


SKILLS PROGRAMME DOCUMENT							
Skills Programme Title		<b>Refrigerant Safe Handling</b>					
NQF Level	2	Credits	20	Duration in days	16 Days		
Skills Programme ID Number		SP-210408					
Skills Programme Status	Approved			Start Date	End Date		
				16/04/2021	16/04/2026		
Last date for enrolment	16/04/2027	Last date for achievement		16/04/2030			

## SKILLS PROGRAMME DETAILS

<b>Title</b>	Refrigerant Safe Handling
<b>Sub Title</b>	<p>2019-642- Air Conditioning and Refrigeration Mechanics Air conditioning and refrigeration mechanics assemble, install, maintain and repair air conditioning and refrigeration systems and equipment. Tasks include: Interpreting blueprints, drawings or other specifications Testing systems, diagnosing faults and performing routine maintenance or servicing Assembling, installing and repairing components for air conditioning and refrigeration systems Connecting piping and equipment by bolting, riveting, welding or brazing</p> <p>2019-642701 Air-conditioning and Refrigeration Mechanic Installs, maintains and repairs piping, ducting and equipment for heating, cooling and ventilation of buildings or vessels. Specialisations: Air Conditioning Equipment Mechanic Air Conditioning and Refrigeration Technician Mechanical Services and Air Conditioning Plumber Air Conditioning Technician</p> <p>Alternative Titles: 2019-642702 Refrigeration Mechanic Assembles, installs, maintains and repairs industrial, commercial and domestic air-conditioning and refrigeration systems and equipment. Specialisations: Cold Storage Maintenance Serviceman Heating Control Mechanic Electrical Mechanic HVAC Control Technician / Fitter Refrigeration Mechanic (Commercial) Air-conditioning and Refrigeration Electrician Air-conditioning / Cooling / Heating / Ventilation Mechanic Refrigeration Fitter Air-conditioning / Cooling / Heating / Ventilation Systems Installer Refrigeration Mechanician Refrigeration Mechanic (Industrial</p>

<b>NQF Level</b>	2
<b>Credits</b>	20
<b>Duration</b>	16 Days
<b>Quality Assuring Body</b>	Quality Council for Trades and Occupations (QCTO)
<b>Skills Rationale</b>	<p>The OHS Act no.85 of 1993 - Sections 43 and 44 and the pressure equipment regulations R734, 15 July 09 and the SANS 10147 require that only authorised persons may work with refrigerants. This skills program is the minimum requirement to register as an authorised person.</p> <p>The refrigerant safe handling skills program represents the minimum legal requirement for all persons working in industry, whether it be in the formal or informal sectors.</p> <p>The skills program is an existing unregistered program but as the program is of national and international importance; the program needs to be registered with QCTO as a national skills programs as part of the new Occupations registered. Refrigeration Mechanic SAQA ID 642702 and Occupational certificate: Air conditioning and refrigeration mechanic SAQA Qual ID: 642701.</p> <p>No other skills programs of this nature are currently registered with QCTO.</p> <p>The program forms part of the Montreal Protocol strategy and as such part of South Africa's international commitment to the phase down of ozone depleting and global warming substances (Refrigerants) forming part of National Government's department of the Environment, Forestry and Fisheries.</p> <p>The skills program forms part of the curriculum and credits can utilised towards the full occupational qualification. All persons who wish to enter or are working in the refrigeration industry have to, buy law, complete the refrigerant safety training as required by SARACCA and SAQCC gas.</p>

	<p>Typical learners include all persons currently working in the field as well as all new entrants skills programs, learnerships and apprenticeships.</p> <p>The skills program meets the requirements for professional registration with SAQCC gas and SARACCA for the registration of authorised persons. As such it is recognised by the industry professional bodies and association.</p> <p>The typical occupations in which the qualifying learners will be operating in are in refrigeration and air-conditioning fields in the qualifications and their part qualifications mentioned above.</p>
<p><b>Related registered qualification/s</b></p>	<p>Refrigeration Mechanic SAQA ID 642702 and Occupational Certificate Air conditioning and refrigeration mechanic SAQA Qual ID: 642701.</p> <p>Part Qualifications</p> <p>642701000#01 Unitary Air Conditioning Installer</p> <p>642701000#06 Vehicle Air Conditioning Fitter</p> <p>642701000#08 Air Conditioning and Refrigeration Compliance Verifier</p> <p>642702000#01 Domestic and light commercial refrigeration serviceman</p> <p>64202000#05 Mobile refrigeration fitter</p> <p>64202000#06 Refrigeration maintenance and repair workman</p>
<p><b>Purpose</b></p>	<p>The skills program will enable the learners to legally work in the air conditioning and refrigeration sector and represents the minimum working criteria when working with refrigerants.</p> <p>The program will enable the learner to register him/herself as an authorised person for the use of refrigerants.</p> <p>The program will inform learners of the latest legislation around the use of refrigerants</p> <p>The program will highlight relevant areas of the OHS act with regards to the pressure vessel regulations.</p>

	<p>The program will train the learners in the use of the new natural flammable refrigerants. (Safety and use)</p> <p>The program will update the learners skill set in the latest technological advances in refrigeration.</p> <p>The program will raise the quality standards of the learners.</p> <p>The program will inform the learners as to international protocols thereby protecting the environment.</p> <p>The program will assist the learners to enter the formal sector</p>	
<b>Content</b>	<p><b><u>Knowledge component</u></b></p> <p>KM 642701000-KM-01 Topic KM-01-KT02</p> <p>KM 642701000-KM-02. Topic KM-02-KT01 Topic KM-02-KT02</p> <p>KM 642701000-KM-09 Topic KM-09-KT01</p> <p>KM 642701000-KM-11 Complete Module</p> <p>KM 642701000-KM-12 Complete Module</p> <p>KM 642701000-KM-14 Complete Module</p> <p>KM 642701000-KM-26 Complete Module</p>	<p><b><u>Application component</u></b></p> <p>PM 642701000-PM-01 Complete Module</p> <p>PM 642701000-PM-03 Complete Module</p> <p>PM 642701000-04 Complete Module</p> <p>PM 642701000-PM-05 Complete Module</p> <p>WM 642701000-WM-01 Topic WM-01-WE03</p> <p>WM 642701000-WM-07 Complete Module</p> <p>WM 642701001-WM16 Topic WM-16-WE02 Topic WM-16-WE03 Topic WM-16-WE04</p>
<b>Minimum entry requirements</b>	NQF Level 1 with Mathematics	

<p><b>Exit Level Outcomes</b></p>	<p>Exit level outcome 1 Handle refrigerants safely</p> <p>Exit level outcome 2 Evacuate refrigeration systems</p> <p>Exit level outcome 3 Pressure test refrigeration systems</p> <p>Exit level outcome 4 Charge refrigeration systems</p> <p>Exit level outcome 5 Recover Refrigerants</p>
<p><b>Assessment</b></p>	<p>a) <b>Continuous Assessment</b> Formative Self tests: Monitored by lecturer</p> <p>Observation checklists utilised throughout the practical sessions coupled with task instructions.</p> <p>b) <b>Supervised Assessment</b> Knowledge questionnaire.</p> <p>Integrated summative assessment in observation checklist</p> <p>Third form of evidence for workplace module: Supervisor statement and/or logbook and interview with assessor</p>
<p><b>Recognition of Prior Learning (RPL)</b></p>	<ul style="list-style-type: none"> <li>Learners will gain access to the skills programme through RPL for Access as provided for in the QCTO RPL Policy. RPL for access is conducted by an accredited institution, skills development provider or workplace accredited to offer that specific skills programme.</li> <li>Learners who have already acquired competencies of modules of a skills programme will be exempted from modules through RPL. Such learners will be awarded credits towards the skills programme.</li> <li>Learners who complete this skills programme will accumulate credits towards the relevant full or part qualification. The Credit Accumulation and Transfer (CAT) Policy shall apply to these learners</li> </ul>

<p><b>Work Opportunities/further learning</b></p>	<p>The skills program is aimed at new entrants as well as currently employed personnel. Upon completion, learners will have acquired knowledge and skills that will enable them to safely, legally work in an environmentally responsible manner on refrigeration systems. In addition, the learners will be able to become registered authorized gas practitioners. They are likely to be employed across the economic sectors that include but not limited to: mining, retail, food processing, warehousing, food production, automotive, marine, medical, engineering, fruit and wine industry, cold transport and farming.</p> <p>This skills program is structured in such a manner that allows learners to progress to the full qualification by accumulating credits achieved from the part.</p>
<p><b>Skills Development Provider Accreditation Requirements</b></p>	<p>a) Human resource requirements:</p> <p>Facilitators must be qualified (Trade tested) in the relevant trades of Refrigeration Mechanic (commercial) and Air-Conditioning and Refrigeration Mechanic or Electrician (Air Conditioning and Refrigeration) or Refrigeration Mechanic (industrial).</p> <p>Mentors must be qualified in the relevant trades of Refrigeration Mechanic (commercial) and Air-Conditioning and Refrigeration Mechanic, Electrician (Air Conditioning and Refrigeration) or Refrigeration Mechanic (industrial).</p> <p>Assessors must have a minimum of 3 years post trade test qualification commercial or industrial industry experience. And be qualified in the relevant trades of Refrigeration Mechanic (commercial) and Air-Conditioning and Refrigeration Mechanic, Electrician (Air Conditioning and Refrigeration) or Refrigeration Mechanic (industrial) and be registered with NAMB.</p> <p>Moderators must have a minimum of 5 years post trade test qualification commercial or industrial industry experience. And be qualified in the relevant trades of Refrigeration Mechanic (commercial) and Air-Conditioning and Refrigeration Mechanic,</p>

	<p>Electrician (Air Conditioning and Refrigeration) or Refrigeration Mechanic (industrial) and be registered with NAMB.</p> <p>b) See Annexure 1</p> <p><b>c) Legal requirements</b></p> <p>The centre must be a QCTO accredited training centre for Refrigeration and or Air conditioning and Refrigeration</p> <p>d) Safety requirements</p> <p>All OHS act requirements.</p> <p>Facilitators, assessors must be in possession of a valid Safe Handling Licence - minimum Category B</p> <p>All pressure equipment must have a valid Certificate of conformance not older than six months.</p>
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