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› Little Giant LSP-100-C Sprinkler/Irrigation Pump Instruction Manual

Little Giant LSP-100-C (Model 558294)

Little Giant LSP-100-C Sprinkler/Irrigation Pump Instruction Manual

Model: LSP-100-C (558294)

1. INTRODUCTION AND OVERVIEW

This manual provides essential information for the safe and efficient operation, installation, and maintenance of your Little Giant LSP-100-C Sprinkler/Irrigation Pump. The LSP-100-C is a 1 HP, non-submersible pump designed for transferring water in residential and commercial lawn and turf sprinkler systems, irrigation systems, hydroponic systems, and general water transfer applications. It features a durable cast iron housing, a Noryl impeller, and a dual voltage motor (115/230 volts) for versatile power options.

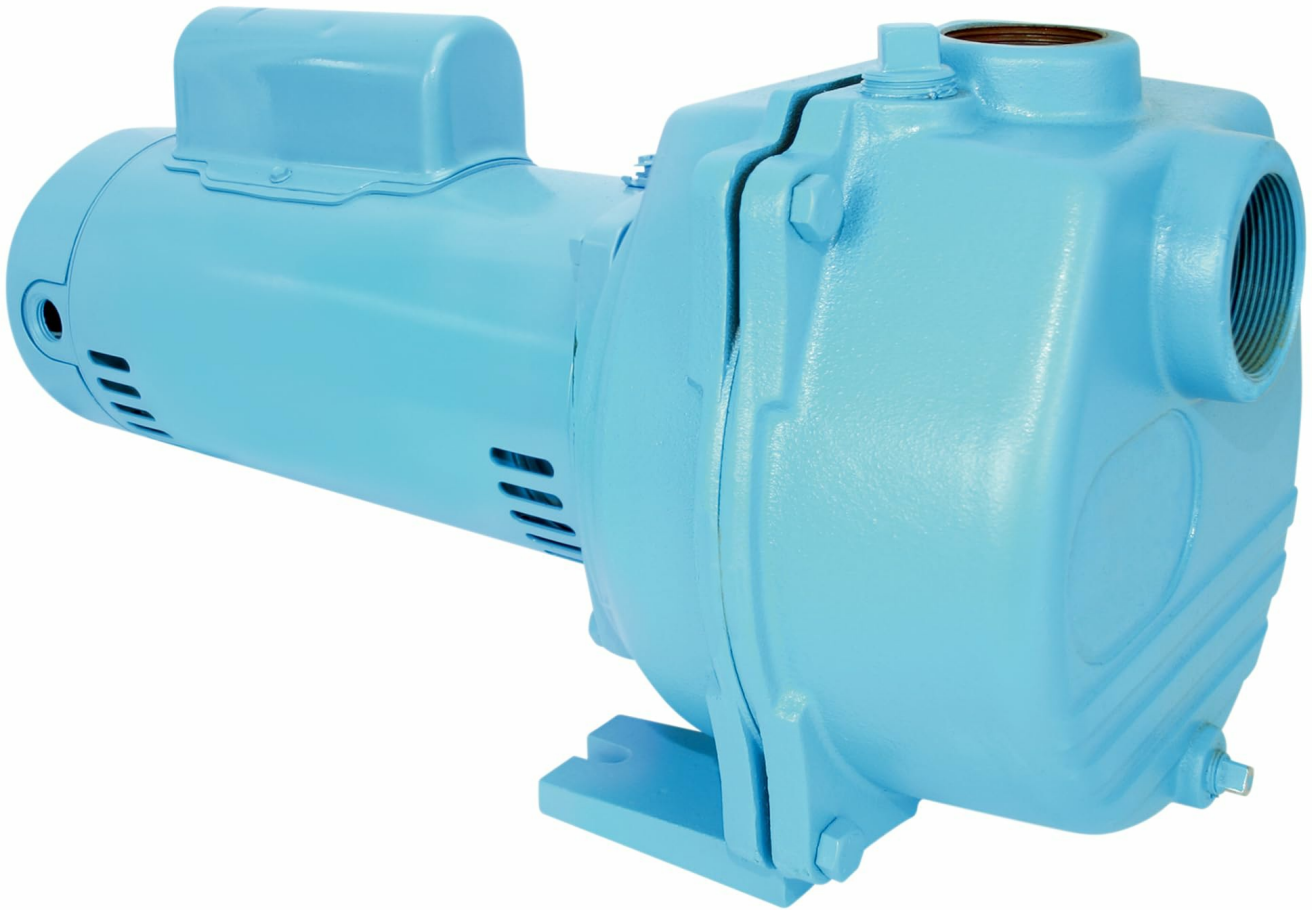


Figure 1: Little Giant LSP-100-C Sprinkler/Irrigation Pump.

2. SAFETY INFORMATION

Read all instructions carefully before installing or operating the pump. Failure to follow these instructions may result in serious injury, death, or property damage.

- Always disconnect power before servicing the pump.
- Ensure the pump is properly grounded to prevent electrical shock.
- Do not operate the pump with damaged electrical cords or plugs.
- Verify that the incoming voltage matches the pump's voltage setting (115V or 230V).
- This pump is non-submersible. Do not immerse it in water.
- Keep hands clear of moving parts during operation.

3. PRODUCT FEATURES

- **Durable Construction:** Features a rugged cast iron pump housing and seal plate for extended service life.
- **Noryl Impeller:** Equipped with a Noryl impeller, suitable for well water (down to 25 feet deep) and lake water applications.
- **Dual Voltage Motor:** The motor can be configured for either 115 Volts or 230 Volts to match the available power source. Factory set to 230 Volts, but easily switchable to 115 Volts.
- **Self-Priming:** Requires only initial priming; no additional priming is needed after the first fill.
- **Efficient Performance:** Delivers up to 72 GPM at 10 PSI and 46 GPM at 30 PSI, capable of handling multiple sprinkler heads.
- **Mechanical Seal:** Includes a standard 5/8-inch rotating mechanical seal to prevent water leakage.
- **Connections:** Features a 2-inch Female NPT threaded intake and a 1.5-inch Female NPT threaded discharge.

4. SPECIFICATIONS

Specification	Value
Brand	Little Giant
Model Number	558294 (LSP-100-C)
Horsepower	1 HP
Voltage	115/230 Volts (Factory set to 230V)
Maximum Flow Rate	72 GPM (at 10 PSI)
Flow Rate at 30 PSI	46 GPM
Maximum Pressure	46 PSI
Maximum Lifting Height	106.3 Feet
Impeller Material	Noryl
Housing Material	Cast Iron
Intake Connection	2-inch Female NPT
Discharge Connection	1.5-inch Female NPT
Product Dimensions (L x W x H)	18.9" x 9.63" x 10.05"
Item Weight	64.1 Pounds
Power Source	Corded Electric
Starting Amps (115V)	19.9 Amps
Starting Amps (230V)	9.95 Amps

LAWN SPRINKLER PUMPS

Little**GIANT**®

MENU

LSP SERIES

APPLICATIONS

- For both residential and commercial lawn and turf sprinkler systems, irrigation, gardens, and general water transfer

FEATURES

- Self priming
- Cast iron casing and seal plate for durability and long life
- Single-phase capacitor start, 115/230 dual voltage on 3/4 hp, 1 hp and 1-1/2 hp models
- Higher than standard NEMA service factors (230 V on 2 hp model)
- Standard 5/8" rotating mechanical seal, for a reliable seal against water leakage
- 2" NPT (51 mm) suction, 1-1/2" NPT (38 mm) discharge
- Priming plug to facilitate priming
- Drain plug for easy drainage of pump
- Fully serviceable with two-year warranty
- 2 hp models use a brass impeller



SERIES SPECIFICATIONS

Item No.	Model	HP	Pump Capacity GPM (LPM) Discharge Pressure in PSI @ 5' (1.5 m) Lift				Max. Pressure in PSI (kg/cm2)
			10	20	30	40	
558297	LSP-075-C	3/4	63 (238.5)	52 (196.8)	40 (151.4)	12 (45.4)	45 (3.2)
558294	LSP-100-C	1	72 (272.5)	62 (234.7)	46 (174.1)	20 (75.7)	46 (3.3)
558295	LSP-150-C	1-1/2	90 (340.7)	80 (302.9)	64 (242.3)	40 (151.4)	47 (3.3)
558296	LSP-200-C	2	97 (367.2)	90 (340.7)	74 (280.1)	47 (177.9)	48 (3.4)
558298	LSPH-200-C	2	84 (318)	81 (306.6)	73 (276.3)	58 (219.6)	57 (4.1)

Figure 2: Dimensional drawing of the LSP-100-C pump series.

5. SETUP AND INSTALLATION

Proper installation is crucial for the pump's performance and longevity. Consult a qualified electrician and plumber if you are unsure about any steps.

5.1 Voltage Selection

The pump is factory set for 230-volt operation. If your power source is 115 volts, the motor must be rewired accordingly. Refer to the wiring diagram inside the motor's terminal box or the detailed instructions in the full owner's manual for proper voltage conversion. *Ensure the voltage of the pump matches the incoming voltage before connecting power.*

5.2 Plumbing Connections

- Connect the suction line to the 2-inch Female NPT intake.
- Connect the discharge line to the 1.5-inch Female NPT discharge.
- Use appropriate thread sealant on all connections to prevent leaks.
- Install a check valve on the discharge side to prevent backflow.
- A gate valve (minimum 3/4-inch) should be installed on the suction side for maintenance.

5.3 Priming the Pump

The LSP-100-C is a self-priming pump, but it requires initial priming. Follow these steps:

1. Remove the priming plug located on the top of the pump casing.
2. Fill the pump casing completely with water until it overflows from the priming port.
3. Replace and tighten the priming plug.
4. Ensure the suction line is submerged in water and free of air leaks.
5. The pump should now be ready for operation. No further priming is typically required after the initial fill.

PERFORMANCE DATA

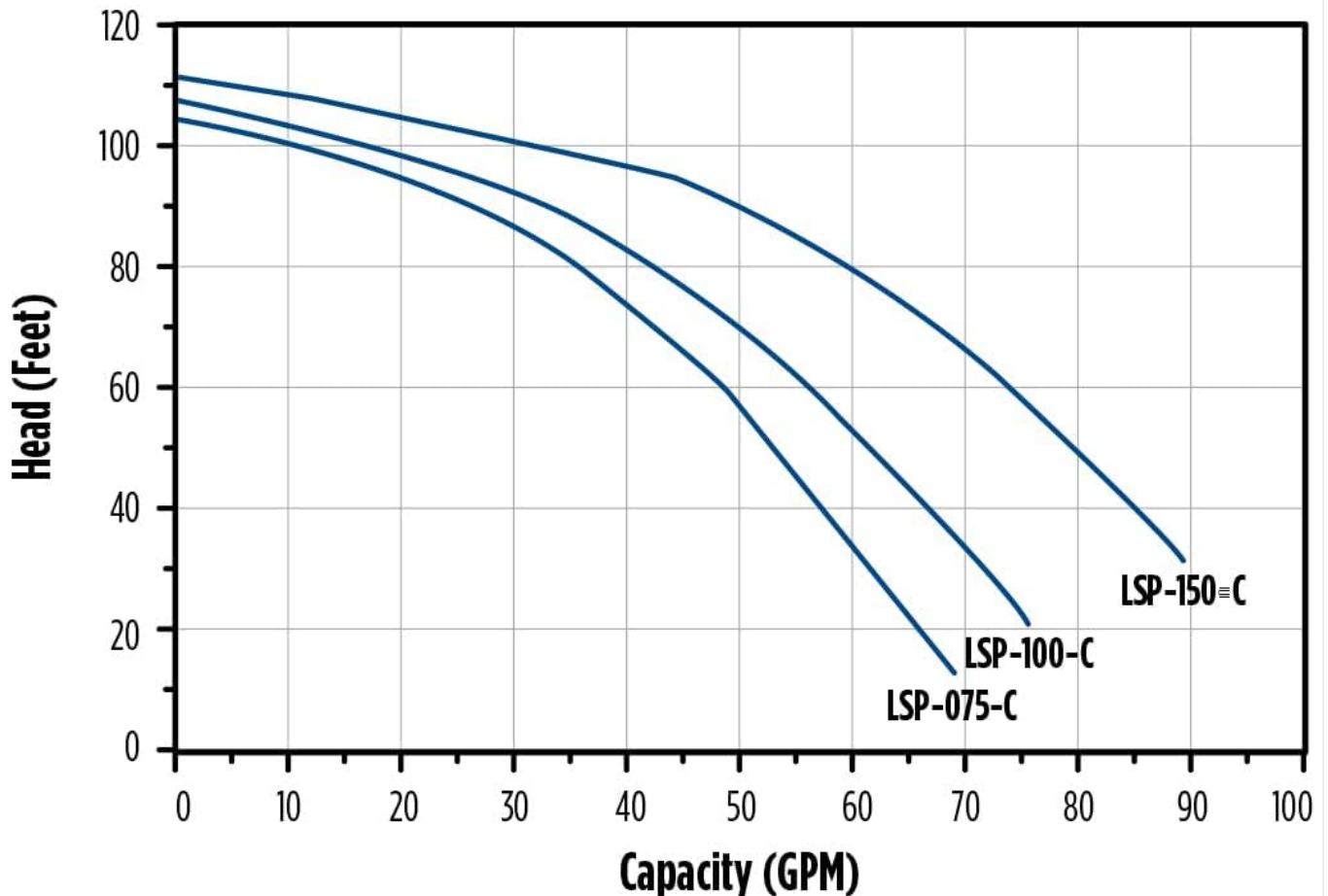


Figure 3: Typical installation diagram for a sprinkler/irrigation pump.

6. OPERATING INSTRUCTIONS

Once installed and primed, the pump is ready for operation.

1. Ensure all connections are secure and there are no visible leaks.
2. Confirm the water source is adequate and the suction line is fully submerged.
3. Turn on the power supply to the pump.
4. The pump should start and begin moving water. Monitor the system for proper flow and pressure.
5. If the pump runs but does not move water, turn it off immediately and re-check priming and suction line integrity.

6.1 Performance Data

The performance of the LSP-100-C pump varies with head (vertical lift) and capacity (flow rate). Refer to the performance curve below for expected output.

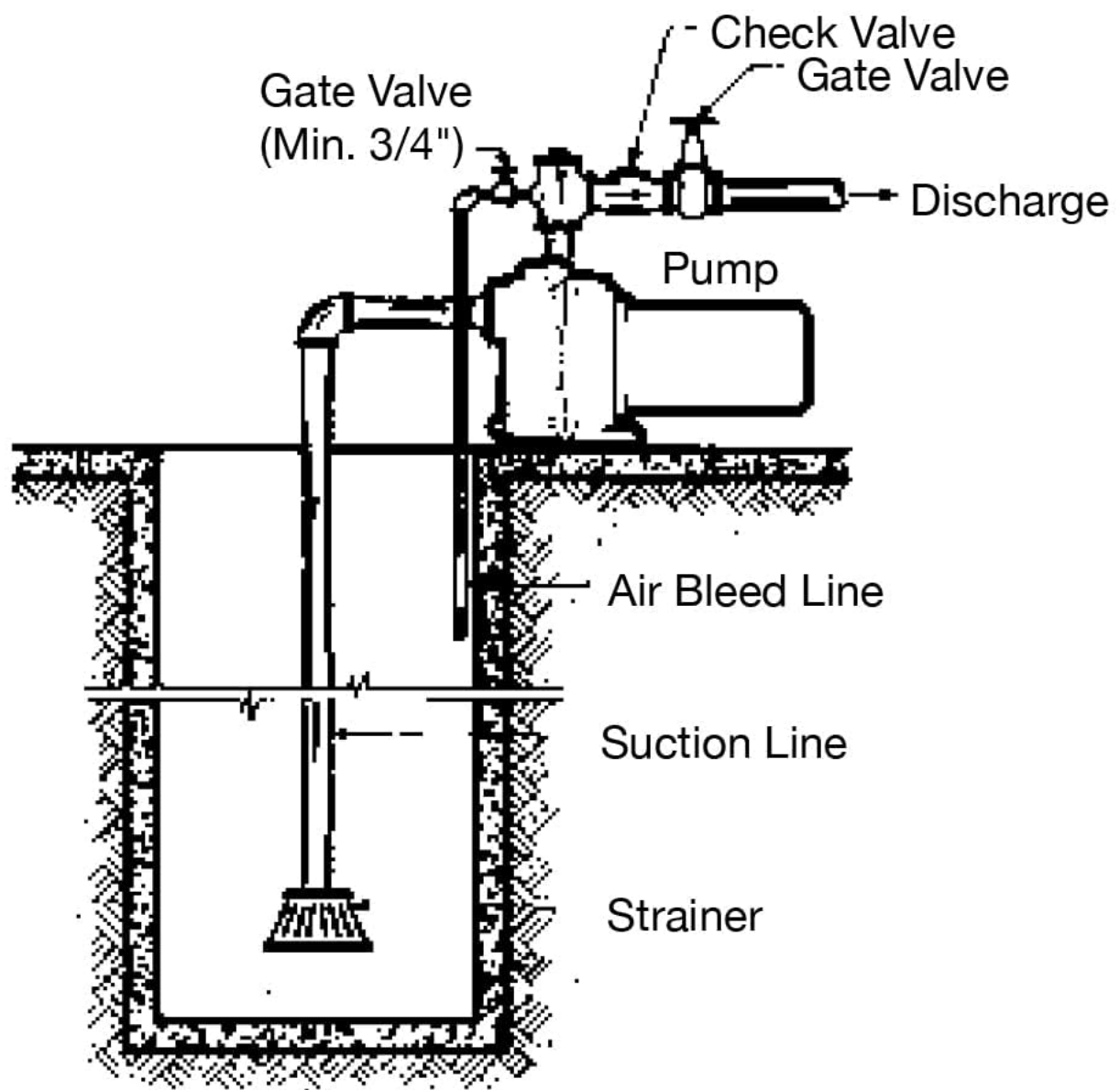


Figure 4: Performance data for LSP series pumps, including LSP-100-C.

6.2 Applications



Figure 5: Pump in a residential lawn sprinkler application.



Figure 6: Pump in a hydroponic system application.

7. MAINTENANCE

Regular maintenance ensures optimal performance and extends the life of your pump.

- **Inspect Connections:** Periodically check all plumbing and electrical connections for tightness and signs of wear or corrosion.
- **Clean Strainer:** If a strainer is used on the suction line, inspect and clean it regularly to prevent clogging and maintain flow.
- **Winterization:** In freezing climates, drain the pump and associated plumbing lines completely to prevent damage from ice expansion. Store the pump in a dry, warm location if possible.
- **Motor Inspection:** Ensure the motor's ventilation openings are clear of debris.

8. TROUBLESHOOTING

This section addresses common issues you might encounter with your pump. For more complex problems, contact customer

support.

Problem	Possible Cause	Solution
Pump runs but no water flows	Not properly primed; air leak in suction line; clogged suction line/strainer; insufficient water supply.	Re-prime the pump; check all suction line connections for leaks; clean strainer; ensure adequate water source.
Pump does not start	No power; incorrect voltage setting; motor overload; seized impeller.	Check power supply and circuit breaker; verify voltage setting matches supply; reset thermal overload; inspect impeller for obstructions.
Low flow or pressure	Partially clogged suction/discharge; air in system; worn impeller; excessive head.	Inspect and clear plumbing lines; re-prime; check for air leaks; consult performance curve for system limits.
Excessive noise or vibration	Cavitation (air in pump); loose mounting; foreign object in pump; worn bearings.	Ensure proper priming and no air leaks; tighten mounting bolts; inspect pump interior for debris; contact service for worn bearings.

9. PRODUCT VIDEO: LSP SERIES SPRINKLER PUMPS - FEATURES



Video 1: This video highlights the key features and benefits of the Little Giant LSP Series Sprinkler Pumps, including the LSP-100-C model. It provides a visual overview of the pump's design and intended applications.

10. WARRANTY AND SUPPORT

10.1 Warranty Information

The Little Giant LSP-100-C Sprinkler/Irrigation Pump comes with a **2-Year Manufacturer's Warranty**. This warranty covers defects in materials and workmanship under normal use and service. Please retain your proof of purchase for warranty claims.

10.2 Customer Support

For any questions regarding installation, troubleshooting, or general product inquiries, our staff is available to assist you. Please refer to the contact information provided with your purchase or visit the official Little Giant website for support resources.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

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After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

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