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› LIGHTEU SEAFLO 12V Diaphragm Water Pressure Pump, 11.3 LPM / 3.8 Bar - User Manual

LIGHTEU LT-DIAG-01-3055

LIGHTEU SEAFLO 12V Diaphragm Water Pressure Pump

Model: LT-DIAG-01-3055

1. INTRODUCTION

This manual provides essential information for the safe and efficient installation, operation, and maintenance of your LIGHTEU SEAFLO 12V Diaphragm Water Pressure Pump. Please read these instructions thoroughly before use and retain them for future reference. This pump is designed for various applications including marine, RV, agricultural spraying, general industrial use, filtration, beverage processing, and solar water systems.

Important Safety Information: Always disconnect power before performing any service. Ensure proper ventilation and avoid pumping flammable liquids. The pump is designed to run dry without damage, but continuous dry running is not recommended.

2. PRODUCT FEATURES

- 12V pressure water pump with a flow rate of 11.3 liters per minute (3.0 GPM).
- Maximum pressure of 3.8 Bar (55 PSI).
- Suitable for fresh, sweet, salt, and bilge water applications.
- Internal bypass technology to reduce pump cycling and ensure smooth flow.
- Integrated pressure switch for automatic stop/start operation.
- Designed for a long lifespan and quiet motor operation.
- Self-priming capability.
- Can run dry without damage.
- Constructed with durable stainless steel shafts and a robust thermoplastic housing.
- Fully protected against immersion and ignition.
- Complies with current safety regulations.
- Snap-lock strainer base for easy assembly and disassembly.

3. PACKAGE CONTENTS

Verify that all items are present and undamaged upon unpacking:

- 1 x LIGHTEU SEAFLO 12V Diaphragm Water Pressure Pump
- 2 x Pump Fittings (12mm hose barb adapters)
- 1 x Inline Filter/Strainer
- 1 x English User Manual (this document)
- 1 x Official Invoice from LIGHTEU GMBH

4. SPECIFICATIONS

Specification	Value
Brand	LIGHTEU
Model Number	LT-DIAG-01-3055
Voltage	12 Volts DC
Max Flow Rate	11.3 Liters per Minute (3.0 GPM)
Max Pressure	3.8 Bar (55 PSI)
Max Current Draw	7.5 Amps
Material	Stainless Steel, ABS
Style	Diaphragm Pump
Power Source	Corded Electric
Item Weight	1.9 Kilograms
Max Lift Height	6 feet
Specific Uses	Marine, RV, Agricultural Spraying, General Industrial, Filtration, Beverage Processing, Solar Water System
Dimensions (L x W x H)	26.6 x 14.4 x 13.2 cm

5. SETUP

5.1 Pre-Installation Check

- Ensure the pump's voltage (12V DC) matches your power supply.
- Verify that the installation location is dry, well-ventilated, and protected from extreme temperatures.
- Confirm that all necessary plumbing and electrical components are available.

5.2 Mounting

Mount the pump in a secure, accessible location. The pump can be mounted horizontally or vertically. Ensure the mounting surface is rigid to minimize vibration and noise. Use appropriate fasteners for your mounting surface.



Figure 1: Front view of the LIGHTEU SEAFLO 12V Diaphragm Water Pressure Pump. This image shows the overall design and the label with key specifications.

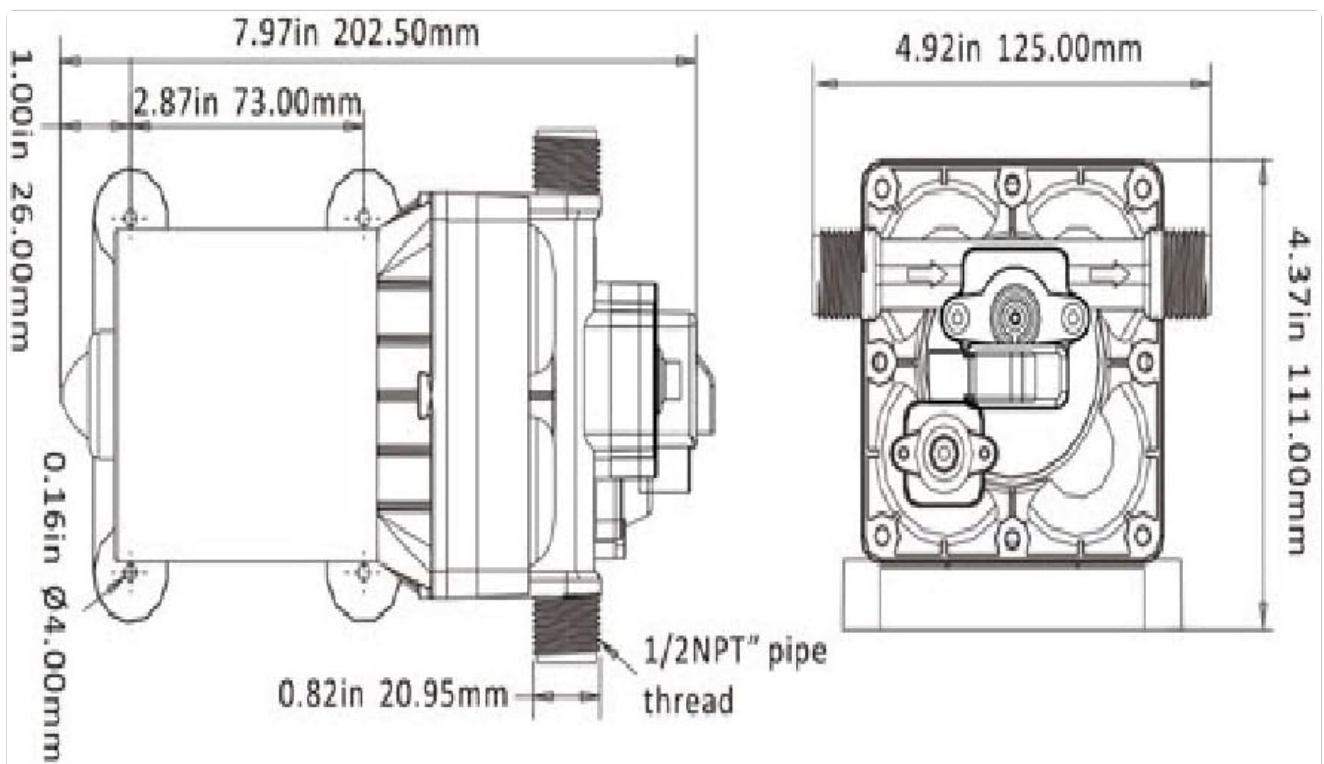


Figure 2: Dimensional drawing of the pump, showing length, width, height, and port sizes for planning installation space and connections.

5.3 Plumbing Connections

1. **Inlet Connection:** Connect the water source to the pump's inlet port. It is recommended to install the included inline filter on the inlet side to prevent debris from entering the pump. Ensure all connections are tight to prevent air leaks,

which can affect pump performance.

2. **Outlet Connection:** Connect the pump's outlet port to your water system. Use appropriate 12mm hose barb adapters or 1/2 inch NPT threaded connectors as needed.
3. Ensure all hoses are securely clamped and free of kinks.





Figure 3: The pump shown with typical plumbing fittings attached, illustrating how the inlet and outlet connections are made.

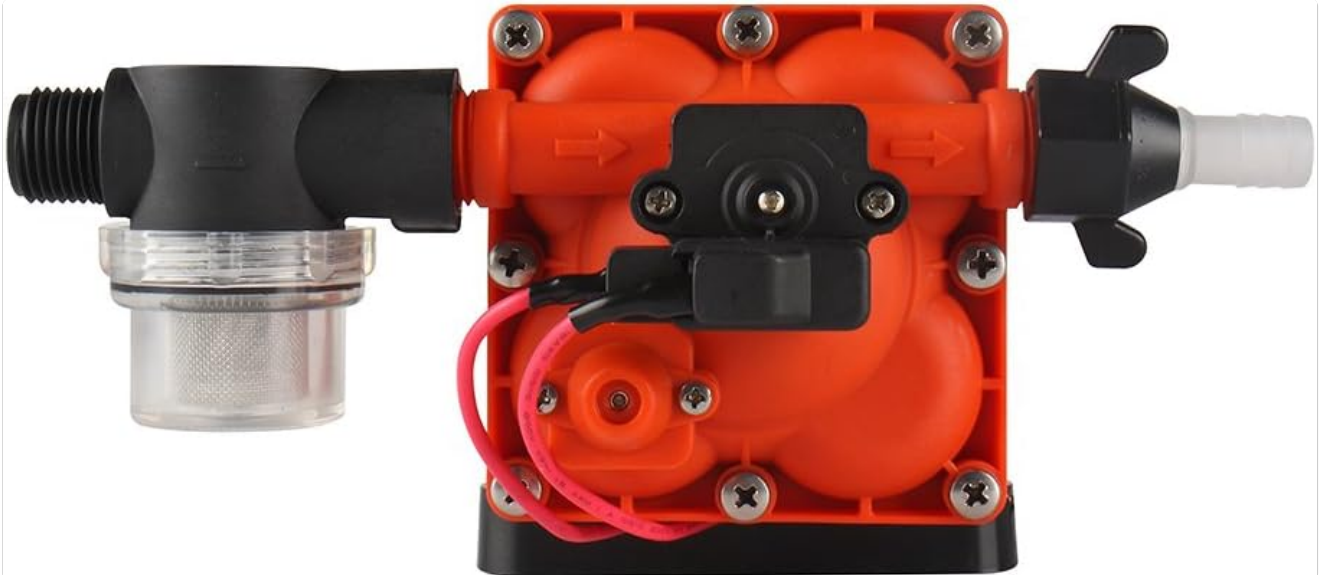


Figure 4: Rear view of the pump, highlighting the electrical connections and the inline filter typically installed on the inlet side.

5.4 Electrical Connections

- Connect the pump to a 12V DC power source. The pump has 16AWG, 9.4-inch long leads.
- Ensure correct polarity: Red wire to positive (+), Black wire to negative (-).
- Install an appropriate fuse (not included) in the positive line, rated for the pump's maximum current draw (7.5 Amps).
- All electrical connections should be waterproof and corrosion-resistant, especially in marine environments.

5.5 Priming the Pump

The pump is self-priming. To prime, ensure the inlet hose is submerged in water and all outlet faucets are open. Turn on the pump. It will draw water and expel air from the system. Once a steady stream of water flows from the faucets, close them. The pump will then build pressure and shut off automatically.

6. OPERATING INSTRUCTIONS

- Once installed and primed, the pump operates automatically via its integrated pressure switch.
- When a faucet is opened, the system pressure drops, and the pump turns on.
- When all faucets are closed, the system pressure builds up, and the pump turns off.
- Avoid prolonged dry running, although the pump is designed to withstand it. Ensure a water source is always available.

7. MAINTENANCE

- **Regular Inspection:** Periodically check all plumbing and electrical connections for leaks, corrosion, or loose fittings.

- **Filter Cleaning:** The inline filter on the inlet side should be regularly inspected and cleaned to prevent debris buildup, which can restrict flow and damage the pump. To clean, unscrew the filter housing, remove the mesh screen, rinse it thoroughly, and reassemble.
- **Winterization:** In freezing conditions, drain all water from the pump and plumbing system to prevent damage from ice expansion. Alternatively, use non-toxic RV antifreeze.
- **Bypass Adjustment:** The bypass is factory-preset for optimal performance. If your application requires a different setting, you can adjust it. Carefully tighten the bypass screw to increase the minimum bypass pressure, or loosen it to decrease. Consult a specialist if unsure.

8. TROUBLESHOOTING

If you experience issues with your pump, refer to the following common problems and solutions:

8.1 Low Flow and Pressure

- **Air Leak at Pump Inlet:** Check all inlet connections for tightness. Ensure the filter housing is sealed correctly.
- **Accumulation of Dirt:** Inspect and clean the inline filter. Check for blockages in the inlet line.
- **Blocked Line:** Inspect both inlet and outlet lines for kinks, debris, or closed valves.
- **Worn Pump Bearings:** If accompanied by loud noises, the pump bearings may be worn. This typically requires professional service or pump replacement.
- **Motor Defective:** If the motor runs but produces no flow, or does not run at all, the motor may be defective.

8.2 Pump Runs Continuously or Cycles Rapidly

- **Water Leak in System:** Check all plumbing for leaks, including faucets, connections, and the pump head itself. Even small leaks can cause the pump to cycle.
- **Insufficient Water Supply:** Ensure the water tank is not empty and the inlet line is fully submerged.
- **Pressure Switch Malfunction:** The internal pressure switch may be faulty.
- **Incorrect Bypass Adjustment:** An improperly adjusted bypass can cause rapid cycling. Refer to Section 7 for adjustment instructions.

8.3 Noisy Operation

- **Mounting Feet Compressed Too Tightly:** Loosen mounting screws slightly to allow the rubber feet to absorb vibrations.
- **Flexible Mounting Surface:** If the mounting surface is not rigid, it can amplify pump noise. Consider reinforcing the mounting area.
- **Rigid Pipe Connections:** If the pump is connected to rigid pipes without flexible sections, vibrations can transmit through the plumbing. Install flexible hoses between the pump and rigid piping.
- **Air in System:** Air trapped in the system can cause gurgling or noisy operation. Prime the pump thoroughly as described in Section 5.5.



Figure 5: An excerpt from the original German instruction sheet, detailing common troubleshooting scenarios for low flow/pressure and noisy operation.

9. WARRANTY

This LICHTEU SEAFLO 12V Diaphragm Water Pressure Pump comes with a **two-year warranty** from the date of purchase. This warranty covers manufacturing defects and material faults under normal use. Damage resulting from improper installation, misuse, neglect, unauthorized modifications, or operation outside the specified parameters is not covered by this warranty.

Please retain your proof of purchase for warranty claims.

10. SUPPORT

For technical assistance, spare parts, or warranty claims, please contact LICHTEU GMBH directly. Refer to the contact information provided on your official invoice or the product packaging.

When contacting support, please have your model number (LT-DIAG-01-3055) and purchase date readily available.

