SEAFLO SFDP1-030-045-33

SEAFLO 33 Series DC Diaphragm Pump Instruction Manual

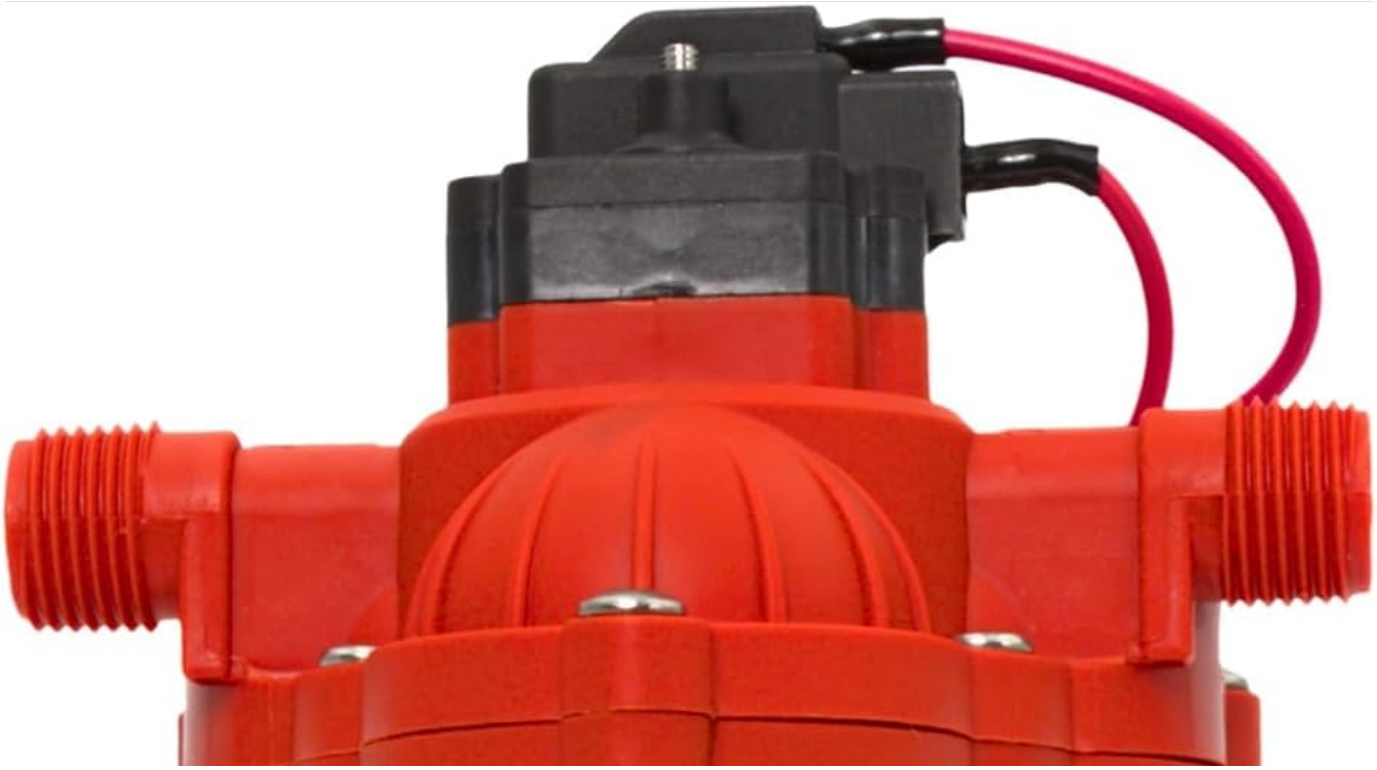
Model: SFDP1-030-045-33

Introduction

This manual provides essential information for the safe and efficient installation, operation, and maintenance of your SEAFLO 33 Series DC Diaphragm Pump. Designed for reliability and performance, this pump is ideal for various water systems in marine, RV, and agricultural applications. Please read these instructions thoroughly before use.

Product Overview

The SEAFLO 33 Series DC Diaphragm Pump is a high-performance, self-priming pump featuring a 3-chamber design for smooth, consistent water flow. It is equipped with a built-in pressure switch for automatic operation and is designed to run dry without damage.



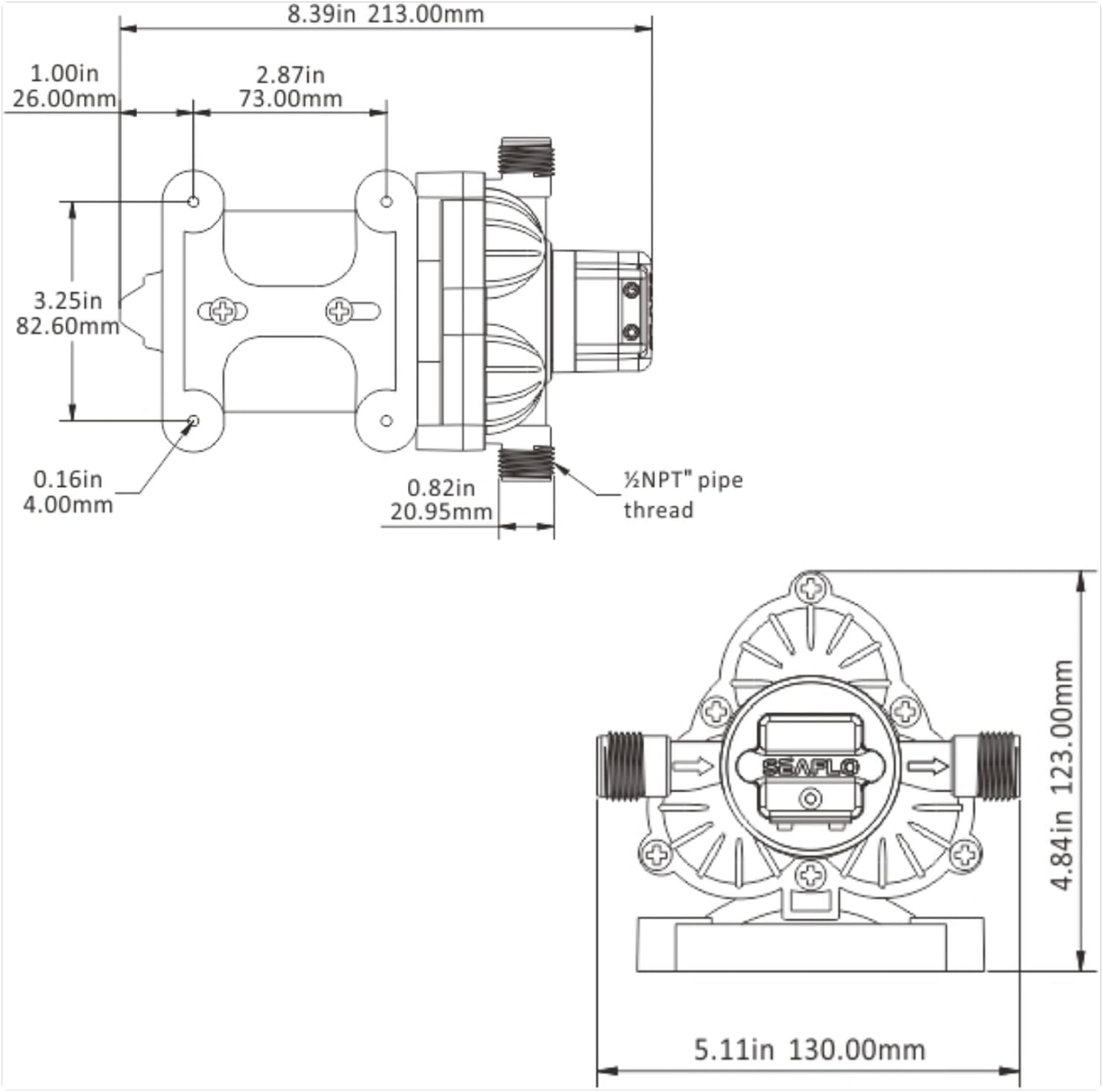
Front view of the SEAFLO 33 Series DC Diaphragm Pump, showcasing its compact design and port connections.

Key Features:

- **High-Performance 3-Chamber Design:** Delivers smooth and consistent water flow up to 3.0 GPM.
- **Capable of Supplying Up to 4 Fixtures:**Ensures consistent performance for multiple outlets.
- **Self-Priming and Run Dry Capability:** Self-primes up to 6 feet (1.8 meters) and can run dry without damage.
- **Automatic Pressure Switch:** Starts and stops automatically based on water demand.
- **Quiet and Vibration-Free Operation:** Equipped with a rubber mounting base to minimize noise.
- **Durable and Thermal Overload Protected:** Constructed with EPDM valves and Santoprene diaphragm, with thermal protection.
- **4-Year Warranty:** Backed by SEAFLO's 4-Year Limited Warranty.

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) suction lift
Max Recommended Temperature	140°F (60°C)
Material (Valves)	EPDM
Material (Diaphragm)	Santoprene
Ports	1/2"-14 MNPT
Product Dimensions	5"L x 4.62"W x 7.84"H
Item Weight	4.5 Pounds



Technical drawing showing the length, width, and height dimensions of the SEAFLO 33 Series DC Diaphragm Pump.

Included Components

Your SEAFLO 33 Series DC Diaphragm Pump package includes the following items:

- 1x SEAFLO 33 Series DC Diaphragm Pump
- 1x 51S01 Filter (Inline Strainer Filter, 1/2" x 1/2")
- 2x 51F001 1/2"-14 FNPT x 1/2" Barb Straight Pump Fittings
- Installation Instructions
- Warranty Information

Image displaying the SEAFLO 33 Series pump along with the 51S01 inline strainer filter and two 51F001 barb fittings.

Setup and Installation

Follow these steps for proper installation of your SEAFLO 33 Series DC Diaphragm Pump:

1. **Mounting:** Secure the pump in a dry, well-ventilated area using the rubber mounting base to minimize noise and vibrations. Ensure the pump is mounted in a position that allows for easy access for maintenance and inspection.
2. **Water Line Connections:** Connect the inlet port of the pump to your water source (e.g., fresh water tank) using the provided 1/2"-14 FNPT x 1/2" barb straight pump fittings and appropriate hoses. Install the 51S01 inline strainer filter on the inlet side to prevent debris from entering the pump. Connect the outlet port to your water distribution system. Ensure all connections are tight to prevent leaks.
3. **Electrical Connections:** Connect the pump to a 12V DC power source. The pump typically has two wires: red for positive (+) and black for negative (-). Ensure correct polarity and use appropriate gauge wiring and a fuse for protection.

4. **Priming:** The pump is self-priming up to 6 feet. To prime, ensure the water source is open and open a faucet in your system to allow air to escape. The pump will draw water and begin to build pressure.

The SEAFLO 33 Series pump installed in an RV setting, demonstrating typical water and electrical connections.

An exploded view of the pump components, highlighting the durable EPDM valves and Santoprene diaphragm for long-lasting performance.

Operating Instructions

The SEAFLO 33 Series pump operates automatically via its built-in pressure switch. Once installed and primed, the pump will maintain system pressure and activate when a faucet or fixture is opened, and deactivate when closed.

- **Automatic Operation:** The pump will automatically turn on when the system pressure drops (e.g., when a faucet is opened) and turn off when the pressure is restored (e.g., when the faucet is closed).
- **Adjustable Pressure Switch:** The pressure switch is factory-set to 45 PSI. If needed, the pressure value can be adjusted by turning a screw on the switch, typically within a range of 17-60 PSI. Refer to the detailed instructions for adjustment procedures.
- **Run Dry Safe:** This pump is designed to run dry without sustaining damage, offering protection if your water source runs out.

Detailed view of the adjustable pressure switch, which enables automatic start and stop functionality for on-demand water supply.

The pump's rubber mounting base, which effectively minimizes vibration and reduces noise for quieter operation in marine and RV environments.

Maintenance

Regular maintenance ensures the longevity and optimal performance of your SEAFLO 33 Series pump:

- **Filter Cleaning:** Periodically inspect and clean the inline strainer filter (51S01) to remove any accumulated debris. A clogged filter can reduce pump performance.
- **Winterization:** In freezing conditions, ensure the pump and entire water system are completely drained to prevent damage from freezing water expansion. Although the pump is run-dry safe, residual water can still freeze and cause cracks.
- **Connections Check:** Regularly check all water and electrical connections for tightness and signs of wear or corrosion.
- **Thermal Overload Protection:** The pump is equipped with thermal overload protection. If the pump overheats, it will automatically shut off. Allow it to cool down before resuming operation and investigate the cause of overheating (e.g., restricted flow, prolonged dry running).

Troubleshooting

If you encounter issues with your SEAFLO 33 Series pump, refer to the following common troubleshooting steps:

- **Pump Not Running:**
  - Check power supply and electrical connections.
  - Verify fuse is intact.
  - Ensure pressure switch is functioning (it should click when pressure drops).
- **Low Flow or Pressure:**
  - Check for clogs in the inlet strainer or water lines.
  - Inspect for air leaks in the suction line.
  - Ensure adequate water supply.
  - Adjust pressure switch setting if necessary.
- **Pump Cycles On/Off Rapidly (Short Cycling):**
  - Check for leaks in the plumbing system (faucets, connections, pipes).
  - Ensure there is no air trapped in the system.
  - A small accumulator tank can help reduce short cycling.
- **Leaks:**
  - Tighten all fittings and connections.
  - Inspect hoses and pump housing for cracks or damage.

Warranty and Support

The SEAFLO 33 Series DC Diaphragm Pump is backed by a**4-Year Limited Warranty**. This warranty covers material and workmanship defects under normal use and service for a period of four (4) years from the date of original consumer purchase with a purchase receipt. To ensure your warranty is guaranteed, register your product within 120 days of purchase.
For warranty claims or technical support, please refer to the contact information provided with your product or visit the official SEAFLO website.

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