

Title	Perform engineering drilling operations using a pedestal type drilling machine		
Level	2	Credits	3

Purpose	<p>This unit standard is an introductory unit standard for mechanical engineering related trades. It covers drilling operations, using a pedestal type drilling machine and is intended for assessment in a workplace or simulated workplace.</p> <p>People credited with this unit standard are able to prepare for, and perform, drilling operations, and verify hole sizes and positions.</p>
----------------	--

Classification	Mechanical Engineering > Engineering Machining and Toolmaking
-----------------------	---

Available grade	Achieved
------------------------	----------

Guidance Information

- 1 Reference
Health and Safety at Work Act 2015.
- 2 Definition

Specifications – detail that defines an object being made; commonly communicated by annotated and dimensioned drawings; by written description, or by other communication media. External references may also be used to specify objects such as tables or industry standards.

Workplace procedures – procedures used by the organisation carrying out the work and applicable to the tasks being carried out. Examples are – 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.

Outcomes and performance criteria

Outcome 1

Prepare for drilling operations.

Range preparation for five different drilling operations using different size drills.

Performance criteria

- 1.1 Machine condition and capability are checked in accordance with job requirements and workplace procedures.
- 1.2 Drawings, instructions, and specifications are interpreted to establish job requirements.
- 1.3 Sequence of operations is planned to achieve job requirements efficiently, and verified in accordance with workplace procedures.
- 1.4 Components are marked out in accordance with job requirements.
- 1.5 Accessories and work-holding fixtures are installed to securely hold the work.
- 1.6 Drills are selected in accordance with specifications and mounted securely.
- 1.7 Drilling speeds are selected for efficient drilling of the material.

Outcome 2

Perform drilling operations.

Range five drilling operations including mild steel and at least one other material.

Performance criteria

- 2.1 Workplace safety procedures are followed.

Range examples are – use of personal protective equipment, checking of equipment for faults.
- 2.2 Cutting fluids or compounds are used in accordance with job requirements.
- 2.3 Holes are drilled to specifications, without damage to machine and tools.

Range diameter +0.2 mm; position +/-0.5 mm.
- 2.4 Machine is cleaned and waste material disposed of in accordance with workplace procedures.

Outcome 3

Verify hole sizes and positions.

Performance criteria

- 3.1 Components are measured using instruments matching the required accuracy to confirm that specifications have been achieved.
- 3.2 Measurements are recorded in accordance with workplace procedures.

Replacement information	This unit standard, unit standard 11662, unit standard 11663, and unit standard 11664 replaced unit standard 2700.
--------------------------------	--

Planned review date	31 December 2022
----------------------------	------------------

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	18 November 1997	31 December 2012
Revision	2	25 September 2001	31 December 2012
Review	3	20 June 2006	31 December 2022
Rollover and Revision	4	17 November 2011	31 December 2022
Review	5	20 July 2017	N/A

Consent and Moderation Requirements (CMR) reference	0013
--	------

This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

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.