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› 3 Hp Vertical Multi-stage Water Pump 220V 3Phase, 17.6 Gpm flow, 72 meter Head, shimge-USA BL(T)4-6-2.2

Shimge BL(T)4-6-2.2

Instruction Manual

SHIMGE BL(T)4-6-2.2 VERTICAL MULTI-STAGE WATER PUMP

Model: BL(T)4-6-2.2 | Brand: Shimge

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1. Product Overview





Figure 1: Shimge BL(T)4-6-2.2 Vertical Multi-stage Water Pump. This image displays the complete pump unit, highlighting its vertical orientation and robust construction, including the motor and pump body.

The Shimge BL(T)4-6-2.2 is a 3 HP vertical multi-stage centrifugal pump designed for continuous operation in various demanding applications. It is engineered to deliver high efficiency, low noise, and reliable, steady performance, making it suitable for pressure boosting, water distribution, and process water systems.

This pump features a non-self-priming vertical multi-stage structure, ensuring ease of installation, operation, and maintenance. Its robust construction includes a stainless steel impeller and a cast iron body, contributing to its durability and reliability in residential, commercial, and industrial environments.

2. Setup and Installation

Proper installation is crucial for the optimal performance and longevity of your Shimge BL(T)4-6-2.2 pump. Ensure all safety precautions are followed during installation.

2.1 Unpacking and Inspection

- Carefully remove the pump from its packaging.
- Inspect the pump for any visible damage that may have occurred during transit. Report any damage to your supplier immediately.
- Verify that all components listed in the packing list are present.

2.2 Mounting the Pump

- Select a stable, level, and well-ventilated location for installation. The pump weighs approximately 92-105 lbs, so ensure the mounting surface can support its weight.
- Secure the pump firmly to the mounting surface using appropriate bolts and anchors to prevent vibration during operation.

2.3 Plumbing Connections

- Connect the inlet and outlet pipes to the pump's flanges. The pump features Flange ANSI B16.5 Class 150 / 1-1/4" Pipe Size connections.
- Ensure all connections are sealed properly to prevent leaks. Use appropriate gaskets and sealants.
- Install isolation valves on both the suction and discharge sides of the pump for ease of maintenance.

2.4 Electrical Connections

- The pump requires a 220V/3Phase/60Hz power supply. Ensure the electrical supply matches the pump's requirements.
- All electrical wiring should be performed by a qualified electrician in accordance with local electrical codes.
- Connect the power cable (not included) to the motor terminals. The motor is a fully enclosed and ventilated two-pole standard motor with Protection class: IP55 and Insulation class: F.
- Ensure proper grounding to prevent electrical hazards.

3. Operating Instructions

Before starting the pump, ensure all installation steps have been completed and checked.

3.1 Pre-Start Checklist

- Confirm all plumbing connections are secure and leak-free.
- Ensure the pump is properly primed if required by your system design (this is a non-self-priming pump).
- Verify that the electrical connections are correct and secure.
- Check that the medium to be pumped is within the specified application limits.

3.2 Starting the Pump

- Open the suction and discharge valves fully.
- Energize the pump's power supply. The pump should start smoothly.
- Monitor the pump for any unusual noises or vibrations during the initial startup.

3.3 Performance Characteristics

The pump has a rated flow of 17.6 gpm (4 m³/hr) and a rated head of 72 meters. The flow range is 11 - 30.8 Gpm, and the head range is 78 - 54 meters. To determine the exact volume of fluid the pump can transfer at different

pressure levels (head), consult the performance curve specific to this pump model.

Performance Curve - BL(T) 4

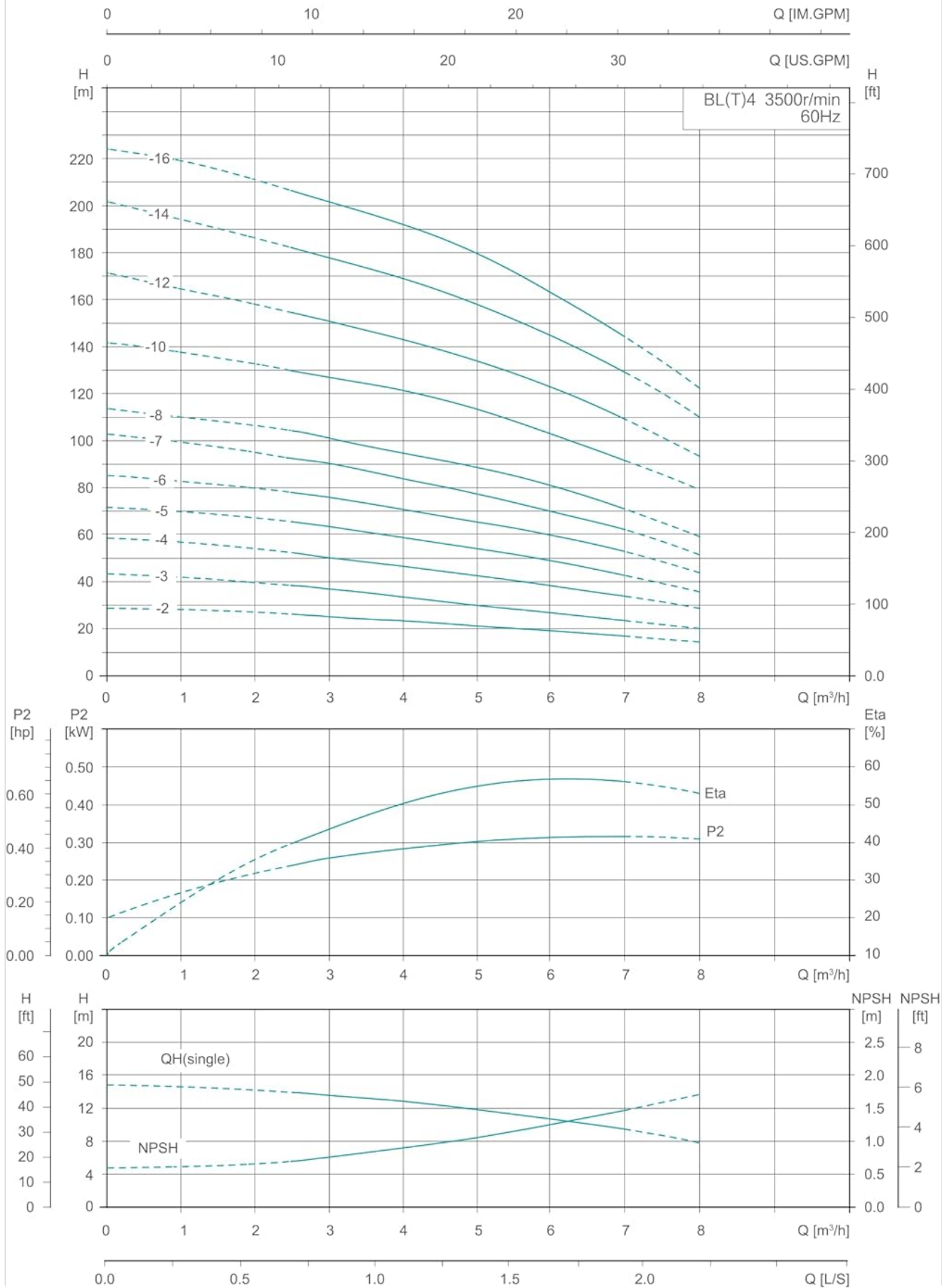


Figure 2: Performance Curve for Shimge BL(T)4-6-2.2 Pump. This graph illustrates the relationship between flow rate (Q), head (H),

power (P2), and efficiency (Eta) at different operating points for the BL(T)4 model at 3500 r/min and 60Hz.

3.4 Application Limits

- **Medium Temperature:** 36 °F to 155 °F (2 °C to 68 °C)
- **Ambient Temperature:** 5 °F to 104 °F (-15 °C to 40 °C)
- **Medium Density/Viscosity:** If the density or viscosity of the medium is higher than water, a more powerful pump may be required.
- **PH Value:** 5 to 9

3.5 Typical Applications

- Pressure boosting systems
- Water distribution from water works
- Pressure boosting in mines
- Pressure boosting in high-rise buildings
- Hotels and commercial establishments
- Process water systems
- Vehicle washing systems
- Firefighters systems (as part of a larger system)

4. Maintenance

Regular maintenance ensures the longevity and efficient operation of your Shimgo pump. Always disconnect power before performing any maintenance.

4.1 Routine Checks

- **Daily:** Check for any unusual noises, vibrations, or leaks.
- **Weekly/Monthly:** Inspect pipe connections for tightness. Ensure the pump's ventilation is not obstructed.
- **Annually:** Have a qualified technician inspect the motor bearings, seals, and impeller for wear.

4.2 Cleaning

- Keep the exterior of the pump clean and free from dust and debris to ensure proper heat dissipation.
- Do not use harsh chemicals that could damage the pump's finish or components.

4.3 Storage

- If the pump is to be stored for an extended period, drain all fluid from the pump and pipes to prevent freezing or corrosion.
- Store the pump in a dry, frost-free environment.

5. Troubleshooting

This section provides solutions to common issues you might encounter. For complex problems, contact qualified service personnel.

Problem	Possible Cause	Solution
Pump does not start	No power supply; tripped circuit breaker; motor fault.	Check power connection and circuit breaker. Consult an electrician if motor fault is suspected.
Low flow or no flow	Air in pump/pipes; clogged impeller/pipes; incorrect rotation direction (3-phase); insufficient water supply.	Prime the pump. Check for blockages. Verify motor wiring for correct rotation. Ensure adequate water source.
Excessive noise or vibration	Cavitation; loose mounting; worn bearings; foreign object in pump.	Check suction conditions. Secure mounting bolts. Inspect for worn parts or obstructions.
Pump leaks	Loose connections; damaged seals/gaskets.	Tighten connections. Replace worn seals or gaskets.

6. Technical Specifications

Parameter	Value
Model	BL(T)4-6-2.2
Voltage	220V/3Phase/60Hz
Power	2.2 Kw (3 Hp)
Current	8 Amps
RPM	3,450
Rated Flow	17.6 gpm (4 m ³ /hr)
Flow Range	11 - 30.8 Gpm
Rated Head	72 meters
Head Range	78 - 54 meters
In/Out Connections	Flange ANSI B16.5 Class 150 / 1-1/4" Pipe Size
Impeller Material	Stainless Steel
Motor Protection Class	IP55
Motor Insulation Class	F
Dimensions (LxWxH)	10 x 6.6 x 27 inches
Weight	92 - 105 lbs
Built-in Thermal Protection	Yes
Material	Cast Iron (Body)
Color	Black

7. Warranty Information

This Shimgé pump comes with a manufacturer's warranty. For specific details regarding the warranty period, coverage, and terms and conditions, please refer to the warranty card included with your product or contact Shimgé customer support directly.

Please retain your proof of purchase for any warranty claims.

8. Customer Support

Should you require technical assistance, spare parts, or have any questions regarding the operation or maintenance of your Shimge BL(T)4-6-2.2 pump, please contact Shimge customer support.

For the most up-to-date contact information, please visit the official Shimge website or refer to the documentation provided with your purchase.

When contacting support, please have your pump's model number (BL(T)4-6-2.2) and serial number (if applicable) ready to assist in faster service.