

Title	Demonstrate knowledge of hot water storage systems for plumbing and gasfitting		
Level	3	Credits	3

Purpose	People credited with this unit standard are able to: describe hot water storage systems for plumbing and gasfitting; describe residential hot water storage heating energy types and technology; and identify hot water storage system components and plumbing.
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Classification	Plumbing, Gasfitting and Drainlaying > Core Plumbing, Gasfitting, and Drainlaying
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Available grade	Achieved
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Guidance Information

- 1 Legislation, regulations and/or industry standards relevant to this unit standard include but are not limited to:
Building Act 2004;
Plumbers, Gasfitters, and Drainlayers Act 2006;
Plumbers, Gasfitters, and Drainlayers Regulations 2010.

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 G12 Water supplies.

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
Industry practice – sound industry practice that meets legislative requirements.
Job specifications, for the purpose of this unit standard, refer to instructions (oral, written, graphic) and may include any of the following: manufacturers' 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.
- 3 This unit standard does not apply to instantaneous water heating systems.

Outcomes and performance criteria

Outcome 1

Describe hot water storage systems for plumbing and gasfitting.

Performance criteria

- 1.1 Hot water storage systems are described in terms of water temperature control requirements.
- 1.2 Hot water storage systems are described in terms of requirements for prevention of legionella bacteria.
- 1.3 Hot water storage systems are described in terms of safety from explosion.
- 1.4 Fixtures and appliances that hot water is plumbed to are identified for typical home installations.

Outcome 2

Describe residential hot water storage heating energy types and technology.

Performance criteria

- 2.1 Types of water heating energy are described for residential use in accordance with industry practice.

Range solar, electric, gas, solid fuel.
- 2.2 Water heating technology is described for residential use in accordance with industry practice.

Range solar types, heat pump, electric, boosted systems.

Outcome 3

Identify hot water storage system components and plumbing.

Performance criteria

- 3.1 Hot water storage cylinder construction and typical take-off point locations are identified in accordance with job specifications.
- 3.2 High and low pressure hot water storage systems are compared to each other in terms of advantages and disadvantages.
- 3.3 Valves and controls within hot water storage systems are identified in accordance with the NZBC, clause G12.

- 3.4 Hot water storage system installation layout schematic is described in accordance with NZBC clause G12.
- 3.5 Pipe materials suitable for hot water storage systems are identified in accordance with NZBC clause G12.

Planned review date	31 December 2029
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	23 January 2009	31 December 2026
Review	2	12 December 2024	N/A

Consent and Moderation Requirements (CMR) reference	0008
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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.