SaiFfe QB60

SaiFfe QB60 Self-Priming Centrifugal Water Pump User Manual

Models: QB60 (12V DC, 24V DC)

1. Introduction

Thank you for choosing the SaiFfe QB60 Self-Priming Centrifugal Water Pump. This manual provides essential information for the safe and efficient installation, operation, and maintenance of your pump. Please read these instructions thoroughly before use and retain them for future reference.

The QB60 pump is designed for various water transfer applications, featuring a self-priming capability, robust construction, and compatibility with 12V or 24V DC power sources, making it suitable for solar-powered systems and other DC applications.

Figure 1: SaiFfe QB60 Self-Priming Centrifugal Water Pump, front view. This image shows the overall design of the pump, including the motor housing and pump head.

2. Product Features

- **Cast Aluminum Pump Body:** Constructed from cast aluminum with an electrostatic spray paint finish for enhanced rust resistance.
- **All Copper Water Injection Cock:** Designed for easy and effective priming of the pump before operation.
- **Efficient Cooling Fan:** Provides robust heat dissipation to maintain optimal operating temperature and control noise levels.
- **All Copper Double-Face Impeller:** Engineered for strong suction capabilities and efficient water flow.
- **Copper Wire Motor:** Ensures stable and reliable operation with high efficiency.
- **Moisture and Rust Proof Rotor:** High-density rotor designed for durability and longevity in various environments.

3. Safety Instructions

Always adhere to the following safety guidelines to prevent injury and damage to the pump:

- **Electrical Safety:** Ensure the power supply matches the pump's voltage (12V DC or 24V DC). Incorrect voltage can cause severe damage or electrical shock. All electrical connections must be performed by a

qualified professional and comply with local electrical codes.

- **Grounding:** The pump must be properly grounded to prevent electrical hazards.
- **Water Only:** This pump is designed for pumping clean water. Do not use it for flammable, corrosive, or abrasive liquids.
- **Overheating:** Do not run the pump dry. Ensure the pump is always filled with water during operation to prevent overheating and damage.
- **Ventilation:** Ensure adequate ventilation around the pump to facilitate proper cooling.
- **Maintenance:** Disconnect power before performing any maintenance or inspection.
- **Children and Pets:** Keep children and pets away from the pump during operation.

4. Setup and Installation

4.1 Component Identification

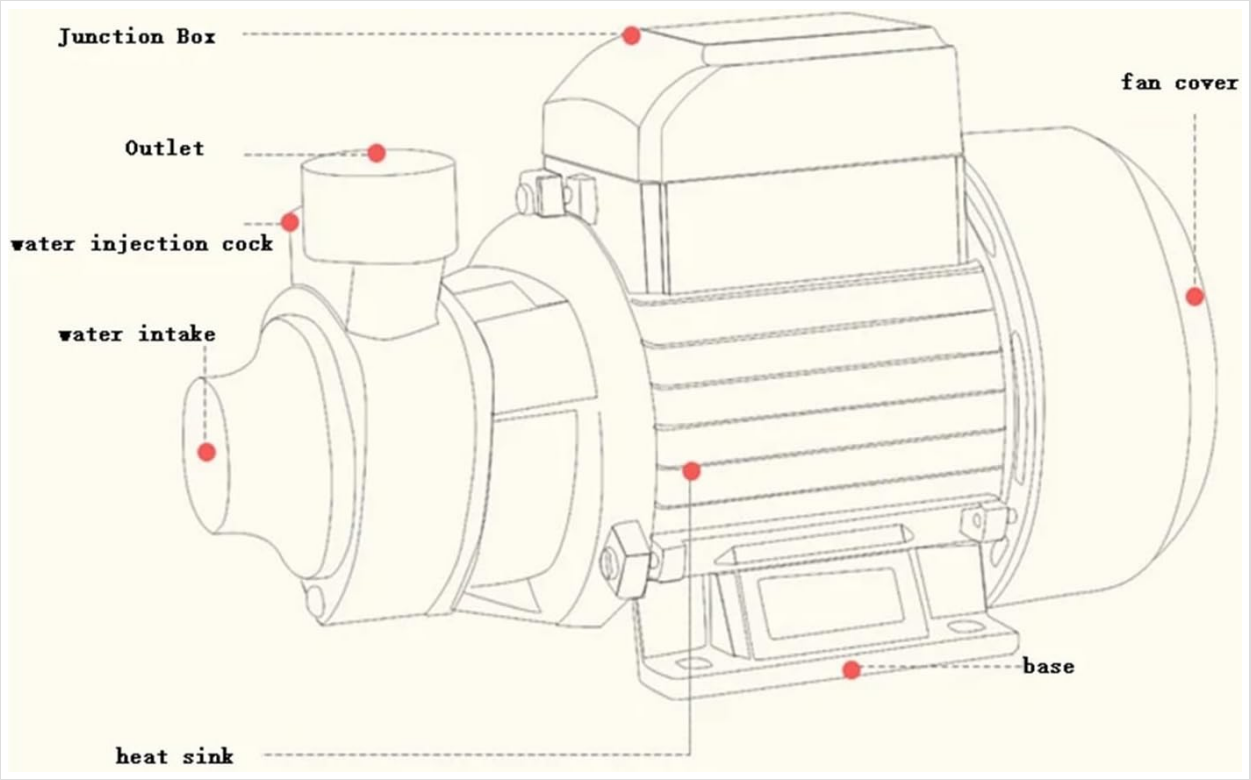

Figure 2: Diagram of SaiFfe QB60 pump components. This diagram labels key parts such as the junction box, outlet, water injection cock, water intake, heat sink, fan cover, and base, aiding in installation and maintenance.

4.2 Mounting the Pump

1. Select a stable, level, and dry location for the pump, protected from direct sunlight and extreme weather.
2. Ensure sufficient space around the pump for ventilation and maintenance access.
3. Secure the pump to the mounting surface using appropriate fasteners through the base holes to minimize vibration.

4.3 Plumbing Connections

1. Connect the suction pipe to the water intake port and the discharge pipe to the outlet port. Ensure all connections are airtight to prevent air leaks, which can affect priming and pump performance.
2. Use appropriate thread sealant on all pipe connections.
3. Install a foot valve with a strainer at the end of the suction pipe in the water source to prevent debris from

entering the pump and to maintain prime.

4.4 Electrical Connections

1. **WARNING:** Ensure the power source is disconnected before making any electrical connections.
2. Connect the pump to a DC power supply (12V or 24V, matching your pump model) using appropriately sized wiring.
3. Observe correct polarity: connect the positive (+) wire from the power source to the positive terminal on the pump, and the negative (-) wire to the negative terminal. Incorrect polarity will prevent the pump from operating or cause damage.
4. Ensure all connections are secure and protected from moisture.

4.5 Priming the Pump

The QB60 is a self-priming pump, but initial priming is crucial for proper operation.

1. Locate the water injection cock on the pump head (refer to Figure 2).
2. Unscrew the cap of the water injection cock.
3. Slowly fill the pump casing with clean water until it overflows from the injection cock.
4. Securely replace the cap of the water injection cock.
5. Ensure the discharge valve (if installed) is open to allow air to escape during priming.

Figure 3: SaiFfe QB60 Self-Priming Centrifugal Water Pump, side view showing motor and pump head. This view highlights the robust construction and the location of the water injection cock for priming.

5. Operating Instructions

5.1 Starting the Pump

1. After completing all installation steps and priming the pump, ensure all valves are in the correct position (suction valve open, discharge valve open).
2. Connect the pump to the appropriate DC power supply.
3. The pump should start immediately and begin drawing water. Listen for any unusual noises.
4. If the pump does not draw water within a few minutes, shut it off, re-check priming, and inspect for air leaks in the suction line.

5.2 Monitoring Operation

- Regularly check the pump for excessive vibration, noise, or overheating.
- Ensure a continuous supply of water to the suction side to prevent dry running.
- Monitor the discharge pressure and flow rate to ensure they meet your requirements.

5.3 Shutting Down the Pump

1. Disconnect the pump from its DC power supply.
2. If the pump will be out of use for an extended period, especially in freezing conditions, drain all water from the pump casing and pipes to prevent damage.

6. Maintenance

Regular maintenance ensures the longevity and optimal performance of your SaiFfe QB60 pump.

- **Cleaning:** Periodically clean the exterior of the pump to prevent dust and debris buildup, especially around the cooling fan.
- **Suction Strainer:** Regularly inspect and clean the foot valve strainer to ensure unrestricted water flow and prevent debris from entering the pump.
- **Connections:** Check all plumbing and electrical connections for tightness and signs of wear or corrosion.
- **Winterization:** In areas subject to freezing temperatures, completely drain the pump and associated piping to prevent ice damage. Store the pump in a warm, dry place if possible.
- **Impeller Inspection:** If performance degrades, the impeller may need inspection for wear or blockages. This typically requires professional service.

Figure 4: Close-up of the copper double-face impeller. This component is critical for the pump's suction and flow capabilities and should be kept free of debris.

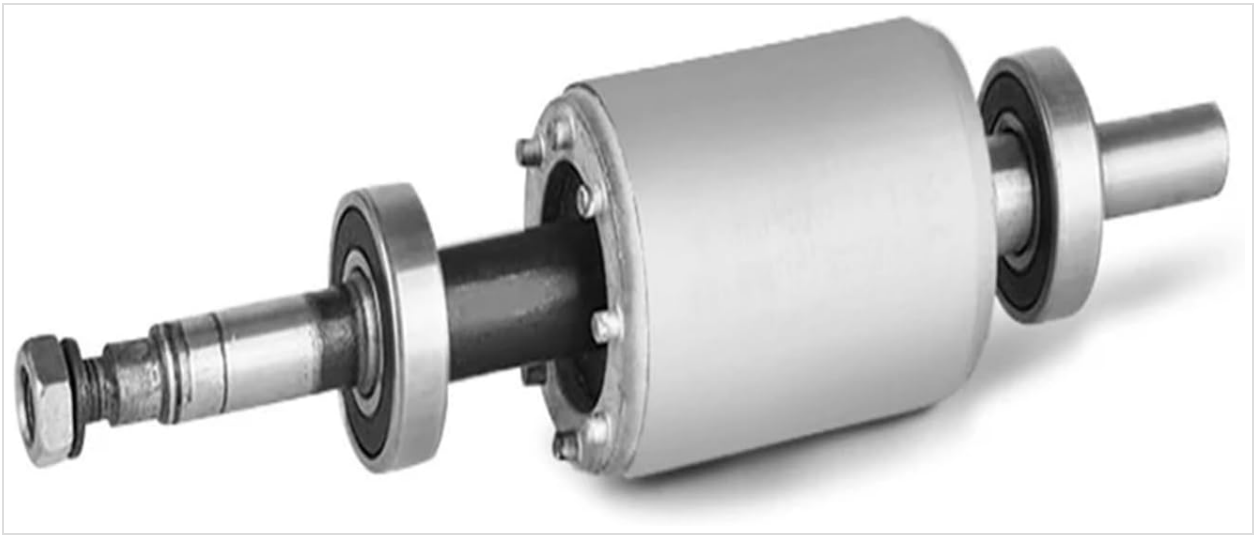

Figure 5: Internal view of the pump's high-density rotor and motor assembly. The rotor is designed to be moisture and rust-proof, contributing to the pump's durability.

7. Troubleshooting

Problem	Possible Cause	Solution
Pump does not start	No power supply Incorrect wiring/polarity Motor fault	Check power connection and fuse/breaker. Verify wiring and polarity (+/-). Contact qualified technician.
Pump runs but no water flow	Pump not primed Air leak in suction line Suction line blocked Foot valve/strainer clogged	Re-prime the pump (Section 4.5). Check all suction connections for tightness. Inspect and clear suction line. Clean foot valve strainer.
Low water flow or pressure	Partial blockage in suction/discharge Air in the system Worn impeller Insufficient power supply	Inspect and clear pipes/strainer. Check for leaks, re-prime. Contact service for impeller replacement. Verify power supply voltage and current.
Pump is noisy or vibrates excessively	Cavitation (air in pump) Loose mounting Bearing wear Debris in impeller	Check for air leaks, re-prime. Tighten mounting bolts. Contact service for bearing/impeller inspection.

8. Specifications

Feature	Detail
Model	QB60
Brand	SaiFfe
Power Source	DC 12V / DC 24V (model dependent)
Pump Type	Self-priming Centrifugal Water Pump
Pump Body Material	Cast Aluminum
Impeller Material	Copper
Motor Type	Copper Wire Motor
Item Weight	Approximately 8.82 pounds (4 kg)
Package Dimensions	Approximately 14.17 x 5.91 x 5.91 inches (36 x 15 x 15 cm)

Feature	Detail
Manufacturer	DISIROU

9. Warranty and Support

For warranty information, please refer to the terms and conditions provided at the time of purchase or contact your retailer. Keep your proof of purchase for any warranty claims.

If you encounter issues that cannot be resolved using the troubleshooting guide, or require technical assistance, please contact the seller or manufacturer's customer support. Provide your product model number (QB60) and a detailed description of the problem to facilitate efficient support.