**SEAFLO SFDP1-012-035-21-FG**

# SEAFLO Food Grade 12V 21 Series DC Diaphragm Pump User Manual

## 1. Introduction

### 1.1 Product Overview

This manual provides instructions for the safe and efficient operation of your SEAFLO Food Grade 12V 21 Series DC Diaphragm Pump. This compact pump is designed for various applications including liquid transfer, spraying, circulation, filtration, and dispensing. The 21-series diaphragm pumps are self-priming and can be run dry without harm. It provides up to 1.2 gallons per minute and serves 1 or 2 3/8" (10 mm) outlets.

### 1.2 Key Features

- Capable of supplying 1-2 fixtures
- Compact design
- On-demand pressure switch
- Adjustable pressure setting
- Can run dry
- Quiet operation
- Ignition protected
- Intermittent duty
- Industry standard mounting pattern
- 18 AWG, 13" (33 cm) long Leads




*Description: Front view of the SEAFLO 21 Series DC Diaphragm Pump, showing the pump head, motor, and mounting brackets, with the product label clearly visible.*

## 2. Safety Information

**WARNING:** Read all instructions carefully before installation and operation. Failure to follow these instructions may result in product damage, personal injury, or electric shock.

- Ensure the power source matches the pump's voltage (12V DC).
- Do not pump flammable liquids. This pump is designed for water and food-grade liquids only.
- Always disconnect power before performing any maintenance, installation, or troubleshooting.
- Mount the pump in a dry, well-ventilated area, protected from direct sunlight and freezing temperatures.
- Ensure all plumbing connections are secure to prevent leaks and water damage.
- Do not operate the pump if it appears damaged.

## 3. Setup and Installation

### 3.1 Unpacking

Carefully remove the pump from its packaging. Inspect the pump for any visible shipping damage. Retain packaging for future transport or storage.

### 3.2 Mounting

Mount the pump in a secure, dry location using the integrated mounting feet. Ensure the mounting surface is stable to minimize vibration and noise. The pump can be mounted in any position.




*Description: Side view of the SEAFLO 21 Series pump, illustrating the mounting feet and inlet/outlet ports for hose connections.*

### 3.3 Plumbing Connections

Connect appropriate hoses to the inlet and outlet ports. Ensure all connections are tight to prevent leaks. The pump is designed for 3/8" (10 mm) outlets. An inlet strainer is recommended to prevent debris from entering the pump.

### 3.4 Electrical Connections

Connect the 18 AWG, 13" (33 cm) long leads to a 12V DC power source. The red wire is positive (+), and the black wire is negative (-). Ensure correct polarity. An inline fuse (not included) of appropriate amperage is recommended for circuit protection and should be installed on the positive (+) lead.




*Description: Top view of the SEAFLO 21 Series pump, showing the electrical wiring connections (red and black leads) and the pump head.*

## 4. Operating Instructions

### 4.1 Initial Start-up

After installation, ensure all plumbing and electrical connections are secure. Open the outlet valve or faucet to allow air to escape the system. Apply 12V DC power to the pump. The pump will begin to prime itself and push water through the system.

### 4.2 Automatic Operation

This pump features an automatic demand pressure switch. It will automatically start when a faucet or valve is opened, causing a drop in system pressure. When the flow is shut off and pressure builds up in the system, the pump will automatically stop.

### 4.3 Adjusting Pressure Switch

The pressure switch is factory set for optimal performance. If adjustment is necessary, refer to the technical specifications for the appropriate pressure range and consult a qualified technician. Improper adjustment can lead to pump damage or system malfunction.

## 5. Maintenance

### 5.1 Regular Checks

- Periodically inspect all plumbing and electrical connections for tightness, signs of wear, or corrosion.
- Check for any leaks around the pump head or connections. Address any leaks promptly.
- Ensure the pump's mounting is secure and free from excessive vibration.

### 5.2 Cleaning

If pumping non-potable liquids, flush the pump with clean water after each use to prevent buildup and ensure longevity. For food-grade applications, follow appropriate sanitation procedures.

### 5.3 Winterization

If the pump is exposed to freezing temperatures, drain all water from the pump and lines to prevent damage from ice expansion. Disconnect hoses and run the pump briefly to expel any remaining water, or use an RV/marine antifreeze solution.

## 6. Troubleshooting

| Problem | Possible Cause | Solution |
|---|---|---|
| Pump Does Not Start | No power to the pump | Check electrical connections, fuse, and power source. Ensure 12V DC is supplied. |
| | Incorrect wiring | Verify correct polarity (red to positive, black to negative). |
| Low Flow or No Pressure | Air in the system | Ensure all air is purged from the lines. Check for loose connections allowing air intake. |
| | Clogged inlet filter (if installed) | Clean or replace the filter. |
| | Restricted inlet/outlet | Check hoses and fittings for kinks or blockages. |
| Pump Runs Continuously | Leak in the system | Check all plumbing connections, faucets, and valves for leaks. |
| | Pressure switch malfunction | Contact customer support for assistance. |

## 7. Specifications

| Specification | Detail |
|---|---|
| Brand | SEAFLO |
| Model Number | SFDP1-012-035-21-FG |
| Voltage | 12 Volts (DC) |
| Maximum Flow Rate | 1.2 Gallons Per Minute |
| Material | Polypropylene (PP), Stainless Steel |
| Power Source | Corded Electric |
| Style | Above Ground |
| Included Components | 1 pump |
| Pressure Setting | 40 PSI / 2.8 Bar (as per product label) |

## 8. Warranty and Support

For warranty information or technical support regarding your SEAFLO Food Grade 12V 21 Series DC Diaphragm Pump, please contact SEAFLO customer service directly. Keep your purchase receipt and model number (SFDP1-012-035-21-FG) for all warranty claims and support inquiries.

**Manufacturer:** SEAFLO

**Item Model Number:** SFDP1-012-035-21-FG