Australian Government

UEERA0081 Select refrigerant piping, accessories and associated controls

Release: 1

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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 select refrigerant piping, accessories and associated controls.

It includes selecting refrigerant piping, accessories and controls for refrigeration and air conditioning installation to comply with regulations, industry standards and specifications. It also includes developing refrigerant pipe work arrangements; selecting pipe work and fittings, refrigerant flow controls and accessories, and mechanical and electrical control devices based on specifications, industry standards and manufacturer catalogues to determine calculated and deemed-to-comply solutions and documenting selection information.

The skills and knowledge described in this unit may, in some jurisdictions, require a licence or permit to practice in the workplace subject to regulations for undertaking refrigeration and air conditioning work. Practice in the workplace and during training is also subject to work health and safety (WHS)/occupational health and safety (OHS) regulations.

Pre-requisite Unit

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

Competency Field

Refrigeration and air-conditioning

Unit Sector

Electrotechnology

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.

1 Prepare to select refrigerant piping, accessories and associated controls	**1.1**	Extent and nature of the refrigeration installation is determined from job specifications
	1.2	WHS/OHS and regulatory requirements of the refrigeration system are identified, obtained and applied
2 Develop refrigerant pipe work arrangements	**2.1**	Intended location of refrigeration equipment is determined from job specifications and site drawings or deemed-to-comply arrangements
	2.2	Pipe work arrangements are developed to ensure safe and functional operation of the refrigerant system in accordance with workplace procedures
	2.3	Pipe work is arranged to comply with technical industry standards, job specifications and requirements
3 Select refrigerant piping, accessories and associated controls	**3.1**	Suitable pipe and tubing are selected for the environment in which it is to be installed in accordance with industry standards
	3.2	Pipe and tubing are sized to meet refrigeration parameters and capacity requirements for the refrigerant to be used
	3.3	Pipe and tubing quantities are determined from equipment location diagrams and job specifications
	3.4	Refrigeration controls and accessories are selected to meet load requirements based on calculated or deemed-to-comply solutions
	3.5	Control devices are selected to meet functional and regulatory requirements
	3.6	Electrical control devices are selected to meet current voltage and ingress protection ratings in accordance with industry standards
	3.7	Evidence is obtained to confirm the selected refrigeration equipment and control devices comply with job requirements and industry standards
4 Document refrigerant piping, accessories and associated controls selection	**4.1**	Refrigerant piping, accessories and associated control selections, including calculations, are documented in accordance with workplace procedures

4.2 Refrigeration installation arrangement and specifications for selected items are documented in accordance with workplace procedures and forwarded to 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.

Selecting refrigerant pipe/tube, accessories and associated controls must include at least two different refrigeration systems and include the following:

- pipe sizes determined using recommended manufacturers specifications and the total equivalent length calculation methods refrigeration flow controls
- isolation/access valves
- filter-dryers
- sight glasses
- accessories
- thermostats
- pressure controls
- humidity controls

Unit Mapping Information

This unit replaces and is equivalent to UEENEEJ110A Select refrigerant piping, accessories and associated controls.

Links

Companion Volume implementation guides are found in VETNet - - https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b8a8f136-5421-4ce1-92e0-2b50341431b6