

AS 1691—1985

Australian Standard®

---

**DOMESTIC OIL-FIRED  
APPLIANCES—INSTALLATION**

---

This Australian standard was prepared by Committee ME/40, Domestic Fuel-fired Appliances. It was approved on behalf of the Council of the Standards Association of Australia on 6 February 1985 and published on 7 June 1985.

---

The following interests are represented on Committee ME/40:

Australian Federation of Consumer Organizations  
Australian Institute of Building Surveyors  
Australian Institute of Petroleum Limited  
Department of Housing and Construction  
Department of Local Government, Vic.  
Heating and Cooling Industry Association of Victoria  
Insurance Council of Australia Limited  
Oil Burning Industry Association (N.S.W.)

---

**Review of Australian Standards.** To keep abreast of progress in industry, Australian Standards are subject to periodic review and are kept up to date by the issue of amendments or new editions as necessary. It is important therefore that Standards users ensure that they are in possession of the latest edition, and any amendments thereto.

Full details of all Australian Standards and related publications will be found in the Standards Australia Catalogue of Publications; this information is supplemented each month by the magazine 'The Australian Standard', which subscribing members receive, and which gives details of new publications, new editions and amendments, and of withdrawn Standards.

Suggestions for improvements to Australian Standards, addressed to the head office of Standards Australia, are welcomed. Notification of any inaccuracy or ambiguity found in an Australian Standard should be made without delay in order that the matter may be investigated and appropriate action taken.

Australian Standard<sup>®</sup>

---

**DOMESTIC OIL-FIRED  
APPLIANCES—INSTALLATION**

---

AS CB21 first published .....	1966
AS CB21 revised .....	1969
AS CB21 renumbered as AS CB21, Part 1—1969 (by amendment) .....	1972
AS CB21, Part II first published .....	1972
AS CB21, Parts I and II revised (in part) and issued as AS 1691 .....	1975
AS 1691 reconfirmed .....	1982
Second edition .....	1985

Incorporating  
Amdt 1—1985

## PREFACE

This edition of this standard was prepared by the Association's Committee on Domestic Fuel-fired Appliances to supersede AS 1691-1975, Rules for the Installation of Domestic Oil-fired Appliances.

This subject was first treated in AS CB21, SAA Oil Heating Appliances Installation Code, which was published in 1966 and revised in 1969. That standard was limited to space heaters, and particularly to those that incorporated vaporizing burners, and it dealt with appliance design and construction in addition to installation.

To cope with the advent of larger space heaters using atomizing burners, AS CB21, Part II was published in 1972, but this was an expedient to solve an immediate problem, and it was recognized that a fresh approach to the whole subject of domestic oil appliances was desirable.

Accordingly the subject was transferred to a newly formed committee ME/40, Domestic Fuel-fired Appliances, which extended the scope from space heaters to all forms of oil appliances, and drafted three separate standards to deal with the three basic aspects, i.e. safety in design and manufacture (AS 1690), quality of performance and construction (AS 2078), and requirements for appliance installation (AS 1691). These standards reflected the outcome of the considerable technological improvements that affected these appliances in this period, and there has been little need to alter the standards since then.

This edition makes no change in the technical sense, it is limited to editorial improvements and the updating of references.

### © Copyright — STANDARDS AUSTRALIA

Users of Standards are reminded that copyright subsists in all Standards Australia publications and software. Except where the Copyright Act allows and except where provided for below no publications or software produced by Standards Australia may be reproduced, stored in a retrieval system in any form or transmitted by any means without prior permission in writing from Standards Australia. Permission may be conditional on an appropriate royalty payment. Requests for permission and information on commercial software royalties should be directed to the head office of Standards Australia.

Standards Australia will permit up to 10 percent of the technical content pages of a Standard to be copied for use exclusively in-house by purchasers of the Standard without payment of a royalty or advice to Standards Australia.

Standards Australia will also permit the inclusion of its copyright material in computer software programs for no royalty payment provided such programs are used exclusively in-house by the creators of the programs.

Care should be taken to ensure that material used is from the current edition of the Standard and that it is updated whenever the Standard is amended or revised. The number and date of the Standard should therefore be clearly identified.

The use of material in print form or in computer software programs to be used commercially, with or without payment, or in commercial contracts is subject to the payment of a royalty. This policy may be varied by Standards Australia at any time.

# CONTENTS

*Page*

SECTION 1. SCOPE AND GENERAL	
1.1 Scope .....	4
1.2 Relationship with Regulations .....	4
1.3 New Designs and Innovations .....	4
1.4 Interpretation .....	4
1.5 Referenced Documents .....	4
1.6 Definitions .....	4
SECTION 2. GENERAL REQUIREMENTS	
2.1 General .....	6
2.2 Materials and Components .....	6
SECTION 3. OIL FUEL TANKS	
3.1 Design and Construction .....	7
3.2 Location and Installation .....	7
SECTION 4. OIL FUEL RETICULATION	
4.1 Material and Installation .....	9
4.2 Pipe Joints .....	9
4.3 Auxiliary Fittings .....	9
SECTION 5. APPLIANCE INSTALLATION	
5.1 General Precautions .....	10
5.2 Location and Access .....	10
5.3 Installation .....	10
SECTION 6. FLUES	
6.1 Design and Construction .....	12
6.2 Installation .....	12
6.3 Flue Heat Protection .....	12
SECTION 7. TESTING AND HANDOVER	
7.1 Testing .....	15
7.2 Handover .....	15

STANDARDS ASSOCIATION OF AUSTRALIA

---

**Australian Standard**  
for  
**DOMESTIC OIL-FIRED APPLIANCES—INSTALLATION**

---

SECTION 1. SCOPE AND GENERAL

**1.1 SCOPE.** This standard sets out requirements for the installation of fixed and flued domestic-type oil-burning appliances of up to 60 kW thermal input rate, together with their associated oil fuel supply systems, in domestic buildings, and in other buildings.

NOTES:

1. For requirements for the design and construction of oil-heating appliances, see AS 1690 and AS 2078.
2. For recommendations on water heater installation details not covered by this standard, including plumbing, see AS 1529.

**1.2 RELATIONSHIP WITH REGULATIONS.** The requirements of this standard may be read in conjunction with, but do not take precedence over, any Statutory Regulations that may apply in any area.

**1.3 NEW DESIGNS AND INNOVATIONS.** Any novel materials, design, methods of assembly, procedures, etc, which do not comply with a specific requirement of this standard, are not necessarily prohibited. The SAA committee on Domestic Fuel-fired Appliances can act in an advisory capacity concerning equivalent suitability, but specific approval remains the prerogative of the Authority.

**1.4 INTERPRETATIONS.** Questions concerning the meaning, application or effect of any part of this standard, may be referred to the SAA Committee on Domestic Fuel-fired Appliances for explanation. The authority of the committee is limited to matters of interpretations and it will not adjudicate in disputes.

**1.5 REFERENCED DOCUMENTS.** The following standards are referred to in this standard:

AS 1250	SAA Steel Structures Code
AS 1375	SAA Industrial Fuel-fired Appliances Code
AS 1529	Code of Practice for Installation of Household Type Hot Water Supply Systems
AS 1530.1	Methods for Fire Tests on Building Materials, Components and Structures, Part 1—Combustibility Test for Materials
AS 1690	SAA Domestic Oil-fired Appliances Safe Design Code
AS 1692	Tanks for Flammable and Combustible Liquids

AS 1940 SAA Flammable and Combustible Liquids Code

AS 2078 Domestic Oil-fired Appliances (Quality and Performance)

AS 3000 SAA Wiring Rules

**1.6 DEFINITIONS.** For the purpose of this standard, the following definitions apply:

**1.6.1 Approved, Approval**—with the approval of, acceptable to, and meeting the prescribed standards of, the Authority having jurisdiction.

**1.6.2 Authority, Authority having jurisdiction**—the Authority having Statutory (legal) control for any work carried out pursuant to this standard.

**1.6.3 Combustible material**—material which when tested in accordance with AS 1530.1 is designated combustible.

**1.6.4 Domestic**—refers to an application in a private dwelling, which is any building or portion of a building that is used, or is intended, adapted or designed for use for living purposes, and is a self-contained unit. The term includes a flat.

**1.6.5 Domestic-type appliance**—an appliance commonly used in, but not necessarily restricted to, private dwellings. Such an appliance would be one which complies with AS 1690 rather than with AS 1375.

**1.6.6 Flue**—any duct used for conveying the products of combustion to outside atmosphere.

**1.6.7 Flue terminal**—the point at which products of combustion are intended to discharge to atmosphere.

**1.6.8 Flue cowl**—a fitting placed at the flue terminal, intended to inhibit the entry of rain, or the disturbing effect of wind, while permitting products of combustion to discharge freely.

**1.6.9 Ground level**—the natural ground level unless the Authority approves otherwise.

**1.6.10 In**—where the term ‘in a building’ or similar expression occurs, ‘in’ means ‘in or appurtenant to’.

**1.6.11 Installer**—a person or organization that undertakes the responsibility of carrying out the installation, but not an employee of such a person or organization.

**1.6.12 Installation**—the appliance together with its flue, pipelines, valves and oil storage tank(s).