

Australian Standard™

**Gas fired water heaters for hot water
supply and/or central heating**



This Australian Standard was prepared by Committee AG-001, Gas appliances. It was approved on behalf of the Council of Standards Australia on 21 September 2005.

This Standard was published on 8 December 2005.

The following are represented on Committee AG-001:

AGA (Network Operators)
AGA Certification Services
Appliance and Component Testing
Australian Liquefied Petroleum Gas Association
CSIRO Energy Technology
Committee AG-001-03
Consumers' Federation of Australia
Energy Retailers Association of Australia
Gas Appliance Manufacturers Association of Australia
Gas Technical Regulators Committee

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 Standards may also be withdrawn.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 Standards can be found by visiting the Standards Web Shop at www.standards.com.au and looking up the relevant Standard in the on-line catalogue.

Alternatively, the printed Catalogue provides information current at 1 January each year, and the monthly magazine, *The Global Standard*, has a full listing of revisions and amendments published each month.

Australian StandardsTM and other products and services developed by Standards Australia are published and distributed under contract by SAI Global, which operates the Standards Web Shop.

We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Contact us via email at mail@standards.org.au, or write to the Chief Executive, Standards Australia, GPO Box 476, Sydney, NSW 2001.

This Standard was issued in draft form for comment as DR 04156.

AS 4552—2005

Australian Standard™

Gas fired water heaters for hot water supply and/or central heating

Originated as AG 102—1976.
Previous edition May 2000.
Revised and redesignated AS 4552—2005.

COPYRIGHT

© Standards Australia

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.

Published by Standards Australia, GPO Box 476, Sydney, NSW 2001, Australia

ISBN 0 7337 7017 7

PREFACE

This Standard was prepared by the Standards Australia Working Group AG-001-00-11, Gas Water Heaters, under the responsibility of Standards Australia Committee AG-001, Gas Appliances. This edition is a substantial revision of the previous edition of AS 4552/AG 102:2000 to align with the expansion of the Scope. It supersedes AS 4552/AG 102 – 2000, *Gas Water Heaters*.

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 gas fired water heaters and central heating boilers for hot water supply and/or central heating.

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

In its preparation, consideration has been given to—

- (a) continuity of satisfactory operation;
- (b) the prevention of fire hazards, and explosions;
- (c) the prevention of injury to persons or property;
- (d) gas rules and regulations now in force; and
- (e) relevant International Standards.

AS 5601—Gas Installations, provides essential requirements and basic standards for gas installations.

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 to tables and figures are deemed to be requirements of this Standard.

CONTENTS

	<i>Page</i>
SECTION 1 SCOPE AND DEFINITIONS	
1.1 SCOPE	5
1.2 DEFINITIONS	5
SECTION 2 DESIGN AND CONSTRUCTION	
2.1 GENERAL	18
2.2 MATERIALS	20
2.3 ELECTRICAL SYSTEMS	22
2.4 INSTALLATION REQUIREMENTS	23
2.5 MAINTENANCE REQUIREMENTS	23
2.6 PRESSURE REGULATORS	25
2.7 GAS CONTROLS, SAFETY SHUT OFF SYSTEMS AND RELIEF DEVICES	25
2.8 COMBUSTION AIR SUPPLY AND CONTROLS	26
2.9 IGNITION, PILOTS AND MAIN BURNERS	26
2.10 FLUEING REQUIREMENTS	28
2.11 MARKINGS	30
2.12 INSTRUCTIONS	32
SECTION 3 PRELIMINARY TESTS - LINE GASES	
3.1 GENERAL	35
3.2 PREPARATION FOR TESTING	35
3.3 GAS LEAKAGE	37
3.4 GAS CONSUMPTION	37
3.5 GAS PRESSURE REGULATORS	37
3.6 IGNITION AND SAFETY SHUT OFF SYSTEMS	38
SECTION 4 LIMIT GAS TESTS	
4.1 GENERAL	41
4.2 CO/CO ₂ RATIO LIMITS FOR ANY INDEPENDENT BURNER—OVERLOAD ...	41
4.3 CO/CO ₂ RATIO LIMITS FOR PERMANENT PILOTS—OVERLOAD	41
4.4 FLAME CHARACTERISTICS AT MAXIMUM AND MINIMUM LIMITING CONDITIONS	41
4.5 BURNER IGNITION AT MAXIMUM AND MINIMUM LIMITING CONDITIONS	41
4.6 DELAYED IGNITION AT MAXIMUM AND MINIMUM LIMITING CONDITIONS	42
4.7 REIGNITION AT TURNDOWN UNDER DRAUGHT CONDITIONS	42
4.8 NOISE OF EXTINCTION	42
4.9 BURNER STABILITY WHEN CHANGING SETTING	42
4.10 PILOT IGNITION AND STABILITY AT MAXIMUM AND MINIMUM LIMITING CONDITIONS	42
4.11 EFFECT OF OPENING AND CLOSING DOORS AT TURNDOWN CONDITION	43
4.12 UNBURNT GAS RELEASE FROM BURNER SYSTEM	43
4.13 BURNER INTERFERENCE AT IGNITION OR DURING COMBUSTION	43
SECTION 5 PERFORMANCE TESTS-ALL APPLIANCES	
5.1 GENERAL	44
5.2 DRAIN PERFORMANCE	44
5.3 CONDENSATION	44

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

-
- Looking for additional Standards? Visit Intertek Inform Infostore
 - Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation
-