

Title	Demonstrate knowledge of LPG cylinder systems for gas installations for buildings		
Level	4	Credits	4

Purpose	<p>This unit standard is for people who work in the gasfitting industry.</p> <p>People credited with this unit standard are able to demonstrate knowledge of:</p> <ul style="list-style-type: none"> – the components of LPG cylinder systems for gas installations for buildings; – the installation of LPG cylinder systems for gas installations for buildings; – the commissioning of LPG cylinder systems for gas installations for buildings; and – regulatory requirements, and underpinning concepts and principles, as applied to the gasfitting of LPG cylinder systems for gas installations for buildings.
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Classification	Plumbing, Gasfitting and Drainlaying > Gasfitting
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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 the:
- Gas Act 1992;
 - Gas (Safety and Measurement) Regulations 2010;
 - Health and Safety at Work Act 2015.

The following standards, which are available at <http://www.standards.govt.nz>:
 AS/NZS 1596:2014, *The storage and handling of LP Gas*,
 NZS 5601.1:2013 *Gas installations – Part 1: General installations*.

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 G10 Piped Services,
- New Zealand Building Code Clause G11 Gas as an Energy Source.

The following codes of practice, which are available at <http://www.gasnz.org.nz/lpg-association-of-new-zealand/lpga/codes-of-practice/>:

LPG Association Code of Practice No. 2 *Installation and maintenance of twin 45kg LPG cylinder systems*,

LPG Association Code of Practice No 5 *Installation and maintenance of LPG multi-cylinder systems*.

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 Definition

LPG cylinder systems refer to cylinders and associated fittings including pigtails, regulators, manifolds, and condensate trap/drain.

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

4 Assessment information

Evidence presented for assessment must be in accordance with job specifications and relevant standards and codes.

5 Range

LPG cylinder systems may include any combination of – single cylinder, multiple cylinder, change over systems, automatic ordering.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of the components of LPG cylinder systems for gas installations for buildings.

Performance criteria

1.1 Identify LPG cylinder systems that serve different applications.

1.2 Identify the components of LPG cylinder systems and their functions.

Range may include but is not limited to – LPG cylinders, changeover regulators, excess flow valves, flexible hoses, single and two stage regulation, condensate trap, cylinder connections, relief valves, relief pipes, seismic restraint, over-pressure shut off (OPSO).

1.3 Describe the key considerations when encountering liquid draw LPG cylinder systems.

Range must include but is not limited to – application, licensing to install and service, means of identifying, pressure relief.

Outcome 2

Demonstrate knowledge of the installation of LPG cylinder systems for gas installations for buildings.

Performance criteria

2.1 Calculate capacities of systems in accordance with maximum appliance load.

2.2 Establish appropriate location of systems.

2.3 Explain installation of systems.

2.4 Explain the requirements for securing and physical protection of installed systems.

2.5 Explain gas tightness tests and purging.

Outcome 3

Demonstrate knowledge of the commissioning of LPG cylinder systems for gas installations for buildings.

Performance criteria

3.1 Explain commissioning of systems.

Range must include but is not limited to – checking and adjusting pressure control and safety devices.

3.2 Describe the post installation documentation to be completed.

Range may include but is not limited to – gas certificates, guarantees, checklists, site certification.

3.3 Explain the consumer instruction process to be followed on completion of installation and commissioning.

Outcome 4

Demonstrate knowledge of regulatory requirements, and underpinning concepts and principles, as applied to the gasfitting of LPG cylinder systems for gas installations for buildings.

Performance criteria

- 4.1 Describe applicable sections of legislation, standards, and codes in terms of their application to the gasfitting of LPG cylinder systems for gas installations for buildings.
- 4.2 Explain underpinning concepts and principles in terms of their application to the gasfitting of LPG cylinder systems for gas installations for buildings.
- Range vaporisation rates, recovery rate, frosting, reliquification.

Replacement information	This unit standard, unit standard 30721, unit standard 30722, and unit standard 30723 replaced unit standard 21897.
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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 November 2017	31 December 2028
Review	2	25 July 2024	N/A

Consent and Moderation Requirements (CMR) reference	0003
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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.