

Title	Manually produce and interpret simple engineering component drawings under supervision		
Level	2	Credits	8

Purpose	People credited with this unit standard are able to: explain engineering drawing office procedures; and, under supervision, interpret, manually produce, and confirm engineering component drawings.
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Classification	Mechanical Engineering > Engineering Drawing and Design
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Available grade	Achieved
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Entry information	
Recommended skills and knowledge	Unit 4434, <i>Demonstrate knowledge of basic geometric form in engineering</i> , or demonstrate equivalent skills and knowledge.

Explanatory notes

- 1 Reference
SAA/SNZ HB1:1995 Joint handbook – *Technical drawing for students*. Available from Standards New Zealand.
- 2 Definitions
Accepted industry practice refers to approved codes of practice and standardised procedures accepted by the wider mechanical engineering industry sectors as examples of best practice.
Interpretation refers to the explanation in practical terms of features shown graphically in the drawing.
Job specifications refers to instructions relevant to the safe completion of the specific task, such as technical specifications, assembly instructions, drawings, parts lists, standards, codes of practice, test and commissioning procedures, and verbal instructions.
Supervision refers to working under the direction of a suitably qualified tradesman or manager who oversees the learner and is responsible for ensuring that the quality of work meets the required standard.
Workplace procedures refers to procedures used by the organisation carrying out the work and applicable to the tasks being carried out. They may include but are not limited to – standard operating procedures, safety procedures, equipment operating procedures, codes of practice, quality management practices and standards, procedures to comply with legislative and local body requirements.

3 Assessment information

- This unit standard covers the production and interpretation of drawings using isometric, oblique, and orthographic projection, including hidden detail and single plane sectional views.
- Drawings presented as evidence must be limited to single components and may include but are not limited to – simple pump, gearbox, hydraulic cylinder, support frame, tool and die, holding device, sheet metal fabrications.
- This standard may be used in the context of any of the mechanical engineering disciplines.
- This standard does not apply to drawings produced using Computer Aided Design software – see unit standard 2433.

Outcomes and evidence requirements

Outcome 1

Explain engineering drawing office procedures.

Evidence requirements

- 1.1 Drawing office procedures are described in accordance with workplace procedures or accepted industry practice.

Range drawing office procedures include but are not limited to - drawing control, approval, variation, distribution, and storage.

Outcome 2

Interpret engineering component drawings under supervision.

Range first and third angle orthographic projection, isometric, oblique.

Evidence requirements

- 2.1 Components and assemblies are identified and interpreted from drawings in accordance with SAA/SNZ HB1:1995 Joint handbook.
- 2.2 Material requirements are determined from drawings.
- 2.3 Dimensions and drawing notes are interpreted in accordance with SAA/SNZ HB1:1995 Joint handbook.
- 2.4 Symbols are identified and interpreted in accordance with SAA/SNZ HB1:1995 Joint handbook.
- 2.5 Conventions are identified and interpreted in accordance with SAA/SNZ HB1:1995 Joint handbook.

Outcome 3

Manually produce engineering component drawings under supervision in accordance with SAA/SNZ HB1:1995 Joint handbook.

Range first and third angle orthographic projection, isometric and oblique.

Evidence requirements

3.1 Drawings are prepared in accordance with projection and view.

3.2 Drawings are produced to meet job requirements.

Range includes but is not limited to – dimensions, symbols, line weights, scale, labelling.

Outcome 4

Confirm engineering component drawings under supervision.

Evidence requirements

4.1 Drawings are checked to ensure compliance with job requirements.

Range orientation, proportion, dimensions, related notes.

4.2 Any non-conformance to job specifications is corrected in accordance with workplace procedures or accepted industry practice.

Planned review date	31 December 2021
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	31 October 1994	31 December 2011
Revision	2	14 April 1997	31 December 2011
Revision	3	5 January 1999	31 December 2011
Revision	4	23 May 2001	31 December 2011
Review	5	26 July 2004	31 December 2011
Rollover and Revision	6	20 March 2009	31 December 2016
Review	7	17 November 2011	31 December 2021
Review	8	15 September 2016	N/A

Consent and Moderation Requirements (CMR) reference	0013
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

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.