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## AQUASTRONG SFP450

# AQUASTRONG 18in Sand Filter Pump (Model SFP450) Instruction Manual

Comprehensive guide for installation, operation, and maintenance of your AQUASTRONG SFP450 sand filter pump.

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## 1. PRODUCT OVERVIEW

The AQUASTRONG 18in Sand Filter Pump (Model SFP450) is designed for inground and above-ground pools up to 20,000 gallons. It features a 1 HP motor, a maximum flow rate of 6100 GPH, and a 6-way valve for versatile filtration control. This system enhances water circulation and filtration, contributing to a clear pool environment.



Image: AQUASTRONG Sand Filter Pump system, illustrating the concept of creating a filtration plan.

## Key Features:

- **Customized Filtration:** Offers 9 time settings (2 to 24 hours) for single or continuous cycles, ensuring efficient operation.
- **High Flow Rate:** A powerful 1 HP motor delivers a maximum flow of 6100 gallons per hour (101 GPM), suitable for pools up to 20,000 gallons.
- **Enhanced Durability:** Designed for long-lasting, efficient filtration with a 150 lb sand capacity, reducing frequent maintenance needs.
- **6-Way Valve:** Provides multiple functions for comprehensive pool maintenance.

## 2. SAFETY INFORMATION

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**Read all instructions carefully before installation and operation.**

- Always disconnect power before performing any service or maintenance.
- Ensure the pump is installed on a level, solid surface to prevent vibration and movement.
- Do not operate the pump if the power cord or plug is damaged.
- Keep children and pets away from the pump and filter system during operation.
- Consult a qualified electrician for electrical connections if you are unsure.
- Ensure proper ventilation around the pump to prevent overheating.
- Never operate the pump dry (without water).

## 3. PRODUCT COMPONENTS

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The AQUASTRONG SFP450 sand filter pump system includes the following main components:

- Sand Filter Tank (18-inch diameter)
- Pump Motor (1 HP)
- 6-Way Multiport Valve
- Pressure Gauge
- Base Plate
- Connecting Hoses/Pipes

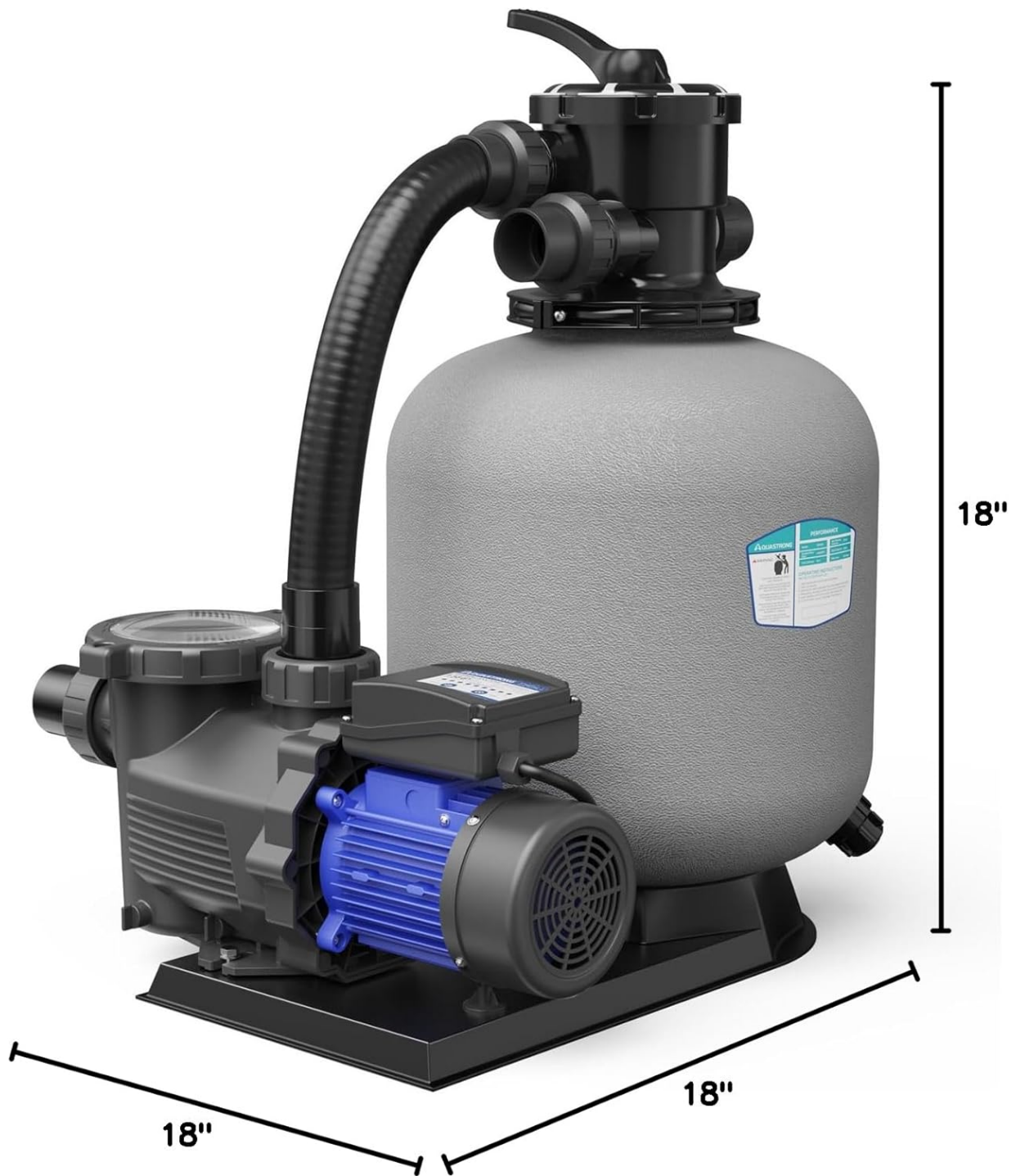


Image: The AQUASTRONG sand filter pump assembly with key dimensions (18"L x 18"W x 18"H) indicated.

## 4. INSTALLATION GUIDE

Follow these steps for proper installation of your sand filter pump system:

1. **Positioning:** Place the pump and filter on a firm, level surface, as close to the pool as possible. Ensure adequate drainage.
2. **Secure the Pump:** Secure the pump onto the base plate.
3. **Add Filter Media:** Fill the sand filter tank with the recommended amount of filter sand or filter balls (150 lbs sand capacity). Refer to the "Pool Selection Tips" in the Specifications section for guidance.
4. **Install Multiport Valve:** Carefully install the 6-way multiport valve onto the top of the filter tank. Ensure all O-rings are properly seated and lubricated.
5. **Connect Plumbing:** Connect the pump to the filter valve and the filter valve to the pool's return and skimmer lines.

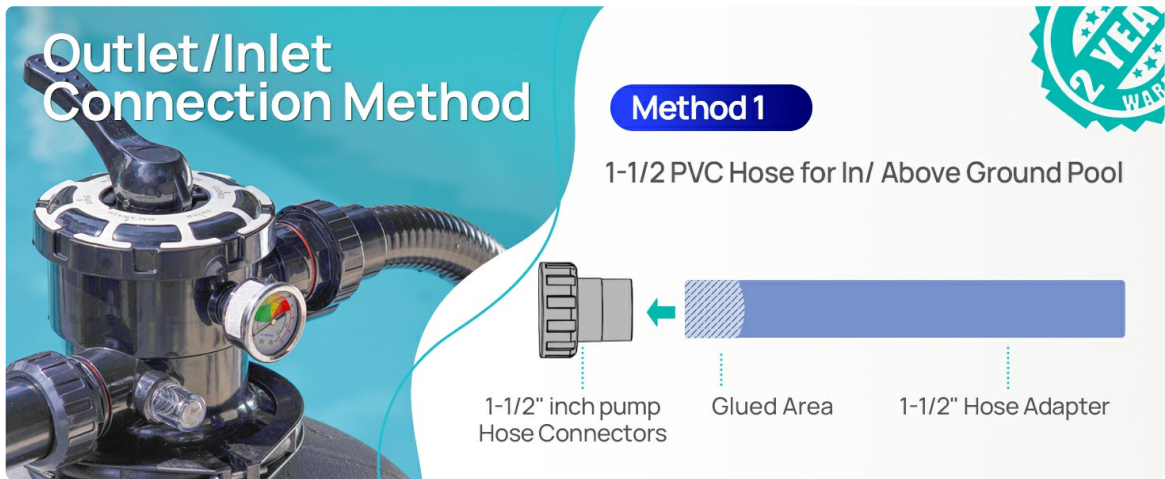


Image: Illustration of the recommended 1-1/2 inch PVC hose connection method for the pump's inlet and outlet ports, showing the use of hose adapters and a glued area for secure fitting.

*Note:* The system is designed for 1-1/2 inch PVC hoses. Adapters may be required for different hose sizes. Ensure all connections are tight to prevent leaks.

6. **Electrical Connection:** Connect the pump to a grounded electrical outlet. Ensure the power supply matches the pump's requirements.
7. **Prime the Pump:** Before starting, ensure the pump is primed by filling the pump basket with water.
8. **Set Valve to 'FILTER':** Before starting the pump, ensure the 6-way valve is set to the 'FILTER' position.



Image: A visual guide demonstrating the four key installation steps: securing the pump, adding filter media, installing the valve to 'FILTER', and setting the timer to start.

## 5. OPERATING INSTRUCTIONS

### 5.1. 6-Way Multiport Valve Functions

The 6-way valve allows you to control the water flow through the filter system. Always turn off the pump before changing valve positions.



Image: A detailed view of the 6-way multiport valve, illustrating each position and its function: FILTER, BACKWASH, RINSE, WASTE, CIRCULATE, and CLOSED.

- **FILTER:** Standard operating mode for daily filtration. Water passes through the sand media, cleaning the pool water.
- **BACKWASH:** Reverses water flow through the filter to clean the sand media. This flushes trapped debris out through the waste port.
- **RINSE:** Used after backwashing to flush out any remaining debris from the filter lines before returning to FILTER mode.
- **WASTE:** Bypasses the filter and sends water directly out the waste port. Useful for lowering pool water level or vacuuming heavy debris directly to waste.
- **CIRCULATE:** Bypasses the filter and circulates water directly back to the pool. Useful for mixing chemicals without filtering.
- **CLOSED:** Stops all water flow to and from the filter. **Never use this setting while the pump is running.**

## 5.2. Timer Settings

The integrated timer allows for automated filtration cycles. The pump offers 9 time settings from 2 to 24 hours, with options for single or continuous cycles.

# Swimming Pool Timing Plan

*In just two steps*



**Step 1**  
Set running hours



**Step 2**  
Turn on the pump



TIPS:

The time activate the timer becomes the daily start time.

Image: The pump's control panel showing the timer settings (2, 4, 6, 8, 10, 12, 14, 16, 24 hours) and the ON/OFF switch. The time you activate the timer becomes the daily start time.

1. **Set Running Hours:** Select the desired filtration duration using the timer dial.
2. **Activate Timer:** Turn on the pump. The time of activation will become the daily start time for the selected cycle.
3. **Continuous Operation:** For continuous operation, select the appropriate setting or bypass the timer function if available.

## 6. MAINTENANCE

Regular maintenance ensures optimal performance and longevity of your AQUASTRONG sand filter pump.

- **Backwashing:** Backwash the filter when the pressure gauge reads 8-10 PSI above its clean operating pressure, or when water clarity decreases.
  - a. Turn off the pump.
  - b. Set the 6-way valve to 'BACKWASH'.
  - c. Turn on the pump and backwash until the water in the sight glass (if present) runs clear (typically 2-3 minutes).
  - d. Turn off the pump.
  - e. Set the 6-way valve to 'RINSE'.
  - f. Turn on the pump and rinse for 30-60 seconds.
  - g. Turn off the pump.
  - h. Set the 6-way valve to 'FILTER' and restart the pump for normal operation.
- **Sand Replacement:** Filter sand typically needs replacement every 3-5 years, depending on usage and water quality.
- **Pump Basket Cleaning:** Periodically check and clean the pump's strainer basket to remove large debris.
- **Winterization:** In colder climates, drain all water from the pump and filter system to prevent freezing damage. Store the pump in a dry, protected area.

## 7. TROUBLESHOOTING

This section addresses common issues you might encounter with your sand filter pump.

Problem	Possible Cause	Solution
<b>Pump not priming / Low flow</b>	<ul style="list-style-type: none"> <li>• Air leak in suction line</li> <li>• Clogged skimmer or pump basket</li> <li>• Low water level in pool</li> <li>• Impeller clogged</li> </ul>	<ul style="list-style-type: none"> <li>• Check all connections for tightness.</li> <li>• Clean skimmer and pump baskets.</li> <li>• Add water to the pool.</li> <li>• Turn off pump, clear impeller.</li> </ul>
<b>Sand returning to pool</b>	<ul style="list-style-type: none"> <li>• Broken lateral assembly inside filter</li> <li>• Too much sand in filter</li> <li>• Improper backwashing/rinsing</li> </ul>	<ul style="list-style-type: none"> <li>• Inspect and replace laterals if broken.</li> <li>• Ensure correct sand level.</li> <li>• Perform proper backwash and rinse cycles.</li> </ul>

Problem	Possible Cause	Solution
<b>Water not clearing</b>	<ul style="list-style-type: none"> <li>• Insufficient filtration time</li> <li>• Dirty filter sand</li> <li>• Improper chemical balance</li> </ul>	<ul style="list-style-type: none"> <li>• Increase daily filtration hours.</li> <li>• Backwash filter; consider replacing sand if old.</li> <li>• Test and adjust pool chemicals.</li> </ul>
<b>Pump making unusual noise</b>	<ul style="list-style-type: none"> <li>• Air in system</li> <li>• Motor bearing issue</li> <li>• Debris in impeller</li> </ul>	<ul style="list-style-type: none"> <li>• Check for air leaks, ensure pump is primed.</li> <li>• Contact customer support if motor noise persists.</li> <li>• Turn off pump, clear impeller.</li> </ul>

## 8. PRODUCT SPECIFICATIONS

Detailed specifications for the AQUASTRONG SFP450 Sand Filter Pump:

Feature	Detail
<b>Brand</b>	AQUASTRONG
<b>Model Number</b>	SFP450
<b>Filter Size</b>	18 inch
<b>Horsepower (HP)</b>	1 HP
<b>Maximum Flow Rate</b>	6100 GPH (101 Gallons Per Minute)
<b>Maximum Lifting Height</b>	62 Feet
<b>Recommended Pool Size</b>	Up to 20,000 Gallons
<b>Sand Capacity</b>	150 lbs
<b>Valve Type</b>	6-Way Multiport Valve
<b>Power Source</b>	Corded Electric
<b>Material</b>	Plastic, Cast Iron
<b>Product Dimensions (L x W x H)</b>	18" x 18" x 18"
<b>Color</b>	Gray

### Pool Selection Tips:



Image: A table providing guidance on selecting the appropriate filter size based on HP, maximum pool size, system flow rate, and sand capacity.

Filter Size	HP	Recommended Max. Pool Size	System Flow Rate	Sand Capacity
16in	3/4HP	16000	2860	100 lbs
18in	1HP	20000	4490	150 lbs
18in	1.5HP	28000	5265	150 lbs
20in	1.5HP	32000	6060	200 lbs
20in	2HP	38000	6800	200 lbs

## 9. WARRANTY AND CUSTOMER SUPPORT

The AQUASTRONG SFP450 Sand Filter Pump is backed by a **two-year warranty** from the date of purchase. This warranty covers manufacturing defects and ensures peace of mind regarding product quality.

For technical assistance, troubleshooting not covered in this manual, or warranty claims, please contact AQUASTRONG customer support. Refer to your purchase documentation for specific contact details or visit the official AQUASTRONG website.

AQUASTRONG™



- Easy Installation
- Durable and Reliable

Image: A close-up of the pump system highlighting its easy installation and durable design, accompanied by a "2 Year Warranty" badge.