

Australian Standard[®]

**LP Gas mobile industrial direct fired air
heaters**



This Australian Standard® was prepared by Committee AG-001, Gas Appliances. It was approved on behalf of the Council of Standards Australia on 12 January 2011. This Standard was published on 26 May 2011.

The following are represented on Committee AG-001:

- Appliance and Component Testing
 - Australian Gas Association
 - Australian Greenhouse Office, Department of the Environment and Water Resources
 - Consumers' Federation of Australia
 - Energy Networks Association
 - Gas Appliance Manufacturers Association of Australia
 - Gas Technical Regulators Committee
 - LPG Australia
-

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Standards Australia wishes to acknowledge the participation of the expert individuals that contributed to the development of this Standard through their representation on the Committee and through the public comment period.

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LP Gas mobile industrial direct fired air heaters

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PREFACE

This Standard was prepared by the Australian members of Joint Standards Australia/Standards New Zealand Committee AG-001, Gas Appliances, to supersede AG 404—1988, *Approval requirements for LPG mobile industrial direct fired air heaters*.

After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this Standard as an Australian Standard rather than an Australian/New Zealand Standard.

The objective of this Standard is to provide manufacturers, designers, regulatory authorities, testing laboratories and similar organizations with uniform minimum requirements for the safety, performance and use of LP Gas mobile industrial direct fired air heaters.

AS/NZS 5601.1, *Gas installations, Part 1: General installation*, provides essential requirements and basic standards for gas installations.

Statements expressed in mandatory terms in notes and footnotes to tables and figures are deemed to be requirements of this Standard.

Minimal changes have been made to AG 404—1998 in this revision in anticipation of the re-structuring and updating of all gas appliance standards.

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application of the appendix to which they apply. A ‘normative’ appendix is an integral part of a Standard, whereas an ‘informative’ appendix is only for information and guidance.

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STANDARDS AUSTRALIA

Australian Standard**LP Gas mobile industrial direct fired air heaters**

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard specifies requirements for new mobile industrial direct fired air heaters, constructed entirely from new materials and components and intended for use with liquefied petroleum gas (LP Gas) with gas consumption greater than 50 MJ/h and not exceeding 500 MJ/h.

NOTE: For direct fired air heaters up to and including 50 MJ/h, refer to AS 4553.

Figures for this Standard are set out in Appendix A. Methods of test are set out in Appendix B.

1.2 REFERENCED DOCUMENTS

The documents referred to in this Standard are as follows:

AS

- 1319 Safety signs for the occupational environment
- 1881 Zinc alloys—Casting ingots and castings—Quality requirements
- 4553 Gas space heating appliance
- 4617 Manual shut-off gas valves
- 4625 Electronic flame safeguards and flame detectors
- 4646 Gas appliance standards—Definitions and calculations

AS/NZS

- 3000 Electrical installations (known as the Australian/New Zealand Wiring Rules)
- 3100 Approval and test specification—General requirements for electrical equipment
- 5601 Gas installations
- 5601.1 Part 1: General installations
- 60335 Household and similar electrical appliances—Safety
- 60335.1 Part 1: General requirements (IEC 60335-1 Ed.4.2, MOD)

ISO

- 6976 Natural gas—Calculation of calorific values, density, relative density and Wobbe index from composition

EN

- 298 Automatic gas burner control systems for gas burners and gas burning appliances with or without fans

1.3 DEFINITIONS

For the purpose of this Standard the definitions below apply.

1.3.1 Appliance regulator

A device fitted to an appliance to control the gas pressure or gas volume delivered to that appliance.

1.3.2 Approved

Acceptable to, and meeting the prescribed standards of, the authority having jurisdiction.

1.3.3 Authority

Means the authority having jurisdiction or such authority as delegated.

1.3.4 Authority having jurisdiction

The authority having statutory (legal) control.

1.3.5 Automatic burner

A burner system that, on starting, follows a self-acting sequence that has been manually or automatically initiated, to provide gas and ignition to the burner without any intermediate manual operation.

1.3.6 Automatic ignition

The lighting of gas at a burner without a manual operation whenever gas flows from the burner.

1.3.7 Automatic operation

The use of a sequence of operations that, once initiated, does not require any intermediate manual operation.

1.3.8 Calibration

The determination of the relationship between the measured or indicated value of a parameter and its true value.

1.3.9 Certifying body

A body acceptable to the *Technical Regulator* that provides assurance of compliance of appliances and components with nominated standards and other accepted safety criteria.

1.3.10 Combination gas control

An assembly of two or more different control functions in a single body.

1.3.11 Combustible construction

Materials made of or surfaced with wood, compressed paper, plant fibres or other materials that will ignite and burn.

1.3.12 Combustion products

Constituents resulting from the combustion of a fuel with oxygen, including the inerts associated with the fuel and the oxygen but excluding any other diluent or contaminant.

1.3.13 Cut-off

The function of isolating the upstream pressure from the downstream side of a valve or regulator.

1.3.14 Determined gas consumption

Gas consumption rate, measured in megajoules per hour, using reference gas at specified test pressures and with ambient conditions corrected to standard temperature and pressure.

NOTE: The derivation of the formula used for calculating the determined gas consumption is given in AS 4646.