



[Manuals.plus](#) /

› [Seaflo](#) /

› Seaflo Series 22 Diaphragm Pump 12V 5.0LPM 100PSI Instruction Manual

Seaflo SFDP1-013-100-22

Seaflo Series 22 Diaphragm Pump Instruction Manual

Model: SFDP1-013-100-22

1. PRODUCT OVERVIEW

The Seaflo Series 22 diaphragm pumps are compact and designed for a wide range of applications including liquid transfer, spraying, circulation, filtration, and dispensing. These pumps are self-priming, capable of running dry without damage, and feature an internal bypass function that reduces pump cycling. This miniature multi-outlet water pressure pump serves 1 or 2 outlets simultaneously. It includes a built-in pressure switch that automatically starts and stops the pump when a faucet is opened and closed.

Typical Applications: Marine, RV, agricultural spraying, general industrial use, filtration, beverage processing, and solar water systems.



Figure 1: Angled view of the SeaFlo Series 22 Diaphragm Pump, highlighting its compact design and connection points.

2. KEY FEATURES

- **Bypass Technology:** Reduces cycling and wear on the pressure switch.
- **Dry Run Capability:** Safely operates without liquid, preventing damage.
- **Electrical Connections:** Equipped with 18 AWG wires, 9.5 inches (25 cm) long, with a 2-pin connector/leads.
- **Adjustable Pressure Switch:** Allows for customizable pressure settings.
- **Durable Construction:** Meets or exceeds RoHS, SGS, and ISO standards.



Figure 2: Diagram illustrating key features and benefits, including bypass technology, hose connections, quiet motor, adjustable pressure switch, and rubber feet for vibration reduction.

3. SETUP AND INSTALLATION

3.1 Safety Precautions

- Ensure the power supply is disconnected before installation.
- Do not pump flammable liquids.
- Wear appropriate personal protective equipment.

3.2 Mounting the Pump

1. Select a dry, well-ventilated location for mounting, protected from direct sunlight and freezing temperatures.
2. Mount the pump on a solid surface using appropriate fasteners. The pump can be mounted horizontally or vertically.
3. Ensure there is sufficient space around the pump for ventilation and access for maintenance.

3.3 Plumbing Connections

- Connect the inlet hose to the pump's inlet port (typically marked). Use 10 mm (3/8") hose barb fittings.
- Connect the outlet hose to the pump's outlet port.
- Ensure all connections are secure and leak-free. Use hose clamps where necessary.
- Avoid kinks or sharp bends in the hoses, which can restrict flow.

3.4 Electrical Connections

- Connect the pump's 12V DC wires to a suitable power source. The red wire is positive (+), and the black wire is negative (-).
- Install a 9.0 A fuse in the positive (+) line to protect the pump and electrical system.
- Ensure all electrical connections are clean, tight, and protected from moisture.



Figure 3: Top view of the pump, illustrating the electrical wiring (red and black) and the hose barb connections for inlet and outlet.

4. OPERATING INSTRUCTIONS

1. **Priming the Pump:** The pump is self-priming. Open a faucet on the discharge side to allow air to escape. Turn on the power to the pump. The pump will draw water and push air out of the system. Once a steady stream of water flows, close the faucet.
2. **Automatic Operation:** The built-in pressure switch will automatically turn the pump on when the system pressure drops (e.g., when a faucet is opened) and turn it off when the pressure builds up (e.g., when a faucet is closed).

3. **Adjusting Pressure Switch (if applicable):** If your model has an adjustable pressure switch, refer to the diagram (Figure 2) or specific instructions for adjusting the cut-in/cut-out pressure. The factory setting for cut-off pressure is 100 PSI, with a restart pressure of 75 PSI \pm 5 PSI.
4. **Running Dry:** The pump is designed to run dry without damage, but continuous dry running should be avoided to conserve energy and prevent unnecessary wear.

5. MAINTENANCE

5.1 Regular Checks

- Periodically inspect all hose connections for leaks and tighten if necessary.
- Check electrical connections for corrosion or looseness.
- Ensure the pump mounting is secure and free from excessive vibration.

5.2 Winterization (for marine/RV applications)

- Drain all water from the pump and plumbing system to prevent freezing damage.
- Run non-toxic antifreeze through the pump if recommended for your specific application.

5.3 Material Composition

Understanding the materials helps with proper maintenance and compatibility with liquids.

- **Pump Head:** Nylon
- **Head Cover:** PPS
- **Motor Housing:** Polypropylene
- **Valves/Seals:** EPDM
- **Diaphragm:** Santoprene



Figure 4: Diagram detailing the materials used for various pump components, including housings, valves/seals, diaphragm, and motor.

6. TROUBLESHOOTING

| Problem | Possible Cause | Solution |
|---------------------------------|---|--|
| Pump does not turn on. | No power, blown fuse, loose wiring, faulty pressure switch. | Check power supply, replace fuse (9.0 A), tighten connections, test/replace pressure switch. |
| Pump runs but no water flows. | Air in system, clogged inlet filter, dry run, kinked hose, low water supply. | Prime the pump, clean inlet filter, ensure water supply, straighten hoses. |
| Pump cycles on and off rapidly. | Air in system, small leak in plumbing, restricted flow, faulty pressure switch. | Bleed air, check for leaks, ensure clear flow path, adjust/replace pressure switch. |
| Low flow or pressure. | Clogged filter, restricted inlet/outlet, worn diaphragm, low voltage. | Clean filter, check hoses, inspect diaphragm, verify 12V power supply. |

7. SPECIFICATIONS

| | |
|--|---|
| Model Number | SFDP1-013-100-22 |
| Pump Type | 2-chamber positive displacement diaphragm pump, self-priming, capable of dry running. |
| Control Type | Pressure switch and bypass control |
| Maximum Recommended Temperature | 60 °C (140 °F) |
| Priming Capabilities | 1.8 m (6 feet) suction lift |
| Shut-off Pressure | 100 PSI |
| Restart Pressure | 75 PSI ± 5 PSI (± 0.3 bar) |
| Inlet/Outlet Ports | 10 mm (3/8") hose barb |
| Flow Rate | 5.0 LPM (1.3 GPM) |
| Voltage | 12V DC |
| Max Current Draw | 6.0 A |
| Fuse Amps | 9.0 A |
| Weight | 1.1 kg (2.4 lbs) |
| Dimensions (L x W x H) | 18.7L x 11W x 7.2H cm |
| Motor Leads | 18 AWG, 25 cm (10") length with 2-pin connector/leads |
| Duty Cycle | Intermittent |

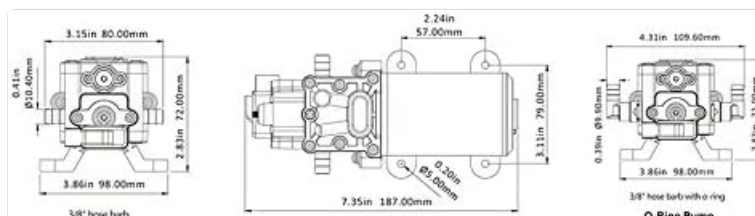


Figure 5: Detailed dimensional drawing of the pump, showing various measurements in both inches and millimeters for installation planning.

8. WARRANTY AND SUPPORT

This Seaflo pump comes with a **2-year warranty**. For warranty claims or technical support, please contact your retailer or visit the official Seaflo website. Ensure you have your model number (SFDP1-013-100-22) and proof of purchase available.

The product is designed to meet or exceed international standards including RoHS, SGS, and ISO, ensuring quality and reliability.

© 2026 Seaflo. All rights reserved. Information subject to change without notice.