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› [Grundfos](#) /

› [Grundfos MQ3-45 Water Pressure Booster Pump User Manual](#)

Grundfos 96860207

Grundfos MQ3-45 Water Pressure Booster Pump User Manual

Model: 96860207

1. INTRODUCTION

The Grundfos MQ3-45 Water Pressure Booster Pump is a compact, all-in-one pressure boosting unit designed for domestic water supply and various boosting or lift applications. This reliable and easy-to-install pump is ideal for pressure boosting from water storage tanks or city water supply (with a maximum 45 psi inlet pressure).

It is a self-priming multistage centrifugal pump capable of self-priming from a well depth of up to 26 feet within a maximum of 5 minutes. Key features include dry-running protection with automatic reset, a user-friendly control panel, a built-in pressure tank and switch, and low noise operation. The anti-cycling feature prevents the pump from frequently starting and stopping due to minor leaks or dripping taps. This pump is suitable for pressure boosting and shallow well applications in private homes, vacation homes, farms, greenhouses, and marinas.

2. SAFETY INFORMATION

Please read all safety instructions carefully before installation, operation, or maintenance of the Grundfos MQ3-45 pump. Failure to follow these instructions could result in serious injury, death, or property damage.

- **Electrical Safety:** Ensure the pump is connected to a properly grounded electrical supply. Disconnect power before performing any service or maintenance. All electrical work must be performed by a qualified electrician in accordance with local codes and regulations. The pump operates on 240 Volts.
- **Water Safety:** Do not operate the pump with flammable or explosive liquids. Ensure proper ventilation around the pump to prevent overheating. Protect the pump from freezing temperatures.
- **Installation:** Install the pump in a dry, well-ventilated area, protected from direct sunlight and extreme temperatures. Ensure all pipe connections are secure and leak-free.
- **Operation:** Do not run the pump dry for extended periods without the dry-running protection engaging. The pump is designed for clean water applications.
- **Maintenance:** Only use genuine Grundfos replacement parts. Refer to the maintenance section for routine checks.

3. PRODUCT OVERVIEW

The Grundfos MQ3-45 is an integrated unit consisting of a pump, motor, pressure tank, and control unit, all designed for optimal performance and ease of use.

3.1 Key Features

- **Voltage:** 230 Volts with 1 Horse Power.
- **All-in-one Unit:** Compact design integrating pump, motor, pressure tank, and control.
- **Ease of Use:** Easy to install and operate with a user-friendly control panel.
- **Self-Priming:** Capable of self-priming from a well depth of up to 26 feet within 5 minutes.
- **Protection:** Features dry-running protection with automatic reset.
- **Noise Level:** Designed for low noise operation.
- **Connections:** Flexible discharge connection for versatile installation.
- **Anti-Cycling:** Prevents frequent starts/stops due to minor leaks.

3.2 Product Images



Figure 3.1: Front-side view of the Grundfos MQ3-45 Water Pressure Booster Pump, showcasing its compact design and integrated components.



Figure 3.2: Angled view of the Grundfos MQ3-45 pump, highlighting the motor housing and connection points.



Figure 3.3: Dimensions of the Grundfos MQ3-45 pump, indicating approximate measurements of 12\"L x 12\"W x 12\"H for installation planning.

4. SETUP AND INSTALLATION

The Grundfos MQ3-45 is designed for straightforward installation. However, professional installation by a qualified plumber or electrician is recommended to ensure proper function and adherence to local codes.

4.1 Pre-Installation Checklist

- Verify power supply matches pump requirements (240 Volts).
- Select a suitable installation location: dry, well-ventilated, protected from frost and direct sunlight.
- Ensure adequate space for maintenance and ventilation around the pump.
- Gather necessary tools and plumbing fittings.

4.2 Installation Steps

1. **Mounting:** Securely mount the pump on a stable, level surface to minimize vibration and noise.
2. **Pipe Connections:** Connect the inlet and outlet pipes. Ensure all connections are watertight using appropriate sealants and fittings. The pump has flexible discharge connection options.
3. **Electrical Connection:** Connect the pump to the dedicated 240V electrical supply. Ensure proper grounding. This step must be performed by a qualified electrician.
4. **Priming (if necessary):** Although self-priming, ensure the pump is filled with water before initial startup, especially if drawing from a well. The pump can self-prime from depths up to 26 feet.
5. **Leak Check:** After all connections are made, slowly open the water supply and check for any leaks.

5. OPERATING INSTRUCTIONS

The Grundfos MQ3-45 is designed for automatic operation once properly installed and powered.

5.1 Initial Startup

1. Ensure all valves are open and water supply is available.
2. Turn on the electrical power to the pump.
3. The pump's user-friendly control panel will indicate its status. The pump will automatically start and prime itself if necessary.
4. Allow the pump to run until a steady flow of water is achieved and all air is purged from the system.

5.2 Normal Operation

- The pump will automatically start when water is drawn (e.g., opening a tap) and stop when water flow ceases.
- The built-in pressure tank and switch maintain consistent water pressure.
- The anti-cycling feature prevents the pump from short-cycling due to minor leaks, ensuring longer pump life.
- The dry-running protection system will automatically shut off the pump if water supply is interrupted, preventing damage. It will attempt to reset automatically once water supply is restored.

6. MAINTENANCE

Regular maintenance ensures the longevity and efficient operation of your Grundfos MQ3-45 pump.

- **Annual Inspection:** Annually inspect the pump for any signs of leaks, corrosion, or unusual wear. Check all electrical connections for tightness.
- **Cleanliness:** Keep the area around the pump clean and free of debris to ensure proper ventilation.
- **Winterization (if applicable):** If the pump is installed in an area subject to freezing temperatures, ensure it is properly drained or protected from frost during winter months to prevent damage.
- **Professional Service:** For any complex issues or internal component checks, it is recommended to contact a qualified Grundfos service technician.

7. TROUBLESHOOTING

This section provides solutions to common issues you might encounter with your Grundfos MQ3-45 pump. For problems not listed here, contact customer support.

Problem	Possible Cause	Solution
Pump does not start.	No power supply; tripped circuit breaker; dry-running protection activated.	Check power connection and circuit breaker. Ensure water supply is available; the pump has automatic reset for dry-running.
Pump runs continuously or frequently cycles.	Leak in the system; faulty check valve; anti-cycling feature not functioning.	Check for leaks in plumbing. Inspect or replace check valve. If anti-cycling is suspected, consult a technician.
Low water pressure.	Insufficient water supply; clogged filter; air in the system; pump wear.	Verify adequate water supply. Clean any filters. Bleed air from the system. If persistent, professional inspection may be needed.
Pump is noisy.	Air in the system; cavitation; loose mounting; foreign object.	Bleed air from the system. Ensure proper water flow to prevent cavitation. Check mounting bolts. Inspect for debris.
Pump overheats and shuts off.	Lack of ventilation; prolonged dry running; motor overload.	Ensure adequate ventilation around the pump. Verify continuous water supply. If motor overload is suspected, consult a qualified electrician.

8. SPECIFICATIONS

Detailed technical specifications for the Grundfos MQ3-45 Water Pressure Booster Pump.

Specification	Value
Brand	Grundfos
Model Number	96860207
Voltage	240 Volts
Horsepower	1 HP
Wattage	716 watts
Maximum Flow Rate	22 Gallons Per Minute
Item Weight	32.7 Pounds
Product Dimensions (L x W x H)	12"L x 12"W x 12"H
Material	Plastic, steel, brass
Power Source	Hydraulic-powered
Style	Pressure
Color	Black

9. WARRANTY AND SUPPORT

For warranty information, technical support, or to locate an authorized service center, please contact Grundfos customer service directly. Keep your purchase receipt and product model number (96860207) readily available when contacting support.

Note: Warranty terms and conditions may vary by region and retailer. Always refer to the official Grundfos warranty documentation provided with your product.