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Red Lion 97101001

Red Lion RL-SPRK100 Sprinkler Pump User Manual

Model: 97101001

1. PRODUCT OVERVIEW

The Red Lion RL-SPRK100 is a 1 HP sprinkler pump designed for residential and light commercial lawn and turf sprinkling systems. It features a rugged cast iron casing and a high-efficiency thermoplastic impeller and diffuser. This pump is engineered for reliable performance and ease of use.



Image 1.1: The Red Lion RL-SPRK100 Sprinkler Pump, showcasing its red cast iron housing.

Key Features:

- **Durable Construction:** Features a rugged cast iron pump housing and a glass-filled thermoplastic impeller, suitable for various water sources including well water and lake water.
- **Dual Voltage Motor:** Operates on either 115 Volts or 230 Volts. The pump is factory-set to 230 Volts but can be easily reconfigured to 115 Volts. It is crucial to match the pump's voltage setting to the power source voltage for proper operation.
- **Self-Priming Capability:** Requires only a one-time initial prime. No additional priming is necessary after the initial fill, simplifying setup.
- **High Performance:** Delivers up to 63 Gallons Per Minute (GPM) at 10 PSI and 38 GPM at 30 PSI. Capable of supporting up to 12 sprinkler heads with 1/2-inch fittings or 6 sprinkler heads with 3/4-inch fittings per zone.
- **Standard Connections:** Equipped with a 2-inch Female NPT threaded intake and a 1.5-inch Female NPT threaded discharge.

SPRK SERIES SPRINKLER PUMPS

FEATURES



Image 1.2: Diagram highlighting key features of the pump, including the 2-inch FNPT intake, 1-1/2-inch FNPT discharge, cast iron casing, capacitor start, and thermally protected motor.

2. SETUP AND INSTALLATION

Proper installation is essential for the safe and efficient operation of your Red Lion RL-SPRK100 Sprinkler Pump. Refer to the complete installation manual included with your pump for detailed instructions and safety warnings.

2.1 Voltage Configuration

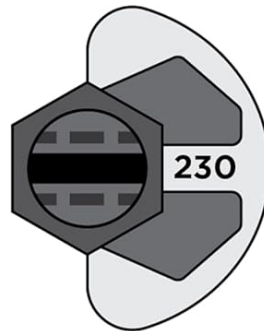
The pump motor is factory-set to 230 Volts. If your power supply is 115 Volts, you must adjust the motor's voltage setting before operation. Failure to match the pump's voltage to the source voltage will prevent the pump from performing to specifications and may cause damage.



Ensure the pump's voltage setting matches the power source voltage.

SET TO 230 V

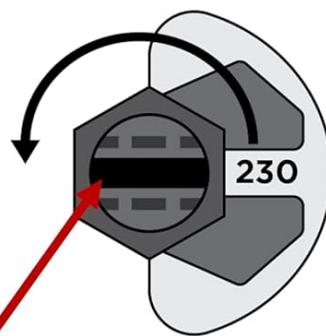
The motor is factory preset to 230-volt. The voltage indicator should show 230.



Set to 230 V

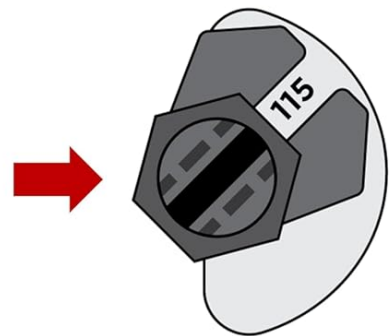
SET TO 115 V

Insert a flat screwdriver into the black voltage change indicator. Twist the indicator counterclockwise to switch to 115.



Insert flat
screwdriver here

Set to 230 V



Set to 115 V

Image 2.1: Instructions for setting the dual voltage motor. The pump is factory preset to 230V. To switch to 115V, insert a flat screwdriver into the black voltage change indicator and twist counter-clockwise.

2.2 Priming the Pump

The RL-SPRK100 is a self-priming pump, meaning it only requires an initial prime. After the initial fill, no additional priming is typically required. Follow these general steps for initial priming:

1. Ensure all plumbing connections are secure and leak-free.
2. Remove the priming plug (usually located on top of the pump casing).
3. Fill the pump casing completely with water until it overflows.
4. Replace and tighten the priming plug.
5. Open any discharge valves to allow air to escape the system.
6. Start the pump. It should begin pumping water within a few minutes. If not, turn off the pump, re-prime, and check for air leaks in the suction line.



SPRK SERIES SPRINKLER PUMPS

Self-priming up to 25' after initial prime.

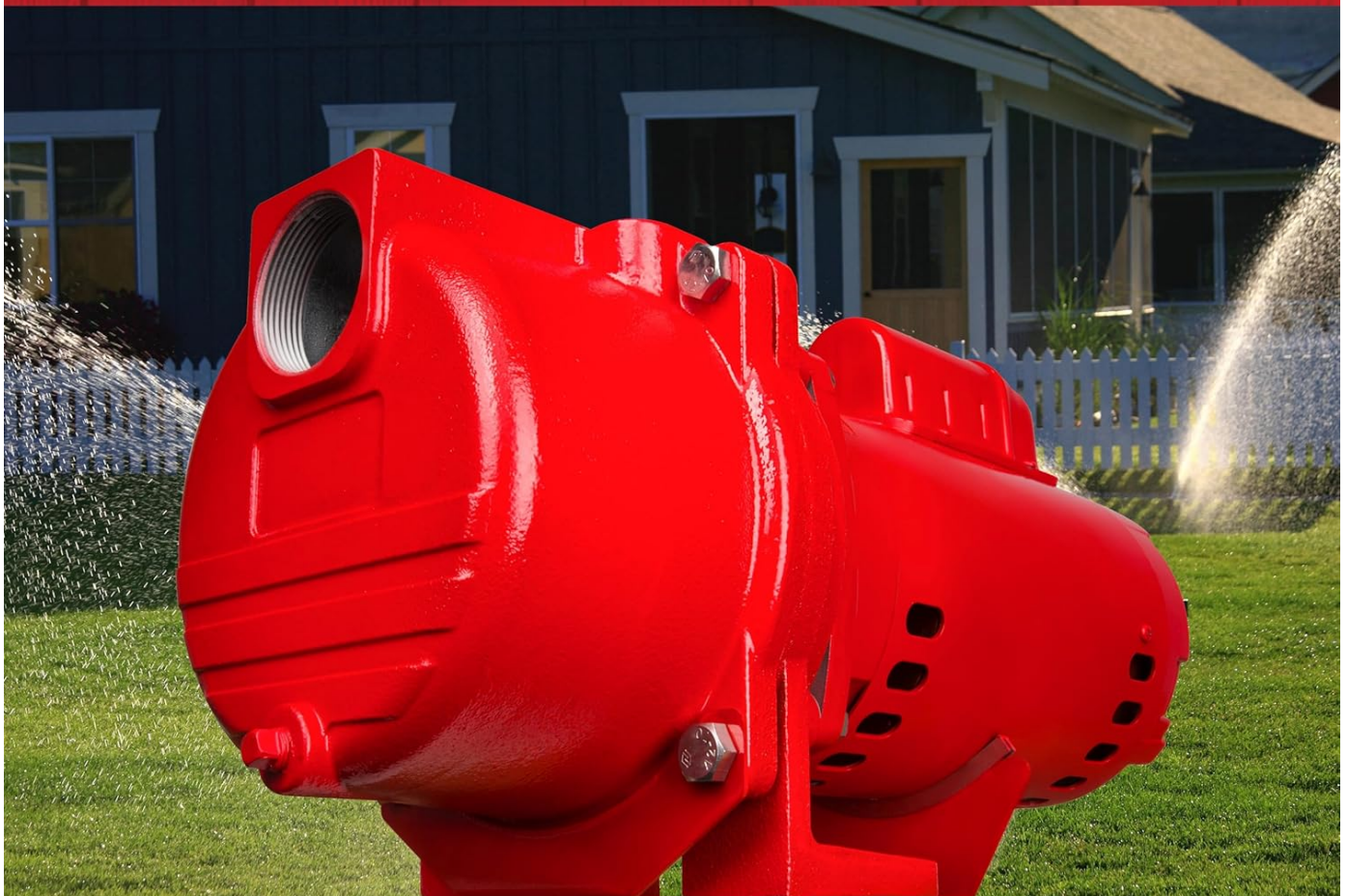


Image 2.2: The Red Lion Sprinkler Pump positioned in a lawn setting, illustrating its self-priming capability up to 25 feet after the initial prime.

3. OPERATING INSTRUCTIONS

Once properly installed and primed, the Red Lion RL-SPRK100 Sprinkler Pump is ready for operation. Ensure all

connections are tight and there are no obstructions in the intake or discharge lines.

3.1 Starting the Pump

Activate the power supply to the pump. The pump will begin to draw water and build pressure. Monitor the system for any unusual noises or leaks during initial startup.



SPRK SERIES SPRINKLER PUMPS

Draws water from wells, lakes ponds or ditches and is ideal for residential or light commercial use.



Image 3.1: The Red Lion Sprinkler Pump operating in a residential setting, drawing water from a well, lake, pond, or ditch for irrigation.

3.2 Performance Guidelines

The pump is designed to deliver consistent water flow and pressure for various sprinkler system configurations. Refer to the performance chart below for expected output based on dynamic head and flow rate.

RL-SPRK100 SPRINKLER PUMP

PERFORMANCE

HP	Volts	Amps	Watts	Intake	Discharge	Max. Pressure	Max. Flow
1	115/230	14 A @ 115 V 7 A @ 230 V	4848	2" FNPT	1-1/2" FNPT	45 PSI	63 GPM

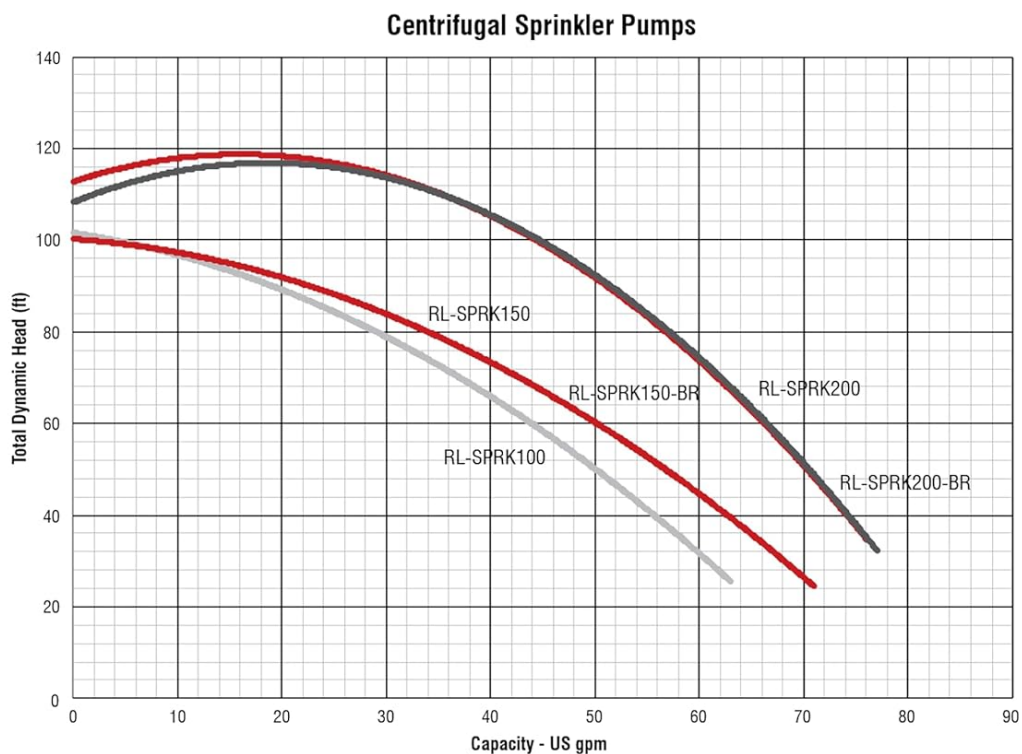


Image 3.2: Performance curve chart for Red Lion Centrifugal Sprinkler Pumps, including the RL-SPRK100, showing Total Dynamic Head (ft) versus Capacity (US gpm).

3.3 Shutting Down the Pump

To turn off the pump, deactivate the power supply. If the pump will be inactive for an extended period or during freezing temperatures, follow the maintenance guidelines for winterization.

4. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your Red Lion RL-SPRK100 Sprinkler Pump.

4.1 Routine Checks

- Inspect the pump and plumbing for leaks, especially at connections.
- Check for unusual noises or vibrations during operation, which may indicate a problem.

- Ensure the pump's ventilation openings are clear of debris to prevent overheating.

4.2 Winterization

In regions subject to freezing temperatures, it is crucial to properly winterize the pump to prevent damage:

1. Disconnect power to the pump.
2. Drain all water from the pump casing by removing the drain plug.
3. Disconnect the intake and discharge pipes and drain them thoroughly.
4. Store the pump in a dry, frost-free location if possible. If not, ensure all water is completely removed and consider using RV antifreeze in the pump casing if recommended by a professional.

5. TROUBLESHOOTING

This section provides general guidance for common issues. For complex problems, consult a qualified technician or contact Red Lion customer support.

5.1 Pump Does Not Start

- **No Power:** Check circuit breaker or fuse. Ensure power cord is securely plugged in.
- **Incorrect Voltage Setting:** Verify the pump's voltage setting matches the power supply (115V or 230V).
- **Motor Overload:** Allow the motor to cool down if the thermal overload protector has tripped. Check for obstructions in the impeller.

5.2 Pump Runs But Delivers No Water or Low Pressure

- **Loss of Prime:** Re-prime the pump as described in Section 2.2. Check for air leaks in the suction line or loose connections.
- **Clogged Intake/Impeller:** Inspect the intake screen and impeller for debris.
- **Low Water Source:** Ensure the water source level is adequate for the pump's suction lift capabilities.
- **Discharge Obstruction:** Check for closed valves or blockages in the discharge piping or sprinkler heads.

5.3 Excessive Noise or Vibration

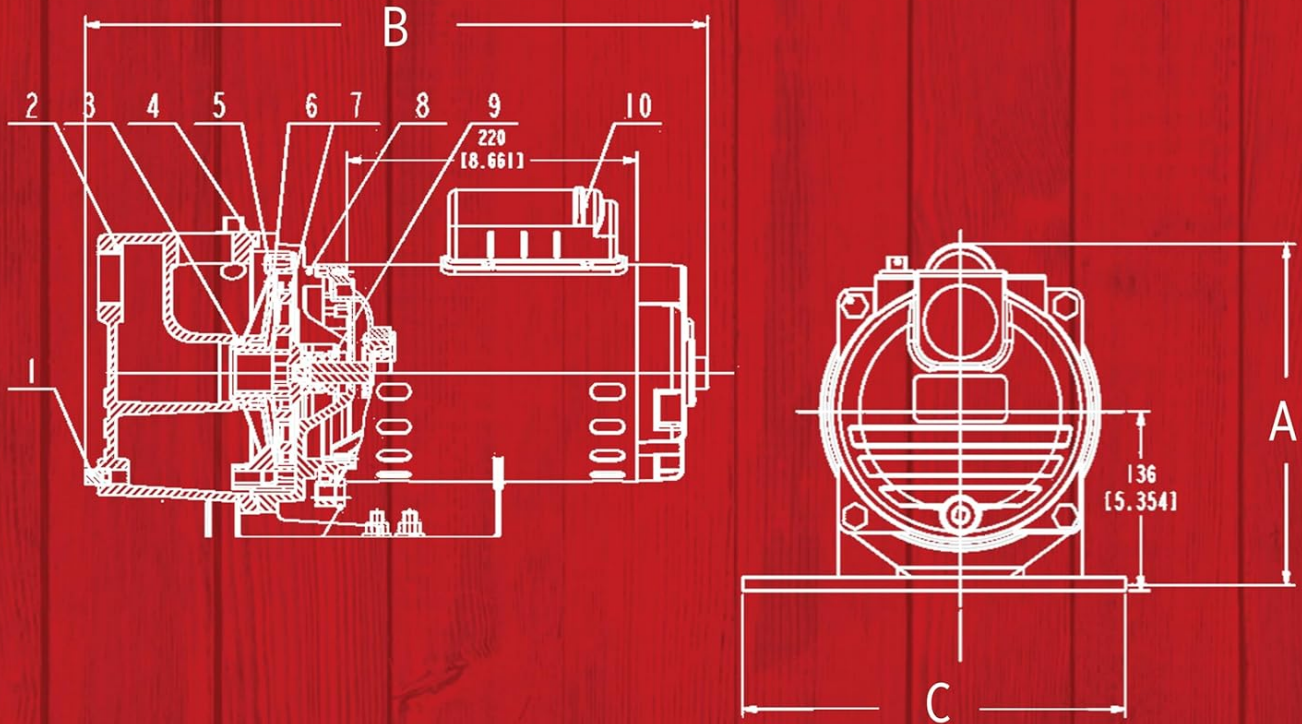
- **Air in System:** Ensure the pump is fully primed and there are no air leaks.
- **Loose Mounting:** Check that the pump is securely mounted to a stable surface.
- **Foreign Object:** Turn off power and inspect the impeller for any foreign objects.

6. SPECIFICATIONS

Detailed technical specifications for the Red Lion RL-SPRK100 Sprinkler Pump.

SPRK SERIES SPRINKLER PUMPS

DIMENSIONS



HEIGHT (A)	LENGTH (B)	WIDTH (C)
10.2"	21.85"	11.42"

Image 6.1: Technical drawing illustrating the dimensions of the SPRK Series Sprinkler Pumps, including height (A), length (B), and width (C).

Specification	Value
Brand	Red Lion
Model Number	97101001
Horsepower	1 HP
Voltage	115/230 Volts
Wattage	4848 watts
Maximum Flow Rate	63 Gallons Per Minute (GPM)
Maximum Pressure	45 PSI

Specification	Value
Maximum Lifting Height	25 Feet
Intake Thread Size	2-inch Female NPT
Discharge Thread Size	1.5-inch Female NPT
Material	Cast Iron, Thermoplastic
Product Dimensions (L x W x H)	21.85" x 11.42" x 10.2"
Item Weight	53 Pounds
Power Source	Corded Electric
Included Components	Pump with thermoplastic impeller
UPC	010121124868, 010121001398

7. WARRANTY AND SUPPORT

7.1 Manufacturer's Warranty

The Red Lion RL-SPRK100 Sprinkler Pump is covered by a **2-year manufacturer's warranty**. Please retain your proof of purchase for warranty claims. For specific terms and conditions, refer to the warranty information provided with your product packaging.

7.2 Technical Support


For technical assistance, troubleshooting guidance, or questions regarding your Red Lion product, please contact our support team:

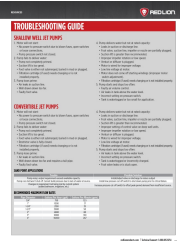




- **Technical Support Phone:** 1-888-885-9254

Our staff are available to assist with troubleshooting or installation assistance.

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Related Documents - 97101001

	<p>Red Lion RL-SPRK Series Sprinkler Pump Owner's Manual - Installation, Operation, Maintenance Guide</p> <p>This manual provides comprehensive instructions for the Red Lion RL-SPRK Series Sprinkler Pumps, covering installation, voltage settings, operation, maintenance, troubleshooting, and replacement parts. Designed for residential and commercial lawn and turf sprinkler systems.</p>
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	<p>Red Lion Pump Troubleshooting Guide: Solutions for Jet, Submersible, and Transfer Pumps</p> <p>Comprehensive troubleshooting guide for Red Lion water pumps, including Shallow Well Jet Pumps (e.g., RJS-50-PREM), Convertible Jet Pumps (e.g., RJC-50), 4" Submersible Well Pumps (e.g., RL12G10-3W2V), Submersible Utility & Sump Pumps, RL-S Cast Iron Surface Effluent Pumps, RL-50 Transfer Pumps, and RLSP/RLHE Sprinkler Pumps. Find solutions for common issues like motor failure, priming problems, low pressure, and more.</p>
	<p>Red Lion RLHE-300 Cast Iron Industrial Sprinkler Pump Owner's Manual</p> <p>Comprehensive owner's manual for the Red Lion RLHE-300 industrial sprinkler pump, covering installation, operation, maintenance, and troubleshooting. Features include heavy-duty iron casing, high-efficiency impeller, and automatic thermal protector.</p>
	<p>Red Lion CUB5 Miniature Electronic 8-Digit Dual Counter and Rate Indicator</p> <p>Detailed specifications, installation guide, and programming manual for the Red Lion CUB5 miniature electronic 8-digit dual counter and rate indicator. Features include selectable LCD or LED backlighting, optional relay and serial communication modules, and NEMA 4X/IP65 sealing.</p>
	<p>Red Lion RJSE-75SS Sprinkler Utility Pump - Operation and Maintenance Manual</p> <p>Comprehensive guide for the Red Lion RJSE-75SS Sprinkler Utility Pump, covering safety warnings, electrical precautions, application, installation, operation, maintenance, and troubleshooting. Includes detailed diagrams and warranty information.</p>
	<p>Red Lion RL-MP25A Utility Pump Owner's Manual and Specifications</p> <p>Comprehensive owner's manual for the Red Lion RL-MP25A Utility Pump, detailing specifications, safety instructions, installation, operation, maintenance, and troubleshooting. Includes flow rate charts and technical data.</p>