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# Timber structures — Testing of joints made with mechanical fasteners — Requirements for timber density

*Structures en bois — Essai sur assemblages réalisés par organes  
mécaniques — Exigences concernant la masse volumique du bois*



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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

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This document was prepared by Technical Committee ISO/TC 165, *Timber structures*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 124, *Timber structures*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This third edition cancels and replaces the second edition (ISO 8970:2010), which has been technically revised.

The main changes compared to the previous edition are as follows:

In this edition the sampling method aims not only at ensuring that the selected pieces have a mean density comparable to the wood to which the test result is intended to be applied<sup>[1]</sup>, but also requiring the coefficient of variation of the density to be reflected. Only then the characteristic value of the strength determined by the test can be used directly<sup>[2]</sup>.

If it is not possible to obtain wood with the target mean value and variation of the wood density, the normative [Annex A](#) provides a correction method. The informative [Annex B](#) provides background to the correction procedure.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

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## Introduction

The sampling method given aims at ensuring that the selected pieces have a density distribution comparable to the timber to which the test result is intended to be applied. When this is fulfilled, the results can be used directly to determine the characteristic value of the strength parameter.

As it is often difficult to obtain a variation of the density similar to that allowed in a strength class, a correction method is given to obtain a corrected coefficient of variation for the strength parameter.

It should be kept in mind that the effect of density on the load-bearing capacity of connections is in many cases less significant than expected, and that many other parameters influence it.