



དཔལ་ལྷན་འབྲུག་གཞུང་། ཤེས་རིག་དང་རིག་ཁུལ་གོང་འཕེལ་ལྷན་ཁག  
 Royal Government of Bhutan  
 Ministry of Education and Skills Development  
 Department of Workforce Planning and Skills Development



DWPSD/PESJP/G-03/2024-2025/ 1221

29/05/25

**Amendment 1**

This is has reference to the tender for G-03 Procurement of Lab Equipment for TTI-Khuruthang Facility Technology advertised on 7/05/2025. The Department would like to inform all the interested bidders that the technical specification of item No. 36- Air Conditioning training kits with bench type under Section VI-Schedule of Supply has been amended as below:

**Section 6: technical Specification**

Existing Technical Specification	Revised Technical Specification
<p>Dimensions and Power Supply:</p> <ul style="list-style-type: none"> <li>• Dimensions: 1000mm (L) x 1600mm (W) x 1800mm (H)</li> <li>• Power Supply: AC 220V, 50Hz</li> </ul> <p>Refrigeration System:</p> <ul style="list-style-type: none"> <li>• Refrigerant Type: R134a</li> <li>• Refrigerant Pressure:</li> <li>• Low Pressure: 0.15–0.35 MPa</li> <li>• High Pressure: 1.5–2.0 MPa</li> </ul> <p>Components:</p> <ul style="list-style-type: none"> <li>• Mobile Stand with Test Panel</li> <li>• Ignition Switch</li> <li>• High/Low Pressure Gauge</li> <li>• Air Conditioning Controller</li> <li>• Evaporator Assembly</li> <li>• Air Compressor</li> <li>• Expansion Valve</li> <li>• Dryer</li> <li>• Blower</li> <li>• Condenser</li> <li>• Drive Motor</li> <li>• Cooling Electronic Fan</li> <li>• Fault Set Module (Manual Switch Type)</li> </ul> <p>Main Features:</p> <ul style="list-style-type: none"> <li>• Utilizes an original automotive air conditioning system to demonstrate its structure and function.</li> <li>• Employs an AC motor to drive the air conditioning compressor, allowing realistic operation via the control panel.</li> <li>• Features a panel with circuit diagrams and schematics for visual learning and analysis.</li> <li>• Equipped with test terminals to measure electrical signals such as resistance, voltage, and current across various components.</li> <li>• Enables practical training in refrigerant filling and leak detection.</li> <li>• Includes a fault-setting module for diagnostic exercises.</li> </ul>	<p>The Central Air Conditioning Training System should include the compressor, Water cooled (or air cooled) condenser, Thermal expansion device, Water circulation pump, Evaporator, Indoor, Coil, Indoor fan, Air filter, Condensate drain, A cooling tower, Sight glasses thermostat, Hand valves, High/low-pressure controls, 2 low pressure gauges, 2 high pressure gauges, pressure taps.</p> <p><b>The instrument panel includes:</b>                      Electrical box with circuit breaker protection, Starter control, Voltmeter, Ammeter and various other controls as required. Include Item: Air Handling Unit and Electronic Controls complete with: cooling/heating coil, fan, return airway, air filter, pressure gauges (before and after cooling coil/heating coil), smoke sensor, temperature sensor, humidity sensor.</p> <p>Chiller Unit, compact size to match Air Handling Unit, Variable speed fan for Air Handling Unit.</p> <p><b>Complete Air Handling Consisting of :</b>                      Mixing box with manual damper capacity: 3–5 ton, electric motor damper for fresh air.                      Filter unit: basic filter 60%, Shunt pump unit for above water system, humidifier unit, Centrifugal fan: variable speed motor, Special short duct section that allows return air path and venting to the room, Flow diagram with control functions: psychometric</p>



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**Training Capabilities:**

- Introduction to the main components of the automotive air conditioning system.
- Demonstration of the system's working principles and processes.
- Measurement of sensor and actuator signals.
- Practical exercises in vacuum pumping, refrigerant filling, and leak detection.
- Fault setting and troubleshooting practice.

This trainer offers a comprehensive platform for understanding and practicing the installation, operation, and maintenance of automotive air conditioning systems.

Supplying, installation and testing of the equipment on site.

Training of at least 5 staffs.

The following documents & certificates to be provided along with each machine.

- Operation/Maintenance manual in English.
- Warranty certificate: Minimum one year warranty from the date of acceptance of item.

process diagram, Educational Frame with transparent panels to view interior, Adapter, connections to all duct opening: bolts, brackets and all mounting accessories included.

Supplying, installation and testing of the equipment on site.

Training of at least 5 staffs.

The following documents & certificates to be provided along with each machine.

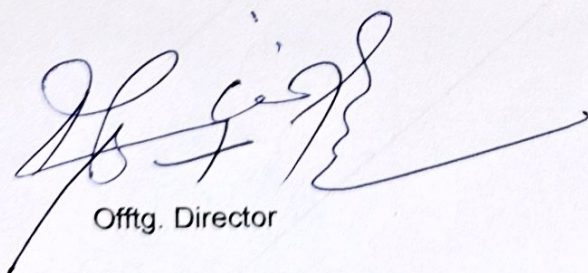
- Operation/Maintenance manual in English.

Warranty certificate: Minimum one year warranty from the date of acceptance of item.

The bid submission deadline and delivery duration has been amended as below:

Existing requirement	Revised requirement
<b>The deadline for bid submission is:</b> Date: <b>6/06/2025</b> Time: <b>10.30AM</b>	<b>The deadline for bid submission is:</b> Date: <b>13/06/2025</b> Time: <b>10.30AM</b>
Delivery duration is 90 days	Delivery duration is 140 days

The bids should be submitted in compliance with the ITB clause no. 8.2 of the Instruction to Bidder of the tender document which stipulates that "Any addendum issued shall be part of the Bidding Document". Please note that other requirement of the tender document remains unchanged.

  
Offtg. Director