Global Horizon
TRAINING CENTER

Training Course:
Electrical Motors & Equipment: Troubleshooting, Operation, and Maintenance

14 - 25 September 2026
London (UK)

Training Course:
Electrical Motors & Equipment: Troubleshooting, Operation, and Maintenance

Training Course code: SC235652 From: 14 - 25 September 2026 Venue: London (UK) - Training Course Fees: 10300 Euro

Introduction

Electrical motors and equipment are essential to industrial operations across manufacturing, energy, utilities, and transportation, where they ensure efficient and continuous performance. Proper understanding and maintenance of these systems are critical to reducing downtime and improving operational efficiency.

This 10-day training program by Global Horizon Training Center provides participants with practical and technical knowledge in electrical motor operation, maintenance, and troubleshooting. It covers core principles, diagnostic techniques, and preventive maintenance strategies using modern tools and technologies.

By the end of the program, participants will be able to improve equipment performance, reduce failures, and apply effective maintenance practices that enhance safety and efficiency.

Objectives

- Understand the fundamental principles of electrical motors and equipment.
- Explore key operational features, types, and applications of electrical motors.
- Develop skills in diagnosing and troubleshooting electrical motor faults.
- Learn preventive and predictive maintenance strategies for electrical equipment.
- Master the use of modern diagnostic tools and technologies.
- Gain insights into common operational challenges and effective solutions.
- Ensure safety in maintenance and troubleshooting activities.

Target Audience

- Electrical engineers and technicians
- Maintenance personnel responsible for electrical systems
- Plant and facility managers overseeing electrical operations
- Industrial operators and supervisors working with electrical motors
- Professionals in energy, manufacturing, or utilities seeking advanced knowledge in electrical equipment
- Anyone involved in troubleshooting and maintaining electrical systems

Outlines

Day 1:

Fundamentals of Electrical Equipment and Motors

- Introduction to electrical equipment and motor technology
- Key components and operating principles of electrical motors
- Types of motors: AC, DC, synchronous, and asynchronous
- Basics of electrical circuits and motor connections
- Safety standards and precautions in motor maintenance

Day 2:

Motor Construction and Functionality

- Detailed overview of motor construction: stator, rotor, windings
- Working principles of induction and synchronous motors
- Torque, speed, and power characteristics
- Common applications of various motor types
- Case studies: Selecting the right motor for specific applications

Day 3:

Troubleshooting Electrical Motors

- Introduction to troubleshooting techniques
- Identifying motor faults: electrical, mechanical, and operational
- Diagnostic tools for motor troubleshooting
- Hands-on exercise: Fault identification in motor systems
- Interactive discussion: Common motor failure scenarios

Day 4:

Preventive and Predictive Maintenance of Motors

- Importance of preventive maintenance PM and predictive maintenance PdM
- Inspection routines and maintenance schedules
- Vibration analysis and thermography for motor health monitoring
- Practical workshop: Developing a maintenance plan
- Group activity: Creating checklists for motor inspections

Day 5:

Advanced Troubleshooting Techniques

- Motor testing methods: insulation resistance, continuity, and winding tests
- Using multimeters and megohmmeters in diagnostics
- Troubleshooting motor control circuits
- Hands-on session: Advanced motor diagnostic exercises
- Group discussion: Troubleshooting strategies and best practices

Day 6:

Electrical Equipment Maintenance

- Overview of key electrical equipment in industrial systems
- Maintenance of switchgear, transformers, and circuit breakers
- Diagnosing electrical faults in power distribution systems
- Hands-on activity: Testing and maintaining electrical components
- Case study: Enhancing the reliability of electrical systems

Day 7:

Energy Efficiency in Motors and Equipment

- Understanding motor efficiency and energy losses
- Energy-saving practices for motor operations
- Variable frequency drives VFDs for motor efficiency
- Hands-on exercise: Analyzing energy performance in motors

- Workshop: Developing an energy efficiency improvement plan

Day 8:

Advanced Motor Technologies

- Introduction to smart motors and IoT integration
- Monitoring motor performance using digital tools
- Exploring motor protection systems and automation
- Hands-on session: Setting up motor control systems
- Group activity: Evaluating new motor technologies

Day 9:

Motor Rewinding and Repairs

- When and why to rewind a motor
- Step-by-step motor rewinding process
- Cost analysis: Repair vs. replacement
- Workshop: Demonstrating the rewinding process
- Case study: Successful motor repair projects

Day 10:

Comprehensive Review and Practical Application

- Reviewing key concepts and troubleshooting techniques
- Practical sessions: Troubleshooting and maintaining electrical motors and equipment
- Creating a personalized maintenance and troubleshooting plan
- Final assessment and certification ceremony
- Wrap-up discussion: Lessons learned and next steps

Registration form on the Training Course: Electrical Motors & Equipment: Troubleshooting, Operation, and Maintenance

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Complete & Mail or fax to Global Horizon Training Center (GHTC) at the address given below

Delegate Information

Full Name (Mr / Ms / Dr / Eng): .....
Position: .....
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Personal E-Mail: .....
Official E-Mail: .....

Company Information

Company Name: .....
Address: .....
City / Country: .....

Person Responsible for Training and Development

Full Name (Mr / Ms / Dr / Eng): .....
Position: .....
Telephone / Mobile: .....
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Payment Method

- ☐ Please find enclosed a cheque made payable to Global Horizon
- ☐ Please invoice me
- ☐ Please invoice my company

Easy Ways To Register

Telephone: +201095004484 to provisionally reserve your place.	Fax your completed registration form to: +20233379764	E-mail to us : info@gh4t.com or training@gh4t.com	Complete & return the booking form with cheque to:Global Horizon 3 Oudai street, Aldouki, Giza, Giza Governorate, Egypt.