AS 1720.3:2016

Timber structures

Part 3: Design criteria for timber-framed residential buildings

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- Building Research Association of New Zealand
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- Engineers Australia
- Forest and Wood Products Australia
- Forest Industries Federation, WA
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- Wood Processors & Manufacturers Association of New Zealand

This Standard was issued in draft form for comment as DR AS 1720.3:2015.

Standards Australia wishes to acknowledge the participation of the expert individuals that contributed to the development of this Standard through their representation on the Committee and through the public comment period.

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Originally as AS 1684.1—1999.
Revised and redesignated as AS 1720.3:2016.

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PREFACE

This Standard was prepared by the Australian members of the Joint Standards Australia/ Standards New Zealand Committee TM-010, Timber Structures and Framing, to supersede AS 1684.1—1999, *Residential timber-framed construction*, Part 1: *Design criteria*.

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

The objective of this Standard is to provide users with the design criteria considered suitable for the design of conventional timber-framed residential buildings, subject to the requirements and limitations described in the Scope. Design criteria for the most commonly used timber members are provided.

This revision continues to recognize the ongoing development of timber framing systems and the need to cater for a widening variety of materials and design conditions. Significant changes include—

(a) closer alignment with the relevant requirements of AS 1720.1;

(b) adoption of the nomenclature and relevant requirements of the AS/NZS 1170 series of loading standards and, in particular, the recently revised edition of AS 4055;

(c) de-linking of this Standard from the timber member span tables components of AS 1684.2, AS 1684.3 and AS 1684.4;

(d) inclusion of design criteria for additional members and beams;

(e) limitation to Class 1 and 10 buildings as defined by the National Construction Code—Building Code of Australia;

(f) adjustment of the structural models used for joist and bearer design;

(g) removal of alternative characteristic beam shear strengths for F-grades; and

(h) correcting errors and addressing anomalies and inconsistencies.

Mandatory statements in notes and footnotes to tables are deemed to be requirements of this Standard.

The term ‘normative’ has been used in this Standard to define the application of the appendix to which it applies. A ‘normative’ appendix is an integral part of a Standard.

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STANDARDS AUSTRALIA

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Part 3: Design criteria for timber-framed residential buildings

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE AND APPLICATION

1.1.1 Scope

This Standard sets out the design methods, assumptions and other criteria, including uplift forces and racking pressures, suitable for the design of timber-framed buildings constructed within the limitations and parameters of, and using the building practice described in, AS 1684.2, AS 1684.3 and AS 1684.4.

The design criteria apply for the preparation of design data for conventional timber-framed construction where the loading and performance requirements correspond to those for Class 1 and Class 10 buildings as defined by the National Construction Code—Building Code of Australia.

1.1.2 Application

This Standard is to be read in conjunction with AS 1684.2, AS 1684.3 and AS 1684.4, the AS/NZS 1170 series, AS 4055 and AS 1720.1.

NOTE: While this Standard may be applied for Class 10 buildings less conservative levels of design may be permitted, for this Class, by building regulations and other Australian Standards.

The design criteria contained herein provide a basis for the design of timber members and timber-framed building systems and components, including the preparation of Span Tables and design data for structural wood products.

NOTE: The use of the design criteria contained in this Standard may provide evidence of satisfactory safety and serviceability performance.

1.2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS	
1170	Structural design actions
1170.4	Part 4: Earthquake actions in Australia
1684	Residential timber-framed construction
1684.2	Part 2: Non-cyclonic areas
1684.3	Part 3: Cyclonic areas
1684.4	Part 4: Simplified—Non-cyclonic areas
1720	Timber structures
1720.1	Part 1: Design methods
4055	Wind loads for housing

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