

## ECO-WORTHY T33-12V

# ECO-WORTHY RV Fresh Water Pump Instruction Manual

**MODEL: T33-12V**

**Brand: ECO-WORTHY**

## INTRODUCTION

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This manual provides essential information for the safe and efficient operation, installation, and maintenance of your ECO-WORTHY RV Fresh Water Pump (Model T33-12V). This 12V DC self-priming diaphragm pump is designed to provide consistent water pressure for various applications, including RVs, yachts, campers, food trucks, and other portable water systems. Please read this manual thoroughly before installation and operation to ensure proper usage and longevity of the product.

The pump delivers a flow rate of 3.5 gallons per minute (GPM) with a pressure switch set to 45 PSI. It is capable of self-priming up to 9.8 vertical feet and can lift water up to 98 feet. The maximum current draw is 6.0 amps.

## SAFETY INSTRUCTIONS

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- **Electrical Safety:** Ensure the power source matches the pump's voltage (12V DC). Disconnect power before performing any installation, maintenance, or troubleshooting.
- **Liquid Compatibility:** **DO NOT PUMP FLAMMABLE LIQUIDS.** This pump is designed for fresh water only. Pumping flammable liquids can result in fire or explosion.
- **Thermal Protection:** The pump features built-in thermal overload protection. If the motor temperature

exceeds 70°C (158°F), the pump will automatically shut off to prevent damage. Allow the pump to cool down before resuming operation.

- **Dry Run Protection:** The pump is designed to run dry without damage, but prolonged dry running is not recommended.
- **Installation Environment:** Install the pump in a well-ventilated area, protected from direct sunlight, extreme temperatures, and moisture.
- **Secure Mounting:** Ensure the pump is securely mounted using its anti-vibration rubber feet to minimize noise and vibration during operation.
- **Hose Connections:** Use appropriate hose clamps and thread sealant (like Teflon tape) to ensure all connections are watertight and secure.

## PRODUCT FEATURES

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- **Pump Specifications:** 12V DC water pump provides 3.5 gallons per minute water flow, the pressure switch is set to 45PSI. Self-Priming up to 9.8 vertical feet, lift up to 98 feet. 6.0 Max amps.
- **Automatic Pressure Switch:** Equipped with an on-demand pressure switch for high flow demand, preventing rapid cycling or stopping. When the faucet is opened, the pressure switch activates the pump. The pressure setting is adjustable from 35-80 PSI. Turning clockwise increases pressure, and counter-clockwise reduces it.
- **Reliable Performance:** Thermal overload protection is built into the water pump to ensure safe operation. The pump can run dry without damage.
- **Quiet Operation:** The pump features a rubber mounting bracket base designed to minimize vibration and noise, even on hard surfaces.
- **Durable Construction:** Features a pure copper motor for high durability and efficiency, excellent conductivity, heat dissipation, and resistance to environmental factors. Includes a sealed gasket to prevent water from leaking into the motor.

# HIGH EFFICIENCY

**12V DC**  
Voltage

**3.5 GPM**  
Water Flow

**45 PSI**  
Water Pressure

**9.8 FT**  
Max Suction

**98 FT**  
Lift Up

**6.0 A**  
Max Current



Figure 1: Key specifications of the ECO-WORTHY RV Fresh Water Pump.

# ON DEMAND PRESSURE SWITCH

Pump starts supplying water automatically when the faucet is opened



## Adjustable

Pressure setting to 45PSI. Turning clockwise to increase the pressure and vice versa is to reduce the pressure

Figure 2: Detail of the adjustable on-demand pressure switch.

# INCREASE WATER PRESSURE & EASY TO INSTALL

Get rid of the trouble of insufficient water pressure

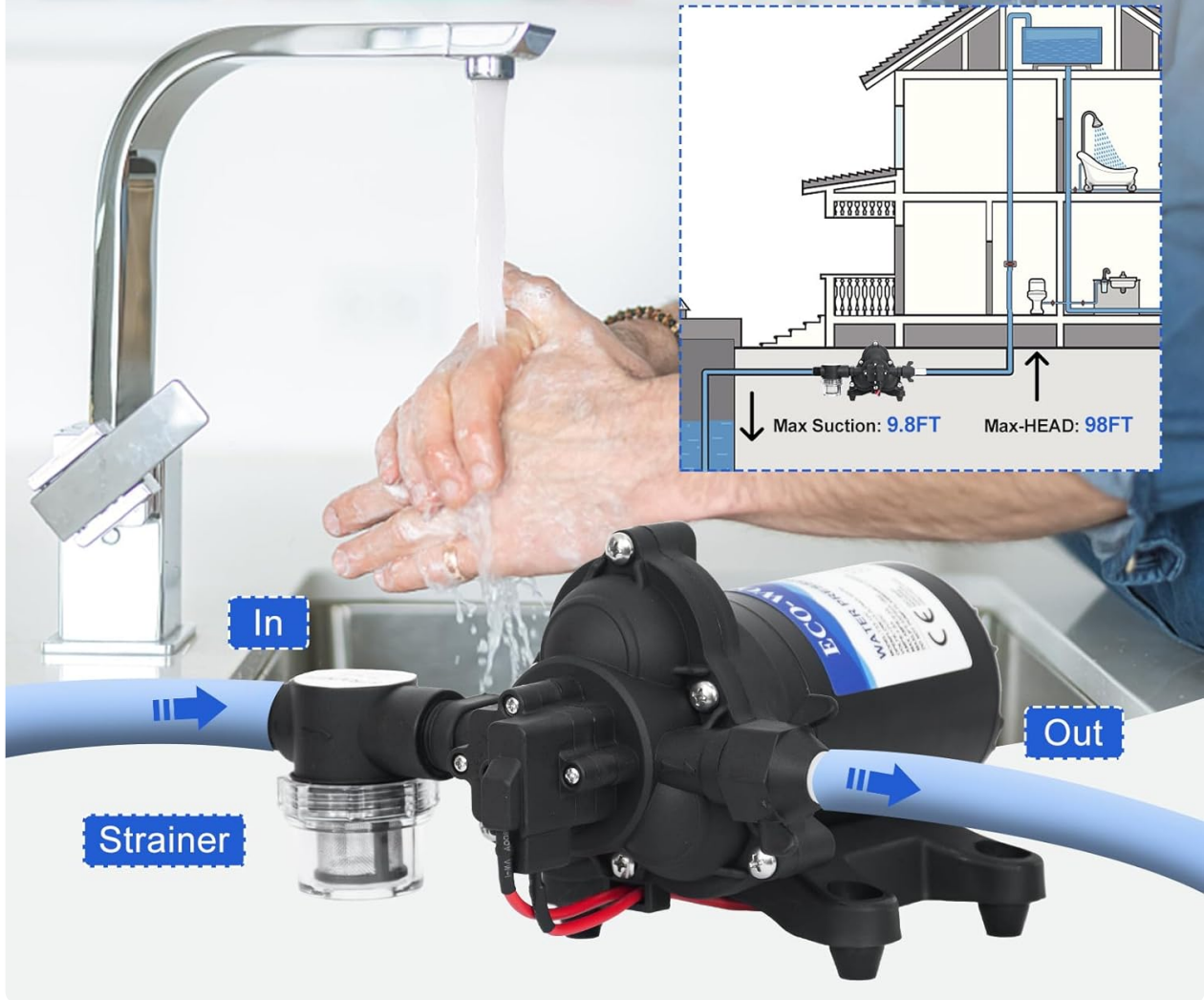


Figure 3: Illustration of the pump's quiet operation and anti-vibration features.

# MULTIPLE OCCASIONS



RV



Yacht



Camping



Kitchen



Figure 4: Internal components and features of the pump.

## SPECIFICATIONS

Attribute	Value
Brand	ECO-WORTHY
Model Number	T33-12V
Color	Black
Material	Stainless Steel
Style	Diaphragm Pump

Attribute	Value
Product Dimensions (L x W x H)	11.38" x 5.59" x 5.59"
Power Source	12V DC
Item Weight	4.93 Pounds
Maximum Flow Rate	3.5 Gallons Per Minute (GPM)
Maximum Lifting Height	9.8 Feet (Suction) / 98 Feet (Lift)
Voltage	12 Volts (DC)
Wattage	55 watts
Pressure Switch Setting	45 PSI (Adjustable 35-80 PSI)
Max Amps	6.0 Amps
Included Components	Water Pump, Pure copper motor, On demand pressure switch

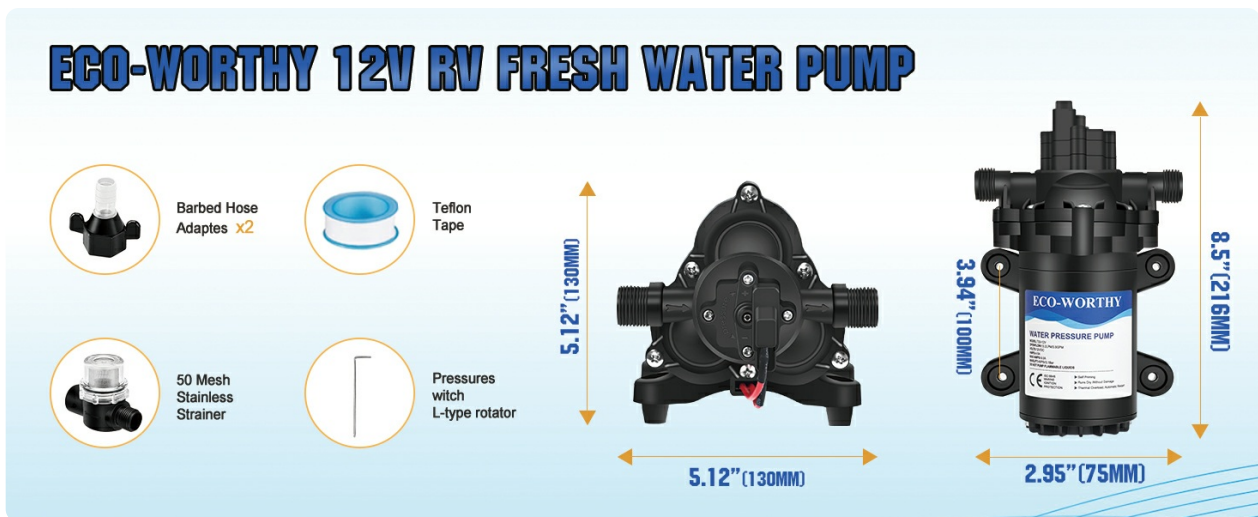


Figure 5: Detailed dimensions of the pump and accessories.

## SETUP

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

- 1. Mounting:** Securely mount the pump on a stable, flat surface using the integrated mounting feet. The rubber feet help reduce vibration and noise.
- 2. Inlet Connection:** Connect the water supply line to the pump's inlet port. Ensure the included 50-mesh strainer is firmly tightened to the inlet to prevent debris from entering the pump.
- 3. Outlet Connection:** Connect the output hose to the pump's outlet port. The pump comes with 1/2" NPT external pipe threads and barbed hose adapters for flexible hose connections (fits 1/2" flexible hose). Use Teflon tape on threaded connections for a watertight seal.

4. **Electrical Connection:** Connect the pump to a 12V DC power source. Ensure correct polarity (red wire to positive, black wire to negative).
5. **Priming:** For initial setup, ensure the pump is filled with water before starting to aid in priming. The pump is self-priming, but a pre-filled system can expedite the process.

## PRODUCT FEATURES

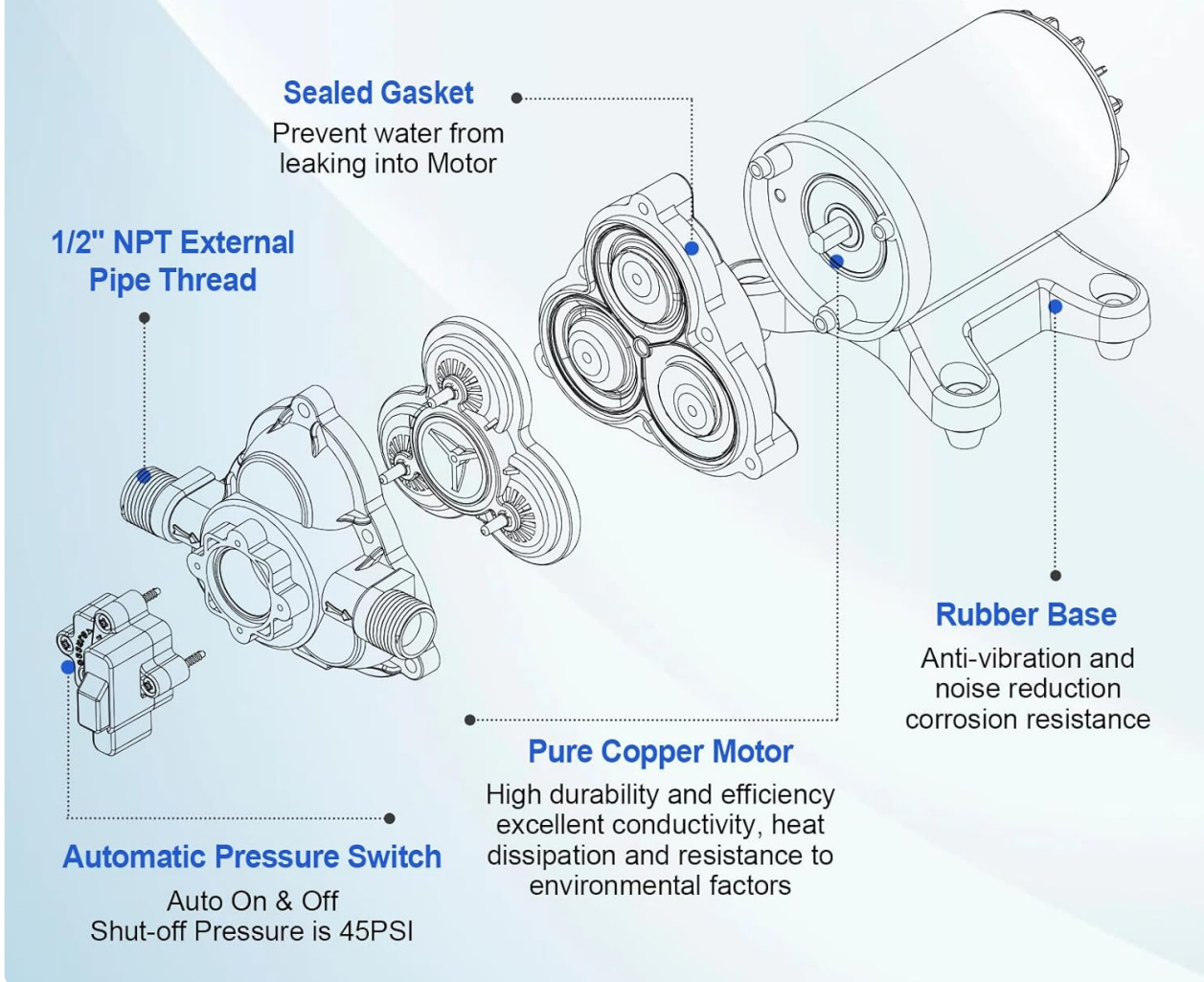


Figure 6: Water flow and installation diagram.

## EASY TO INSTALL

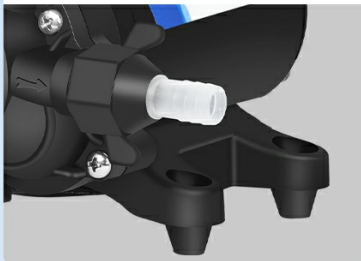
### STEP 1



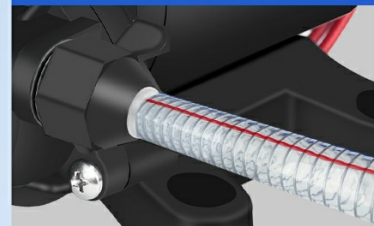
Firmly tighten the strainer

### STEP 2

Install hose to the threaded MNPT on the pump (Fit 1/2" flexible hose)



### STEP 3



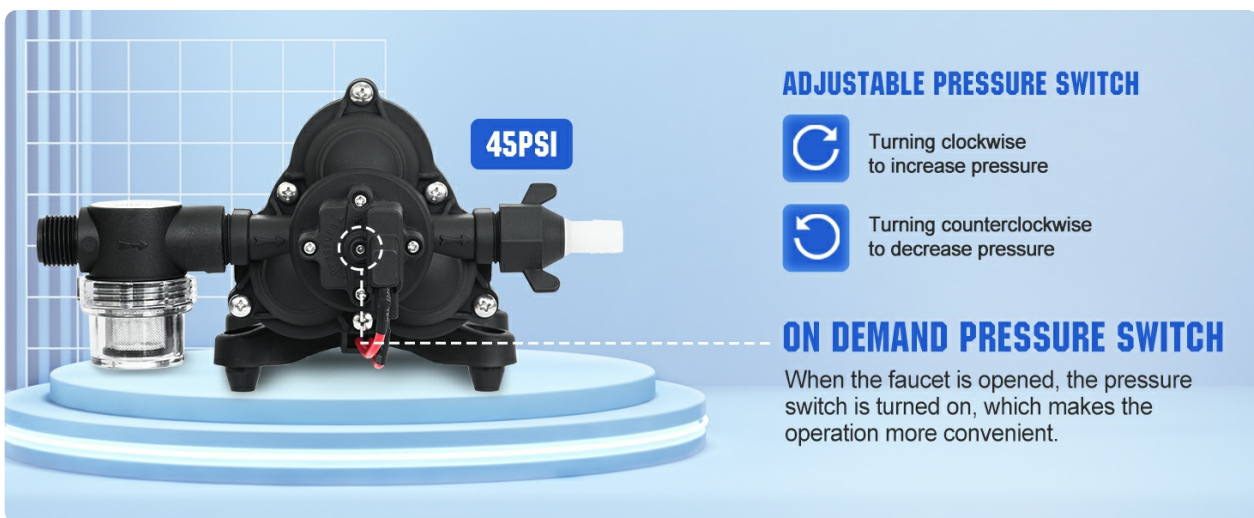
Install hose to barbed hose adaptors (Fit 1/2" flexible hose)

Figure 7: Visual guide for pump installation steps.

## OPERATING INSTRUCTIONS

The ECO-WORTHY RV Fresh Water Pump is designed for automatic operation based on water demand.

- **Automatic Operation:** Once installed and connected to power, the pump will automatically turn on when a faucet or water outlet is opened, and turn off when the outlet is closed and the system pressure reaches the set PSI.
- **Pressure Adjustment:** The pressure switch is factory-set to 45 PSI. If needed, you can adjust the pressure within the 35-80 PSI range. To increase pressure, turn the adjustment screw clockwise. To decrease pressure, turn it counter-clockwise. Make small adjustments and test the system.
- **Continuous Use:** The pump is suitable for intermittent duty. Avoid prolonged continuous operation without water flow.



### ADJUSTABLE PRESSURE SWITCH



Turning clockwise to increase pressure



Turning counterclockwise to decrease pressure

### ON DEMAND PRESSURE SWITCH

When the faucet is opened, the pressure switch is turned on, which makes the operation more convenient.

Figure 8: Pressure switch adjustment guide.

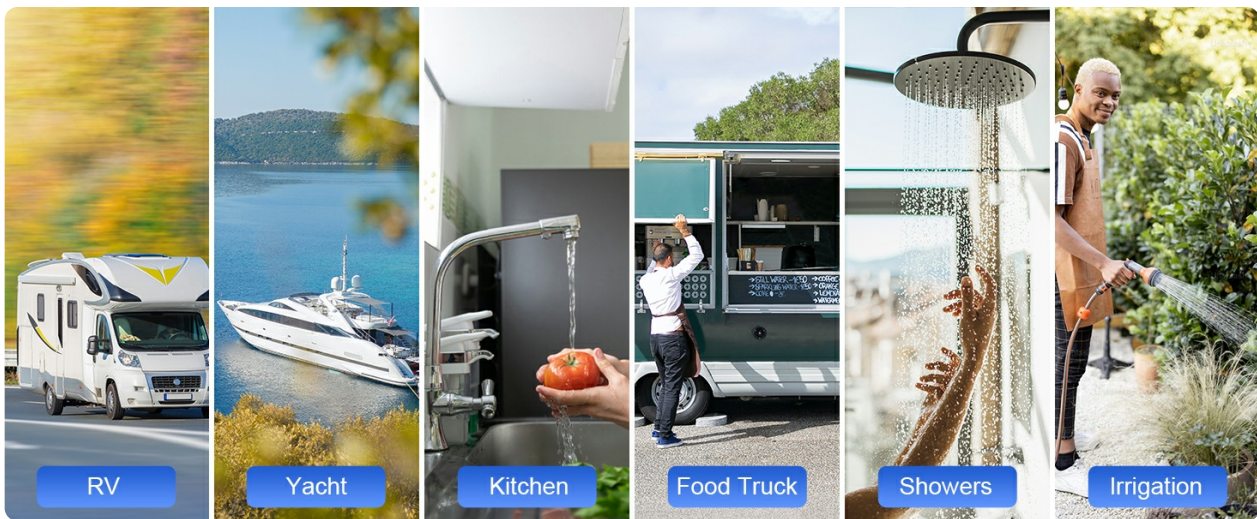


Figure 9: Examples of multiple applications for the water pump.

## MAINTENANCE

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

- **Strainer Cleaning:** Periodically inspect and clean the 50-mesh strainer at the inlet to prevent blockages and maintain optimal flow.
- **Winterization:** In freezing temperatures, drain all water from the pump and lines to prevent damage from ice expansion.
- **Post-Chemical Use Cleaning:** If the pump is used to transfer chemicals (e.g., bleach solution for roof cleaning), flush the pump thoroughly with fresh water after each use to prevent corrosion and residue buildup.
- **Connection Check:** Regularly check all hose connections and electrical wiring for leaks, wear, or damage. Tighten connections as needed.

## TROUBLESHOOTING

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

- **Pump Not Starting:**
  - Check power connection and ensure 12V DC supply.
  - Verify the pressure switch is not stuck or faulty.
  - Check for thermal overload shutdown; allow pump to cool.
- **Low Flow or Pressure:**
  - Inspect the inlet strainer for clogs and clean if necessary.
  - Check for kinks or blockages in the inlet or outlet hoses.
  - Ensure the water supply is adequate and not restricted.

- Verify the pressure switch setting is appropriate.
- **Pump Runs Continuously or Cycles Rapidly:**
  - Check for leaks in the plumbing system (faucets, connections, hoses).
  - Adjust the pressure switch setting.
  - Ensure there is no air trapped in the system.
- **Excessive Noise or Vibration:**
  - Ensure the pump is securely mounted and its rubber feet are intact.
  - Check for air in the system.
  - Inspect for loose components or debris inside the pump (if safe to do so after disconnecting power).

If problems persist after attempting these solutions, please contact ECO-WORTHY customer support.

## WARRANTY AND SUPPORT

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This ECO-WORTHY RV Fresh Water Pump (Model T33-12V) comes with a **4-year warranty** from the date of purchase. This warranty covers defects in materials and workmanship under normal use and service.

For warranty claims, technical support, or any questions regarding your product, please contact ECO-WORTHY customer service through the original order form or visit the official ECO-WORTHY store online. Please have your model number (T33-12V) and purchase information ready when contacting support.

### Contact Information:

- Visit the [ECO-WORTHY Store on Amazon](#)
- Refer to your purchase documentation for specific customer service contact details.