



**Australian Government**

# **UEERA0030 Develop specifications and prepare drawings for HVAC/R projects**

**Release: 1**

# UEERA0030 Develop specifications and prepare drawings for HVAC/R projects

## 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 develop specifications and prepare drawings for heating, ventilation and air conditioning/refrigeration (HVAC/R) system projects.

It includes working safely, following a design brief for HVAC/R systems, selecting system components, operating within established project budget, and developing project specifications and design drawings.

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

## Pre-requisite Unit

UEERA0061 Produce HVAC/R system design drawings

UEERA0001 Analyse the operation of HVAC air and hydronic 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 develop HVAC/R specifications and prepare drawings

#### 2 Develop HVAC/R specifications and

### 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) processes and workplace procedures for a given work area are identified and applied

**1.2** Extent of the project scope is determined from design brief and/or relevant documentation and from discussions with appropriate person/s

**1.3** Appropriate person/s is consulted to ensure the work is coordinated effectively with others involved in the work

**1.4** Information technology and software tools and equipment needed for the HVAC/R work are obtained in accordance with workplace procedures

**2.1** Sources of components and materials needed for the HVAC/R project are determined and selected for their

**prepare drawings**

availability, suitability for purpose and cost in accordance with workplace policies and procedures

- 2.2 HVAC/R specifications are developed to include necessary performance requirements for components and system
- 2.3 Risk management strategies for the HVAC/R project are sought and obtained for incorporating in the specification
- 2.4 Appropriate information technology and software tools are used to develop HVAC/R specifications and produce drawings based on standard protocols
- 2.5 HVAC/R project specifications and drawings are reviewed against project inputs and adjusted to rectify any anomalies
- 2.6 HVAC/R project specifications and drawings are documented in accordance with workplace policies and procedures
- 2.7 Solutions to unplanned situation are provided in accordance with workplace policies
- 2.8 HVAC/R work quality is monitored against performance agreement and/or organisational or industry standards

**3 Obtain approval for HVAC/R specifications and drawings**

- 3.1 HVAC/R project specifications and drawings are presented and discussed with relevant person/s
- 3.2 Alterations to the project specifications and drawings resulting from the presentation/discussion are negotiated with relevant person/s in accordance with organisation policies
- 3.3 Final HVAC/R project specifications and drawings are documented and approval obtained from appropriate person/s

**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.

Developing HVAC/R specifications and preparing drawings must include at least the following:

- two different HVAC/R projects

## Unit Mapping Information

This unit replaces and is equivalent to UEENEEJ139A Develop specifications and prepare drawings for HVAC/Refrigeration projects.

## Links

Companion Volume implementation guides are found in VETNet - -

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