



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

On Off Control Devices In Air Conditioning And Refrigeration Systems Training

Manufacturing, Engineering and Technology / Manufacturing and Assembly

Unit Standard 116226 · NQF Level 2 · 6 Credits · 3 Days

COURSE OVERVIEW

This course equips learners with the knowledge and skills to identify, select, install, and maintain on-off control devices in air conditioning and refrigeration systems. Participants will gain a thorough understanding of the operational principles, safety requirements, and troubleshooting techniques for these essential components, ensuring efficient and reliable system performance.

Category	Manufacturing, Engineering and Technology
Subfield	Manufacturing and Assembly
Unit Standard	116226
Accreditation	SAQA Accredited · NQF Level 2 · 6 Credits
Duration	3 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS – verifiable online

LEARNING OUTCOMES

- Identify and describe the functions and types of on-off control devices used in air conditioning and refrigeration systems.
- Apply correct procedures for selecting, installing, and commissioning on-off control devices according to manufacturer specifications and safety standards.
- Demonstrate the ability to test and troubleshoot on-off control devices using appropriate tools and techniques.
- Evaluate system performance and adjust control settings to optimize energy efficiency and temperature regulation.
- Implement preventive maintenance schedules and document control device inspections and repairs.
- Analyze common faults in on-off control systems and propose corrective actions.

WHO SHOULD ATTEND

- This training is designed for refrigeration and air conditioning technicians, maintenance personnel, and engineers who install, service, or maintain HVAC&R systems.
- It is also suitable for apprentices and technical students seeking to specialize in control devices.

COURSE OUTLINE

Day 1: Fundamentals of On-Off Control Devices

- Overview of on-off control in refrigeration and air conditioning cycles.
- Types of control devices: thermostats, pressure switches, contactors, relays.
- Operating principles: bimetallic strips, capillary tubes, diaphragm actuators.
- Electrical ratings, contact configurations (SPST, SPDT, etc.).
- Reading and interpreting wiring diagrams for simple control circuits.
- Safe isolation and lockout/tagout procedures.

Day 2: Circuit Analysis and Troubleshooting

- Detailed circuit analysis: series and parallel control configurations.
- Using multimeters: measuring voltage, resistance, and continuity.
- Common fault scenarios: welded contacts, burnt coils, corrosion.
- Step-by-step troubleshooting methodology.
- Replacement procedures for thermostats, pressure switches, and contactors.
- Practical exercises: fault-finding on trainer panels.

Day 3: Advanced Applications and System Integration

- Multi-device control sequences: defrost timers, fan cycling, safety interlocks.
- Calibration techniques for temperature and pressure setpoints.
- Energy efficiency considerations: differential settings, anti-short cycle timers.
- System commissioning: verifying control operation under load conditions.
- Documentation and reporting of control settings and test results.
- Final assessment: practical demonstration of control device testing and adjustment.

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 **6 NQF credits** at **NQF Level 2**.

PRICING (PER DELEGATE, EX-VAT)

Delegates	Training Method	Price per Delegate	Total
1	Online	R 17,900.00	R 17,900.00
1	In-House	R 23,300.00	R 23,300.00
1	On-Campus (Pretoria)	R 26,800.00	R 26,800.00

UPCOMING SESSIONS

Start	End	Method	Venue
04 Aug 2026	06 Aug 2026	On-Campus	Dubai, UAE
04 Aug 2026	06 Aug 2026	On-Campus	Johannesburg, South Africa
05 Aug 2026	07 Aug 2026	On-Campus	Pretoria, South Africa
05 Aug 2026	07 Aug 2026	On-Campus	Mauritius
10 Aug 2026	12 Aug 2026	On-Campus	Durban, South Africa
10 Aug 2026	12 Aug 2026	On-Campus	Dubai, UAE
11 Aug 2026	13 Aug 2026	On-Campus	Pretoria, South Africa
11 Aug 2026	13 Aug 2026	On-Campus	Mauritius

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 116226) 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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