19.8 approved anti-entrapment suction covers for each drain.
- Ensure that each suction cover is installed at least three (3') feet apart, measured from the nearest point to nearest point.
- Regularly check all suction covers for cracks, damage, and excessive weathering.
- Promptly replace any loose, cracked, damaged, broken, or missing cover with an appropriate certified one.
- Periodically replace drain covers as necessary since they deteriorate over time due to exposure to sunlight and weather.
- Avoid placing hair, limbs, or your body near any suction cover, pool drain, or outlet.

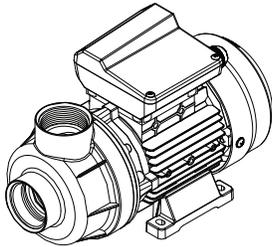
⚠ WARNING

By adhering to these precautionary measures, you can significantly reduce the risk of injury associated with suction entrapment hazards.

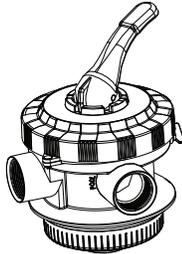
OVERVIEW (PRODUCT INFORMATION)

OVERVIEW (PRODUCT INFORMATION)

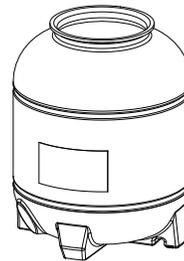
PACKAGE CONTENTS



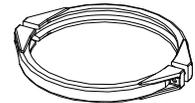
PART# 12: PUMP 2.5HP
1 PC(S)



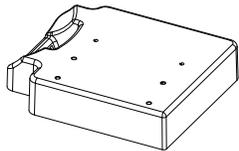
PART# 1: 7-WAY VALVE
1 PC(S)



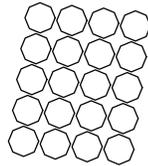
PART# 6: FILTER TANK
1 PC(S)



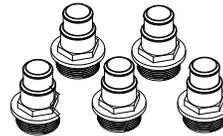
PART# 4: LOCKING RING
1 SET(S)



PART# 14: PUMP BASE
1 PC(S)



COTTON FILTER
1 SET(S)



PART# 10: HOSE ADAPTER
5 PC(S)



PART# 8: HOSE
1 PC(S)



PART# 7: FILTER DRAIN NOZZLE
1 SET(S)



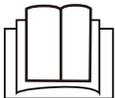
PART# 5: FILTER ASSEMBLY
1 PC(S)



PART# 9: HOSE CLAMP
2 SET(S)



PART# 13: SCREW ASSEMBLY
4 PC(S)



USER'S GUIDE
1 PC(S)



PART# 3: O-RING (LARGE)
1 PC(S)



PART# 11: O-RING (REGULAR)
7 PC(S)



O-RING (SMALL)
1 PC(S)



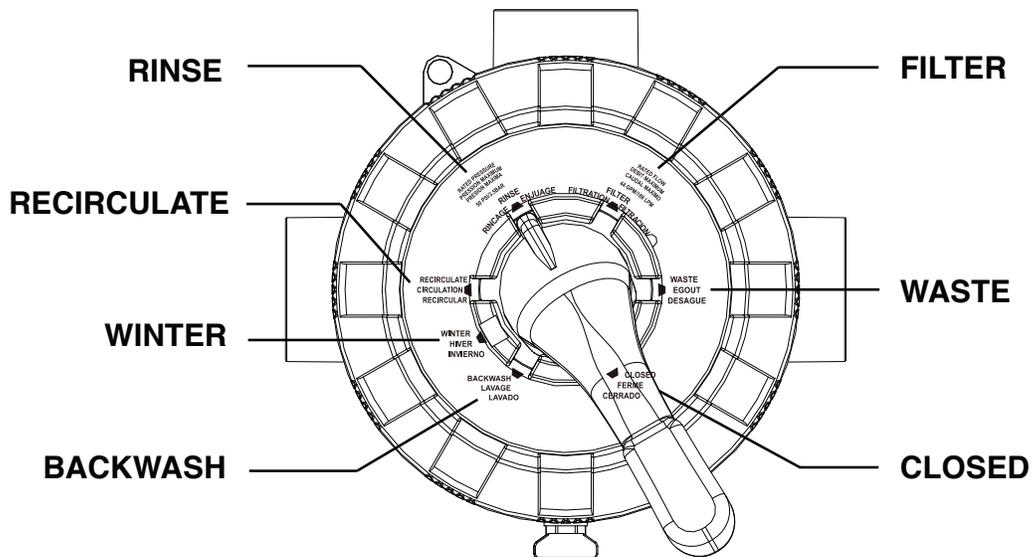
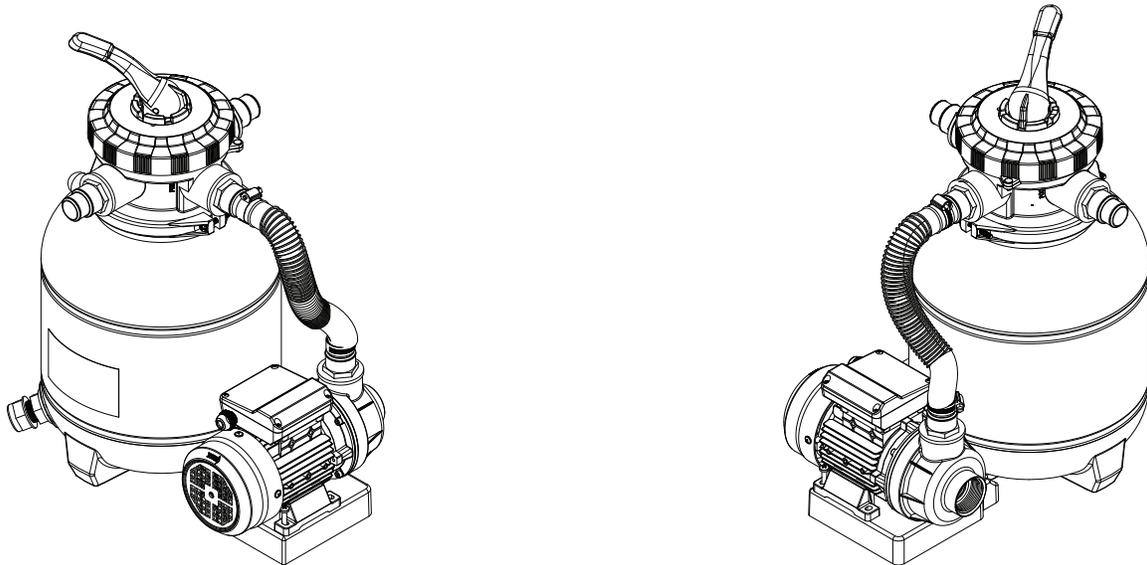
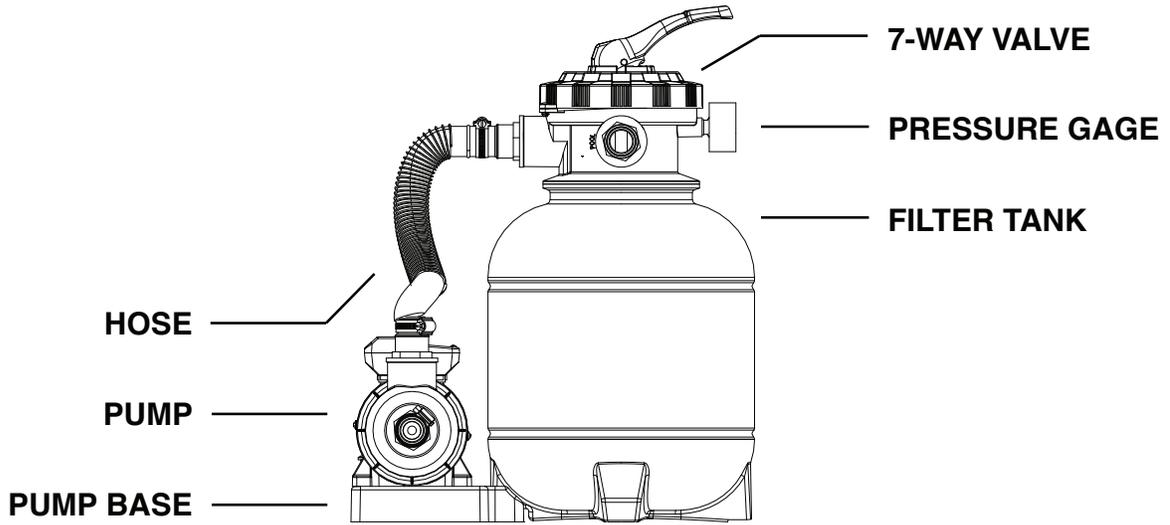
TEFLON TAPE
1 PC(S)



PART# 2: PRESSURE GAUGE
1 PC(S)

OVERVIEW (PRODUCT INFORMATION)

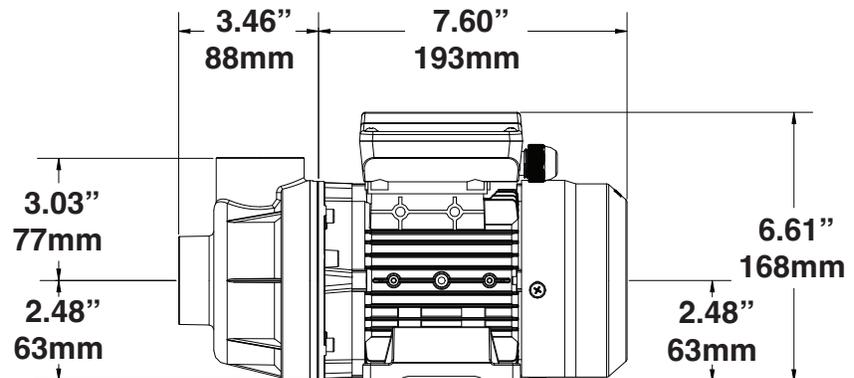
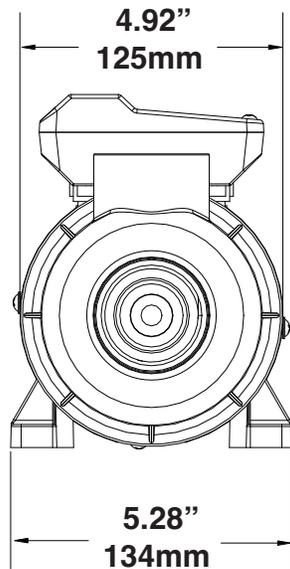
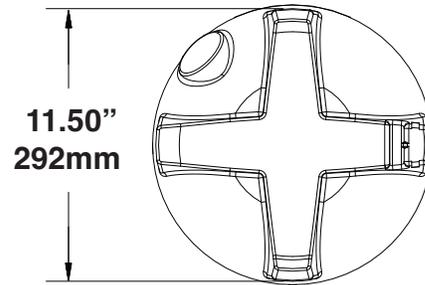
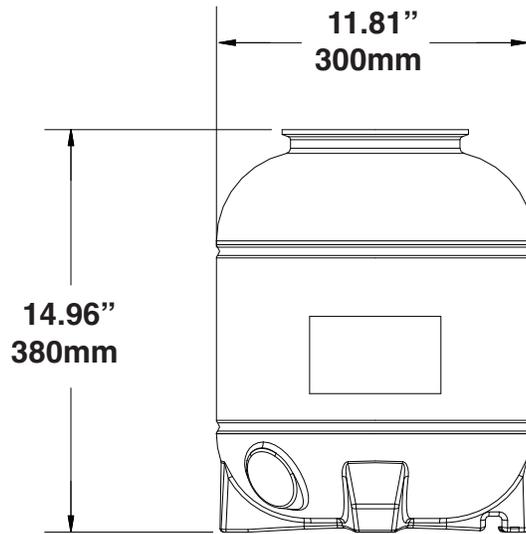
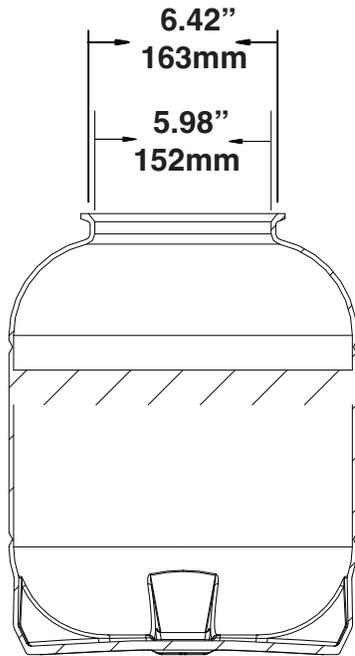
PUMP AND SAND FILTER SYSTEM



OVERVIEW (PRODUCT INFORMATION)

PRODUCT DIMENSIONS

General product dimensions



OVERVIEW (PRODUCT INFORMATION)

SPECIFICATIONS

| | | |
|----------------------------------|------------------------------|-----------------------------------|
| Input Voltage / Frequency | 115 V / 60 Hz | |
| Input Current | 2.5 Amp | |
| Speed | Single (1) Speed | |
| RPM | 3450 RPM | |
| Horsepower | 0.25 HP | |
| WEF | 6.5 | |
| Maximum Continuous Load | 2400 GPH (Gallons Per Hour) | |
| Ambient Conditions | Storage | -40°F to +140°F (-40°C to +60°C) |
| | Operating | +32°F to +122°F (0°C to +50°C) |
| | Humidity | Relative 0 to 95 % Non-condensing |
| | Water Temperature | +32.0°F to +113.0°F (0°C to 45°C) |
| Pool Type | Above Ground | |
| Hmax (Maximum Head) | 6.6M | |
| Qmax (Maximum Flowrate) | 140L / Min (37GPM) | |
| Max Lift-up | 34.4 ft | |
| Drum Capacity | Up to 43 lbs | |
| Waterproof Level | IPX 5 | |
| Certification | UL Listed | |
| | CSA Certificated | |
| | ETL Listed | |
| Feature | Thermal Protected | |
| | Heavy-Duty Long-Lasting Case | |

INSTALLATION

For detailed guidance on safe installation, please refer to the IMPORTANT SAFETY INSTRUCTIONS provided on pages 3 to 6. These instructions are vital to ensure the pump is set up correctly, maintaining safety and optimal performance.

LOCATION

NOTE

- Pumps without strainer bodies require flooded suction (all fittings and piping below water level) and won't self-prime. Install the pump below water level when the pool is filled, or use suction line valves for priming. Minimize vertical distance if mounting above water level.
- It's recommended to connect the pump to an external skimmer on the pool. This would help prevent debris from entering the pump and ensures smoother operation.
- Position the pump as close to the pool or spa as feasible, ensuring it is placed on a dry, well-ventilated surface away from direct sunlight. Consider the following factors:
 - Ensure proper drainage away from the pump.
 - Provide adequate ventilation for the pump motor.
 - Allow easy access for future servicing and winterizing needs.
 - Protect the pump from exposure to the elements.
- Do not install this pump and sand filter system within an outer enclosure or beneath the skirt of a hot tub or spa unless specific markings indicate its suitability for such installation.
- Set the pump and sand filter system on a level concrete slab, stable ground, or an equivalent surface to avoid straining the attached plumbing.
- Position the filter carefully, considering the piping connections for easy operation and servicing.
- Ensure that the compliance label is facing the front, making it easily identifiable in case of service difficulties.
- During installation, it is crucial to mechanically secure the pump and sand filter system to the included system ray. Proper mechanical securing guarantees stability and safe operation of the pump and sand filter system during its use.
- Reduce the use of connecting adapters and minimize bending in the hose connections to decrease water flow scrubbing and maximize effectiveness.
- Avoid excessive application of solvents to fittings to prevent running into O-rings and causing sealing problems.
- Do not over-tighten fittings or adapters.

INSTALLATION

Ensure that the pump location satisfies the following requirements:

- Position the pump and sand filter system close to the pool or spa, using short and direct suction and return piping to minimize friction loss and improve efficiency.
- During installation, maintain a minimum distance of 5 feet (1.5 meters) from the inside wall of the pool and spa.
- Keep a minimum distance of 3 feet (0.9 meters) between the pump and the heater outlet.
- Avoid installing the pump at a location higher than 10 feet (3.1 meters) above the water level.
- Select a well-ventilated site for the pump, providing protection from excessive moisture, such as rain gutter downspouts or sprinklers.
- Allow at least 3 inches (7.6 centimeters) of rear clearance during installation to facilitate easy motor removal for maintenance and repair.
- Ensure the filter operates within the recommended pressure range and, if the system includes a booster pump, use a pressure control valve.
- If the pump is positioned higher than the water level, install a backwater control valve.
- If the pump is situated lower than the water level, an isolation valve is necessary to prevent water from flowing back during general inspections.

While the pump is designed for outdoor use, it is advisable to position both the pump and filter in the shade to shield them from continuous direct heat. Select a well-drained location that will not flood during rainy periods. Never install the pump and filter in a damp or poorly ventilated area. Keeping the motor clean is crucial, as pump motors require unrestricted air circulation to aid in cooling.

ELECTRICAL



RISK OF ELECTRICAL SHOCK OR ELECTROCUTION.

It's crucial to follow the National Electrical Code and all relevant local codes and ordinances. Going against these rules can result in a high risk of electrical shock, potentially leading to severe injury, death, or property damage for individuals involved. To prioritize safety and prevent potential hazards, adhering to electrical safety regulations and guidelines is crucial.



Always ensure the power to the pump is disconnected from the power source before performing any service or maintenance. Failure to do so can lead to severe injury or even death for service personnel, pool users, or others due to electric shock, and may also result in property damage. Prior to servicing the pump, ensure complete disconnection from the power source to ensure the safety of everyone involved and to prevent any potential hazards or accidents.

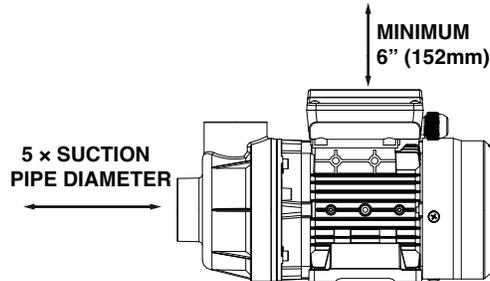
Prior to commencing any work on the pump, **thoroughly read and familiarize yourself with all servicing instructions.** This practice ensures your understanding of the proper procedures and precautions necessary for safe and effective pump servicing. Neglecting to do so may result in accidents, injuries, or damage to the pump or surrounding equipment. Prioritize safety by carefully reviewing all instructions before undertaking any maintenance tasks.

INSTALLATION

PUMP AND SAND FILTER SYSTEM INSTALLATION GUIDE

Step 0: Before starting the installation

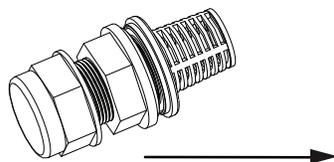
Ensure that the designated location has sufficient space and meets all the installation requirements. Refer to chapter “Installation” -> “Location” -> “Ensure that the pump and sand filter system location satisfies the following requirements:”



Step 1: Sand Filter Drain Installation

- A. Disassemble the Filter Drain Nozzle, and arrange the drainage components in the following order as showing in **Figure A**: #6.1, #6.2, #6.3, #6.4, #6.5, and #6.6. Apply #6.5 onto #6.6 (**Figure B**).

Figure A.



Filter Drain Nozzle

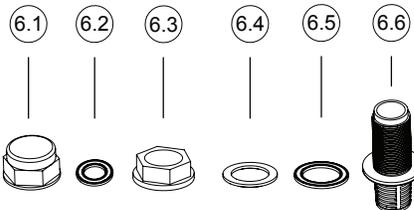
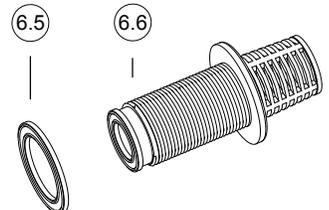
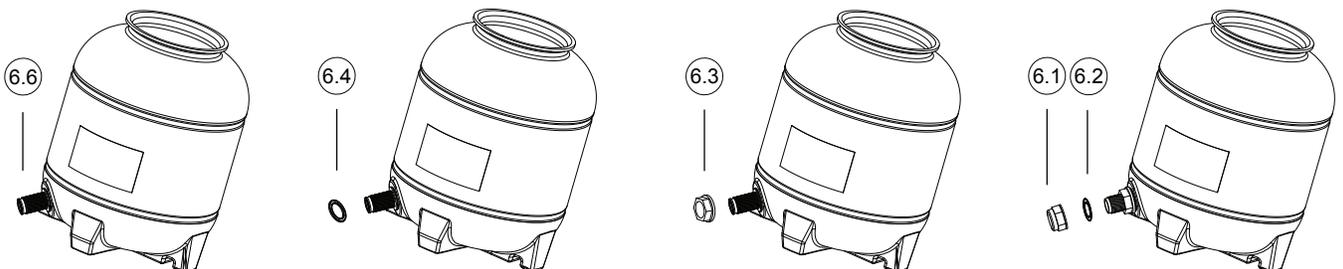


Figure B.



- B. Insert the assembled #6.5 and #6.6 into the filter tank's opening. On the out side of the filter tank, install other drainage components onto #6.6 in the following order: #6.4, #6.3, #6.2, and #6.1.



- C. Manually tighten all the components to secure the filter drain. Do not overtighten. No tools are required.

INSTALLATION

Step 2: Pump Base Installation

A. Place the pump base on a flat surface.



NOTE

The equipment must be placed on a level surface with adequate ground hardness; if positioned on grass, a flat wooden board should be used as a base for leveling.

B. Using bolts to secure the pump to the pump base. (*Figure A., Figure B.*)

Figure A.

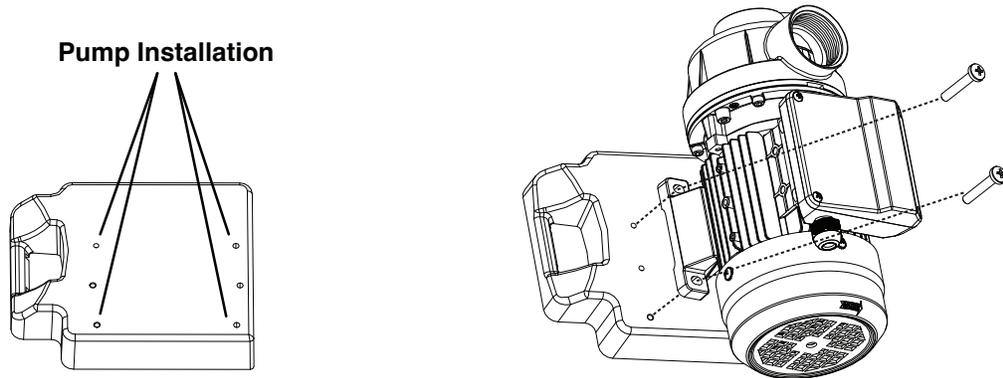
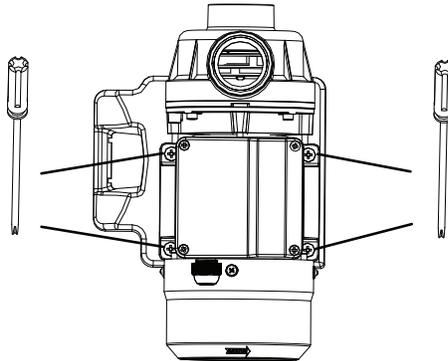


Figure B.



INSTALLATION

Step 3: Pressure Gauge Installation

- A. Apply the o-ring (large) at the bottom of the 7-way valve and place them on the top of filter tank. Remove the plug from the pressure gauge port on the side of 7-way valve.
- B. Clockwise wrap the pressure gauge's thread with Teflon tape.
- C. Clockwise screw in the pressure gauge, then manually tighten.

Figure A.

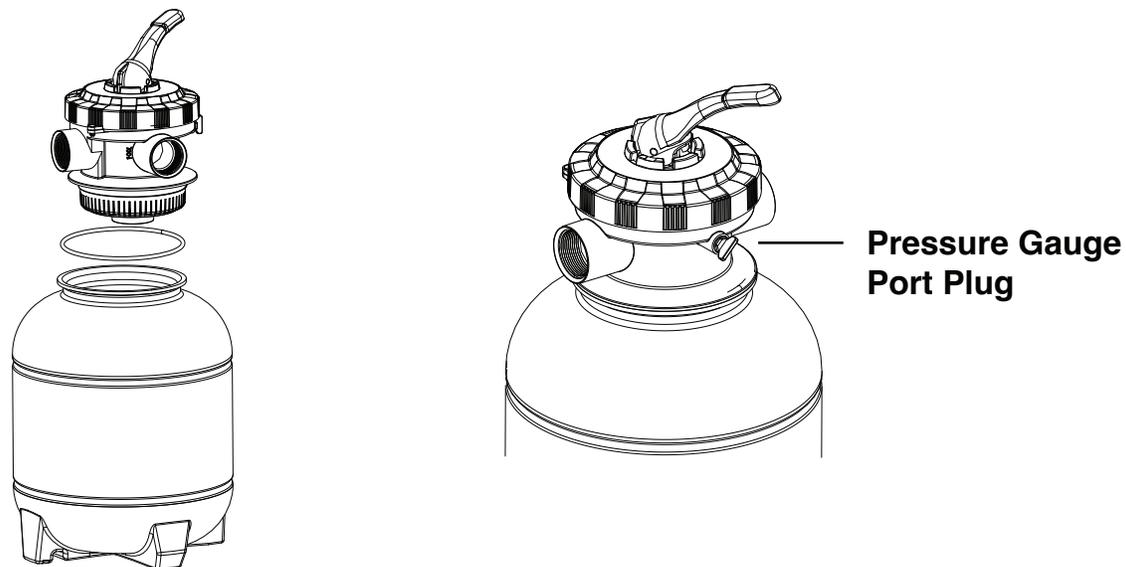


Figure B.

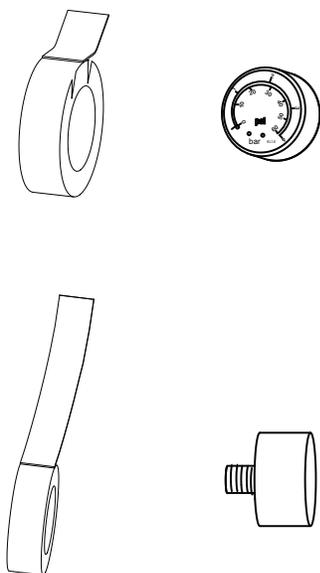
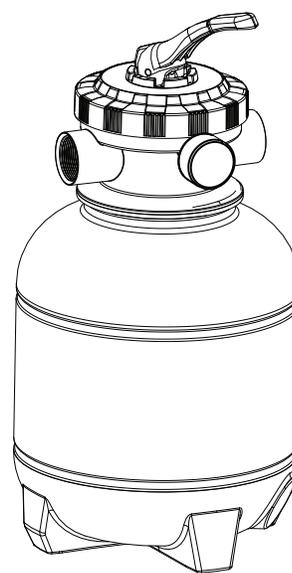


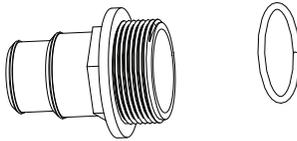
Figure C.



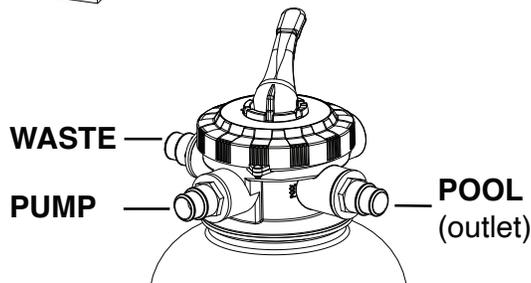
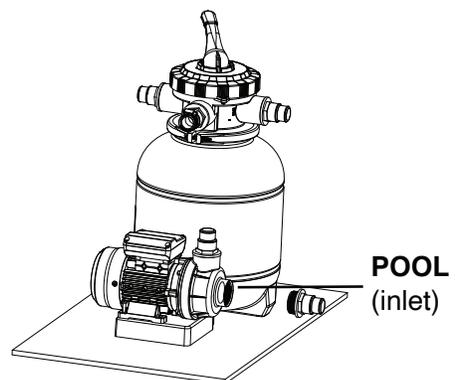
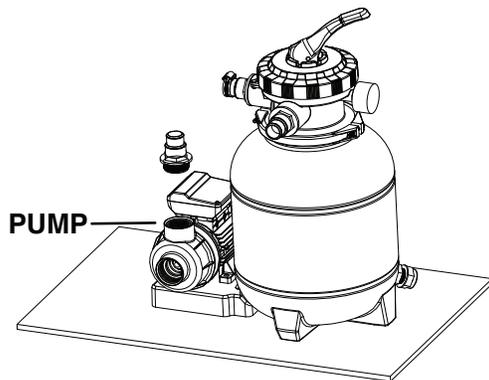
INSTALLATION

Step 4: Hose Adapter Installation

- A. Place 1 piece of o-ring (regular) on the threaded end of each hose adapter.

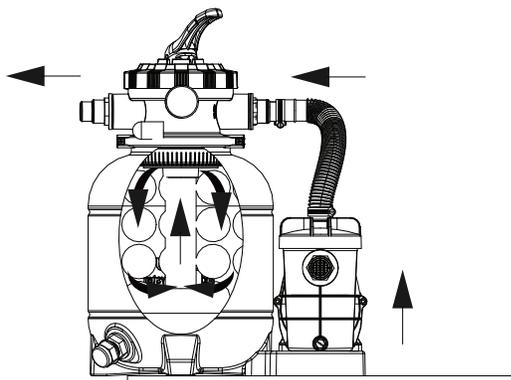


- B. Install the hose adapters onto the specified ports on the 7-way valve and the pump, then manually tighten the hose adapters.



C. Water Flow Direction Diagram

The 7-way valve automatically directs incoming water from the piping system to the top of the filter bed. Once the water passes through the filter system, it captures and traps dirt and debris, effectively filtering them out. The filtered water is then returned from the bottom of the filter tank, flows through the 7-way valve, and is sent back through the piping system.

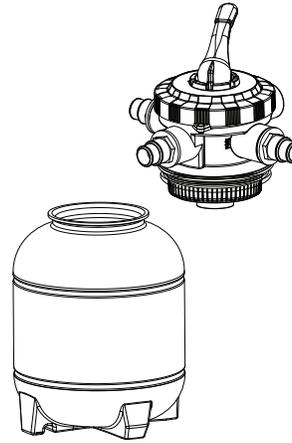


INSTALLATION

Step 5: Adding Filter Media (Cotton Ball (Step 5: B.1) or Sand (Step 5: B.2))

- A. Remove the 7-way valve from the filter tank.
 - a. for **Cotton Ball** Filter Media: **Step 5: B.1**
 - b. for **Sand** Filter Media: **Step 5: B.2**

Figure A



B.1 For **Cotton Ball** Filter Media:

- a. Place the filter assembly in the center of the sand filter, ensuring the pipe remains upright during the media loading process.
- b. Place the funnel at the top of the filter tank by aligning it with the filter assembly. Then, evenly fill the filter tank with the swimming pool filter cotton ball.
- c. Remove the funnel.

Figure B.1.a

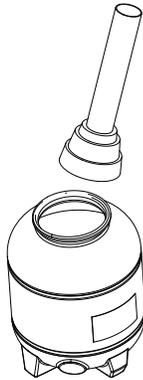
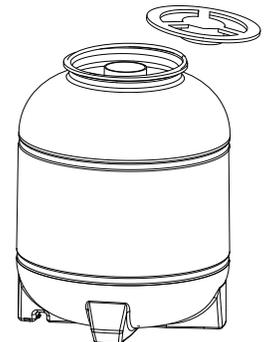
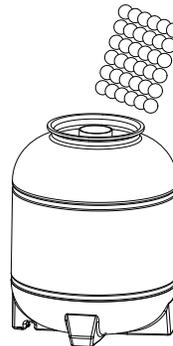
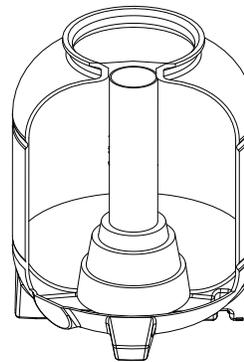


Figure B.1.b



Figure B.1.c



INSTALLATION

Step 5: Adding Filter Media (Continued)

! WARNING

Use only **POOL FILTER SAND** for this step.

Use only the specific type of sand intended for the sand filter's purposes when performing this step.

B.2 For **Sand Filter Media**: (the sand is not included)

- a. Place the filter assembly in the center of the filter tank, ensuring the pipe remains upright during the media loading process.
- b. Place the funnel at the top of the filter tank by aligning it with the filter assembly. Then, evenly fill the filter tank with the required amount of swimming pool filter sand.
- c. **Sand Selection and Loading Requirements:**
 - **Commonly used sand:** #20 (0.71mm) quartz sand
 - **Sand density:** 0.1 lb/ft³ (1.6kg/m³)
 - **Standard weight for sand loading:** 50 lbs
 - **Maximum sand loading in the tank:** Fill up to two-thirds of the filter tank.
- d. Remove the funnel and make sure to thoroughly clean the tank's neck.

Figure B.2.a

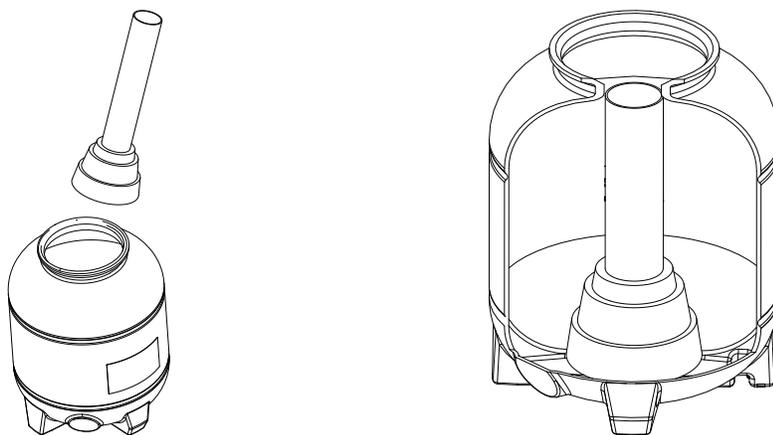
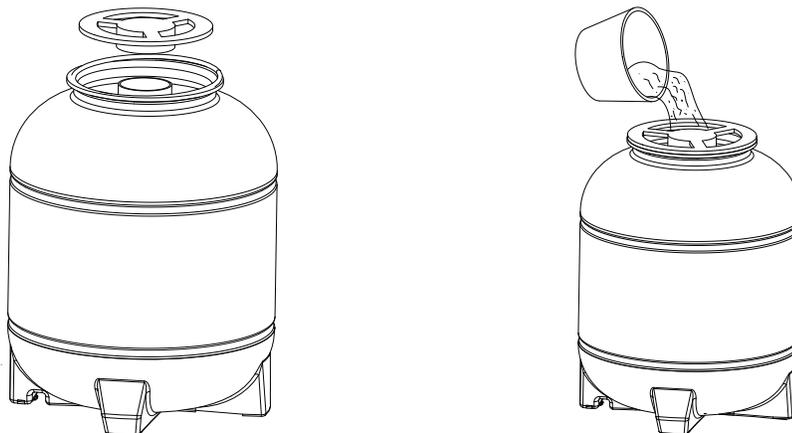


Figure B.2.b

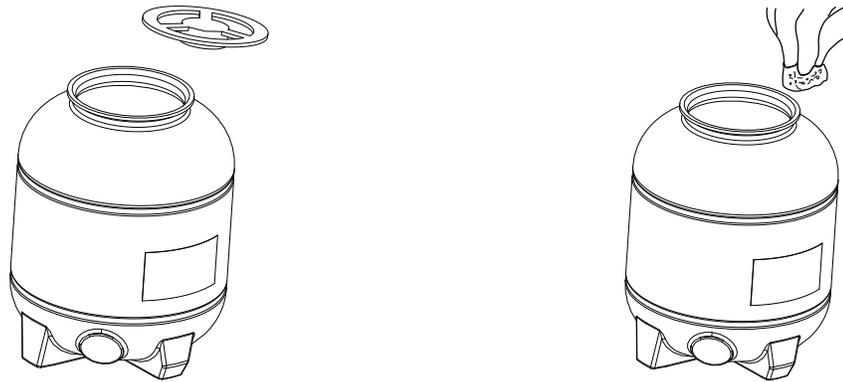


*The sand is not included

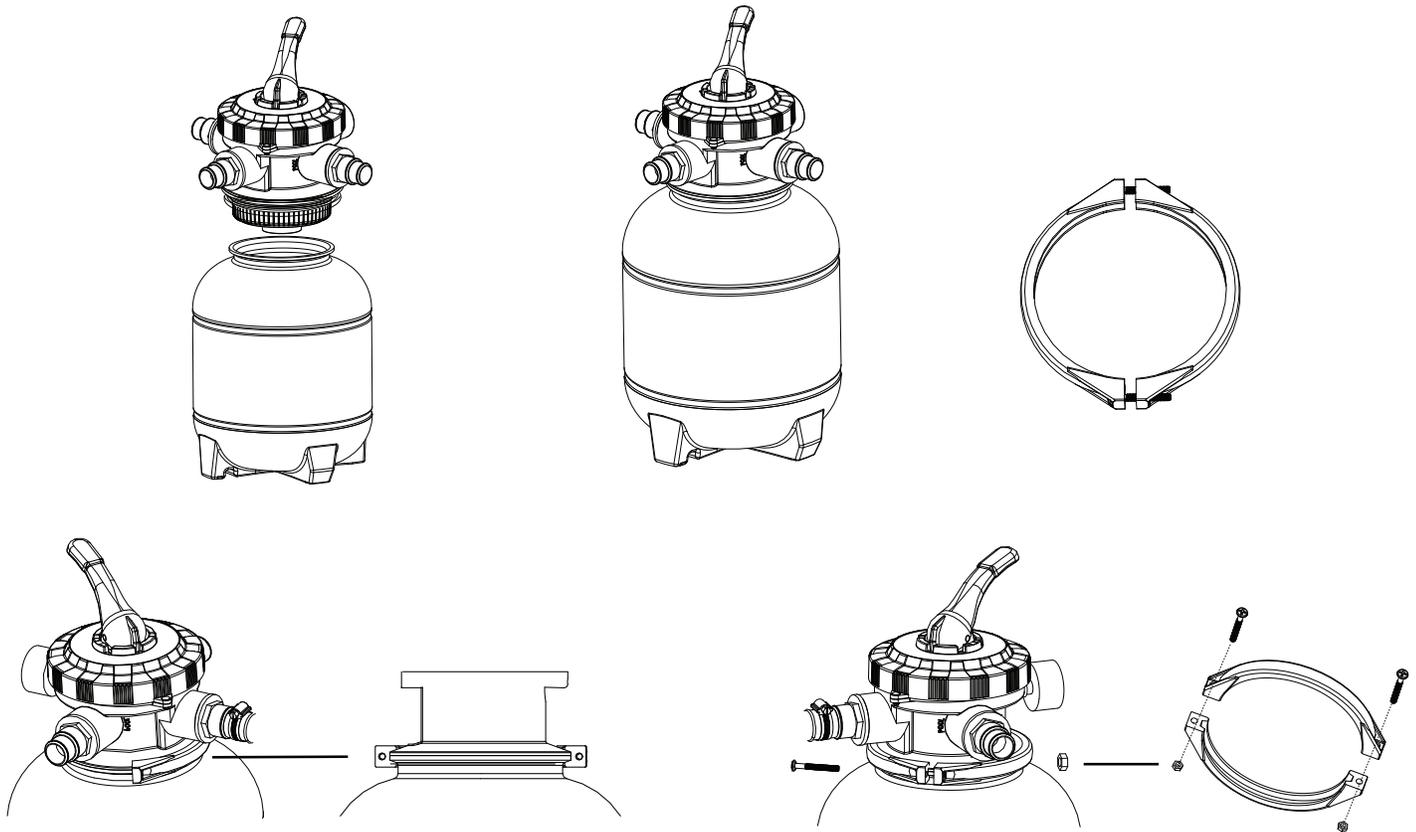
INSTALLATION

Step 5: Adding Filter Media (Continued)

Figure B.2.c



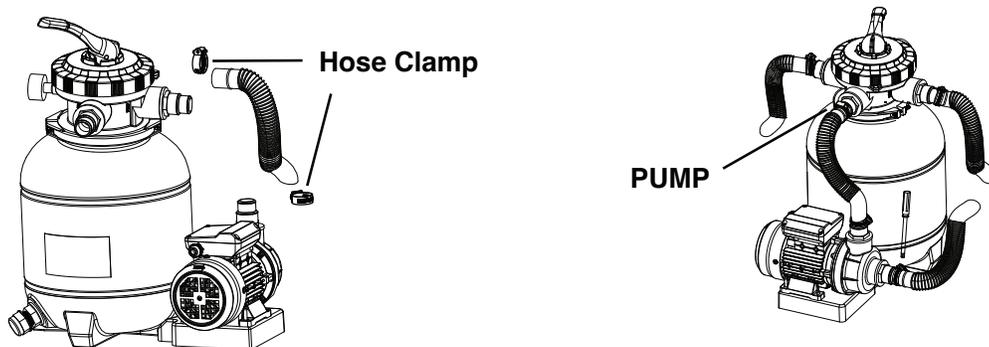
- C. Reinstall the 7-way valve onto the filter tank. Tighten and install the locking ring clamps on the outer filter tank's neck, and secure both end screws.



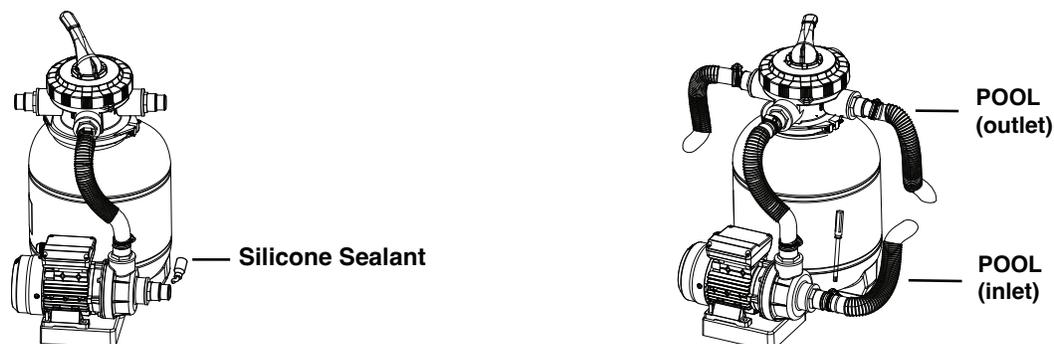
INSTALLATION

Step 6: Hose Attachment

- A. Insert a hose clamp onto one end of the hose adapter, attach the hose, and secure it by tightening the hose clamp onto the "PUMP" port of the 7-way valve. Repeat the same process to attach the hose onto the hose adapter of the "PUMP" port of the pump.



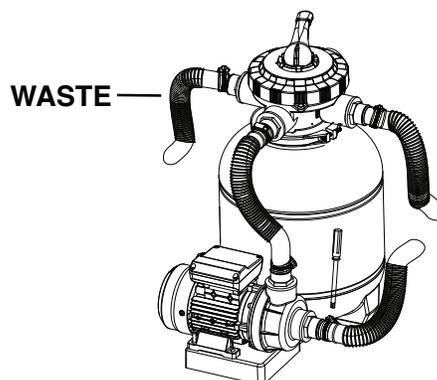
- B. Repeat the above method to attach the hoses for the "POOL (inlet)" and "POOL (outlet)" ports. (The pool inlet and outlet hoses are not included)
(Optional) Apply silicone sealant around the inlet adapters to prevent water leakage.



*The silicone sealant is not included

*The pool inlet and outlet hoses are not included

- C. (Optional / Recommended) Connect a discharge hose to the "WASTE" port of the 7-way valve to redirect water flow away from the pool bottom during flushing or backwashing. (The discharge hose is not included)

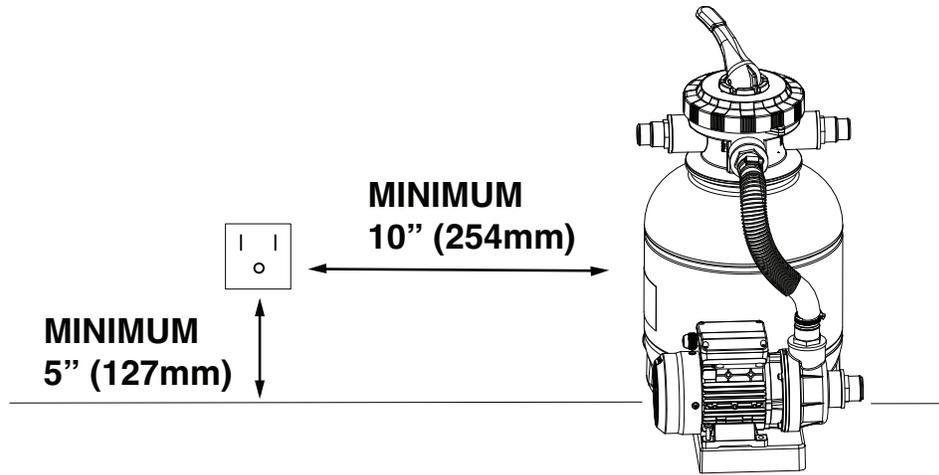


*The discharge hose is not included

INSTALLATION

Step 7: Power Connection

- A. See below for details of the minimum distance between the ground fault protection socket and the pump and sand filter system in inches.



- B. For the extension cord and the requirements for withstanding the filter pump's electrical load:
18 AWG

Pump Running Time Suggestion Chart

| Pool Capacity (Gallons) | Duration of Each Run (Hours) | Operating Frequency (Hours/Run) |
|-------------------------|------------------------------|---------------------------------|
| 300 | 0.5 | 4 |
| 600 | 1.0 | 4 |
| 900 | 1.5 | 4 |
| 1200 | 2.0 | 5 |
| 1500 | 2.5 | 5 |
| 2000 | 4.0 | 5 |
| 2500 | 5.0 | 6 |
| 3000 | 6.0 | 6 |

OPERATION

PRIOR TO START-UP

⚠ CAUTION Operate with caution: This pump and sand filter system operates simply by plugging in to turn on, and power starts immediately. To turn it off, simply unplug, and power is cut off immediately.

★ NOTE This pump and sand filter system is designed to work seamlessly with a Swimming Pool Outdoor Programmable Timer outlet, enhancing control and efficiency. Highly recommend using such a timer for optimized performance.

⚠ WARNING If the circulation equipment must remain in the plumbing system during the water pressure test, exercise caution and do not apply more than 10 PSI (0.69 BAR, this reading may vary depending on the pool's pump and general piping system) pressure to the system.

⚠ WARNING When starting the circulating pump system, ensure that all suction and discharge valves are OPEN, along with the filter air relief valve (if available) on the filter. This critical step is essential for proper pump operation and to prevent potential severe personal injuries.

PRIMING THE PUMP

⚠ WARNING Before operating the pump, ensure it has been properly primed as water is essential for cooling and lubricating the seal.

For pumps without strainer bodies located above water, close the suction line valve and fill the pump with water for priming.

Pumps located below water level will self-prime if all piping is also below water level.

- If any water leakage is observed from the pump or filter, DO NOT start the pump. In such cases, it is essential to address the leakage issue before proceeding.
- If no leakage occurs, you may proceed to start the pump. However, ensure that you stand at least 10 feet away from the pump and/or filter before starting it.

⚠ CAUTION NEVER OPERATE THE PUMP WITHOUT WATER. Water cools and lubricates the mechanical shaft seal. Running the pump dry can damage the seals, causing leaks, flooding, and voiding the warranty.

OPERATION

PRIMING THE PUMP (CONTINUED)

⚠ CAUTION It is vital to NEVER add undiluted chemicals directly into the pump suction of the pool/spa system. Adding undiluted chemicals can damage the pump and void the warranty.

★ NOTE Avoid installing 90° elbows directly into the pump inlet or outlet. This will help maintain efficient pump operation.

Turn on the power and wait for the pump to prime, which may take up to ten (10) minutes. The priming time depends on the vertical length of the suction lift and horizontal length of the suction pipe. If the pump does NOT prime within 10 minutes, stop the motor, and identify the cause. Ensure all suction and discharge valves are open when the pump is running. For troubleshooting guidance, refer to the Troubleshooting Guide.

By adhering to these safety and operational instructions, the proper functioning of the pump can be upheld, and potential risks and damages can be avoided.

- A. Verify all connections are secure.
- B. Before filling a new pool with water, ensure it is thoroughly cleaned to prevent excessive dirt and large particles from damaging the pump and filter.

⚠ WARNING Ensure all suction and discharge valves are fully open before starting the system. Failure to do so could result in severe personal injury.

⚠ WARNING Before starting the pump, make sure the filter vessel is filled with water. Starting the pump without water may cause damage to the pump.

- C. Make sure all pool suction and WASTE lines are open, allowing water to flow freely from the pool to the WASTE line. Depress and rotate the top mount valve handle to BACKWASH position.
- D. Check the valve clamp to ensure it is properly tightened.
- E. Prime and start the pump, allowing the filter tank to fill with water.
- F. Once a steady water flow is observed from the WASTE line, run the pump for at least 2 minutes or until the backwash water appears clean. This initial backwashing is essential to remove impurities and fine sand particles from the silica sand media.
- G. Turn off the pump and set the valve to the "RINSE" position. Ensure that all pool suction and WASTE lines are open, allowing water to flow freely from the pool to the WASTE line. Do not dry run the sand filter. Stay clear of the filter and start the pump.

OPERATION

PRIMING THE PUMP (CONTINUED)

- H. Run the pump for at least two minutes.
- I. Turn off the pump and set the valve to the "FILTER" position. Ensure that all pool suction and RETURN lines are open, allowing water to flow freely from and back to the pool. Stay clear of the filter and start the pump.
- J. The filter is now in its filtering cycle. Make sure water is returning to the pool and take note of the operating pressure when the filter is clean.
- K. Check the system for any water leaks. If a leak is found, shut off the pump before correcting the leak.
- L. As the filter removes dirt and impurities from the pool water, the accumulation will cause the filter pressure to rise and flow to diminish. When the pressure gauge reading is 5-10 PSI (0.0.34-0.69 BAR, this reading may vary depending on the pool's pump and general piping system) higher than the clean filter reading noted above (this reading may vary depending on the pool's pump and general piping system), it is time to backwash the filter.

WARNING

Always turn off the pump before adjusting the filter control valve to avoid strain on the piping system and valves.

NOTE

Regularly cleaning the pump and filter system is essential to prevent damage to the pump and filter and ensure proper system operation.

AFTER PRIMING THE PUMP

Once the pump is primed, activate the pump and open all suction and discharge line valves. Allow some time for the pump to remove air from the suction lines. If there is no flow within five minutes, stop the pump and re-prime. Check for air leaks and consult the Troubleshooting section if the pump does not operate properly.

Checking for Air Bubbles

After approximately ten minutes of operation, inspect the return fittings for air bubbles. Continuous air flow indicates leaks in the suction line. Address any leaks immediately to prevent further issues.

Controlling Output

Keep the gate valve in the suction line fully open during pump operation. If necessary to control the output, use a valve in the return line.

WARNING

Never operate the pump with closed suction or discharge valves.

OPERATION

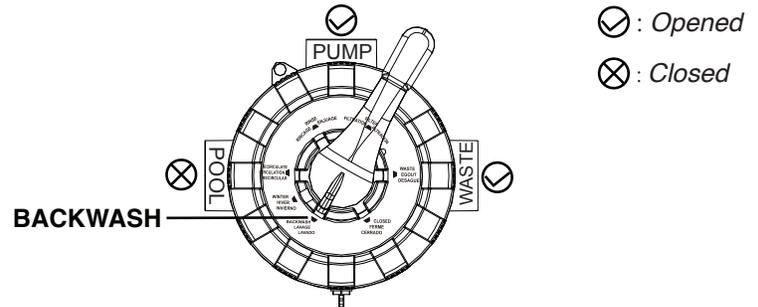
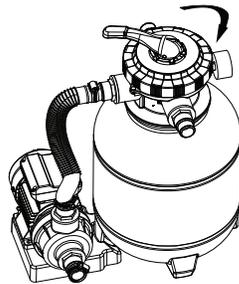
VALVE FUNCTIONS

CAUTION Never operate the pump without water.

BACKWASH (Initial Run)

Use this setting to clean the filter. When the filter pressure gauge rises 5-10 PSI (0.034-0.69 BAR, this reading may vary depending on the pool's pump and general piping system) above the start-up clean pressure.

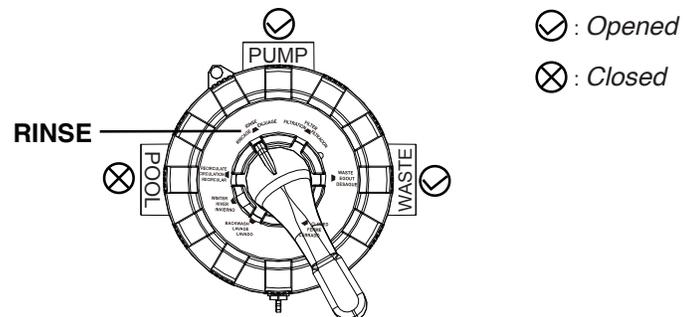
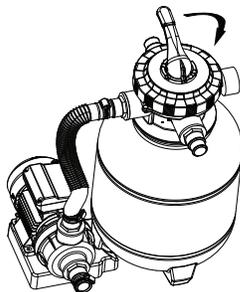
- A. Turn off the pump and set the valve to the "BACKWASH" position.
- B. Start the pump and backwash until the water in the sight glass is clear. This usually takes about 2 minutes or less, depending on the amount of dirt accumulated, and then turn off the pump. Proceed to "RINSE".



RINSE (Initial Run)

This ensures that all the dirty water from backwashing is rinsed out of the filter and goes to waste, preventing possible return to the pool.

- A. After backwashing, keep the pump off and set the valve to "RINSE" position and start the pump for about 0.5 to 1 minute.
- B. During rinsing, discharge water through the drain pipe. After sufficient rinsing, stop the pump, set the valve to "FILTER", and start the pump for normal filtering.

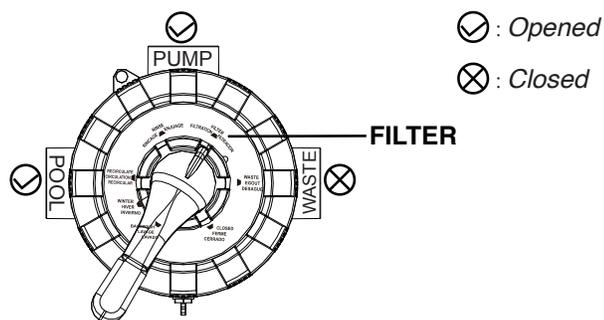
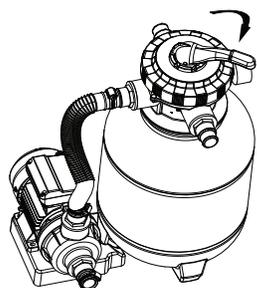


OPERATION

FILTER (Normal Operation)

For normal filtering and regular vacuuming.

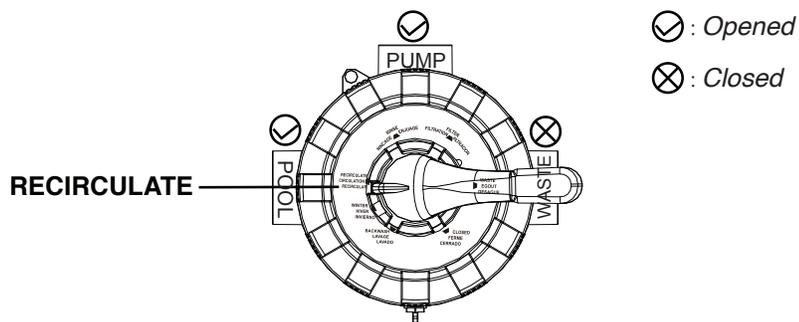
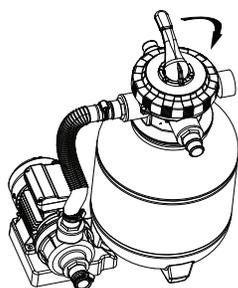
- A. Turn off the pump. Set the valve to the "FILTER" position for regular pool filtration. Then, start the pump.
- B. Occasionally check the pressure gauge to ensure pressure remains within the normal range 5-10 PSI (0.034-0.69 BAR), this reading may vary depending on the pool's pump and general piping system.
- C. After sufficient filtration, turn off the pump.



RECIRCULATE (Move The Water Around Without Filtering)

Only use the it for a short period of time when the filter is malfunctioning, there is a severe algal bloom in the water, chemicals are being added to the pool, or after the filter has been backwashed

- A. With the pump remaining off, set the valve to the "RECIRCULATE" position to circulate the pool water without filtering it. Then start the pump.
- B. After sufficient circulation, turn off the pump.

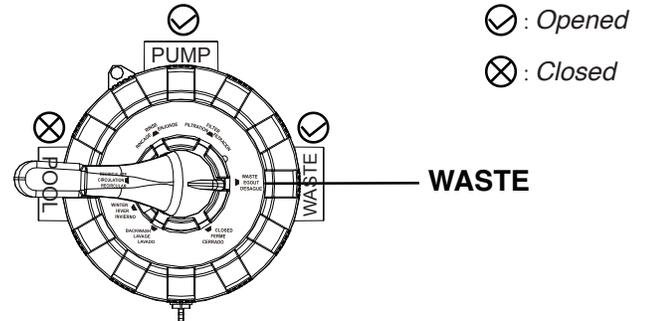
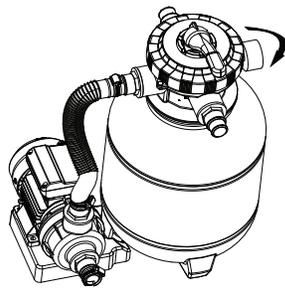


OPERATION

WASTE (Bypass Filter Media For Direct Water Exit)

It enables water to access the filter but avoids passing through the filter media, instead directing it to exit the filtration system entirely. It aids in extracting leaves, dirt, and additional debris.

- A. With the pump remaining off, set the valve to the "WASTE" position to prevent clogging of the filter while vacuuming the pool. Then start the pump.
- B. After sufficient flushing, turn off the pump.



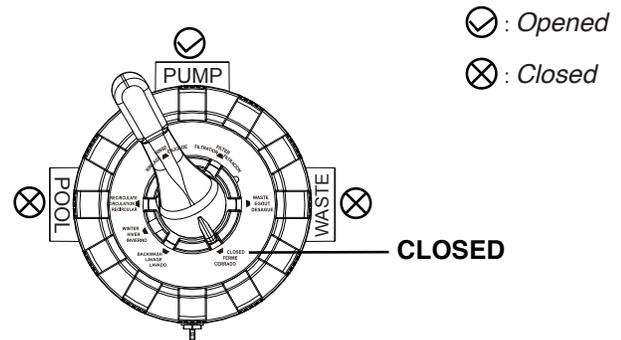
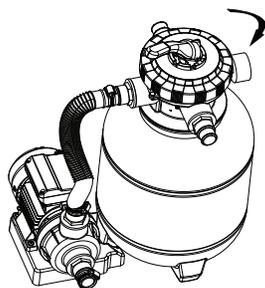
⚠ WARNING

Avoid activating the pool pump when the 7-way valve is set to CLOSED, as this could result in damaging the filter, the pump, or both.

CLOSED (Shut Off The Flow To The Filter and Pool)

This function involves shutting the valve to prevent water from entering, offering utility in clearing the lines during the pool's opening process and during winterization to expel air through the suction lines, redirecting airflow into the pool.

- A. With the pump remaining off, set the valve to the "CLOSED" position to prevent water from entering.



OPERATION

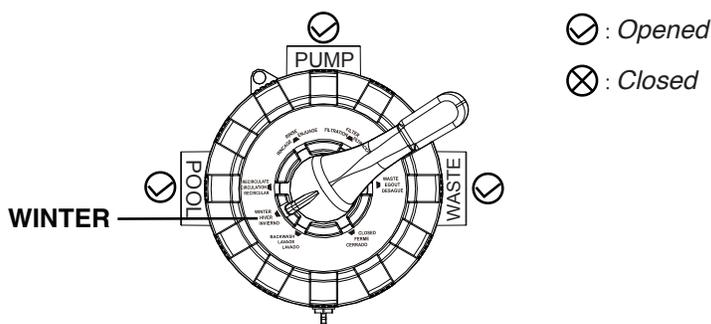
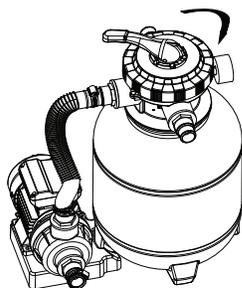
WINTER (For Winterizing)

To prevent freeze damage.

NOTE Clearing out all residual water will reduce the risk of freeze damage.

A. Setting the Valve for Winterization

- a. With the pump remaining off, set the valve to the "WINTER" position to open all ports to prevent residual water inside the machine from freezing and causing damage.



DANGER Before attempting any corrective actions, ensure that the pump is in the OFF position. To avoid any potential electrical hazards, wait until the remaining power in the capacitor is fully discharged before proceeding with any work on the pump.

B. Storing Pump for Winterization

- a. Turn off the power for the pump.
- b. Drain Water.
 1. For the system with a filter
 01. For Sand Filter
 001. Turn the valve to "BACKWASH" for 3 to 5 minutes.
 002. Set the valve to "WINTER" position.
 02. For Cotton Ball Filter
 001. Turn off the pool pump power.
 002. Locate and open the drain valve at the bottom of the filter tank.
 003. Allow the water to drain from the filter.
 004. Close the drain valve once draining is complete.
 005. Set the valve to "WINTER" position.
- c. Cover the motor to shield it from severe rain, snow, and ice.
- d. Avoid wrapping the motor in plastic, as it can lead to condensation and rust on the inside of the motor.

TROUBLESHOOTING

TROUBLESHOOTING



Before attempting any corrective actions, ensure that the pump is in the OFF position, and the power source to the pump is also turned OFF. To avoid any potential electrical hazards, wait until the remaining power in the capacitor is fully discharged before proceeding with any work on the pump.

| ISSUE | CAUSE | CORRECTIVE ACTION |
|-------------------------------|---|--|
| Pump Won't Start | Improper or loose wiring connections; open switches or relays | Check all connections |
| | Tripped circuit breakers | Reset tripped breakers |
| | Blown fuses. | Replace blown fuses in the Circuit Breakers (Applies to older homes) |
| | Mechanical binding and electrical overload | Manually check rotation of motor shaft for free movement with no obstruction |
| | Using a pump timer | If using a pump timer try overriding, it to ensure the pump is receiving power. Also check the rocker switch on the back of the pump to confirm the power is on either high or low speed so that the timer can turn the pump on and off to the set speed |
| Pump Starts then Stops | Undersized wiring | Contact qualified professional to check that the wiring gauge is heavy enough. The wiring should be at least AWG14 |
| | Loose connections | Check all connections |
| | Low voltage at motor or power drop (frequently caused by undersized wiring or extension cord use) | Contact qualified professional to check that the wiring gauge is heavy enough. The wiring should be at least AWG14 |
| | Overheating | The pump shouldn't be running for more than 8 hours a day. Ensure that it is either well shaded or run during the cooler times of the day to prevent the bearings from drying out quickly. |
| | Mechanical binding | Manually check rotation of motor shaft for free movement with no obstruction |
| | Electrical overload | Ensure proper grounding and wiring voltage. |

TROUBLESHOOTING

| ISSUE | CAUSE | CORRECTIVE ACTION |
|-------------------------------------|--|---|
| Pump Hums but will Not Start | Incorrect Voltage | Check input voltage and wiring connection |
| | Incorrect Wiring | Check wiring connections |
| | Mechanical binding | Manually check rotation of motor shaft for free movement with no obstruction |
| | Pump Ran Dry | Ensure that the pump is properly primed before its first use. Also, check for any leaks at the connections or in your pipes. The pump basket should always be full while the pump is running; |
| | Capacitor failure | Have the capacitor tested by a pool pump repair company. |
| Pump Won't Prime | Pump Ran Dry | Ensure that the pump is properly primed before its first use. Also, check for any leaks at the connections or in your pipes. The pump basket should always be full while the pump is running; any loss of water in the basket while running or when the pump turns off indicates a leak somewhere. A backflow device can be installed in the suction line of the pool pipes if needed. |
| | Empty pump/strainer housing. (If strainer is equipped.) | Make sure pump/strainer housing is filled with water and cover O-ring is clean. Ensure O-ring is properly seated in the cover O-ring groove. Ensure O-ring is lubricated, and that strainer cover is locked firmly in position. Lubricant will help to create a tighter seal. Lubricant will help to create a tighter seal. Fill with water and observe carefully to check for any leaks. |
| | Loose connections on suction side and/or outlet side. (If strainer is equipped.) | Tighten pipe/union connections. (Any self-priming pump will not prime if there are suction air leaks. Leaks will result in bubbles emanating from return fittings on the pool wall or in the strainer basket.) |
| | Leaking O-ring or packing glands on valves. | Tighten, repair, or replace valves. |
| | Strainer basket or skimmer basket loaded with debris. | Remove strainer housing cover or skimmer cover, clean basket, and refill strainer housing with water. Tighten cover. (If strainer is equipped.) |

TROUBLESHOOTING

| ISSUE | CAUSE | CORRECTIVE ACTION |
|--------------------------------|---|---|
| Pump Won't Prime (Cont) | Suction side clogged. | <p>Contact a qualified repair professional.</p> <p>Block off the bottom port of the skimmer to determine if pump will develop a vacuum. You should have 5"-6" of vacuum at the strainer cover (Only your Pool dealer can confirm this with a vacuum gauge). You may be able to check by removing the skimmer basket and holding your hand over the bottom port with skimmer full and pump running. If no suction is felt, check for line blockage. (If strainer is equipped.)</p> <p>A. If pump develops a vacuum, check for blocked suction line. An air leak in the suction piping may be the cause.</p> <p>B. If pump does not develop a vacuum and pump has sufficient "priming water":</p> <p>a. Re-check housing cover and all threaded connections for suction leaks. Disconnect from the breaker and check if all system hose clamps are tight.</p> <p>b. Check voltage to ensure that the motor is rotating at full RPM's.</p> <p>c. Open housing cover and check for clogging or obstruction in suction. Check impeller for debris. Remove and replace shaft seal only if it is leaking.</p> |
| | Clogged or restricted pipe (line) and / or outlet line. | Contact a qualified repair professional. |
| Low Flow | The pump's location is either too high above the pool water level and/or too far from the pool. | Make sure that the pump height and lines are not further than the manufacturer's recommended maximum distance. |
| | Undersized pool piping. | Correct piping size. |
| | Plugged or restricted discharge line of filter, valve partially closed (high gauge reading). | Sand filters – backwash as per manufacturer's instructions; D.E. filters – backwash as per manufacturer's instructions; Cartridge filters – clean or replace cartridge. |

TROUBLESHOOTING

| ISSUE | CAUSE | CORRECTIVE ACTION |
|--|--|---|
| Low Flow (Cont) | Air leak in suction (bubbles issuing from return fittings). | Re-tighten using Teflon tape. |
| | Plugged, restricted, or damaged impeller. | Contact a qualified repair professional. Clear blockage and replace the impeller seal. |
| Noisy Pump | Air leak in suction piping, cavitation caused by restricted or undersized suction line or leak at any joint, low water level in pool, and unrestricted discharge return lines. | Correct suction condition or throttle return lines, if practical. Holding hand over return fitting will sometimes prove this point or putting in a smaller eyeball fitting. |
| | Vibration due to improper mounting, etc. | Mount the pump on a level surface and secure the pump to the equipment pad. |
| | Foreign matter in pump housing. Loose stones/debris hitting impeller could be cause. | Clean the pump housing. |
| | Squealing sounds that are getting louder over time | Bearings may become noisy over time if not properly maintained. They can be re-greased and should be done with regular pump maintenance, depending on usage. Check for leaks in the seals that may allow water, including chemicals, to work into the bearing ring and wipe out the grease. Any leaking seals should be replaced at once. |
| High Pressure Reading | Pipe blockage. | Check that all the pipe valves are in the open position. |
| | Pump blockage. | Check if there is any debris blocking inside of the pump. |
| | The filter cotton is hardened due to the excessive dirt inside the filter. | Run the pump in BACKWASH for 10 minutes.. |
| Water Leakage (Filter Tank's Locking Ring Area) | Pipe blockage. | Check if the locking ring screws are tightened, and if there are any foreign objects inside the locking ring position. |

TROUBLESHOOTING

| ISSUE | CAUSE | CORRECTIVE ACTION |
|---|---|---|
| Water Leakage (Inlet, Outlet, and Drainage Port) | The damaged o-ring installed. | Adjust or replace the o-ring. |
| | The locking ring is not properly installed. | Tighten the screws of the locking ring to ensure proper installation. |
| Water Discharging (From The Drainage Port During Filtration) | The sealing ring of the 7-way valve is damaged. | Replace with a new valve. |

MAINTENANCE

Pump Maintenance

⚠ DANGER

Always ensure the power to the pump is disconnected before starting any work.

- Motors are designed to be self-lubricating, eliminating the need for additional lubrication.
- Check the motor for any blockage of air vents on the motor shell. If any debris is found, remove it after turning off the power source.
- If any leakage is noticed, inspect the shaft seals, and replace them if they show signs of wear.

Pump Protection

- Protection from heat:
 - Shield the motor from direct sunlight by providing shade.
 - Ensure any enclosure used is well-ventilated to prevent overheating.
 - Promote ample cross ventilation to keep the motor cool.
- Protection against dirt:
 - Safeguard the motor from any foreign matter or splashing water.
 - Avoid storing pool chemicals near the motor to prevent potential damage.
 - Refrain from sweeping or stirring up dust near the motor while it's in operation.
 - Remember that motor damage caused by dirt will void the motor warranty.
- Protection against moisture:
 - Shield the motor from splashing pool water and lawn sprinklers.
 - Keep it protected from harsh weather conditions.
 - If the motor gets wet, allow it to dry completely before operating it again. Avoid using the pump if it has been flooded.
 - Note that water damage to the motor will void the motor warranty.

⚠ CAUTION

Never wrap the motor with plastic or any other airtight materials. While it's acceptable to cover the motor during a storm or for winter storage, it should never be covered while it is operating or expected to be in operation.

★ NOTE

When replacing the motor, ensure that the motor support is correctly positioned to adequately support the size of the motor being installed.

MAINTENANCE

Water Chemistry

Maintaining proper water chemistry is essential for clean, sanitary water and to control algae growth in the pool or spa.

Chlorine

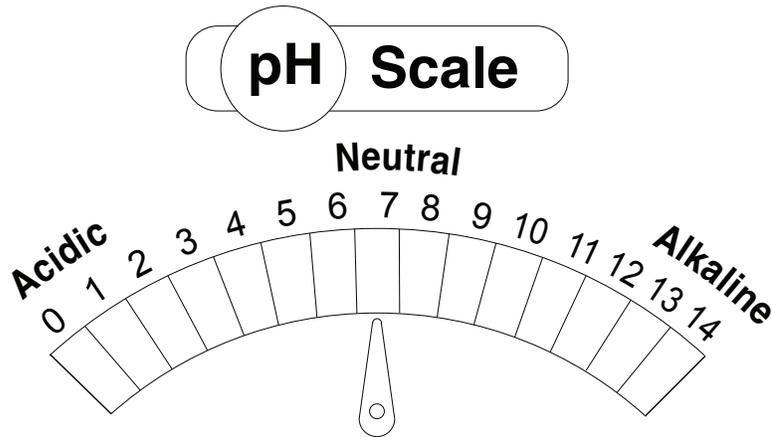
Use dry or liquid chlorine (calcium or sodium hypochlorite) daily to ensure clean and sanitary water. Chlorine dissipates due to dirt, germs, sunlight, and wind exposure.

pH Level

Maintain the correct level of acidity or alkalinity in the pool water.

Desirable range: 7.2 - 7.4

Figure pH Level

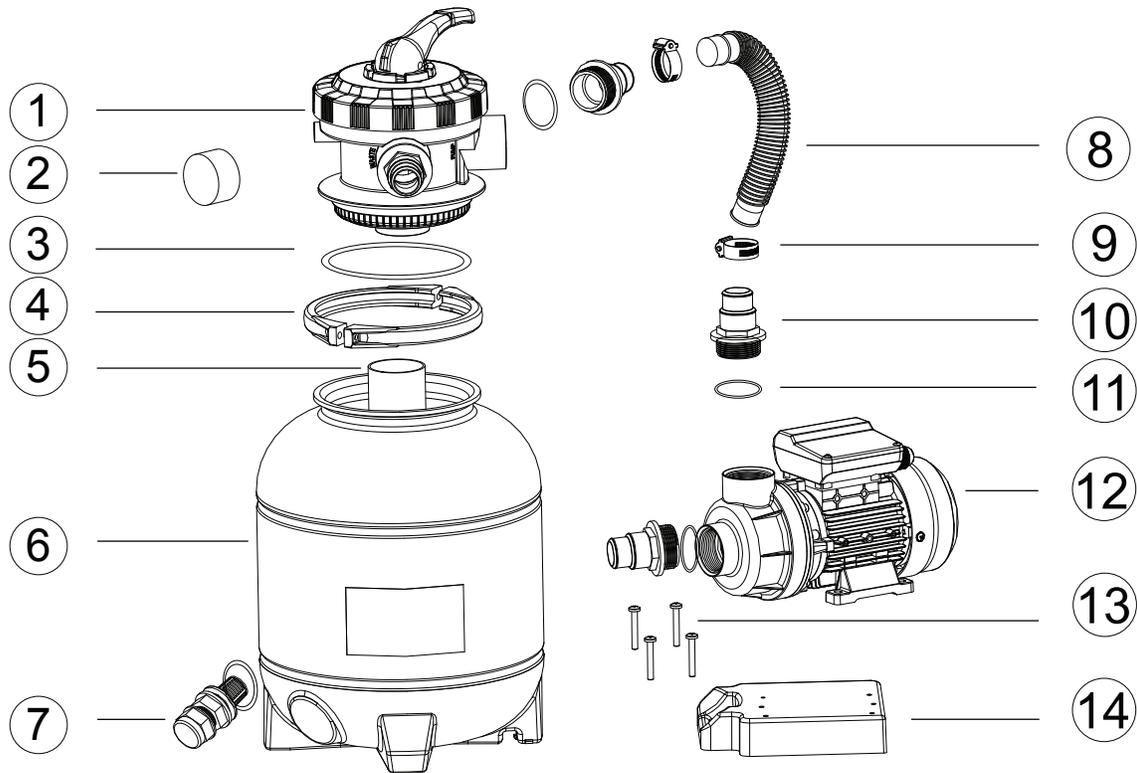


REPLACEMENT PARTS

REPLACEMENT PARTS

Parts Diagram

Pump and Sand Filter System

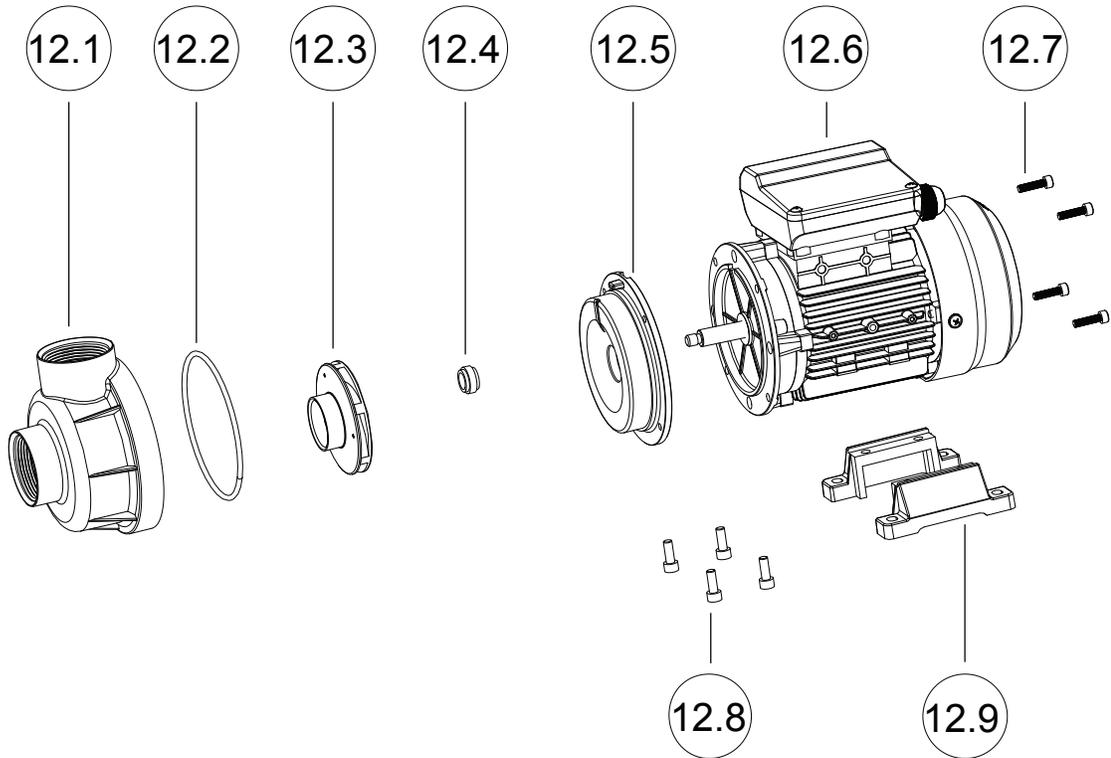


| Item | Part. No. | Description | Quantity |
|------|--------------|---------------------|----------|
| 1 | 647304271000 | 7-Way Valve | 1 |
| 2 | 5024002000 | Pressure Gauge | 1 |
| 3 | 5431032080 | O-Ring (Large) | 1 |
| 4 | 47303005080 | Locking Ring | 2 |
| 5 | 47303008080 | Filter Assembly | 1 |
| 6 | 47250501011 | Filter Tank for 12" | 1 |
| 7 | 47304014080 | Filter Drain Nozzle | 1 |

| Item | Part. No. | Description | Quantity |
|------|-------------|--------------------------|----------|
| 8 | 5749017080 | Blow Molding Hose 1-1/4" | 1 |
| 9 | 5021004000 | Hose Clamp | 2 |
| 10 | 47303205080 | Hose Adapter | 5 |
| 11 | 47303205080 | O-Ring (Regular) | 7 |
| 12 | 72712000 | Pump 0.25HP | 1 |
| 13 | 5224008000 | Screw M6*50 | 4 |
| 14 | 47302502080 | Pump Base | 1 |

REPLACEMENT PARTS

Pump 0.25HP



| Item | Part. No. | Description | Quantity |
|------|--------------|---------------|----------|
| 12.1 | 47254701080 | Pump Housing | 1 |
| 12.2 | 5431032080 | O-Ring | 1 |
| 12.3 | 647251271000 | Impeller | 1 |
| 12.4 | 5028013000 | Seal Assembly | 1 |
| 12.5 | 47251202080 | Pump Cover | 1 |

| Item | Part. No. | Description | Quantity |
|------|-------------|---------------|----------|
| 12.6 | 5023010000 | Motor 0.25HP | 1 |
| 12.7 | 5227002108 | Screw M6*16 | 4 |
| 12.8 | 5224024000 | Screw M5*20 | 4 |
| 12.9 | 47251205080 | Mounting Foot | 1 |

DISCLAIMER

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PLEASE READ THE FOLLOWING CAREFULLY

The manufacturer and/or distributor have provided the parts list and assembly diagram in this manual for reference purposes only. They do not make any representation or warranty to the buyer that they are qualified to make repairs to the product or replace any parts of the product. In fact, the manufacturer and/or distributor expressly state that all repairs and parts replacements should be undertaken by certified and licensed technicians, and not by the buyer.

The buyer assumes all risk and liability arising from their repairs to the original product or replacement parts or arising from their installation of replacement parts. It is strongly advised that qualified professionals handle any repairs or replacements to ensure safety and proper functioning of the product. Improper installation and operation may result in injury, property damage, or voiding of warranty. The manufacturer and/or distributor shall not be held responsible for any accidents, damages, or malfunctions resulting from the buyer's installation and operation of the product. It is essential to follow all safety guidelines and recommendations provided in this manual and to seek professional assistance if unsure about the installation or operation procedures.