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› Shimge BL(T)8-3-2.2 Vertical Multi-stage Centrifugal Pump User Manual

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Model: BL(T)8-3-2.2 | Brand: Shimge

1. INTRODUCTION

This user manual provides essential information for the safe and efficient operation, installation, and maintenance of the Shimge BL(T)8-3-2.2 Vertical Multi-stage Centrifugal Pump. Please read this manual thoroughly before operating the pump to ensure proper function and to prevent damage or injury.

The Shimge BL(T)8-3-2.2 is a high-efficiency, low-noise, and reliable stainless steel multi-stage centrifugal pump designed for continuous operation in various demanding applications. It is a non-self-priming vertical multi-stage structure pump.

2. SAFETY INSTRUCTIONS

WARNING: Failure to follow these safety instructions could result in serious injury or death.

- Always disconnect power before performing any maintenance or service on the pump.
- Ensure the pump is properly grounded to prevent electrical shock.
- Do not operate the pump with damaged electrical cords or connections.
- Keep hands and loose clothing away from moving parts.
- Ensure the installation area is well-ventilated and free from flammable materials.
- The pump is designed for specific fluid temperatures (36 °F to 155 °F) and ambient temperatures (5 °F to 104 °F). Operating outside these limits may cause damage.
- Maintain a pH value of the medium between 5 and 9.
- If the density or viscosity of the medium is higher than water, a more powerful pump should be used.

3. PRODUCT OVERVIEW

The Shimge BL(T)8-3-2.2 pump is a robust and efficient solution for various water transfer and pressure boosting applications. Its design emphasizes durability and reliable performance.

3.1 Key Features

- **Power:** 3 HP (2.2 kW)
- **Voltage:** 220V, 3-Phase, 60Hz
- **Material:** Stainless steel impeller, Cast Iron body.
- **Protection Class:** IP55
- **Insulation Class:** F
- **Built-in Thermal Protection:** Yes
- **Connections:** Flange ANSI B16.5 Class 150 / 2" Pipe Size
- **Power Cable:** Not included (requires separate wiring)

3.2 Product Components





Figure 1: Overview of the Shimge BL(T)8-3-2.2 Vertical Multi-stage Centrifugal Pump. This image shows the main pump unit with its motor, pump head, and flange connections.

4. SETUP AND INSTALLATION

Proper installation is crucial for the pump's performance and longevity. It is recommended that installation be performed by a qualified professional.

4.1 Pre-Installation Checklist

- Verify power supply matches pump requirements (220V, 3-Phase, 60Hz).
- Ensure adequate space for installation, maintenance, and ventilation.
- Confirm pipe connections (2" Pipe Size, Flange ANSI B16.5 Class 150) are compatible.
- Prepare a stable, level foundation capable of supporting the pump's weight (approx. 112 lbs / 50.8 kg).

4.2 Installation Steps

1. **Mounting:** Securely bolt the pump to the prepared foundation, ensuring it is level to prevent vibration and stress on connections.
2. **Piping:** Connect the inlet and outlet pipes to the pump's flanges. Use appropriate gaskets and ensure connections are leak-free. Avoid putting strain on the pump body from misaligned pipes.
3. **Electrical Wiring:** Connect the pump to the 220V, 3-Phase power supply. Ensure all wiring complies with local electrical codes. Note that a power cable is not included with the pump and must be sourced separately. The pump has built-in thermal protection.
4. **Priming:** As this is a non-self-priming pump, ensure the pump and suction line are completely filled with the liquid to be pumped before starting.

5. OPERATING INSTRUCTIONS

Follow these steps for safe and effective operation of your Shimge pump.

5.1 Starting the Pump

1. Ensure the pump is properly primed (filled with liquid).
2. Open any necessary valves on the suction and discharge lines.
3. Turn on the power supply to the pump. The pump should start smoothly.
4. Monitor the pump for unusual noises or vibrations during the initial startup.

5.2 Performance Characteristics

The pump's performance varies with flow rate and head. Refer to the performance curve for detailed operational parameters.

Performance Curve - BL(T) 8

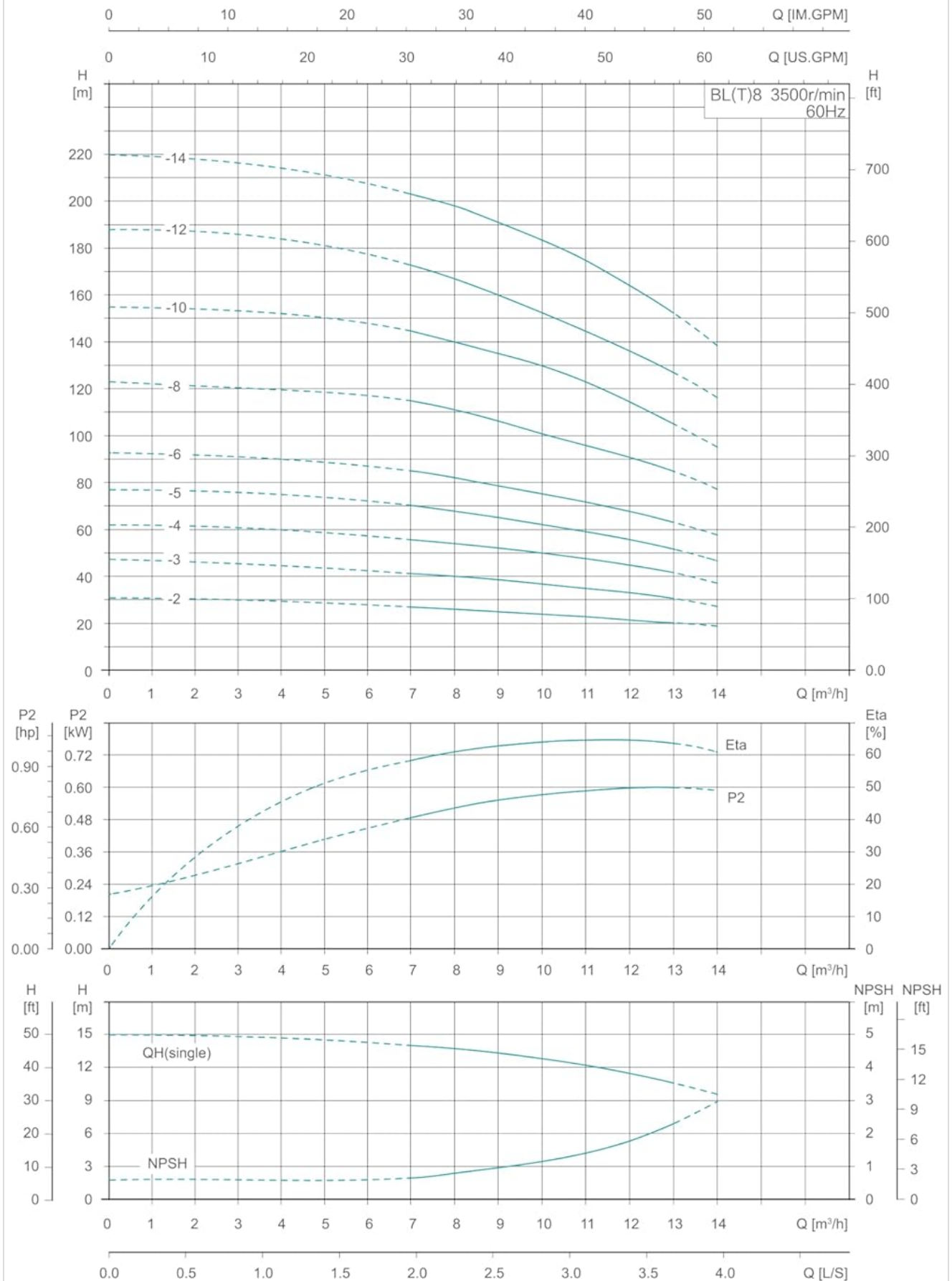


Figure 2: Performance Curve for the Shimge BL(T)8-3-2.2 Pump. This graph illustrates the relationship between flow rate (Q), head (H), power (P2), and efficiency (Eta) at 3500 RPM and 60Hz, crucial for understanding pump operation under various conditions.

Rated Flow: 35.2 gpm (8 m³/hr)

Flow Range: 30.8 - 57.2 Gpm

Rated Head: 40 meters

Head Range: 41 - 30 meters

5.3 Shutting Down the Pump

1. Turn off the power supply to the pump.
2. Close any necessary valves on the suction and discharge lines.

6. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your pump. Always disconnect power before maintenance.

6.1 Routine Checks

- **Daily:** Check for any leaks around seals and connections. Listen for unusual noises or vibrations.
- **Weekly:** Inspect electrical connections for signs of wear or corrosion. Ensure ventilation openings are clear.
- **Monthly:** Verify mounting bolts are secure. Check the condition of the power cable.

6.2 Cleaning

Keep the exterior of the pump clean to prevent dust and debris buildup, which can affect cooling.

6.3 Long-Term Storage

If the pump will be out of service for an extended period, drain all liquid from the pump and pipes. Store in a dry, protected environment.

7. TROUBLESHOOTING

This section provides solutions to common issues. For problems not listed here, contact qualified service personnel.

Problem	Possible Cause	Solution
Pump does not start	No power; tripped circuit breaker; motor overload; wiring issue.	Check power supply; reset breaker; allow motor to cool; inspect wiring.
Low flow or no flow	Pump not primed; clogged suction line/filter; air in system; incorrect rotation.	Prime pump; clear obstruction; bleed air; check motor rotation (for 3-phase).
Excessive noise or vibration	Cavitation; loose mounting; worn bearings; foreign object in pump.	Ensure adequate suction pressure; tighten mounting bolts; contact service; inspect impeller.
Pump leaks	Loose connections; damaged seals/gaskets.	Tighten connections; replace seals/gaskets.

8. TECHNICAL SPECIFICATIONS

Parameter	Value
Model	BL(T)8-3-2.2
Brand	Shimge
Power	2.2 kW (3 HP)
Voltage	220V, 3-Phase, 60Hz
Current	8 Amps
RPM	3,450
Rated Flow	35.2 gpm (8 m ³ /hr)
Flow Range	30.8 - 57.2 Gpm
Rated Head	40 meters
Head Range	41 - 30 meters
In/Out Connections	Flange ANSI B16.5 Class 150 / 2" Pipe Size
Impeller Material	Stainless Steel
Body Material	Cast Iron
Built-in Thermal Protection	Yes
Protection Class	IP55
Insulation Class	F
Dimensions (LxWxH)	11 x 6.6 x 27.2 inches (27.9 x 16.8 x 69.1 cm)
Weight	112 lbs (50.8 kg)
Medium Temperature Range	36 °F to 155 °F (2 °C to 68 °C)
Ambient Temperature Range	5 °F to 104 °F (-15 °C to 40 °C)
PH Value of Medium	5 to 9
UPC	792105746982

8.1 Applications

- Pressure boosting
- Distribution from water works
- Pressure boosting in mines
- Pressure boosting in high-rise buildings
- Hotels
- Process water systems
- Vehicle washing systems
- Firefighters systems

9. WARRANTY INFORMATION

The product description mentions "WARRANTY!". For specific warranty terms and conditions, please refer to the documentation included with your purchase or contact Shimge customer support directly. Typically, warranties cover defects in materials and workmanship under normal use.

10. CUSTOMER SUPPORT

For technical assistance, spare parts, or service inquiries, please contact Shimge customer support. Refer to the product packaging or the official Shimge website for the most current contact information.

Shimge Official Website: www.shimge.com