



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

Pneumatic Systems Maintenance

Manufacturing, Engineering and Technology / Manufacturing and Assembly

Unit Standard 253361 · NQF Level 4 · 8 Credits · 5 Days

COURSE OVERVIEW

This course equips learners with the knowledge and skills to maintain pneumatic systems effectively. It covers systematic inspection, fault diagnosis, and repair procedures to ensure optimal performance and safety. Learners will gain practical competence in interpreting system schematics and applying maintenance schedules.

Category	Manufacturing, Engineering and Technology
Subfield	Manufacturing and Assembly
Unit Standard	253361
Accreditation	SAQA Accredited · NQF Level 4 · 8 Credits
Duration	5 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS – verifiable online

LEARNING OUTCOMES

- Apply safe working practices and identify hazards associated with pneumatic systems.
- Interpret pneumatic circuit diagrams and component specifications.
- Demonstrate systematic fault-finding techniques on pneumatic systems.
- Perform routine maintenance tasks including component inspection and replacement.
- Implement appropriate repair procedures to restore system functionality.
- Analyze system performance data to recommend preventive maintenance actions.

WHO SHOULD ATTEND

- This course is designed for maintenance technicians, millwrights, and engineers responsible for the upkeep of pneumatic systems in industrial settings.
- It is also suitable for apprentices and tradespeople seeking formal recognition of their skills.

COURSE OUTLINE

Day 1: Introduction to Pneumatic Systems

- Overview of pneumatics vs hydraulics
- Basic physics: pressure, flow, force
- Major components: compressors, cylinders, valves, actuators
- Reading pneumatic circuit diagrams
- Safety precautions and lockout/tagout

Day 2: Pneumatic System Components and Operation

- Air compressors: types, filters, regulators, lubricators
- Directional control valves: 2/2, 3/2, 5/2, 5/3
- Cylinders: single-acting, double-acting, rodless
- Flow control and speed regulation
- Component failure modes and diagnostics

Day 3: Pneumatic Circuit Design and Analysis

- Circuit design principles
- Cascade method for sequential control
- Safety circuits: two-hand control, emergency stop
- Force and speed calculations
- Air consumption and sizing

Day 4: Maintenance and Troubleshooting

- Preventive maintenance schedules
- Common faults: leaks, contamination, wear
- Diagnostic tools: pressure gauges, flow meters
- Step-by-step troubleshooting guide
- Repair techniques: seal replacement, valve rebuild
- Maintenance documentation

Day 5: Advanced Applications and Integration

- Electro-pneumatic interfaces
- PLC programming for pneumatic control
- System optimization: pressure reduction, leak detection
- Energy efficiency and cost savings
- Review for unit standard assessment

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 **8 NQF credits** at **NQF Level 4**.

PRICING (PER DELEGATE, EX-VAT)

Delegates	Training Method	Price per Delegate	Total
1	Online	R 23,000.00	R 23,000.00
1	In-House	R 29,900.00	R 29,900.00
1	On-Campus (Pretoria)	R 34,500.00	R 34,500.00

UPCOMING SESSIONS

Start	End	Method	Venue
10 Aug 2026	14 Aug 2026	On-Campus	Durban, South Africa
10 Aug 2026	14 Aug 2026	On-Campus	Abu Dhabi, UAE
10 Aug 2026	14 Aug 2026	On-Campus	Pretoria, South Africa
10 Aug 2026	14 Aug 2026	On-Campus	Dubai, UAE
10 Aug 2026	14 Aug 2026	On-Campus	Cape Town, South Africa
10 Aug 2026	14 Aug 2026	On-Campus	Mauritius
17 Aug 2026	21 Aug 2026	On-Campus	Dubai, UAE
17 Aug 2026	21 Aug 2026	On-Campus	Pretoria, South Africa

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

HOW TO GET A QUOTE OR APPLY

- 1. Get an instant quotation online:** visit www.aaticd.co.za, open the page for this course (Unit Standard 253361) and click **Get A Quote / Apply**. 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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