AS 1720.5:2015
(Incorporating Amendment No. 1)

AS 1720.5:2015

Australian STANDARD

Timber structures

Part 5: Nailplated timber roof trusses

STANDARDS Australia

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- Australian Forest Products Association
- Australian Institute of Building
- Building Research Association of New Zealand
- Engineered Wood Products Association of Australasia
- Engineers Australia
- Forest and Wood Products Australia
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- James Cook University
- Master Builders Australia
- New Zealand Timber Industry Federation
- Timber Development Association, NSW
- Timber Queensland
- University of Technology, Sydney
- Wood Processors and Manufacturers Association of New Zealand

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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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PREFACE

This Standard was prepared by the Australian members of the Joint Standards Australia/Standards New Zealand Committee TM-010, Timber Structures and Framing.

This Standard incorporates Amendment No. 1 (May 2019). The changes required by the Amendment are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure or part thereof affected.

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 a performance-based document for the design of nailplated timber roof trusses for residential and similar building applications in accordance with AS 1720.1, AS 4055 and the AS(/NZS) 1170 series. Guidance is provided as necessary for the interpretation of these Standards specifically for roof truss design within defined building parameters. Some prescriptive information is included for effective application of the Standard.

Statements expressed in mandatory terms in notes to tables are deemed to be requirements of this Standard.

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 for information and guidance only.

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FOREWORD

The design of nailplated timber roof trusses in Australia has evolved over the past 50 years, from simplified manual procedures encompassing standard designs, to the sophisticated computer design packages of today, which are used to individually design each truss within a roof system.

Over this period, methods of design, fabrication and construction, drawn from research, experience and reference to various Australian and international Standards, have been developed to suit the form and style of Australian buildings. This Standard is the result of a collaborative effort to document a common uniform method of designing nailplated timber roof trusses in Australia.

The methodology, design and performance criteria outlined in this Standard are suitable for preparing and checking the designs of nailplated timber roof trusses in residential and similar building applications in Australia. Additional information, such as the structural properties of proprietary nailplates, may be obtained from the supplier.

STANDARDS AUSTRALIA

Australian Standard
Timber structures

Part 5: Nailplated timber roof trusses

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard sets out design considerations and methods for nailplated timber roof trusses for residential and other buildings within the following limitations:

(a) Residential structures, light commercial structures, and non-habitable structures.

(b) Maximum roof pitch of 45°.

(c) Maximum truss span of 16 m.

(d) Maximum truss spacing of 1200 mm.

1.2 APPLICATION

This Standard shall be used in conjunction with AS 1720.1, AS 4055 (where appropriate) and the AS(/NZS) 1170 series.

NOTES:

1 The design requirements and criteria contained herein provide a basis for the design of nailplated timber roof trusses to meet the structural safety and serviceability performance requirements of the NCC for the building types within the general limitations given in Clause 1.1.

2 This Standard may also be applied to the design and construction of other classes of buildings where the design criteria, loadings and other parameters applicable to those classes of building are within the limitations of this Standard.

3 Some parts of the scope of this Standard are beyond the scope of AS 1684 and AS 4773. In those circumstances, the supporting structure shall be designed from first principles according to their material standards.

1.3 NORMATIVE REFERENCES

The following are the normative documents referred to in this Standard:

NOTE: Documents referenced for informative purposes are listed in the Bibliography.

AS

1170 Structural design actions

1170.4 Part 4: Earthquake actions in Australia

1397 Continuous hot-dip metallic coated steel sheet and strip—Coatings of zinc and zinc alloyed with aluminium and magnesium

1649 Timber—Methods of test for mechanical fasteners and connectors—Basic working loads and characteristic strengths

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