



Australian Government

**Assessment Requirements for MEM23147
Contribute to the design of hydronic
systems**

Release: 1

Assessment Requirements for MEM23147 Contribute to the design of hydronic systems

Modification History

Release 1. Supersedes and is equivalent to MEM23147A Contribute to the design of hydronic 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, client requirements and specifications 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 designing a hydronic system
- contributing to the design of a hydronic system on at least two occasions including determining performance aspects of the systems, sizing pipes, selecting optimum pump performance, minimising system friction losses and selecting major components and materials using manufacturer data
- 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:

- WHS requirements
- appropriate personnel to consult
- principles of fluid flow
- system operating parameters
- pump performance and selection
- pipe sizes
- valve performance and selection
- pressure loss and static head calculations
- calculating system (static and dynamic) head
- optimum pump selection
- environmental requirements
- organisational procedures

- resource and equipment requirements
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Assessment Conditions

- Assessors must:
 - have vocational competency in contributing to the design of hydronic 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>