

Unit ID: 603

Domain

**AIR CONDITIONING AND
REFRIGERATION**

Title:

Build up cold and freezer rooms

Level: 4

Credits: 11

Purpose

This unit standard specifies the competencies required to build up cold and freezer rooms. It includes developing project plan proposal, constructing cold and freezer rooms and managing ACR projects. This unit standard is intended for those who work as air conditioning and refrigeration mechanics.

Special Notes

1. Entry information:

Prerequisite

- Unit 567 - *Apply health and safety routines in an air conditioning and refrigeration workplace* or demonstrated equivalent knowledge and skills.

2. Assessment evidence may be collected from a real workplace or a simulated real workplace or an appropriate simulated realistic environment in which air conditioning and refrigeration operations are carried out.

3. All inspection, operation and maintenance procedures associated with the use of tools and equipment shall comply with manufacturers' specifications and/or company's guidelines and instructions.

4. Glossary of terms:

- 'ACR system' refers to air conditioning and refrigeration systems
- 'specifications' refers to any, or all of the following: manufacturers' specifications and recommendations, workplace specific requirements.

5. Regulations and legislation relevant to this unit standard include the following:

- Labour Act, No. 11, 2007
- Occupational Health and Safety Regulations No. 18, 1997 and all subsequent amendments.

6. Performance of all elements in this unit standard must comply with industry standards.

7. This unit standard applies to single-phase and three-phase air conditioning and refrigeration systems.

Quality Assurance Requirements

This unit standard and others within this subfield may be awarded by institutions which meet the accreditation requirements set by the Namibia Qualifications Authority and the Namibia Training Authority and which comply with the national assessment and moderation requirements. Details of specific accreditation requirements and the national assessment arrangements are available from the Namibia Qualifications Authority and the Namibia Training Authority. All approved unit standards, qualifications and national assessment arrangements are available on the Namibia Training Authority website www.nta.com.na.

Elements and Performance Criteria

Element 1: Plan and prepare for work.

Range

Air conditioning and refrigeration service hand tools may include but are not limited to tools for turning, special spanners, swage and fare tools, tools for gripping and holding tools for hammering and driving, tools for cutting and forming, tools for pulling and pushing tools, measuring tools, bending tools measuring instruments.

Air conditioning and refrigeration service power tools may include but are not limited to air blow gun, drill machine, arc welding machine, and grinder.

Equipment may include but are not limited to oxy-acetylene gas welding set, charging station/manifold gauges, recovery machine and vacuum pump.

Performance Criteria

- 1.1 Work instructions, including job cards, specifications and operational details are obtained, confirmed and applied.
- 1.2 Workplace inspection, equipment defect identification, assessment of conditions and hazards and determination of work requirements is carried out.
- 1.3 Safety requirements are followed in line with safety plans and policies.
- 1.4 Tools and equipment selected to carry out tasks are consistent with the requirements of the job, checked for serviceability and any faults rectified or reported prior to commencement.
- 1.5 Material requirements are identified and obtained in line with job card and/or specifications.
- 1.6 Materials are safely handled and located ready for use in line with workplace procedures.
- 1.7 Technical and/or calibration requirements for tools and equipment are sourced and implemented in line with workplace procedures.
- 1.8 Environmental protection requirements are identified and applied in line with environmental plans and regulatory obligations.

Element 2: Develop project plan proposal

Range

Project plan proposal may include but are not limited to estimated size of plant, material, labour and other costs.

Performance Criteria

- 2.1 Procedures and information required for developing project plan proposal are identified and sourced in line with workplace procedures.
- 2.2 Project budget is established in line with manufacturer's specifications and workplace procedures.
- 2.3 Critical projects path are analysed in line with workplace procedures.
- 2.4 Project plan proposal is documented in line with manufactures and workplace procedures.

Element 3: Construct cold and/or freezer room.

Range

Constructing methods may include but are not limited to fasten, rivet, adhesive, sprit level, silicone and brazing.

Performance Criteria

- 3.1 Procedures and information required for constructing cold and/or freezer rooms are identified and sourced in line with workplace procedures.
- 3.2 Construction plan are read and interpreted correctly.
- 3.3 Properties of materials used for constructing cold and/or freezer rooms are identified and described.
- 3.4 Cold and/or freezer room is constructed in line with industry requirements, manufacturer's specifications and workplace procedures.
- 3.5 Constructing methods are implemented in line with workplace procedures.
- 3.6 System components are assembled in line with work place procedures.
- 3.7 Pipe installations are run to meet industry requirements and in line with workplace procedures.
- 3.8 Electrical connections are carry out to ensure system operations and in line with manufacture specifications and workplace procedures.

Element 4: Manage ACR projects

Performance Criteria

- 4.1 Risk events are identified and project strategies implanted to ensure that outcomes are achieved in line with workplace procedures.
- 4.2 Project Progress is monitored against schedule, quality requirements and budget.
- 4.3 Conflict issues at work site and between stakeholders, clients and regulators are identified and managed in line with workplace procedures.

Element 5: Complete work and clean up.

Range

Work completion details may include but are not limited to job card, and sign-out form for equipment.

Performance Criteria

- 5.1 Work is completed and appropriate personnel notified in line with workplace procedures.
- 5.2 Work area is cleared of waste, cleaned, restored and secured in line with workplace procedures.
- 5.3 Reusable material is collected and stored in line with workplace procedures.
- 5.4 Equipment used is cleaned, checked, maintained and stored in line with workplace procedures.
- 5.5 Work completion details are finalised in line with workplace procedures.

Registration Data

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