

Australian/New Zealand Standard™

**Gas appliances**

**Part 1.7: Domestic outdoor gas  
barbecues**



## **AS/NZS 5263.1.7:2016**

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee AG-001, Gas Appliances. It was approved on behalf of the Council of Standards Australia on 23 December 2015 and on behalf of the Council of Standards New Zealand on 12 February 2016.

This Standard was published on 8 March 2016.

---

The following are represented on Committee AG-001:

Association of Accredited Certification Bodies  
Australian Building Codes Board  
Australian Gas Association  
Consumer Electronics Suppliers Association  
Consumers Federation of Australia  
Energy Efficiency and Conservation Authority of New Zealand  
Energy Networks Association  
Gas Appliance Manufacturers Association of Australia  
Gas Association of New Zealand  
Gas Energy Australia  
Gas Technical Regulators Committee  
Gas Utilisation Institute, New Zealand  
Worksafe New Zealand—Energy Safety

---

### **Keeping Standards up-to-date**

Standards are living documents which reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued. Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments which may have been published since the Standard was purchased.

Detailed information about joint Australian/New Zealand Standards can be found by visiting the Standards Web Shop at [www.saiglobal.com.au](http://www.saiglobal.com.au) or Standards New Zealand web site at [www.standards.co.nz](http://www.standards.co.nz) and looking up the relevant Standard in the on-line catalogue.

For more frequent listings or notification of revisions, amendments and withdrawals, Standards Australia and Standards New Zealand offer a number of update options. For information about these services, users should contact their respective national Standards organization.

We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Please address your comments to the Chief Executive of either Standards Australia or Standards New Zealand at the address shown on the back cover.

---

# Australian/New Zealand Standard™

## Gas appliances

### Part 1.7: Domestic outdoor gas barbecues

Originated in Australia as AG 107—1975.  
Previous edition AS 4557—2004.  
Jointly revised and redesignated as AS/NZS 5263.1.7:2016.

#### **COPYRIGHT**

© Standards Australia Limited/Standards New Zealand

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher, unless otherwise permitted under the Copyright Act 1968 (Australia) or the Copyright Act 1994 (New Zealand).

Jointly published by SAI Global Limited under licence from Standards Australia Limited, GPO Box 476, Sydney, NSW 2001 and by Standards New Zealand, Private Bag 2439, Wellington 6140.

## PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee AG-001, Gas Appliances, to supersede AS 4557—2004, *Domestic outdoor gas barbecues*.

This Standard provides particular requirements for domestic outdoor gas barbecues that apply in addition to or in place of the general requirements for gas appliances set out in AS 5263.0, *Gas appliances, Part 0: General requirements*. The combination of AS/NZS 5263.1.7 and AS 5263.0 supersedes AS 4557—2004.

This Part 1.7 of AS/NZS 5263, supplements or modifies the corresponding clauses of Part 0. The numbering of Clauses in this Part 1.7 is consistent with the numbering in Part 0 for related requirements.

Statements used in this Part 1.7 to explain the relationship of clauses in this Standard to the corresponding Clause of Part 0 are as follows:

- (a) ‘This Clause of AS 5263.0 applies’, in which case the corresponding Clause of Part 0 and its subclauses are used without modification.
- (b) ‘This Clause of AS 5263.0 applies, except as modified below’, in which case the corresponding Clause of Part 0 and its subclauses are used but with the modifications, as listed in this document.
- (c) ‘Not applicable’, in which case the corresponding Clause of Part 0 is not used in this context.

Otherwise the text in this Standard replaces the corresponding Clause of Part 0.

Any Clauses in this Standard that are additional to the requirements of Part 0 are numbered beginning from 101 (except for additional definitions, which begin from 201). Additional Appendices in this Part 1.7 are designated with a letter starting from AA, or numbered beginning from 101 (e.g. ZA101).

Where an Appendix or part of an Appendix (i.e. Paragraph, Figure or Table) is cited in this Standard, reference should first be made to Part 0 for the content of the Appendix, which may be modified by this Part 1.7.

Appendix BB sets out additional requirements and variations to AS 5263.0, to provide for New Zealand requirements and practices. These variations to Part 0 may be overridden by variations in the body of this Standard.

The objective of this Standard is to provide manufacturers, designers, regulatory authorities, conformity assessment bodies and similar organizations with uniform minimum requirements for the safety, performance and use of gas appliances.

This Standard should not be regarded as a design specification or as an instruction manual.

Consideration has been given to—

- (i) continuity of satisfactory operation;
- (ii) the prevention of fire hazards, and explosions;
- (iii) the prevention of injury to persons or property;
- (iv) gas rules and regulations now in force; and
- (v) relevant International Standards.

AS/NZS 5601 series of Standards provides essential requirements and means of compliance for gas installations. Any reference to 'AS/NZS 5601' in AS/NZS 5263 series of Standards should be considered as reference to the appropriate part of AS/NZS 5601 series of Standards (i.e. AS/NZS 5601.1 or AS/NZS 5601.2).

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.

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

## CONTENTS

	<i>Page</i>
SECTION 1 SCOPE AND GENERAL	
1.1 SCOPE.....	6
1.2 REFERENCED DOCUMENTS.....	6
1.3 DEFINITIONS.....	7
1.4 TEST METHODS.....	8
SECTION 2 DESIGN AND CONSTRUCTION	
2.1 SCOPE OF SECTION .....	9
2.2 GENERAL DESIGN REQUIREMENTS.....	9
2.3 MATERIALS.....	10
2.4 DESIGN FOR ASSEMBLY AND INSTALLATION.....	10
2.5 DESIGN FOR MAINTENANCE.....	11
2.6 DESIGN FOR OPERATION .....	11
2.7 CONTROLS AND SAFETY DEVICES .....	11
2.8 GAS TRAIN .....	11
2.9 COMBUSTION AIR AND FLUE SYSTEMS.....	12
2.10 FAN ASSISTED COMBUSTION SYSTEMS.....	12
2.11 BURNER AND IGNITION SYSTEMS.....	12
2.12 COMPONENTS .....	12
2.13 CYLINDERS AND CYLINDER COMPARTMENTS .....	12
2.14 MARKINGS .....	13
2.15 INSTRUCTIONS.....	14
SECTION 3 PRELIMINARY TESTS—LINE GASES	
3.1 GENERAL.....	16
3.2 PREPARATION FOR TESTING .....	16
3.3 GAS LEAKAGE.....	16
3.4 GAS CONSUMPTION.....	16
3.5 GAS PRESSURE REGULATORS .....	16
3.6 IGNITION AND SAFETY SHUT OFF SYSTEMS.....	16
3.7 IGNITION OF DRAPED FABRIC.....	16
SECTION 4 TESTS UNDER LIMITING CONDITIONS	
4.1 GENERAL.....	17
4.2 CO/CO <sub>2</sub> RATIO LIMITS OF ANY INDEPENDENT SURFACE COMBUSTION BURNER—UNDERLOAD .....	17
4.3 CO/CO <sub>2</sub> RATIO LIMITS OF ANY BURNER—OVERLOAD.....	18
4.4 CO/CO <sub>2</sub> RATIO LIMITS FOR PERMANENT PILOTS—OVERLOAD .....	18
4.5 FLAME CHARACTERISTICS AT MAXIMUM AND MINIMUM LIMITING CONDITIONS .....	19
4.6 BURNER IGNITION AT MAXIMUM AND MINIMUM LIMITING CONDITIONS .....	19
4.7 DELAYED IGNITION AT MAXIMUM AND MINIMUM LIMITING CONDITIONS .....	20
4.8 REIGNITION AT TURNDOWN UNDER DRAUGHT CONDITIONS.....	20
4.9 PILOT IGNITION AND STABILITY AT MAXIMUM AND MINIMUM LIMITING CONDITIONS.....	20
4.10 BURNER STABILITY WHEN CHANGING SETTING.....	20
4.11 UNBURNT GAS RELEASE FROM BURNER SYSTEM .....	21

	<i>Page</i>
4.12	BLOCKED FLUEWAY TERMINAL..... 21
4.13	CASE PRESSURE TEST ..... 21
4.14	NOISE OF EXTINCTION..... 21
4.15	EFFECT OF OPENING AND CLOSING DOORS AT TURNDOWN CONDITION..... 21
4.16	SOOTING—LUMINOUS EFFECT APPLIANCES ..... 21
4.17	BURNER INTERFERENCE AT IGNITION OR DURING COMBUSTION..... 21
4.101	IGNITION AT TURNDOWN GAS CONSUMPTION..... 23
<b>SECTION 5 PERFORMANCE TESTS</b>	
5.1	COMBUSTION AIR SUPPLY ..... 22
5.2	FLUE OPERATION ..... 22
5.3	CONDENSATE..... 22
5.4	NOISE OF OPERATION ..... 22
5.5	TEMPERATURE HAZARDS ..... 22
5.6	HEAT RESISTANCE OF APPLIANCE..... 23
5.7	DURABILITY ..... 24
5.8	ELECTRICAL SUPPLY VARIATION OR FAILURE ..... 24
5.9	APPLIANCE OPERATION UNDER LINTING CONDITIONS..... 24
5.10	RAIN TEST FOR OUTDOOR AND ROOM SEALED APPLIANCES ..... 25
5.11	OPERATION UNDER WINDY CONDITIONS ..... 25
5.12	STRENGTH AND STABILITY ..... 25
5.13	THERMAL EFFICIENCY..... 25
5.14	VITIATION AND EMISSIONS ..... 25
<b>APPENDICES</b>	
AA	FIGURES AA101 TO AA102..... 26
BB	VARIATIONS TO AS 5263.0 FOR APPLICATION IN NEW ZEALAND ..... 28
ZA	PRELIMINARY TEST METHODS ..... 40
ZB	LIMIT CONDITION TEST METHODS ..... 43
ZC	PERFORMANCE TEST METHODS ..... 52

## STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

**Australian/New Zealand Standard**  
**Gas appliances**

**Part 1.7: Domestic outdoor gas barbecues**

SECTION 1 SCOPE AND GENERAL

**1.1 SCOPE**

This Standard provides specific requirements and test methods for domestic outdoor gas barbecues and solid fuel-to-gas conversion kits which use natural gas (as described by AS 4564), town gas, liquefied petroleum gas (LP Gas, as described by AS 4670) and tempered liquefied petroleum gas (TLP) as a fuel, with an energy input not exceeding 200 MJ/h.

For New Zealand, the fuel gases are natural gas (as specified in NZS 5442) and general product liquefied petroleum gas (NZLPG) (as specified in NZS 5435).

NOTE: Other statutory and regulatory requirements may be applicable to product that falls within the scope of this Standard. It is the responsibility of the manufacturer, importer or distributor (as appropriate) to ensure that products comply with such requirements.

Appendix AA provides figures referenced in this Standard that are in addition to those in AS 5263.0.

Appendix BB sets out additional requirements and variations to AS 5263.0, to provide for New Zealand requirements and practices. These variations to Part 0 may be overridden by variations in Sections 1–5 of this Standard.

Test methods are set out in Appendices ZA, ZB and ZC (see Clause 1.4).

**1.1.101 Application**

This Standard is complementary to, and is intended to be used in conjunction with AS 5263.0. The requirements given herein shall take precedence over corresponding requirements in that Standard.

AS 3645 specifies essential requirements for gas equipment that requires regulatory approval before sale. This Standard, together with AS 5263.0, is intended to provide a means of demonstrating compliance with AS 3645.

**1.2 REFERENCED DOCUMENTS**

The following are the documents referenced in this Standard.

AS	
3645	Essential requirements for gas equipment
4564	Specification for general purpose natural gas
4621	Regulator for use with liquefied petroleum—Vapour phase
4627	Quick-connect devices for gas
4670	Commercial propane and commercial butane for heating purposes