

THERMOPLASTIC PEDESTAL SUMP PUMP

RLSP33PED

Owner's Manual



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SAFETY INSTRUCTIONS

Hazard Messages

This manual includes safety precautions and other important information in the following formats:

⚠ DANGER
Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

⚠ WARNING
Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION
Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate personal injury.

NOTICE
Indicates a potentially hazardous situation which, if not avoided could result in damage to equipment or other property.

IMPORTANT: Identifies information that controls correct assembly and operation of the product.

NOTE: Identifies helpful or clarifying information.



This symbol alerts the user to the presence of dangerous voltage inside the product that might cause harm or electrical shock.



This symbol alerts the user to the presence of hot surfaces that might cause fire or personal injury.

Before Getting Started

This equipment should be installed and serviced by technically qualified personnel who are familiar with the correct selection and use of appropriate tools, equipment, and procedures. Failure to comply with national and local electrical and plumbing codes and within Red Lion recommendations may result in electrical shock or fire hazard, unsatisfactory performance, or equipment failure.

Know the product's application, limitations, and potential hazards. Read and follow instructions carefully to avoid injury and property damage. Do not disassemble or repair unit unless described in this manual.

Refer to product data plate(s) for additional precautions, operating instructions, and specifications.

Failure to follow installation or operation procedures and all applicable codes may result in the following hazards:

⚠ DANGER

⚡ Risk of death, personal injury, or property damage due to explosion, fire, or electric shock.

- Do not use to pump flammable or explosive fluids such as gasoline, fuel oil, kerosene, etc.
- Do not use in explosive atmospheres or hazardous locations as classified by the NEC, ANSI/NFPA70.
- Do not handle a pump or pump motor with wet hands or when standing on a wet or damp surface, or in water.
- When a pump is in its application, do not touch the motor, pipes, or water until the unit is unplugged or electrically disconnected.

⚠ WARNING



High voltages capable of causing severe injury or death by electrical shock are present in this unit.

- To reduce risk of electrical shock, disconnect power before working on or around the system. More than one disconnect switch may be required to de-energize the equipment before servicing.
- Be certain that this pump is connected to a circuit equipped with a ground fault circuit interrupter (GFCI) device if required by code.
- Wire pump system for correct voltages.
- The pump has been evaluated for use with water only. Pump should only be used with liquids compatible with pump component materials. If the pump is used with liquids incompatible with the pump components, the liquid can cause failure to the electrical insulation system resulting in electrical shock.

NOTICE

Risk of damage to pump or other equipment.

- Do not use this pump for pumping sea water, beverages, acids, chemical solutions, or any other liquid that promotes corrosion as this can result in damage to the pump.
- Do not run pump dry.
- This pump is not suitable for pond applications.

⚠ CAUTION



Risk of bodily injury, electric shock, or property damage.

- This equipment must not be used by children or persons with reduced physical, sensory, or mental abilities, or lacking in experience and expertise, unless supervised or instructed. Children may not use the equipment, nor may they play with the unit or in the immediate vicinity.
- Do not use this pump for pumping any liquid intended for human consumption.
- Equipment can start automatically. Always unplug the pump power cord and disconnect the electrical power before servicing the pump or switch. Lockout-Tagout before servicing equipment.
- An inoperative or malfunctioning pump could lead to flooding, resulting in personal injury or property damage.
- In applications where property damage and/or personal injury might result from an inoperative or leaking pump due to power outages, discharge line blockage, or any other reason, an automatic back-up system and/or an alarm should be installed.
- Operation of this equipment requires detailed installation and operation instructions provided in this manual for use with this product.
- Read entire manual before starting installation and operation.
- End User should receive and retain manual for future use.
- Keep safety labels clean and in good condition.
- Keep work area clean, well-lit, and uncluttered.
- Wear safety glasses while installing or performing maintenance on the pump.
- Do not wear loose clothing, jewelry, or anything that may be caught in the rotating parts. Tie up long hair and remove jewelry.

PRODUCT DESCRIPTION

Model

PRODUCT DESCRIPTION

This pump is for use in basins or lift stations and is suitable for pumping clear water and other non-explosive, non-corrosive liquids. Do not use the pump in applications where sewage or any other debris (gravel, sand, floating debris, etc.), abrasives, or corrosives are present.

These products have been carefully tested, inspected, and packaged to ensure safe delivery and operation. Please examine your pump carefully to ensure that no damage occurred during shipment. If damage has occurred, please contact the place of purchase. They will assist you in replacement or repair, if required.

This pump is designed for domestic household service only. Total pump run time should be two hours or less per day.

The pump motor is equipped with an automatic resetting thermal protector, and may restart unexpectedly. Thermal Protector tripping is an indication of motor overloading or overheating, which can be caused by application issues such as an obstructed pump impeller, float stuck in the ON position, pump running dry, pump air-locked, pump short cycling, excessively high or low voltage supply, or possibly a pump, motor, bearings, or seal that have reached the end of their useful life.

Model

Model	HP	Amps	Voltage	Float Type	On/Off Levels	Minimum Basin Diameter	Minimum Basin Depth	Maximum Basin Depth
RLSP33PED	1/3	4.0	115	Snap Action	8"-10" (203 - 254 mm)/ 3"-5" (76 - 127 mm)	13" (330 mm)	18" (457 mm)	24" (610 mm)

Flow Rates

Gallons/Liters per Hour					
At Height: (Head)	0 ft (0 m)	5 ft (1.5 m)	10 ft (3 m)	15 ft (4.5 m)	Shut Off
RLSP33PED	3300 / 12492	2800 / 10599	2040 / 7722	600 / 2271	16 ft (4.9 m)

Specifications

Discharge Size	1-1/4" FNPT
Intake Size	1/6" (4.2 mm) screened opening
Pump Housing	Polypropylene (including volute)
Impeller	Polybutylene terephthalate, top intake, non-clog
Motor	1/3 hp, PSC, 115 V, 60 Hz, 1725 RPM
Hardware	Zinc plated steel
Bearings	Ball bearings
Power Cord	18" (457 mm) AWG 3-Conductor Copper, Stranded, 8' Length (2.4 m)
Pump Shaft	PVC

INSTALLATION

Physical Installation

⚠ WARNING

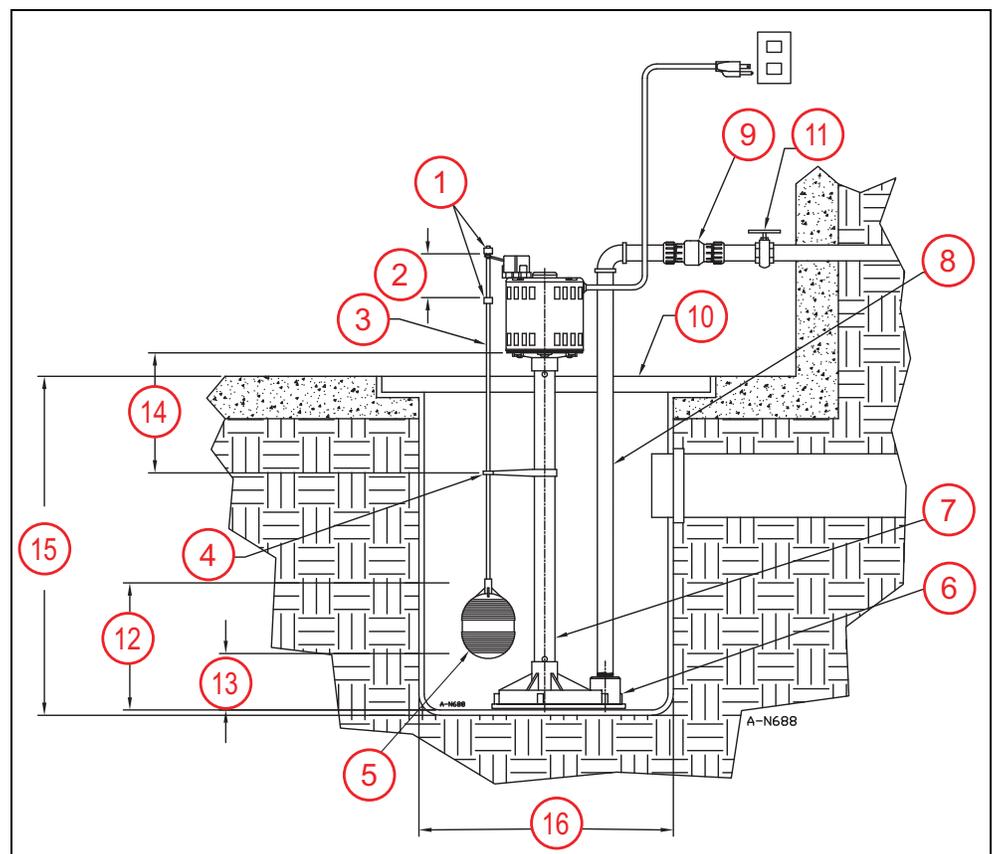


Risk of severe injury or death by electrical shock.

- Always disconnect the electrical power before touching the pump or discharge.
- Check local electrical and building codes before installation. The installation must be in accordance with their regulations as well as the most recent National Electrical Code (NEC).

Typical Installation

1. Rubber Stoppers
 2. 5.5" (140 mm) Maximum
 3. Float Stem
 4. Float Stem Guide
 5. Float
 6. Pump Base / Volute Discharge
 7. Pump Column
 8. Discharge Pipe
 9. Check Valve
 10. Sump Pit Cover (optional)
 11. Ball or Gate Valve
 12. Pump ON Level: 8-10" (203-254 mm)
 13. Pump OFF Level: 3-5" (76-127 mm)
 14. 8.5" (215 mm) Maximum
- Basin Dimensions:
15. Basin Height
24" (610 mm) Maximum
18" (457 mm) Minimum
 16. Basin Diameter:
13" (330 mm) Minimum



INSTALLATION

Physical Installation

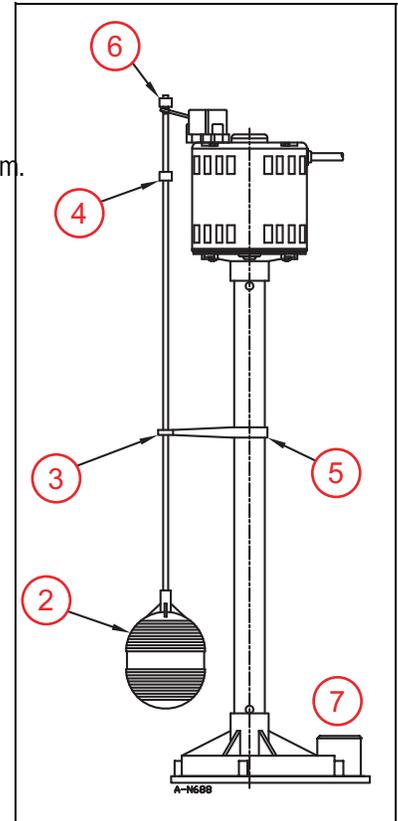
Assemble the Float Mechanism

1. Remove the float stem components from the poly bag included with the pump.
2. Spin the float onto the threaded end of the float stem approximately eight turns.
3. Slide the float stem guide onto the float stem.
4. Push one rubber stopper down approximately 5" (127 mm) from the top of the float stem.
5. Place the float stem guide onto the pump column by aligning the tab on the inside of the half circle with the matching hole in the column.
6. Slide the float stem through the opening in the switch lever and place the remaining rubber stopper on the top of the float stem.

Pump Installation

This pedestal sump pump is designed to fit most residential basement sump pits. The pump must sit level in the sump pit. A tilted pump can trap air and cause possible damage to the bearings. Make sure the base sits on a flat surface before proceeding with the installation.

1. Pump must be installed in a suitable basin that is at least 18" (457 mm) deep, and in accordance with local plumbing codes. Refer to ["Model" on page 4](#) for minimum and maximum basin diameters. Make sure the discharge pipe and switch side are clear from the walls of the sump pit. Allowing maximum clearance around the float will help provide long life and reliable service.
2. Clean any debris from the basin and set the pump in the center of the basin (refer to ["Typical Installation" on page 5](#)).
3. The pump must be placed on a hard, level surface. Never place the pump directly on clay, earth, or gravel surfaces. These surfaces contain small stones, gravel, sand, etc. that may clog or damage the pump and cause pump failure.
4. Do not attempt to restrict the intake side of these pumps. Restricting the intake may cause damage to the seal and may starve the pump.



Connect Discharge Piping

1. Use pipe joint compound at all connections. Sump pumps can be piped to discharge into the house drainage system, to a dry well, splash block, or to a storm drain, depending on local plumbing codes. The discharge pipe should be a straight 16" length of 1-1/4" pipe mounted directly to the pump discharge (#7, above right).
 - Support the pump and piping while assembling and when installed. Failure to do so may cause the piping to break, the pump to fail, motor bearing failures, etc.
 - Alternative discharge piping can be connected to the 16" discharge pipe and the installation can proceed from this point as needed. The rigid 1-1/4" discharge stand pipe ensures that flexible joints or flexible pipes do not obstruct the free movement of the float/switch mechanism, and improves water flow.
 - Always install a union in the discharge line just above the basin cover to allow for easy removal of the pump for cleaning or repair.
2. In situations where the piping is long, or the vertical discharge is above 7' (2.1 m) to 8' (2.4 m), or a small pit has been provided, use of a check valve is recommended to prevent back flow of water into the sump pump. When a check valve is used, drill a relief hole, 1/8" to 3/16" (3.2 mm to 4.8 mm) diameter, in the discharge pipe. The hole should be located below the floor line between the pump discharge and the check valve. Unless a relief hole is provided, the pump could air lock and not pump water, even though it will run. A missing, improperly installed, or malfunctioning check valve can cause a pump to short-cycle due to back-flow of the pumped fluid from the discharge plumbing back into the basin, significantly shortening the life of the pump.

3. Connect the pump to an appropriate power supply following the instructions in [“Electrical Connections” on page 7](#).
4. Test the operation of the pump system by following the instructions in [“Operation Testing” on page 7](#) of this manual. Do not attempt to operate the pump without water; this will damage the seals and bearings and could result in permanent damage to the pump.

Electrical Connections

⚠ WARNING



Risk of severe injury or death by electrical shock.

- Always disconnect the electrical power before touching the pump or discharge.
- Pumps are supplied with a grounding conductor and grounding-type attachment plug. To reduce risk of electric shock, be certain that it is connected only to a properly grounded grounding-type receptacle. Do not remove the third prong from the plug. The third prong is to ground the pump to help prevent possible electric shock hazard.
- Check electrical outlets with a circuit analyzer to ensure power, neutral, and ground wires are properly connected. If not, a qualified, licensed electrician should correct the problem.
- Do not use the power cord for lifting the pump.
- Do not use an extension cord.

Wiring Guidelines

Check the pump label for proper voltage required. Do not connect to voltage other than that shown.

Be certain that this pump is connected to a circuit equipped with a ground fault circuit interrupter (GFCI) device if required by code.

The pump should be connected or wired to its own circuit, with no other electric receptacles or equipment in the circuit. The fuses or circuit breaker should be of ample capacity in the electrical circuit.

- RLSP33PED Series breaker size = 15 A

OPERATION TESTING

NOTICE

Risk of damage to pump or other equipment.

- Do not attempt to run the pump without water; this could result in permanent damage to the pump.
- If pump is run dry, it may damage pump and void the warranty.

Test the Pump

1. Turn on power to the pump.
2. Run water into the sump pit until the pump starts. Do not attempt to operate the pump without water; this will damage the seals and bearings and could result in permanent damage to the pump. Check the pump for proper operation by gently lifting the float stem to activate the motor. Release the float stem after a few seconds.

MAINTENANCE

Periodic Service

3. Fill the sump pit to the normal “ON” level and allow pump to remove water to the normal “OFF” level. If the pump does not operate properly, refer to [“Troubleshooting” on page 9](#). If the solution still cannot be found, please contact the place of purchase or Technical Support at 888-885-9254.
4. Adjust the pump level by raising or lowering the lower rubber stopper on the float stem.
5. Place the cover on the sump basin (if provided). This will prevent debris from falling into the basin. Make sure the cover does not obstruct free movement of the float and that maximum clearance is provided around the pump column and float stem.

MAINTENANCE

⚠ WARNING



Risk of severe injury or death by electrical shock, high temperatures, or pressurized fluids.

- Always unplug the pump power cord and disconnect the electrical power before servicing the pump or switch.
- Let pump cool for a minimum of 2 hours before attempting to service.

NOTICE

Risk of damage to pump or other equipment.

- This unit is permanently lubricated. Oiling is not required. Do not open the sealed portion of the unit or remove housing screws.
- Do not remove the motor housing cover.
- Do not remove the impeller
- Warranty is void if the motor housing cover, impeller, or seals have been removed. Repairs on the motor or impeller require special tools.

Sump pumps are usually idle in dry weather, and may receive little or no maintenance during this time. But when needed, after long periods of non-use, they are expected to perform without failure. This pump is designed to require as little maintenance as possible; however, for long life and reliable service, periodically check the pump and its installation during dry months to be sure that it will be ready when needed.

Periodic Service

Inspect and test the pump system condition and operation every three months—more frequently in heavy use applications.

1. Check the power cords, electric receptacle, and/or junction box for damage or corrosion. The power cord on these units cannot be replaced. If damaged, replace the pump.
2. Remove all debris (gravel, sand, floating debris, etc.) from the basin.
3. Check the pump system components (basin, pump, switch, etc.) for any build-up (sludge, sediment, minerals, etc.) that would inhibit functionality of the components. If significant, remove build-up or replace affected components.
4. Confirm that all flexible coupling hose clamps are fully engaged with plumbing and fully tightened.
5. Test operation of the pump system. Refer to [“Operation Testing” on page 7](#).
6. While the pump is running, make sure a stream of water is escaping from the air bleed hole. If not, clear the hole of any deposits or debris.

Cleaning the Impeller and Volute

Periodic cleaning of the pump parts will prolong the life and efficiency of the pump. After removing power to the pump, disconnect the pump from the discharge plumbing.

1. Remove the screws that hold the base to the volute, then separate the base from the volute.
2. Remove the base and clean the impeller and the volute passage. Do not use strong solvents on the impeller.
3. Be sure the impeller turns freely after cleaning.
4. Attach the base to the volute, making sure the seal is properly aligned.

Troubleshooting

Problem	Probable Causes	Corrective Action
Pump does not turn on	Pump not connected to electrical power.	Connect pump to a dedicated circuit equipped with GFCI.
	Circuit breaker off or fuse removed.	Turn on circuit breaker or replace fuse.
	Accumulation of trash or build-up on float.	Clean float.
	Float obstruction.	Check float path and provide clearance.
	Defective switch.	Replace pump.
	Defective motor.	Replace pump.
Pump will not shut off	Float or float stem obstruction.	Check float and float stem path and provide clearance.
	Pump is air locked.	Shut off power for approximately 1 minute, then restart. Repeat several times to clear air from the pump.
	Liquid inflow matches pump capacity.	Larger pump required.
	Defective switch.	Replace pump.
Pump runs but does not discharge liquid	Check valve installed backwards.	Check flow indicating arrow on check valve body to ensure proper installation.
	Check valve stuck or plugged.	Remove check valve and inspect for proper operation.
	Lift too high for pump.	Check rated pump performance.
	Inlet to impeller plugged.	Pull pump and clean.
	Pump is air locked.	Pull pump and clean.
Pump does not deliver rated capacity	Lift too high for pump.	Check rated pump performance.
	Low voltage, speed too slow.	Check that supply voltage matches the nameplate rating.
	Impeller or discharge pipe is clogged.	Pull pump and clean. Check pipe for scale or corrosion.
	Impeller wear due to abrasives.	Replace pump.
Pump cycles continuously	No check valve in long discharge pipe allowing liquid to drain back into basin.	Install a check valve in discharge line.
	Check valve leaking.	Inspect check valve for correct operation.
	Basin too small for inflow.	Install larger basin.