

Title	Demonstrate knowledge of the installation and maintenance of solid fuel space heaters and flues		
Level	4	Credits	3

Purpose	<p>This unit standard is for people who work, or intend to work, in the plumbing industry.</p> <p>People credited with this unit standard are able to:</p> <ul style="list-style-type: none"> – demonstrate knowledge of regulatory requirements, selection of methods and materials, and underpinning concepts and principles, as applied to the installation and maintenance of solid fuel space heaters and flues; – describe positioning of solid fuel space heaters and flues; – describe installation of solid fuel space heaters and flues; and – describe the maintenance solid fuel space heaters and flues.
----------------	---

Classification	Plumbing, Gasfitting and Drainlaying > Plumbing
-----------------------	---

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

Guidance Information

- 1 Legislation, regulations and/or industry standards relevant to this unit standard include but are not limited to the:
 Building Act 2004;
 Health and Safety at Work Act 2015;
 Plumbers, Gasfitters, and Drainlayers Act 2006;
 Plumbers, Gasfitters, and Drainlayers Regulations 2010;
 Resource Management Act 1991;
 Resource Management (National Environmental Standards for Air Quality) Regulations 2004.

The following standards, which are available at <http://www.standards.govt.nz>:
 AS/NZS 2918:2018 *Domestic solid fuel burning appliances – Installation*,
 NZS 3604:2011 *Timber-framed buildings*,
 AS/NZS 4013:2014 *Domestic solid fuel burning appliances – Method for determination of flue gas emission*.

The following Building Code clauses, and any related Acceptable Solution and Verification Method documents, which are available at <https://www.building.govt.nz/>:
 New Zealand Building Code Clause B1 Structure,
 New Zealand Building Code Clause B2 Durability,
 New Zealand Building Code Clause E2 External moisture,

New Zealand Building Code Clause C2 Prevention of fire occurring.

Any new, amended or replacement referenced standards, codes of practice, guidelines, Building Code Acceptable Solutions and Verification Methods, or authority requirements affecting this unit standard will take precedence for assessment purposes, pending review of this unit standard.

2 Definitions

Job requirements refer to specific requirements of the job at hand not covered by job specifications.

Job specifications refer to instructions (oral, written, graphic) and may include any of the following – manufacturer instructions; design drawing detail specifications; specifications from a specialist source such as an architect, designer, engineer, or a supervisor; and site or work specific requirements.

Maintenance may refer to all or any of – repair, upgrade, alteration, removal.

- 3 Candidates must hold a current limited certificate trainee authorisation or exemption under supervision as issued under the Plumbers, Gasfitters, and Drainlayers Act 2006.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of regulatory requirements, selection of methods and materials, and underpinning concepts and principles, as applied to the installation and maintenance of solid fuel space heaters and flues.

Performance criteria

- 1.1 Describe applicable sections of legislation, standards, and codes in terms of their application to the installation and maintenance of solid fuel space heaters and flues.
- Range includes but is not limited to – local government requirements for installation.
- 1.2 Justify selection of methods and materials.
- Range job specifications, operation of the installed system and components, suitability and durability of materials.
- 1.3 Explain underpinning concepts and principles in terms of their application to the installation and maintenance of solid fuel space heaters and flues.
- Range combustion, conduction, convection, dew point, radiation, production of creosote, ventilation.

- 1.4 Explain the implications on the installation of solid fuel space heaters with differences in fuel source.

Range wood, coal, pellet, alternative fuel sources.

Outcome 2

Describe positioning of solid fuel space heaters and flues.

Range inbuilt, insert, freestanding, alternative applications.

Performance criteria

- 2.1 Describe how to position solid fuel space heaters and flues to measurements in accordance with job specifications and relevant standards and codes.

Range combustion clearances, heat shields, structural integrity, weathertightness, clearance for maintenance.

Outcome 3

Describe the installation of solid fuel space heaters and flues.

Performance criteria

- 3.1 Describe appropriate selection of solid fuel space heaters and flues in relation to job specifications and regulatory requirements.

- 3.2 Describe installation of solid fuel space heaters and flues in accordance with job specifications and relevant standards and codes.

- 3.3 Describe commissioning tests in accordance with relevant standards, codes, and manufacturer instructions.

Range flue spillage, emission and smoke, appliance surface temperatures, integrity of installation.

- 3.4 Explain content and importance of hand-over briefing to customer on completion of installation.

Outcome 4

Describe the maintenance of solid fuel space heaters and flues.

Performance criteria

- 4.1 Describe preventative maintenance requirements.

Range cleaning flues, vents/grills, manufacturers requirements

- 4.2 Describe how to identify faults in terms of causes and means of rectification.

- 4.3 Describe the rectification of faults in accordance with maintenance requirements and job specifications.

Replacement information	This unit standard and unit standard 30608 replaced unit standard 2153.
--------------------------------	---

Planned review date	31 December 2029
----------------------------	------------------

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	26 October 2017	31 December 2028
Review	2	30 May 2024	N/A

Consent and Moderation Requirements (CMR) reference	0003
--	------

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

Comments on this unit standard

Please contact Waihanga Ara Rau Construction and Infrastructure Workforce Development Council qualifications@waihangaararau.nz if you wish to suggest changes to the content of this unit standard.