



*Training Course:
Compressor Technology*

*16 - 27 May 2027
Cairo (Egypt)*

Training Course: Compressor Technology

Training Course code: EN6023 From: 16 - 27 May 2027 Venue: Cairo (Egypt) - Training Course Fees: 6950 € Euro

Introduction

Compressors are critical assets in oil & gas, petrochemical, and industrial facilities, where they play a key role in gas handling, transportation, and process optimization. Advanced understanding of compressor design, performance, and reliability is essential to ensure safe operation, energy efficiency, and minimal downtime.

This program, designed by Global Horizon Training Center, provides a comprehensive 10-day advanced training covering compressor theory, selection, operation, maintenance, troubleshooting, and optimization in line with international standards and industry best practices.

Course Objectives

By the end of this program, participants will be able to:

- Apply advanced thermodynamic principles of gas compression
- Analyze and interpret compressor performance data and curves
- Select and size compressors for industrial applications
- Understand surge, stall, and control systems
- Diagnose and troubleshoot complex compressor issues
- Implement maintenance and reliability strategies
- Optimize compressor systems for energy efficiency
- Apply API and ISO standards in compressor operation

Target Audience

This program is designed for:

- Mechanical and Process Engineers
- Maintenance and Reliability Engineers
- Rotating Equipment Specialists
- Plant Operators and Supervisors
- Oil & Gas and Industrial Professionals
- Technical staff working with compressors

Outline

Day 1: Fundamentals of Compressor Technology

- Overview of compressors and industrial applications
- Gas properties and behavior
- Thermodynamics of compression
- Types of compressors and classifications
- Safety fundamentals

Day 2: Gas Compression Principles and Calculations

- Compression processes isothermal, adiabatic, polytropic
- Work and power calculations
- Efficiency definitions
- Multi-stage compression
- Practical examples

Day 3: Reciprocating Compressors

- Design and components
- Performance characteristics
- Capacity control methods
- Applications and limitations
- Maintenance considerations

Day 4: Centrifugal Compressors

- Operating principles
- Performance maps and curves
- Impellers and diffusers
- Surge and stall phenomena
- Design considerations

Day 5: Rotary and Screw Compressors

- Screw compressor operation
- Rotary vane compressors
- Oil-injected vs oil-free systems
- Applications and performance
- Selection criteria

Day 6: Compressor Selection and Sizing

- System requirements and specifications
- Capacity and pressure calculations
- Selection methodology
- Integration with process systems
- Case exercises

Day 7: Control Systems and Operation

- Compressor control strategies
- Anti-surge systems

- Flow and pressure control
- Load management
- Monitoring and automation

Day 8: Installation, Commissioning, and Maintenance

- Installation best practices
- Alignment and coupling
- Lubrication and cooling systems
- Preventive and predictive maintenance
- Condition monitoring

Day 9: Troubleshooting and Failure Analysis

- Common compressor failures
- Root cause analysis RCA
- Diagnostic tools and techniques
- Repair strategies
- Case studies

Day 10: Optimization, Standards, and Best Practices

- Energy efficiency improvement
- Performance optimization
- API standards API 617, API 618
- Reliability and lifecycle management
- Final review and practical applications

Registration form on the Training Course: Compressor Technology

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

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Payment Method

- ☐ Please find enclosed a cheque made payable to Global Horizon
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