



BA-PHALABORWA MUNICIPALITY
MEMORANDUM
- BUDGET AND TREASURY –

TO : *Prospective Service Provider*
FROM : *SCM /STORES*
DATE : *22/02/2019*
ENQUIRIES : *STORES*
TELEPHONE : *015 780 6362/61*
REF : *128141*

Kindly furnish this office with a written quotation for supply of goods/ services as detailed below. The quotation must be submitted on the letterhead of your Business and Brought to our offices 3 Nyala Street, Phalaborwa not later than **04/03/2019 at 12HOO**

QUANTITY	Description	PRICE/UNIT (Inc .VAT)	DELIVERY PERIOD
25	Request for Air conditioner repair training for 25 learners for 3 days		

Please number your quotes (Your Ref no)

The following conditions will apply:

- *Price (s) quoted must be valid for at least thirty (30) days from date of your offer.*
- *The municipality retains the prerogative to reject any quotes it deems to be excessive*
- *A firm delivery period must be indicated.*
- *Tax Clearance Certificate*
- *A service provide be registered with central supplier database (CSD)*
- *Registered with CIPRO (CK 1 or 2 document)*
- *BBBEE Certificate certified by a SANAS accredited institution.*
- *Completed MBD4 (Declaration of Interest) Form*

N.B Originals must be couriered/ posted to 3 Nyala Street Phalaborwa for all emailed documents.

Fill in and Return the Declaration of Interest Form.



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**SOUTH AFRICAN QUALIFICATIONS AUTHORITY
REGISTERED UNIT STANDARD:**

Repair and overhaul air-conditioning, refrigeration and ventilation equipment

SAQA US ID	UNIT STANDARD TITLE			
116421	Repair and overhaul air-conditioning, refrigeration and ventilation equipment			
ORIGINATOR				
SGB Air-conditioning Refrigeration and Ventilation				
PRIMARY OR DELEGATED QUALITY ASSURANCE FUNCTIONARY				
FIELD		SUBFIELD		
Field 06 - Manufacturing, Engineering and Technology		Manufacturing and Assembly		
ABET BAND	UNIT STANDARD TYPE	PRE-2009 NQF LEVEL	NQF LEVEL	CREDITS
Undefined	Regular	Level 4	NQF Level 04	8
REGISTRATION STATUS		REGISTRATION START DATE	REGISTRATION END DATE	SAQA DECISION NUMBER
Reregistered		2018-07-01	2023-06-30	SAQA 06120/18
LAST DATE FOR ENROLMENT		LAST DATE FOR ACHIEVEMENT		
2024-06-30		2027-06-30		

In all of the tables in this document, both the pre-2009 NQF Level and the NQF Level is shown. In the text (purpose statements, qualification rules, etc), any references to NQF Levels are to the pre-2009 levels unless specifically stated otherwise.

This unit standard replaces:

US ID	Unit Standard Title	Pre-2009 NQF Level	NQF Level	Credits	Replacement Status
9521	Repair and overhaul air-conditioning, refrigeration and ventilation equipment	Level 4	NQF Level 04	8	Complete

PURPOSE OF THE UNIT STANDARD

Repair and overhaul air-conditioning, refrigeration and ventilation components and equipment. People credited with this unit standard have proven the ability to:

- Apply instructions, technical drawings, specifications and data to repair and overhaul refrigeration and air-conditioning components and equipment.
- Select the correct method of repair and overhaul.
- Undertake the work correctly and safely.
- Test the assembled component or equipment for acceptable operation.

LEARNING ASSUMED TO BE IN PLACE AND RECOGNITION OF PRIOR LEARNING

Ability to select, use and care for the relevant refrigeration tools and instrumentation.

- Operate and maintain power tools used in the refrigeration, air-conditioning and ventilation trade.
- Use and maintain refrigeration trade service tools and instruments.
- Interpret technical drawings.



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UNIT STANDARD RANGE

Compressors, motors, pumps, fans and components used in refrigeration and air-conditioning.

Specific Outcomes and Assessment Criteria:

SPECIFIC OUTCOME 1

State the purpose of component overhaul and repair.

ASSESSMENT CRITERIA

ASSESSMENT CRITERION 1

The purpose of overhaul and repair in terms of performance and economic considerations is explained.

ASSESSMENT CRITERION 2

The type of overhaul and repair is explained and described.

ASSESSMENT CRITERION RANGE

Minor repair on site. Minor overhaul, repair and reconditioning. Major overhaul and repair and complete reconditioning of components and ancillaries.

SPECIFIC OUTCOME 2

Plan the overhaul and repair operation.

ASSESSMENT CRITERIA

ASSESSMENT CRITERION 1

The work sequence and techniques for the overhaul and repair is planned and the importance of the various sequences and techniques is explained.

ASSESSMENT CRITERION 2

The type and quantities of material, tools, equipment and instrumentation required is included in the plan.

ASSESSMENT CRITERION 3

Work activities are planned to maintain productive work output and ensure compliance with given work instructions.

ASSESSMENT CRITERION 4

The form and principles of tools used for overhaul and repair is described.

SPECIFIC OUTCOME 3

Carry out overhaul and repair activities.

ASSESSMENT CRITERIA

ASSESSMENT CRITERION 1

Safe handling of tools, equipment and instrumentation in accordance with their intended use and/or manufacturer's specification and to prevent harm to oneself and others and damage to equipment, is demonstrated.

ASSESSMENT CRITERION 2

Overhaul and repair is carried out according to manufacturer's specifications and procedures.

ASSESSMENT CRITERION 3



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Functioning of the various components of the equipment is described.

ASSESSMENT CRITERION 4

The common defects, for which equipment parts should be examined, are described.

ASSESSMENT CRITERION 5

Reconditioning processes to rectify defects are described.

ASSESSMENT CRITERION 6

Components or parts are checked for functionality and defective components are repaired or replaced according to standard operating procedures.

ASSESSMENT CRITERION 7

All components and spare parts are positioned and secured in accordance with manufacturer's recommendations.

ASSESSMENT CRITERION 8

Frequent checks are carried out during the progress of work to ensure correctness of operation.

ASSESSMENT CRITERION 9

Spare parts are inspected for functionality and any deviation from specification is identified and corrective action is taken in line with company procedures and manufacturer's instructions.

ASSESSMENT CRITERION 10

The equipment is repaired or overhauled within agreed time frames.

ASSESSMENT CRITERION 11

The consequence of sub-standard repair is described in terms of loss in production, danger to plant and personnel, long-term damage to machinery and their cost implication.

ASSESSMENT CRITERION 12

The effects and importance of forces, tolerances, correct positioning and mating of components required during assembly, are described.

SPECIFIC OUTCOME 4

Carry out post-repair and overhaul activities.

ASSESSMENT CRITERIA

ASSESSMENT CRITERION 1

Work is checked in accordance with written instructions to ensure compliance.

ASSESSMENT CRITERION 2

The method and equipment required for testing the component is described.

ASSESSMENT CRITERION 3

Operation of the component and/or equipment is tested in accordance with specified operating instructions.

ASSESSMENT CRITERION 4

The work area is cleaned, and tools and surplus material is stored in accordance with accepted housekeeping principles.

ASSESSMENT CRITERION 5

Completion of the work is reported in line with agreed company procedures.



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UNIT STANDARD ACCREDITATION AND MODERATION OPTIONS

Any person wishing to be assessed against this unit standard may apply to an assessment agency, assessor or provider institution accredited by the relevant ETQA, who may appoint a moderator to be present at the assessment.

The assessor must have knowledge and experience of air-conditioning, refrigeration or ventilation equipment.

UNIT STANDARD ESSENTIAL EMBEDDED KNOWLEDGE

- *Use of technical drawings and specifications used for repair and overhaul of equipment.*
- *Knowledge of consequences of sub-standard workmanship.*
- *Planning repair and overhaul procedures.*

UNIT STANDARD DEVELOPMENTAL OUTCOME

N/A

UNIT STANDARD LINKAGES

N/A

Critical Cross-field Outcomes (CCFO):

UNIT STANDARD CCFO IDENTIFYING

Identify and solve problems

- *Identifying components and faulty parts to be replaced*

UNIT STANDARD CCFO WORKING

Work effectively with others

- *Work with others during assembly of equipment*

UNIT STANDARD CCFO ORGANISING

Organise and manage myself and my activities responsibly and effectively

- *Preparing, planning and selecting correct repair and overhaul procedures*

UNIT STANDARD CCFO COMMUNICATING

Communicate effectively

- *Presenting oral or written reports to supervisor*

UNIT STANDARD CCFO SCIENCE

Use science and technology effectively and critically

- *Using correct tools, instrumentation and parts*

UNIT STANDARD CCFO DEMONSTRATING

Demonstrate an understanding of the world as a set of related systems

- *Impact of substandard or incorrect repair method on people and environment*

UNIT STANDARD ASSESSOR CRITERIA

N/A

REREGISTRATION HISTORY

As per the SAQA Board decision/s at that time, this unit standard was Reregistered in 2012; 2015.

UNIT STANDARD NOTES

This unit standard replaces unit standard 9521, "Repair and overhaul air-conditioning, refrigeration and ventilation equipment", Level 4, 8 credits.



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Supplementary information:

Specific requirements are contained in one or more of the following documents:

- *Manufacturer's instructions regarding dismantling and assembly of equipment.*
- *Relevant technical drawings and specifications.*
- *Company procedures and guidelines.*
- *Occupational Health and Safety Act.*

QUALIFICATIONS UTILISING THIS UNIT STANDARD:

	ID	QUALIFICATION TITLE	PRE-2009 NQF LEVEL	NQF LEVEL	STATUS	END DATE	PRIMARY OR DELEGATED QA FUNCTIONARY
Core	48966	Further Education and Training Certificate: Air-conditioning, Refrigeration and Ventilation	Level 4	NQF Level 04	Passed the End Date - Status was "Reregistered"	2009-03-12	Was MERSETA until Last Date for Achievement
Elective	65509	Further Education and Training Certificate: Air-conditioning, Refrigeration and Ventilation	Level 4	NQF Level 04	Reregistered	2023-06-30	MERSETA

PROVIDERS CURRENTLY ACCREDITED TO OFFER THIS UNIT STANDARD:

This information shows the current accreditations (i.e. those not past their accreditation end dates), and is the most complete record available to SAQA as of today. Some Primary or Delegated Quality Assurance Functionaries have a lag in their recording systems for provider accreditation, in turn leading to a lag in notifying SAQA of all the providers that they have accredited to offer qualifications and unit standards, as well as any extensions to accreditation end dates. The relevant Primary or Delegated Quality Assurance Functionary should be notified if a record appears to be missing from here.

1. COLLEGE OF CAPE TOWN (Pinelands Campus)(DTTC)
2. IFIHLILE TRAINING ACADEMY GAUTENG (PTY) LTD (Halfway House)(TP)
3. Industries Education & Training Institute (MAITLAND) (TP)
4. INDUSTRIES EDUCATION & TRAINING INSTITUTE - PE TTC
5. Service Corps T/A Works Training School (ELANDSFONTEIN) (TP)
6. Shukela Training Centre
7. Tekmation (Pty) Ltd T/A Tekmation Training Institute (DURBAN) (TP)
8. Umfolozi FET College - Mandeni Campus
9. Wavelength T.T.I
10. Winters Business Enterprise T/A Winters Tradesman Technical Tuition (PRETORIA) (TP)

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