

Model CSP-237 and CSP-457 Crawl Space Pump

CSP-237 1/3HP 115V 60Hz

CSP-457 1/2HP 115V 60Hz



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IMPORTANT:

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

MODEL _____

SERIAL _____

CODE _____



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1. General Information and Safety Guidelines

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.** 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 receptacle.
- 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 and Plumbing Codes as well as all applicable local codes and ordinances.

2. Installation

Fig. 1 – Typical Residential Installation
This is a recommended installation only.

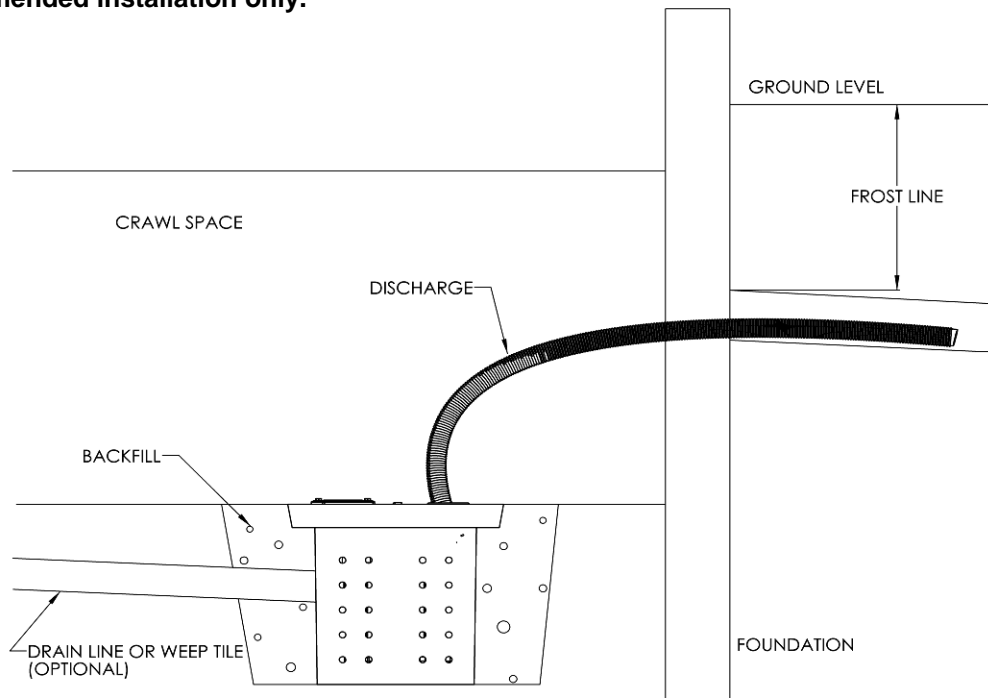


Figure 1

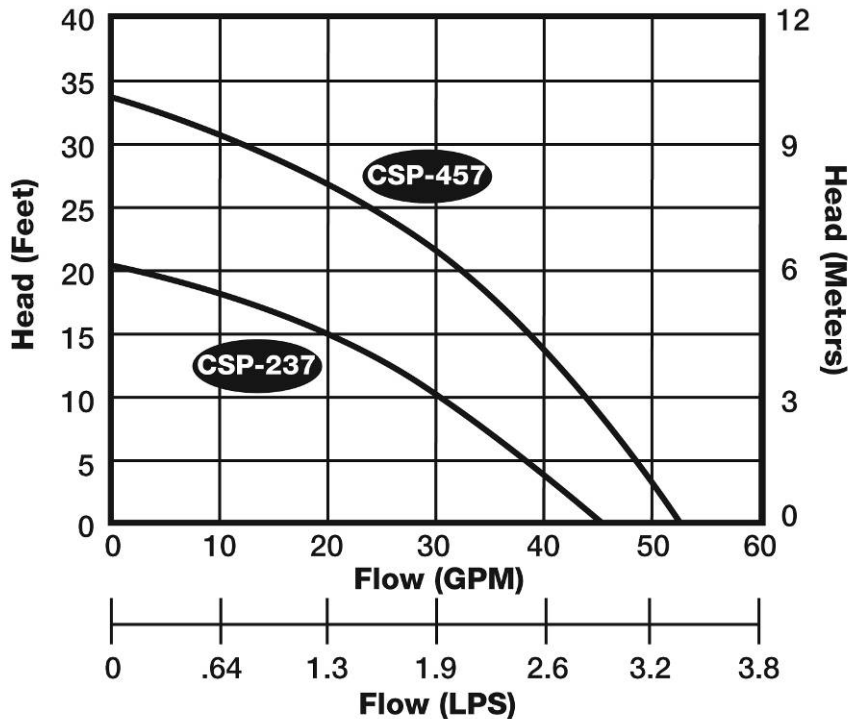
Application: The CSP-237 and CSP-457 crawl space pumps are designed for use in a crawl space or where pooling water is occurring. Allowing the water in the pump or discharge line to freeze may cause damage to the pump. In colder regions, the pump should only be installed indoors or deep enough to be below the frost line.

- A. **BACKFILL:** For in ground installation a hole should excavated as small as possible, leaving at least 8" of diametrical clearance. Course gravel is recommended for backfill.
- B. **INLET:** The CSP-237 and CSP-457 include a perforated basin for gathering water. Additional inlets may be added with a hole saw for allowing drain lines or weep tiles.
- C. **DISCHARGE:** When attaching the discharge, place the pump in the basin being careful to keep float from any obstruction or from hitting the tank wall. The CSP-237 and CSP-457 include a DHK-24 discharge hose kit. A 1-1/2" X 1-1/4" hose adapter will thread into the pump discharge. The 24' flexible hose will fit over the barbed fitting of the adapter and should be tightened down with a hose clamp. The hose will fit through the grommet in the basin cover and can be cut to the required length. Exit the discharge of water in an area that will drain away from the building and foundation.
- D. **CHECK VALVE:** The CSP-237 and CSP-457 include a threaded check valve for use with the discharge hose. If the pump is short cycling, then a check valve may be required. This would prevent water from draining back through the discharge hose into the basin. When using a check valve, the discharge line must be protected from freezing by running the discharge deep enough below ground level to be beneath the frost line. See figure 1.
- E. **POWER CORD:** The pump power cord is equipped with a grounding conductor and grounding-type 3-prong plug. It should be connected to a separately fused, grounded, 3-wire grounding-type receptacle of 15-amp capacity with the proper 115V. Make sure all electrical wiring and connections are in accordance with the National Electric Code and all applicable local codes.

⚠ WARNING

- **Risk of electric shock.** Always disconnect the pump from the power source before handling or making adjustments.
- DO NOT remove the plug or ground prong.
- DO NOT use an extension cord.

PERFORMANCE CURVE



Maximum Fluid Temperature 140° F

3. Maintenance and Troubleshooting

Each unit is individually factory tested to ensure proper adjustment and operation. If the unit fails to operate properly, carefully re-read the instructions to see that they have been followed correctly. Routine maintenance is not required on the pump itself, but associated connections may require occasional attention. The check valve on the discharge should also be checked for freedom of operation at the same time.

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

Problem	Cause	Correction
Pump will not turn on	<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 capacity.
	<ul style="list-style-type: none"> Defective switch or build-up on tank wall restricting free movement of float switch. 	<ul style="list-style-type: none"> Check that float is free to move. If build-up restricts float, clean and reinstall. If defective, 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 blockage, including ice if the line passes through or into cold areas.
	<ul style="list-style-type: none"> Check valve is stuck closed or installed wrong. 	<ul style="list-style-type: none"> Remove and examine for freedom of operation and proper installation.
	<ul style="list-style-type: none"> Total lift height has been reached (see Fig. 2) 	<ul style="list-style-type: none"> Try routing pipe to a lower level. If not possible, another pumping station may be required at a level of roughly half the total lift.
	<ul style="list-style-type: none"> Pump impeller is jammed. 	<ul style="list-style-type: none"> *Disassemble the receiver and bottom base of pump. Remove foreign material. Reassemble.
	<ul style="list-style-type: none"> Defective switch. 	<ul style="list-style-type: none"> Check that float is free to move. If build-up restricts float, clean and reinstall. If defective, replace switch.
Pump does not turn off	<ul style="list-style-type: none"> Defective switch or build-up on tank wall restricting free movement of float switch. 	<ul style="list-style-type: none"> Check that float is free to move. If build-up restricts float, clean and reinstall. If defective, replace switch.
Pump operates noisily.	<ul style="list-style-type: none"> Foreign objects in impeller cavity. 	<ul style="list-style-type: none"> *Disassemble the receiver and bottom base of pump. Remove foreign material. Reassemble.
	<ul style="list-style-type: none"> Broken impeller 	<ul style="list-style-type: none"> Consult the factory for information regarding the replacement of impeller.

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 above the ratings listed above; if the pump has been used in 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.