Accredited Africa Training Institute for Capacity Development

Unit FO409, Hatfield Plaza · 1122 Burnett St, Hatfield 0028 · Pretoria, Gauteng · South Africa

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COURSE BROCHURE

Gas Compression

Custom Courses / Energy, Oil and Gas

Unit Standard AATICD-0387 · NQF Level 5 · 4 Credits · 2 Days

COURSE OVERVIEW

This course equips learners with the knowledge and practical skills required to operate, monitor, and maintain gas compression systems safely and efficiently. It covers fundamental principles, safety protocols, and troubleshooting techniques, ensuring compliance with industry standards and promoting a safe working environment.

Category	Custom Courses
Subfield	Energy, Oil and Gas
Unit Standard	AATICD-0387
Accreditation	SAQA Accredited · NQF Level 5 · 4 Credits
Duration	2 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS — verifiable online

LEARNING OUTCOMES

- Apply the fundamental principles of gas compression, including gas laws, compressor types, and system components.
- Demonstrate safe operating procedures for gas compression systems, including start-up, shutdown, and emergency response.
- Analyze compressor performance data to identify inefficiencies and potential faults.
- Evaluate the environmental and safety risks associated with gas compression operations and implement appropriate control measures.
- Implement routine maintenance schedules and troubleshoot common compressor malfunctions.
- Design a basic gas compression system layout, considering operational requirements and safety standards.

WHO SHOULD ATTEND

- This course is designed for technicians, operators, and maintenance personnel involved in the operation and upkeep of gas compression equipment in industrial settings, such as oil and gas, petrochemical, and energy sectors.

COURSE OUTLINE

Day 1: **Fundamentals of Gas Compression and System Components**

- Introduction to gas compression: purpose and applications
- Gas properties and gas laws (Boyle's, Charles', ideal gas law
- Types of compressors: positive displacement (reciprocating, rotary screw) and dynamic (centrifugal, axial
- Compressor components: cylinders, pistons, valves, seals, bearings, and lubrication systems
- System components: piping, filters, coolers, separators, and control valves
- Basic compressor performance calculations
- Safety in gas compression: hazards, PPE, and safe operating procedures
- Overview of relevant regulations and standards (e.g., ASME, API

Day 2: **Operation, Maintenance, and Troubleshooting of Gas Compressors**

- Compressor operation: pre-start checks, start-up sequence, normal operation, shutdown procedures
- Performance monitoring: pressure, temperature, vibration, and flow readings
- Routine maintenance: lubrication, valve inspection, filter replacement, and seal checks
- Common faults: valve leakage, piston ring wear, bearing failure, and overheating
- Troubleshooting methodology: systematic diagnosis and root cause analysis
- Condition monitoring: vibration analysis, oil analysis, and thermography
- Environmental considerations: emission controls and leak detection
- Case studies and best practices in compressor reliability

ASSESSMENT & CERTIFICATION

Delegates are assessed through exercises and a final test. A mark of **50% or above** earns an **AATICD Certificate of Completion**, issued digitally with a unique verification code. This course carries **4 NQF credits** at **NQF Level 5**.

PRICING (PER DELEGATE, EX-VAT)

Delegates	Training Method	Price per Delegate	Total
1	Online	R 11,900.00	**R 11,900.00**
1	In-House	R 16,100.00	**R 16,100.00**
1	On-Campus (Pretoria)	R 17,800.00	**R 17,800.00**

UPCOMING SESSIONS

Start	End	Method	Venue
01 Dec 2026	02 Dec 2026	On-Campus	Durban, South Africa
02 Dec 2026	03 Dec 2026	On-Campus	Dubai, UAE
03 Dec 2026	04 Dec 2026	On-Campus	Victoria Falls, Zimbabwe
03 Dec 2026	04 Dec 2026	On-Campus	Cape Town, South Africa
10 Dec 2026	11 Dec 2026	On-Campus	Maseru, Lesotho
10 Dec 2026	11 Dec 2026	On-Campus	Kigali, Rwanda
10 Dec 2026	11 Dec 2026	On-Campus	Accra, Ghana
10 Dec 2026	11 Dec 2026	On-Campus	Cape Town, South Africa

Contact us if no suitable date is listed — on-demand sessions can be arranged for groups.

HOW TO GET A QUOTATION OR APPLY

1. **Get an instant quotation online:** visit www.aaticd.co.za, open the page for this course (Unit Standard AATICD-0387) and click **Get A Quotation**. Select your training method and number of delegates — your quotation is generated immediately and emailed to you with the course brochure attached.
2. **Apply by email:** send the course title, your preferred training method (Online, In-House or On-Campus Pretoria), the number of delegates and your preferred dates to **apply@aaticd.co.za** — our team will reply with a formal quotation.
3. **Apply by phone or WhatsApp:** call **+27 12 004 8389** or WhatsApp **+27 65 077 6310** and we will prepare your quotation and reserve your seats.
4. **Confirm your booking:** accept the quotation and settle the invoice. As soon as payment is confirmed your delegates are enrolled and receive their AATICD LMS login details by email, along with joining instructions for their chosen training method.

Group discounts apply automatically — the more delegates you enrol, the lower the price per delegate. No payment is required to request a quotation.

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