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> DC HOUSE 110V RV Camper Water Pressure Diaphragm Pump (Model DPHC-T33-110V) - Instruction Manual

DC HOUSE DPHC-T33-110V

DC HOUSE 110V RV Camper Water Pressure Diaphragm Pump

MODEL: DPHC-T33-110V - INSTRUCTION MANUAL

1. Introduction

This manual provides essential information for the safe and efficient installation, operation, and maintenance of your DC HOUSE 110V RV Camper Water Pressure Diaphragm Pump, Model DPHC-T33-110V. This pump is designed to deliver a steady, on-demand water flow for various applications including RVs, campers, food trucks, and marine vessels.



Image 1.1: DC HOUSE 110V RV Camper Water Pressure Diaphragm Pump, Model DPHC-T33-110V.

2. Safety Information

Please read and understand all safety instructions before installing or operating the pump. Failure to follow these instructions may result in electric shock, fire, serious injury, or property damage.

- **Electrical Safety:** Ensure the power supply matches the pump's voltage (110V AC). Always disconnect power before performing any service or maintenance. Use a grounded outlet.
- **Water Safety:** Do not pump flammable liquids. Ensure all connections are watertight to prevent leaks and potential electrical hazards.
- **Installation:** Install the pump in a dry, well-ventilated area. Avoid locations where it may be exposed to freezing temperatures.
- **Operation:** Do not run the pump dry for extended periods, although it features dry-run protection, prolonged dry operation can reduce pump lifespan.
- **Children and Pets:** Keep the pump out of reach of children and pets.

3. Package Contents

Verify that all items are present in the package:

- DC HOUSE 110V Water Pressure Diaphragm Pump
- Hose Adaptors (various sizes for flexible connection)
- Plumber's Tape
- Filter Screen (for inlet)

3-CHAMBER DIAPHRAGM DESIGN



SPECIFICATIONS

Model:	DPHC-T33-110V	Voltage:	110V AC
Maximum Flow Rate:	4.0 GPM	Cut-Off Pressure:	50 PSI
Maximum Current:	0.8 A	Maximum Head:	131ft (40 m)
Max. Self-Priming Height:		9.8 ft (3 m)	

Image 3.1: Water pump and included accessories.

4. Specifications

PRODUCT DIMENSIONS

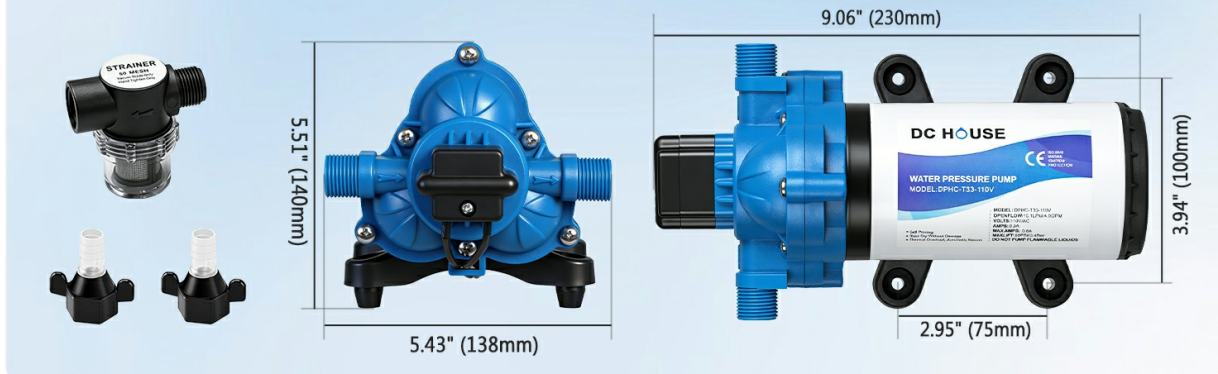


Image 4.1: Product dimensions and components.

Technical Specifications

Feature	Specification
Brand	DC HOUSE
Model Number	DPHC-T33-110V
Voltage	110 Volts (AC)
Maximum Flow Rate	4 Gallons Per Minute (GPM)
Cut-Off Pressure	50 PSI
Maximum Head	131 ft (40 m)
Max. Self-Priming Height	9.8 ft (3 m)
Maximum Current	0.8 A
Item Weight	6.4 Pounds
Product Dimensions (L x W x H)	12.4" x 5.1" x 5.1"
Material	Mesh, Metal, Plastic (Housing: Nylon Polypropylene; Diaphragm: Santoprene; Valves/Seals: EPDM/Viton)
Power Source	AC
Motor Type	Copper-core motor
Protection Features	Thermal Overload Protection, Dry Run Protection

3-CHAMBER DIAPHRAGM DESIGN



SPECIFICATIONS

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Image 4.2: Internal 3-chamber diaphragm design.

COPPER-CORE MOTOR

Unrivaled durability and efficiency
with excellent conductivity



THERMAL
PROTECTION



DRY RUN
PROTECTION

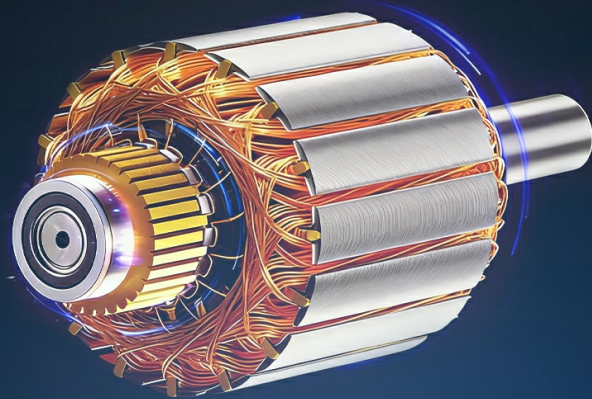


Image 4.3: Copper-core motor for enhanced durability.

5. Setup and Installation

Proper installation is crucial for the pump's performance and longevity. Follow these steps carefully:

- Mounting:** Secure the pump to a solid, flat surface using the integrated mounting feet. The pump can be mounted in any position. Ensure there is adequate space around the pump for ventilation and maintenance. The anti-vibration rubber feet help reduce noise.
- Inlet Connection:** Connect the water source (e.g., fresh water tank) to the pump's inlet port. Install the provided filter screen on the inlet side to prevent debris from entering the pump. Use plumber's tape on threaded connections to ensure a watertight seal. The pump has a self-priming lift of 9.8 feet.
- Outlet Connection:** Connect the pump's outlet port to your water system (e.g., faucets, shower). Use appropriate hose adaptors and plumber's tape for secure, leak-free connections.
- Electrical Connection:** Plug the pump into a standard 110V AC grounded electrical outlet. Ensure the power cord is not pinched or damaged.
- Initial Priming:** Once all connections are secure, open a faucet in your system to allow air to escape. Turn on the pump. It will self-prime, drawing water from the source. Once water flows steadily from the faucet, close the faucet. The pump's pressure switch will automatically turn off the pump.



Image 5.1: Example installation of the water pump with an inline filter.

6. Operating Instructions

The DC HOUSE diaphragm pump features intelligent on-demand operation.

- **Automatic Operation:** The built-in pressure switch automatically activates the pump when a faucet or water outlet is opened, and turns it off when the outlet is closed and pressure builds up.
- **Quiet Operation:** The pump is designed for quiet operation, typically below 50dB, enhanced by anti-vibration rubber feet.
- **Pressure Adjustment:** The pump's cut-off pressure is factory set at 50 PSI. If adjustment is needed, carefully open the top cover of the pressure switch. Use an Allen wrench (not included, but typically a small hex key) to turn the adjustment screw. Turning clockwise increases pressure, and counter-clockwise decreases pressure. The adjustable range is typically 40-80 PSI. **Do not over-adjust.**

AUTOMATIC PRESSURE SWITCH

50PSI CUT-OFF PRESSURE

Featuring a built-in automatic pressure switch that starts and stops the pump on demand for seamless water flow.

EASY PRESSURE TUNING

Open the top cover and turn the screw.
Adjustable range: 40-80 PSI.

Clockwise to increase
counter-clockwise to decrease.



Image 6.1: Automatic pressure switch and adjustment mechanism.

EMBRACE THE QUIET



Image 6.2: Pump designed for quiet operation (below 50dB).

7. Maintenance

Regular maintenance ensures optimal performance and extends the pump's lifespan.

- **Filter Cleaning:** Periodically inspect and clean the inlet filter screen to prevent clogging and maintain flow rate. Disconnect power, unscrew the filter housing, remove the screen, rinse it thoroughly, and reassemble.
- **Leak Inspection:** Regularly check all hose connections and the pump body for any signs of leaks. Tighten connections as needed.
- **Winterization:** In freezing conditions, the pump must be drained completely to prevent damage. Disconnect the inlet and outlet hoses, allow all water to drain, and store the pump in a warm, dry place.
- **General Cleaning:** Keep the exterior of the pump clean and free from dirt and debris.

8. Troubleshooting

Refer to the table below for common issues and their solutions.

Problem	Possible Cause	Solution
Pump does not turn on	No power; Blown fuse/breaker; Loose wiring; Motor failure	Check power connection; Reset breaker/replace fuse; Inspect wiring; Contact support if motor fails.
No water flow or low flow	Inlet filter clogged; Air in system; Kinked hose; Low water source; Pump not primed	Clean inlet filter; Bleed air from system by opening faucets; Straighten hoses; Ensure adequate water supply; Re-prime pump.
Pump runs continuously (does not shut off)	Leak in system; Pressure switch malfunction; Air in system	Check for leaks in plumbing; Inspect pressure switch (do not attempt to repair if unfamiliar); Bleed air from system.
Excessive noise/vibration	Loose mounting; Debris in pump; Air in system	Ensure pump is securely mounted; Clean inlet filter; Bleed air from system.
Pump overheats and shuts off	Prolonged dry running; Restricted flow; Motor overload	Ensure water supply; Check for blockages in inlet/outlet; Allow pump to cool, then restart. Thermal protection will reset automatically.

9. Applications

The DC HOUSE 110V Water Pressure Diaphragm Pump is versatile and suitable for various fresh water applications:

- RV and Motorhome fresh water systems
- Marine fresh water systems and washdown
- Food trucks and mobile kitchens
- Off-grid rain collection systems
- Small-scale irrigation and garden hose boosting
- Other liquid transfer applications requiring on-demand pressure

DC HOUSE

DPHC-T33-110V

RV/MOTORHOME	MARINE	SHOWER SUB-PUMP	IRRIGATION
POTABLE FRESHWATER SYSTEMS	SALT/FRESHWATER WASHDOWN	OFF GRID RAIN COLLECTION	OTHER LIQUID TRANSFER APPLICATIONS

Image 9.1: Diverse applications of the DC HOUSE water pump.

10. Warranty and Support

DC HOUSE is committed to quality and provides reliable product support. For any questions, technical assistance, or warranty claims, please refer to the contact information provided with your purchase or visit the official DC HOUSE website. Specific warranty terms and conditions may apply and are typically detailed in the product packaging or on the manufacturer's website.