



Australian Government

Assessment Requirements for MEM23150 Contribute to the design of heating systems

Release: 1

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Modification History

Release 1. Supersedes and is equivalent to MEM23150A Contribute to the design of heating systems.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria and include:

- identifying and interpreting drawings and specifications and client requirements appropriate to the design task
- implementing work health and safety (WHS) procedures and practices including the use of risk control measures
- demonstrate the use of software tools related to design heating systems
- determining performance aspects of systems and sizing of pipes on at least two occasions, minimising system heat losses
- designing a heating system on at least two occasions including selecting major system components and materials using manufacturer data and appropriate heating equipment and evaluating piping configuration
- communicating technical and procedural requirements to others
- dealing with unexpected situations
- documenting technical information and designs in accordance with procedures.

Note: Where a volume and/or frequency is not specified, demonstration must be provided at least once.

Knowledge Evidence

Evidence required to demonstrate the required knowledge for this unit must be relevant to and satisfy the requirements of the elements and performance criteria and include knowledge of:

- heating equipment and techniques including relative advantages and disadvantages of:
 - heat pumps
 - boilers and hydronic systems including underfloor systems
 - gas
 - electric
 - solar
 - solid fuel
- system configuration
- piping configuration including:

- standard materials and sizes
- sources of information
- system pipe sizes
- appropriate personnel to consult
- WHS and environmental requirements relevant to heating systems
- organisational procedures
- resource and equipment requirements.
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Assessment Conditions

- Assessors must:
 - have vocational competency in contributing to the design of heating systems at least to the level being assessed with relevant industry knowledge and experience
 - satisfy the assessor requirements in the Standards for Registered Training Organisations 2015 or its replacement and comply with the National Vocational Education and Training Regulator Act 2011, its replacement or equivalent legislation covering VET regulation in a non-referring state/territory as the case requires.
- Where possible assessment must occur in operational workplace situations. Where this is not possible or where personal safety or environmental damage are limiting factors, assessment must occur in a sufficiently rigorous simulated environment that reflects realistic operational workplace conditions that cover all aspects of workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills.
- Conditions for assessment must include access to all tools, equipment, materials and documentation required including relevant workplace procedures, product and manufacturing specifications.
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.
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Links

Companion Volume Implementation Guides are available on VETNet -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>