AS 1684.4:2024

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Residential timber-framed construction

Part 4: Simplified — Non-Cyclonic Areas

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The following are represented on Committee TM-010:

Australian Building Codes Board
Australian Engineered Fasteners and Anchors Council
Australian Forest Products Association
Australian Institute of Building Surveyors
Australian Timber Flooring Association
Engineers Australia
Engineered Wood Products Association of Australasia
Forest Industries Federation (WA)
Forest and Wood Products Australia
Frame & Truss Manufacturers Association Australia
Glued Laminated Timber Association of Australia
Griffith University
Housing Industry Association
Housing SA
Institution of Fire Engineers
James Cook University
Master Builders Australia
The University of Queensland
Timber Development Association (NSW)
Timber Queensland
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Preface

This Standard was prepared by the Australian members of the Joint Standards Australian/Standards New Zealand Committee TM-010, Timber Structures and Framing, to supersede AS 1684.4:2010.

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

The objective of this document is to provide the building industry with procedures that can be used to determine building practice, to design or check construction details, and to determine member sizes, and bracing and fixing requirements for timber-framed construction in non-cyclonic wind classifications N1 and N2.

The major changes in this edition are to —

(a) include editorial amendments and some technical changes to correct mistakes, clarify interpretation and enhance the application of the document;

(b) amend Section 5 to remove ambiguities and to reflect current research and experience which is able to provide for a quieter and more robust floor;

(c) adjust the number of required Type A bracing units to represent JD5 joint group capacities,

(d) amend Clause 9.6 to represent JD5 specific fixing joint group capacities; and

(e) relaxing the notching requirements for non-loadbearing walls.

Prior to using this document, it is necessary to establish the design gust wind speed and wind classification (see Clause 1.4.2).

This document is a companion publication to the following:

AS 1684.1, *Residential timber-framed construction, Part 1: Design criteria*

AS 1684.2, *Residential timber-framed construction, Part 2: Non-cyclonic areas*

AS 1684.3, *Residential timber-framed construction, Part 3: Cyclonic areas*

This document has been derived from AS 1684.2 to provide a simpler design procedure for lower wind classification areas where details of bracing and tie-downs are simplified. It should be noted that this document differs from AS 1684.2 in a number of areas in order to achieve the simplification. Some of the differences are as follows:

(i) Input to the Span Tables requiring references to span and spacing.

(ii) The geometric limits of the house are more restricted, e.g. 12.0 m maximum width and 30° maximum roof pitch.

(iii) Span Tables are provided for a more limited range of stress grades.

(iv) Design of bracing is simplified.

(v) Where required, design of tie-down is simplified.

Alternatively, for wind classifications N1 and N2, more economical design may be obtained by following the design procedures given in AS 1684.2. For wind classifications N3 and N4 for non-cyclonic areas, see AS 1684.2.

This document does not preclude the use of framing, fastening or bracing methods or materials other than those specified. Alternatives may be used, provided they satisfy the requirements of the Building Code of Australia.

The terms “normative” and “informative” are used in Standards to define the application of the appendices 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 the Span Tables in Appendix A are deemed to be requirements of this document.