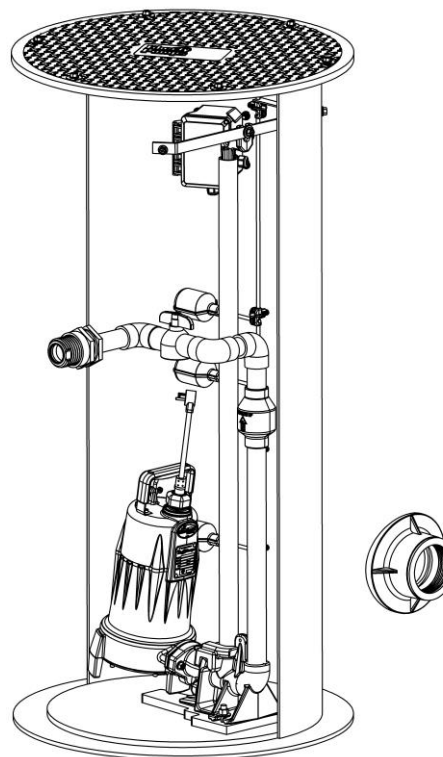


## 2460 / 2472 / 2484/ 2496 - Series Simplex Grinder Systems

### Features:

- LSG or LSGX Series 2HP Grinder Pump
- 24" dia. Basin available in 60", 72", 84", or 96" depths
- Guide Rail System
- Preassembled including ball & check valves
- Simplex Panel with Alarm –or- Automatic Pump with Alarm



### Contents

1. General Information
2. Precautions / Pre-Installation
3. Installation Instructions
4. Maintenance & Troubleshooting
5. GR20 Assembly



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[www.libertypumps.com](http://www.libertypumps.com)

### IMPORTANT:

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

MODEL \_\_\_\_\_

SERIAL \_\_\_\_\_

CODE \_\_\_\_\_

INSTALLATION  
DATE \_\_\_\_\_

# 1 General Information

**Maximum fluid temperature: 140°F (60°C)**

**⚠ CAUTION** The LSG or LSGX Series grinder pump and the control panel are supplied with their own separate Installation/Operation/Maintenance manuals. Ensure that you have received these manuals, and that you read and understand them prior to installing this unit. Your familiarity with the grinder pump manual and the control panel manual is critical. This installation manual gives a brief overview of the system, and deals mainly with inspection and installation of the basin, but it does not cover the specifics of the pump operation or the control panel operation. If you have any questions, call customer service at (800) 543-2550 or visit [www.libertypumps.com](http://www.libertypumps.com).

## 2 Precautions / Pre-Installation

### **⚠ WARNING**

- **Risk of electric shock.** Always disconnect the pump from the power source before handling or making adjustments.
- These pumps are not to be installed in locations classified as hazardous in accordance with the National Electric Code, ANSI/NFPA 70.
- The electrical connections and wiring for a pump installation should only be made by qualified personnel.
- This pump is supplied with a grounding conductor or a grounding-type attachment plug. To reduce the risk of electric shock, be certain that the grounding conductor is connected only to a properly grounded control panel or, if equipped with a grounding-type plug, that it is connected to a properly grounded, grounding-type receptacle.
- Do not bypass grounding wires or remove ground prong from attachment plugs.
- Do not remove cord and strain relief, and do not connect conduit to pump.
- 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 installation must be in accordance with the National Electric Code and 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.
- Never enter a pump basin after it has been used. Sewage and effluent can emit several gases which are poisonous.

### **Pre-installation checklist:**

1. Inspect system unit upon arrival to ensure that there is no shipping damage. Pay careful attention to the condition of the fiberglass basin, control floats, pump guide rail brackets, and control panel. Notify the carrier immediately if there is any damage.
2. Read all instructions and familiarize yourself with the unit's operation prior to proceeding with the installation.
3. A qualified licensed electrician should install and test all electrical circuits.
4. Check to ensure that your power source is adequate to handle the pump amperage as noted above and on the pump nameplate. Ensure that the electrical supply circuit is equipped with fuses or breakers of the proper capacity.
5. A separate 115V branch circuit should be installed for the alarm. We do not recommend splitting the incoming pump power circuit to power the control circuit.
6. All electrical connections should be tested to ensure that a proper ground has been established

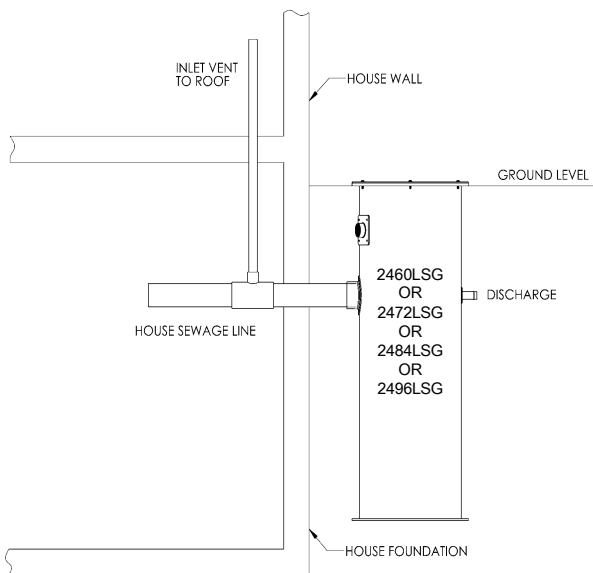
# 3 Installation Instructions

1. **Excavation:** Excavate the hole for the basin as small as possible, with a minimum base diameter of 38". Never place the basin in direct contact with rocks or other sharp objects. Place enough fine, 1/8" to 3/4" pea gravel or 1/8" to 1/2" washed, crushed stone at the bottom of the excavation to create a minimum of 12 inches stone or gravel after compaction. 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. If a concrete pad will be used under the basin, the compacted stone sub-base can be reduced to 6 inches.
2. **Connections & Backfill:** Pour enough concrete over and around the anti-floatation flange to anchor the basin and prevent upward movement. Connect 1 1/4" schedule 80 PVC pipe to the pump discharge. Do not reduce the size of the discharge piping, and do not increase the discharge piping to larger than 2". The remainder of the discharge line should be as short as possible with a minimum number of turns. Connect the inlet line to the 4" fiberglass inlet hub with a rubber donut (Liberty #6112000). Connect the electrical coupling to 2" electrical conduit and run the power and float cords through the conduit to the control panel. The remaining backfill should be only fine, 1/8" to 3/4" pea gravel or 1/8" to 1/2" washed, crushed stone. Do not use sand or native soil as backfill\*. **Do Not** exert heavy pressure or run heavy equipment over the backfill material, as it may cause tank collapse.

\*Other backfill options may be available – consult the factory for special instructions relative to your situation.

3. **Venting:** The fiberglass basin provided with the system must be completely sealed and properly vented in order to meet health and plumbing code requirements. The system is designed to be vented through the inlet to an existing building vent stack. In order to accomplish this, there must be no traps between the system inlet and the nearest building vent stack connection. See Figure A for an example. If this is not possible or desirable in your application, a vent flange or grommet can be installed in a hole cut into the solid fiberglass cover.

Figure A – Inlet Venting



**⚠ CAUTION** The control panel that is an integral part of this complete unit is supplied with its own separate Installation/Operation/Maintenance manual. Ensure that you have received this manual, and that you read and understand it prior to installing this unit. Your familiarity with the control panel manual is critical.

Per UPC code, a separate 115V branch circuit should be installed for the alarm circuit. We do not recommend splitting the incoming pump power circuit to power the control circuit.

Connect the grinder pump leads and the float switch leads to the control panel in accordance with the instructions included with those units.

## 5. Float Switches:

The float switches are pre-mounted on a quick tree. For quick tree removal, loosen the cord nut, locking clamp, and pull the tree straight out of the tank. The pump cycle is pre-set at the factory at 14" for 2460LSG (approximately 28 gallons), 18" for 2472LSG (approximately 35 gallons), 20" for 2484LSG (approximately 39 gallons), and 24" for the 2496LSG (approximately 47 gallons). The pump cycle can be adjusted by loosening the cord clamp and moving the "on" float up or down. We do not recommend adjustments of more than 3" in either direction – please call the factory if you need to adjust the pump cycle beyond this recommended level.

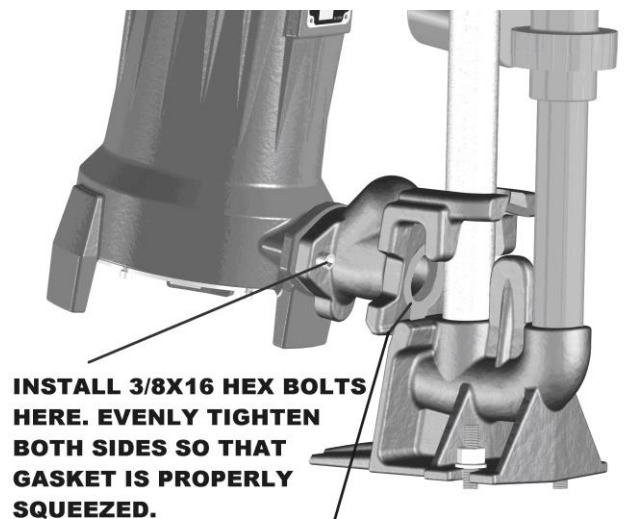
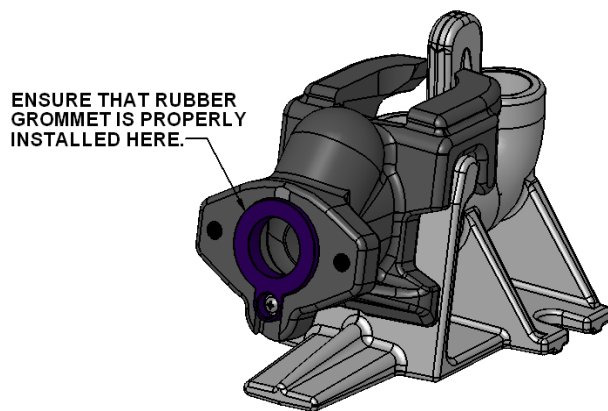
6. **Testing and Startup:** Follow the testing and startup procedures found in the LSG / LSGX Series and control panel manuals.

# 4 Maintenance and Troubleshooting

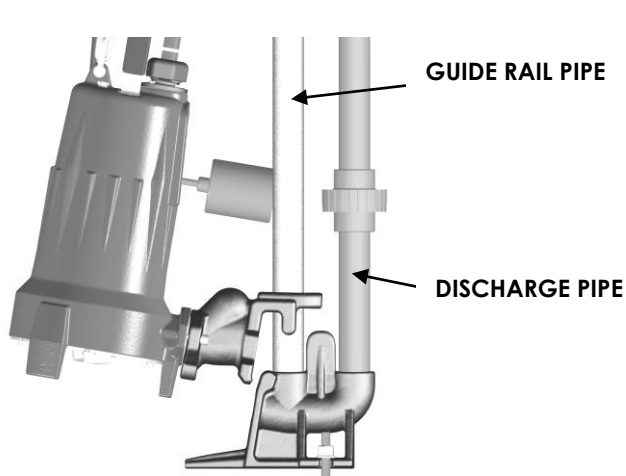
**⚠ CAUTION** The LSG or LSGX Series grinder pump and control panel are supplied with their own separate Installation/Operation/Maintenance manuals. Ensure that you have received these manuals, and that you read and understand them prior to installing this unit. Your familiarity with the grinder pump manual and the control panel manual is critical. Please follow the Maintenance and Troubleshooting procedures provided in those manuals.

## 5 GR20 Quick Disconnect Assembly

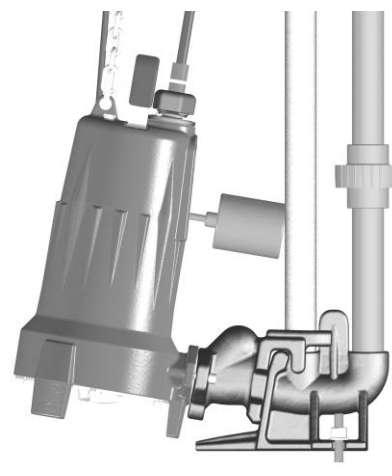
The GR20 quick disconnect assembly provided with your grinder package system is designed to allow easy installation and removal of the pump. Please ensure that installation is done as per the diagrams below.



ENSURE THAT RUBBER GROMMET IS PROPERLY INSTALLED HERE.



**DISCONNECTED POSITION**



**OPERATING POSITION**

### 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:

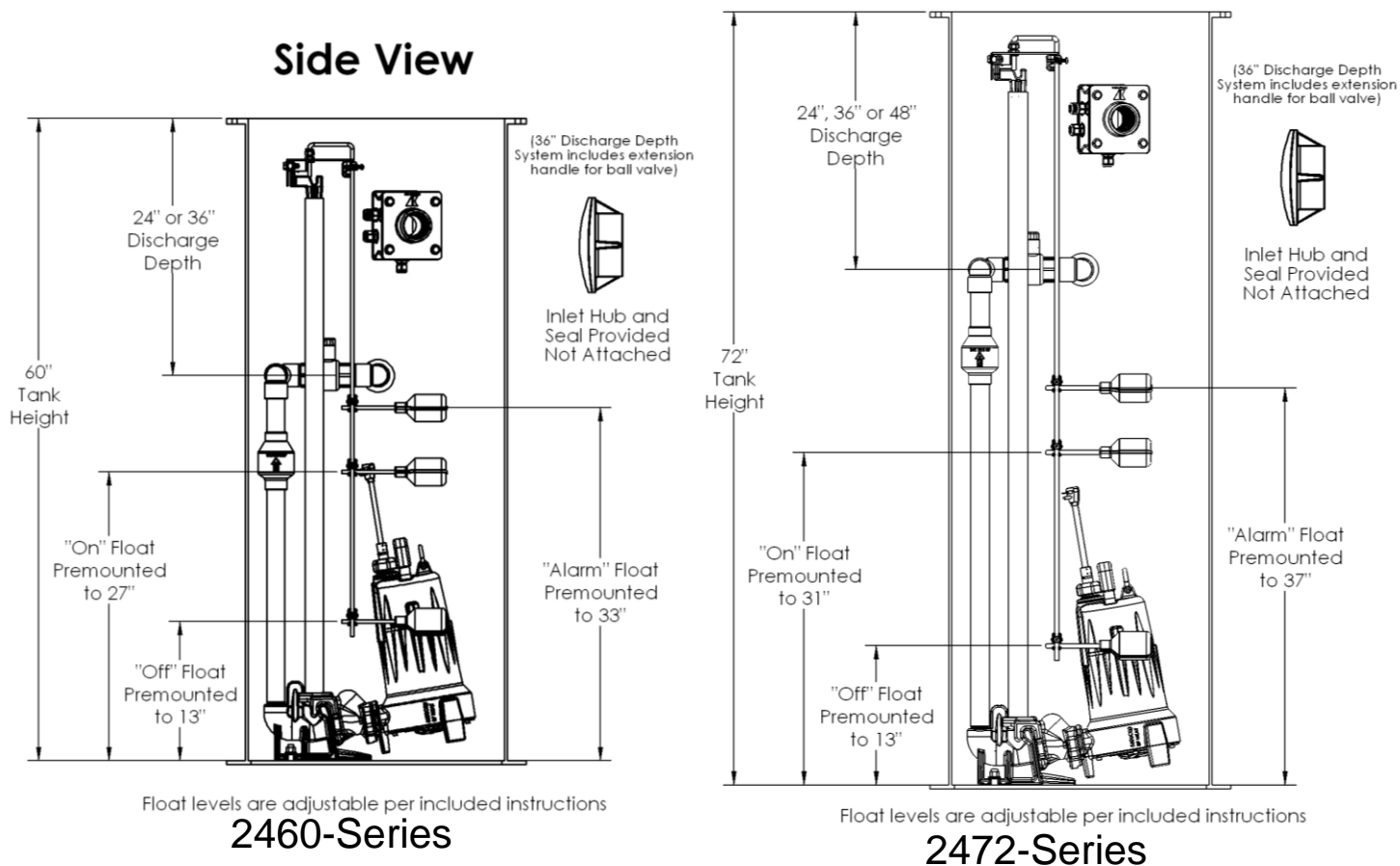
The manufacturer shall not be liable under this Warranty if the product has not been properly installed; if it has been disassembled, modified, abused or tampered with; if the electrical cord has been cut, damaged or spliced; if the pump discharge has been reduced in size; if the pump has been used in water containing sand, lime, cement, gravel or other abrasives, or in water exceeding the advertised temperature; 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.

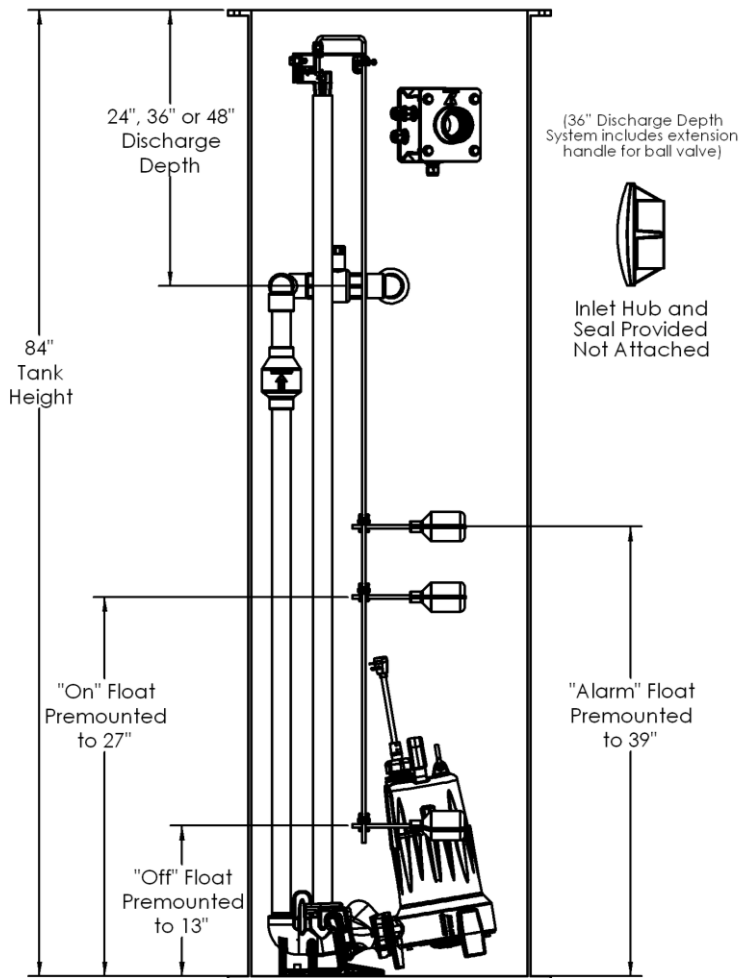
**There is no other express warranty. All implied warranties, including those of merchantability and fitness for a particular purpose, are limited to three years from the date of purchase.**

**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.**

### Side View



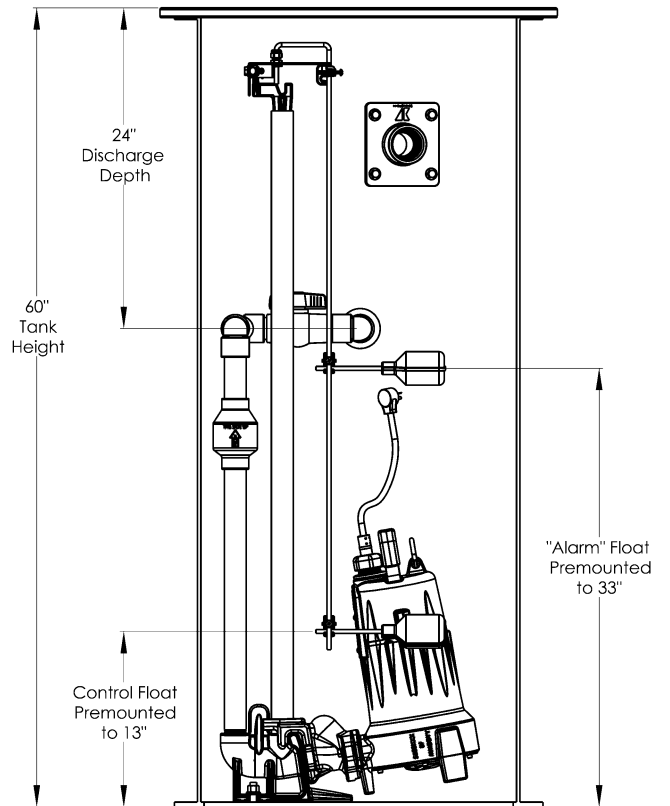
## Side View



Float levels are adjustable per included instructions

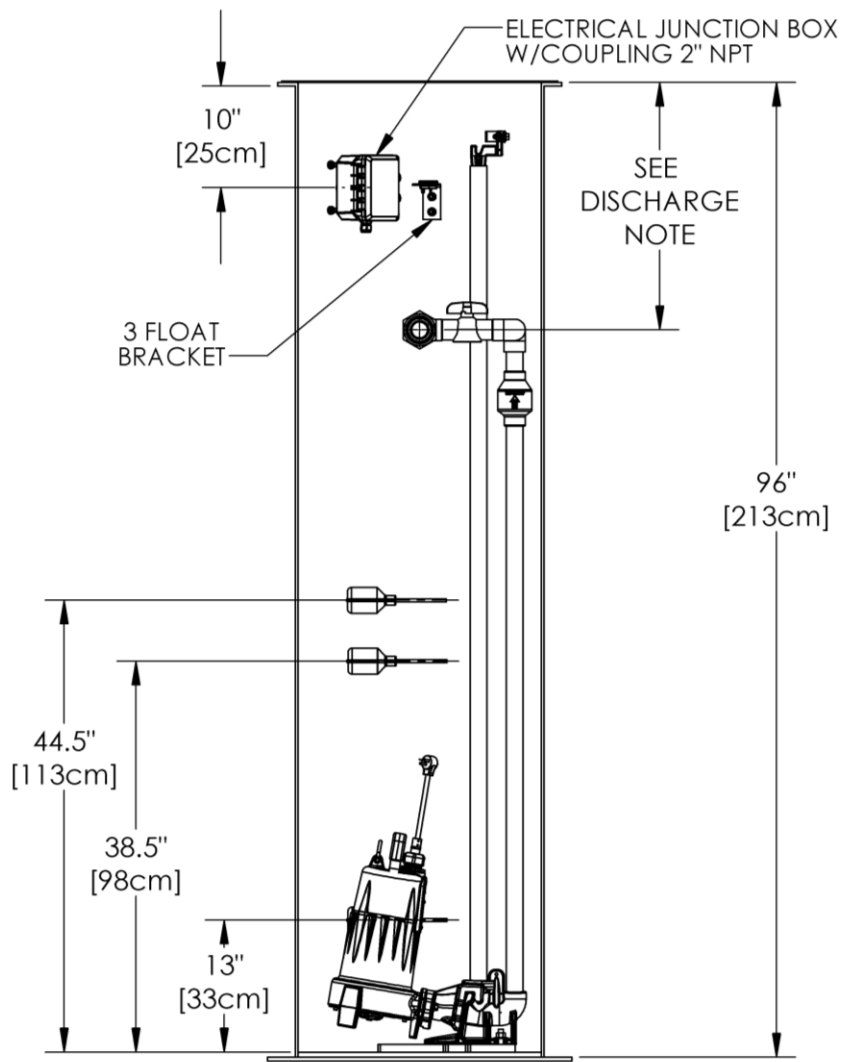
2484-Series

## Side View



2460LSG24-A

## Side View



2496-Series



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