

SBX-Series

Models

SBX35	1/3 HP	115V	
SBX35A	1/3 HP	115V	ALM-2 Alarm
SBX280	1/2 HP	115V	
SBX280A	1/2HP	115V	ALM-2 Alarm



IMPORTANT: For future strainer, switch, and pump service, be sure to allow easy access to the system covers when the unit is being positioned in the basement.

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- 1.) General Information
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- 3.) Installation
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IMPORTANT:

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

MODEL _____

SERIAL _____

CODE _____

1. General Information

Before installation, read the following instructions carefully. Each Liberty pump is individually factory tested to insure proper performance. Closely following these instructions will eliminate potential operating problems, assuring years of trouble-free service.

⚠ WARNING

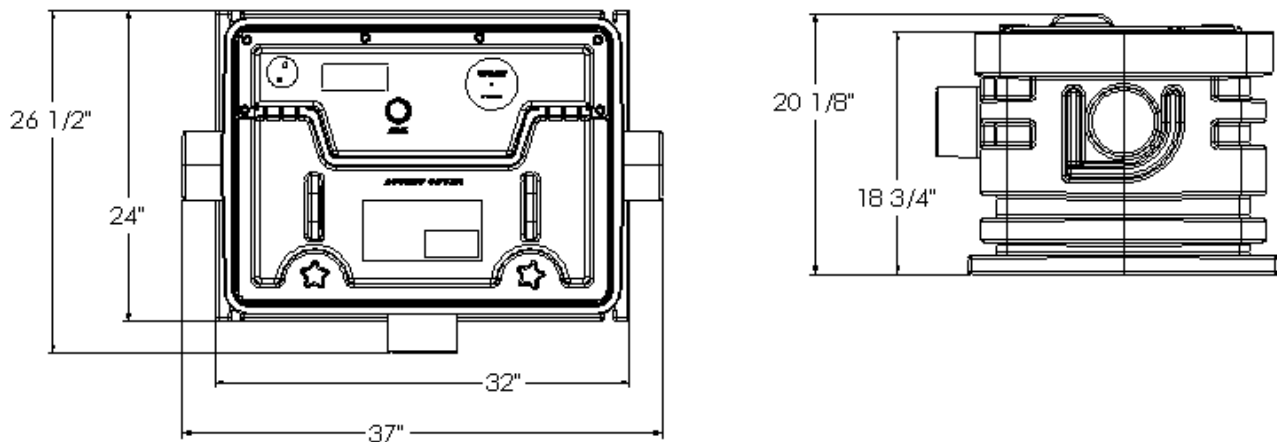
- **Risk of electric shock.** To reduce risk of electric shock, always disconnect pump from power source before handling.
- The electrical connections and wiring for a pump installation should only be made by qualified personnel.
- This pump is supplied with a grounding conductor and grounding-type attachment plug. To reduce the risk of electric shock, be certain that it is connected only to a properly grounded, grounding-type receptacle. This receptacle should be protected by a ground fault circuit interrupter (GFCI).
- Do not bypass grounding wires or remove ground prong from attachment plugs.
- Do not use an extension cord.
- This pump requires separate, properly fused and grounded branch circuit. Make sure the power source is properly sized for the voltage and amperage requirements of the motor, as noted on the pump nameplate.
- 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.
- The installation must be in accordance with the National Electric Code and all applicable local codes and ordinances.

⚠ CAUTION

- Do not use these pumps in water over 140° F.
- When the risk of property damage from high water levels exists, an independent high water alarm or back up pump system should be installed.

Model Specifications								
Model	HP	Volts	Full Load Amps	Solids Handling	FNPT Discharge	Shut-off Head	Capacity	Alarm
SBX35	1/3	115	6.5	1/4"	1-1/2"	25'	41 gal	No
SBX35A	1/3	115	6.5	1/4"	1-1/2"	25'	41 gal	Yes
SBX280	1/2	115	10	3/4"	1-1/2"	37'	41 gal	No
SBX280A	1/2	115	10	3/4"	1-1/2"	37'	41 gal	Yes

Dimensional Data



2. Precautions/Pre-Installation

1. The **SumpBox™** is shipped factory assembled; inspect tank, pump, float(s), and accessories for shipping damage. Contact your dealer with any problems prior to installation.
2. Read all instructions and familiarize yourself with the unit's operation prior to proceeding with the installation. Read pump specifications to assure pump has adequate head performance prior to installation.
3. **⚠ WARNING** **Risk of electric shock.** Always disconnect the pump from the power source before handling or making adjustments. The pump power cord is equipped with a grounding conductor and grounding-type 3-prong plug. To reduce the risk of electric shock, be certain that the SumpBox™ unit is connected only to a properly grounded grounding-type receptacle. This receptacle should be protected by a ground fault circuit interrupter (GFCI). All electrical circuitry should be installed in accordance with the National Electric Code (NEC) and all applicable local codes or ordinances. Never remove the ground pin from the plug.
4. **⚠ WARNING** Never use an extension cord. 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.
5. Check to ensure that your power source is adequate to handle the pump amperage. Pump amperage can be found on the nameplate and/or the product literature. Ensure that the electrical supply circuit is equipped with fuses or breakers of the proper capacity.
6. It is recommended that a separate branch circuit be installed for the pump. Such a branch circuit should be sized in accordance with the NEC.
7. Each electrical outlet should be tested to ensure that a proper ground has been established. A UL listed circuit analyzer will indicate if the power, neutral, and ground wire are properly connected.
8. A qualified licensed electrician should install and test all electrical circuits.
9. All plumbing (waste and vent) should be done by a qualified professional and in accordance with applicable codes.
10. **⚠ CAUTION** Liquid temperature must not exceed 140°F (60°C).
11. Always disconnect the pump from the power source prior to removing or servicing.
12. Tools required prior to installation: Teflon pipe tape, a hacksaw (or something similar), and a hammer or small sledge hammer.

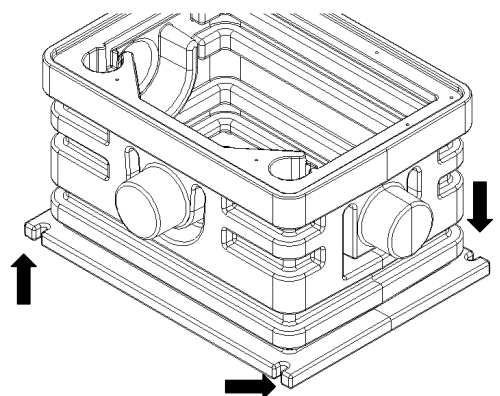
3. Installation

Rough-In

IMPORTANT: During the rough-in process the clear disposable protective cover should remain on the system to protect the covers and accessories from dirt, gravel, concrete, and other objects.

- A. **Excavation:** Choose a location in the basement that will allow easy access to the system. Excavate the hole as small as possible, with a minimum recommended 8" clearance around the tank. Never place the basin directly in contact with rocks or other sharp objects. Place only fine, 1/8" to 3/4" pea gravel or 1/8" to 1/2" washed, crushed stone as bedding between the basin and the hole walls. Do not use sand or native soil as backfill. Properly compact underneath the basin to provide a solid, level base that can support the weight of the filled basin.
- B. **Staking Locators:** The SumpBox™ basin has 4 staking features in the anti-flotation flange that will accept up to 1/2" rebar (see fig. 1). Staking will help support the system during inlet connection and backfill.
- C. **Inlet Connection and Initial Backfill:** Only fine, 1/8" to 3/4" pea gravel or 1/8" to 1/2" washed, crushed stone should be used around the bottom of the basin to hold it in place. Do not use sand or native soil as backfill. Make the inlet connection(s) at any of the three inlet hubs on the basin. Select the inlet hubs you wish to use. Cut 1/4" (but not more than 3/4") of material from those inlet hubs to

Fig. 1 Staking Locations



assure a good drain tile fit (see fig. 2). Insert the drain tile into the cut inlet hub. Allow about 1" of spacing between the end of the drain tile and the internal strainer basket for good operation and easy removal of the strainer during maintenance (see fig. 3).

- D. **Final Backfill.** Large rocks, clods, and foreign objects should be kept out of the backfill material. Only fine, 1/4" to 3/4" pea gravel, or 1/8" to 1/2" washed, crushed stone is recommended. Do not use sand or native soil as backfill. Provide access to the basin cover for maintenance and service.

IMPORTANT: Do not exert heavy pressure or run heavy equipment on the backfill as this could cause damage to the tank.

Fig. 2 Cutting the Inlet Hubs

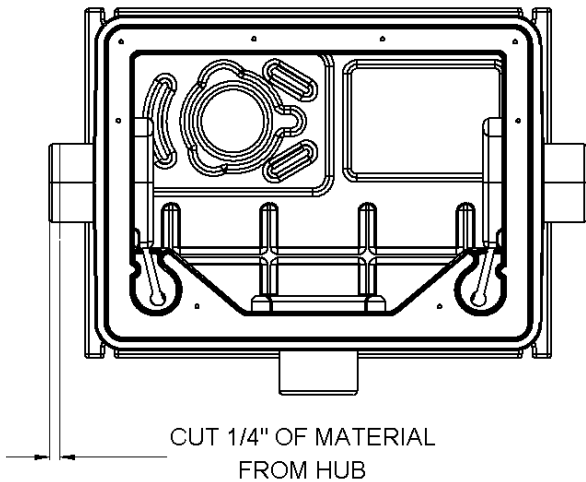
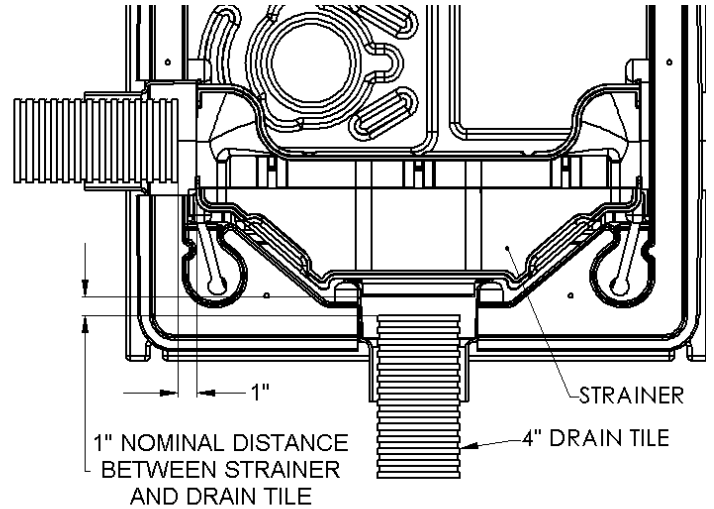


Fig. 3 Drain Tile Placement

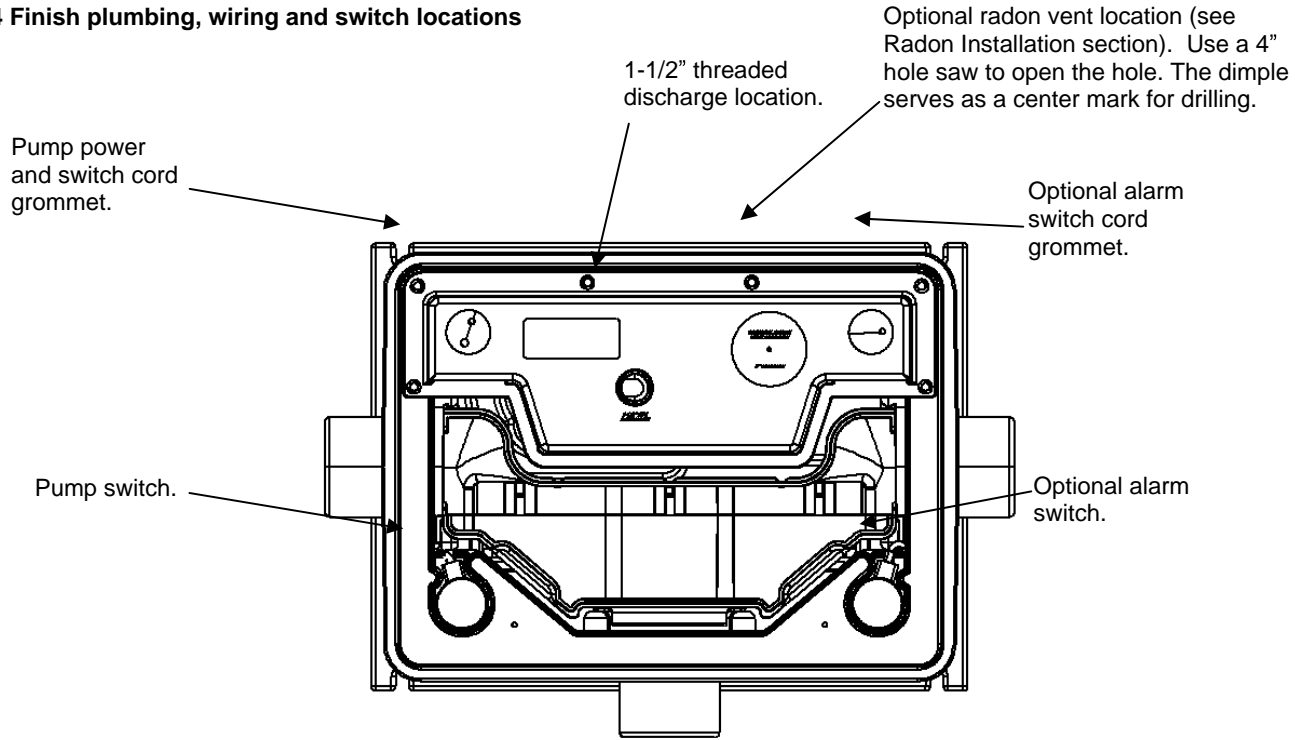


Finish Plumbing and Alarm Installation

IMPORTANT: All plumbing installations (waste and vent) should be done by a qualified professional and in accordance with applicable codes.

- A. Remove and recycle the disposable protective cover before plumbing the system.
- B. **NOTE: Threaded connections at cover - HAND TIGHTEN ONLY and use Teflon tape as a thread sealant.** Remove the gray plug and install 1-1/2" PVC pipe to the cover connection labeled "1-1/2" DISCHARGE" (see figure 4). A union should be installed to facilitate pump removal if necessary. A free-flow swing check valve is recommended after the union to prevent the backflow of liquid after each pumping cycle. A gate or ball valve should follow the check valve to allow periodic cleaning of the check valve or removal of the pump. The remainder of the discharge line should be as short as possible with a minimum number of turns, to minimize friction head loss. Contact Liberty Pumps or other qualified person if you have questions regarding proper pipe sizes and flow rates.
- C. If your system is equipped with an alarm, refer to the alarm Installation Instructions for proper connection. The alarm box and accessories are located under the clear protective cover. The alarm switch cord has bare wire leads and exits the cover through the single hole grommet (see fig. 4).

Fig. 4 Finish plumbing, wiring and switch locations

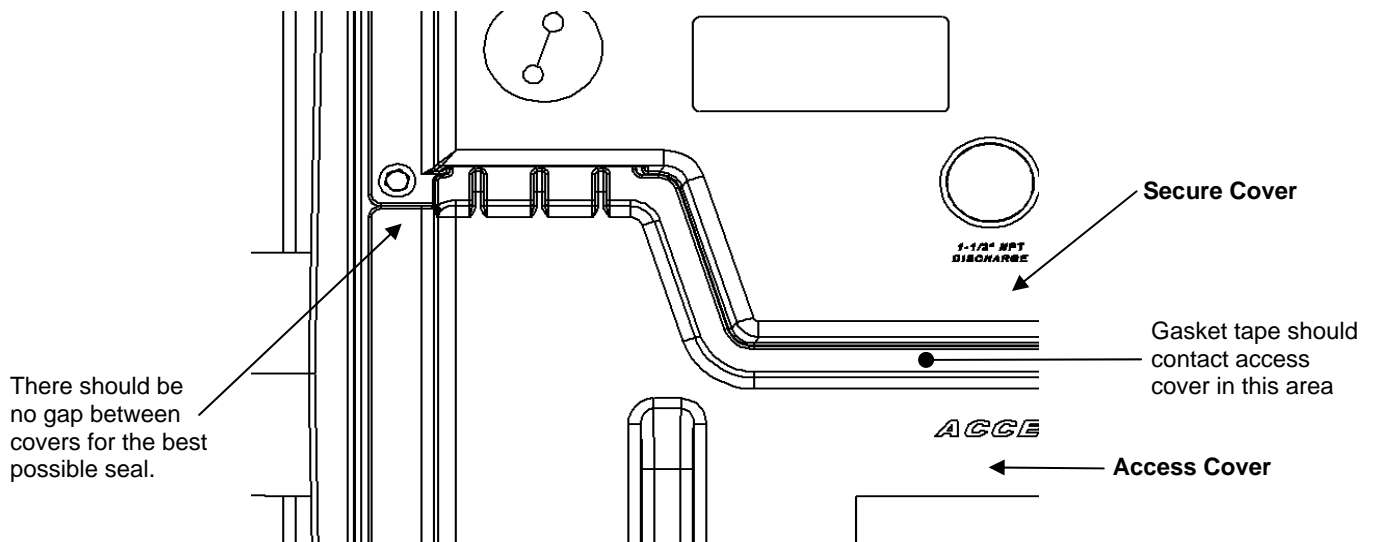


Radon Installation

IMPORTANT: All installations in Radon environments should be done by a qualified professional and in accordance with applicable codes.

- A. The access cover must seat against the secure cover to ensure the gaskets provide a sealed gas-tight system (see fig. 5). Additionally, ensure that the gaskets between the covers create a seal.
- B. Install a 3" vent line at the cover connection labeled "OPTIONAL RADON VENT LOCATION". Use a 4" hole saw to create a hole in this location. A dimple is provided on the cover to properly center the drill (see figure 4, above). Install the provided 3" pipe seal in the hole. Place 3" PVC vent pipe from the vent system through the pipe seal. Do not place the vent pipe more than 4" into the basin.

Fig. 5 Correct Access Cover Installation



4. Operation and Maintenance

- A. For automatic operation, the two cords should be interconnected and plugged (see fig. 6) into a separately fused, grounded outlet of proper amp capacity for your selected pump model (see Section 1, General Information, or the pump nameplate for electrical specifications of your model.) Both cords are equipped with 3-prong plugs and must be plugged into a properly grounded 3-wire receptacle.

⚠ WARNING DO NOT REMOVE GROUND PRONGS FROM ATTACHMENT PLUGS.

- B. Pump and alarm switch levels are preset at the factory. If for any reason the switch levels change, please refer to fig. 7 for proper re-adjustment of the switch. It is recommended that the system be disconnected from the power source and the switch be removed to perform this operation. Periodically check the condition of the switches to ensure proper operation by removing debris or build up that would render the switch inoperable.

- C. To clean the strainer basket, loosen the two wing bolts and remove the access cover. Lift up on the two handles (see fig.8) and remove the strainer basket. Caution: water will continue to drip from strainer after removal. Clean the basket by dumping the debris and rinsing. Reinstall the strainer basket as soon as possible to prevent debris from entering the tank. Reinstall the access cover. It is strongly recommended that this be done frequently during new home construction and every 6 months thereafter or as needed.

- D. To remove a switch, open the access cover and remove the strainer basket. Remove the appropriate cord grommet on the secure cover and pull the switch cord through the open hole. The switch can now be lifted from its pocket and be serviced or replaced. To reinstall a switch, place it back into the float pocket. Route the switch cord around the internal inlet hub (see fig. 9). The switch cord should not interfere with filter tray operation. Pull the end of the switch cord through the grommet hole in the cover and reinstall the cord grommet.

- E. To reinstall a switch, place it back into the float pocket. Route the switch cord around the internal inlet hub (see Figure 9). The switch cord should not interfere with filter tray operation. Pull the end of the switch cord through the grommet hole in the cover and reinstall the cord grommet.

Fig. 6 Piggyback plug installation.

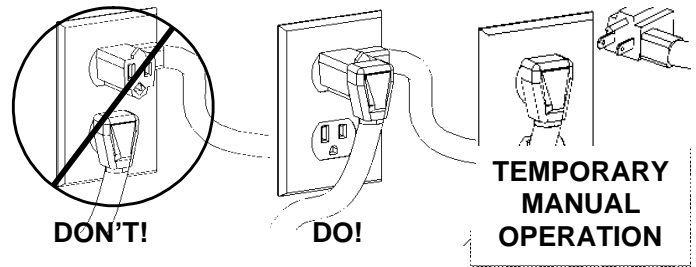


Fig. 7 Pump and Alarm Switch Set Points

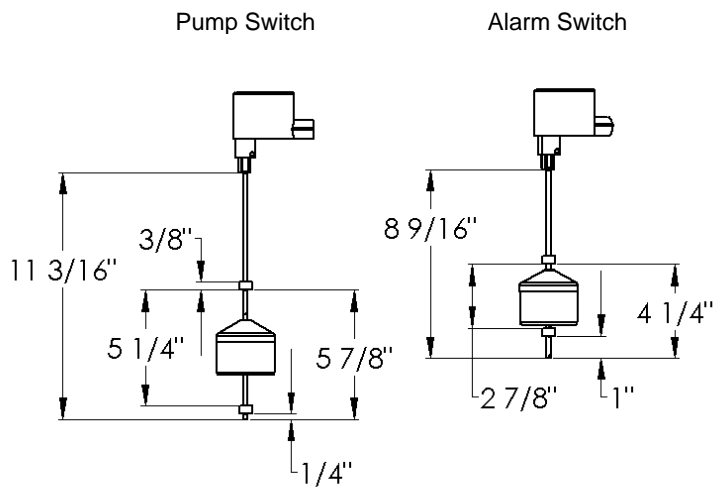


Fig. 8 Removal of Strainer Basket

Take hold of these handles and lift the strainer upward out of the basin.

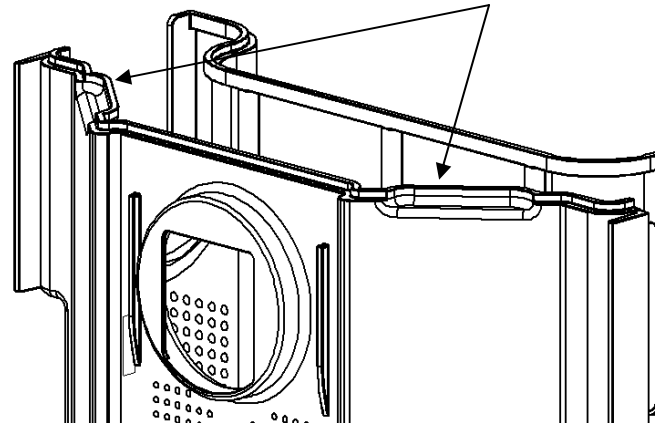
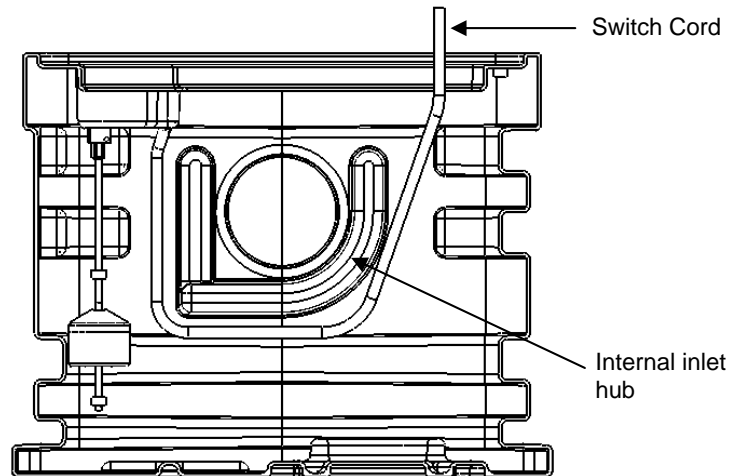


Fig. 9 Switch Cord Routing



4. Troubleshooting

⚠ WARNING

Risk of electric shock. Always disconnect the pump from the power source before handling or making adjustments.

Problem	Cause	Correction
Pump will not run.	<ul style="list-style-type: none"> Blown fuse or other interruption of power; improper voltage. 	<ul style="list-style-type: none"> Check that the unit is securely plugged in. Have an electrician check all wiring for proper connections and adequate voltage and capacity.
	<ul style="list-style-type: none"> Switch is unable to move to the "turn on" position due to interference with the side of basin or other obstruction 	<ul style="list-style-type: none"> Position the pump or switch so that it has adequate clearance for free operation.
	<ul style="list-style-type: none"> Insufficient liquid level. 	<ul style="list-style-type: none"> Make sure the liquid level is allowed to rise enough to activate switch(s).
	<ul style="list-style-type: none"> Defective switch. 	<ul style="list-style-type: none"> Remove and replace switch.
Pump will not turn off.	<ul style="list-style-type: none"> Switch(s) unable to move to the "turn off" position due to interference with the side of basin or other obstacle. 	<ul style="list-style-type: none"> Position the pump or switch so that it has adequate clearance for free operation.
	<ul style="list-style-type: none"> Defective switch. 	<ul style="list-style-type: none"> Remove and replace switch.
Pump runs or hums, but does not pump.	<ul style="list-style-type: none"> Discharge is blocked or restricted. 	<ul style="list-style-type: none"> Check the discharge line for foreign material, including ice if the discharge line passes through or into cold areas.
	<ul style="list-style-type: none"> Check valve is stuck closed or installed backwards. 	<ul style="list-style-type: none"> Remove check valve(s) and examine for freedom of operation and proper installation.
	<ul style="list-style-type: none"> Gate or ball valve is closed. 	<ul style="list-style-type: none"> Open gate or ball valve.
	<ul style="list-style-type: none"> Total lift is beyond pump's capability. 	<ul style="list-style-type: none"> Try to route piping to a lower level. If not possible, a larger pump may be required. Consult the factory.

Pump runs or hums but does not pump	<ul style="list-style-type: none"> Pump impeller is jammed or volute casing is plugged. 	<ul style="list-style-type: none"> *Remove the pump from the basin. Detach the pump base and clean the area around the impeller. Reassemble and reinstall.
Pump runs periodically when fixtures are not in use.	<ul style="list-style-type: none"> Check valve was not installed, is stuck open or is leaking. 	<ul style="list-style-type: none"> Remove check valve(s) and examine for freedom of operation and proper installation.
	<ul style="list-style-type: none"> Fixtures are leaking. 	<ul style="list-style-type: none"> Repair fixtures as required to eliminate leakage.
Pump operates noisily.	<ul style="list-style-type: none"> Foreign objects in the impeller cavity. 	<ul style="list-style-type: none"> *Remove the pump from the basin. Detach the pump base and clean the area around the impeller. Reassemble and reinstall.
	<ul style="list-style-type: none"> Broken impeller. 	<ul style="list-style-type: none"> Consult the factory for information regarding replacement of impeller.
	<ul style="list-style-type: none"> Worn bearings. 	<ul style="list-style-type: none"> Return pump to the factory or authorized repair station for repair.
	<ul style="list-style-type: none"> Piping attachments to building are too rigid. 	<ul style="list-style-type: none"> Replace a portion of the discharge line with rubber hose or connector.

***NOTE:** Liberty Pumps, Inc. assumes no responsibility for damage or injury due to disassembly in the field. Disassembly, other than at Liberty Pumps or its authorized service centers, automatically voids warranty.

2 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 2 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 2 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 damaged or improperly spliced; if the pump discharge has been reduced in size; if the pump has been used in hot water 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 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 two 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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