



Australian Government

MEM09002 Interpret technical drawing

Release: 1

MEM09002 Interpret technical drawing

Modification History

Release 1. Supersedes and is equivalent to MEM09002B Interpret technical drawing

Application

This unit of competency defines the skills and knowledge required to interpret technical drawings.

Technical drawings may utilise perspective, exploded views or hidden view techniques and may include symbol glossaries. Drawings are provided to AS 1100 Technical drawing or AS 1102 Graphical symbols and their equivalents from the full range of engineering disciplines.

Where any technical drawing, sketch, chart, diagram is only used as a technique for communication, then this unit does not apply: unit MEM12023 Perform engineering measurements or unit MEM16006 Organise and communicate information should be selected as appropriate.

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

Band: A

Unit Weight: 4

Pre-requisite Unit

MEM12023	Perform engineering measurements
MEM12024	Perform computations
MEM13015	Work safely and effectively in manufacturing and engineering
MEM16006	Organise and communicate information

Competency Field

Drawing, drafting and design

Elements and Performance Criteria

Elements describe the essential outcomes.

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

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1. Determine job requirements	1.1 Follow standard operating procedures (SOPs)
	1.2 Comply with work health and safety (WHS) requirements at all times
	1.3 Identify job requirements from specifications, job sheets or associated work instructions
2. Interpret technical drawing	2.1 Check drawing and version and validate against job requirements
	2.2 Recognise components and assemblies or objects
	2.3 Identify dimensions, instructions and material requirements
	2.4 Recognise symbols used in the drawing
	2.5 Compile list of required materials

Foundation Skills

This section describes those required skills (reading, writing, oral communication and numeracy) that are essential to workplace performance in this unit of competency.

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

Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Drawing interpretation includes recognising the following:

- relationship between the views contained in the drawing
- objects
- units of measurement
- dimensions of the key features
- symbols

Unit Mapping Information

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Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>

Assessment Requirements for MEM09002 Interpret technical drawing

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria on at least two (2) occasions and include:

- following work instructions, standard operating procedures (SOPs) and safe work practices
- selecting, checking and validating technical drawing against job requirements or equipment
- interpreting technical drawing through recognition of components, assemblies, objects and symbols
- identifying dimensions
- applying drawing conventions appropriate to engineering discipline
- compiling a materials list.

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:

- safe work practices and procedures and use of personal protective equipment (PPE)
- application of AS 1100 Technical drawing or AS 1102 Graphical symbols
- conventions used in technical drawings
- correct interpretation of instructions contained in drawings
- materials from which drawing object(s) are made and their features and manufacturing and assembly requirements.

Assessment Conditions

- Assessors must:
 - have vocational competency in interpreting technical drawings 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. This must 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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