



Industrial and commercial gas-fired appliances



This Australian Standard® was prepared by Committee AG-011, Industrial and Commercial Gas-Fired Appliances. It was approved on behalf of the Council of Standards Australia on 3 December 2014.

This Standard was published on 18 February 2015.

The following are represented on Committee AG-011:

- Australian Petroleum Production and Exploration Association
 - Energy Networks Association
 - Engineers Australia
 - Gas Appliance Manufacturers Association of Australia
 - Gas Energy Australia
 - Gas Technical Regulators Committee
 - Master Plumbers and Mechanical Services Association of Australia
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This Standard was issued in draft form for comment as DR AS 3814.

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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Australian Standard[®]

Industrial and commercial gas-fired appliances

Originated as AG 501—1984.
Previous edition AS 3814—2009.
Third edition AS 3814:2015.

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Published by SAI Global Limited under licence from Standards Australia Limited, GPO Box 476, Sydney, NSW 2001, Australia

ISBN 978 1 74342 979 2

PREFACE

This Standard was prepared by Standards Australia Committee AG-011, Industrial and Commercial Gas-Fired Appliances, to supersede AS 3814—2009, *Industrial and commercial gas-fired appliances*.

The objective of this Standard is to provide uniform minimum requirements for the safe operation of gas-fired industrial appliances and other large appliances used for commercial applications which are not covered by any other Standard.

This Standard should not be regarded as a design specification or as an instruction manual—it has been prepared with due regard for gas rules and regulations now in force. In its preparation, primary consideration has been given to—

- (a) the prevention of injury to persons; and
- (b) the prevention of fire hazards, and explosions associated with fuel use and processes, particularly where they could lead to a risk of injury of persons.

Additionally, consideration has been given to—

- (i) the prevention of damage to property;
- (ii) continuity of satisfactory operation of appliances and equipment;
- (iii) the provision of satisfactory permanent access for service; and
- (iv) relevant international and overseas standards.

This Standard has been further revised to remove ambiguities and to place the responsibility for safety of gas-fired industrial appliances, and other large appliances used for industrial and commercial applications firmly on the original equipment manufacturer. To this end, the original equipment manufacturer has been given a wide definition in this revision.

The main features of this revision are the following:

- (1) The requirements for hazard and risk assessment have been expanded in line with international practice, including a new informative Appendix K as well as a list of significant hazards covered by this Standard in new informative Appendix M.
- (2) The section on programmable electronic systems has been extensively revised to align it more appropriately with AS 61508 the related application Standards, AS IEC 61511 and AS 62061.
- (3) An informative Appendix N on the guidance for verifying that an appliance meets the safety requirements and/or measures in accordance with this Standard.
- (4) Included is an informative Appendix L for the review of PES designs by way of a checklist.
- (5) The robust nature of gas engines has been reflected in the revision of Section 5.8 and the uncertainties relating to applicability of many other sections of this Standard to gas engines have been removed.
- (6) In line with other international standards, the concept of a gas turbine purge credit has been introduced to enable designers and operators to establish and maintain a 'purged' condition for heat recovery steam generators (HRSGs) for an extended period of time between restarts.

The user should be aware that in many jurisdictions in Australia, this Standard is deemed as a 'prescribed or preferred standard', to which compliance is mandatory. Although Australian and New Zealand standards mostly do not do so, all the Australian and New Zealand Technical Regulators agree that this Standard should include appropriate requirements for particular components to be certified by a recognized third party assessment body.

Notes have been integrated into the text of this Standard. They provide additional information and guidance intended to assist the understanding or use of this Standard. The notes do not contain requirements or any information considered indispensable for the use of this Standard.

The term 'informative' has been used in this Standard to define the application of the appendices to which it applies. An 'informative' appendix is only for information and guidance.

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