



## GUIDE TO REGISTRATION OF AUTHORISED REFRIGERATION PRACTITIONER

Thank you for taking the time to register under the Pressure Equipment Regulations with SAQCC Gas.

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 an accredited 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 3 basic categories within the scope of refrigeration work as defined in SANS 10147-2014 (Refrigerating systems including plants associated with air-conditioning systems).

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,.....

Clause 17; Gas reticulation equipment and systems;

1. “No person shall –

(a) Handle, store, or distribute any gas in any manner, which includes the filling of a container, other than in accordance with the relevant health and safety standard incorporated into these regulations under section 44 of the Act;

(b) Install or remove an appliance, pressure equipment or system for gas in any manner other than in accordance with the relevant safety standard incorporated into these regulations under section 44 of the Act;

(c) Install or remove a gas appliance or a gas system or a gas reticulation system unless such a person is an authorised person; or

(d) Use pressure equipment or systems for gas in any manner other than in accordance with the relevant safety standard incorporated into this regulation under section 44 of the Act.

2. After installation or re-installation, and before commissioning a gas system, the user shall ensure that an external inspection and leak test are performed by an authorised person or an approved inspection authority as applicable in terms of sub regulation 1.c.
3. an authorised person or an approved inspection authority shall issue a certificate of conformity after completion of a gas installation, modification, alteration or change of user or ownership in the form of annexure 1.”

Clause 18; Transportable gas containers;

1. No user shall use, require or permit a transportable gas container to be used, and no user shall fill, place in service, handle, modify repair inspect or test any transportable gas container, other than in compliance with the relevant standards incorporated into these Regulations under section 44 of the Act.

The Pressure Equipment Regulations refer to SANS 10147-2014. It is important to note in this Document that all personnel involved in the installation, operation and maintenance of refrigeration equipment and plants shall have been trained on the functioning of the installation and the handling, charging and recovery of refrigerants used in the refrigeration and air conditioning systems.

The Driven Machinery Regulations, also in the OHS Act, Clause 15 states that:  
No user shall use or permit the use of a refrigeration or an air conditioning installation unless it complies with the safety standard with respect to its construction, installation, operation and inspection incorporated for this purpose into these regulations.....

A Disciplinary procedure has been put in place by SAQCC Gas Code of Conduct and is applicable to where an authorised person practicing within his scope of work shows poor or bad performance and workmanship or bad behaviour can be held to account. Doing poor work and operating without registration will be viewed in a serious light and in severe cases of misconduct legal prosecution could be followed. The Code and the Disciplinary procedure can be viewed on the SAQCC Gas web site. ([www.saqccgas.co.za](http://www.saqccgas.co.za))

The application form for an Authorised Refrigeration Practitioner (ARP) is very straight forward. The information asked for can quickly be provided such as your name, address, phone numbers and employer details. The information regarding education and experience must be backed up by supporting certificates and documents. It would be wise to back up experience with letters from employers substantiating you experience profile.

The cost of first time registration and renewal of registration as from the 1st March 2018 is R2255.00 inclusive of VAT. Registration is valid for three years.

The replacement cost of a lost card or change of employer name or an up-grade within the 3 year cycle period is R400.00 inclusive of VAT.

Examine the list of 14 categories of registration below to establish where your training, qualifications, competence assessment and experience qualifies you for registration.

Category O; Refrigerants and Containers.

“The card holder is authorised to handle refrigerant containers”

This category is for those who are handling refrigerant containers, cylinders and the transfer refrigerants from storage vessels into service cylinders at the wholesalers and a company stores. MINIMUM UNIT STANDARDS to be covered are US-116334; US-116223; a relevant portion of US-116700

Category A; Refrigeration plant Operator.

“The card holder is authorised to operate a refrigeration plant and is aware of safety regulations and requirements”

The persons registering here are those who work as operators in plant rooms and in factories using process refrigeration but are not qualified to work on refrigeration plants.

Persons applying for registration in this category require training in the understanding the OHS Act and safety response and the basics of the refrigeration process and use of refrigerants.

A plant operator may not sign a Certificate of Conformity.

MINIMUM UNIT STANDARDS required for assessment are US116223, part of US116334 and US-116468: Ammonia Safety Response Training and portions of US116700 and/or US116704 relevant to plant operation;

Category A; Air Conditioning & Refrigeration Installer.

“The card holder is authorised to install of refrigeration piping, components and plant equipment”  
Installers who are defined as assistants or semi-skilled to NQF level 2 and 3 or who are not trade tested and are carrying out refrigeration installations and maintenance under supervision fall into this category.

A Practitioner registered as a category ‘A’ here is not permitted to sign a Certificate of Conformity. Installation Assistants who work alongside refrigeration mechanics also fall into this category.

MINIMUM UNIT STANDARDS required for assessment are US116700 and/or US116704; US-116334; US-116223; US 116468 and US-116355.

Category A; Domestic refrigeration practitioner.

“The card holder is authorised to install and maintain refrigeration units using Hydro Carbon Refrigerants (R600a & R290)”

The installation and maintenance of refrigeration appliances covering domestic refrigerators, small ice makers and refrigeration units using Hydro Carbon Refrigerants. Training at suppliers on product specific installation and maintenance activities is recognised.

The is registered here as a category ‘A’ is permitted to sign a Certificate of Conformity on Hydro Carbon gas appliances only

MINIMUM UNIT STANDARDS required for assessment are US116700 and/or US116704; US-116334; US-116223; US 116468 and US-116355.

Category A; Air Conditioning unit Installer –

“The card holder is authorised to install and maintain room air conditioning units up to 18kW cooling capacity”

Installers who are installing Room Air Conditioning units and small refrigeration units up to 18kW cooling capacity under supervision fall into this category. Training at air conditioning unit suppliers on product specific activities is recognised.

This category is restricted to the Group A1 refrigerants defined in SANS 10147:2014.

The installer is registered here as a category ‘A’ is permitted to sign a Certificate of Conformity (CoC) for equipment up to 18kW cooling capacity.

MINIMUM UNIT STANDARDS required for assessment are US116700; US-116334; US-116355; US-116223; US 116468. PLUS; Room air conditioning unit product specific training covering installation, commissioning and maintenance at a unit supplier.

Category A; Air Conditioning & Refrigeration Apprentice/Learner-

“The card holder is an authorised air conditioning & refrigeration Apprentice/Learner”  
This category is specifically for those mechanics who are in training towards a trade test. After passing a trade test the mechanic may apply to be upgraded to category ‘B’.

An apprentice registered as a category ‘A’ here is not permitted to sign a Certificate of Conformity for installations.

MINIMUM UNIT STANDARDS to be covered are the Core unit standards in NQF level 2, 3 and 4 up to a trade test. Including for registration US116700 and/or US116704; US-116334; US-116223, US-116468 & US-116355.

The Minimum Unit standards for registration in category B for artisans are US116223; US116334; US116355; US116700 (F-gases) US116704 (Ammonia) and US116468.

Category B; Air Conditioning & Refrigeration Practitioner –

“The card holder is an authorised as a refrigeration Practitioner using Synthetic Freon gases and Hydro Carbon refrigerant gas”

The majority of refrigeration mechanics fall into this category. They must have completed an apprenticeship and trade test in refrigeration or electrical trades and are registered as artisans. They are qualified to work on a wide variety of refrigeration and air conditioning installations and systems using Group A1 & A3 refrigerants. Have a knowledge of refrigeration safety, the handling of refrigerants, installation, testing, and commissioning and inspection skills.

The Practitioner is permitted to sign a Certificate of Conformity for installations, maintenance and repairs.

Category B; Carbon Dioxide Refrigeration Practitioner-

‘The card holder is authorised as a specialist Carbon Dioxide (R744) refrigeration practitioner’  
Refrigeration Mechanics working in commercial refrigeration using Carbon Dioxide and are registered artisans must apply here. The following trades may be recognised are Refrigeration mechanics, Electricians, and who have been assessed as competent after specific Carbon Dioxide refrigeration training.

Proven experience in Carbon Dioxide refrigeration is a requirement.

Category B; Ammonia Refrigeration Practitioner-

“The card holder is authorised as a specialist Ammonia (R717) refrigeration practitioner”  
Refrigeration Mechanics working in cold storage and process cooling refrigeration using Ammonia and are registered artisans must apply here. The following trades may be recognised are Refrigeration mechanics, Electricians, Millwrights etc. and who have been assessed as competent after specific Ammonia refrigeration training.

Training in Ammonia Safety Response Training.

Category B; Car Air Conditioning-

“The card holder is authorised as a specialist motor vehicle air conditioning practitioner”  
All motor vehicle air conditioning for cars, buses, and vehicle cabs are covered by this category. Those who register here may be motor mechanics, auto electricians and diesel mechanics that have completed the vehicle air conditioning training and safe handling of refrigerants training. Additional minimum unit standards are recommended for skills in vehicle air conditioning;

US116703, US116705 and US116708.  
Category B; Refrigerated Transport –

“The card holder is authorised as a specialist refrigerated transport practitioner”

Refrigerated transport vehicles and containers are covered by this category. Those who register here may be refrigeration mechanics, motor mechanics, auto electricians and diesel mechanics that have completed the vehicle refrigeration training and safe handling of refrigerants training. Additional minimum unit standards; US 9546, US 9266 and US 262158 are recommended as skills in refrigerated trucks, trailers and shipping containers

Category B; Marine Refrigeration –

“The card holder is authorised as a specialist marine refrigeration practitioner on all types of refrigerant gases”

The refrigeration on fishing boats and ships and refrigerated container carriers is covered in this category. Those who register here must be refrigeration mechanics Electricians and millwrights who have trained in the marine environment. Knowledge in all types systems and refrigerants used on fishing boats and ships.

Category C; Inspector – Refrigeration installations –

“The card holder is an authorised Inspector of refrigeration installations”

This registration is for those who by experience and training are well versed in all applications industrial and commercial refrigeration who can act within training, experience and competence. Previous registration in Category B is a requirement plus a competent assessment in the inspection of refrigeration plant as per Unit Standard 262159 and knowledge of SANS10147, SANS347 and the OHS Act and Regulations

Category C; Inspector – Refrigeration associated with Air Conditioning –

“The card holder is an authorised Inspector of refrigeration associated with air conditioning installations”

This registration is for those who by experience and training are well versed in all applications refrigeration associated with air conditioning. Previous registration in Category B is a requirement plus a competent assessment in the inspection of refrigeration plant as per Unit Standard 262159 plus knowledge of SANS10147, SANS347 and the OHS Act and Regulations.

Category C; Designer – Refrigeration and Air Conditioning –

“The card holder is an authorised Designer of refrigeration and air conditioning installations”  
This category is aimed at those who design refrigeration systems and refrigeration related to air conditioning at different levels. It is necessary to define where design expertise gained. Design qualifications in refrigeration and Air Conditioning theory plus knowledge of SANS10147, SANS347 and the Pressure Equipment Regulations incorporated into the OH&S Act.

A technical / engineering diploma or degree is necessary.

Recognition of prior learning and experience in the field of design will be applied.

All applicants must have been assessed as competent in the handling refrigerants by a SARACCA recognised training provider in the relevant Unit Standards listed above. A list of MERSETA accredited training providers is available from SARACCA.

The Department of Higher Education and QCTO is in the process of realigning the refrigeration and air conditioning trades which could be introduced later this year (2018)

You are required to sign a Code of Good Refrigeration Practice as part of your registration. Do not forget it is most important to attach all the relevant documentation, copies of certificates, photographs and proof of payment. Failure to do so will delay and stall your application.

It is better to provide more information than too little.

Registration as an “authorised refrigeration gas practitioner” is a legal requirement and any false declaration or working outside of the scope of your registration and competence will result in disciplinary procedures in terms of the SAQCC Gas Disciplinary Code and/or possible or possible legal action and prosecution in terms of the OHS Act.

An Authorised Refrigeration Gas Practitioner with up to date registration is required as detailed in the PER Regulation 17 to sign a Certificate of Conformity (CoC) after completion of an installation, maintenance procedure, repair, relocation or decommissioning of a unit or plant.

Category A unit installers may only sign a CoC for room air conditioning units installations up to 18kW cooling capacity.

Category B practitioners may sign a CoC for work in their area of competence and experience for any size plant provided they have done the work or witnessed the installation and commissioning of the plant.

Certificate of Conformity books of 50 certificates are available from SARACCA at R490.00 each inclusive of VAT and courier.