

## FUNDAMENTALS OF COMPRESSOR CONTROL

*"Optimizing compressor operations and performance through effective control strategies"*

### Schedule

Date	Venue	Fees (Online)
18 - 19 May 2026	Online	USD 700 per delegate

► **Available delivery methods:** Face-to-Face & Online Training

### Introduction

Compressors are critical equipment in oil and gas operations, ensuring efficient gas transport and process reliability. Effective control of compressors is essential to maintain operational stability, prevent equipment damage, and optimize performance.

This 2-day intensive training provides participants with practical knowledge of compressor control principles, operational strategies, and troubleshooting techniques. Participants will gain insights into control system architecture, performance optimization, and hands-on approaches to manage compressor operations efficiently.

### Objectives

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

- Understand the fundamentals of compressor operation and control
- Identify key components and functions of compressor control systems
- Apply control strategies for stability and efficiency
- Monitor and optimize compressor performance
- Troubleshoot common operational issues
- Enhance safety, reliability, and energy efficiency of compressor systems
- Integrate control principles into daily operations

## Why Attend

- Learn practical compressor control strategies
- Improve operational stability and efficiency
- Reduce downtime and equipment failures
- Enhance safety and process reliability
- Apply real-world case studies and best practices

## Target Audience

This program is designed for:

- Process and mechanical engineers
- Control and instrumentation engineers
- Operations and maintenance personnel
- Plant supervisors and managers
- HSE professionals involved in operational safety
- Technical staff responsible for compressor systems

## Individual Benefits

Key competencies that will be developed include:

- Understanding compressor control principles
- Ability to implement operational and control strategies
- Skills to troubleshoot and optimize compressor performance
- Knowledge of safety and reliability considerations
- Enhanced professional confidence in managing compressor systems

## Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Improved compressor performance and operational efficiency
- Reduced risk of equipment failures and unplanned downtime
- Better operational safety and reliability
- Stronger integration of control principles into maintenance practices
- Enhanced energy efficiency and cost management

## Instructional Methodology

The course follows a blended learning approach combining theory with practice:

- Strategy Briefings – Fundamentals of compressor operation and control
- Case Studies – Real-world compressor control challenges and solutions
- Workshops – Hands-on exercises in monitoring and troubleshooting
- Peer Exchange – Discussions on operational best practices
- Tools – Control diagrams, monitoring templates, and optimization guides

## Course Outline

Detailed 2-Day Course Outline

Training Hours: 9:00 AM – 3:30 PM Daily Format: 3–4 Learning Modules | Coffee breaks included

Day 1: Fundamentals of Compressor Control

Module 1: Introduction to Compressor Systems (09:00 – 10:30)

- Types of compressors and their applications
- Key performance parameters

Module 2: Control System Basics (10:45 – 12:15)

- Components and architecture of control systems
- Role of instrumentation and automation

Module 3: Operational Strategies (01:00 – 02:15)

- Start-up, shut-down, and normal operation procedures
- Maintaining stability and efficiency

Module 4: Workshop – Performance Monitoring (02:30 – 03:30)

- Hands-on exercises for monitoring and control

Day 2: Optimization and Troubleshooting

Module 1: Performance Optimization Techniques (09:00 – 10:30)

- Controlling flow, pressure, and speed
- Energy efficiency considerations

Module 2: Troubleshooting Common Issues (10:45 – 12:15)

- Identifying operational problems
- Corrective actions and preventive measures

Module 3: Integrating Control with Operations (01:00 – 02:15)

- Linking control strategies with operational goals
- Documentation and continuous improvement

Module 4: Workshop – Action Planning (02:30 – 03:30)

- Developing practical plans for compressor control improvement
- Group discussion and review

## Certification

Participants will receive a Certificate of Completion in Fundamentals of Compressor Control, validating their knowledge and practical competence in managing and optimizing compressor systems in oil and gas operations.

## Why Choose MAWA Events

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