

<b>Title</b>	<b>Demonstrate knowledge of gas boosted solar water heating systems and hydronic heating</b>		
<b>Level</b>	<b>4</b>	<b>Credits</b>	<b>4</b>

<b>Purpose</b>	<p>This unit standard is for people who work in the gasfitting and plumbing industries.</p> <p>People credited with this unit standard are able to demonstrate knowledge of:</p> <ul style="list-style-type: none"> <li>– gas boosted solar water heating systems; and</li> <li>– hydronic heating systems.</li> </ul>
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<b>Classification</b>	Plumbing, Gasfitting and Drainlaying > Core Plumbing, Gasfitting, and Drainlaying
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<b>Available grade</b>	Achieved
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### Guidance Information

- 1 References
  - Building Act 2004;
  - Electricity Act 1992;
  - Gas Act 1992;
  - Gas Regulations 1993;
  - Health and Safety at Work Act 2015;
  - Plumbers, Gasfitters, and Drainlayers Act 2006;
  - Plumbers, Gasfitters, and Drainlayers Regulations 2010;
  - NZS 5261:2003 *Gas installation*, available at <http://www.standards.govt.nz>;
  - The following clauses, and any related compliance documents, are available at <https://www.building.govt.nz>:
    - New Zealand Building Code, Clause E2 External Moisture,
    - New Zealand Building Code Clause G11 Gas as an Energy Source;
    - and all subsequent amendments and replacements.
- 2 Credit for this unit standard does not entitle the candidate to legally perform certain electrical aspects of this work unless registered or supervised by a registered person under the provisions of the Electricity Act 1992.
- 3 Candidates must hold a current limited certificate or exemption under supervision as issued under the Plumbers, Gasfitters, and Drainlayers Act 2006.

## Outcomes and performance criteria

### Outcome 1

Demonstrate knowledge of gas boosted solar water heating systems.

#### Performance criteria

- 1.1 Explain process to isolate heating unit from water supply.
- 1.2 Identify components and explain their purpose and function.

Range circulating pipes and pump, solar collector, diversion valve.

### Outcome 2

Demonstrate knowledge of hydronic heating systems.

#### Performance criteria

- 2.1 Identify the implications of type of water supply to a hydronic heating system.

Range mains connected water supply, expansion chamber supplied.

- 2.2 Identify components of a hydronic heating system and explain their purpose and function.

Range circulating pipes, radiators, different types of heat source, circulating pump, flow control valves for zoning, corrosion inhibitor.

**This unit standard is expiring. Assessment against the standard must take place by the last date for assessment set out below.**

#### 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	31 December 2028

#### Consent and Moderation Requirements (CMR) reference

0003

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