LABFENG AL-SF102

LABFENG Aquarium Chiller User Manual

Model: AL-SF102

Product Overview

The LABFENG Aquarium Chiller (Model AL-SF102) is designed to maintain optimal water temperatures for various aquatic environments, including aquariums and hydroponic systems. It features fast cooling capabilities, intelligent temperature control, and energy-efficient operation. This chiller is suitable for both freshwater and saltwater applications, thanks to its built-in anti-corrosion titanium tube.

Key features include a silent compressor for quiet operation (30-45dB), a digital display for real-time temperature monitoring, and a detachable air inlet mesh for easy cleaning. The unit comes with necessary accessories, including a water pump and connecting hoses, to facilitate immediate setup.

Package Contents

Upon opening the package, please verify that all components are present and undamaged. The standard package includes:

- LABFENG Aquarium Chiller Unit (Model AL-SF102)
- Water Pump (160L)
- Connecting Hoses
- Hose Clamps
- Sealing Gaskets
- Power Cord

Image: The LABFENG Aquarium Chiller unit shown with all included accessories: the chiller itself, a water pump, connecting hoses, hose clamps, and sealing gaskets.

Setup and Installation

1. **Unpacking and Acclimation:** Carefully remove the chiller from its packaging. It is crucial to allow the unit to sit upright for at least 2-4 hours before plugging it in. This allows the refrigerant and oils to settle after shipping, preventing potential damage to the compressor.
2. **Placement:** Position the chiller on a stable, level surface. Ensure there is adequate ventilation around the unit, especially at the front and back grilles, to allow for proper heat dissipation. Avoid placing it in direct sunlight or in an enclosed space.
3. **Connecting the Water Pump:** The included water pump is essential for circulating water through the chiller. Connect one end of the provided hose to the outlet of your water pump and the other end to the chiller's inlet port (typically marked "IN" or with an arrow pointing into the unit). Secure connections with hose clamps to prevent leaks.

Image: Close-up of the water pump, highlighting its four strong rubber suction cups designed for stable placement inside the tank.

4. **Connecting to the Tank:** Place the water pump inside your aquarium or hydroponic reservoir. Connect another hose from the chiller's outlet port (typically marked "OUT" or with an arrow pointing away from the unit) back into your tank. Ensure both hoses are securely fastened.

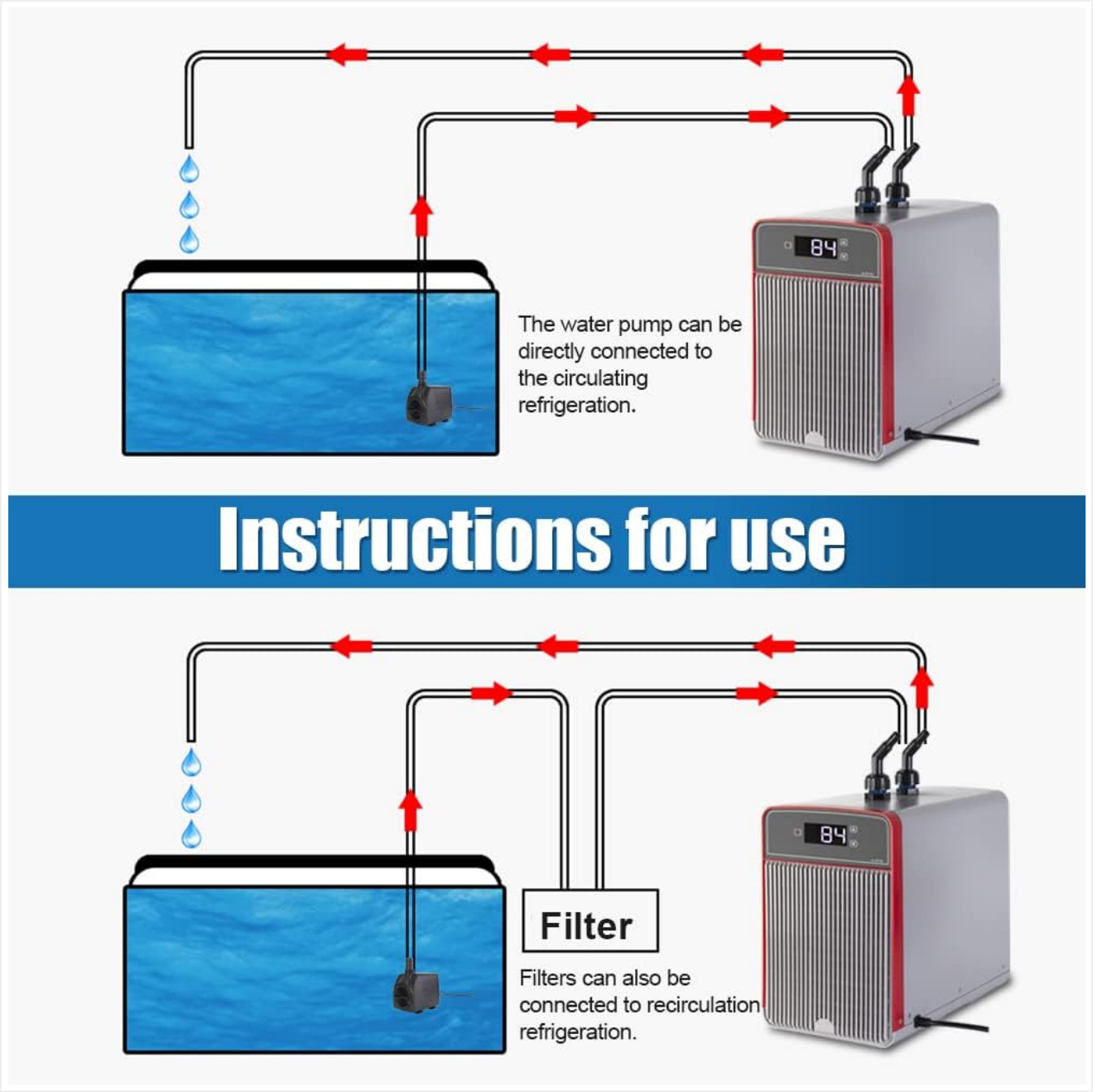

Image: Two diagrams illustrating connection methods. The left diagram shows direct connection of the water pump to the chiller for circulating refrigeration. The right diagram shows connecting the chiller to a filter before returning water to the tank, allowing for recirculation refrigeration through a filtration system.

5. **Power Connection:** Once all water connections are secure and the unit has acclimated, plug the chiller's power cord into a grounded electrical outlet (110V AC). Ensure the power outlet is suitable for the chiller's wattage (150W).

Operating Instructions

The LABFENG Aquarium Chiller features a user-friendly digital display for temperature control.

Image: Close-up of the chiller's digital display, showing the current water temperature and control buttons for adjustment.

1. **Power On/Off:** Press the power button on the control panel to turn the unit on or off. The digital display will illuminate, showing the current water temperature.
2. **Setting Desired Temperature:** Use the up and down arrow buttons on the control panel to adjust the target temperature. The chiller will automatically cool the water until it reaches the set temperature. The recommended temperature range for most aquatic life is 68-78°F (20-26°C).
3. **Temperature Fluctuation (Differential):** The chiller is designed to allow for a slight temperature variation around the set point to optimize energy efficiency and compressor lifespan. This differential is typically 1-3 degrees. For example, if set to 65°F with a 2-degree differential, the chiller will activate when the temperature reaches 67°F and cool down to 63°F before turning off.
4. **Quiet Operation:** The chiller is engineered for low noise operation, typically between 30-45dB, making it suitable for various indoor environments.

Image: An illustration depicting the low noise level of the chiller, showing a sleeping child undisturbed by its operation, with a decibel scale indicating its quiet performance compared to other common sounds.

Maintenance

Regular maintenance ensures the longevity and efficient operation of your chiller.

- **Cleaning the Air Inlet Mesh:** The chiller features a detachable air inlet mesh for easy cleaning. Periodically remove and clean this mesh to prevent dust and debris buildup, which can impede airflow and reduce cooling efficiency. Use a soft brush or cloth to remove accumulated particles.

Image: A hand demonstrating the removal of the detachable air inlet mesh from the chiller unit, indicating its ease of cleaning.

- **Hose and Connection Inspection:** Regularly inspect hoses and connections for any signs of leaks, kinks, or blockages. Ensure hose clamps remain tight.
- **Water Pump Cleaning:** Clean the water pump regularly to prevent buildup of algae or debris, which can reduce flow rate and efficiency.
- **Refrigerant:** The chiller uses non-polluting R134a refrigerant. There is no need to supplement refrigerant under normal operating conditions.

Troubleshooting

This section provides general guidance for common issues. For more complex problems, please contact customer support.

Problem	Possible Cause	Solution

Problem	Possible Cause	Solution
Chiller not turning on	No power, loose connection, power button off.	Check power cord, ensure outlet is functional, press power button.
Water not cooling	Incorrect temperature setting, poor water flow, dirty air mesh, ambient temperature too high, tank size exceeds capacity.	Adjust temperature, check pump and hoses for blockages, clean air mesh, ensure proper ventilation, verify tank volume is within 160L (42gal) capacity.
Unit is noisy	Vibrations, fan obstruction, external pump noise.	Ensure unit is on a stable surface, check for obstructions around fans, note that external pumps may contribute to overall system noise. The chiller itself operates quietly (30-45dB).
Water leaks	Loose hose connections, damaged hoses.	Tighten hose clamps, inspect hoses for cracks or damage and replace if necessary.

SPECIFICATIONS

Model	AL-SF102
Brand	LABFENG
Item Weight	22 pounds (approx. 10 kg)
Product Dimensions (L x W x H)	13.39 x 7.87 x 12.6 inches (approx. 34 x 20 x 32 cm)
Voltage	110 Volts (AC)
Wattage	150 watts
Cooling Power	270W
Sound Level	45 dB (max)
Applicable Tank Volume	Up to 42 gallons (160 liters)
Refrigerant	R134a (Freon-free)
Material	Stainless Steel
Usage	Aquariums and Hydroponics (Freshwater & Seawater)

SPECIFICATION:

Model: AL-SF102	Voltage/Frequency: 110V/60Hz
Machine power: 150W	Refrigerant: R134a
Cooling power: 270W	Net weight: 8.6Kg
Applicable fish tank water volume ≤ 160 liters	

Image: A visual representation of the chiller's dimensions and a summary of its key specifications, including model, power, cooling capacity, voltage, refrigerant type, and applicable tank volume.

Warranty and Support

LABFENG offers a one-year warranty policy for this product. For any issues, questions, or support needs, please contact the manufacturer's professional after-sales team. Please refer to your purchase documentation for specific contact details.