Teco EP0256

Teco EP0256 AC Electric Induction Motor User Manual

Model: EP0256

1. Introduction

This manual provides essential information for the safe and efficient installation, operation, and maintenance of your Teco EP0256 AC Electric Induction Motor. The EP0256 is a robust 25 horsepower, 1200 RPM, Totally Enclosed Fan Cooled (TEFC) motor, designed for industrial applications requiring reliable three-phase power. It operates on 208-230/460 Volts and features a 324T frame with footed mounting. Please read this manual thoroughly before attempting any procedures.

2. Safety Information

WARNING: Failure to follow these safety instructions may result in serious injury, death, or property damage.

- Always disconnect power before performing any installation, maintenance, or troubleshooting. Lock out and tag out circuits according to OSHA standards.
- Installation and electrical connections must be performed by qualified personnel in accordance with all national and local electrical codes.
- Ensure proper grounding of the motor and associated equipment to prevent electrical shock.
- Keep hands, tools, and clothing clear of rotating parts during operation.
- Do not operate the motor in environments exceeding its specified temperature or humidity ratings.
- This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm (Proposition 65 warning). Handle with care and wash hands after contact.

3. Unpacking and Inspection

Upon receiving your Teco EP0256 motor, carefully inspect the packaging for any signs of shipping damage. Unpack the motor and check for visible damage such as dents, cracks, or bent shafts. Verify that all components listed on the packing slip are present. Report any damage or missing parts to the carrier and supplier immediately.

Image 1: Teco EP0256 25 HP AC Electric Induction Motor. This image displays the motor's robust cast iron frame, cooling fins, and terminal box, characteristic of a Totally Enclosed Fan Cooled (TEFC) design. The motor is foot-mounted, indicating its intended use for stable, fixed installations.

4. Setup and Installation

4.1 Mounting

The Teco EP0256 motor features a footed 324T frame for secure mounting. Ensure the mounting surface is flat, rigid, and capable of supporting the motor's weight (approximately 725 pounds) and any associated equipment. Use appropriate bolts and washers to secure the motor firmly, ensuring proper alignment with the driven equipment to minimize vibration and bearing stress.

4.2 Electrical Connections

This motor is designed for three-phase operation at 208-230/460 Volts. All electrical wiring must be performed by a licensed electrician in compliance with local and national electrical codes (e.g., NEC). Refer to the wiring diagram located inside the motor's terminal box for specific connection details. Ensure the correct voltage selection and phase rotation for your application.

- **Voltage Selection:** Confirm the motor is wired for the correct supply voltage (208-230V or 460V). Incorrect voltage can lead to motor damage.
- **Grounding:** Connect the motor frame to a reliable earth ground using a properly sized grounding conductor.
- **Overload Protection:** Install appropriate motor overload protection devices (e.g., thermal overloads, circuit breakers) sized according to the motor's full load amperage (FLA) and local codes.
- **Conduit and Glands:** Use suitable conduit and cable glands to protect wiring and maintain the TEFC enclosure's integrity.

5. Operating Instructions

5.1 Pre-Operation Checks

- Verify all electrical connections are secure and correctly wired.
- Ensure the motor is properly mounted and aligned with the driven equipment.
- Check that all safety guards are in place and secure.
- Confirm that the motor shaft rotates freely by hand (if accessible and safe to do so).
- Ensure the cooling fan is unobstructed.

5.2 Starting the Motor

With all pre-operation checks complete, apply power to the motor. Observe the motor during its initial startup for any unusual noises, vibrations, or signs of overheating. If any anomalies are detected, immediately shut down the motor and investigate the cause.

5.3 Normal Operation

During normal operation, periodically monitor the motor's temperature, noise level, and vibration. The TEFC design helps protect internal components from dust and moisture, but proper ventilation around the motor is still crucial for effective cooling. Ensure the motor operates within its specified current and temperature limits.

5.4 Stopping the Motor

To stop the motor, disconnect the power supply. For emergency stops, utilize the designated emergency stop controls for the system. Always ensure the motor has come to a complete stop before approaching or performing any work on it.

6. Maintenance

Regular maintenance is crucial for extending the life and ensuring the reliable operation of your Teco EP0256 motor.

6.1 Routine Inspections (Monthly/Quarterly)

- Check for excessive noise or vibration.
- Inspect the motor's exterior for dirt, dust, or debris buildup, especially on cooling fins.
- Verify that all mounting bolts are tight.
- Examine electrical connections for signs of corrosion or loosening.
- Check the condition of the power cable for damage.

6.2 Lubrication

The motor bearings are typically pre-lubricated for a long service life. For motors with grease fittings, consult the motor's nameplate or Teco's specific lubrication guide for recommended grease type and re-lubrication intervals. Over-lubrication can be as damaging as under-lubrication.

6.3 Cleaning

Periodically clean the exterior of the motor, especially the cooling fins and fan cover, to ensure efficient heat dissipation. Use compressed air or a soft brush to remove dust and debris. Do not use high-pressure water or solvents that could damage the motor's finish or seals.

6.4 Storage

If the motor is to be stored for an extended period, store it in a clean, dry, and vibration-free environment. Protect the shaft extension from corrosion. Rotate the shaft periodically to prevent bearing brinelling.

7. Troubleshooting

Before attempting any troubleshooting, ensure power is disconnected and locked out.

Problem	Possible Cause	Solution
Motor does not start	No power supply Incorrect wiring Blown fuse/tripped breaker Overload protection tripped	Check power source Verify wiring against diagram Replace fuse/reset breaker Reset overload, investigate cause
Motor overheats	Overload condition Insufficient ventilation High ambient temperature Bearing failure	Reduce load Clear obstructions, ensure airflow Improve cooling in environment Inspect/replace bearings

Problem	Possible Cause	Solution
Excessive noise or vibration	Misalignment Loose mounting bolts Worn bearings Unbalanced driven equipment	Check and correct alignment Tighten mounting bolts Inspect/replace bearings Balance driven equipment

8. Specifications

The following table outlines the key specifications for the Teco EP0256 AC Electric Induction Motor:

Specification	Value
Brand	Teco
Model	EP0256
Horsepower	25 HP
Speed	1200 RPM
Voltage	208-230/460 Volts
Phase	3 PH
Frame Size	324T Frame
Enclosure Type	TEFC (Totally Enclosed Fan Cooled)
Efficiency Class	Max-E1
Mounting Type	Footed
Material	Cast Iron, Rubber, Lead, Steel, Aluminum, Alkyd Paper
Item Weight	725 Pounds
Manufacturer	TECO-Westinghouse
ASIN	B01MFCNJRF
Date First Available	October 26, 2016

9. Warranty and Support

For warranty information, technical support, or service inquiries regarding your Teco EP0256 motor, please contact Teco-Westinghouse customer service directly. Keep your purchase receipt and motor serial number available when contacting support. Specific warranty terms and conditions are provided at the time of purchase or can be obtained from the manufacturer.