Aquapro 21849

Aqua Pro Fresh Water Pump

Model: 21849 - Self-Priming Diaphragm Pump

User Manual

1. Introduction and Overview

This manual provides essential information for the safe and efficient installation, operation, and maintenance of your Aquapro Model 21849 Fresh Water Pump. Please read this manual thoroughly before installation and use to ensure proper function and longevity of the pump.

The Aqua-Pro Universal 3.0 Gallons Per Minute Water Pump is designed with an automatic demand diaphragm, providing reliable pressure and flow. Its compact design makes it suitable for installations in tight spaces. This pump can be configured with various inlet types and fittings to suit diverse applications. **Note: This pump is NOT certified for use in boats.**



Figure 1: Aqua Pro Fresh Water Pump Model 21849. This image shows the pump from a three-quarter view, highlighting its blue and silver components, inlet/outlet ports, and electrical connections.

2. Product Features

- **Self-Priming:** Capable of drawing water without external priming.
- **Run-Dry Safe:** Designed to withstand periods of dry running without damage.
- **Quiet Operation:** Engineered for reduced noise during use.
- **Low Power Draw:** Efficient energy consumption.
- **Rubber Mounting Base:** Dampens vibration, prevents rust, and features an industry-standard mounting pattern for easy installation.
- **Thermal Breaker Motor Protection:** Integrated safety feature to prevent motor overheating.

3. What's in the Box

Upon unpacking, please verify that all components are present and undamaged. The package typically includes:

- Aqua Pro Fresh Water Pump (Model 21849)
- Basic installation guide (this manual)
- *Note: Specific fittings may vary based on the purchased kit.*

4. Setup and Installation

Proper installation is crucial for the pump's performance and longevity. Ensure all connections are secure

and leak-free.

4.1 Mounting the Pump

1. Select a dry, well-ventilated location that is easily accessible for maintenance.
2. Mount the pump on a solid, flat surface using the integrated rubber mounting base. Ensure the mounting screws are tightened securely to minimize vibration.
3. Allow adequate space around the pump for air circulation and access to connections.



Figure 2: Dimensional drawing of the Aqua Pro Fresh Water Pump. This diagram provides precise measurements (in inches and millimeters) for the pump's length, width, height, and mounting hole positions, essential for installation planning.

4.2 Plumbing Connections

1. Identify the inlet and outlet ports. The inlet typically connects to the water source (e.g., fresh water tank), and the outlet connects to the water distribution system.
2. Use appropriate fittings and flexible hoses to connect the pump. Avoid rigid piping directly to the pump to reduce vibration and noise.
3. Ensure all connections are sealed with thread sealant or PTFE tape to prevent leaks.
4. Install a strainer or filter on the inlet side to protect the pump from debris.

4.3 Electrical Connections

1. Ensure the power source matches the pump's voltage requirements (12 Volts DC).
2. Connect the positive (+) wire from the power source to the pump's positive terminal and the negative (-) wire to the pump's negative terminal. Observe correct polarity.
3. Install an appropriate fuse or circuit breaker in the positive line, close to the power source, to protect the circuit.

4. All electrical connections should be secure and insulated to prevent short circuits and corrosion.

5. Operating Instructions

Follow these steps for safe and effective operation of your Aqua Pro pump.

5.1 Priming the Pump

Although the pump is self-priming, it is recommended to ensure the inlet line is filled with water before initial startup or after the system has been drained.

1. Open all faucets in the system to allow air to escape.
2. Turn on the pump's power supply.
3. Allow the pump to run until a steady stream of water flows from all faucets, indicating that air has been purged from the system.
4. Close the faucets. The pump should shut off automatically once system pressure is reached.

5.2 Normal Operation

The pump is designed to operate on demand. It will automatically turn on when a faucet is opened and pressure drops, and turn off when the faucet is closed and pressure is restored.

- Ensure the water source is always available when the pump is powered on to prevent prolonged dry running.
- Monitor for unusual noises or vibrations during operation, which may indicate an issue.

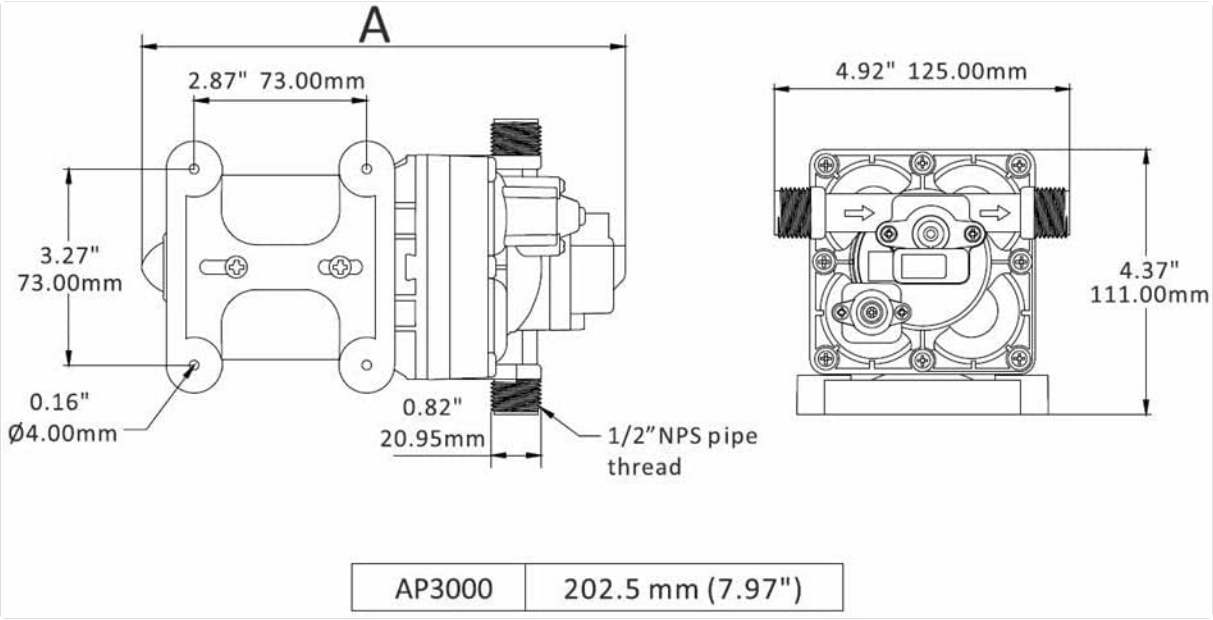


Figure 3: Aqua Pro Fresh Water Pump, side view. This image provides an alternative perspective of the pump, showing the robust construction and the placement of the electrical connector.

6. Maintenance

Regular maintenance helps ensure optimal performance and extends the life of your pump.

- **Inlet Strainer/Filter:** Regularly inspect and clean the inlet strainer to prevent debris from entering the pump and reducing flow.
- **Connections:** Periodically check all plumbing and electrical connections for leaks, corrosion, or looseness. Tighten as necessary.
- **Winterization (if applicable):** In freezing conditions, the pump and plumbing system must be

completely drained or winterized with non-toxic RV antifreeze to prevent damage from freezing water.

- **General Cleaning:** Keep the exterior of the pump clean and free of dirt or excessive moisture.

7. Troubleshooting

This section provides solutions to common issues you might encounter with your pump.

Problem	Possible Cause	Solution
Pump does not run	No power; Blown fuse/tripped breaker; Loose wiring	Check power supply; Replace fuse/reset breaker; Inspect and secure wiring.
Pump runs but no water flow	No water in tank; Clogged inlet strainer; Air in system; Leaks in suction line	Check water level; Clean strainer; Re-prime pump; Check for and seal leaks.
Low flow or pressure	Clogged strainer; Partially closed valve; Kinked hose; Low voltage	Clean strainer; Open all valves; Straighten hoses; Check power supply voltage.
Pump cycles on and off rapidly	Small leak in system; Pressure switch issue; Accumulator tank (if present) needs air	Check for leaks and repair; Consult a technician for pressure switch; Check accumulator tank pressure.
Excessive noise/vibration	Loose mounting; Air in system; Debris in pump head	Tighten mounting screws; Re-prime pump; Inspect pump head for foreign objects.

8. Specifications

Attribute	Detail
Brand	Aquapro
Model	21849
Power Source	AC/DC (typically 12 Volts DC for this model)
Voltage	12 Volts (DC)
Maximum Flow Rate	3.0 Gallons Per Minute (GPM)
Item Weight	4.19 pounds (approx. 1.9 kg)
Product Dimensions	7.97 x 4.92 x 4.37 inches (approx. 20.24 x 12.50 x 11.10 cm)
Material	Rubber (for mounting base)
Style	Diaphragm
Manufacturer	AQUA-PRO
UPC	880268153485

9. Warranty and Support

For warranty information, technical support, or to inquire about replacement parts, please contact Aquapro

customer service. Retain your proof of purchase for warranty claims.

Contact Information: Please refer to the Aquapro official website or your product packaging for the most current contact details.

Proposition 65 Warning: This product may contain chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.

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