



Australian Government

MEM12003 Perform precision mechanical measurement

Release: 1

MEM12003 Perform precision mechanical measurement

Modification History

Release 1. Supersedes and is equivalent to MEM12003B Perform precision mechanical measurement

Application

This unit of competency defines the skills and knowledge required to perform precision mechanical measurement.

This unit covers comprehensive measuring skills where judgement is required in the selection of the most appropriate techniques/devices and where results are interpreted and/or analysed.

Where interpretation of technical drawings is required unit MEM09002 Interpret technical drawing should also be selected.

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

Band:

This unit has dual status and is to be regarded as both a Specialisation Band A unit and Specialisation Band B unit for progression to C7 (AQF level IV).

Unit Weight: 2

Pre-requisite Unit

MEM11011	Undertake manual handling
MEM12023	Perform engineering measurements
MEM13015	Work safely and effectively in manufacturing and engineering
MEM16006	Organise and communicate information

Competency Field

Measurement

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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<p>1 Determine job requirements</p>	<p>1.1 Follow standard operating procedures (SOPs)</p> <p>1.2 Comply with work health and safety (WHS) requirements at all times</p> <p>1.3 Use appropriate personal protective equipment (PPE) in accordance with SOPs</p> <p>1.4 Identify job requirements from specifications, sketches, job sheets or work instructions</p>
<p>2 Perform precision measurement</p>	<p>2.1 Select appropriate precision equipment to achieve specified outcome</p> <p>2.2 Check the accuracy of the selected measuring equipment for where appropriate</p> <p>2.3 Use correct and appropriate measuring techniques for the measurement task</p> <p>2.4 Take measurements to the finest graduation of instrument in an accurate manner</p> <p>2.5 Interpret readings and measurements</p>
<p>3 Maintain precision equipment</p>	<p>3.1 Set measuring equipment to specifications using manufacturer guidelines or procedures and techniques</p> <p>3.2 Adjust and maintain measuring equipment to required accuracy using appropriate techniques according to manufacturer's specifications or SOPs</p> <p>3.3 Store equipment to manufacturer's specifications or SOPs</p>

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.

Equipment includes one (1) or more of the following:

- strip gauges
- precision squares
- angle dekkors
- sine bars
- angle gauges
- polygons
- precision levels
- dial indicators
- vernier protractors
- shadow graphs
- vibration measurement equipment
- dynamic balancing equipment
- micrometres
- height gauges
- hardness testers
- texture measuring equipment

Measurements include one (1) or more of the following:

- length
- circular
- straightness
- flatness
- hardness
- angles
- finishes
- textures
- roundness
- squareness
- alignment and coordinate measurement

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM12003B Perform precision mechanical measurement

Links

Companion Volume implementation guides are found in VETNet -

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