

AS 1684.3—1999 Residential timber-framed construction

**Building Code of Australia
primary referenced Standard**



Part 3

Cyclonic areas

(Incorporating Amendment Nos.1, 2, 3 and 4)



This Australian Standard was prepared by Committee TM/2, Timber Framing. It was approved on behalf of the Council of Standards Australia on 5 November 1999 and published on 5 December 1999.

The following interests are represented on Committee TM/2:

Australian Building Codes Board
Australian Institute of Building
Australian Institute of Building Surveyors
Building Research Association of New Zealand
CSIRO, Division of Building, Construction and Engineering
Housing Industry Association
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(Incorporating Amendment Nos 1, 2, 3 and 4)

Australian Standard™

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Part 3: Cyclonic areas

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PREFACE

This Standard was prepared by the Joint Standards Australian/Standards New Zealand Committee TM/2, Timber Framing, to supersede (in part) AS 1684—1992, *The National Timber Framing Code*.

This Standard incorporates Amendments No. 1 (April 2000), No. 2 (October 2000), No. 3 (May 2001) and No. 4 (May 2002). The changes required by the Amendments are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure, or part thereof affected.

This Standard is the result of a consensus among Australian and New Zealand representatives on the Joint Committee to produce it as an Australian Standard.

A2 | The objective of this Standard 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 cyclonic areas.

Prior to using this Standard, it is necessary to establish the design gust wind speed and wind classification (refer Clause 1.6).

The continued development of timber framing systems and the need to cater for a widening variety of materials and design conditions have led to a total revision of structural framing design. These developments include—

- (a) provision for limit state design methods;
- (b) revised/new structural grades for timber;
- (c) provisions catering for open plan living—larger spans, wider openings and bigger rooms, which need more rational approach to bracing design;
- (d) special ‘engineered’ and fabricated timber products;
- (e) recognition of a wider range of high wind and cyclonic design.
- (f) computer-aided design software for member sizes, bracing and tie-down.

The increased scope and application of this Standard to cater for these conditions has also led to the need to perform a more rigorous design check on a wider range of members and construction practices including windowsill trimmers and roof bracing.

This Standard is a companion publication to the following:

AS	
1684	Residential timber-framed construction
1684.1	Part 1: Design criteria
1684.2	Part 2 Non-cyclonic areas
1684.4	Part 4 Simplified—Non-cyclonic areas

This Part of the AS 1684 series differs from AS 1684—1992 in a number of areas including—

- (i) input values required to used the Span Tables in the Supplements are assessed as load width (e.g. roof load width (*RLW*), floor load width (*FLW*), etc.) in lieu of ‘*EL*’ or spacing;
- (ii) wind speeds up to C3 (74 m/s) are catered for;
- (iii) bracing design uses individually rated (kN/m) bracing system capacities; and
- (iv) some building geometric limits have been removed.

It should be noted that Part 4 of the AS 1684 series also contains additional differences to Parts 2 and 3 and to the 1992 edition of AS 1684.

The following Supplements form an integral part of, and must be used in conjunction with, this Standard:

	Supplement	0	General introduction and index
	C1 Supp.	1	Wind classification C1—Seasoned softwood—Stress grade F5
	C1 Supp.	2	Wind classification C1—Seasoned softwood—Stress grade F7
	C1 Supp.	3	Wind classification C1—Seasoned softwood—Stress grade F8
	C1 Supp.	4	Wind classification C1—Seasoned softwood—Stress grade MGP 10
	C1 Supp.	5	Wind classification C1—Seasoned softwood—Stress grade MGP 12
	C1 Supp.	6	Wind classification C1—Seasoned softwood—Stress grade MGP 15
	C1 Supp.	7	Wind classification C1—WA seasoned hardwood—Stress grade F14
	C1 Supp.	8	Wind classification C1—Seasoned hardwood—Stress grade F17
	C1 Supp.	9	Wind classification C1—Seasoned hardwood—Stress grade F27
	C1 Supp.	10	Wind classification C1—Unseasoned softwood—Stress grade F5
	C1 Supp.	11	Wind classification C1—Unseasoned softwood—Stress grade F7
A3	C1 Supp.	12	Wind classification C1—Unseasoned hardwood—Stress grade F8
	C1 Supp.	13	Wind classification C1—Unseasoned hardwood—Stress grade F11
	C1 Supp.	14	Wind classification C1—Unseasoned hardwood—Stress grade F14
	C1 Supp.	15	Wind classification C1—Unseasoned hardwood—Stress grade F17
	C2 Supp.	1	Wind classification C2—Seasoned softwood—Stress grade F5
	C2 Supp.	2	Wind classification C2—Seasoned softwood—Stress grade F7
	C2 Supp.	3	Wind classification C2—Seasoned softwood—Stress grade F8
	C2 Supp.	4	Wind classification C2—Seasoned softwood—Stress grade MGP 10
	C2 Supp.	5	Wind classification C2—Seasoned softwood—Stress grade MGP 12
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A CD-ROM, which contains the above Supplements, is attached to this Standard.

Statements expressed in mandatory terms in Notes to the Span Tables are deemed to be requirements of this Standard.

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