SARACCA

Approved Training Provider

Encob

Winner business of the year award!

FULLY ACCREDITED TRADE TEST & TRAINING CENTRE

Accreditation Numbers

07-QCTO/SDP201024225155
07-QCTO/AC-TTC181124222839
07-QCTO/SDP070921-2873
07-MER/SDP070225101051
07-QCTO/SDP120426154216
07-QCTO/SDP180926191111
03-QCTO/SDP210425225816
03-QCTO/AC-TTC100325134918
03-QCTO/SDP200526081645
05-QCTO/SDP110722-6781
05-QCTO/AC-TTC010425141909
05-QCTO/SDP070921-2874
05-QCTO/SDP060125191509

Air Conditioning and Refrigeration Academy

KwaZulu Natal Branch
21 Nipper Road, New Germany,
Pine Town, KZN, 3620
Tel: (031) 202 3103
acrakzn@acra.co.za

Gauteng Branch (Head Office)
203 Element Road, Chloorkop, Kempton Park, 1619
Tel: (011) 393 1642, (011) 609 1118, 082 936 4183
VAT. NO. 476 018 8229
PO Box 1709, Edenvale, 1610 I info@acra.co.za

Northern Cape Branch
71-75 De Beers Road, Kimberley, 8301
Tel: (053) 833 1903
acranc@acra.co.za

Course Brochure 2027

GAUTENG I KWA-ZULU NATAL I NORTHERN CAPE

YOUR PARTNER TO BECOME A SKILLED / QUALIFIED ARTISAN









TRAINING OVERVIEW

The Academy has the resources to train all aspects of the Air conditioning and refrigeration fields up to NQF Level 4 and Trade Test. The emphasis is on training apprentices, artisans, and technicians, as well as management roles requiring technical knowledge. The training is specialised to the fields of air conditioning, refrigeration and ventilation. The training is competency-based, meaning any student attending a course is given in-depth theoretical knowledge and the practical skills in order to achieve competency in the workplace. Given the nature of the training required, all courses have a full practical element. The aim of all the training is such that on successful completion of any particular course the student will be competent to do the job as required.

HISTORY

ACRA's roots date back to 1961. In its current form, ACRA opened its doors in August 1998 in Johannesburg, followed by Durban in 2018 and our latest branch in Kimberley in 2019. Our Lecturers have trained students from the entire industry and have achieved international status training people from several of the Southern African countries and as far afield as Australia and Canada. The Academy became an accredited NAMB/QCTO Decentralised Trade Testing Centre in 2003. The Academy is involved with international organisations such as GIZ Proklima (Germany), the United Nations and UNIDO, AUDA-NEPAD, the African Union and the European Union. The Academy is involved with the National Government Department of Forestry, Fisheries and the Environment, the National Ozone Unit, QCTO and NAMB.

TRAINING OFFERED AT ACRA

Courses:

1. Air Conditioning and Refrigeration Technology 1 Course	- Basic	(10 Days)
2. Air Conditioning and Refrigeration Technology 2 Course	- Intermediate	(10 Days)
3. Air Conditioning and Refrigeration Technology 3 Course	- Intermediate/Advanced	(10 Days)
4. Air Conditioning And Refrigeration Technology 4 Course	- Diploma Section Advanced	(10 Days)
5. Electrical 1 Course (pertaining to Air Conditioning and Refrigeration)	- Basic	(10 Days)
6. Electrical 2 Course (pertaining to Air Conditioning and Refrigeration)	- Intermediate	(10 Days)
7. Electrical 3 Course (pertaining to Air Conditioning and Refrigeration)	- Intermediate/Advanced	(10 Days)
8. Installation, Fault Finding, Maintain&Repair of Split, Console and Window Units Course	- Basic	(10 days)
9. Authorised Practitioners Safe Handling of Refrigerants (new)	-Freons, HC's, CO2	(05 Days)
10. Renewal Authorised Refrigeration Practitioner Course (renewal)	-Freons, HC's, CO2	(02 days)
11. Authorised *Ammonia Refrigeration* Practitioners (Ammonia Cat A and B) (new)	-Ammonia Safe Handling License	(05 Days)
12. Renewal Authorised *Ammonia* Practitioners (Ammonia Cat A and B) (renewal)	-Ammonia Safe Handling License	(02 Days)
13. Certificate of Conformance (COC) (Portfolio needs to be completed)	-for Trade Tested Candidates	(01 Day+Portfolio)
14. Vehicular Air Conditioning (Automotive and Earthmoving / Mining Equipment)		(10 Days)
15. Welding, Brazing & Cutting Course		(10 Days)

New National Occupational Qualifications (apprenticeships) being launched in 2027:

1. Occupational Certificate: Air Conditioning and Refrigeration Mechanic	(3 years)
2. Occupational Certificate: Refrigeration Mechanic (Context 1)	(3 years)
3. Occupational Certificate: Refrigeration Maintenance and Repair Workman	(12-18 months tbc)
4. Occupational Certificate: Refrigeration Pipework Installer	(12-18 months tbc)
5. Occupational Certificate: Domestic and Light Commercial Refrigeration Serviceman	(12-18 months tbc)
6. Occupational Certificate: Heating, Ventilation and Air Conditioning (HVAC) Control Fitter	(12-18 months tbc)
7. Occupational Certificate: Refrigeration Fitter	(12-18 months tbc)
8. Occupational Certificate: Mobile Refrigeration Fitter	(12-18 months tbc)

New Courses being launched in 2027:

1. Reefer Maintenance	(05 Days)
2. Application and Usage of Flammable Refrigerants	(05 Days)
3. Brazing Certification	(03 Days)
4. CO2 Reefers	(05 Days)

The ACRA Diploma consists of the following courses:

1. Air Conditioning and Refrigeration Technology 1 Course	- Basic	(10 Days)
2. Electrical 1 Course (pertaining to Air Conditioning and Refrigeration)	- Basic	(10 Days)
3. Installation, Fault Finding, Maintain&Repair of Split, Console and Window Units Course	- Basic	(10 Days)
4. Air Conditioning and Refrigeration Technology 2 Course	- Intermediate	(10 Days)
5. Electrical 2 Course (pertaining to Air Conditioning and Refrigeration)	- Intermediate	(10 Days)
6. Authorised Refrigeration Practitioner Course	- Safe Handling License	(05 Days)
7. Electrical 3 Course (pertaining to Air Conditioning and Refrigeration)	- Intermediate/Advanced	(10 Days)
8. Air Conditioning and Refrigeration Technology 3 Course	- Intermediate/Advanced	(10 Days)
9. Air Conditioning And Refrigeration Technology 4 Course	- Diploma Section Advanced	(10 Days)

17 weeks in total

T1 Course Name — Air Conditioning and Refrigeration Technology 1

Short Course

Entry Requirements	Basic Literacy and Numeracy.	**Duration**	10 days
Course Times	Monday - Friday 08h00 until 15h30	**Cost**	R 19 850,00 incl. vat

Objectives

This course represents all of the fundamental aspects of the theoretical knowledge and practical skills required by all persons wishing to work in the air conditioning and/or the refrigeration fields. This course forms the foundation and as such it is imperative that all persons complete the course. Technology 2, 3 and the diploma course follow. No previous knowledge or experience is required. The course has a full theory and practical component in our accredited workshops.

Outcomes

Upon successful completion of this course the student will have the understanding of safety procedures, refrigerants, the Vapour Compression Cycle / Basic Thermodynamics. Tooling, Safety, Components and Accessories, Pipework (Copper, Aluminium), Servicing, Repair and Installation procedures. The student will be able to perform the applicable practical aspects on the job site. The student has the opportunity to further his studies. The range of study progresses through air conditioning and refrigeration to and including large central plants. It is strongly advised that students and companies consider the electrical course and technology 2 course.

Example of Skills

Safety / risk assessment / pipe work / evacuation / flaring / swaging/ charging / recovery / testing / tools and instruments / safety / refrigerants / refrigerant containers / basic thermo dynamics / basic refrigeration cycle / fittings / trade related tools / refrigerants / air conditioning and refrigeration components manifold gauges, service valves, operation and setting of expansion devices, setting pressure switches.

Johannesburg Dates	11 Jan - 22 Jan 2027	18 Jan - 29 Jan 2027	08 Feb - 19 Feb 2027	08 Mar - 19 Mar 2027
	30 Mar - 09 Apr 2027	12 Apr - 23 Apr 2027	10 May - 21 May 2027	24 May - 04 Jun 2027
	14 Jun - 25 Jun 2027	12 Jul - 23 Jul 2027	02 Aug - 13 Aug 2027	23 Aug - 03 Sep 2027
	27 Sep - 08 Oct 2027	18 Oct - 29 Oct 2027	15 Nov - 26 Nov 2027	06 Dec - 17 Dec 2027
Durban Dates	11 Jan - 22 Jan 2027	15 Feb - 26 Feb 2027	08 Mar - 19 Mar 2027	05 Apr - 16 Apr 2027
	17 May - 28 May 2027	28 Jun - 09 Jul 2027	26 Jul - 06 Aug 2027	23 Aug - 03 Sep 2027
	20 Sep - 01 Oct 2027	18 Oct - 29 Oct 2027	15 Nov - 26 Nov 2027	06 Dec - 17 Dec 2027
Kimberley Dates	11 Jan - 22 Jan 2027	01 Feb - 12 Feb 2027	22 Feb - 05 Mar 2027	12 Apr - 23 Apr 2027
	24 May - 04 Jun 2027	28 Jun - 09 Jul 2027	26 Jul - 06 Aug 2027	23 Aug - 03 Sep 2027
	27 Sep - 08 Oct 2027	01 Nov - 12 Nov 2027	06 Dec - 17 Dec 2027	

E1 Course Name — Electrical 1 *(Basic Principles of Electricity pertaining to Air Cond. and Refrigeration)*

Short Course

Entry Requirements	Technology 1 incl. Basic Literacy and Numeracy.	**Duration**	10 days
Class Times	Monday - Friday 08h00 until 15h30	**Cost**	R 19 850,00 incl. vat

Objectives

This course represents all of the fundamental electrical aspects, theoretical knowledge and practical skills required by all persons wishing to work in the air conditioning and/or the refrigeration fields. This course forms the foundation of the electrical aspects and as such it is imperative that all persons complete the course. Electrical two and three courses follow. No previous electrical knowledge is required but Technology One should have been completed. The course has a full theory and practical component in our accredited workshop. The course compliments the Technology 1 as well as the unitary air conditioning course.

Outcomes

Upon successful completion of this course the student will have the understanding and the practical skills in relation to Air Conditioning and Refrigeration electrical systems. Understand Ohm's Law, Kirchhoff's Law, Volt, current, resistance, energy and power, alternating current and direct current, magnetic fields and flux, power generation, conductors, components, accessories, symbols, basic electrical layouts, dangers of electricity and potential hazards as well as methods to prevent injuries. Electrical controls, components and circuits.

Example of Skills

Identify, select and the use of electrical tools and instruments. Identify, test and connect electrical conductors (jointing, installation and termination methods) Install trunking. Read and interpret diagrams. Maintain electrical systems including controls, components, accessories, motors and panels. Electrically isolation, maintenance procedures of electrical panels and switch gear, components and conductors paying attention to loose connections.

Johannesburg Dates	18 Jan - 29 Jan 2027	01 Mar - 12 Mar 2027	24 May - 04 Jun 2027	12 Jul - 23 Jul 2027
	06 Sep - 17 Sep 2027	25 Oct - 05 Nov 2027	29 Nov - 10 Dec 2027	
Durban Dates	25 Jan - 05 Feb 2027	01 Mar - 12 Mar 2027	03 May - 14 May 2027	12 Jul - 23 Jul 2027
	06 Sep - 17 Sep 2027	01 Nov - 12 Nov 2027	06 Dec - 17 Dec 2027	
Kimberley Dates	03 May - 14 May 2027	05 Jul - 16 Jul 2027	13 Sep - 23 Sep 2027	15 Nov - 26 Nov 2027

T2 *Course Name* *Air Conditioning and Refrigeration Technology 2*

Short Course

Entry Requirements	Technology 1 and Electrical One incl. Basic Literacy and Numeracy.	**Duration**	10 days
Class Times	Monday - Friday 08h00 until 15h30	**Cost**	R 19 850,00 incl. vat

Objectives

This course represents the intermediate aspects of the theoretical knowledge and practical skills required by all persons wishing to work in the air conditioning and/or the refrigeration fields. This course forms the second stage and as such is imperative that all persons complete the course. Technology 3 and the diploma course follow. The course has a full theory and practical component in our accredited workshop.

Outcomes

Upon successful completion of this course the student will have the understanding of the intermediate aspects of refrigeration and air conditioning. Superheat measurement, setting and the importance there of, sub-cooling, LP and HP Pressure switch setting determination and actual setting on an installation, Basic refrigeration commissioning techniques and procedures. Types of refrigeration systems, types of air conditioning systems, evaporative coolers, air conditioning components, heating, critical charging, compressor testing, fault finding, drives and couplings. Students have the opportunity to further their studies. The range of study progresses through air conditioning and refrigeration to and including large central plants.

Example of Skills

Fault finding / basic commissioning / procedures on walk in fridges / freezer / air con units / critical charging / humidity / recovery of refrigerants/ servicing/ belt drives tensioning and alignment / couplings / bearings / various systems and their operation and application / controls and safety devices / vapour barriers.

Johannesburg Dates	11 Jan - 22 Jan 2027	01 Feb - 12 Feb 2027	01 Mar - 12 Mar 2027	05 Apr - 16 Apr 2027
	03 May - 14 May 2027	07 Jun - 18 Jun 2027	12 Jul - 23 Jul 2027	16 Aug - 27 Aug 2027
	20 Sep - 01 Oct 2027	25 Oct - 05 Nov 2027	29 Nov - 10 Dec 2027	
Durban Dates	25 Jan - 05 Feb 2027	30 Mar - 09 Apr 2027	24 May - 04 Jun 2027	26 Jul - 06 Aug 2027
	04 Oct - 15 Oct 2027	22 Nov - 03 Dec 2027		
Kimberley Dates	18 Jan - 29 Jan 2027	30 Mar - 09 Apr 2027	17 May - 28 May 2027	19 Jul - 30 Jul 2027
	11 Oct - 22 Oct 2027	06 Dec - 17 Dec 2027		

E2 *Course Name* *Electrical 2 (Single Phase Electricity pertaining to Air Cond. and Refrigeration)*

Short Course

Entry Requirements	*Technology 1, Electrical One and Technology 2 including Basic Literacy and Numeracy.*	***Duration***	*10 days*
Class Times	Monday - Friday 08h00 until 15h30	**Cost**	R 19 850,00 incl. vat

Objectives

This course represents the intermediate electrical aspects of the theoretical knowledge and practical skills required by all persons wishing to work in the air conditioning and/or the refrigeration fields. The course has a full theory and practical component in our accredited workshop. The course compliments the Technology 1, 2 and Electrical 1 courses as well as the unitary air conditioning range of courses. This course focuses on single phase systems.

Outcomes

Upon successful completion of this course the student will have the understanding and the practical skills pertaining to the interpretation of single phase circuits wiring diagrams, the wiring of control panels, electrical motors and starters (Single phase) applicable to air conditioning and refrigeration systems. Inspection and maintenance of electrical panels, electrical motors, starter panels and circuits. Fault-finding and repairing single phase electrical panels, electrical motors, starter panels and circuits. Construction of single phase electrical motors, starter circuits. Operation and testing of electrical motors.

Example of Skills

Connect basic controls, components, accessories and motors with the correctly identified cabling/conductors. Test operation of the circuit and electrical components in the system and take corrective action if needed. Identify electrical controls, components, accessories and motors from drawings. Construct complete electrical system including controls, components, accessories, motors and panel with the correctly identified cabling/conductors. Fault-find electrical circuits and equipment in the air conditioning and/or the refrigeration fields. (Single phase) Test and connect electrical motors (Single phase)

Johannesburg Dates	08 Mar - 19 Mar 2027	19 Apr - 30 Apr 2027	07 Jun - 18 Jun 2027	10 Aug - 20 Aug 2027
	04 Oct - 15 Oct 2027	22 Nov - 03 Dec 2027		
Durban Dates	26 Apr - 07 May 2027	10 Aug - 20 Aug 2027	25 Oct - 05 Nov 2027	
Kimberley Dates	08 Feb - 19 Feb 2027	14 Jun - 25 Jun 2027		

T3 Course Name *Air Conditioning and Refrigeration Technology 3*

Short Course

Entry Requirements	Completion of Technology 1, Technology 2, Electrical 1 & Electrical 2 incl. Basic Literacy and Numeracy.	**Duration**	10 days
Class Times	Monday - Friday 08h00 until 15h30	**Cost**	R 19 850,00 incl. vat

Objectives

On successful completion of this course the student will have the necessary knowledge and practical skills to perform more of the advanced aspects of the trade related to central plants / ducted / indirect systems. Chillers, air delivery systems, filtration, water reticulation systems form the focal point of this course. Includes basic psychometrics, air flow and air changes. This course is the third phase of the diploma course but may be used alone ending at this level.

Outcomes

Relative humidity and product classifications in refrigeration applications, multiplex refrigeration systems, refrigeration and air conditioning system burn out procedures, central and industrial air conditioning systems, maintenance schedules, air distribution equipment, air cleaning equipment and filtration, lubrication, water reticulation equipment, ventilation and ventilation rate determination and measurement, airflow measurement, heating, basic psychometrics, water treatment methodology and systems.

Example of Skills

Air flow balancing, ventilation rates, developing and applying maintenance schedules, burn out procedures, ventilation rate measurement, air flow measurements, commissioning, lubrication, fans and pumps and basic psychometrics, central plant layouts.

Johannesburg Dates	25 Jan - 05 Feb 2027 06 Sep - 17 Sep 2027	30 Mar - 09 Apr 2027 22 Nov - 03 Dec 2027	31 May - 11 Jun 2027	26 Jul - 06 Aug 2027
Durban Dates	08 Feb - 19 Feb 2027	31 May - 11 Jun 2027	10 Aug - 20 Aug 2027	29 Nov - 10 Dec 2027
Kimberley Dates	22 Feb - 05 Mar 2027	10 Aug - 20 Aug 2027		

E3 Course Name *Electrical 3 (Three Phase Electricity pertaining to Air Conditioning and Refrigeration)*

Short Course

Entry Requirements	Completion of Technology 1, Technology 2, Technology 3, Electrical 1, Electrical 2, incl. Basic Literacy and Numeracy.	**Duration**	10 days
Class Times	Monday - Friday 08h00 until 15h30	**Cost**	R 19 850,00 incl. vat

Objectives

This course represents the advanced three phase electrical aspects, theoretical knowledge and practical skills required by all persons wishing to work in the air conditioning and/or the refrigeration fields. The course has a full theory and practical component in our accredited workshop.

Outcomes

Upon successful completion of this course the student will have the understanding and the practical skills for the wiring of control panels, electrical motors and starters (three phase). Interpretation of three phase circuits, sketching three phase circuits applicable to air conditioning and refrigeration systems. Inspection and maintenance of electrical panels, electrical motors, starter panels and circuits. Fault-finding and repairing three phase electrical panels, electrical motors, starter panels and circuits. Construction of three phase electrical motors and starter circuits. Operation and testing of electrical motors. The purposes of various available variable speed drives and soft starters. Wiring, inspection, maintenance, fault-finding and repairing of variable speed drives, soft starters and electronically controlled fans. Knowledge and understanding of basic electronics. Fundamental operation, construction and testing of basic electronic circuits.

Example of Skills

Establish safety aspects (electrical isolation) Identify, test and connect electrical motors (three phase). Read, design and interpret electrical diagrams including symbols and legend requirements, basic motor controls and starters in accordance with the electrical diagrams. Construct complete electrical circuitry including controls, components, accessories, motors and panel with the correctly identified cabling/conductors. Fault-finding and testing of electrical motor circuits and equipment in the air conditioning and/or the refrigeration fields. (Three phase). Determine, conduct, verify and report on faulty components.

Johannesburg Dates	15 Feb - 26 Feb 2027 08 Nov - 19 Nov 2027	12 Apr - 23 Apr 2027	21 Jun - 02 Jul 2027	20 Sep - 01 Oct 2027
Durban Dates	22 Feb - 05 Mar 2027	14 Jun - 25 Jun 2027	13 Sep - 23 Sep 2027	
Kimberley Dates	08 Mar - 19 Mar 2027			

INST MR FF

Course Name — Installation, Fault Finding, Maintain & Repair of Split, Console & Window Units

Short Course

Entry Requirements	Basic Literacy and Numeracy.	**Duration**	10 days
Class Times	Monday - Friday 08h00 until 15h30	**Cost**	R 19 850,00 incl. vat

Objectives

This is a stand alone course however the candidate should complete the Authorised Refrigeration Practitioner License (Safe Handling of Refrigerants) in addition to this course. Covering the installation, maintenance and repair of unitary air conditioning units excluding repair of printed circuit boards. The repairs required including the replacement of compressors & other components, evacuation and critical charging of these units. This course includes the theory around operation of systems, the functions of the components as well as the practical aspects. Complete installation procedures of the above mentioned units are dealt with.

Outcomes

Upon successful completion of this course the student will have the understanding and the basic practical skills (competencies) needed on the worksite for the installation, maintenance and repair of unitary air conditioning systems. The student will perform on actual installations as part of training. Full workshop training component.

Example of Skills

For Window / Console / and split unit air conditioning: Compressor testing / Compressor replacement / burnouts / critical charging / testing / recovery of refrigerants. Full installation, all repairs, servicing and maintenance. Areas include but are not limited to: pipe work / brazing / evacuation / charging / driers / faultfinding / maintenance and vapour barrier installation.

Johannesburg Dates	15 Feb - 26 Feb 2027	30 Mar - 09 Apr 2027	17 May - 28 May 2027	28 Jun - 09 Jul 2027
	16 Aug - 27 Aug 2027	20 Sep - 01 Oct 2027	08 Nov - 19 Nov 2027	06 Dec - 17 Dec 2027
Durban Dates	11 Jan - 22 Jan 2027	15 Feb - 26 Feb 2027	12 Apr - 23 Apr 2027	12 Jul - 23 Jul 2027
	11 Oct - 22 Oct 2027			
Kimberley Dates	25 Jan - 05 Feb 2027	14 Jun - 25 Jun 2027	11 Oct - 22 Oct 2027	22 Nov - 03 Dec 2027

T4

Course Name — Air Conditioning and Refrigeration Technology 4 (Diploma Section)

Short Course

Entry Requirements	Completion of Technology 1, Technology 2, Electrical 1, Electrical 2, Electrical 3 & Technology 3, Authorised Refrigeration Practitioner License, Maintenance, Fault Finding and Installation.	**Duration**	10 days
Class Times	Monday - Friday 08h00 until 15h30	**Cost**	R 19 850,00 incl. vat

Objectives

This course includes the advanced aspects of air conditioning and refrigeration including central plant and air conditioning in depth. This course will enable the student to perform retrofitting work, conduct heat load calculations for quoting and installation purposes, ventilation rate calculations for commercial and industrial applications, calculation of system performance, capacity, advanced fault finding, evaporative cooling sizing and design, psychometrics and Mollier (Pressure / enthalpy) diagrams.

Outcomes

Upon successful completion of this course the student will have the understanding and skills to determine a systems operating parameters from a pressure enthalpy diagram, calculation of plant capacities, C.O.P., compressor efficiency, mass flow, heat rejection, confirmation of superheat and sub-cooling etc. In addition: fault finding using a pressure enthalpy chart, heat load calculations for air conditioning and refrigeration applications, the retrofitting process, psychometrics. Although this is an in depth course the level is with-in the artisans / technicians scope of work.
This course is very popular with the medium to large corporate client running a central plant / ducted or indirect system and with persons wishing to have an in depth under standing of the trade.

Example of Skills

Central plant air conditioning / advanced fault finding using Mollier diagrams / heat load calculations. Psychometrics, air flow rates and balancing, determination and calculation of ventilation rates, air changes per hour / humidity / maintenance schedules / evaporative cooling sizing and design. Properties of air, humidification, calculations involving heat & mass transfer. Air flow measurements, air changes, flow rates, duct balancing, define operating parameters, refrigerant blends/temperature glide, operational faults & remedial action. Detailed practical Mollier chart application, determination of plant capacity, C.O.P., Compression ratios, super heat & sub cooling, mass flow and fault finding.

Johannesburg Dates	03 May - 14 May 2027	14 Jun - 25 Jun 2027	30 Aug - 10 Sep 2027	11 Oct - 22 Oct 2027
	06 Dec - 17 Dec 2027			
Durban Dates	08 Mar - 19 Mar 2027	14 Jun - 25 Jun 2027	04 Oct - 15 Oct 2027	
Kimberley Dates	Available on Request!			

WBC

Course Name — Welding, Brazing & Cutting

Short Course

Electric Arc, C02, copper to copper, Oxy/Acetylene.

Entry Requirements	Basic Literacy and Numeracy	**Duration**	10 days
Class Times	Monday - Friday 08h00 until 15h30	**Cost**	R 19 850,00 incl. vat

Objectives

Typically for candidates working on general welding i.e.. brackets/condenser brackets. Perform basic arc welding, brazing of copper to copper, copper to brass and use of the cutting torch. Selecting and checking welding equipment and consumables. Operating welding equipment. Applying safety equipment and procedures. Ensuring suitability and strength of weld. Electric arc/C02 and aluminium welding available.

Outcomes

On successful completion of this course the student will be able to interpret job instructions. Identify arc-welding equipment and check it for safety and suitability. Welding consumables are inspected for correct size and suitability. Metals to be welded are inspected for suitability. Things that make metals and/or consumables unsuitable are listed and discussed. Safety equipment and procedures required are listed and discussed. Arc-weld metals. Metals to be welded are prepared for welding process. Work area is inspected for fire hazard, secured and made safe. Appropriate welding process is applied. Weld is cleaned using correct procedure. Consequences of using wrong power setting or wrong consumables are listed and explained. Correct and all safety equipment is used. Apply quality checks on completed weld and correct if necessary. Visual check is conducted to ensure quality weld. Weld is checked for strength. Work-piece is checked for compliance with job sheet. Improper welded sections are made good.

Example of Skills

Arc welding, brazing, cutting, electric arc, C02 welding, copper to copper, oxy/acetylene.

Johannesburg Dates	17 May - 28 May 2027	06 Sep - 17 Sep 2027
Durban Dates	21 Jun - 02 Jul 2027	27 Sep - 08 Oct 2027
Kimberley Dates	03 May - 14 May 2027	

VEH

Course Name — Vehicular Air Conditioning

Short Course

Automotive and Earthmoving / Mining Equipment

Entry Requirements	Basic Literacy and Numeracy	**Duration**	10 days
Class Times	Monday - Friday 08h00 until 15h30	**Cost**	R 19 850,00 incl. vat

Objectives

Anyone interested in vehicular air conditioning as well as the following industries:
Automotive Industries / Car Manufacturers / Rail / Mining / Construction / heavy Earthmoving equipment as well as their sub-contractors, Panel Beaters, Insurance Industry Assessor, Fitment Centre's.

Outcomes

On successful completion of this course the student will be able to:
Be competent to use basic tools and procedures applicable to vehicular air-conditioning. Understand principles of refrigeration, heat and unit used to express heat, specific heat, methods of heat transfer, latent and sensible heat, heat of compression, thermometers and their scales, atmospheric pressure, gauge pressure, absolute pressure, effect of pressure on boiling point of liquid, mechanical refrigeration cycle. Apply leak testing methods. Identify components and explain vehicular components and their function thereof. Ie. Compressor condenser / evaporation / receiver drier / accumulator / orifice tube / expansion valve.

Example of Skills

Repairs and maintenance including evacuation, leak testing, charging, commissioning, safety aspects, common faults and components and accessories as required for vehicular and mobile air conditioning systems.

Johannesburg Dates	22 Feb - 05 Mar 2027	03 May - 14 May 2027	10 Aug - 20 Aug 2027	01 Nov - 12 Nov 2027
Durban Dates	17 May - 28 May 2027	16 Aug - 27 Aug 2027		
Kimberley Dates	10 Aug - 20 Aug 2027			

VEH

Course Name BMS Control Systems

Short Course

Entry Requirements	Basic Understanding of Computers (It could be advantageous for the candidate to have a basic understanding of Air Conditioning Systems) including Basic Literacy and Numeracy.	**Duration**	4 days
Class Times	Monday - Thursday 08h00 until 15h30	**Cost**	R 7940,00 incl. vat

Objectives

Control Basics - Have a basic understanding of the control process. Describe what a sensor is, its use and where sensors should be located. Describe how a controller works and how it can be used. Introduction to Direct Digital Control (DDC) - Describe what a DDC is and have a basic understanding of the functions these devices can perform. Describe common terminologies used by a DDC. Understand the fundamentals of how PID loops function. Describe some basic programming blocks used in a DDC configuration. DDC Networking Basics - Have an understanding of why we network DDC's. Understand how DDC's communicate and share information. DDC Programming Basics - Describe a DDC program. Understand the basics of configuration logic and how the program works.

Outcomes

On successful completion of this course the student will be able to write basic program on a system to operate a controller. Test and run basic program operating a controller.

Johannesburg Dates	22 Feb - 25 Feb 2027	19 Apr - 22 Apr 2027	05 Jul - 08 Jul 2027	13 Sep - 16 Sep 2027
	22 Nov - 25 Nov 2027			
Durban Dates	Available on Request			
Kimberley Dates	Available on Request			

Courses Available on request for groups of 6 or more students:

* *End of Life Training (safe disposal of air conditioning / refrigeration equipment)*
* *Evaporative Cooling Sizing/System Selection/Design Aspects*
* *Evaporative Cooling Installation/Commissioning*
* *Refrigeration Pipework Installations*
* *Rigging, Bearings & Fans Course*
* *Drain Piping for HVAC&R*
* *Duct Work Installation*

New Courses Launching by June 2027:

* *Reefer Maintenance and Pre-trip Inspections*
* *Application and Usage of Flammable Refrigerants*
* *Brazing Certification*
* *CO2 Reefers*

Authorised Refrigeration Practitioner Course required by law for all Refrigeration Persons :

The Department of Labour published the "Pressure Equipment Regulations" in the Government gazette in July 2009 and they came into force on 1st October 2009. These form part of the Occupational Health and Safety Act Number 85 of 1993. Revision 1 with guide notes was published in 2015 and Revision 2 was published in November 2017.

The regulations.
The Department of Labour has Mandated SAQCC Gas with the responsibility of registering and maintaining a data base of "Authorised Persons" for handling and working with gases under pressure. SARACCA is a member association of SAQCC Gas with the responsibility to review and process applications from persons in the refrigeration and air conditioning industry.

The Regulations define an Authorised Person as one who is registered with SAQCC Gas as being competent within the scope of work for refrigeration. In the refrigeration and air conditioning industry we have defined 14 categories of registration within the scope of refrigeration work

Clause 2(1) of the PER says,
Scope of Application: These Regulations shall apply to the design, manufacture, operation, repair, modification, maintenance, inspection, and testing of pressure equipment with a design pressure equal to or greater than 50kPa,.....

SAQCC GAS
South African Qualification and Certification Committee

SARACCA

SHL 5D

Course Name: *First Time Registration - Authorised Refrigeration Practitioner License (Safe Handling of Refrigerants)*

Legislated training

Fluorinated, Flammable and CO_2 refrigerants

Entry Requirements	Basic Literacy and Numeracy, minimum 12 months relevant industry experience or Technology 1 course.	**Duration**	5 days
Class Times	Monday - Friday 08h00 until 15h30	**Cost**	R 9 920,00 incl. vat

Excludes: SARACCA Reg. fee of R 2 530.00 incl. vat payable directly towards SARACCA

For the digital registration via SARACCA - 2 colour id photos, certified copy of id, certified copy of ACRA Certificate and Trade Test Certificate (if applicable) should be attached to the application / emailed to SARACCA. Candidates who apply for registration will be registered on the SAQCCGas Database www.saqccgas.co.za**.** Some categories can register on the SAQCCGas Mobile Application for issuing COC's.

Registration via SARACCA should be done within 12 months from completing the training. Should the 12 month period be exceeded you will be required to redo the full 5 day course.

Objectives: Training and Assessment to comply with the legal requirement of the OHS Act. Pressure Equipment Regulation (Clause 17-18) July 2009 No 85 of 1993.

Outcomes: This course, required by law enables persons to register as an authorised person in the relevant categories with SAQCCGas.

Johannesburg Dates	11 Jan - 15 Jan 2027	18 Jan - 22 Jan 2027	01 Feb - 05 Feb 2027	15 Feb - 19 Feb 2027
	01 Mar - 05 Mar 2027	30 Mar - 02 Apr 2027	12 Apr - 16 Apr 2027	19 Apr - 23 Apr 2027
	26 Apr - 30 Apr 2027	03 May - 07 May 2027	10 May - 14 May 2027	31 May - 04 Jun 2027
	21 Jun - 25 Jun 2027	12 Jul - 16 Jul 2027	02 Aug - 06 Aug 2027	23 Aug - 27 Aug 2027
	13 Sep - 17 Sep 2027	04 Oct - 08 Oct 2027	25 Oct - 29 Oct 2027	15 Nov - 19 Nov 2027
	29 Nov - 03 Dec 2027	13 Dec - 17 Dec 2027		
Durban Dates	11 Jan - 15 Jan 2027	01 Feb - 05 Feb 2027	01 Mar - 05 Mar 2027	30 Mar - 02 Apr 2027
	19 Apr - 23 Apr 2027	10 May - 14 May 2027	31 May - 04 Jun 2027	07 Jun - 11 Jun 2027
	28 Jun - 02 Jul 2027	12 Jul - 16 Jul 2027	02 Aug - 06 Aug 2027	23 Aug - 27 Aug 2027
	06 Sep - 10 Sep 2027	27 Sep - 01 Oct 2027	18 Oct - 22 Oct 2027	08 Nov - 12 Nov 2027
	29 Nov - 03 Dec 2027			
Kimberley Dates	11 Jan - 15 Jan 2027	15 Feb - 19 Feb 2027	08 Mar - 12 Mar 2027	30 Mar - 02 Apr 2027
	17 May - 21 May 2027	28 Jun - 02 Jul 2027	12 Jul - 16 Jul 2027	02 Aug - 06 Aug 2027
	23 Aug - 27 Aug 2027	06 Sep - 10 Sep 2027	04 Oct - 08 Oct 2027	25 Oct - 29 Oct 2027
	08 Nov - 12 Nov 2027	29 Nov - 03 Dec 2027		

SHL 2D

Course Name: *Renewal - Authorised Refrigeration Practitioner (Safe Handling of Refrigerants)*

Legislated training

Fluorinated, Flammable and CO_2 refrigerants

Entry Requirements	Valid SAQCCGas Safe Handling License *(Registration should not be expired for longer that 12 months).*	**Duration**	2 days
Class Times	Wednesday - Thursday 08h00 until 15h30	**Cost**	R 3 970,00 incl. vat

Excludes: SARACCA Reg. fee of R 2 530.00 incl. vat payable directly towards SARACCA.
For the digital registration as per initial registration via SARACCA.

Objectives: Training and Assessment to comply with the legal requirement of the OHS Act. Pressure Equipment Regulation (Clause 17-18) July 2009 No 85 of 1993.

Outcomes: This course, required by law enables persons to re-register as an authorised person in the relevant categories with SAQCCGas.

Johannesburg Dates	13 Jan - 14 Jan 2027	20 Jan - 21 Jan 2027	03 Feb - 04 Feb 2027	17 Feb - 18 Feb 2027
	03 Mar - 04 Mar 2027	31 Mar - 01 Apr 2027	14 Apr - 15 Apr 2027	21 Apr - 22 Apr 2027
	28 Apr - 29 Apr 2027	05 May - 06 May 2027	12 May - 13 May 2027	02 Jun - 03 Jun 2027
	23 Jun - 24 Jun 2027	08 Jul - 09 Jul 2027	14 Jul - 15 Jul 2027	04 Aug - 05 Aug 2027
	25 Aug - 26 Aug 2027	02 Sep - 03 Sep 2027	15 Sep - 16 Sep 2027	06 Oct - 07 Oct 2027
	27 Oct - 28 Oct 2027	17 Nov - 18 Nov 2027	01 Dec - 02 Dec 2027	
Durban Dates	13 Jan - 14 Jan 2027	03 Feb - 04 Feb 2027	03 Mar - 04 Mar 2027	31 Mar - 01 Apr 2027
	21 Apr - 22 Apr 2027	12 May - 13 May 2027	02 Jun - 03 Jun 2027	09 Jun - 10 Jun 2027
	30 Jun - 01 Jul 2027	14 Jul - 15 Jul 2027	29 Jul - 30 Jul 2027	04 Aug - 05 Aug 2027
	25 Aug - 26 Aug 2027	08 Sep - 09 Sep 2027	29 Sep - 30 Sep 2027	20 Oct - 21 Oct 2027
	10 Nov - 11 Nov 2027	18 Nov - 19 Nov 2027	01 Dec - 02 Dec 2027	
Kimberley Dates	13 Jan - 14 Jan 2027	17 Feb - 18 Feb 2027	10 Mar - 11 Mar 2027	31 Mar - 01 Apr 2027
	19 May - 20 May 2027	10 Jun - 11 Jun 2027	30 Jun - 01 Jul 2027	14 Jul - 15 Jul 2027
	04 Aug - 05 Aug 2027	25 Aug - 26 Aug 2027	08 Sep - 09 Sep 2027	06 Oct - 07 Oct 2027
	27 Oct - 28 Oct 2027	10 Nov - 11 Nov 2027	18 Nov - 19 Nov 2027	01 Dec - 02 Dec 2027

CAT A 3D

Course Name: First Time Registration - Authorised Ammonia Practitioner Course (Safe Handling of Ammonia License)

Legislated training

Ammonia CAT A

Entry Requirements	This is for any persons working in or around an ammonia plant including cleaners, technical staff and plant operators as per legal requirement laid down in the OHS Act and pressure vessel regulations.	**Duration**	3 days
Class Times	Monday - Wednesday 08h00 until 15h30	**Cost**	R 5 960,00 incl. vat

Excludes: SARACCA Reg. fee of R 2 530.00 incl. vat payable directly towards SARACCA.

For the digital registration via SARACCA - 2 colour id photos, certified copy of id, certified copy of ACRA Certificate and Trade Test Certificate (if applicable) should be attached to the application / emailed to SARACCA. Candidates who apply for registration will be registered on the SAQCCGas Database www.saqccgas.co.za.

Registration via SARACCA should be done within 12 months from completing the training. Should the 12 month period be exceeded you will be required to redo the full 3 day course.

Objectives: This course enables a successful candidate to register in terms of the OHS Act (No 85 of 1993) - Sections 43 and 44 and regulation R734 of July 2009 (Pressure Equipment Regulations) as applicable to Ammonia Refrigerant. This course, required by law enables persons to register as an authorised person in the relevant categories with SARACCA.
The persons registering here are those who work as operators in plant rooms and in factories using process refrigeration but are not qualified by training in refrigeration. Persons applying for registration in this category require training in the hazards of ammonia refrigerant; Health and Safety and incident safety response requirements. A plant operator may not sign a Certificate of Conformity.

Outcomes: On successful completion of this course the student will have an understanding and skills in relation to the safe handling and response of Ammonia Refrigerant including the pressure vessel regulations, The OHS act and relevant regulations, the Montreal protocol, SANS requirements, safety, first aid, emergency response to a leak.

Johannesburg Dates	25 Jan - 27 Jan 2027	15 Mar - 17 Mar 2027	19 Apr - 21 Apr 2027	07 Jun - 09 Jun 2027
	19 Jul - 21 Jul 2027	30 Aug - 01 Sep 2027	11 Oct - 13 Oct 2027	22 Nov - 24 Nov 2027
	13 Dec - 15 Dec 2027			
Durban Dates	19 Apr - 21 Apr 2027	05 Jul - 07 Jul 2027	20 Sep - 22 Sep 2027	13 Dec - 15 Dec 2027
Kimberley Dates	07 Jun - 09 Jun 2027			

CAT A 2D

Course Name: Renewal - Authorised Ammonia Practitioner (Safe Handling of Ammonia License)

Legislated training

Ammonia CAT A

Entry Requirements	Valid SAQCCGas Ammonia Safe Handling License *(Registration should not be expired for longer that 12 months).*	**Duration**	2 days
Class Times	Tuesday - Wednesday 08h00 until 15h30	**Cost**	R 3 970,00 incl. vat

Excludes: SARACCA Reg. fee of R 2 530.00 incl. vat payable directly towards SARACCA.
For the digital registration as per initial registration via SARACCA.

Objectives: This course enables a successful candidate to re-register in terms of the OHS Act (No 85 of 1993) - Sections 43 and 44 and regulation R734 of July 2009 (Pressure Equipment Regulations) as applicable to Ammonia Refrigerant.

Outcomes: This course, required by law enables persons to re-register as an authorised person in the relevant categories with SAQCCGas.

Johannesburg Dates	26 Jan - 27 Jan 2027	16 Mar - 17 Mar 2027	20 Apr - 21 Apr 2027	08 Jun - 09 Jun 2027
	20 Jul - 21 Jul 2027	31 Aug - 01 Sep 2027	12 Oct - 13 Oct 2027	23 Nov - 24 Nov 2027
	14 Dec - 15 Dec 2027			
Durban Dates	20 Apr - 21 Apr 2027	06 Jul - 07 Jul 2027	21 Sep - 22 Sep 2027	14 Dec - 15 Dec 2027
Kimberley Dates	08 Jun - 09 Jun 2027			

CAT B 5D

Course Name — First Time Registration - Authorised Ammonia Practitioner Course

Legislated training

(Safe Handling of Ammonia License) **Ammonia CAT B**

Entry Requirements Refrigeration Mechanics working in cold storage refrigeration and process cooling using Ammonia can apply in this category. The artisan should have a trade test, the following trades are recognised Refrigeration mechanics, Pipe fitters, Electricians, Millwrights, who have been assessed as competent after specific safe handling of Ammonia and safety response training. *(SARACCA Requirement)*

Duration 5 days

Class Times Monday - Friday 08h00 until 15h30

Cost R 9 920,00 incl. vat

Excludes SARACCA Reg. fee of R 2 530.00 incl. vat payable directly towards SARACCA.

For the digital registration via SARACCA - 2 colour id photos, certified copy of id, certified copy of ACRA Certificate and Trade Test Certificate (if applicable) should be attached to the application / emailed to SARACCA. Candidates who apply for registration will be registered on the SAQCCGas Database www.saqccgas.co.za**.** Candidates can register on the SAQCCGas Mobile Application for issuing COC's.
Registration via SARACCA should be done within 12 months from completing the training. Should the 12 month period be exceeded you will be required to redo the full 5 day course.

Objectives This course enables a successful candidate to register in terms of the OHS Act (No 85 of 1993) - Sections 43 and 44 and regulation R734 of July 2009 (Pressure Equipment Regulations) as applicable to Ammonia Refrigerant. This course, required by law enables persons to register as an authorised person in the relevant categories with SARACCA.
"The card holder is an Authorised Refrigeration Practitioner using Ammonia Refrigerant refrigerant"
The candidates should be qualified artisans. The Practitioner can sign and issue a Certificate of Conformity for installation, maintenance and/or repairs.

Outcomes On successful completion of this course the student will have an understanding and skills in relation to the safe handling and usage of Ammonia Refrigerant including the pressure vessel regulations, The OHS act and relevant regulations, the Montreal protocol, SANS requirements, safety, first aid, emergency response to a leak and the basic service procedures.

Johannesburg Dates	25 Jan - 29 Jan 2027	15 Mar - 19 Mar 2027	19 Apr - 23 Apr 2027	07 Jun - 11 Jun 2027
	19 Jul - 23 Jul 2027	30 Aug - 03 Sep 2027	11 Oct - 15 Oct 2027	22 Nov - 26 Nov 2027
	13 Dec - 17 Dec 2027			
Durban Dates	19 Apr - 23 Apr 2027	05 Jul - 09 Jul 2027	20 Sep - 23 Sep 2027	13 Dec - 17 Dec 2027
Kimberley Dates	07 Jun - 11 Jun 2027			

CAT B 2D

Course Name — Renewal - Authorised Ammonia Practitioner

Legislated training

(Safe Handling of Ammonia License) **Ammonia CAT B**

Entry Requirements Valid Saracca Ammonia Safe Handling License
(License Card should not be expired for longer that 12 months)

Duration 2 days

Class Times Thursday - Friday 08h00 until 15h30

Cost R 3 970,00 incl. vat

Excludes SARACCA Reg. fee of R 2 530.00 incl. vat payable directly towards SARACCA.
For the digital registration as per initial registration via SARACCA.

Objectives This course enables a successful candidate to re-register in terms of the OHS Act (No 85 of 1993) - Sections 43 and 44 and regulation R734 of July 2009 (Pressure Equipment Regulations) as applicable to Ammonia Refrigerant.

Outcomes This course, required by law enables persons to re-register as an authorised person in the relevant categories with SAQCCGas.

Johannesburg Dates	28 Jan - 29 Jan 2027	18 Mar - 19 Mar 2027	22 Apr - 23 Apr 2027	10 Jun - 11 Jun 2027
	22 Jul - 23 Jul 2027	02 Sep - 03 Sep 2027	14 Oct - 15 Oct 2027	25 Nov - 26 Nov 2027
Durban Dates	22 Apr - 23 Apr 2027	08 Jul - 09 Jul 2027	22 Sep - 23 Sep 2027	
Kimberley Dates	10 Jun - 11 Jun 2027			

COC

Course Name — Certificate Of Conformance (COC)

Legislated training

Entry Requirements	Valid SAQCCGas Safe Handling Registration	**Duration**	1 day
Class Times	08h00 until 15h30	**Cost**	R 8 270,00 incl. vat

Excludes: SARACCA Reg. fee of R 2 530.00 incl. VAT payable directly to SARACCA.

For the digital registration via SARACCA - 2 colour ID photos, certified copy of ID, certified copy of ACRA Certificate and Trade Test Certificate should be attached to the application / emailed to SARACCA. Candidates who apply for registration will be registered on the SAQCCGas Database www.saqccgas.co.za**.** Candidates can register on the SAQCCGas Mobile Application for issuing COC's.

Objectives: Training and Assessment to comply with the legal requirement of the OHS Act. Pressure Equipment Regulation (Clause 17-18) July 2009 No 85 of 1993.

Outcomes: This course, required by law, enables persons to register as an Inspector Category C, provided all other requirements have been met as per SARACCA. ***Portfolio needs to be submitted within 90 days after successful completion of course at ACRA - or the candidate will have to redo the training.***

Example of Skills: The candidate will understand the Safety and Legal aspects with regards to the Pressure Vessel Regulation and be able to conduct inspections, completing all the relevant reports , documentation and issuing of a COC.

Johannesburg Dates	19 Feb 2027	16 Apr 2027	09 Jul 2027	10 Sep 2027	12 Nov 2027
Durban Dates	21 May 2027	17 Sep 2027			
Kimberley Dates	Available on Request!				

Once you have been registered with SAQCCGas. Please go to https://saqccgas.co.za/, search by only adding your Surname or Company Name to verify your license number.

Once you have confirmed your license number, please download the SAQCCGas COC mobile Application on your phone and complete the registration process.

TT PTA Legacy

(Legacy) Trade Test Readiness Assessment

Readiness Assessment

Entry Requirements	Minimum 4 years theoretical & practical on-the-job experience in HVAC&R.	**Duration**	1 day
Objective	Testing a candidate's knowledge before applying for the Trade Test.	**Cost**	R 800,00 incl. VAT

TTP Legacy

(Legacy) Pre-Trade Test Revision Refrigeration Mechanic (Industrial & Commercial)

(ARPL - Artisan Recognition of Prior Learning)

Revision

Entry Requirements	Approval from Seta - Serial Number	**Duration**	1 - 10 days
Class Times	Monday - Friday 08h00 until 15h30	**Cost**	R 1985,00 incl. vat per day depending on duration

Objectives: Revision for the candidate before trade testing. Applications for trade testing available at the Academy.

Available Dates: Dates issued after receipt of Trade Test Assessment Dates from Seta The dates will be scheduled 10 days / 5 days prior to the Trade Test Assessment date. The duration of Revision is subject to your knowledge and experience.

TT Legacy

(Legacy) Trade Test - Refrigeration Mechanic (Industrial & Commercial)

(ARPL - Artisan Recognition of Prior Learning)

National Qualification

BACKGROUND:

The National Qualifications Framework (NQF) is a comprehensive system for the classification, coordination, registration, and publication of articulated and quality-assured national qualifications.

Unit standard-based qualifications, also called "Legacy Qualifications," reached their registration end date. Existing learners will be allowed to complete the qualification.

Entry Requirements	Approval from SETA - Serial Number	**Duration**	2 days
Class Times	08h00 until 15h30	**Cost**	R 6810,00 incl. VAT per 2-day assessment

Objectives: The Academy is a DHET / QCTO / NAMB / SETA Accredited Decentralised Trade Test Centre (National Certification). Applications for trade testing are available at the Academy.

Available Dates: Trade Test dates are issued by a SETA after submission of your Trade Test Application at your nearest SETA office.

APPR Legacy

(Legacy) Apprenticeship - Refrigeration Mechanic (Industrial & Commercial)

National Qualification

Only apprentices already registered on the legacy qualification may continue until completion (2027).

OCCU APPR

*Occupational Qualifications ***NEW****

National Qualification

The Occupational Qualification Sub-framework (OQSF) is one of three sub-frameworks that comprise the NQF. The OQSF is the repository for all Occupational, Professional, and Trade qualifications, which are designed for the workplace. The OQSF provides for the development of Occupational Qualifications that are occupationally focused and designed to meet the needs of the workplace. Qualifications are developed by subject matter experts and are quality assured by the QCTO.

At the heart of the NQF are transferability, quality, and Recognition of Prior Learning (RPL), promoting flexibility and mobility in the education and employment sectors. Individuals who have acquired skills and knowledge through work experience or other means can have their skills and knowledge assessed and recognised as part of a qualification.

Occupational qualifications are designed to equip individuals with the knowledge, skills, and competencies required to perform specific job roles effectively and efficiently. Central to the design of occupational qualifications is the inclusion of **Knowledge, Practical,** and **Work Experience modules**.

Knowledge modules encompass the academic and theoretical aspects of a particular occupation. Knowledge modules ensure that learners have a solid understanding of the underlying concepts, theories, and best practices related to their chosen occupation.

Hands-on skills and real-world application of knowledge are the focus of **Practical modules**. Practical application helps bridge the gap between theoretical knowledge and job performance, making graduates job-ready.

Work experience modules involve learners working in a real job environment related to their field of study. This practical exposure allows learners to apply their theoretical knowledge and practical skills in a real-world setting. Evidence gathered for workplace experience will take the form of a logbook for the employer to complete.

Occupational Qualifications (Apprenticeships) *(contact us for more information)*

Upon successful registration, the apprentice will receive a starter toolbox, basic PPE, and the training will end with an Occupational Trade Test.

National Occupation Qualification	**National Certificate Refrigeration** Refrigeration Mechanic (ID 103270 OFO 642702)	
	Context 1: Fluorinated and Flammable Refrigerants	3 years
	Context 2: Carbon Dioxide Refrigerant	3 years
National Occupation Qualification	**National Certificate Air Conditioning and Refrigeration** Air Conditioning and Refrigeration Mechanic (ID 103277 OFO 642701)	3 years

Occupational Part-Qualifications *(contact us for more information)*

Part Qualification	**Heating, Ventilation and Air Conditioning (HVAC) Control Fitter** (ID 104620)	12 Months
Part Qualification	**Air Conditioning and Refrigeration Compliance Verifier** (ID 103276)	12 Months
Part Qualification	**Refrigeration Fitter** (ID 103268)	12 Months
Part Qualification	**HVAC Compliance verifier Domestic and light commercial refrigeration servicemen** (ID 103279)	12 Months
Part Qualification	**Air Conditioning and Refrigeration Certificate of Conformity Verifier** (ID 103272)	12 Months
Part Qualification	**Refrigeration Maintenance and Repair Workman** (ID 103266)	12 Months
Part Qualification	**Mobile Refrigeration Fitter** (ID 103267)	12 Months
Part Qualification	**Refrigeration Pipework Installer** (ID 103265)	12 Months

Occupational ARPL Trade Test (3 days)

National Occupational Qualification ARPL TRADE TEST	**National Occupational Certificate Refrigeration** Refrigeration Mechanic (ID 103270 OFO 642702)	
	Context 1: Commercial Refrigeration Mechanic (Fluorinated and Flammable Refrigerants)	**3 days** **Available 2027**
	Or Context 2: Industrial Refrigeration Mechanic	3 days To be confirmed
	Or Context 3: Carbon Dioxide Industrial Refrigeration Mechanic	3 days To be confirmed
	National Occupational Certificate Air Conditioning and Refrigeration **Air Conditioning and Refrigeration Mechanic (ID 103277 OFO 642701)**	**3 days** **Available 2027**

The **Artisan Recognition of Prior Learning (ARPL)** process in South Africa evaluates your existing workplace experience against formal trade standards to grant access to a Red Seal trade test.

1. Minimum Entry Requirements

To qualify for an ARPL assessment, you generally need a minimum age of 19 and one of the following experience-education combinations:

- **3 Years Work Experience:** Combined with an N2 certificate (4 subjects), Engineering NC(V) NQF 3, or Technical Grade 12.
- **18 Months Work Experience:** Combined with an Engineering NC(V) NQF 4, N6 certificate, or a National Technical Diploma.
- **4 Years Work Experience:** Combined with a Grade 9 school qualification.
- **Self-Employed / Informal Experience:** Supported by affidavits and community or client references.

2. Required Documentation

You must compile a **Body of Evidence (BoE)** to submit to an accredited Trade Test Centre:

- Certified copy of your South African ID
- Certified copies of school or technical certificates (e.g., Grade 9, Matric, N2, or N6)
- Detailed Curriculum Vitae (CV) mirroring your trade duties
- Employer service letter(s) on official company letterhead detailing start/end dates, specific trade tasks performed, and contact details of the supervisor/HR (or affidavits if self-employed)
- Application forms and registration/assessment fees.

3. The ARPL Assessment Process

- **Advocacy & Application:** You apply through an accredited Trade Test Centre.
- **Orientation & Compliance Check:** The center verifies your documents, screens your eligibility, and conducts an orientation.
- **Technical Evaluation & Interview:** A technical evaluation panel (consisting of registered Subject Matter Experts/assessors) interviews you and reviews your practical skills and theory knowledge.
- Gap Analysis & Feedback:
  - *If competent:* You are recommended/booked directly for your official **Trade Test**.
  - *If gaps are found:* A gap analysis identifies missing theory or practical competencies. You undergo targeted workplace training or a short preparation/skills-gap program (ranging from a few days to several weeks) before re-evaluating.

4. The Final Trade Test & Certification

- **Trade Test:** Conducted over 3 days at an accredited trade test center.
- **Red Seal Certification:** Passing the trade test leads to your official nationally recognized artisan qualification issued via the Quality Council for Trades and Occupations (QCTO).

Contact us for more information.

THE ACRA TEAM

Head Office:
Grant Laidlaw - Managing Director
Anria Pieterse - Administration Manager / Senior SDF
Armando Smal - Accountant / Auditor
Robyn Laidlaw - Accounts / Project Administration
Lourensia Welthagen - Accounts Clerk

Gauteng - Johannesburg:
James Laidlaw - Technical Manager / Facilitator / Assessor / Moderator
Freddie Upton - Facilitator / Assessor / Moderator / Trade Assessment Practitioner
Johanna Mahori - Facilitator / Assessor / Moderator
Ryan Laidlaw - Facilitator
Gareth Channer - Facilitator
Annelize Grobbelaar - Administration / Marketing / SDF
Alicia Leary - Reception / Social Media / Marketing / SDF
Magda Human - Course Bookings / Trade Test Bookings / Queries / SDF

Kwa-Zulu Natal - Durban:
Gordon Banks - Branch Manager / Facilitator / Assessor / Moderator / Trade Assessment Practitioner
Rodney Adams - Facilitator / Assessor
Donald Fraser - Facilitator / Assessor
Claudia Lee - Branch Administrator / SDF

Northern Cape - Kimberley:
Laurie Jacobs - Technical Manager / Facilitator / Assessor / Branch Administrator
Andre Mynhardt - Facilitator / Assessor
Stewart Laidlaw - Facilitator / Assessor / Moderator / Trade Assessment Practitioner

CLASS TIMES AND INFORMATION

Mondays - Thursday:

Training Start	08:00 am	Training Ends	15:30 pm
Lunch Time	12:00 pm	Lunchtime Ends	12:45 pm
Study Time Start	15:30 pm	Study Time Ends	16:00 pm

Fridays:

Training Start	08:00 am	Training Ends	13:00 pm

Tea Breaks

Tea & Coffee is included and will be served at the following times
Morning - 7:30am to 8:00am
Tea Break -10:00am to 10:15am
Lunch Time - 12:00pm to 12:45pm

What to Bring

SAFETY SHOES - no students will be allowed in the workshop without safety shoes.
Stationary - pen, pencil, ruler, eraser, highlighters, note pad and **calculator** - NO CELLPHONES ALLOWED DURING CLASS
ID / copy of ID / Proof of payment & Suitable clothing for practical training.

Bookings

See attached 2027 Enrolment form - please complete the form and return to the relevant branch:
* **Johannesburg Enrolments** via email to info@acra.co.za
* **Durban Enrolments** via email to acrakzn@acra.co.za
* **Kimberley Enrolments** via email to acranc@acra.co.za

Please send a copy of ID and proof of 50% Deposit paid.

ACCREDITATION

The Academy carries FULL ACCREDITATION for the training of apprenticeships, learnerships and training courses in air conditioning and refrigeration levels 2 through to 4, with QCTO (Quality Council for Trades & Occupations), NAMB (National Artisan Moderation Body) and DHET (Department of Higher Education and Training) Decentralised Assessment Centre status for Trade Testing and licensing for Safe Handling of Refrigerants for the South African Refrigeration and Air Conditioning Contractors Association (SARACCA). All courses are therefore recognised and are nationally and internationally certificated and/or licensed or carry a Diploma.

ACRA's TRAINING PARTNERS

It is ACRA's policy to involve industry role players as training partners; ultimately this results in ACRA's training being cutting-edge and in line with the latest trends in industry. Our partners introduce the latest technologies and equipment to the training centre. Their assistance with equipment keeps our training costs manageable and our courseware up to date. Our current training partners include:

Africa Eckerle Condensate Pumps
Copper Development Association Africa
Evapco
GIZ
O3 Chemicals
SARACCA /SAQCC Gas
Tecsa Reco
UNIDO
A-Gas (South Africa) (Pty) Ltd
Direct Digital Control Services / Innotech
Full Gauge Controls
IWC - Innovative Water Cooling (Pty) Ltd
Quickpro Pipes
Shamus Rennie
Testo South Africa (Pty) Ltd
Victaulic
Belimo
DFFE
GEA Africa
Johnson Controls
Samsung
Seeley International / Breezair Chint
Umicore Marketing Services Africa (Pty) Ltd
Whirlpool

INDUSTRY INVOLVEMENT

ACRA and ACRA's staff are heavily invested in the industry at various levels. Mr Grant Laidlaw is a Past President for SAIRAC (South African Institute for Refrigeration and Air Conditioning) and currently sits on the National Executive Committee in the training and Treasurers Portfolios. Mr Grant Laidlaw has been appointed to represent industry with NAMB as an expert practitioner for the development of occupational qualifications and trade testing. Mr. Laidlaw represents the Industry and the Department of Higher Education as a subject-matter expert for the curriculum and National Assessment Development. Mr. Laidlaw has published many articles in trade magazines and is a permanent contributor to the RACA Magazine and serves on the Advisory Committee. Furthermore, Mr. Laidlaw is a registered DOL/SAQCC Gas Inspector.
Mr Laidlaw is involved with the Department of the Environment, Forestry and Fisheries working committee for the phase-out and phase-down of ozone-depleting and global warming substances.

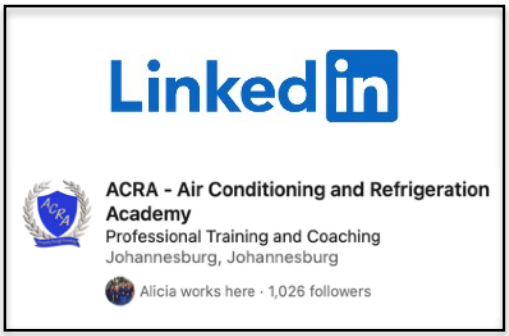
Grant Laidlaw was appointed by SARACCA to develop and maintain the Safe Handling of Refrigerants course, training manual, assessments and all associated documents and to develop the necessary processes for all providers on a national level.

Gordon Banks is the National President and sits on the Committee of SAIRAC KwaZulu-Natal.

Anria Pieterse, Annelize Grobbelaar, Alicia Leary, Magda Human, and Claudia Lee are all registered SDF's.

SOCIAL MEDIA

Find us on the following social media platforms-











RACA JOURNAL®
Refrigeration & Airconditioning Africa

Grant Laidlaw publishes monthly articles in the RACA - Refrigeration and Air Conditioning Africa Journal (magazine), visit **www.refrigerationandaircon.co.za** to read the articles published.







GRANT LAIDLAW

Grant Laidlaw is currently the owner of the Air Conditioning and Refrigeration Academy (ACRA) in Edenvale. He holds a Bachelor of Business Administration and an associate degree in educational administration. He has a National Technical Diploma and completed an apprenticeship with Transnet. He has dual-trades status: refrigeration and electrical. He has been involved with SAIRAC for over two decades and served on the Johannesburg committee as chairman and was also president between 2015 and 2018. Currently he is the SAIRAC national treasurer.

WELCOME TO THE SOLUTIONS PAGE

By Grant Laidlaw

Many people ask for assistance in understanding theoretical and practical aspects of the industry. I will endeavour to enlighten. We are going back to basics as I have questions coming in that indicate that the basic understanding necessary to work in industry is not in place.

Prince asks: I need to understand the situation around natural refrigerants. Also, what are forever refrigerants? I do not see any natural refrigerants being used. Thank you.

Hi Prince, yes, I can assist you with your question and pick up from the last issue.

Natural refrigerants are currently being extensively used. The domestic refrigeration sector has moved over to R600a (isobutane). R600a is a hydrocarbon and is, in fact, a natural refrigerant, as is R290 (propane). In the light commercial refrigeration sector, R290 beverage coolers have been introduced into the market with tens of thousands of these units currently in use in South Africa. In the industrial refrigeration sector, R717 (ammonia) is highly common and has been used in South Africa for over one hundred years. R717 has gained considerable traction in the commercial refrigeration space.

Prince, let us look at natural refrigerants in more detail.

NATURAL REFRIGERANTS – AN OVERVIEW

Natural refrigerants are substances that occur naturally in the environment. They are composed of the elements hydrogen, oxygen, carbon and nitrogen and include hydrocarbons, carbon dioxide, ammonia, water and air (also called 'the natural five'). The strong advantages of natural refrigerants are that they have zero ODP and a zero or negligible GWP.

SAIRAC™







South African Institute for Refrigeration and Air Conditioning

ACRA strives to be involved with institutions like SAIRAC to advance and protect the arts and sciences of refrigeration, air conditioning and the allied arts and sciences. Mr Grant Laidlaw is a Past President for SAIRAC (South African Institute for Refrigeration and Air Conditioning) and currently sits on the National Executive Committee in the training and Treasurers Portfolios.

Visit the SAIRAC website for events information and information regarding becoming a member of the South African Institute for Refrigeration and Air Conditioning - www.sairac.co.za

2027 GAUTENG - JOHANNESBURG COURSE BOOKINGS

For bookings please call Magda Human magda@acra.co.za or info@acra.co.za
Tel: (011) 393 1642, (011) 609 1118, 082 936 4183

2027 KWA-ZULU NATAL - DURBAN COURSE BOOKINGS

For bookings please call Claudia Lee acrakzn@acra.co.za or Gordon Banks gordon@acra.co.za
Tel: (031) 202 3103, 064 908 2677

2027 NORTHERN CAPE - KIMBERLEY COURSE BOOKINGS

For bookings please call Laurie Jacobs acranc@acra.co.za or laurie@acra.co.za
Tel: (053) 833 1903, 067 590 0579

Please complete the attached Enrolment Form to enrol on our courses.





