

## Star 5SPHLC

# Star 5SPHLC 1/2 HP Aluminum Submersible Sump Pump Instruction Manual

Model: 5SPHLC

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## 1. INTRODUCTION

This manual provides essential instructions for the safe and efficient installation, operation, and maintenance of your Star 5SPHLC 1/2 HP Aluminum Submersible Sump Pump. Please read this manual thoroughly before use and retain it for future reference.

The Star 5SPHLC is a 1/2 HP submersible sump pump designed for residential dewatering applications. It features a durable cast aluminum body, an energy-efficient 115V motor, and a streamlined vertical float switch for automatic operation.

## 2. SAFETY INFORMATION

**WARNING:** Always disconnect power before servicing the pump or sump basin.

**CAUTION:** This pump is designed for water only. Do not use for flammable liquids, chemicals, or sewage.

- Ensure the pump is connected to a Ground Fault Circuit Interrupter (GFCI) protected outlet.
- Do not operate the pump with a damaged cord or plug.
- Keep hands and feet clear of the pump inlet and discharge when operating.
- Ensure proper ventilation if operating in an enclosed space.
- This pump is not intended for use in swimming pools or marine areas.

## 3. PRODUCT OVERVIEW

The Star 5SPHLC sump pump is engineered for reliable performance in managing water accumulation in sump basins. Its robust construction and efficient design ensure effective water removal.

### Key Features:

- 1/2 HP energy-efficient motor (115V, 4 Amps)
- Cast aluminum body for heat resistance and durability

- Streamlined vertical float switch for automatic operation and long life
- Built-in thermal overload protection
- Designed to fit in a 10-inch sump basin
- 1-1/2 inch NPT discharge
- 9-foot double-sealed power cord
- Capable of pumping up to 55 gallons per minute (GPM)
- 1-year limited warranty



**Image 1:** Overview of the Star 5SPHLC 1/2 HP Submersible Sump Pump, illustrating its key features such as 55 GPM flow rate, high-efficiency impeller, and vertical switch. The image also highlights the 1-year limited warranty.



**Image 2:** Comparison of Star 1/3 HP (3SPHLC) and 1/2 HP (5SPHLC) Cast Aluminum Submersible Sump Pumps. This image details common features and benefits, including the streamlined vertical switch, 115V motor, cast aluminum body, thermal overload protection, 10-inch basin fit, 1-1/2 inch NPT discharge, and 9-foot cord. Performance data for both models is also presented.

## 4. SETUP & INSTALLATION

### 4.1 Choosing the Right Sump Basin

The pump is designed to prevent basement flooding automatically. For optimal performance, your sump basin should be at least 10 inches in diameter and deep enough to accommodate the pump and its float switch. A 1-1/2 inch discharge pipe is recommended for maximum efficiency.



**Image 3:** Diagram illustrating recommended sump basin dimensions for pump installation, showing a minimum 10-inch diameter and 18-inch depth to ensure proper fit and operation of the pump and float switch.

### 4.2 Installation Steps

1. **Prepare the Sump Basin:** Place the pump in a sump basin that is at least 10 inches wide and 18 inches deep. Ensure the basin is clean and free of debris.
2. **Position the Pump:** Make sure the pump is placed on a hard, level surface at the bottom of the basin. The basin must be clear of any obstructions that could interfere with the float switch operation.
3. **Connect Discharge Pipe:** Attach a 1-1/2 inch NPT discharge pipe to the pump outlet. It is recommended to install a check valve in the discharge line to prevent water from flowing back into the sump basin when the pump turns off.
4. **Vent Hole:** Drill a 3/16-inch vent hole in the discharge pipe between the pump and the check valve. This prevents airlock.
5. **Electrical Connection:** Connect the pump to a 115V GFCI-protected electrical outlet. The 9-foot double-sealed cord provides ample reach.



**Image 4:** Detailed installation diagram showing the sump pump within a basin, including the check valve, vent hole, and connection to a GFCI outlet. It also indicates the 'On' and 'Off' levels for the float switch.

## 5. OPERATING INSTRUCTIONS

The Star 5SPHLC sump pump operates automatically via its vertical float switch. When the water level in the sump basin

risers and lifts the float switch to the "On" level, the pump will activate and begin pumping water out. Once the water level drops and the float switch reaches the "Off" level, the pump will automatically shut off.

Ensure the float switch has a clear path of travel and is not obstructed by the basin walls or other components. Regular checks of the sump basin and pump operation are recommended, especially during heavy rainfall.

## 6. MAINTENANCE

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

- **Periodic Inspection:** Annually, or more frequently if needed, inspect the sump basin for debris, dirt, or gravel that could impede pump operation or clog the impeller. Clean the basin as necessary.
- **Check Valve:** Verify that the check valve in the discharge line is functioning correctly, preventing backflow into the basin.
- **Float Switch:** Ensure the vertical float switch moves freely and is not obstructed. Manually lift the float to test pump activation.
- **Power Cord:** Inspect the power cord for any signs of damage, fraying, or wear. Replace if damaged.
- **Discharge Pipe:** Check the discharge pipe for any blockages or leaks.

## 7. TROUBLESHOOTING

| Problem                              | Possible Cause                                                                              | Solution                                                                                                                             |
|--------------------------------------|---------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Pump does not turn on                | No power; GFCI tripped; Float switch obstructed or faulty; Thermal overload activated.      | Check power supply and GFCI. Clear float switch path. Allow pump to cool if thermal overload tripped. Inspect wiring.                |
| Pump runs continuously               | Float switch stuck in "On" position; Check valve faulty (backflow); Discharge pipe blocked. | Clear float switch. Inspect and repair/replace check valve. Clear discharge pipe.                                                    |
| Pump runs but no water is discharged | Air lock; Impeller clogged; Discharge pipe blocked; Water level too low.                    | Ensure vent hole is clear. Clear impeller. Clear discharge pipe. Ensure water level is sufficient for pump activation.               |
| Pump cycles too frequently           | Sump basin too small; Check valve leaking; Float switch setting.                            | Consider a larger sump basin. Repair/replace check valve. Adjust float switch if possible (not applicable for fixed vertical float). |

## 8. SPECIFICATIONS

| Attribute         | Value                       |
|-------------------|-----------------------------|
| Model             | 5SPHLC                      |
| Horsepower        | 1/2 HP                      |
| Voltage           | 115V AC                     |
| Amperage          | 4.0 Amps                    |
| Maximum Flow Rate | 55 GPM (Gallons Per Minute) |

| Attribute                   | Value             |
|-----------------------------|-------------------|
| Discharge Size              | 1-1/2" NPT        |
| Cord Length                 | 9' (2.7 m)        |
| Material                    | Cast Aluminum     |
| Switch Type                 | Vertical Float    |
| Thermal Overload Protection | Built-in          |
| Fits Sump Basin             | 10 inch diameter  |
| Overall Dimensions          | 8" x 12.2" x 9.2" |
| Standard Weight             | 10.8 lb.          |
| Hertz                       | 60 Hz             |
| Phase                       | 1 Ph              |
| UPC                         | 054757096953      |

Performance Data (5SPHLC):

| Discharge Height (Lift) | Gallons Per Minute (GPM) |
|-------------------------|--------------------------|
| 0 ft.                   | 55                       |
| 5 ft.                   | 47                       |
| 10 ft.                  | 38                       |
| 15 ft.                  | 29                       |

9. WARRANTY

The Star 5SPHLC 1/2 HP Aluminum Submersible Sump Pump comes with a**1-year limited warranty** from the date of purchase. This warranty covers defects in materials and workmanship under normal use and service. For warranty claims or service, please contact Star Water Systems customer support.

10. CUSTOMER SUPPORT

For technical assistance, parts, or warranty inquiries, please contact Star Water Systems customer support.

**Manufacturer:** Star Water Systems  
**Website:** [Visit the Star Store on Amazon](#)  
**Phone:** 1-800-742-5044

## ASK A QUESTION ABOUT THIS MANUAL

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.

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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.

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