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› Liberty Pumps Model 253 Submersible Sump/Effluent Pump Instruction Manual

## Liberty Pumps 253

# Liberty Pumps Model 253 Submersible Sump/Effluent Pump Instruction Manual

Model: 253

## 1. PRODUCT OVERVIEW

The Liberty Pumps Model 253 is a rugged and dependable heavy-duty cast iron pump designed for ground water and wastewater removal in residential and commercial applications. This automatic submersible sump/effluent pump is engineered for durability and efficient performance.



Image: Liberty Pumps Model 253 Submersible Sump/Effluent Pump, showcasing its robust cast iron construction.

### Key Features:

- Unique, one-piece UniBody casting for enhanced durability.

- Durable epoxy powder coat finish for corrosion resistance.
- Vortex style impeller designed for efficient solids handling.
- Permanently sealed and lubricated bearings for long-term, maintenance-free operation.
- 10-foot quick-connect power cord for easy installation and replacement.

## 2. SAFETY INFORMATION

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Always observe all safety precautions during installation, operation, and maintenance. Failure to do so may result in injury or property damage.

- **Electrical Safety:** Ensure the power supply is disconnected before performing any work on the pump. All electrical wiring must comply with local codes and regulations.
- **Proper Grounding:** The pump must be properly grounded to prevent electrical shock.
- **Hazardous Locations:** Do not install or operate the pump in locations classified as hazardous by the National Electrical Code (NEC), ANSI/NFPA 70.
- **Personal Protective Equipment (PPE):** Wear appropriate PPE, such as safety glasses and gloves, when handling the pump or working in the sump pit.
- **Sump Pit Requirements:** This sump pump is designed for sump pits no less than 10 inches in diameter. Ensure adequate space for pump operation and float switch movement.

## 3. SETUP AND INSTALLATION

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Careful installation ensures optimal performance and longevity of your Liberty Pumps Model 253.

### 3.1. Pre-Installation Check

- Inspect the pump for any shipping damage.
- Verify that the power supply voltage matches the pump's requirements (120 Volts).
- Ensure the sump pit is clean and free of debris.

### 3.2. Placement in Sump Pit

- Place the pump on a solid, level surface at the bottom of the sump pit. Avoid placing it directly on dirt or gravel.
- Ensure the sump pit is at least 10 inches in diameter to allow for proper pump and float switch operation.

### 3.3. Discharge Piping

- Connect the pump to the discharge piping using appropriate fittings. The pump features a 1-1/2 inch discharge.
- Install a check valve in the discharge line to prevent water from flowing back into the sump pit when the pump shuts off.
- Ensure all connections are watertight.

### 3.4. Float Switch Adjustment

The Model 253 features an automatic float switch. Adjust the float switch to ensure it moves freely and does not interfere with the pump or sump pit walls. The float switch determines the pump's on/off cycles based on water level.

### 3.5. Electrical Connection

- Connect the quick-connect power cord to a properly grounded 120V electrical outlet.
- Do not use extension cords.
- Ensure the outlet is protected by a Ground Fault Circuit Interrupter (GFCI).

## 4. OPERATION

The Liberty Pumps Model 253 operates automatically once properly installed and connected to power.

### 4.1. Automatic Operation

- When the water level in the sump pit rises and lifts the float switch to its 'on' position, the pump will activate and begin discharging water.
- The pump will continue to run until the water level drops, allowing the float switch to return to its 'off' position.

### 4.2. Initial Start-Up

- After installation, fill the sump pit with water to verify the pump activates and deactivates correctly.
- Observe the discharge flow and ensure there are no leaks in the piping.

## 5. MAINTENANCE

Regular maintenance helps ensure reliable operation and extends the life of your pump.

### 5.1. Monthly Checks

- **Sump Pit Inspection:** Check the sump pit for any accumulation of debris, dirt, or foreign objects that could obstruct the pump or float switch. Remove any obstructions.
- **Float Switch Movement:** Manually lift the float switch to ensure it moves freely and activates the pump. Ensure it returns to the 'off' position when released.
- **Discharge Line:** Verify that the discharge line is not clogged or frozen (in cold climates).

### 5.2. Annual Cleaning

- Disconnect power to the pump.
- Remove the pump from the sump pit.
- Clean the pump's intake screen and impeller area of any accumulated debris.
- Rinse the sump pit to remove sediment.
- Reinstall the pump and verify operation.

## 6. TROUBLESHOOTING

This section provides solutions to common issues you might encounter with your pump.

| Problem             | Possible Cause                                                  | Solution                                                                                        |
|---------------------|-----------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| Pump does not start | No power; tripped breaker; faulty float switch; motor overload. | Check power supply and breaker; manually lift float switch; reset motor overload if applicable. |

| Problem                                       | Possible Cause                                                                     | Solution                                                                                               |
|-----------------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| Pump runs continuously                        | Float switch stuck in 'on' position; check valve failure; continuous water inflow. | Check float switch for obstructions; inspect/replace check valve; address source of continuous water.  |
| Pump runs but no water discharges or low flow | Clogged intake or discharge line; air lock; impeller obstruction.                  | Clear intake screen and discharge line; remove pump to clear impeller; ensure pump is fully submerged. |
| Pump is noisy or vibrates excessively         | Debris in impeller; pump not sitting level; worn bearings.                         | Disconnect power and clear impeller; ensure pump is stable; contact support for worn bearings.         |

## 7. SPECIFICATIONS

Detailed technical specifications for the Liberty Pumps Model 253.

|                                |                         |
|--------------------------------|-------------------------|
| Brand                          | Liberty Pumps           |
| Model Number                   | 253                     |
| Material                       | Cast Iron               |
| Style                          | Submersible, Sump Pump  |
| Product Dimensions (L x W x H) | 10.7"L x 6.5"W x 10.7"H |
| Power Source                   | Corded Electric         |
| Maximum Flow Rate              | 50 Gallons Per Minute   |
| Voltage                        | 120 Volts               |
| Horsepower                     | 0.3333 HP (1/3 HP)      |
| Discharge Size                 | 1-1/2 Inch              |
| UPC                            | 671812002539            |
| Included Components            | Product Only            |

## 8. WARRANTY INFORMATION

Liberty Pumps, Inc. warrants that pumps and other products of its manufacture are free from all factory defects in material and workmanship for a period of **2 years from the date of purchase**. Please retain your proof of purchase for warranty claims. For full warranty terms and conditions, refer to the official Liberty Pumps documentation or website.

## 9. SUPPORT

For technical assistance, replacement parts, or further inquiries regarding your Liberty Pumps Model 253, please contact Liberty Pumps customer support directly. Refer to the contact information provided in your product packaging or on the official Liberty Pumps website.

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Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

### Name

Anonymous

### Email

you@example.com

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### Question

Example: How do I reset this device or fix this error?

### Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question