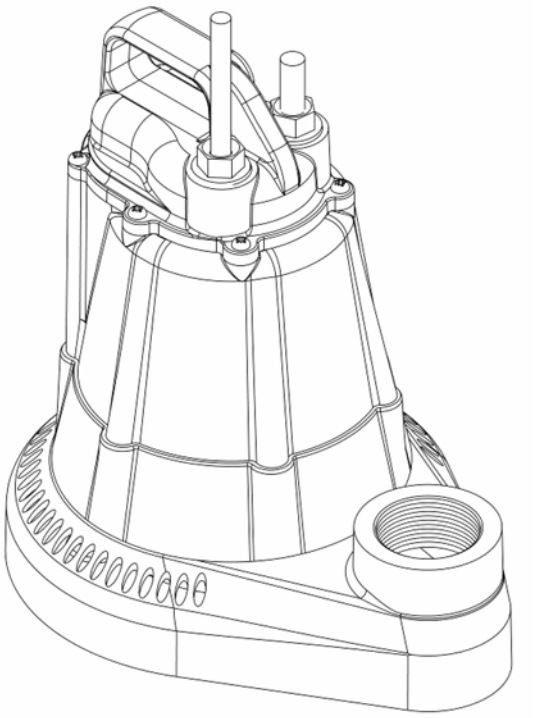
Installation Manual

7175000G

S30 - Series Builders Series Sump Pump

***Do not throw away or lose this manual.**



Contents

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IMPORTANT:

Prior to installation, record Model, Serial Number, and Code Number from pump nameplate for future reference.

MODEL _____

SERIAL _____

CODE _____

INSTALLATION DATE _____

Models

S35M	Manual Pump, No Switch
S37	Automatic Pump, Vertical Switch
S37-P	Automatic Pump, Piggy-Back Vertical Switch
S38	Automatic Pump, Wide Angle Switch

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1. General Information

Before Installation, read the following instructions carefully. Each Liberty pump is individually factory tested to assure proper performance. By closely following these instructions, potential operating problems should be eliminated, providing years of trouble-free service.

⚠ WARNING

- **Risk of electric shock**. Always disconnect the pump from the power source before handling or making adjustments.
- The electrical connections and wiring for a pump installation should only be made by qualified personnel.
- This pump is supplied with a grounding conductor and grounding-type attachment plug. To reduce the risk of electric shock, be certain that it is connected only to a properly grounded, grounding-type 15 Amp receptacle.
- Always wear rubber boots when water is on the floor and you must unplug the pump.
- DO NOT bypass grounding wires or remove ground prong from attachment plugs.
- DO NOT use an extension cord.
- This pump requires a separate, properly fused and grounded branch circuit. Make sure the power source is properly sized for the voltage and amperage requirements of the pump, as noted on the nameplate.
- The electrical outlet shall be within the length limitations of the pump power cord, and at least 4 feet above floor level to minimize possible hazards from flood conditions.
- The installation must be in accordance with the National Electric Code, Uniform Plumbing Code, International Plumbing Code, as well as all applicable local codes and ordinances.
- Sump and sewage pumps often handle materials which could cause illness or disease. Wear adequate protective clothing when working on a used pump or piping.
- Keep clear of suction and discharge openings. To prevent injury, never insert fingers into pump while it is plugged in.
- DO NOT use this product for flammable or corrosive liquid.
- DO NOT use this product in applications where human contact with the pumped fluid is common (such as swimming pools, fountains, etc.)
- NEVER dispose of materials such as paint thinner or other chemicals down drains, as they can chemically attack and damage pump components, potentially causing product malfunction or failure.

⚠ CAUTION

- **DO NOT use pumps in water over 140°F (60°C).**
- DO NOT use pumps in mud, sand, cement, oil or chemicals.
- DO NOT modify the pump in any way.
- DO NOT lift or carry pump by power cord.
- DO NOT remove any tags from pump or cords.
- If pump is installed during construction before power is available, it must be protected from the environment to prevent water from entering through the cord plug end, etc.

2. Sump Pit

A sump pit not less than 14” in diameter is recommended. A larger diameter pit is preferred as it allows for longer pump cycling and reduced switch cycling. The minimum depth of the pit should be 18”.

The bottom of the pit should be a solid level of bricks or concrete. DO NOT place the pump directly on earth, gravel or debris since this can cause excessive wear of the impeller and possible jamming. “The Brick” (sold by Liberty Pumps as part # 4445000) is a pre-molded stable platform designed to fit your submersible pump. It raises the pump 2.75” off the bottom of the pit, reducing the potential for jamming from rocks and debris. Contact your local distributor to order. Remove all debris from the bottom of the sump pit before installation of the pump. A sump pit cover is suggested for safety and to prevent foreign objects from entering the pit.

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3. Installation

A.) Removal of the old pump (**NOTE: Disconnect pump from power source before handling**): Separate the discharge pipe at either the check valve or at the union. If neither a check valve nor a union is part of the existing discharge pipe, cut the pipe with a hacksaw and remove the pump (A union or check valve will need to be installed at this cut).

B.) The discharge size is 1-1/2" NPT Do not reduce the discharge size to less than 1-1/4", as this will affect pump flow and performance. Schedule 40 PVC pipe is recommended; however, flexible discharge hose kits may be used for temporary installations.

C.) Connect the pipe or the discharge hose to the discharge of the pump. HAND TIGHTEN ONLY, over-tightening can damage the pump discharge.

D.) Install a union or other means of separating the discharge pipe just above the floor to facilitate removal of the pump if necessary. **A check valve is recommended just above or in place of the union to prevent the back-flow of water after each pump cycle.**

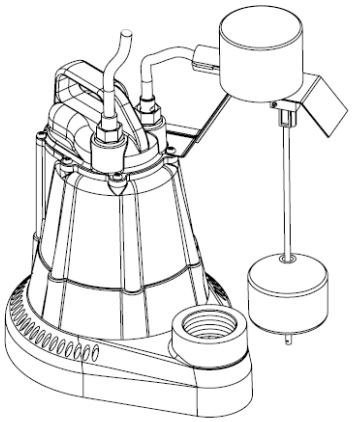
E.) Connect additional pipe as necessary to direct the discharge to the desired location. Discharge should be kept as short as possible with a minimum number of turns.

F.) Model S37, S37-P and S38: When placing the pump in the basin assure that float switch has adequate clearance in pit and will not interfere with side wall.

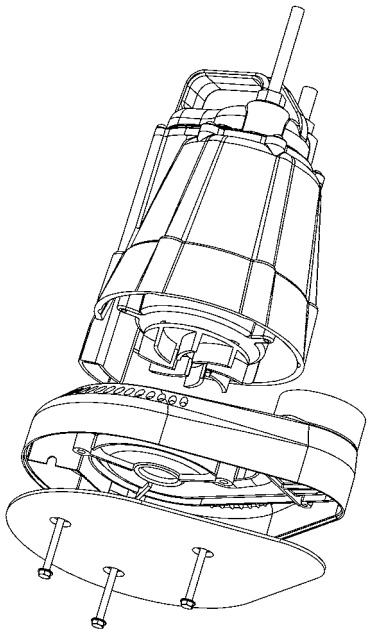
G.) For added protection, consider the addition of a back-up pump such as ***Liberty's SJ10 SumpJet***, as well as an alarm such as ***Liberty's ALM-2*** in applications where loss of pump function could result in property damage. If an alarm is used, it must be connected to a separate electrical circuit.

4. Operation

A separate branch circuit, properly fused and grounded, should be provided to the pump. Make sure the power source is properly sized for the voltage and amperage requirements of the motor as noted on the pump nameplate. If electrical receptacle is corroded or worn it should be replaced to ensure reliable operation of the pump. The electrical outlet or panel shall be within the length limitations of the pump power cord and at least 4 feet above floor level to minimize possible hazards from flood conditions. Check to make sure installation is in accordance with the National Electric Code and all applicable local codes and ordinances. Wiring extended over greater distances must be in accordance with NEC requirements. **DO NOT USE AN EXTENSION CORD**.



Models S37 and S37-P have an integrated vertical float switch. The turn off position can be adjusted by sliding a rubber grommet up or down the length of the float rod.



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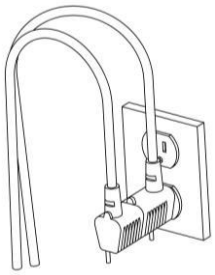
Models S37-P and S38 are automatic pumps which come with two cords - one for the switch and the other for the pump motor. The switch cord has a series (piggyback) plug enabling the pump (motor) cord to be plugged into the back of it. The purpose of this design is to allow manual operation of the pump separate from the switch if necessary.

For automatic operation using the supplied switch, the two cords should be interconnected and plugged into a separately fused, grounded outlet of proper amp capacity for your pump model. Both cords are equipped with 3-prong plugs and must be properly plugged into a properly grounded 3-wire receptacle. DO NOT REMOVE THE GROUND PRONGS.

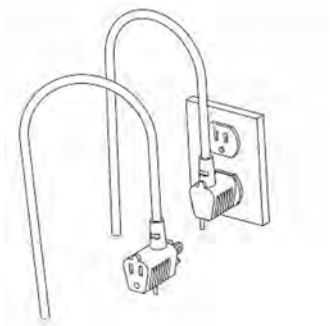
For manual operation, or in the event of switch failure, the pump cord can be separated and plugged directly into the electrical outlet, bypassing the switch. The unit can be operated by directly plugging the pump cord (from the motor) into an approved electrical outlet. To prevent excessive seal wear and overheating, the pump should not be run dry for extended periods of time. A minimum 2-1/2" water level is recommended.



DON'T



DO



TEMPORARY
MANUAL OPERATION

5. Maintenance and Troubleshooting

WARNING: ALWAYS DISCONNECT THE PUMP FROM THE POWER SOURCE BEFORE HANDLING. The guide on the following page is designed to help identify reasons for potential operating problems. It is not a service guide. Dismantling of the pump voids the warranty. Servicing of the pump other than simple cleaning of the pump inlet or impeller should be referred to the factory or its authorized service centers. **NOTE: The manufacturer assumes no responsibility for damage or injury due to disassembly in the field.**

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Troubleshooting Table:

Problem	Cause	Correction
Pump will not run or hum.	• Blown fuse or other interruption of power; improper voltage.	• If blown, replace with properly sized fuse or reset breaker; if voltage is under 108V, check wiring size. Remove extension cord if connected.
	• Water level in pit may be too low to activate switch.	• Add more water to the pit.
	• Plug on power cord may not be making contact in receptacle.	• Check security and connection. If receptacle is corroded, have it replaced by a certified electrician.
	• Piggyback plugs may not be connected tightly together.	• Tighten connection of plugs.
	• Switch is defective Model S38 only.	• Verify that water level is at least 4" above pump. To test the switch, plug the power cord directly in to the electrical receptacle bypassing the piggyback plug. If pump operates, then the switch needs replacement. (See Switch-Servicing procedures on page 5).
	• Motor winding may be open.	• Consult factory.
	• Float switch obstructed Models S37 and S38.	• The float must be free to move unobstructed – if bound remove debris or position pump to prevent float from rubbing on side wall of sump.
Pump runs or hums but does not remove water.	• Check valve may be installed backwards or is defective.	• Make sure it's installed properly and flapper in valve is free to move.
	• Discharge line may be blocked or frozen.	• Make sure line doesn't pass through cold areas or isn't blocked.
	• Vertical lift is beyond pump's capability.	• If possible, try to reduce the discharge head to a lower height.
	• Inlet screen of pump is plugged or the impeller is jammed.	• Remove the pump screen and clean inlet and impeller.
Pump runs and removes water but does not shut off.	• Switch is defective or obstructed.	• Make sure switch is free from obstruction or replace switch.
	• Pump has met or exceeded its maximum lift.	• Route discharge piping to a lower level. If this isn't possible then a larger pump may be required.
Pump runs but removes very little water.	• Vertical lift is approaching pump's maximum lift capability of 27'.	• If possible, try to reduce the discharge head to a lower height.
	• Pump's inlet is partially blocked.	• Remove volute and make sure inlet is clear of debris.
	• Discharge line is partially blocked.	• Remove blockage.
	• Check valve is not opening all the way.	• Remove blockage or make sure check valve is not defective.
Circuit breaker trips or fuse blows when pump starts.	• Fuse or breaker is too small.	• A 15-amp breaker should be used.
	• Other major appliance is on the same circuit.	• Pump should be on its own circuit.
	• Pump is connected to an extension cord or wiring is inadequate.	• Have an electrician check for proper wiring.
	• Defective motor or switch.	• Consult factory.

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6. 3 Year Limited Warranty

Liberty Pumps, Inc. warrants that pumps of its manufacture are free from all factory defects in material and workmanship for a period of 3 years from the date of purchase. The date of purchase shall be determined by a dated sales receipt noting the model and serial number of the pump. The dated sales receipt must accompany the returned pump if the date of return is more than 3 years from the "CODE" (date of manufacture) number noted on the pump nameplate.

The manufacturer's obligation under this Warranty shall be limited to the repair or replacement of any parts found by the manufacturer to be defective, provided the part or assembly is returned freight prepaid to the manufacturer or its authorized service center, and provided that none of the following warranty-voiding characteristics are evident.

The manufacturer shall not be liable under this Warranty if the product has not been properly installed; if it has been disassembled, modified, abused or tampered with; if the electrical cord has been cut, damaged or spliced; if the pump discharge has been reduced in size; if the pump has been used in water temperatures above the advertised rating, or water containing sand, lime, cement, gravel or other abrasives; if the product has been used to pump chemicals or hydrocarbons; if a non-submersible motor has been subjected to excessive moisture; or if the label bearing the serial, model and code number has been removed. Liberty Pumps, Inc. shall not be liable for any loss, damage or expenses resulting from installation or use of its products, or for consequential damages, including costs of removal, reinstallation or transportation.

There is no other express warranty. All implied warranties, including those of merchantability and fitness for a particular purpose, are limited to three years from the date of purchase.

This Warranty contains the exclusive remedy of the purchaser, and, where permitted, liability for consequential or incidental damages under any and all warranties are excluded.

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