SEAFLO SFDP1-030-045-33

SEAFLO 33 Series 12V DC Fresh Water Pressure Pump

Model: SFDP1-030-045-33 | Brand: SEAFLO

1. Introduction

This manual provides essential information for the installation, operation, and maintenance of your SEAFLO 33 Series 12V DC Fresh Water Pressure Pump. This pump is designed for reliable water delivery in various applications, including RVs, campers, boats, and off-grid systems. Please read these instructions thoroughly before installation and use to ensure proper function and longevity of the product.



Image 1: SEAFLO 33 Series 12V DC Fresh Water Pressure Pump with accessories.

The SEAFLO 33 Series pump is a high-performance 3-chamber diaphragm pump, providing a consistent 3.0 GPM flow at 45 PSI. It features an automatic adjustable pressure switch, ultra-quiet operation, self-priming capabilities up to 6 feet, and can run dry without damage. It is certified for potable water safety and compliant with RV and marine plumbing standards.



Image 2: Versatile applications for the SEAFLO 33 Series pump.

2. Safety Information

Adherence to safety guidelines is crucial for preventing injury and ensuring proper pump operation. This pump is designed for fresh water applications only. Do not use with flammable liquids.

- **Electrical Safety:** Ensure all electrical connections are made by a qualified professional and comply with local codes. The pump operates on 12V DC.
- **Water Safety:** This pump is certified to NSF/ANSI/CAN 61 & 372 (Potable Water Safety), NSF 24 (RV Plumbing), UL 778 (Motor-Operated Water Pumps), and CSA C22.2 No. 108 (Liquid Pumps). It is safe for drinking water applications.
- **Temperature Limits:** Do not exceed the maximum fluid temperature of 140°F (60°C).
- **Pressure Limits:** Do not exceed the maximum operating pressure of 45 PSI (3.1 BAR).
- **Flammable Liquids:** Never pump flammable liquids. This can cause fire or explosion.



Image 3: NSF, UL, and CSA certifications for the SEAFLO 33 Series pump.

3. Product Overview

The SEAFLO 33 Series pump is engineered for durability and consistent performance. Key features include:

- **High-Performance 3-Chamber Diaphragm:** Provides reliable 3.0 GPM flow at 45 PSI for steady water delivery.
- **Automatic Adjustable Pressure Switch:** Starts and stops the pump based on water demand, with an adjustable pressure range of 17-60 PSI.
- **Ultra-Quiet Operation:** Equipped with a noise-reducing rubber mounting base to minimize vibration and sound.
- **Self-Priming and Run Dry Capability:** Primes up to 6 feet and can operate without fluid without damage.
- **Durable Construction:** Features a copper-core motor and corrosion-resistant materials like nylon/polypropylene housings, Santoprene diaphragm, EPDM/Viton valves/seals, and stainless steel screws.
- **Versatile Application:** Capable of supplying up to four fixtures simultaneously.



Image 4: High-performance 3-chamber diaphragm design.



Image 5: Automatic adjustable pressure switch.



Image 6: Ultra-quiet operation with vibration dampening mount.



Image 7: Durable and corrosion-resistant materials.

Included Components:

- (1) SEAFLO 33-Series Diaphragm Pump
- (1) Set of Instructions (this manual)
- (2) 1/2" Barbed Hose Adaptors
- (1) 50 Mesh Inlet Strainer

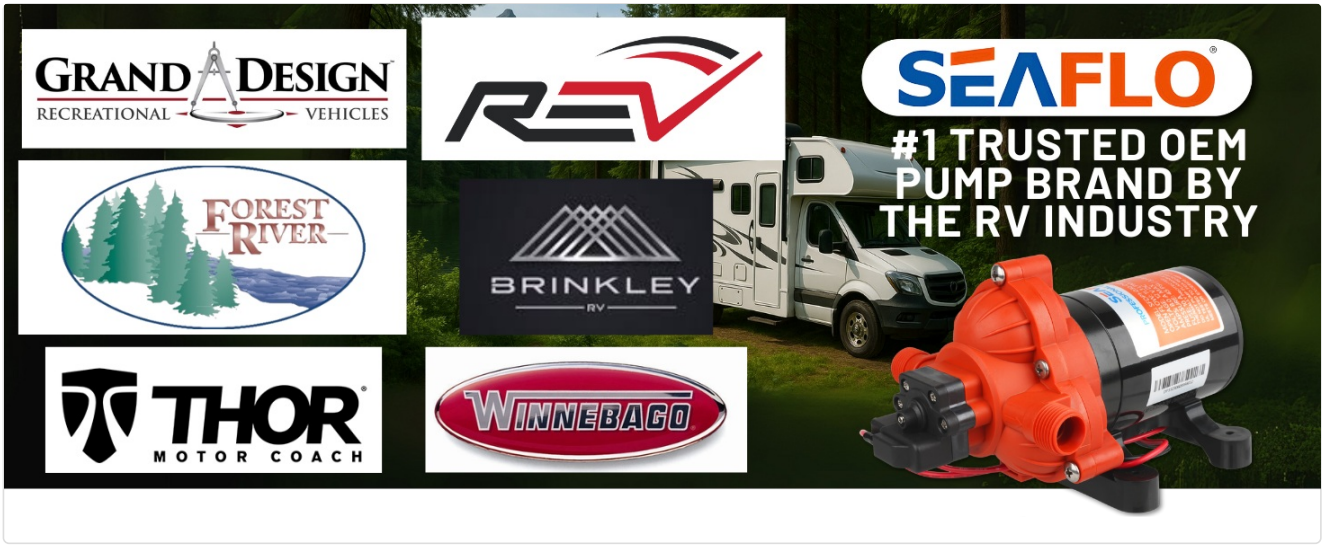


Image 8: Included accessories: inline strainer and barbed hose adaptors.

4. Setup and Installation

Proper installation is critical for optimal performance and to prevent damage. Refer to the diagram below for dimensions and component identification.



Image 9: Exploded view of pump components.

1. **Mounting:** Secure the pump using the integrated rubber mounting base. This base is designed to minimize vibration and noise. Ensure the pump is mounted in a dry, accessible location, protected from direct sunlight and freezing temperatures.
2. **Plumbing Connections:** The pump features 1/2"-14 MNPT ports. Use the provided 1/2" barbed hose adaptors for hose connections. Install the 50 Mesh Inlet Strainer on the inlet side of the pump to prevent debris from entering and damaging the pump. Ensure all connections are tight to prevent leaks. The pump is self-priming up to 6 feet, allowing for flexible installation above the water tank level.
3. **Electrical Wiring:** Connect the pump to a 12V DC power source. The pump's wire connections are 12V 16 AWG and 4.5" long. Ensure correct polarity (red wire to positive, black wire to negative). Install an appropriate fuse in the positive line as close to the power source as possible to protect the circuit.
4. **System Priming:** After installation, open all faucets in the system to allow air to escape. Turn on the pump. It will self-prime and begin pumping water. Once a steady stream of water flows from all faucets, close them. The pump's automatic pressure switch will then shut off.

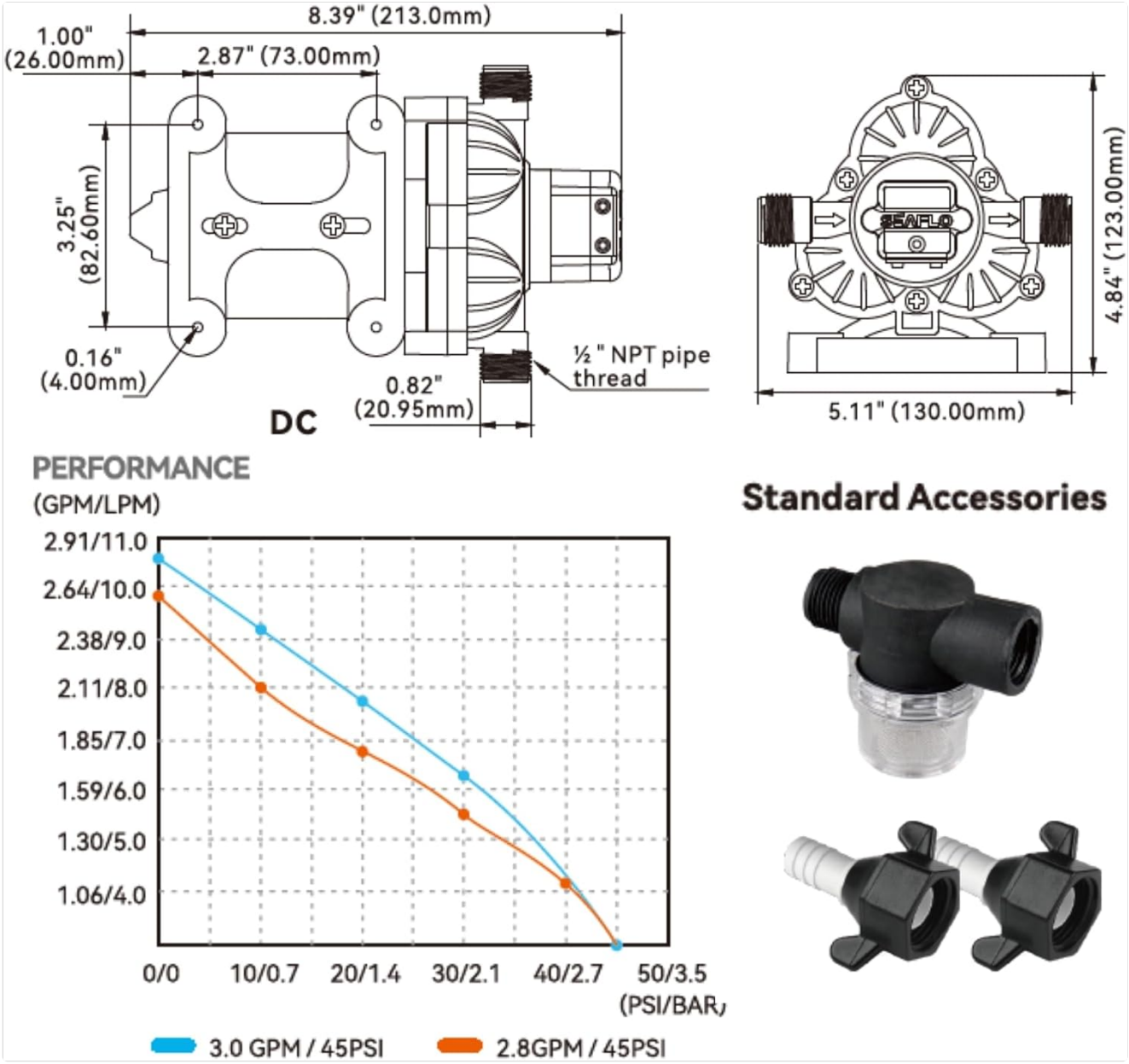


Image 10: Pump dimensions and performance curve.

5. Operating Instructions

The SEAFLO 33 Series pump is designed for automatic, on-demand operation.

- **Automatic Operation:** The built-in pressure switch automatically activates the pump when a faucet is opened and the system pressure drops. It deactivates the pump when the faucet is closed and the system reaches its shut-off pressure.
- **Pressure Adjustment:** The pressure switch is adjustable. To modify the pressure value, locate the adjustment screw on the switch and turn it as needed. The adjustable pressure range is 17-60 PSI. Refer to the specifications for factory-set shut-off pressure.
- **Multiple Fixtures:** This pump is capable of supplying water to up to four fixtures simultaneously, providing consistent flow without significant pressure drop.
- **Run Dry Protection:** The pump can run dry without sustaining damage, offering protection in situations where the water source is depleted. However, prolonged dry running is not recommended.

6. Maintenance

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

- **Inlet Strainer Cleaning:** Periodically inspect and clean the 50 Mesh Inlet Strainer to prevent blockages and maintain optimal flow. Turn off the pump and relieve system pressure before removing the strainer for cleaning.
- **Winterization:** In freezing conditions, drain the pump and plumbing system completely to prevent damage from ice expansion. Alternatively, use non-toxic RV/marine antifreeze.
- **General Inspection:** Regularly check all hose connections for leaks and ensure electrical connections are secure and free from corrosion. Inspect the pump for any signs of wear or damage.

7. Troubleshooting

This section addresses common issues you might encounter with your pump.

Problem	Possible Cause	Solution
Pump does not turn on	No power, blown fuse, loose wiring, faulty pressure switch.	Check power supply, replace fuse, tighten connections, test/replace pressure switch.
Pump runs but no water flows	Air in system, clogged inlet strainer, dry run (no water in tank), kinked hose.	Prime the system, clean strainer, ensure water supply, check hoses.
Pump cycles on and off rapidly (short cycling)	Leak in system, faulty pressure switch, insufficient accumulator tank (if installed).	Check for leaks, adjust/replace pressure switch, consider adding an accumulator tank.
Low flow or pressure	Clogged strainer, partially closed valve, low voltage, worn pump head.	Clean strainer, open valves, check voltage, inspect pump head for wear.
Excessive noise or vibration	Loose mounting, air in system, debris in pump.	Secure mounting, bleed air from system, inspect for debris.

If you are unable to resolve an issue using the troubleshooting guide, please contact SEAFLO customer support.

8. Specifications

Specification	Value
Model Number	SFDP1-030-045-33
Voltage	12V DC
Open Flow	3.0 GPM (11.3 LPM)
Shut-Off Pressure	45 PSI (3.1 BAR)
Priming Capabilities	6 feet (1.8 meters)
Max Temperature	140°F (60°C)
Ports	1/2"-14 MNPT
Material (Valves)	EPDM
Material (Diaphragm)	Santoprene

Specification	Value
Product Dimensions	7.84"L x 5"W x 4.62"H
Item Weight	4.2 Pounds
Certifications	NSF/ANSI/CAN 61 & 372, NSF 24, UL 778, CSA C22.2 No. 108

9. Warranty Information

The SEAFLO 33 Series 12V DC Fresh Water Pressure Pump is covered by a**4-Year Limited Warranty**. This warranty ensures reliability and peace of mind, covering defects in materials and workmanship under normal use. For detailed warranty terms and conditions, please refer to the official SEAFLO warranty documentation or contact customer support.

10. Support

For technical assistance, warranty claims, or further inquiries, please contact SEAFLO customer support. You can also visit the official SEAFLO store for additional product information and resources:

Visit the SEAFLO Store on Amazon

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