



BSI Standards Publication

Timber structures — Strength graded structural timber with rectangular cross section

Part 3: Machine grading; additional requirements for factory production control

This is a preview of "BS EN 14081-3:2022". [Click here to purchase the full version from the ANSI store.](#)

National foreword

This British Standard is the UK implementation of EN 14081-3:2022. It supersedes BS EN 14081-3:2012+A1:2018, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee B/518, Structural timber.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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English Version

Timber structures - Strength graded structural timber with rectangular cross section - Part 3: Machine grading; additional requirements for factory production control

Structures en bois - Bois de structure à section rectangulaire classé pour sa résistance - Partie 3 : Classement mécanique ; exigences complémentaires relatives au contrôle de la production en usine

Holzbauwerke - Nach Festigkeit sortiertes Bauholz für tragende Zwecke mit rechteckigem Querschnitt - Teil 3: Maschinelle Sortierung, zusätzliche Anforderungen an die werkseigene Produktionskontrolle

This European Standard was approved by CEN on 13 March 2022.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (EN 14081-3:2022) has been prepared by Technical Committee CEN/TC 124 "Timber structures", the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by October 2022, and conflicting national standards shall be withdrawn at the latest by October 2022.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 14081-3:2012+A1:2018.

Compared to EN 14081-3:2012+A1:2018, the following modifications have been made:

- references to other parts of EN 14081 are undated;
- editorial changes to improve clarity of the text and to align terminology with the other parts of EN 14081.

The other parts of the EN 14081 series are:

- EN 14081-1, *Timber structures — Strength graded structural timber with rectangular cross section — Part 1: General requirements*;
- EN 14081-2, *Timber structures — Strength graded structural timber with rectangular cross section — Part 2: Machine grading; additional requirements for type testing*.

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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Introduction

Machine grading is in common use in a number of countries. The countries use two basic systems, referred to as 'output control' and 'machine control'. Both systems require a visual override inspection to cater for strength-reducing characteristics that are not automatically sensed by the machine.

The output control system is suitable for use where the grading machines are situated in sawmills grading limited sizes, species and grades in repeated production runs of around one working shift or more. This enables the system to be controlled by testing timber specimens from the daily output.

These tests together with statistical procedures are used to monitor and adjust the machine settings to maintain the required strength properties for each strength class. With this system, it is permissible for machine approval requirements to be less demanding and for machines of the same type to have nonidentical performance.

The machine control system was developed in Europe. Because of the large number of sizes, species and grades used, it was not possible to carry out quality-control tests on timber specimens drawn from production. The system relies therefore on the machines being strictly assessed and controlled, and on considerable research effort to derive the machines settings, which remain constant for all machines of the same type.

The acceptability of grading machines and the derivation of settings rely on statistical procedures and the results will therefore depend on the method used. For this reason, this document gives appropriate statistical procedures.

The requirements in this document are based on machines in current use and on future types of machines as far as these can be foreseen. It is recognized that additional clauses or standards might be required if unforeseen developments take place.

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1 Scope

This document specifies requirements additional to those given in EN 14081-1 for factory production control of machine graded structural timber with rectangular cross-sections shaped by sawing, planing or other methods, and having deviations from the target sizes corresponding to EN 336.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 384, *Structural timber - Determination of characteristic values of mechanical properties and density*

EN 408, *Timber structures - Structural timber and glued laminated timber - Determination of some physical and mechanical properties*

EN 14081-1, *Timber structures - Strength graded structural timber with rectangular cross section - Part 1: General requirements*

EN 14081-2, *Timber structures - Strength graded structural timber with rectangular cross section - Part 2: Machine grading; additional requirements for type testing*

EN 14358, *Timber structures - Calculation and verification of characteristic values*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 14081-1 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1

production batch

one production run where the timber of one source, grade or grade combination, species or species combination and size is graded using the same settings