



Australian Government

**UEERA0034 Establish heat loads for
commercial refrigeration and/or air
conditioning applications**

Release: 1

UEERA0034 Establish heat loads for commercial refrigeration and/or air conditioning applications

Modification History

Release 1. This is the first release of this unit of competency in the UEE Electrotechnology Training Package.

Application

This unit involves the skills and knowledge required to establish heat loads for commercial refrigeration and/or air conditioning applications.

It includes determining heat loads for commercial refrigeration and air conditioning applications using quick selection, short-form paper and computer-based methods and documenting results.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

UEERA0038 Establish the thermodynamic parameters of refrigeration and air conditioning systems

UEERA0002 Analyse the psychrometric performance of HVAC/R systems
and

UEERA0003 Analyse the thermodynamic performance of HVAC/R systems
or

UEERA0094 Verify functionality and compliance of refrigeration and air conditioning installations

UEECD0007 Apply work health and safety regulations, codes and practices in the workplace

UEECD0019 Fabricate, assemble and dismantle utilities industry components

UEECD0020 Fix and secure electrotechnology equipment

UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications

UEECD0016 Document and apply measures to control WHS risks associated with electrotechnology work

UEERA0059 Prepare and connect refrigerant tubing and fittings

UEERA0036 Establish the basic operating conditions of vapour compression systems

UEERA0035 Establish the basic operating conditions of air conditioning systems

UEERA0050 Install refrigerant pipe work, flow controls and accessories

UEERA0081 Select refrigerant piping, accessories and associated controls

UEERA0031 Diagnose and rectify faults in air conditioning and refrigeration control systems

UEERA0092 Solve problems in low voltage refrigeration and air conditioning circuits

UEERL0005 Locate and rectify faults in low voltage (LV) electrical equipment using set procedures

UEERL0004 Disconnect - reconnect electrical equipment connected to low voltage (LV) installation wiring

UEERL0001 Attach cords and plugs to electrical equipment for connection to a single phase 230 Volt supply

UEERL0002 Attach cords, cables and plugs to electrical equipment for connection to 1000 V a.c. or 1500 V d.c.

Competency Field

Refrigeration and air-conditioning

Unit Sector

Electrotechnology

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Prepare to determine heat loads for commercial refrigeration and/or air conditioning applications

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 1.1** Work health and safety (WHS)/occupational health and safety (OHS) requirements and workplace procedures for a given work area are identified and applied
- 1.2** WHS/OHS risk control measures and workplace procedures are followed in preparation for commercial refrigeration/air conditioning work
- 1.3** Extent of heat load analysis is determined from project specifications and discussions with appropriate person/s
- 1.4** Activities are planned to meet scheduled timelines in consultation with other person/s involved in commercial refrigeration/air conditioning work
- 1.5** Effective strategies are determined to ensure solution

- development and implementation is carried out efficiently in accordance with workplace procedures
- 2 Determine heat loads for commercial refrigeration and/or air conditioning applications**
- 2.1** WHS/OHS risk control measures and workplace procedures for carrying out commercial refrigeration/air conditioning work is followed
- 2.2** Specifications of commercial refrigeration and/or air conditioning system operating parameters are applied when performing heat load estimations
- 2.3** Parameters, specifications and performance requirements in relation to commercial refrigeration and/or air conditioning system are set in accordance with workplace procedures
- 2.4** Appropriate approaches to determine the heat loads are carried out to provide most effective solutions
- 2.5** Unplanned events are dealt with safely and effectively consistent with regulatory requirements and workplace procedures in a manner that minimises risk to personnel and equipment
- 2.6** Work quality is monitored in accordance with performance agreement and/or workplace or industry standards
- 3 Complete and report heat loads for commercial refrigeration and /or air conditioning applications**
- 3.1** Heat load estimations are documented, including details of findings, calculations and assumptions, in accordance with workplace procedures
- 3.2** Completed heat loads are submitted to appropriate person/s to be checked for accuracy and compliance with project specifications and evaluated to determine whether performance requirements are met
- 3.3** Heat load estimations are reported to relevant person/s to determine appropriate action to be taken based on findings

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the UEE Electrotechnology Training Package Companion Volume Implementation Guide.

Determining heat loads for commercial refrigeration and/or air conditioning applications must include at least the following:

- one quick selection short-form paper and/or one computer-based method for a refrigeration and/or air conditioning system

Unit Mapping Information

This unit replaces and is equivalent to UEENEEJ129A Establish heat loads for commercial refrigeration and/or air conditioning applications.

Links

Companion Volume implementation guides are found in VETNet - -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b8a8f136-5421-4ce1-92e0-2b50341431b6>