## Title
Interpret mechanical engineering drawings

<table>
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<tr>
<th>Level</th>
<th>Credits</th>
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<tbody>
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<td>5</td>
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### Purpose
People credited with this unit standard are able to select and interpret mechanical engineering drawings.

### Classification
Mechanical Engineering > Engineering Drawing and Design

### Available grade
Achieved

### Explanatory notes

1. **References**
   
   An abridgement of these standards, suitable for the purposes of this unit standard, is SAA/SNZ HB1: 1994, *Technical Drawing for students. Available from Standards New Zealand*.

2. **Definition**
   - *Interpretation* – the explanation in practical terms of features shown graphically in the drawing.
   - *Worksite requirements* – the administrative routines of any given workplace, or workplace simulations in a provider environment.

3. **Assessment information**
   - Interpretation of mechanical engineering drawings to AS 1100, drawn in third angle projection.
   - Assessment must involve at least one detail drawing and one assembly drawing, of sufficient complexity to assess the required features.

### Outcomes and evidence requirements

#### Outcome 1
Select mechanical engineering drawings.

#### Evidence requirements

1.1 Drawings are selected from drawing files and validated in accordance with worksite requirements.

1.2 Drawing versions are identified and currency confirmed in accordance with worksite requirements.
Outcome 2

Interpret mechanical engineering drawings.

Range in accordance with AS 1100, Parts 101 and 201.

Evidence requirements

2.1 Drawing concepts are explained.

Range concepts – scale, third angle projection, first angle projection, isometric drawing, oblique drawing.

2.2 Sectioned views and cross hatching are interpreted.

2.3 Different types of lines are interpreted.

2.4 Drawing symbols are interpreted.

Range assessment of 12 symbols chosen at random by the assessor.

2.5 Dimensions are interpreted.

Range datum points or lines; linear and angular dimensions; dimensioning of – diameters, radii, holes, countersinks, counterbores, spotfaces, chamfers, bolts, screws, studs, washers, screw threads, keyways.

Evidence is required for at least six dimensions.

2.6 Tolerances are interpreted.

2.7 Machining and surface roughness symbols are interpreted.

2.8 Materials required for the work are identified from the drawing.

Planned review date 31 December 2016

Status information and last date for assessment for superseded versions

<table>
<thead>
<tr>
<th>Process</th>
<th>Version</th>
<th>Date</th>
<th>Last Date for Assessment</th>
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<td>22 September 2005</td>
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<td>Rollover and Revision</td>
<td>2</td>
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Consent and Moderation Requirements (CMR) reference 0013

Please note
Providers must be granted consent to assess against standards (accredited) by NZQA, before they can report credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be granted consent to assess against standards by NZQA before they can register credits from assessment against unit standards.

Providers and Industry Training Organisations, which have been granted consent and which are assessing against unit standards must engage with the moderation system that applies to those standards.

Requirements for consent to assess and an outline of the moderation system that applies to this standard are outlined in the Consent and Moderation Requirements (CMR). The CMR also includes useful information about special requirements for organisations wishing to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.

Comments on this unit standard
Please contact Competenz qualifications@competenz.org.nz if you wish to suggest changes to the content of this unit standard.