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## Leeson 102861.00

# Leeson Electric 102861.00 General Purpose Motor Instruction Manual

Model: 102861.00

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## 1. PRODUCT OVERVIEW

The Leeson Electric Model 102861.00 is a general purpose motor designed for various industrial applications. This motor features a .5 horsepower (HP) rating, operates at 1725 revolutions per minute (RPM), and is a 3-phase unit compatible with 208V, 230V, and 460V power supplies. It is built with an S56C frame, includes a C-Face flange for mounting, and is footless, making it suitable for direct mounting applications. The Totally Enclosed Non-Ventilated (TENV) design provides protection against dust and moisture, ensuring durability in demanding environments.



*Figure 1: Leeson Electric Model 102861.00 General Purpose Motor. This image shows the motor from a slightly elevated side angle, highlighting its grey casing, the Leeson brand label, the electrical connection box on the side, and the output shaft with its C-Face flange.*

## 2. SAFETY INFORMATION

Read and understand all instructions before installing, operating, or maintaining this motor. Failure to follow these instructions may result in serious injury or property damage.

## 2.1 General Safety Precautions

- **Electrical Hazard:** Always disconnect power before working on the motor or connected equipment. Lock out and tag out circuits to prevent accidental energization.
- **Rotating Parts:** Keep hands, tools, and clothing clear of rotating parts. Ensure all guards are in place before operation.
- **Hot Surfaces:** Motors can become hot during operation. Allow sufficient time for cooling before handling.
- **Proper Grounding:** Ensure the motor is properly grounded according to local and national electrical codes.
- **Qualified Personnel:** Installation, wiring, and maintenance should only be performed by qualified and authorized personnel.
- **Environmental Conditions:** Do not operate the motor in environments exceeding its specified temperature, humidity, or hazardous location ratings.

## 3. SETUP AND INSTALLATION

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Proper installation is crucial for the safe and efficient operation of the motor.

### 3.1 Mounting

- This motor features a C-Face flange and is footless. It is designed for direct mounting to equipment or gearboxes.
- Ensure the mounting surface is flat, rigid, and capable of supporting the motor's weight and operational forces.
- Use appropriate bolts and torque specifications to secure the motor firmly to the mating equipment.
- Verify proper shaft alignment to prevent excessive vibration and premature bearing wear.

### 3.2 Electrical Connections

- Refer to the motor's nameplate and wiring diagram (typically located inside the terminal box cover) for correct voltage and phase connections.
- Ensure the power supply matches the motor's voltage rating (208V, 230V, or 460V, 3-phase).
- Use appropriately sized wiring and circuit protection (fuses or circuit breakers) as per national and local electrical codes.
- All connections must be tight and secure to prevent arcing and overheating.
- Connect the motor to a reliable earth ground.

## 4. OPERATING INSTRUCTIONS

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Once installed and wired correctly, the motor is ready for operation.

### 4.1 Pre-Operation Check

- Verify all electrical connections are secure and insulated.
- Confirm proper grounding.
- Ensure no obstructions are present around the motor or its shaft.
- Check that all safety guards are in place.

### 4.2 Starting the Motor

- Apply power to the motor circuit.
- Observe the motor for any unusual noises, vibrations, or excessive heat during the initial startup.

- If any abnormalities are detected, immediately disconnect power and investigate the cause.

### 4.3 Stopping the Motor

- Disconnect power to the motor circuit.
- Allow the motor to come to a complete stop before performing any work or inspection.

## 5. MAINTENANCE

Regular maintenance helps ensure the longevity and reliable performance of your Leeson motor.

### 5.1 Routine Checks

- **Periodically:** Inspect the motor for any signs of physical damage, corrosion, or loose connections.
- **Vibration:** Monitor for unusual vibrations, which may indicate misalignment or bearing issues.
- **Temperature:** Check the motor's operating temperature. Excessive heat can indicate overload or ventilation issues (though TENV motors are designed for non-ventilated operation, internal heat buildup can still occur).
- **Noise:** Listen for abnormal noises, such as grinding or squealing, which may suggest bearing wear.

### 5.2 Cleaning

- Keep the exterior of the motor clean and free of dust, dirt, and debris.
- For TENV motors, external cleanliness is important for heat dissipation through the motor frame.
- Use a dry cloth or soft brush for cleaning. Avoid using solvents that may damage the motor's finish or insulation.

### 5.3 Lubrication

Refer to the motor's nameplate or specific Leeson documentation for lubrication requirements. Many modern motors, especially smaller ones, come with sealed bearings that do not require re-lubrication.

## 6. TROUBLESHOOTING

This section provides guidance for common issues. For complex problems, contact a qualified technician or Leeson Electric support.

Problem	Possible Cause	Solution
Motor does not start	No power supply Incorrect wiring Overload protection tripped Motor winding fault	Check power source and circuit breaker/fuses Verify wiring against diagram Reset overload, check for mechanical binding Consult qualified technician
Motor runs hot	Overload Low voltage High ambient temperature Restricted ventilation (if applicable, less common for TENV)	Reduce load Check supply voltage Ensure adequate cooling space Clean motor exterior

Problem	Possible Cause	Solution
Excessive noise or vibration	Misalignment Loose mounting bolts Worn bearings Unbalanced load	Check and correct alignment Tighten mounting bolts Replace bearings (qualified technician) Balance the driven equipment

## 7. SPECIFICATIONS

Key technical specifications for the Leeson Electric Model 102861.00 motor:

**Model Number:** 102861.00

**Horsepower (HP):** 0.5 HP

**RPM:** 1725 RPM

**Phase:** 3 Phase (3PH)

**Voltage:** 208V / 230V / 460V

**Frame Size:** S56C

**Mounting:** C-Face Flange, Footless

**Enclosure:** TENV (Totally Enclosed Non-Ventilated)

**Type:** General Purpose Motor

**Item Weight:** 23 Pounds

**Manufacturer:** Leeson Electric

## 8. WARRANTY AND SUPPORT

For specific warranty information regarding your Leeson Electric motor, please refer to the documentation provided at the time of purchase or contact Leeson Electric directly. As an authorized distributor, Leeson Electric products typically come with a manufacturer's warranty covering defects in materials and workmanship.

### 8.1 Customer Support

If you require technical assistance, have questions about installation, operation, or maintenance, or need to inquire about warranty service, please contact Leeson Electric customer support or your authorized Leeson distributor.

**Leeson Electric Official Website:** [www.leeson.com](http://www.leeson.com) (for general information and contact details)

**Authorized Distributor:** Refer to your purchase invoice or packaging for distributor contact information.